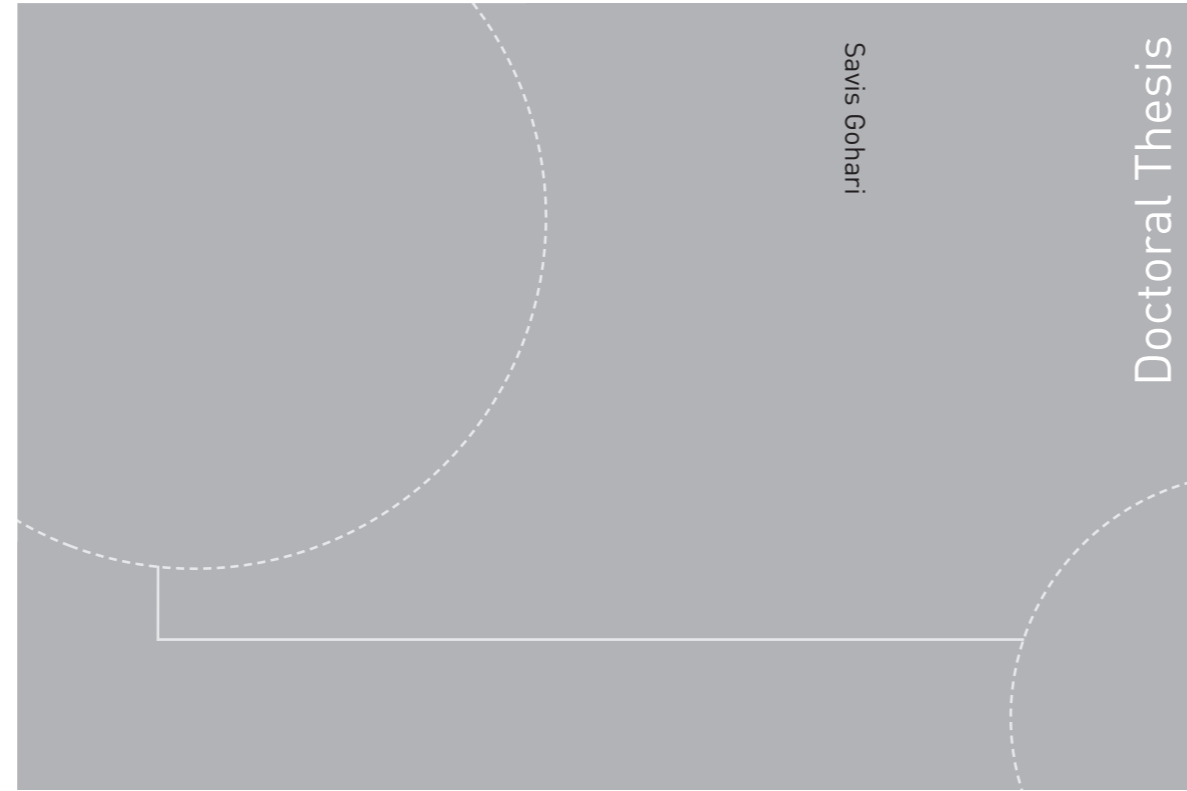


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Trondheim, February 2019

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Dedicated to my lovely parents

“Without the inspiration, drive, and support that you have given me, I might not be the person I am today.”

Executive summary

Trondheim's identity has been closely associated with the development of knowledge and education. To put sustainable knowledge-based development into practice, the political mainstream is to open up the campus areas of the Norwegian University of Science and Technology (NTNU) to the outside world and integrate their activities and functions with the rest of the city. Correspondingly, a large part of the higher education and research institutions is located in the area close to Trondheim city center, which can facilitate the goal of integration between city and campuses. Since NTNU was built in 1996, a co-location of campuses in the Gløshaugen-Elgeseter-gate area, (close to the city center) has been on the agenda. The co-location of campuses was also seen as a strategy for increasing the synergy and collaboration between different disciplines, under the influence of the Norwegian higher education reform, the Hernes Commission. In 2000, the desire to co-locate the campuses was reinforced by the new trend of knowledge-based urban development in Trondheim. Therefore, the campus development has been undertaken through the cooperation of different actors, in order to work and collaborate on the co-location plan.

One of the most challenging issues of the co-location idea has been to move (re-locate) both the administration and education affairs of NTNU's Dragvoll campus to the Gløshaugen-Elgeseter-gate area (a distance of 5 km). Such a process of moving has been an intricate evolution that has brought different social, economic and ecological interests into conflict with political interests and power issues. In 2006, the case of co-location was stopped, and, instead, the rehabilitation of Dragvoll campus (the two-campus model) was raised. After six years of inaction, the idea of the co-location of campuses was revisited and approved by the government. Today, the co-location of campuses is in the process of implementation. The latent conflict between these contrasting interests and power levels has led to prolongation, recurring controversies, stagnation, and moments of adaptation in the planning and decision-making processes for more than 15 years. This reflects the complexity of inter-relationships among actors, the way actors affect and are affected by negotiation and renegotiation procedures and discourses, and their asymmetrical power relations (Healey, 1997). In this regard, strengthening the institutional governance, the positions of actors in a network, in which they interact to influence the outcomes of public policies, is critical for taking cooperative action, and for the implementation of the policies.

The main focus of this research is on ‘governance’ in a complex planning and decision-making process. The co-location of university campuses is the typical case of governance, which represents a complex, uncertain and multi-layered system. The main research question is how the governance structure and process influenced the campus development in Trondheim from 2000 to 2013.

In order to understand governance in a complex, multi-layered and non-linear context, this thesis focuses on the transformation of governance structures and functions in the planning and decision-making processes of the co-location case in Trondheim. Looking at the planning and decision-making process conveys how the original intentions have deviated towards more biased goals or even turned in a distinctly different direction over time. In this regard, the researcher needs to go beyond legal frameworks and formal institutions and processes, to understand the political structure underpinning the (informal) functioning of governance in terms of different actors’ roles, interests, resources, potential conflict and power/influence. This thesis tries to identify how different influential actors have fostered or inhibited the process of co-location at different rounds of planning and decision-making and in response to the social and political dynamics behind the university development. The transformation of governance structure and function in different periods can demonstrate the extent to which governance models were/are impractical, inefficient or misunderstood.

To answer the main question, the researcher needs to understand the change/halt of the co-location plan in 2006 and identify why and how the process departed from such a formally approved decision (in 2006) afterwards. Therefore, the sub-question is ‘Why did the planning and decision-making process in the case of co-location change direction overtime?’

This question explicitly means: Why was the co-location case stopped in 2006 and why had no major change/development taken place at Dragvoll between 2006 and 2012? Why and how was the case of co-location raised again in 2012? Why was the opposition silent in the last round?

The theoretical framework of this is based on the assumption that governance structure and function are interconnected and dynamic and that an in-depth understanding of a complex governance system requires a temporal, iterative and interactive approach. In this regard, this thesis combines the ‘structural-functionalism’ planning approach and the temporal-iterative ‘rounds model of decision-making’ to investigate the transformation of governance structure

at different levels (of university governance and urban governance) and governance process at different rounds of planning and decision-making. The functional components of governance include interest, resource, power, conflict and resolution methods.

In this research, 25 interviews were taped, transcribed, coded and analyzed, both qualitatively and quantitatively, through a ‘Qualitative Data Analysis’ tool. The coding process was inductive, as new fragments of data were constantly compared to previous segments of data in terms of similarities and differences. This thesis adopts an embedded single case study, which looks at three levels of governance: understructure, middle structure, and superstructure. The units of analysis are the individual and collective actors’ discourses and artefacts (official documents, newspapers, books, etc.). Through discourse analysis, first, the actors, who played key roles in each period, then, their goals, interests, resources and power relations are identified. Interviews, archival records and documentation data are combined to trace down and illustrate the informal networks, leverage practices and coalition networks of different actors, in order to understand the change processes over time. Lastly, the casual interrelations between actors’ attributes are analyzed, and the external and internal factors that shape the transformation of governance for ensuring the city-regional development are discovered. This has come under the scrutiny of the social and political dynamics behind the university’s development in the case of Trondheim/Norway.

This thesis has discovered that the university governance failed in 2006, due to the misalignment of leadership and power between NTNU and the Ministry of Education and the ensuing uncertainties, on one hand, and internal conflicts at the university, on the other. In that time, the governance structure of different levels was horizontal and self-organized, in which the university had dealt with the planning process autonomously. NTNU, however, did not alone have sufficient knowledge or capacity to control the process alone, and its freedom, power and authority were limited by its legal and financial dependency on the Ministry of Education. On the other hand, despite the positive collaboration between the university administration and city-region partners, the academic staff considered the involvement of the city and region a gross interference and felt estranged from the administration. This resulted in a bitter and highly problematic split within the university. Simultaneously, the ministry had difficulty in controlling the process because NTNU’s norm was to have a large degree of discretion to deal with its work. Therefore, there were some years of inaction, until the

ministry took full responsibility, mediated all the existing conflicts and bridged the national and regional contributions of the university (in 2012).

NTNU's tradition of living in an 'ivory tower' made the academics conservative and impervious to any change and resulted in one-sided negotiation processes that not only cost NTNU time, energy and money but also blinded the university to recognizing the power and influence of the national and regional governmental and political actors. By letting time pass, the ministry aimed to resolve many of the latent conflicts. The period of inaction was an interim opportunity for collective learning, the establishment of shared visions and trust among diverse stakeholders. It became clear that all actors had a common interest, and the co-location of campuses could be of mutual benefit, but the direction of their dynamics and strategies was not uniform. By taking the intermediate role and directing the process of dialogue and resource-sharing, the ministry was able to make the co-location of campuses materialize. Even though the co-location case satisfied all actors' interests, today NTNU and city-regional parties struggle to compromise on a co-location site. Accordingly, developing a mutual benefit and managing the contradictions are not things that are done once and forgotten about; they should be continuous.

The results show that the government's initiative and control functions or some moderate hierarchical coordination are necessary. The more that organizational participants are involved in the network decision process, the more time-consuming and resource-intensive that process will tend to be (Considine and Lewis, 1999). In addition, the efficiency of the governance network has been challenged by different factors such as dynamic changes in the composition of the actors, their informal/ interpersonal networks and their direct interference; a secret collusive relationship between politicians, which the outside world could rarely glimpse; the presence of unresolved tensions/conflicts, e.g. between the university's traditions; ineffective leadership, lack of accountability and lack of control functions; frustration over the lack of clear and visible results; uncertainty about access to the critical resources; lack of transparency of interests and strategies; and distortion and change of the set agenda or the policy process. Nevertheless, the government has the power to reintroduce hierarchy into the equation, in order to avoid the failure of governance (B. Jessop, 2002). According to Goldstein and Glaser (2012, p.172, p.172), "there is considerable institutional inertia combined with government having inherited the legal authority and sovereignty to be the final decider. Accordingly, a complete cessation of hierarchy is impractical and not realistic".

On the other hand, engineering an optimal/effective governance is a challenging task, and factors related to the culture of the institution and government priorities have a considerable influence on the outcome of the planning and decision-making processes. Thus, exploring governance requires political, cultural and periodic review. It is important to understand the processes of change, including how and why they happened and whether the change was in response to an external crisis, e.g. uncertainty in government funding or change of national mood, or an internal crisis, e.g. lack of confidence in leadership or organizational resistance. In order to evaluate the effectiveness of a governance model, it is recommended to identify governance structure, operational efficiencies, ways of remedying its deficiencies in interaction with governance functions and processes. This will allow the non-political actors, including planners, to unravel the political planning and decision-making processes and to grasp their rationale. It provides a better understanding about the national political mood/priorities, organizational change, internal cultural diversity, potential contradictory interests, strategic roles, and interactions between formal and informal networks in the way they shape change or develop processes. Thus, it can be claimed that this thesis has abstractly contributed to the conceptualization and generalization of the accumulated political knowledge, which can help academics, planners and politicians to see some of what can be learned from practice and the realities of politics.

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List of Abbreviations

AP- Arbeiderpartiet (Labour Party)

AVH- Den allmennvitenskapelige høyskole (Norwegian College of General Sciences)

DKNVS- Det Kongelige Norske Videnskabers Selskab (The Royal Norwegian Society of Sciences and Letters)

FD- Finansdepartementet (Ministry of Finance)

FK- Fylkeskommune (County)

FrP- Fremskrittspartiet (the Progress Party)

H- Høyre (the Conservative Party)

HiST- Sør-Trøndelag University College

KBUD- Knowledge-Based Urban Development

KD- Kunnskapsdepartementet (Ministry of Education)

KrF- Kristelig Folkeparti (the Christian Democratic Party)

KS- kvalitetssikring (Quality Assurance)

KVU- konseptvalgutredning (Choice of Concept Evaluation)

NLHT- Den allmennvitenskapelige høyskole (Norwegian College of General Sciences)

NPM- new public management

NTH- Norges tekniske høyskole (Norwegian Institute of Technology)

NTNU- Norges teknisk-naturvitenskapelige universitet (Norwegian University of Science and Technology)

PPP- Private- Public Partnership

RiT- Regionsykehuset i Trondheim (Regional hospital in Trondheim)

SINTEF- Stiftelsen for industriell og teknisk forskning (The Foundation for Scientific and Industrial Research)

SiT- Studensamskipnaden i Trondheim (Student Welfare Organization in Trondheim)

SP- Senterpartiet (the Center Party)

STFK- Sør Trøndelag fylkeskommune (Sør Trøndelag County)

SV- Sosialistisk Venstreparti (The Socialist Left Party)

TK- Trondheim kommune (Municipality)

UNIT- Universitetet i Trondheim (The University of Trondheim)

Chapter 1 Introduction

This chapter sets the scene for this thesis and is divided into four main sections. Section 1.1 introduces the process of campus development and the idea of co-location in Trondheim. Section 1.2 discusses the problem and raises the research questions. Section 1.3 highlights the main focus of this thesis and explains which approach this thesis takes to deal with the problem and answer the research questions. Lastly, Section 1.4 presents the structure and development of the thesis.

1.1 NTNU campus development in Trondheim

Trondheim is a municipality (kommune) in Sør-Trøndelag County (fylkeskommune), Norway¹. This city functions as the administrative center of Sør-Trøndelag County. It has a population of circa 190,000 (January 1, 2018) and is the third most populous municipality but the fourth largest urban area in Norway. Trondheim is regularly rated as the best student city in Norway, and students make up a fifth of the population (around 36,000) (Trondheim Kommune, 2018). Trondheim is dominated by the Norwegian University of Science and Technology (NTNU), the Foundation for Scientific and Industrial Research (SINTEF), St. Olav's University Hospital, and other technology-oriented institutions, such as Statoil's Research Center².

For a long time, knowledge and education have been the most important resources for Trondheim's economic growth and development of the welfare society (see the Appendix, 'Trondheim as knowledge city'). In this regard, universities and colleges, particularly the Norwegian University of Science and Technology (NTNU), have played a key role in the life of the city (Trondheim Kommune, 2012a). Over time, the city and university authorities have focused more on the importance of the physical capability of the learning environment and research infrastructure in education quality and the city's reputation, competence and economy (Trondheim Kommune, 2014, Haugen, 2014). They believe that there are important links between the nature of education and what the campus should look like and develop into (Haugen, 2014). The NTNU strategy report also mentions that the university would like to help Trondheim to enhance its reputation as the country's best city for education (NTNU,

¹ Sør-Trøndelag County merged with Nord-Trøndelag County in 2018 as Trøndelag County.

² Today, Statoil is renamed Equinor.

2011). Norway, as a participant in the Bologna process, is concerned about ‘brain drain’ from Norway to other countries in Europe. The future competitiveness of the national university, NTNU, and Trondheim might have a significant impact on Norway’s economic future. Accordingly, the city authorities in Trondheim have acknowledged that to develop sustainably, Trondheim is dependent on such an attractive university. Therefore, while the social responsibility of education and research institutions has been taken into consideration, their better interaction with the surrounding environment has increasingly been emphasized. Accordingly, Trondheim’s ideal is to physically and institutionally integrate the university and college campuses with the urban context, by combining the education and research functions with the city’s activities and facilities. The location of the main campus of NTNU, Gløshaugen, in the middle of the city, can enable them to meet their vision and integrate city and university.

Gløshaugen campus, built in 1911, is the location of the science and technology disciplines and is located on a plateau overlooking the city center. Although Gløshaugen campus is within easy walking distance from the city center (15-20 minutes) and many students that live in the city can take advantage of the cultural life of the city center, it is not fully integrated into the city (Corneil and Parsons, 2007).



Figure 1-1: Gløshaugen Campus. Photo: Eirik Refsdal

The Humanities and Social Sciences of NTNU are located at another campus, ‘Dragvoll’, which is 5.5 kilometers from the city center and 3.5 kilometers from Gløshaugen campus (Nikolaisen and Garathun, 2014). Dragvoll campus was built in 1968 on former farmland.

For many years, NTNU has considered the possibility of moving both the administration and education affairs of NTNU’s Dragvoll campus (80,000 m²) to, or in the close proximity of,

Gløshaugen Campus (Trondheim Kommune, 2012a), to be better integrated into the city, and to be closer to business, working life, an innovative environment, and the whole range of academic communities. The assumption is that the re-location of Dragvoll would be more attractive to the students, as it would be more accessible, since the majority of students live closer to the city center than to Dragvoll. Moreover, it would become easier for them to study different subjects from other faculties. In addition, a co-location of Gløshaugen and Dragvoll campuses would lead to an efficient use of common educational areas, services and facilities, while the university, as a whole, would become more accessible to the urban population (Andersen, 2015). At the same time, Dragvoll campus has suffered from lack of space and facilities for students. The collusion and simultaneity of assembling the activity of the two largest campuses (Gløshaugen and Dragvoll) with an ongoing discussion about the rehabilitation/future development of the Dragvoll campus, enforced the board of NTNU to choose a best option/strategy for the future, in 2006.



Figure 1-2: Dragvoll Campus. Photo: Åshild Berg-Tesdal

For a long time, Trondheim Municipality has supported the city-center-close solution for campuses, including Dragvoll campus. The municipality has believed that NTNU and Sør-Trøndelag University College (HiST)³ would make a center of gravity for business, innovation and other city activities by co-locating their campuses close to each other and the city center (Trondheim Kommune, 2012a). As a result, Trondheim Municipality has also taken a part in reinforcing the ties between the various parts of the campuses, particularly Dragvoll and Gløshaugen, through co-location and the development of good urban spaces and facilities for students, staff and other citizens/users. This would help Trondheim to become a known

³ In 2016, HIST was merged with NTNU and today they both represent NTNU.

student city, both nationally and internationally. In addition to Trondheim Municipality, the Sør-Trøndelag County⁴ authorities have also had a special interest in the future development of NTNU campuses, due both to the role of NTNU and knowledge in the regional development and to the county's own needs. Their general vision has been to make Sør-Trøndelag the most creative region in Europe.

Despite the apparent supportive conformities of various decisive actors, the board of NTNU came up with a no to the co-location idea in 2006 and rejected it. Instead, the rehabilitation of Dragvoll campus or a two-campus model was prioritized. At that time, the board's decision was greeted with great surprise, and many supporters took it very hard.

Apart from some minor changes, no important development/improvement happened at Dragvoll campus after the board's decision in 2006. After a period of inaction, the co-location of Gløshaugen and Dragvoll campuses was revisited in 2012.

In 2013, the new rector of NTNU (Gunnar Bovim) initiated a vision project, with a mandate to develop visions for campus development with a 50-year perspective. In the same year, 2013, the Norwegian Ministry of Education and Research initiated a concept study for the future localization of NTNU campuses. Both reports were presented in 2014, in which they recommended bringing together the Dragvoll and Gløshaugen campuses and integrating them with the city. In 2015, the government finally approved the movement of the faculties of Dragvoll to the area of Gløshaugen. As a result, Dragvoll was obliged to move its 14,000 students and 1,500 employees to the Gløshaugen area. For Prime Minister Erna Solberg, "NTNU was considered as a university for the whole of Norway that the co-location solution, would make NTNU the most exciting, innovative and largest university in Norway"⁵.

The final outcome of the co-location case and the presence of positive insights and strong supportive actors to promote it at all times contradicted the dismissal of the case in 2006, the deviation towards the rehabilitation of Dragvoll campus and the prolongation of the decision-making process. On the other hand, the board decision in 2006 (a no to co-location) and the priority to rehabilitate Dragvoll campus controverted the following inaction period at Dragvoll (from 2006 to 2012) and their later yes to co-location. Understanding the whys and (the) wherefores and the contextual background for such an overturning is the basis of this thesis:

⁴ Sør-Trøndelag County has been merged with the Nor-Trøndelag County into Trøndelag County.

⁵ This was more a result of the integration of three regional university colleges with NTNU.

understanding why this case took so long to be approved; why and how the case was stopped in 2006 and re-opened in 2012; why nothing had happened at Dragvoll Campus, and what caused the no decision to become a yes.

1.2 Statement of the problem and research questions

The process of co-location of university campuses, in light of the simultaneous knowledge-based urban development, has been an intricate process that requires the involvement of various actors to embrace different aspects of social, economic and ecological contexts. Such a diverse framework and the engagement of multiple actors have been accompanied by a variety of conflicting political interests and power relations. Despite the initial common goal of the main actors (the municipality, the county, the government, and the university leadership/administration), the governance networks have formed different interests and strategies, which, rather than facilitating it, have undermined the process of planning and decision-making. The hidden and informal exercise of power and the protection of special interest over time at different levels has exacerbated the political and managerial complexity, ambiguity and uncertainty and led, for more than 15 years in Trondheim, to prolongation, recurring controversies, stagnation, and unwilling adaptations. This reflects the complexity of inter-relationships among actors, the way actors affect and are affected by negotiation and renegotiation procedures and discourses, and their asymmetrical power relations (Healey, 1997). Part of their power depends on the resources they possess and the importance of these resources in the decisional process (Scharpf, 1978).

A lack of flexibility in adapting to those challenges and a failure to anticipate and plan for both challenges and opportunities can undermine the process of planning and decision-making. In such cases, different bits and pieces converge into a political momentum and put the planning and decision-making processes on the political agenda. Due to the secrecy and behind-the-scenes nature of the politics and the informal governance networks, the available data cannot always explain the process of change in political, complex and multi-faceted systems, which, in turn, can make it a debatable issue for all affected actors that demands explanation and greater transparency. In this regard, strengthening the institutional governance, the positions of actors in a network, in which they interact to influence the outcomes of public policies, is critical for taking cooperative action, and for implementation of the policies. It is important to identify the preconditions for an efficient multi-actor collaboration/governance network, through a systematic and thorough analysis of planning

and decision-making processes. In addition, it is necessary to go beyond legal frameworks, formal institutions and processes, and try to understand the political structure underpinning the (informal) functioning of governance in terms of different actors' roles, interests, resources and power.

Correspondingly, the researcher should identify how different influential actors have fostered or inhibited the process of the co-location of NTNU faculties at different rounds of planning and decision-making. Accordingly, one purpose of this research is to understand the transformation of governance mechanisms in response to the social and political dynamics behind the university's development in Trondheim. The transformation of governance structure in different periods can demonstrate the extent to which governance models were/are impractical, inefficient or misunderstood.

The main question that this thesis tries to answer is:

How have the governance structure and process influenced campus development in Trondheim from 2000 to 2013?

Campus development in Trondheim has undergone major redefinitions, revisions and frequent turnovers. Looking at the policy-making process conveys how the original intentions have deviated towards more biased goals or even turned in a distinctly different direction over time. In this regard, the researcher needs to understand the change/halt of the co-location plan in 2006 and identify why and how, afterwards, the process departed from such a formally approved decision (in 2006). Therefore, the sub-question is:

Why did the planning and decision-making process in the case of co-location change direction over time?

This question explicitly means: *Why and how was the co-location case stopped in 2006 and why had no major change/development taken place at Dragvoll between 2006 and 2012? Why and how was the case of co-location raised again in 2012? Why was the opposition silent in the last round?*

As a result, the sequential steps to answer the research question(s) are:

- Identifying the role of different individuals and/or institutions (actors) in the university development processes

- Identifying the main actors' interests and goals to facilitate the achievement of collectively desirable outcomes
- Identifying the required resources and the resource providers, in order to understand the nature of different interrelationships in this collaborative network
- Understanding the level of power (influence) that different actors need to have to reach a certain level of agreement
- Defining and analyzing institutional and obstacles that have complicated the development of the co-location case until now
- Exploring and highlighting the conditions for better governance practices in future

1.3 Research justification

While the impact of knowledge assets on regional economies receives much attention in the economic literature, few studies focus on governance in planning and decision-making processes, regarding the relationships between academics, city planners, governmental and political authorities/actors in developing a mutual benefit in such processes. Very few attempts have been made to produce a dedicated theory of governance in this context. The vast majority of empirical studies that look at how university development has been governed make little or no reference to what currently passes for governance theory. What theory/theories are needed from the broader field of social science research on policy and political systems is also not discovered. In this respect, this thesis provides an empirical study that is based on a real and ongoing process. The consideration of such an ongoing process gives extra scope to this research, since it imposes new lessons and guidelines for the upcoming actions.

Much research has explicitly focused on the real costs and conflicts of interest involved in exchanges between university and other related actors. For example, Benneworth et al. (2010) attract attention to the fact that city and university may fail to achieve mutual benefit, due to a misalignment and disagreement of their strategies. They may have contradictions regarding university expansion plans, local transport and housing infrastructure that can impose insuperable barriers on either side. Russo et al. (2007) use a consensual and deliberative approach to emphasize collective, pragmatic and participatory problem-solving in university-development processes. They propose that a joint management should not include merely university and city but also students, academic community, entrepreneurs, and citizens, whose personal ties and informal networking have effects on university development procedures. However, Benneworth et al. (2010) and Russo et al. (2007) both have largely neglected the

role of governmental and political authorities, and deeper cultural-cognitive aspects of the change process that underlie the formal and informal networks of actors at different levels of society. More importantly, they fail to take account of the strategic role of actors and the interactions of their interests, resources and power relations.

Etzkowitz and Leydesdorff (1997) considered the government's role and introduced the triple helix model, emphasizing the interaction among universities, industry and government, as being the key to innovation and resultant economic growth. However, they did not consider the various ways these three categories of actors can link and interact with each other to support an innovation system. In many studies, the focus is on only one or limited levels of governance. However, power and influence are omnipresent, and the direction of power networks can be upwards, downwards or sideways between different levels of government. In addition, the analysis of many related studies usually takes place at a high level of aggregation and generalization that obscures the diversity of individual cases. Therefore, there is a need to look at governance of university development in the real, multi-layered and complex context, to understand which actors, institutions, processes and relational mechanisms at different levels of governance have had an impact on the implementation of the co-location case.

1.4 Structure of the thesis

The thesis is structured in seven chapters. Chapter 1 starts with the introduction to NTNU's campus development, the case of co-location and a statement of the problem. It explains that the plurality of interdependent actors, who have different goals that mostly are formed and transformed during the process, has caused complexity, uncertainty and instability and changed the direction of co-location planning and decision-making processes several times. Accordingly, strengthening the governance network is seen as critical for taking cooperative action and mediating the problems, which requires an in-depth understanding of the reality of governance structure and function/process in this case. On this basis, the main research objectives and questions are identified, which set up a fundamental framework for the theoretical discussion. Chapter 2 deals with the contextual background of the co-location process, 'the knowledge-based urban development (KBUD)'. This chapter explains that Trondheim has developed as a knowledge city, in which the quality of its university is manifest in urban development. As a result, the co-location of campuses, as a desired strategy for the university, can provide a mutual benefit both for the city and the university (NTNU). This chapter looks at different aspects of KBUD within both national and international contexts

and highlights the necessity of network governance for redressing the balance between such changes and universities' original identity. Chapter 3 introduces the relevant theories for describing and analyzing governance structure and process within the 'decision-making' and 'planning' theories. Appropriate theoretical models for understanding, illustrating and analyzing governance structure and function/process are identified and combined to develop a more fitted model for this thesis and answering the research objectives. Chapter 4 describes the methodology of this research, a qualitative case study, and provides a detailed explanation of the method used in this thesis. Chapters 5 and 6 describe and analyze the case of co-location at different rounds, which are based on the theoretical framework, combination of 'structural-functionalism' and rounds model', and longitudinal and abductive methodological reasoning. Chapter 5 includes four rounds that start with the background and history of NTNU and the co-location idea and end with the no to co-location in 2006. Chapter 6 includes two rounds, after the no to co-location that start with rehabilitation of Dragvoll but end with the yes to co-location in 2012-13. In the analysis section in both Chapters 5 and 6, the governance structure and process of each round are defined and analyzed. The structure of governance is analyzed through the interactions of network governance at three levels: understructure, middle structure and superstructure. The process of governance is analyzed through the multiple wealth of details and by specific functional components (interest/goal, power, resource, process-based role and conflict) that are important for the development of a nuanced view of reality. Chapter 7 first reflects on the theoretical framework and tries to see how theoretical components, which describe the transformation of governance structure and process, explain or do not explain the specific outcomes of the process. Second, it synthesizes the findings, the theoretical analysis and the implications of the findings for existing theories.

Table 1-1: The structure of the thesis

<p>Chapter 1 Introduction</p>	<p>Introduction to the case of Trondheim; Research issue and questions</p>
<p>Chapter 2 Context</p>	<p>The knowledge-based urban development as the contextual background to the co-location case in Trondheim</p>
<p>Chapter 3 Theory</p>	<p>Governance theory; structure and function/process as two main components of governance; structural-functionalism planning theory as theoretical basis; use of iterative and temporal 'round model' of decision-making for adjustment to the structural-functionalism model; modification and development of the theoretical model</p>
<p>Chapter 4 Methodology</p>	<p>Research methods and approach; use of longitudinal and abductive approach, and qualitative embedded single case study</p>
<p>Chapter 5 Case and Analysis 'No to co-location'</p>	<p>Answering research sub-questions through description and analysis of the rounds of planning and decision-making in the case of co-location, which started with the initiation of co-location but ended with the no to co-location</p>
<p>Chapter 6 Case and Analysis 'Yes to co-location'</p>	<p>Answering research sub-questions through description and analysis of the rounds of planning and decision-making in the case of co-location that started with two-campus model solution, but ended with the yes to co-location</p>
<p>Chapter 7 Conclusion and Implementation</p>	<p>A brief recapitulation of the major findings in relation to the theoretical framework, the interrelationship of governance structure and function; Synthesis of conclusion from case study and comparison with theory</p>

Chapter 2 – Context

In order to develop an understanding of and to theorize about governance, in the planning and decision-making process, this chapter starts with the context, in which the co-location of university campuses is taking place in Trondheim. Section 2.1 discussed the concept of knowledge-based urban development that has come to urban planning and become a promising paradigm to support the process of transforming cities into knowledge cities. Section 2.2 discusses how such a transformation has influenced the role of universities, so that they can support their cities in embedding knowledge into the social, spatial and economic development. Section 2.3 then focuses on the geographical proximity and co-location as parallel strategies of knowledge-based urban development and highlights such transformation as a nontrivial and complex process, particularly in cities with the greatest dependence on universities or higher education. There is a discussion of the various and paradoxical components of these changes (institutional and physical), which conceptualize a holistic and integrated approach towards governance that previously has not been fully considered. This chapter aims to gradually introduce and elaborate the significance of governance in the relatively new, but rapidly emerging, knowledge-based urban developments.

2.1 Knowledge-Based Urban Development (KBUD)

In today's rapidly globalizing world, 'knowledge' along with the social, technological and economic settings, is seen as a major factor of postmodern production (Yigitcanlar et al., 2007). Knowledge is today's economy and we are in the era of the global knowledge economy (Gabe et al., 2012). Schumpeter (1942) popularized the term "creative destruction" to explain that capitalism is not about the accessibility of capital but about accessibility of ideas. Thus, innovation, technological change and large-scale development of new ideas can make traditional capitalism ideas inefficient. Those who invest in research, developing ideas and innovation, will really move the economy and not those focusing on capital to raise product prices.

The 'knowledge-based' concept was triggered by the success of Silicon Valley and Cambridge Science Park in the 1970s, which led to urban development that focused on developing techno-poles or industrial parks to make optimal utilization of technological resources (Castells and Hall, 1994). Silicon Valley has inspired 'knowledge-based urban development' to balance economic prosperity, human development, and socio-environmental sustainability, in which

citizens inform, and are informed about, the nature of changes that occur in their city (Laszlo and Laszlo, 2007, Wang, 2009, Yigitcanlar et al., 2008). Other known examples of KBUD are London's East End, Netherlands' Brainport Area, New York's Roosevelt Island, Barcelona's @22, North Carolina's Research Triangle, Moscow's outskirts of Solkovo and Paris's outer circle development.

A number of cities are already reaping the benefits of KBUD, e.g., Cambridge, Seattle, Austin, Boston, Helsinki, Manchester, Melbourne and Singapore. Many others are in pursuit to join them – such as Brisbane, Dubai, Istanbul, Kuala Lumpur and Shenzhen. However, due to the diversity and uniqueness of places and societies and cultures, it is difficult to replicate KBUD strategies and policies in other cities (Carrillo et al., 2014). KBUD is a complicated process, and every locality needs to develop its own unique KBUD vision and objectives that are in tune with the culture of the place, government priorities, IT networks and infrastructure, etc. (Baum et al., 2007). Accordingly, this thesis adopts a single case study rather than a comparative study or multiple case studies because KBUD here is only seen as the cultural-political background/context of the 'governance in planning and decision-making processes'; it is not the main focus of the thesis.

2.2 Role of universities in KBUD

In light of their institution's educational mission, physical location, economic relations, and political demands, universities have an important and complex role in the development of their host city. There are many case studies that illustrate the university's impact on urban development in historic preservation, economic renewal, land use development and community, social welfare and equity development. Accordingly, in the 1960s, the regional dimension became important in the discussion of the location of new universities, where they can serve as permanent fixtures of the urban economy. For instance, the University of Tromsø, Norway's Arctic University, was established in 1968 to be a driving force in the development of Norway's northern region (UiT, 2017).

In some cases, the new university was seen as an important element in the welfare state, and a tool to meet the demand for an academically educated labor force, especially in the public sector. For instance, the decision to locate the Norwegian Institute of Technology, NTH⁶, in 1910, in Trondheim instead of the capital city of Oslo, was made in this respect. During the

⁶ NTNU was formerly NTH.

economic recession in Norway around 1900, the demand for engineers and technological education increased, to compensate for the economic downturn. In addition, Norway became an independent nation in 1905 and needed to have its own technical university on equal terms with Royal Institute of Technology (KTH ⁷), Chalmers, etc. in Sweden. The impact of NTH on the physical growth of Trondheim was significant, and industry and business in the region could benefit from graduate engineers and architects.

In many countries, governmental policies have demanded that universities play a more central role in supporting economic growth and promoting knowledge transfer to industry. The growing intensity of university-industry or university-city/regional ties has also influenced universities' organizational and institutional change, the work experiences, norms and practices of academic scientists over the past two decades (Trowler, 2001, Vallas and Kleinman, 2007, Lam, 2010, Owen-Smith and Powell, 2001).

In the past, universities defined themselves by their elitism and their isolation. However, today's economy requires that knowledge be distributed and widely accessible. Therefore, universities can no longer be isolated. Indeed, they should be inclusive and accessible (Corneil and Parsons, 2007). "In a healthy knowledge society, the university becomes the city, and the city becomes the university" (Corneil and Parsons, 2007, p.115). This requires universities' adaptation and transformation, both institutionally and physically.

One factor of universities' success in terms of urban regeneration appears to depend on the integration of their campus with the urban fabric, e.g. Oxford, Cambridge, Stanford, Yale and Cornell universities. There are many cases, e.g. the University of Washington at Tacoma, the University of South Carolina (USC), the University of Illinois in Chicago and the University of Pennsylvania, in which the development of the campuses became a major reason for the re-urbanization of the inner city (Corneil and Parsons, 2007, Coffey and Dierwechter, 2005). "Their campus typology has increasingly become a motor for innovation and synergy outside their academic context in high-tech clusters and corporate centers" (Hoeger, 2007, p.13). Recently, this new evolution towards integrating universities with cities, for the mutual benefit of university and city, is also taking hold in Canada, including Montreal, Toronto, Ontario, Calgary, Saskatchewan and Vancouver (Simon Fraser University) (Peters, 2017).

⁷ Swedish: Kungliga Tekniska högskolan

Nowadays, the campus, as the university's location, matters for urban development (Schwander et al., 2012). In this thesis, 'campus' is used as a common expression for an ensemble of buildings for higher education and therefore primarily indicates the 'location' (Muthesius, 2000). In this regard, 'campus' can imply the agglomeration of universities' faculties or departments that are located at different parts of the city. By this definition, NTNU has five main campuses in Trondheim: Dragvoll (Humanities and Social Science), Gløshaugen (Technology, Engineering and Economy), Øya (Medicine), Kalvskinnet (Museum and Bachelor of Engineering⁸) and Tyholt (Marine Engineering).

There are two historical campus traditions: 1) The American tradition, in which the campus has historically acted as a city in itself, with all necessary functions for everyday life located on campus, such as the University of British Columbia in Vancouver, Canada. However, Harvard in the USA is one of the famous campuses that is connected with its urban context. 2) The European tradition, in which the campus is physically and socially integrated within the city limits and makes active use of information exchange with local trade and industry. The European campus model, seen for example in London, Oslo, Edinburgh, Bologna, Oxford, Cambridge, Amsterdam, Groningen or Istanbul – but also in Stanford, Yale or Cornell – allows for the universities to be strongly connected to their surroundings and create several synergy effects in their local context (Bakken, 2012).

Recent studies show that many universities are shifting toward the European tradition (Bakken, 2012, Perry and Wiewel, 2005, Hoeger et al., 2007). In this way, the educational institutions have become a much more integrated part of city life, compared to the traditional campus that is detached from the surrounding city, e.g. Aalborg and the University of East Anglia outside Norwich.

The university campus can be designed with extrovert principles, rather than simply offering education and research. The site selection can aim to integrate the campus with its surroundings and to connect different disciplines, to increase and encourage cross-encounter and informal communication. For instance, Columbia University on Manhattan has started to give lectures in shop premises at street level, so that everyone can attend classes (Hajer and Reijndorp, 2001).

⁸ Will be integrated with the master programs at Gløshaugen.

The physical aspect of university development, which relates to architecture and campus design, is interconnected with the institutional and ideological contexts of universities. Before, universities were designed/seen as closed communities, ivory towers, in which the academic community needed to be kept away from unwanted distractions. The university design reflected a sense of being a part of an elite, “relatively closed group with particular intellectual, social and political qualities, a privileged, dominant social stratum” (Deplazes, 2007, p.41), which separated the academic from the outside world. Higher education was reserved for the minority of the population, and such isolation was manifest in the physical makeup of universities, for instance, the classic collegiate architectural paradigm of the Gothic campus, epitomized by places like Yale in the USA and Cambridge and Oxford in the UK (Corneil and Parsons, 2007). On the other hand, with reference to the dominant role of students in the French and Iranian Revolution and at UC and Berkeley in instigating political unrest, students were seen as a “political force and a potential danger”, and keeping them in a closed community was for governments’ own safety (Deplazes, 2007, p.41). However, in the nineteenth century and under the influence of the industrial revolution and the emergence of social awareness, the postwar university campus as an isolated community was thoroughly revised.

In the process of university development, it is not surprising to expect a set of competing differences or even contested and conflictual interests between the key institutional elements and actors, particularly the city and university authorities. The power relations underpinning these two (city and university development) can be very different and challenging and may lead to deep shifts and changes in the way university strategies and decisions are developed, implemented and evaluated (Benneworth et al., 2010).

In general, universities are supposed to determine their own institutional changes in response to external drivers, based on their interactions with the Ministry of Education or government and different research councils. They expect the local authority to play a reactive and subordinated role. However, city authorities may have substantial demands and aspirations for universities’ development, to improve the spatial quality of the city (e.g. the case of the University of Illinois in Chicago). In other words, they see university spatial development as an opportunity to improve the competitiveness of their own locality. They benefit from the university’s existence to improve their city’s potential as a student, research, knowledge or business-friendly city (Benneworth et al., 2010). Moreover, there are other groups,

organizations, and/or individuals, who have particular and divergent interests in the university development process and play an active role in influencing policy decisions. Accordingly, in order to establish mutual benefit among all interested actors, negotiation and cooperation are necessary to recognize and assess the key mutuality elements, such as “leadership, resources, organizations and/or expertise” (Perry et al., 2009). A direct involvement of the top leadership, a clear assignment of responsibility and accountability to the vision or goal of the process, and the availability of the required resources and expertise are influential factors for success.

The development process of Auraria Campus in Denver, which is a shared campus for the three institutions of the Community College of Denver, the Metropolitan State University of Denver and the University of Colorado Denver, was accompanied by conflict over economic resources and changes in interest groups, political alliances and decision-makers. The plurality and variety of involved interests and power relations could complicate the process of planning and decision-making. However, the establishment of a third party, Auraria Higher Educational Center (AHEC), as a single voice for planning, constructing, leasing/owning, operating, maintaining, and managing all the physical plans, facilities and buildings mediated all the existing conflicts and tensions (Wiewel and Perry, 2008). None of the three institutions was allowed to get involved in the campus development processes. Instead, they focused on their teaching missions.

Another political campus development example is the University of Illinois at Chicago (UIC), which was merged with the University’s Medical School and became a potential candidate for development as a future national leader in education and research (Perry and Wiewel, 2005). The expansion of the UIC was based on the new “Circle” campus idea, which was “coterminous” with the proposal of the “Chicago Circle” model. The case of Chicago is a clear example of university development as mixed-use development, where university buildings have become city buildings, and city services are mixed with academic usage. Moreover, city plans dictate the direction and even the placement of the university’s land use and buildings. The consistency of the university development with (if not a fully functioning part of) the city planning was considered the key success factor (Perry et al., 2009, p.35).

These cases show that universities’ development decisions, their physical location and campus evolution could be key political elements of urban partition and conflict. As a result, university development practices are features of the communal and politics of cities (Wiewel and Perry,

2008). In accepting that university development is a political procedure, there is a need to understand the local politics and rules of the game in such processes; otherwise, the possibilities of carrying forward the development will be far more difficult.

Many factors can also shape and affect university contributions to regional and city development. These factors can relate to the university, such as the population, traditions, culture, history, age or type of university, the circumstances under which the university was founded and the role it was expected to play in the region (Trippel et al., 2015, Deem, 1998, and , and , Nilsson et al., 2003). For example, unlike the increasing emphasis on integration of city and university, the Norwegian University of Life Sciences had to move its campus outside the city of Oslo to Ås in 2016, due to the need for specific facilities for the education of veterinary students. There are other factors that can relate to regional characteristics, such as geographical scale, populations, economic activity, localization economies, and maximizing the potential for economic benefits and the capacity of local public and private organizations to absorb and utilize knowledge created in universities (Smith and Bagchi-Sen, 2010, Nilsson et al., 2003). Therefore, what works in one location may not work in another.

The contribution of this thesis is **not** to underpin the KBUD by finding the similarities with or differences from international case. The contribution of this thesis is to identify the necessary contexts underlying a *governance system* that it is necessary to take into account in order to achieve effective KBUD.

2.3 Geographical proximity and co-location as a response to KBUD

In addition to integrating university campuses with city activities, the geographical proximity of campuses with business and other knowledge institutions to form a knowledge precinct/hub or ‘science park’ is another way that universities can contribute to regional development. Many studies have tried to explore the geographical aspects of knowledge development and the localization of innovative or high-tech firms, stressing the fundamental role that proximity plays in mediating the processes of knowledge creation (Landry, 2008, Madanipour, 2011, McCann, 2013, Meusburger et al., 2009, O'Mara, 2015, Knoblen and Oerlemans, 2006, Laursen et al., 2011, Sternberg, 2000, Boschma, 2005, Jaffe et al., 1992, Petruzzelli et al., 2009, Cheng et al., 2014). There are also some cases, such as those of Brisbane and Melbourne, that explain how state governments and universities have worked together to develop knowledge precincts, where research investment is coupled with urban regeneration projects, with an increased focus on the universities’ engagement (Charles, 2011). Another

example is Eindhoven University of Technology in the Netherlands, which formed the Brainport Area, “the world’s smartest region”, in order to have strong collaboration with the surrounding business and cultural areas (Rytönen, 2015).

The positive outcome of geographical proximity can be economic, innovative, social, etc. Since knowledge is generated and transmitted more efficiently via local proximity, economic activity based on new knowledge has a high propensity to cluster within a geographic region (Audretsch, 1998). The agglomeration of knowledge centers can incorporate both the urbanization economies and localization economies by providing productions and services from a wide range of activities (Jacobs, 1969) or agglomerating the same industry or sector that shares common inputs and similar technologies for production (Chinitz, 1961, Cheng et al., 2014). Geographical proximity, science parks, clusters and/or co-located campuses are all manifestations of the idea/assumption that productivity is higher in conglomerated areas (Van Soest et al., 2006). Finnish regional science and technology policy also encouraged universities to set up technology parks on university campuses with Nokia or other research labs (Cooke, 2001). The idea was to establish a seedbed and an enclave for technology, playing the role of incubator, nurturing the development and growth of high-tech firms. Regarding university development, such clusters can facilitate the transfer of university know-how to tenant companies, encouraging the development of faculty-based spin-offs and stimulating the development of innovative products and processes (Felsenstein, 1994). Aalto University was established as a merger of three original universities from the fields of Arts, Business and Technology, to increase synergies and create innovations through a strong interdisciplinary agenda (Rytönen, 2015). Regarding regional development, clusters can act as a catalyst for regional revitalization and economic development, while providing work and living spaces for knowledge workers (Felsenstein, 1994).

A policy of aggregation amongst institutions of higher education can inspire new visions of campus development for universities to create innovative change (Calvo-Sotelo, 2012). A knowledge precinct or aggregation may enable the university to align its own needs to reshape the institution to fit new models of engaged research and teaching with external funding and policies. Accordingly, aggregation has an important role in stimulating innovative activity by creating spillovers within a given geographic location. Some countries like France and Japan built ‘techno-poles’ by attracting research branches to co-locate in special zones.

On the other hand, a high endowment of human capital and knowledge cannot alone facilitate the transmission of knowledge across agents, firms, and even industries. There is a need for interaction, communication and exchange between individuals (Saxenian, 1990, p.96). In these forums, relationships are easily formed and maintained, technical and market information is exchanged, business contacts are established, and new enterprises are conceived. This decentralized and fluid environment can also promote the diffusion of intangible technological capabilities and understandings (Audretsch, 1998).

Boschma (2005) defines five forms of proximity relevant to innovation:

1. Cognitive proximity, which implies interdisciplinarity, connectivity and interaction between different knowledge sources.
2. Organizational proximity, which can imply the intra-actor connectivity and union of values, cultures and interests in knowledge development.
3. Social proximity, which focuses on interdependency and interrelationships between individuals.
4. Institutional proximity, which focuses on inter-actor connectivity, interactive learning, cooperation and knowledge transfer.
5. Geographical proximity, which implies the physical vicinity of knowledge centers for better interaction.

The co-location of departments, offices or institutions is also consistent with increasing the geographical proximity to enable easier and more frequent interaction between members of different departments. The underlying assumption is that, by bringing individuals together, the functional barriers that separate departments are broken down, thus promoting close interaction to achieve common goals/interests. The co-location of engineers and production people at McDonnell Douglas, Ford's development of the Mustang, and Honda's production facilities showed that co-location can promote successful interdepartmental integration, higher levels of collaboration and interaction between departments, and higher levels of performance and satisfaction.

On the other hand, Korotka (2015) and Ratinho and Henriques (2010) argue that geographical proximity is not a prerequisite for effective (university-industry) interaction and collaboration, and that the other types of proximity may play a more significant role. For example, in the case of the University of Twente in the Netherlands (Korotka, 2015), cognitive, social and organizational proximity are more influential than geographical proximity in academics'

interactions with external partners. This can show that co-location or geographical proximity as an effective strategy may function differently in different contexts or organizations, depending on different cultural, political, social, economic, or environmental conditions. In addition, despite the fact that a body of research has been produced on the social effects of co-location, there is a lack of study focusing on the physical aspect of co-location and its impact on the urban development process. Many studies also neglect the deeper cultural-cognitive aspects of the change process underlying the formal arrangements, and, instead, view such changes as a linear historical process, in which the traditional form is replaced by the new logic (Lam, 2010).

Chapter 3 – Theory

In this chapter, the first section (3.1) starts by discussing governance theory, distinguishing it from ‘government’, addressing supportive and critical approaches to governance and its application for the Norwegian urban context. Section 3.2 discusses the governance concept in the higher education and Norwegian university contexts. Section 3.3 discusses how a complex, multi-layered and non-linear governance system can be investigated/understood. Subsequently, Section 3.4 explains which theoretical models are found to be consistent with the theoretical approach of this study and, through which modifications or combinations, the existing limitations can be overcome to develop the most fitted model.

3.1 Governance

“The debate about ‘governance’ arose when political, social and economic framework conditions brought about a questioning of traditional forms of government intervention and policy making” (Berger, 2003, p.221). In other words, the gradual change in governments’ role has resulted in the emergence of governance theory (Klijn, 2008, Healey, 2006, Rhodes, 1997, Jessop, 1995, Pierre, 2000, Holmen and Farsund, 2010).

The issue of governing society is summed up in a choice between state, market and civil society, being related in such a way that each excludes or precludes the other (B. Jessop, 2002, Røiseland and Vabo, 2008). Instead of using ‘state’ and ‘civil society’, some authors, e.g. Holmen and Farsund (2010), use ‘government’ and ‘network’, respectively, as governing modes.

The terms ‘state’ and ‘government’ are often used interchangeably in political discourse. They both refer to an organized political group that exercises authority over a particular territory. However, they can also refer to very different entities. According to Robinson (2013, p.556), “State is the nonphysical objective legal persons of international law, while government is the exclusive legally coercive organizations for making and enforcing group decisions”. Thus, the term ‘government’ is one representation and authorized agency of ‘state’, which refers to all public authorities and governmental branches (Robinson, 2013).

The traditional mode of governing was the hierarchical control of the government, in which the political values and preferences of the government were translated into laws and regulations (public interest) that were implemented and enforced by publicly employed

bureaucrats (Sørensen and Torfing, 2004). In the 1970s, this mode of bureaucratic welfare state was weakened, and public choice theorists blamed this failure on the idea that state interventions cannot be democratic, inexpensive and efficient at one and the same time (Arrow, 1963, Sørensen and Torfing, 2004). This failure led to a new form of governing, 'less state and more market', in which the invisible hand of the market was supposed to not only ensure an optimal allocation of private goods but also to regulate the public goods' production more efficiently. Therefore, the growing interest was in forms of economic coordination, which conformed to neither pure markets nor unitary hierarchies/government (Jessop, 1995, Pierre, 2000, Rhodes, 1997, Røiseland and Vabo, 2008). Later, this new form of governing mode manifested the theory of 'new public management' (NPM) that implied two meanings: managerialism and new institutional economics. The former indicated bringing private and public sectors together, and the latter introduced incentive structures, such as market competition, into public service provision (Rhodes, 1996). Nevertheless, the increased reliance on market forces was also criticized due to it depoliticizing public governance and failing to prevent instability, externalities and inequality, and thus enhancing state control (rather than reducing it) (Sørensen and Torfing, 2004, Jessop, 1998, Sager, 2013).

Both modes of governing, 'state' and 'market', failed because they threw their weight behind power and money, and thus undermined the social bonds and virtues of civil society (Sørensen and Torfing, 2004). Rhodes (1997) attributed this failure to the tension between the wish for authoritative action and the dependency on the compliance and actions of others. As a result, these modes of 'inappropriate elites' and 'command-operating' codes floundered in confrontation with organized social complexity, creating a system that frustrated everyone. Therefore, a new and distinctive mechanism of governing was needed to encompass the three dimensions of state, market and civil society. As a result, 'governance', as a new mode of governing, was derived from the negotiation rationality between state, market and civil society, in which decisions are no longer enforced by legal measures, economic incentives, or normative control alone (Scharpf, 1994). The interpretation is that the essence of governance was to focus on governing mechanisms, which do not rest on recourse to the authority and sanctions of government (Stoker, 1998). The evidence shows that there has been a shift toward more varied and complex patterns (Sørensen, 2004, p.784).

Bellamy and Palumbo (2010) characterize the passage from government to governance in three major innovations that are aimed to produce a more effective polity, which is less

dependent on command and control logic, and less vulnerable to government failure. These innovations are seen as three different dimensions: institutional, political and judicial. Respectively, the institutional dimension indicates the shift from traditional hierarchical to the network form of organization. The political implies the revision of the relationship between state and civil society in a more participatory direction. The judicial focuses on the shift from 'hard law' to more flexible forms of 'soft law' and stresses the superiority of targets and positive incentives as a means for implementation.

3.1.1 Governance versus government

In order to describe and propose the governance concept for this study, an initial step is to recognize the difference between government and governance. According to Jessop (1995), the first uses of 'governance' date back to the 14th century and mainly referred to the action or manner of governing, guiding, or steering. During the last two decades, however, the new and modern concept of governance has been used, as opposed to government, as a new process of governing (Rhodes, 1997). As a result, governing today embodies 'government' and 'governance' as two related and intertwined processes (Evans et al., 2006). "Government is the sphere of authority, and the legal, financial, political, formal and institutional processes that operate at the level of the nation state. It is characterized as the only decision-maker that tries to maintain the public order and facilitate collective action" (Stoker, 1998, p.17). It is based on centralization and control, whose relationships with other units of policy network are asymmetric (Rhodes, 1997). Governance, on the other hand, "is the sphere of public debate, partnership, interaction, dialogue and indeed conflict and dispute among local citizens, organizations and local government" (Evans et al., 2006, p.850). Therefore, it refers to "a shift from state sponsorship of economic and social programs and projects to the delivery of these through partnership arrangements which usually involve both governmental and non-governmental organizations" (Murdoch and Abram, 1998, p.41). Nevertheless, "both terms refer to purposive behavior, to goal-oriented activities, to systems of rule. However, government suggests activities that are backed by formal authority, whereas governance refers to activities based on shared goals that may or may not derive from legal or formally prescribed responsibilities" (Rosenau and Czempiel, 1992, p.4). According to this argument, governance is not the complete opposite of government. It is, however, a more encompassing concept, which brings both governmental and non-governmental institutions together. Furthermore, the outputs of governance are not necessarily different from those of government. It is rather a matter of a difference in processes.

In line with Peters and Pierre (2004), Røiseland and Vabo (2008) define governance as the non-hierarchical process whereby public and private actors and resources are coordinated and result in a common direction and sense. This definition emphasizes that public policies are developed and implemented through structures that are different from the hierarchical and are based on the interaction between different players (Holmen and Farsund, 2010).

Holmen and Farsund (2010), differentiate between ‘government’ and ‘governance’ as different types of governing (see Table 3-1) by their form/model (vertical versus horizontal), type of involved actors (public versus private and elected versus non-elected), nature of actors’ relation, decision-making process and outcome, and control mechanism (authoritative versus mutuality).

Table 3-1: Illustration of difference between government and governance. Adapted from Holmen and Farsund (2010, p.33)

	Government	Governance (multi-actor system, including government)
Governing form/model	Vertical/hierarchy	Horizontal/interactive
Actors	Public	Public and private
Inclusion	Elected actors	Elected and non-elected actors
Relation type	Dependency	Interdependency
Decision-making process	Voting, authority and negotiation	Expanded negotiation
Decision outcome	Decision of the majority	Consensus and voluntary agreements
Control mechanism	Authoritative	Trust/reciprocity (mutuality)

Rhodes (1996, p.660, 1997, p.53) lists the shared characteristics of governance in different types of use:

- 1) Interdependence between organizations,
- 2) Continuing interactions between network members, caused by the need to exchange resources and negotiate shared purposes,
- 3) Game-like interactions, rooted in trust and regulated by rules of the game that are negotiated and agreed by network participants,
- 4) A significant degree of autonomy from the state. This explains that networks are not accountable to the state; they are self-organizing.

Bellamy and Palumbo (2010) expand the use of governance to two general categories: first, neo-institutional political scientists, such as Rhodes, who use governance as new alternatives

to both markets and hierarchies/government, the ‘hollowing out of the state’ concept; second, systematic political sociologists, such as Kooiman, Stoker, Kjaer and Pierre, who use governance as a process or style of government, as a form of governing or steering, implying the ‘state restructuring’ concept. Rhodes (1996) regards the essence of governance as governing without government, while Kjaer (2004) believes that the concept of governing without government is false. Pierre (2000) also believes that the emergence of governance should not be taken as proof of the decline of the state but, rather, of the state’s ability to adapt to external changes. He sees governance as “institutional responses to rapid changes in the state’s environment” (Pierre, 2000, p.3).

By the ‘hollowing out of the state’ concept, Rhodes (1997) means that the (British) government loses hands-on control; this takes away its leverage to steer the networks and erodes its capacity to coordinate and steer. Rhodes’ arguments are mostly inspired by Kickert (1993), who sees government as one of the many actors that influence the course of events in a societal system and have limited control capacity, due to the lack of legitimacy, the complexity of policy processes and the multitude of institutions. Kickert believes that no single superordinate actor, not even the government, has the power to exert its will and control social institutions. Social institutions control themselves autonomously. Rhodes (1997) also adds that the skills of government have changed to ‘game-playing’, ‘joint action’, ‘mutual adjustment’ and ‘networking’, which has led to self-organization, as a new mode of governing. Kooiman and Van Vliet (2000, p.20) use self-governance as equal to self-organization and define it as “the capacity of societal entities to provide the necessary means to develop and maintain their identity, by and large, by themselves, and thus show a relatively high degree of social-political autonomy”.

While Rhodes (1997, p.59) sees a self-organizing network as a challenge to governability, due to the autonomy of networks and their resistance to central guidance, Pierre (2000, p.5) notes that “What we are observing is less the decline of the state and more a process of state transformation and thus we are still far from dismissing the state as the center of political power and authority” (Pierre, 2000, p.5).

According to the most definitive and conclusive literature, the globalization market has caused an inevitable change in the form of government’s steering and controlling, which does not necessarily mean the loss of government’s control and authority. This thesis agrees that, even if the form and level of government’s power and influence has changed, it has not been taken

from government and given to others. Indeed, it is partly shared with other actors in policy networks. Therefore, instead of looking at governance as a “hollowing out of the state” (Rhodes, 1996), it is to be considered a new strategy for state re-structuring that is based on a public-private coordination (Pierre, 2000), with the plurality and complexity of hierarchies, markets and networks (Kjaer, 2004). Subsequently, the meaning of governance network (in this thesis) is not exclusive to informal and horizontal relationships but also includes hierarchical authority patterns.

Since the main focus of the thesis is on interdependence and interaction among actors, the chosen definition of ‘governance’ is:

“the ways in which stakeholders interact with each other in order to influence the outcomes of public policies” (Bovaird, 2005, p.220) or the system through which a kind of order is achieved among several actors, who are cooperating and contributing resources to the negotiation process (Jessop, 1998) to reach a compromise, even though they might have conflicting interests.

3.1.2 Two generations of governance

Torring and Sørensen (2007), Holmen and Farsund (2010), and Mayntz (2003) consider two generations of governance research. The first generation is preoccupied by explaining how and why the governance networks are formed, particularly in comparison with hierarchy of the state and anarchy of the market. As Figure 3-2 shows, the first generation is divided into four basic theoretical positions (interdependency, governmentality, governability and integration theory) and two important respects (calculation versus culture or conflict versus coordination). The first generation of governance indicates: 1) whether the theories conceive rational calculation (self-interested individuals’ rational calculation of costs and benefits) or culture-bound rule-following (rules, norms and values that are intrinsic to particular cultures and historical contexts) as the driving force of social action; 2) whether the theories perceive persistent conflicts or smooth coordination as the defining feature of societal governance. Figure 3-2 represents the theoretical position of each theory. For example, interdependency theorists conceive rational calculation and perceive persistent conflict, while integration theory conceives rule-following and smooth coordination.

“Some theories tend to view conflict and power struggles as a constitutive, and yet potentially destabilizing feature of societal governance. Whereas other theories tend to downplay the role

of conflict, and instead conceive indifference or inappropriate action” as the major obstacle to societal governance, which is caused by the lack of coordination (Torfing and Sørensen, 2007, p.16).

Table 3-2: Overview of four different governance network theories (Torfing and Sørensen, 2007, p.17)

	Calculation	Culture
Conflict	Interdependency theory (Rhodes, 1997, Kickert et al., 1997, B. Jessop, 2002)	Governmentality theory (Foucault, 1991, Dean, 1999, Rose and Miller, 1992)
Coordination	Governability theory (Mayntz (1993a), (Scharpf, 1993, 1994, 1997, Kooiman, 1993, Mayntz, 1993b)	Integration theory (March and Olsen, 1995, Dimaggio and Powell, 1983, 1991, Scott, 2000)

Gradually, governance has faced many criticisms/questions regarding efficiency, democracy, accountability and legitimacy that none of the theorists could defend perfectly. One of the arguments was that governance theory gives ‘unfettered’ power to main policy-makers/actors to do almost whatever they want. There were some criticisms that governance theory plays into the hands of special interests, who wish to use the resources of their organization for their own ends by using non-market forces to reallocate the wealth (Torfing and Sørensen, 2007).

Thus, new attention was drawn to possibilities of governance network failure, particularly in the work of B. Jessop (1998, 2002, 2003). As a result, the second generation emerged to deal with the potential problems, challenges, or sources of governance network failure: for example, changes in the composition of the network actors, the presence of unresolved tensions/conflicts, weak and ineffective leadership, frustration over the lack of clear and visible results, and external events that disturb the policy process. They can destabilize network governance and turn it into a malfunctioning talking shop (Torfing and Sørensen, 2007).

In continuation of this, many theorists have started to look at how public authorities and other influential political actors attempt to regulate network governance, which is itself characterized by a high degree of self-regulation (Kickert et al., 1997, B. Jessop, 2002). This regulation of self-regulation created the new concept of ‘meta-governance’.

Governance capacity and planning systems in cities are different and restricted by national institutional differences. Even in Europe, there are significant differences between east and

west and between north and south (Newman and Thornley, 1996). In Britain, for example, the dominant factor that shaped all aspects of public policy during the 1980s and 1990s was the arrival of the Thatcher government in 1979. This government attacked the whole concept of the post-war welfare state and tried to replace it with a more market-oriented approach. An important part of the Thatcher reforms influenced local government, whose power was reduced, to set up frameworks for the freer operation of market forces. As a result, the metropolitan authorities and the Greater London Council were removed as a tier of government in 1986 (Newman and Thornley, 1996). The Thatcherite ideology of economic liberalism (market as the best decision-making process) and the ‘authoritarian decentralist’ (strengthening of central government) approach were also applied to urban policy. This resulted in an enhanced role of the private sector and a property-led approach to urban regeneration (Newman and Thornley, 1996), which denied the importance of local democracy and political representation (Duncan and Goodwin, 1988).

3.1.3 Urban governance in the Norwegian context

Norway has a unitary political system, in which there is a three-tiered political-administrative structure, consisting of municipalities, counties and central government (Hansen, 1980). It has a fragmented management structure, in which a multitude of actors are involved in the management of urban areas. The public authorities’ involvement, responsibilities and tasks have been divided between the central state, the counties and the municipalities. At the central level, the central government is accountable to the national assembly/parliament (the Storting). The parliament is the legislative body, which decides upon the budgets and economic frameworks, within which the regional and local authorities can operate. The parliament determines the division of functions between the different levels of government, (i.e. central government, counties and municipalities) and the framework of their activities through legislation and decisions regarding local government funding. It is the national level that determines which local and regional projects are worth concentrating on.

“State grants account for about 40 percent of total local government revenue, whereas 50 percent come from local taxes, which are also mostly governed by the Parliament. The rest is made up of fees and charges paid by the users, a source of revenue which has been growing in importance for the municipalities” (Norges Kommunerevisorforbund, 2007, p.3).

The Norwegian counties have been said to have an increased responsibility for developing a regionally differentiated policy, targeting business development and innovation through

bottom-up, endogenous processes (Hanssen et al., 2011, Selstad and Onsager, 2004). However, counties also lack sufficient funding for regional development and are subject to provisions and scrutiny from the national level.

In Norway, the importance of forming a unitary and hierarchical system of management in municipalities and counties systems is emphasized (Hofstad, 2013, Medalen and Leknes, 2010). The Norwegian Planning and Building Act (revised in 2008) emphasizes the strategic aspects of municipal planning and the synchronization and coordination of planning activities between the national, regional and municipal levels (Nordregio, 2016). The government and hierarchical logic still play a dominating role in regional-local development, and the “shadow of hierarchy” is still strongly seen (Hanssen et al., 2011). However, there is no strict judicial hierarchical binding between the governmental levels, which introduces some freedom and flexibility into the Norwegian system (Harvold and Nordahl, 2012).

The system of governance in local government in Norway is based on the principle of separation of functions, which is a clear distinction between political and administrative matters. On the other hand, municipalities are considered as the main planning authorities (Harvold and Nordahl, 2012) that are required to have a municipal master plan, which is aligned with the regional-national interests and functions.

The municipal plan includes both a social element (samfunnsdel) and a land-use element (arealdel). The former includes strategic priorities for development of the society as a whole, public services and a spatial development policy. The latter includes maps and provisions that are legally binding for detailed plans and building permits. The co-location of university campuses, therefore, has not directly been a part of the Trondheim Planning Strategy, but it was in line with the Knowledge-Based Urban Development Strategy, mentioned in the Trondheim Master Plan (Trondheim Kommune, 2014).

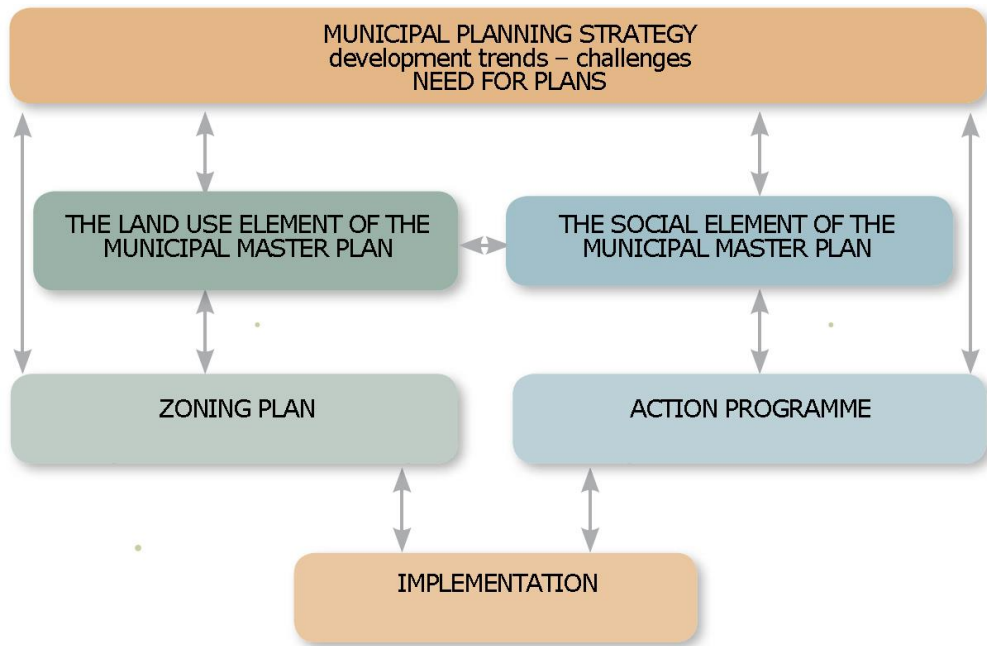


Figure 3-1: Municipal planning process (Regjeringen, 2014)

The new concept of governance in Norway is defined as an interdependent network of involved parties, in which decisions are taken as a result of discourse or negotiation. In addition, it is a planned and target-oriented activity, involving organizational processes, formulation of objectives and coordination. In addition, empirically, there is no direct link between governance and the way the peculiar interactions are organized in practice. It can be either in the form of ‘network’ or ‘organization’ (see Figure 3-3) (Røiseland and Vabo, 2008).

With this base, the typology of organized forms of governance differs, depending on various variables, e.g. management level, policy area, policy process and duration (Røiseland and Vabo, 2008). The figure below shows that Norwegian governance is empirically materialized in different ways, from highly formalized forms of interaction in ‘corporations and foundations’ to informal ‘cooperation’. In the more ‘formalized’ partnership, the organizational/governance structure will be closer to ‘organization’ than ‘network’.

Table 3-3: Selected empirical expression for samstyring in Norway (Røiseland and Vabo, 2008, p.93)

Informal ←					→ Formal
	Cooperation	Projects	Partnership/ inter-municipal cooperation	Councils and committees	Corporation/ foundation
Possible organizational structure	Network organization	Network organization	Network organization	(Network) organization	Organization
Possible authoritative management	Varying	Varying	Depending on the agreement or deal	Quite high	Depending on the ownership/low

3.2 University governance

Over the past four decades, universities have been confronted with increasingly complex external pressures related to their governance. Currently, there is increasing pressure from university policy-makers (higher education institutions in general), aiming at institutional change to improve their global research excellence in light of the knowledge-based development. This refers to the assumption that universities make an important contribution to the national production of wealth and to the performance of the nation in the global economy. As a result, the process of the institutionalization of universities, in which their institutional features (formal and informal), norms and values have been developed over time, is under the influence of today's knowledge world (Boin and Christensen, 2008). This new trend has caused some structural challenges for universities, such as emergence of external stakeholders, who represent diffuse interest groups. "It has penetrated the determination of values, mission and purposes inside universities, the systems of decision-making and resource allocation, the patterns of authority and hierarchy, and the relationship of universities to the different academic worlds within and the worlds of government, business and community without" (Marginson and Considine, 2000, p.7).

The contemporary transformation in the relationship between academia and the outside society presents a major challenge, not only to the external conditions of academic work but, more fundamentally, to the core elements of academic professional identities. Many problems arise simply because universities are constantly in a state of 'flux and metamorphosis' that is in the nature of academic life, *and academics are constantly trying to protect their cultural, ideological and political distinctiveness* (Trakman, 2008). In addition, universities are complex organizations, comprising different academic disciplines and departments, and

science itself is also a dis-unified endeavor pursued by groupings of experts who are separated from each other by heterogeneous research approaches (Knorr-Cetina, 1999).

Overcoming these evolving challenges has attracted the attention of researchers to the topic of ‘university governance’ in the higher education field, which is defined as the:

General organizational technologies and practices through which higher education institutions attempt to regulate and control what happens within their increasingly porous and contested boundaries. It implies a range of organizational forms, modes of control and regulatory practices through which individual and collective behavior is routinely monitored, evaluated and modified. (Reed, 2002, p.164)

The history of university governance

At the end of the 18th and the beginning of the 19th centuries, the “university was a fundamental instrument for the construction and reinforcement of the nation-state”. The university was "an agent of national reconstruction, allied with the overhaul of recruitment to the apparatus of state" (Amaral and Magalhaes, 2002, p.2, Neave and Vught, 1994, p.268). Besides developing skills and human capital, universities had to forge the national political identity through the preservation and enhancement of the national culture, consolidating the nation-state (Amaral and Magalhaes, 2002). The university was placed within the public domain as a national responsibility, which limited the university’s control and administration during that period. “The state acted as the sole regulator of the higher education system by using traditional mechanisms of public regulation, including legislation, funding, and in many cases, the appointment of professors”. The concept of university was based on individual academic freedom but not on institutional autonomy (Amaral and Magalhaes, 2002, p.3). However, all over Europe, governmental intervention and regulation were perceived as excessive, and governments began to realize that it was not in the best interests of society to maintain centralized and detailed control over university systems (Amaral and Magalhaes, 2002). In response to the criticisms, government strategies changed by partially replacing the traditional public regulation mechanisms with market-type mechanisms and progressively embracing the principles of university autonomy and self-regulation. This transition is seen as a shift from the model of state control to the model of state supervision (Neave and Vught, 1994).

These new mechanisms induced competition among universities (for students, for funding, for research projects, etc.) to become more efficient and more responsive to outside demands. This process led to the emergence of a new university organizational stereotype or model, known as the 'entrepreneurial university' (Marginson and Considine, 2000).

In many universities, the real market was not allowed to emerge; (thus) something like a "command economy" appeared (Trow, 1996, p.310). In addition, governments did not allow for a complete degree of institutional autonomy. Indeed, they kept a firm hand on the regulation of the system, creating a hybrid model of regulation (Maassen and Van Vught, 1988). The new movement towards market orientation, and the financial uncertainty created by this movement, have led to the development of a more bureaucratic organization, with the elected university rector/vice chancellor being replaced by the appointed one, selected on the grounds of management abilities (Amaral and Magalhaes, 2002).

These new changes and outside pressures on universities were assigned to the nature of the university as a public good, which required its interaction with and response to outside interests for its survival. It is in this context that the concept of the 'third party' or 'external stakeholder' emerged in university management structures, in order to make the university more visible to society. Internal stakeholders implied the academic community, and external members referred to the representatives of the 'outside world'. At the beginning, external stakeholders did not have very active interference in university affairs, only reminding the university about outside needs and interests. The presence of the third party was both legitimate (having a 'legitimate' interest in the social, economic and cultural function of the university) and useful (enhancing the university's innovation and responsiveness to the 'real' needs of society) (Amaral and Magalhaes, 2002, p.2).

Later, however, universities were appointed to be even more responsive to the needs of society, which required the involvement of society (external representative) more directly in the university's internal affairs, such as the proposed budget, localization, and priorities of the study programs. Thus, the third party's responsibility to protect academic freedom from external interests has gradually changed to protect outside interests from attacks coming from inside the institutions themselves (e.g. opening up the university campuses and facilities to the outside world; see Chapter 2, p.13). Subsequently, the traditional idea of the independent third party, which has no direct interest in the result, has been replaced by appointing people who have a stake or an interest. This change shows a movement away from traditional

university governance models by eliminating collective decision-making bodies and replacing them with a more managerial organizational structure.

The replacement of elected rectors by appointed ones, the increased salience of external stakeholders, the dismissal of traditional governance mechanisms and the proliferation of boards of trustees are some of the most visible signs of the changes that have taken place in universities.

Some believe that the changes taking place can result in negative consequences for the universities insofar as core academic values may be replaced by short-term views and criteria focusing on the needs of the economy (Amaral et al., 2002). According to Paradeise et al. (2009), these external pressures on the universities have created some tension internally, and conflicts of interests between the administrative and academic staff have arisen. Therefore, the academic staff have tended to leverage for academic freedom, reflecting path-dependent resistance towards any change or reform that is imposed on them or the university. The common cultural argument that academic staff often use is that the university developments are no longer sensitive to the academic traditions and special characteristics of the universities (Christensen, 2011). There is a growing concern that “Academics are losing their dominating power over the university” (Altbach, 2000, p.10) and whatever direction they take, in response to external pressing economic, political and cultural demands, incurs substantial risks, uncertainty and costs that are difficult to manage (Amaral et al., 2002). “It is no wonder that many academics claim today that they are confronted with increasing attacks on their freedom and closer control over their work by their own institution” (Amaral and Magalhaes, 2002, p.8). Accordingly, there is a certain amount of skepticism expressed as academic freedom and autonomy, the universities’ traditional norms and values, are gradually being eroded, and the position of scientists is under threat due to the knowledge-economy revolution (Lam, 2010, Beck and Young, 2005). The centralization and concentration of power have reduced academics' opportunity to participate in (strategic) decision-making and have had negative implications for the university's viability. Bypassing academics has also affected the quality of universities’ decisions and capacity to implement the higher education policies.

Different universities react differently to the external and internal pressures. The history and cultural profile and root, which a university develops in its early years, along with institutional environments and governance traditions, complexity of institutions and personalities of the main individual leaders in charge, will heavily influence and delimit the university’s later

trajectory and development strategies (Scott, 1995, Krasner, 1988). Accordingly, in order to evaluate the governance network in this case, the change in the university's institutional governance structure, operational efficiencies and remediation strategies for overcoming insufficiencies is a part of the investigation. In addition, the role of academics and their practices to resist change, negotiate or alter the process to follow their old and traditional academic norms are taken into account.

University governance in the Norwegian context

Norwegian universities, as part of higher education, are state-run. The higher education system is centralized, with the Ministry of Education and Research having the overall responsibility for defining universities' rights and duties and financing, including grants for property development that is acknowledged by the parliament.

In Norway, higher education is under the influence of three waves of reforms that have taken place during the last 50 years. The first one is associated with the Ottosen Committee, which submitted its five reports from 1965 to 1969, to integrate all post-secondary education into one higher education system. The aim was to make the education system more adaptive to student demand and the labor market. This was considered the first movement towards the decentralization of higher education. However, the government was supposed to control and steer the internal affairs of the institutions.

The second reform is associated with the 'Hernes Commission' in 1988 (Mjøs, 2000). The Hernes Commission also aimed to integrate all higher education into one coordinated and flexible system to strengthen the quality of research and education. One aspect of this commission was the internationalization of higher education. A key element was the idea of a 'Network Norway', which meant that all institutions of higher education should be part of a unified system, based on specialization and division of labor. In this regard, universities and university colleges that had previously followed separate laws became unified, due to the same law in 1990. Under the effect of this reform, the regional colleges were reorganized and merged into 26 larger state colleges. This caused many colleges to aspire to become 'real universities'. In fact, three of the state colleges have become universities today: namely, the University of Stavanger, the University of Agder and Nord University.

According to Kyvik (2002), the objectives of this reform were to create larger and stronger disciplinary units, create a common educational culture, enhance contact and collaboration

between different disciplines, offer students opportunities to combine subjects, create better organizational conditions for adaptation to changes and societal needs, increase cost efficiency, and improve library, ICT and administrative services. In addition, this reform aimed to prevent the two largest regional colleges from achieving university status. The minister of education was very intent on limiting the number of universities. “By establishing a binary system with two distinct higher education sectors, and by amalgamating these colleges with the professionally-oriented non-academic colleges in each of their regions, the minister hoped to put an end to their ambitions to become a university” (Kyvik, 2002, p.55).

The third reform referred to the Mjøs Commission in 2000 (Mjøs, 2000), which proposed greater autonomy for the higher education institutions. This reform proposed that universities and colleges should have the freedom to establish new study programs on their own, without prior consent from the Ministry of Education, and have independent responsibility for shaping their own future (Larsen, 2002). In addition, it was determined that the ministry should appoint the governing body of the institutions (university board) with a majority of external representatives. In addition, the rector/vice chancellor was to answer to this board.

Today, many of the Mjøs report elements are under implementation (Nilsson et al., 2003, Larsen, 2002). The university board is the highest governing body, responsible for acting according to the framework and guidelines of the Ministry of Education.

3.3 Structure and process, two main elements of governance

The theory on governance has concentrated on three interpretations: descriptive, analytical, and normative (Pierre and Peters, 2000, Jordan, 2008). In addition, these theories tend to be mainly either normative, empirical and/or analytical; thus, the dialogue between these three perspectives is relatively limited, at least in terms of learning and applying lessons (Jordan, 2008).

- The ‘descriptive theory’ refers to ‘governance as structure’, which includes different institutional structures and arrangements and the inclusion of societal actors under new conditions (Berger, 2003, p.220). Governance as structure is about the position of each actor in a network and in relation to each other. The descriptive theories try to describe and understand where the network stands and what the reality of the actors’ (formal) interactions is, in terms of their positions.

- The ‘analytical governance theory’ looks at ‘governance as process’. It is about the interactions among structures and the outcomes of these interactions. Additionally, it looks at the inclusion and influence of different actors that can change across sectors and over time, due to the uneven distribution of power and influence within their network(s). Since the differences in the power and influence of actors make the decision-making conflictual (Pierre and Peters, 2000, p.31), ‘governance as process’ looks at the interaction and negotiation practices of different stakeholders and the way they cope with potential conflicts to make decisions (Pierre and Peters, 2000, Berger, 2003, Lindblom, 1965, Flyvbjerg, 1998). The analytical governance theories analyze the background of specific actions or decisions at specific times.
- ‘Normative governance theory’ is about identifying what governance changes are needed to implement a plan or make a decision (Jordan, 2008), realizing when a governance model is not working. One of the most well-known normative and prescriptive formulations is the concept of ‘good governance’. Much of the literature on governance uses different factors or measures to evaluate governance, including efficiency, legitimacy, accountability, transparency, democracy, etc. However, this thesis argues that governance systems may function differently in different contexts, in light of particular histories, cultures and practices. Accordingly, a democratic, bottom-up, transparent and/or highly inclusive governance system in one level or context may embed a distinctly opposite output in another level (e.g. superstructure) or context. In this regard, to measure governance, first governance structure and process (descriptive and analytical governance theories) should be described and analyzed to identify how and why the system does not work or works properly. Thus, instead of benchmarking governance systems on good practice elsewhere, this thesis concentrates on the longitudinal transformation of governance ‘structure’ and ‘process’ in the case of Trondheim. For that matter, we claim that optimal governance is responsive to the context, instead of being fitted to the context. The governance structure will provide the basis for the analytical governance process to understand and analyze the underlying causes that have created the specific decisions as results of different actors’ actions and relational networks.

To have an overview of the future of the theory on governance, there is certainly a need to move beyond grand theories and typologies of governance, and to undertake more detailed empirical testing. Therefore, instead of adopting a rather static perspective, which simply

describes the presence and/or absence of particular modes or instruments of governing, there is a need to explore the causal relationship between governance interventions and outcomes 'on the ground'. In other words, in order to ensure good governance, in terms of e.g. legitimacy and accountability, we need to understand what forms of governing (i.e. structure) lead to what sorts of outcomes (i.e. process). The concentration of normative governance on the future direction has limited its scope for developing a cumulative body of knowledge. The underlying causes of (and hence remedies for) inefficient governance/un-governability are deeply contested, so that consensus on even the most basic of policy packages will probably always remain elusive. In this regard, normative governance is subtly interconnected with descriptive and analytical governances, i.e. governance structure and process (Jordan, 2008).

3.4 Theoretical framework based on structural-functional governance

In many disciplines, urban systems are understood as complex open systems. Such complexity, which is rooted in different societal domains that occur at different levels and involve different actors with different perspectives, norms and values, cannot be solved with simple and short-term solutions (Loorbach and van Raak, 2005). Theories that focus on the world, where change is non-linear, uncertain, and imbedded in a diversity of multi-level systems can be relevant to this thesis in order to get a better analytical grip on the limits and possibilities of governance (Byrne, 2003, Law, 1986, Duit and Galaz, 2008, Rydin, 2013). However, few studies have accounted for the cumulative impact of governance structure and function and their interactions in the real world, multi-layered and complex systems. Many planning theories focus on the interrelations of structures and subsequently fail to recognize the significant influence of functions within the system. Even though some theorists, e.g. Healey (2007), emphasize and support the concepts of structural-functionalism to understand governance, they do not provide a practical tool or approach to inform evidence-based governance in practice. In addition, analysts of governance have mainly focused on how planning or policy-making challenges are processed, rather than on understanding the dynamics of how political problems emerge (Goetz, 2008).

Among all planning theories, a recent and more complete theory is 'structural-functionalism', which touches the concept of descriptive-analytical governance and explains how 'governance process', an asymmetry of power relations between different 'structures', affects the outcome of planning and decision-making (Potts et al., 2015). However, this theory has some

limitations that challenge its completeness to be used solely. In the following section, this theory and its limitations are introduced.

Different authors have recognized that a social system cannot be limited to only one tradition (model/theory); it needs to draw on different traditions. For instance, (Friedmann, 1998, p.252, Friedmann, 1999) and Mazza (1996) believe that, due to the dual and rather conflictual nature of planning, a complementary approach is needed to perceive the relationship between action and knowledge, and knowledge and power. In certain periods and for certain purposes, one or two forms of planning or decision-making discourses can be more related, but neither of them is self-sufficient. Accordingly, many authors address the cross-scale complexity and interrelationships between ‘governance’ and ‘planning’ theories and ‘governance’ and ‘decision-making’, both directly and indirectly. Forester (1989, p.52) discussed the “politics of muddling through” and described practice in administration and planning by using different attributes of governance function, such as setting and time, that define conditions of administration and planning (see Table 4 in Forester, 1989, p.53). In addition, Forester (1989) interconnected the governance function with governance structure, implying that, in each decision-making setting, depending on time and level of complexity, different actors choose different strategies, such as networking/satisfying, bargaining/adjusting or counteracting/anticipating. Lindblom (1965) was also concerned about reaching agreement in confrontation with diverse and conflicting interests and looked at governance function, a process of bargaining and compromise-seeking between the interest groups concerned with a planning issue. Lindblom and Woodhouse (1993) also described governance function as interactive and incremental components, due to the different roles and power/influence of actors that are evolving over time within decision-making processes. In the Norwegian context, Medalen and Leknes (2010) also synchronously looked at planning and governance systems and concluded that, to understand and search governance, it is not enough to dig into governance theory; it is also necessary to exploit planning theory. Røiseland and Vabo (2008) included the organizational (decision-making) theory in their governance research and came up with a similar conclusion, recommended to research governance through organizational and decision-making theory.

However, there are few thorough studies that, while empirically and analytically addressing the interconnection and similarities of ‘planning’ and ‘decision-making’ theories, explain the gaps, disagreements and disparities between them, bringing them together as a practical tool

or approach to shed light on evidence-based cases for understanding complex and multi-layered governance structures and processes in practice. Forester (1989, p.64) argued that repertoires of theories are needed to understand the complexity of policy-making and planning through the structure and process of network governance. However, he argued that, depending on the context of the research, some theories may be more dominant, relevant and resourceful than others.

While Forester's (1989) main focus is on the combination of theories to understand the complex planning and decision-making process, in which governance is seen as a conflict management method, this thesis focus on the combination of theories to investigate complexity of governance in planning and decision-making processes.

Within the existing theories, planning theories usually form the general cognition of the governance issue, with a main focus on its structural components, while decision-making theories provide sufficient practical tools for assessing and analyzing the different functional aspects of governance process. This thesis, however, argues that governance structure and process (descriptive and analytical perspectives of governance) are interconnected. In this regard, the aim is to combine and integrate the theories of planning and decision-making, and, through their interconnections and similarities, provide greater insight into the contextual complexity of the governance issue. In addition, by finding the gaps between these complementary theories, an appropriate theoretical framework is modified/developed to investigate how dynamic, multi-layered and complex governance structures and processes have led to different outcomes (of planning and decision-making) over time.

Some of the related and consistent theoretical models that have concentrated on the complex interplay between governance 'structure' and 'process' over time are 'structural-functionalism theory' in the planning context (Potts et al., 2015), and 'rounds model theory' in the decision-making context (Teisman, 2000).

3.4.1 'Structural-functionalism' model of planning

In line with the theoretical framework of this thesis, Potts et al. (2015) acknowledged that:

*...any analysis of governance underpinning complex planning systems must consider how the system is **structured** and organized, but also the way in which the structures in the system **function** (referring to governance process). Analyzing both the structures and functions enables planners to take a more systemic view of decision-making, while*

still accounting [in a non-linear way] for the numerous dynamic interactions of multiple structures across scales and policy spheres. (Potts et al., 2015, p.13)

The structuralism-functionalism model (see Figure 3.2) conceptualizes a society as an open system of interacting parts and looks at governance structures and processes as interconnected and interdependent components (Potts et al., 2014). It suggests that, in order to fully understand planning systems, practitioners and theorists must consider the system as a whole. It is important to recognize the cumulative influences of the broad political, social, economic and cultural contexts of the system and the way in which institutions/individuals interact, based on their roles and positions in the planning and decision-making process. In addition, the structural-functionalism perspective/theory attracts the attention to power, agency and the networks of actors, which inherently drive functional connectivity within planning systems, and declares that it is difficult to understand the dynamics of planning without considering them (Forester, 1989, Potts et al., 2014).

In this model, **structures** are organized or institutionalized in a specific manner and consist of many interrelated, interdependent, but also autonomous, individuals, existing at different levels of society: national, regional and local (see Figure 3.2) (Potts et al., 2014). They can include government agencies, industry groups, non-government organizations, community groups and individuals. Structures run processes and are involved in different planning or policy cycles, such as goal-setting, strategy development, implementation or evaluation, and produce different outputs (e.g. formal documents such as legislation, policies, strategies, plans) to guide actions for the achievement of desired outcomes. Therefore, structural components are defined as institutions and strategic outputs, which are shown in Figure 3.2. Structural components in this model are considered 'static' elements that carry out typical roles within the strategic policy or planning system. It is explained that being static does not mean that structures cannot change, but they change at a slower rate than the functions. They help to understand where the network stands and what the reality of actors' relations and networks are, in terms of their different knowledge use, connectivity and capacity.

The structural-functionalism model uses the rational planning approach to discuss and analyze the underlying complexities and uncertainties, in which visioning and objective-setting, research and strategy development, implementation and monitoring/evaluation are the recognizable stages of strategic planning. However, as Figure 3.2 shows, planning is designed as an ongoing, less linear and more iterative and adaptive planning process, capable of

responding to particular political, social and institutional contexts, constraints and changes within the system (Vella et al., 2011). In addition, it assumes that different actors can simultaneously be involved in a number of rational planning steps such as implementation and monitoring, or strategy development.

The **functional** dimension of the structural-functionalism approach connects the actors in a system but also represents the relationships between them. The functional components tend to be more dynamic and less robust than structures. In this model (Figure 3.2), three cornerstone functional components are used to investigate ‘governance processes’, which include 1. knowledge use, 2. connectivity and 3. capacity.

1. Knowledge use indicates the importance of applying, coordinating and integrating relevant social, economic, environmental, traditional and historical knowledge, rather than one set of knowledge or one method, to solve complex problems and enable better functioning governance systems. “Knowledge is considered highly dynamic, which requires actors to be flexible and connected to ensure emerging knowledge is continuously fed into planning and decision-making” (Potts et al., 2014, p.18).
2. Connectivity implies a collaborative approach of stakeholders’ engagement and participation, which can develop consensus and build stronger community and institutional networks (Potts et al., 2014). In structural-functionalism, the fragmentation of institutions is seen as an impediment to the alignment of national and regional-local priorities and, thus, to the success and effectiveness of planning processes.
3. Capacity is another key driver of the system’s overall functionality; it refers to the power or capability of institutions to achieve outcomes, depending on the amount and types of capital/resources that they have accrued or access (Potts et al., 2014). In this theory, capital/resources include the human, social, financial and physical, which are only a part of building capacity. It is mentioned that, besides capital, leadership and agency are also important. Different actors may have access to adequate capital to take an action; however, they may fail to do so because they are unable to act due to legal or political constraints, lack adequate motivation (incentives or disincentives) or are opposed to the action, strategically or philosophically.

In the structural-functionalism model, the levels of capacity, connectivity and knowledge are considered unequal among different actors, as shown in the different sizes and colors in Figure 3.2. Different sizes of rectangles represent the greatness of the capacity. The

thickness of arrows represents the strength of connectivity, and the colors of the rectangles represent the amount of knowledge.

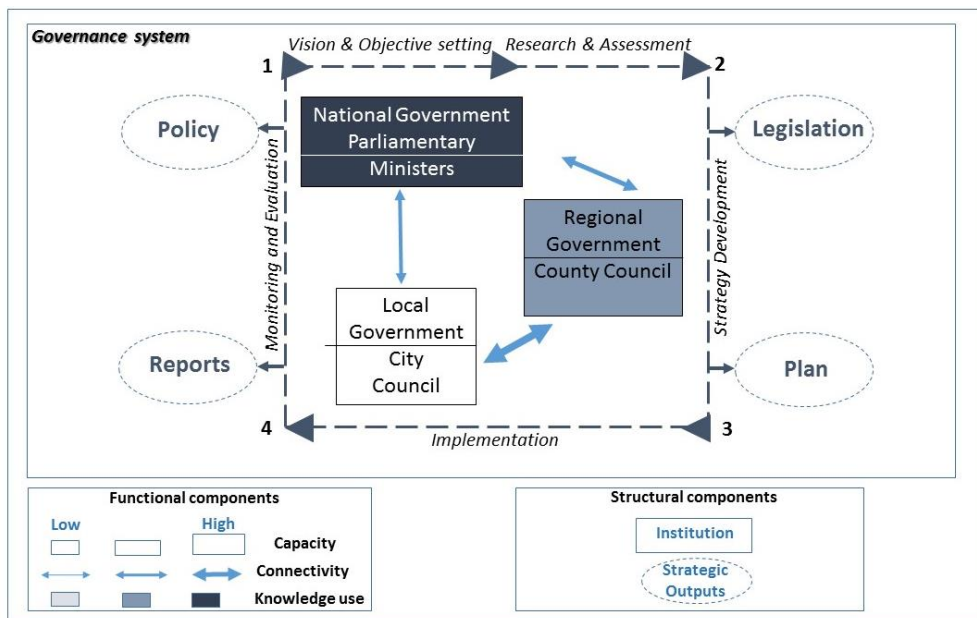


Figure 3-2: Interactions between structures and functions in a governance system; adopted from Potts et al. (2014a, p.19)

Structural-functionalism provides a logical, systematic and evidence-based approach to the analysis of strategic planning systems that is complementary to existing theories of planning. It recognizes the inherent complexity and iterative nature of planning systems and allows analysts to consider a plethora of interactions and other factors influencing planning processes and outcomes across scales. Therefore, functionality is explained by different levels of connectivity between actors in order to have access to different forms of capital (resources). Access to these capitals constitutes an actor's capacity and their ability (power) to use, communicate or manipulate different forms of knowledge/information. Structural-functionalism theory discusses the interconnection between functional components, among which knowledge enhances power and influences capacity and connectivity. Connectivity and integration between different actors/structural components also enhance stability and the overall capacity of the governance system (Potts et al., 2015).

Since the differences in actors' capacity (power and influence) make the decision-making conflictual (Pierre and Peters, 2000, p.31), functional components of governance should also look at the negotiation practices of different stakeholders and the way they cope with potential

conflicts to make decisions (Pierre and Peters, 2000, Berger, 2003, Lindblom, 1965, Flyvbjerg, 1998). Although the structural-functionalism theory seems to be one the most fitting theoretical frameworks for this research, it still has some limitations, which restrict the ability to gain a broad, realistic approach towards governance; these are discussed in the following.

3.4.2 Criticisms of structural-functionalism

Some of the limitations of the structural-functionalism model/theory that need to be dealt with, to adjust to the context of this study, are as follows:

1. The rational planning approach in structuralism-functionalism cannot give real insight into the planning and decision-making process in this case, where the diversity of interests and thus conflicts makes the predictions difficult (Sager, 2003, Medalen and Leknes, 2010). Furthermore, in complex contexts, where “Everyone and everything are interconnected, causality is ambiguous and unintended consequences are ubiquitous”, rational planning that requires continuity and some degree of stability is quite unproductive (Byrne, 2003). In processes, where the possibility of change or pause is quite high, and the power relations are dynamic and fluctuating all the time, due to different uncertain practices (such as ‘negotiation/dialogue’, ‘adaptation’, ‘co-production’ and often ‘dispute’), rational planning is useless. According to Brugha and Varvasovszky (2000), planning and policy development are complex processes, which frequently take place in an unstable and rapidly changing context, subject to unpredictable internal and external factors. Rational planning implies anticipating, predicting, and handling change to deal with probable future developments. However, this contrasts with the reality of the decision-making process, which is too complicated and complex to be governed by laws and regulations. In addition, limitations on both time and information preclude examination of more than a few options, which restricts attention to options that are well understood and politically feasible (Lindblom, 1965 and Forester, 1989). Lindblom (1965) argued that, in practice, contrary to the rational ideal, policy-makers do not identify objectives and then examine alternative means; rather, they consider means and ends simultaneously. Accordingly, incremental outcomes are virtually inevitable, given the need to bargain over a limited number of alternatives. Large change is, nevertheless, possible through the accumulation of incremental steps, resulting from repeated policy cycles. In this regard, many authors, e.g. Medalen and Leknes (2010), find the incremental approach of Lindblom, i.e. managing the

present on the basis of a known past, and/or through a pluralistic process of trial and error, a more realistic and practical approach than rational planning and designing the uncertain future. Other actors, such as, Mintzberg et al. (1976) while recognizing that decisions have unique patterns of solution, adopt the rational approach but rearrange its pieces to allow repetition and variety in their order. Mintzberg et al. (1976) argue that the phases of the classic rational model, which occur sequentially, can come in any order and can repeat. Therefore, these phases/steps can actually shift, branch, cycle and recycle. The amount of cycling and the shape of the process depend on how complex and political the decision is (Eisenhardt and Zbaracki, 1992). Complex and contentious matters have more complicated processes with delays and recycling. Thus, planning or decision processes vary, depending on decision characteristics, as the affected actors apparently bypass or revisit different aspects of the choice over time.

2. In the structural-functionalism model, both structural and functional components are considered in a holistic framework, in which the borders of hierarchy are blurred, and the interaction of different governance levels, beyond their formal relationships, is vaguely addressed (Giddens, 1979). The intra-institutional and inter-institutional relationships, and their formality or informality, are not distinguished or separated. Accordingly, it fails to represent a real cross-scale complexity. In addition, it downplays the role and power of the individuals and their dialogue/negotiation practices in the system, especially within their informal networks. Each governance system incorporates a multiplicity of positions and levels, and, thus, actors' structural position and subsequent power or influence can be highly fluid. Furthermore, the dynamics of governance process and functional change, including the power/capacity, knowledge use and connectivity between actors, are overlooked and illustrated as stable features, without considering their iterative and evolving interactions. Considering a governance system as one structural and functional typology will provide misleading evidence. In fact, the governance system constitutes different structural levels that each associate with different functions that define governance process.
3. Structural-functionalism only considers three general functional components (knowledge, connectivity and capacity), and their interrelationships are not explicitly defined and argued. It fails to realize or discuss other interconnected components that can also impact the governance and outcomes of planning and decision-making. In addition, the significance of context (such as political, cultural and economic), as well as time and external factors, is not discussed explicitly. As a result, structural-functionalism provides

a simplistic and quite static presentation model of society/systems, which does not show a real process of transformation and change.

Only a few planning theories were found that could partly compensate for these limitations of structural-functionalism. Therefore, this thesis suggests combining the structural-functionalism model of planning with decision-making theories, to bridge the existing gaps. As a result, to fully understand governance mechanisms and to modify the structural-functionalism theoretical model, the thesis uses the relevant and supporting decision-making approaches, in which the iterative and temporal model of decision-making, such as, 'rounds model' is considered as a useful and complementary tool in developing governance theories. Teisman (2000) has developed a 'rounds model', to conceptualize decision-making for generating useful insights to understand complexity of governance systems.

3.4.3 Supporting decision-making theories for structural-functionalism

1. 'Rounds model of decision-making': Dealing with the first limitation of structural-functionalism

In the decision-making field, the work and approach of Teisman (2000) is aligned with this thesis, which is concerned with the long duration of planning and decision-making processes and the changes that take place within these processes. It is perhaps not the only fitting theory, but it is a complete and reasonable replacement. Teisman noticed that the actors involved in decision-making often do not agree on (or similarly realize) the classification of a certain stage in the process, in terms of formation, adoption and implementation. Although it is possible to identify several official decisions taken by ministers, parliament, parliamentary committees, etc., none of these decisions can be clearly depicted as the moment of adoption or implementation (Teisman, 2000, p.939). Such an observation, and the fact that the central decision cannot be found, altered the conceptual definition of decision-making, implying that the decisions are no longer arranged on the basis of a priori order and hierarchy. Teisman collected all the decisions that were taken in a certain case and tried to clarify the empirical relationship between them. He redefined decision-making as "an intertwined 'clew' of a series of decisions taken by various parties/actors" (see Figure 3.3) (Teisman, 2000, p.939). Therefore, the decision-making process consists of different iterative decision-making rounds. As Figure 3.3 shows, in all sets of rounds, the interaction between different actors results in one or more definitions of problems and solutions, which become the basis or beginning of the next round. A round of decision-making begins and ends with the adoption of a certain combination of a problem definition and a solution by one or more actors. But, at the same

time, each new round can change the direction of the match or the rules of the game because new actors can appear (Figure 3.3). Every new actor entering the decision-making introduces new problems and solutions. In addition, distinctions between problems and solutions are difficult because a solution for one actor could easily be a problem for another. However, when a provided solution deals with sets of problems and the ambitions of several involved actors, then progress is made. For this reason, this iterative and temporal model focuses on the interaction between actors, in which they negotiate acceptable combinations of problems and solutions.

As a result, the rounds model of decision-making “is not about a single issue, nor about separated streams of problems, solutions and participants [as the garbage can theory proposes], but about dynamic combinations of sets of problems and solutions represented by different actors” (Teisman, 2000, p.946).

According to Teisman (2000), some theories assume that policies are set at a certain moment [rational approach], and others’ assumption is that concurrent streams of problems, solutions and politics set a policy [garbage can approach]. However, in contrast, his ‘rounds model’ assumes that this moment does not exist, and policies result from a series of decisions taken by various actors during a period of time [interactive approach]. The dynamics of combining problems and solutions, and the relationship between the two, account for the course of decision-making.

The rounds model of decision-making highlights the process of change and the dynamic nature of planning and decision-making. In addition, it acknowledges that there are different exogenous factors that can influence the outcome. For these matters, this thesis adopts the interactive and iterative ‘rounds model of decision-making’, instead of the rational planning approach in structural-functionalism and, thus, focuses on the interaction between different actors’ perceived problems, solutions and strategies over time. Subsequently, it analyses whether and how actors managed to combine their perceptions to such an extent that they were willing to support a joint solution, once ‘No’ and then ‘Yes to co-location’. As Figure 3.3 presents, the most crucial decisions/changes that took place at specific times determine the decisional rounds. Therefore, instead of ‘vision and objective setting, research and assessment or implementation’ processes of the structuralism-functionalism approach (see Figure 3.2), this thesis defines different rounds, such as ‘initiation of co-location’, ‘no to co-location’, ‘inaction of campus development’, ‘re-initiation of co-location’ and ‘approval of co-location’

(see Figure 3.5). In this regard, the output of each round is not necessarily in the form of legislation, a plan, report or policy (Figure 3.2); indeed, it is in the form of a specific decision or event (Figures 3.3 and 3.4). As a result, this thesis assumes that the ‘policy adoption’ becomes the consolidation of a problem-solution combination over a long period of several decision rounds, in which many policy-makers, not only one focal actor(s), take decisions. The ‘rounds model’ is “not the feature of the time period that is being determined; as such this is e.g. ‘vision setting’ and this is ‘implementation’ as the structuralism-functionalism approach reflects in Figure 3-2. “It features the starting and concluding points of a certain period, which is called a ‘decision-making round’” (Teisman, 2000, p.944). In this model, Figure 3.3, first a series of decisions that were taken in a specific time and by different actors is considered. Then, the interaction and interconnection between those decisions are identified, to understand why ‘No’ or ‘Yes to co-location’ has taken place. To separate strands of decision-making, the train of thought of the phase model (Bryson and Crosby, 1992, pp.57-66), which focuses mainly on the intended policy of the focal actor, is combined with that of the stream model, which focuses on the fragmentation of decision-making into problems, solutions and politics, separately (Cohen et al., 1972 and Kingdon, 1984, p.152). By focusing on the interaction between different actors (not only one actor) and the interaction between problems, solutions and politics (not each stream individually), the interactive approach of the ‘rounds model’ can enhance insight into decision-making. Therefore, by accepting that there are various actors, instead of only specific actors, and that all these actors contribute to the decision-making process and influence the results, the complexity and reality of governance networks are better understood. Accordingly, on the one hand, a vertical classification of decision-making is made, by looking at the series of decisions that were taken at that time (Figure 3.3). On the other hand, a horizontal classification is applied, by looking at interactions concerning the same subject, even if actors were unaware of each other’s decisions at the moment they took these decisions. In Figure 3.3, the big gray arrow presents the decision-making process, in which the black dots depict decisions taken by the various actors, and the policy result stems from the interaction between decisions and building upon the decision of others (black small arrows). White arrows represent an anticipation of future decisions, and white rectangles are covenanting results.

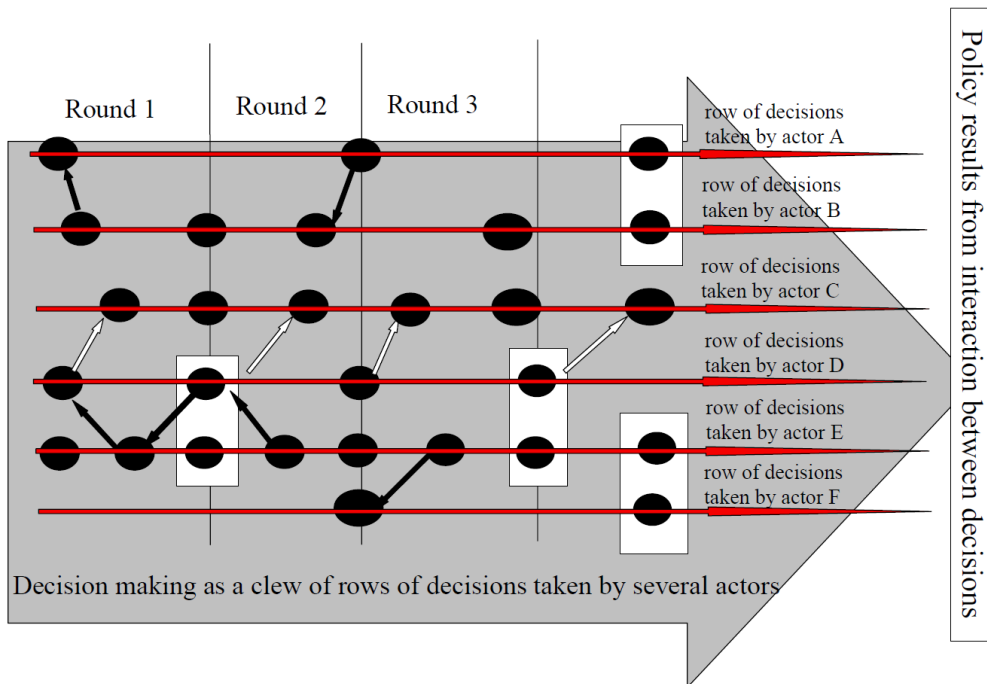


Figure 3-3: The concept of decision-making used in the rounds model; source: Teisman (2000, p.6)

The point of this model is that the choice of future decisions depends on the behavior and interaction of actors that are present at the time, which become an important point of reference for the later decisional period.

By using the rounds model of decision-making, the first limitation of structural-functionalism, i.e. use of rational planning, will be overcome.

2. Multiplicity of governance structures in response to the second limitation of structural-functionalism

Clark (1986) sheds light on the complex dynamics of planning and decision-making, combining and integrating governance structures and processes, as well as organizational culture(s). He conceives governance structures and processes as frames that are shaped and transformed by a distinct organizational identity and organic organizational culture. Clark offers an analytical device, combining an approach privileging the influence of the *context* on the governance structure, with a focus on intra and inter-organizational relationships that shape organizational actions and governance processes. In addition, he calls for a shift in the unit of analysis, giving prominence to the university as an open system, with multiple reciprocal relations, with its own environment. Instead of having a holistic approach towards

governance, he considers three different levels of governance: 1) the understructure, 2) the middle or enterprise structure and 3) the superstructure.

The *understructure*, shown by color blue in Figure 3.4, considers the institutional structure of the focal organization, or the university in this case, and focuses on the intra-relationships. The *middle or enterprise structure* level, shown by color gray in Figure 3.4, considers the inter-relationships of the focal organization or the university and other regional and local actors that collaborate on city-regional development. The *superstructure*, shown by color orange in Figure 3.4, focuses on the relationship of the focal organization and its superior, i.e. the university and the Ministry of Education and Research. The superstructure level considers the key role of government in underpinning and/or providing supportive regulatory environment and funding. Government policies and funding have both direct and indirect regional and municipal outcomes, both spatial and non-spatial intent (Smith and Bagchi-Sen, 2010). In the case of co-location, superstructure and understructure represent university governance, and middle structure represents urban governance.

Each level of governance can be characterized as bottom-up, top-down, or horizontal. In the 'bottom-up' type of system, the superior follows rather than leads a change process initiated by the subordinate(s) within each level. Therefore, as Figure 3.4 represents, a bottom-up superstructure in the case of co-location implies that the university, as the subordinate, has the autonomy, freedom or control in planning and decision-making processes. At the understructure level, a bottom-up structure implies the dominant power or influence of the academics over the leadership. At the middle-structure level, a bottom-up structure implies the dominant role, power and interests of the community/university over the local-regional government. In the 'top-down' type of system, the subordinates merely respond to the superiors' inspired policy initiatives, which are enforced by their power and authority. In the horizontal type, neither superior nor subordinate can dominate. They both have operational autonomy, and the system, to a certain extent, is self-regulating.

The top-down type can be equal to 'hierarchical' and the horizontal type to 'negotiation' forms (March and Olsen, 1983) or 'mutual adjustment' (Lindblom, 1965). In the hierarchical version, reform processes are dominated by a closed group of top leaders, political or administrative/institutional, who score highly, on both control and unambiguous organizational thinking; i.e., they know why and how to reform and tightly control the process. On the other hand, the negotiational version starts from the notion of heterogeneity in systems,

institutions, interests, norms and values. “Reform processes are more like a ‘tug-of-war’ between different actors, both inside the leadership and among several groups with different interests. Reform decisions and implementation could be reached by majority, consensus or sequential attention to goals and interests” (Christensen, 2011, pp.505-506).

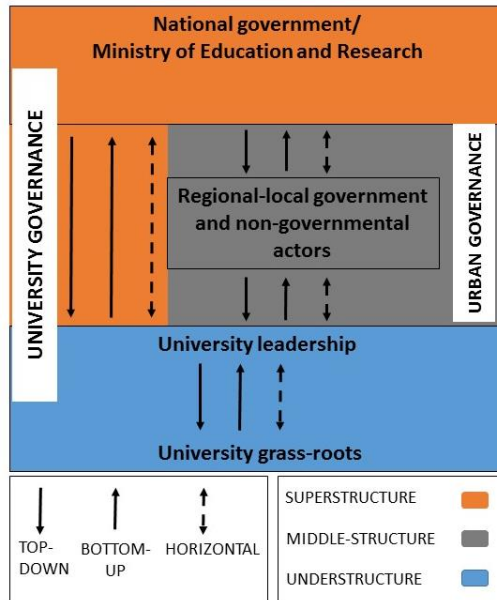


Figure 3-4: Different levels of governance structures, adopted from Clark (1986)

Few studies address the entire governance process and the way these levels interact. Most scholarship focuses on subunits of analysis. For example, Dill and Helm (1988), Kezar and Eckel (2004), Trakman (2008), Clark (1986), and Amaral et al. (2002) have focused on the understructure level. Benneworth et al. (2010), Perry and Wiewel (2005), Russo et al. (2007), Vázquez et al. (2008), and Mullin et al. (2012) have focused on the middle or enterprise level. And a few researchers, such as Christensen (2011), have focused on the superstructure level.

This gap in the literature suggests that there is a need for an interactive and integrated approach to the study of governance. In this regard, the objective is to investigate the dynamics within each level and the interaction between levels in the specific spatial, cultural, political and economic contexts. Thus, the researcher strives to understand the dynamics of the changing relationship between all these levels of governance analysis and their impact on the governance structures, cultures and development practices. By considering different levels of governance and focusing on their interactions, the second limitation of structural-functionalism is dealt with.

3. Inclusion of other functional components; dealing with third/last limitation of structural-functionalism

Different theories of decision-making and planning address and use different elements to define and analyze governance, and each element can provide a new insight into the governance structure and process. However, none of these theories provides an all-embracing, integrated, interactive, and/or comprehensive approach, which considers the impact of their interrelationships on the outcome of planning and decision-making. Accordingly, most related approaches and empirical evidence of planning and decision-making theories have been applied and merged, to develop a more complete and thorough theoretical framework and model⁹.

There are some points of convergence and/or divergence in these theories. The common approach towards governance in these theories is an emphasis on the plurality of actors and that there is no single actor, who has enough steering capacity to determine the strategic actions of the other actors (Morçöl, 2007, Kickert et al., 1997, Healey, 1992, Røiseland and Vabo, 2008, Kickert et al., 1997, Healey, 1992, Røiseland and Vabo, 2008). All actors have their own goals and interests, and there is no single goal that can be used as a measurement for effective planning and decision-making (Klijn, 1996). On the other hand, dependencies between actors and their interactions create patterns of relations between them, in which they try to influence the planning and decision-making process to achieve their own goals (Røiseland and Vabo, 2008). Each actor can be seen as a potential ‘leverage point’ within the politics ‘stream’ that may be a visible or hidden participant (for others) (Gergen, 1968) that can actively promote policy options or solutions (Kingdon, 1984). Actors’ inconsistent interests or conflicts and subsequent influence on each other’s actions and policy outcome make the processes of bargaining, coalition formation, and conflict mediation imperative. In these processes, many actors may be forced or convinced to change their attitude and set other goals, which may differ from their original and real interest. Based on their new goals, new networks will be formed, and actors may play new roles. Such loops can be repeated again and again until a particular condition is satisfied.

⁹ Some of the key references in planning fields have been: Flyvbjerg (1998), Forester (1989 and 2013), Healey and Hillier (2008a, 2008b), Hillier (2000), B. Jessop (2002), Klijn (2008), Lindblom (1959 and 1965), Lindblom and Woodhouse (1993), Kooiman (1993), Albrechts and Mandelbaum (2005), Marcussen and Torfing (2007), Medalen and Leknes (2010), Pierre (2000), Potts et al. (2014) and Rhodes (1997). The key references in decision-making and political sciences have also been: Dente (2014), Galaskiewicz and Marsden (1978), Galbraith (1984), Hanf and Scharpf (1978), Scharpf (1997), March (1966), Pfeffer (1981) and Teisman (2000).

Each actor, based on the position and subsequent legal rules (governance structure), has specific responsibility and formal competence to intervene in the planning and decision-making process, which determines the possible actions he/she can take. However, the action and role of an actor is a function he/she fulfills within the process and in interaction with other actors, which is not only affected by the formal position she/he has but by the dynamics of that specific process. This means that, in different processes or even in the same process, the same role (e.g. being an initiator, promoter, ally, mediator, opposer, gatekeeper¹⁰ or filter¹¹) can be played by politicians, planners, employees or bureaucrats (Dente, 2014).

The interaction and interrelation of different functional components – such as power, resource, interest, conflict, role – together will affect outcomes or decisions. However, when (at which time) these interactions take place is important. The same kind of interactions may result in different outcomes if they are formed at different times. Not only do actors change with time, but also society, technology, people's values, beliefs, cultures and positions change. There are many different external factors, such as new regulations, new systems and new environmental conditions, etc., that also affect the outcomes of such processes and need to be taken into account.

In much of the literature, the terms, 'actors' and 'stakeholders', are used interchangeably. However, Dente (2014) draws attention to the difference between them and argues that neither a person who has an interest in acting nor whoever could act, is necessarily an actor. Actors are only those who actually act. In this regard, the individuals or groups who should take part in the process, but do not, are not actors, e.g. the residents in the co-location area. Consequently, those that participate in the planning and decision-making process, despite actually not being legally entitled to do so, are eventually considered to be actors. In this regard, a person, who has a legal right to intervene in a process, is a stakeholder, until he/she takes an action and plays a role to influence the outcome and becomes an actor.

A group of subjects can be considered as an actor, usually referred to as a 'collective actor'. In this situation, "The mechanisms governing the interaction among the members of the group

¹⁰ The gatekeeper is the actor, who is against the case and uses all his/her resources to stop the promoter and allies from acquiring specific outcomes (Dente, 2014). This is different from what Levin (1947) defined as the blocking of unwanted or useless things by using a gate. A gatekeeper in this thesis refers to a person, who tries to hinder the others' progress.

¹¹ The filter is an actor that enters the process, representing the goals and the interests of others, disregarding his/her own goals. A journalist, for example, can belong to this category.

are sufficiently stable and binding to make sure everyone acts in the interests and for the goals of [the collective]/the superior unit, and not for their own” individual interest (Dente, 2014, p.31). For instance, if all the departments of a municipality that are dealing with the same issue behave consistently, the municipality is considered a single actor.

Since this PhD looks at the planning and decision-making process, which depends on the actions of many participants, the attention is on the actors and not the stakeholders. It is important to declare that actors of one specific period may be just stakeholders in other periods.

Each of the aforementioned functional components is important and affects the outcomes. Accordingly, this thesis tries to consider the interaction of these components in actors’ network, to explore governance and the outcome of planning and decision-making over time. Galaskiewicz (1996) describes network research as a “handmaiden theory” since it is often used to support the elaboration of other theories; however, *it rarely becomes the focus of its own development*. The network concept is used not only to capture the constitution of actors in complex systems but also to emphasize informal dimensions of such relations, as opposed to formalized or hierarchical structures. Thus, while some networks are formally incorporated, others “may utilize networks and channels of energy flows outside of the formal decisional processes in search of certain economic, ideological, or other benefits for themselves or their group”. Actors utilize intermediaries in order to persuade or enroll others to their particular points of view. These intermediaries may be “texts, such as planning documents, consultants’ reports, letters, surveys, petitions, newspaper articles, TV coverage, photographs, etc.” In this sense, the issue is about “who you know, not what you know” (Hillier, 2000, p.34- 48).

This thesis draws on both theories of planning and decision-making to bridge the gap in knowledge and provide a better/thorough theoretical model for understanding governance structure and process. Being aware of different functional components (in addition to capacity, knowledge and connectivity of the structural-functionalism model) and examining how their interactions can influence the outcome of planning and decision-making is another adjustment to overcome the limitation of structural-functionalism. In the following, it is explained how these functional components can influence the outcomes, which are necessary to investigate governance mechanisms. *Developing the theories of these components/concepts (such as interests, power, conflict, role and resource) is, however, beyond the scope of this*

study, in which they are used as a supportive tool for understanding governance in complex processes.

Interests/goals

According to Faludi (1973), the fact that people do not appraise things similarly creates an allocation problem in society. On one hand, the aggregation of individual preferences is itself a highly complex matter. On the other, there is considerable dispute and uncertainty regarding whether there is any group interest or common welfare other than the sum of individual preferences. Achieving a thing that satisfies everyone at one time is impossible. This difficulty is exacerbated when different actors' interests and values are involved in a pluralist and complex context of planning and decision-making. Each of the various actors has his/her own interest and perception of the issue, and therefore his/her desired solution may be contrasting. Actors also have different perceptions of the other actors' interests in the network. On the basis of these perceptions, actors select strategies (Faludi, 1973). The outcomes are the consequences of interactions between different actors' strategies (Klijn and Koppenjan, 2000). Actors' strategies and membership of networks fluctuate all the time, depending on the evolving interactions with others.

An interest/goal "is collective to the degree that a benefit from it cannot accrue to one member of the citizenry without accruing in some significant amount to many others. It also cannot be withheld from one member without being in some significant amount withheld from others" (Baron, 2003, p.279). Thus, collective interests/goals are not necessarily agreed values and vice versa. On the contrary, a private or particular value benefit can accrue to one or a few actors that can be at the expense of benefit to another. The discussion of interests herein is connected to other attributes, such as power, network, time, etc. Mawhinney (2001) links the difficulties of understanding power to the complexity of the competition among many diverse interests. Benson (1975) argued that, in order to understand actors' interests, their inter-organizational relationships should be scrutinized. Benditt (1975) considers 'time' as an effective factor in the interest theory. Benditt (1975) believes that one's interest has two dimensions: (1) what sorts of things are in one's interest and (2) what is in one's interest at a particular time. He points to the fact that sometimes (a particular time) it is not in a person's interest to pursue one of his/her interests. In addition, an actor's interest and 'the best thing to do' are different notions. Sometimes, a policy is the best one to adopt at a given time, and this does not mean that it is also in one's interest at that time; it may only mean that it is the policy

that is least against one's interest at that time. Furthermore, an actor's chances of fulfilling his/her interests are likely to depend on other altering physiological, subjective, goal, and behavioral attributes, such as the resource and power. Therefore, some policies are in one's interest, as long as one has, for example, the specific resource or power. The same policy can be against one's interest at another period.

Interests can be categorized in different groups as social, economic, environmental and political. *Social interest* is an interest that an actor can have regarding his/her relationship and interaction with others, such as affiliation, which causes him/her to protect and support the interest of the group or organization he/she belongs to. *Economic interest* emphasizes the actor's economic attitude, the desire to control his/her costs, expenditure, and/or money, etc. and to acquire material possessions. *Environmental interest* is based on conservation of natural resources and ecological issues such as protection of the land and air pollution. And *political interest* concerns achieving or improving his/her own status, dominance, power, leadership, recognition, etc.

Resources

Many of the recent planning theories focus on the actual use and exchange of resources that are influenced by a political process through bargaining, negotiations, consensus-building and joint agreements (Healey, 1992, Forester, 2013, Hajer and Wagenaar, 2003, Hillier, 2003, Booher and Innes, 1999, Leknes and Farsund, 2010, Falleth and Saglie, 2011). However, in decision-making theories, the impact of resource exchange is studied in relation to the behavior of actors (organizations) and the outcomes of planning and decision-making. For instance, Nienhüser (2008) precisely explains that dependence on critical and important resources influences the actions and decisions of organizations (actors), which can be explained in relation to the particular dependency situation. This argument is the fundamental assumption of 'resource dependence' theory, which Pfeffer and Salancik (1978) and Johnson and Bob (1995) brought about to explain organizational processes and structures. They explain that the behavior/actions of organizations (actors) are traced back, to the extent they are influenced by other actors in the network governance that is controlling critical resources, which can impose external constraint and control on those dependent actors' behaviors and actions (Johnson and Bob, 1995). It is explained that actor 'A' is dependent on actor 'B', to the extent that B controls some resource or performance valued by A that cannot be obtained from alternative persons (Hernes (1975). Thus, "The greater the dependency of actor A upon actor

B, the more power actor B has over A. In addition, the dependence of an actor A upon actor B is directly proportional to A's amount of motivational investments in goals mediated by B and inversely proportional to the availability of those goals to A outside the A-B relation" (Emerson, 1962, p.32).

Those actors, who control a large part of critical resources but do not themselves need any resources from other actors, are relatively powerful and can place high demands on others. Thus, concentration of resources principally means concentration of power (Nienhüser, 2008, p.12). One of the consequences of this rationality is that actors can manipulate the perceived importance of their resources and therefore increase their power and demand over those dependent actors.

Another aspect relating this argument to planning and decision-making is that the cumulative effect of the dependency of actor A on actor B's resource can increase the uncertainty for actor A in making a decision (Johnson and Bob, 1995). If actor A's decision is dependent on the resource of actor B, the availability of and accessibility to that resource will create uncertainty for actor A. The more an organization is dependent on others, the higher the amount of uncertainty (Nienhüser, 2008). In addition, dependencies of the other actors on the same resource or on the dependent actor itself can make numerous interrelations that raise the uncertainty, complexity and conflict within the network governance. A response to the demands of one group may also constrain the future actions of a resource provider in relation to the demands of others.

Resource dependence theory relates to this research as a means to understand how the resource-rich organizations/actors will use power to control the behavior/action of resource-dependent organizations/actors and what the outcome of this interrelationship is in the process of planning and decision-making (Coleman, 1964, Davis and Cobb, 2010).

Different types of resources are recognized for this study: legal, political, economic, and cognitive (Dente, 2014). *Legal resources* refer to the administrative and legal authority of an actor due to his/her position. *Political resources* imply the quality of relationships and connections an actor has at different political and governmental levels and especially with the government or other actors with legal resources. This resource will help an actor to increase the possibility of making a consensus and alliances with main actors. This is a fundamental resource for all public decisional processes, since participants' agreement and unanimity are

necessary for taking and implementing the decision (Dente, 2014). It is a matter of using the authority and power of main actors to reach a specific goal. *Economic resources* consist of the “ability to mobilize money or any form of wealth in order to modify other actors’ behavior” (Dente, 2014, p.37). *Cognitive resources* refer to the availability of important information, knowledge and experience for the decisional process, while *social resources* imply the number of relationships and connections an actor has. It is a matter of using popularity and acceptance among a wide network to help an actor to make more alliances.

Power

There is a consensus in different traditions that the concept of power is elusive and redundant (Astley and Sachdeva, 1984, Booher and Innes, 2002, Wrong, 1968, Dahl, 1961, March, 1966, Gallie, 1955). Use of power depends on the purposes of the particular analyst. It is “context-specific” (Pfeffer, 1981, p.3).

In planning, the most common approach to the concept of power apparently originates from Castells (1997). Castells believed power was no longer concentrated in institutions, organizations, or even symbolic controllers such as the church or media, but was diffused throughout global networks of wealth, information, and images. Castells (1997) believed that the traditional version of power was no longer effective. On the other hand, “The new power lies in the codes of information and in the images of representation around which societies organize their institutions, and people build their lives and decide their behavior. The sites of this power are people’s minds” (Castells, 1997, p.359). According to him, power belongs to one, who wins the battle of people’s minds. Previously, however, the planning theorists were more influenced by economists like Galbraith or political theorists like Dahl. Power was seen as the ability of one player, organization, or class to make another person or group do something they would otherwise not do (Galbraith, 1984). Later, Booher and Innes (2002) mentioned that they “do not disagree that this ability is a form of power and is relevant to planning practice, but they found it to be a limiting concept for contemporary times”. Even if the powerful actors can get ‘acquiescence’, they may not see the results they intended in the end.

The effect of Castell’s theory, lately, has influenced planning theorists in two dimensions: 1) information as a (main) source of power, 2) planners’ power or powerlessness in planning and decision-making. This indicates that power can be exercised in terms of misinformation in three modes of decision-making, agenda setting and needs-shaping (Forester (1989). It implies

that decision-makers and planners can effectively inform or misinform others, particularly by prevailing informal decision-making relations and situations, and control ‘who finds out what and when, about which projects, which opinions’, and possible solutions and results (Forester, 1989, p.44). Thus, they can shape desired action and/or inaction through “the management of comprehension, or obfuscation; of trust, or false assurance; of consent, or manipulated agreement; and of knowledge, or misrepresentation” (Forester, 1989, p.17).

Although Forester tries to empower planners’ role in the planning and decision-making process, at the same time, he confirms their powerlessness against other major actors. Booher and Innes (2002) explain this duality of planners’ power in the way that, although planners are far from powerless, they have rarely recognized it themselves. In addition, the reason for this can be related to the sensitive nature of planners’ role in the democratic planning process. In one way, they belong to the decision-makers’ society, while, in the other, they should represent and protect the needs of citizens (Sager, 2008). This is why Booher and Innes (2002) also mentioned that, among all the fields that deal with the concept of power, planning has been the most challenging one.

While Forester (1989) and other planning theorists, such as Bryson and Crosby (1992) and Hoch (1994), claim that what planners do is part and parcel of what constitutes power in a society, Booher and Innes (2002), Flyvbjerg (1998) and Altshuler (1965) assume that whatever power is, planners do not have it. For instance, Flyvbjerg (1998) tries to show how the leaders of Aalborg city, for the sake of politics, played games of power and deliberately ignored the planners’ technical advice (and the mayor’s will). Banfield (1961) told a similar story from Chicago, where the mayor gradually achieved his political will by getting projects funded for powerful players and manipulating planners, to support and legitimize what he had already decided to do.

Yiftachel (1999) believes contributions to planning theory often fail to consider ‘power’ or ‘bracket power’ into the background of attention. One of the parallel objectives of this thesis is, thus, to assess the power of planners in the case of campus development.

The quite recent area of attention in power discussion, in both planning and decision-making theories, relates to the horizontal mode of governing and whether power is diffused equally among actors (Marin and Mayntz, 1991, Røiseland and Vabo, 2008, Holmen and Farsund, 2010). Some argue that governance is not (or should not be) about empowering different

stakeholders but is about challenging existing power structures. This is because a stakeholder's ability to participate is often pre-determined by who initiates or controls the process and whose rationality drives it (Buchy and Race, 2001). Accordingly, it is hypothesized that the participation of different actors, including planners, in different stages of the planning and decision-making process is the "handmaiden of power, the dupe or victim of power" (Altshuler, 1965, Flyvbjerg, 1998, cited in Booher and Innes, 2002, p.221).

Power in the field of decision-making is defined as the capacity of social actors to overcome resistance, in order to achieve a desired objective or result (Pfeffer, 1981, pp.2-3). Power is also defined as a relation among social actors, in which actor A can get actor B to do something that B would not otherwise have done (Dahl, 1957, pp.202-203, Hernes, 1975). In both definitions, power is somehow seen as the ability of those who possess power to bring about the behaviors/outcomes they desire (Pfeffer and Salancik, 1978). Unlike planning, in decision-making, power is perceived in a relationship, and the assumption is that one actor is more powerful or powerless in relation to others. Not all the actors have the same power in the interaction process, and it depends mainly on the resources that an actor possesses and also the importance of these resources in the policy process (Scharpf, 1978).

Pfeffer and Salancik (1978) claim that problems do not arise because of the power concentration, which is inevitable, but because others are not able to muster equal power or equal concentration of opposition. They connect their argument to situations, where the interests of one party cannot be achieved without another party (parties). Thus, forming a coalition between them as a potential concentration of opposition can weaken the power concentration. Hence, the critical issue in network governance is not whether there will be a concentration of control or power but, rather, whose interests are being served by the organized and coordinated activities (Perrow, 1972).

The approach of this paper to power is a mixed and mediated one that takes some of its arguments from planning theories and some from decision-making. The more balanced and well-adjusted definition of power for this research is defined by Parsons (1956): that power is seen as the realistic capacity of a system-unit to actualize its interests within the context of system-interaction and, in this sense, exert influence on processes in the system. Potts et al. (2014) provided a related definition: the ability of an individual or institution to draw on the functional elements of a governance system to influence action and decision-making.

Bacharach and Lawler (1980, p.31) mentioned that many organizational studies have failed to recognize the multidirectional nature of power relations and overlooked the potential tension between different facets of power. To remedy this situation, this PhD thesis analyses network governance process as the joint product of two contents of power – authority and influence – in relation to the three sources of power – position, personality and opportunity.

Authority is a given power, or ‘legitimated’ power (Pfeffer, 1981), as the result of the specific position the actors hold. However, influence is a manifestation of power in a relationship that may be present or absent from setting to setting. Influence is multidirectional and consists of efforts to affect organizational decisions indirectly, while authority makes (final) decisions through downward flow. It means people can influence colleagues, superiors, or subordinates no matter which position they have in their network, while people can exercise authority only if their positions give them the required prerogative. In other words, while authority is a source of social control, influence is a dynamic aspect of power and may cause a change. It is agreed that different actors try to influence other actors’ (both) perspectives and actions in pursuit of their own wishes/interests, but only some are successful in manipulating the behavior of others. In order to understand who are able to exercise power successfully, it is necessary to understand that there are different sources of power. Authority and influence can be seen as two of the contents of power, each relying on different sources of power.

The ‘position’ that an actor is officially appointed to is considered a source of authority. Pfeffer (2010) defines ‘position’ as formal power, which is based on an actor’s title, e.g. minister, rector, board leader, university director, project manager, etc. The formal or position power gives the ability and responsibility to reward (provide someone with a raise or plum assignment) and punish (discipline someone or limit access to resources). The power relations between actors in important and formal positions and authority imply the characteristic of the governance system, whether it is horizontal or hierarchical.

Based on the initial knowledge about the context of the co-location case, ‘personality’ and ‘opportunity’ are two main sources of influence in this study. Personality, which both Bacharach and Lawler (1980) and Galbraith (1984) consider a source of power/influence, implies both physical attributes and verbal/communicative skills/ability to argue and convince effectively. It is defined as “the quality of physique, mind, speech, moral certainty, or other personal trait that gives access to one or more of the instruments of power” (Galbraith, 1984, p.6). In primitive societies, the stronger, larger or more muscular person had more

power/influence; however, in modern times, the one with the ability to persuade or create belief is more powerful. Opportunity embedded in the time and situational context is another source of influence. It implies a particular situation which makes it possible to do or achieve something.

Personality and opportunity are ‘informal’ sources of power/influence (Pfeffer, 2010) that depend on the ability of an actor to develop and associate power, either with the help of his/her knowledge, skills and experience or his/her social network (who he/she knows and who knows him/her).

Conflict

In planning theories, it is argued that, as soon as interests, values, and schemes of signification are involved, the actors’ networks, which are being formed in response to shifting interests and coalitions, will face the tensions of conflict. In each political struggle, actors must decide whether to pursue their political goals in isolation from others or to form a coalition and achieve a common goal. The possibility of forming a coalition is high when actors predict that the probability of achieving their expected outcomes (in a form of coalition) is greater than when pursuing them alone (Bacharach and Lawler, 1980). While coalitions bind the members with the most common interests together, they also pit those with the most divergent interests against one another. In this regard, coalitions are not just the principal units of political action but also the mechanisms for establishing and defining the political game. The political game, in turn, is manifested in bargaining between coalitions upon the conflicting interests.

Habermasian-based theory of communicative, collaborative and deliberative planning expresses conflict as distrust between parties, or abuse of power, and recommends compromises, consensus-building or the use of legal forces as mediation methods. Pløger (2004, p.79) believes that these methods are “frameworks for deliberation and dialogue that imply bureaucratic power, which compels actors to reach an agreement to move on”. Accordingly, the actors, who have power, control critical resource and/or are good in networking, have a higher possibility of winning the negotiation. Thus, there is a criticism that consensus steering and collaborative processes cannot solve the problem of informal politics.

In decision-making theories, different types of conflicts are recognized. The conflict procedures take different forms, dependent on different contexts and different times. Discovering how they are interpreted, phrased, and dealt with can broaden the horizons, to

better understand the governance mechanism (Kolb and Putnam, 1992). Types of conflict that can specifically be used for the analysis of this research are:

Conflict over strategy refers to intellectual and evaluative issues, emphasizing the different logics of intervention and ways of dealing with the problem. The actors may have the same goal but different solutions or ways of achieving it that may bring them into conflict with each other.

Conflict over (organizational) culture, perspectives or values refers to the way actors (including collective actors) perceive and understand the issue or problem. In this research, culture mainly includes a collective actor's expectations, experiences, philosophy, and values that hold an organization or institution together and are expressed in its self-image, inner workings, interactions with the outside world, and future expectations. It is based on shared attitudes, beliefs, customs, and written and unwritten rules that have been developed over time and are considered valid. For example, the main conflict between the technology and engineering campus and the human science campus has been over (institutional or organizational) culture and their ontology, i.e. social identity.

Conflict over interest means conflict over social, economic, environmental or political interest, as explained in Section 3.3.1. Conflict over social interest, for example, can occur between two internal board members, who each wants to protect his/her own department's interest (affiliation). Conflict over political interest can be explained, for example, between two political parties that compete over status, leadership or dominance, etc. The conflict over interest is about not only the types of interest but also the dimension of interest: local, regional, or national. A local politician, who looks after the benefits of Trondheim, may be in conflict (over dimension of interest) with a national politician, who prioritizes another Norwegian city and/or university.

Conflict over resource (Sell et al., 2004) can occur, for example, between the NTNU administration and the Ministry of Education, regarding university properties, or between the municipality and NTNU over land around the campus. It can also happen between the NTNU administration and employees over how to spend the yearly budget.

In order to reach a decision, actors need to find a way to manage the conflict situations. There are a number of ways for the parties to deal with their differences and conflicts. This can be in the form of coalition-building: one party tries to make alliances with his/her own supporters

to exert pressure and force on the other party. It may be in the form of avoidance or giving up (withdrawing from the relationship), 'lumping it' (tolerating the situation because there is no other choice), joint deliberation, the involvement of third parties as mediators, collective choice mechanism, based on the votes of the majority, and negotiation or bargaining (Black, 1990, Nader and Todd, 1978, Kolb and Putnam, 1992, Lindblom, 1965).

Bargaining relationships may be tacit or explicit (Lindblom, 1965). On the other hand, "Tacit bargaining refers primarily to parties' efforts to outmaneuver each other and reach an unstated, implicit 'bargain' to favor their own interests" (Lawler, 1992, p.19, Strauss, 1978, Schelling, 1980). In this type of bargaining, parties manage a conflict without consenting or being able to "sit at the bargaining table" (Lawler, 1992, p.19). They cannot clearly see a range of possible solutions and, thus, resolve the conflict through some sort of tacit coordination. In such bargaining, parties obstruct communication lines and may not even define the relationship as a bargaining one or even be conscious of the fact that they are in a bargaining relationship (Bacharach and Lawler, 1980). This give-and-take involves few explicit offers or counteroffers; instead, parties attempt to manipulate each other, often using subtle influence tactics or rewards and punishments. Explicit bargaining is "a method of conflict resolution entailing some level of mutual consent and commitment to consider compromise" (Lawler, 1992, p.29). It is based on collaboration, in which parties mutually acknowledge a bargaining relationship, perceive the issues in terms of a range of possible solutions, and employ direct lines of communication to make offers and counteroffers along an issue dimension (Lawler, 1992, p.19). In explicit bargaining, parties sit at the bargaining table and exchange offers and counteroffers to control or manage their structurally-based conflicts of interest (Bacharach and Lawler, 1980).

To conclude, none of the planning theories can adjust or fill the existing gaps of structural-functionalism theory to provide an optimal theoretical model. However, the decision-making and organizational theories have provided the missing links. These theories together offer a more thorough framework for studying the governance system.

3.4.4 Proposed theoretical model

According to what has been discussed, in order to understand governance in a complex, multi-layered and non-linear process, two main interconnected components of governance, namely structural and functional, should be studied synergistically and simultaneously. Correspondingly, structural components will help to understand 'governance structures' and

functional components will help to understand 'governance processes'. Structural components imply the way actors stand in a network and interact with each other, and functional components explain the process and functionality of governance, i.e. how different components influence and shape actors' actions/decisions over time. Governance structure and functions are interconnected and affect each other constantly.

Structural-functionalism model of planning, which includes and integrates governance structure and process in the same framework, was used as the primary theoretical model. As discussed, this model has three main limitations that can challenge the accuracy of studying governance in the case of the co-location of university campuses. These limitations mainly relate to the fact that the case of co-location of university campuses (2000-2013) was not a part of the formal traditional planning process but, rather, an informal (semi-formal) and uncertain decision-making process, which also enforced some sudden un-continued planning processes.

Correspondingly, the first limitation relates to the inappropriateness of using rational planning to understand and analyze such an evolving, unpredictable and changeable process. According to Forester (1989, p.40), choosing an approach (rational-comprehensive, incrementalism, communicative planning theory such as consensus-seeking or management of conflicts, etc.) depends on the context one is in, in ordinary life no less than in planning and public administration. For example, for a researcher/review planner, who is a part of the planning administration and has the chance to observe and influence the ongoing planning process, communication theory and a pragmatic approach can be a useful tool (Forester, 1980). However, in the case of co-location, those communications would be silent to the researcher, who is an outsider, with different cultural, societal and personal experiences, trying to trace the decisions that sprang from the past; thus, interpretivism (not pragmatism) is the only possible approach.

Nevertheless, in the case of co-location, where information about the consequences of supposed alternatives, about the range and content of values, preferences and interests is incomplete, and resources are limited, the rational planning theory cannot fit (Lindblom and Woodhouse, 1993, Forester, 1989). In these conditions, policy-making rarely proceeds the step-by-step approach of rational process, which follows an analysis of how political actors formulate issues for action (vision and target setting), how legislative or other action ensues (strategy development), how administrators implement the policy, and how policy is evaluated (see the original model, Figure 3.1, p.39) (Lindblom and Woodhouse, 1993, Teisman, 2000).

There may not even be a stage, where problem definition occurs, because actors often have different ideas about the problem, and their actions often arise from new opportunities or compromises with other political actors, rather than from problems (Lindblom and Woodhouse, 1993, Cohen et al., 1972). Correspondingly, timely confluence of different factors, actors and practical strategies in different settings can create the momentum/opportunity necessary for making a specific decision (see Table 4 in Forester, 1989, p.53). “Deliberate, orderly steps therefore are not an accurate portrayal of how policy process actually works. Policy making is, instead, a complex interactive process without beginning or end” (Lindblom and Woodhouse, 1993, p.11). Accordingly, an appropriate substitute for rational planning approach used in structural-functionalism is a model that considers decision-making in a temporal and iterative process.

Since policy-making processes are functionally oriented, as Lindblom and Woodhouse (1993) declare, the ‘rounds model of decision-making’ is a better substitute for the rational framework of the structural-functionalism model for studying governance system in this case (Teisman, 2000). Accordingly, ‘No’ and ‘Yes to co-location’ decisions are not seen in a priori order, indeed as interconnected chains of decisions taken by various actors over time. As Figure 3.3 presents, the temporal and iterative ‘rounds model of decision-making’ can show how the interaction/decisions of different actors at different times led to the ‘initiation of co-location’ and ‘no to co-location’, which had become the basis or beginning of the next rounds, starting with ‘re-initiation of co-location’ and ending with ‘yes to co-location’.

The second limitation refers to the holistic approach of the structural-functionalism model, in which different levels of governance and roles of individuals within each institution are overlooked, and the structure/form of governance is considered a static component (see Figure 3.2, the original model). This thesis has acknowledged the interconnection between different levels and layers of governance (superstructure and understructure, representing university governance, and middle structure, representing urban governance) on one hand, and between both *individuals* and *institutions* (collective actors), on the other. In addition, the proposed model goes beyond existing legal and formal interrelationships among actors and also considers the informal networks of individuals. In the proposed model, Figure 3.5, different governance structures are shown in different colors: orange represents superstructure (national government-university interrelationship), gray represents middle structure (local and regional government-university interrelationship) and blue represents understructure (intra-

relationships within the university). In addition, formal and informal relationships are shown by different colors and lines. The black two-way arrows represent informal networks between individuals, while colorful simple lines represent formal networks at different levels. Orange lines in Figure 3.3 present formal networks at superstructure, gray lines present formal networks at middle structure and blue lines present formal networks at understructure governance at three levels: national, regional and local.

The third limitation of the model refers to its incomplete and general focus on only three functional components: namely knowledge, capacity and connectivity (see Figure 3.2). However, this thesis acknowledges the effects of other interconnected and more specific functional components, including interests, power, conflict and resolution methods that define governance process, which influence the way governance-structure functions and varies over time. Thus, governance structure is not seen as a static component, as it is seen in the original structural-functionalism model; rather, it is considered as evolving, as functional components that can change with the governance process. This thesis therefore argues that understanding the functionality of governance through general aspects of knowledge, capacity and connectively cannot provide a real image of the complexity of governance process, unless other interconnected functional components are taken into account. Furthermore, what makes the existing planning and decision-making approaches (rational, incremental, communicative, etc.) different from each other lies in the way they consider and argue issues of interest, conflict management, power and the role of government, planners, politicians, etc. in the process of planning and decision-making. Therefore, by scrutinizing the interactions between these components, the aim is to understand how they depict the governance process and influence the outcomes of planning and decision-making processes over time. The aim is not to develop theories of these concepts (including interest, resource, power, conflict and role) but to see whether the chosen approaches/model (or which other approach) can help us to understand governance in such a complex, unpredictable and uncertain context. Since it is not possible to illustrate all the functional components, i.e. attributes that different actors carry, and their interrelationships in the model, they are not mentioned in Figure 3.5 but are represented in Table 3.4.

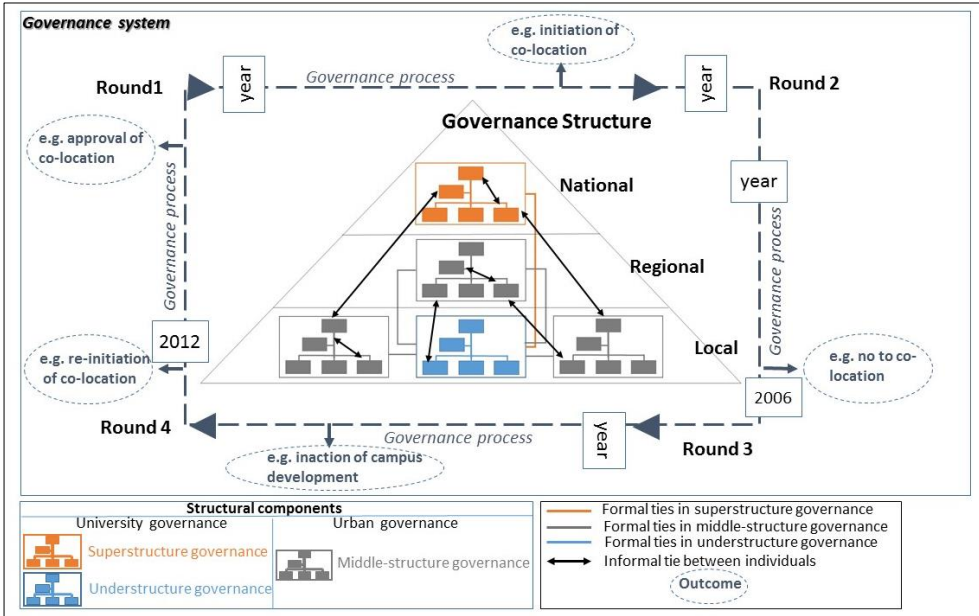


Figure 3-5: Proposed theoretical model: A temporal and iterative approach to structural-functionalism theory of governance

Table 3-4: Proposed functional components of governance system

Functional components, i.e. actors' attributes at different levels of governance
Interest
Resource
Power
Conflict and resolution methods

To summarize, building on the structural functionalism model for governance and overcoming the limitations of this model to examine governance in a non-linear, complex and multi-layered context, three main changes are applied: 1. Applying the 'rounds model of decision-making' instead of the 'rational' approach of the original model, in other words, considering temporal and iterative models of decision-making and planning, rather than following a rigidly structured sequence of planning from developing problem definitions and solutions to adopting and implementing proposals; 2. considering different governance structures at different levels and focusing on the dynamic interactions between them, instead of the holistic approach of the original model; 3. considering different influential functional components, rather than focusing on the effects of a few components, such as capacity, knowledge and connectivity of the original model. Accordingly, the proposed model focuses on:

- Dynamic changes of governance structure and process over time,
- Interaction of governance structures at three levels of understructure, middle structure and superstructure,
- Specific outcomes, instead of strategic and predicted outputs, depending on the governance process and structure at a specific round,
- Interrelationships between different functional components, such as interests/goals, power, resource, conflict, roles, etc.,
- Both formal and informal networks between institutions as well as individuals.

Chapter 4 – Research Method

This chapter includes the research methodology of the thesis and outlines the research approach (Section 4.1), research design (Section 4.2), research methods (Section 4.3), research quality concern (Section 4.4), methodological challenges (Section 4.5), strengths and weaknesses (Section 4.6), ethical issues (Section 4.7) and analytical techniques (Section 4.8). A clear and complete description is provided of the research steps that are generated by careful consideration of the research questions and the appropriate methods for answering them.

4.1 Research approach

The philosophical assumption of this qualitative research is constructivism. Rather than uncovering a true account, the purpose is to capture and understand the meaning of social-political actions and events. The rationale behind choosing a qualitative approach is that researching the problem requires learning and interpreting individuals' views and assessing a process of decision-making that is influenced by different social and political settings that change over time (Creswell, 2008). The purpose is to understand in depth the characteristics of the situation (governance as structure), the complexity of social and political interactions, the meanings that the participants themselves attribute to these interactions and what is/was happening at the moment (governance as process) (Potter, 2013). This thesis believes that truth lies in the eyes of the researcher, and descriptions of events are not free from biases. Accordingly, the found accumulated evidence will be used to proceed toward a generalized conclusion, which is likely, but not certain.

This study is abductive, which is a combination of deductive (top-down) and inductive (bottom-up) research. It starts with a real concluded situation (no to the co-location of campuses in 2006 but yes to the co-location of campuses in 2012-13) with an incomplete set of observations/information. Then it goes to theories that can help to explain the situation or problem (the structural-functionalism approach in planning theory, which is integrated with some decision-making theories, particularly the 'rounds model'. So far, it is inductive. The process then becomes deductive, to see whether the explanation or theory seems reasonable. Unlike inductive research, abductive reasoning is characterized by lack of completeness, in either the evidence or the explanation, or both. This thesis acknowledges that there are many or an infinite number of possible explanations for a phenomenon, and the researcher needs some way to decide which possible explanations to look at first (Thagard and Shelley, 1997).

Through the abductive back and forth process, the thesis has developed the theories to better match with/explain the evidence in the co-location case. Accordingly, the final explanation is among the most feasible and a more complete reasoning.

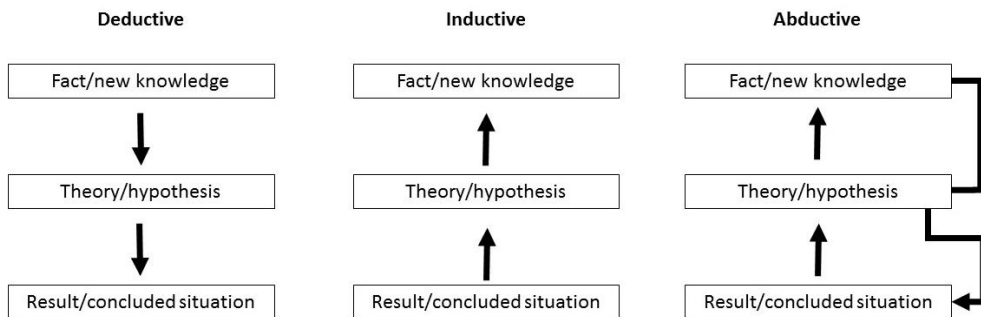


Figure 4-1: Deductive, inductive and abductive reasoning

4.2 Research design

This research aims to develop in-depth descriptive-analytical perspectives towards the governance system in planning and decision-making processes. The thesis deals not only with ‘how’ the certain outcomes occurred but also tries to understand ‘why’, more than just find out what those outcomes were. Yin (2009, p.18) believes that the case study has a distinct advantage when a ‘how’ or ‘why’ question is being asked about a set of events within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident. When there is no pressure on the researcher to impose controls or to change circumstances ((Denscombe, 1998), the best research strategy is the case study that provides the opportunity to obtain an in-depth investigation of a given phenomenon, within its context, by using a variety of data sources (Yin, 2012). What a case study can do, that, for example, a survey normally cannot, is to study things in detail and discover things that might not have become apparent through more superficial research (Denscombe, 1998). Since the governance concept focuses on interconnected and interrelated structures and processes, sufficient details are required to unravel the complexities of a given situation. Thus, the case study works well in this study, in which the researcher deals with the case as a whole, to discover how different variables affect one another.

Considering the constructivist philosophy of this research, one of the advantages of the case study, compared to other types, is the close collaboration between the researcher and participants that enables participants to tell their stories (Crabtree, 1999) and describe their views of reality that will help the researcher to better understand their actions (Lather, 1992). Accordingly, the researcher collects extensive narrative data (non-numerical data), based on the defined theoretical attributes (interests, goals, resources, power, roles and networks) over an extended period of time (2000-2013). Case study research allows prior theories (how theoretical concepts and categories relate to each other) as a sensitizing and guiding device for data collection (Yin, 2009).

4.2.1 Case study design

The case of co-location of university campuses in Trondheim contains elements that are especially significant and represents a typical case for testing the concept of governance in the planning and decision-making processes. Trondheim can be an appropriate case to study governance because local government in Norway has historically performed crucial development functions, and the government places greater emphasis on governance, dialogue and cooperation between the state and cities and between public and private parties (Regjeringen.no, 2008). As mentioned in Chapter 3, Theory, this case study is, on one hand, descriptive, as it tries to illustrate how ‘governance is structured’. On the other hand, it is explanatory (analytical), in order to analyze ‘governance as processes, i.e. how and why things occurred’ (Yin, 2009). It is also explorative because the researcher explores a phenomenon in practice that could contribute to a new theory or model.

According to Denscombe (1998, p.32), “Case studies focus on one instance (or a few instances) of a particular phenomenon with a view to providing an in-depth account of events, relationships, experiences or processes occurring in that particular instance”. Case studies might arise from two basic interests: intrinsic and instrumental (Stake, 1994). Intrinsic case studies are carried out to better understand a particular case, while, in instrumental case studies, the case is of secondary interest and plays a supportive role to understanding a particular phenomenon. Accordingly, this research is intrinsic, in which a particular case (co-location of campuses in Trondheim) is explored to describe and analyze the background, development of the idea, interaction of governance components, and internal-external influences in the planning and decision-making processes over time. Focusing on an unfolding

chain of events and processes that change over time implies the longitudinal nature of the case study, which provides interactions with an empirical context over time.

Case studies can be single or multiple, holistic or embedded. Yin (2009) explains that a single case is appropriate on the basis that the case is revelatory. The problems discovered in a particular revelatory case are common to other cases as well. One research objective is to develop an understanding of the governance in planning and decision-making. Accordingly, the thesis explores and describes a particular process of the co-location, provides a rich history of its development, and documents and understands its development, which is valuable for its own sake. On the other hand, this thesis sheds light on problems and issues that may be common to other governance in planning/decision-making cases. In this respect, the thesis produces a revised model, focused on describing and analyzing the governance system. The model may have utility in the investigation of other cases. Thus, the case of the co-location of campuses is chosen as a single case to determine whether propositions of governance in planning and decision-making theories are confirmed, challenged or need to be extended. This single case can represent a significant contribution to knowledge and theory building and can help to refocus future investigations in the entire field.

The single case study of this thesis is embedded, and there are three levels of governance: understructure, middle structure, and superstructure. The main unit of analysis is the participants' discourses, and documentation and archival records are supplementary. Through discourse analysis, first, the actors, who played key roles in each period, then, their goals, interests, resources and power relations are identified.

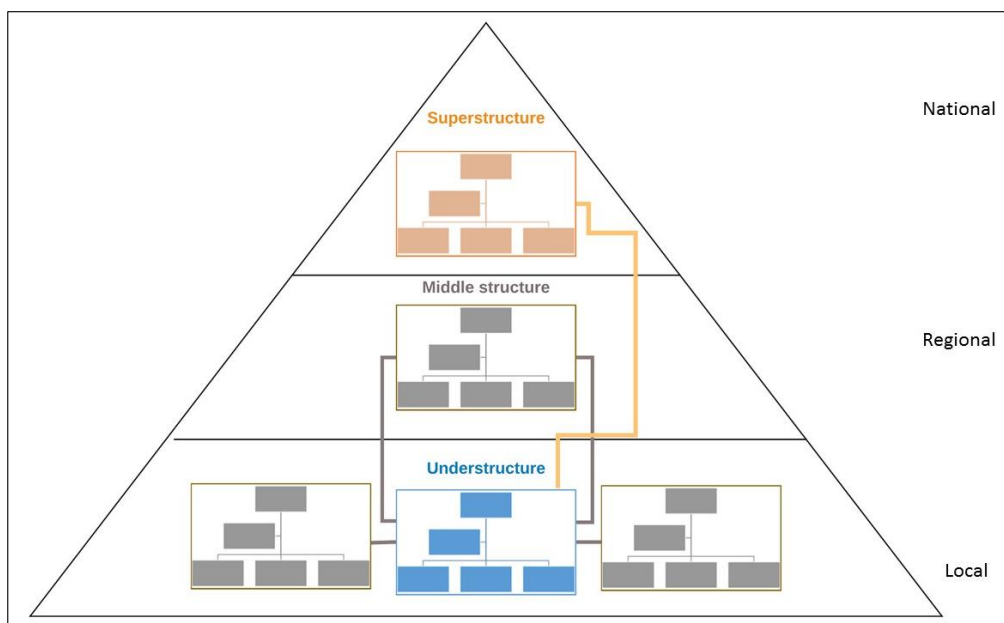


Figure 4-2: Three levels of analysis

4.3 Research methods

One important benefit in applying a case study is the opportunity to use a triangulated research strategy. Triangulation allows the investigation of a phenomenon from various viewpoints and the collection of a richer and stronger array of evidence than can be accomplished by any single method alone (Yin, 2009). Additionally, using multiple sources of data is important for ensuring construct validity. Documentation, archival records and interviews are the sources of evidence.

4.3.1 Documentation

This type of information can take many forms and should be the object of explicit data collection plans. These include letters, emails, personal documents; agendas, announcements and minutes of meetings, and other written reports of events; administrative documents, such as proposals, progress reports and other internal records; formal studies or evaluations related to the case; news clippings and other articles appearing in the mass media or community newspapers.

One of the disadvantages of this method is that documents can owe more to the interpretations of those who produce them than to an objective picture of reality (Denscombe, 1998, p.170). However, documents are helpful in verifying the information gained from other sources and

provide specific details to corroborate information from those sources, such as interviews. Thus, although the documents are not always accurate and may not be lacking in bias, they are useful sources. This thesis tries to overcome the weaknesses of documentation by using the triangulation technique, with the aim of verifying or falsifying the collected data.

Two key actors in this case provide the access to some of the necessary documents: the project manager of NTNU and the municipal advisor.

4.3.2 Archival records

Archival records can take the form of computer files, organizational records, maps and charts, and survey data that are produced by others. The difference between archival records and documentation is that some documents will need to be kept as evidence of business transactions, routine activities or as a result of legal obligations, such as policy documents. These should be placed in an official filing system and, at this point, they become official records. In other words, all records start off as documents, but not all documents will ultimately become records.

The main archival records for this research are NTNU's webpage (<http://www.ntnu.no/adm/styret/saker>), which collects all agendas, minutes of meetings, and other written reports about campus development, including the co-location case, and 'Atekst' (<https://web.retriever-info.com/services/archive>), which collects all media resources. The two main newspapers that cover most of the campus development issues and are used in this study are *Universitetsavisa* and *Adresseavisen*.

4.3.3 Interviews

As mentioned, the researcher is seeking the actors' individual interpretations and experiences in relation to the co-location and its decisional process. According to Denscombe (1998, p.111), "The nature of emotions, experiences and feelings is such that they need to be explored rather than simply reported in a word or two". Therefore, the interview is more practical than other methods like questionnaires.

The thesis used semi-structured in-depth interviews as the most appropriate mode for this research. With semi-structured interviews, the researcher has a clear list of issues to be addressed and questions to be answered. Moreover, by using a semi-structured interview, the researcher is prepared to be more flexible in terms of the order in which the topics are considered. Semi-structured interviews, unlike more formalized interviews, are conducted

with a fairly open framework, which provides a focused, conversational, two-way communication that allows both the giving and receiving of information but with an emphasis on the interviewee elaborating on points of interest. It lets the interviewee develop his/her ideas and speak more widely on the issues raised by the researcher (Denscombe, 1998). Since semi-structured interviews allow informants the freedom to express their views in their own terms, they can result in more reliable and comparable qualitative data.

The standard method of capturing interview data is audio-tape recording. However, since audio tapes capture only the verbal utterances, the researcher made field notes to refer to any non-verbal communication and visual signals that occurred during the interview. These notes include observations about the ambience of the interview and things like gestures, outside interferences, uncomfortable silences or other feelings that give a richer meaning to the words spoken. These annotations were placed in a special column on the page where the interviews were transcribed. Later, the transcript was sent to the interviewee to check whether the interviewer understood the interviewee's point of view properly and to verify that the statements were accurate. The interviewee had the chance to confirm what he/she said at the time of the interview was what was really meant but not said in the heart of the moment.

In this research, the researcher is both the interviewer and transcriber; thereby, compromising influences are reduced, with respect to the transcript quality. All the details of the discourse for all interviews were not transcribed in this thesis, such as breaks in speech, laughter, mumbling, involuntary sounds, gestures, body language, etc., unless they afford a more complete and valid picture of the interviewee's content. For instance, in the situation below, the interviewee's laughter was transcribed.

The researcher: Didn't you have any friend at the Ministry of Finance? (This question was asked, based on the fact that this actor/interviewee was very well-known in networking and as having connections with the right people.)

The interviewee: No, in fact I did not have (laughing...)

The interviewee's laughter let slip what he considered his deficiency in this process. Thus, the next question was asked, to confirm the researcher's interpretation.

The researcher: So, does it mean that if you had a friend in the Ministry of Finance, you might make it happen?!

The interviewee: (laughing...)

In this situation, the interviewee's laughter reveals more than his verbal content. It is worth mentioning that, in this situation, the interviewer may not recognize the value of transcribing 'laughing' immediately, but only after doing some additional interviews and interpretive work. Specific comments in the transcript will trigger a multi-faceted recollection of the interview situation – e.g. the respondent seeming remarkably self-confident or defensive when answering a question.

On the other hand, the presence and personal identity of the researcher may also affect how the interviewee responds, which may not be articulate, perceptive or clear. In sum, interviewees and interviewer have their own preferences and prejudices that have some impact on the chances of developing rapport and trust during an interview. Different readers read different meanings in the same interview, and the results are entirely subjective and dependent upon the interpreters, who only find the meanings they expected to find. In fact, the outcome of interviews, performed by different interviewers using the same interview guide may vary, due to the different sensitivities of the interviewers concerning personal interaction, as well as to their ear for and knowledge of the topics of the interviews.

Interview sampling

Sampling depends on the overall aim of the research. The aim can be to produce generalizable results, which leads to the choice of a representative sample of people to interview, or the aim can be to delve in depth into a particular situation, with a view to explore the specifics, in which case the emphasis is on choosing key players in the field (Denscombe, 1998, p.119). In this research, the focus is more on the latter. Creswell (2008) notes that, in qualitative inquiry, the intent is never to generalize; instead, it is to develop an in-depth exploration of a central phenomenon. In this thesis, the researcher is looking for specific informants who took important action in the process of co-location or have important information and insight due to their position. This sampling method, in which the researcher purposefully or intentionally selects individuals, instead of conducting random sampling, is "nonprobability purposive expert sampling" (Trochim, 2006). To identify and get through to the key and most important actors for the interviews, in addition to the use of documentation and archival records, the researcher had the privilege of being supervised by the professor, who had been involved in the campus development process, had known most of the main actors and had closely followed

the process¹². In addition, ‘snowball sampling’ was used as a complementary sampling technique by the identification of initial actors/interviewees, who provided the names of other related actors and opened up possibilities for an expanding web of contact and inquiry.

Through the documentation and archival records, 86 names were identified as potential interviewees. These people participated in the process of co-location planning and decision-making at different times and in different positions. Some were board members, professors/employees, rectors, politicians and governmental authorities, including mayors. The list of potential interviewees was revised, together with the supervisor, and 22 interviewees were selected/prioritized and invited by email to the interview (see Table 4-1). Among those 22 selected informants, 10 accepted the interview invitation, one (the internal board member) said no, and the rest did not respond to the invitation, which was sent three times after an appropriate time interval had elapsed.

In addition to the 10 people that accepted the interviews, 10 other people were recommended by other interviewees (snowball sampling). In order to reach those people who did not respond to the interview invitation, or the most busy and critical interviewees, the researcher used her personal network in the municipality and interviewed the municipal senior advisor. However, the interview with her revealed that she was one of the main active but hidden actors in this process. Contacting the municipal senior advisor paved the way for data collection and accessing many other informants. She revised the interview list and suggested new interviewees that could compensate for those unanswered/rejected interview invitations. All the informants in the revised list were successfully interviewed by the direct or indirect intermediation of other interviewees, which is explained in Table 4-2. The interviews were performed in person, except the interview with Minister of Education Halvorsen (2009-2013), which was an email interview, and with Minister of Education Djupedal (2005-2007), which was a telephone interview. The process of interviews took eight months (from October 2015 to April 2016).

¹² Professor Tor Medalen was on sabbatical from summer 2005 to summer 2006. Within this period, he was working with the campus project team (prosjektgruppe for samlokalisering), in which Trondheim Municipality and NTNU collaborated. His role as professional advisor was confined to only planning and transportation issues, and he did not have any decision-making role/power.

Table 4-1: The initial list of interviewees

	Position	Who accepted the interviews
1	NTNU professor	X
2	NTNU professor	
3	Deputy minister of education (H ¹³) (2000-2005)	
4	NTNU rector (2001-2005)	X
5	Former editor of <i>Adresseavisen</i>	
6	NTNU project director (2004-2013)	X
7	NTNU former internal board member	
8	NTNU professor	
9	deputy mayor (SV)	X
10	NTNU professor	
11	NTNU former internal board member	Rejected
12	NTNU advisor	
13	NTNU board leader (2005-2013)	X
14	NTNU senior advisor	
15	NTNU university director (2004-2006)	X
16	NTNU former internal board member	
17	Mayor (AP)	
18	NTNU professor	X
19	NTNU former external board member	X
20	Municipal director	
21	<i>Adresseavisen</i> journalist	X
22	NTNU former internal board member	X

In the end, 25 interviews were taped, transcribed, coded and analyzed through a ‘Qualitative Data Analysis’ tool. The coding process was also an inductive process, in which new fragments of data were constantly compared to previous segments of data in terms of similarities and differences. The coding analysis is explained later in this chapter.

¹³ The Conservative Party (Norwegian: Høyre, literally: Right). It is the major party of the Norwegian center-right, and the leading party of the Prime Minister Erna Solberg cabinet.

Table 4-2: Those who were interviewed, their positions, dates of interviews and recommendations

	Position	Date of interviews	Explanation
1	NTNU chairman of Hestnesutvalget (2004-2006)	23.09.2015	
2	NTNU dean of Faculty of Social Sciences and Technology Management (2013-2016)	02.11.2015	Recommended by an outsider
3	NTNU project director (2004-2013)	30.11.2015	
4	NTNU rector (2001-2005)	14.12.2015	
5	NTNU professor	06.01.2016	
6	NTNU internal board member in 2006	07.01.2016	
7	NTNU rector (2005-2013)	12.01.2016	Recommended interviewing the board leader in 2012
8	NTNU university director (2004-2006)	19.01.2016	
9	<i>Adresseavisen</i> journalist	01.02.2016	Interviewed by intermediary of Rector Digernes
10	Municipal senior advisor	05.02.2016	Researcher's networking
11	NTNU dean and professor	10.02.2016	Recommended by Rector Bovim
12	Student leader at student parliament	11.02.2016	Recommended by municipal senior advisor
13	NTNU property administrator	12.02.2016	Recommended by municipal senior advisor
14	Municipal chief executive	18.02.2016	Recommended by municipal senior advisor
15	Deputy minister of education (SV) (2012-2013)	19.02.2016	Recommended by municipal senior advisor
16	Deputy mayor (SV)	25.02.2016	Recommended by municipal senior advisor
17	HiST project manager	26.02.2016	Recommended by municipal senior advisor
18	NTNU external board member in 2006	09.03.2016	Interviewed by intermediary of Rector Digernes. Recommended interviewing the general secretary at KD in 2012
19	NTNU board leader (2005-2013)	10.03.2016	Interviewed by intermediary of Rector Digernes
20	Politician (AP) at TK (1999-2007) advisor at STFK (2008-2015)	14.03.2016	Recommended by municipal senior advisor
21	Minister of education (2009-2013)	15.03.2016	
22	Politician (AP)	04.04.2016	Interviewed by intermediary of deputy mayor
23	NHO project leader, board leader of NTNU2020/HiST2020	05.04.2016	
24	Minister of education (2005-2006)	07.04.2016	
25	Politician (SV) at STFK in 2012	12.04.2016	Recommended by municipal senior advisor

4.4 Research quality concern

In any kind of research, the researcher should show that the methods and conclusions are justifiable and reasonable. The issues of objectivity, reliability, generalizability and validity

are as important in qualitative research as in any other approach (Denscombe, 1998, Yin, 2009).

Objectivity concerns the inevitable biases of the researcher that impact on the research. Case study researchers are prone to conduct research subjectively and try to find supportive evidence to validate their predefined position and avoid contrary evidence (Yin, 2009). Thus, the researcher might have held some position (expectation, bias, belief, or set of cultural values) when she was conducting her research. On the other hand, it is difficult to be objective when studying human behavior. Regarding the researcher's desire to produce an accurate reflection of reality and produce meaningful results, the researcher's bias might compromise the integrity of the research, by allowing personal beliefs to affect the analysis and explanation process. Therefore, bias is inevitable in this thesis. However, it is important that the researcher recognizes subjectivity and reflects on the values and objectives she brings to her research and the way it affects the research project, whether it facilitates or impedes objective comprehension. Breckenridge et al. (2012) assert that researcher's bias is itself a variable and social product. If the researcher is exerting bias, then this is a part of the research, in which bias is a vital variable to weave into the constant comparative analysis. Flyvbjerg (2006) also mentions that the case study contains no greater bias than other methods of inquiry towards verification of the researcher's preconceived notions. On the contrary, experience indicates that the case study contains a greater bias towards the falsification of preconceived notions than towards their verification.

Reliability is transformed into the question: If someone else did the research would he or she have got the same result and arrived at the same conclusion? To achieve reliability, the researcher used audio-taping. In addition, the written case reports were returned to key informants for factual verification and to check the researcher's interpretations of the data. In this regard, the participants had the opportunity to discuss and clarify the interpretation and contribute new or additional perspectives on the issue under study. Furthermore, the 'Qualitative Analysis Data' software, which was used for coding and analyzing data, provides some quantitative data (the number of people that mention the same thing) that can increase the reliability. Triangulation of methods was also used to conform to the findings of other methods.

Golafshani (2003) concludes that the quality of research is related to the *generalizability* of the result and thereby to the testing and increasing the validity or trustworthiness of the

research. Qualitative research often confronts skepticism about how far it is reasonable to generalize from the findings, especially of the single case study, which is the only one case of its kind. The issue of generalization in a qualitative case study is still under question. Some believe that one cannot generalize, based on an individual case, while others, such as Flyvbjerg (2006), claim that one can generalize on the basis of a single case study. In addition, if one cannot formally generalize his/her research, it does not mean that the research “cannot enter into the collective process of knowledge accumulation in a given field or in a society” (Flyvbjerg, 2006, p.227). In this thesis, the case is told in its diversity, and it can be unfolded from its many, complex and even conflicting sides. Flyvbjerg (2006, p.238) suggests: “Leave the scope for readers of different backgrounds to make their own different interpretations and draw diverse conclusions regarding the question of what the case is a case of”. In this way, readers are not pointed down any one theoretical path or given the impression that truth might lie at the end of such a path; however, they are invited to define the meaning of the case through their own path. In this regard, this thesis does not aim to recommend and generalize any best form of governance, because details and contexts vary from case to case. However, addressing the institutional barriers, imbalanced power relations and influence of formal-informal networks in this case can be a learning example (generalized point) for researchers, political authorities and policy-makers, to work out principles of governance in practice and beyond the theoretical context. In addition, the key success and failure factors in the case of Trondheim can provide some insights to policy-makers and authorities, who are involved in a similar process, particularly in Norway. One contribution of the thesis is in theory building, suggesting an integrated approach of planning and decision-making or ‘structural-functionalism’ with a ‘rounds model’.

Validity in a broad sense refers to the data and the methods being right and whether or not they reflect the truth and reality and cover the crucial matters; it questions whether the researcher is measuring suitable indicators of the concept and obtaining accurate results (Denscombe, 1998, p.241). According to Yin (2009), there is no single, coherent set of validity and reliability tests for each research phase in case-study research. The way the quality can be evaluated depends on the case and the process of data collection and analysis. In this thesis, validity is ensured by combining interviews, documentation and archival records, to overcome the limitations and intrinsic biases of any one perspective. In addition, two analytical techniques are used to increase internal validity, which are ‘pattern matching’ and ‘logic models’; these are explained in Section 4-9, Analytical techniques.

4.5 Methodological challenges

In order to explore why and how a specific decision or action was taken, it is important to consider the decision-making conditions, where multiple actors' interests, cultures, strategies and resources might be in conflict and the rules of the game unclear, uncertain and complex. Individual factors (such as ego, strength, field dependence, and locus of control) and situational factors (such as job context and the broader organizational culture) can influence the likelihood of an individual's acting on cognitions of what is right or wrong in decisional processes (Trevino, 1986). People can be influenced by the behavior and opinion of other actors unconsciously, and it is not easy to figure out the reality from asking questions of interviewees. An actor's immediate interest, such as external rewards/punishments, or the culture, values and principles of the society or organization that an actor belongs to can also affect one's decision (Trevino, 1986). Even if people may be aware of the influence of others, they may not be willing to admit it. The idiosyncrasy of such multifaceted decisions, the number of variables, and the complexity of anticipated consequences make it difficult to compare different decisions systematically and predict all possible decisional alternatives (Winn, 2001). Accordingly, the focus has been on understanding the decisional process as a social behavior. The informants' statements merely represent their perceptions. Their cognitive and emotional reactions can filter and modify their perceptions, which are reported through their personal verbal usage. Thus, it is important to acknowledge that the researcher is merely getting the informants' picture of the world as they see it; and the researcher is getting the information only as the informants are willing to pass it on in the interview situations (Dean and Whyte, 1958). Subsequently, the researcher cannot tell what an informant really believes, based on a few questions she asks him/her in an interview. By putting different kinds of questions to the informant in different ways, it is unwarranted to expect that his/her real feelings will be represented. The informants unconsciously modify their responses because of their emotional needs to shape the situation to fit their own perspective. Awareness of the facts might be so uncomfortable that the informants want to protect themselves against their awareness. For instance, when interviewees talked about their own interest in this case, they commonly and mostly referred to their social and/or environmental interest. In contrast, when they talked about other actors, they usually addressed their economic and/or political interest. In this regard, interviewees' economic and political interests were interpreted through the way they discussed and analyzed the processes,

particularly in relation to other actors' behavior. Putting interviewees' responses together can somehow reveal the actors' real interests.

In addition, difficulties in understanding the informants' responses are seriously increased when the informants are telling not their present feelings or attitudes but those they recollect from the past. This is because of the widespread tendency we all have to modify a recollection of past feelings in a selective way that fits them more comfortably into our current point of view. Furthermore, the ulterior motives of the informants may modify the way they respond to the interview questions. Today, the co-location decision has been approved and is in the implementation process. The informants may feel that the affairs of their organization or their own personal life should be put forward in the light of the co-location decision. Subsequently, they may hesitate to bring up the negative aspects of it (Dean and Whyte, 1958). The researcher tries to overcome this challenge by assuring the informants that if they so wish, their remarks can be confidential and reported to no one else.

Interviews cannot be reliable alone. The respondents may not necessarily know about the details of what happened. Thus, they report what they supposed/remembered that happened. Because their mental set has selectively perceived the situation, they might have only a distorted impression of what occurred. In this regard, the triangulation method is significant in this case. Another tactic to detect the distortion of informants' responses and correct them is to ask different informants the same question. It may not be manageable to overcome all these challenges; however, it is important to mention that the researcher took them into account before starting the analysis.

On the other hand, interviewees' language style and vocabulary size might be different from the researcher's, which might raise considerable misunderstanding on the part of the interviewer and interviewee. Therefore, instead of looking for whether the informant was telling the truth, the researcher's focus was on what the informants' statements reveal about their feelings and perceptions, and what inferences could be made from them about the actual events they had experienced.

4.6 Strengths/weaknesses

The process of co-location influences many people, such as students, employees and residents, to have their own interest in the project's outcomes. However, as a non-Norwegian temporal fellow at NTNU, the researcher is not dependent on any organization and does not have any

special interest (compared to others) in the case of co (re)-location. She looks at this case as an outsider, who does not have a primary interest and knowledge, compared to a normal citizen. This might inhibit the researcher's prejudgment about the interviewees, which could increase the trust building and allow informants to share their real answer. However, due to the unfamiliarity with language, on one hand, and lack of the general knowledge about decision-making processes in Norway and the background of the co-location process, on the other, it is impossible to entirely avoid misinterpretation and misunderstanding in the process of data collection. In addition, as English is not the mother-tongue language for either the researcher or the informants, misinterpretation is inevitable in interviews which were mainly conducted in English.

Since many informants, such as rectors, former ministers/member of parliament, deans, managing directors, etc., are/were very busy people, it was difficult to get through all the interviewees' list. In addition, this reduced the speed at which the interviews were conducted.

4.7 Ethical issues

Because of the nature of qualitative case-study research, ethical issues must be considered. Researchers need to protect the anonymity of the participants, in case they do not want to be identified. Due to the nature of the research topic, and in order to ensure the accuracy and reliability of the data, the researcher decided to make the report non-anonymous. In this regard, the researcher explained the purpose of the research and informed participants about the non-anonymity of the information beforehand (see the letter of information in the Appendix). This information and the consent letter were sent, together with a request email for an interview. Before interviews were conducted, the interviewees were asked to sign the letter of consent, in which they certified that they were aware that the interview would be recorded, and the report would not be anonymous (see the letter of consent in the Appendix), unless interviewees wished to say something off the record. Those parts would be quoted as anonymous. Although the researcher decided to make the information non-anonymous, which is also approved by the Norwegian Center for Research Data (NSD) (see NSD report in the Appendix), the non-anonymity is meaningless for (inter)national audiences.

This thesis targets the wider society than local and thus quotations are anonymous, although the more detailed and non-anonymous version is also available for local audiences if there is a demand for it. In addition, if the researcher faced grammatical errors in the process of quotation, she corrected them and used brackets to alter the original word. However, if she

was not sure whether a correction might change the core of an interviewee's content and intended meaning, she left those errors.

Nevertheless, prior to the thesis submission, the researcher sent a copy of the document to the interviewees and they had the right to review, comment on, correct, and/or withdraw the information that was given in the interview. The identities of interviewees are kept anonymous, and their quotations just include their role and the date of interviews. In addition, the researcher stored the collected data in a safe place and in her personal computer, which is secured with a passcode. The informants were also informed that the information would be kept secret and inaccessible. After all, due to the freedom of the press and information that is guaranteed under Article 100 of Norway's constitution, it does not seem that the ethical issue has been a great barrier in this case.

In Norway, any individual researcher is obliged to familiarize himself/herself with the Research Ethics Act, research ethics guidelines and information from the Norwegian Social Science Data Services (NSD) concerning the Data Protection Official scheme and processing personal data and must submit the notification form at least 30 days prior to commencing data collection (see the notification form in the Appendix).

4.8 Analytical techniques

In order to analyze the case study data, the researcher started with the descriptive research questions, identified the elements and attributes that addressed those questions and drew a tentative conclusion, based on the weight of the evidence. This procedure was repeated over and over until the researcher could respond to the question. The original objectives and design of the case study presumably were based on theoretical propositions.

The researcher started by reading the interview transcriptions chronologically and performing the initial coding: identifying discrete events, incidents, ideas, actions, perceptions, and interactions of relevance. The initial coding was based on the researcher's first impression, mainly a summarized and condensed version of the data.

Each coding unit was linked to specific portions of the text. Some were coded clearly, simply and unambiguously, while it was more complex and ambiguous to code some once and for all. For the complex ones, 'memos' were written as supportive tools, to explain codes, keep

track of and refine ideas that developed during the analysis (see Figure A-11¹⁴ and Table A-1¹⁵ in the Appendix).

Some memos presented hypotheses/questions about connections between categories and/or their properties (shown by question marks in Figure A-11), which necessitated an integration of these connections with clusters of other categories to be approved/responded to.

As a result, coding became a transitional process between data collection and data analysis. The researcher clustered connected codes together and, according to their similarity and regularity, facilitated the development of categories and thus analysis of their connections.

The researcher was quite flexible in coding the data and actively sought new concepts relevant to the phenomenon of interest. Codes were reviewed, revised and recoded over and over.

Once a basic set of concepts was identified, these concepts were then used to code the remainder of the data, while simultaneously looking for new concepts and refining old concepts (see Figure A-12¹⁶, Table A-2¹⁷ and Table A-3¹⁸ in the Appendix).

Although some codes were based on the researcher's own naming convention, some were standardized labels taken from the theoretical framework, such as 'power', 'interest', 'goal', 'conflict', 'mediation method' and 'roles'. In addition, in line with the rounds model of decision-making (the theoretical framework), in which the governance structure and process are investigated in relation to the outcomes of 2006 and 2012, the researcher categorized the data longitudinally, based on the attribution of selected change processes. In several rounds, these data were juxtaposed and put into different arrays and matrices of categories, chronological order and temporal schemes. Then, based on the relation between these variables and the frequency of different events, a relational flowchart or matrix was drawn by the researcher. To move toward a general analytical strategy, the researcher needed to move backward and forward through the research questions and the interpretation of the data. The researcher had to examine the data fairly to see how they might or might not support the research questions and the conclusion.

¹⁴ Shows a schematic view of the coding system in MAXQDA environment, in which memos were written to decipher the meaning behind a certain code.

¹⁵ Describes the memos.

¹⁶ Shows a sample of initial coding and memos, which also present a repetitive pattern of action and consistencies in the responses of an interviewee.

¹⁷ Explains the categories that codes in Figure A-12 belong to and the related sub-codes.

¹⁸ Explains the memos of the example above.

In such an open coding process, the researcher figured out that some categories and subcategories could be assembled into causal relationships to tentatively explain the specific event/decision in this process. For instance, a quotation might be said in relation to the events in 2012 and addressing the important role of some specific actors that resulted in the ‘yes to co-location’ decision. The roles of these actors were sub-coded under the ‘success factors’ code in the category of ‘2012’.

By coding more interviews, repeating and revising the coding, some codes were added, and some were considered as an embedded or interconnected part/sub-code of a larger code. For example, the specific role of actors in 2012 was included in a larger code as ‘Right People at Right Time and Position’. Some additional codes, e.g. the role of the municipality as a promoter and the role of HiST as NTNU’s ally and supporter in 2012 were added in the second coding; (see Figure A-13, a developed version of Figure A-12 in the Appendix).

By grouping similar concepts into higher-order categories, a ‘bigger picture’ of the issues was built that was salient to understanding the governance structure and process in the co-location case. The coding process implied the continuous rearrangement, aggregation, and refinement of categories, relationships, and interpretations, based on increasing depth of understanding. The incidents/texts assigned to each category were compared constantly to validate the category, to integrate categories and/or their properties (if it was necessary), and to focus on the core concepts and ignore less relevant concepts.

The coding process was cyclical, and only a few codes from the first cycle remained intact. The process of generating categories, themes and concepts was conducted a minimum of four times to search for patterns in the data and for ideas to help explain why those patterns were there in the first place.

The chosen technique of analysis for this study was a combination of pattern matching and logic models. The logic-model technique can be considered as a form of pattern matching (Yin, 2009). Through the empirical pattern matching, the findings are compared with a theoretical model/framework. If the empirical and predicted patterns appear to be similar, the results can also help a case study to strengthen its internal validity.

The ‘logic model’ also “stipulates and operationalizes a complex chain of occurrences or events over an extended period of time” (Yin, 2009, p.155). The logic model looks at events

that are staged in repeated cause-effect-cause-effect patterns, whereby a dependent variable (event) at an earlier stage becomes the independent variable (causal event) for the next stage.

The analysis of this research mainly focuses on relational patterns between the various forms of governance functional components and explains how they have affected the decisional process and results, instead of focusing specifically on a causal pattern. Although some evidence of causal relationships can be found between some components, the aim is not to find a cause-effect relationship between all variables in this case.

The reason for choosing a combination of pattern matching and logic-model techniques was because they both consist of matching empirical observed events to theoretically predicted events.

Although Qualitative Data Analysis (MAXQAD12) software serves as an able assistant and reliable tool to code and categorize the data, it cannot perform the finished analysis on its own. It can only help to find all the words and phrases matching the defined codes, count the incidence or occurrence of the words or codes (quantitative data) and show when and where multiple combinations are found. The figure below shows the chronological process of research.

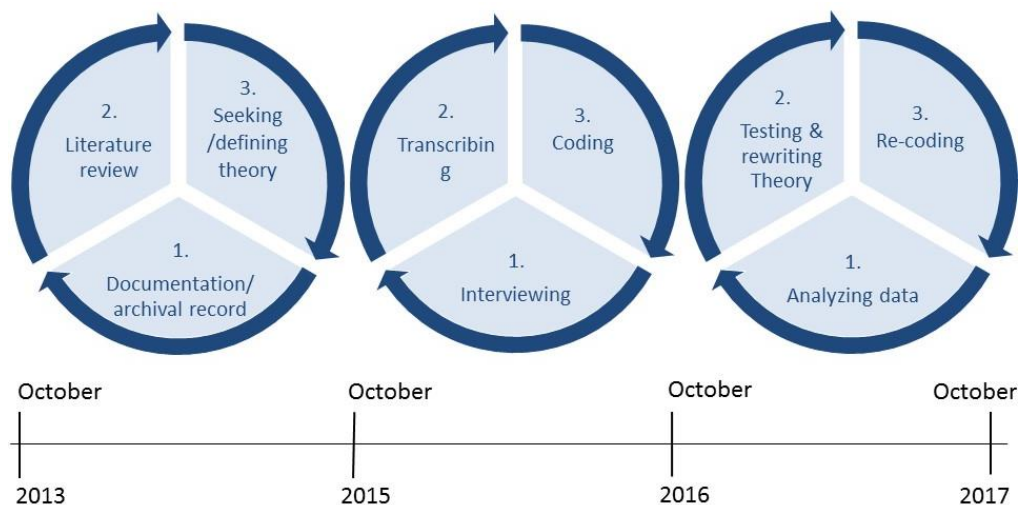


Figure 4-3: The process of four-year research

Chapter 5 – Case and Analysis: No to co-location

5.1 Brief overview

In order to answer the main research question, ‘Why did the planning and decision-making process in the case of co-location change direction over time?’, the researcher needs to understand the change/halt of the co-location plan in 2006 and identify why and how the process departed from such a formally approved decision, i.e. no to co-location, and ended with the yes decision in 2012-13. The case and analysis section is divided into two major parts: Chapter 5 No to co-location and Chapter 6 Yes to co-location, each answering the relevant sub-question: Section 5.2 ‘How was the idea of co-location initiated?’ and Section 5.3 ‘How and why was the co-location of campuses stopped in 2006?’ Section 6.1 ‘Why had no major change/development taken place at Dragvoll between 2006 and 2012?’ and Section 6.2 ‘Why and how was the case of co-location raised again in 2012? Why was the opposition silenced in this round?’

Based on the theoretical framework, this thesis does not perceive the planning and decision-making process as specific consecutive steps over time but, rather, as streams of simultaneous and interactive events/decisions that were taken by different actors at a specific time, creating milestones that were decisive in the development of the co-location decision. The division into time periods in this thesis does not represent a number of defined sequences or an order that is being determined – e.g. this is preparation, and this is implementation – but, rather, it denotes the starting and concluding points of a certain outcome (see Table 5-1).

This thesis demarcates planning and decision-making rounds by determining the most crucial decisions of planning and decision-making in retrospect. This concerns particularly the choice of decisions that, in a later period of decision-making, served as an important point of reference for the behavior of the actors that were present at the time (Teisman, 2000). Each round is formed by the strategic interaction of several actors, each with their own understanding of the problem and the feasibility of particular solutions, with their own individual and institutional self-interest, normative preferences, power or resources that may be employed to affect the opportunities for choices and final outcome (Scharpf, 1997). Accordingly, the actors of each round (structural components of governance) and their recognizable/influential course of action (functional components of governance) are identified and analyzed. The initial focus is on the perceived problems and solutions of different actors,

and a subsequent analysis is to understand whether (and how) actors had managed to combine perceptions to support a joint solution and conformable actions. Thus, the final outcome is the consolidation of a problem-solution combination over a longer period of several planning-decision rounds; the researcher analyses the interactions between the decisions and processes of these rounds.

These rounds are defined in Table 5-1, explaining that these specific milestones affect the outcome of today's co-location process. These rounds are grouped in relation to the two main outcomes: no to co-location in 2006 and yes to co-location in 2012-13.

The rounds that ended with no to co-location in 2006 and are explained in Chapter 5 include:

- Round 1 before 2000: the history and background of the co-location alternative. This round is the important point of reference for the later processes and rounds. The events of this period are considered as precursors to the co-location processes and emphasized the significance of NTNU in Trondheim.
 - Round 2 from 2000 to 2002: the case of the university hospital development and the replacement of Øya campus with Dragvoll campus. In this round, the idea of replacing the university hospital and medical department¹⁹ at Øya campus with the social departments of Dragvoll campus was brought up politically. The replacement idea was dismissed, but it opened up the door to the re-location of Dragvoll campus to the city.
- Round 3 from 2003 to 2004: heating up the co-location idea. This round is about when and how the idea of co-location was formally initiated and introduced, and why it found so many supporters.
- Round 4 from 2005 to 2006: turning a perceived/expected yes to the no decision. In this round, the management system of NTNU had changed, which brought about the transformation of governance structure and power relations. At the end of this round, the co-location of campuses was dismissed. Indeed, the rehabilitation of Dragvoll campus was brought up, in light of the two-campus model at NTNU.

The rounds that started with no to co-location and the rehabilitation of Dragvoll alternative in 2006, and ended with yes to co-location in 2012-2013, are explained in Chapter 6 and contain:

¹⁹ Later, it was called 'faculty'.

- Round 5 from 2006 to 2012: inaction on the rehabilitation of Dragvoll. In this period, no big development or change happened at Dragvoll. The reasons for such stagnation are explained.
- Round 6 from 2012: re-initiation and approval of the co-location. In this round, the co-location was re-started, the existing conflicts and disagreements mainly disappeared, and the relocation of Dragvoll to the vicinity of Gløshaugen was finally approved.

Table 5-1: Rounds of planning and decision-making in the case of co-location

	Rounds of planning and decision-making	Timeline	Outcome
No to co-location	Round 1 History and background	Before 2000	Formation of co-location idea
	Round 2 University Hospital and replacement of Øya campus with Dragvoll campus	2000-2002	No to replacement idea but yes to relocation of Dragvoll
	Round 3 Heating up the co-location idea	2003-2004	The powerful actors came to be in favor of the co-location
	Round 4 Turning 'yes' to the 'no' decision	2005-2006	The board of NTNU said 'no' to the co-location
Yes to co-location	Round 5 Inaction on the rehabilitation of Dragvoll	2006-2012	Political coalition in opposition to rehabilitation of Dragvoll
	Round 6 Re-initiation and approval of the co-location	2012-2014	The board of NTNU said 'yes' to the co-location

The word 'co-location' focuses mainly on the process of re-locating Dragvoll campus to the Gløshaugen-Øya area.

To recall the theoretical perspective, this thesis considers a governance system as interacting parts, defined as structures and functions/processes that are interconnected and interdependent.

One of the main effective factors of ‘governance structure’ in planning and decision-making processes is the change of actors and their decisive positions in a network. Accordingly, in Chapters 5 and 6, at the beginning of each round, the main actors at three levels of governance, namely, understructure, middle structure and superstructure, and the process-based roles they had played are presented in separate tables. In addition, it is important to consider which actors held the main positions with the attributed authority in each round²⁰. Figure A-15 in the Appendix can show which authorities were new in the process or which had been present for a longer time. It represents how often the governmental positioning had changed, which can provide information about the political context that influences the “body politic, such as swings in national mood, executive or legislative turnover, and interest group advocacy campaigns” (Béland and Howlett, 2016).

Table 5-2 recalls the functional components, chosen in the Theory chapter, that are analyzed in Chapters 5 and 6.

Table 5-2: Functional components of governance

Functional components	Type
Interest	Social, political, economic, environmental
Resource	Legal, political, social, economic, cognitive
Power	Position (authority), personality and opportunity (influence)
Conflict	Over strategy, interest, resource, culture

²⁰ Figure A-15, in the appendix, shows the Minister of Education (EM), Minister of Finance (FM), Prime Minister (Gov.) and their political party in each round that was concurrent with the presidency period of each rector at NTNU.

5.2 How was the idea of co-location initiated?

5.2.1 Round 1 (before 2000): History and background

Table 5-3: Governance structure, Round 1 (before 2000): History and background

Round 1 History and Background	Governance structure	Main actors
Before 2000	Understructure	Before 1996: rector of NTH, rector of NLHT, rector of museum After 1996: rector of NTNU
	Middle structure	
	Superstructure	Ministry of Education 1 (AP)

Table 5-4: Important roles, Round 1 (before 2000): History and background

Round 1 History and Background	Main actors	Role
Before 2000	Minister of education	Initiator
	Employees	Opposer

The history of Trondheim acknowledges the significance of ‘knowledge’ as the main asset of the city and the critical role that the university and university colleges can play in the development of the city and region. In addition, it shows that, for a long time, the merger and co-location of educational departments have been a part of knowledge-development strategies in Trondheim, and in Norway in general (see the Appendix, Trondheim as a knowledge city).

In order to understand how the case of co-location was initiated, many of the interviewees referred to the creation of the Norwegian Institute of Technology (NTH) in 1910, which reinforced knowledge and technology as the driving force of Trondheim’s economy and business development.

The aim of founding NTH was to assign the main national responsibility for higher education in engineering and technology. “This has had an enormous impact on the development of Trondheim, its reputation and pride” (Journalist, interviewed on 01.02.2016). Simultaneously, the students and professors of engineering and technology sciences derived great pride from studying or working at the best national engineering university. Understanding the significant position of NTH in Norway may explain the later behavior and reaction of academics in the case of co-location. According to many interviewees, the impression is that the foundation of

NTH might make the engineering and technology professors (Gløshaugen campus) overconfident. In various writings and in many contexts, and in connection with the process of establishing NTNU, the unconventional culture of NTH has been particularly described and discussed (Hård, 1997, Brandt and Nordal, 2010, Kvaal, 1997).

When the government wanted to establish NTH as the technology core in Trondheim, the issue was very disruptive and controversial. There was skepticism in parliament about having the most important technical educational institution in Trondheim, rather than in the capital city, Oslo. “Still, it is controversial, because there is little industrial activity in Trondheim, compared to Oslo, and there should be more innovation, money, investment and people” (Journalist, interviewed on 01.02.2016). Such controversy implies conflict over national and local interests.

After the establishment of NTH, Trondheim became a very popular city. Many smart and clever people from all over the country started to move and live there, due to the university. Since then, the technological side of the university at national level has become very special (Journalist, interviewed on 01.02.2016). The story behind establishing NTH in Trondheim explained the culture and behavior of Gløshaugen (engineering) people in this process. According to Jensen (2010), from the first day (in 1910), the NTH students were very conscious of their elite status.

The same sense of culture and community was true for the Norwegian College of Teaching in Trondheim (NLHT) and for the social scientists. However, compared to NTH, it was gentle and less controversial and troublesome.

In 1961, it was proposed that NTH, NLHT and the Museum of Science (old DKNVS) should be merged and create the University of Trondheim (UNiT). Considering the fact that their cultures were different and deeply rooted, there was little desire to be joined as a single institution, undergoing a process of institutional change. However, the debate about the cooperation between NTH and NLHT had begun, which became the most complicated merger attempt in Norway, incurring countless hours of oppositions and negotiations (Opdahl, 2004). A majority of employees and politicians agreed to establish UNiT only if each of the three colleges would have its own autonomy. A minority also proposed an integrated university. The Ministry of Education supported the minority’s idea and suggested developing UNiT at

Dragvoll farmlands²¹ to take account of the future expansion of all departments, and to encourage and enhance the city's development in that area (Eriksen, 2007). The initial budget that was considered for developing UNiT was 250 million kroner for 7000 students. The choice of Dragvoll campus was also in consideration, with the NTH's future need for space, which was estimated to be 100 hectares (250 acres). The vision was that Dragvoll would be Trondheim's largest campus with the possibility to build on its own land (but state-owned), for decades to come.

According to one of the professors of Dragvoll, interviewed on 07.01.2016, "The new brand of architecturally designed campus at Dragvoll, which was built for the future expansion of UNiT, made the university community in humanity and social sciences very proud. Therefore, when all the arguments on having one campus closer to Gløshaugen came up, this history of Dragvoll was conflictual, which was a part of the rationality of opponents' resistance".

Despite the efforts made by the Ministry of Education to create a stronger institution by merging NTH and NLHT, the University of Trondheim (UNiT) was still a loose organization ('papiruniversitet') and to little or no useful effect (Opdahl, 2004).

The strategy of integrating faculties failed, due to the high degree of autonomy of each faculty. In addition, different functions, backgrounds and cultures of NTH and NLHT backfired on the institutionalization of UNiT and compelled them to reach an agreement on forming a new and permanent organizational structure for the entire university (Rabben, 2016). Various proposals for organizational development were launched, but no one won a majority on the board. As a result, the decision was left to the central government.

To compensate for this letdown, the minister of education, who was a professor of sociology at the University of Oslo, brought about some changes in the organizational structure of UNiT that led to the establishment of the new university, the 'Norwegian University of Science and Technology (NTNU)'. He discovered that a university with two autonomous campuses, which have two different organizational cultures, would not work efficiently. It is better to have these cultural differences under the same umbrella, [without] being particularly close geographically.

²¹ Originally, Trondheim Municipality wanted the university to be located in the new satellite, 10 km south of the city center, in Tiller.

The government's decision on the creation of NTNU raised the university employees' opposition, due to a latent conflict over their intrinsic professional differences and cultures. Their resistance was underpinned by the strong fear of being overcome/weakened by the other partner's profession. However, the employees' resistance to becoming one institution was rejected by the government and the decision was taken unilaterally and through a top-down process. As more time went by, many opponents were convinced that the governmental decision on establishing NTNU was not that bad, "because at that time NTH was very conservative and arrogant. The nostalgia connected with the unique institution of NTH made them stubborn and closed-minded to accept any change or improvement. Thus, it was necessary that the government took that decision unilaterally!" (Rector, interviewed on 14.12.2015).

Nevertheless, the government's coercion of the merger caused a period of estrangement and led to a deep long-running feud between two traditions of social and technical sciences. As a result, they gradually lapsed back into their own traditions and ways of implication in education, separately and autonomously. After that, NTNU suffered the lack of a sense of unity among their faculties, which had inhibited any positive collaboration and interdisciplinarity among their programs. The two traditions were more concerned about protecting their own area of interest and competence than finding the progressive way of collaboration. On the other hand, "There had always been some efforts to mix courses between the two campuses of Gløshaugen and Dragvoll. However, building a common culture by bringing them under the same umbrella was not an easy task. In addition, the physical distance was also a barrier that prevented their success. It was very challenging to move students up and down [between Dragvoll and Gløshaugen] all the time" (Professor of Dragvoll, Interviewed on 02.11.2015). In this regard, the co-location of their campuses (geographical proximity) was the underlying possible solution that the government raised to induce them to collaborate. This idea was based on the philosophy that the closer two potential collaborators are, the more likely they are to initiate informal communication. The ideal was that physical proximity could form and maintain their relationships by providing a platform for exchanging information and establishing new academic/business contacts and enterprises. In the report of NTNU's committee (NTNU Utvalget, 1995), it was also mentioned that "Based on the international experiences, co-organization is more effective when the disciplines are physically connected and co-located". Consequently, in order to increase the synergy and collaboration between all the departments, and particularly to solve the conflict between old

NTH (Norwegian Institute of Technology) and AVH (Norwegian College of General Sciences) (old NLHT), the co-location of campuses was seen as an optimal solution.

A similar and simultaneous organizational transformation can be found in the history of the Sør-Trøndelag University College in Trondheim (HiST). With the same aim of knowledge development, eight independent colleges in the city were merged in 1994 to create HiST. However, this merger was also only organizationally centered, and planning for geographical proximity was promised for the future. Similar to NTNU, HiST has had a plan to co-locate their different campuses, preferably in the city center. Their common strategies opened another door for a collaboration between these two autonomous education institutions later in the process.

In parallel with the organizational change for educational development, Trondheim Municipality (TK) also directed its strategies and attention towards a knowledge-based urban development. In 1997, the 'knowledge city' (kunnskapsby) concept was launched as a new vision for Trondheim 2030 in the municipal long-term plan. Correspondingly, the university development had extensively mattered to Trondheim Municipality (TK), which initiated a city-university collaboration. TK believed that their success in urban planning was partly beholden to their collaboration with NTNU and HiST as the knowledge centers. Additionally, many actors, placing an emphasis on the role of education as a creator of intellectual/human capital for economic and social rewards, highlight students' interest in this city. As a result, NTNU, HiST, TK and students have been the main pillars of knowledge-based development in Trondheim.

5.2.2 Round 2 (2000- 2002): University hospital case

Table 5-5: Governance structure, Round 2 (2000-2002): University hospital case

Round of planning and decision-making	Governance structure	Main actors
2000-2002 University hospital and replacement case	Understructure	Rector 2, university director, dean of medical department (rector 4)
	Middle structure	County mayor (SP), deputy county mayor (AP), mayor (H), municipal councilor (AP), editor of local newspaper
	Superstructure	Minister of education 2 (AP), minister of health (AP), H and AP politicians, prime minister (AP)

Table 5-6: Important roles, Round 2 (2000-2002): University hospital case

Round of planning and decision-making	Main actors	Roles
2000-2002 University hospital and replacement case	Rector 2, university director, dean of medical department (rector 4), county mayor (SP), deputy county mayor (AP),	Opposer and gatekeeper (no to replacement, but yes to re-location of Dragvoll)
	Mayor (H)	Mediator and Fixer
	Municipal councilor (AP), National politicians (AP)	Ally (yes to replacement)
	Local newspaper, minister of health (AP)	First ally, then promoter
	Minister of education 2 (AP)	Initiator and Promoter
	National politician (H)	Opposer and gatekeeper

The first realization of the co-location ideal was co-locating the natural sciences of AVH/Norwegian College of General Sciences, including biology, chemistry, physics and mathematics, which were located at Lade and Rosenborg, to Gløshaugen campus.

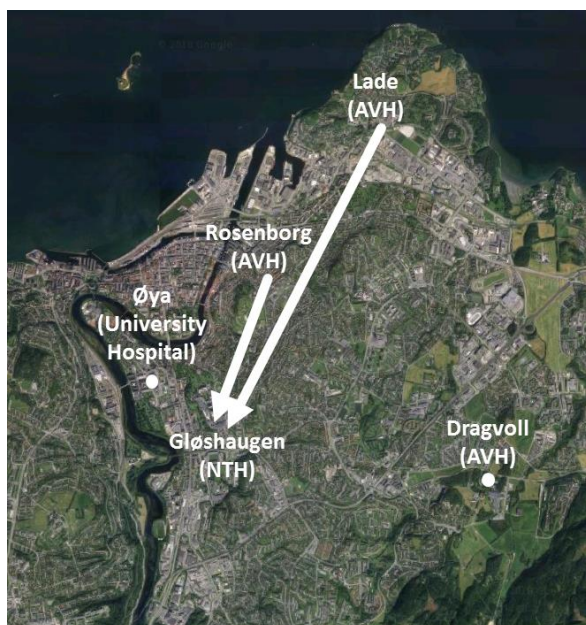


Figure 5-1: Relocation of AVH campuses to Gløshaugen

There were two reasons: the homogeneity and connection between those sciences, on one hand, and the lack of space at Lade and Rosenberg buildings, on the other. As a result, the government funded the construction of a new building (Realfagbygget) at Gløshaugen, which was finished in 2000. In the same year (2000), when the development of the university hospital (known as RiT 2000 project) was a part of NTNU health authorities' agenda, the Minister of Education (KD), Giske²², from the Labor Party (AP), spontaneously suggested moving the Dragvoll campus down to the city and replacing it with the university hospital at Øya campus (see Figure 5-1). It can be assumed that the success of the former co-location in the Realfagbygget project could initiate the replacement idea of Øya with Dragvoll campus (switching the campuses) to make the old AVH closer to the old NTH.

Nonetheless, the most reasonable and probable locational solution for the university hospital was Øya campus, where the building of the medical department was already located. In addition, based on the two agreements between the state and Sør-Trøndelag County in 1996 and 1999, the development and expansion of the university hospital was to take place in the Øya area (Regjeringen, 2001). The state and county agencies were at once owner, builder and user. In addition to these bodies, there were a number of other public parties, who were also

²² He was born and raised in Trondheim and was a student at Dragvoll. He has been a representative for South Trøndelag in parliament.

connected to the hospital project. For example, municipal authorities were responsible for the execution of the Planning and Building Act (Eikeland, 2001) (See Figure A-16 in the Appendix, which shows the official/formal network of actors in the project of the university hospital). Nonetheless, in none of the official documents was the inevitable role of different stakeholders formally mentioned.

In June 2000, stage 1 (Nevrosenteret) was processed by the county council as the owner of the project. The result of the investigation in this stage showed a significant premium, compared to the original cost estimation of the agreement conditions. As a result, the state had to review the case, considering future flexibility and economy, in order to reduce cost and risk. This opened a door to new alternatives that could lower the cost and uncertainty. The minister of education's proposal of the replacement of Øya campus with Dragvoll was in respect of this new revision. His original goal was to increase the collaboration and interdisciplinarity between the faculties of Dragvoll and Gløshaugen, in order to have a better and more attractive university at the national and international level. His consideration of the community and students' benefit may put his interest in the 'social' category (Section 3.3.1). In addition, by replacing the university hospital with Dragvoll campus, he aimed to have better and more efficient use of resources. The financial evaluation showed that the replacement idea (developing two campuses at the same time) would be much cheaper than developing and building the hospital at Øya campus (Eikeland, 2001, Ellingsen et al., 2001). It was estimated that construction of the hospital at Dragvoll would be 600-800 million kroner cheaper than building on Øya (Braaten, 2001). The calculation showed that NTNU could build the hospital at Dragvoll for the same price as at Øya but also move Dragvoll down to the city at no extra cost. This illustrates the minister's 'economic' interest as well.

Since the minister of education's proposal was different from the original plan, it came as a big surprise and resulted in many internal debates, political unrest and conflicts among different stakeholders.

The rector of NTNU, together with the dean of the medical department²³, sent their direct declaration to the minister of health, from the Labor Party (AP), indicating that Øya campus was the best location for university hospital development (Meland, 2001). Nevertheless, Minister of Education Giske had allies within the government, mainly at national level and

²³ Who, since 2013, has been the rector of NTNU.

particularly within the Ministry of Health and the majority of the AP to have their support (Ellingsen, 2001). His process-based goal was to make the re-location of Dragvoll campus happen by making alliances within the government while he was the minister of education, using his power in terms of both authority and opportunity. The accomplishment of this goal might help him to win votes in the next political election. This also implied his 'political' interest. Because of his official position as the minister, he had the right political connections and the required information about political and financial procedures for bringing about the replacement idea. In other words, his position within the governance structure had assigned him some important functional attributes that influenced his alternative solution and action, and the role he had played. Thus, with all his 'legal', 'political', 'social' and even 'cognitive' resources, and power in all terms of 'authority', 'personality' and 'opportunity', he initiated and promoted the re-location idea of Dragvoll. This perfectly illustrates the interplay between governance structure and function/process.

It is not clear when the minister of health approached the idea of switching the places of Dragvoll and Øya. However, when he formed an alliance with Prime Minister Stoltenberg and the rest of the government on the idea, he made it public. Maybe he could not say anything about it to the people of Sør-Trøndelag County and people outside the government before it had been handled within the government. Still, it is not clear when and why he chose Dragvoll as the alternative site. The fact that the state owned the land and the existing buildings at Dragvoll could be an important factor because they could be used in connection with the university hospital development if the government wished. Therefore, the support of the minister of health can be traced back, to the extent that he was influenced by the government, which was controlling the critical legal and economic resources. The availability and accessibility of the land would solve all the existing uncertainties.

Together with the minister of education as the initiator, the minister of health played the role of a promoter, i.e. they both prioritized the initiated case in their actions and developed it further to obtain some desired outcome.

The editor of the local newspaper, *Adresseavisen*, was also one of the main allies, who used the media as a good platform for the replacement argument. However, he was criticized for using the newspaper, which has a monopoly, to influence politicians' and people's opinion in favor of the replacement idea, instead of using it as an information channel and broadcast/convey the voices of individuals in important matters (Medalen, 2001a, Medalen,

2001b, Snekvik, 2001). In other words, he used the media, as the collective resource for his own interest and manipulated and misrepresented people in favor of the re-location of Dragvoll.

Nevertheless, the alliance between these main actors was so strong that, according to the local newspaper, *Adresseavisen*, the prime minister also changed his position from that of a proponent of building at Øya campus, to that of a supporter of replacing the university hospital with Dragvoll campus. Consequently, the idea of replacement was being initiated and induced through the informal network of a few powerful actors, mainly at government and national level (see the Appendix, Figure A-17).

This precipitous deviation in opinion at national level caused much confusion and skepticism, particularly within Sør-Trøndelag County, which was greatly reflected in the media (Ellingsen et al., 2001). The reason for opposition at the county level was that the minister of education (at national level) did not consult with his political party (AP) at the regional level before introducing the idea. The deputy county mayor, who was from the same political party (AP), mentioned that she did not expect her political party at national level to not contact her and inform her about the idea of replacement. She blamed the minister of education and, in return, boldly resisted the replacement idea. According to her, there were some underhand and personal motives behind what was happening, which would inhibit having the best possible hospital in the region (Røsvoll and Holstad, 2001).

The county mayor, from the central party (SP), also blamed his political party for being silent on the replacement idea. As a result, Sør-Trøndelag County, the owner of the project and one of the most important decision-makers, was totally against the replacement idea. On the other hand, the minister of health was pushing the case strongly towards the replacement idea, to postpone the decision-making process, while assessing the possibility of the replacement idea. In other words, the government at national level was applauding the replacement decision and, on the other, the local-regional government was fighting against it. On both sides, they were looking for some allies at the other level. For the national government, the municipal councilor (kommunlråd), from AP, who had a close connection with the minister of education, was the main conspirator at the local level. For the regional government, the national politician from the conservative party (H), who was from Sør-Trøndelag and elected to the Norwegian

Parliament, was the key maneuverer. The mayor from H party was a middleman that both parties tried to lobby and maneuver (see Figure A-18²⁴, in the Appendix).

Unlike the dissidence between national and regional government on the replacement idea, students and some professors at NTNU supported the idea of moving Dragvoll down towards the city. The re-location of Dragvoll to the Gløshaugen-Øya area had the advantage of being closer to the city center, which students would like. In addition, there would not be any additional cost to bring Dragvoll down to Øya. The student leader mentioned in *Adresseavisen* that this re-location would promote greater contact between disciplines. It would give students an opportunity to take courses across the boundaries, without being limited by some practical problems such as distance between the campuses. In addition, it would be much easier for the university to offer the same services to all students. Last but not least, the proximity of Dragvoll to Gløshaugen would solve their major cultural problems that had existed since the establishment of NTNU.

Despite the aforementioned positive sides of the replacement idea, the replacement option would be more time-consuming than developing the hospital at Øya. In that period, time had more salience and priority than other concerns, such as money. In addition, the supporters of the replacement idea, particularly the *Adresseavisen* newspaper, only presented the positive side. However, there were also some negative sides. An investigation showed that the proportion of environmentally friendly journeys (walking, cycling and public transit) would be reduced from 60% at (or to/from) Øya to 34% at Brøset or Dragvoll (Medalen, 2001b). In addition, the process of planning and constructing a new hospital at Dragvoll would take time, and the hospital could hardly be used before 2012-2013. As a result, the Dragvoll option would give poor conditions for patients and their families, staff and students in the coming seven to eight years and would increase the operating costs for the hospital project. Meanwhile, there was a need for a temporary hospital until the new one was completed, which again would cost extra money, considering the need for new infrastructure (roads, water, sewage, power supply, etc.). NTNU had a very short deadline to convene an extra board meeting and express their straight no to the replacement idea (TU, 2002). NTNU's rector was against moving the medical people to Dragvoll, because there was a strong and fruitful collaboration between

²⁴ Shows all the existing and concurrent favoring and opposing actions and leverages, which made the university hospital (RiT 2000) project one of the most important power games in this region (Braaten, 2001).

medical and technology people; moving medical research to Dragvoll would endanger this close collaboration.

Nonetheless, the idea of moving Dragvoll down (re-location) alone (not replacing it with the hospital) pleased many people at NTNU. Therefore, in one of the hearings in relation to the hospital project in 2000, NTNU people mentioned that it would be a good idea to investigate the relocation of Dragvoll in future plans (Medalen, 2001b). In this respect, the rector and the university director contacted the mayor to inform the municipality about the possible movement of Dragvoll in future and, in return, the municipality agreed to notify NTNU about any development plan for the Dragvoll area in the future.

As a result, the end of this running battle (in Feb. 2002) was in favor of keeping the university hospital at Øya and developing it there (Klungtveit, 2002). In addition to the time and cost issue, the main convincing reasoning behind that decision was based on the successful collaboration between the medical and technical departments (such as blood surveying, ultrasound, etc.), due to their physical proximity, which could be destroyed by moving the hospital to Dragvoll. NTNU wanted a united university, with all technological and biological sciences, humanities, social sciences and medicine co-located on a common campus. Therefore, the replacement idea would be impartial and in conflict with a total co-location. This logic positively silenced the idea of replacement and opened the door for entering the Dragvoll campus in this partnership circle. More importantly, different investigations and the Realfagbygget project showed that there was enough space for both Dragvoll campus and the hospital in the Gløshaugen-Øya area, which was a reinforcing factor (Medalen, 2001b). In addition, the possibility of relocating Dragvoll in the future calmed down the supporters of the replacement idea. The re-location of Dragvoll to the city was mutually consented and committed to by the proponents and opponents, a desired base for explicit bargaining, to achieve a compromise and manage their conflict.

Accordingly, the birth of the re-location of Dragvoll idea was the outcome of this round, though it took some time before it was taken seriously at the university (at that time) and strongly pushed and pursued afterwards. Soon after the Regional hospital in Trondheim, 'RiT 2000 project', was finalized, NTNU leadership and Trondheim municipality started their collaboration to co-locate the whole university around the Gløshaugen area (Klungtveit, 2002). For the mayor, "Collecting education, research and business activities that are closely interconnected in the Gløshaugen area was a great idea for Trondheim to become an

internationally recognized study, student and research city. There was enough awareness that bringing a giant building of Dragvoll to the city would not be conflict-free, but this idea was so interesting that they would dare to get into gear” (Klungtveit, 2002). In addition, the Realfagbygget project proved that it was possible.

Although the idea of the co-location of university campuses attracted many different interests and actors, it increased the level of uncertainty regarding both finance and space. The municipality and NTNU's leadership had a subsequent meeting, in which it was agreed that the co-location project must be a part of urban planning (Klungtveit, 2002). There was an acknowledgement and agreement among NTNU leadership about the role of the municipality at the end of this round. It was unrealistic to expect such a project to be financed by the regular budget provided by the Ministry of Education. Therefore, they reached a consensus that Dragvoll properties also had to be sold.

5.2.3 Round 3 (2003-2004): Heating up the co-location idea

Table 5-7: Governance structure, Round 3 (2003-2004): Heating up the co-location idea

Round of planning and decision-making	Governance structure	Main actors
2003-2004 Heating up the co-location idea	Understructure	Rector 2, university director, dean of medical department (Rector 4), students
	Middle structure	County mayor (SP), deputy county mayor (AP), mayor (AP), municipal councilor (AP), HiST
	Superstructure	Minister of education 2/politician (AP) and minister of education 3 (H)

Table 5-8: Important roles, Round 3 (2003-2004): Heating up the co-location idea

Round of planning and decision-making	Main actors	Roles
2003-2004 Heating up the co-location idea	NTNU rector 2	Promoter and director
	University director, project manager, HiST rector, municipal director	Promoter
	Students	Initiator
	HIST, mayor (AP), county mayor (AP)	Ally
	Politician (AP) and leader of Trondheim Student Council, municipal advisor	Initiator and promoter

Based on the interviews, it is assumed that the local politicians and administrators at TK and Sør-Trøndelag County (STFK) gave the major leading push to start the investigation of co-location again.

In one of the regular meetings at Trondheim Student Council²⁵, in which students have direct communication with the municipal politicians, students brought up the idea of co-location.

The leader of the student council, who was a politician in the city council, promoted an interpellation to address the co-location idea. The municipal director (kommunaldirektør) became interested in the co-location of campuses, which was complementary to achieving a 'knowledge city' ideal. He decided to follow it through, together with his senior advisor (Seniorrådgiver), which developed a strong relationship between them and the leader of the student council, who initiated the idea in the city council.

The municipal director was greatly influenced by the international trend of knowledge-based urban development (KBUD). At that time, many European cities had been undergoing KBUD (SKAARUP & JESPERSEN AS, 2005). The municipal director was engaged in some of these projects and gradually became more convinced that Trondheim had the potential to be developed as a 'knowledge city'. One of his strategies was to build a strong network with different disciplines at NTNU and to make alliances in favor of the co-location. He was very successful in his mission. He used the positive opinion of different professors with different backgrounds (from both Dragvoll and Gløshaugen) on the co-location idea as a strong persuasion about the goodness of it. The agreement among different disciplines of the university upon such issues, particularly at Dragvoll campus, was not something that NTNU was accustomed to.

As previously mentioned, at the end of the RiT 2000 project, the municipality of Trondheim (TK) and County of Sør-Trøndelag (STFK) showed their interest in the relocation of Dragvoll to the city and have subsequently developed this idea among themselves. The kinship between the municipal senior advisor and the NTNU rector might have been an opportunity for TK to

²⁵ One of the positive actions TK took was to enhance the role of students in this process and establish the Municipal Students' Council, to give them a chance to make their voices heard. The Municipal Student Council (Trondheim studentråd) was the first in the country and would become a model for other university cities (Holmquist, 2000).

encourage the rector to raise the issue at the university. TK might have ensured the rector of their support, which inspired the rector to assert himself about the co-location idea. The rector was also informed that developing the Dragvoll campus at the Gløshaugen-Øya area was feasible, regarding the availability of land.

Nevertheless, the strong informal networks of some interested actors had brought up the idea of co-location in 2003 (see Figure A-20 in the Appendix). Subsequently, a strong favoring coalition was formed between TK and STFK that originated in the case of the university hospital (Figure A-21 in the Appendix). The rector of NTNU was the most ‘central’ actor that was influenced from different sides.

Later, in 2003, when the new mayor (AP) and the new county mayor (AP) came into office, the atmosphere, at both TK and STFK, came to be dominantly in favor of co-location. Based on the strong relationship/collaboration between the municipal and county advisors, there is an assumption that they both played effective roles in prompting TK and Sør-Trøndelag FK in favor of co-location and bridging these two important institutions when the new councils came in. Many interviewees mentioned that the municipality was the most influential actor in this period. In addition, both the mayor and the county mayor were close friends and colleagues of the former minister of education (2). When they took office, former Minister of Education Giske (AP) could find an opportunity to pursue his dream of re-locating the Dragvoll campus through their help and power (exploiting his friends’ situational position/authority). In this regard, it is speculated that the former minister of education exerted influence on them, since they quickly came to be in favor of the co-location idea.

In 2004, the new university director took over the position. The first issue he and the rector discussed was possibility of changing the management system at NTNU. The rector’s wish was to have more control and power over institutional issues. The rector (interviewed on 14.12.2015) thought that an “elected rector had, in fact, very little power written into the law in regulating universities. The university director, on the other hand, had, legally, almost full control. However, just once a month, the rector became the leader of the board”. This made no sense for the rector, because he believed that “Research and science should not be separated from organization and finance and they should go together in all practical aspects and should not depend on how closely the rector and the director collaborated” (interviewed on 14.12.2015).

During the last period, the former university director, together with other professors and students publicly announced their interest in the co-location idea. However, the rector had not discussed the case of co-location in the NTNU community and did not inform employees before the new university director came into office. This may be because the rector did not feel powerful enough to actualize the ambition of the co-location when the municipality encouraged him.

As soon as the new university director started his new position, students from Dragvoll contacted him to address their dissatisfaction with the facilities and lack of space at Dragvoll campus, asking him to hand in their demands concerning the rehabilitation of their campus. The university director was the former chief executive officer (CEO) at the Student Welfare Organization in Trondheim (SiT). Therefore, students knew him from before. The university director was known as the man with a strong personality that had the guts to get things done. In addition, he was very good at networking and making the right connections. Students believed that he was the only one that could materialize their demand. Accordingly, the first step the university director took was to contact the ministry of education, from the Conservative Party (H), to assess the possibility of applying for money for the development of Dragvoll. In response, he was informed that applying for money, while NTNU had the co-location case on the agenda, was not a wise idea. For many people, the university director was the initiator of the co-location case. However, he heard it from the minister of education for the first time while the idea was actually on the table (Ressem, 2006). Receiving that information from the ministry and not from the rector was considered a positive signal from the government towards the co-location idea. On the other hand, there was a strong relationship between former Minister of Education Giske (2001-2002) and the university director. It is speculated that the former minister of education might have exerted leverage on both the current minister of education and the university director to re-initiate the idea of co-location, which was not seriously discussed until he came into office.

At the beginning, the university director thought that this idea was unwise and should be investigated in detail. It is not clear when and how he became a supporter of co-location, but, as he himself explained, he had always believed in the benefits of collaboration and interdisciplinarity. He also saw co-location as a good opportunity for building collaboration between the two different traditions at Gløshaugen and Dragvoll. At the university director's suggestion, the rector appointed a person as the project manager, who had held the same

position in the university hospital project in 2000. Because of the good role the project manager had played in the university hospital case, he could be helpful and resourceful (cognitive resource) for the investigation of the co-location case.

On the other hand, the urgent need for development at Dragvoll reinforced the argument for a co-location solution and enforced NTNU's administration, including the university director, to decide whether they wanted to co-locate campuses in the city center or would follow the two-campus model. In addition, they were under time pressure (until the end of the year 2004) to decide whether they were interested in buying the municipal high-rise building (in Holtermannsveien), located between Gløshaugen and Øya campuses, which was available for sale and could host Dragvoll disciplines. This speeded up the process of investigation and decision-making for the co-location. Based on the common strategy of co-location of campuses in the city center, both at NTNU and HiST, there was a discussion (between TK, HiST and NTNU) about the possibility of allocating this building (at Holtermannsveien) jointly to similar activities of HiST and NTNU. Concurrently, the idea of fusion of NTNU and HiST was born. The initial idea was to merge their departments of economics as the eighth faculty of NTNU and later merge the entire institutions. The initiation of fusion with HiST showed how interests of actors could suddenly change direction under the influence of their informal networks and negotiations. In addition, most of the actors' actions resulted from those preferences and goals that were formed during the process. Some of these process-based goals also depended on a transformation of the context, when some other issue or more serious problems gained importance.

To evaluate the feasibility of co-location and possible fusion with HiST, the university director and the rector decided to seek the opinion of the main related stakeholders. They started with NTNU staff and first raised the question in the regular meeting that all deans of faculties attended. The deans' meeting (Dekanmøtet) is a semi-formal meeting but one of the most important meetings in terms of power relations at NTNU. The idea of fusion was immediately choked off due to great opposition at the deans' meeting. "It was a tradition at that time that, when the rector and deans met, if the rector faced a unanimous 'no' to a case, that case would automatically be closed. Except for 2-3% of the employees, including some of the opponents of the re-location of Dragvoll, everybody disliked the idea of fusion with HiST. However, for the politicians [AP], it actually sounded reasonable. In the politicians' eyes, there was no point

in such a small city like Trondheim having either two different institutions or two different (main) campuses for one institution” (Internal board member, interviewed on 07.01.2016).

According to one of the professors of Gløshaugen campus, who was in favor of the co-location, but against the fusion idea:

...One of the reasons that employees disagreed with the idea of fusion was the higher ranking of NTNU in comparison to HiST. Merging with HiST would potentially bring down the quality of education, the label and status of NTNU. In addition, the co-location of campuses was on NTNU’s agenda, and NTNU could not work with the two projects at the same time. (Professor, interviewed on 23.09.2015)

Although the idea of fusion was stopped, it established a good relation between TK, HiST and NTNU (and SiT) and provided a good platform for their later collaboration (NTNU 2020/HiST 2020, in 2005) in making a knowledge cluster by co-locating the campuses. In this period, although there were strong interactions between NTNU, HiST and TK, these were mostly informal.

Unlike their response to the fusion idea, many deans were quite open and positive to investigating the possibilities of the co-location, based on the future need and vision of NTNU and its students. As a result, the university director initiated the feasibility study of land/space requirements, to study a financial solution and political will, as prerequisites for realizing a co-location of campuses (NTNU Board, 2004). In addition, the rector appointed a committee (Hestnes committee) to evaluate both the alternatives (one campus and two-campus models). Their work was based on two main questions: Is there enough space for Dragvoll activities down in the Gløshaugen-Øya area? and Is it financially feasible to move Dragvoll campus down to the Gløshaugen-Øya area?

“This committee was not to conclude and recommend a solution, but to advise the board and facilitate constructive debate on the future of NTNU, emphasizing the academic consequences of the possible co-location in Gløshaugen. The committee was to analyze NTNU’s strengths and weaknesses and set the results in the context of potential opportunities and threats that would affect NTNU” (Professor, interviewed on 23.09.2015).

Meanwhile the deans were responsible for conveying the idea of co-location to their departments' employees and asking for their opinions. "It was a decision that should be made collectively at the university" (Professor, interviewed on 23.09.2015).

The result of the investigation committee showed later that there was more than enough room for Dragvoll at or close to Gløshaugen (over 500,000 potential square meters) and there was unanimous support for the co-location idea. The estimated cost of this move was somewhere between under 100 and over 400 million Norwegian kroner.

Before the university director was appointed, the idea of co-location had not yet come to the fore. His 'social' interest was to increase the interdisciplinarity and to support the students' wishes. Although his initial interest was for the sake of students' interests, his personal characteristics and ambitions, such as gaining more ascendancy, recognition and status, i.e. 'political' interest, influenced his later actions. Many interviewees mentioned that he tried hard to get credit for accomplishing the co-location and to prove his competence (political interest). Considering his former position as CEO at SiT, he had lots of information and connections, both politically and socially, i.e. 'cognitive', 'political' and 'social' resources.

5.3 How and why was the co-location stopped in 2006?

5.3.1 Economic 'resource'

The financial solution/resource that NTNU came up with, for either co-locating campuses or developing Dragvoll campus, was to sell some of the university properties at Dragvoll to the private sector, which, in return, should build a new university building either close to Gløshaugen campus (co-location alternative) or at Dragvoll campus. The amount of money that would be gained by selling Dragvoll properties could not be estimated precisely due to the time and market uncertainties. "The university director suggested a private-public partnership, in which, by running a competition among private companies, the one who won would take over the Dragvoll area for a certain sum. Subsequently, NTNU could use the money to construct new buildings for Dragvoll around Gløshaugen" (Rector, interviewed on 14.12.2015). However, NTNU (similar to any Norwegian university) did not own the property and did not have the power to build the campus on its own. Therefore, NTNU needed to provide money first or eventually needed someone to buy Dragvoll and to be sure that these funds would go to the building process. Otherwise, "This money would go to the finance ministry because it was not NTNU's money" (Minister of Education, interviewed on 04.04.2016). In other words, "NTNU needed both political and financial resources (a buyer).

Fortunately, the mayor was willing to support, buy, develop, and sell the property to developers” (Minister of Education, interviewed on 04.04.2016).

Trondheim Municipality (TK) was the strongest supporter that NTNU had in this round; it gave full backing from the beginning, especially regarding the land-use planning (for Dragvoll property) and adapting the local development plan in the Gløshaugen area to meet NTNU’s needs. Knowledge development is/was not an official and typical responsibility for municipalities in Norway, but, due to Trondheim’s uniqueness in this aspect, TK obliged itself to support it and acted as NTNU’s complementary ally (Adresseavisen, 2006a).

Nevertheless, as NTNU was/is a state-owned organization, the public fund was another considerable source that NTNU took into account. In order to obtain the public funding, NTNU had to stand in the queue, together with other national projects, making it difficult to predict when it could proceed. Thus, the level of uncertainty for this alternative was very high. In this respect, they needed a governmental guarantee for financial support. Unsatisfactorily, the private-public partnership was not the model that the finance minister and many politicians of different parties wanted to support. Accordingly, the cumulative effect of NTNU’s dependency on the government’s resource increased the uncertainty for NTNU’s decision-making (Adresseavisen, 2006b). If we agree with Johnson and Bob’s (1995) argument that, when actor A’s decision is dependent on the resource of actor B, the availability and accessibility of that resource will make uncertainty for actor A. The dependency of NTNU on the government created great uncertainty for NTNU at that time. The more an organization is dependent, the higher the amount of uncertainty (Nienhüser, 2008). On one hand, NTNU was dependent on the Ministry of Education to get approval for the co-location proposal or any other development applications (political-legal resource) and, on the other, NTNU was dependent on the Ministry of Finance to obtain funding (economic resource). In addition, other national and local universities were dependent on the government for the same resources. All these concerns added to the existing doubts and uncertainties among different actors, increasing uncertainty, complexity and conflict within the network governance in this period.

5.3.2 ‘Role’ of municipality as promoter

Because of the interest, which TK showed for the Dragvoll properties, many actors were suspicious that TK had other intentions and was more interested in the properties at Dragvoll than helping NTNU (Anonymous, 2004, Moe, 2004), for instance, building homes for elderly people. Nevertheless, TK’s role as both promoter and initiator in the cases of co-location and

fusion cannot be denied. The deputy minister of education, who has also worked at Trondheim municipality, reasoned that:

TK believes that knowledge is the main industry and asset in Trondheim and the co-location of campuses would reinforce this capability. On the other hand, Dragvoll gradually became isolated and all the city services and facilities, such as bank, post office, travel agencies, etc. were closed. Dragvoll became dead in the afternoon, which was not attractive either for students or citizens (Interviewed on 19.02.2016).

Accordingly, the municipality believed that city development and university development were inseparable and complementary, because conditions had changed from the time when universities' only obligation was to provide education and research for society. Today, universities are required to cooperate with local and regional development on innovation and creativity. In this regard, integrating the university campuses with the city's activities, physically and socially, was a good strategy for Trondheim municipality (TK) to follow. "Previously, the city tended to view NTH as an arrogant state institution, and NTH had the impression that the city was unable or unwilling to see the bigger picture. Fortunately, their relations are much better today" (Rector, interviewed on 14.12.2015). With this point of view, Trondheim municipality definitely had a special interest in the co-location case.

Nonetheless, the involvement of the municipality in this case was interpreted as a great interference that led to skepticism and confusion among different actors, both NTNU and TK staff. Employees at NTNU felt that the municipality or someone outside NTNU was leading this case, which caused their resistance. In addition, academics generally do not like to be dictated to from above. Although the municipal director tried to clarify the responsibility of the municipality several times in the city council, people needed a longer time to grasp the idea. Some people at the university felt that TK viewed the co-location solution as an urban development, while academics considered it a good project for the university's development.

In 2004-5, the municipal director did an unusual thing in the city council. Together with architects from Malmo and Denmark, he came to the meeting and introduced the knowledge-based urban development way of thinking in Trondheim. This was not the way that someone usually raised the issue at the city council. He did a big push to declare the necessity of TK's support in the

co-location case of NTNU campuses. He was like a bulldozer, who drove against the cliché (he had power in terms of personality). Unfortunately, he was too early for this process and, by overselling and overdoing things, became his own worst enemy (Deputy Minister, 19.02.2016).

In this regard, one of the biggest challenges for the municipality, from the beginning, has been to explain and clarify its role and the necessity of its intervention in this case.

5.3.3 Conflict over interest, strategy, culture and resource

The co-location idea came as a surprise for many staff of NTNU. They complained that they were not informed about it and/or able to discuss it, before it became a proposal. This is why the issue became so brutal and intense inside NTNU (Weisser, 2004). When the employees realized the seriousness of the co-location decision, their opposition became loud and clear. They started to use all their power and influence to prevent it from happening. They formed the resistance campaign at the university and did their best to get more allies to stop it. One of their influence channels was media. They wrote many harsh and critical articles to exert leverage over decision-makers and to emphasize the dark sides of the co-location alternative (Borstad, 2004, Moe, 2004, Brøgger, 2004). In October 2004, 582 employees from different departments signed their disagreement about the co-location alternative (Weisser, 2004). The employees had quite different discussions and logics, but they wanted the same thing: 'no-to-co-location'.

The interoperation is that the main reason for such quick resisting reaction was rooted in the establishment of NTNU in 1996 and the subsequent traditional and professional conflicts. At that time, the employees had felt and experienced that they were obliged (and dictated to from above) to merge with another institution and culture, and their dissenting voice was not taken into account. In addition, they did not believe that the merger had brought any positive collaboration between Gløshaugen and Dragvoll traditions. Accordingly, employees were skeptical and without hope that co-location or such physical proximity would necessarily result in successful collaboration and mediate the long-running conflict between the two traditions. For them, the co-location idea was not about moving buildings. It was about moving two cultures. One culture had developed since 1910 around Gløshaugen, as the leading technical university in Norway, and the other from being a large university in humanities and social sciences for decades. Therefore, NTNU was just a label for what was still felt to be a multi-institution. Those old fights had not been buried, and the feeling of belonging and

having a common identity was not yet developed. Accordingly, they were refusing to tolerate another forced merger. Hence, the co-location idea was gradually accompanied by different uncertainties, challenges and weaknesses that stirred up the opposing environment.

Many employees were critical about the way the university leadership/administration dealt with the co-location case in terms of democracy (Weisser, 2004). The employees did not feel included in the process of planning and decision-making, which caused a subsequent gap between academics and the administration. As a result, the split within NTNU became double-edged. On one hand, it was between Gløshaugen and Dragvoll employees and, on the other, between employees and administration.

In addition, the alliance between NTNU administration and Trondheim municipality (TK) created growing distrust among employees. For them, “The idea of moving Dragvoll to Gløshaugen opened new windows for politicians, private sectors, entrepreneurs and developers. What was felt was a shift from the realistic process of re-locating/developing the Dragvoll campus (for the aim of university development) to a greedy opportunity for all contractors, real estate agents and companies, who wanted to get the greatest possible benefits” (Mæhlum, 2006). Thus, one of the objectives of building up resistance was to turn down the engagement of the municipality or other interested actors. Their enquiry was about greater transparency and accountability.

Gradually, the resistance became so large that it was not possible for the proponents to express themselves. Therefore, the environment supporting the co-location of campuses easily deviated to a more opposing one (see Table A-4²⁶ in the Appendix).

Many employees were also skeptical about the consequences of selling Dragvoll properties, although they did not question the nature of the co-location idea. For them, it was insane to give away more or less all those large areas at Dragvoll. These were already owned by the state and future extension was planned. Co-location would imply going through all the processes again, such as asking for public funding and breaking up all those facilities that worked well, to build a new campus. It was irrational to demolish Dragvoll campus. There were a certain number of good qualities at Dragvoll that could never be gained at Gløshaugen, e.g. the vastness of the area, the large number of parking places, being close to nature, etc. Dragvoll people were already struggling with a lack of maintenance and space, and the re-

²⁶ Table A-4 presents the responses of interviewees, regarding the different reasons for employees' resistance.

location solution would not meet their urgent needs but would also make them wait longer to get their new place. Therefore, it was unwise to waste money, other resources and time on a lost cause. There was also a fear and skepticism about the capability of NTNU (administration) to overcome such challenges and uncertainties unilaterally.

On the other hand, NTNU had just finished a very large project, the Realfagbygget that cost 1.3 billion kroner. Therefore, being in another re-organizational and construction period would exhaust more time, money and people's energy (Rector, interviewed on 12.01.2016). Moreover, the government budget for university development projects was limited and oversubscribed through many proposed projects and applying for public funding was not very promising.

Last but not least, many people opposed the co-location idea because human beings naturally resist any kind of change, and academics were no exception. Indeed, academics are usually considered conservatives, who have a mind of their own. There have always been similar examples of university internal resistance, at both NTNU, HiST²⁷ and other (inter)national cases (Deputy Minister, interviewed on 19.02.2016; Rector, interviewed on 12.01.2016; Journalist, interviewed on 01.02.2016; Professor, interviewed on 23.09.2015).

As a result, while some people looked at the co-location idea as a profitable alternative, others saw it as an inefficient solution. Both groups considered the economic, social and environmental interests of the university, although their strategical perspectives were different (see Table A-5²⁸ in the Appendix).

The number of both supporters and opponents and their arguments was quite extensive and considerable, and each group tried hard to make both internal and external coalitions, either in favor or against the co-location. Most of the formed networks were in favor of co-location, and the only opposing networks centered around employees (see Figure A-22 in the Appendix). As a result, the co-location idea was easily initiated and prompted by the influence of the supporters.

²⁷ Process of moving the business school (TØH), which was located within the city (Moholt area), to the new building in the vicinity of Gløshaugen campus and the central city (Elgeseter-gata) in 2014. At the start, the employees and students were resistant to the idea, but, in the end, they were happy to be moved.

²⁸ Shows some of the examples of interests, in terms of their type, in this case.

5.3.4. Round 4 (2005-2006): Turning ‘yes’ to the ‘no’ decision

Table 5-9: Governance structure, Round 4 (2005-2006): Turning ‘yes’ to the ‘no’ decision

Round of planning and decision-making	Governance structure	Main actors
2005 to 2006 Turning ‘yes’ to the ‘no’ decision	Understructure	Rector 4, board leader, board members, students, university director, project manager, employees, media
	Middle structure	County mayor (AP), mayor (AP), municipal director, municipal advisor
	Superstructure	Minister of education 4 (SV)/minister of finance (SV), politicians (SV)

Table 5-10: Important roles, Round 4 (2005-2006): Turning ‘yes’ to the ‘no’ decision

Round of planning and decision-making	Main actors	Roles
2005 to 2006 Turning ‘yes’ to the ‘no’ decision	NTNU rector 3, board leader	Mediator
	Internal board members, employees, SV politicians, deputy mayor	Opposer
	External board members	Ally
	Students, project manager, university director, mayor	Promoter
	Politician (AP) and leader of Trondheim Student Council	Initiator and promoter
	Mayor (AP)	Ally
	Municipal director	Promoter
	Municipal advisor	Initiator and promoter
	County mayor (AP)	Ally

Change of ‘under-structure’ governance

In 2005, the Ministry of Education introduced a new proposal for the management system of Norwegian universities, in which an appointed rector was introduced as an alternative to the earlier form of the elected one. NTNU was the first university in Norway that adapted to the new law. Since 2005, NTNU’s rector has been appointed by the board and has both administrative and academic leadership (power). Meanwhile, the leadership of the board has been assigned to someone from outside the university that has been appointed by the Ministry of Education. In addition, the structure of the board has also changed. The board consists of two groups: internal members, who represent the academics’ interests, and external members,

who represent the interests of society at large and are directly appointed by the Ministry of Education. This transformation was based on the idea that appointed managers would be better suited to the new and more strategic role that New Public Management's (NPM) theory prescribes (Clarke and Newman, 1997). At that time, Norwegian higher education was under the influence of NPM (Rasmussen, 2015).

There is no evidence to prove whether the university director could influence this transformation, giving the rector more control and power upon the board. In fact, this new structure weakened the university director's own power and, instead, empowered the board leader. The new rector took over the position of leadership, and an external person was chosen as leader of the board.

Regarding the change of management system in the university, for some interviewees, the new management model became more efficient, because an appointed rector would become freer to push the projects that were good for the institution, without being concerned about being re-elected. However, it was some time before some level of trust was built in many things and at many levels²⁹.

The governance change at understructure level took place while NTNU was in the middle of the co-location process. Thus, there was little time for the new rector and the new team of external board members to become anchored and to feel ownership of this process.

The replacement of an elected rector by an appointed one, the increased salience of external board members, and the dismissal of traditional management mechanisms were some of the most visible signs of the governance changes, which affected the relationship between the university and the ministry. In other words, the new 'Babel tower' model, in which national interest is supposed to be protected and enhanced by external board members but within the academic institutions, was challenged by the traditional 'Ivory tower' model at NTNU (Amaral and Magalhaes, 2002). This challenge reflected a movement away from traditional university governance, in which academics had quite a high level of freedom and autonomy in their work

²⁹ There was an overlap between the management of the appointed rector, which was up-down, and that of the elected dean for faculties, which was bottom-up. Since 2005, the rector had appointed the deans of faculties. However, employees still elected the chairs of departments. Since 2013, employees have no longer elected the chairs of departments; instead, deans of faculties appoint them.

and institutions, replacing it with a more managerial organizational structure, in which universities become more responsive to the needs of society.

In 2005, the collaboration between NTNU, HiST and Trondheim Municipality (TK) became more official and formal, which formed the new middle-structure governance model. Previously, the interaction of NTNU and HiST with TK was mostly informal (see Figure A-25 in the Appendix, in which the semi-formal role of TK is shown by the dash-dot line). On one hand, NTNU and HiST linked to the Ministry of Education (local-national) to collaborate on the university development, in order to improve the education and research quality (institutional dimension). On the other, they linked to regional and other local actors, to work on the possibility of co-location as a physical dimension of university development and in light of knowledge-based urban/regional development. SiT, SINTEF, TK, STFK and students started to collaborate with NTNU and HiST under the project NTNU2020/HiST 2020. On top, there was a board, on which the rectors of NTNU and HiST, their vice rectors, the university/college directors, the CEO of SiT, and the municipal director worked together. The aim of this project was to develop the Trondheim region as an attractive, creative and leading international knowledge society, through the collaboration of related actors (Digernes, 2005). Under the project board³⁰, there was a reference group – a group of individuals with relevant expertise – that assisted and advised the board on strategic and overarching issues in the project. In 2005, the university governance networks overlapped the city governance networks in the process of planning and decision-making for the co-location of campuses (see Figure A-25, in the Appendix).

Because of the new management structure in 2005, there was a new board election at NTNU. Among employees, three of the strongest resisters, who created the opposition campaign for the election, promising to thwart the case of co-location, were elected as internal board members to fight against the co-location and turn it down. Many interviewees doubted whether those opposing internal members at that time were the right representatives of the whole population of NTNU. When it came to voting for members on the board, an assumption was that employees might use force and leverage for or against some cases. The opponents

³⁰ The members of the reference group were appointed by the project board and included Municipal Director (TK), Director of SiT, Strategy Director of SINTEF, Mayor of Sør-Trøndelag County (STFK), Union representatives of NTNU and HiST, Student Leaders of NTNU and HiST, a professor at NTNU, Dean of HiST and Director of Norwegian Enterprise (NHO).

might convince some of the supporters or neutrals to vote against the co-location; in return, they would vote for their interest at another time. In addition, some believed that:

The resisters were very clever in their election campaign, despite all of those who were in favor of co-location not putting their efforts together. Thus, it was a kind of price for most of the supporters that a group of four resisters came onto the board. At the university, when one is elected, he/she normally has to stick to his/her promises. This was the internal members' situation at that period. They were chosen to stick to their promises, to overcome the external board members and students' representatives, who were in favor of the co-location, and stop the case. Favorably, they were good in rhetoric and could turn off the one-campus alternative (External Board Member, interviewed on 09.03.2016).

Incidentally, the contradiction of interests and perceptions among NTNU people and within the board made the university atmosphere very intense and restive. This opposing environment and internal unrest at NTNU fueled suspicion among politicians of different parties, who agreed that co-location would not bring the desired results if the majority of employees did not agree with it.

The majority of the SV party were also suspicious about the one-campus solution, because they had other ideas/environmental preferences for developing Dragvoll than a co-located campus in the center. Therefore, when they listened to the opponents at Dragvoll and their rationalities, they quite agreed with them that co-location was not a good option (Deputy Mayor, 25.02.2016).

There was also a lack of unanimity among politicians of different parties, due to financial uncertainties. A majority of politicians from SV, AP, H and nearly all the Progress Party (FrP) politicians were skeptical about the expenses and general consequences of the co-location. As a result, they thought there was a need for further investigation at NTNU. However, compared to those at the national level, the politicians at local level were more optimistic. It is assumed that the number of favoring lobbies at local level were much higher than at the national level.

At that time, the local newspaper, *Adresseavisen*, conducted a survey, in which the representatives of different political parties in Trondheim (local level) were asked three questions: 1) Is it a good idea to co-locate NTNU campuses in the Gløshaugen-Øya area? 2) What is the main rationality of your answer to question 1? 3) Should the municipality actively

contribute in this case? In this regard, the newspaper entered the process to represent the goals, interests and perspectives of politicians, disregarding its own goals, playing as a ‘filter’.

The result (Table A-6, in the Appendix) showed that the SV and SP political parties were skeptical about the co-location idea. Interestingly, the political party of the parliamentary majority (Stoltenberg II), including the opposition at NTNU, the minister of education and the board leader, belonged to SV or SP at that time. In other words, the actors with the most power, in terms of authority, belonged to the most doubtful parties.

In the end, due to the employees’ resistance, financial uncertainty and the probable expensive cost of the re-location, democracy and consensus-building issues, the left parties gradually backed off from pushing in favor of the co-location.

5.3.5 Lack of ‘resource’ and uncertainty for rector and board leader

The muddled situation of Round 4 and the split board (internal versus external members and students) overburdened the responsibility and position of the board leader and rector, who were new in their positions.

The polarity between the board members made the board leader very doubtful and skeptical about the co-location decision. She believed that in many ways NTNU would not necessarily become a better university only by a co-location solution. She knew that the conflictual board would constitute a serious impediment to the progress of NTNU in other aspects. There had already been so much debate and discussion on building and locations that it limited the time and ability to discuss other priorities in education and research. “The co-location idea at that time was counterproductive and would result in too many negative consequences if it was rushed, considering the lack of governmental financial and political support” (Board Leader, interviewed on 10.03.2016). Thus, for the benefit of the university, she prioritized consensus building and unanimity among employees.

On the other hand, she was also not sure about the financial solution of the co-location. Funding it out of the ordinary government budget was not realistic at the time.

“At that time, NTNU had an annual budget of 3 billion. The cost of moving Dragvoll down to Gløshaugen was estimated to be between -100 to 400 million kroner, which was much less than the annual budget. Therefore, it was not a question of political money, it was a case of

political will. If the government wanted to support or had trust in NTNU, then even 400 million would be a quite reasonable price” (Rector, interviewed on 14.1.2.2015).

In addition to the financial uncertainty, there were other factors that made the board leader less positive and supportive of the co-location of campuses, such as the lack of clarity about the role of TK, improper experience of the merging process in 1996, academics’ culture of living in their ivory tower, and the ministry’s lack of trust in NTNU’s unilateral way of handling the case. Thus, putting the case on hold and providing some time was a logical decision for the board leader.

Nonetheless, the main reason that the board leader did not support the co-location as was expected was speculated to relate to her political party (SP), which was against any centralization strategies. According to some interviewees, the opposing attitude of the board leader made the rector give up his wish for the co-location, because he was dependent on the board leader, who had the legal resource and authority to force a yes to co-location.

On the contrary, some thought that she was the one who was affected by the rector’s uncertainty and NTNU’s opposing attitude. So, she asked the external members to withdraw their positive vote, supporting the internal interests.

There was also another assumption, which implied that the external members did not believe/trust in the rector’s personality (power) and knowledge (cognitive resource), which could help him to get through the co-location in a good way. They believed the accomplishment of such a case depended on the rector’s personality, whose power and resource were needed, to achieve the goal.

Nevertheless, different interviewees had dissimilar and even opposite interpretations regarding the interests of the board leader and the rector in this case, which shows that neither the rector nor the board leader was clear and straight about their interests regarding the co-location solution, which led to unpredictable subsequent actions in this and the next rounds.

Based on the interview with the rector on 12.01.2016, he had been always positive about co-location and believed in the interdisciplinarity and collaboration between different sciences that this solution could bring. However, the intense disagreement among the employees, and the worry about the financial uncertainty, which were overwhelmingly dominant in the university environment, made him more conscientious. Similar to the board leader, the rector

did not like conflict in the system and preferred a consensus-building and united board than achieving the co-location goal at any price. In addition, he considered the decision of NTNU and Trondheim Kommune in the 1970s to invest in a new university campus at Dragvoll as an irreversible decision. Recreating the same capacity at a different location was not a thing that a university would usually do because of the huge amount of money it would have to spend³¹. Moreover, the opponents' argument that Dragvoll could still be used and that many universities survive and succeed with divided campuses, was a true and logical observation for him. Therefore, he was not convinced that it was a complete necessity to co-locate the campuses. He believed that NTNU needed to balance the costs and benefits of alternatives. Correspondingly, the co-location solution might mean setting back the development of the university or freezing it in other fields for a very long time, which did not sound advisable, to the rector, at all possible costs. As a result, when it became clear that there was no political support to relieve the financial risk for the institution in the proposed co-location alternative, the rector changed his recommendation to the board to go for the two-campus alternative. He recommended opening an option that NTNU could come back to the co-location decision if the political support were to emerge at a later time. Such a decision would make it possible to go forward to develop a politically supported solution to alleviate the difficult space situation at the Dragvoll campus, which was an important consideration for the rector. This was the basis for the negotiation in the board that ended with a no to co-location.

In this regard, an assumption was raised that, if the political will was received to relieve NTNU of the financial risk, the rector might not change his recommendation and would persist in his support to co-locate campuses. Could this reflect the outcome of 2012 that, when the political or governmental signals were to support the co-location alternative, everything was immediately started to develop that solution?

After many back-and-forth discussions, the board decision was to withdraw the co-location case with the votes of nine against two (students). However, the votes for the concept of the co-location were six to five, which means the external members were in favor of co-location but, because of the possible negative consequences of saying yes and to support the board leader, they agreed to put a pause on the case and give it some time to mature. In that way,

³¹ The process of re-location of Rosenberg campus to Realfagbygget was also due to the oldness and tenantship of the building.

they ended the critical situation on the board by voting against the co-location, and the battle of wills resulted in a ‘no’ decision in 2006 (see Figure A-26 in the Appendix).

For the board of NTNU, it was clear that the case of co-location had not been completely stopped. Instead, it was temporarily put on hold, in order to calm the opponents on one hand, and let the process mature, on the other. The supporters were just waiting and diligently working on the politicians to bring it up again. Among supporters, Trondheim municipality and students were the main ‘back-seat drivers’ to keep the alternative alive. For the internal board members, who were in the middle of the process, the decision was also a temporary victory. It was important because it gave them time to breathe, after such a frustrating process. Many believed this completely political case would obviously be brought up again. However, for many internal and external actors, it was a closure of the co-location idea: NTNU had to go for the two-campus model.

5.3.6 Opposing coalition

Since the external board members, including the leader, were appointed by the Ministry of Education, the assumption was that “If the minister had been upfront about his intention and given a clear mandate for the co-location alternative, the board had to follow it up. However, he did not offer a clear point of view and thus the board leader was free to say what she thought” (Minister of Education, interviewed on 04.04.2016).

When the idea of co-location came up, the minister of education became very excited with the idea. The minister was active in the process of creating NTNU by merging NTH and AVH. However, he gradually stopped his backing and abruptly opposed the financial model that NTNU came up with, i.e. the private-public partnership (PPP) model, which he had neither supported nor rejected before. The shift in the minister’s position towards co-location was not a good sign for the rector, who was uncertain about the finances.

The change in the minister’s position was referred to in the lobby from internal board members, employees and politicians of the SV party. The minister was mainly elected by people from Sør-Trøndelag for the Socialist Left Party (SV), and Dragvoll people formed a part of the majority of SV. In other words, the power (vote) of the minister (for the next round) was in the hands of Dragvoll professors, who were mainly against the co-location (Minister of Education, 04.04.2014). It was hypothesized that the minister was lobbied or influenced by the attitude of Dragvoll (NTNU) people to not support the co-location. The disciplines at

Dragvoll were afraid that they would "drown" at Gløshaugen because the technological and natural sciences would outnumber them (Minister of Education, interviewed on 15.03.2016). In addition, because the minister was closely connected to the process of NTNU in 1996, for many people within the university, he was a red flag because they blamed him for the forced merger. The unpopularity of the merger in 1996 among employees made him a little bit conscious and more careful about being outspoken again in this round. He might also have been receiving some advice from his political colleagues in Trondheim to keep a low profile on the co-location case, to inhibit any further resistance.

On the other hand, some believed that the way NTNU was dealing with the case caused the ministry to feel excluded and undermined. Although the ministry and NTNU administration's intention regarding the co-location idea might be allied, their strategy and the finance mechanism were in conflict. NTNU administration, including the project manager and the university director, was doing too much on its own, especially on the things that they had no right or pure ownership to do, e.g. selling Dragvoll, financial calculations/pricings and housing planning. The unilateral action of NTNU administration exacerbated the existing resistance, stubbornness and controversial atmosphere of the university.

Furthermore, the Ministry of Finance (FD) did not like the proposed model for selling Dragvoll properties and using the money in other areas. The reason was that they had so many other similar university development cases in Norway, that by accepting this PPP they would be getting a great deal of problems. When the ministry asked for the quality assurance³² (kvalitetssikring, KS), which was in accordance with the choice of concept evaluation (konseptvalgutredning, KVVU), NTNU refused to do that because they had spent much time and effort making their own campus plan and were keen to implement it. Accordingly, although the minister did not provide any financial guarantee, he also did not allow NTNU to use the revenue from the sale of Dragvoll as a part of the financing of their development plan.

³² In 2000, the government introduced the quality assurance (KS) concept, because many public projects failed in terms of cost overruns. The government obliged all public projects, with an estimated cost of more than 500 million NOK, to perform a quality assurance and execute a cost control of their project before submission to parliament for approval and funding. In 2005, the government introduced a pre-study to the quality assurance, namely 'a choice of concept evaluation (KVVU)'. In KVVU, three relevant conceptual solutions should be identified, and the consequences of each alternative should be described. The starting point is to investigate how well the concepts can meet the university's key needs and requirements. Then, an external firm will conduct the first quality assurance (KS1) of the concept alternatives, before the Ministry of Education sends a recommendation to the government. The government decides which concept will be used as the basis for the further work. When a specific proposal for the rebuilding or development of a university is prepared, it will be presented to parliament in connection with the national yearly budget (NTNU, 2016).

Such a conflictual situation between NTNU and the Ministry of Finance was another reason that the minister of education did not stand against his voters and the opposition to forge co-location; instead, he preferred to be indifferent and inactive. He was not certain about his success in making the co-location happen because he obviously had trouble in getting the money from the Ministry of Finance.

In confrontation with the Ministry of Finance, NTNU was obliged to provide three conceptual alternatives for the choice of concept evaluation (KVU), implying adding two other alternatives to the co-location of campuses. These alternatives were: 1. one-campus model (co-location); 2. two-campus model (development of Dragvoll campus and the co-location of other campuses); and 3. null alternative (continuing the current situation without any change). Providing the KVU study in 2005-2006 was something new that NTNU had not previously done, which reflects NTNU's lack of cognitive resource in that matter.

The sum of the interviewees' interpretations or responses to 'why the co-location was stopped in 2006' is shown and coded in Table A-7 in the Appendix.

5.4 Analysis: From ascent to descent of the co-location idea

In order to evaluate and analyze the governance in this case, this thesis has concentrated on the longitudinal transformation of governance 'structure' and 'process'. The governance structure, i.e. the way actors stand in a network and in relation to each other, provides the basis for analyzing governance process, i.e. the interaction and negotiation practices of different stakeholders, who have asymmetrical power and influence, to cope with potential conflicts and make decisions. The governance processes are analyzed through the interaction between different functional components, such as power, interest, resource and conflict. The analysis of the causal relationship between governance structure and process can help to understand and analyze the underlying causes that have created the specific decisions at different rounds of planning and decision-making.

5.4.1 Round 1 (before 2000): History and background

Formation of co-location/ geographical proximity as a resolution to the cultural conflict

In order to understand the governance in this round through the interrelationship between different structural and functional components, the long-lasting and latent conflict between Gløshaugen and Dragvoll traditions over their professional culture became the main link in the chain to start with. The subsequent upcoming conflicts, inconsistencies of interests and

ensuing difficulties in this process were at the core of such a ‘conflict over culture’ that was created at very beginning of the process, when NTH and AVH were established. The root of this conflict lies in both governance structure and process, which is discussed in the following.

Governance structure: Round 1

Before 2000, the ministry had the only autonomous administrative power, and the superstructure governance was evidently top-down. The government’s unilateral decision on establishing NTNU, regardless of employees’ internal opposition and opinion, was a great affirmation of the real hierarchy and the bureaucratically based structure. The government’s decision to merge two technical and social faculties³³ to establish NTNU was taken through the manipulation of agreement (Sager, 1999). The initial agreement was that each institution had its own autonomy. However, their autonomy was gradually taken from them. The manipulation consisted of hushing up the reality of planning and decision-making procedures, particularly in terms of time and financial factors. By withholding the useful and complete information, the government deliberately tried to influence the response of the academics/university administration with the tacit intention of supporting a particular alternative (first institutional and then physical merger). Therefore, the academics’ desired response had not been explicitly communicated. In this regard, the obscure message about merging the departments was concealed from academics, and this rhetoric tacitly promoted a desired interpretation. Later, the employees’ reactions to the forced merger were in the form of avoidance, giving up and tolerance of the situation, mainly because they had no other choice, due to their asymmetrical power against the government. Thus, actors’ resolution strategies can result from their formal power, which stems from the structure/model of governance.

Correspondingly, the positive interaction and collaboration that the ministry aimed for by bringing the two traditions under the same organization was not effectively achieved. Such an unsuccessful experience urged the government to change its governing strategy and give more power/freedom and autonomy to the university. In other words, conflict, as one of the

³³ NTNU was established by merging different institutions/disciplines besides the technical (NTH) and social/human sciences (AVH), including DMF (medicine), the Music Conservatory of Trondheim, the Art Academy of Trondheim and VM (museum). However, merging the technical and social sciences was the most troublesome.

functional components of ‘governance process’, led to the change of ‘governance structure’, implying the interconnection between structure and process.

The outcome of this round has underlined how the different organizational culture of NTH and NLHT/old AVH had encountered problems in the new environment of UNiT and influenced the following activity of the university and the ministry at the understructure and superstructure levels of governance. Having a good understanding of this broader historical and cultural context has helped the researcher to understand the process of changes in sync with the behavior of opponents in the case of co-location in the later rounds.

Since Round 1 represents events which happened a long time ago, there is a lack of sufficient information, evidence and memory that hinders the thorough analysis of governance structure at other levels and governance process at those times.

Table 5-11: Summary of governance structure and process in Round 1

		Round 1		
		History and background, Before 2000		
		Superstructure	Middle structure	Understructure
No to co-location	Governance structure	Top-down: ministry was the only decision-maker	Lack of information	Lack of information
	Governance process	Conflict /inconsistency of interest	Conflict resolution	Power
		Between university employees (conflict over culture) and with ministry	Employees: avoidance and tolerance ministry: manipulation of agreement and misrepresentation, use of authority. Later, giving more power and freedom to the university	Ministry had more power than university
	Outcome	Formation of co-location idea (physical merger) as a solution to conflict		

5.4.2 Round 2 (2000- 2002): University hospital case

No to replacement of Øya but yes to re-location of Dragvoll, a mutual interest

After the initiation of co-locating the traditions by the state in 1996, the minister of education (Giske) brought up the parallel idea of the re-location of Dragvoll campus in 2000.

The characteristic of this round was similar to the first round (before 2000); the initiation came from the top, the interest and coalition consistency among political and governmental actors was high, and the level of uncertainty was almost zero, since all the necessary resources were in place because the government/the resource provider was the initiator. The majority of lobbyists were positively at the political and governmental level rather than at the academic level, though there was still some disagreement and resistance at the lower levels of university governance and among employees.

Despite the similar situational characteristics with Round 1 (before 2000), the results of this round differed from those of the first round. In the former round (before 2000), the outcome was in favor of the government's interest, which was the institutional merger of NTH and NTHL, while, in the latter round, the outcome was against the government's initial interest, which was no to the replacement of Øya with Dragvoll.

The difference in outcomes is related and discussed in respect of both structural and functional aspects of governance.

Governance structure: Round 2

As was mentioned before, the outcome of Round 1 (before 2000) resulted in the change of governance structure and the subsequent power relation towards less hierarchy. The results show that the unilateral decision of government on the institutional merger for greater interdisciplinarity in 1996 could not diminish the abiding internal conflict of the disciplines. Indeed, it locked the academics into a bitter dispute that hampered the effectiveness of the decision. Although the minister's goal was to increase collaboration between the traditions of Gløshaugen and Dragvoll in 1996, it contradicted the interest and organizational culture of the employees (conflict over culture). The governmental avoidance of the grass root's interest thwarted a complete success. As a result, the hierarchical, top-down model of governance, in which the ministry had the only autonomous administrative power, had been replaced by a more horizontal or bottom-up (but yet not complete) / semi-hierarchical model, in which the government exercised power through the empowerment of a more collaborative and

democratic network in the second round (2000-2002), so that employees' voices were, to a greater extent, taken into account. Accordingly, the outcome of this round, the no to the replacement idea, was mostly in favor of the university's interest or the opposition to the replacement of Øya and Dragvoll campus and against the national government's interest.

In addition, there was a conflict of interest between national and regional-local government that resulted in favor of the latter, which had the more formal power in this round. At that time, the university hospital was the regional government's responsibility, though today it is a part of national responsibility.

Governance process: Round 2

The second difference between the outcomes of Round 1, which was in favor of the government, and Round 2, which was against the government, relates to the interplay of 'conflict over interest/goal' and subsequent 'resolution strategies'.

In the first round, in which the government's interest was against that of the employees, the opponents' solution to handle their conflict of interests with the government was through *avoidance and tolerance* of the situation.

In the second round, the minister's proposal to replace Dragvoll with Øya campus was for the sake of the Gløshaugen and Dragvoll disciplines and their interdisciplinarity. However, it overlooked the interest of the local-regional partners and the university, which watched over the positive collaboration of Gløshaugen and Øya/medical campus. In addition, the minister's 'economic' interest was in conflict with the temporal priority of the university hospital project and its subsequent and long-term financial costs. Thus, the national economic interest was in confrontation with the regional-local economic interest. At that time, the regional government, as the owner of the university hospital project, had more legal power. Accordingly, although the minister of education had the national government as his ally, he needed the support from the regional and local government. Excluding the county from the decision-making process and underestimating its power, in terms of situational position, might be the main reason that the minister of education and his allies failed. In addition, there was not complete unanimity among political parties, at different governmental levels, particularly among the AP party, which had conflicts over interest, resources and strategy.

In this round, the opponents' resolution strategy was to form a stronger and more expansive coalition than that of the supporters (see Figure A-19, in the Appendix). Academics, who were

few in number, were invisibly active and were backseat drivers to stop the replacement idea of Øya campus with Dragvoll. It can be concluded that the coalition-building strategy, used in this round, was more efficient than the avoidance and tolerance techniques, used in the first round.

Nevertheless, the actors involved in this round also had the political intelligence (cognitive resource) to soon recognize the underlying mutual benefit, which was the re-location of Dragvoll campus, without necessarily moving the hospital. This was certainly because the involved actors were a part of the politics and the game-like process of this round. Co-locating all the campuses was a common dream/goal for many involved actors, but if they had to choose between the Dragvoll campus and Øya campus to build a new university hospital, the latter was prioritized, because it was already in place. Thus, they were able to resolve their conflict through a coalition network and high-level explicit negotiations. Another influential factor that mediated the existing conflict in Round 2 was the concurrent relocation of natural sciences to the Gløshaugen/Realfagbygg, which opened an opportunity window for the possible re-location of Dragvoll in the future. Subsequently, the supporters and opponents successfully reached a consensus to bring up the re-location discussion of Dragvoll in the near future and turn off the replacement of the university hospital.

Until now, according to the analysis, conflict or inconsistency of interest brought the power issue to the fore, which directly interrelates with the governance structure. The following resolution methods are also under the influence of actors' power/influence and political knowledge within their networks. Furthermore, under certain circumstances, a window of opportunity can be opened to advance the engagement of the issue or solution. In this regard, a solution can become joined to the existing problem/issue, and both of them can be joined to favorable political forces (Kingdon, 1984). In this round, after the case of Realfagbygget, the separation/disconnection of Dragvoll campus became a recognized problem on the official (or institutional) agenda, and the public policy process started addressing it.

Table 5-12: Summary of governance structure and process in Round 2

		Round 2 University hospital and replacement of Øya campus with Dragvoll campus 2000-2002			
		Superstructure	Middle structure	Understructure	
No to co- location	Governance structure	Towards collaborative governance (more horizontal and less hierarchical, compared to Round 1)	Horizontal	Bottom-up/collegial: elected rector and more autonomy	
	Governance process	Conflict /inconsistency of interest	Conflict resolution	Power	Other
		Between national government and regional-local government and university	First through tacit bargaining and outmaneuvering the opposition but then through explicit bargaining	Regional government as owner of the university hospital project had more power	Window of opportunity
	Outcome	Reaching a mutual interest: No to replacement idea but yes to re-location of Dragvoll			

5.4.3 Round 3 (2004- 2005): Heating up the co-location idea

The powerful actors came to be in favor of the co-location

After the dismissal of the replacement idea in Round 2, once again the initiation for the campus development came from outside the university. This time it came extensively from the local-regional authorities and the government, rather than from the actors at national level. In addition, some actors within the university community, the administration and leadership, slowly but surely, became more influential to prompt the co-location of campuses. Trondheim Municipality and local politicians were the main driving forces/initiators, while the university leadership and administration acted as promoter and director of the co-location idea.

Governance structure: Round 3

In this round, the university governance at superstructure level had quite a horizontal and self-organized model. In addition, the favoring lobbies of actors, the external NTNU, were mainly behind the scenes, due to the dominant and loud role of the NTNU leadership/administration in this round. In addition, it was apparently up to NTNU to find a good solution for handling the campus development. It was felt that NTNU had received more freedom and authority to decide the university issues. On the other hand, some critical positions, including university director and university project manager, were given to some external actors (not academics), which reflected a shift from an ivory tower culture to a more integrated and inclusive partnership culture at understructure level.

The model of urban governance at middle-structure level in this round was also self-organized and horizontal, but the university's relation with the municipality had been extensively improved.

Such self-governance networks at all levels allowed the formation of informal and interpersonal networks, particularly at the level of the individual, rather than the collective. For instance, the municipal senior advisor was an intermediate between TK and Sør-Trøndelag FK, on one hand, and between TK and NTNU, on the other, which was beyond her political affiliation and authority. She was the rector's niece and maybe the rector's main ally and affiliate at Trondheim Municipality. She was also the connector between HiST and NTNU, having personal contacts with both NTNU's rector and HiST's rector. Together with other political and municipal actors, she was the reason that, when the mayor and the county mayor came into office, they instantly become very noteworthy and compelling in the case of co-location.

In this round, the co-location idea was discussed only at the higher levels of governance at different levels, and there was no major conflict or inconsistency of interest.

Governance process: Round 3

The governance process and the interplay of functional components in this round were highly influenced by the horizontal structure of the governance network. The outcome of this round, the initiation and activation of the co-location, resulted from many informal favoring networks and three strong coalitions (Figure A-23, in the Appendix). One coalition was among students/the municipal senior advisor and the student leader/municipal politician (AP).

Another was among the former minister of education (AP), the mayor (AP) and the county mayor (AP), all external to the university. The last coalition was between the university director, the project manager and the rector, which was the most outspoken in this period.

Although students and the university administration usually represent the university society, the university employees did not consider them as the internal representatives but rather as external users or even customers, who want services and knowledge from academe. Thus, instead of being representatives of their constituency, they were seen as representatives of themselves or their political interests. In addition, it was felt that the project manager and the university director were external to NTNU because they were appointed from outside the university community and only for a short period of time, whose temporal position was seen as a window of opportunity. For the same reason, the elected students on the board were not the same as other students. They were fully paid by the university and worked 100% on this case. Their perspectives were more future-centered, and their interest was more political. In addition, their interaction was more with the university rector and politicians than with students. As a result, although the majority of students were not against the co-location, they could not have strong opinions when this was about the future. Therefore, the students' representatives used their power, in alliance with the representatives from business and industry, "to overrule academic staff in the question of democratic governance with the argument that more control from management would discipline staff to provide good quality education" (Rasmussen, 2015, p.3). On the other hand, employees, as the grass roots of the university, were not actively involved in the initiation or development phases of the co-location alternative.

The mayor, the municipal senior advisor and the university director were the main active and central actors in this period, but the university director was the most decisive and powerful, in terms of both position and personality. Interestingly, when the university director was appointed, his initial goal was not 100% consistent with the co-location. However, the students' push and a signal from the Ministry of Education might have dared him to show his capability and courage (political interest) in the accomplishment of the co-location.

The outcome of this round highlights that the actors' actions do not always result from their original or initial interests or goals. On one hand, actors may take different decisions or act differently under the influence of their informal and interpersonal networks. On the other hand, due to a lack of governmental/formal surveillance or authority, the engagement and

influence of different actors are greater, and it is more difficult to assign a specific outcome/action to a specific person or reason.

Table 5-13: Summary of governance structure and process in Round 3

		Round 3			
		Heating up the co-location idea, 2003-2004			
No to co- location	Governance structure	Superstructure	Middle structure	Understructure	
		Horizontal (NTNU had more freedom and autonomy than before)	Horizontal	Bottom-up/collegial: elected rector and more autonomy	
	Governance process	Conflict /inconsistency of interest	Conflict resolution	Power	Other
		No conflict		All the main actors more or less had quite similar influence/power.	
Outcome		The powerful actors came to be in favor of the co-location			

5.4.4 Round 4 (2005- 2006): Turning ‘yes’ to the ‘no’ decision

The opposing coalition made the board say ‘no’ to the co-location

A major part of this round was in favor of the co-location, which abruptly and hastily changed to a total opposing environment. The following high level of uncertainty, ambiguity and misjudgment and the unpredicted outcome in this round highlight the scrutiny of governance process and structure in interconnection with each other.

Governance structure: Round 4

After the idea of co-location came to the fore, the university administration, including the university director, the project manager and the rector, seized the control and responsibility of campus development and planning. This may have resulted from the apparent shift of governance at superstructure level to a more horizontal form.

Increasing global pressure and an emphasis on the international research excellence of universities, on one hand, and on universities’ contribution to knowledge-based urban development, on the other, had imposed a new management system on NTNU. This had resulted in the inevitable involvement of multiple actors in campus and university

development and a shift in NTNU's role and relationships with other local educational institutions (HiST, SINTEF, SiT), the Municipality of Trondheim and the state. On the other hand, it induced 'entrepreneurial competition' among universities to be more efficient and responsive to outside demands. The financial model that the university administration came up with for the co-location, to sell Dragvoll properties in collaboration with the municipality and other potential private partners, verifies a shift towards a market-based norm.

The change of the management structure was also accompanied by the emergence of the external members in the board to represent or act as reminders of outside needs and interests. The external board members entered the university management system as a third party to be an intermediate and mediator between state/society and university. Similar to most European universities, the third party was directly appointed by the state and became a part of the university board at NTNU. Subsequently, the board became the highest governing body at NTNU, and the university director, who was one of the main pushers in the last round, gradually lost part of his positional power in the new system³⁴. The change of management at that time smoothed the resistance process for the opponents, for two reasons. First, the university director, as one of the strongest actors and main barriers, lost his power/influence. Second, a new rector and board leader came onto the board, who had a moderate and peaceful attitude and preferred to inhibit any disagreement and act as a mediator. These two reasons turned to the advantage of the opponents. The board leader's moderate strategy made the external board members, who were usually in alignment with the board leader, give up their supportive votes. Regarding the new understructure governance, the external members did not directly interfere in the university affairs in this round, which was at the beginning of the governance change. On the contrary, they abided by democracy and somehow protected academic freedom from external interests. This situation gave extra power, in terms of opportunity, to the internal board members, who were the most strong-minded opponents. As a result, the internal board members were able to counteract the power of the university leadership and administration and leverage their demand extremely effectively. Thus, for a second time, a window of opportunity could change the outcome.

At NTNU, there was a dichotomy of strategies for dealing with environmental pressures. On one hand, the strategy of the rector and the board leader was in the form of conformity to

³⁴ Later, in 2006, the board of NTNU decided to abolish the position of university director at the university and, indeed, handed over the responsibilities of a university director to the rector. Figure A-28 in the appendix shows the organization chart of NTNU, after termination of the university director position.

institutional pressures (acquiesce) that involved balancing, pacifying, and bargaining with others (compromise). On the other hand, the university director and the project manager attempted to disguise the internal and external nonconformity, buffered their endeavors from institutional pressures, and somehow escaped from institutional rules and expectations (regarding the financial model they proposed). Employees had yet another strategy, which was to resist internal and external pressures in a very public manner. They used different tactics of defiance, including dismissal, challenge and attack.

Regarding urban governance at middle structure, the governance model was still horizontal and self-organized, in which actors' networks were based on the complex reciprocal interdependencies. The involved actors were trying to manage their contradictions and dilemmas themselves, to develop a mutual benefit. However, in light of the inevitable involvement of multiple actors at different levels and the recent university governance change, NTNU faced different difficulties and conflicts, to handle all these external pressures and balance them with its academic core values.

In connection with superstructure governance, the government's rejection of a public-private partnership and the prevention of the full market regulation or some part of it showed that the government was just allowing for some degree of institutional autonomy at NTNU but was keeping a firm hand on the regulation of the university system, making rhetorical use of the 'market' apparent. As a result, when the ministry saw that NTNU administration was unwittingly proceeding with the case through a bottom-up process, it had tried to obfuscate and misrepresent the financial possibilities, acting as a gatekeeper, and backed off from the necessary support. The lack of governmental financial and legal support created a great amount of uncertainty for the rector, the board leader and others, which gradually diminished their interest in supporting the co-location idea. Accordingly, the government's strategy to control such a conflicting environment was 'manipulation' and 'false assurance', proving that the ownership and jurisdiction of a university is/was conditional and limited by the ministry as the main owner. As a result, although the idea behind the self-organization model was to provide opportunities for several voices to be heard, it created a misalignment of leadership, power and role: first, within NTNU internally and, second, between NTNU and the ministry.

With knowledge about the yes to co-location in the later rounds, the question remained that, if the opposing employees had the power to clash with the decision and pause the case temporarily, what did happen/change that they lost or lacked the power to make another

decision or stop it permanently? Could it reflect another change in governance structure and a power relation change in the later rounds?

Governance process: Round 4

In 2006, the aggregation of social networks became complex and contrasting. There were great numbers of concurrent favoring and opposing networks that overlapped each other. Within these networks, the minister of education and the rector were two of the most central actors, upon whom different people imposed a lobby or direct tie, to gain their support. They faced great leverage, both in favor of and against the co-location, which made their decision-making situation difficult and critical. The real approach of both the minister and the rector was 'yes to co-location'. However, the external forces and dynamics of the process at that time imposed an opposite action on them. Correspondingly, they could not strongly support or push the case in favor of the co-location.

The political interest of the minister of education was to keep his voters. He was from the SV party, and many people that belonged to SV were against the co-location in this period. Therefore, the minister had to play an inactive role. In addition, the general mood of the government was against the co-location alternative at that time. The reason was either financial or political that the self-governance practices of NTNU in large part had caused.

The rector, on the other hand, prioritized his social interest before his political interest and supported the employees' wishes. He preferred a unanimous organization and chose a consensus-building strategy to mediate the existent conflict within his organization. The uncertainty about the finance had convinced him even more that the co-location was not ideal at that time.

Within the university organization, the board leader had the same moderate attitude as the rector. The original approach of the board leader was not a complete no to co-location at the beginning. She would have supported it, only if the employees unanimously wanted to co-locate campuses. However, due to the employees' and internal board members' resistance throughout the process, and the rector's uncertainty, she shifted entirely to a 'no to co-location' side. Her interest was social, since she supported the employees' interest, and partly political, if we consider that she pursued her political party's (SP) attitude, also being against centralization.

The external board members, whose real goal was ‘yes to co-location’, in support of the board leader and for the sake of the university, at the end said, ‘no to the co-location’.

According to the choice of these actors, it is concluded that actors predominantly act according to their process-based goal, which is under the influence of their interactions with others, rather than their real goal. In this round, lobbyists’ actions imposed opposing actions (anti-real goal actions) on the supporters and/or some indifferent actors and compelled them to change side or take the opposing side. In this regard, lobbyists can agitate for change of policy or decision, depending how well they can exploit the system to their own advantage. This, on the one hand, depends on their existing formal and legal power and resources, which directly interrelate with their position within a network and the model of the governance structure in general. On the other hand, it depends how they can gain or enhance their power and resource informally through the network process.

Although the governance understructure was converted from a professionally-based bottom-up model to a more collaborative and negotiation-based governance model in 2005, the change was very recent, and employees still had greater discretion over university affairs.

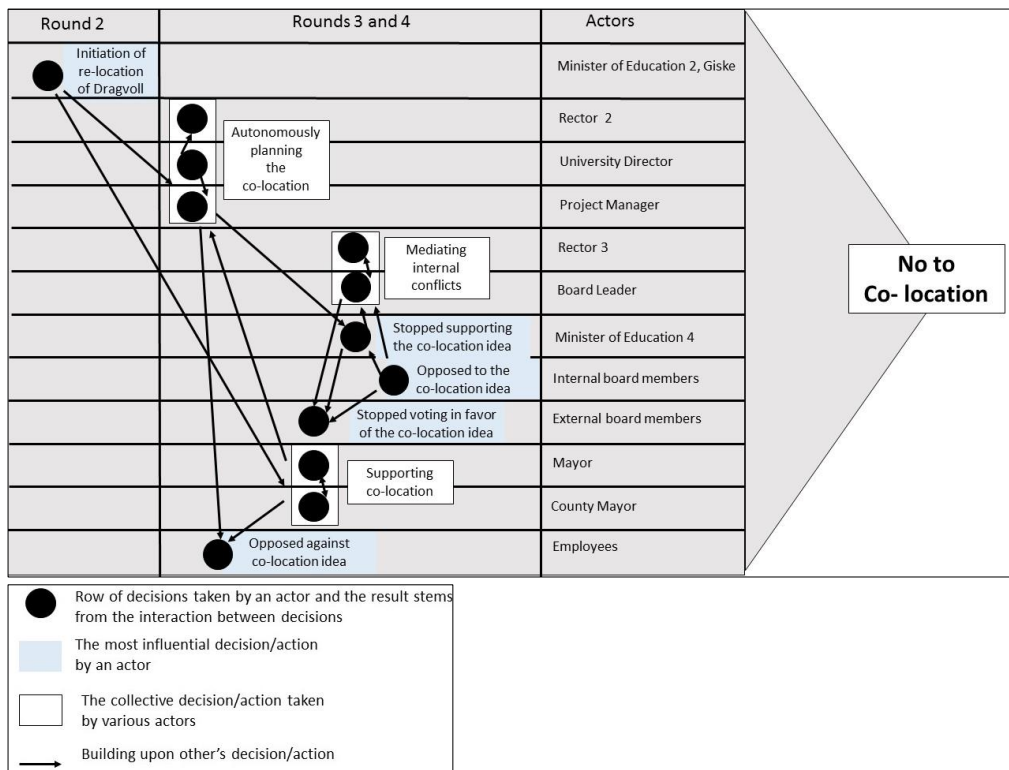
On the other hand, the total environmental and political situation (‘policy window’) (Kingdon, 1984) of this round was in favor of the opponents, which helped them to form a strong coalition. An extraordinary amount of agreement and interest towards the co-location idea might cause supporters to take this affirmative situation for granted and neglect to strengthen their coalition. They did not expect that the resistance of a small group of professors could break their impervious favoring networks. In fact, the supporters underestimated the power of the opposition coalition. On the other hand, the role of the rector and board leader as mediator and fixer was also very advantageous for the university resisters to act more astutely and team up with the main influential actor, particularly the Ministry of Education. Evidently, the internal board members played strongly as opposition, lobbied the minister and the SV party to use their power and resource to stop the promoters and allies, thus playing the role of gatekeepers. The mayor, county mayor, project manager, university director, students, external board members, rector and even the minister of education were all in favor of the co-location. However, except for the weak coalition between students, the project manager and the university director, there was no strong favoring coalition, especially with the governmental administrations. The project manager and the university director were not successful in forging the same bond with the new rector as they had with the former rector.

The analysis of the former rounds showed that two factors, ‘governance structure model’ and ‘coalition building’, can affect the outcome, which is in conformity with the outcome of this round.

In this round, the lack of transparency about interests, goals and strategies, on one hand, and inconsistency between actors’ action and their original intention and attitude, on the other, caused ambiguity, uncertainty, complexity and distrust, so that more actors had to change strategies. This gave an advantage to the opposition to produce actions that conformed to their preferences or, at a minimum, to block their least preferred alternatives.

The recent continuing shifts in governance structure at different levels involved corresponding shifts in the processes of governing, as well as in the content of governing. These changes had occurred in large part due to a variety of changes occurring within government itself and, perhaps more importantly, because of changes in the university’s reactions to the actions of the government (Peters, 2002). The previous outcomes might also have undermined the confidence in government institutions to achieve goals through authority and legitimacy. Accordingly, these problems can partly relate to the self-organized nature of the governance in this round, in which actors had difficulties in identifying the locus of power, accountability and resource allocation. The absence of some sort of authority and legal power made the decision situations become unstructured, anarchic and less predictable, so that a variety of influences were brought to bear on choices. According to the outcome of this round, in horizontal networks, where there are few formalized rules that govern the interaction of the actors, the actors themselves may decide about their involvement. It seems that, when there are fewer hierarchical constraints, actors that have been well integrated into the process, and have greater political skill and knowledge, can exercise some form of informal power within the process and translate their own interest into policies. Subsequently, under these circumstances, power, actions and decisions are more subject to windows of opportunities, depending on which actor has the right personality, skill or knowledge to exploit them.

The outcome of this round, no to co-location, shown in Figure 5.2, verified the assumption that policy process represents the confluence of streams of actors, decisions and possibilities, presented in the ‘rounds model of decision-making’ rather than a *rational base* (Cohen et al., 1972). By rejection of the rational perspective, this question remains: Which perspective can possibly explain how actors muddle through in the complex and informal/self-organized governance situations?



No to Co-location

Figure 5-2: No to co-location as a clew of decisions taken by several actors; taken from Teisman (2000)

Table 5-14: Summary of governance structure and process in Round 4

		Round 4			
		Turning 'yes' to the 'no' decision, 2005-2006			
No to co- location	Governance structure	Superstructure	Middle structure	Understructure	
		Horizontal (ministry started to regain some of its power through the board of the university)	Horizontal	Slowly towards market-based governance; more formal autonomy, but less real autonomy	
	Governance process	Conflict /inconsistency of interest	Conflict resolution	Power	Other
		Between employees and supporters of co-location. There was also a conflict over strategy between university leadership and the ministry	Employees formed an opposing coalition, lobbied the political party (SV), the rector and the board leader. The ministry used false assurance and manipulation of agreement	All the main actors more or less had quite similar influence/power, but internal board members used it more efficiently	Change of management structure at NTNU was a window of opportunity for the internal board members
Outcome	The board of NTNU said no to the co-location				

Chapter 6 Case and Analysis: Yes to co-location

This chapter describes and analyzes the two rounds of planning and decision-making after the ‘no to co-location’ in 2006, within which the different governance structures and processes had led to the ‘yes to co-location’. In so doing, the research sub-questions, which are recalled in the title of each round, are also answered.

6.1 Round 5 (2006-2012): Opposing coalition to rehabilitation of Dragvoll

RQ: Why had no major change/development taken place at Dragvoll between 2006 and 2012?

Table 6-1: Governance structure, Round 5: Inaction on the rehabilitation of Dragvoll, 2006-2012

Round of planning and decision-making	Governance structure	Main actors
2006 to 2012 Inaction on the rehabilitation of Dragvoll	Understructure	Rector 4, board leader
	Middle structure	County mayor (AP), mayor (AP)
	Superstructure	Minister of education 2

Table 6-2: Important roles, Round 5: Inaction on the rehabilitation of Dragvoll, 2006-2012

Round of planning and decision-making	Main actors	Roles
2006 to 2012 Inaction on the rehabilitation of Dragvoll	NTNU rector 4 and board leader	Promoter of rehabilitation of Dragvoll
	Mayor (AP), county mayor (AP) and minister of education 2 (AP)	Gatekeeper

Since the board of NTNU dismissed the co-location of campuses in 2006, the rehabilitation of Dragvoll (two-campus model) came at the top of NTNU’s agenda. The first step was to investigate the financial source for the rehabilitation of Dragvoll. The possible financial solution was the same as before: either selling Dragvoll property or applying for state funding. In order to solve the financial problems, the possible partnership of the private sector was again brought up (Adresseavisen, 2008). Without the partnership of the private sector, NTNU had to wait in the queue to get public funding, which could take 10-15 years. That was not a good option, since Dragvoll was in urgent need of rehabilitation.

The new government³⁵ came into office in 2005. They allowed the financial model (PPP) to go ahead, although they knew the model was not their preference for a constructive project like this. At that time, they did not stop it. However, at the end of 2007, it was necessary for them to decide. Then, a political signal was given that PPP was not an acceptable model, and they had to stop this option politically, but it did not necessarily mean that the idea of selling Dragvoll was closed. (Rector, interviewed on 12.01.2016).

Nevertheless, all the efforts that NTNU, mainly the rector and the board leader, made to get money for the development/rehabilitation of Dragvoll were rejected. According to the 'rounds model of decision-making' (Figure 3.3, p.6), any decision stems from the interaction between decisions or actions taken by several actors. Thus, due to the lack of political-governmental support, NTNU did not find any other choice than to stand in the queue and wait for the public funding.

It was not that long ago that NTNU received the money from the government for the university hospital development. Twelve billion NOK were invested in St Olav's Hospital in 2005, which was a huge investment in the Trondheim region, at the expense of other parts of the country. On the other hand, there was an urgent need for funding of major development projects at several university and university college campuses in Norway at that time. For instance, HiST had great needs for upgrading its campuses, which was a priority for the ministry (Minister of Education, interviewed on 15.03.2016).

Therefore, NTNU was not at the top of the list of public projects to receive any public money in this period.

The rejection of the PPP model slowed down the progress of rehabilitation at Dragvoll because all the investigations were based on that model before. In addition, it was going to be too slow for HiST, which decided not to wait for NTNU but to go its own way and fulfil its own needs. Therefore, the ministry dismantled the NTNU and HiST joint campus project. "NTNU and HiST both recognized that it was beyond their institutions' power or control to avoid what

³⁵ Stoltenberg II from AP, SP and SV parties.

was happening around them at that stage. Therefore, NTNU leadership gave up any follow-up request for the money” (Rector, interviewed on 12.01.2016).

After the ‘no to co-location’ decision, the existing resisting and tense environment gradually became indistinct and moderate. However, the municipality did not give up their wish to have an integrated campus city and continued working on it. The new planning group disregarded the re-location plan of Dragvoll campus and refocused on other possible campuses, to create a knowledge cluster in the city center. They redeveloped their collaboration and communication culture with all the main local actors and concentrated all their energy and focus on the same goal. This time the municipality tried to be more careful in its interventions, using skillful and practical maneuvers to have good communication with NTNU, avoiding any dilemma and misunderstanding that would hinder the achievement of their goal again.

In 2008-2009, due to the financial crisis, the government had the opportunity to devote money for university development if NTNU had any handy proposal for developing Dragvoll. Thus, the Ministry of Education (KD) contacted NTNU to find out whether NTNU had any plan for the rehabilitation of Dragvoll. At that time, the ministry was concerned about the critical situation at Dragvoll campus and its urgent need for maintenance and renovation. NTNU’s proposal was to build 10-14,000 square meters adjoining existing buildings, in addition to renovation and the rebuilding of the old structures. Because of the financial issue, NTNU was asked to bring up the proposal with the Ministry of Finance. The budget required for such development was estimated at one billion kroner. This amount exceeded the limit for state buildings, which was around five hundred million in 2009. As a result, NTNU was obliged to do a concept study (KVU). Both Ministries of Education and Finance decided to support NTNU, by speeding up the process of decision-making and planning for the rehabilitation of Dragvoll, and to disregard the public waiting list. In 2010, when KD was in the process of negotiation with Statsbygg (the Norwegian Directorate of Public Construction and Property) and the Ministry of Finance, to finalize the development plan of Dragvoll, the mayor, county mayor and former minister of education (Giske), who, at that time was in the Ministry of Trade and Industry, were informed about what was going on. As expected, they did not like the idea of developing Dragvoll, which caused them to quickly contact their political connections, to express their dissatisfaction and disinterest and to strongly lobby against that the government’s support (Høstad, 2015, p.36).

Any public development project that needs state funding has to compete with other public projects, issued in the government, and pass the majority of the government's vote. Due to the lobby of the supporters of the co-location idea, there was no political enthusiasm in the political camps for the two-campus solution (Project Manager, interviewed on 30.11.2015). "Someone had obviously decided or dictated to the government that 'whatever you do, don't do too much at Dragvoll'" (Journalist, interviewed on 01.02.2016). Therefore, the government's speed for helping Dragvoll slowed down.

Among all those stubborn supporters of the co-location idea, the most known and powerful actors were the mayor at local level, the county mayor at regional level and the politician/former Minister of Education Giske at national level, all from the Labor Party (AP). They managed to make a strong opposing coalition network to lobby the government (both Ministries of Education and Finance) to not give any money to NTNU and to sabotage any development at Dragvoll campus (Lorentzen, 2013, Monsen, 2012d). As a result, nothing happened at Dragvoll in this round. The stable power relations and behind-the-scene negotiations of the lobbyists provided some room to win occasionally, which they could not do in open confrontations. Consequently, the interpretations of the inaction of Dragvoll development in this period were different and contrasting (see Table A-8³⁶, in the Appendix).

For instance, according to the former minister of education (interviewed on 04.04.2016):

...the rector saw that there was no political support for rehabilitation of Dragvoll. The rector needed political support to push through a new building at Dragvoll, but he realized that he could not do this alone in a long round, when the mayor, the county mayor and I stood against him. This caused the rector to be open to a new investigation of co-location again.

³⁶ Table A-8 represents the summary of interviewees' responses to /interpretations of why nothing had happened at Dragvoll during this period.

6.2 Round 6 (2012-2014): The board of NTNU said ‘yes’ to the co-location

RQ: Why and how was the case of co-location raised again in 2012? Why was the opposition silenced in this round?

Table 6-3: Governance structure, Round 6: Re-initiation and approval of the co-location, 2012 to 2014

Round of planning and decision-making	Governance structure	Main actors
2012 to 2014 Re-initiation and approval of the co-location	Understructure	Rector 4, internal board members
	Middle structure	County mayor (AP), mayor (AP), SV and AP politicians, deputy mayor (AP), municipal advisor
	Superstructure	Minister of education 6 (SV), deputy minister (SV), minister of research (SV), deputy minister of research (SV), minister of finance (AP), deputy minister of finance (AP), state secretary of prime minister (AP)

Table 6-4: Important roles, Round 6: Re-initiation and approval of the co-location, 2012 to 2014

Round of planning and decision-making	Main actors	Roles
2012 to 2014 Re-initiation and approval of the co-location	SV politicians	Initiator
	Ministry of Education (SV)	Director
	Deputy minister of education (SV), AP politicians	Promoter
	Ministry of Finance (AP), State secretary of prime minister (AP), AP politicians, SV politicians, rector 4, board leader	Ally
	Internal board members	Opposer

Re-initiation and approval of the co-location, 2012-2014

One of the ambiguities of this process is/was how the discussion of co-location was raised again. According to the former rounds of planning and decision-making, the outcomes were always made in an informal way, so that it was difficult to identify who was the initiator, responsible for what and/or who should be held accountable for the decision carried out. Some interviewees believed that Rector Digernes, who had been in this process since 2005, had become experienced enough to know the rules of the game and to re-initiate the case. They

thought that, in 2012, which was coincident with the last year of his presidency (Rector 4), he found an opportunity to finish his mission and facilitated the co-location of campuses. In addition, considering all the supporters and pushers of the co-location solution, he realized that NTNU would not have any choice other than accepting a one-campus solution.

On the other hand, some believed that the new rector (Bovim), who came into office in 2013, was the initiator, referring to his strong personality and skill in networking and making alliances. In their eyes, he started his job with two main missions: first, to merge NTNU and HiST, which he had initiated before, and, second, to co-locate the campuses. This assumption was reinforced by the fact that the new minister of education (Isaksen), who also came into office in 2013, had the same goal: ‘merging universities with potential university colleges’. It is speculated that the rector promised the fusion of NTNU and HiST, and, in return, the minister supported the co-location decision. In addition, the rector was also involved in the hospital case and he knew lots of people and formalities, having cognitive³⁷, political and social resources. Thus, his political connections helped him to form alliances with other decisive actors and accomplish the mutual goal of co-location.

Some other interviewees believed that the initiation again came from outside the university, because nobody at NTNU would dare to pick up the idea again and wage a new war. Some saw the re-initiation phase as a result of the actions of a mixture of actors, particularly the former red-green government represented by Minister of Education Halvorsen, who wanted to get the co-location started.

Foss et al. (2013) argued that:

Since the no to co-location decision in 2006, NTNU has had the rehabilitation of Dragvoll at the top of its priority. Despite numerous meetings with the government agencies, rehabilitation of Dragvoll was not realized. This proves that NTNU has become a part of a political game, where its desire for further development at Dragvoll is in conflict with local and regional politicians' ambitions for urban development. As a result, the Ministry of Education (KD) has systematically neglected NTNU's wish on a two-campus solution. We [the

³⁷ Possessing important political information, knowledge and experience for the decisional process.

board of NTNU] greatly regret the lack of action that has deteriorated the learning environment at Dragvoll and NTNU.

After interviewing the most related and involved actors, who were present in the process in 2012, it was revealed that the last hypothesis, indicating that the initiation came from outside NTNU, was the most sensible one. In fact, in 2012, one of the SV politicians at Sør-Trøndelag County Council (Randi Reese) contacted Deputy Minister of Education Ragnhild Setsaas and also the deputy mayor, who were also from SV, to see whether it was possible and wise to raise the case of co-location again. The reason was that SV was blamed for rejecting the case in 2006 (because the minister of education at that time was from SV), and by still having SV in the ministry, it was a good opportunity to clear the blame.

The deputy minister saw that there was local pressure to locate NTNU's departments closer to each other, on one hand, and to tear down the [cultural] division at NTNU, on the other. In addition, the collection of reasons, including the transportation issue, the students' interest in living in the city center, the similar strategy of HiST to co-locate its campuses and the unappropriated use of Dragvoll properties for the public convinced her that co-location was a good idea. Thus, the co-location idea would give the city population a chance to see what was going on in the campuses and to have contact with the university (Deputy Minister, interviewed on 19.02.2016). As a result, without considering budget issues at the beginning, she let the debate of co-location go on, to see whether they could use the local pressure to open the case again. Thus, the re-initiation process became a more political than financial and/or technical decision.

With the reference to the non-development of Dragvoll and the lack of push from NTNU itself to investigate the co-location possibility, the deputy minister discussed the issue with Minister of Education Halvorsen, to obtain confirmation to initiate the case again. Earlier the same year, the deputy minister of higher education and research (Kyrre Lekve), together with the minister (Tora Aasland), both from SV, also contacted the deputy mayor to evaluate the possibility of raising the case of co-location³⁸ (Monsen, 2012a). They knew that, in order to have success in re-starting the case, they would need someone with authority at local level (County Politician, interviewed on 12.04.2016). Apparently, SV's political attitude and

³⁸ On May 7th 2012, the Deputy Minister of Education, Ragnhild Setsaas, replaced the Deputy Minister of Higher Education and Research, Kyrre Lekve. On March 23rd 2012, the Minister of Higher Education, Tora Aasland, was also replaced by the Minister of Education, Kristin Halvorsen.

position towards the co-location idea shifted from being against co-location in 2006 to not only being in favor of it but also being the initiator and promoter of co-location. The deputy mayor had always been one of the known strong opponents to the co-location. It was surprising how he suddenly became one of the promoters of the co-location idea in this round.

The deputy mayor explained that the reason why SV or he had changed their attitude towards co-location was the environmental issue (interviewed on 25.02.2016). They were convinced that co-location could actually reduce transportation problems and make greater developments in Trondheim (Monsen, 2012a). As a result, the county council politician and the deputy mayor (both from SV) raised the co-location alternative at both local and regional councils on the same day (June 26th, 2012); their proposal received unanimity among different political parties (Meland, 2012b, Lylum, 2012).

Nevertheless, there was a trivial conflict over political interest between AP and SV to get the credit for the re-initiation of the case. They managed to solve this by sharing the prerogative of initiating the case together. Correspondingly, on August 30th, 2012, the deputy mayor from SV and a local politician (Geir Waage) from AP jointly raised the question of co-location in interpellation in the city council (Trondheim Kommune, 2012b, Oksholen, 2012, 2013). Usually, this kind of proposal at the city council should come from the mayor. On that day, the mayor (AP) could not be present and, unwittingly, the deputy mayor (SV) had to take over her role for that meeting. As a result, SV inevitably sealed victory in raising the case of co-location in public opinion. SV initiated the co-location idea, but AP took over the decision afterwards and full control of it. The success of SV was beholden to the political support of AP, particularly due to the strong coalition between the mayor, county mayor and the former minister of education, who covered all levels of government and were always in favor of co-location (Adresseavisen, 2013).

When the co-location proposal was brought up in the city council, only a minority (some representatives of the Progress Party and the Red and Green parties) believed that the initiative for a new co-location should come from the university itself (Monsen, 2012c, Oksholen, 2012). However, because a majority agreement was received in the city council, the idea was made public (Adresseavisen, 2012). After that, the Ministry of Education took the initiative, invited NTNU people and raised the co-location matter with them. In that meeting, the minister asked NTNU to stand aside and let the ministry take care of the case and carry out all the official and political procedures. This suggestion pleased NTNU leadership because they

would no longer have to worry about the financial solution. As a result, NTNU leadership agreed, and the ministry took charge of the process by accepting full responsibility. Many believed that this (the ministry accepting the responsibility) was the only way to get the money from the state. In the following, it is explained why NTNU might not have succeeded in getting the money without the direct intervention and supervision of the ministry.

The minister of education was the former minister of finance and had good knowledge about the political processes in the Ministry of Finance. In addition, she had a good relationship with the current minister of finance. During the 24 years that she had been in politics, eight years of her political life had been spent in the government/ministries. In the remaining years, she had worked in parliament. Her political life and her former position as the minister of finance gave some advantages to the supporters of the co-location, because she knew what was going on at the Ministry of Finance. She was very resourceful in terms of cognitive (possessing important information and experience) and political assets. NTNU was dependent on the Ministry of Education (SV), to obtain approval for the co-location proposal, and it needed the Ministry of Finance (AP), to get approval for the financial model. Those two resource providers were in complete agreement and partnership.

On the other hand, when one ministry struggles in negotiations with the ministry of finance, the prime minister's office usually acts as an intermediate. The deputy minister of education had an opportunely good relationship with the deputy minister of finance (Hilde Singsaas), who was the former state secretary of the prime minister's office. In addition, she knew the present state secretary of the prime minister's office at that time (Rita Skjærvik). The deputy minister of education, the deputy minister of finance and the state secretary of the prime minister's office had many rounds on emails and telephones before they reached the decision on what the mandate for the concept study (KVU) should look like to be approved by the government. They were all from the Trondheim region (Sør-Trøndelag County) and were in favor of developing Trondheim. They were successful in lobbying or influencing the rest of the government to be in favor of the NTNU co-location case.

Providentially, all the actors involved had exceptional knowledge and growing realization of their own and others' position, their interdependency and the rules of the game in general. All supporters of the co-location put their energy and efforts into solving the challenges and actualizing the co-location idea in this round (Meland, 2012a). The general perception is that the situation in this round was much smoother and less conflictual, compared to 2006.

However, there was still some opposition, uncertainty and suspicion among different people, who believed that the process had once again been raised politically. For some people, e.g. the director of the urban development committee, this case was always accompanied by some constant behaviors/characteristics, such as uncertainty, informality, anarchy and irregularity. Re-initiation of the co-location case by SV and AP on the same day made them suspicious that there were some strong backseat drivers. They believed that the initiation had always been brought up informally. In the former process (2003-2004), the Labor Party (AP) initiated the proposal, and this time it came in the form of an interpellation from SV.

For some people, “The urban development has been driven strangely in this case, in which first the conclusion came and then the investigation; like selling the skin before the bear is shot!” (Monsen, 2012c).

A former internal board member, the most known opponent in the case of co-location, also wrote an article, titled ‘High game around NTNU’ for the university newspaper and tried to revisit the important reasons/discussions against the co-location alternative (Lorentzen, 2013). For instance, he recalled that NTNU could build/develop on its own unlimited lands at Dragvoll, without needing to look for or rent a new site for new buildings. Secondly, he mentioned that the city center was growing closer to Dragvoll year by year and the rationality of making an integrated city-campus was becoming meaningless. According to him, public transportation was already effective in Trondheim and the possibilities for high-tech transport solutions were clearly present. He strongly hoped that NTNU's management would not contribute to any reprisal of the time-consuming, costly and unnecessary process, which NTNU had once gone through in 2005-2006 (Lorentzen, 2013).

The statement above showed that the opponents (at least some of them) had not changed their mind and still had the same rationality towards the re-location of Dragvoll campus. Similar to the board situation in 2006, the internal board members, who represented the inside community, were skeptical about the co-location solution. Four internal board members together wrote an article to once more mobilize public opinion against the co-location but in favor of the rehabilitation of Dragvoll (Foss et al., 2013). In this article, titled ‘The ministry passes over NTNU’, they recalled the decision in 2006 and the priority of the NTNU board at that time, which was the rehabilitation of Dragvoll that never was accomplished. They reasoned that the desire for further development at Dragvoll was in conflict with local and regional politicians' ambitions and, therefore, the Ministry of Education (KD) had

systematically neglected NTNU's decision on a two-campus solution, in support of their political friends. They warned that, if NTNU were to accept the ministry's requirement of a new choice of concept selection (KVU) for the co-location solution, the first new building for Dragvoll would be built in around ten years, considering the time required for the government's investigation regulations (KVU, KS1, KS2), as well as design and construction time (Foss et al., 2013). In this regard, until the new building was finished, the learning environment at Dragvoll, which was still in urgent need of rehabilitation, would deteriorate. They showed their suspicion that the Ministry of Education cared more about urban development in Trondheim than the university's best interests. Otherwise, the support for the rehabilitation of Dragvoll would have already been realized (Meland, 2013).

Despite the process in 2006, the rector, who was the same person, did not want to commit to two campuses and had a different mind than the internal board members. The rector acknowledged the political wave, which the municipality and county had created, and considered it an opportunity to get out of the political barriers (Monsen, 2012e) and break the 'deadlock' (Universitetsavisa, 2012). Accordingly, in a preliminary recommendation, he had advised the board to join the Ministry of Education and conduct a draft for KVU. He reassured the board that he was already in dialogue with the ministry and would come up with some permanent/long-term solutions for the Dragvoll situation. However, the internal members preferred to postpone the decision-making until the parliamentary elections had finished, in the hope that new political parties might have different preferences/opinions that would benefit Dragvoll (Meland, 2013).

In February 2013, the NTNU board, for a second time, had to decide on either co-location as a one-campus solution or a two-campus solution with the priority of rehabilitating Dragvoll. Up to that date, there was still some opposition, particularly among the Dragvoll community. There was also some skepticism among different political parties, e.g. the Progress Party (FrP) and the Green Party (Monsen, 2012b, Oksholen, 2012). The new rector, together with the external board members, did not support the internal board members, and the board finally expressed a 'yes' to co-location. Many of the interviewees credited the 'yes to co-location' to the role and power of the new rector, Bovim, at NTNU, who was not afraid of resistance and had the courage to accomplish the co-location of campuses. His knowledge about politics and his focus on strengthening coalitions with powerful actors were the key to his success.

6.3 Analysis

The analysis of governance structure and process in this chapter focuses on why the ‘no to co-location’ had ended as the ‘yes to co-location’ and what structural-functional components had triggered such an outcome.

6.3.1 Round 5 (2006- 2012): Coalition opposing the rehabilitation of Dragvoll

The analysis of this round aims to understand how the power of the opponents, who had successfully blocked the policy initiatives from the top in Round 4, had come to naught. To tease out the dynamics of the processes of inaction in this round, a framework of power mobilization, the ‘power game’ at different structural levels of governance, has been scrutinized.

Governance structure: Round 5

Governance structure at different levels was more or less the same as before: horizontal and self-organized. However, this period was an adaptation and a learning process towards governance transformation, not only for NTNU but also for politicians and the government. Throughout this period, they gained more insight into the reality and substance of power relations, leadership, and conflict resolution (how governance *functions*), to realize which governance *structure/model* is practical and efficient for their own or for the collective advantage. In addition, time was necessary for different actors to adapt to the recent governance structural changes, which required flexibility and the modification of preferences and strategies.

Governance process: Round 5

In 2006, the supporters of the co-location idea could not act as effectively as the opponents and lost the case because they did not form any strong coalition networks (see the Appendix, Figure A-27). However, the temporary victory of the opponents and their subsequent calmness and satisfaction gave the supporters of co-location an opportunity to compensate for their ineffective attempt during this round. Although the supporters could not prevent the dismissal of the co-location case in 2006, they were able to hamper any further fulfilment that contrasted with their interest in the co-location of campuses. Therefore, the supporters’ coalition, particularly between the former minister of education, the mayor and the county mayor, blocked off the efforts of the rector and the board leader³⁹ to obtain funding to develop the Dragvoll campus. The ministers of education and finance were the most central actors, who

³⁹ The board leader was more inclined than the rector to make rehabilitation of Dragvoll happen.

confronted both favoring and opposing lobbies in the rehabilitation case of Dragvoll (see Figure A-29 in the Appendix). Eventually, the coalition opposing the rehabilitation of Dragvoll counteracted the favoring leverages of the board leader and the rector, sabotaging the rehabilitation of Dragvoll (see Figure A-30 in the Appendix). As a result, the financial support that NTNU was dependent on to rehabilitate Dragvoll was not actualized, due to the strong lobby of the political actors, including the mayor, the county mayor and the former minister of education (all from the AP party) on the government. Once again, coalition-building changed the result of the planning and decision-making process and, instead of the rehabilitation of Dragvoll, NTNU faced six years of stagnation.

On the other hand, the desire to rehabilitate Dragvoll was not as strong as the wish to demolish the co-location in the former round. There was not enough push from the university to rehabilitate Dragvoll because, firstly, the rector, at the top, was mainly in favor of the co-location. Secondly, not all the opponents of the co-location, who wished to stop the case in 2006, were particularly concerned about the rehabilitation of Dragvoll, e.g. Gløshaugen people. Their situational interest was to inhibit the re-locating of Dragvoll campus at that time, and it was enough for them to temporarily win the game. This was the main reason that no coalition was formed in favor of rehabilitating Dragvoll. The opposition no longer had a common interest, e.g. in rehabilitating Dragvoll, to collectively fight for.

The period between 2005 and 2006 was a real power show-off, internally and externally. Within NTNU, the battle of wills was between opponents and proponents of the co-location idea, particularly between the administrative/leadership and the grassroots. There was also a power struggle between the academics and the city, on one hand, and NTNU and the ministry, on the other. Therefore, the process gradually became a battlefield, in which everybody's main intention was to make a point rather than solving a problem or building a consensus regarding the co-location case. According to one of the external board members (interviewed on 09.03, 2016):

...mode of operation in 2006 was not exactly rational. It was full of feelings and full of fighting against Gløshaugen or Dragvoll. The opposition did not really think and care about what would or should happen at Dragvoll in the coming years. They were fighting just to be against something, not fighting to gain something specifically, such as the rehabilitation of Dragvoll. The opponents' mutual goal was to avoid a 'yes to co-location' decision and nothing more.

The events of this round showed that, in such complex self-organized networks, the outcome is deeply embedded in the hidden exercise of political power, in the protection or adaptation of their special interests over time. In addition, it may not be the societal actors, who might have been advantaged by a shift toward a democratic and horizontal governance model, but, rather, it may be politicians and other formal institutions that are able to prosper in that horizontal and democratic setting. Thus, may the horizontal and self-governance model be a natural locus for *politics* rather than the locus for more open and democratic *participation* for societal actors, who are presumed to be the winners in governance? (Peters, 2002).

Table 6-5: Summary of governance structure and process in Round 5

		Round 5			
		Inaction on the rehabilitation of Dragvoll, 2006-2012			
Yes to co-location	Governance structure	Superstructure	Middle structure	Understructure	
		Horizontal (Ministry regaining its power through the board of university)	Horizontal	Self-governance; more formal autonomy, but less real autonomy	
	Governance process	Conflict /inconsistency of interest	Conflict resolution	Power	Other
		Between Gløshaugen and Dragvoll employees	Employees did not persist/continue the formed coalition for pushing the rehabilitation of Dragvoll	All the main actors more or less had quite similar influence/ Power, but supporters of co-location used it more efficiently	The loss of coalition among opposition of co-location gave a window of opportunity to the supporters. Political knowledge of supporters helped them to build a strong coalition to sabotage the rehabilitation of Dragvoll
Outcome	Political coalition in opposition to rehabilitation of Dragvoll				

6.3.2 Round 6 (2012-2014): The board of NTNU said ‘yes’ to the co-location

The objective of the analysis here is to understand what had changed from 2006, so that the ‘yes to co-location’ materialized in 2012-13. At both times, employees were the main opponents. In 2006, they were able to form a coalition and mobilized the support of the government and the SV party to block the co-location process, while, in Round 6, they were overpowered by the SV party and the government, who this time formed a strong coalition to make the co-location happen. Moreover, the existing uncertainty about funding in 2006 negated the influences of the supporters of co-location, while, in 2012, the uncertainty was managed, due to the different role of the government. As discussed before (in analyses of Chapter 5), coalition-building, uncertainty and differences between outcomes in general have been connected to the governance structure/model and process; i.e. how different actors use their power/influence to handle the existing conflict or inconsistency of interests. Their power is dependent on the structure of the governance at different levels, whether it is hierarchical or horizontal. In addition, some exogenous (New Public Management trends in Europe at the international level or change of governmental mood at the national or local level) or indigenous factors can become a window of opportunity for some actors to change the process to their own benefit. In this regard, some parts of the conflict resolution, e.g. coalition-building, depend on how actors are able to exploit those opportunities and informal power.

Governance structure: Round 6

This round reflects how the change process of university understructure governance that had started in 2005 had been cultivated. The external members at the university were no longer concerned about protecting academic freedom from external interests. Instead, they were protecting outside interests from the conservative approach of the ivory tower. This change implies a gradual movement from the traditional governance model and complete collective decision-making, to a more bureaucratic organizational structure at the university.

On the other hand, the difficulties or failure to maintain the power alignment between the university and the ministry within a horizontal self-organized network had also led to a return to a more bureaucratically-based governance system at superstructure level. According to the findings, since 2005, the governance model at both understructure and superstructure levels had slowly but surely become more hierarchical and top-down. The accomplishment of the ‘yes to co-location’ had built an assumption that such an outcome could relate to the

hierarchical form of the governance at both understructure and superstructure levels. It was the first time that the governance model at both these levels was hierarchical.

The relations between the local-regional governments and the national government at middle structure, which had been developed since the last round (Round 5), also became stronger through political cooperation and intergovernmental lobbying. Accordingly, the 'yes to co-location' outcome was effectively achieved by a group of astute political actors at the middle-structure level. This emphasizes the political nature of relationships at this level and on substantive policies, which determines who raises/initiates, promotes and directs the issue, and how and when it is done.

According to the findings, there is no specific factor or reason that can place an issue from the public policy agenda onto the government's agenda and lead the government finally to approve it. Indeed, the timely confluence of different factors, actors and relationships can create the momentum necessary for raising an issue or a possibility to the actuality of the government's chosen solution. The issue should arise at just the right time for discussion to lead to government's action. However, the governance structure and the following political situation, e.g. "changes in the majority party in the parliament, the retirement or defeat of powerful legislators, and the prevailing mood among the electorate" can affect the governance process and the final outcome (Larkin Jr, 2012, p.29).

Governance process: Round 6

The favoring informal networks and coalitions of individuals had led to the reopening of the co-location case in 2012 (see Figures A-31 and A-32 in the Appendix). The coalition networks were distributed at different levels of government and particularly between the AP and SV political parties. All lobbyists were in favor of co-location, and there was no bold opposing coalition, either individually or institutionally. For the first time in this process, few individual actors at NTNU were conspicuous and active; their actions were effectively silenced after the board decision in February 2013. The deputy minister was the most central actor in this process. However, it is difficult to determine who had the most power/influence because nearly all the important actors, who had formal power, used their informal power in terms of opportunity (at the right time) to make the co-location happen.

The case of co-location was re-initiated to satisfy the SV political interest. The underlying process-based goal was to rebuild SV prominence, which had been tarnished in 2006. For the

second time, SV political coalitions influenced/determined the general outcome of the process. The first time, in 2006, SV unanimously opposed co-location in support of NTNU employees (social interest) and environmental considerations. The second time, in 2012, the SV party was in government and controlled all the required legal, political and cognitive resources. Such a specific political situation gave SV the required authority/power, not only in terms of position but also in terms of opportunity to dominate the governance process for the sake of their own goals.

The AP party had a more or less similar political situation/advantage to be able to have dominance over the governance process parallel to SV, possessing the rest of the critical political and legal resources, and providing the major economic resources. The goal of the AP party was to complete the co-location of campuses, which was originally initiated by them. Former Minister of Education Giske from AP, who initiated the relocation of Dragvoll in 2001-2002, tactically pursued it until the bitter end and became one of the most decisive and known AP politicians in the case of co-location (Adresseavisen, 2013).

The mutual goal of the SV and AP parties was to put their names on the accomplishment of the co-location case. This, on the other hand, caused a conflict over their political interests, competing for more power. Conversely, they knew/had learned from the process in 2006 that, in order to accomplish their goal, they were interdependent. In 2006, AP and SV were in conflict with each other and made individual coalitions to outmaneuver each other, using tacit bargaining strategies behind the scene. However, in the newer process, they managed/learned to mediate their conflict through explicit bargaining and mutual coalition-building and managed to succeed.

In 2012, NTNU was dominantly represented in the form of an institution (collective actor). No individual actor within the university was active in the process of the re-initiation of co-location until the new rector came into office. There were some determinant reasons for such inaction at NTNU. First, the government was the initiator, promoter and director of the case this time and became the owner of the case and provided/guaranteed the legal and economic resources, thus mediating the unsolved financial challenge and uncertainty. Second, there was no strong opposing coalition, and the dominant atmosphere of the board was positive. Both the rector and the external board members, including the leader, became more supportive and were no longer skeptical/uncertain about the co-location. Third, the opponents of the co-location in 2006 belonged to the older generation of academics; as time went by, they had

retired and/or been replaced by a younger and more open-minded generation. On the other hand, the period of inaction and the non-development at Dragvoll campus caused many opponents to feel powerless and give up. Finally, the long-term perspective of co-location could pacify the remaining resisters because they did not need to worry that co-location would happen soon and affect their academic life.

The pause between the stopping of co-location and the re-opening process was the interim opportunity for collective learning and for the establishment of shared visions and trust among diverse stakeholders. Therefore, time was needed so that everyone got to know the different types of interests, perspectives, power relations and rules of the game. In sum, a confluence of all these factors had created the right momentum for re-initiating the co-location alternative and putting it on the government's agenda (see Figure 6-1).

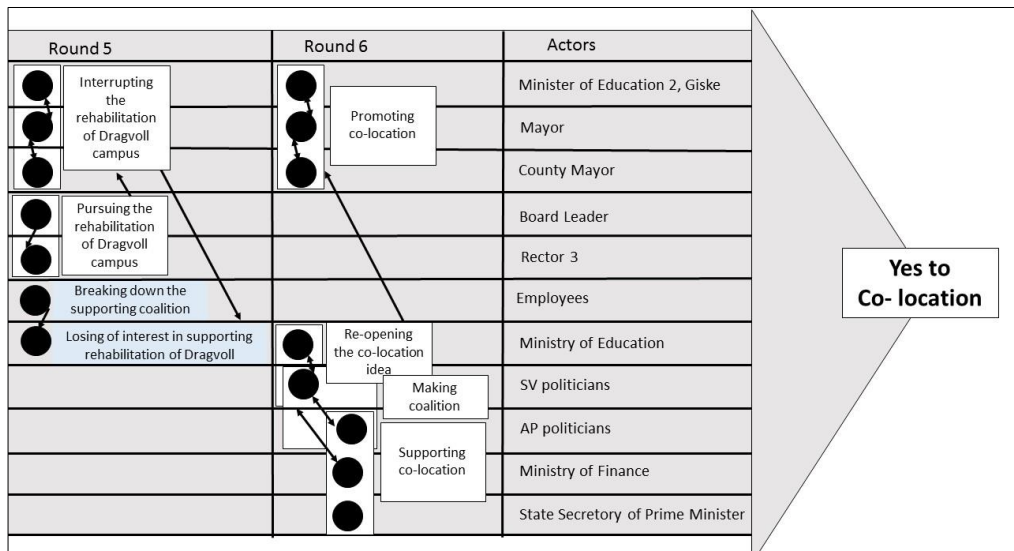


Figure 6-1: Yes to co-location as a clew of decisions taken by several actors; taken from Teisman (2000)

Table 6-6: Summary of governance structure and process in Round 6

		Round 6 Re-initiation and approval of the co-location 2012-2014			
		Superstructure	Middle structure	Understructure	
Yes to co- location	Governance structure	Hierarchical but in the shadow of collaborative governance	Horizontal	Hierarchical but in the shadow of collaborative governance	
	Governance process	Conflict /inconsistency of interest	Conflict resolution	Power	Other
		No main conflict, but internal board members/employees were still opponents	Collective choice mechanism based on the votes of the majority. Strong coalition-building among political and governmental actors	Politicians and government	Right time, right people, right position
	Outcome	The board of NTNU said 'yes' to co-location			

The ensuing events and upcoming rounds

The aim of this research was to look at the process of the co-location from the time it was initiated until it was approved. However, it was challenging to stop discussing this process at specific points and times, because it was ongoing, and its events were politically interconnected. For instance, as previously mentioned, there is a speculation that the intention of fusion with HiST was a forerunner of the yes decision to the co-location case. Both 'fusion' and 'co-location' ideas faced great opposition in the initiation phase (2003-2006). The process of planning and decision-making in the co-location case has lasted for more than 15 years, and still it continues. Contrariwise, the fusion was approved and took place a short time after it was initiated for the second time. When the idea of fusion was discontinued in 2004, it was not officially pursued. However, it was suddenly brought up again in mid-2014 and, after a short while (in January 2016), NTNU merged with HiST and two other university colleges in Gjøvik and Ålesund (Figure A-34).

Although the co-location and the fusion are different in nature, e.g. in respect of finance and physical planning and potential uncertainty, the contradiction between these two processes raised the suspicion that the synchronization and relation of these two processes was not accidental. NTNU was one of the leading institutions in Norway that grinned and bore this institutional and academic transformation and merged with HiST and two other university colleges. Many believed that NTNU accepted fusion because, by becoming one institution and a bigger university, it would be easier to obtain money/public funding for the co-location case, particularly because the fusion process was a political prestige project for the current minister. “There have always been cases of political horse-trading throughout Norwegian political history” (Rector, interviewed on 12.01.2016).

On the other hand, the initiators of the co-location idea in this round, both the county position and the deputy minister of education, had been the board members of HiST and were always in favor of merging HiST and NTNU (Lynum, 2012, Meland, 2012b). It might be true – or natural – that they were both more concerned about HiST than NTNU. In this regard, some of their political efforts might have been in pursuit of HiST’s interest, which was, providentially, parallel with NTNU’s co-location case.

Still the question remains as to whether the fusion of NTNU with other university colleges in other cities is in contradiction with the co-location of campuses in the central city, which was based on the philosophy that geographical proximity, closer to the city center, would increase and improve interdisciplinarity, more efficient use of university and city facilities, and collaboration and integration between city-university and business. If this is the case, does it mean that all the time, energy, money and resources that were consumed to persuade everyone that the co-location of disciplines is necessary and important for the life of the university and the city were contradictory?

It is, however, acknowledged that the merger of NTNU with three colleges with bachelor studies, would build a stronger potential for NTNU to recruit master students.

The fusion of NTNU brought an assumption that the governance process of the planning and decision-making is an adaptation to the interests of the government, which can influence the degree of autonomy and institutionalization of governance networks for its own purpose. In the last rounds of planning and decision-making in Trondheim, the government progressively accrued the capacity for its hierarchical intervention. It took some years before the state

capacity had evolved and the capacity for its hierarchical intervention had increased again. For example, in 2006, when the governance process was under liberal-democratic conditions, the government tried to accrue its intervention and power in the face of strong opposition to the PPP financial model and the creation of uncertainty.

By looking at the process and structure of governing longitudinally, the implications of changes in the capacity of the government are better understood. When the governance model is horizontal and informal, the process becomes like a game, in which many people and institutions get to play. Their wider involvement and interventions cause inconsistency of interests, conflicts, ambiguity and uncertainty that create difficulties for the government and make outcomes less predictable. In such processes, the ‘policy window’ or almost accidental confluence of streams of problems, solutions, opportunities and actors should take place to bring about the desired outcome. In this regard, the absence of authority can imply more loosely structured, indeterminate, and uncertain processes of steering. A path towards ‘government’ or hierarchy (Goetz, 2008) also runs the risk of giving more power to politicians (as they are omnipresent in the central institutions of the state) and taking it from other groups of society, such as academics or planners. Nevertheless, the evidence of this thesis supports less governance for such processes.

Chapter 7 – Conclusion and Implication

The question that is asked is: How have the governance structures and processes influenced campus development in Trondheim from 2000 to 2013? The purpose of this thesis has been to understand the transformation of governance mechanisms, in response to the social and political dynamics behind the university campus development in Trondheim. Accordingly, the effort has been to explore the causal relationship between governance ‘structure’ and ‘process’, and the main outcomes on the ground (first ‘no to co-location’ of campuses in 2006 and then ‘yes to co-location’ in 2012-13). To understand governance structure, the position of each actor, in formal and informal relations to other actors under the specific issue and at a specific time, was identified. The actors’ relations were considered at different levels of understructure (intra-relationship at the university), middle structure (interrelationship between the university and other local-regional partners) and superstructure (interrelationship between the university and the government/Ministry of Education). The actors’ interactions between the understructure and superstructure levels represented the university governance, and their interaction within the middle structure reflected the urban governance. The comprehension of the interconnection between these structural levels provided the basis for understanding and analyzing the governance process, i.e. the underlying causes and functions that have created the specific relational networks, actions and outcomes. The interactions of different functional components that had changed across structural levels over time reflected the governance process at each round.

To draw a wider picture about the governance, this thesis has tried to answer the question: ‘Why did the outcomes of the planning and decision-making process in the case of co-location change direction over time: first ‘no to co-location’ in 2006 and then ‘yes to co-location’ in 2012-13?’ The answers given in Chapters 5 and 6, which were both connected to governance structure and process that function differently, are briefly recapitulated in this chapter. Apparently, the uncertainty about funding and the employees’ opposing coalition was able to block the co-location solution in 2006, whereas the favoring coalition and the governmental financial support (resolution of uncertainty) brought about the yes to co-location in 2012-13. However, the analysis showed that coalition-building and the management of uncertainty are themselves interconnected and interdependent on other factors, such as i) the structure/form of the governance and ii) the subsequent power relations, and iii) the political skill/knowledge

of actors about the rules of the game, which are determined by the government and the ‘policy window’.

In this chapter, the researcher returns to the research’s theoretical framework and methods used, reflects on them and discusses the implications for theory and methods, with respect to exploring governance in planning and decision-making processes. Finally, the researcher brings forward some recommendations for future research.

7.1 Governance structure

Actors, institutions, and the way they have stood and interconnected at different levels of governance (i.e. hierarchical or horizontal) have contributed to the overall structure of the system. The structural networks have included both formal and informal dimensions of actors’ relations. Thus, the informal structures and functions were seen within the wider formal system at different levels, which have been both vertical and horizontal over time.

University governance: Interplay between superstructure and understructure levels

The establishment of the University of Trondheim (UNiT) and later NTNU in Round 1 (history and background, before 2000) were the great manifestations of the hierarchical top-down superstructure model and the state’s control, in which the decision was taken autocratically, regardless of the university/academics’ opinion/opposition. In those times, the university was the “fundamental instrument for the construction and reinforcement of the nation-state and was contributing in forging the national political identity through the preservation and enhancement of the national culture” (Amaral and Magalhaes, 2002, p.2). However, the later disunity and disconnection between university traditions (particularly the technical and social) were the sign of growing disaffection towards the government’s one-sided decision. The government’s intervention and the hierarchical model of superstructure were excessive and ineffective. Employees had to comply with the decision because they practically did not have any other choice, due to the lack of formal power. However, because they did not have a sense of joint responsibility and ownership for the decisions, they, deliberately or not, hampered the implementation, rather than supporting it. For that matter, the government’s victory was not complete. As time passed, it became evident that although the government had the formal power/authority to make a unilateral decision, academics also had a relatively strong mind-set and bargaining power (informal power) to gradually influence or manipulate the outcome. As a result, the bureaucratic and hierarchical governing model was not productive at that time.

After that, the government decided to step back for a while and, instead, give more freedom and autonomy to the university. Subsequently, the former strong hierarchical model became lenient (still remained) and came under the shadow of university institutional autonomy. In addition, the minimization of government growth was in line with the New Public Management (NPM) and neoliberal economic thoughts, in order to increase the efficiency of universities through producing competition between them. The NPM idea was to separate the regulatory role and ownership of the state: indeed, to deregulate state monopolies to create competition (Christensen and LæGreid, 2007). As a result, the political compromise was to give more freedom to universities to govern themselves. The government's change of strategy at superstructure level had influenced the understructure governance. Successively, in the early 2000s, including Round 2 (university hospital and replacement of Øya campus with Dragvoll campus, 2000-2002) and Round 3 (heating up the co-location idea, 2003-2004), the governance model at understructure level became quite bottom-up, in which academics/employees had the power to collectively take decisions about their academic affairs.

In order to strengthen the university's capacity for strategic management in pursuance of NPM, in 2005, at the beginning of Round 4 (turning 'yes' to the 'no' decision, 2005-2006), the management system at NTNU was changed (Rasmussen, 2015). The rector was no longer elected; instead, he was appointed by the board, of which half the members were appointed by the ministry. This change was dual. At understructure level, the entrance of the external board members into the university organization caused a gradual shift from a bottom-up and professionally-based governance model to a horizontal, market-based and self-governance model. At the superstructure level, the transference of the autonomy to the university apparently caused a shift from hierarchy to a more horizontal and negotiation-based relationship between university and government. However, in fact, the government's centralized and detailed control over the university's institutional autonomy remained as delegated to the university board, which was partly appointed by the government. The introduction of such a change was quite piecemeal, which made the reversal of the power less apparent and the decision-making process less transparent (Rasmussen, 2015). As a result, it was not easy to locate the locus of power and identify where decisions were taken and who was responsible in that period/Round 4. NTNU considered itself a key decision-maker, underestimated the ministry's role and power and neglected who held the real power. The conditions of action were seemingly oversimplified for the university leadership and

administration, who probably did not have sufficient capacity, experience or knowledge about new causal connections affecting the university as the object of governance. Thus, it caused a misalignment of leadership and power between the university and the ministry, on one hand, and coordination problems at intra-organizational levels, which endangered the 'legal certainty', 'equality' and 'interest protection', on the other (Van Kersbergen and Van Waarden, 2004).

Interestingly, the ministry and the university had a common interest and perspective regarding the co-location of campuses and, if the ministry had wanted and pushed the process to move forward, the case would have been stopped in 2006. However, it seems that the ministry was dissatisfied with the way the university executed the new management system and mishandled the case of co-location. As a result, due to the uniformity of the direction of their dynamics and strategies towards the co-location, the ministry preferred to let time pass, in order to resolve many of the latent governance conflicts. This might imply that the self-governance model at understructure level might be an unproductive model for actualizing the co-location of campuses.

The ministry's strategy to deal with such a managerial problem was to exploit NTNU's dependency on the state's economic and legal resources and to utilize networks and channels of energy flow, in order to disturb the university's autonomous way of planning (in the case of co-location). NTNU was under the influence of the NPM trend and was interested in private-public partnership, while the ministry (SV) favored traditional funding and state control. It might be problematic if the ministry suddenly and entirely re-changed the embedded norm of NTNU, in which the university had just recently gained a large degree of discretion for dealing with its own planning processes, based on internal consensus. Subsequently, the ministry obfuscated the planning and decision-making procedures and, by rejecting some of the financial decisions that NTNU made, tried to express its superior power and role.

Round 5: 'Inaction on the rehabilitation of Dragvoll, 2006-2012' was the time, which the government used to re-balance/heal the superstructure governance relationships. Meanwhile, by making some inexpensive and unserious developments at Dragvoll campus, they tried to silence the opposition, making the condition optimal for bringing up the case of co-location again. Thereby, the traditional university democracy, in which the university had quite a lot

of autonomy, met its end (Rasmussen, 2015, Christensen, 2011), and the central government's monitoring and control was returned and enhanced again.

Since 2012 (Round 6: 'Re-initiation and approval of the co-location, 2012-2014'), the new superstructure governance was formed, which apparently aimed at an interactive problem-solving arena between the ministry and university. The structural arrangement of governance had supposedly become heterogeneous, though the bureaucratic rationalism was still dominant at superstructure level and, instead of 'solving together', it was more oriented towards 'solving on behalf of'. The government's reason/strategy was probably to safeguard the university against any other possible failure, stagnation or retrogression. Consequently, the current superstructure model stands somewhere between the traditional hierarchical (top-down) and the horizontal interactive forms. However, it is closer to the traditional mode, in which the national government is a prime actor and plays a significant role among all stakeholders.

Regarding the understructure governance, today we are witnessing the university board, half of whose members are still external and appointed by the ministry, making the strategic choices, while the rector, deans, and chairs of departments are in charge of ensuring that the strategies are implemented. There is a line of hierarchical command, which goes from the board and the rector through the deans and then to the chairs of departments (Rasmussen, 2015). It seems that the government, by conversely exposing the university to more scrutiny and control systems, has also imposed a hierarchical mode on the understructure level. Apparently, the new understructure governance is thwarting democratic participation and is encouraging passivity within the university, in contrast to 2006, when the co-location idea was stopped based on the realization of a democratic planning and decision-making process. Today's situation at understructure level looks like tokenism, in which employees can both hear and have a voice, but they actually do not have the power to ensure their views are heeded by the leadership/authority. Therefore, they cannot follow through what they really mean/want. The right to decide is still limited to the upper authority. In addition, the withdrawal of academics' engagement in the day-to-day administrative life of the university has produced an organizational separation between employees and managers/administrators (Rasmussen, 2015).

Table 7-1 represents the university governance structural model at different rounds of planning and decision-making. Changes in university governance are considered to be a

common trait, shared by the Nordic countries and Britain (Helgøy et al., 2007). While higher education in Scandinavia has undergone processes of decentralization and deregulation and, more recently, processes of re-regulation (central government’s reclaim of control), in Britain education reforms have moved away from local governance towards a system of stronger central regulation and increased marketization (Helgøy et al., 2007).

Table 7-1: Governance structural model at different levels and rounds of planning and decision-making

*Based on researcher’s interpretation rather than an institutional policy

	Rounds of planning and decision-making	Timeline	Governance model	
			Superstructure (ministry-university)	Understructure (within university)
No to co-location	Round 1 History and background	Before 2000	Top-down hierarchical	Bottom-up professionally-based?
	Round 2 University hospital and replacement of Øya campus with Dragvoll campus	2000-2002	Still top-down, but university had more institutional autonomy in academic affair	Bottom-up professionally-based
	Round 3 Heating up the co-location idea	2003-2004		
	Round 4 Turning ‘yes’ to the ‘no’ decision	2005-2006	Horizontal in appearance through delegation of power to the university board, but bureaucratic in practice	Horizontal and self-governance
Round 5 Inaction on the rehabilitation of Dragvoll	2006-2012	Horizontal in appearance through delegation of power to the university board, but bureaucratic in practice (the autonomy of the university was hanging in the balance)		
Yes to co-location	Round 6 Re-initiation and approval of the co-location	2012-2014	Gradually towards the reversal of traditional hierarchical/top-down model	Hierarchical

Urban governance: Interrelationship of university governance with middle structure

The middle-structure governance, in which the university interacts with other local and regional actors in university development, is unchanged and has constantly been horizontal and self-organized. Neither university governance nor urban governance has undergone a structural change under the influence of each other. They only affect the quality of relationships and the functional process of governance, which have faced different deviations in interaction between university and urban governance.

In the first rounds of planning, in which NTNU was more autonomous in the procedure of its development, its relationships with other local/regional partners were collaborative, negotiated and mutual-benefit-based. Both the city and the university administrators and leaders had based their collaboration/negotiation on the fact that NTNU is good for the city, and the city is good for NTNU⁴⁰. However, there was not a complete consensus among the university community on the involvement of the other local actors in the co-location process. The employees and leadership of the university had an inconsistent perspective and interest regarding the co-location of campuses, which caused many internal tensions and conflicts. Consequently, the strong network between the university and the city authorities at the middle-structure level had resulted in the significant reduction in high-trust relations within the understructure governance. The conflict between the employees versus the city and university authorities had undermined the effectiveness of the governance at both understructure and middle-structure levels, which was associated with the ‘no to co-location’ decision in 2006. On the other hand, the financial requirement for actualizing the co-location of campuses had created an illusory interdependency and resource-exchange relations between the university and other local partners, which was inconsistent with the ministry’s political strategy. The strong collaboration between the university and the city made the university misunderstand its real dependency on the ministry, which undermined the quality of superstructure interrelations. Thus, due to the lack of transparency and accountability that the self-governance model had created at levels of understructure, middle structure and superstructure in Round 4 (2005-2006), this horizontal model failed to achieve the co-location decision.

After the no decision to co-location in 2006 and the government’s re-initiation in 2012, the university has realized the ministry’s real power and significance in the decision-making process and improved its collaboration and communication with the ministry. Subsequently,

⁴⁰ “What is good for General Motors is good for USA” (Charles Erwin Wilson).

the university's relation with the municipality and other local-regional partners has become inferior. Today, the shared desire of the university and the ministry to create a single campus to boost international competitiveness has been more emphasized, which has become at odds with the city and region's interest in having the university campuses more integrated into the fabric of the town. Thus, the city and university authorities are struggling to reach a compromise on the co-location site. The municipality and the university both want to co-locate campuses near the city center (northern part of Gløshaugen campus) and in Elgeseter Street. However, they are in conflict over building in the park in Elgeseter Street, which the university is interested in, but the municipality and politicians are against (due to environmental issues and the protection of neighbors' interests). Due to the financial barriers and availability of land, the university's present option is to build in the southern part of Gløshaugen campus, which makes the availability of land less problematic. Accordingly, the enhancement of the relationships at superstructure level, based on 'solving together', has evidently undermined the dependency of the university on its local partners and vitiated the quality of middle-structure relationships. On the other hand, it seems that the relation or perspective of employees towards the role of the municipality has unexpectedly and completely reversed, compared to 2006. Today, the elected representatives of employees on the board and other academics, particularly planners and architects, are actually collaborating with the municipality against NTNU (leadership).

Conclusion of governance structure

Actors and institutions can exist at multiple scales/levels of governance, interconnect with other actors across the system, and fulfill more than one role, due to the existing interdependencies. The structure and position of each actor at different levels of governance give them some functional attributes that lead to actions that are no longer in the direction of their positional affiliation. To understand the governance system comprehensively, actors should not be looked at in isolation, but they should be seen in a wider picture and through cumulative influences of their interactions with others within political, social, economic and cultural contexts. In order to understand complex, unpredictable, non-linear governance mechanisms in planning and decision-making processes, different levels of governance should be realized, and interaction/interconnection between them should be taken into account.

In the co-location case of Trondheim, superstructure and understructure levels (university governance) are more interconnected and interdependent than the middle structure (urban

governance). The government was/is the one, who determines the institutionalization of understructure and superstructure levels, either in response to internationalization or in reaction to the mechanism and practices of the understructure governance. If the government is not satisfied with the way the university autonomously aligns and adjusts itself to the institutional changes and other endogenous and exogenous events and pressures or the way it generally functions, a modification of university governance usually takes place. Such a modification can be slight or significant and gradual or sharp. Accordingly, the university has little or no control over its inevitable institutional change.

This thesis has shown that an exclusive scrutiny of the network relations' transition over time is partial, unless the transformation of governance structures/forms is also considered. Accordingly, this thesis suggests that the study of the governance network should include the investigation of the adopted governance structural model over time and the management of tensions/deficiencies related to that form. An exclusive focus on each level of governance, without considering the political system that forms it, obscures the complexity and reality of planning and decision-making processes. In addition, it is almost impossible to fully understand the network relations at each individual level without considering the evolution of interconnection between levels over time.

7.2 Governance process

According to what has been argued, the difference between the university governance *structure* in 2006 and that in 2012-13 has led to the opposite outcomes. In 2006, when the co-location was stopped, the structural model was horizontal and self-governance, while, in 2012-13, the co-location process was governed more hierarchically and top-down (at both understructure and superstructure levels), which ended with the 'yes to co-location'. Governance processes are different when the governance structures vary, which also affects the outcome of planning and decision-making. This section reflects on such an interdependency between governance structure and process.

The structural model of the governance has directly influenced the power relations, resource dependence relations, and the conflict mediation methods that follow the inconsistency of interests and strategies. As a result, analysis of governance process is inseparable from the analysis of governance structure.

7.2.1 Formal and informal power

The structural model of governance first and foremost influences the power relations, determining who has the most power in terms of authority. The actor that stands in the highest level of hierarchy, e.g. the government, has legal resource, which the actors in the lower positions are dependent on to make a decision.

In the case of Trondheim, the government also controls the economic resource. Therefore, other actors with economic resources, including the municipality or private sector, do not have power unless the government authorizes their power and legitimatizes their resources. For instance, in the period of time that NTNU had some sort of autonomy and freedom to handle the university development process through self-governance, by saying no to private-public partnership, the government had overpowered other resourceful actors.

The government, as the only actor that controls a large part of critical resources, can manipulate the perceived importance of the resources and therefore increases its power and demand over the dependent actors (Nienhüser, 2008). In addition, the cumulative effect of the dependency of actors on the government's resource and the ambiguity about other possible alternatives increases the uncertainty for actors' decision-making (Johnson and Bob, 1995). The more an organization is dependent on others, the higher the amount of uncertainty (Nienhüser, 2008). One of the influential factors that led to the 'no to co-location' in 2006 and a subsequent period of stagnation was the high level of uncertainty about the finance. In addition, dependencies of the other higher education institutions on the same resource and on the government had exacerbated the ambiguity, complexity and contest within the university network governance.

Nevertheless, the government's direct control and monopoly of resources is milder in horizontal networks, in which there are no levels of hierarchy. In such a network, which the socio-political conditions of the society demand, the government's strategy is to collectively share power and resource with other actors. Consequently, other forms of resources, such as political, cognitive and social, and other forms of powers, such as personality and opportunity, may come to the fore. Only in this circumstance, are the behavior/actions of organizations (actors) traced back to the extent they are influenced by other actors, rather than the government, that is controlling different resources (Pfeffer and Salancik, 1978). This brings the reality of informality into the planning and decision-making process, in which actors are increasingly organizing and mobilizing outside the formal procedure, and their

private/individual interests may actually become dominant. For instance, actors may be motivated by a sincere concern for a particular problem, receiving self-serving benefits, instilling their policy values, or gaining personal satisfaction just from participating in the process (Kingdon, 2003). Thus, in conformity with Perrow (1972), one of the main critical questions in the governance research is: Whose interests are being served or pushed by the organized and coordinated activities?

Such interests cannot be discovered unless through actions. Accordingly, the success and achievement of the actors, who have power, in terms of authority and the legal resource, e.g. the government, are contingent. The functionality of the informal and interpersonal networks can influence them to intentionally or unintentionally act against their collective or real interest and goal. Thus, the set agenda may be detoured or distorted. The main manifestation was in 2006, when the minister of education, who was originally in favor of the co-location of campuses, under the lobby of his informal and interpersonal networks, had to act indifferently or against the co-location, which associated him to the no decision. Therefore, other forms of resource and power, which are gained informally, can manipulate, outmaneuver or neutralize the formal forms of power.

Accordingly, it is impossible to 'depoliticize' planning decisions, in which actors' roles/logic of action are linked not to their formal position but to the informal dynamics of the process they are taking part in (Hillier, 2000).

Informality is not confined to the horizontal or stateless governance model. It also exists in the vertical/hierarchical structural model, though it is only restricted to a few legitimate and authorized actors, compared to the horizontal networks, which are open to the entry of any groups that able to claim an interest in an issue. In this regard, the informality within the formal structural model is less problematic and complex and is more controllable than within the horizontal model, which is informal in nature. Pfeffer and Salancik (1978) argued that problems do not arise because of the power concentration, which is inevitable, but because others are not able to muster equal power or an equal concentration of opposition. On the contrary, this thesis argues that problems arise in governance networks because different actors can muster power or oppose a decision and cause the stagnation and prolongation of a process.

In complex and pluralist networks, any actor, who has the right skill and personality to win the battle of people's minds (Castells, 1997), can gain power, which is different from the formal and authorized power assigned to the formal position. Any actor can gain power by transforming the wants of others, so that they demand the things he/she can provide, such as information or a vote. Instead of seeking to provide the things that others want, a power-seeker tries to induce others to want the things/resources he or she can provide. There are also some advantages in having interests that are consistent with those of people that have formal power/authority, particularly the government. If influencers want what the government wants or can persuade the government to have an interest or perspective consistent with theirs, they are more likely to get what they want. In this respect, actors, whose actions and roles align with the government's role and strategy, usually reach the desired outcome. Therefore, in cases of conflict, they need to strategically convince, lobby or negotiate with the government. Accordingly, any actor can gain power, depending on his/her strategy, knowledge about politics, networking ability, social intelligence, apparent sincerity (honesty), and/or interpersonal influence. In this respect, two important factors can help an actor to gain informal power: 1. the right personality, 2. the right timing/opportunity.

Right personality

The 'no' and 'yes' to co-location outcomes show that resisters, who want to inhibit change from happening, should have reasonably different personalities and strategies for gaining power from supporters or those who want to put through a change. While resisters must be extroverted and forceful, as in the case of the opposition to co-location in 2006, supporters should be humble and secretive, as were the supporters of co-location in 2012. Supporters may have a strong mind, but they should definitely not have strong action or be too forceful. It was proven that, in such cases, being humble and working behind the scenes is more productive than being loud and distinctly obstinate. The political work records of the supporters of co-location show that they were more successful in the later processes, in which they acted inaudibly, compared to at the beginning, when they emerged very noticeably.

The sensitivity of the right personality in the case of Trondheim is partly related to the uniqueness of academics as being very conservative, confident and impervious to any change. This also makes the personality of the rector quite sensitive in this case. Although the rector in 2006 was popular, due to his mild and peaceful attitude, he was perceived to be too pragmatic and moderate for such a process, in which other actors with stronger interest and

power could take advantage. Accordingly, the rector needs to have some audacity and courage, not only to make alliances and reach compliance but also to inhibit any opportunity for resisters. In addition, the rector needs to be unflinching (remaining strong and determined in a difficult situation), to be able to gradually convince employees about the change.

Right timing/opportunity

Actors need time to learn the rules of the game, build social relationships, enhance their capacity to see others' points of view, interests, resilience and ambition, and to tolerate and mediate conflict better. Time can help actors to become better in negotiation practices, finding mutual benefit, building trust and overcoming inconsistent interests and strategies. Correspondingly, informal power can be gained through a potential opportunity that an actor realizes in order to turn the table on him/herself. For instance, in 2012, the fact that the minister of education was from the SV party was used as an opportunity and extra power by the SV politicians to re-initiate and force the co-location idea.

Based on this argument, any actor, regardless of his/her affiliation and attachment to any organization, can influence the actions of others and the outcome of the process, depending on the structural model of governance. In a more informal and horizontal network, every actor that has shrewd relationship skills and is politically adept, can influence the outcome and violate the principles of democratic behavior and totally distort the outcome. On the contrary, in hierarchical networks, the influence of actors is slight and temporary. According to Kingdon (2003, p.164), having an impact on an agenda "is different from control over the alternative and the outcomes". They may only cause some disruption or pause (e.g. in 2006), unless they also have some sort of formal power or join up with the main source of formal power/authority (e.g. in 2012). Therefore, if the informal power is coupled with the formal power and authority, actors can change the course of events, overcome resistance/lobbyists and get things done in a timely and effective way. This can reflect the reality of the last round of planning and decision-making in Trondheim, which led to the 'yes to co-location', in which the right people, who had the right personality, political skill and knowledge (knowing how governance functions), were at the right place at the right time. Therefore, actors' different forms of power, both formal and informal in terms of personality and opportunity, were effectively counterbalanced. According to Shafritz and Ott (1996), much formal and even informal power that is backed by great effort can come to naught, due to political ineptness. Political skill or knowledge means the ability to use the "bases of power effectively to convince those to whom

one has access, to use one's resources, information, and technical skills to their fullest in bargaining, to exercise formal power with a sensitivity to the feelings of others, to know where to concentrate one's energies, to sense what is possible, to organize the necessary alliances" (Shafritz and Ott, 1996, p.286).

7.2.2 Interplay between informal power and inconsistency of interests

Generally, in an informal network, a considerable advantage comes from having wishes that lie close to the center of gravity of the rest of the system. However, the outcome of 2006 showed that the success of the majority, who want the same thing, is not necessarily guaranteed, because a minority's *coalition* can overpower the number. Coalition is a *political resource* that actors can gain informal power upon, to outmaneuver the opposition. However, to be efficient and sustainable, a coalition requires stability over time.

In order to sustain a formed coalition, it is important that actors constantly have/find a common *interest/goal*. When actors reach a common goal that they formed a coalition for, they usually disperse and follow new motives or goals. In the face of shifting patterns of attention, their influential actions can be unstable, and their success can be temporal. In addition, 'ambiguity', 'outcome optimism' and 'support exaggeration' can make coalitions unstable, thereby making implementation problematic (March, 1994). In this situation, the coalition members may fail because they are distracted by the new interest/goal, which can provide a window of opportunity for their persistent opponents to reactivate their favoring issue that was temporarily dormant. This is the exact situation that happened in Round 5: 'Inaction on the rehabilitation of Dragvoll, 2006-2012'. The opposing coalition that stopped the co-location in 2006 was broken down, due to the lack of a new common interest, so that the supporters of co-location found an interim opportunity to bring the idea of co-location back to the fore again.

Continually finding a common interest/goal is very challenging. Interests are not stable and fluctuate all the time, because actors' preferences, knowledge, experience and networks are constantly developed, transformed or manipulated. In addition, perceptions about each other's interests and goals are subject to human error and/or incomplete information. Under specific conditions and based on their socio-political strategies, actors may prefer to hide or reveal information about their real interest and goals (as the board leader and the local newspaper, *Adresseavisen*, did in 2006). Therefore, actors infer other's interests and goals from their actions, events, and communications that are susceptible to multiple interpretations. They guess about interests that are obscured by problems of interpersonal and intercultural

communication, as well as by deliberate falsifications and strategic misinformation (March, 1994, Turpin and Marais, 2004, Forester, 1989, Booher and Innes, 2002). The ‘no to co-location’ decision was partly linked to the fact that many actors were inaccurately informed about what other people wanted, how they intended to get what they wanted, what they thought was an appropriate strategy/alternative, and how they perceived other people’s actions and interests.

Misjudgment, ambiguity and uncertainty of the actors about each other’s interests and goals influences their subsequent actions and leverage practices, which can undermine the planning and decision-making process. This situation is exacerbated when people do not have a clear perception about the interests of the main and the most powerful actors/authority or the members of their coalition. Since the perceived level of consistency of interests or goals is dependent on incomplete and misleading information, decision-makers may easily come to believe that their own interests and those of others are consistent when they are not, or they may believe that they are inconsistent when they are actually consistent. The former situation can lead to unwarranted trust, and the latter can lead to unwarranted distrust (March, 1994). The situation is worsened when misperceptions lead to actions that make the misperceptions valid.

Table 7-2: Interconnectivity between consistency of interests (real versus perceived) and trust, adopted from March (1994)

		Perception	
		Consistent	Inconsistent
Real situation	Consistent	Trust	Unwarranted distrust
	Inconsistent	Unwarranted Trust	Distrust

In networks, where there is a variety of interests and corresponding leverage actions, the power of central actors, who are located at tightly coupled interconnected nodes in the network, can become greater. The central actors’ immersion in multiple interdependencies made them functionally indispensable (Dente, 2014). However, their power and their subsequent actions depend on the diversity of opposing and favoring networks/inconsistency of interests, their personality (for tolerating conflictual networks) and the structural model of governance.

Findings show that confronting different but equal types of leverages (both favoring and opposing) makes it difficult for central actors to act wisely. The density of different favoring and opposing networks upon a central actor will put him/her in an uncertain and susceptible situation. Whatever side the central actor wants to take, the lobbyists from the other side may form strong, unified forces against him/her. In this situation, the central actors will probably adopt a ‘compromiser’ role, attempting to balance, pacify, and bargain with different influential stakeholders. The best action that the central actor can take in this situation is to negotiate a mutually satisfactory position, which can at least appease different actors’ expectations somewhat and achieve a stable, predictable environment, in which the lobbyists are unlikely to oppose his/her actions collectively. In 2006 (Round 4), the rector played a compromiser role. However, depending on the personality of the central actors, they may adopt a solitarian role, attempting to avoid the pressures that are against their own interest, instead, pursuing their own will. Under these conditions, central actors, depending on the power and stubbornness of their opponents, may face a continuous struggle without resolution, thereby creating an uncertain future for themselves and their own allies. In the case of the university hospital (Round 2), the minister of education took a solitarian role.

Under the condition, when a majority of leverages is against the central actor’s interest, the central actor may adopt a subordinate role, attempting to comply with lobbyists’ expectations. In 2006 (Round 4), the minister played a subordinate role. However, if the interest of lobbyists is consistent with that of the central actors, they adopt a commander role, attempting to control information flows, influence behavior expectations, and co-opt stakeholders (Oliver, 1991). In 2012 (Round 6), the minister of education took a commander role.

Table 7-3 shows the reaction of a central actor in a confrontation with different lobbyists in the case of co-location, which can be different in other contexts.

Table 7-3: Role of central actor(s) in different situations: adopted from (Rowley, 1997)

Role of central actor	Centrality
Compromiser Solitarian	Favoring and opposing networks are both large
Subordinate	A majority of networks is inconsistent with the central actor’s interest
Commander	A majority of networks is consistent with the central actor’s interest

Conclusion of governance process

Planning and decision-making in the face of inconsistent interests, goals and perspectives bring the idea of power (March, 1994). The use of informal power and leverage to overcome the inconsistency of interests/goals for self-interest can cause distrust, complexity and inefficiency. Because it is difficult to fully be sure what is in someone's interest, it is almost impossible to propose a governance model, where actors' interests do not clash. No governing model – either governance or government – could completely overcome the inconsistency of interests and asymmetrical power. On the other hand, in such political cases that politicians have more political knowledge and skill and are closer to the government than other actors, such as *planners*, they are more involved, determinant and powerful. On the other hand, stakeholders' ability to participate is often pre-determined by who initiates or controls the process and whose rationality drives it (Buchy and Race, 2001) and is the handmaiden of power, a dupe, or a victim of power (Altshuler, 1965, Flyvbjerg, 1998, cited in Booher and Innes, 2002, p.221). But the government can use legal forces and bureaucratic power to re-balance the informal power relations, compel actors to reach an agreement and thus solve inconsistency and conflicts of interest. In addition, the government can protect the weaker parties against a poor agreement and help them make the most of their assets and develop mutual benefits (Fisher et al. 2011). As a result, the functionality of governance is closely dependent on the governance structure.

7.3 Reflection on theory

Incompleteness of the functional components

The structural-functionalism theory suggests three functional components to study governance process: knowledge, capacity and connectivity (Potts et al. 2014). The results show that being confined to only these unspecified and generalized components and failing to consider/scrutinize other effective factors/components, is one of the weaknesses of the structural-functionalism model that this thesis highlights. However, there are other important components, such as power, resource, interest, conflict, role, etc., that can explain how and why structural-functional relationships exist and evolve as they do. Therefore, one of the necessary modifications is to integrate all the influential functional components. This thesis has found the decision-making theories more complete in contemplating these components, although none of these theories was exhaustive. In this regard, in order to define and measure these components more precisely, decision-making theories are supplementary to structural-functionalism planning theory.

The researcher acknowledges that each of these functional components is quite big and it is difficult to thoroughly explore the significance of each for the research problem. However, the contribution of this thesis is not to develop the theories of their concepts but to explain their significance in exploring governance and the outcomes of planning and decision-making processes. There are already many studies that focus on one or two of these concepts, but there is almost no research that includes all these interdependent concepts of governance and investigates the impact of their interaction/interdependency on the outcome of the planning and decision-making. This thesis argues that the integration and inclusion of all these components is necessary to completely understand the real dynamics of governance structure and process. Each component in interaction with other components can provide a nuanced view of the events and outcomes of each round and the interplay between the structure and function/process of the governance system. Hence, the outcomes are likely to be poorly understood if these attributes are looked at exclusively and independently. On the other hand, due to their interaction and interconnection, the boundaries between them are also blurred.

Cognitive limitations for designing governance network

The initial objective was to consider and integrate different influential factors/functional components in the developed model of the thesis, to overcome the limitation of the original structural-functionalism model of governance. However, the illustration of the real situation was too complex. In this regard, the figures to illustrate all influential networks (connectivity) were revised many times, so that presenting the real complexity would not interfere with the readability of the reality. The solution was to present different informal networks of each round/period (based on the rounds model of decision-making) in separate and split figures. The complexity of real governance systems was simplified by removing the formal institutions' structures and by illustrating only the informality of the networks. Accordingly, presenting the real complexity, diversity and plurality of networks, and the asymmetry of influence, power and interpersonal/informal relations, was challenging and difficult to illustrate in figures.

On the other hand, some leverage or conflict networks were stronger and more forceful than others, which influenced the process and actions of actors much more strongly. However, they are all presented as equal in the figures (opposite to the original model), because presenting such asymmetry through the size of functional components would make it less legible.

There were other limitations that have complicated the illustrations of governance structure and process, preventing the duplication of the structural-functionalism model. For instance, not all the involved/active actors were included in the networks (only those that the interviewees referred to). The difficulty of including all actors was exacerbated by the openness and decentralization of informal networks, in which many people were active in several networks at once, and the levels of their participation and demonstration were high. As a result, it is possible that not all the existing ties are illustrated.

In addition, it is not possible to illustrate the dynamic changes of actors' interests and goals, which were under the influence of shifting and evolving interrelationships. On the other hand, new forms of interests and goals lead to new forms of networks, coalitions, conflicts and mediation methods that are difficult to trace back and show at the same time. Each actor is affected by different types of (influence) networks and does not simply respond to each of them individually, rather, responding to the interaction of multiple influences from his/her entire network. Figures can only illustrate the latter. In other words, the figures only show the outcome of actors' different interactions that aggregate into the unique patterns of action and decision-making.

Accordingly, illustration limitations are linked to cognitive limitations for designing governance networks. When networks are so complex and changing that it is difficult to illustrate them, any normative ideas of such processes will always be subject to a certain amount of uncertainty and cognitive unpredictability. In addition, the situational particularities of each case can determine the theorization.

Relegation of rational-based approaches

Another aspect of the structural-functionalism approach is that planning and decision-making should be represented traditionally, in terms of a number of distinct stages, which have their own specific characteristics and participants (or structural components). These stages in planning systems are "vision and objective setting, analysis and research, strategy development, implementation and monitoring, evaluation and review" (Potts et al. (2014). In decision-making, they include "policy formation, policy adoption, policy implementation and policy evaluation" (Teisman, 2000).

This thesis shows that reality hardly ever follows a rigidly structured sequence from developing problem definitions and solutions to adopting and implementing proposals. In fact,

the process of planning and decision-making consists of different overlapping, overturning and evolving rounds that change direction. One reason is that the formal power of policy-making and planning is evolving continuously, due to the periodic change in the political and administrative organization of government. The social power is also shared among different governmental and non-governmental actors, who are coming and going all the time. Thus, actors and their power relations are not stable, varying constantly. The same is true regarding actors' interests, goals, preferences, resources and their roles, which raise the existing conflicts, and cut off the mainstream of planning and decision-making. On the other hand, different factors, such as the attitude of the public, campaigns by pressure groups, economic crises, institutional transformation of involved organizations, etc., can also deviate a process from its original route. Thus, planning and decision-making have unpredictable developments, and the chronological sequence of the traditional model/theory cannot be constructive, while there are different rounds that do not necessarily follow one another in any regular chronological pattern. Each process develops according to its own dynamics and rules. On the other hand, the interactive rounds-model of decision-making shows the extent to which these dynamics and rules, and the interaction between decisions that are taken by several actors, forge a specific outcome/event and why.

The theory chapter (Section 3.1.2) discussed that, in order to understand governance, there are two main theoretical positions as driving forces of social action: rational calculation (self-interested individuals' rational calculation of costs and benefits) versus culture-bound rule-following (rules, norms and values that are intrinsic to particular cultures and historical contexts). This thesis shows that actions are matched to situations by means of rules, norms and values, instead of anticipations of the future effects of current actions. Thus, actors/decision-makers pursue a logic of appropriateness and follow rules rather than a logic of consequence or make rational choices. Consequently, reaching the desired outcome is not dependent on a single factor or specific course of action; indeed, several factors/courses of actions should coexist and coincide. Evaluation, then, can no longer focus on the question of whether the policy outcome agrees with a single policy intention but on whether it responds to the objectives of all the parties involved at the moment of policy-making. As a result, instead of considering decisions as resulting from the intention and interests of independent actors, attention should be paid to the interaction patterns and the ways in which individual actors and organizations fit together. This implies an inappropriateness of the rational theories of planning and decision-making, which inaccurately assume that decisional processes can be

controlled and directed towards a series of typical and identifiable steps, beginning with establishing goals and objectives and concluding with feedback and assessment. The findings show that interest and power play significant roles in problem/agenda setting and choices of alternatives. Any interest group tries to put what is in their best interest in the definition of the problem so that they can reap benefits from the policy. Winners shape what the problems would look like and prevent other ideas from gaining agenda status, by creating constraints such as invoking the mobilization of bias. In addition, they can push politicians to pass certain type of policies and favor some over others. In this regard, politics also affects choices, because politicians come with specific policies, based on their ideologies and interests. Politicians also have their own interests such as re-election. In addition, choices are made under some context-based and temporal circumstances that are not all present at the same time, or do not fit together in different contexts and/or do not result similarly. For instance, swings in national mood or election results can influence politics and the choice of alternatives differently (Kingdon, 2003). Thus, the same course of action can have different consequences and meanings at different times.

In addition to the temporal alignment, chance becomes the main cause for the occurrence of events, meaning that a desired outcome can happen accidentally. There are policy windows and problems windows, which may not stay open long, and, when they are closed, the solutions wait for the window to be opened again (Kingdon, 2003). In other words, the right people should be at the right place at the right time, so that a desired outcome takes place. In this regard, the 'no to co-location' in 2006 could be a result of the wrong time for the proponents or for the policy window for the opponents. Time and opportunity factors neutralize the concepts of choice and awareness in traditional-rational theories and partly support the 'garbage can' concept. In a garbage can process, it is assumed that there are exogenous, time-dependent arrivals of opportunities, problems, solutions and decision-makers. Problems and solutions are attached to choices and, thus, to each other, not because of any means-ends linkage but because of their temporal proximity. Problems can be characterized by their arrival times, the amount of energy/resources required to solve them, and their access to opportunities (Cohen et al., 1972, March, 1994, Teisman, 2000). Such linkages change over time, as problems, solutions, and decision-makers and choices are changing from one mode to another all the time. Thus, the results produced by the system depend on the timing of the various flows and on the structural-functional constraints of the system.

In this regard, the findings of this research confirm the choice of decision-making theory and the use of temporal relations, rather than the rational stages of planning in developing the structuralism-functionalism theory (Teisman, 2000). Instead of following a benchmark-oriented assessment of a complex system, which can only present a static picture of governance, the rounds model of decision-making provides a narrative of how the system has changed or adapted (to social-political needs) over time. This thesis suggests that the 'structural-functionalism' planning approach and the 'rounds model of decision-making' (focusing on temporal factors) thinking are both needed and complementary, to understand governance. It is suggested to integrate these two approaches and use them as practical analytical-explorative devices, rather than as empirical approaches to conceptualize complex governance systems.

7.4 Conclusion

The essence of this thesis was distilled from the general assumption that network governance, which is based on the negotiation and collaboration rationality, can overcome the limitations of anarchic market exchange (procedural rationality) and top-down planning and decision-making (substantial rationality). The general assumption is that governance involves a large number of interdependent and autonomous actors with different but complementary resources, who interact with each other to overcome the plurality of competing interests and preferences and produce more effective and legitimate outcomes. Thus, governance can be a solution for un-governability (Papadopoulos and Benz, 2006, p.2) (referring to first generation of governance theory; see Section 3.1.2).

The campus development/co-location process in Trondheim is presented as a typical governance case, in which a broad range of interests, strategies, conflicts and power relations has been involved. Despite the initial common goal between the governance networks, including the university and city authorities and the government, to co-locate the university campuses around Gløshaugen campus, the process of planning and decision-making has faced difficulties, pauses and substantial changes in direction that have lasted for more than 15 years. A plurality of interests and strategies have caused imbalanced and unstable structural-functional relations that have undermined the process rather than facilitated it. Accordingly, this thesis has tried to understand how and which governance mechanisms can actually result positively ('yes to co-location'), through a scrutiny of the governance transformation over time. The finding has raised questions about the legitimacy and accountability of informal

networks, compared to the formal mechanisms (Aars and Fimreite, 2005). Although the government/hierarchical mode of governing also failed once, the results show that the government's initiative and control functions or some moderate hierarchical coordination is necessary. The more that organizational participants are involved in the network decision process, the more time-consuming and resource-intensive that process will tend to be (Considine and Lewis, 1999). In addition, the efficiency of the governance network has been challenged by different factors such as: dynamic changes in the composition of the actors, their informal/interpersonal networks and their direct interference; a secret collusive relationship between politicians, which the outside world could rarely glimpse; the presence of unresolved tensions/conflicts, e.g. between the university's different traditions; ineffective leadership, lack of accountability and lack of control functions; frustration over the lack of clear and visible results; uncertainty about access to the critical resources; lack of transparency of interests and strategies; and distortion and change of the set agenda or the policy process. Nevertheless, the government has the power to reintroduce hierarchy into the equation, in order to avoid the failure of governance (B. Jessop, 2002) (referring to the second generation of governance theory; see Section 3.1.2).

“There is considerable institutional inertia combined with government having inherited the legal authority and sovereignty to be the final decider. Accordingly, a complete cessation of hierarchy is impractical and not realistic” (Goldstein and Glaser, 2012, p.172).

The conclusion that is inferred from such an opposite outcome is that it is unlikely that a similar governance model may result, depending on the time, political, socio-cultural context and issue under consideration, for example, in the case of Trondheim, the transformation of the governance structures and subsequent power struggles/resistances rooted in the background of NTNU, when it was established as a ‘loose coupling’ of different disciplines, creating a heterogeneous set of norms and subcultures and inconsistency of interests within the system (March et al., 1976). Thus, the balance between the democratic governance problems and potentials will depend on the institutional conditions (structure), power struggles (function) and national governmental policies/priorities (Sørensen and Torfing, 2005).

Depending on different situations and the prerequisite capability of the governance actors, e.g. university (leadership) in the case of Trondheim, the government should act differently. Governance relationships may become fractured and need healing, repairing or replacement

(Trakman, 2008), which requires the government's intervention. It is not always practical for the government to steer from a distance, providing a level of autonomy or mediating its control, because "Politics is not always and primarily about fulfilling tasks, producing benefits and problem-solving, but [sometimes] about gaining and maintaining political power" (Goetz, 2008, p.272).

In political-administrative environments, in which attention and time are scarce, reaching a consensus is the result of a political game, which requires a successful bargaining strategy and collaboration with the government. The findings show that the outcome of planning decision-making is more influenced by the informal interactions of actors outside their formal relationships, in ways which may never formally enter the public domain. Such informality enforces actors to readily engage in tactical ploys of direct action, implying realities of distortions, politics, and power plays (Hillier, 2000). Accordingly, the direction of the planning and decision-making process, the rules of the game and strategic tactics are evolving all the time.

The case of Trondheim reflects how these informal networks and power relations lurk in the background behind formal processes. Accordingly, many actors in the formal structures and relationships are unable to grasp the political sensitivities and ambiance built during the process and realize the real perspectives and interests of involved actors. In such (organized) anarchy, preferences/interests are discovered only through actions, and a policy change is likely to take place only if favorable momentum, a so-called 'policy window', occurs (Cohen et al., 1972).

In order to enhance governance effectiveness, all involved actors need to fully understand such decisional processes and realize the model/form of governance and subsequent power relations (who has the power now?). On the other hand, engineering optimal/effective governance is a challenging task, and factors related to the culture of the institution and government priorities have a large influence on the outcome of the planning and decision-making processes. Thus, exploring governance requires political, cultural and periodic review. It is important to understand the processes of change, including how and why they happened and whether the change was in response to an external crisis, e.g. uncertainty in government funding or change of national mood, or an internal crisis, e.g. lack of confidence in leadership or organizational resistance. In order to evaluate the effectiveness of a governance model, it is recommended to identify governance structure, operational efficiencies, and ways of

remedying its deficiencies in interaction with governance functions and processes. This will allow the non-political actors, including planners, to unravel the political planning and decision-making processes and to grasp its rationale. This provides a better understanding about the national political mood/priorities, organizational change, internal cultural diversity, potential contradictory interests, strategic roles, and interactions between formal and informal networks in the way they shape change and develop processes. Thus, it can be claimed that this thesis has abstractly contributed to the conceptualization and generalization of the accumulated political knowledge, which can help academics, planners and politicians to see some of what can be learned from practice and the realities of politics.

7.5 Reflection on methods

Recalling the purpose of this research, the aim was to capture and understand the meaning of social-political actions/events through the interpretation of the interviewees, rather than uncovering a ‘true’ account. The outcome of this research lies in the eyes of the researcher, who tries to understand the characteristics and complexity of social-political situations in depth, to understand how the participants themselves contribute to these situations. In this regard, there was no way to know what – of all the possible evidence gathered – might be invalidated by unobserved evidence. Because there are many possible explanations, the abductive and back-and-forth methodological approach was the best choice to produce the likeliest possible explanation. In addition, the longitudinal perspective of the study helped to unfold the chain of events and processes, which provided a better understanding about the reality of the case. Ultimately, the researcher believes that the achievement of the rich empirical data for this study mostly relates to the sequence of the methods. By reviewing the documentation and archival records before interviews, the researcher could gain a quite appropriate insight into the case, which built confidence among interviewees that the researcher had the required knowledge and competence to conduct the interviews.

7.6 Recommendation for future research

It is always dangerous to make generalizations, based on findings from a single case study. Consequently, it would be valuable to explore the differences and similarities between the Trondheim case and other national or international cases in future studies. Furthermore, this study mainly focuses on the decision-making and planning processes within a specific period, 2000 to 2013, but future research might extend the contribution to the implementation process and cover the periods after 2013. In order to evaluate the efficiency, legitimacy and

sustainability of the co-location decision and the effectiveness of the recent governance model, future research could be conducted some years after the project has been implemented. Further research is necessary to extend the findings of this research and to increase the lessons in policy and practice for stimulating governance process and structure in other contexts and in relation to knowledge-based urban development.

There is still much work to do to build and test theory related to governance in the planning and decision-making process. This thesis can be viewed as a starting point for exploring governance through an integrated approach of planning and decision-making. It has been an attempt to develop new theory about network governance and to stimulate fresh thinking about how networks might be studied in the future. It has shown how the integration of the structural-functionalism planning theory and rounds model of decision-making (temporal and iterative model) or garbage can model can put realism into the study, during both the research process and the analysis, and overcome the partial explanation that an individual theory can provide. It is recommended that any analysis of governance underpinning complex planning systems considers how the system is structured and organized but also the way in which different structure levels in the system function and interact. Analyzing both the structures and functions enables planners/researchers to take a more systemic view of decision-making, while still accounting (in a non-linear way) for the numerous dynamic interactions of multiple structures across scales and policy spheres (Potts et al., 2014).

This thesis has argued the importance of including various functional components and levels of governance structures. It is certainly possible that other components/levels may be equally important. More research is recommended, to apply ‘structural–functional’ approaches and to test/integrate different functional components to underpin a practical analysis of the complex planning and decision-making and to provide the evidence-based result. In addition, the two forms of governing, ‘government’ and ‘governance’, and the subsequent role of government and informal networks/actors in addressing the tensions inherent in each governance model, are discussed. However, these issues need to be addressed in greater depth, because arguing what exactly should be done and how it should be done is beyond the scope of this thesis. Although the impact of the governance model on outcome or network effectiveness is primarily and generally discussed, future research might move beyond this.

Considering the fact that power is a complex and asymmetric construct and some cases are even more severe in this respect, further research is needed to understand how strongly power

relations are conceptualized within different types of networks, and this should be empirically tested.

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Chapter A Appendix

Trondheim as a knowledge city

1152 – The oldest school in Norway

Trondheim's identity has always been associated with the development of knowledge. The first indication goes back to 1152, when the first Norwegian high school, the Trondheim Cathedral School (Trondheim katedralskole), was built in Trondheim. The school underwent a major expansion in 1920, and today it is an upper secondary school for music, dance and drama, as well as media and communication. It is located next to the Nidaros Cathedral in the center of Trondheim, Norway.

1760 – The first incentive for knowledge development

The second symbol of Trondheim's knowledge identity is the Society of Sciences and Letters (DKNVS, 2015), which was founded in 1760 under the name of 'the Trondheim Society'. Later, in 1767, it received royal affirmation of its status and was named 'the Royal Norwegian Society of Sciences and Letters (DKNVS)'. The society was located in the site of Trondheim Cathedral School until 1866, when it acquired its own premises (Bratberg and Arntzen, 1996). From 1903, its main task was to run a museum. In 1926, however, there was a split in its function and the museum became a separate entity, receiving the assets of the learned society. The ownership of the museum was transferred to the University of Trondheim (today the Norwegian University of Science and Technology) in 1968, but DKNVS recovered some assets in 1984 through the reorganization, and today the foundation of DKNVS controls these assets (Midbøe, 1960).

1870 – The first technical institution

In 1870, the first technical institution in Norway was built in Trondheim under the name of Trondheim Technical Teaching institution (TTL). TTL was a forerunner to the Norwegian Institute of Technology (NTH), which was established in 1910, and later to the Norwegian University of Science and Technology (NTNU) in 1996. The original building is used today as Trondheim's City Hall.

1910 – Parliament's choice of Trondheim as host of the National University of Technology

The decision to establish a Norwegian national university of technology was made by the Norwegian parliament, the Storting, in 1900, after years of debate on where the institution should be located. In 1833, the first proposal for a Norwegian Polytechnic Institute was made, and this idea was proposed a number of times throughout the 1800s without it taking place. Many political representatives felt that Oslo as the capital city was the best place for this nationally important seat of learning. Eventually, however, the Norwegian Institute of Technology (NTH) was located in central Trondheim. The choice of Trondheim for its location was based on the emerging policy of decentralization. However, the city's existing and highly esteemed technical college (TTL) was the key influential factor. On September 15, 1910, NTH was opened.

In the same year (1910), Students and employees established their own outlet for stationery and other office supplies, the Trondheim Student Society (Studentersamfundet).

1922 – Developing attention on General Sciences

The Norwegian College of Teaching in Trondheim (NLHT) was established in 1922. NLHT was a precursor of the Norwegian College of General Sciences (AVH), which was part of the University of Trondheim (UNIT) from 1968 to 1996. The college was created as a result of a parliamentary resolution on June 1, 1922. Only 60 students were permitted to attend the school, because of the size of the schoolroom at Lade Gård (Brandt and Nordal, 2010). In 1978, all the humanities disciplines from NLHT moved to the first buildings constructed at Dragvoll. The building was the first physical expression of the University of Trondheim. The structure itself became an internationally and architecturally recognized icon because of its distinctive glassed-in walkways that link the different buildings. This approach has been copied numerous times in Trondheim and elsewhere (in Trondheim at the Royal Garden and at the Electro building at Gløshaugen) (Brandt and Nordal, 2010).

In 1984, NLHT changed its name to AVH, and it became a part of the University of Trondheim in 1968. In practice, it retained much of its former autonomy. In 1996, it was merged with NTH to create the Norwegian University of Science and Technology (NTNU).

NLHT had three campuses, located at Rosenborg (chemistry and biology), Lade (mathematics, physics, informatics and psychology) and Dragvoll (social studies and humanities). The campuses at Rosenborg and Lade were abandoned in 2000 (except for

psychology) and were moved to Gløshaugen, where the Norwegian Institute of Technology (NTH) was located. (The campus at Lade has been converted to apartments and offices, while the buildings at Rosenborg have been razed and replaced by apartments).

1948 – Establishment of the Student Welfare Organization in Trondheim (SiT)

The initial idea was based on the students' dissatisfaction with NTH's sale of writing equipment and supplies, which caused them to open an independent store, run by students themselves. It was named 'Tapir', since it rhymes with 'papir' (paper in Norwegian).

In 1948, Parliament adopted a law to ensure students' welfare, called 'The Law on Student Unions'. Three months later, a separate regulation was produced for the Student Welfare Organization in Trondheim. Since then, SiT has been responsible for housing, training, kindergarten, cafés, bookstores, psychologists, advisors, career center, health station and economic support arrangements.

1950 – Trondheim became the host of the largest independent research organization in Scandinavia, SINTEF

The Foundation for Scientific and Industrial Research (SINTEF) is a non-profit research institute, which aims to contribute to the development of society through research in science, technology, health and social sciences, in cooperation with NTNU. SINTEF was established in 1950 by the Norwegian Institute of Technology (NTH). Until an amendment in 2008, its full name was the Company of Scientific and Industrial Research at the Norwegian Institute of Technology.

SINTEF was established because the professors of NTH saw the opportunity to build a contract-research business (oppdragsforskningsvirksomhet) and used SINTEF as a tool. SINTEF departments organized the activities, and the professors were the leaders. That's how SINTEF was developed up to 1980. SINTEF had its strongest growth period in the 1970s, in connection with the development of the growing Norwegian oil industry. The so-called goodwill agreement between NTH and SINTEF gave a boost to Trondheim's research environment. Consequently, foreign oil companies were encouraged to place their research activities in Norway, which raised the position of NTH and SINTEF to a high international level in the technological context.

In 1980, SINTEF became an industrialist foundation and was professionalized as an organization, since three new departments were placed under its management umbrella.

Norwegian Ship Research (MARINTEK), the Electricity Research Institute (EFI), and the Continental Shelf Institute (IKU) were transformed into joint stock companies with SINTEF. Since then, the old model, in which NTH's professors led SINTEF, has been abolished. However, some employees have continued in double roles. In 1996, the social science research community also gathered under the SINTEF industrial management umbrella. In the 1980s, medical technology was also built up at SINTEF, in collaboration with the University Hospital in Trondheim (now St. Olav's Hospital) and the Faculty of Medicine at NTNU (Sintef, 2015). SINTEF today retains the leadership responsibility.

1974 – Department of Medicine (later the Faculty of Medicine) established at UNIT

The Faculty of Medicine was first established as the Department of Medicine at the University of Trondheim on April 9, 1974. The medical education was established in 1975, in cooperation with the University of Bergen, but without a pre-clinic. At that time, 21 students came from Bergen to Trondheim and took the last part of their education after a pre-clinic in Bergen. The Faculty of Medicine was formally created on April 1, 1984, and, by 1993, the medical students received their full-time education in Trondheim. Since then, the hospital has cooperated closely with the university in research and the education of medical doctors. In 1996, the faculty became part of the newly established NTNU.

The history of the University Hospital is as follows: The Trondheim Hospital was built in 1902 at Øya. Sør-Trøndelag County increased its ownership from one third to a half in 1948. Later, in 1950, its name was changed to Trondheim Central Hospital. In 1959, the first part of the central section was built with six stories and, in 1974, these were expanded to ten. In 1964, Sør-Trøndelag County took over responsibility for the hospital, two years later renaming it as Trondheim Regional Hospital. Through the late 1990s and early 2000s, a major debate about the location of the hospital was initiated, due to an urgent need for expansion. The first idea was to move the entire hospital to the Dragvoll area and replace it with Dragvoll campus. However, on May 28, 2002, the parliament decided to build an entirely new hospital at Øya. In the same year, the government, through Central Norway Regional Health Authority, had taken over the responsibility for the hospital. The first new buildings were opened in 2005.

1996 – Establishment of the university and the merger of all scientific institutions/departments

The Norwegian University of Science and Technology (NTNU) was formed in 1996 by the merger of the Norwegian Institute of Technology (NTH), the Norwegian College of General Sciences (AVH), the Museum of Natural History and Archaeology (VM), the Faculty of

Medicine (DMF), the Trondheim Academy of Fine Art (KiT) and the Trondheim Conservatory of Music (MiT). Prior to the 1996 merger, NTH, AVH, DMF, and VM together constituted the University of Trondheim (UNiT). The University of Trondheim, together with the University of Tromsø, was the third university in Norway, after Oslo (founded in 1811) and Bergen (founded in 1946). However, UNiT was a much looser organization than NTNU.

The parliament laid clear guidelines for the new institution of NTNU in January 1996. As the name implies, the university should take on a national responsibility for technical and scientific research and education. This determined NTNU's main profile. At the same time, NTNU should take a particular responsibility for developing interdisciplinary collaboration and knowledge.

According to Nilsson et al. (2003), most of the national funding in Norway goes to the places with the greatest concentrations of expertise. In this regard, the national government's influence on science and technology development at NTNU is the dominant factor in the case of knowledge-based urban development.

According to Corneil and Parsons (2007, p.117), "Governments in developed Western economies are becoming increasingly concerned about the difficulty of attracting and retaining students in science and engineering, especially because Asian students, mainly from China and India, dominate this field with increasing investment".

One solution to attracting students to choose science and engineering is to put this education in a rich urban cultural context, through an integrated cross-disciplinary approach, which is currently lacking in India and China.

2000 – The impact of knowledge on the city development, Co-location of NTNU departments at Gløshaugen-Realfagbygget

The Natural Sciences Building (Realfagbygget) was established with the aim of gathering together different faculties, chemistry and biology, mathematics, physics, and informatics, that had been geographically scattered at different locations at Gløshaugen, Rosenborg and Lade. Since that merger, the number of applicants choosing NTNU as their first choice has significantly increased (Rambøll, 2014).

2016 – Merger of NTNU with the University College in Sør-Trøndelag in Trondheim, the University College in Gjøvik and the University College in Ålesund

In January 2015, the board of NTNU decided that fusion with some related university colleges could help NTNU to become the largest national university and an internationally recognized university.

Today, NTNU has nine faculties and faculty-level groups and 55 departments; in total, 734,000 m² are owned or rented. The annual budget is 8.19 billion NOK. In 2016, 39,700 students were registered, about half of whom studied technology and the natural sciences (NTNU, 2016).

NTNU has the main responsibility for higher education in technology in Norway, and it is the country's primary institution for the education of engineers. The university offers several programs of professional study and a broad academic curriculum in the natural sciences, social sciences, teacher education, humanities, medicine and health sciences, economics, finance and administration, as well as architecture and the arts.

Figures and tables for Chapter 3

Figure A-1: Letter of information for interview



NTNU Norwegian University of Science and Technology	Faculty of Architecture and Fine Art Department of Urban Design and Planning
	
Researcher: Savis Gohari (savis.gohari@ntnu.no) (94484660) Supervisor: Tor Medalen (tor.medalen@ntnu.no) (7359501)	
Topic: The local governance and decision-making processes in the co-location of university campuses: The Case of Trondheim, Norway	
<p>The main goal of this research is to investigate the local governance process in terms of roles, interests, resources, power, and the effect of institutional structures on the nature and form of the decision-making process in the case of co-location of NTNU campuses between 2000 and 2013. In other words, the aim is to understand which actors, institutions, processes and relational mechanisms have had impact on the implementation of the co-location case.</p>	
<p>In this regard, the first interview questions will focus on the interviewee's role, interest and knowledge about the process of decision-making in co-location case at different times. Then the subsequent questions will direct to the interviewee's perspective about the other main actors, their roles, interests and power relations in their collaborative network. One of the research interests is to identify the challenges and conflicts, and to understand the process of consensus building through different actors' negotiation and bargaining tactics. The interview will be ended by the interviewee's suggestion or recommendation for better collaboration outcomes and to have smoother decision-making and implementation processes in the future.</p>	
<p>This interview is designed to not be anonymous and the conversations will be recorded. However it will happen only if the interviewee agrees and signs the written consent. All the information will be kept confidential and secured in the researcher's PC. Only the researcher and the supervisor will have access to this information. Prior to the thesis submission, the researcher will send a copy of the document to the interviewee and he/she has the right to review, comment on, and/or withdraw the information that was given in the interview. The expected time to end this project is within November 2017. After the thesis submission, the information will be anonymized or deleted.</p>	
<p>Due to the researcher's lack of competence in Norwegian, the interview will be held in English. The interview will last approximately one hour although, the interviewee is free to expand on the topic and say as much or as little as he/she wants. The interviewee can decide not to answer any question, or to stop the interview any time he/she wants.</p>	

Figure A-2: Letter of consent for interview

NTNU Norwegian University of Science and Technology	Faculty of Architecture and Fine Art Department of Urban Design and Planning
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Informed Consent

The local governance and decision-making processes in the co-location of the university campuses: The Case of Trondheim, Norway

I, _____, agree to be interviewed for the PhD project, which is being produced and recorded by PhD candidate Savis Gohari. I am aware that this interview focused on my knowledge and idea about the process of decision-making in co-location case and I will be asked about my and other's role, interest and influence/ power in this process.

I certify that I have been told of the confidentiality of information, which will be kept in secured pc and only the researcher and the supervisor will have access to. In addition, I have told that all the information will be anonymized or deleted when the project ends. The expected end date of project is in November 2017.

I know that this research will not be anonymous and I will be cited in any kind of publication. However prior to the thesis submission, I have the right to review, comment on, and/or withdraw the information I gave. I certify that I have been given satisfactory answers to my inquiries concerning project procedures and other matters. I also certify that I have been advised that I am free to withdraw my consent and to discontinue participation in the project or activity at any time without prejudice.

_____ Date _____

Signature of Interviewee

If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in this study, contact:

[Department of Urban Design and Planning, Alfred Getz vei 3, Sentralbygg I*657,
73595030]

Researcher: Savis Gohari, savis.gohari@ntnu.no, 94484660
Supervisor: Tor Medalen, tor.medalen@ntnu.no, 73595012

Figure A-3: NSD report, page 1

Norsk samfunnsvitenskapelig datatjeneste AS NORWEGIAN SOCIAL SCIENCE DATA SERVICES			
Savis Gohari Institutt for byforming og planlegging NTNU Alfred Getz vei 3 7491 TRONDHEIM		Harald I Hårfagres gate 29 N 5007 Bergen Norway Tel: +47-55 58 21 17 Fax: +47-55 58 96 50 nsd@nsd.uib.no www.nsd.uib.no Org.nr: 985 321 884	
Vår dato: 10.11.2015	Vår ref: 44947 / 3 / AMS	Deres dato:	Deres ref:
TILBAKEMELDING PÅ MELDING OM BEHANDLING AV PERSONOPPLYSNINGER			
Vi viser til melding om behandling av personopplysninger, mottatt 01.10.2015. Meldingen gjelder prosjektet:			
<i>44947</i>	<i>Governance and decision making process in the co-location of university campuses- case of Trondheim city</i>		
<i>Behandlingsansvarlig</i>	<i>NTNU, ved institusjonens øverste leder</i>		
<i>Daglig ansvarlig</i>	<i>Savis Gohari</i>		
Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.			
Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.			
Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, http://www.nsd.uib.no/personvern/meldeplikt/skjema.html . Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.			
Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, http://pvo.nsd.no/prosjekt .			
Personvernombudet vil ved prosjektets avslutning, 01.11.2017, rette en henvendelse angående status for behandlingen av personopplysninger.			
Vennlig hilsen			
Katrine Utaaker Segadal		Anne-Mette Somby	
Kontaktperson: Anne-Mette Somby tlf: 55 58 24 10			
Vedlegg: Prosjektvurdering			
<i>Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.</i>			
<small>Auktoriseringskontoret / District Offices OSLO NSD, Universitetet i Oslo, Postboks 1055 Blindern, 0316 Oslo. Tel: +47-22 85 52 11. nsd@uio.no TRONDHEIM NSD, Norges teknisk naturvitenskapelige universitet, 7491 Trondheim. Tel: +47 / 3 59 19 07. kjerne.svanva@svt.ntnu.no TROMSØ NSD, Universitetet i Tromsø, 9037 Tromsø. Tel: +47 / 7 61 43 36. nsdmaa@svt.uib.no</small>			

Figure A-4: NSD report, page 2


<p>Personvernombudet for forskning</p> <p>Prosjektvurdering - Kommentar</p> <hr/> <p style="text-align: right;">Prosjektnr: 44947</p> <p>PURPOSE</p> <p>The purpose of the project is to investigate the local governance process in terms of roles, interests, power, and the effect of institutional structures on the nature and form of the decision-making process in the case of co-location of univeristy campuses in Trondheim.</p> <p>CONSENT</p> <p>The sample will receive written and oral information about the project, and give their consent to participate.</p> <p>The letter of information and consent form are somewhat incomplete, and we ask that the following is deleted:</p> <ul style="list-style-type: none">- The sentence "I agree that any information obtained from this research may be used in any way thought best for this study." <p>We ask that the following is added:</p> <ul style="list-style-type: none">- what kind of information will be collected- that information will be treated confidentially and who will have access to it- the expected end date of the project- that all personal data will be anonymized or deleted when the project ends- whether individuals will be recognisable in the final thesis/publication- contact information of the researcher and supervisor <p>We ask that the revised letter of information is sent to personvernombudet@nsd.no before contact with the sample is established.</p> <p>SENSITIVE INFORMATION</p> <p>There will be registered sensitive information relating to ethnic origin or political/philosophical/religious beliefs.</p> <p>DATA SECURITY</p> <p>The Data Protection Official presupposes that the researcher follows internal routines of NTNU regarding data security.</p> <p>PUBLICATION</p> <p>It is stated that personally identifiable information will be published. The Data Protection Official presupposes that the participants give their explicit consent to this. Further, we recommend that participants are given the opportunity to read through their own information and give their approval before publication.</p> <p>END DATE</p>	
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Figure A-5: NSD report, page 3


Estimated end date of the project is 01.11.2017. According to the notification form all collected data will be made anonymous by this date.

Making the data anonymous entails processing it in such a way that no individuals can be recognised. This is done by:

- deleting all direct personal data (such as names/lists of reference numbers)
- deleting/rewriting indirectly identifiable data (i.e. an identifying combination of background variables, such as residence/work place, age and gender)
- deleting digital audio and video files

Figure A-6: Notification form for NSD, page 1

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



MELDESKJEMA

Meldeskjema (versjon 1.4) for forsknings- og studentprosjekt som medfører meldeplikt eller konsesjonsplikt (jf. personopplysningsloven og helseregisterloven med forskrifter).

1. Intro		
Samles det inn direkte personidentifiserende opplysninger?	Ja • Nei ○	En person vil være direkte identifiserbar via navn, personnummer, eller andre personentydige kjennetegn. Les mer om hva personopplysninger.
Hvis ja, hvilke?	<input checked="" type="checkbox"/> Navn <input type="checkbox"/> 11-sifret fødselsnummer <input type="checkbox"/> Adresse <input type="checkbox"/> E-post <input type="checkbox"/> Telefonnummer <input type="checkbox"/> Annet	NBI Selv om opplysningene skal anonymiseres i oppgave/rapport, må det krysses av dersom det skal innhentes/registreres personidentifiserende opplysninger i forbindelse med prosjektet.
Annet, spesifiser hvilke		
Skal direkte personidentifiserende opplysninger kobles til datamaterialet (koblingsnøkkel)?	Ja • Nei ○	Merk at meldeplikten utløses selv om du ikke får tilgang til koblingsnøkkel, slik fremgangsmåten ofte er når man benytter en databehandler
Samles det inn bakgrunnsopplysninger som kan identifisere enkeltpersoner (indirekte personidentifiserende opplysninger)?	Ja • Nei ○	En person vil være indirekte identifiserbar dersom det er mulig å identifisere vedkommende gjennom bakgrunnsopplysninger som for eksempel bostedskommune eller arbeidsplassskole kombinert med opplysninger som alder, kjønn, yrke, diagnose, etc.
Hvis ja, hvilke	occupation, status, gender	NBI For at stemme skal regnes som personidentifiserende, må denne bli registrert i kombinasjon med andre opplysninger, slik at personer kan gjenkjennes.
Skal det registreres personopplysninger (direkte/indirekte/via IP-/e-post, adresse, etc) ved hjelp av nettbaserte spørreskjema?	Ja ○ Nei •	Les mer om nettbaserte spørreskjema.
Blir det registrert personopplysninger på digitale bilde- eller videoopptak?	Ja ○ Nei •	Bilde/videoopptak av ansikter vil regnes som personidentifiserende.
Søkes det vurdering fra REK om hvorvidt prosjektet er omfattet av helseforskningsloven?	Ja ○ Nei •	NBI Dersom REK (Regional Komite for medisinsk og helsefaglig forskningsetikk) har vurdert prosjektet som helseforskning, er det ikke nødvendig å sende inn meldeskjema til personvernombudet (NBI) Gjelder ikke prosjekter som skal benytte data fra pseudonyme helseregistre. Dersom tilbakemelding fra REK ikke foreligger, anbefaler vi at du avventer videre utfylling til svar fra REK foreligger.
2. Prosjekttittel		
Prosjekttittel	Governance and decision making process in the co-location of university campuses- case of Trondheim city	Oppgi prosjektets tittel. NBI Dette kan ikke være «Masteroppgave» eller liknende, navnet må beskrive prosjektets innhold.
3. Behandlingsansvarlig institusjon		
Institusjon	NTNU	Velg den institusjonen du er tilknyttet. Alle nivå må oppgis. Ved studentprosjekt er det studentens tilknytning som er avgjørende. Dersom institusjonen ikke finnes på listen, har den ikke avtale med NSD som personvernombud. Vennligst ta kontakt med institusjonen.
Avdeling/Fakultet	Fakultet for arkitektur og billedkunst	
Institutt	Institutt for byforming og planlegging	
4. Daglig ansvarlig (forsker, veileder, stipendiat)		

Figure A-7: Notification form for NSD, page 2

Fornavn	Savis	<p>Før opp navnet på den som har det daglige ansvaret for prosjektet. Veileder er vanligvis daglig ansvarlig ved studentprosjekt.</p> <p>Veileder og student må være tilknyttet samme institusjon. Dersom studenten har ekkem veileder, kanbiveileder eller fagansvarlig ved studiestedet stå som daglig ansvarlig.</p> <p>Arbeidssted må være tilknyttet behandlingsansvarlig institusjon, f.eks. underavdeling, institutt etc.</p> <p>NB! Det er viktig at du oppgir en e-postadresse som brukes aktivt. Vennligst gi oss beskjed dersom den endres.</p>
Efternavn	Gohari	
Stilling	PhD candidate	
Telefon	0047	
Mobil	94484660	
E-post	savis.gohari@ntnu.no	
Alternativ e-post	savis_g64@yahoo.com	
Arbeidssted	Trondheim	
Adresse (arb.)	Alfred Getz vei 3	
Postnr./sted (arb.sted)	7491 Trondheim	
Sted (arb.sted)	Trondheim	
5. Student (master, bachelor)		
Studentprosjekt	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	Dersom det er flere studenter som samarbeider om et prosjekt, skal det velges en kontaktperson som føres opp her. Øvrige studenter kan føres opp under pkt 10.
6. Formålet med prosjektet		
Formål	to investigate the local governance process in terms of roles, interests, power, and the effect of institutional structures on the nature and form of the decision-making process in the case of co-location of univeristy campuses in Trondheim	Redegjør kort for prosjektets formål, problemstilling, forskningsspørsmål e.l.
7. Hvilke personer skal det innhentes personopplysninger om (utvalg)?		
Kryss av for utvalg	<input type="checkbox"/> Barnehagebarn <input type="checkbox"/> Skoleelever <input type="checkbox"/> Pasienter <input type="checkbox"/> Brukere/klienter/kunder <input checked="" type="checkbox"/> Ansatte <input type="checkbox"/> Barnevernsbarn <input type="checkbox"/> Lærere <input type="checkbox"/> Helsepersonell <input type="checkbox"/> Asylsøkere <input checked="" type="checkbox"/> Andre	
Beskriv utvalg/deltakere	actors and decision makers in the case of co-location of univeristy campuses in Trondheim, the Rector of NTNU, HIST, NTNU Board members/representatives, Politicians, People from Trondheim Kommune, Sør-Trøndelag county and Ministry of Education and Finance, Student Board and employees	Med utvalg menes dem som deltar i undersøkelsen eller dem det innhentes opplysninger om.
Rekruttering/trekking	elite and snowball sampling, the main actors are known through the media and official documents and they can introduce the related actors themselves.	Beskriv hvordan utvalget trekkes eller rekrutteres og oppgi hvem som foretar den. Et utvalg kan trekkes fra registre som f.eks. Folkeregisteret, SSD-registre, pasientregistre, eller det kan rekrutteres gjennom f.eks. en bedrift, skole, idrettsmiljø eller eget nettverk.
Førstegangskontakt	directly by the reseracher, or by her supervisor, Tor Medalen, Professor at Department of Urban Design and Planning. Contact info. : tor.medalen@ntnu.no, +47 73595012 +47 91636340, Alfred Getz vei 3, Sentralbygg I*553	Beskriv hvordan kontakt med utvalget blir opprettet og av hvem. Les mer om dette på temasidene .
Alder på utvalget	<input type="checkbox"/> Barn (0-15 år) <input type="checkbox"/> Ungdom (16-17 år) <input checked="" type="checkbox"/> Voksne (over 18 år)	Les om forskning som involverer barn på våre nettsider.
Omtrentlig antall personer som inngår i utvalget	between 20-30	
Samles det inn sensitive personopplysninger?	Ja <input checked="" type="radio"/> Nei <input type="radio"/>	Les mer om sensitive opplysninger .

Figure A-8: Notification form for NSD, page 3

Hvis ja, hvilke?	<input checked="" type="checkbox"/> Rasemessig eller etnisk bakgrunn, eller politisk, filosofisk eller religiøs oppfatning <input type="checkbox"/> At en person har vært mistenkt, siktet, tiltalt eller dømt for en straffbar handling <input type="checkbox"/> Helseforhold <input type="checkbox"/> Seksuelle forhold <input type="checkbox"/> Medlemskap i fagforeninger	
Inkluderes det myndige personer med redusert eller manglende samtykkekompetanse?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	Les mer om pasienter, brukere og personer med redusert eller manglende samtykkekompetanse.
Samles det inn personopplysninger om personer som selv ikke deltar (tredjepersoner)?	Ja <input checked="" type="radio"/> Nei <input type="radio"/>	Med opplysninger om tredjeperson menes opplysninger som kan spores tilbake til personer som ikke inngår i utvalget. Eksempler på tredjeperson er kollega, elev, klient, familiemedlem.
Hvem er tredjeperson og hvilke opplysninger registreres?	if one of the interviewees refer to the third person in her/his interviews	
Registreres det sensitive opplysninger om tredjeperson?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	
8. Metode for innsamling av personopplysninger		
Kryss av for hvilke datainnsamlingsmetoder og datakilder som vil benyttes	<input type="checkbox"/> Papirbasert spørreskjema <input type="checkbox"/> Elektronisk spørreskjema <input checked="" type="checkbox"/> Personlig intervju <input type="checkbox"/> Gruppeintervju <input type="checkbox"/> Observasjon <input type="checkbox"/> Deltakende observasjon <input checked="" type="checkbox"/> Blogg/sosiale medier/internett <input type="checkbox"/> Psykologiske/pedagogiske tester <input type="checkbox"/> Medisinske undersøkelser/tester <input checked="" type="checkbox"/> Journaldata	Personopplysninger kan innhentes direkte fra den registrerte f.eks. gjennom spørreskjema, intervju, tester, og/eller ulike journaler (f.eks. elevmapper, NAV, PPT, sykehus) og/eller registre (f.eks. Statistisk sentralbyrå, sentrale helseregistre). NBI Dersom personopplysninger innhentes fra forskjellige personer (utvalg) og med forskjellige metoder, må dette spesifiseres i kommentar-boksen. Husk også å legge ved relevante vedlegg til alle utvalgs-gruppene og metodene som skal benyttes. Les mer om registerstudier her . Dersom du skal anvende registerdata, må variabeliste lastes opp under pkt. 15.
	<input type="checkbox"/> Registerdata	
	<input type="checkbox"/> Annen innsamlingsmetode	
Tilleggsopplysninger		
9. Informasjon og samtykke		
Oppgi hvordan utvalget/deltakeme informeres	<input checked="" type="checkbox"/> Skriftlig <input checked="" type="checkbox"/> Muntlig <input type="checkbox"/> Informeres ikke	Dersom utvalget ikke skal informeres om behandlingen av personopplysninger må det begrunnes. Les mer her . Vennligst send inn mal for skriftlig eller muntlig informasjon til deltakeme sammen med meldeskjema. Last ned en veiledende mal her . NBI Vedlegg lastes opp til sist i meldeskjemaet, se punkt 15 Vedlegg.
Samtykker utvalget til deltakelse?	<input checked="" type="radio"/> Ja <input type="radio"/> Nei <input type="radio"/> Flere utvalg, ikke samtykke fra alle	For at et samtykke til deltakelse i forskning skal være gyldig, må det være frivillig, uttrykkelig og informert . Samtykke kan gis skriftlig, muntlig eller gjennom en aktiv handling. For eksempel vil et besvart spørreskjema være å regne som et aktivt samtykke. Dersom det ikke skal innhentes samtykke, må det begrunnes.
Bliir tredjepersoner informert?	<input checked="" type="checkbox"/> Skriftlig <input type="checkbox"/> Muntlig <input type="checkbox"/> Informeres ikke	
10. Informasjonssikkerhet		
Hvordan oppbevares navnelisten/koblingskalkelen og hvem har tilgang til den?	they will be stored in the researcher's personal computer, which is only accessible by her	
Oppbevares direkte personidentifiserbare opplysninger på andre måter?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	

Figure A-9: Notification form for NSD, page 4

Spesifiser		NBI som hovedregel bør ikke direkte personidentifiserende opplysninger registreres sammen med det øvrige datamaterialet.
Hvordan registreres og oppbevares personopplysningene?	<input type="checkbox"/> På server i virksomhetens nettverk <input type="checkbox"/> Fysisk isolert PC tilhørende virksomheten (dvs. ingen tilknytning til andre datamaskiner eller nettverk, interne eller eksterne) <input checked="" type="checkbox"/> Datamaskin i nettverkssystem tilknyttet Internett tilhørende virksomheten <input type="checkbox"/> Privat datamaskin <input type="checkbox"/> Videoopptak/fotografi <input checked="" type="checkbox"/> Lydopptak <input checked="" type="checkbox"/> Notater/papir <input type="checkbox"/> Mobile lagringsenheter (bærbar datamaskin, minnepenn, minnekort, cd, ekstern harddisk, mobiltelefon) <input type="checkbox"/> Annen registreringsmetode	Merk av for hvilke hjelpemidler som benyttes for registrering og analyse av opplysninger. Sett flere kryss dersom opplysningene registreres på flere måter. Med «virksomhet» menes her behandlingsansvarlig institusjon. NBI som hovedregel bør data som inneholder personopplysninger lagres på behandlingsansvarlig sin forskningsserver. Lagring på andre medier - som privat pc, mobiltelefon, minnepenne, server på annet arbeidssted - er mindre sikkert, og må derfor begrunnes. Slik lagring må avklares med behandlingsansvarlig institusjon, og personopplysningene bør krypteres.
Annen registreringsmetode beskriv		
Hvordan er datamaterialet beskyttet mot at uvedkommende får innsyn?	the computer will be password protected, and be kept in a locked room	Er f.eks. datamaskintilgangen beskyttet med brukernavn og passord, står datamaskinen i et låsbart rom, og hvordan sikres bærbare enheter, utskriftler og opptak?
Samles opplysningene inn/behandles av en databehandler?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	Dersom det benyttes eksterne til helt eller delvis å behandle personopplysninger, f.eks. Questback, transkriberingsassistent eller tolk, er dette å betrakte som en databehandler. Slike oppdrag må kontraktsreguleres.
Hvis ja, hvilken		
Overføres personopplysninger ved hjelp av e-post/Internett?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	F.eks. ved overføring av data til samarbeidspartner, databehandler mm.
Hvis ja, beskriv?		Dersom personopplysninger skal sendes via internett, bør de krypteres tilstrekkelig. Vi anbefaler for ikke lagring av personopplysninger på nettskytjenester. Dersom nettskytjeneste benyttes, skal det inngås skriftlig databehandleravtale med leverandøren av tjenesten.
Skal andre personer enn daglig ansvarlig/student ha tilgang til datamaterialet med personopplysninger?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	
Hvis ja, hvem (oppgi navn og arbeidssted)?		
Utleveres/deles personopplysninger med andre institusjoner eller land?	<input checked="" type="radio"/> Nei <input type="radio"/> Andre institusjoner <input type="radio"/> Institusjoner i andre land	F.eks. ved nasjonale samarbeidsprosjekter der personopplysninger utveksles eller ved internasjonale samarbeidsprosjekter der personopplysninger utveksles.
11. Vurdering/godkjenning fra andre instanser		
Søkes det om dispensasjon fra taushetsplikten for å få tilgang til data?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	For å få tilgang til taushetsbelagte opplysninger fra f.eks. NAV, PPT, sykehus, må det søkes om dispensasjon fra taushetsplikten. Dispensasjon søkes vanligvis fra aktuelt departement.
Hvis ja, hvilke		
Søkes det godkjenning fra andre instanser?	Ja <input type="radio"/> Nei <input checked="" type="radio"/>	F.eks. søke registreier om tilgang til data, en ledelse om tilgang til forskning i virksomhet, skole.
Hvis ja, hvilken		
12. Periode for behandling av personopplysninger		
Prosjektstart	01.10.2015	Prosjektstart Vennligst oppgi tidspunktet for når kontakt med utvalgt skal gjøres/datainnsamling starter.
Planlagt dato for avslutt	01.11.2017	Prosjektstutt: Vennligst oppgi tidspunktet for når datamaterialet enten skal anonymiseres/slettes, eller arkiveres i påvente av oppfølgingsstudier eller annet.
Skal personopplysninger publiseres (direkte eller indirekte)?	<input checked="" type="checkbox"/> Ja, direkte (navn e.l.) <input type="checkbox"/> Ja, indirekte (bakgrunnsopplysninger) <input type="checkbox"/> Nei, publiseres anonymt	NBI Dersom personopplysninger skal publiseres, må det vanligvis innhentes eksplisitt samtykke til dette fra den enkelte, og deltakere bør gis anledning til å lese gjennom og godkjenne sitater.
Hva skal skje med datamaterialet ved avslutt?	<input checked="" type="checkbox"/> Datamaterialet anonymiseres <input type="checkbox"/> Datamaterialet oppbevares med personidentifikasjon	NBI Her menes datamaterialet, ikke publikasjon. Selv om data publiseres med personidentifikasjon skal som regel øvrig data anonymiseres. Med anonymisering menes at datamaterialet bearbeides slik at det ikke lenger er mulig å føre opplysningene tilbake til enkeltpersoner. Les mer om anonymisering .

Figure A-10: Notification form for NSD, page 5

13. Finansiering		
Hvordan finansieres prosjektet?	it is a part of my PhD Project budget	
14. Tilleggsopplysninger		
Tilleggsopplysninger		

Figure A-11: Schematic view of the coding system in MAXQDA environment

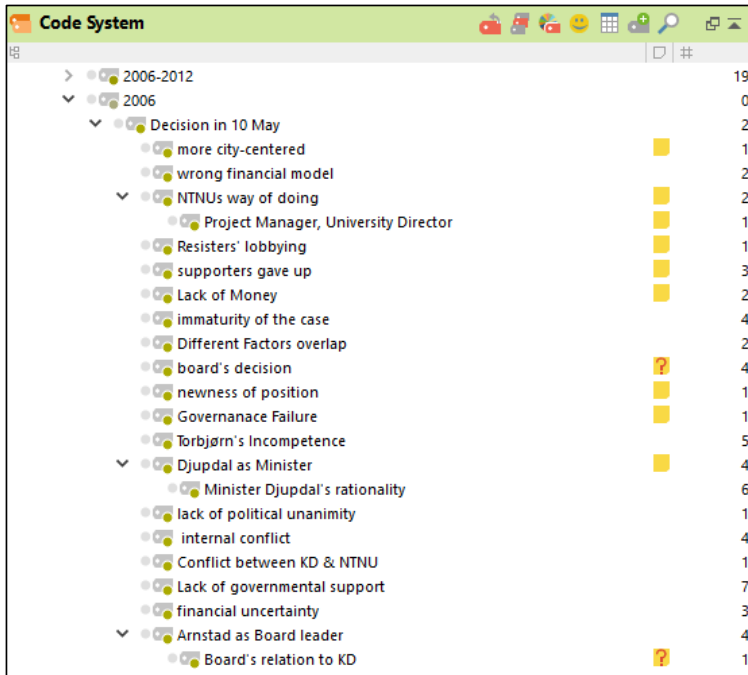


Table A-1: Different types of memos in coding system

Code	Memos	Type of memos
More city development	It was more about city development than university development	■
NTNU's way of doing	The process was run by NTNU unilaterally	■
Project manager, university director	Some specifically pointed to the project manager and university director's way of doing	■
Resisters' lobbying	Lorentzen and other internal members (his allies), who were mostly from SV could influence the government to be against the co-location	■
Supporters gave up	The resisters' influence and power were greater than that of the supporters. The supporters could not handle it and gave up	■
Lack of money	NTNU had recently received money for the hospital case, so NTNU was not the priority to get the money at that time	■
Board's decision	The government did not want to push the case against the board's (employees') wish and the board's decision was a no. Could the internal board members lobby the ministry to prevent the external members to say yes?	?
The newness of the management system	Both the rector and the board leader were new to their position (lack of experience)	■
Governance failure	Some think the governance model in 2006 (the bottom-up process) was wrong, especially because NTNU depends on KD for the money	■
Djupdal as minister	Many blamed the minister, who did not show support because of his voters, who were against the co-location. However, some think he wasn't positive in general (the comments indicate that the minister's interest/role was decisive).	■
External members	Is the board representing KD's point of view/interest? Does the board have to listen to KD?	?

Figure A-12: An example of initial coding

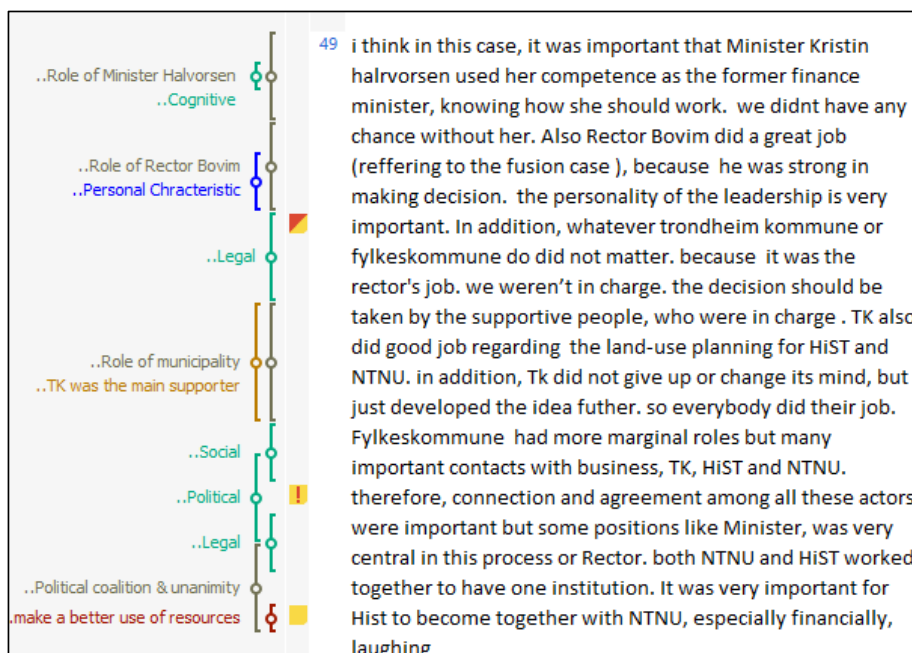


Table A-2: A sample of categories, codes and sub-codes

Category	Code	Sub-code
<i>2012, Reasons for success</i>	Role of municipality	TK was the main supporter
	Role of Rector Bovim	
	Role of Minister Halvorsen	
	Political coalition and unanimity	
<i>Resource</i>	Social	
	Political	
	Economic	Make better use of resources
	Legal	
	Cognitive	
<i>Power</i>	Personal Characteristic	

Table A-3: Description of memos in Figure A-12




Type of memo	Title	Explanation	Connected code	Quotation
	Lack of legal resource	Municipality and County Council lacked legal resource; their power to make a decision was restricted	Resource, Legal	Whatever Trondheim kommune or fylkeskommune did, it did not matter. Because it was the rector's job. We weren't in charge. The decision should be taken by the supportive people, who were in charge.
	Analysis	Legal resource is more decisive than social and political resources	Resource	Connection and agreement among all these actors were important, but some positions like minister or rector were very central in this process.
	HiST	HiST has economic interest in the fusion case	Interest, Economic, Better use of resources	It was very important for HiST to get together with NTNU, especially financially. (laughing)

Figure A-13: A revised coding



Figure A-14: Coding based on the theoretical framework: Functional components

Code System	Count
Actors	48
Interest	3
Political interest	6
Environmental interest	7
Economic interest	21
Social interest	66
Goal	0
Process-based	11
Content-based	19
Resource	0
Cognitive	3
Legal	1
Economic	1
Political	11
Power	0
Content of power	29
Source of power	52
Base of power	21
Role	1
Filter	3
Gate keeper	4
Mediator, fixer of conflicts	3
Ally, supporter	6
Director, fixer, pirot, guider	8
Promoter	8
Conflicts	0
over strategy	6
over culture or attitude	13
over interest	16
over resources	28
Conflict resolution methods	0
avoidance	4
intercession	1
Coalition building (behind the scences)	16
Tolerance	6
bargaining	10
Collective choice mechanism	3
network	11
Coalition network	26

Figures and tables for Chapter 5

Figure A-15: Temporal sketch of management system at NTNU and the government

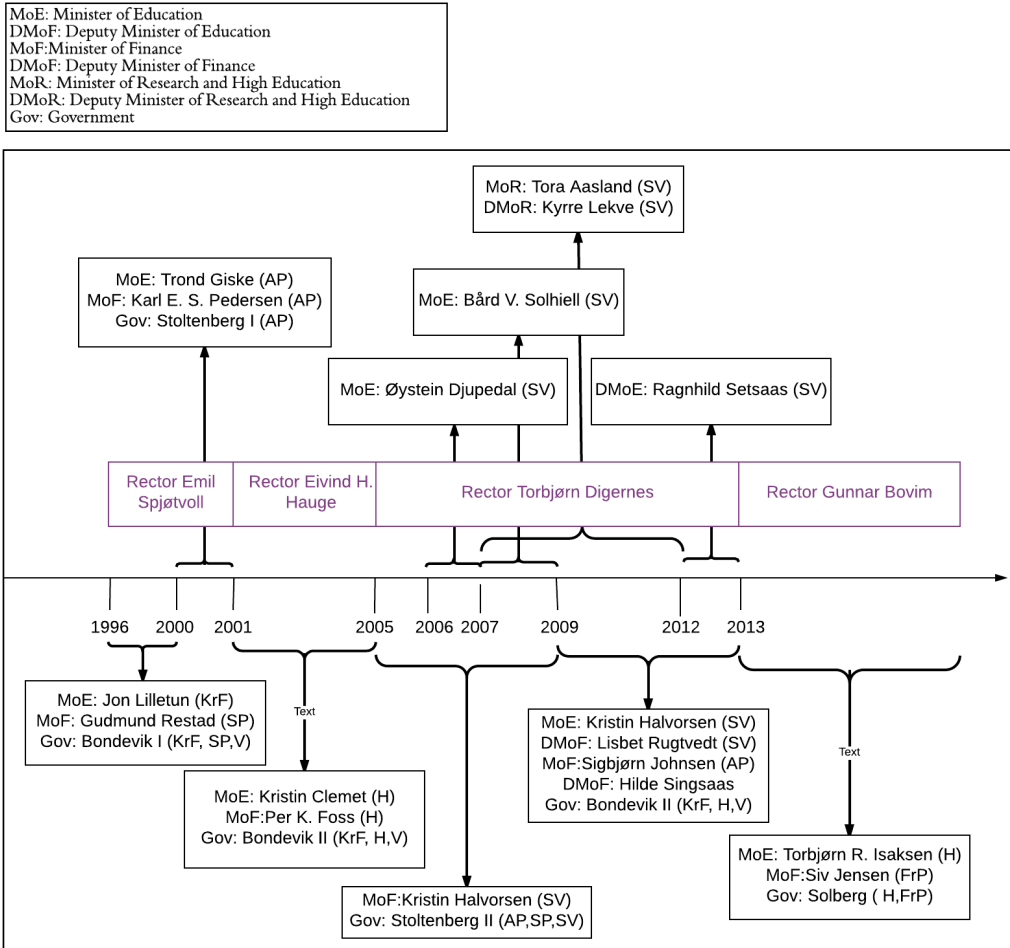


Figure A-16: The formal network of institutions in the RiT 2000 project

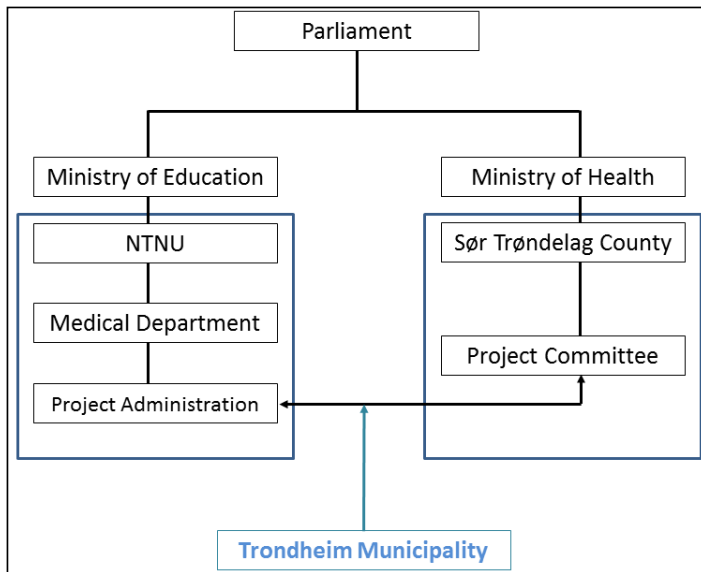


Figure A-17: Informal network of actors in the initiation phase of replacement idea

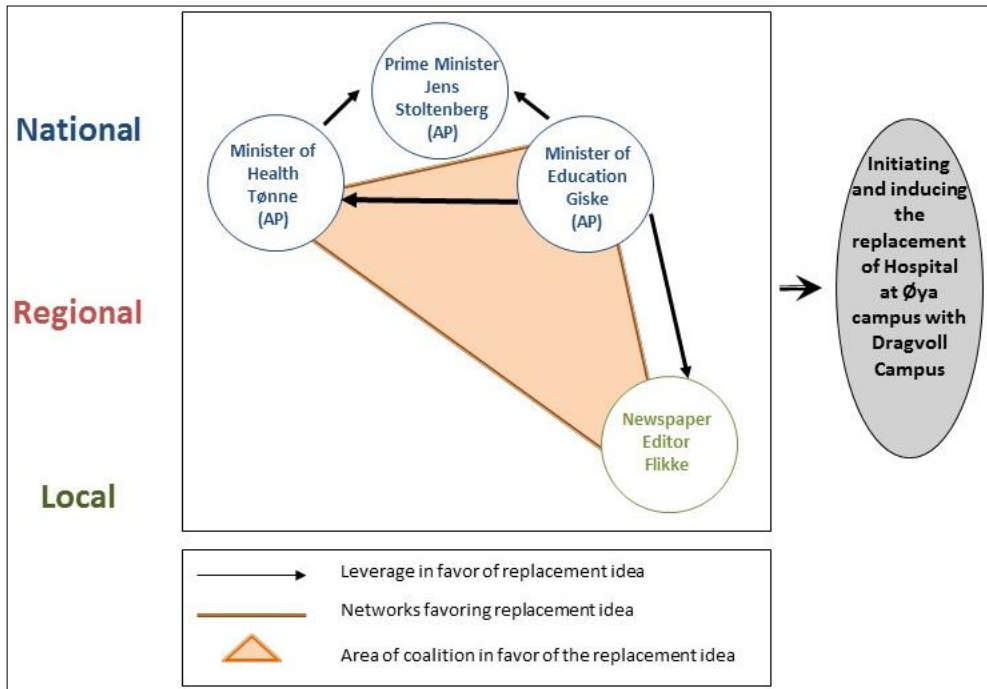


Figure A-18: Power struggle in the case of replacement idea

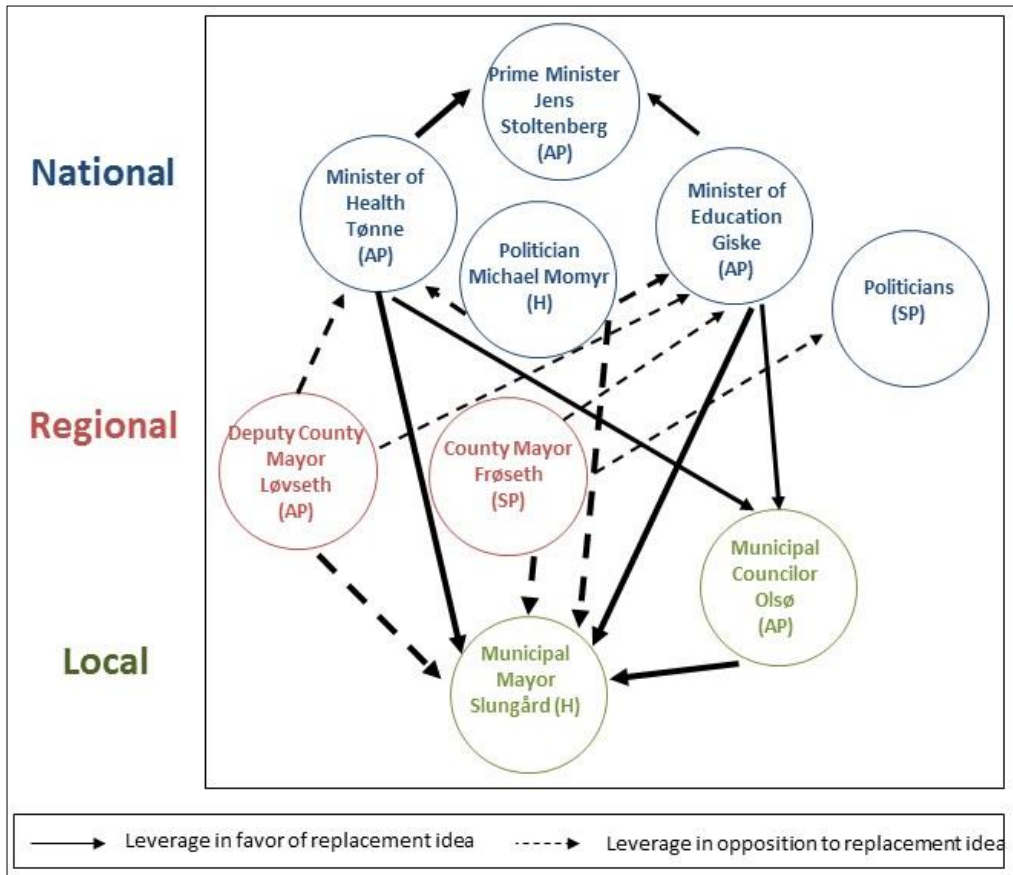


Figure A-19: Favoring and opposing coalitions in the case of replacement of Dragvoll campus

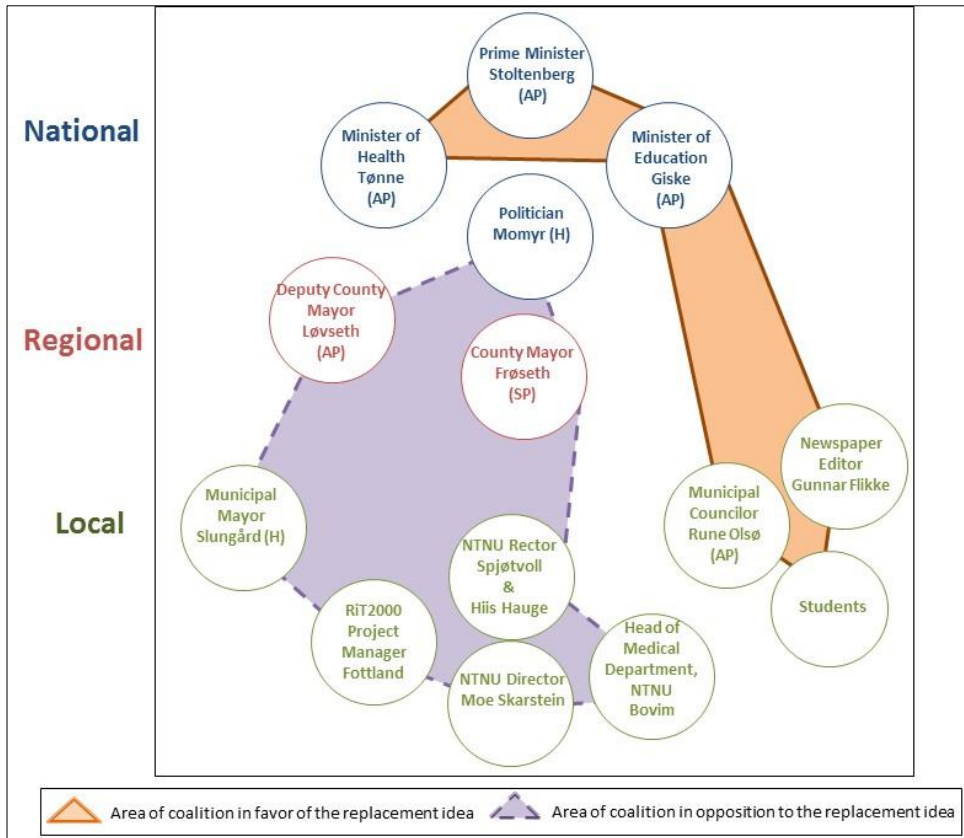


Figure A-20: The formation of coalition in favor of the co-location of campuses in 2003

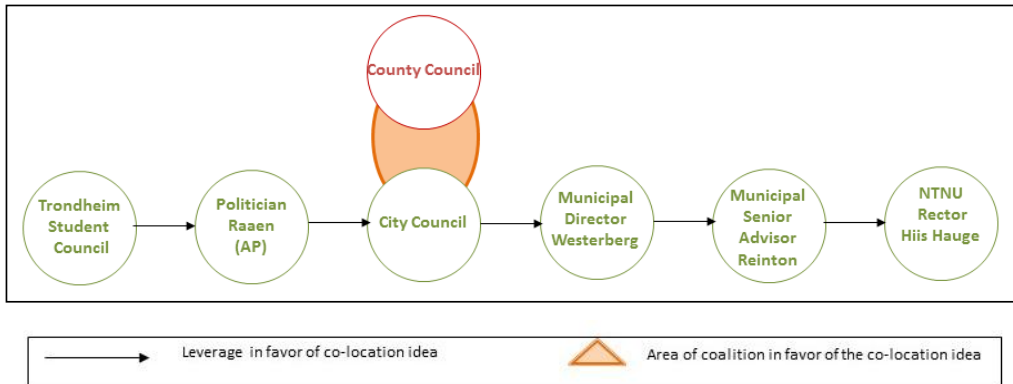


Figure A-21: Favoring networks and coalitions in the case of co-location in 2003

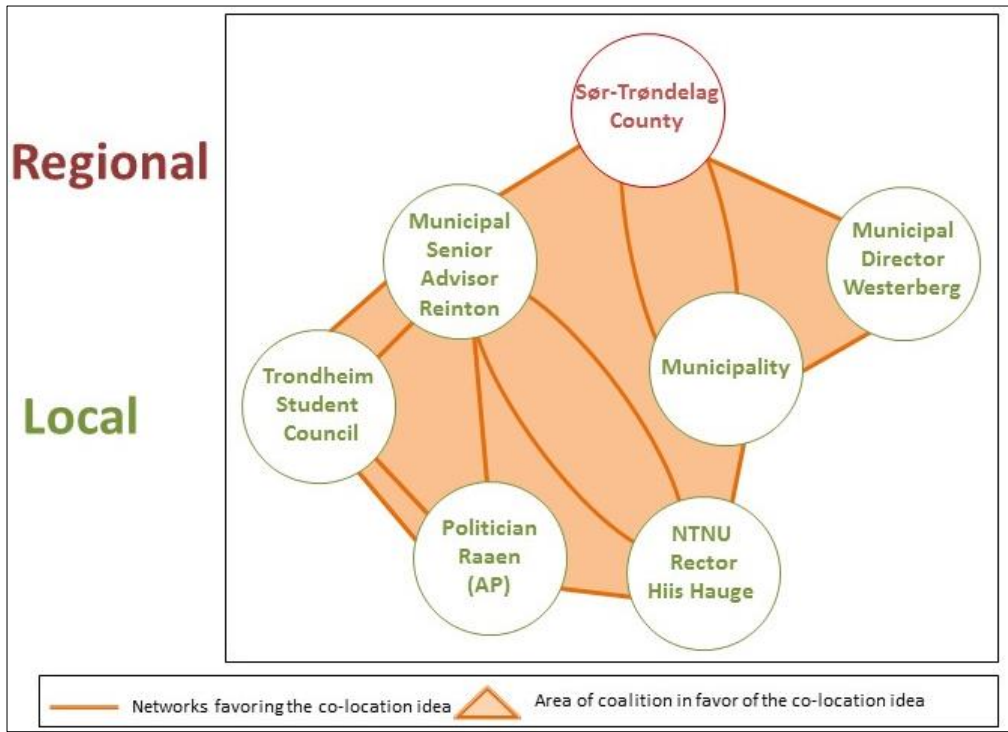


Table A-4: Reasons for resistance to the co-location idea

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Sum	Interviewees	Code system	
									●																1	Lack of Trust/transparency of roles		
			●				●			●	●								●							5	Unsuccessful experience of merging in 1996	
		●		●		●				●										●	●					6	Cultural difference	
	●			●	●	●	●		●	●																7	Moving Dragvoll is inappropriated use of NTNU's resources	
			●		●				●		●															4	Co-location doesn't necessarily ensure the collaboration	
									●										●							2	Co-location will distract the main focus from education and research	
										●											●					2	It is time-consuming	
●				●	●	●								●				●				●				7	There is a natural resistance to any kind of change	
1	1	1	2	2	3	3	3	-	4	4	2	-	-	1	-	-	1	2	1	2	1				33	Number of coding		

Table A-5: Examples of types of interest in the case of co-location

Type of interest	Political	Environmental	Social	Economic
Examples for the case of co-location	Gaining ascendancy, recognition, status, control, etc.	Reducing traffic and pollution	Taking side of other's need or interest, supporting your political party or institution, knowledge development, city development, increasing the collaboration, etc.	Business/economic development of the city, region or institution, saving money / better use of resources / being economical and efficient, making money for yourself or your institution

Figure A-22: Employees, the only opposing group, when the co-location idea was initiated

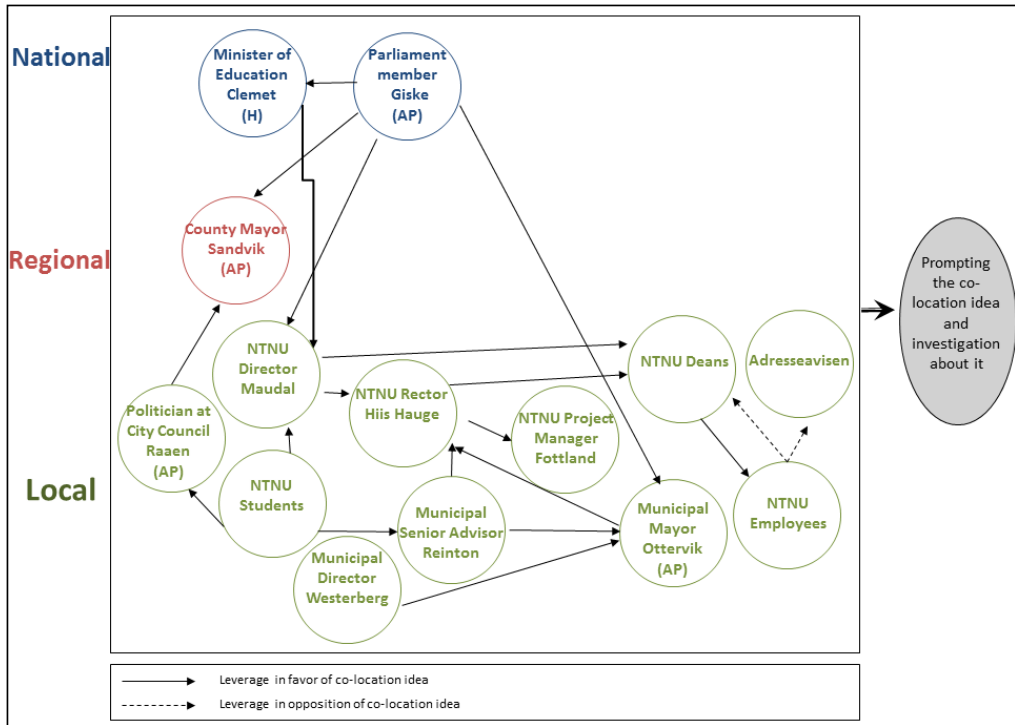


Figure A-23: Favoring networks and coalitions in the case of co-location in 2004

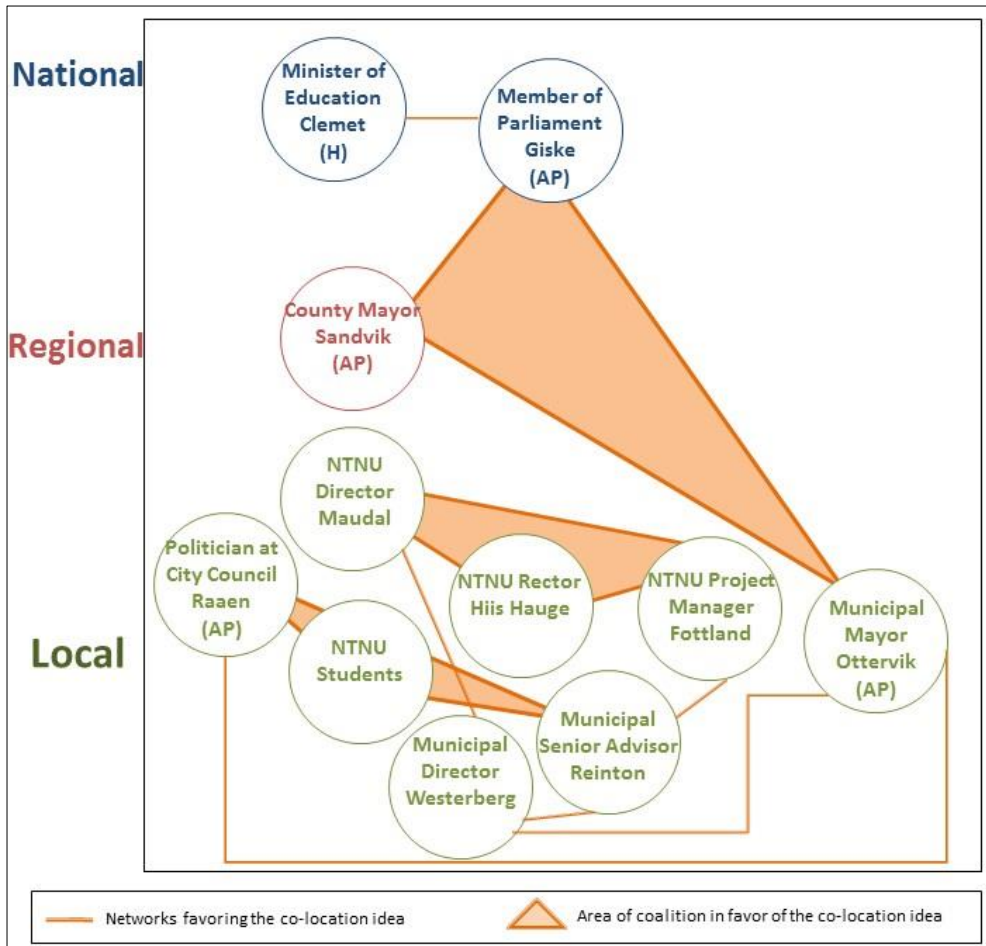


Figure A-24: The formal network of institutions in 2004

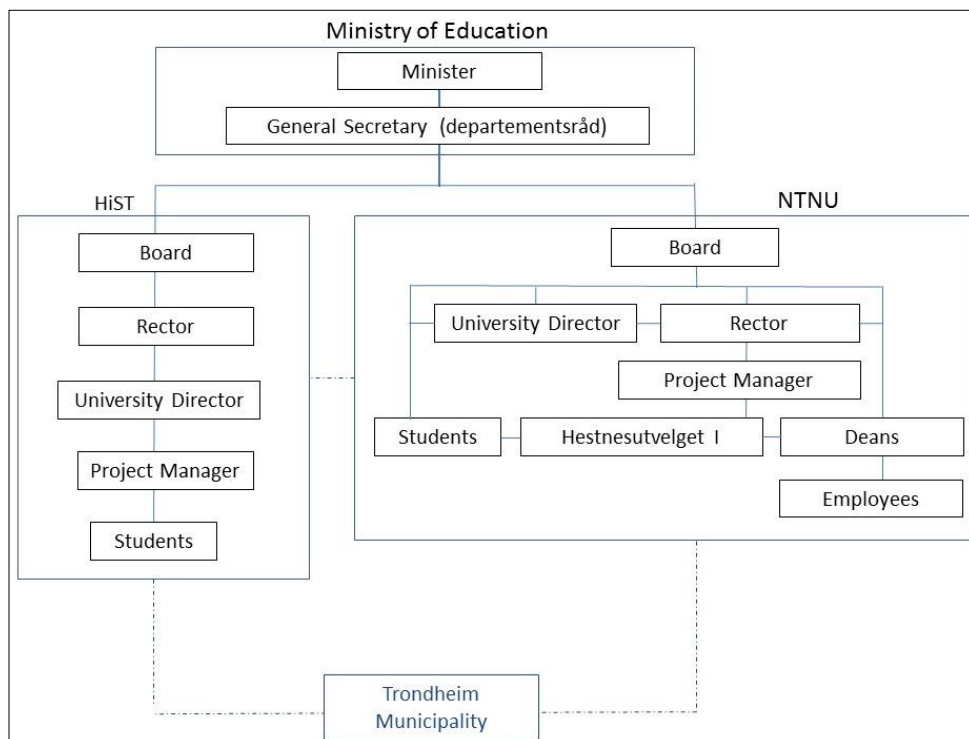


Figure A-25: Formal network of actors in 2005

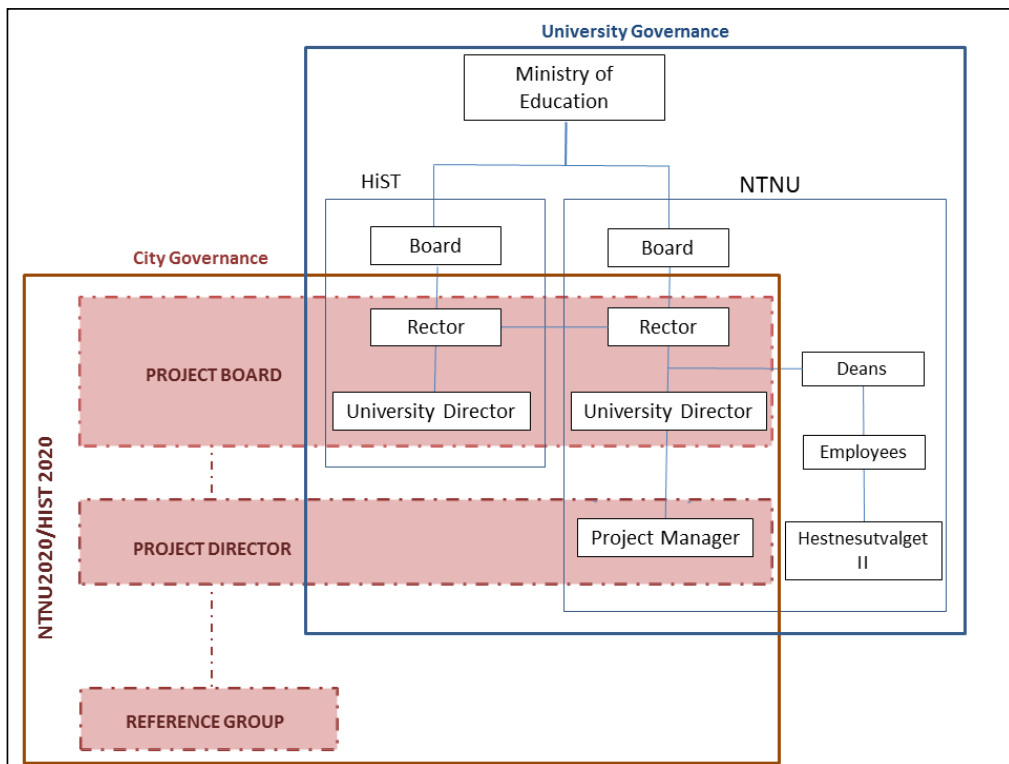


Table A-6: Adresseavisen's questionnaire (Adresseavisen, 2006)

Interviewees	Political Party	Questions:		
		1. Is it a good idea to co-locate NTNU campuses in Gløshaugen-Øya area	2. What is the main rationality of your answer to question 1?	3. Should the municipality actively contribute in this case?
Mayor	AP	Yes	It makes Trondheim a more attractive student city, both nationally and internationally	Yes, because the municipality and NTNU have common interests
Deputy mayor	(SV)	I am very skeptical about the co-location	Co-location means a densification that the city cannot withstand	Yes, regarding the moderate, long-term development of Dragvoll
Politician	H	Yes	I think co-location is an important step in making NTNU an internationally outstanding university	If the co-location is the university's choice, the municipality should actively assist
Politician	KrF	We haven't finalized our opinion, waiting for NTNU's board decision	Co-location will lead to closer cooperation and will make Trondheim an attractive student city	If the university wishes co-location, the municipality should be a good partner
Politician	FrP	No	Mainly because of financial uncertainty	The municipality should certainly help to develop Dragvoll
Politician	SP	Depends what NTNU board decides	We don't have any answer for that	It is not unreasonable for the municipality to contribute

Figure A-25: The battle of favoring and opposing wills in 2006

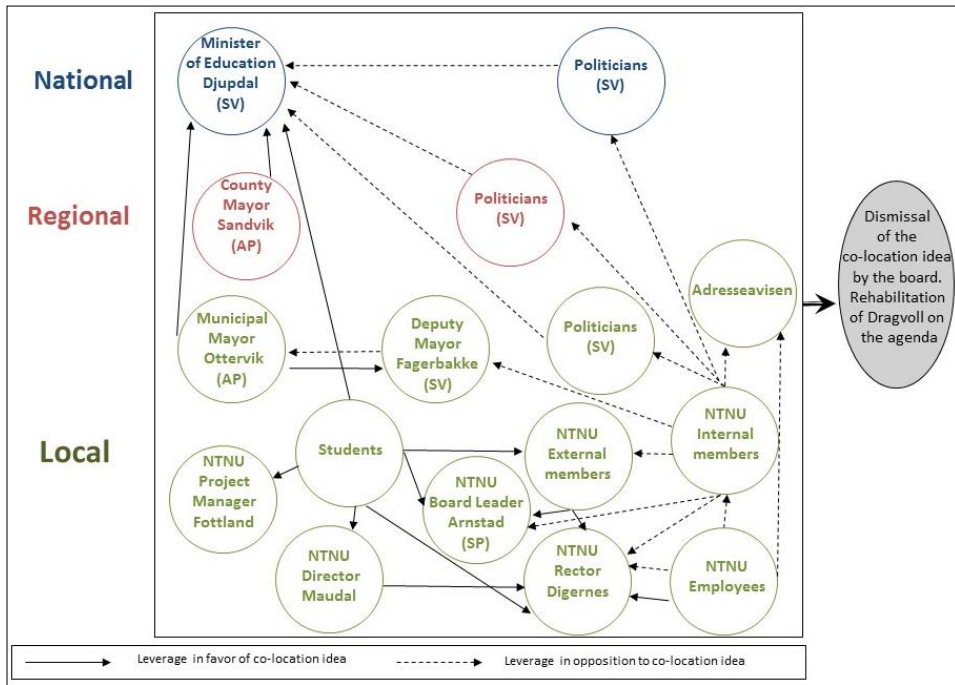


Table A-7: Interviewees' responses in relation to the decision on May 10, 2006

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Sum	Interviewees	Code system	
																												Because of specific person	
										●						●	●	●	●	●						7	Employees		
					●				●		●							●	●	●	●	●				11	Board of NTNU		
		●					●		●	●	●			●				●	●	●	●	●				14	Rector		
					●			●								●						●				7	Maudal		
								●									●									3	Fottland		
							●			●								●	●							7	Ministry of Education		
										●																1	Ministry of Finance		
											●															11	Financial uncertainty		
	●			●					●																	11	Lack of governmental support		
								●		●																2	Change in the management system		
										●																2	Lack of trust		
								●																		4	Newness of the positions		
																												Conflict and disagreement	
										●																2	Between TK and NTNU		
										●																6	Between KD and NTNU		
											●													●		4	Immaturity of the case		
										●																2	Being rushed		
										●																5	Resisters' lobby		
										●																1	Supporters' game up		
1	2	-	2	3	3	1	5	7	4	10	5	-	-	1	5	5	3	8	10	7	2	10	3	4	2	100	Total		

Figure A-26: Confrontation of favoring and opposing networks/coalitions in 2006

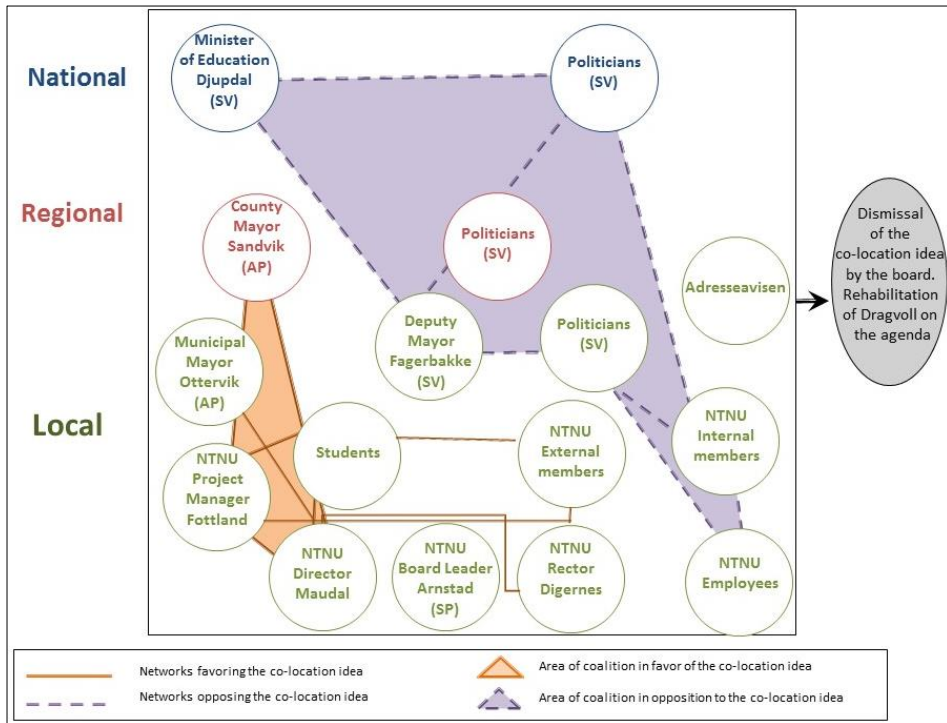


Figure A-27: The university chart after termination of the university director position

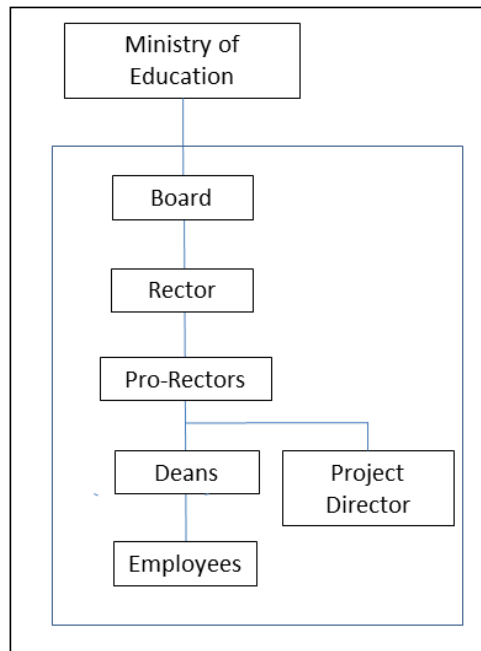


Table A-8: Interviewees' responses about the inaction on the rehabilitation of Dragvoll

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	Sum	Interviewees Code system	
●				●														●	●				●		5	Not enough push for developing Dragvoll	
				●															●			●			3	Development of Dragvoll wasn't necessarily what the opposition wanted	
●	●					●		●	●	●		●						●			●				9	There was lack of governmental support	
						●																			1	The PPP model was rejected	
				●								●							●	●	●			●	●	7	There was a queue for public funding
								●									●									2	Co-location case wasn't stopped. It was just put on hold
				●	●	●		●	●	●		●	●		●			●	●		●				12	The supporters lobbied	
						●			●										●						3	Ottervik, Sandvik and Giske's coalition and lobby	
															●										1	Lobby from inside NTNU	
1	1	1	-	4	1	4	-	3	3	2	-	3	1	-	2	-	1	4	●	2	2	1	2	1	43	total	

Figure A-28: Favoring and opposing leverages in the case of rehabilitation of Dragvoll (2006-2012)

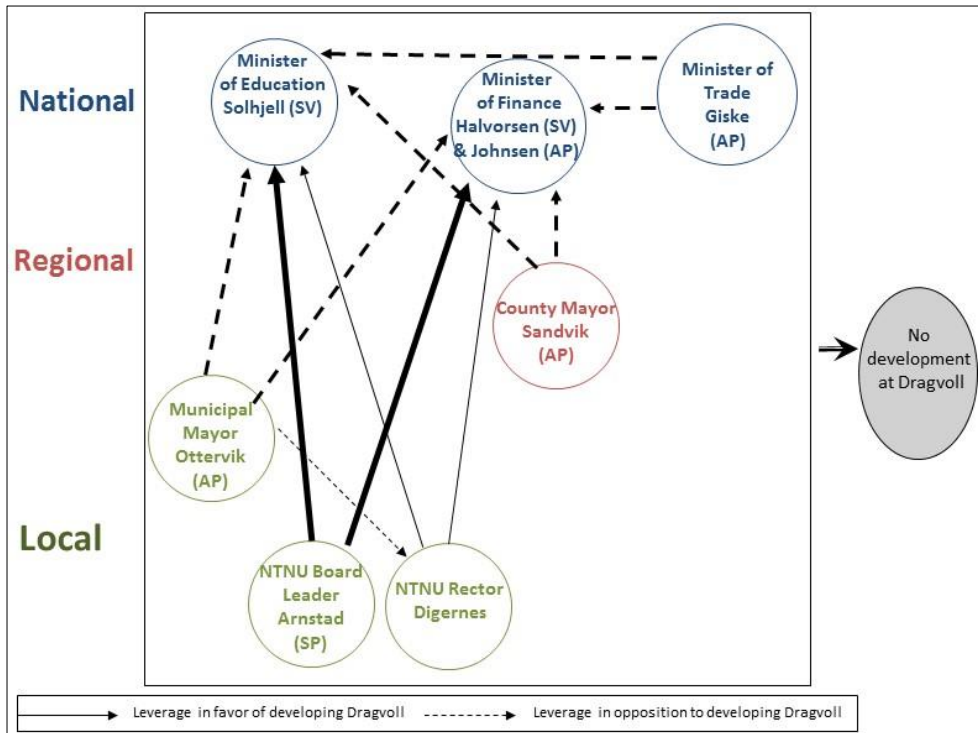


Figure A-29: Opposing coalition against the rehabilitation of Dragvoll

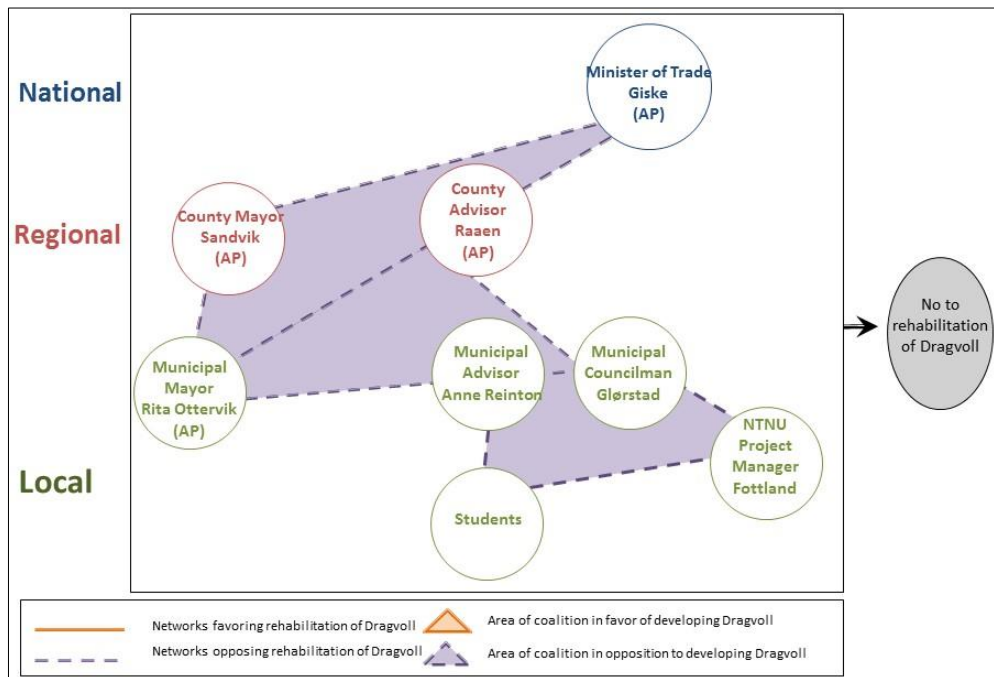


Figure A-30: Informal networks of actors in re-initiation phase of co-location in 2012

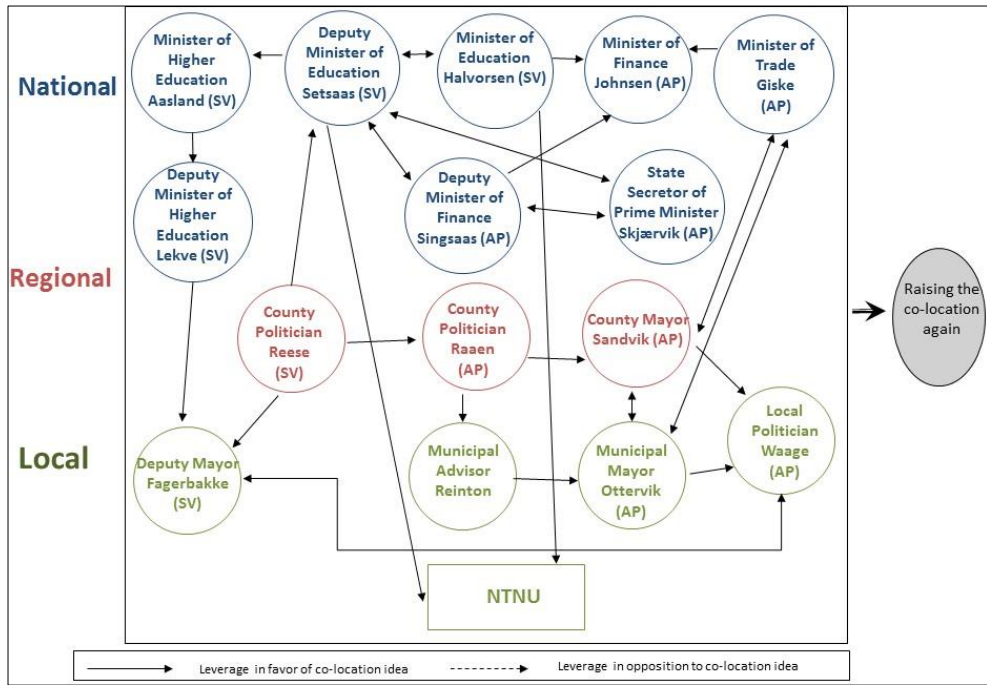


Figure A-31: Coalition networks of actors in re-opening of the co-location in 2012

