

In-house or Outsourcing FM Services in the Public Sector: A Review of 25 Years Research and Development

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Structured Abstract

Purpose: The purpose of this article is to explore the development of knowledge about facilities management (FM), in particular, the management of FM services in practice, education and research. The article questions whether we know more about optimal models for in-house or outsourcing FM after 25 years of applied research and development of best practices.

Design/methodology/approach: The article is based on literature reviews, case studies and personal experiences from practice for over 25 years, concentrating on the public sector. The article maintains an international focus on the FM development, with particular focus on the development in Norway and the Nordic countries. The knowledge development triangle, and its integration of education, research and practice, is used as an underlying theoretical framework.

Findings: The knowledge regarding management of FM services in both the public and private sector has been developed over the last two decades. The changes in both sectors is reflected in all the three aspects of the knowledge triangle. While the use of outsourcing increased significantly in popularity during the last 25 years, the Norwegian profile continues to have limited use of outsourcing.

Research limitations/implications:

The article is based a qualified selection of doctoral theses, research reports and scientific articles published in the period 1990–2015. The explorations include limited quantitative data.

Practical implications – Social implications: The choice for FM in practice, whether fully or partly to produce services with internal resources or to make arrangements with external suppliers, is an important strategic decision regarding the choice of a procurement strategy for the company or the organisation. This decision is not necessarily about outsourcing or in-house, but rather the strategic sourcing and management of the needed services.

Originality/value: Twenty-five years of research have shown that a simple solution and answer to the questions about in-house or outsourcing FM services is lacking. To find a good solution, it is necessary to understand the content of FM services with respect to quality and efficiency, and to understand the interaction between FM, the core activities and the users.

Key words: Sourcing, outsourcing, in-house, FM, facilities management, management, facility services.

Article type: Literature review/General review

1 Introduction and background

1.1 Scope and purpose

In a 25 years perspective from 1990, one major issue for discussion has been whether facilities management (FM) services should be in-house, closely related to core business, or outsourced. This theme has been at the core of research within the discipline and, over the years, several questions have been raised in research to develop better management models in FM. This article reviews central research studies from the beginning of the FM history and asks whether we know more about managing FM services after 25 years of research and development.

The article limits its focus to Northern Europe and the developments in Scandinavia, but provides a glimpse into a wider context. The aim is to present Norwegian knowledge development as experienced by the authors and found in the literature. FM has developed as a field since 1978 (Pitt and Tucker, 2008), and has, since that early beginning, focused on issues related to productivity. It is likely that the development of FM was influenced by society's craving for increasing efficiency following the economic crisis of midst 1970s and the evolvement of new public management (NPM) (Klungseth, 2015). One of NPMs aims was to introduce private sector ideas to the public sector to increase its efficiency, and outsourcing was one of the suggested ways to do this.

Prior to the establishment of FM as a discipline, outsourcing was tested on facility services. One of the first known actions was the outsourcing of cleaning services by the UK Government in 1968 (Rhodes, 1994). This action is proposed as the beginning, in the British public sector, of market testing and contracting out tendencies, which in many ways define NPM. Nevertheless, as with NPM, FM spread to Europe after being developed in the US and the UK (Klungseth, 2015; Maliene et al., 2008), and at present, the UK, the US, the Nordic countries and the Netherlands are considered to lead the international developments in FM (Jensen, 2012a).

As this article primarily focuses on Scandinavia, we set the beginning of FM to 1990, in line with Maliene et al.'s (2008) estimate that FM was introduced to Scandinavia in 1992. NPM also entered Norway by law in 1992, as stipulated in the new local government act of 1992 (Klungseth, 2015; 2014), and scholars started to call for dedicated FM research in the same year (Alexander, 1992). In this article, we consider 1990 and 2015 to be years of significance; the span represents the 25 years included in the article, and the end points represent the years that the authors published their PhD theses, which both addressed FM. Nevertheless, this article glimpses back to the 1970s and 1980s, as these decades were important for the development of FM in a global context.

1.2 Research design and questions

In the article, we present an overview of the developments in theory and practice of management models for FM services, ranging from out-tasking of single services and outsourcing to total FM. Our examples mainly relate to FM in the public sector with references to major developments in the private sector from the early 1990s until 2015.

The main question we ask is as follows: Do we know more about managing FM services after 25 years of research and development in the public sector? To answer this, we formulated the following two sub-questions:

- What management models for FM services have been present the last 25 years?
- How have the discussion and knowledge regarding in-house and outsourcing changed over these years?

Organising FM services in-house or by outsourcing to an external supplier has been the focus of many studies over a long period, starting with theoretical studies at the end of the 1980s (Haugen, 1990a) and moving to the development of key indicators and benchmarking for cost and quality during the 1990s in the private and public sectors and to more scientific studies applied to business in later years. The examples provided in this article are limited to the public sector, especially the use of different models applied by local authorities (Klungseth, 2015; Alexander, 2003a; Haugen, 2003a). The term *local authority* can include several levels of authorities such as counties, municipalities and towns/parishes. In this article, we mainly focus on the FM development in municipalities, reflecting the term used in most countries.

Studies addressing in-house and outsourcing of other public services, such as Fet et al. (2011) and Leiren et al. (2016), have been excluded from this article, as these studies contribute to a more general understanding of outsourcing in the public sector. These articles address services which are traditionally organised under other sections than the real estate and FM departments of local authorities. The present article retains a traditional approach to, and therefore discusses developments in terms of cleaning services. A major issue in the research has been to find actual evidence by analysing a number of real case studies. To shed light on the following discussion and to connect it to the global developments within FM, this article starts by defining FM prior to presenting its theoretical framework – the knowledge triangle.

1.3 Defining FM

Having emerged over the last 30 years, FM as a field of research and practice is considered to be a relative new profession with particularly rapid development since the 1990s (Jensen and Nielsen, 2012; Ventovuori et al., 2007; McLennan, 2004; Amaratunga et al., 2002; Tay and Ooi, 2001; Nutt, 1999; Spedding, 1994); thus, FM has been defined in several ways over the years (Spedding, 1994; Tay and Ooi, 2001). It is hoped that a global agreement on how to define this field will soon be reached. After examining the development of FM to find what constitutes FM, what a facility manager is and how the profession of FM could be enhanced, Tay and Ooi (2001) claimed that FM still suffers from an acute identity crisis, although it is clearly linked with the workplace. Currently, it is common to consider FM as being concerned with the provision of services to core businesses. More specifically, the management tasks related to the provision, the coordination and the administration of support services that a core business needs. In Alexander's (1992, p. 6) view, FM should be seen as 'a service to an organisation' and a discipline that is distinct from other disciplines, as FM focuses on 'process and service and the relationship between facilities and the objectives of an organization' (Alexander, 1992, p. 6).

From its conception, this discipline has focused on productivity, and from the late 1980s, one major subject for discussion has been the efficiency of FM services related to their quality. In a way, it can be argued that FM has changed its focus from efficiency to effectiveness. Accordingly, the focus is no longer solely on cost optimisation, but on customer satisfaction, service quality and cost optimisation. The primary focus is still, as Alexander described in 1992, on an organisation's objectives, although it more indirectly includes the following: 'the objective of FM is to provide the setting and services that support the effectiveness of organizations that contribute to the development and creativity of the occupants and proved community benefits' (Lindahl et al., 2012, pp. 111–112).

Currently, the two most commonly used definitions of FM are the ones by EN 15221-1 (2006) and by the International Facility Management Association (IFMA). Together these two definitions illustrate that FM covers a wide array of tasks such as building administration, maintenance, cleaning,

caretaking, security, energy and catering. In the US, FM is defined as ‘a profession that encompasses multiple disciplines to ensure functionality of the built environment by integrating people, place, process and technology’ (Web IFMA, 2016a), whereas FM in Europe is defined as the ‘integration of processes within an organisation to maintain and develop the agreed services which support and improve the effectiveness of its primary activities’ (EN 15221-1, 2006, p. 5) However, there are some disputes about whether or not the term ‘agreed’ should be part of the EN-standard definition. In this article, we define FM according to the EN 15221-1 (2006), while acknowledging the IFMA definition, which we consider to complement the European definition.

1.4 Methodology and framework

The main research methods used in this article are literature reviews, case studies and personal experience in a number of applied development projects. This article is based on an invitation issued to leading researchers with long-term involvement in FM. The invitation asked for personal, thought-provoking and inspirational essays and allowed one experienced researcher to write in collaboration with another researcher or practitioner. Consequently, the two authors of this article are researchers, one younger and one experienced, both of whom have published PhD theses within the field of FM (Haugen, 1990a; Klungseth, 2015). Providing personal views influences the article’s writing style to a certain extent, as personal and lifelong experience is conveyed through a more personal tone; however, the younger researcher leans more on theoretical elaborations and reviews of publications to illustrate the development of FM as an academic discipline.

Throughout the writing process, the following key points have been central to the authors’ thinking:

- To convey a 25-year history of FM, tinted with personal learnings and experiences
- To present changes in thoughts around FM throughout the 25 years
- To describe the evolution in research and theoretical FM models and link it to developments in education and practice

A knowledge triangle, as illustrated in figure 1, represents a theoretical framework for this article. This triangle can be seen as a platform for the professional development and growth of FM education and research over the last 25 years. The development of the triangle in FM was based on a joint interaction and cooperation between education, research and practice. The experienced author of this article attended the first European FM conference in Glasgow in 1990, which recognised and established a tradition for the development of FM as a profession, and as an academic discipline. Recently, Junghans and Olsson (2014) assessed the development of FM as an academic discipline, focusing on the aspects included in the knowledge triangle, and found that FM appeared to be on its way to becoming an established discipline.

In the knowledge triangle, education learns about practice and new business opportunities by working closely with actors in practice, and practice can develop skills and learn about new theoretical models and examples of applied solutions. In research, new models for improving efficiency and quality can be developed in cooperation with practice by testing and applying new ideas. Education and research should be closely linked for developing a research-based foundation for education.

A KNOWLEDGE TRIANGLE FOR DEVELOPING FM

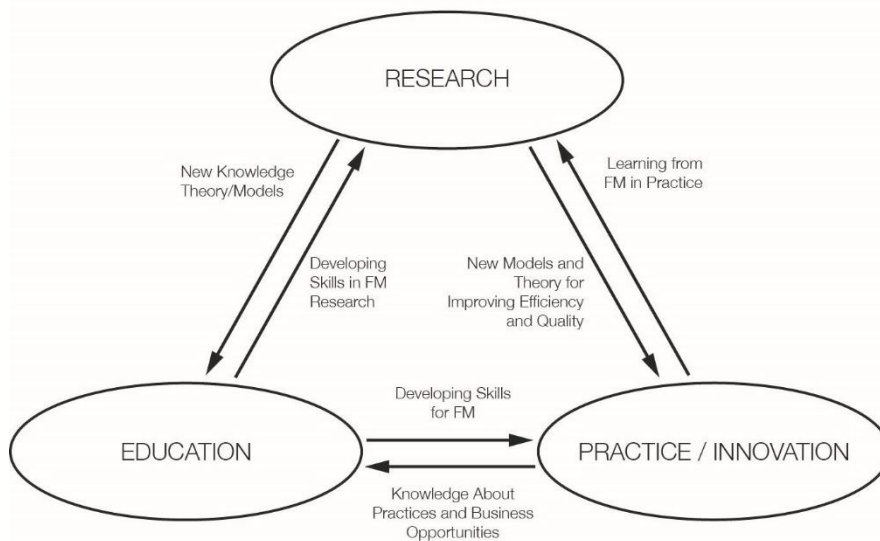


Figure 1. The knowledge triangle for FM illustrating the interaction between practice, education and research.

As Figure 2 illustrates, EuroFM was established on the basis of a close cooperation between education, practice and research. While this platform was not specifically defined in the 1990s as a knowledge triangle, the term has been used the last decade 2000 to bring innovation closer to education and research. One example is the EU commission's (Web EU, 2016) description: 'The recent shift towards open innovation has resulted in increased flows of knowledge and new types of cooperation' (Web EU, 2016). Each of the three elements in the knowledge triangle represents one type of knowledge. Together, these elements bring innovation as new knowledge is created.

The following section presents a chronological history of FM and our reflection on the knowledge triangle.

2 A brief history of FM from the 1960s

2.1 The early years – From property management to FM

The end of the 1960s saw a major shift in property management and city development, from a post-war culture and faith in progress where everything should be modernize to redeveloped and preservation. The post-war planning ideals of the modern cities included new buildings, effective infrastructure, more cars and open green areas. During the 1960s, old buildings and old urban city structures had to be demolished to give room for the new city developments with areas for work, living and green fields separated from brown fields and heavy infrastructure and industry.

The shift in the 1970s in Northern Europe and the US was typically driven by young people, as a grass roots movement, interested in the use and preservation of existing buildings and city areas, focusing on historic values and cultural aspects. Qualified architects and planners began to work with restoration and transformation of existing buildings and city development, and property and real estate developers became interested in developing existing buildings in abandoned brown areas of city and regional developments. The first famous development projects came to larger cities in the US

and Canada like Fisherman's Wharf in San Francisco, but re-development projects also began in large European cities, such as London, Rotterdam, Barcelona and Oslo. From a Norwegian perspective, this development stimulated education and research to more focus on modernisation and development of existing buildings (Søgnen, 1981).

During the 1970s property management was taken care of by a property owner typically owning a limited number of rental buildings locally in a city or a region (Haugen, 1990a). FM services were managed in two different ways: some were allocated to the owner, while others were allocated to the tenant. The building owner or a lawyer employed a janitor and operations and maintenance staff (carpenter, electrician and plumber). The tenant was responsible for FM services such as cleaning, energy management, reception services, catering and other support services. In-house services and own employees were the norm in both the private and public sectors.

Owing to the need to prevent wear and tear of the building over time and the need for flexibility to accommodate other user requirements, the 1980s also saw an increasing focus on the life cycle perspective on buildings and other assets. Internationally, within building research, the CIB W70 FM and Maintenance focused on this area. The first Norwegian standard for Life Cycle Costing (LCC) of buildings came in 1988. The standard specifies a 60-year perspective for LCC analysis of buildings and gives a principal model for calculating annual management, operation and maintenance costs. In the 1990s, the model was expanded to include costs for major upgrading and modernisation and a possibility to include service costs for user activities. The model and the standard (NS 3454) for LCC calculation has been revised several times over the years (NS 3454, 1988; 2000; 2013; AC 2013), but it remains the basis used for benchmarking and key-figures in the FM sector in Norway (Klungseth and Blakstad, 2016 forthcoming) and the other Nordic countries.

2.2 The rise of FM in practice and research – The 1980s

FM practice was first given its identity by Anglo-American countries. As the first country to form an FM association – the IFMA – in 1980 (Spedding, 1994; Web IFMA 2016b), the US held the first IFMA conference in Washington DC in 1989. In the UK, a growing awareness and acceptance of FM (in both public and private sectors) was seen during the latter half of the 1980s (Alexander, 2003b), and in 1986, Keith Alexander established one of the first Master's programmes in FM at the University of Strathclyde (CIB Information, 2003). Nevertheless, Japan stood out as the country where FM was promoted through the public sector association (Spedding, 1994). The public sector has also been important for the development of FM in the Nordic countries (Jensen et al., 2008; Klungseth and Blakstad, 2016 forthcoming). However, based on Jensen et al. (2008) and Nutt (1999), Klungseth and Blakstad (2016, forthcoming) argues that 'FM (throughout the world) was primarily developed by the private sector'. To a certain extent, this illustrates the three sides of the knowledge triangle: the emergence of practice resulting in developments in education and research.

FM research, which can be traced back to late the 1970s and early 1980s, has made considerable progress. The first CIB W70 FM Conference was held in 1979 in Rotterdam, The Netherlands (Web CIB W70, 2016), and around 1981 (note that the year is estimated), the trade journal *Facilities & Design Management* [1] was established in the US (FDM 1988) and two years later – in 1983 – the first scientific journal *Facilities* was launched in the UK (Web Facilities 2016). The development of the EuroFM organisation began in 1987 and three years later, in 1990, the EuroFM held its first conference – Facilities Management International (Alexander, 1992; Ventovuori et al., 2007).

With regards to academic publishing, 2002 was a significant year: a new scientific journal, *Journal of Facilities Management*, was launched (Web JoFM, 2016) and scientific FM conferences started to

appear regularly. Since then, EuroFM has been held annually, while CIB W70 has been arranged every other year (Jensen et al., 2008). More recently, in 2010, the first scientific open access journal within the field, *International Journal of Facilities Management (IJFM)*, was launched.

At its conception, FM was a practical discipline and Alexander (1992) called for research on FM strategies, organisations, systems (both generic and delivery systems) and FM procedures. In the 1990s, the management focus increased; for example, Price and Akhlagi (1999) looked at the Tayloristic control paradigm and the Learning paradigm. However, at the time, FM was grossly under-researched and unsupported by practical theory (Nutt, 1999). Some researchers advocated that FM needed to 'be more closely aligned to a management discipline' (McLennan, 2004, p. 344) to stand out and suggested that the Service Management theory would be of use to FM research. Other researchers started to call for a stronger link between research and practice to promote FM (Ventovuori et al., 2007). Nutt (1999) suggested that areas of special interest for future collaborative research (between FM practice and FM research) would be managing facility operations and support services. One of the arguments was that the field of FM needed to 'think more for itself, to develop its own contribution to management expertise, with less reliance on borrowed concepts and imported expertise from other professional fields of activity' (Nutt's 1999, p. 12).

With regards to research, Ventovuori et al. (2007) set out to review and classify some of the FM research conducted from 1996 to 2005. The majority of the analysed research had been published since year 2002, and workplace, procurement and sustainability were seen topics of increasing importance. Ventovuori et al. (2007) found that FM articles were typically normative, often written by authors with a practical background and thus called for research that was strongly connected to prior knowledge and research. The normative FM articles could easily form research articles if they included a thorough methodology section and the findings were linked to the existing body of knowledge.

This links to the aim of our article, as we aim to present the Norwegian knowledge development as experienced by the authors and found in the literature. As presented previously, we interpret knowledge according to the three dimensions of research, education and practice.

2.3 The first European FM conference – Glasgow 1990

The first European conference in FM, Facilities Management International, was held on 9–13 April 1990 at the Hospital Inn, Glasgow. The conference was organised by the University of Strathclyde and the European FM Network. Keith Alexander, director for Building Performance Studies, hosted the event. The programme covered six different topics: organisation, building performance, economics, tools, practice and professional development. The main topic 'Organisation' was divided into six sessions: 1.1 Organisational Modelling, 1.2 Managing Change, 1.3 Management Skills, 1.4 Information Management & Organisations, 1.5 Strategic Management of Buildings and 1.6 The Design Brief.

Approximately 350 delegates attended the first European FM conference, the majority (around 200) were from the UK, but large groups from the Netherlands (46), Japan (35) and the US (21) also attended the conference. In addition, one delegate from Norway (the first author of this article), six from Sweden and nine from Germany were also in attendance. The majority of the delegates were facility and property managers and consultants from different fields (Haugen, 1990b).

Discussions were held as to whether to use the title Facilities or Facility Management. The IFMA defined Facility Management as 'the practice of coordinating the people and the work of an organization into the physical workplace'. The British organisation Association of Facilities Managers (AFM) defined FM in 1986 as 'the management of premises as buildings together with the facilities services and people contained therein; this has implications in respect of the initial design, the

maintenance, the day-to-day administration and control of manpower, energy and related resources'. The FM term used by the IFMA and AFM had a wider perspective than building and asset management but had a strong focus on the FM function in commercial office buildings.

The professional development of FM was considered very important as many of the Facilities Managers from the UK and the US stressed the importance of having a stronger position at the strategic level of companies. In order to gain a stronger position for FM, requests were made by professional national organisations such as Norwegian Real Estate and Facility Management Network (NfN) and Confederation of Norwegian Enterprise (NHO), to develop higher education programmes for FM and to strengthen the research on the fundamental problems in FM.

The first European FM conference held in Glasgow in 1990 was the start of a long series of European conferences organised by EuroFM and IFMA during most of the 1990s. The platform established for the Glasgow conference – the knowledge development triangle based on the integration and networking between education, research and practice (as illustrated in Figure 2) – has been an important foundation for professional development of FM until today.

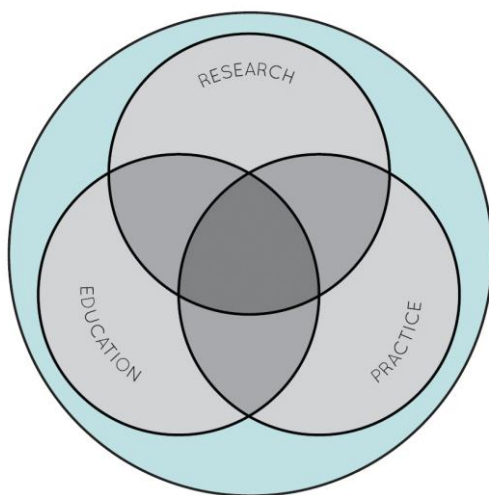


Figure 2. The first logo for the EuroFM network linking research, education and practice.

2.4 The development of FM research

As illustrated in the previous sections, the discipline of FM as a field of research emerged from practice, and FM research remains closely related to practice. In some cases, FM education followed the emergence of FM research. In other cases, FM research followed the emergence of FM education. In Norway, FM education at The Norwegian University for Science and Technology (NTNU) followed research on FM related topics, while at the Oslo and Akershus University College of Applied Sciences (HiOA), FM education came prior to FM research. These are the two Norwegian higher education institutions that currently supply dedicated FM education in Norway and where Klungseth were educated.

To illustrate the development of international FM research since its commencement in the 1980s, the length of the articles and the numbers of citations presented in each article can be used. The references also indicate an article's connection to prior and present knowledge and theory development. These examples, as illustrated in Table 1, shows – in a simple way – the development

from more or less a practice-oriented discipline without any particular theoretical elaboration to a situation where the conducted FM research is based on an increasing theoretical body of knowledge.

The information presented in Table 1 shows that one issue was chosen for every tenth year in *Facilities* – Issue 6 or issue 5/6 – for the years 1983, 1993, 2003 and 2013. A review of the articles from the selected issues shows that the quality of the articles has evolved over the years from short articles, without any references or citing any authors, to articles exceeding 30 pages with a plurality of citations. In 1983, a case study of Westminster Tower in London was presented on two full pages by an anonymous author, without any references (*Facilities*, 1983).

Ten years later, in 1993, the articles usually mention the authors' names. However, the only article that used a citation was elaborating on 'Delivering the Facilities service', and presented its case on five pages using only one citation (Alexander, 1993). Ten years thereafter, in 2003, the use of several citations had become normal practice; five articles presented their cases over 8–11 pages and used between 8–55 references each. The development in the numbers of pages and references has continued, and in the issue in 2013, the articles used up to 31 pages and 68 references to state their cases (*Web Facilities*, 2016). Please note that these statistics would likely be different if all issues of the journals had been included.

Year of publication in <i>Facilities</i>	1983	1993	2003	2013
Volume, Issue	Vol 1, Iss 6	Vol 11, Iss 6	Vol 21, Iss 5/6	Vol 31, Iss 5/6
Number of articles	5	4	5	6
Pages per article	1–6	3–6	8–11	14–31
References per article	0–6	0–1	8–5	30–68
Authors name mentioned	No	Always	Always	Always

Table 1. The evolution of FM research in *Facilities* (Source: Klungseth, 2013)

2.5 Introducing new management models FM, benchmarking and key performance indicators (KPIs) – The 1990s

Researchers and practitioners started development of theoretical models for describing and analysing FM at the end of the 1980s (*Facilities*, 1983; Alexander and Marshall, 1987; Williams, 1987), and as previously mentioned, the first European FM-conference in Glasgow in 1990 laid the foundation for the integrated knowledge development between education, research and practice. Large private companies were looking into new ways of organising FM support services to core businesses and were the first actors to develop FM in not only Scandinavia, but also in other countries. The public sector followed this development by reorganising in-house property and facilities services, and developing a variety of different FM management models over time.

The major driving force in developing new management models was to achieve greater efficiency and a higher quality of FM services (Haugen, 1990a). In the doctoral thesis, 'Facilities Management – Cost effective operation and maintenance', Haugen introduced a theoretical model for cost effective FM (see Figure 3). This model is based on three main elements that have to be coordinated: (1) Organisation of the FM-activities, (2) Target and goals, and (3) Information (data) about the facilities and services. An important part of the model is to find the optimal balance between cost efficiency, the quality of the services and how to secure the quality in maintaining and using the buildings and assets/real estate. When this model was developed during the late 1980s, information and data were lacking for managing FM in a cost effective way.

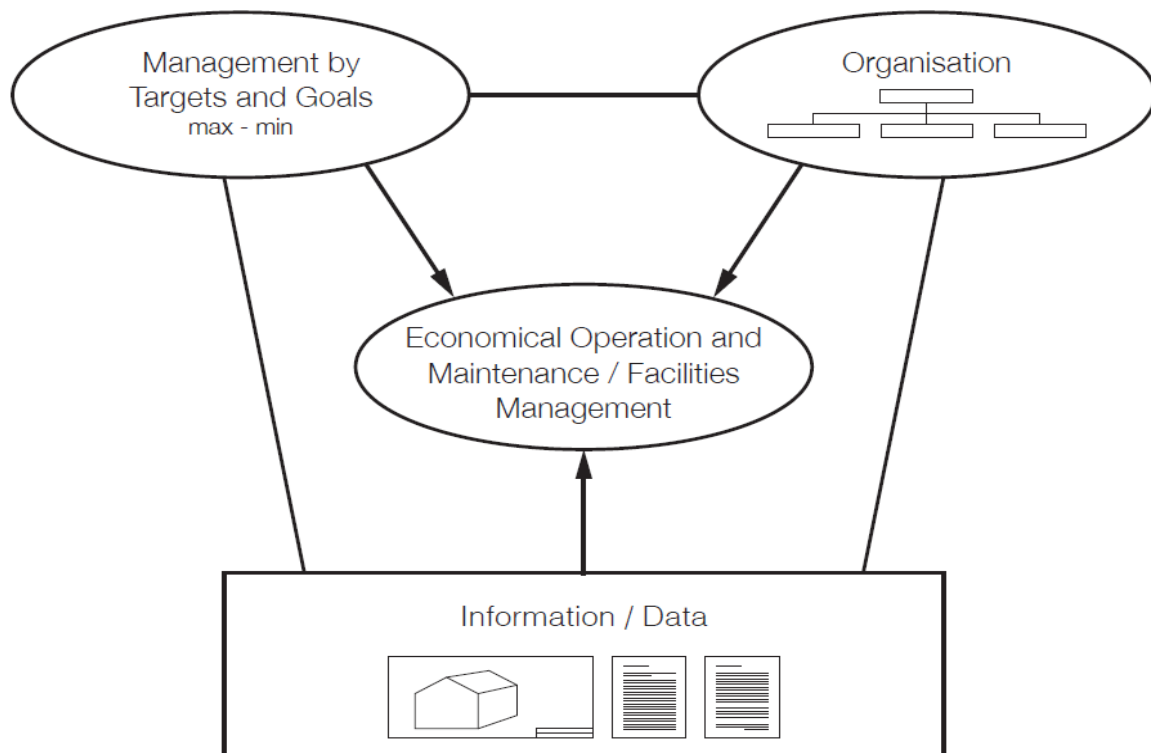


Figure 3. Cost effective operation and maintenance depends on an integrated model linking goals and target, management of the organisation and information/data (Source: Haugen, 1990a).

To achieve greater efficiency and a higher quality of FM services, one has to understand the typical FM organisation with different management levels and different tasks and responsibilities. The different management levels – strategic, tactical and operational – have different needs for data and documentation, as illustrated in Figure 4. At the same time, information has to be correct and coordinated between the three management levels responsible for planning, making strategic decisions and conducting operational activities.

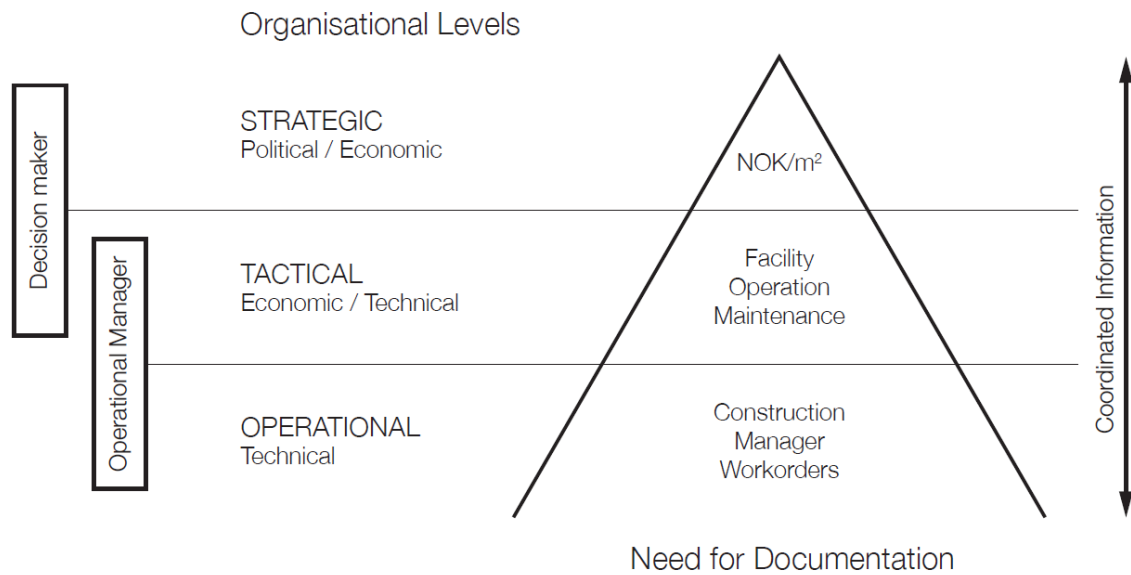


Figure 4. Responsibilities in FM and their corresponding organisation levels (Source: Haugen, 1990a).

The simplified illustration of a traditional hierarchical FM organisation displayed in Figure 4 has been used as backbone since 1990 for explaining and developing FM in practice, education and research. In our research and advisory work in specific projects and for organisations carried out during the 1990s, we used this kind of simplified framework for developing the overall efficiency and quality of the FM services.

Using the different definitions of FM explained in '1.4 Methodology and framework', we developed systems for benchmarking and KPIs for FM services that have been used in different professional networks in the private and public sectors. The following paragraphs present examples and results from a number of case studies in Norway. Some of these studies specifically focused on in-house or outsourcing FM.

Between 1992 and 1994, our research group at NTNU carried out detailed studies of the operational costs and quality of FM services and university buildings owned by NTNU and Sintef in Trondheim. A major task was to compare the operational costs of three large buildings with different organisational models. For two of the buildings, most of the FM-services were carried out by in-house employees and for one building most of the operational activities were outsourced to external service providers (Haugen 1994, unpublished project memos). Our assumption and research question when starting the detailed survey was that the in-house model would be less cost effective compared to outsourcing the FM-services. During the research project carried out in close cooperation with FM professionals from NTNU Real Estate and Sintef, we had to develop detailed cost accounting systems to be able to register cost and activities as part of the benchmarking. The benchmarking could build on a further development of the Norwegian standard (NS 3454) for the LCC of buildings with supplementary specifications for a number of the FM services, which are not linked to the buildings and other built assets.

The Norwegian Real Estate and Facility Management Network (NfN) was established in 1992 with large international companies as active members (Haugen, 2003b). The network developed the traditional in-house management of properties and service management into a full FM function as an operational, tactical and strategic level within the company. This network with an upper limit of approximately 30 active member companies carried out the first benchmarking studies of FM in the mid-1990s. This development was also carried out in close cooperation with professionals in research and education, involving a number of Master's theses. After the first two years of development, testing and reaching consensus for a common benchmarking system with a specified number of KPIs for FM, the network established an annual reporting system for KPIs that has now been in operation for 20 years.

Benchmarking and development of KPIs for FM and real estate have also been developed for the public sector (municipalities and in the governmental sector), and consultancy companies have developed benchmarking and KPIs for different clients in the private and public sectors.

3 In-house or outsourcing as part of the FM history

The client-supplier model developed from the 1990s is becoming increasingly common (Boge and Nielsen, 2015). According to Haugen (2003a), the public FM evolution in Norway was moving slowly in the 1990s. This statement from an article in a special issue dedicated to public FM; the first volume of *'Nordic Journal of Surveying and Real Estate'* (published in 2003). The special issue included articles focusing on the two concepts of contracting out and managing in-house FM services in Norway, Finland, Sweden, The Netherlands, the UK and the US. The following describes the outcome of these articles. For Norway and the UK, additional studies are also included.

In Finland, municipalities had 78% in-house services and 22% outsourced services (Leväinen, 2003). Cleaning was one of the lesser common services to outsource, forming only 6% of the outsourced services. However, when the outsourced services were distributed according to cost, cleaning represented the highest cost most likely because it is labour intensive. The client-provider model has been increasingly applied to the Finnish in-house services.

In Sweden, the use of internal client-provider models was increasing, and Bröchner (2003, p. 45) gave the following reason for this: 'Influences from the UK (notably the principle of compulsory competitive tendering, CCT) led to experimentation in the early 1990s with a growth in internal contracting arrangements in Sweden.' As a result, internal units had to compete with external providers. Swedish municipalities had been outsourcing single services (common for the 1990s) and all property management (occurred already in the late 1980s) and establishing their own municipal company. A survey conducted at the end of the 1990s showed that 50% of the Swedish municipalities were outsourcing services. Bröchner (2003, p. 50) stated in his concluding remarks that 'somehow, the external provider must be more efficient than in-house providers of services. A closer look at a list with arguments for and against outsourcing in general reveals that lower costs, higher quality and other desired effects arise through better access to knowledge of routines, front-line technologies and more efficient information systems'. Bröchner (2003, p. 50) continued by explaining that 'it is probably so that major cost reductions that are sometimes reported when services are outsourced for the first time should be explained mostly by effects of the initial effort of specifying requirements on the contractor'.

Outsourcing was also increasing in The Netherlands at the beginning of the new millennium (van Wagenberg, 2003), and renovation of buildings and cleaning were commonly outsourced as single services. The outsourcing rate for cleaning services in Dutch municipalities rose from 91% in 1999 to 95% in 2000. According to van Wagenberg (2003), the Dutch municipalities are required by law to assess the cost of and benchmark their activities with other municipalities. The Eindhoven municipality was given as an example where 81% of the cleaning was contracted out, 5% was self-produced and 14% was partly contracted out.

In the US, public services were not only outsourced, but they were also privatised – mostly at the local government level, but also at the state and federal level. The three most commonly privatised services in 1995 were vehicle towing, solid waste treatment and building security (Zumpano, 2003). The delivery systems in use in the US for outsourced public services included contracting (most common), franchising, concessions, vouchers (as food stamps), grants, subsidies, volunteerism (under-reported), private donation, public-private partnership and asset sales. According to Zumpano (2003, pp. 98–99), ‘the forces and factor contributing to the devolution of public services to the private sector are common to all countries. Governmental budgetary constraints and the need for greater cost containment, along with calls for greater governmental accountability continue to fuel interest in outsourcing and facilities management.’ Zumpano (2003) expressed concern for the increasing privatisation rate and questioned the benefit to the citizens and the ‘true cost of privatization’.

In the UK, FM in local authorities has traditionally been perceived as an in-house support service that is a prime candidate for contracting services out. Alexander (2003a) examined 10 UK local authorities (that were among the 20 top local authority websites in 2000) and found that only 35.5% of municipal FM services was outsourced and that cleaning, including allied contracts, was mainly retained in-house (around 60%). He emphasised that the most important aspect of public FM is the ‘contribution that facilities make to the delivery of public services and the creation of an enabling environment and services that respond to the democratic need of citizens and nurtures a strong, healthy community and thriving local economy’ (Alexander, 2003a, p. 72).

According to Clark and Rees (2000), the UK’s local authorities view FM as an internal function with little impact on meeting the needs of the end user. In 1999, the same authors investigated the FM structure among local authorities and found that 38% of the UK’s local authorities used a traditional separate support services, 33% used a partly integrated FM department and 29% had fully integrated FM services. Among the local authorities that had either a partly or a fully integrated FM structure (62% of all the authorities), Clark and Rees (2000) found that 98% reported directly to the chief executive or to the level just below, and 88% of the ‘FM heads’ reported directly to the council committee. Clark and Rees (2000) also found a remarkable variation in the structure of FM within the UK’s local authorities that did not have a fully integrated FM service; 50% had their services spread over two to three departments, whereas 12% of the authorities had FM services scattered over six to nine different departments.

Atkin (2003) identified six different possibilities of how to organise FM: in-house, separate company (reconstitution of the in-house team), managing agent, managing contractor, total FM and agencies (‘off-the shelf’ – to cover temporary manpower need). Atkin and Brooks (2009) provided knowledge on how to conduct good FM without addressing an organisational model for FM to any particular extent beyond the fact that FM was a non-core business that can be in-house or outsourced.

Barrett (1995), however, emphasised that 'there are no hard and fast rules concerning what should be kept in-house and what should be contracted out. Some organisations favour a totally in-house option, while others literally contract every service possible and then there are those that will use a combination' (pp. 35–36). Nevertheless, Barrett (1995; 2000) and Barrett and Baldry (2003) developed one generic FM system model illustrating an ideal FM organisation, if built from scratch. This model divides FM into two parts: strategic and operational.

In Norway during the 1990s, a number of new ways of organising municipal property management were developed (Haugen, 2003a). Operational staff (janitors, cleaners and catering personnel) were employed locally at the individual school or healthcare facility, and the more periodic and long-term activities (maintenance and modernisation) were taken care of as a central function in the municipality. From mainly decentralised models, the 1990s saw a development into partly decentralised models and to centralised property management, where the operational staff (janitors and cleaners) are employed by the municipal property management unit, and although there was a tendency to source out services, most of the municipalities chose to retain most of the FM services in-house, or they separated the FM services from the core business by establishing a municipal enterprise or a share-holding company wholly or partly owned by the municipality. Overall, out-tasking was more common than outsourcing.

A further development in the municipalities was the introduction of the client–supplier model (called the purchaser–supplier model in NPM) which splits the FM responsibility between the owner, the manager and the end users. The owner keeps contact with the end users (who pay the owner rent for the facilities they use) and acquires the needed services from a supplier on a contract basis that defines the level and the price of the service. In this model, the supplier can be an in-house department, a wholly or partly owned public company or a public or private enterprise (Haugen, 2003a). The client–supplier model had a greater focus on the core business of the local authorities and was anticipated to reduce the administrative and operational organisation. However, the client–supplier model had issues regarding long-term gains in productivity (Haugen, 2003a). Both in terms of NPM and in FM, the Norwegian public sector used to be regarded as a late developer (Klungseth, 2015); however, this has changed over the last 20 years as the sector has adopted more marked orientations through implementation of the internal rent model (Lædre et al., 2016, s.3).

Other studies have shown that local conditions are still influential in FM developments in the Nordic countries. This is illustrated by Dannemand Andersen et al.'s (2012) foresight study on trends and challenges: 'It is remarkable that none of the megatrends are significant in all four countries' (p. 315). This study, by Dannemand Andersen et al.'s (2012), can be described as a collaboratory project between practice and research. With regards to education and practice, the development of academic literature in Scandinavia has been dependent on its link to practice. The first FM book in a Scandinavian language was published in Denmark by Per Anker Jensen in 2001 and was predominantly based on Jensen's experience as a facilities manager (Jensen, 2012b). Seven years later, in 2008, the first FM book in a Norwegian language was published by Tore Haugen (Haugen, 2008). This publication was the first in a series of research based pamphlets published by the NTNU in the decade that followed. Later, the third edition of Jensen's FM book in a Danish language evolved into a book tuned to strategic FM and based on research (Jensen, 2012b).

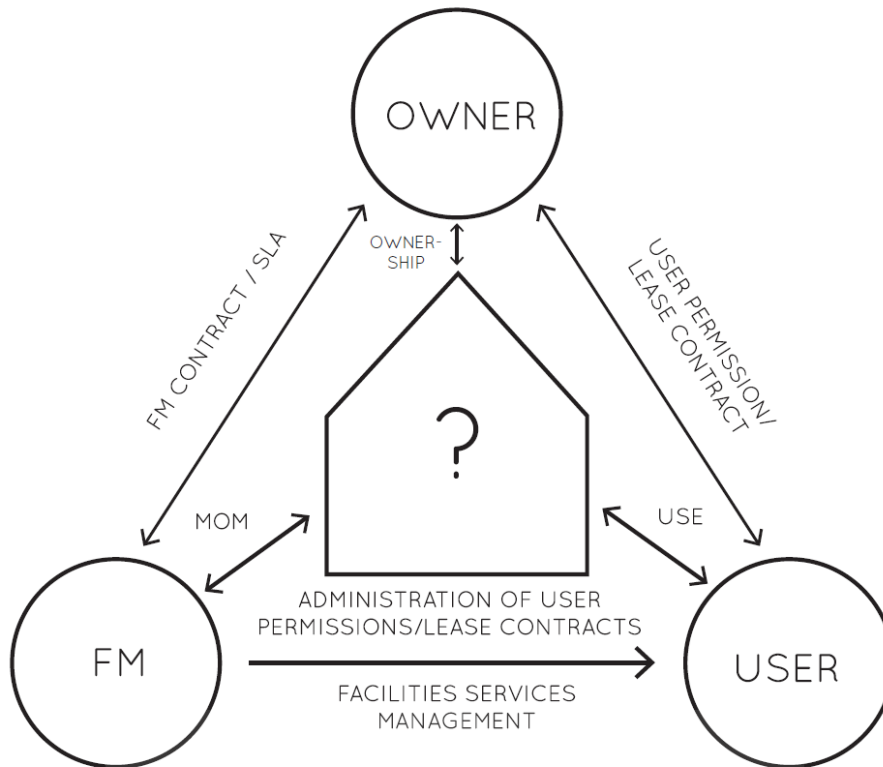


Figure 5. The three main actors in FM: the owner, the supplier and the user/tenant (Source: Haugen, 2008). (MOM: Management, Operations and Maintenance, SLA: Service level agreement)

The introduction of the client–supplier model in municipalities seemed to have a positive effect from a short-term perspective. Moving towards a situation where property and facility services seem to be a free commodity for many in the municipality and only expenses (the unnecessary evil) on the overall budget, the model places focus on the facility services delivered, the quality of the services, the need for service level agreements and the real costs related to property and facilities services. In a way, the model displayed in Figure 5, attempts to bring in a real business situation for the property and facility services, while giving the top municipal management full economical control (cutting budgets and transferring capital to other sectors). Claussen (2003) who based the research on experiences from use of different models in two large municipalities in Norway, argued though that the client–supplier model tended to be ineffective in the long term.

3.1 Resent research into public FM – 2010 onwards

The most recent research contribution by NTNU with regards to public FM addressed cleaning services. The major contribution of Klungseth’s (2015) PhD thesis was to bridge a research gap on cleaning in national and international FM research. The thesis focused on cleaning services in local authorities, while the incorporated topics touched upon issues of relevance for settings outside local authorities, such as whether organisations choose to produce or procure their services. In Norway, the public sector is considered to be of major importance, as Norwegian local authorities tend to own and manage their own buildings. These buildings represent significant parts of the national capital asset

(Bjørberg, 2009). In a lifetime perspective, the most significant costs for buildings are their operative services, with cleaning taking its fair share. However, few are aware of how cost-demanding and labour intensive cleaning services really are (Klungseth and Blakstad, 2012; 2016 forthcoming), considering that the cost for labour can represent between 70% and 95% of the cleaning cost (Trygstad et al., 2012; NHO Service, 2009; Stoy and Johrendt, 2008; Ryan and Herod, 2006; NOU 1993:10; Campbell, 1990; Facilities, 1984; Byggeriets utviklingsråd, 1983) and that cleaning has been found to represent a larger share of costs than energy, equalling up to as much as 49% of the building's operational costs (Klungseth, 2015).

Overall, Klungseth (2015) addressed the issue of retaining services in-house or outsourcing them through a threefold strategy describing and exploring the objective of studying organisation and practice in local authorities. The threefold strategy was based on a pragmatic worldview inspired by positivism and constructivism. The study started with a thorough and all-embracing epistemological literature review covering a 200-year period of research on cleaning in a Norwegian context (Klungseth and Olsson, 2013). This was followed by a national survey in 2010 (Klungseth, 2014) asking all Norwegian local authorities how they organised and planned to organise their local authorities with regard to FM, particularly with regard to cleaning. Third, descriptive case studies were conducted within two local authorities (Klungseth and Blakstad, 2016 forthcoming), one from Norway (Klungseth, 2012), facilitating a more in-depth understanding of the situation within one of Norway's larger local authorities, and one from the UK (Klungseth and Blakstad, 2012), to obtain an external view of the Norwegian situation. These two national contexts of Norway and the UK have similarities, such as the type of governmental system. These contexts also have known differences; for example, in Norway, it is voluntary to expose public service production to competition, while in the UK, local authorities are obliged to only partially expose service production to competition. Based on the national Norwegian survey and survey reports from the UK, local authorities in both Norway and the UK prefer to retain their cleaning services in-house on a national scale. To Klungseth (2015) this was an unexpected finding, indicating that obligatory exposure to competition does not necessarily affect strategic choices as much as anticipated.

3.2 Developments in municipal FM organisations in Norway

The national survey, presented in Klungseth (2014), confirmed the indication of Norwegian municipalities' [2] preferences as identified in the literature. In Norway, both FM and cleaning are most commonly retained in-house as fully centralised departments. The results indicated further that private providers are more commonly used for FM organisations than for cleaning organisations, and that Norwegian municipalities in general, irrespective of size (as a measure of population), use private and voluntary providers to a limited extent to supplement their in-house services, and even less to replace their in-house services.

The Norwegian municipalities' 2010 responses related to planned changes in management models indicated that changes at times relate more to tactical or operational interfaces than to strategic choices concerning which models to use (Klungseth, 2015; 2014). For example, future plans were at times associated with changes within the in-house management, such as employing a cleaning manager, dividing the service into cleaning areas or developing collaboration between individual cleaners. One of the more strategic plans for the cleaning involved transforming the centralised

department (FCD) into a municipal undertaking (KF). The survey also indicated that planned changes in FM organisations could be related to tactical, operational or strategic choices. The responses on possible strategic plans for future changes could involve an increased use of decoupled, market-inspired models, as illustrated in Figure 6. According to Klungseth (2015), cleaning organisations can be expected to follow this development.

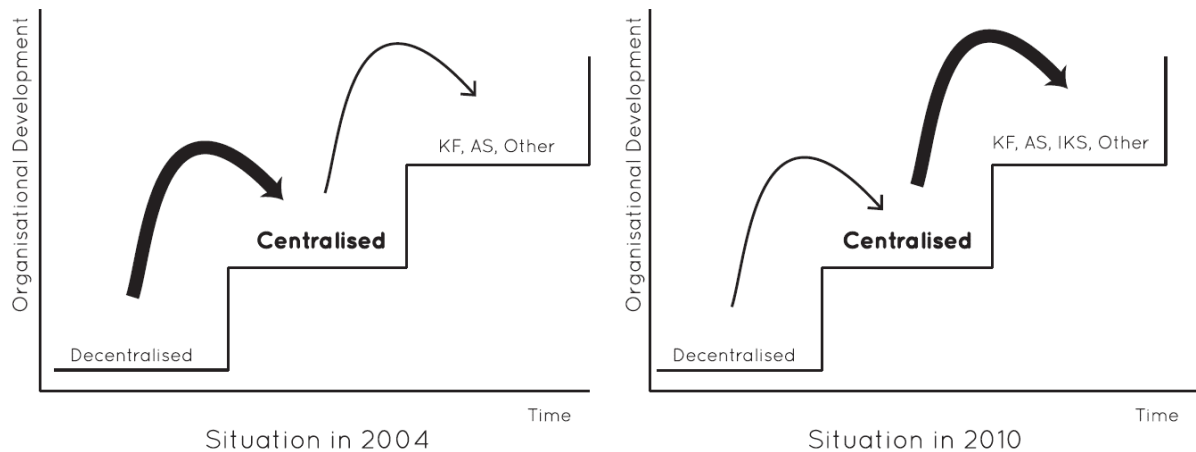


Figure 6. Developments in municipal FM organisations in Norway (Source: Klungseth, 2015) (KF: municipal undertaking, AS: limited company and IKS: inter-municipal alternatives).

Unexpectedly, Klungseth (2015; 2014) found that Norwegian local authorities were not the only authorities embracing in-house provision. Apparently, the UK's local authorities have the same preferences for cleaning services. The high occurrence of in-house cleaning services in the UK's local authorities (89%–87%) was particularly unexpected, as the UK is known for its private sector orientation and as an NPM reformer. According to Rhodes (1994) and Greenwood and Wilson (1994), public cleaning services in the UK have been outsourced since 1968 and exposed to competitive tendering since the late 1980s. Based on Klungseth (2014; 2015) and Klungseth and Blakstad (2016, forthcoming), the difference in relation to voluntary or compulsory competition does however appear to affect what is happening inside public organisations.

3.3 Case studies from Norway and the UK

The predominant conclusions from Klungseth's case studies illustrated that cleaning can be structured and managed differently in different local authorities and countries. On a strategic level, the cases did not exhibit any particular differences in their approaches to procuring and producing services, except for what was obligated. However, this difference emphasised the different approaches to strategies, monitoring and operational practice. While both cases studied did most of their cleaning themselves, the case from UK seemed to emphasise strategic perspectives, while the Norwegian case emphasised operational perspectives. Accordingly, Klungseth (2015) suggested that cases may be referred to as 'top heavy' and 'bottom heavy'. In Figure 7, these perspectives are denoted by the shaded parts of the triangles representing the case organisations. Figure 7 is modified; thus, for the full version of the figure, see Klungseth (2015).

Figure 7 illustrates that the UK case in Klungseth’s PhD thesis had a clearer strategic focus and was less concerned with the practical details than the Norwegian case. As an example, the actual ‘cleaning technique’ resembled the technique described in Norwegian research from the late 1980s. Another example at an operational level is that the two cases had quite different approaches to the service supervisors’ responsibilities. In the UK case, one service supervisor could be responsible for 150 cleaners and aimed to see each cleaner once every three months. By contrast, as the Norwegian case emphasises the operational aspects of education and close relations, the Norwegian service supervisors were responsible for 25 to 30 cleaners and scheduled monthly gatherings for all their cleaners to educate them and address operational issues, such as the use of up-to-date technology and collaborations with individual building users. Based on Klungseth’s (2015) literature reviews, the Norwegian case resembled the pre-2000s in Norway, whereas the UK case resembled operational cleaning practices as they were conducted in Norway before the 1990s.

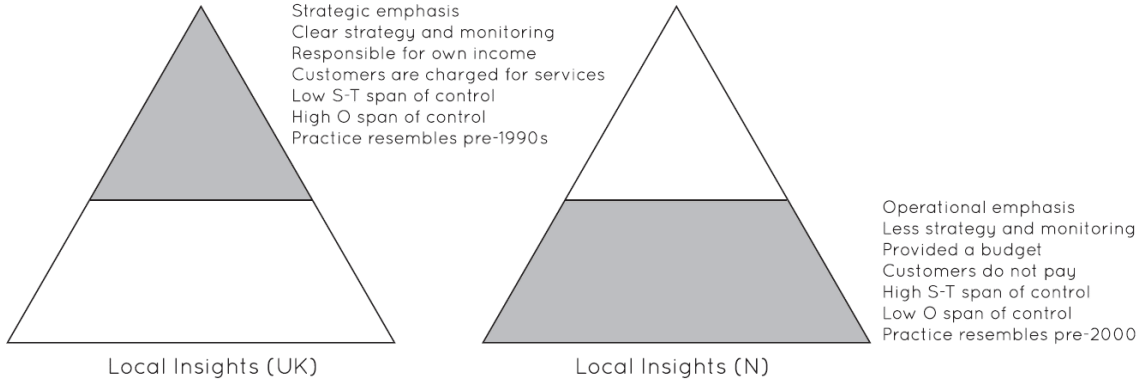


Figure 7. The case organisations from the UK and Norway (Source: Klungseth, 2015).

4 Concluding Discussion

This article has reviewed 25 years of research and development of management models in the public sector FM. The results show that FM is still a young discipline, but over more than 25 years, it has developed into a recognised and important service activity in the private and public sectors. The professional development in practice has developed significantly; FM has grown into an academic discipline based on the development of higher educational programmes, which are now offered in many European countries and worldwide, and as shown in this article, through the development of research.

In our search for ‘what do we know’ or more precisely ‘what have we learned’ about in-house or outsourced FM services after 25 years of research and development, we assumed that learning and knowledge development about FM have been based on an interactive cooperation between practice, education and research. This reflects the basis for establishing EuroFM and other national associations 25 years ago, where actors in practice and in education worked together to develop the professional and academic fields of FM.

Representing a senior and a junior researcher in FM with 25 years between publishing our Doctoral theses, we claim to have a good insight into FM development in Europe, even though our research examples and in-depth case studies mostly relate to Norway and the Nordic countries. Active participation in EuroFM and other international networks since 1990, where we as researchers and educators try to challenge and cooperate with the practice field, is an important part of the integrated knowledge development. Another important part is the development of FM education starting with single short time courses for professionals in the 1990s in Norway and introducing new Bachelor's programmes (since 2003 at [HiOA](#)) and Master's level programmes in Real Estate and FM (since 2005 at NTNU). The three-year (part-time and experience-based) Master's programme at NTNU has especially created an arena for learning between practice, education and research. [NTNU](#) also offer a two-year full-time programme for students without experience, which started in 2006.

The following lists our key findings:

- The case studies and development projects described in this article are all done in close cooperation with professional organisations in the private and public sectors. Some of the projects and studies are documented in academic research publications. Other development projects have limited open documentation, as they have been used for internal organisational development.
- There has been a rise of FM knowledge in practice and research over the last 25 years, with innovation, professional development and recognition of FM. The studies and examples in this article show evidence of an inter-connected knowledge development for managing FM services. This development has been possible through the close work between education, research and practice.
- The theoretical models for understanding FM and managing FM-services have created a backbone for educational developments and for developing FM in practice to become a profession on strategic, tactical and operational levels in the public and private sectors.
- Our studies from Norway, Scandinavia and the UK are found to be relevant for other European countries and are anticipated to be relevant globally. However, the studies referred to in this article contain very limited empirical data regarding the efficiency and quality of the services that can be used in benchmarking across national borders.
- The search for knowledge development regarding in-house or outsourcing FM services in the public sector has shown that the development and learning about organising cleaning services are relevant to other FM services and partly also to FM Services on a generic level.
- Soon the FM community will no longer be able to claim that FM is suffering from an identity crisis. The process of transforming the EN-15221 series to ISO standards started in 2013 (ISO/TC 267). Thus, one can expect that the worldwide FM community will soon reach an agreement on the definition of FM. Presently, the first international ISO standards are under development for FM and are likely to be published in November 2016, bringing the global FM community closer to a common understanding of FM. In this process, the definition of FM in the current European standards is merging with that held by IFMA. The forthcoming global definition is likely to emphasise improvements of core businesses productivity and people's quality of life. As before, the focus is also on people, places and processes within the limitation of a built environment.

- As stated by researchers in the mid-1990s, there are no hard and fast rules concerning what FM services should be kept in-house and what should be contracted out. The same can be said 20 years later; there is no quick answer to the issue of in-house or contracted out FM services.
- The choice for FM in practice, whether fully or partly to produce services with internal resources or to make arrangements with external suppliers, is an important strategic decision regarding choice of a procurement strategy for the company or organisation. The decision is not necessarily about outsourcing or in-house, but is rather about strategic sourcing and management of the needed services.

As a final remark, we conclude that after 25 years of research and development, we know more about how to procure and manage FM services and how service quality and efficiency can be obtained.

Endnotes

[1] The trade journal Facilities & Design Management [0279-4438] stopped publishing in 2003. See Anonymous (2003). Editorial: Farewell for now, FMs. Facilities Design & Management Vol 22, Iss 3 (Mar 2003), page 6.

[2] Municipalities represent the second tier of local authorities. For further clarification, see Figure 1 in Klungseth (2015), which is available for downloading here: <http://hdl.handle.net/11250/2364934>.

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