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The FM Sector and its Status in the Nordic Countries

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The FM Sector and its Status in the Nordic Countries



Report 21.2010

DTU Management Engineering

Per Anker Jensen
Per Dannemand Andersen
October 2010

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1. Introduction

The purpose of this document is to form a basis for foresight workshops about FM in the Nordic countries during 2010 and 2011 as part of CFM's Nordic FM Foresight project culminating at CFM's Nordic FM Conference 22-23 August 2011.

The overall aim of the Nordic FM Foresight project is to develop a common research agenda for increased collaboration on FM related research in the Nordic countries.

In this context we define foresight as '*.. the process involved in systematically attempting to look into the longer-term future of science, technology, the economy and society with the aim of identifying the areas of strategic research and the emerging generic technologies likely to yield the greatest economical and social benefits*'¹.

Per Anker Jensen, head of CFM, is responsible for the project, which is carried out in collaboration with Per Dannemand-Andersen and Birgitte Rasmussen from the section on Innovation Systems and Foresight. Both CFM and this section is part of DTU's Department of Management Engineering.

The document has been prepared by Per Anker Jensen and Per Dannemand-Andersen based on their combined specialist knowledge about FM and foresight research, respectively. Besides that, the document is based on CFM's research as well as various existing material. This includes a database of documents from EuroFM's earlier FM Futures project provided by professor Keith Alexander, who was managing that project. Material from a working group under NordicFM on a "Common understanding of FM in the Nordic countries" has also been utilized.

¹ B. Martin

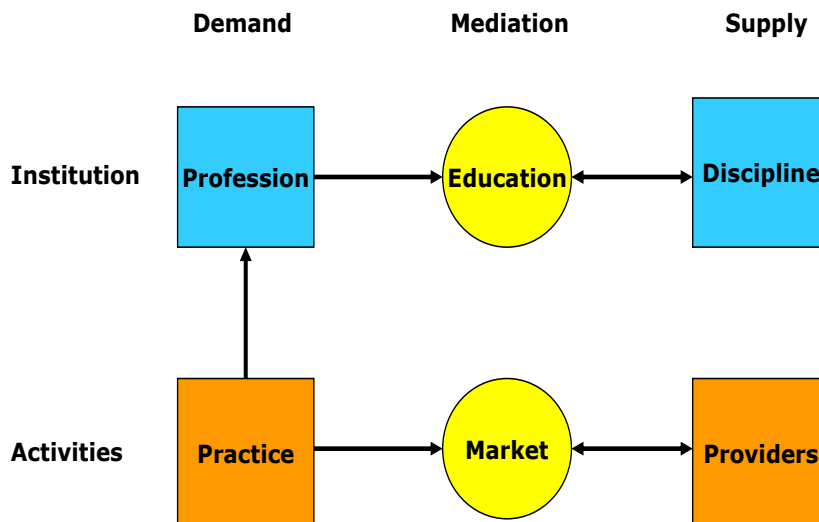
2. The Emergence of the FM Profession and the FM Practice

Facilities Management has developed gradually to become a distinct field of practice, profession, market and academic discipline over the last 20-30 years. Most of the activities in FM practice have existed for much longer but they have become increasingly more important and the need for a more professional management of these activities has emerged. This has led to the establishment of a profession of engaged practitioners, who have joined together in associations to develop the field and disseminate knowledge about it. At the same time a change from mostly undertaking the activities in-house with own employed staff in the organisation towards an increasing part of the activities are being undertaken externally. This has occurred through outsourcing etc. and has led to the development of a fast growing market. Many provider companies have been established and expanded within different branches of industry.

Together this development has created a new and dynamic sector leading to a need for a higher degree of professionalization, which has been met with the establishment of educations at different levels as well as research and development activities.

The development is illustrated in **Figure 1** starting with practice in the bottom left corner.

Figure 1: The development of FM with activities and institutions (Jensen, 2010)

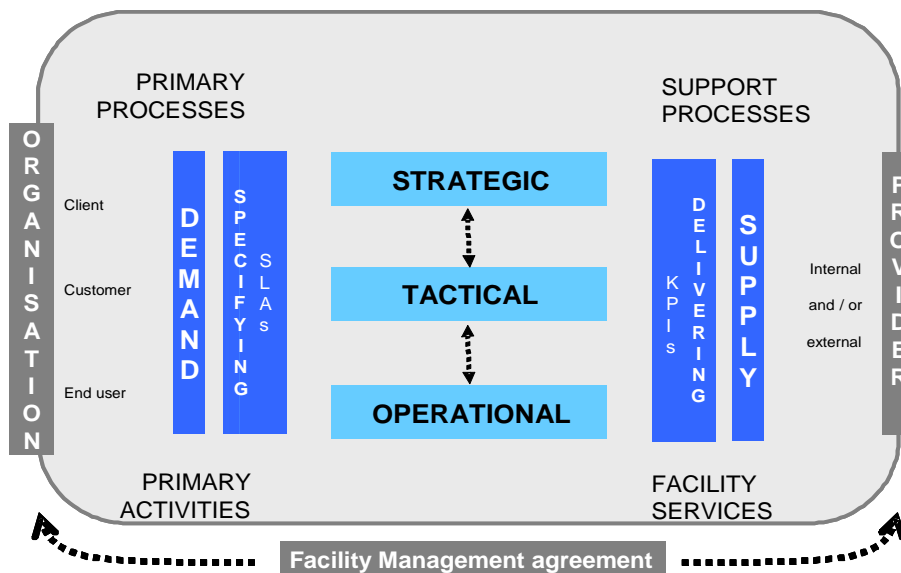


FM definition

A European standard from 2006 has the following definition of FM: “The integration of processes within an organization to maintain and develop the services which support and improve the effectiveness of its primary activities” (DS/EN 15221-1, 2008). The scope of FM can according to the standard be grouped around client demands summarised under two main headings: Space & Infrastructure (S&I) and People & Organisation (P&O).

This is more or less in line with the commonly used distinction between “hard FM” and “soft FM”. The standard includes in an annex a management model of FM shown in **figure 2**. The model distinguishes horizontally between primary processes and support processes and horizontally between strategic, tactical and operational levels of interaction.

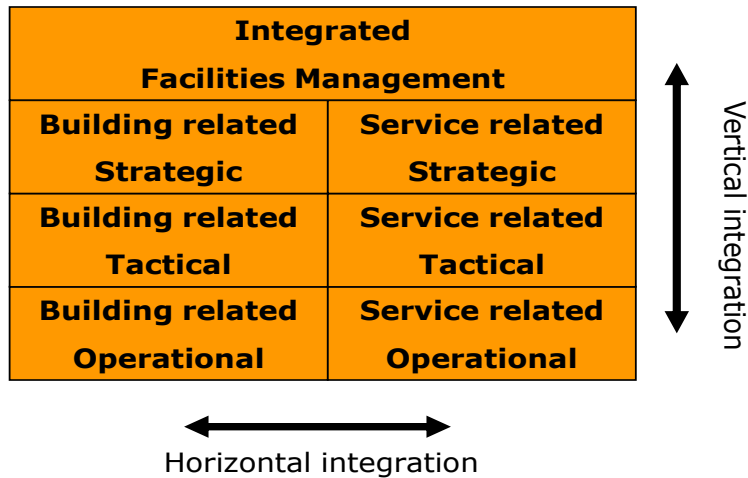
Figure 2: Management model for FM (DS/EN 15221-1, 2008)



FM practice

The development of practice in corporations has typically started at the operational level and often divided in building related and service related activities. As corporations grow the need for first tactical activities and later strategic activities occur particular for the building related areas. These different activities has often been placed different places in the corporate organization and often based on situational decisions. Over time an increasing integration has occurred both vertically between the operational, tactical and strategic levels and horizontally between building and service related activities leading to the establishment of an integrated corporate FM function headed by a facilities manager. This development is illustrated in **figure 3**.

Figure 3: The development of FM as an integrated corporate function (Jensen, 2008a)



EuroFM’s Research Network Group started its FM Futures project in 2005 and it has included three facilitated workshops in different European countries. The project was managed by professor Keith Alexander, Centre for Facilities Management, Manchester, UK. The overall results are included in the research report “Facilities Management Futures” (Alexander, 2008) and the summary report “European Facilities Management – The next generation” (Alexander, 2009). The reports present the following general picture of the historical development:

1970s	1G	Managed services, outsourcing total facilities management, CAFM	Operational
1980s	2G	Quality management, management agency benchmarking, FM processes , FIMS	Tactical
1990s	3G	Partnering, re-engineering processes, knowledge management product innovation, sustainable facilities management	Strategic
2000s	4G	Business processes, open innovation, usability service excellence, transformational outsourcing,	Transformational

Researchers from the UK (Pathirage et al., 2008) have presented a general development of FM with the following four generations:

1. Within the first generation of FM, it was merely considered as an overhead to be managed for minimum cost rather than optimum value. FM was characterised as working in isolation to the rest of the organisation and was criticised for the lack of applicability of the output of the FM function to the achievement of organisational effectiveness.
2. The integration of a FM process perspective was characterised during the second generation of FM. Within this, FM promoted the process focus between the

organisation's individual businesses and the FM organisation by making FM activities within the organisation a continuous process.

3. In the third generation, FM is seen as more concerned with resource management, concentrating on managing supply chain issues associated with the FM functions. This changing focus in FM as an integrated resource management process, stressed the importance of understanding FM as a business context.
4. In order to achieve the much needed alignment between organisational structure, work processes and the enabling physical environment, the organisation's strategic intent must clearly reflect the facilities dimensions in its strategic business plans, which represents the fourth generation.

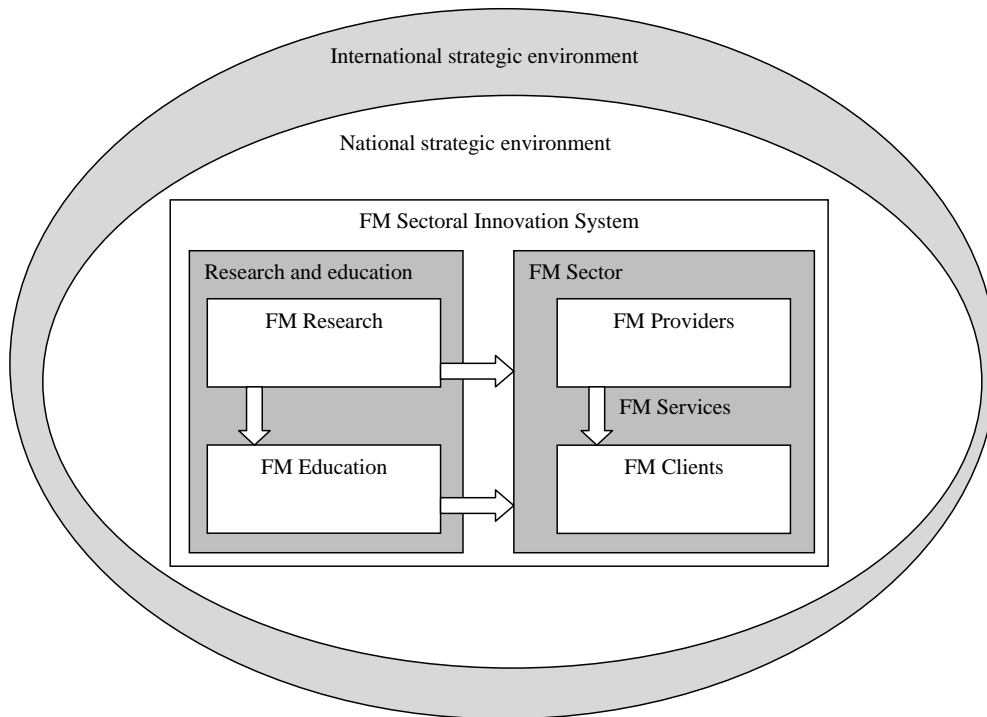
3. A Simple Model for the FM Sector

Several models of Facilities Management have been developed in order to assist or guide different analytical needs.

Earlier in this note a simple (science sociology) model was presented for the development of FM with activities and institutions. A Facility Management relationship model has been suggested in the CEN/TC 348 document to illustrate the linkages between FM processes, FM products and the sector's cost and income structure.

For the purpose of a FM Foresight a simple (sectoral innovation system) model of the FM sector and its strategic environment is a useful tool to guide the analyses and processes, see **figure 4**.

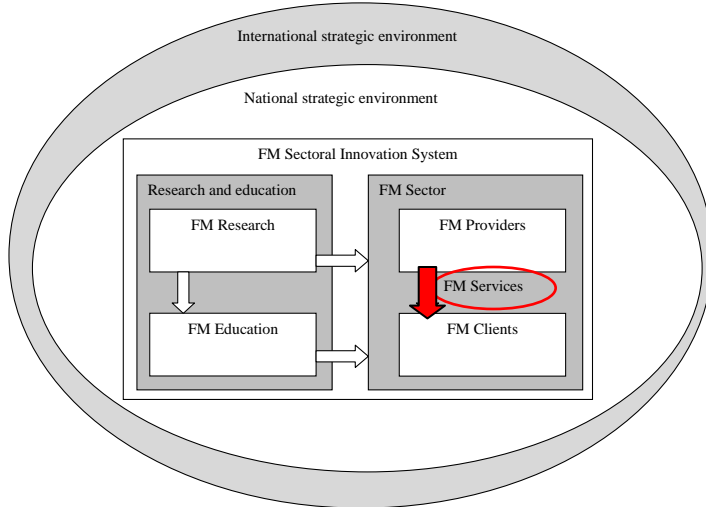
Figure 4. Sectoral innovation system model of FM



The FM sector in this model is consists of a number of FM providers that provides FM services to their customers or clients. Public FM research and FM education provide new (research based) knowledge and professionals (graduates) to the sector. The sector and the affiliated research and education institutions exist within a national (e.g. Danish) and international strategic environment.

In the following pages we will give brief introductions to each of the elements of this model as a point of origin for the discussions at the workshops.

4. FM Products and Services – and the Market



A new European standard for FM taxonomy has been proposed and is expected to be accepted in 2011. This proposal introduces the term standardised facility products, which are generic facility services that can be compared across organisations and borders. The taxonomy is a classification of the products of FM in a hierarchical structure with associated definitions of the standardised products. In **table 1** the left column state the name of the products in the proposal for a new standard and the corresponding Danish terms used in CFM's survey of the Danish FM market in 2009 are shown in the right column. An appropriate Danish translation of 'Hospitality' has not been found, and this has been divided into the two sub-products: Catering and Reception, contact centre and meeting rooms.

Table 1: Standardised products in the proposed standard and related Danish terms (CEN/TC 348, 2010)

FM products from proposal to new European standard	Danish names used in CFM's market survey
Space & Infrastructure (S&I)	Ejendomsdrift
• Space	• Bygninger og lokaler
• Outdoors	• Terræn
• Cleaning	• Renhold
• Workplace	• Arbejdsplads
• Industry sector specific	• Branchespecifik
People & Organisation (P&O)	Services
• Health, safety and security	• Sundhed, sikkerhed og sikring
• Hospitality	• Catering
	• Reception, kontaktcenter og mødelokaler
• ICT	• IKT
• Logistics	• Logistik
• Business support (Management support)	• Virksomhedssupport (ledelsessupport)

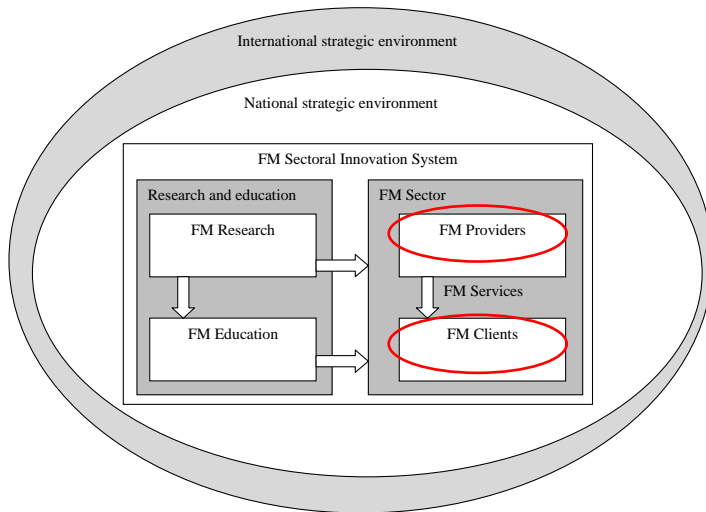
FM market

The economic size of FM in relation GDP is according to a recent German PhD study 4,92% for the potential and 2,48% for the actually outsourced market in the five largest European countries: UK, Germany, France, Italy and Spain. The study uses a model of market types as shown in **table 2**. The pioneer markets are UK and Holland, the developed markets are mainly Central European countries but also Denmark, Italy and Spain, emerging markets includes the other Nordic countries, Poland, Czech Republic and Hungary, and pre-emerging countries are mostly South-East European countries and other East European countries.

Table 2: Degree of outsourcing and growth rates for FM market types in Europe (Teichmann, 2009)

Market type	Degree of outsourcing	Growth rate
Pioneer markets	56,3 %	6,0 %
Developed markets	43,6 %	8,0 %
Emerging markets	32,5 %	12,3 %
Pre-emerging markets	17,5 %	21,5%

5. FM Providers and Clients



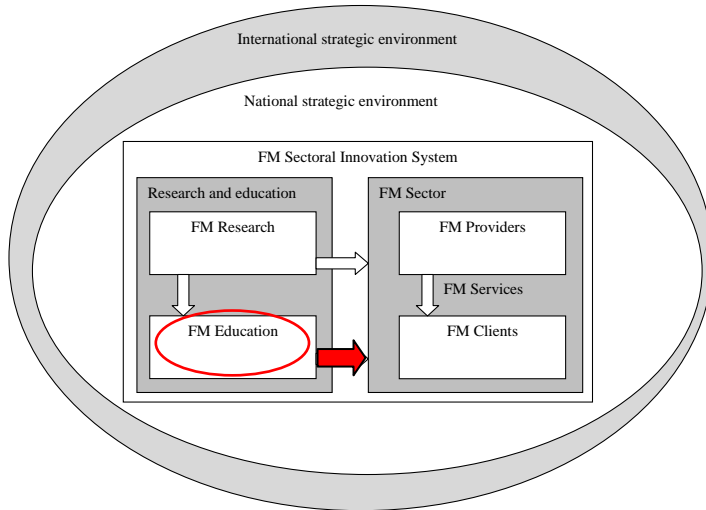
A Danish survey has analysed the facilities management market in Denmark². This survey revealed four main groups of clients (or customers) and ten provider industry branches. See **table 3** below.

Table 3. FM customers and providers

FM customers The four main groups of clients	FM providers The ten provider industry branches
<ul style="list-style-type: none"> • Industry etc. <ul style="list-style-type: none"> ○ National firms ○ International firms • Private service <ul style="list-style-type: none"> ○ Trade and operational service ○ Finance, IT and knowledge service • Public service <ul style="list-style-type: none"> ○ Municipalities ○ Regions ○ State • Housing associations <ul style="list-style-type: none"> ○ Almennyttige ○ Ejer-, andels-, og private udlejningsboliger 	<ol style="list-style-type: none"> 1. Construction and Civil Engineering 2. Catering 3. Real Estate and Renting 4. Finance and Insurance 5. IT Consultancies 6. Travelling Agencies, Cleaning and Other Operational Service 7. Waste 8. Machinery and Electrical Equipment Repair Work 9. Transportation 10. Knowledge Services

² P. A. Jensen (2010), The facilities management market in Denmark, *Facilities*, Vol. 28, No. 7/8, pp383-394.

6. FM Competences – Formal Education



The job profile and key qualification of FM professionals is of a generalist nature and cross-functional oriented. The profession uses knowledge and tools from a number of other professions. Most of the FM professionals have acquired their competences from their practice, but some attempts have been made to describe a more formal competence profile for FM professionals.

The key question for this project is: ‘What should be the curriculum for a formal education in FM?. We here understand curriculum as the set of courses, and their content, that should be offered to students of FM at a university level. The text boxes below lists the competences suggested by EuroFM.

Understanding business organization

1. Understanding the structure and behaviour of organizations
2. Understanding business and organization strategy
3. Developing FM strategy

Managing people

4. People management
5. Communication
6. Working with suppliers and specialists

Managing premises

7. Property portfolio management
8. Understand building design
9. Building fabric maintenance

Managing services

10. Managing building services
11. Managing support services
12. Project management
13. Managing customer services

Managing the work environment

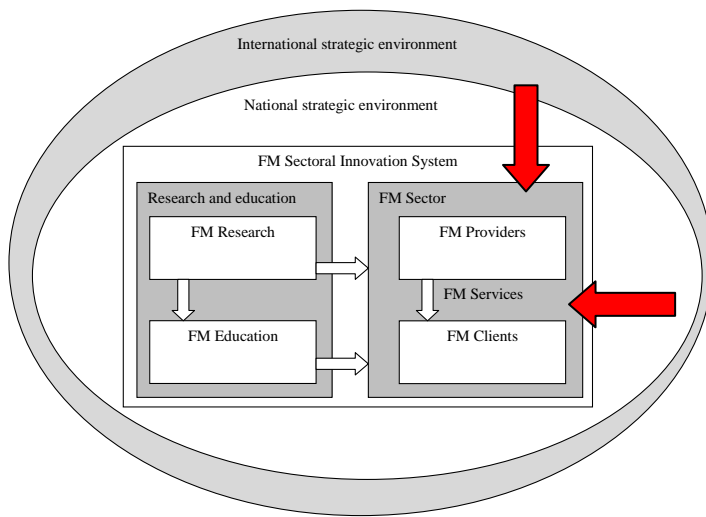
14. Environmental issues
15. Space management

Managing resources

16. Procurement
17. Risk Management
18. Financial Management
19. Quality Management
20. Information Management

7. Megatrends in the strategic environment

This section deals with megatrends in the strategic environment that are going to affect the FM sector during the next 15 - 20 years. These megatrends are mostly outside the influence of the actors within the FM sector. In principle we distinguish between the national (i.e. Danish) strategic environment and the international strategic environment. In practice this distinguishing often is difficult.



EuroFM has held three futures workshops that took place in Helsinki 2005, Manchester 2007, and Zürich 2008. The workshops had variations in focus and methodology applied.

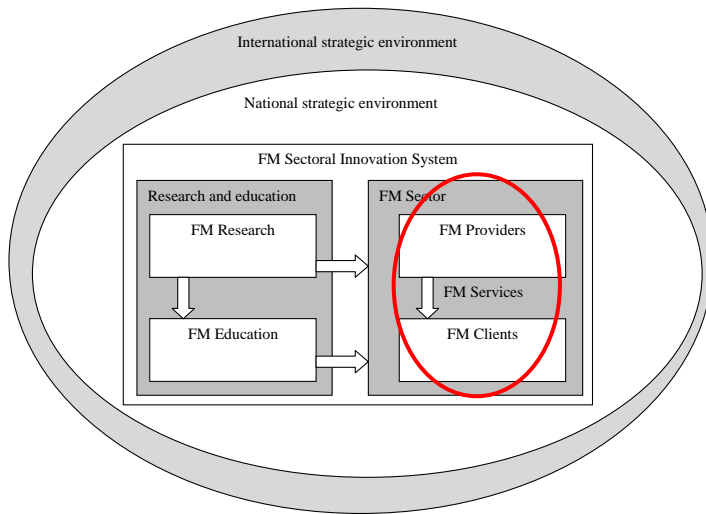
The Zürich workshop took place on 11th November 2008 hosted by Institute of Facility Management, Zurich University of Applied Sciences. The strategic question was agreed as 'what are the major forces of change affecting the future of facilities management and the workplace, and how should the facilities management community prepare itself not to face a future of uncertainty and complexity?' To enable clustering and confirmation of issues and trends an analytical framework called PESTLE was applied. This is an acronym for Political, Economic, Sociological, Technological, Legal, and Environmental. For the use of this note the PESTLE framework is simplified to the STEP framework: Social, Technological, Economical and Political factors. A simplified version of the list of megatrends is shown in **table 4**.

Table 4. Megatrends in the external environment. Based on results from FM Futures workshop in Zürich 2008

STEP category	Megatrend in the external environment
Social	Demographic change – labour shortage Aging population Increased mobility Diversity in society Migration Mix of cultures Change of culture – multi-cultural society
Technological	Information and Communication Technology (ICT) Knowledge management systems Intelligent building systems Faster technological change Security Stronger risk management methods
Economic (incl. market issues)	Globalisation Internationalisation – Europeanization Financial restrictions (budget restrictions) Increasing cost pressure Financial restrictions within the health sector Real estate valuation – opportunity for FM Competition as a new phenomena in the Health sector Individualisation of needs Increasing energy prices More professional customers
Political (incl. legal)	Increased focus on sustainability Consequences of climate changes Stronger role of servicing department

8. Trends in the Development of the FM sector

This section deals with development trends within the FM sector. A trend is in this context defined as an inclination or a tendency that has been observed during the recent few years and that is expected to prevail during the next few (3 – 5) years. These trends are mostly controllable by the actors within the FM sector – or results of a strategic or managerial decision taken by FM actors under consideration of developments in the external environment.

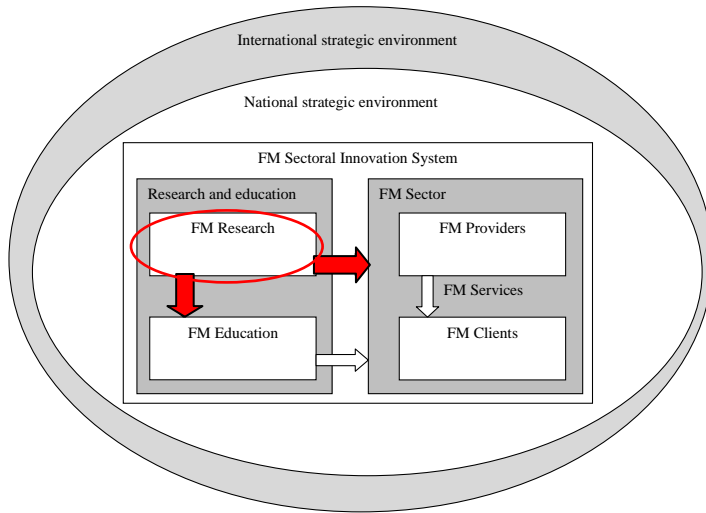


Some of the general current trends which can be observed in the FM sector are:

1. Outsourcing has been a general trend and has probably been getting increased momentum recently due to the financial crisis.
2. A change from mostly single service towards multi-service and increasingly also towards integrated facilities is another general trend
3. A change from operational towards strategic focus has been much argued among proponents of FM but there is also evidence that it does occur in many both private and public organizations.
4. A change from cost reduction towards added value was clear before the financial crisis but although the focus at the moment is again very much on cost reduction, the need to also deliver added value will probably persist
5. A number of new forms of procurement has developed and these are increasingly based on establishing more partnership based collaboration
6. The ICT development has immense impact on FM both in relation to changing needs for support of workplaces and infrastructure and for internal process development in the FM supply chain.
7. Increased focus on sustainability and corporate social responsibility creates new activities and opportunities for FM organizations both in-house and for providers

8. Increased cross-border coordination of FM in multinational companies and use of international service providers – due to the general globalization.
9. The general trend towards a higher degree of professionalization results in increasing need for educations on all levels as well as research and development.
10. Pressure for decreasing FM costs per workplace.

9. Towards a Research Agenda for FM

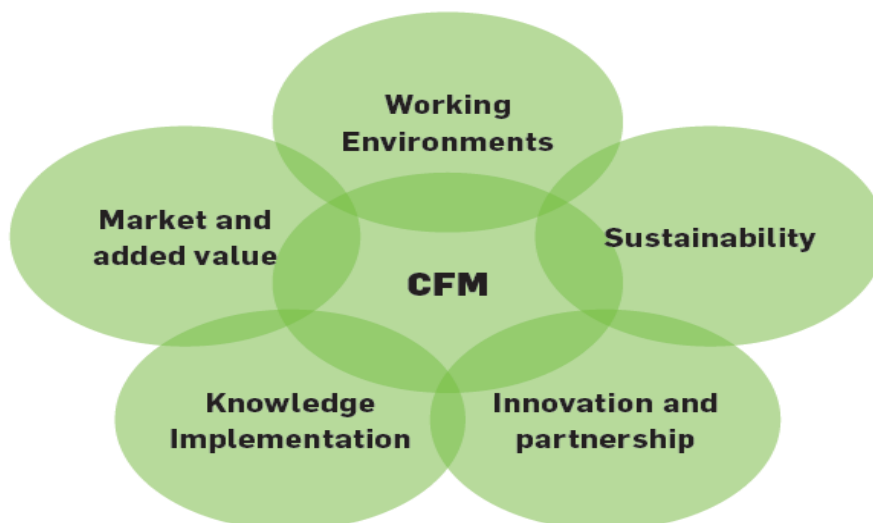


The overall aim of this project is to provide input to a common research agenda for FM. This research agenda must reflect the needs for new knowledge of the FM sector.

The key question is: ‘What are FM sector’s needs for new knowledge?’. An additional question will then be: ‘To which extent can academic research provide this new knowledge?’.

CFM’s current research agenda has the five topics shown in **figure 5**.

Figure 5: CFM’s research topics



NordicFM have defined the following current objectives:

1. Promote a common Nordic understanding of FM
2. Develop a Nordic platform for benchmarking
3. Highlight the added values for the core business provided by FM
4. Formulate common requirements for FM education
5. Facilities Management in large hospitals
6. Review and comments on CEN enquiry on new drafted FM standards

EuroFM has recently launched the project on FM Market Data.

Another approach to this issue is an analysis of the present academic literature in the area. A recent study (Ventovuori et al, 2007) has analysed a total of 584 papers. Here the topics are listed in 6 groups. See figure 6 and 7.

Figure 6: Number of papers in international journals distributed by topics. Source: Ventovuori et al, 2007.

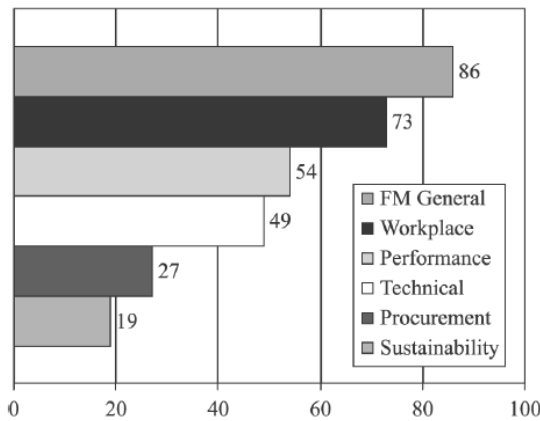
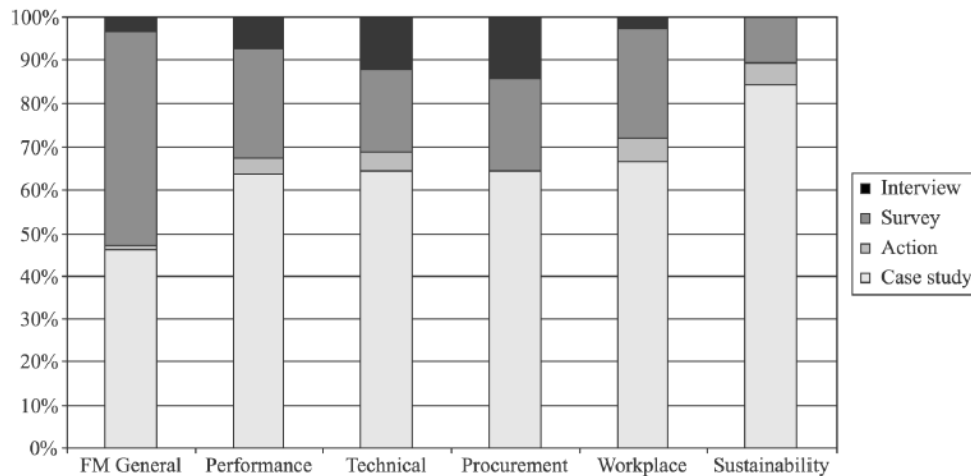


Figure 7: Data gathering in empirical papers by topics. Source: Ventovuori et al, 2007



10. FM in the Nordic countries

The book on FM Best Practice in the Nordic Countries (Jensen et al., 2008) gives the following characteristics of FM in the Nordic countries.

FM is a subject area with a strong international orientation, among other things due to the general globalizing with many multinational companies, both as to demand and supplier. Nevertheless a regional and national influence on the subject area takes place due to variations in the conditions. These are among the differences in FM in the Nordic countries compared to other countries:

- The public sector plays an important role in the Nordic countries, while FM internationally mostly is developed in the private sector
- FM in the Nordic countries is very much under influence by people with a professional background such as architects or engineers, and so the constructional aspects within property management have a major focus
- The climatic conditions in the Nordic countries implies major demands as to the design and management of the buildings, and by the same reason energy and environmental conditions are much emphasised
- Considerations as to daylight in the buildings and the ergonomic form of workplace design have a special focus in the Nordic countries, and also staff involvement and user involvement play an important role

In NordicFM (2006) the following three metaphors are used to describe the characteristics of development of workplaces in the Nordic countries: Nordic design, role of the nature and the Nordic welfare states. Each of these metaphors and their meaning are shortly described below.

Nordic design is known world wide for its bright functional shapes and colours. The result of the design process is mostly user orientated. Nordic artefacts are often useful and designed for daily use as utility items. With aspects to the workplace design the Nordic design has a strong focus on the technical aspects emphasising good functionality. Compared to many other countries the Nordic workplaces are spacious with a good approach of daylight. Wood is often an important material of the workplace design, and furniture with precise geometrical design is frequently mixed with round chair design and warm colours.

The importance of daylight and wood leads to **the role of nature**. The relation to nature has to people in the Nordic countries a character of almost obsession compared to people in other countries. Many people in the Nordic countries spend a major part of their spare time in nature, and many have their own holiday home or cottage situated at the woods,

the seaside or the fells. It is important to the design of workplaces to have a strong focus on indoor climate as well as energy and environmental conditions.

The Nordic welfare states are characterised by a sophisticated social security network covering day care centres, schools, and security regulation on workplaces and unemployment benefit, as well as a well-developed healthcare system and pension schemes. Equality is highly valued in the Nordic countries, and the social structures are characterised by short distances to the authorities. People in the Nordic countries have much confidence in their institutions, and organisations have confidence in their members. Therefore self organisation is common in the workplaces, and the extent of direct control in the companies is modest. This contributes to a wide flexibility and a general sincerity to new ways of technology.

A few other matters of importance to FM in the Nordic countries will be mentioned. First of all, the wage level in the Nordic countries is generally high, and there are relatively high minimum wages, leading to a large economical motivation to make service activities more efficient, among other things within the FM area. Secondly trade organisation on the labour market is highly spread, and the trade unions have rather fine possibilities to affect decision processes, among other things in connection with possible outsourcing.

In spite of these characteristics in relation to FM in the Nordic countries opposite to other countries, there are also some differences between each of the Nordic countries. Some of these differences will appear in the sections below.

The Nordic FM market

The results from the German market study mentioned above for the five Nordic countries in 2008 are shown in **table 5** together with results from a study by CapGemini Norway from 2004 as well as CFM's study for the Danish market in 2008. The results vary considerable.

Table 5: The potential FM Market in the Nordic countries 2004 and 2008
(CapGemini, 2005, Teichmann, 2009 and Jensen 2009)

Billion EUR	CapGemini Norway Year 2004	Teichmann Germany Year 2008	CFM Denmark Year 2008
Denmark	8	11	8
Norway	9	12	
Sweden	23	15	
Finland	12	8	
Iceland	1	1	
Sum	53	47	

Capgemini divides FM into Property Management, Building Operation & Maintenance and Support Services, and the total FM market is estimated to be shared into respectively 11%, 32% and 57% within the field of these services. In the evaluation the market for integrated FM (I-FM, i.e. the total FM delivery – also named TotalFM, TFM) is estimated to amount 6%, while other kind of outsourcing represents 19% of the potential market. The market for I-FM has been strongly consolidated within a few companies with ISS as the biggest with 44%, Coor Service Management with 28%, and Johnson Controls with 10%.

CapGemini evaluated Sweden as the most developed market followed by Finland, Denmark, Norway and Iceland, while the German study as mentioned regarded Denmark to be a developed market, while the other Nordic countries were characterised as emerging markets. A recent Italian study uses the same market types as the German study except that the pioneer markets are called advanced markets and Denmark is together with the UK and Holland regarded as the advanced markets in the EU (Toni et al. 2010). Sweden and Finland are placed among the emerging markets in the Italian study like in the German study. Norway and Iceland are not included in the Italian study, The reason for this evaluation of the Danish market as very advanced is probably based on the fact the ISS as one of the biggest providers internationally is based in Denmark.

The outsourced market is according to Capgemini's evaluation expected to continue to grow with 8% annually, but the market for I-FM is expected to grow somewhat more than 14%. The public sector represents approx 14% of the customer base, but the public sector is expected to grow faster than the private market. Among other trends are:

- FM organisations are expected to continuously provide better services, but the buyers will continue to lower the FM budget (hence the title of Capgemini's report: "More for less")
- Corporate managements have an increasing attention to FM, and more and more companies are centralizing their FM function
- FM providers will more and more aim at becoming I-FM supplier, leading to increased consolidation and more partnerships

NordicFM

The Nordic FM network, NordicFM, was started as a project with financial support from NICE (Nordic Innovation Centre) under the Nordic Council of Ministers from 2003-6 with the purpose to development the collaboration in relation to FM among the five Nordic countries. During this period several working parties were active and the results for instance included a guideline for SLA's and an overview of FM education in the Nordic countries (Jensen, 2008b).

After the project period it was decided to continue the collaboration as a network with FM associations in the 5 countries as the central members. The steering board has a

member from each of the 5 countries and from the beginning each country became responsible to chair a joint development project concerning one of the following 5 topics:

- A. *Promote a common understanding of FM, including the need for definitions and measuring tools for services.*
- B. *Implement new standards for Facilities Management in the Nordic countries including certification criteria.*
- C. *Develop a Nordic platform for benchmarking*
- D. *Highlight the added values for the core business provided by Facilities Management*
- E. *Formulate common requirements for FM education and training*

In 2010 NordicFM is starting a new working group on FM in Hospitals.

FM in Denmark

In Denmark there is the national FM association DFM (Danish Facilities Management Association), which was established in 1991. The purpose of the network is:

- to develop the subject area FM
- to spread knowledge to the subject area by communicating knowledge
- to promote the correlation between practice, education and research
- to be the connecting link to FM internationally

The network was from the beginning open to company memberships and personal members. Later reduced membership fees for students were introduced. The first year DFM had 25 members out of which 24 were companies. In 2000 it had grown to 119 with 106 companies and in 2009 the total number of members was 219 with 135 companies, 50 personal members, and 34 were students. As it appears company members are the actual basis of the network.

It is characteristic that DFM is open to all sorts of companies. Hence the members include both companies from the demand side and from the supply side of the FM market, including consultants and other providers of consultancy services. The spread is fairly even to the two sides of the FM market. Hence 48 % of the members represent companies who themselves handle and inquire for FM services, whereas 24 % are consultants and yet other 24 % are providers of other services. The remaining 4 % of the members consist of institutions et cetera

Hence DFM is neither a procurement organisation nor a trade association, which must handle the member companies' commercial interests as demanders and providers. In

organising members from both demanders and providers DFM appears as a professional oriented association which without consideration to special interests aims at developing FM as a profession.

The activities of DFM have mainly been arrangement of member meetings, company visits, seminars, conferences and other information activities. From early on DFM has arranged an annual conference – first 1 day and later typically 1½ day. Until around 2000 DFM produced a written newsletter to the members, but since then it has been replaced by DFM's web-site and news distributed by e-mail. DFM has recently started to produce a printed quarterly magazine.

DFM-benchmarking

The interest to implement a project about key indicators was already shown at the very first member meeting in DFM network in November 1991. Inspiration was found from IFMA, who produced their first benchmark report around that time. Hence it was decided to start a project, which was fully financed by the 26 private and public participating companies. The purpose of the project was to create a common order with concept definitions and structure for the key figure indicators in relation to FM, and establishment of common systematic of handling of the data to this. On basis of such a common order and systematic it would be possible to make meaningful comparisons across companies – benchmarking.

On basis of the key indicator project it was decided to start continuous work with annual collection of FM key indicators. For financial and legal reasons it was decided to establish a special association for this purpose – still with close connections to DFM network. So in 1996 the association called DFM key indicators – in 2008 changed to DFM-benchmarking - was established. One of the first tasks was to develop the necessary IT tools. In 2007 the system was changed to a fully web-based system where the members can deliver data on-line, and when a sufficient number of data has been delivered for a year, the system is open for the members to use the analysis tools to extract the data that they are interested in, for instance comparisons of own data with the average of properties from all members that meet the specified criteria. This has replaced the annual publication of a huge report of more than 300 pages with all the data analyses.

DFM-benchmarking has private and public companies as members. All members can deliver data to the annual collection of key indicators. There are no personal members. From the start there were 30 members and this has until 2009 increased to 63. Approximately 20 members deliver data each year and for the year 2008 the deliver data for 1.100 estates covering 5.5 million m².

Providers

At a first meeting in the reference group for CFM's FM market project in may 2008 the participants made the ranking of the largest FM providers in Denmark shown in table 6.

Table 6. The largest FM providers in Denmark.

Rank	Provider	Type
1	ISS	Multi services
2	Coor Service Management	Multi services
3	Johnson Controls	Multi services
4	YIT	Teknique
5	IDA Service	Multi services
6	Ejendomsvirke	Property administration
6	Forenede Service	Multi services
6	Compass Group	Multi services
9	Kemp & Lauritzen	Teknique
9	Slots- & Ejendomsstyrelsen	In-house/client
9	Novo Nordisk Servicepartner	In-house/client
9	DanEjendomme	Property administration
9	Bravida	Teknique
9	Sodexo	Multi services
15	Datea	Property administration
15	Lindpro	Teknique
15	BMT	Construction
15	WIP	Multi services
15	Post Danmark	Single service
15	Bravida	Teknique
15	Coloplast FM	In-house/client
15	Forsvarets Bygningstjeneste	In-house/client
15	CPH	Renting out and client
15	Elite Miljø	Multi services ?
15	Alliance Clean & Care (Metro)	Multi services ?
15	Regus	Office hotel
15	Andersen Rengøring	Single service
15	Rank Xerox	Copying machines
15	Scanomat (?)	Vending machines
15	PLH	Architect consultant
15	COWI	Engineering consultant
15	M3	Space consultant
15	Otis	Lifts
15	KONE	Lifts
15	ThyssenKrupp	Lifts
15	Jespers Torvekøkken	Single service
15	Datea	Property administration
15	Kuben	Property administration
15	Dansk Cleaning Service	Single service

Research

The Technical University of Denmark (DTU) in 2003 decided to introduce FM as a new subject in research and teaching in the strategy plan for the Civil Engineering department. I was appointed as associate professor in 2005 to develop the subject. From the start of 2008 the FM subject has been part of a new department of Management Engineering at DTU and at the same time the research centre CFM was established with financial support from the private Danish foundation RealDania over a 5 year period. I was appointed professor in FM at DTU in 2009.

In the book on FM Best Practice in the Nordic Countries (Jensen et al., 2008) there are 25 cases about FM in different Danish organisations.

FM in Norway

In Norway there are not a single organisation representing FM. There are two FM-related associations with NfN representing a group of property owners and NBEF being a broader building oriented association. There are also two trade federations called NHO Service and HSH. NHO Service has recently taken an initiative to establish a national Professional Forum for FM.

The following trends have been identified:

- FM as professional term is being used more frequently in publications and advertisements
- FS providers are still the most dynamic "drivers" in the market
- Private sector large players organize internal FM concepts more professionally, but also investigate more outsourcing options
- Private sector realizes more frequently the need for specialized FM competence (also procurement competence)
- Public sector large players are becoming "more curious" about FM
- These trends are positively reflected in the interest for NTNU Master program which includes FM and are also reflected in demands for bachelor programs at highschool (university college) level and advertisements from a number of "course producers"

The following institutions provide educations in FM (information from Olav Egil Sæbøe in NordicFM working group):

- Norwegian University of Science and Technology (NTNU)
- Høgskolen i Akershus – Akershus University College
- University of Stavanger

- Universitetet for Miljø og Biovitenskap – University of Life Sciences
- Høgskolen i Narvik – Narvik University College

Research

NTNU in Trondheim has since the early 1990's undertaken research related to FM at the Faculty of Architecture and Fine Arts. The leading person has been professor Tore Haugen, who is a former chairman of EuroFM's Research Network Group and today is dean of the faculty at NTNU. From 2002 to 2006 Tore Haugen was leading the ambitious project Metamorphose aiming at developing a research based education and competence environment in relation to Property and FM, and one result was planned to be the establishment of a Centre for Property and FM. However, the recent development has been instead to establish a Gemini Centre for Sustainable Architecture and Property in collaboration between NTNU and the Norwegian research institution SINTEF, and this centre has research in Property Development and Management as one of three main fields. NTNU has based on the Metamorphoses project started master educations both as candidate and postgraduate programmes (Jensen, 2008a).

Public market

According to a Norwegian research study outsourcing of FM services in Norway from the former public administrations has been driven by public sector reforms inspired by New Public Management (NPM). Outsourcing of support services has been crucial for transforming and improving the railroads, postal services and the national telecom operator and several others public administrations' effectiveness and efficiency. A second wave of NPM reforms have transformed several former public administrations to joint stock companies and have increased the total size of the Norwegian FM market. These NPM inspired public sector reforms have also facilitated development of a national market for integrated FM services. The public administrations' internal service suppliers were in many instances first partly outsourced and privatized through joint ventures with ISS or other professional FM suppliers. When the staff in the joint ventures had become sufficiently efficient, then some of the joint ventures were sold to the FM suppliers. In this way the Norwegian government usually achieved a far better price for their former internal service providers than if they had been privatized directly. This indirect privatization also helped develop the Norwegian FM market.

These public sector reforms affected the strategies and structures of some major Norwegian FM-suppliers. ISS Facility Services was established as a single/bundle service supplier specialized on soft FM services but have developed towards an integrated FM supplier, which currently also offers hard FM services. Coor Service Management was established as an integrated FM supplier that provided both hard and soft FM services. NEAS was established as a single/bundle service supplier specialized on hard FM services, particularly real estate management. NEAS have currently developed towards an integrated FM supplier providing both hard and soft FM services. (Boge, 2010).

In the book on FM Best Practice in the Nordic Countries (Jensen et al., 2008) there is a case about the Norwegian Railways' (NSB's) collaboration with FM providers and about space strategies in Statoil.

FM in Sweden

The following information is mainly based on Löfvenberg (2010) prepared for the NordicFM working group.

Like in Norway there is not a single organisation representing FM in Sweden. IFMA Sweden organise a number of individuals. Aff "Forum for Property and Facility Management" has some 50 members, including the Swedish Property Federation, significant real estate companies and the Swedish Association of Local Authorities and Regions. Aff has revised its publication "Aff-definitions" in accordance with the CEN-standard. Aff has also published a "Guidance for strategy- and procurement processes within Property and Facility Management", based on the European FM-standard.

The development of FM in Sweden accelerated after the finance crisis in the 90s. Real estate and facility services were recognized as possible value-adding activities, instead of "sunk costs". The main drivers were the need for efficiency and cost savings. Many listed companies and public organisations coordinated their real estate and facility services in departments or wholly owned companies. In this regard Ericsson and Tetra Pak were front-runners and became models for other organisations. Both companies organised their FM-operations in internal service companies in the 90s, which Tetra Pak has kept in-house, while Ericsson decided to sell out the Swedish real estates and the service company in 1999. Today you will find FM-functions in IKEA, Astra Zeneca, Telia Sonera, SEB and many other companies. In the public sector you will find FM-organisations in for example, the municipality of Kungälv, LFV, The government office of Sweden, The region of Västra Götaland, the city of Malmö and the county council of Sörmland.

The need for efficiency and cost reductions has often led to competitive tendering, outsourcing or out tasking. In the public sector, political deregulations have reinforced the outsourcing processes. This has sometimes led to confusion between the terms outsourcing and Facility Management even in Sweden.

One can say that FM has been an established concept in Sweden since the mid 90s. IFMA Sweden was founded in 1994. Shortly thereafter, it published a document about Facility Management, which contributed to the understanding of FM well beyond IFMA's network. Other milestones were IFMA's European Conference in Gothenburg in 1999 and the CoreBiz fair in 2003. The same year as the journal Facilities was founded. Facilities has today some 12 000 readers.

In Sweden, the public sector has played an important role in the spreading of a communal understanding of FM. One example is U.F.O.S. (Utveckling av Fastighetsföretagande i Offentlig Sektor), which has performed over 100 development projects, whereof several about FM. For example, “More than just four walls and a roof - Facility management: efficient support for core activities” (2007), “Facility management i praktiken — Med en studie av fem offentliga organisationers erfarenheter av FM” (2002), and Facility management — Offentligt fastighetsföretagande i ett nytt perspektiv” (1997). The following organisations are members of U.F.O.S: The Swedish Association of Local Authorities and Regions, the Swedish Fortifications Agency, the National Property Board, Specialfastigheter, Swedish Energy Agency and Akademiska Hus.

Another project, which contributed to the understanding of FM in Sweden, was IT Bygg och Fastighet, which included the development of a process model for Facility Management in the late 90s. The model was originally published in the report ”Förvaltningsresultat ur kund och utförarperspektiv”, Svensk Byggtjänst (1999). Partners in IT Bygg och Fastighet were among others, U.F.O.S, Swedish Association of Municipal Housing Companies, ABB Real Estate, Akademiska Hus, Vasakronan, and the National Property Board.

The examples above indicate that a great variety of organisations have been involved in the spreading of FM. Still, there is no trade association that works as a unifying force for FM in Sweden. So far, and generally speaking, FM is well known in the public sector and among listed companies, but unknown in middle sized and small companies.

In the future, the new Karolinska Hospital in Solna near Stockholm will probably contribute to an increased interest in FM-practices. A consortium consisting of Skanska and Innisfree, with Coor as exclusive FM provider will build the hospital and take responsibility for co-ordinating, developing and delivering a range of property and workplace-related FM services during the contract term.

FM suppliers

The market for FM-services has increased steadily by 10-15 per cent per year, since the mid 90s. The FM-market is approximately worth 140 bn SEK. Fifty per cent of the market is more or less open, depending on the organisations’ decisions concerning competitive tendering and outsourcing.

The seven largest FM-suppliers in the Nordic countries have according to their annual reports, a turnover of approximately 27 bn SEK (2008) and some 40 000 employees. The companies in the **table 7**, have the capacity to handle big contracts in all parts of the country, they offer both property and facility services and have all the capacity to offer complete multiservice solutions.

Table 7: The largest FM providers in the Nordic countries and their size in Sweden

Company	Turnover 2008, bn SEK	Number of employees	Comment
Compass Group	(30.0)	Ingen uppgift	Europa
Johnson Controls	0,5	Ingen uppgift	Norden
Addici	1,5	2 000	Norden
Sodexo	3.0	8 000	Sverige
Coor	5,7	4 000	Norden
Dalkia	2.0	1 300	Norden
YIT	6.1	4 600	Sverige
ISS	5.0	12 000	Sverige
Samhall (tjänster)	2,2	6 700	Sverige
Total	27.0	40 000	

Research and education

Several universities offer educations in Facility Management. For example KTH Royal Institute of Technology, Malmö University, Lund University and Chalmers University of Technology.

In 1998 Chalmers started a multidisciplinary research and education network, which was originally meant to bridge over between the schools of Architecture, Civil Engineering and Management of Technology and Economics. FM Chalmers was headed by Professor Jan Bröchner, department of Service management and Professor Jan Åke Granath, department of Space and Process (retired 2005). Both are well-known in EuroFM and IFMA International.

A report from Chalmers show that research with doctoral theses has been performed within the areas Knowledge Companies, Health Care, Change and Growth Processes and Processes of Change. Between 1997 and 2004, ten PhD and licentiate theses were published within the FM Chalmers network at the schools of Architecture, plus a great numbers of articles and reports.

Besides the universities several companies offer courses in FM, e.g. Teknologisk Institut, IBC Euroforum and FM Skolan (FM Konsulterna).

In the book on FM Best Practice in the Nordic Countries (Jensen et al., 2008) there are cases about Eriksson's outsourcing to Coor Service Management, Dynamate with production support to Scania, and ESCO in regional hospitals of the region of Skåne.

FM in Finland

In Finland FIFMA is a national FM association, but the building client association RAKLI is also engaged in aspects of FM. FM in Finland is very much concentrated about Real Estate and Property Management. There is a real estate institute called KTI, who among other things arrange benchmarking.

The situation about FM in Finland is much similar to that in Sweden. Senate Property, which is responsible for almost all state property, is a good example of a frontrunner from the public sector. Much research in the field of Facilities Management takes place. Very few people in Finland see themselves as professional facilities managers in the business life (information from Keijo Kaivanto, FIFMA in NordicFM working group).

Research

Research on FM was started in the early 1990's at Helsinki University of Technology (now part of Aalto University) with professor Kari I. Leväinen (now retired) at the Institute of Real Estate Studies as the leading person. Later research initiatives have spread also to other research organizations within Helsinki University of Technology, for example Facility Services Research group under the Institute of Construction Economics and Management, as well as in other universities and VTT, National Research Center.

In the book on FM Best Practice in the Nordic Countries (Jensen et al., 2008) there is a case about Senate Property and space utilisation in the national broadcasting corporation YLE.

FM in Iceland

The knowledge of FM in Iceland is limited due to a small population. Only between 10 and 15 people in Iceland deal with Facilities Management frequently. Much therefore depends on international relations. The consulting engineering company IceConsult has been a driver behind introducing FM on Iceland, and they promote a FM system (called DriftsChefen in Denmark). There have been FM-courses at the University of Reykjavik with Brian Atkins as teacher (information from Björn Skúlason, FASTI in NordicFM working group).

Iceland has been a frontrunner in relation to Public-Private Partnerships (PPP) among the Nordic countries, but the financial crisis has set a stop to that. In the book on FM Best Practice in the Nordic Countries (Jensen et al., 2008) there is a case on PPP and the company Nysír, but today both later Nysír went bankrupt and the bank they collaborated with were taken over by the Icelandic state.

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