



The Market for Facilities Management in Denmark

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Per Anker Jensen

The Market for Facilities Management in Denmark



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DTU Management Engineering, Technical University of Denmark

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BY PER ANKER JENSEN,
professor, head of CFM

Key figures for the Danish Facilities Management market in 2008

The total FM market in 2008 is estimated as

- € 7.9 billion for the potential market
- € 4.9 billion for the actual market
- The outsourcing degree is thus 62 %

A total of 375 enterprises have been interviewed by telephone

- 272 clients
- 103 providers

186 clients have stated their turnover

- € 0.7 billion in total annual FM turnover
- 8.3 % of the total potential FM market
- € 3.5 million in annual FM turnover in average per enterprise

74 providers have stated their turnover

- € 1.5 billion in total annual FM turnover
- 30.0 % of the total actual FM market
- € 19.9 million in annual FM turnover in average per enterprise
- 28.6 % of their total turnover within FM

90 providers have stated their number of employees with FM activities

- 12,118 employees within FM in all enterprises
- 135 employees within FM in average per enterprise
- 42.9 % with a higher education compared to 30.6 % of all employed in Denmark in 2007

The average annual turnover per employee within FM in provider enterprises

- € 147.536

The total number employed within FM is

- 33,167 employees with providers
- 53,412 employees at the total potential market

NB! The figures for the total market and the total employment are estimated from random samples and the results are subject to uncertainty.

Introduction

How big is the FM market in Denmark? What is the structure and what are the trends? Most players on the Danish FM market and others involved in the FM development are interested in these questions. They are also important questions for reliable answers in order that FM is recognized and seen as an important business area by politicians and decision makers, e.g. within teaching and research.

There has, however, been a lack of well founded surveys of the Danish FM market from independent sources. The best we have had so far is the Norwegian CapGemini survey of the Nordic FM market from 2005 based on 36 interviews of 29 large client corporations and 7 providers in Denmark, Norway, Sweden and Finland during 2004. This survey stated that the potential Danish FM market in 2004 was totally € 8,3 billion. The actual market, i.e. the outsourced provider market was not stated separately for the individual countries, but merely as 25 % of the potential market in general in the Nordic countries. For Denmark this was thus an actual market of € 2,1 billion. Furthermore, the survey indicated that the outsourced market grew by 8 % annually.

At the Centre for Facilities Management – Realdania Research (CFM) we have researched the FM market in Denmark. We see it as a necessary basis for our research that we get a better documented overview of the FM area in general, and the project about the FM market is a central element in creating such an overview. The project has been done in cooperation with the consulting company Rambøll Management who has been responsible for the data collection by a large number of telephone interviews and data analyses, including estimation of the size of the total Danish FM market.

The results are also regarded to be of interest to FM professionals and researchers outside Denmark. The size of the Danish FM market in comparison with other countries should be seen in relation to the size of the population, which amounts to 5.5 million inhabitants in Denmark. This paper is a translation based on an article written in Danish in the magazine FM Update published by the Danish Facilities Management Association (DFM). A full report in Danish is available at CFM's web-site www.cfm.dtu.dk.

Definition and Delimitation

One of the big challenges of such a survey is that there is no clear delimitation of the FM market. Therefore, an important step in the project has been to make such a delimitation. I have been responsible for this and I have as a starting point used the FM definition in the European standard from 2006, which since 2008 has been available in an official Danish translation. According to this definition FM is: *“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).

This definition does not, however, bring us much closer to a delimitation, but the standard also has a section on the scope of FM. According to that, FM can be grouped around client demands summa-

rised 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”.

Following this first standard a new European standard for a FM taxonomy has been proposed and will be put out for public hearing in autumn 2009. The taxonomy is a classification of the products of FM in a hierarchical structure with associated definitions of the classified products. I have been involved both in the creation of the first standard and in the proposal for the new standard. In the figure below the left columns state the name of the products in the proposal for a new standard and the corresponding Danish terms used in CFM’s survey 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. (Since the start of the Danish survey a finalization of the proposal for the new standard has been ongoing. In the latest version it has been simplified by putting together ‘Business support finance, Business support HRM and Management support-organization specific’ into ‘Business support’).

FM products from proposal to new European standard	Danish names used in the survey
<p>Space & Infrastructure (S&I)</p> <ul style="list-style-type: none"> Space Outdoors Cleaning Workplace Industry sector specific 	<p>Ejendomsdrift</p> <ul style="list-style-type: none"> Bygninger og lokaler Terræn Renhold Arbejdsplads Branchespecifik
<p>People & Organisation (P&O)</p> <ul style="list-style-type: none"> Health, safety and security Hospitality ICT Logistics Business support finance Business support HRM Management support – organisation specific Organisation specific 	<p>Services</p> <ul style="list-style-type: none"> Sundhed, sikkerhed og sikring Catering Reception, kontaktcenter og mødelokaler IKT Logistik Virksomhedssupport – økonomi Virksomhedssupport – personale Ledelsessupport – organisationsspecifik Organisationsspecifik

The Danish survey of the FM market is the first market research using this new product structure for FM. The survey has included both the provider and the client side of FM.

In order to identify the enterprises the national statistics in Denmark for division into sectors and industry branches has been applied. For providers the industry codes from 2007 (equivalent to the international NACE codes) has formed the basis, including 21 main sectors with a total of 726 industry branches. On this basis 10 industry branches have been identified which to a smaller or bigger extent cover FM providers. For the client side the division in the national finance statistics in 8 main sectors has formed the basis, but for this purpose they have been merged together in 3 groups to which Housing Associations has been added as it is an important FM client that is not included in national finance statistics. This gives 4 groups of FM clients. In the figure below the four main client groups are listed in the left column, and the 10 industry branches are listed in the right column.

The Survey Methodology

The research is based on two surveys divided into providers and clients within FM.

The provider survey included 103 enterprises. The data collection with telephone interviews was done in June 2008. The enterprises were selected through a combination of suggestions from an advisory group, providers among DFM's members and among enterprises with more than 50 employees from commercial market database.

The four main groups of clients

- Industry etc.
- Private service
- Public service
- Housing associations

The 10 provider industry branches

1. Construction & Civil Engineering
2. Catering
3. Real Estate & Renting
4. Finance & 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

Generally, the enterprises approached were willing to participate. Some enterprises could, however, not disclose concrete business figures. For some enterprises these figures have been collected by desk research from the enterprise web pages etc.

Larger enterprises are overrepresented in the surveys for both the provider and the client side. On basis of the data collected, estimations for the total Danish market have been made. Especially for the providers this is attached with great uncertainty due to the non-random selection of the supplier enterprises. But in the client segment the enterprises have been randomly selected among the four main groups. The estimations for these enterprises are therefore made with a substantially lower uncertainty. Therefore only the aggregated results from the calculations based on the client survey are presented.

Results for the Providers

Of the ten industry branches Construction & Civil Engineering was represented by far the bigger number of enterprises, i.e. 34 of a total of 103 providers. The five branches: Real Estate & Renting, Industry, IT Consultancy, Travelling, Cleaning and other operational service and Knowledge services were represented by 10-12 enterprises, whereas the four lines of branches: Financing & Insurance, Catering, Transportation and Waste were only represented by 2-4 enterprises. For three enterprises there is no industry branch stated.

Most enterprises provided within Space & Infrastructure (81 of 103), whereas about half (56) provided within People & Organisation. Within S&I, Space was the most common product area (60 of 81) followed by Outdoors (37), Cleaning (29) and Workplace (23). Most providers of Cleaning also provide Outdoors. Within P&O, ICT was the most common product area (24 of 56) followed by Health, Safety and Security (23), Catering (18) and Logistics (16).

74 enterprises have stated their turnover figures, and the total FM turnover was at € 1.5 billion of a total of the enterprises' total turnover of € 5.1 billion. The FM turnover in each enterprise amounts to € 19.9 million in average, and the share of the FM turnover is 28.6 % of the total turnover. The share of the FM turnover in the providers' total turnover varies much within the different product areas and industry branches. The biggest turnover share for FM is with providers in the product areas Outdoors, Cleaning, Catering and Business Support – both in terms of economy and staff. In relation to industry branches, Real Estate & Renting FM has the largest share of the turnover, whereas FM has the smallest share in Knowledge services, which i.a. includes lawyers, architects, consulting engineers and leasing of cars, office machinery and other material.

The number of FM employees is 12,118 in the 90 enterprises that have stated this figure. This equals 135 employees per enterprise. Seen from an educational background, unskilled workers in FM serv-

ices are 21.1 % compared to 27.7 % unskilled of all employed in Denmark, whereas there is 36.1 % skilled in FM compared to 40.1 % skilled of all employed. For these educational levels there are relatively less employed within FM. In contrast the share of higher educated is substantially higher with 42.9 % within FM compared to 30.6 % among all employed in Denmark in 2007.

Unexpectedly, the FM providers are characterized by relatively many higher educated and few unskilled and skilled employees compared to the total Danish labour market. This pattern is, however, varying to a high degree within the different industry branches. The unskilled constitute the majority of those employed within Waste, Transportation, Catering and Travelling Agencies, Cleaning and other operational service, whereas the skilled constitute the majority within Construction & Civil Engineering, Industry and Knowledge services. Only within Financing & Insurance and IT Consultancies the higher educated constitute the majority.

Based on the average turnover of € 19.9 million in 74 enterprises and the average number of employees with FM services of 135 employees in 90 enterprises, the average turnover per employee is calculated at € 147,536.

Far the majority of the FM providers have clients within all of the four main groups of clients, as at least 83.5 % of the providers supply to each group. The types of contracts are also largely split equally on ad hoc services with no contract, fixed price contracts, hourly rated contracts, fixed agreements/time limited contracts up to one year and fixed agreements/time limited contracts exceeding one year. In contrast, only 24.3 % of the providers enter into contracts with bonus schemas and with penalty clauses, and only 9.7 % with gain sharing. Bonus schemes, penalty clauses and gain sharing are mainly seen in Construction & Civil Engineering – penalty clauses are, however, mainly applied with IT consultancies. The methods for price fixing are mainly market estimates (26.2 %) and ad hoc dependent on the service (23.3 %). To a certain extent methods with fixed agreements (12.7 %), cost price multiplied by a factor (11.7 %) and cost price plus a fixed amount (10.7 %) are used. Only a few use trade standard price (2.9 %).

In relation to expected future development, 10 of the 103 enterprises will not focus on FM in future. Of the remaining 93 enterprises, 73.1 % will intensify the cooperation with other providers, and 63.0 % will use more types of services. 63 enterprises respond to a question on the expectation of their own growth, and only one enterprise expects a negative growth. Of the remaining enterprises 35 % expect a growth of 0 to 10 %, 27 % expect between 11 and 15 %, 21 % expect between 16 and 25 %, whereas 16 % expect a growth higher than 25 %. The highest expectations were seen in Construction & Civil Engineering followed by Catering and Transportation, and the lowest were seen in Financing & Insurance and Waste. These are, however, estimates prior to the start of the financial crisis in autumn 2008.

Results for the Clients

The 272 participating enterprises were almost equally distributed on the four main groups with 76 private service enterprises, 74 public service enterprises, 88 industrial enterprises and 56 housing associations. The enterprises are randomly sampled from a total population of 5,520 enterprises, and the 272 enterprises constitute 5 % of the total population. In relation to the four main groups public service enterprises are over represented by 18 %, housing associations are underrepresented by 2 %, whereas private service enterprises and industrial enterprises are represented averagely by 5 %.

For 186 enterprises the costs for FM service are stated, amounting to a total of € 700 million corresponding to € 3.5 million per enterprise. However, the FM costs vary extensively among the 4 main groups. For public service enterprises they are € 9.4 million per enterprise, and for private € 3.0 million. Housing associations and industrial enterprises are as low as € 0.5 and 0.4 million respectively in average per enterprise. In relation to the degree of outsourcing the differences are substantially smaller. Here the public service enterprises have 51 %, whereas the industrial enterprises have 57 %, housing associations 64 % and private service enterprises 73 %.

Almost all enterprises have FM tasks in-house and outsourced. For S&I, 255 enterprises handle the FM tasks themselves, whereas 262 enterprises buy such FM services from other enterprises. For P&O this applies to 256 and 237 enterprises respectively. This is far from surprising.

On the other hand it is more surprising that this also is the case for individual types of services – not least within S&I. E.g. 260 enterprises inform that they use cleaning, of which 210 enterprises buy services, whereas 101 produce it themselves. Cleaning is the service bought by most. Within S&I there are also more enterprises that buy the services than enterprises that carry this out themselves when it comes to Space and Outdoors, whereas the majority of enterprises handle Workplace tasks themselves.

Within P&O the enterprises tend to produce the services themselves rather than buying for all types of tasks. This is especially seen for Reception, contact centre and meeting rooms, where only 15 enterprises buy services, but also for Business Support Finance (33), Logistics (53) and Business Support HRM (61) far more enterprises produce this themselves. Catering is the type of services where relatively the majority buys services rather than producing it themselves. 866 of the 176 enterprises using catering buy the services, whereas 108 handle it themselves. Within Health, Safety & Security (125), Management Support – Organisation Specific (136) and ICT (113) you find most enterprises buying the services.

According to 191 (70 %) of the 272 enterprises, most clients foresee no changes in the FM demand. Only 15 % of the clients expect more services, whereas 7 % foresee less services in future. For S&I, most

services are expected for Space, followed by Outdoors and Cleaning. Within P&O the picture is very vague, but ICT is mostly expected to need more services. 4 % foresee a negative growth in relation to the extent of internal handling, whereas 4 % expect a positive growth. As for the amount of bought services, 4 % foresee a negative growth, other 8 % expect a positive growth – equally distributed on clients that expect a growth of below or above 10 % respectively in their purchase of FM services. As for the combinations of services in demand, 18 % expect fewer providers with more services, 13 % expect more specialised services, whereas 11 % expect both.

Results for the Total Market

According to the survey the total Danish FM market in 2008 is **€ 7.9 billion for the potential market**. This is close to the € 8.3 billion estimate from Cap Gemini for the Danish market in 2004. The survey also shows that the **actual Danish market for FM in 2008 was at € 4.9 billion**. This implies an **outsourcing degree of 62 %**.

This is surprisingly high when considering the fact that in 2004 CapGemini's estimate of the outsourcing degree was 25 % for the Nordic countries corresponding to € 2.1 billion for the Danish FM market. CapGemini also estimated an 8 % yearly growth rate, but with this increase the € 2.1 billion from 2004 would only have grown to € 2.8 billion in 2008. Based upon the CapGemini estimate of € 2.1 billion for 2004 and the € 4.9 billion for 2008, the increase in this 5 year period has been 24 %. This is three times as high as the 8 % estimate from GapGemini.

The FM providers are characterized by being relatively big in numbers of employees and turnover. Part of this overrepresentation of larger providers rest with the sample not being random. Only enterprises with more than 50 employees were included. The client survey shows that the clients are also often large or middle sized organizations.

It is the same kind of services that are mostly offered and demanded. For S&I they are Space, Outdoors, Cleaning and Workplace, and for S&I they are Health, Safety & Security and ICT. Almost all clients, however, also use Reception, contact centre and meeting rooms and Business Support Finance, HRM and Organisation Specific, but most handle it themselves.

The FM services form a major part of the primary business for the providers, but they are only of less importance for the clients. In average the FM activities amount to 28.6 % of the providers' turnover. In comparison more than half of the clients state that their FM costs amount to less than 5 % of their total turnover.

As previously indicated, the average yearly turnover per employee within FM was € 147,535. Based on the calculated turnover on the actual market it can be calculated that the total number of employees

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Project group:

Henrik Stener Pedersen,
Rambøll Management
Ulrik Buhl,
Rambøll Management
Per Anker Jensen, CFM
(Project Manager)

within FM is **33,167 employees with providers**. Assuming a similar turnover per employee within FM with the clients, there are a total of **53,412 employees on the potential FM market**. Thus this survey confirms that FM in relation to employment is a very important line of business in Denmark.

Reservations and evaluation of results

The results of the survey are subject to uncertainty and should be interpreted with reservations. Based on 95 % confidence intervals Rambøll Management estimates € 4.8 and 11.0 billion respectively as the lower and upper limit for the size of the potential market and correspondingly € 2.7 and 7.0 billion for the actual market. Further, Rambøll Management states:

“It is important to interpret the € 4.9 billion correctly. This is the best estimate of the actual market for clients with more than 50 employees. The survey does not include enterprises with less than 50 employees. Therefore, it is likely that the actual market in reality is as bigger than € 4.9 billion.

The estimates of the total potential market must be interpreted cautiously and most likely show a minimum assessment. The wording of the first screening question (in the client analysis) is phrased to ensure a substantial number of enterprises already in the market for FM services from other organizations, so that knowledge on client behaviour and future expectations is collected.”

In connection with the project an advisory committee was established, widely representing a.o. DFM, DFM-benchmarking and DI Service (part of the main Danish industry association). The members of the committee represented smaller and bigger providers, including ISS, as well as private and public (local and national) clients. The committee has had three meetings. At the third and last meeting where the results from Rambøll Management were discussed, the members generally agreed on the assessment that the key figures from the Rambøll Management survey show a realistic picture. For comparison, the representative from ISS mentioned that ISS estimate their market share in Denmark to be 10-12 % with a turnover of approx. € 530 million.

Supplemented with the above comments from Rambøll Management this supports the view that the results of the survey represents conservative estimates of the size of the potential and actual FM market in Denmark.

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Facilities Management (FM)

FM is about how to design, operate and develop buildings and infrastructure so they constantly are adapted to the user requirements.

In the Danish and European standard DS/CEN 15221-1 from 2006 FM is defined as "integration of processes within an organisation to maintain and develop the agreed services which support and improve the effectiveness of the primary activities".

CFM was founded January 2008 with the purpose to strengthen research within Facilities Management (FM). Previously research within this rather new subject area had only been made occasionally in Denmark. This, along with a steadily growing interest from companies and a reformulation of the field of work, was the background to establishing the research centre with subsidies from the Realdania foundation.

Compared to the traditional technical approach to operation and maintenance, where the buildings are starting point, FM is an expression of a change of paradigm, in which support to the activities in buildings are in focus, and where buildings are considered means to create the optimal frames to the activities. Therefore the centre emphasises the relationships between physical frames and social activities.

The research centre will create new understanding and knowledge, which may contribute to a strategic way of thinking about properties considering the visions for the development of organisations. On the more specific level there will furthermore be created new knowledge and insight, which may contribute to the development of new buildings, and change the existing buildings so they better meet the users' requirements, both in the short and the long run, and at the same time they be operational friendly and sustainable.

As part of the centre a number of PhDs are graduated, and in connection with this we want to collaborate with interested companies about industrial PhDs. A close collaboration with companies and professional organisations within the field is emphasized, just as communication to practice and students is a high priority.

Research projects

In 2008 and in the beginning of 2009 the centre has implemented research projects within the following topics:

1. Workplace Management
Research responsible: Juriaan van Meel, The Netherlands
2. Facilities for creative environments
Research responsible: Birgitte Hoffmann, DTU
3. Implementation of knowledge of performance in construction
Research responsible: Torben Damgaard, SDU with Poul Henrik Due, COWI and Pia Bruun Erichsen, SDU
4. Sustainable FM
Research responsible: Susanne Balslev Nielsen with Kirsten Ramskov Galamba, DTU
5. ICT based innovation in the chain of FM supply
Research responsible: Ada Scupola Hugger with Markus Holzweber, RUC

6. The market for FM in Denmark
Research responsible: Per Anker Jensen, DTU with Henrik Stener Pedersen, Rambøll Management
7. Service partnerships and strategic collaborations within FM
Research responsible: Kresten Storgaard, Jacob Norvig Larsen and Ib Steen Olsen, SBI
8. OPP and procurement of FM services
Research responsible: Kristian Kristansen, DTU
9. ICT based management system with a view to improve the well-being in our buildings
Research responsible: Poul Henrik Due, COWI with Henriette Hall-Andersen, TI
10. FM processes and added value
Research responsible: Per Anker Jensen, DTU
11. Energy concepts (ESCO et cetera)
Research responsible: Susanne Balslev Nielsen, DTU with Jesper Ole Jensen, SBI

A research centre without walls

CFM consist of a network of researchers from various Danish and international research institutions with managerial and administrative centre at the Technical University of Denmark at DTU Management – Department of Management Engineering.

CFM is managed by:

- Centre director, Professor Per Anker Jensen
- Deputy centre director, associate professor Susanne Balslev Nielsen

CFM is supervised by a centre committee:

- Institute director Jacob Steen Møller, DTU Byg (chairman)
- Project manager Lennie Clausen, Realdania
- Property director Karen Mosbech, Freja ejendomme A/S
- Division director Steffen Gøth, COWI
- Managing director Flemming Engelhardt, Datea
- Head of department Lasse Sundahl, the Danish Enterprise and Construction Agency

The centre committee is advised by a scientific committee consisting of:

- Professor Sire Hunnes Blakstad, NTNU, Trondheim
- Professor Jan Bröchner, Chalmers University of Technology

For further information about CFM please contact:
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