

EUroEM **EUROPEAN FACILITY MANAGEMENT NETWORK**

International Journal of Facilities Management

FM for a SUSTAINABLE FUTURE

Conference Papers 12th EuroFM Research Symposium, Prague, **Czech Republic**

22-24 May 2011

Conference Papers
12th EuroFM Research Symposium:
FM for a SUSTAINABLE FUTURE

22 May 2013, Czech Technical University in Prague, Czech Republic. 23- 24 May 2013, Prague Congress Center, Czech Republic

Editor:

Professor Keith Alexander, CFM, Manchester, UK

Copyright © EuroFM May 2013

Published by the European Facilities Management Network (EuroFM)

ISBN: 978-94-90694-02-9

(pdf: available at www.eurofm.org and http://www.efmc-conference.com)

EuroFM Publications
Gooimeer 4
1411 DC Naarden
The Netherlands
Telephone: +31 35 694 27 85
Email: eurofm@eurofm.org

entitions. Sometimes of the contraction of the cont

www.eurofm.org

All reasonable care and attention has been taken in compiling this publication. The author and the publishers regret that they cannot assume responsibility for any error or omission contained herein.

All rights reserved. This publication may not be reproduced, re-used, repurposed, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise without the prior permission of the publishers.

A FurnFM Publication

CONFERENCE PAPERS OF THE 12TH **EUROFM RESEARCH SYMPOSIUM:**

May 2013

Organising Committee

Prof Keith Alexander (Chair) Prof Pavel Slavoda Dr Viera Somorova

CFM. Manchester TU Czech in Prague Slovak TU

UK Czech Republic Slovakia

Scientific Committee

Prof Keith Alexander Dr Knut Boge Prof Siri Hunnes Blakstad Prof Jan Bröchner Dr Inês Flores-Colen Dr Brenda Groen Prof Per Anker Jensen Prof Keith Jones Assoc Prof Antje Junghans **Prof Kunibert Lennarts** Assoc Prof Göran Lindahl Prof Thomas Madritsch Dr Margaret-Mary Nelson Dr Susanne Nielsen Dr Suvi Nenonen Dr Viera Somorova Dr Theo Van Der Voordt Prof Thomas Wehrmüller Prof Lukas Windlinger

Oslo & Akershus Univ Coll of App Sci Norway NTNU, Trondheim Chalmers University, Gothenburg IST, TU Lisbon Saxion University of Applied Sciences CFM Realdania, DTU University of Greenwich NTNU. Trondheim Karlsruhe Institute of Technology Chalmers University, Gothenburg University of Applied Sci, Kufstein University of Bolton CFM Realdania, DTU Aalto University, Helsinki Slovak TU, Bratislava Delft University of Technology Zurich University of Applied Sciences Zurich University of Applied Sciences

Centre for Facilities Management

Norway Sweden Portugal Netherlands Denmark UK Norway Germany Sweden Austria UK Denmark Finland Slovakia Netherlands Switzerland Switzerland

UK

Facility Management in Austria 2012 - Value Add?

Alexander Redlein Vienna University of Technology, IFM alexander.redlein@tuwien.ac.at

Michael Zobl Vienna University of Technology, IFM michael.zobl@ifm.tuwien.ac.at

ABSTRACT

20% of expenditure is linked to infrastructure (buildings etc.) and related services, so the question is what value can Facility Management (FM) add for companies? Since 2005 the Vienna University of Technology (TU Wien) has performed surveys in the area of Facility Management on a yearly basis. The main goal was to define and identify parameters that guarantee an economic effective implementation of FM which results in cost savings and increase of productivity. Companies for the survey are selected randomly from the Austrian journal "Trend", which publishes a list of Austria's Top 500 companies every year (ranking is sales driven). This research paper presents some first results of the current survey as well as the next research steps to show the parameters that have positive impact on the efficiency and effectiveness of FM. The research is based on the Mixed Method Approach.

Keywords

Facility Management, Value Added, Mixed Method Approach

1 INTRODUCTION

From an academic/scientific point-of-view as well as in daily practice there is a need to improve the understanding of how Facility Management (FM) can become more effective and add value to the company's core business and the different stakeholders (Jensen et. al., 2012). Many books and publications refer to the benefits and savings from the use of FM. Two articles by Lynch focus on maximizing FM's contribution to shareholder value and therefore on economical value (Jensen et. al. 2010, Lynch 2002a and 2002b). More than 80% of the total costs for buildings are operation costs like costs for maintenance or energy supply, whereas only 10 to 20% costs are spent for planning and construction (Limke, 2003, Nävy, 2006). As these running costs are still rising, a lot of companies have recognized FM as a management strategy capable to reduce costs for facilities (Redmann, 2000). According to different publications, it is possible to save between 10 and 30% of the costs of buildings through the efficient use of FM (Nävy, 2006). Therefore, there is a need to determine the economic effects/value added of the use of FM with the help of scientific models and methods.

Since 2005 the Vienna University of Technology (TU Wien) has performed surveys in the area of FM on a yearly basis. The first attempt to prove the profitability and efficiency of FM was performed by Susanne Hauk. In her study she showed that companies using FM achieve an increase of efficiency and productivity²⁸ as well as cost savings but also create more cost

 $^{^{28}}$ In the questionnaire/survey productivity was defined as: Increase in productivity = More output with the same input e.g. staff; respectively increase of output per unit of input.

drivers²⁹ (Hauk, 2007). This research paper shows further results of the actual survey as well as a discussion of the next research steps to show and define the parameters that have positive impact on the efficiency and productivity of FM.

2 METHODOLOGY

According to Jensen et. al. FM value research needs both qualitative and quantitative research methods. Quantitative surveys should be combined with qualitative data collection methods e.g. personal interviews, expert groups, focus groups with professionals and content analysis (Jensen et. al., 2012). Therefore the Mixed Method Approach/Research was used to combine these research methods (qualitative research paradigm is used for one phase of the study, quantitative research paradigm is used for another phase of the study). The goal of Mixed Method Research is to draw from the strengths and minimize the weaknesses of both research methods (quantitative and qualitative) in single research studies and across studies. Its logic of inquiry includes the use of induction (discovery of patterns), deduction (testing of theories and hypotheses) and abduction (uncovering and relying on the best of a set of explanations for understanding one's results). Taking a mixed position allows researchers to mix and match design components that offer the best chance of answering their specific (research) questions (Johnson and Onwuegbuzie, 2004). The current study consists of four steps. The qualitative steps had the purpose to prepare the next quantitative steps. Based on the results of the qualitative steps, the questionnaire for the following quantitative steps has to be developed. The quantitative studies had the goal to validate the results of the qualitative steps done before (Redlein and Sustr, 2008). The qualitative steps were used to survey the (potential) profitability and efficiency of FM. Based on the quantitative studies/steps, the results of the qualitative steps were analyzed and validated (Hauk, 2007).

The whole survey process from creating the questionnaire to evaluating results is under yearly review (quantitative step). Results of expert interviews are included in the existing questionnaire. Questions are rephrased if necessary, added or deleted (Hizgilov and Redlein, 2011). The standardized questionnaire for the survey with closed and open questions was subdivided into the parts: Companies in general and FM organization (e.g. questions about the industry of the company, number of employees), savings through the use of FM, increase of productivity through the use of FM, cost drivers through the use of FM, Outsourcing and IT Support (e.g. questions about the use of an ERP and CAFM system). Depending on the answers there are up to about forty questions.

Companies for the survey are selected randomly from the Austrian's Top 500 (ranking is sales driven) published by the Austrian journal "Trend" (Leeb, 2012). Tools for the survey were phone and/or E-Mail. Interviewees of the survey were the Facility Managers themselves or if this position does not exist, the persons responsible for the FM tasks. The data (answers) was entered in a MS Access database and afterwards exported into statistical programmes and analyzed and evaluated (qualitative step).

3 FIRST RESULTS

This paper shows some first results of the quantitative part of the actual survey.

²⁹ Cost drivers open up the possibility of differentiated cost planning and cost control. They are measures of cost causation and resource use and output (Leidig, 2004).

3.1 General Facts (Organization of FM)

In the year 2012, 87% of the surveyed companies (N=82) had their own FM department. In the years 2011 and 2010 the portion of companies with own FM departments were about 90% respectively 87%. This slight decrease of companies with an own FM department can be explained by the random sample. In 2012 more small companies participated in the survey. However, the share of companies with an own FM department is still on a high level. The importance of FM departments is underlined by its organizational integration within the company's hierarchy. In the year 2012 about 35% of FM departments are organizational integrated as staff unit, while another 54% are integrated as line function. Most of the FM departments are staffed with 3 to 5 employees (2012: 30%). The share of companies with over 50 employees is only about 3% in 2012. The trend is therefore towards smaller and sleeker departments. The (economic) crisis could be a possible explanation for this significant change since 2007, where 14% of the companies were staffed with more than 50 employees (Hizgilov and Redlein, 2011). The increased awareness for FM is also evident in the rise of companies having a description of tasks for the FM area. In the year 2012 about 89% of the surveyed companies had a task description. Companies having a description of tasks for the FM department frequently have assigned the tasks to specific persons (88%). While only 12% of the companies having a description do not assign to specific persons.

3.2 Value Added

Value Added³⁰ of FM includes cost savings and increase in productivity on the one side and on the other side cost drivers (Mierl, 2012). The biggest cost driver in 2012 was energy, which was mentioned by 27% of the answering Facility Managers. This cost driver was followed by more "labor-intensive" areas such as safety (13%), maintenance/repair (12%) and cleaning (12%). The most relevant areas of cost savings in 2012 (number of mentions/frequencies to total respondents in %) were energy (51%), cleaning (44%) and personnel (21%). Savings reasons are (sorted by number of mentions): new type of contract, rates, technical upgrade, reorganization and utilization of synergies. In the evaluation of 2012 the area administration (18%) was the most named area in which an increase in productivity could be observed (answers in % to total respondents). This area was followed by maintenance/repair (17%) and personnel (16%). Reasons for an increase in productivity are (sorted by number of mentions): process optimization, utilization of synergies and personnel/employee workload.

4 CONCLUSION AND NEXT STEPS

The first results of the actual survey show that the share of companies with an own FM department is still on a very high level. Also that FM is a very important tool to achieve an increase in savings and productivity. As mentioned before, a lot of publications indicate that the introduction of FM has positive effects on savings. This can be confirmed by the recent study. An own FM department had positive effects on cost savings, especially in the areas cleaning and energy. FM also leads to an increase in productivity. Most named areas were administration and maintenance/repair. The authors already started to define statistical models to prove if there is an (significant) correlation between different variables/parameters

³⁰ In the past, added value was seen as a combination of price and quality. Nowadays added value is considered as a complex concept that can be studied from different perspectives. There appears to be broad consensus about added value being the ratio between benefits and sacrifices for the costumer. Risk is also mentioned as a separate aspect. The assessment of and decision about added value involves a trade-off and a choice between different criteria – benefits, costs and risks – which in themselves are difficult to compare (Kok et al., 2011).

(e.g. Cramer's V). In addition parameters were defined that have influence on the efficiency of FM. According to Jensen et. al. still much work has to be done to learn about adding value of FM e.g. identifying value drivers, examining the nature of value and its dimensions (Jensen et. al., 2012). The actual and next research steps will be to define even more statistical models how parameters influence the value added e.g. prove if there is an (significant) correlation between different variables/parameters (e.g. Cramer's V, Spearman rank correlation). Also an equivalent test could be used for comparing the average performance of two groups (Wilcoxon Test) to verify if there is a difference between two populations on the basis of the random samples from these populations (Dodge, 2008). Regression analysis could be used to make quantitative estimates of economic relationships between different variables/parameters to specify that a dependent variable is a function of one or more independent variables (Studenmund, 2006). Also more detailed analyses of different industries and/or countries are possible to gather more information and an expansion of the data about this research field and help to find out how general these results are.

REFERENCES

Dodge, Y. (2008): The Concise Encyclopedia of Statistics. Springer Verlag: Berlin, Heidelberg.

Hauk, S. (2007): Wirtschaftlichkeit von Facility Management. Dissertation, TU Wien.

Hizgilov, T., Redlein, A. (2011): Einsparungspotenziale, Produktivitätssteigerungen und Kostentreiber im Facility Management. In: Journal für Facility Management, Vol. 3, pp. 18-25.

Jensen, P. A., van der Voordt, T., Coenen, C., von Felten, D., Lindholm, A.-L., Nielsen, S. B., Riratanaphong, C., Pfenninger, M. (2012): In search for the added value of FM: What we know and what we need to learn. In: Facilities, Vol. 30, Issue 5, pp. 199-217.

Jensen, P. A., van der Voordt, T., Coenen, C., von Felten, D., Lindholm, A.-L., Nielsen, S. B., Riratanaphong, C., Schmid, M. (2010): The added value of FM: Different Research Perspectives, EFMC 2010, 1-2 June 2010, Madrid.

Johnson, R. B., Onwuegbuzie, A. J. (2004): Mixed Method Research: A research paradigm whose time has come: In: Educational Researcher, Vol. 33, No. 7, pp. 14-26.

Kok, H. B., Mobach, M. P., Omta, O. S. W. F. (2011): The added value of facility management in the educational environment. In: Journal of Facilities Management, Vol. 9, Issue 4, pp. 249-265.

Leeb, M. (2012): "Die Top 500! Österreichs erfolgreichste Unternehmen 2011". http://www.format.at/articles/0724/580/175720/die-top-500-oesterreichs-unternehmen-2011# (Zugriff am 05.06.2012)

Leidig, G. (2004): Prozesskosten-Management. Arbeitskreis Klein- und Mittelbetriebe (AKM) Eschborn. http://www.rkw-kompetenzzentrum.de/fileadmin/media/Dokumente /Publikationen/2004_FB_Prozesskosten-Management.pdf (accessed on 12.03.2013)

Limke, W. (2003): Die Bedarfsplanung – Eine neue Aufgabe für das Dienstleistungsportfolio des Facility Managers? In: Tagungsband Facility Management Messe und Kongress Düsseldorf, VDE Verlag: Berlin, Offenbach.

Lynch, B. (2002a): Maximising FM's contribution to shareholder value Part 1: Can the capital expenditure process for fixed assets be improved? In: Journal for Facilities Management, Vol. 1, Issue 1, pp. 48-55.

Lynch, B. (2002b): Maximising FM's contribution to shareholder value Part 2: Tactics for improving capital budgeting process – and producing results? In: Journal for Facilities Management, Vol. 1, Issue 3, pp. 222-226.

Mierl, M. (2012): Trends und Status Quo 2011 im Facility Management im Vergleich mit 2010. Master Thesis, TU Wien.

Nävy, J. (2006): Facility Management: Grundlagen, Computerunterstützung, Systemeinführung, Anwendungsbeispiele. Springer Verlag: Berlin, Heidelberg, 4. Auflage. Redlein, A., Sustr, F. (2008): Economic Effective Implementation of FM. Research Paper, TU Wien.

Redmann, R. (2000): Gebäudemanagement: Transparenz schaffen, Kosten optimieren. Verlagsgruppe Jehle Rehm GmbH: München, Berlin.

Studenmund, A. H. (2006): Using Econometrics: A practical guide. Pearson Education: Boston, 5th edition.