FM - time to take responsibility

In recent years, facility management (FM) has developed into a discipline which is increasingly able to extend its contribution to the valued added chain of business, healthcare, public administration and other sectors. FM is being integrated more and more into the core processes, thereby generating increasing value and no longer representing a simple cost factor. Ronald Schlegel, director of Vebego Switzerland and visiting lecturer at the ZHAW Institute for Facility Management, writes a two-part feature for ECJ.

In recent years facility management has developed into a discipline which is increasingly able to extend its contribution to the valued added chain of business, healthcare, public administration and other sectors. Facility management is being integrated more and more into the core processes, thereby generating increasing value and no longer representing a simple cost factor. This brings with it greater responsibility on the part of facility management for the success of the enterprise as a whole. Are we ready to take on this responsibility? Which direction should research and development take and how should education and training be geared to meet these new demands?

Energy consumption makes great demands on Switzerland. Buildings are responsible for a significant part of end energy usage: in Switzerland in 2014, for example, this amounted to 40.7 per cent of the total consumption or 82.1 TWh (Prognos/INFRAS/TEP, 2015). Operating systems and hence facility management have a major influence on energy usage. Experience with many properties, combined with measurements taken, shows that proper commissioning and operating optimisation can lead to efficiency improvements of over 20 per cent. What needs to change, to take advantage of these opportunities and in this case, what responsibility can facility management take on?

Demographic changes create great opportunities for facility management and at the same time represent a great challenge as a result of the increasing lack of skilled workers. A clear distinction between attendance care and nursing care can create new opportunities for division of labour and for the development of new models which can have a positive impact on costs.

Global trends

Demographic developments - In many countries, particularly in the industrialised world, the average age of the population is rising rapidly and the classic age pyramid is becoming an "urn". In Germany, for example, the proportion of over 65s is expected, depending on the scenario, to grow to over 50 per cent by 2050 (D-Statistics, Federal Office of National Statistics population pyramid). The needs of this rapidly growing population group represent major opportunities and challenges for facility management.

Independence and self-reliance are extremely important for most people even in old age and have a crucial influence on their quality of life. Although people, even in the higher age groups, are now on average considerably healthier and more active, the costs of nursing and care in the final years of life are rising sharply.

As a result of demographic developments, this increasing number of pensioners is faced with a smaller number of workers. It is thus not only the cost which presents a problem but also the shortage of skilled labour which represents a major challenge.

There is an opportunity for facility management here to play a significant role and take on added responsibility. To maintain their independence, older people often have no need of nursing care for years but instead need help with daily living activities. Many of the latter services are at present provided by trained nursing staff. Where this support is no longer possible, this is often the reason for the loss of independence. Where help with daily living activities can be undertaken by professional providers employing appropriately trained but considerably cheaper staff and where modern technology and digitalisation can be used, this can result in a significant improvement in quality of life and reduce costs at the same time. Cooperation between facility management services and the Spitex organisations can lead to a substantial reduction in costs.

The implementation of this sort of approach and the systematic use of new technology is gaining increasing ground, in spite of the shortage of trained staff

in the hospital and care sector. Modern technology should be employed to enable best use of the valuable time for direct contact between carers and their clients.

Sustainability - "Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (Brundtland report 1987)

The three dimensions - social, environmental and economic - should be given equal weight.

Factor of success

Sustainability is viewed increasingly as a factor of success: investors demand sustainability reports and many companies have committed themselves to the principle of sustainability, whereby facility management assumes a very important role. There are property funds, such as the CS Green Property Funds for example, which follow the rules of the sustainable property industry and are thus valued more highly; and there are institutional investors who will increasingly only invest in sustainable assets. The Dow Jones Sustainability Index has been tracking the sustainability of companies since 1999. As far as the general public is concerned, certain aspects of sustainability are playing an increasingly greater part in influencing decisions for or against a particular product. Initiatives towards a 'green' economy are becoming more frequent and 'green' politicians are increasingly not the only ones familiar with the concept of the ecological footprint.

Sustainability is by definition a long-term consideration and thus inevitably requires operating systems to take centre stage. Operating systems imply a key role for facility management.

Facility management serves both user and investor and is consequently paid for and measured by both of them: comfort, services and costs are the parameters. To achieve sustainability, facility management must be able to influence the process at an early stage and be involved in the entire process: not advisory but responsible. This means that appropriate incentives must be offered and that facility management has the necessary competence and skills to take on this responsibility.

A substantial element of sustainability is related to energy consumption or emissions of greenhouse gases like CO2. The proportion of end energy usage by buildings in Switzerland in 2014 reached 40.7 per cent or 82.1 TWh (Prognos, TEP, 2015). Facility management has a major effect on this energy usage.

Experience with many properties, combined with measurements taken, shows that proper commissioning of systems and installations along with optimisation of operation can bring about an increase in efficiency of over 20 per cent. In Switzerland, for example, this could lead to a saving of 16.4 TWh which in turn corresponds to a saving of around eight per cent of end energy consumption.

Facility management can and must make a significant contribution to energy transition.

Significant change

Digitalisation - In the modern world we seem to be always online and fully networked. Machines and equipment are also increasingly connected to the Internet of Things. Algorithms can today determine what information we receive, which products we are likely to buy and which partners we should look for.

Robots, drones, advanced sensor technology and automation, the Internet of Things, Building Information Modelling (BIM) etc – these are all becoming more important day by day. They also form the basis of many innovations in facility management.

Digitalisation changes the processes linking buildings and facilities just as significantly as in all other areas. With BIM at the core of the operation buildings can be developed, planned, built and commissioned in a completely different way. The use of modern technology such as robots and automation can bring about significant change to activities and business models at the facility services level. The key task of facility management must be to integrate data streams from the various systems and sources into a profitable whole. Digital connectivity between property owners and operating company, production and users is essential to ensure integration and achieve process optimisation. This improves the quality of the value added and increases productivity. Digitalisation can thus provide facility management with the opportunity to fulfil its role as integrator even more effectively.

▪ *In the April/May edition of ECJ Ronald Schlegel will explore new opportunities for and responsibilities of the FM industry.*

Ces dernières années, le facility management est devenu un discipline toujours plus capable d'apporter une contribution à la chaîne de valeur ajoutée du commerce, de l'industrie, de la santé, de l'administration publique et d'autres secteurs. Le facility management se trouve intégré toujours plus dans des processus centraux, générant de ce fait une valeur accrue et ne représentant plus un facteur de coût simple.

In den letzten Jahren hat sich das Facility Management (FM) zu einer Disziplin entwickelt, die ihren Beitrag in zunehmendem Maße auf die Wertschöpfungskette des Handels, des Gesundheitswesens, der öffentlichen Verwaltung und anderer Bereiche ausweiten kann. FM wird verstärkt in Kernprozesse integriert, und dadurch trägt es verstärkt zur Wertschöpfung bei und stellt nicht mehr einfach einen Kostenfaktor dar.

Negli ultimi anni, il facility management (FM) si è trasformato in una disciplina incredibilmente in grado di estendere il suo contributo alla catena del valore aggiunto delle imprese, del settore sanitario, delle amministrazioni pubbliche e di altri settori. Il facility management (FM) viene sempre più integrato nei processi primari, generando quindi ulteriore valore e non più rapresentando un semplice fattore di costo.

FM - time to take responsibility (2)

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Facility management faces both opportunities and responsibilities. The first of these is Digital FM. Data relating to the operation, use and user of a property converge in facility management and form the basis for sustainable operation. They are however at the same time of great value for the entire value-added of a company. The integration of facility management into the overall value-added chain can open up access to important customer information. The interconnection of systems and instruments from various parts of value-added forms the basis for integrating facility management into the value-added chain.

Digital facility management brings these tasks together within the area of facility management and integrates the relevant systems. One of the key tasks here is to integrate the systems and bring together usage and users. Facility management must take on responsibility for this.

Digitalisation must create added value for investors, users and operators, since these are, as the beneficiaries, the ones who will ultimately have to pay: the wishes and needs of users and tenants will be met with considerably more speed and cost-effectiveness, the needs of tenants will be better recognised and products developed to meet these, life-cycle and ancillary costs will be reduced and profitability will increase.

Energy transition as a practical contribution to sustainability

Why don't we realise the potential of saving over 20 per cent energy? The technical means are available and are constantly being further developed. Building technology can provide devices and systems which are certified as guaranteeing minimal energy usage. Building automation gives us the means to achieve optimum operation of buildings and individual rooms. In spite of this, even buildings with the most recent certificates use far too much energy. Buildings and systems are not operated on an integrated basis and optimisation is therefore either not implemented or not possible. No-one in the property planning and development process is responsible for the integrated operation and optimisation of buildings.

Some individual builders are now adopting approaches whereby general contractors are given the responsibility and have to provide evidence of contractual performance over several years in operation. In these models, facility management is integrated and planning data are actually reduced by optimisation.

The Institute for Facility Management, with the support of the Swiss Federal Office of Energy (BFE) and the Zurich Cantonal Office for Energy, Water and Land Management (AWEL), has carried out a well-documented building optimisation programme, with the following findings. The building was handed over to the clients in 2013 in accordance with contractual terms and conditions. The energy consumption was much higher than planned. In winter and summer the users complained of too low or too high temperatures respectively and in winter they complained about humidity which was between 10 and 20 per cent.

Proper commissioning and optimisation led to a reduction in energy consumption of over 50 per cent as a result of correct parameterisation. No physical adjustments to the system (eg replacement of pumps) were necessary to achieve optimisation. The success of this exercise was based on analysis of measured readings and readjustment of target values, configuration and optimisation over the building management system. The individual components were aligned with each other and now work together in harmony. The potential of the inherently efficient individual components has now been realised thanks to correct commissioning and optimisation.

Facility management can play an important role in implementing the energy transition strategy. The 20 per cent reduction in energy consumption by buildings which can be achieved by operational measures would, with minimum costs, lead to a reduction in total energy consumption in Switzerland, for example, of eight per cent. The only costs to be incurred would be those of proper commissioning and optimisation. In most cases, only minor additional investment would be necessary

Continued page 60

FM - time to take responsibility (continued)

and the technical means are available. In order to achieve this, incentives must be applied in such a way that those who take responsibility for implementing the necessary measures can also benefit. There will need to be changes in responsibilities and skills and models will have to be developed to enable and encourage this.

Facility management must continue to develop as a discipline if it is to take on appropriate responsibility in these new models. There is a vital need for research on models which allow for planners, builders and operators to accept liability for consumption and emissions over a longer period following the completion of the building. What sort of incentives can be applied, who can influence them and in what way? Which regulations, laws and standards will have to be changed to create these incentives? How will the different roles be defined and how in particular will the role of facility management as integrator be defined?

Demography as opportunity

In order to benefit from the opportunities arising from demographic changes and to make a significant contribution to the management of these changes, facility management must make full use of modern technology. There must be significant investment in the integration of these technologies into facility services and relevant innovations must be encouraged. In parallel and as an equally high priority, employees at all levels must be trained for these demanding new tasks. The self-image of the sector has got to change. Activities in certain sectors of facility services frequently do not at present require professional training. Specific programmes and training courses are therefore needed to enable these employees to undertake new roles.

Summary

The quality of employees must be systematically raised through continuing further education and training and new technologies must be used. Modern technologies require investment and in many areas a much more "industrial" approach. Services must increasingly be delivered with as little effort and expense as possible. Institutionalised innovation processes will help to drive the sector forwards. This all requires companies in the facility management sector to be able to make the necessary investments and generate the margins which will allow this to happen.

An industry can only get established and grow if it is in a position to generate these margins. Without this capability, facility management will not be able to take on the responsibility which it deserves. The industry should therefore be even more proactive in seeking success. Innovative contract models which are more performance-oriented and geared to the creation of added value are needed: these will allow companies which are delivering operational excellence with commensurate success to improve their margins. Clients would thereby also transfer the risks to the companies who are better able to control them. This should consequently also enable the clients to improve their own margins.

Challenges for training and research

Facility management is a management and a social science which brings together different sectors and disciplines. FM training is therefore a form of management training which covers various topics in depth while at the same time delivering the knowledge and skill to think and act as a generalist.

The key areas of training are: business topics, facility services, such as the operation and maintenance of technical systems, hospitality management, catering, cleaning, safety and security, economic and financial control etc, personnel management, management and leadership, service management, systems engineering and project management, etc. With the bachelor's and master's programmes, and in continuing education and training, the aim is to achieve professional competence. At the same time, talented and ambitious students must be given the chance to become drivers of industry and to push forward the developments described above.

As far as research is concerned, in addition to basic facility management topics such as digital FM, sustainability and benchmarking, research targeted at important economic sectors should also be pursued. The Institute for Facility Management is concentrating on workplace management and facility management in healthcare, assisted living and consumer facility management, in addition to more general topics.

With the integration of the Institute for Facility Management into the Department of Life Science and Facility Management of the ZHAW in 2007, this sector now has its own faculty which will enable it to drive forward training and research in this discipline and develop it still further.

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