DISTINCTION OF FACILITY AND ASSET MANAGEMENT IN CROATIA

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Facility/Asset Management is a relatively young scientific discipline studied and developed by academic institutions and businesses through best practices and expertise development. Facility management was first introduced in the US in the 1950s as a tool for enhancing business interaction and productivity. Today there are numerous international and national FM/AM associations and institutes, the most important among which are IFMA, BIFM, Global FM and in Croatia it is Croatian Maintainers Association - HDO. The common goal of all associations is transfer of knowledge and expertise through various programmes of education, certification and gaining skills for a new profession – asset and facility manager. Management of assets (their selection, maintenance, supervision and renewal) plays a key role in performance and profitability of any industry in which asset operations represent core activities. Good asset management practice can assist managers in making right decision, optimisation of processes and minimisation of total costs during assets life cycle. Asset management as a profession is developing quite fast through professional training and certification, while higher level knowledge is obtained at various master and doctorate studies. In harmonization and optimisation of knowledge in the field of FM/AM, other professional knowledge is applied from different scientific disciplines (architecture, construction, mechanical engineering, electrical engineering, economy, law, etc.) so as to acquire the best sustainable support and value for money during selection, purchase, maintenance, renewal or disposal of assets. British Standard PAS 55 was issued in 2004 and updated in 2008, provides guidelines for a strategic, integrated approach which is necessary for meeting stakeholders' demands and achieving the best value of assets. In Croatia there is no comprehensive methodology and standard that would regulate this area, but parts of other standards are taken to cover FM activities. The future work of Croatian FM practitioners will be focused on harmonization of standards and participation in developing of EU asset management model.

A case study presented in the paper gives an example of outsourcing of technical and hygienic maintenance services in the Croatian company and 3-year facility management implementation with gradual shift into asset management, which resulted in significant cost savings. Positive example of the presented case study provides incentives for further development of asset management in Croatia. The issue of asset management and building up of institutional infrastructure in Croatia should be a priority issue in Croatian Government's activities in the mid-term period. The very fact that the Government considers introduction of changes in asset management institutional framework (setting up of an Agency for Asset Management) points to growing awareness of the need for proper asset management, and to former inefficiency. There are real challenges in managing of state-owned property and assets, because there is neither a model in place for management of such assets, nor institutional infrastructure for large systems which still need to be restructured (health care institutions, schools, infrastructural facilities and similar). Improvement of land administration efficiency and real property registration, preparation and standardization of land and property registers, higher level of transparency and leaving less room for corruption, are among priorities in the reform of the Croatian justice system and an important step in EU accession process. In addition, we can expect more extensive outsourcing activities in public enterprises in the forthcoming period. In order to tackle all these challenges, it is important to put in place adequate solutions for enhanced asset management in Croatia and such solutions should be based on scientific, objective, research, and not politics, or uncritical copying of others' models.

Asset management assumes fast adoption of international standards, which is also important for attracting foreign investors and introduction of advanced technologies which is absolutely necessary for improvement of Croatian economy competitiveness. British Standard BSI PAS55 outlined best practice in asset management life cycle. Harmonization of standards and designing of best asset management models is the subject of EU asset management associations, but also the Croatian Association – HDO.

2. HISTORIC DEVELOPMENT OF FACILITY MANAGEMENT

Recognition of FM as a separate profession began in the United States in the early 1950s. It was developed by the Schnelle brothers in order to enhance coordination and interaction between businesses so as to increase productivity. The first concepts

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1 Modern Real Estate Management, Andreas Pfurn, Koraci, 2005., page 65-80
of facility management emerged from activities and operations of town halls, military and colleges in the United States. The first Facility Management Institute was founded in Ann Arbor, Michigan, in 1979, which started to deal with facility management issues in more detail. In 1980 the first International Facility Management Association (IFMA) was established. In the recent years the concept and the term Facility Management is growingly used in Croatia. Valuable contribution to better understanding of facility management was provided by research studies conducted by Springer (1982), Brill, M. Margulis, S., Konar, E. and BOSTI (1985), then Epstein and Westbrook (2001). The findings indicated high level of consistency and positive effects of interaction between organizational units engaged in physical space management and overall business productivity.

The term facility management is defined differently by various international associations but with small variations in modalities, which stem from different interests and ownership relations. According to International Facility Management Association (IFMA), facility management is a profession that encompasses multiple disciplines to ensure functionality of the built environment by integrating people, processes and space. In the United States, the common definition (Cotts i Lee, 1992) is: “Facility management is the practice of coordinating the physical workplace with the people and work of the organization, integrating the principles of business administration, architecture and the behavioural and engineering sciences”. GEFMA (German FM Association): “Facility management is an entrepreneurial process which intends the improvement of flexibility of use, work productivity and capital profitability by the integration of planning, control and management of buildings, installations and facilities, while considering workplace and work environment” (Braun, Oesterle and Haller, 1995).

Cotts, Roper and Payant (2010) provided an updated definition of facility management: „it is a multidisciplinary profession tending to ensure functionality of the built environment by integrating people, place process and technology“. In this last version of definition, the focus is on technology, which was not mentioned earlier.

Generally, despite some differences in individual definitions, facility management assumes asset related activities, therefore it is also called asset management, and it can encompass catering management, fleet management, space management, archives and records management, library management including all incoming and outgoing documentation.

HDO – Croatian association of maintainers is a voluntary, non-profit association of practitioners in maintenance and management of technology and infrastructure systems, with individual professionals and corporate members. It is working on achieving the goals outlined in its Statute and promotion of joint activities. HDO is a member of Croatian Engineers Association – HIS and a member in European Federation of National Maintenance Societies (EFNMS).

HDO recognised the role and importance of this new scientific discipline – facility management and organized the first international conference in the coastal town of Šibenik in October 2008: „Facility Management 2008.“ The goal of the conference was to set foundations and directions for the future development of FM in Croatia. HDO participates actively in promotion of facility management concept through its members in EFNMS committees which are currently working on clarification of differences in terms 'facility' or 'asset' management, or maintenance management.

What all FM associations have in common is the prevailing attitude that FM is a multidisciplinary and trans-disciplinary profession with theory and practice encompassing engineering, architecture, design, accounting, finance, management and behaviourism in management of physical assets. (Teicholz 2001).

2.1. When FM manager become AM manager

What are the assignments of a facility manager and what competencies he must have? Wilson (1985) synthesized the required competencies in five activities. These are: asset/real estate management, strategic planning, engineering project administration and administrative support. The US National Research Council (NRC), when they changed the name facility management into asset management during 2008, published a list of competencies which a future asset manager should have. This created some fuss and confusion. But it is just a change in terminology but not substance, and many FM associations and councils believe that NRC is going to revise its standpoint concerning this new definition.

Key competencies that every asset manager (Malestrom 2009) should have are the following:

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• business leader,
• strategic business planner and implementer,
• resource getter,
• financial manager,
• spokesperson and advocate,
• agile purchaser, lessor, and contractor with a major regard for ethics,
• information manager,
• environmentalist,
• networker,
• mentor,
• innovator,
• risk taker,
• survivor.

The shortage of excellent FM managers is particularly conspicuous in public sector, where the lack of quality managers is so critical that it can be described as human resources crises (Cotts, Roper and Payant 2010). There are also considerable requirements for quality FM managers in social infrastructure management because modern economic development involves construction and maintenance of increasingly complex and costly infrastructural projects. (A. Amekudzi and S. McNeil, 2008).

In the recent years the awareness on importance of FM is growing in Croatia, primarily due to:

• interest for outsourcing as a 'hot' theme frequently considered by the management as a solution;
• Initiatives for private-public partnership as a solution for financing projects in situation of poor funding capabilities of public sector;
• Growing concern for FM issues by banks and financial institutions;
• Support in mergers & acquisitions and integration process following M&A
• Ensuring business continuity and jobs during recession and higher risk exposure.

Developed economies have organized postgraduate and doctorate studies in the field of FM, while in Croatia we still do not have a formal specialised education in this subject. Various aspects of maintainers' education, different engineering curriculum partly dealing with aspects of FM, are elaborated in more detail in the article written by Čala and Čosić (1999.)

Diploma at the end of FM study comprising the above indicated curriculum should ensure competencies which would enable FM managers to respond adequately to complex tasks in this scientific and business discipline.

3. STANDARDIZATION AM ACTIVITIES IN INTERNATIONAL PRACTICE AND IN CROATIA

British Standard BSI PAS 55:2008, developed and sponsored by Institute of Asset Management, defines requirements for integrated approach to asset management as the best practice. It contains a useful glossary of key words related to asset management and represents the best combination of elements in asset management (ex. maintenance and risk management) and asset utilisation (ex. use of assets for the purpose of achieving strategic objectives). Focus on combination of utilisation and concern for the assets through their entire life cycle – from original investments to final disposal, renewal or modification.

Figure 1. Specification of PAS55 standard

PAS 55 set IAM’s competitive framework which describes what competencies, knowledge and skills should people engaged in physical asset management have. It is applicable to any organisation where physical assets are a key or critical factor in achieving effective service delivery. Key functions of asset management are:

- Policy development,
- Strategy development,
- Asset management planning,
- Implementation of asset management plan,
- Development of key competencies in asset management,
- Improvements in risk management and overall performance,
- Asset knowledge management.

Figure 2. AM strategy – holistic approach
Figure 2 above presents holistic approach to asset management. It is a system thinking, interdisciplinary and optimised approach to asset management which combines and balances short-term demands with sustainable implementation of long-term plans. This 'stakeholder oriented approach' provides security and guarantee to customers, owners, employees, managers and other stakeholders that business operations are in ‘good hands’.

PAS 55 defines asset management as “Systematic and coordinated activities and practices through which organisation optimally manages its physical assets and their associated performance, risks and expenditures over their lifecycles for the purpose of achieving its organisational strategic plan.”

Table 1 presents Croatian standards which provide basic foundation, though incomplete, for FM operations. It is important to mention that we talk here about individual standards from other areas, and not integrated an standard that would provide methodology base. But in fact such integrated FM standard is still evolving and FM methodology has not been harmonized even in international practice.

Table 1. Standards which regulate FM and AM activities in Croatia

<table>
<thead>
<tr>
<th>Standard</th>
<th>Name of the standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>HRN EN 13306:2004</td>
<td>Maintenance terminology (EN 13306:2001)</td>
</tr>
</tbody>
</table>
The Croatian standards, contrary to the British standard BSI PAS 55, are not integrated into a unique standard which would provide a comprehensive guidelines and norms for physical asset management. Croatian standards are more focused on technical aspects and engineering, and less on behavioral science. The lack of appropriate standardization in facility management necessitates introduction of applicable international standards in the Croatian environment, although some local specific factors should be taken into consideration.

Maintenance is one of the key elements of FM or AM, and it should be clearly defined because it does not refer only to maintenance of technical equipment and installations, but also to the entire business infrastructure. In further development of Croatian standards, particular attention should be paid to economic, legal and environmental protection aspects since these elements are not adequately included or are not included at all in the existing standards.

4. FACILITY MANAGEMENT CASE STUDY – OPTIMISATION PROJECT INVOLVING COST CUTTING MEASURES AND OUTSOURCING – SLA (SERVICE LEVEL AGREEMENT) NON CORE ACTIVITIES

This section of the paper presents a case study describing the introduction of a new FM/AM organizational unit in the Croatian oil and gas company INA-Industrija nafte d.d. The former organizational unit General Administrative and Technical Department was transformed into FM/AM Sector. In parallel with setting up of the new organizational unit with its authorities and responsibilities in FM/AM, the process optimisation and cost reduction projects were implemented, which represent a backbone of FM/AM. In addition, SLA (Service Level Agreement) was concluded for outsourcing technical and cleaning services as non-core activities of oil and gas industry. The introductory part of this section presents changes that took place in implementation of the new structure. Then follows the description of SLA as an important FM tool and made a future AM organizational unit.

INA made a strategic decision on outsourcing of non-core activities so as to ensure free capacity and funding for other investments and to reduce costs. In case of outsourcing, responsibility for quality of services is transferred to the service provider. It does not mean outsourcing of personnel, as is frequently assumed by general public. Outsourcing is regulated by a Service Level Agreement - SLA\(^3\) and such an agreement was concluded for outsourcing of mentioned activities by INA.

SLA contains all important provisions which regulate relations between the parties. This is an agreement between provider of services and the client. It normally contains provisions that regulate the level of services, priorities, responsibilities, guarantees, penalty for breach (financial), but it usually also includes the level of availability, usability, performance, invoicing and similar.

Technical specification included in SLA generally describes the services to be rendered and and it is called Service Level Specification (SLS). It details the objectives of specific services - Service Level Objective (SLO). SLS serves as operative guidelines for implementation of services, and SLO is a sub-group of SLS which contains important parameters of services that are rendered and objectives to be achieved by SLS. Service Level Agreements are important elements of management discipline and they affect relationships between the parties in outsourcing - Outsourcing Relationship Management (ORM)).

Today it is a general practice that SLA agreements are applied in contracting outsourcing of services and represent one of primary tools in managing outsourcing.

\(^3\) Physical Asset Management, Nicholas A.J. Hastings, Springer, 2009
Benchmarking of technical and hygienic maintenance of INA's facilities indicated that the costs of these services (maintenance of buildings, warehouses, etc.) were higher than in comparable companies. Therefore INA made decision on outsourcing of these services. Service provider was a consortium of companies. For this purpose INA prepared a specification of activities to be outsourced and detailed plan of activities (Figure 6).

Figure 6: Outsourced activities

<table>
<thead>
<tr>
<th>Building management, maintenance, Administrative operations</th>
<th>Furniture management, moving from location to location</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Technical maintenance (civil, mechanical, electrical)</td>
<td>*Maintenance &amp; repair of furniture</td>
</tr>
<tr>
<td>*Facility renovation and refurbishment</td>
<td>*Renewal of furniture</td>
</tr>
<tr>
<td>*ServiceDesk management system for malfunction alarm</td>
<td>*Organizing inventory</td>
</tr>
<tr>
<td></td>
<td>*Moving management</td>
</tr>
</tbody>
</table>

Planning and control not to be outsourced

Hygienic maintenance

<table>
<thead>
<tr>
<th>*Routine cleaning daily</th>
<th>*Maintenance of green surfaces, mowing</th>
</tr>
</thead>
<tbody>
<tr>
<td>*Extraordinary cleaning</td>
<td>*Horticultural maintenance (flowers)</td>
</tr>
<tr>
<td>*Detailed cleaning</td>
<td>*Cleaning of external surfaces</td>
</tr>
<tr>
<td></td>
<td>*Snow cleaning</td>
</tr>
</tbody>
</table>

*Sanitary-hygienic disinfection, desinsection, pest control

External surfaces

| *Maintenance of green surfaces, mowing |
| *Horticultural maintenance (flowers)  |
| *Cleaning of external surfaces |
| *Snow cleaning |

Source: INA

In order to ensure meeting of required level of services and continuous execution and follow up of services, a joint project team was established including members of INA's FM and service provider selected in public tendering. Thanks to formation of quality data base, the planning process was simpler and faster. It was prepared on the basis of actual data on realistic condition of buildings and technical systems.

As service provider, in this case Consortium, took over a series of commercial activities such as ordering. INA's procurement sector was relieved of part of activities. Instead of large number of quotations, orders and invoices, after concluding of the umbrella Service Level Agreement, the supplier received one consolidated monthly invoice, adjusted in advance through weekly and monthly reports. As a result, administrative operations became simpler and work load reduced.

According to analyses, about 71% of technical maintenance activities were realized through SLA implementation, and the remaining 29% was realized through specialized companies certified for providing specific services and testing (Table 2). In case of hygienic maintenance, the ratio in favour of SLA is even higher.

The advantage of such outsourcing is simpler procurement process involving smaller number of orders, smaller number of suppliers and consequently less engagement by INA's procurement sector.

Table 2: Structure of activities covered or not covered by SLA
The company obtained a strategic and social partner in sustainable facility management. After bidding process and competition between two international bidders and one domestic consortium, negotiations ended so that INA achieved 25% lower price than originally offered. For the first time without workers protests and in an innovative way, employees were leased to strategic stakeholder at negotiated price. But what is more important in the current situation of recession and uncertainty, the jobs were preserved.

As indicated by the data presented in Table 3, a large portion of requests - 89,1% were realized within SLA lump sum, while the remaining 10,9% was realized outside lump sum and it referred mainly to specific equipment or human resources required (certificates, authorization required by law, etc.). Technical and other bidding documents were carefully prepared during 4 months. For the first time a proper standardization of hygienic and technical maintenance services for buildings and facilities was carried out. Even at lower negotiated price, the level of services and their standard was not degraded. Consequently, even in the difficult time of recession and illiquidity, INA has services provided according to set standards and its core activities are not jeopardized.

Table 3: Key statistical data on realized requests according to SLA
Source: Author's calculation

FM Engineering has important role in monitoring of activities and further development of the project. Its assignment is to continue with optimisation and standardisation of FM processes and optimisation of FM costs borne by the client. In addition
to analyses and monitoring of equipment condition, which is recorded and documented in CAFM, FM Engineering is also responsible for proper structuring of FM expenditures, benchmarking and identifying reference and comparable values in the area of technical and hygienic maintenance.

5. CONCLUDING REMARKS

Facility and Asset Management is a relatively young scientific discipline devised and elaborated by academic institutions and businesses through best practices and individual experience. The beginnings of facility management emerged in the United States in the 1950s when it was used as a tool for productivity improvement and higher level of interaction. Today, a number of international associations and institutes work on development of facility management. All the international association for facility and asset management have common goal - promotion and transfer of knowledge through educational programmes, certification and specification of a new profession – asset manager. The only international standard which regulates asset management in a comprehensive and integrated manner is British Standard PAS 55, issued in 2004, which serves as a platform for expert discussions around the world. It defines strategically integrated approach which is necessary to meet shareholders’ demand in regard to asset management and value creation. In Croatia there is no integrated methodology and standard which would regulate AM subject. Instead, there are specific standards in other areas which partly cover also AM issues. The process of harmonization of standards in the FM/AM field are subjects of discussions, not only in Croatia but internationally.

The case study of AM implementation at INA, Croatian oil and gas company, describes a successful pilot example of 3-year long facility management which evolved into asset management. The process involved changes in organizational structure, streamlining of processes, delegation of responsibilities to lower hierarchical levels, implementation of projects which represent basic AM tools. The result of the project was matrix structure in asset management which is leaner and more efficient. After further development of the model, other non-core activities should be outsourced, apart from real estate management. Outsourcing of non-core activities creates benefits for the company as it leaves more funding and other resources to be focused on core activities. In outsourcing, responsibility for service performance is transferred to provider of services, but it does not necessarily include outsourcing of human resources. Outsourcing is realized through one of basic FM tools, i.e. through Service Level Agreement. Through implementation of the SLA for contracted services, INA achieved savings of 25% on technical and hygienic maintenance in comparison with previous period. During the process INA elaborated its own model, kept operational personnel, but leased their physical work to strategic supplier of services. In this way the company preserved its know-how and achieved cost savings. Operational knowledge was not outsourced as it remained with its employees. Proactive physical asset management contributes to improved profitability, and in such context FM/AM cannot be observed any more as a maintenance cost, but as strategic management discipline. According to international practice in large companies, this discipline is managed by vice president for administration, but in small companies FM/AM departments are in charge. Arrival of foreign companies and their practice facilitated spreading of FM/AM to other countries and markets and introduction of standard tools, and recognition of a new profession – Facility/Asset manager. Positive results achieved by INA provide incentive for further development of FM/AM in Croatia. It is certain that almost all institutions and organisations, from those on government level, local communities, towns and businesses, will adopt some form of facility/asset management. When we join European Union further harmonization of standards will have to be done. It will also include standards in asset management. This is absolutely necessary because application of standard tools for AM management assumes existing of well organized land registry and cadastral data.

References: