FACILITY MANAGEMENT IN SERBIA – STATE OF THE ART AND PERSPECTIVES

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Trying to estimate perspectives of Facility Management development in Serbia, the authors are looking for rare cases and initiations of Facility Management in practice, considering recent experiences from the countries in the CEE (Central and Eastern Europe) region such as Hungary, Croatia and other European countries in transition. In a milieu of a recovering economy, privatization in progress, a dynamic real estate market and an expansion of foreign investments, development of FM is regarded as a field with a significant perspective. The presence of developed FM concepts in European countries can be a chance for Serbia to start developing its own FM strategy based on the best regional experiences.

Keywords: Facility Management, Serbia, perspectives

INTRODUCTION

The aim of this paper is to draw attention of professional circles to one segment of wider European market that goes trough the conceptual stage of FM development. Trying to estimate perspectives of FM development in Serbia (*Figure 1*), the authors consider recent experiences from the countries in the CEE (Central and Eastern Europe) region such as Hungary, Croatia and other European countries in transition. In a milieu of a recovering economy, privatization in progress, a dynamic real estate market and an expansion of foreign investments, development of FM is regarded as a field with a significant perspective. The presence of developed FM concepts in European countries can be a chance for Serbia to start developing its own FM strategy based on the best regional experiences.

At the first glance, Facility Management seems to be completely new technology in Serbia. Although certain percent of public objects have been managed by special departments or experienced individuals, majority of related activities have been dispersed within organizations and Facility Management as a professional field has still not been established. In this research authors are looking for rare cases and initiations of facility management in practice, as well as for the clues of facility management in the existing academic and continued education programs.

The paper presents the first steps in establishing the Facility Management Group within the Faculty of Architecture, University of Belgrade and the planned activities towards setting a Pilot Project in application of the CAFM technology on the case of Building of Technical Faculties in Belgrade.

During the early development stages of Facility Management in Europe in the last decade, Serbia and the region of ex Yugoslavia experienced the toughest time in its recent history, resulted in huge economic crisis and significant political changes.

Facts related to Serbia and Montenegro, according to the World Bank resources (World Development Indicators Database, 2004), illustrate the most recent economic trends (*Table 1*):

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Serbia and Montenegro	1999	2002	2003
GNI per capita, Atlas method (current US$)	1,310.0	1,400.0	1,910.0
GDP (current $)	9.8 billion	15.7 billion	19.2 billion
GDP growth (annual %)	-18.1	4.0	3.0
GDP implicit price deflator (annual % growth)	60.9	25.5	6.4
Exports of goods and services (% of GDP)	21.0	20.7	22.2
Imports of goods and services (% of GDP)	34.6	43.8	45.3
Gross capital formation (% of GDP)	11.6	16.1	17.8

Table 1: Selected economic facts on Serbia and Montenegro (according to the World Bank resources)

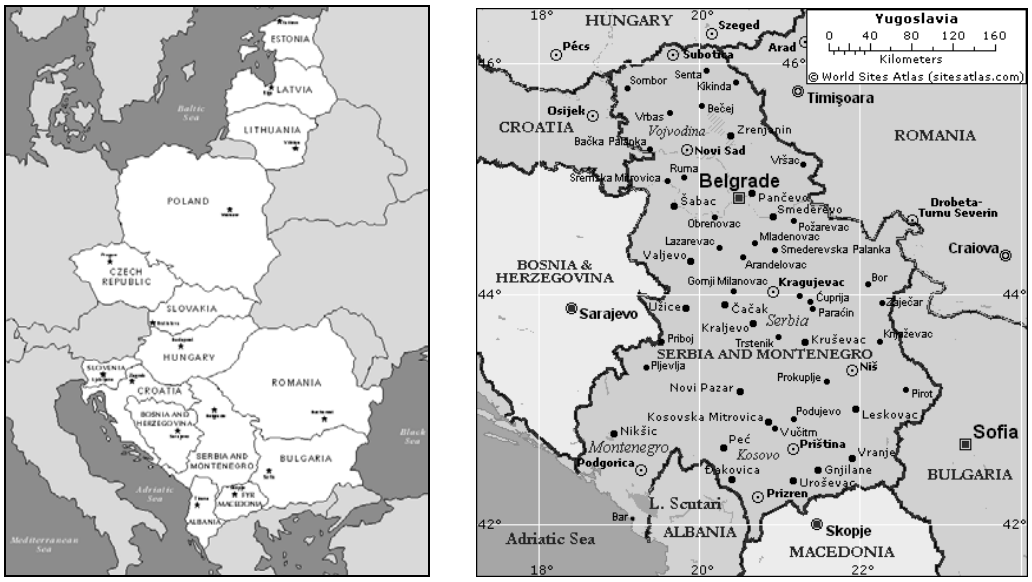

Figure 1: Serbia and Montenegro within the CEE countries

Related to perspectives of Serbian market for adopting the FM technology, it is important to stress that domestic engineering practices relatively easily implemented CAD technologies in early 90-es, supported by integration of these technologies in appropriate academic programs. Orientation of Serbian architectural practices for example, towards remote Eastern markets (the Russian in particular) during the last decade, enforced local professionals to consider the electronic communication as a substitute for traditional means of communication. Based on this it could be estimated that digital divide in local engineering and academia, significantly differ from the national average, so that adoption of a new technology based on ICT-s could be realized efficiently and smoothly.

THE RESEARCH METHODOLOGY

Searching for examples best describing state of the art of Facility Management technology in Serbia, the capital city has been focused, estimating that being administrative, business and industrial center, it will include a full variety of FM application levels.

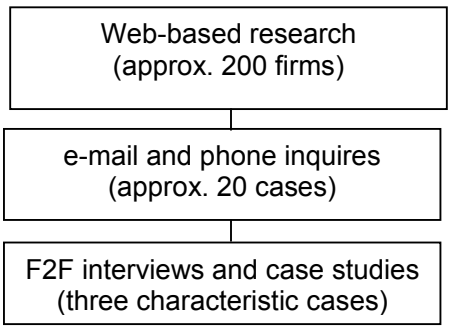

Figure 2: The scheme of sampling process

The Web-based research was the most suitable for an initial screening of existence of the Facility Management technology within the examined field. Considering the fact that significant percent of Serbian firms and institutions have been presented on the Internet, it was expectable to detect the FM or similar departments using this method. The first search was based on keywords (facility management) and geographic references (Serbia, Serbia and Montenegro, Belgrade…). In this search we got relatively modest results of a couple of institutions mentioning the required expressions in different contexts. In this group, in fact, we found the two examples that we consider as typical at the moment.

Considering the fact that in Serbian language the expression "Facility Management" might be translated, transcribed or interpreted differently, the second circle of Web-based research was conducted, examining about 150 institutions (government, communal, financial, health, educational, retail, insurance, etc.) searching for facility management or similar departments. Apart from research results, this examination helped in creating a database of potential institutions for future FM application and customers of our consulting services.

The selected companies, institutions and individuals (approx. 20 out of nearly 200 initially examined), were contacted either by e-mail or by phone calls (*Figure 2*). This reduced sample included best (and only) FM practices, software producers and regional distributors, academics organizing national conferences that might be of relevance for FM development, and distributors of building technology equipment.

Based on this reduced sample the three typical examples of FM implementation/need are selected and presented in this paper respecting the privacy of corporate data.

The researchers intended to use the snowball methodology to identify the cases of FM in Belgrade, but the two initially identified cases (while the third case has been partly completed by one of the authors) did not reference to any other, which might indicate that the FM technology has not been spread and that the network of FM professionals had not been established as yet.

The Web-based research included also the relevant conferences, international FM associations (IFMA 2005; EuroFM 2005), and papers published in related scientific journals. These resources were extremely useful in understanding the general strategies (Teicholz, 2002; Alexander, 2003) and theoretical positions (May et all., 1996; Chotipanich, 2004) of Facility Management, specific aspects of regional research (Gilleard, 1999; Gilleard, Yikun 1999; Moore, M. 2004), and particularly development in the countries of the CEE (Central Eastern Europe) region (Sloan, 1998; Melnikas, 1998.).

FACILITY MANAGEMENT IN SERBIA

Discussing the state of the art of Facility Management in Serbia, a systematization of Serbian real estate regarding the FM implementation is given, followed by analysis of the current situation in outsourcing. The main sources of knowledge on Facility Management have been identified. Concluding this part, the actual academic initiatives are presented.

Systematization of Real Estate Regarding the Facility Management Needs and Implementations

The systematization of Serbian Real Estate regarding the FM implementation includes three different groups of buildings:

The first group consists of buildings owned and built by international companies, hotel chains (Hyatt Regency, Intercontinental, etc.), big retail firms (Metro, Mercator, etc.), banks (Société Générale, Raiffeisen Bank, etc.), fast food such as Mc Donald's (Figure 3) and many others. These companies come with already established facility management standards and requirements, and apply them within institutions. The cases from this group seem to be isolated with low or no connections on the local/national level.

Figure 3: McDonald's chain of restaurants, source of illust. (McDonald's Serbia and Montenegro, 2002

The only institution mentioning publicly the Facility Management department until now has been Austrian Raiffeisen Bank, that a couple months ago established the Facility Management department recruiting people from its ICT sector (Raiffeisen Bank Contacts, 2004).

The second group is the one with the FM technology included in the stages of designing and construction. This group is represented by the case of the Usce Business Center (Figure 4), the state building seriously damaged during the NATO bombardment of Belgrade in 1999, that has been privatized, and after a public architectural competition, is under reconstruction.

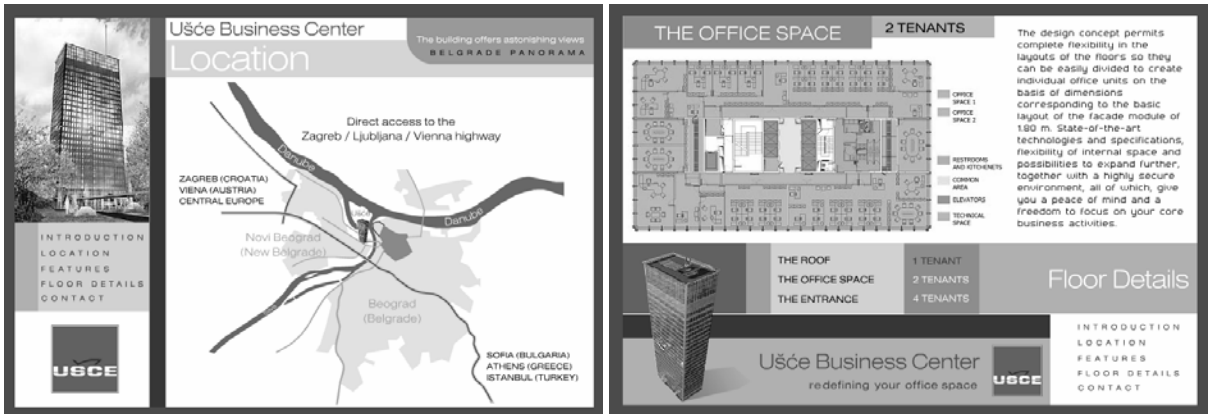

Figure 4: The Usce Business Center – Rebuilding of Office Spaces with Integrated Facility Management, source of illust. (Usce Business Center, 2004)

The FM technology in this case helps in negotiations with future owners and tenants of offices, as well as in simulating the constantly changing functionality of the designed space.

The third and incomparably largest group includes the majority of existing buildings in use, be it administrative, educational, government, retail, tourist or any others. In this group we expect dynamic needs for implementation of FM technology, caused by wide variety of factors such as:

- Huge operational costs
- Needs for renovation / reconstruction
- Privatization
- Change of building owner
- Functional alterations

This group is represented by the case of the Building of Technical Faculties in Belgrade currently accommodating faculties of Electronics, Civil Engineering and Architecture, of the University of Belgrade (Figure 5).

Authors of this paper had occasion to participate and observe the activity of updating the technical documentation on the building for the purpose of reconstruction and renovation of the existing heating system. It was surprisingly to discover that, despite of the existence of the building directorate and generally high technical culture of the accommodated institutions, the accurate documentation did not exist, nor centralized for the whole building, neither for the spaces used by any of departments.

Production of up to date CAD documentation (the so called “as is” study) took a couple of months and a significant body of work. The benefit of centrally elaborated documentation was immediately recognized by different members of institution ranging from the management to the cleaning division members. The authors of this paper identified this study with the one of initial steps in Facility Management application. Based on the documentation mentioned above, a Pilot project of Facility Management implementation is proposed within the institutional R&D activities for the period 2005 – 2007.

Figure 5: The Building of Technical Faculties Belgrade, source of illust. (Faculty of Electronics Web Site, 2004)

The case of the Building of Technical Faculties is more or less typical and represents a huge group of buildings where even the basic technical documentation needs to be updated, followed by establishing information systems supporting processes of the building's quotidian function.

THE TRENDS IN OUTSOURCING

The outsourcing in Serbia started in early 90-es caused by several factors:

- New trends in business
- Privatization of particular departments and specific activities within the local firms
- Job cuts in many industrial fields
- Social crisis

The new trends in business related to outsourcing range from small signs like appearance of privately owned and maintained coffee machines in public buildings, mobile toilets supporting public manifestations and so on, to requirements of foreign investors for highly specialized services that could not be obtained as "in-house" projects. However, the major and still increasing outsourcing field in Serbia is in ICT services, where highly specialized firms offer a continual support in network engineering, database maintenance and strategic development consulting.

Some cases in the examined sample indicate examples of maintenance departments that have been privatized and the related activities therefore become the matter of outsourcing. The job cuts during 90-es and increased number of refugees invoked finding new sources of income, which resulted in small firms specialized in cleaning and technical maintenance of buildings, photocopying, printing and other technical services, etc.

The social conditions that followed economic crisis in last decade caused a need for more specialized security services than the ones that average organizations normally had. The security services therefore become one of the most spread fields for outsourcing, the second one after the IT support.

Sources of Knowledge on Facility Management

In this research the four main sources of knowledge related to Facility management have been identified:

- Software producers and distributors, mainly in the field of CAD, such as Nemetschek with its Allfa FM solution, Graphisoft with the ArchiFM, etc.
- Equipment producers such as Siemens with its Facility Management solutions.
- Professionals in the field of FM identified in the rare cases of FM technology implementation.
- Academic circles to which the authors of this paper belong.

Discussing sources of FM knowledge it is important to consider the experiences from the region. Looking at the neighbor countries, the best results and the higher development level, as well as an established national network of FM professionals is identified in Hungary (Kuczogy, 2003). The influences coming from Croatia, however, seem to be more influential, despite the fact that Croatian FM scene has not been that articulated as yet.

In this research the leading Croatian firms in the field of FM have been identified and contacted. The feedback received, indicates a strong similarities of the two markets, and some stages that the Serbian FM is to go through. It also highlights certain characteristics of FM implementation in transitional economies such as dealing with dispersion of FM related activities within diverse

departments of institutions, obstacles of syndicates and challenges of outsourcing processes.

The papers presented at the Conference of Facility Management in CEE countries in Vilnius 1998 and later published in the special issue of Facilities (Melnikas, 1998), did not include cases from Serbia, but still seem to be applicable on Serbian situation about six years later.

Academic Initiatives

Considering the fact that being involved in Facility Management activity, architects extend their influence in building lifecycle beyond the stages of designing and completion (Career options…, AIA, 2003), a group of researchers from the Faculty of Architecture, University of Belgrade, initiated a range of FM related activities.

The initial interest of this group for Facility management was influenced early this year by a presentation of a range of engineering CAD software of the German firm Nemetschek (CAD and more, 2004) that includes Allfa FM system. Last summer the group attended an introductory workshop related to Allfa system, organized by the Nemetschek CREM Solutions experts in Munich. This collaboration was supported by Nemetschek's regional representative Nemetschek d.o.o. Pula, Croatia.

Under the title: Facility Management – Information Technologies Supporting Architectural Objects in Use, a part of wider R&D project has been proposed by the authors of this paper to the Ministry of Science and Technology of Serbia. The issues of initial application of the Facility Management technology in Serbia are in the focus of the proposed research theme. Apart from these general interests, the group is examining position of architects in FM multidisciplinary teams (AIA, 2003) and relation of FM with architectural design (Akin, 1994; Mills, 1996).

After completing the pilot-project and after critically examining a couple of implementations, the activity of this group is aimed in providing consulting services in the field of Facility Management in Serbia.

PERSPECTIVES

Discussing perspectives for Facility Management development and implementation in Serbia, it would be interesting to consider the statements of Hungarian colleagues (Kuczogi, 2003) that disadvantages caused by delays in the technology development and implementation, might be used as advantages by adopting the best experiences and solutions. However, it is of a vital importance to identify characteristics of local culture and context, the legislative base, as well as of facility features, that significantly differ from the standard European milieu. Just with identified local specifics it would be possible to find optimal solutions for establishing national FM strategies.

Mechanisms of the recovering Serbian economy together with the proximity of the EU business culture are seen as the main forces introducing a necessity for more efficient and transparent management of the existing built environment and its exploitation. The increasing presence of international firms and institutions will be an opportunity for the local market to inherit developed organizational concepts, including the Facility Management.

The IT departments are identified in this study as the most likely to mediate in launching FM concepts in Serbian organizations, through CAFM systems integrating a national-wide well established CAD base and an expertise in information systems.

The main obstacles to Facility Management growth in Serbia, however, lay in still existing overall corruption that places Serbia among the countries with the highest rate of corruption in Europe. Unfortunately, corruption in the field of real estate is one of the most significant on the national level. Another significant barrier in FM adoption could be expected from inherited organizational culture that does not recognize the benefits of transparent accessibility to facility related information and knowledge. Finally, bridging the digital divide, both on the national level (compared with European averages) and within different departments of local organizations, will also be a base for introduction of integrated information solutions as FM.

In current situation, a synergetic activity of academia and practice is estimated as an optimal solution towards testing the cutting edge technology and concepts, as well as its application within the local market. The proposed

pilot-projects are to examine / showcase the full benefits of the FM technology implementation, together with the main specificities and challenges of its localization on one side, and the readiness of the local market for it adoption. Therefore, integrating the main sources of knowledge and expertise in Facility Management within a National Network of FM professionals and straightening connections with colleagues in the region, will be of the highest priority for the further development and implementation of Facility Management in Serbia.

CONCLUSIONS

Intensive development of Facility Management worldwide happened during the last decade when Serbia experienced the toughest political and economic time in its recent history. In the context of broken domestic economy, the Serbian Facility Management as a professional field has not been established as yet and its clues in practice are rare and isolated. The national organizations are entering the conception stage in FM development, establishing FM departments, identifying initial needs, and gaining experience in outsourcing. This paper is aimed in drawing a professional attention to Serbian market, potentially interesting for spreading European knowledge and practices.

The technological disadvantage caused by a delay of ten years behind the leading European FM companies, theoretically opens the Serbian market an opportunity to chose and adopt the best technical solutions and to learn from advanced European experiences. The main forces for adoption of FM are identified, as well as the sources of possible obstacles. The local specifics are estimated as a subject of further research, as a necessary activity before discussing strategies for FM development.

The authors of this paper, members of the recently established Facility Management Group at the Faculty of Architecture, Belgrade University, proposed the Facility Management as a theme within the wider Research Project on Urban Management that is going to be funded by the Serbian Ministry of Science and Technology in the period 2005-2007. If accepted, this research project is going to be a start point (incubator) for establishing academic connections with related European academic institutions and research programs.

Integrating the main sources of knowledge and expertise in Facility Management within a National Network of FM professionals and straightening connections with colleagues in the region, will be of the highest priority for the further development and implementation of Facility Management in Serbia.

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TEHNOLOGIJA UPRAVLJANJA I ODRŽAVANJA OBJEKATA U SRBIJI

U nastojanju da procene perspektive razvoja tehnologije upravljanja i održavanja izgrađenih objekata (Facility Management) u Srbiji, autori tragaju za primerima primene u domaćoj praksi. Pri tome se imaju u vidu skorašnja iskustva zemalja Centralne i istočne Evrope (CEE), kao što su Mađarska, Hrvatska i druge evropske zemlje u tranziciji. U uslovima oporavka nacionalne privrede, nedovršene privatizacije, dinamiziranja tržišta nekretnina i ekspanzije stranih ulaganja, razvoj FM tehnologije prilagođene lokalnim uslovima, smatra se vrlo perspektivnim poljem delovanja. Postojanje razvijenih FM koncepata u evropskim zemljama pruža izuzetnu šansu Srbiji da započne formiranje sopstvene FM strategije bazirane na najboljim iskustvima iz zemalja u regionu.

Ključne reči: Fasiliti Menadžment, upravljanje i održavanje izgrađenih objekata, Srbija, perspektive.