

THE ROLE OF IT DEPARTMENTS IN THE ENHANCEMENT OF BANKS' PROJECT MANAGEMENT

ULOGA IT ODJELA U UNAPREĐENJU PROJEKTOGA MENADŽMENTA U BANKAMA

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Abstract

Contemporary business conditions put a lot of pressure on organizations in basically all industries to successfully maintain or increase their competitiveness. That is also true of the very dynamic banking and financial sectors. Managing change is of special importance for the banks' competitiveness and thus non-standard activities or processes, namely projects, need to be performed on a permanent basis. The progressively growing complexity of business environments demands a corresponding increase in the number of projects to be carried out while bearing in mind the fact that projects in the banking sector need to follow some specific rules, at least in terms of formal regulations and confidentiality norms that are to be observed in this sector. A bank's IT department is generally the only sector in the bank that is fully project-oriented. In this paper its role is presented as the axis of the bank's multiple projects environment and thus the axis of the bank's development. Also, the role of the bank's IT department in enhancing the bank's project management maturity will be clarified.

Sažetak

Zbog suvremenih uvjeta poslovanja organizacije u gotovo svim gospodarskim granama pod velikim su pritiskom da zadrže ili povećaju svoju konkurentnost. Isto vrijedi i za vrlo dinamičan bankarski i finansijski sektor. Upravljanje promjenama posebno je važno za konkurentnost banaka pa stoga aktivnosti ili procese koji nisu standardni, drugim riječima projekte, valja stalno provoditi. Sve veća složenost poslovnih okruženja zahtijeva odgovarajuće povećanje broja projekata koje treba provesti imajući na umu činjenicu da projekti u bankarskom sektoru moraju slijediti neka specifična pravila, barem što se tiče formalnih pravila i normi za zaštitu povjerljivosti kojih se treba pridržavati. IT odjel najčešće je jedini sektor banke koji je u potpunosti projektno usmjeren. U ovom radu njegova je uloga predstavljena kao osovina multiprojektne okruženja banke pa tako i razvoja banke. Nadalje, objasniti ćemo i ulogu IT odjela banke u unapređenju projektnoga menadžmenta u bankama.

1. Introduction

Contemporary business conditions put a lot of pressure on organizations in basically all industries to successfully keep and/or increase their competitiveness as it is the basis for their success in the long run /1/. Certainly, this also applies to the very dynamic banking and financial sectors. Providing maximum quality with minimum costs and within the shortest possible response time

while maximizing productivity is what modern organizations need /2/.

Strategic management is a well-known scientific and professional dimension of management used in long-term planning and implementation of organizations' development increasing their competitiveness through meeting their strategic objectives. In the last few decades, numerous management concepts, methods, techniques and tools

have been developed for that reason. The following should be highlighted /3/:

- Balanced scorecard
- Quantitative methods for making decisions in circumstances of uncertainty
- Porter's Generic Strategies model
- Metamodels based on the above mentioned models

Sources of information required for making decisions and creating strategies tend to be heterogeneous. Modern times are characterised by a large quantity of various information from a variety of sources. Managing and using an increasing quantity of data, the so-called Big Data is becoming increasingly pressing. It has become a huge challenge how to integrate data from a variety of data sources, how to determine which data to focus on and which to neglect, how to process the data to make them potentially useful, how to recognise potentially useful data in the first place etc. Big data is high volume, high velocity, and/or high variety information assets that require new forms of processing to enable enhanced decision making, insight discovery and process optimization /4/.

Managing change is of special importance for the competitiveness of any organization. In order to successfully manage change, non-standard activities or processes, namely projects, need to be performed on a daily basis /5/. Projects need to be compatible with the strategies and implemented to carry out strategic plans and achieve strategic objectives /6/.

The complexity of business environments is growing progressively due to increased competitiveness and ever more dynamic change, which results in a progressive increase in the number of projects to be carried out /7/. The scope of work on projects of various sizes and purposes has been rapidly increasing over the last two decades. According to the World Bank, 21% of the world's GDP comes from investment projects /8/. In addition, numerous other projects are being carried out that do not have investment significance, but are vital for the survival and further development of business and other systems. This has resulted in multiple projects that, according to some estimates, represent close to one third of the world's business and related activities /9/. The research conducted by the Anderson Economic Group (AEG) showed that in 2006 over 24.4 million em-

ployees in 11 of the world's leading economies participated in projects. It is expected that by 2016 this number will exceed 32.6 million /10/.

Indeed, multi-project environments are being created at all levels of human activity including organisations, where multi-project operation is emerging and needs to be mastered /11/, /12/. The key challenge of multi-project operation is not merely to implement an individual project successfully; it is rather the synergic and organisational handling of all projects taking into consideration the limited available resources and the need for carrying out incessantly and simultaneously the basic continuous processes in every organisation.

Due to the aforementioned reasons, project managers do not only need knowledge and experience from the field which is the subject of the project, but also the knowledge and experience related to the project implementation processes, namely the field of project management /13/. On the other hand, it is not sufficient anymore for organizations to have experienced and capable project managers ready to take over new projects and to cooperate in project teams, but also to adjust organizational structures to the new demands of the increasingly more complex and important multi-project operations.

2. Multi-project environment in contemporary banking institutions

The banking industry has experienced mixed results in the (post)crisis period from 2008 to 2010. Industry growth has slowed down considerably and the industry has entered a period of enhanced regulation. More stringent capital adequacy and risk management standards are now being imposed upon banks, along with a corresponding increased strain on their traditional business models and operating margins. Looking forward, certain key priorities have emerged for the banking industry, the most prominent being the restoration of customer confidence; addressing issues such as low efficiency of existing channels; ageing technology; high operating costs and the existence of complex processes /14/.

Projects have received more attention in the last decade since they have been recognised as an efficient tool for quick realization of newly prioritised activities and processes /15/. But those pro-

jects are not the only ones in the banking sector. There are many other different types of projects with different specific characteristics influencing the way they should be managed. According to their characteristics they could be classified as /16/, /17/, /18/:

- operational projects,
- growth-oriented commercial projects,
- development-oriented projects,
- emergency projects.

Operational projects are most of the time minor projects the purpose of which is to support efficient implementation of fundamental continuous processes in banks that mostly focus on their clients. Such projects are almost a routine and are often repeated in similar forms. These are projects that enable carrying out annual plans and they are mostly internal bank projects, i.e. they are carried out solely for the purposes of the bank. Examples of operational projects include minor technological upgrades, solving technical problems occurring in the business information system, which involves previously planned interventions on maintenance systems and minor upgrades of the existing functionalities of the system, continuous training of employees and the like.

Growth-oriented commercial projects are strategic projects that banks implement with the intention of increasing their revenues, market share and other growth indicators. These are projects that have a direct impact on change, i.e. on the improvement of banks' indicators of success, which is why the top management often give them highest priority. Most of the time they result from strategic development programmes of the banks so they can be categorised as internal projects. Examples of such projects include the development and introduction of new banking services and products, horizontal integration projects, diversification projects, projects involving winning new markets etc. The aims of such projects are largely related to strengthening the market position and increasing the number and satisfaction of clients.

Development-oriented projects are strategic projects that do not have immediately measurable economic or other financial effects at the exploitation stage, but yield some other positive effects essential to the business system. These are projects that lead to a quality development of banks, such as the development of new information-

communication technologies, reorganization of the business system, replacement of the IT system and the like – all leading towards consolidation and optimization of the banks' processes, technologies and platforms. Similarly to growth projects, development projects also need to result from strategic development projects of banks and they are identified as banks' internal projects. The aims of development-oriented projects include increase efficiency and cost cutting as well as laying the foundations for future growth and the implementation of growth-oriented commercial projects.

Emergency projects are projects that emerge suddenly. They need to be implemented very fast and urgently, but are not part of the strategic development programme or the annual operational plan nor are they commissioned externally. These are projects resulting from the need created by various developments that disrupt the further operation of the bank. Examples of such projects include projects designed to deal with incidents in regular operation (emergency production requirements that assume "ad hoc" interventions due to the downtime of some production system), regulatory projects with a tight implementation deadline and often with the highest priority regardless of other projects.

Compared to other industries' environments, banking environments have specific characteristics and constraints that affect, among other things, project management processes in banks. These characteristics require some adjustments of conventional project management techniques and methods, the required competencies of project managers and project team members and the analysis of suitability and customization of standard project management organizational solutions. Those specific characteristics include the following /19/:

- banks' organisational structure – for the most part, the banks' organisational structures is prescribed by regulatory authorities, both national and international of professional;
- organisation and continuity of business processes – the operation of banks is mostly carried out at a high level of organisation, which is to a large extent adjusted to the execution of fundamental and continuous business processes. At the same time it is important to find out how to implement the project successfully;

- availability of the bank's service – banking services are mostly available round the clock throughout the year, which requires very short deadlines for the final parts of projects (the bank's system's "shutdown" due to the introduction of new software solutions or the introduction of new products and services is measured in minutes or possibly hours);
- risk – each, even the smallest change may result in the system's inconsistency, which can have a negative impact on the bank's operation as well as on the operation of its clients;
- regulatory and intervention projects – they occur relatively often in bank-related projects and have to be implemented to set deadlines regardless of other projects; these are projects with the highest priority and are the reason why the bank's project portfolio management faces huge challenges when allocating and ensuring necessary resources;
- security and limited access of some data – business processes in banks are carried out within high level security norms with significant restrictions in data transaction, the transparency of some project parts etc.

Banking business systems cannot operate efficiently nor be successful unless their development activities display an appropriate balance between growth-oriented commercial projects and development-oriented projects. Successful implementation of these projects requires human resources with specific skills that will allow efficient operation and contribute to the success of the bank's business system. As the results of numerous studies point to a very high percentage of failing or relatively successful projects (e.g. according to the latest Standish Group survey /20/, only 39% of projects are completed successfully, 43% of projects are completed but with some deviations, and 18% of projects fail completely), it is clear that having competent individuals who run projects or participate in them in any role is of utmost importance.

3. Supportive and development processes of IT departments in the banking industry

Information technology (IT) departments are generally those bank's departments that its customers cannot see and do not have direct contact with. For this reason someone might find them less

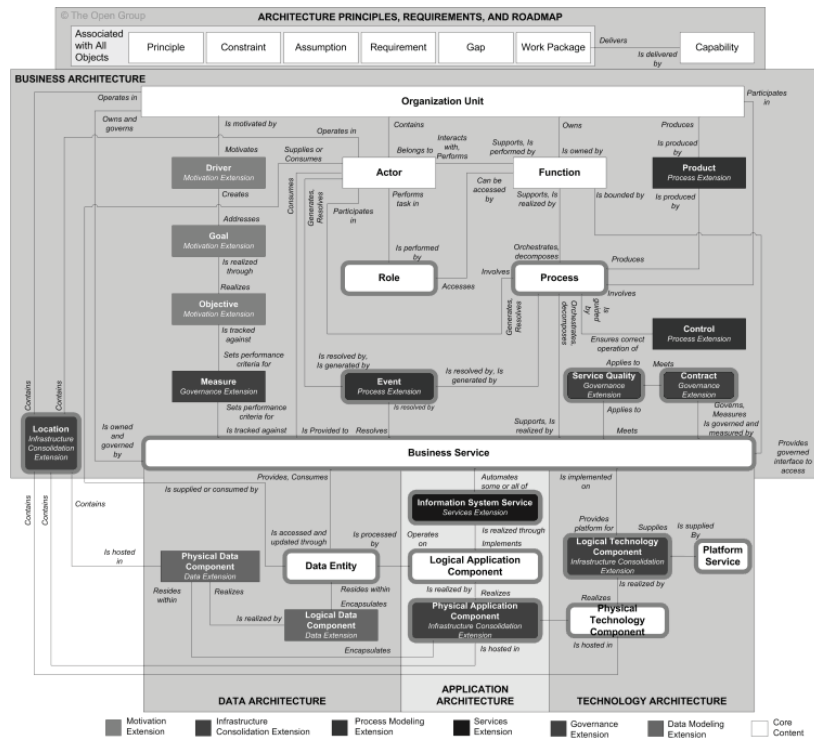
important, but they actually represent the bank's information centre, being the platform for performing all operating and strategic activities. IT departments are part of the so-called back office departments. Unlike the front office department – sales and other customer-facing staff – the back office produces or develops services or is involved in administration without being seen by customers. Although the operations of a back office are seldom prominent, they are a major contributor to business. In banking, the back office includes a heavyweight IT processing system that handles position keeping, clearance, and settlement. They co-create complex processing and organizational architecture in banks.

Figure 1. shows the relationship between business architecture and IT architecture according to TOGAF® (The Open Group Architecture Framework), which is a worldwide accepted standard for building an Enterprise Architecture (EA). It is used by IT architects for designing, planning, implementing and governing enterprise information architecture /21/.

Business architecture consists of motivation framework (drivers, goals, objectives, and measures), organisational framework (organisational units, location, actors, roles) and functions (business services, contracts, service quality, processes, events, controls, products and functions) with their relationships. Business services rely on data architecture, application architecture and technology architecture as a part of IT architecture. Implementing business strategy, technology strategy, business principles, objectives and drivers, architecture, vision and stakeholders expectations is defined within architecture requirements.

On the other hand, Gartner's research shows that the field of IT in business systems does not have a unique organizational design /22/. According to its findings, IT organizational design is mostly about allocating the most important and most expensive resources – human resources – within the IT budget. It is about making sure that the right people with the right role are used and managed in a way that will maximize the impact and value of IT organization. Also, according to Gartner, a CIO is a C level officer who is expected to design their own organization, without or with little organizational and HR expertise. Also, there is very little expertise in HR on IT organization.

Figure 1: The standard corporate architecture with a distinctive position of IT architecture



Source: TOGAF (2008)

The IT organisation structure depends on the strategic role of IT in an organisation, on the organisation’s management and corporate governance. IT can be organised in one of the four possible ways /23/:

- IT as the technological part of the organisation: in more conventional and traditional organisations where IT is perceived as a back office function;
- IT as global business service provider: mostly in companies operating globally, whose operation depends on IT solutions for global services;
- IT as a business: in companies that embrace new trends in the economy and digitalisation as the latest trend. IT is the foundation of all solutions, of new services that are removing the barriers in traditional divisions in the industry, thus allowing the entrance of retail

ers into finance, social networks into marketing, and making big data the basis for making strategic decisions;

- Everyone’s IT: companies that see their opportunity in digitalisation, social networks, Big Data analyses, the most progressive and high technology profiled companies.

Based on the publicly available secondary sources, the authors of this paper have made an analysis of the IT organisational structure of banking institutions in the Republic of Croatia. The findings show that there is no standard IT organisational structure in the researched organisations. The analysis has also revealed that IT departments in major banks are functionally divided into two parts: development and operations. Such division occurs in 66% of medium-sized banks, while in small banks such a division has not been perceived (Table 1).

Table 1: Groups of banks from Croatia with comparable characteristics, the share of their assets in the assets of all banks, IT organisation structure

Bank size	Number of banks	Share of assets in the assets of all banks	IT organisational structure
Large	6	81.7	functional, specialised
Medium-sized	3	9.9	mixed

Small	22	8.4	unified
Total	31	100.0	

Source: authors

In his *new model in business partnering for IT services* (Figure 2) Webster emphasises some other functions of IT. He sees IT services as a part of overall corporate services to reach business strategic goals in a state-of-the-art environment /24/. The model is based on David Ulrich's well-known Human Resources (HR) roles model from the late 1990's, HR Business Partnering. This model describes the shift of HR organization and orientation from functional to strategic business partnership. Webster takes the same approach to IT organization, from functional to strategic partner for core business and creates a new IT organizational model parallel to Ulrich's HR model.

The model has six building blocks, as follows:

1. Core infrastructure services: data centre, network operations, telecommunications, storage, and printing services, delivered by shared services.
2. Support services: routine services that are performed in service desk, installation,

procurement and administration, delivered by shared services.

3. Applications specialists design, procure, build and maintain data specific software. This function is delivered by the centres of excellence.
4. Base technology specialists design, procure, build and maintain software and hardware, telecommunications, software and information engineering, end-user computing, and information disciplines. This function is delivered by the centres of excellence.
5. Architects facilitation of agreement on standards and guidelines, which is delivered by centres of excellence.
6. Strategic business partners transform business strategies into information systems requirements. This is delivered through business partnering.

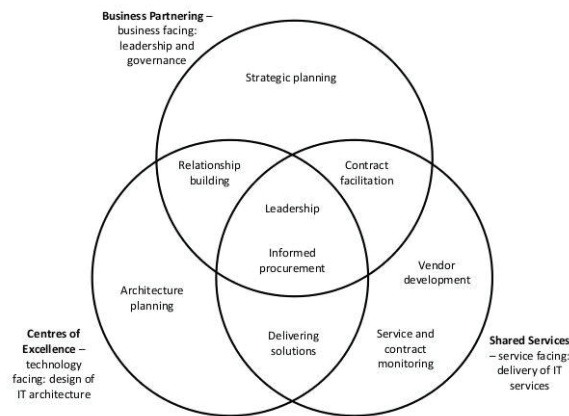


Figure 2: New model in business partnering for IT services

Source: Webster, M. (2014)

The benefits of this model include:

- Specialism – units act independently whilst operating within clearly defined standards and guidelines;
- Professionalism – speeding up learning and innovation;
- Architectural integrity – executed through well- defined architecture function;
- Improved relationships – between IT and business strategy;
- Strategic direction of IT – as a result of direct involvement of IT in strategy definition;
- Effective use of resources through dedicated centres of excellence and shared services.

Thus, IT is becoming a strategic source and is assuming an important role in dealing with strategic issues. IT managers work closely with senior management. As a result of this initiative, IT can deliver innovative technology solutions that will enhance the business. It is becoming one of the key players in reaching strategic goals with its proactive and leading role.

4. Enhancing the management of projects through the bank's IT environment

In all organisations, including those which operate mainly on the basis of continuous activities, there are certain departments that are often or even regularly involved in projects or project work. These are project-oriented departments /25/, such as Marketing, R&D, Repairs, IT etc. As departments that are almost entirely project-oriented Kerzner emphasises Engineering, R&D and IT /26/. What these departments have in common is the fact that, due to the nature of their business processes, which are mostly based on project processes, they have to master project management and develop an elaborated PM system. This is why employees who work in these departments do not perceive the introduction or improvement of the project management system as a negative change they might resist, but rather as a natural, positive and desirable change.

All the above mentioned is also true of IT sectors in banks. Due to the nature of the industry, banks usually do not have traditional engineering or R&D departments, but they do have IT departments. This leads to the conclusion that the IT sector is actually the only sector in the bank that can be treated as fully project-oriented. The banks' IT sector processes are for the most part related to the preparation and implementation of major or minor projects, which can be divided into three categories. The first category includes projects related to the IT department's core activity – *IT projects*, the second category includes projects related to the establishment and development of the system that allows efficient project work – *Supporting projects*, and the third category includes *Research projects*.

IT projects can include, for example, B-C applications, the development of internal applications, upgrades of existing applications and development of ICT infrastructure, while *supporting pro-*

jects involve the development of project management methods, internal training for successful project management, the introduction of ICT support for multiple-project work in the sector, and *research projects* include research and development projects the purpose of which is to find potentially interesting new information-communication tools, solutions and applications for the bank's purposes or for the purposes of the clients. Out of these three categories, *IT projects* are by far the most numerous requiring significantly more resources than the other two categories. However, *supporting projects* are the ones that have proved to be key to internal development projects in the IT sectors, allowing successful implementation of *IT projects*, while *research projects* have proved to be one of the key triggers for achieving competitive advantage by increasing the efficiency of the banks' internal processes as well as for winning new clients.

IT projects create information, communication and numerous other technical solutions that are needed for successful completion of basic business processes in all the bank's departments. This category also includes projects for developing new solutions and applications that are not used solely by the bank's employees, but also by the bank's clients. However, their use by clients, of course, needs to be supported at the very bank, too, within the bank's internal business processes and by applying tools adjusted to them.

The *IT projects* category also includes all the projects that have been designed for the implementation of the bank's strategies. Namely, nearly all the bank's strategic projects also rely on the IT sector, which is supposed to provide the support they need and adjust the existing IT tools to the changes in the business processes.

It should further be emphasised that IT projects in banking environments tend to be particularly challenging, as each of them includes two quite conflicting aspects:

- Flexibility and democracy vs. regulation and compliance
- Cloud solutions vs. data protection and confidentiality
- Global digitalisation vs. risk
- Costs vs. best solutions
- Security vs. the importance of social networks.

As today's pace of development and use of a variety of new IC technologies and products is extremely fast, the banks should also follow suit. It is the bank's IT sectors that are responsible for running *research projects* in order to find new, potentially beneficial solutions to the existing and future challenges, ensuring that the bank is constantly in touch with current trends in the bank's external environment.

Banks' IT sectors are thus at the very centre of the multiple-project environment of any bank focused on the future. The multiple-project nature of IT

sectors is the result of projects designed for the implementation of the bank's strategies, projects supporting the needs and changes in the bank's business processes and following trends in the bank's external business environment, mostly in the area of IT technologies and products (Figure 3). It is fair to say that the IT sector represents the axis of the dynamic wheel of development and adjustment of the bank to the fast changes in the bank's environment, thus ensuring and enhancing the banks competitiveness.

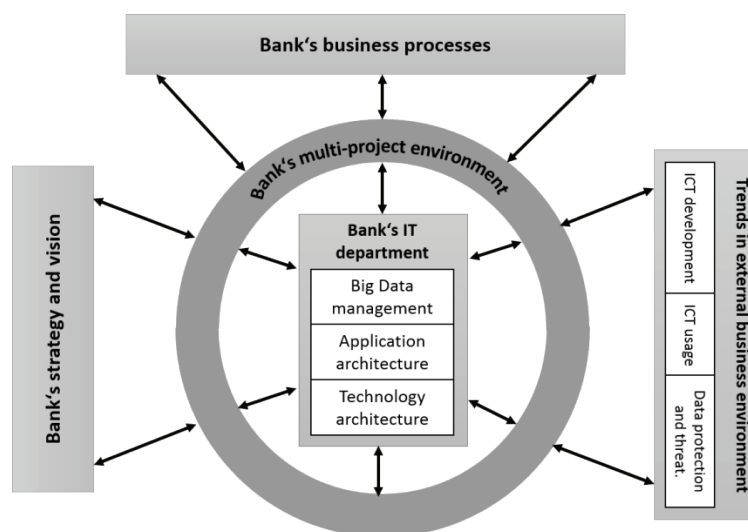


Figure 3: Bank's IT department: the axis of the bank's multiple projects environment – the axis of the bank's development
Source: authors

The bank's IT sector is the only sector where the multiple-project environment is a natural environment; all other sectors do not cope too well in these circumstances. The increase in the number of projects in all organisations including banks and the increased complexity of multi-project environments in most departments have caused considerable problems in most sectors with the exception of the IT sectors, which do not see this change as a significant one. It is therefore understandable that with an overall increase in the number, importance and complexity of projects in the bank, the IT sector will be among the first and key initiators of changing the company's organizational approach to the management of these projects. Such behaviour of the IT sector should not be perceived as an ambition of this sector to achieve a more prominent position in the overall organizational hierarchy, but as a logical consequence of the knowledge and experience of

management in multiple-project environments. According to the authors' experience and the research they have conducted in Croatia and Slovenia, it is the IT departments in the banking sector that typically raise the awareness of the importance of professionalising project management for efficient and successful project implementation. This is why it is reasonable to expect the IT sector to:

- propose, organise and maybe even provide PM training for employees in all sectors
- initiate the introduction of professional software tools for the preparation and management of projects, such as Microsoft Project, Super Project, Primavera etc.
- manage or implement the project of preparing project management rules of procedure and methodology adjusted to the bank's specific needs

- propose the bank's reorganisation in a manner that would create synergy between the company's continuous activities and its project-based activities.

Among organisational solutions banks are coming up with (especially commercial banks), the introduction of Project Management Offices (PMOs), which seem to have become increasingly common as central places for managing banking projects. PMOs may be considered as organisational units in charge of projects ranging from providing support to project managers *to overall responsibility for the success of all projects* /27/.

The main role of a PMO in banks mostly comes down to responsibilities related to the following /28/:

- project management methods and standards (development of project management methods, definition of standard procedures and forms related to project management, establishment and maintenance of a central repository of the entire project documentation; selection, implementation and maintenance of programme support (SW tools) for project management
- education and training (development of educational materials; preparing and running seminars)
- supervising and reporting on the project status (reporting on deadlines, costs, scope: monitoring project interdependencies).

Even though the importance of PMOs as professional organisational units for project management has been recognised worldwide, their introduction into business systems in this part of the world is still in its infancy. It is organisations from the banking sector (besides IT and telecommunications) that dominate in their introduction, which is often the result of the fact that organisations from these sectors are foreign-owned.

According to the results of the research conducted by the authors of this paper, a PMO is typically established in the IT sector of a bank as the internal PMO of that sector, which is eventually transformed into the PMO of the entire bank.

5. Conclusions

The emergence of the multiple-project environment is nowadays a given in all organisations

including those in the banking, i.e. financial sector. This is a result of the response of organisations to the increasing challenges of the modern time, which are related to increased competitiveness, technological advances, social change, globalisation etc. The pace of changes in today's business environment is becoming ever faster and the challenge for organisations to adjust to these changes in order to succeed in the market is ever increasing. Many organisations in the so-called New Economy /29/ have not managed to adjust to the progressive growth dynamics of the business environment /30/, which is why they are facing a crisis or have already lost out to their competitors. Projects can be viewed as one-time, time-limited and goal-determined processes that always create something new in response to the challenges of constant change in the business environment. Furthermore, projects create change in our own environment, but also in the business environment of our competitors. This is why it is fair to say that it is the projects that represent the only possible tools for coping with the challenges of today's business environment, and thus tools that need to be used for ensuring a long life and success of organisations. The scope of activities performed worldwide is increasingly related to project work. According to some estimates, more than a third of all today's activities are related to project implementation. Coping with and managing projects as one-time processes is quite different from managing continuous processes, especially those in relatively stable business environments.

Competencies of employees in organisations as well as organisational structures themselves are not sufficiently developed and adjusted to the requirements of projects, and particularly, to the multiple-project environment. The achievement of the required project competences and organisational adjustment of organisations for successful implementation of projects is also a complex project, i.e. project programme. It leads to significant changes in organisations in terms of the way business is conducted, it requires more efficient interaction and collaboration of employees, better and more open communication etc. All the above mentioned may create substantial organisational resistance, especially because the majority of employees work on continuous, rather than project-based processes. Furthermore, the experience

individuals have of project work is very often negative, the reason for the most part being lack of professionalism in this area.

In this paper the authors wanted to suggest that in banks, which represent a typical example of organisations that base their business operation on running continuous processes, there are certain organisational units that are more inclined to project-based operation. This is primarily the case with the IT organisational unit (sector, department). It has the most experience of project work, it has employees who are better trained for project work and management and the established organisation of work allows coping with and coordinating projects within limited resources. This is why authors emphasise the role and competency of the IT department in making proposals and later running the programme of introducing i.e. updating organizational project management maturity across the banking organisation.

This method of work provides banking organisations as well as the project management profession with a specific proposal on how to approach increasing organizational project management maturity, which is a must due to the characteristics of the contemporary business environment. In this process, the banks' IT organisational units play a very important part, on the one hand by encouraging such a process and on the other by running and managing it.

The entire body of knowledge presented in this paper is the result of the many years its authors have spent learning and following the development of the project management area and the IT environment in banks. In addition, it has resulted from researching generally available data on the banking sector in the Republic of Croatia and the Republic of Slovenia as well as the knowledge about development banks in both countries.

The research on the role of IT departments in the enhancement of banks' project management suggests that it would be a good idea for future research to include a thorough analysis of the diverse roles of IT departments in the development of project management by banks' size and age as certain correlations between the afore mentioned variables emerged in the course of this research. In addition, the authors also propose creating a model of updating organizational project management maturity, which would further facilitate the implementation of this kind of projects and

accelerate the process of creating project environments in banks. This would increase the efficiency and success of all growth and development projects that banks are supposed to implement in the future.

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