Projektna mreža Slovenije

Poslanstvo revije

Revija Projektna mreža Slovenije je osrednja znanstvena, strokovna in informativna revija, ki bralcu raziskovalno, analitično in informativno ponuja znanje, izkušnje in informacije o projektnem managementu. Je recenzirana ter v stroki prepoznavna in uveljavljena revija s priznanimi strokovnjaki v uredniškem odboru. Revija je namenjena vsem, ki sodelujejo pri izvajanju projektov ali jih raziskujejo, kot tudi managerjem in tistim, ki management in organizacijo preučujejo.

Revija objavlja prispevke iz različnih področij projektnega managementa:

- nastajanje in zagon projektov,
- organiziranje projektov,
- načrtovanje projektov,
- kadrovanje za projekte,
- vodenje projektov,
- spremljanje in nadziranje projektov,
- zaključevanje projektov,
- ocenjevanje tveganosti in uspešnosti projektov,
- povezovanje projektov z organizacijo, managementom in drugimi stičnimi področji,
- primeri celotnih projektov ali njihovih delov iz najrazličnejših dejavnosti,
- teorija projektnega managementa,
- povezanost med strateškim in projektnim managementom.

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Uvodnik

Jure Kovač

V vsakdanjem pogovornem jeziku vse pogosteje srečamo besedo projekt. Uporabljajo jo – poleg managerjev in strokovnjakov s področja poslovne organiziranosti – tudi drugi poklici kot so npr. zdravniki, politiki, učitelji itd. Iz tega lahko sklepamo, da si projektni način dela in projektni management utirata pot tudi na področja in v dejavnosti, znotraj katerih do sedaj ni bil v večji meri prisoten, ter postajata stalnica in nepogrešljivo orodje v procesih vodenja, doseganja strateških ciljev in dvigovanja konkurenčnosti ne samo v gospodarstvu, temveč tudi v izobraževalnih ustanovah, zavarovalnicah, bankah, javni upravi ipd. Navedeni trendi pa niso prisotni samo v našem okolju, temveč bi lahko govorili o globalnem prodoru projektnega managementa na skoraj vsa področja človekovega ustvarjalnega delovanja. Torej lahko govorimo o renesansi projektnega managementa v sodobno razvitih družbah.

Veliki popularnosti projektnega načina dela v sodobni družbi sledi tudi razvoj stroke projektnega managementa. Zadnjih dvajset let se je projektni management razvijal od sistemskega vidika, preko ciljno usmerjene teorije, do projektno usmerjenega managementa (termini, ki jih v strokovni literaturi srečamo so project-based management, management by project ali project oriented management, strategic oriented project management). Danes so aktualna področja znanstvenega preučevanja teorije managementa na eni strani usmerjena v razvoj novih oblik instrumentarija projektnega managementa (kot je npr. projektni portfolio) in na drugi strani v razvoj teorije o integralnosti projektnega managementa, ki obsega celovit koncept managementa v organizaciji. V navedena prizadevanja se uvršča tudi področje preučevanja projektne odličnosti, kateri posvečamo tudi vsebino junijske številke revije Projektna mreža Slovenije.

Druga letošnja številka revije Projektna mreža Slovenije je po svoji vsebini – znanstvenem preučevanju področja projektne odličnosti – tesno povezana z letošnjim osrednjim dogodkom Slovenskega združenja za projektni management – Projektnim forumom 2007. K sodelovanju pri nastajanju tematske številke smo povabili nekatere mednarodno priznane strokovnjake s področja projektnega managementa in projektne odličnosti. Nekateri avtorji prispevkov so se udeležili tudi Mednarodnega akademskega foruma, ki je bil organiziran v sklopu Projektnega foruma 2007. Njihovi prispevki niso bili objavljeni v Zborniku Foruma, temveč smo jim namenili prostor v posebni izdaji naše revije. S tem smo prispevali majhen delež k popularizaciji znanstvenega razvoja projektnega managementa – predvsem projektne odličnosti – v slovenskem prostoru.

The word 'project' can be found more and more often in everyday colloquial language. It is being used – apart from managers and business organisation experts – by other professionals, such as doctors, politicians, teachers, etc. A conclusion can be drawn from the above that project work and project management are blazing its trail to the fields and activities in which they have not been largely present until now and are becoming a constant and an indispensable tool in processes of management, achievement of strategic goals and raising of competitiveness not only in economy but also in educational facilities, insurance companies, banks, public administration, etc. The above trends are not present in our environment only; one could speak of a global breakthrough of project management in almost all areas of man's creative activities. One can thus speak of the renaissance of project management in modern developed societies.

High popularity of project work in contemporary society is followed by development of the project management field. For the last twenty years, project management has been developing from the system point of view through target-oriented theory to project-oriented management (terms one comes across in specialised literature are: project-based management, management by project or project oriented management, strategic oriented project management). Today's topical areas of scientific research of the management theory are, on one hand, oriented towards the development of new forms of project management instrumentation (e.g. project portfolio) and, on the other, towards the development of the theory on completeness of project management, comprising an overall management concept in a company. The June issue of the Project Management Review is dedicated to the research of project excellence, which is part of the above stated endeavours.

The contents of this year's second issue of the Project Management Review – scientific research of project excellence – are closely linked to this year's central event of the Slovene Project Management Association – Project Forum 2007. Some of the internationally renowned experts from the field of project management and project excellence were invited to collaborate in this thematic issue. Several of the participating authors assisted in the International Academic Forum that was organised within the Project Forum 2007. Their articles will not be published in the miscellany of the Forum, but were dedicated a separate place in the special issue of our review. This is our small contribution to the popularisation of scientific development of project management (of project excellence, above all) in Slovenia.

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E-learning – a Solution for Project Management Excellence

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Abstract

The paper presents an e-Learning platform in project management centred on the learner and based on advanced technologies, such as: ontology, competence standards, IMS Standards.

Key words: e-Learning, ontology, project management, competency management, ICB

1. Introduction

The e-learning platform, named SinPers, is based on two new fundamental concepts: Learning object – LO and learner's model. These assume the structuring of the course content (knowledge) on several abstracting levels: domain ontology (concepts and relation between concepts), learning objects (support of the concepts), and metadata (objects attributes). Applying this for the project management domain imposes the adopting of a standard for the domain concepts and project managers competencies. This standard is ICB – International Competence Baseline of the IPMA – International Project Management Association.

The training material is structured on indexed learning objects (LO). For the specification of the relations and interdependencies between the elements, SinPers platform uses ontology; these allow the abstracting, definition and inter-correlation of the training domain concepts by relations like is_part_of, requires, and suggested order, for the link with LO. Learner models are created and maintained in SinPers. These models contain, mainly, the learner cognitive state and preferences (knowledge level, cognitive and perceptive abilities, relations with the actors of the learning process etc.).

In SinPers a course will be composed from a selected set of goals of the training (key concepts that the learner must learn) and from a learning path (a sequence of LOs that will be used for a learner in order to reach the goals). Once established these elements, begins the complete cycle of the learning-training process.

2. The Educational Content Management – an Ontology-based Learning Approach

2.1 Definitions

A learning ontology is an explicit formal specification of how to represent the learning objects, learning concepts (classes) and other entities and the relationships among them (Kanellopoulos et al., 2006). It describes the learning terms and the relationships between them and provides a clear definition of each term used. Ontologies are created using ontology editors, such as Protégé (2000). Protégé is a Java-based ontology editor which allows ontology implementation as an applet. Protégé provides the framework for a multiple usage of the ontology. An interesting guide to develop a learning ontology is given in Kanellopoulos et al. (2006). The proposed methodology for developing learning ontology include the following steps: identifying the purpose (why is the ontology being built), ontology capture mechanism (identifying all the key concepts and relationships), coding (representing the ontology in a formal language, using a suitable editor), refinement, testing and maintenance of the ontology.

A precise and formal description of the course content will be made by explicit references to the learning ontology, using semantic annotations. The modelling of an ontology-based course can be accomplished on two levels of knowledge organization (figure 1):

- the upper level: the concepts set of the course topic selected form the ontological domain concepts;
- the lower level: learning resources (books, web presentations, movies) associated with the upper level concepts; the ontology may be used as a semantic index for accessing the resources.
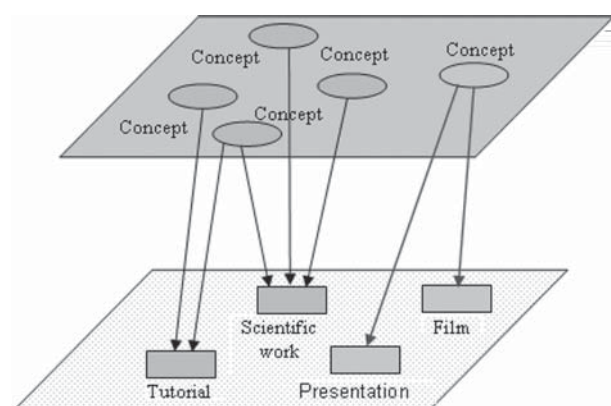

Figure 1: The content semantic annotation

In the course development phase, learning paths can be created at the conceptual level based on semantic relations between the concepts (figure 2a, b). In this phase, it is considered:

- a sequence of concepts obtained by browsing of the domain ontology, which give the access order to the learning objects
- the corresponding learning objects sequence, which is associated to the ontology concepts and which constitute the personalized course.
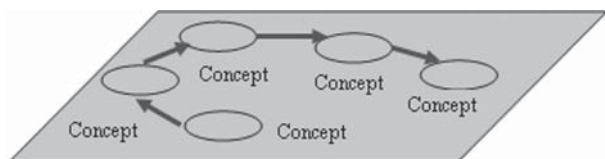

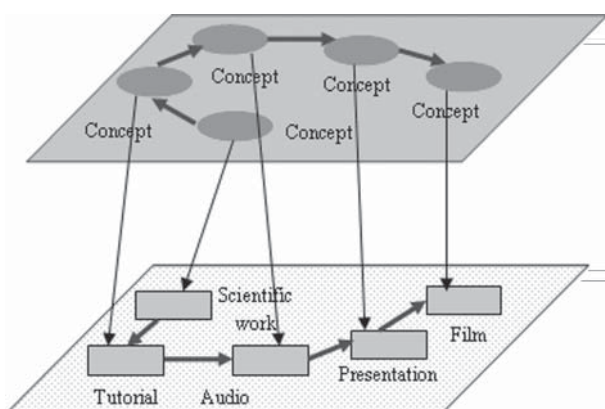**Figure 2a**: The learning path at the conceptual level

Figure 2b: A learning path with LO

At the conceptual level, the learning paths can be developed based on semantic relations between the concepts, on two dimensions: the horizontal dimension and the vertical dimension (figure 3a, b).
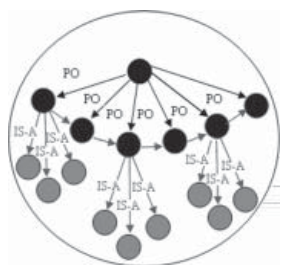

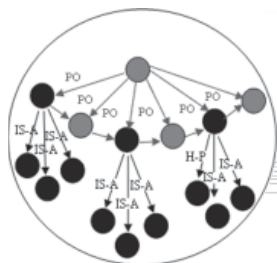**Figure 3a**: The learning path development - horizontal dimension

Figure 3b: The learning path development - vertical dimension

On the horizontal dimension, the learning sequence is established by moving from a given concept (the main subject), the ontology is browsed by following the decomposition relations (PO – Part Of relation). On the vertical dimension, the ontology is browsed on the specialized connections (the IS-A relationship) with different results base on the direction: from down to up (synthesis and topic completion) and from up to down (topics development).

2.2 Ontology-based Learning Systems - Some Examples

The following systems are based on ontologies and standards that have an important role in the representation of learning objects and repositories (Kanellopoulos et al., 2006):

- **CIPHER** (http://www.cipherweb.org): The system supports the exploration of national and regional heritage resources.
- **Connexions** (http://cnx.rice.edu): It is an open source project that provides learning objects, a repository, a markup language and a set of tools for authoring, composing modules into courses and navigating through these courses.
- **Conzilla** (http://www.conzilla.org/): Conzilla is being developed as part of the PADLR project as a means of accessing and annotating learning objects. It is a concept browser that allows the user to navigate through a space of context maps to access associated content. While the context maps are not reffered to as ontologies, they may be regarded as equivalent.
- **Edutella** (http://edutella.jxta.org): This project provides an infrastructure for Peer-to-Peer systems for exchanging educational resources. Edutella uses metadata based on standards such as IEEE LOM to decsribe resources.
- **EML (Educational Modelling Language)** (http://eml.ou.nl/introduction/explanation.htm): It is a notational system developed at the Open University of the Netherlands as a means of representing the content of a study unit and the students and teachers roles, relations, interactions and activities. It now forms the basis for the IMS Learning Design Specification. As with many XML based approaches ontologies are not mentioned. However, the study units, domain and learning theory models can be contructed as a set of ontologies.

2.3 Integrating the Ontology-based Learning with an Ontology-based Project Management Competency Management

The *competency ontology*, known as *competency catalogue* (Biesalski, Abecker, 2005; Schmidt, Kunzmann, 2006) defines the *employee competency profiles* (the actual competencies of the employees) and the *reference position competency profiles* (the list of competencies that are needed to fulfil the working requirements of the individual positions). The competency ontology should be in line with

the ICB competence standard. These two types of profiles allow afterwards a matching process to be done for the identification of a possible gap between the reference and the actual competency profiles and identification of the project management training requirements. An ontology-based project management learning approach allows to find the most suitable courses when there a similarity but do not an exact match between training offers and the competency gap.

The usage of competency ontologies have several benefits like:

- Competency groups or clusters can easily be defined since the competency ontologies are taxonomies. An hierachy can be easily exploited to aggregate competencies to a more abstract level and build up competency groups.
- An ontology component can be integrated from another information source (e.g. the domain ontology) using ontology mapping techniques.
- Similarity measures can easily be calculated to define the gap between the reference and the actual competency profiles.
- A similarity-based search of the most suitable trainings is possible. This can be used to recommend trainings that are similar but do not exactly close to the competency gap.

3. The SinPers Project Management Ontology

Applying the ontology learning approach for the project management domain requires adopting a standard for the domain concepts and project managers' competencies. This standard is ICB – International Competence Baseline of the IPMA – International Project Management Association.

The training material is structured on indexed learning objects (LO). For the specification of the relations and interdependencies between the elements, SinPers system uses ontology (Biesalski, Abecker, 2005; Garcia et al., 2003; Liu et al., 2003); these allow the abstracting, definition and inter-correlation of the training domain concepts by relations like is_part_of, requires, and suggested order, for the link with LO. Learner models are created and maintained in SinPers. These models contain, mainly, the learner cognitive state and preferences (knowledge level, cognitive and perceptive abilities, relations with the actors of the learning process etc.).

In SinPers a learning unit will be composed from a selected set of goals of the training (key concepts that the learner must learn) and from a learning path (a sequence of LOs that will be used for a learner in order to reach the goals). Once established these elements, begins the complete cycle of the learning-training process.

The ontology of the project management course contains 201 concepts and 3 types of relationship between concepts.

The following table presents concepts of ontology, in connection with ICB competence elements (IPMA, 2006):

ICB competence elements	SinPers concepts	ICB competence elements	SinPers concepts
Project management success	INT, PRJ, SCS, DSC, FSP, SUC	Assertiveness	CO4
Interested parties	MSP, MSE, PIN, RMS, ACO, QAD, AAN, SRP	Relaxation	CO5
Project requirements and objectives	ENI, ASI, STO, RST, OBV, OOB, DOB, OBP, OSA, NOB	Openness	CO6
Risk & opportunities	MRO, IER, ACA, MOC, PMM	Creativity	CO7
Quality	MCF, PCF, PPR, PCR, PCM, ASC, ADP, CON, COA	Results orientation	CO8
Project organisations	SOP, ORG, OPR, RPR, PRP, MGP, CMP, STP, ASO, CER, FDP, CAM, MEP, COL, EPR	Efficiency	CO9
Teamwork	PEP, CEP	Consultation	C10
Problem resolution	MPR, CRD, PSO	Negotiation	C11
Project structures	GRP, CXP, STR, SPR	Conflict & crisis	C12
Scope & deliverables	SFC, REZ, WBS, WBI, SPA, CPA, RPA, IPA	Reliability	C13
Time & project phases	DIT, FPP, CVP, FZP, MTP, PLC, PJA, JAL, DGT, ADC, DRA, DEP, RDD, DRC, ALG	Value appreciation	C14
Resources	RES, NOR, ESR, ALR, MLR, OAR	Ethics	C15
Cost & finance	MCF, COS, TCO, CEN, PCO, ECO, BPR, MFP, SFP, PFN	Project orientation	OPP
Procurement & contract	ACC, NAP, SFR, NCO, DCA	Programme orientation	MPG, PGR, OPG
Changes	MSH, MSC, MSR, MSF	Portfolio orientation	MMP, GRU, LAN, CLP, MPP, POP, SPP, OPO, GPP, TPP
Control & reports	CCT, RPT, ACP, CRE, RCR, DUR, CCO, RPC, AEV, CFN, RAF, TMC, CTR	Project, programme & portfolio implementation (PPP implementation)	TIP, DIM, DSP
Information & documentation	IDP, SMD, SMP, SIP, BDP	Permanent organisation	ICO, DMP, MOP, COO, MMO, EMP
Communication	COP, STC, TIC, SWP	Business	IPR, INV, IDE, CRV, SFZ, ACB, AEC, ASZ, ARC, SWO
Start-up	DDI, DIF, PRO, CPR, DDP, EEP, ATP	Systems, products & technology	PTH
Close-out	TPR, DOF, APR, LIN	Personnel management	MGF, MGE, MGR
Leadership	CO1	Health, security, safety & environment	SSS
Engagement	CO2	Finance	AFC
Self-control	CO3	Legal	AJD

Table 1: Concepts of ontology, in connection with ICB competence elements

The following table describes the type of the relationship between concepts:

ID	Relationship type	Symbol
1	Has-Part	⇨
2	Is-required-by	→
3	Suggested-Order	- - ►

Table 2: The type of the relationship between concepts

Figure 4 presents an overall view of the ontology and figure 5 presents detailed views of the following parts of the ontology: project (5a), project management (5b) and project oriented organizations (5c).
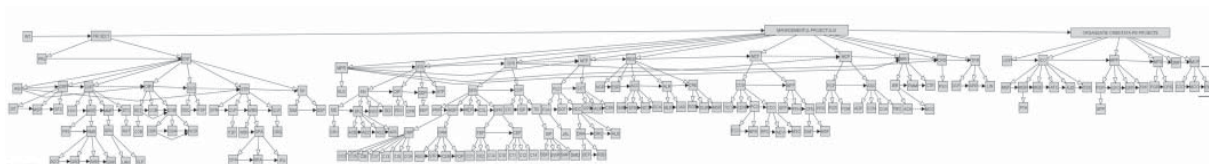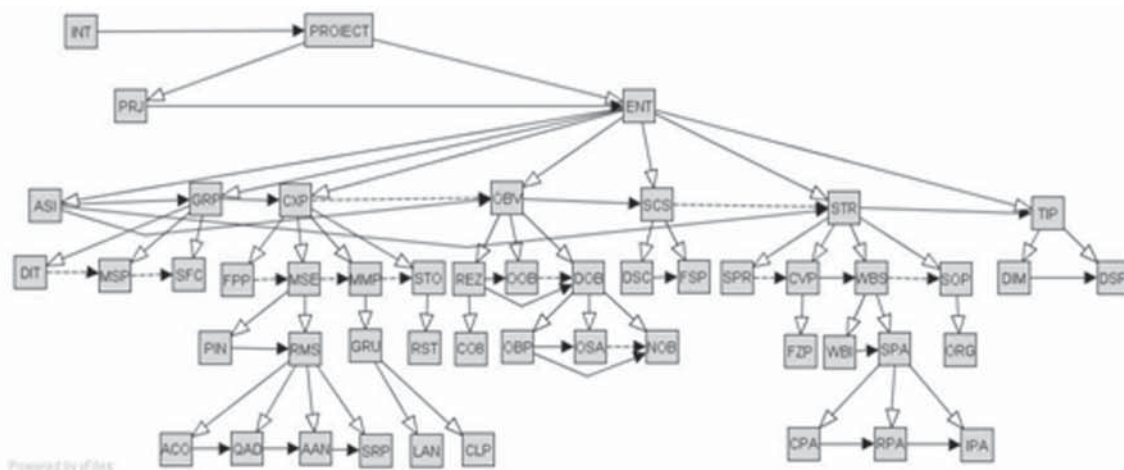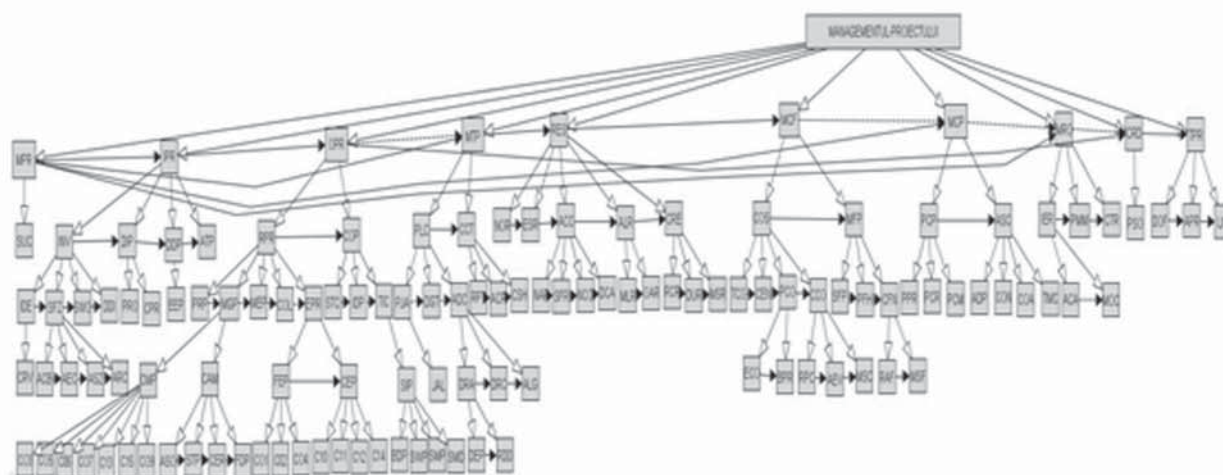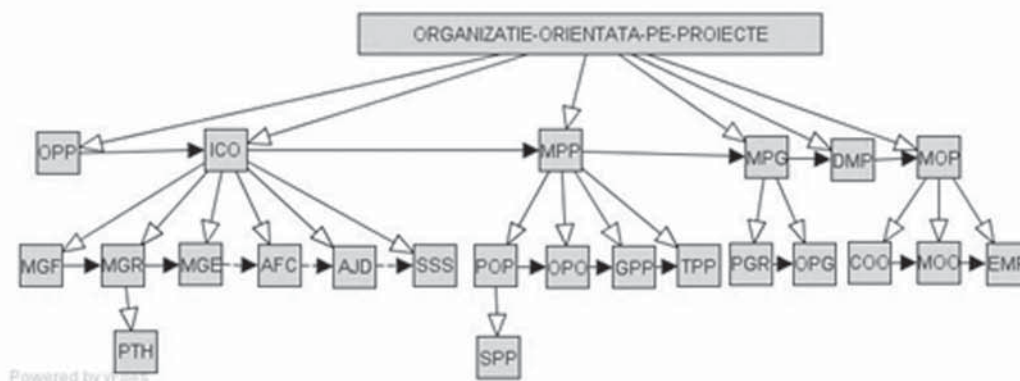

Figure 4: The ontology of the project management course – a general view

a) The detailed view of the *Project* part

b) The detailed view of the *Project management* part

c) The detailed view of the *Project oriented organizations* part

Figure 5: The ontology of the project management course – detailed views

Figure 6 shows the Protégé description of the project management course ontology and the figure 7 presents a fragment from the OWL code.
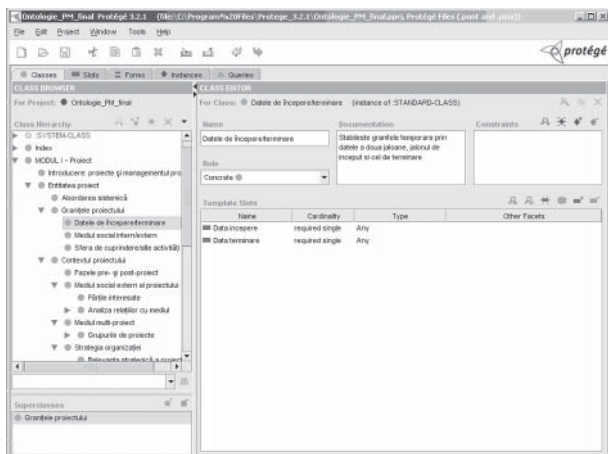

Figure 6: Protégé description of the project management course ontology – an extract

Figure 7: OWL description of the project management course ontology – an extract

4. Conclusions

The research project brings new conceptual approaches and technical solutions for three basic elements: the teaching-learning process (e.g. learning and support activities flow, delivery conditions, triggers - notifications or timed events), the learning content (e.g. domain ontology, learning object and metadata) and the actors-roles. The learning platform development process use state of the art IT technologies (metadata and ontology for knowledge manipulation, web services, learner model, and intelligent tutoring systems). The research project concentrates both market demands in e-learning for adults (mainly project managers from different industries), and the emerging concepts and technologies regarding Internet usage, man-computer interaction, multimedia technologies, knowledge management, according to the IST / FP6 and FP7 - Technology enhanced learning objectives.

The reaserch project team developed the first comprehensive project management course ontology based on ICB 3.0. The integration of the ontology-based learning with the competency management is proposed. The competency ontology should be in line with the ICB competence standard. The competency ontology allows the identification of a possible gap between the reference and the actual competency profiles and the identification of the project management training requirements. An ontology-based project management learning approach allows to find the most suitable training when there a similarity but do not an exact match between training offers and the competency gap.

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Project Organization And Quality - as Seen by Various Expert Studies

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Abstract

The handling of projects using professional project management instruments has been institutionalised more and more in the past years. This found expression in a growing number of successfully closed projects. Aspects of project organization and quality management are essential success factors. This article will examine these elements integrating the results of various studies.

Key words: project, project organization, quality management

1. Introduction

This paper will discuss project organization and quality management as success factors in project management. Therefore, results of an analysis of written contributions to project management expert conferences are presented. Next, these aspects will be further examined using the results of expert interviews with an emphasis on R&D projects. This paper closes with an integrated discussion of selected thesis of the question.

2. Professional Project Management Progress

As the Standish Group[1] found out, the growth of project management during the past decade contributed markedly to project success rates: While in 1994 31 % of the focused projects failed, this rate decreased to 15 % in 2002. The percentage of successful projects rose from 16 % to 34 % in the same period. Figure 1 shows some remarkable results of the same study concerning project finance.

Year	Waste	Spent
1994	US$ 140 billion	US$ 250 billion
2002	US$ 55 billion	US$ 255 billion

Figure 1: Total cost in projects 1994 and 2002

The Standish Group worked out, that the total cost of financial waste and budget overruns from challenged and failed projects decreased about 2.5 times. The money, spent in projects increased in eight years by 5 billion US$ to 255 billion US$. This leads to the conclusion that in the course of time money has been invested in much more efficient projects. Now the question raises, what factors do improve projects and drive them to success? The Interthink Consulting realized a study, which indicates an important impact of organizational aspects on project success.

3. The Impact of Project Management on Organizations

In 2002 a project management baseline study[2] that surveyed 300 professionals in 67 global organizations. One of the various results was, that over 90 % of the projects had a significant impact on the organization (18 % can bee seen as extremely high value projects, which are essential to organization's success; 51 % are high value projects with an significant impact on the organization; 23 % are categorized as project of medium value, which have some impact on the organization.).

To get a deeper insight in the question of organization in projects and its changing importance in the course of time, IPMI-Study I worked out some remarkable results.

4. IPMI-Study I+II: Contributions to PM Conferences of the Last Three Decades

The IPMI-Study dissects into two parts: First period was from 1967 to 1987 and the second period into 1988 to 2000. The first part[3] of the analysis has been oriented on the IPMI-Thesaurus, the first classification system for project management. Subject of the study were contributions to PM conferences on one hand, and articles in PM journals on the other.

The second part[4] of the study has been done in 2000. Subject of this study were exclusively conference contributions. During this study the IPMI-Thesaurus has been extended for some necessary subtopics. Also, this study characterized the papers with reference to the GPM-Kanon, which is mostly equivalent to the International Competence Baseline (ICB) of the IPMA.

For the study 4485 contributions to international conferences (and articles) were analysed to find out their main topics. Therefore the social empirical instrument of a content analysis was applied. Each article was classified by

means of up to three descriptors of the IPMI-Thesaurus, each representing a project management topic. Choosing the design of a longitudinal analysis enables an empirical study, which gives an overview over three decades of project management discussion.

	IPMA / INTERNET	PMI	Σ
Contributions 1969-87	1287 28.6 %	442 9.9 %	1729 38.5 %
Contributions 1988-99	758 16.9 %	1716 38.2 %	2474 55.1 %
Journals 1969-87	114 2.7 %	168 3.7 %	282 6.3 %
Σ	2159 48 %	2326 52 %	4485

Figure 2: Distribution of papers by source over time

The contributions to PMI-Conferences have a share of 48.1%. Which is almost equal to contributions to IPMA (former INTERNET) 45.6 %. Only few articles from journals have been taken into account. The second part of the study did not focus any PM-articles.

5. Classification System IPMI-Thesaurus and GPM-Kanon

In order to be able to carry out a further classification and grouping of the 2011 contributions, it was necessary to find or develop a catalogue of descriptors (Thesaurus) concerning the topic 'Project Management'. *IPMI-Study I* applied two classification structures, which are shown in Figure 3 and Figure 4. The use and evaluation revealed deficiencies and inaccuracies, as it is the case with all descriptor catalogues. The catalogue may be extended.

Figure 3 shows two categories in detail - out of the IPMI-Thesaurus: *1. Project Management in general* and *3. Organization*. Categories, which are not picked out as a special theme in this paper shall just be mentioned as area to give a review: 2. Planning & Control, 4. Project Information Systems, 5. Project Environment, 6. Project Personnel, 7: Branches/ Sectors for Project Management.

1. Project Management in General	3. Organization
101 Philosophy, Definitions	301 Alternative Organization Forms
102 System Engineering, System Theory, System Management	302 Separate PM-Lines
103 Life Cycles (LC), Phase Models	303 Matrix Organization
104 Productivity, Efficiency, Purposes	304 Organization Aids
105 Performance Specification, Statement of work	305 Implementation, Organization Development (OD)
106 Configuration Management, Change Management	306 Start-Up of Projects
107 Quality Assurance	307 Workshops
108 Contracting Offers, Bidding	308 Integrated Project Teams
109 Risk Analysis, Risk Assessment	309 Multi project, Programs
110 PM Techniques in General	310 Organizational Networks

Figure 3: IPMI Thesaurus on Project Management (excerpt)

The descriptor groups 1 to 6 in IPMI-Thesaurus carry out a classification according to technical topics in project management. List 7 gives some supplementary information on different branches and sectors in which projects are carried out. Such a descriptor is applied to a contribution if the relation to a branch is obvious and important. The technical contents of several contributions could be perfectly characterized with one or two of the

descriptors. For others even two or three descriptors were not be enough for an exact classification. In that case one of the global overall group descriptors 100 to 700 was used.

Figure 4 shows the areas *1. Basic Competence* and *4. Organizational Competence* of the GPM-Kanon. The categories *2. Social Competence* and *3. Methodological Competence* are further areas, which are not be discussed here.

1. Basic Competence	4. Organizational Competence
1.1 Management	4.1 Employers' and Project Organization
1.2 Project and Project Management	4.2 Quality Management
1.3 Project Environment and Stakeholder	4.3 Content and Management of Contracts
1.4 System Approach and Project Management	4.4 Configuration and Change Management
1.5 Project Management Implementation	4.5 Documentation Management
1.6 Project Objectives	4.6 Project Start
1.7 Project Success and Failure Criteria	4.7 Risk Management
1.8 Project Phases and Life Cycle (LC)	4.8 Project Information Systems
1.9 Standards and Guidelines	4.9 EDP Support in Projects
	4.10 Project Close Down and Evaluation
	4.11 Personnel Management

Figure 4: GPM-Kanon on Project Management (excerpt)

One central result of the *IPMI-Study I* was to work out the importance of the topic of organization. The number of conferences, that discussed organizational aspects (*Thesaurus: area 3*) rose over the last three decades.
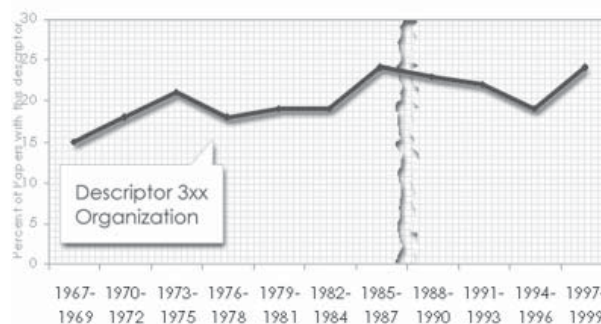
Figure 5: Proportional share of contributions on PMA and PMI conferences dealing with the topic "Organization"

Figure 5 gives an overview over the proportional share of papers on conferences of IPMA and PMI between 1967 and 1999. The descriptor contains all elements, listed in area 3 "Organization" of the IPMI-Thesaurus. Overall, over time the need for discussion about organizational topics rose to almost 25 percent in the last period of the analysed time.

As a further factor for project success *IPMI-Study I* identified the topic of quality, which bears some close relations to the question of project organization. Only in a reliable and well-structured organizational environment enables the implementation of an effective quality system.
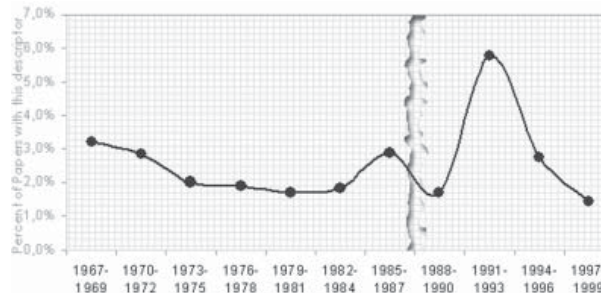
Figure 6: Course of the topic "Quality" over Time

A very important topic can be seen in the descriptor "quality", shown in Figure 6. Over time, the proportional share of all contributions on the conference was between 1.8 and 3.1 percent. The period between 1991 and 1994 can be seen as an exception. On the 1991 conference the topic of quality marked an relative share of nearly 6,0 % of all contributions, which were 18 papers absolute. One reason for that might be the introduction of quality assurance systems worldwide, e.g. ISO norms.
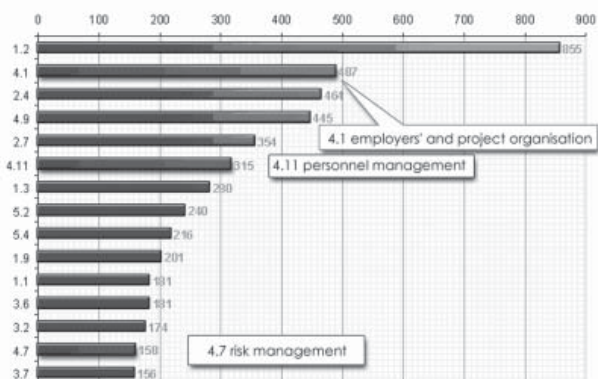
Figure 7: Overview of the most often discussed pm topics at IPMA and PMI conferences (absolute numbers of the period 1988-99)

Altogether the topic 4.1 Employers' and Project Organization was conferred in 487 papers and thereby is the second-most referred area under discussion. *4.11 Personnel Management* was discussed in 315 articles and marked the 6th rank. *Risk Management* as descriptor 4.7 was topic of 158 contributions and marked the 14th rank. All the mentioned descriptors were part of category: *Organizational Competence*. This may lead to the conclusion, that aspects of organizations are a very current topic and are very important for effective project management.

6. IPMI-Study II: PM Training Offers in Germany

In 1999 the *IPMI* launched a representative study on major project management topics in courses and seminars for project personnel, offered on the German market[5]. The study analysed the focused content, the training methods, the target group alignment, and other relevant attributes of 370 project management seminars offered by 270 suppliers of further education measurements. The following scale assessed the seminars:

[D]	No content of the specific PM topic	[C]	Low
[B]	Medium	[A]	High

Following are selected results related to the title of the Conference »*The power of project organisation - quality breakthrough*«.

	[D]	[C]	[B]	[A]
Company and Project Organization	231	2	103	0
Groups and Teams	149	9	178	0
Quality management	279	1	56	0

Figure 8: Content of PM courses and seminars for project personnel

It can be seen that in none of the given topics in Figure 8 were rated with a high priority ("A") and only few were judged to be low ("C") priority. They either had no content of the specific topic ("D") or the topic was covered with a medium ("B") priority.

7. IPMI-Study III: Project Management Expert Survey "Project Organization"

The topic "Project Organization" has been analysed in 1992[6] in a survey asking 167 project management experts. It focused on experience based use of different organizational models. Constitutive questions were:
1. **"How have projects been organized when project management was introduced?"**
2. **"How are projects organized at present and after experience with PM exists?"**

When introducing project management, most companies were organized by the operating department (38.9 %). With growing experience in PM, matrix organizations became the most preferred model (36.5 %), followed up by "Pure PO". The Project Staff Organization lost influence with growing experience in project management.

Forms of Project Organization in companies	Introduction of PM	After experience with PM
Organization by functional/ operating department	65 %	27 %
Project Staff Organization	32 %	26 %
Matrix Organization	33 %	61 %
Project oriented Line Organization	13 %	22 %
Pure project organization	21 %	31 %

Figure 9: Project Organization: at PM implementation and after PM experience

8. IPMI-Study IV: Project Management in SME in Europe

In 1994 Huber-Jahn[7] accomplished a survey with 46 interviews in small and medium sized enterprises (SME) with up to 500 employees from various branches who participated in international cooperation projects. The companies were located throughout Europe[8]. The central questions were about their understanding of project management, project organizational forms or models and common problems in project management.

When asked about their "understanding of project management", 41 percent considered PM as a management concept. About one third of the questioned answered that project management is network plan technique. Another 22 percent said that they understand project management as planning and controlling projects and 7 percent compared it to investment planning. None of the interviewed managers perceived "project organization" as a synonym for the PM discipline!

When explicitly asked about their organizational forms of the projects, 46 percent answered that they were using a matrix organization, 41 percent used their existing line organization and only 13 percent of the interviewees

used a separate project organization.

Another question was about common problems in project management. Of given answers, 72 percent of the 46 interviewees considered the project leadership and coordination a problem, followed by methods of planning and controlling (67 %), project personnel (57 %), and offerings and contracts (52 %). Almost half of those interviewed saw problems in the project organization (46 %). Other problematic areas in project management were PM-software (28 %) and intercultural problems (24 %).

9. IPMI-Study IV+V: R&D Pilot Study 2000 and VW/IPMI-study 2002

The IPMI R&D Pilot Study[9] examined the organization of 31 large and ten small to medium sized R&D companies and research facilities. The majority of companies (39 %) were structured using matrix organization for their projects. The use of a line organization is larger in SME and research facilities, but noticeably, in 24 % of the large companies this sort of organization is used. SME and R&D mainly used a pure project organization; larger companies rarely use this sort of project organization.

Size Organization	Large companies (76%)	SME and research facilities (24%)
Line organization	24 %	30 %
Staff-Line organization	14 %	0 %
Division Organization	10 %	10 %
Matrix organization	43 %	30 %
other (pure project organization)	10 %	30 %

Figure 10: R&D companies and research facilities: Large and SME

As a follow-up of the pilot study, a questionnaire was developed and in 2002 interviews with 250 project management experts[10] were realized - 40 % of the expert with IPMA-Certificate, from 60 R&D enterprises and 190 other companies, The study found out that most companies organized project actions depending on a particular project basis (and 77.5 % R&D, 83.3 % other companies).

About half of those surveyed organize PM within a line organization while only a third (R&D: 35 %, other: 57,1) of the experts consider this form of organization as relevant. Interestingly, half of those surveyed appear to get project management support via a centre of competence, sometimes called Project Office (47.5 % / 51.4 %). This seems to underline the demand and importance of in-house services on PM. Only in a third of cases the project management function is centralized (32.5 % / 37.6 %).

Another question complex dealt with the interfaces of PM and quality management systems. In general: R&D companies are equipped with more advanced systems than other enterprises, as it can be seen clearly in Fig. 11.

Interfaces of PM and Quality system	R&D companies	other companies
Certified quality management systems available	90.0 %	61.0 %
Control of compliance with standards	77.5 %	67.6 %
Quality of PM-systems controlled by audits	70.0 %	55.7 %
Integration into quality management systems given	70.0 %	48.1 %

Figure 11: Interfaces of project management and quality management systems in R&D and other companies

10. IPMI-Study VI: Theses on Project Management Organization

On eleven IPMA- and PMI-Congresses between 1986 and 1988 up to 649 project managers had been asked to assess 45 theses on PM-topics.[11]

Thesis 31 dealt with suitable organizational forms: "Although much has been said and written about project organization, the most suitable organizational form for a certain (specific) project is still not certainly known."

306 project management experts have been asked in how far they either approve or reject this thesis (see Figure 12). With an average score of +0.9 this thesis is supposable true.

Rejection		+0.9	Approval	
-2	-1	0	1	2
5%	11%	9%	38%	37%

Figure 12: Thesis suitable organizational form

Thesis 36 stated: "The effectiveness of project management in practice is limited by an insufficient knowledge of alternative forms of project organizations". exp85 percent of 306 answers agreed to this statement while only seven percent disagreed (see Figure 13). With an average score of +1.3 this thesis can thus be considered definitely approved.

Rejection		+1.3	Approval	
-2	-1	0	1	2
3%	4%	9%	28%	57%

Figure 13: Thesis Knowledge of alternative project organizations

336 project management experts assessed Thesis 22: "Coping with arising problems in matrix organization is a serious problem for project staff and project managers." Even though the average score is only +0.5, this Thesis is considered as supposable approved.

Rejection		+0.5	Approval	
-2	-1	0	1	2
10%	15%	13%	33%	29%

Figure 14: Thesis Problems with Matrix Organization

11. Conclusions

After evaluating various studies, the elements "organization" and "quality" can be identified as important factors for the succeeding of project. Essential for the positive influence seems to be an established project culture and the choice of the suitable project organizational form that have to be oriented on the special needs and circumstances of the company.

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[7] *Huber-Jahn 1994.*
[8] *Germany, Spain, Turkey, Denmark, The Netherlands and Portugal.*
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[10] *Dworatschek/Kruse et al. 2002.*
[11] *Dworatschek/Gutsch 1988.*

Strategic Project Management – Tool for Reaching Business Excellence

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Abstract

Strategic project management represents cross-cutting approach which is defined on a basis to reach business excellence in complex multi-project environment. This paper considers strategic project management as a tool for reaching business excellence. It is necessary to define a management system that will unite the expressed needs for change, both in the form of different project number and size, and in the form of programs being executed and a strategy inclusive of those needs. By applying this approach, supported by adequate organization, policy, leadership, resources and processes, the improvement of business results is greatly enabled, especially if the PM tools and techniques are applied, together with IT solutions for project collaboration. Thus, the balanced scorecard method should be considered as a starting point for strategy implementation and progress evaluation through projects.

Key words: project, strategy, project-oriented company, balanced scorecard

1. Introduction

Project management is no longer considered as an approach to the planning and follow-up of a project, but rather as a tool to achieving the company strategic goals in a new business environment. This includes the application of modern PM disciplines that focus primarily on the strategic aspect of project management. The company in which project management has a strategic importance is project-oriented. Such a company demands organizational changes and the implementation of a Project management office (PMO), as well as adaptation of the classical managerial processes to a project-oriented company.

According to Loo (1996), project management represents a new management approach because the projects are:
- Results oriented;
- In demand for effective leadership;
- Meeting-point of various stakeholders in a company;
- Synergy factor which unites multidisciplinary teams towards a defined goal, with specific time and resource limits;
- Basis for individual development inside a team;
- Incentive factor for team-belonging.

On the other hand, in their extensive research directed towards PM processes, technologies and skills, which covered over 3500 articles, magazines and other research works, Kloppenborg and Opfer (2002) established the following trends relevant for the evolution of project management:
- Standardization of processes and tools;
- Wider use of Web based technologies for corporate communication and cooperation;
- Use of widely accepted PM practices and methodologies;
- Expressed "outsourcing" in the realization of some of the largest companies' projects;
- Increased contribution of nonprofit sector projects;
- Evolution of the project manager's role in leadership;
- Adaptation of project endeavors to business demands and measurable benefits;
- Increased importance of project selection and prioritization;
- Focus on formal PM trainings and accreditations;
- Increased attention towards risk management, communication management and stakeholder management, especially in the planning phase.

Webster (1999) claims that today's organizations, under the conditions of provisional organizational structures and chronic lack of resources, recognize project management as a means of achieving adequate system flexibility and desired business results. Hebert (2002), contributing to this line of thought, sees project management as a flexible, effective and strategic management system through the aid of which planned results in traditional management structures are obtained. Also, he claims that the role of project management today is primarily strategic (50 %), followed by managerial (40 %), and finally, least of all, technical (10%). Cicmil (1997) shares similar thinking and points to the idea that project managers should reposition the role of project management from the discipline of middle and operational management into a business philosophy which should support a company's strategic and organizational changes.

2. Model of a Project-oriented Company

The management of projects and programs in a project-oriented company is located within the so-called temporary organization covering both individuals and teams engaged in company projects. The temporary organization implies flexibility directed towards a continuous adaptability to the number and size of projects and programs, and openness through intensive interaction with the environment. The temporary organization is, in terms of the number of people involved and the number of complex business deals conducted under her supervision, dominant in relation to the remainder of companies composed of functional units and support services. The degree of hierarchy within the service for project support is dependant on the size of provisional organization – the larger the provisional organization, the more important the hierarchy and the strategic management of the service for project support.

The model of a project-oriented company, as an open and flexible system, is based on combined organizational structure and continuous organizational changes, corporate project guidance, strategic management, project leadership and team-work. The basic elements of the model (Fig. 1) are (Ives, 2005):

- Company demands,
- Business environment and company capabilities,
- Leadership and funding for project management,
- Project domain and success criterion,
- Project authority,
- Financing and resources.

The company demands cover internal requests for changes in terms of the strategic project direction, program and financial benefit assessment of planned undertakings, as well as external requests relating to the project users' satisfaction, key suppliers and changes in legal records and other legal rules and regulations.

The model elements, covering the company demands and abilities, and business environment can be treated as the organizational basis for the establishment of project management (enterprise project management) within a company.

The company response to changes, which the establishment of a project-oriented company carries, has four dimensions (Ives, 2005):

- Leadership and funding for project management,
- Project domain and success criterion,
- Project authority,
- Financing and resources.
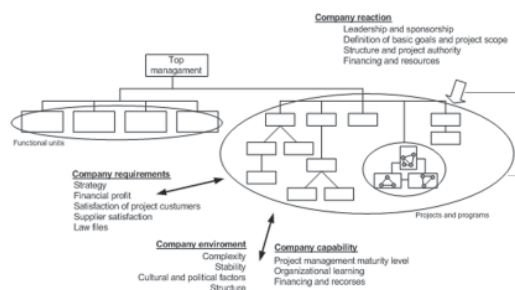
Figure 1: Model of a project-oriented company (Ives, 2005)

3. Strategic Basis of Project-oriented Company

3.1 Project Vision

One of the departure points in strategic management is the definition of the company vision. The vision implies orientation and understanding of a company's future position, prospects and field of activity, and is closely related to the macroeconomic forecasts and changes expected in long-term intervals. The central aspect here is the relatively stable and overall attitude towards the company future. The project vision is important for the definition of the company mission, goals and strategies resulting from them.

In a project-oriented company the project vision represents the project success factor, and its definition is found within the influence of the leader, which can result from the field of higher management, but also from the provisional organization, if it represents a person of authority. It is important that the leader clearly articulates the vision and directs efforts towards its realization. The project vision and the company vision have many common characteristics, but the project vision is more complex as it refers to a number of different projects at the same time, which, each for itself, represent a mini system with its very own organization, culture and value system. The project vision has the following characteristics (Christenson et al. (2004):

- It must be clear (should cover the overall goal, desired future condition and the essence of project goals),
- Must motivate stakeholders and propagate a specific system of values,
- Must be credible and adjusted to the stakeholders' culture and sub-culture,
- Must be demanding and challenging (should be proactive and direct teams towards efficient work).

The development of the project vision represents a complex process covering multiple phases depending on the approach. If transformational leadership is taken as the basis for the development of a vision of a project-oriented company, a model can be defined whose schematic depiction is shown in Figure 2. For the project vision to be understandable to all interested parties, its development should include representative groups of project stakeholders, whose mission is to bring closer the importance and influence of the vision to the employees.
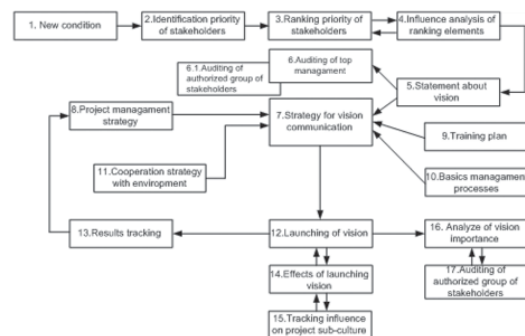
Figure 2: Development process of a project vision (Christenson et al. (2004)

As can be concluded from the above provided model, the project stakeholders have an important role in the development and implementation of the vision and in the modeling of strategic scope of project management within a company. This is why it is necessary to conduct an adequate analysis of all relevant stakeholders already in the planning phase of business undertakings, which also relates to the planning of project portfolio and the planning of individual projects. Therefore, the degree of project vision quality depends on the interaction of relevant stakeholders and the project management team. Their common work secures the realization of basic requests of good project vision: clarity, motivation, credibility and challenge.

3.2 Mission and Strategy

There are points of view according to which the mission is part of strategy, whereas other actors, who are in multitude, make a clear distinction between mission and action which should enable the strategy realization. According to them, the mission results from the company vision and represents the basis for the definition of the strategic goals and strategies corresponding to them. Therefore, with the aid of goals and realized strategies the company mission is realized.

For the mission to be in the function of strategic action of a project-oriented company it is necessary to conduct the so called statement of mission, which covers the following components:

- Most significant projects and programs,
- Major buyers and suppliers,
- Targeted markets,
- Basic economic goals,
- Project culture,
- Basic company and project management competence,
- Common values.

Making the mission concrete is realized though the formulation of strategic goals. These further enable a detailed elaboration of elements given in a statement or mission and secure the basis for the strategy implementation. Formulated goals are the criterion for the rationality of selected planning decisions and alternative action plans (Đuričin, Janošević, 2005).

If considering the strategy of a project-oriented company, one must take into consideration the research by Hamel and Prahalad (1989), which questions the conventional approach to the adaptation of company abilities with requests of the surroundings. According to this research, less successful businesses try and realize their strategic goals through available resources. Within them dominates the approach that strategic balance and maintenance of competitive advantage is achieved through the use of some of the already available generic strategies. The result of such an approach is repetition and imitation. On the other hand, most successful companies are directed towards the use of key competencies in a new and innovative way, so that, at first instance, the hard attainable goals, would be realized. Resources are used creatively, different requests in accordance to the environment are

established, and the company continuously improves key competencies and undertakes organizational changes. It is exactly these qualities that represent a strategic basis for a project-oriented company. Its key project management competencies are in the function of establishing strategic goals.

One of the most important elements for the strategy of a project-oriented company is the formation of a project portfolio, which represents the first step towards action initiation. The goal of connecting strategies to a project portfolio is the adjustment of projects and priorities with a defined strategy and strategic priorities. This primarily corresponds to the adaptability of the portfolio size to the company capacities and project representation in the portfolio as key events in the process of reaching the desired future condition.

An adequate application of the principle of strategic management in the project-oriented company includes three phases in the increase of competencies and achievement of the so-called project management excellence. These are the strategic analysis, the strategic choice and the application of strategy. The strategic analysis covers the analysis of the goal of conducting business, general environment (political, economic, socio-cultural and technological factors), the concrete environment (entry barriers, intensity of competition, negotiation strengths of the suppliers or buyers and the ability of substitution of products and services), resources, competencies and overall company abilities. The strategic choice is composed of the creation of possible strategic options, their judgment and choice, so that an adequate strategy could be applied. The repertoire of strategic options is various and covers different directions: closeness with the buyers, product leadership, diversification, change of work structure, operational excellence, etc.

To bring a company into a desired strategic position it is not enough to have a well formulated strategy, but also to secure the corresponding conditions for her conduct. In that sense, three factor groups of strategic success and excellence accomplishments in project management vary – Table 1. Those are qualitative, organizational and quantitative factors, and they can be observed from a short-term and a long-term perspective.

3.3 Balanced Scorecard (BSC) and Project Management

Under the conditions of the present-day business, the performance measurement of a company represents one of the most important tasks of process planning and overall general management. Within the traditional approach to management, the performance measurement represents a combination of accounting measurements (e.g. Return on investment – ROI), marketing measurements (e.g. Consumer satisfaction index) and quality measurements (e.g. Rate of rejects). A basic setback of these methods is their static character that limits the possibility of the management of the process of value creation through the means of strategy (Đuričin, Janošević, 2005).

Factors	Short-term application	Long-term application
Qualitative	• Providing training and education • No direct (formal) authority • Share responsibility • Project sponsorship	• Team-work emphasizing and multifunctional employee relation
Organizational	• Emphasize political and formal procedures • Project proposals	• Project management career path • System of rewards • Using multifunctional teams
Qvantitative	• Using PM tools for planning, time schedule and control	• Using database

Table 1: Factors of strategic success in a project-oriented company (Kerzner, 2001)

In order to obtain a system of performance measurement which will respond to the present-day business conditions it is necessary to focus on planning and strategy instead of control and budget. In relation to this, the research conducted by Norrie and Walker (2004) adds a fourth element to the traditional project management model – strategy (Figure 3). Forming a model with four project limits, of which three are already well known within the literature – time, budget and quality, they position strategy as a key factor to project success. While in traditional project management the responsibility for planning, follow-up and time management, budget and project quality lies within the team members and project managers, the responsibility in this elaborated model is shared among the project sponsors and project managers.

Figure 3: PM model with four constraints (Norrie and Walker, 2004)

Due to the flexibility of the management system of a project-oriented company, the employees must, by themselves, find the best means for the realization of planned activities towards the achievement of a project vision. The strategy realization becomes as important as a good vision. The problems in the application of a well formulated strategy appear because the strategy, as the unique means of value creation changes constantly, does not count for the tools with which the effects of a strategy are measured. These problems especially become evident in the present-day business because, in view of the potentials for the creation of values, there were important shifts from material resources towards knowledge and information. The strategy based knowledge and information is useful for intangible resources such as consumer relations, information systems, information base, motivation, competence of the employees, common values, etc. (Đuričin, Janošević, 2005).

The basic conditions that brought about the creation of a new approach to the measurement of company performance – list of adapted goals is:

- Management with the aid of decentralized business units,
- Team work,
- Knowledge as competition advantage,
- Employee involvement in continuous process of formulation and strategy implementation.

The Balanced Scorecard – BSC - came about at the beginning of the '90s of the last century as a tool for companies' performance measurement. The popularity of the method was influenced by the fact that it was implemented by the leading consultancy firms that introduced ERP software for business management (SAP, BAAN, ORACLE, and NAVISION). Unlike the traditional methods for performance measurement which rely on past performance indicators, the balanced scorecard is still used together with the future performance indicators, which are extracted from the strategy. In this way, the balanced scorecard becomes a tool for strategy management. Basic elements of this method are (Kaplan, Norton, 1996):

- Consumer perspective,
- Internal perspective,
- Development and training perspective,
- Financial perspective.
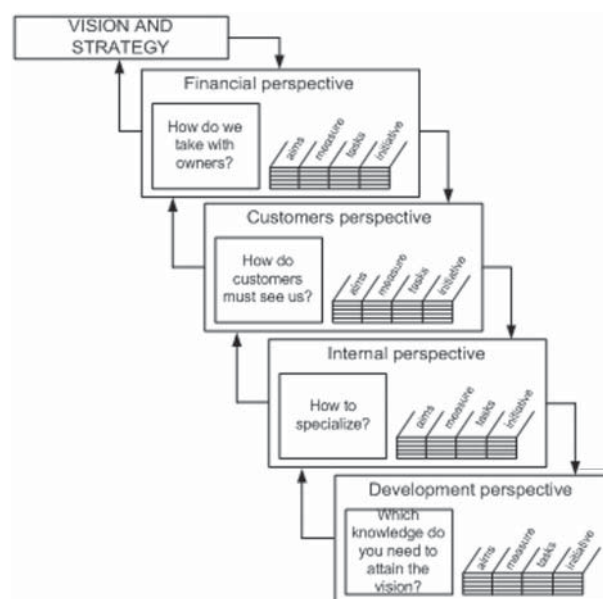
Figure 4: BSC`s four perspectives (Kaplan, Norton, 1996)

Thanks to the integration of financial performance measurements with marketing, internal and development measurements, loopholes within process planning are eliminated in traditional management, together with the reliance on exclusively historical data, the crude base of projected results, and likewise (Đuričin, Janošević, 2005). The concrete development of goals, performance measurements, missions and initiatives for the application of consumer perspective in the model of the balanced scorecard is provided in Figure 5.

3.3.1 Implementation of the Balanced Scorecard
The implementation of the balanced scorecard in a project-oriented company secures a better understanding of the project vision and strategy on behalf of the project

managers and team members perspective, an adequate performance measurement, or rather project results, an improvement in the efficiency of the project team as far as traditional project limitations are concerned – time, budget and quality, and a better communication between internal and external project stakeholders. Also, the project balanced scorecard (Project's BSC) decreases the gap between the project vision and the concrete action taken in order to realize the strategy. This is achieved by emphasizing the practical aspects of the adopted strategy and minimization of theoretical stance.
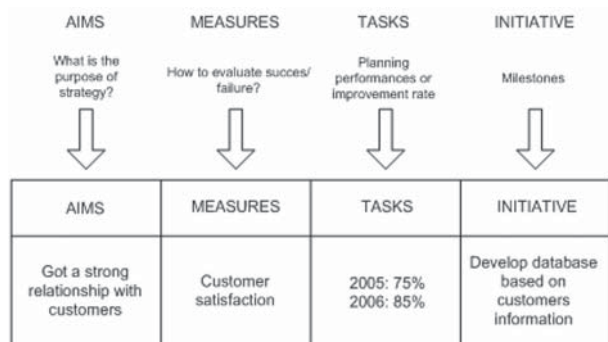
Figure 5: Example of consumer perspective in Balanced scorecard (Kaplan, Norton, 1992)

Unless the members of the team tie their activities and decisions for an adopted project strategy (corporate strategy) a double effect is achieved (Norrie et al., 2004).

- Team members assist the realization and control of project strategy,
- Presence of virtual leadership in all critical decision-making and events is important for the project.

Thus, implementation of the balanced scorecard is supported by all nine elements of the Business excellence model which is, with certain adjustments, also apply as "IMPA project excellence award model". The Model is an over-arching, non-prescriptive framework based on nine criteria. Five of these are "Enablers" and four are "Results". The "Enabler" criteria cover what an organization does. The "Results" criteria cover what an organization achieves. "Results" are caused by "Enablers". Excellent results with respect to Performance, Customers, People and Society are achieved through Leadership driving Policy and Strategy that is delivered through People Partnerships and Resources, and Processes.

The application of balanced scorecard methodology in a project-oriented company requires the following changes and adaptations (Norrie et al., 2004):

- The role of the balanced scorecard changes from the tools for the measurement of achieved strategic goals to the tools for the measurement of project performance and their comparison to planned influence of the projects on executable business strategies;
- Instead of focusing on business strategy, the focus is placed on the borderline of project and business strategy, their integrated application and use of project BSC as a leadership tool;
- Changes of traditional approach in the measurement of project goals and exits, and establishment of project-oriented measurements related to strategy.

4. Conclusion

The concept of project-oriented company comprises contemporary PM concepts (project portfolio management, program management, multi-project management, virtual project management, etc) and enables the integration of strategy, project portfolio and operational project management. The project-oriented company represents, on one hand, a system framework for PM methodology application, which ensures the strategic management by projects, and on the other hand, a promoter of concrete actions in order to achieve a competitive advantage in a multi-project environment.

Strategic project management provides an integrative management approach, based on the application of the theory and practice of project management, strategic management, PMO concept, change management and leadership. Such a system enables the increase of executed projects and programs effectiveness, which results in increasing the effectiveness of the whole company. Also, the balanced scorecard should be implemented in order to secure success of broad range of activities from launching strategy to measuring performance of related project. It is an important issue because the company's competitive advantage might be under threat by the following factors: globalization, new markets, the application of new organizational forms and the development of information and communication technologies.

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Maturity, Excellence and Other Silver Bullets

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Abstract

In recent years, project management has built up a reputation for effective delivery of business results. It's value as an effective tool has grown over the past 10 to 20 years and it is seen currently as both a critical skill for individuals and key organizational process. As its importance has grown, so too has the need for businesses to ensure their competitive edge. This need has caused many organisations to examine their project management methods. This paper examines some of the methods available to organisations to evaluate the effectiveness of organizational project management and notes some of the issues associated with the different approaches.

Key words*: Organizational Competence, Maturity, Project Excellence, Performance Model*

1. Introduction

Many organisations now recognise project management as key to their business operations (see for example Beer et al, 1990; Packendorff, 1995; Hodgson, 2002 or Crawford, 2005). As Morris et al. (2006) show, a wide range of industry sectors now make use of projects and see the effective delivery of projects as a key driver in their organisational performance. This rise of 'projectification' has encouraged practitioners and researchers to investigate all aspects of the knowledge domain we call project management and considerable effort has been devoted to understanding the role of the Project manager (Globerson and Zwikael, 2002), the skills (El-Sabaa, 2001) and competences (e.g. Crawford, 2005). Some Firms have gone so far as to adapt their operational structure to allow them to deliver their output to their clients exclusively by project (Hodgson and Cicmil, 2006), thus project management has become an organizational process, as well as an individual skill.

Claims have been made that delivery by projects is likely to become the dominant mode of business in our times (e.g. Wiig, 1997; Davenport and Prusak, 1998 and DeFillippi, 2001) if it is not already accepted as such. Frame (1999) sees this as due to competitive pressures. One of the major factors in this pressure is the need for consistent delivery of successful projects and so organisations are now turning their attention from looking at the performance of single projects to how they manage the complete range of their projects. So the emphasis has shifted; performance of individual project managers remains important but project management is becoming seen more as an organisational process.

Traditionally, one of the approaches to consistent delivery has been the application of quality management systems to the transformations that the organisation undertakes. Modern quality management has its origins in the emergence of modern engineering and mass production when methods to control manufacturing output as the advantages of product accuracy became apparent. The significance of this was recognised in the 19th century: one instance is the example of the Springfield rifle during the American Civil War where accuracy of subcontracted manufacture ensured that the Union was able to maintain critical supplies of weapons from dispersed manufacturing plants. A counter example was the inaccuracy of component manufacture for the Wolseley sheep shearing machines which were sent to Australia for assembly; the parts were so poor that the machines frequently failed. More recently, the application of statistical process control, better manufacturing tolerances and reduction in human errors have contributed to massive improvements in the output of the manufacturing sector. These and other quality techniques are readily applied to the output of projects but it has proved more difficult to bring such measures to bear on service 'processes' such as the management of projects. This difficulty is noted by Tenner and De Toro (1992) who demonstrate that the major differences between manufacturing companies and service industry include the issues of defining ownership (and hence of understanding expectations), problems of quantification of process output and the relatively less well established nature of management compared to the better understood nature of manufacture. In the case of project management, we can add issues related to the less tangible nature of the process and lack of repetitive tasks to measure. Thus we find that the process of project management is notoriously difficult to measure (Cooke-Davies, 2004).

Another aspect of the highly competitive nature of business is that firms can no longer just do what they always have done in the past. To stand still is to move backwards in relation to their competitors. Thus senior management must be concerned with improving their

processes. As Thurlow (1999) explains, 'great companies compete against themselves. They may be the best but they are never good enough'. How then can senior management have confidence that the key processes of their business are not just operating effectively but also improving? This paper examines competing models used to evaluated project management processes and highlights some of the limitations of these models

2. Assessment and Improvement

2.1 Quality Management Approaches

In the post 2nd World War global economy, the requirement for companies to compete fuelled the quality movement where repeatability of output and conformance to requirements is enshrined in internationally agreed standards (e.g. ISO, 2000). Those companies with ISO 9001 certified management systems are required to have documented systems that demonstrate compliance with the standard. It is usual for them to have quality manuals that set out procedures and work practices showing how major activities may be carried out. The system is specific to the company and is adapted to the business so that business outputs that conform to requirements are described in terms that allow direct comparison with some norm. In some sectors, there are subsidiary standards (e.g ISO Aero Space series) that set out specific components or additional requirements for the system. At present there are no standards that provide definitive guidance on project management; the nearest is ISO 10006:2003 but this only provides high level, generic guidance.

Compliance with standards is demonstrated by auditing. While auditing is a useful way to demonstrate compliance, it is no guarantee of effective delivery since all that is required is to show that work has been done in accordance with the procedures. Many workers have negative views of audits since the output, in terms or 'non-compliance' statements have power connotations. Similarly, the person carrying out the audit is 'independent' and so may be considered an outsider who may not have a good contextual understanding of the project. There is the feeling that the auditor is looking for fault, rarely praising innovative approaches or good work. So for many, auditing projects is a negative experience and is not a fruitful way of meeting the other critical aspect of ISO 9001, that of 'continual improvement' (ISO, 2000). It is seen as doing the things right as opposed to doing the right things, or better, doing the right things right.

2.2 Benchmarking

In order to meet some of the criticisms of 'standards', other approaches to developing quality in companies have been tried. These all depend on the concept of benchmarking. The underlying principle of benchmarking is the process of comparison of one system against another. The comparator can be either an idealised system or another organisation. Idealised systems are usually industry sector specific, say software development or construction, and are based on 'best practice' in that industry. Comparisons with other organisations may be done directly, where teams from the participating organisations observe each other or use case studies.

Benchmarking can be performed in a number of different ways: exploratory, external and competitive. The simplest form, exploratory benchmarking, is usually done as an internal assessment against some form of idealised model. The internal team may operate independently or may perhaps be assisted by a facilitator. External benchmarking is a comparison by an internal team assessing performance against the example of another organisation. The comparator need not be in the same industry sector. Finally, organisations with well established systems sometimes use competitive benchmarking (see Table 1) to establish their reputation for quality. Examples of quality awards and their date of origin are show in Table 1 overleaf. These awards introduce a different approach since they recognise 'excellence': in the case of the Malcolm Baldridge award, it is 'excellence in quality management' and the EFQA it is excellence in TQM achievement.

Award Title	Date instituted	Country	Remarks
Deming Prize	1951	Japan	National competition to seek out and commend those organizations making the greatest strides each year in quality, based on 10 groups of factors.
QC Award	1970	Japan	
BQA Award	1984	UK	
MBNQ Award	1987	USA	Malcolm Baldridge National Quality Award, based on a score card of 7 groups of factors, numerically assessed.
EFQA	1992		An excellence model, similar in style to MBNQA in that assessment is grouped numerically on process groups.
Excellence Award	1994	UK	Subsumes BQA Award and links to EFQA.

Table 1: Quality Awards

Benchmarking activities can be based on competitive environments such as those listed in Table 1 but are more normally performed in other situations. Many benchmarking activities are carried out as in-house assessments of the organisation or a function. This has a number of advantages, notably reduced cost, that make it attractive and may satisfy senior management requirements. The actual benchmarking can be undertaken as an award simulation or can assess a component of the business which makes it well suited to examination of project or programme management.

Benchmarking is seen in a more positive light than auditing since most models seek areas of strength as well as areas that require improvement. While an audit looks for evidence based on past experience, benchmarking also uses forward looking prospects and aims to be empowering for those involved. By basing the assessment on the stakeholder's definition of quality, benchmarking claims to address the twin issues of doing the right things and doing them right.

3. Improvement Models

3.1 Process Maturity

Cooke Davies and Arzymanow (2003) point out that the concept of process maturity emerged from the TQM movement. This approach is exemplified by Capability Maturity Model (CMM) developed in 1986 by the Software Engineering Institute, part of Carnegie Mellon University. This model was partly funded by the US Department of Defence (DoD) to provide an approach to evaluating contractor software development capabilities. The concept evolved from traditional process maturity, where a process matures as it becomes more familiar in use, to 'organizational' maturity where the firm moves through several stages of increasing maturity. CMM has 5 levels of maturity and recognise initial, repeatable, defined, managed and optimized levels. This provides a framework for action since specific plans can be developed to address particular deficiencies and priorities can be assigned.

With its origin in software development, which is usually done by project, it is not surprising that CMM should migrate to project management. There are many CMM based project management improvement models available, ranging from Kerzner's PMMM (Kerzner, 2001) through the IPS model (Ibbs and Kwak, 2002) to the ESI/George Washington University model, all of which make use of PMI's PMBOK©. A recent internal report from APM (2006b) noted more than 20 project and programme organisational maturity models. Several have been produced for consulting houses and others have been designed to support specific project approaches. It is far from clear how many of these models are used in practice.

3.2 Excellence Models

Excellence models make use of the benchmarking approach and invoke a general framework against which the organisation can rate its performance. One of the best known of these models is the European Quality Association's Business Excellence Model (BEM), illustrated in Figure 1 below. Like all benchmarking approaches, the BEM looks at historic performance to provide evidence of achievements as well as plans and detailed process planning to identify areas of strength and areas for improvement. It relies on building a history of activity and thus single assessments are of limited value.
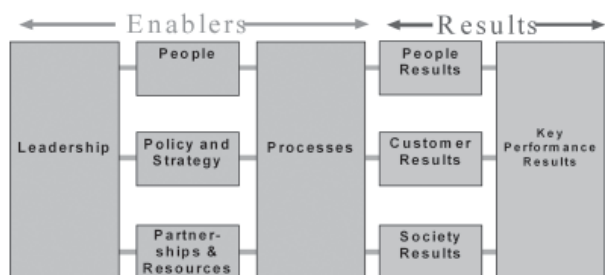
Figure 1: Business excellence model

Excellence models are specifically designed as process improvement tools. They seek to identify interfaces where problems arise. Processes have often developed in a piecemeal fashion, with little thought given to their design from end-to-end and so few people in the organisation understand how the whole process works and so process performance is often inadequately measured. While Functions or departments can optimise their part of the process, this sometimes comes at the expense of the overall process and those working "in the process" often do not understand their full role or the impact of their actions. Assessment using an Excellence Model is claimed to identify such issues and allows a holistic view of improvement action to be established.

Despite these claims, there seem to be fewer Excellence Models available compared to Maturity Models. The APM (2006b) report identified only two related to project management: the IPMA Excellence Award (see http://www.ipma.ch/awards/projexcellence/Pages/ProjectExcellenceModel) which was instituted in 1997 and one theoretical approach (Westerveld, 2003).

4. Issues in Use

4.1 Project Excellence Models

As Westerveld (2003) reminds us, project organisations differ significantly from traditional, functionally based organisations. The unique nature of projects and their clearly defined end dates indicate that they are temporary structures (Packendorf, 1995) while traditional companies are enduring, semi permanent structures which tend to achieve efficiency through routine processes. These differences make it difficult to use tools developed for traditional organisations in project environments. So at first sight, maturity models, which were based on project based structures appear to be better suited to improvement of project processes.

The BEM is designed to address what the organisation has achieved (WHAT or the Results area in the model), and the management of the organisation (the HOW or the Enablers). The project management literature concentrates on the HOW aspects, exemplified by the various Bodies of Knowledge (APM 2006a, PMI 2004). Pannenbacker (1995) modifies the original BEM as shown in Figure 2 below.

Figure 2: IPMA's Project Excellence Model

While this differs from Westerveld's model, both relate project success criteria with the Results area of the model

and critical success factors to the Organisational area.

The main issue for Project Excellence models is the problem of evaluating success. While the simple view of success, based on the so called 'iron triangle' of time, cost and quality provides a straightforward set of criteria, there are competing views. The iron triangle approach was challenged *inter alia* by Belassi and Turkel (1996) while Atkinson (1999) notes that this view is inadequate and that a broader range of stakeholder judgements needs to be taken into account. The recent literature on success in projects confirms this view (see for example Cooke - Davies, 2004). For the model, it is important to understand not just how success is to be judged but the criteria that will be used to determine whether the project achieves success.

It must be said, however, that most of the research on project success has focussed on single projects and little has been said on judging success in the organisational context. The other, but related issue, is that it is almost impossible to evaluate project success across organisations. Where companies perform most of their business, it is difficult to determine whether project success is due to the project manager or to the organisational processes involved (Munns and Bjeirmi, 1996). Other factors that must be taken into consideration are whether the results are typical, representing the true output of the processes involved or whether there are other, possibly project specific, factors that distort the outcome.

Perhaps a more significant issue is the purpose of the modelling activity: typically, it will be to identify areas require improvement but the opportunity to improve project processes may not be amenable to improvement activity. Improvement activity usually takes the form of one or more of the following aspects:

- **Effectiveness** – improving the ability of a process to deliver output that meets customer requirements.
- **Efficiency** – reducing the amount of resources consumed or required to operate a process
- **Cycle Time** – reducing the elapsed time required to convert the input into the output
- **Flexibility** – improving the ability of a process to cope with different or fluctuating demands
- **Capacity** – increasing the throughput capacity of a process

It seems unlikely that improvements to cycle time and capacity are relevant to project management.

Finally, there is the question of how well gradual process improvement maps onto project management. Cooke – Davies and Arzymanow (2003) note that process improvement does not map well to the way individuals acquire skills. Citing Dreyfus and Dreyfus (1986), he notes that they identify 5 stages in skill acquisition and that experts and proficient performers, while familiar with rules and good practices, do not select or follow rules. Instead they perform 'smoothly, effortlessly and subconsciously.

Project Excellence models offer the possibility of process improvement but their application to single projects seems unlikely to yield results that will meet the original objective of improving the detailed process.

4.2 Maturity Models

As remarked earlier, maturity models are based on 'best practices'. In the case of PMI's Organisational Project Management Maturity Model (OPM3®) the 'best practices' are formulated into on some 600 elements mapped onto capabilities, outcomes and key performance indicators. With all such models, the first consideration is how these factors are identified as 'best practices'. Who is entitled to call any practice better than another? Ackoff (1993) describes an assembly of 'best' elements from famous makes of car and then putting them all together in a single 'best of the best' combination. The result, he claims, would not resemble a motor car, let alone a viable model as the parts would simply not fit. His contention is that practices selected by benchmarking seldom take into account the interactions between the parts. Most of the Maturity Models identified by APM (2006b) are based, like OPM3® on the knowledge and process categories of their PMBoK Guide (PMI, 2004). This volume is widely recognised as a basis for certification but there is some challenge as to the validity of the processes (see for example Morris et al., 2006, Shepherd and Johns, 2006) which some (see *inter alia* Hodgson and Cicmil, 2006) see as incomplete and unrepresentative of the complexity of project management.

Setting aside challenges to the validity of the underlying process base, there are also practical issues to consider. In addition to the issues raised by Ackoff, Hoffherr (1993)notes that the 'costs of adapting an existing [benchmarking] solution to a seemingly similar problem can cost two or three times as much as starting from scratch. Because every problem is unique, every problem deserves a unique solution'. This seems to be more in tune with the nature of projects as temporary organisations tackling unique tasks.

5. Conclusions

Project management has become recognised as a business critical activity for many organisations. Senior management is interested in methods that allow their business critical activities to improve over time, or to mature. This desire has lead to an increasing interest in measuring this 'maturity'. Models based on CMM and on excellence have emerged in recent years to assist in assessing the state of organizational project management but the competing approaches have drawbacks. The theoretical basis for the more well known maturity models has been challenged and there are cost implications in implementing such regimes.

Excellence models are seen as less confrontational than auditing for conformance to standards, most of which are not assessable. These models are specifically designed for use in improving processes and so seem more useful than simply measuring maturity. However, the process of improvement requires multiple assessments over time to show commitment, progress and to reinforce success.

Both approaches have strengths but there are weaknesses, too. Hence care is needed in selecting an

approach and in applying it if such use is not to be seen as simply another management fad.

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Starting Points of Project Excellence

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Abstract

In modern business environment, it is becoming increasingly harder for organisations, regardless of their size and operational goal, to carry out the necessary changes in a timely manner. At the same time, it is becoming ever harder for companies to build competitive advantage. Projects and project management are key tools in gaining control over development processes and adapting to changes in the modern organisation business environment. Global trend analyses show that mastery of project work and project management is becoming one of the key success factors of any modern organisation, where the level of mastery of project work is gaining increasing importance. In the following text, the scope of project work and the concept of project excellence will be presented.

Key words: *modern environment, project, project management, project excellence*

1. Characteristics of Modern Business Environment and New Approaches to Business Organisation

Why are projects and project work becoming increasingly important business ingredients in the modern world? Because we have been facing, since the beginning of the nineties, the problems of unstable business environment, requiring from us the ability to develop rapidly and a high level of adaptability in every-day business operations. Business globalisation and rapid technological development, particularly in the area of information technologies and telecommunications, have brough about problems of shortening of the product life cycle, necessity for drastic reduction of product/service development time, increase in the share of order-based production, and others. Traditional business organisation that we are all familiar with and, to a large extent, still practice, is a poor basis for the development of such competencies in a modern organisation that will allow it to successfully face emerging demands and challenges.

In many cases, organisational development did not, unfortunately, keep pace with the technological development described above. To illustrate the issue, let us just mention that the bases for the theory of business organisation that we still use today to a large extent, were developped at the beginning of last century by Fayol, Taylor and their contemporaries. We believe a comparison between technological development and business levels at the time with today's level and demands is needless. Project, network and quantum organisation are notions that apply to modern approaches to better business management in organisations facing problems and challenges of the modern business world.

In order to illustrate the usefulness of work methods and techniques developped by modern project management, let us mention the study (Kerzner, 1998) published in the nineties, which presented the results of project work and compared them to work methods utilised in traditional business organisation. The results showed that, in most observed companies, new product development and mastery time reduced drastically, and an increase in revenues, business profitability and customer satisfaction level was also noted.

Another empirical example showing that new approaches to company business organisation and management must be saught is provided by some of the Japanese automobile manufacturers, such as TOYOTA. In the nineties, when American automobile manufacturers faced problems of decrease in competitiveness and profitability of their companies, TOYOTA's American subsidiary was achieving significantly better results. To illustrate this fact, let us mention (Baumann, 2005) that the profit during the period of observation was 2 % in the GM company, as compared to 8 % for the aforementioned Japanese manufacturer. As early as 1997, the American automobile industry commissioned a study seeking to find out what the essence of TOYOTA's approach was. The study shows that Japanese companies do not observe the golden rules of industrial production formulated in the West after World War II. These rules are based on the following premises (Baumann, 2005):

- The importance of capital, as capital, labour and raw materials are primary production inputs;
- Mass production – increase in prosperity through capital investment, labour cost reduction resulting from it, and and using the force of capital to put pressure on suppliers;
- Scientific management – three groups of employees were formed, namely managers, responsible for decision-making and representing the interests of capital owners, experts, defining how and when things should be done, and workers, whose role is to physically carry out the set objectives;
- Financial management – the basic assumption is

that financial decisions have the most influence on a company's success and that investments should be made into growing economic activities and that companies in good standing should be bought.

Practice has shown many times that such an approach is questionable. Investment into new promising technologies often did not bring the desired financial results. Charismatic management model, based on constraint, personal charisma and cost reduction, has almost always proved to bring profitability only short-term.

Analysis showed that the TOYOTA company's business is based on different premises. The most important factor is knowledge, through which costs can be reduced, and utilisation of labour, raw materials and assets can be optimised. Another difference is that there is only one type of employees in their companies, comprising all the employees. Each individual employee contributes a portion of the knowledge in the process of creation of a new value. Knowledge cannot be bought; it is acquired through continuous learning. Transfer of foreign knowledge into a company's own environment shows considerable net losses of knowledge in such transfers. A lot of the learning occurs in the product development processes. Such an approach brough the TOYOTA company outstanding results, including a four-time increase in development productivity, two to three-time decrease in development time and costs, ten-time increase in the number of innovations, etc. The described cases show that modern times require different organisation governance and management concepts, as the traditional concepts' time is past, and they no longer produce appropriate results. The reasons for this are to be found in the instability and dynamism of the modern business environment, rapid technological development and globalisation of business and competition.

Companies are facing the demand to develop their key competencies, with which to compete on the global market. These competencies are largely connected with the ability to develop new knowledge. More knowledge means greater competitive capacity. Knowledge becomes tangible as a specific product, service, process or system. Final tangible knowledge is the result of the application of inter-connected incremental knowledges participating in such a process of creation of a new artifact. From the business point of view, it is a matter of defining appropriate process objectives, allocating adequate resources necessary for their realisation, and providing appropriate management and motivation of all participants for innovative cooperation. It is a specific type of a one-time business process, professionally referred to as "project".

2. The Scope of Project Management

Project management has hitherto acquired the reputation of a highly successful and efficient work method. Its role was limited solely to the implementation of one-time smaller or larger undertakings. Project management as a work method has doubtless prevailed, and still prevails, in large one-time construction feats, research projects or other types of large-scale pooling of labour and other resources in order to complete a specific complex one-time undertaking.

In companies whose production is not project-oriented, project management is largely the work method of second level management, while the highest level management rarely or occasionally utilises the instruments of project management. (Hauc, Kovač, Vrečko, 2002). Recently though, a significant shift in the understanding and utilisation of project management has been noticable. Project management is increasingly becoming the prevailing work method in companies searching for new forms and types of business process organisation with the aim of attaining a better competitive edge. In addition, project management is increasingly penetrating non for profit organisations, demanding higher efficiency and quality in search of new operation modes.

The prevalence of project work goes hand in hand with the development of project management theory. In the last twenty years, project management has developped from a systems viewpoint, through goal-oriented theory, to project-oriented management (the terms used in professional literature are: project-based management, management by project or project oriented management) (Turner, 1993, Turner, 2000, Lock, 2000, Cleland in Ireland, 2000).

Just as a project is a one-time process with clearly defined beginning and end dates, project management is a one-time undertaking, beginning with clearly defined and set project objectives and ending with the delivery of results to the customer or users organised by the company itself. The international standard (IPMA, ICB, 2002) defines project management as a series of tasks including the planning, organisation, monitoring and control of all the aspects of a project, and the motivation of all those involved in it to achieve the project objectives on time and to the specified cost, and other criteria used for evaluating the successfulness of project implementation. In order for a project manager to be able to carry out the set task, he/she must be familiar with a variety of fields required by the profession of project management, which are defined in the aforementioned standard.

Each project has a customer. The project customer can be a company's or organisation's management, appointing an employee to the position of project manager and thus delegating to him or her the responsibility for the carrying out of set development objectives of the company or organisation. In market projects, the customer is the official representative of the buyer of project results.

Customer satisfaction is one of the fundamental objectives to be pursued by any successful project manager. Well-defined and measurable expectations on the side of the customer are a pre-condition for successful project implementation. Project quality management is a professional field helping the project manager define, together with the customer, unambiguous, measurable results, and expectations connected with them. Project objectives are closely connected with organisations' development strategies and strategic goals. For this reason, the successfulness of development projects is conditional upon the appropriate level of integration of the strategic and project management process.

Projects represent the realisation of an organisation's development strategies. Regrettably, the traditional management theory makes a distinction between strategic and project management, which can be seen in traditional textbooks in this field. Let us a take as an example a book on strategic management describing everything from the mission, vision, to methods utilised for defining strategic development objectives and development strategies connected with these objectives. In the part of the book dedicated to the realisation of the aforementioned development strategies, such sources are very general and succint, and do not, moreover, mention project programmes or project management, which are, in practice, the basis for successful realisation of the said strategies. What follows are not theoretical research findings, but empirical facts having shown that companies achieve significantly better results through project approach than through traditional work methods.

The conditions for successful project realisation are closely connected with (IPMI, 2005):
- competency,
- knowledge,
- available equipment and
- willingness to work.

Competency is defined from the point of view of the involved employees and the organisation. Competency of the involved personnel is defined on the basis of their formal and informal training for the intended work, and their intellectual and emotional IQ. Competency level of the organisation is defined on the basis of the capacity to define project tasks, identify competent personnel capable of carrying out the planned tasks, identify the skills lacking in the involved personnel in light of the requirements, and eliminate the established deficiencies.

Knowledge required for the successful carrying out of a project should also be defined from the point of view of the involved individual, as well as that of the organisation. Indvidual employees are the ones possessing knowledge on how to perform a specific task. These are specific expert knowledges related to the implementation process of the intended project. They include project management knowledge, technical knowledge, economics and business-related knowledge, legal knowledge, financial knowledge, computing knowledge, knowledge required for the use of specific tools, methods, techniques, etc. The role of the organisation, on the other hand, is to define the needs for a specific knowledge and its level required for successful implementation of a specific task. In case of deficiencies, it must ensure transfer of the required knowledges to appropriate employees planned for the implementation of the project, through appropriate instructions, trainings, and other types of transfer of required knowledges and skills to individual employees. In any event, the organisation is responsible for seeking and ensuring the required knowledge sources.

Equipment required for the successful implementation of a project can also be defined from the point of view of the individual involved employee, or the entire organisation. The individual aspect involves equipment required for the successful work of an individual. It is the equipment connected with the work environment, and we distinguish between "hard" and "soft" equipment. The first group is comprised of premises and equipment, standard computing hardware and software, work tools and the like. The second includes working climate and organisational culture representing the environment for the implementation of the planned tasks. The task of the organisation is to ensure adequate equipment for the individual. Logically, "soft equipment", assuring the appropriate working climate, as a pre-condition for successful work, is as important as the "hard equipment", if not more.

In order to achieve above average results, it takes willingness to work, which, again, can be viewed from the standpoint of the individual, as well as the organisation. Personal willingness to work manifests itself as inside motivation for achieving the expected results, and is, in addition, expressed through personal discipline required for the implementation of the task. Together with competency, it gives the individual adequate energy to perform the set task. The role of the organisation is to develop and systematically support the willingness of the involved persons to work. It achieves this through its preparedness to face problems of good and bad implementation of project tasks, and resolve them with the help of the competency described above. It encourages and rewards good work and has the ability to solve problems in a positive manner. Such an organisation has the ability to create willingness to work in all its employees, regardless of their area and level of employment.

3. Project Excellence

Customer satisfaction, connected with the criteria for successful project realisation described above, is the basic starting point for the introduction of project excellence. On the other hand, project management is the performing of management functions required for the implementation and achieving of the project's final goal. In addition to the well-known functions of management, a project manager must pay special attention to the activities of integration and connection of the project with the environment. Integration activities limit the function of project management to the execution level. At the execution level, project management is implemented through the so-called project (or project phase) life-cycle.

The basic phases in most projects include the following: definition of project starting points (purpose, objectives, environment and options), definition of the implementation (resources, implementation modes and manners, plans), implementation of the project and conclusion, and delivery of project results. The entire process of project pre-preparation, implementation and conclusion is a very complex network of various relatively independent sets of activities, differing from each other in contents and implementation methods.

How can it be determined where the observed organisation is at? For this purpose, various project management maturity models were established (OPM3 and others).

As concerns typical phases of introduction of project

management into practice, we can summarise the findings of the world renowned expert Kerzner, who distinguishes the following typical phases (Kerzner, 1998):

- embryonic phase; in this phase, the organisation begins to recognise the need for and benefits of project work,
- executive management acceptance phase; in this phase, the support of the executives to the introduction of project work in the organisation is noticeable,
- line management acceptance phase; the support of the line management has been involved and reached, which manifests itself in the preparedness of top executives and their subordinate employees in the organisation to undergo additional training,
- growth phase; in this phase, the organisation records changes in its business methods, develops and establishes a project management system, and the majority of employees are willing to partake in project work,
- maturity phase; the project management system is integrated and constitutes an integral and inseparable part of the organisation's business operations.

The described phases are connected with the organisation's development level and its preparedness to utilise project management in its own business environment. In the following, the author gives a very detailed description of the scope of project excellence. In his opinion, organisations reach project excellence in the growth and maturity phases of the introduction of project management (Kerzner, 1998). In order to achieve the cited objective, organisations must reach excellence in the following six elements of project management:

- Intergated Management Processes;
- Project Culture;
- Management Support;
- Training and Education;
- Informal Project Management;
- Behavioral Excellence.

There are several methods for evaluating the excellence of project work. The central model for evaluating project excellence, related to individual project implementation, is doubtless the one created within the framework of the International Project Management Association (IPMA), namely the project management excellence award programme for successful implementation of individual projects (IPMA Award).

The IPMA Award is based on the TQM model, which is, in this case, applied to the management process and result evaluation of a specific project. The largest number of points a project may be awarded is 1000. Out of this, 500 points may be awarded for project management, including project objectives (140 points), project leadership (80 points), people management (70 points), resources management (70 points) and processes management (140 points). The remaining 500 points are awarded for the results regarding customer expectations (180 points), results regarding employee expectations (80 points), results regarding expectations and satisfaction of other parties involved in the project (60 points) and the evaluation of key performance and project results (180

points). The first awardees of these prestigious awards were companies such as BMW AG, SIEMENS, DAIMLER CHRYSLER, DEUTSCHE POST and others.

However, project excellence does not consist solely in receiving and holding the prestigious IPMA Award, but also in a comprehensive and continuous concern for the development of personal and organisational competencies, development of personal and organisational knowledge, development and ensurance of adequate equipment and nurturing a culture of willingness to work in all the involved parties.

4. Conclusion

In modern business environment, it is becoming increasingly harder for organisations, regardless of their size and operational goal, to carry out the necessary changes in a timely manner. At the same time, it is becoming ever harder for companies to build competitive advantage. Projects and project management are key tools in gaining control over development processes and adapting to changes in the modern organisation business environment. Global trend analyses show that mastery of project work and project management is becoming one of the key success factors of any modern organisation.

In addition to team work, project work includes control over consumption of time and other resources necessary for the performance of the task, planning, quality control, designing a project information system and documentation, designing a control system, establishing a system of mutual cooperation (through contracts) with other project implementors (mainly outside parties), designing project organisation and IT support. A series of methods, techniques and work modes has been developped for the purpose of implementing the above-cited tasks.

A major advantage of project work is, among others, its efficiency. The vast majority of companies have a more or less rigid functional organisation. In recent years, in developped economies, major efforts are being made to lessen the negative impacts of rigid organisation. Project management is very successful in reducing the rigidity of organisational structures. Its utilisation is therefor rapidly spreading.

In the growh of project management utilisation, the level of mastery of project work is coming to the forefront. The level of mastery and utilisation of project work methodology in the implementation of individual projects is particularly important. There are several methods for measuring the utilisation of project work. Among them, the concept of project excellence developed by IPMA doubtless has a central role.

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Organizational Excellence Delivers Project Management Maturity

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Abstract

Business environment demands a quick reaction from the management of the company. The article deals with project approach at strategy implementation, the focus here being to demonstrate the problems of strategy focused leadership and it connection to the organizational excellence.

Key words: projects, project management, leadership, organizational excellence

1. Project Management Maturity

Much has been written and said about project management maturity and enablers that bring project success to organizations. The focus in this respect has been on operational dimensions, such as having the right project management processes in place and supplementing them with human resources that are well versed in project management principles. This approach in itself cannot be faulted. However, it is totally inadequate considering the importance of supplementing it with a beneficial structural- and behavioural strategy. A structural strategy in the sense of designing an organizational architecture dictating appropriate authority, responsibility and accountability relationships, as also, essential policies and procedures to achieve the organization's mission and vision. Moreover, a behavioural strategy is required that defines the organization's value system and guides it towards a culture of learning and knowledge management, culminating in the right attitudes that would promote trustworthy support, teamwork, innovation and autonomy in managerial decision making. At the root of organizational excellence, as illustrated above, lies leadership acumen.

Superior strategic leadership has become an important competitive tool and is the basis on which leading organizations provide services or goods better than their competition can, resulting in enhanced value-add, thus organizational excellence. Managing organizations through projects and programmes provides the integrative implementation link between corporate strategy, business-unit strategy and operations strategy. Globalization and the information age have also impacted heavily on the way that organizations are led and managed. Accelerated information flow inspiring change, requires that management decisions be made more frequently and with quick response.

2. Value Creation Process

Changes in external environmental dimensions such as the marketplace, economic outlook, socio-cultural issues, politics, ecology and technologies, have a strong influence on modern organizations. Technology is probably the dimension with the greatest impact. This applies particularly to the area of information technology, motivating organizations to improve their systems and business processes continually. As a consequence, the knowledge, skills and behaviour of the human resources component in the organization needs to be continuously improved to maintain a competitive advantage, coupled with effective and efficient knowledge management. The learning and growth perspective of organizational strategy is vital to the success of modern organizations.

Lynch (2000), and Kaplan and Norton (2001) report that value creation opportunities in the modern economy are shifting away from managing tangible assets, such as inventory plant, property and equipment. Value creation opportunities are shifting to managing knowledge-based strategies that deploy the organization's intangible assets inter alia customer relationships and service, productive and responsive processes, innovative products and services, information technology and information systems, a healthy organizational climate, strategy-focused leadership and motivation, and employee knowledge and competency.

Organizations can no longer rely solely on prescriptive strategies such as profit maximization, but have to rely progressively more on the emergent approaches to strategy development and implementation. Lynch (2000) asserts that to cope with the uncertainty and turbulence in transformation and change, sometimes even chaos, organizations are reverting to emergent approaches such as survival-based, uncertainty-based, and human-resource-based theories and strategies. The last-mentioned category entails viewing human resources and their collective creativity as the most important intangible assets of the organization. The world is now in the evolution of a "chaordic" business paradigm, which is an unstable combination of randomness and plan, infused with waves of change. The world environment is "emergent", meaning that with the speed of change, which impacts on every organization, the operational environment has dissolved

into a series of events that frequently orchestrate chaos and confusion. Only leadership excellence, particularly executive leadership, can stem this tide.

Conventional ways of managing organizations, and the traditional organizational forms, are becoming obsolete. Functional approaches to management, which are rigid, no longer cope with the demands of the situation. It has become evident that communication in traditional organizational forms is much too cumbersome and impedes the flow of information and managerial decision-making. In such organizations, leaders tend to lack both strategic purpose and customer focus. This has become a real challenge since most of what has been assumed in the previous century no longer befits current reality.

Building on the platform of accelerated technological revolution, the wave of innovation, entrepreneurial bioengineering and knowledge explosion, all of society now has to cope with the information revolution and globalisation. Human creativity of work teams is becoming increasingly important within the context of the emergent and virtual team management environment. Managers are increasingly entering into a culture of risk, in that business outcomes are predictable only in the short term. Having to lead and manage in this new emergent culture of risk and uncertainty, organizational processes, architecture, and behaviours are compelled to undergo more radical transformation and change than at any time in the past.

3. Importance of Leadership

In the context as described above, leadership of human resources has become a dominant factor. In learning organizations work is progressively done cross-functionally. The cross-functional process managers depend on line managers for their resources. ***Not owning these human talents as direct reports, process managers predominantly draw on their leadership abilities to motivate these cross-functional team members and give them direction***. It is important to note that cross-functional processes can either be normal operational work, for example, procurement, customer relationship management, demand management and capacity planning; or project related, inter-alia, portfolios of continuous improvement-, strategic transformational-, and capital investment projects.

Managing organizations through programmes of cross-functional process groupings, i.e. processes that consist of normal operational- or project work, is gaining popularity. Programme management as it is generally referred to, is an implementation tool that delivers organizational benefits resulting from aligned corporate, business-unit, and operations strategies. It facilitates coordinated and integrated management of functional department portfolios, and cross-functional portfolios of projects and normal operations that bring about strategic transformation, innovative continuous improvement and customer service excellence in organizations, with the aim of achieving benefits of strategic importance. It is not generally recognized that the Chief Operating Officer

(COO) and Chief Financial Officer (CFO) to whom line managers report, are in fact programme managers of the functional department portfolios of the organization.

Through investigating how new economy organizations shape their programmes, many researchers and consultants, including Murray-Webster and Thiry (2000), indicate three ways in which project related programmes serving internal customers are shaped. Firstly, there are strategic or goal-oriented project-portfolio programmes that deal with strategic transformation in the organization. Secondly, there are innovative project-portfolio programmes that deal with continuous improvement initiatives emanating from top management as well as team members in the organization. Thirdly, there are capital expenditure programmes that deal with large capital investment projects such as new plant, equipment and buildings.

Steyn (2001; 2006) asserts that a fourth, fifth and sixth initiative in the programme management approach can be added to the above. The fourth initiative comprises normal operations process groupings of a cross-functional nature serving internal clients such as procurement, demand management and capacity planning, and manufacturing-flow management. The fifth initiative comprises processes serving external clients such as order fulfilment, customer relationship-, and customer service management. The above are operational in character and focus on improved internal and external customer service, guided by strategic initiatives directed by the executive leadership. The sixth initiative comprises a programme of project portfolios serving external customers. The latter exists predominantly in project-driven organizations.

It is essential for organizations to establish appropriate Key Success Factors (or Critical Success Factors) to guide them towards goal achievement. Before commencing, it is essential that outcomes and objectives be properly defined, preferably in accordance with the Balanced Scorecard concept proposed by Kaplan and Norton (2001). These outcomes and objectives must be communicated to all stakeholders. Moreover, top leadership in collaboration with the programme offices must prioritise initiatives. They must also assign appropriate authority, responsibility, and hence accountability, to stakeholders. In this regard, it is emphasized that programme, process, and project managers be given full authority over their work.

At this point, it is appropriate to focus on some important elements of the programme approach. Organizational goals must be clearly specified and the actions to achieve these goals must be itemized and, where applicable, prioritized. Formulating corporate strategy is the task of top leadership in the organization. This is best achieved by utilizing the balanced scorecard of strategies, as proposed by Kaplan and Norton (2001), with its three leading-indicator perspectives, i.e. the customer service, internal, and learning and growth perspectives, on the one hand, and the lagging-indicator perspective of finance on the other. Modern executives understand the importance of proper strategy implementation in order to maintain a competitive advantage in the new economy. The balanced scorecard approach describes strategy, while programme management represents an essential component of the organizational architecture to communicate and

implement the strategy.

Kaplan and Norton (2001) argue that transformation should be mobilized through executive leadership. Executive team support, trust building and involvement are profound factors of organizational excellence. According to them executive leadership must realize that they are not dealing merely with a metrics process, but are actually faced with a change project. In particular, executive leadership must utilize Kotter's (Kotter, 1996) first three steps of organizational transformation and change in the initial stages. These are: firstly to create a sense of urgency, secondly, to mobilize a guiding coalition for the transformation and change, and, thirdly, to develop strategies to describe what type and extent of transformation and change are needed.

In mobilizing transformation and change, executive leadership must govern the process. They must define, demonstrate and reinforce preferred values and principles for the organization. Moreover, they must create strategy teams for the development and implementation of transformation and change, arrange large meetings to communicate and discuss strategy, and encourage open communication of strategic themes throughout the organization. Absence of these elements will result in project management immaturity irrespective of the quality of project personnel on board.

The current authors emphasize that it is also the task of executive leadership to institutionalise the Balanced Scorecard-Programme Management (BSPM) system proposed by Steyn (2001) as the implementation tool for transformation and change, as well as giving it maximum support. As Kaplan and Norton (2001) put it, "the art of leadership is to delicately balance tension between stability and change". Executives are the role models in creating a climate of trustworthy supportiveness throughout the total organizational value chain, suppliers and external customers included. They form an integral part of the BSPM system's coordinating, integrating and communications activities. Managers of project-portfolios and process-portfolios in the value chain seek continuous guidance from executive leadership.

Researchers are continuously examining the current and future decades in order to detect what it will take to provide effective leadership to organizations, including programme management offices, and project teams. Kotter (1996), who has spent 25 years observing the way organizations work argues that "leadership and transformation" will create the sustainable and profitable business of the future. He maintains that change is inevitable if organizations and people are to adapt to rapid advances in technology, increasing competitiveness, globalization and the effects of an aging society. Both Kotter (1996) and Wyatt (2003) are of the opinion that leaders must win the support of employees, partners, investors and regulators for many kinds of initiatives by demonstrating extraordinary personal performance. Steyn and Schmikl provide illustrative lessons of the behavior of outstanding corporate leaders in advancing organizational excellence:

- **Support your subordinates**. Do not expect them to go all out if you fail to demonstrate that you believe in them. Be fair and recognize good performance.

Encourage decentralized managerial decision-making.

- **Develop a Vision**. Investors pay attention to long-term planning. So planning for the long term pays off. Employees (including project personnel) and shareholders want to follow and be committed to someone who knows where he or she is going. True leaders translate Vision into action.
- **Keep your cool**. The best leaders show their mettle under fire. By demonstrating grace under pressure, the best leaders inspire those around them to remain calm and act prudently.
- **Encourage prudent risk taking**. Knowledge that the slightest failure could jeopardize one's entire career prompts leaders to encourage employees to experiment, to push towards new frontiers, readily accept error, push in new and untested directions, and work towards continuous improvement.
- **Build trust and support**. The best leaders journey with their immediate direct reports. They listen; encourage dialogue, innovation and creativity; and are there to remove obstacles to performance.
- **Encourage teamwork**. Show your peers and sub-ordinates that you favour cohesion and cross-functional communication.
- **Be an expert**. From the boardroom to the backroom, everyone had better understand that you know what you are talking about.
- **Invite dissent**. Your people cannot give you their best and learn to lead if they are not comfortable to speak out. Don't defend, listen, and synthesize information.
- **Simplify**. You need to see the big picture in order to set a course, communicate it, and maintain it. Focus on what is important and reach elegant, simple answers to complex questions. Keep unnecessary details at bay.
- **Build leadership strength**. Define leadership, ensure recruitment of quality leaders, link leadership development to the bottom line, and undertake regular leadership assessment.

4. Organizational Excellence

Essentials of organizational excellence should be considered in the context of the above leadership framework. Organizational excellence is unachievable in the absence of profound leadership acumen. The European Forum for Quality Management proposes the following essential areas of organizational excellence (see www.efqm.org):

- **Results Orientation Concept**
Excellence is dependent upon balancing and satisfying the needs of all relevant stakeholders.

- **Customer Focus Concept**
The customer is the final arbiter of product and service quality. Customer loyalty, retention and market share gain is best optimized through a clear focus on the needs of current and potential customers.

- **Leadership and Constancy of Purpose Concept**

The behaviour of an organization's leaders creates a clarity and unity of purpose within the organization and an environment in which the organization and its people can excel.

- **Management by Processes and Facts Concept**

More effective performance is achieved when inter-related activities are understood, systematically managed, as also, decisions concerning current operations and planned improvements made using reliable information that includes stakeholder perceptions.

- **People Development and Involvement Concept:**

The full potential of an organization's people is best released through shared values and a culture of trust and empowerment, which encourages the involvement of everyone.

- **Continuous Learning, Innovation and Improvement Concept**

Organizational performance is maximized when it is based on the management and sharing of knowledge within a culture of continuous learning, innovation and improvement.

- **Partnership Development Concept**

An organization works more effectively when it has mutually beneficial relationships with its partners that are built on trust, sharing of knowledge and integration.

- **Public Responsibility Concept**

Adopting an ethical approach and exceeding the expectations and regulations of the community at large best serve the long-term interest of the organization and its people.

5. Holistic Conclusion

It is concluded that organizational excellence as depicted above results from strategy focused leadership. Moreover, project management maturity is only achieved when a culture of excellence inspired by superior leadership exists in the organization. Organizations plagued by poor leadership are profoundly unable to achieve project management maturity, irrespective of the quality of project managers in their employ.

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Abstracts / Povzetki

E-learning – a Solution for Project Management Excellence

Constanta Nicoleta Bodea

The paper presents an e-Learning platform in project management centred on the learner and based on advanced technologies, such as: ontology, competence standards, IMS Standards.

Key words: e-Learning, ontology, project management, competency management, ICB

E-učenje – rešitev za odličnost projektnega managementa

Constanta Nicoleta Bodea

Članek predstavlja platformo e-učenja v projektnem managementu, ki je osredotočena na učenca in temelji na napredni tehnologiji, kot na primer: ontologija, kompetenčni standardi, standardi IMS.

Ključne besede: e-učenje, ontologija, projektni management, management kompetenc, ICB

Project Organization and Quality - as Seen by Various Expert Studies

Sebastian Dworatschek, Tina Nehlsen, Ina Gatzmaga

The handling of projects using professional project management instruments has been institutionalised more and more in the past years. This found expression in a growing number of successfully closed projects. Aspects of project organization and quality management are essential success factors. This article will examine these elements integrating the results of various studies.

Key words: project, project organization, quality management

Projektna organizacija in kakovost – z vidika različnih strokovnih študij

Sebastian Dworatschek, Tina Nehlsen, Ina Gatzmaga

Vodenje projektov s pomočjo profesionalnih instrumentov projektnega managementa se je v preteklih letih vse bolj institucionaliziralo. To se odraža v naraščajočem številu uspešno zaključenih projektov. Vidiki projektne organizacije in managementa kakovosti so bistveni dejavniki uspeha. Članek bo raziskal te elemente in vključil rezultate različnih študij.

Ključne besede: projekt, projektna organizacija, management kakovosti

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Strategic Project Management - Tool for Reaching Business Excelence

Marko Mihić, Dejan Petrović, Vladimir Obradović

Strategic project management represents cross-cutting approach which is defined on a basis to reach business excellence in complex multi-project environment. This paper considers strategic project management as a tool for reaching business excellence. It is necessary to define a management system that will unite the expressed needs for change, both in the form of different project number and size, and in the form of programs being executed and a strategy inclusive of those needs. By applying this approach, supported by adequate organization, policy, leadership, resources and processes, the improvement of business results is greatly enabled, especially if the PM tools and techniques are applied, together with IT solutions for project collaboration. Thus, the balanced scorecard method should be considered as a starting point for strategy implementation and progress evaluation through projects.

Key words: project, strategy, project-oriented company, balanced scorecard

Strateški projektni management - orodje za dosego poslovne odličnosti

Marko Mihić, Dejan Petrović, Vladimir Obradović

Strateški projektni management predstavlja »cross-cutting« pristop, ki je definiran na osnovi doseganja poslovne odličnosti v zahtevnih multiprojektnih okoljih. Prispevek smatra strateški projektni management kot orodje za dosego poslovne odličnosti. Nujno je opredeliti sistem upravljanja, ki bo integrial vse zahteve po spremembah v smislu števila in obsega nabora različnih projektov, programov ter integrirane strategije, ki bo odražala vse predvidene spremembe. Z uporabo tega pristopa, ki je podprt z ustrezno organizacijo, politiko, vodenjem in procesi, je izboljšanje poslovnih rezultatov v celoti omogočeno, še posebno, če so uporabljena orodja in tehnike projektnega managementa, skupaj z rešitvami IT za projektno sodelovanje. Tako se lahko uravnoteženi sistem kazalnikov smatra kot začetna točka pri implementaciji strategije in evalvaciji napredka projekta.

Ključne besede: project, strategija, projektno usmerjeno podjetje, uravnoteženi sistem kazalnikov

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Maturity, Excellence and Other Silver Bullets

Miles Shepherd

In recent years, project management has built up a reputation for effective delivery of business results. It's value as an effective tool has grown over the past 10 to 20 years and it is seen currently as both a critical skill for individuals and key organizational process. As its importance has grown, so too has the need for businesses to ensure their competitive edge. This need has caused many organisations to examine their project management methods. This paper examines some of the methods available to organisations to evaluate the effectiveness of organizational project management and notes some of the issues associated with the different approaches.

Key words: Organizational Competence, Maturity, Project Excellence, Performance Model

Zrelost, odličnost in druge čarobne rešitve

Miles Shepherd

V preteklih letih si je projektni management zgradil sloves učinkovitega doseganja poslovnih rezultatov. V zadnjih desetih do dvajsetih letih je njegova vrednost učinkovitega pripomočka zrasla in v tem trenutku ga imajo tako za nujno spretnost posameznikov kot tudi za bistveni organizacijski proces. S tem, ko je rasla njegova pomembnost, je rasla tudi potreba podjetij po tem, da si zagotovijo konkurenčno prednost. Zaradi te potrebe so mnoge organizacije preučile svoje metode projektnega managementa. Članek proučuje nekatere metode, ki so podjetjem na voljo za ovrednotenje učinkovitosti organizacijskega projektnega managementa, ter opozori na nekatera vprašanja, povezana z različnimi pristopi.

Ključne besede: organizacijska kompetenca, zrelost, projektna odličnost, model uspešnosti

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Starting Points of Project Excelence

Brane Semolič, Jure Kovač

In modern business environment, it is becoming increasingly harder for organisations, regardless of their size and operational goal, to carry out the necessary changes in a timely manner. At the same time, it is becoming ever harder for companies to build competitive advantage. Projects and project management are key tools in gaining control over development processes and adapting to changes in the modern organisation business environment. Global trend analyses show that mastery of project work and project management is becoming one of the key success factors of any modern organisation, where the level of mastery of project work is gaining increasing importance. In the following text, the scope of project work and the concept of project excellence will be presented.

Key words: modern environment, project, project management, project excellence

Izhodišča za projektno odličnost

Brane Semolič, Jure Kovač

Organizacije v sodobnem poslovnem okolju ne glede na velikost in cilj delovanja vedno težje pravočasno izvajajo potrebne spremembe. Prav tako podjetja vse težje dosegajo konkurenčne prednosti. Projekti in projektni management so osnovno orodje za obvladovanje razvoja in prilagajanja spremembam v poslovnem okolju sodobne organizacije. Analize svetovnih trendov kažejo, da postaja obvladovanje projektov in projektnega managementa eden izmed ključnih dejavnikov uspeha katerekoli sodobne organizacije. Pri tem pa predstavlja stopnja obvladovanja projektnega načina dela vse pomembnejša. V nadaljevanju so prikazane razsežnosti projektnega načina dela in koncepta projektne odlličnosti.

Ključne besede: sodobno okolje, projekt, projektni management, projektna odličnost

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Organizational Excellence Delivers Project Management Maturity

Pieter Steyn

Business environment demands a quick reaction from the management of the company. The article deals with project approach at strategy implementation, the focus here being to demonstrate the problems of strategy focused leadership and it connection to the organizational excellence.

Key words: projects, project management, leadership, organizational excellence

Organizacijska odličnost prinaša zrelost projektnega managementa

Pieter Steyn

Poslovno okolje zahteva hitro reagiranje vodstva podjetja. Članek se ukvarja s projektnim pristopom pri implementaciji strategije, osredotoča pa se na prikaz težav vodenja, ki je osredotočeno na strategijo, ter njegovo povezavo z organizacijsko odličnostjo.

Ključne besede: projekti, projektni management, vodenje, organizacijska odličnost

Dogodki v letih 2007 in 2008

	IPMA World Congress 2008
	Datum: 9. - 11. november 2008 **Lokacija**: Rim, Italija **Naslov kongresa**: Project Management to Run **Več informacij**: www.ipmaroma2008.it

	Nordnet 2007
	Datum: 26. -28. september 2007 **Lokacija**: Reykjavík, Islandija **Naslov dogodka**: Projects Under Risk **Več informacij**: www.congress.is/nordnet2007

	The APM Project Management Conference - The Business of Projects
	Datum: 30. -31. oktober 2007 **Lokacija**: London, Velika britanija **Naslov dogodka**: The Business of Projects **Več informacij**: www.apm.org.uk/conference.asp

	IPMA International Expert Seminar 2008
	Datum: 14. - 16. februar 2008 **Lokacija**: Zurich, Švica **Naslov seminarja**: Ethics in Projects **Več informacij**: http://www.spm.ch, spm@spm.ch

	PMI Global Congress 2007—North America
	Datum: 6. - 9. oktober 2007 **Lokacija**: Atlanta, Georgia, USA **Več informacij**: http://congresses.pmi.org/

	PMI Global Congress—EMEA 2008
	Datum: 19. - 21. maj 2008 **Lokacija**: Marakesh, Maroko **Več informacij**: http://congresses.pmi.org/EMEA2007/NextYearsCongress.cfm

Projektni forum 2007
Projektna odličnost
mag. Tanja Arh

Od 13. - 15. junija 2007, se je v Kongresnem centru Olimie v Podčetrtku odvijal letošnji osrednji dogodek Slovenskega združenja za projektni management, **Projektni forum 2007**. Zaradi bogate mednarodne udeležbe nam je letošnji Forum omogočal tudi pregled stanja projektnega managementa v svetu. Tematika Foruma 2007 je bila **Projektna odličnost** in trije vsebinski sklopi:

- **vedenjske kompetence** projektnega managementa,
- **tehnične kompetence** projektnega managementa,
- **kompetence projektnega okolja**.

Dogodka v Kongresnem centru Olimie v Podčetrtku se je udeležilo preko sedemdeset projektnih managerjev, managerjev podjetij in strokovnjakov s fakultet. Predstavljenih je bilo 33 prispevkov v okviru plenarnih zasedanj in treh tematskih sklopov, praviloma pa so se pri vseh predstavitvah razvile zanimive in plodne diskusije. Izjemno zanimiva je bila tudi **okrogla miza**, ki jo je vodil prof. dr. Anton Hauc, gostje pa so bili:

- Aleš Hauc (direktor, Pošta Slovenije),
- Zofija Mazej Kukovič (direktorica, Esotech),
- Zdravko Počivalšek (direktor, Terme Olimia),
- mag. Janko Burgar (v. d. generalnega direktorja Direktorata za. podjetništvo in konkurenčnost, Ministrstvo za gospodarstvo),
- Mojca Peternoster (Direktorat za turizem na Ministrstvu za gospodarstvo).

Brezplačna predavanja
Za nepoučene in manj izkušene managerje sta bila koristna brezplačna predavanja o osnovah projektnega managementa in projektno usmerjenem podjetju, izvedena dan pred uradnim začetkom Foruma. Brezplačna predavanja je vodil mag. Igor Vrečko.

Slika 1: Okrogla miza, ki jo je vodil prof. dr. Anton Hauc

Plenarna predavanja

V plenarnem delu so svoje bogate izkušnje s področja projektnega managementa predstavili tuji in domači strokovnjaki:

- prof. dr. Qian Fupei (IPMA, Kitajska),
- prof. dr. Pieter Steyn (Cranefield College, Južna Afrika),
- Miles Shepherd (IPMA, Open University, Velika Britanija),
- Otto Zieglmeier (IPMA Q Award),
- dr. Viljem Pšeničny (Obrtna zbornica Slovenije),
- mag. Peter Pustatičnik (ZZZS, Slovenija),
- doc. dr. Brane Semolič (UM, Fakulteta za logistiko, Inova Consulting).
- mag. Drago Pavlič (Esotech, Slovenija).

Slika 2: Številni domači in tuji strokovnjaki na plenarnem delu Foruma

Prispevki, predstavljeni na Projektnem forumu 2007, so s svojo kakovostjo in številčnostjo pokazali visok nivo zavedanja slovenskih organizacij o pomembnosti uporabe projektnega managementa za svoj razvoj ter za zagotavljanje ustrezne konkurenčnosti.

Upamo, da ste na Forumu poglobili prijateljstva in srečali nove poklicne kolege ter da ste s Foruma odšli s številnimi novimi spoznanji.

V imenu Slovenskega združenja za projektni management in Organizacijskega odbora Foruma se Vam zahvaljujem za sodelovanje, pomoč in podporo, nove člane Združenja pa vabim, da se še aktivneje vključite v delovanje Združenja.

Naslednji Projektni forum bo zopet spomladi leta 2008, vse nadaljnje informacije pa boste lahko našli na naši spletni strani: http://zpm-si.com.

First results of the European Master in Project Management

Dino Schönberg

1. Short abstract

New European Master Courses in Project Management are implemented by a consortium of European Universities. This paper describes the concepts and mainstreams of the study courses and deals with the implementation and accreditation. The first results of the IT-projects are presented.

2. Introduction

New European Master Courses in Project Management will be offered by a Consortium including:

- **Norwegian University of Science and Technology, NTNU, Trondheim, Norway**
  Asbjorn Rolstadas, Tim Torvatn

- **University of Zaragoza, Spain**
  Juan Cano

- **University of the Basque Country in Bilbao, Spain**
  Javier Caamaño Eraso

- **Ecole Supérieure de Commerce – ESC - Lille/Paris, France**
  Christophe Bredillet, Rodney Turner

- **University of Maribor, Slowenia**
  Brane Semolič

- **University of Applied Sciences Friedberg, Germany**
  Nino Grau

- **University of Applied Sciences Dortmund, Germany**
  Peter Reusch, Dino Schönberg

The Master's degree programme was accredited in Dortmund in the summer of 2006 and launched in October 2006. The EuroMPM is focused on the growing demand for project management qualification in all industries as well as in public administration. The EuroMPM includes training, research and development in various areas of project management and specializations within the network of the consortium. The qualification for project managers follows the guide lines of project management associations. The EuroMPM follows the strategies of the Erasmus Mundus programme and is open for students from all over the world. Teaching language is English. At the University of Applied Sciences in Dortmund the EuroMPM is a strategic endeavour with contributions from 4 faculties and open for the others. The authors of this paper are the course directors of the EuroMPM in Dortmund. Peter Reusch is also chair of the EuroMPM consortium.

There are several versions of the EuroMPM - 3 to 4 semesters, 90 to 120 ECTS, consecutive and further education, part time and full time. Semester 1 (and mostly semester 2) will be studied at the student's host institution. At least one other semester (Semester [2,] 3 and/or 4) must be studied at an institution other than the host institution. The following table shows the core structure of the study course in the 120 ECTS version with the electives offered in Dortmund, the table thereafter shows the courses of the first 2 semesters. More information is available at the website www.eurompm.net – or at the website of the partners[123].

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[1] http://www.ntnu.no/studieavd/dok/DegreeProgrammes_2005.pdf
[2] http://www.esc-lille.fr/
[3] http://www.fh-giessen-friedberg.de/site/content/view/173/41/

Module	Semester		ECTS
1	1	Essentials of Project Management	15
2	1	Establishing Teams and Organization	15
3	2	Communication, Managing Change, Creativity	15
4	2	Knowledge, Finance and Contracts – and Advanced Concepts	15
5/6 one of the Electives	3	Project Management for IT-Projects	30
		Project Management for Projects in E-commerce, E-Business, E-government	
		Project Management for Projects in Architecture and Construction	
		Project Management for Projects in the Social and Cultural Context	
7	4	Master Thesis	30
		Sum	120

Table 1: Modules of the EuroMPM - Dortmund

Semester	Modules		Courses		
1	1	Essentials of Project Management	MP01	Project Context and Organisation	3 ECTS
			MP02	Phases and Life Cycle Concepts	3 ECTS
			MP03	Standards and Mainstreams	3 ECTS
			MP04	Project Planning	3 ECTS
			MP05	Project Control	3 ECTS
	2	Establish Teams and Organisation	MP06	Team Building and Leadership	3 ECTS
			MP07	Project Organisation	3 ECTS
			MP08	Managing Quality	3 ECTS
			MP09	Managing Risk	3 ECTS
			MP10	Project Economics	3 ECTS
2	3	Communication, Managing Change, Creativity	MP11	Communication, Negotiation and Conflict Management	3 ECTS
			MP12	Social Competencies	3 ECTS
			MP13	Managing Change	3 ECTS
			MP14	Creativity and Decision Making	3 ECTS
			MP15	Intercultural Communication	3 ECTS
	4	Knowledge, Finance and Contracts – and Advanced Concepts	MP16	Information and Knowledge Management	3 ECTS
			MP17	Project Finance	3 ECTS
			MP18	Contracts, Procurement and Legal Aspects	3 ECTS
			MP19	Programme and Portfolio Management	3 ECTS
			MP20	Safety, Health and the Environment	3 ECTS
				Total	60 ECTS

Table 2: Courses of the EuroMPM in semesters 1 and 2 – Dortmund

The course enables specialisation in the third semester. The Department of Computer Science of the University of Applied Sciences in Dortmund offers a specialisation in IT projects. Within the context of developing the Master's degree programme, two IT projects were initiated. The first project results are be introduced at CeBit 2007. They constitute two different applications, based on organic, bistable OLCD displays. One of the results to be introduced is an electronic name plate that functions without batteries; the other is a wireless door display panel that was developed on the basis of Patent No. DE 100 46 155.7, within the scope of a development license. It is a solar-driven display system, which includes the additional option of receiving SMS and MMS messages.

3. The beginning of the new bistable displays

3.1 The name sign
The first project was the development of a no-power-name-sign. This name sign should work without any battery. Therefore we used a 1/8 VGA-bistable Display. In the beginning we transferred the information directly on the display. Later we extended the project and included a flash memory. Therefore we needed in addition a Hub and a program on the flash memory. Now we can use the name sign in addition like a memory-stick. For a congress like this, there is the possibility to save all papers and slides in the name sign. We also can show the logo of the congress in the background and the name of the participant with all functions in front.

The electric name sign can be connected to a PC or laptop via a USB interface. The corresponding programme developed for this is stored on a flash memory, which can simultaneously be used as a USB stick. The programme transmits the desired information on to the bistable display and saves them. The information can still be viewed on the display panel after the connection has been terminated, even though power is no longer being supplied.

3.2 the door sign
The second project was the development of a solar-powered-door sign. Therefore we used a 1/4 VGA-bistable Display. The idea was to send messages from every point of the world to the sign. The idea stated in a traffic jam. It was not possible to reach anyone by phone. So the idea was born to send a message to a door to inform the students about the late start of the lecture.

The wireless door display is composed of solar cells, coupled with a GSM module and a bistable display unit. It permits SMS and MMS messages to be sent directly to the door display via mobile phone and to remain on the display panel until the next message comes in. This device does away with the time-consuming and elaborate installations that are usually required, involving the laying of cables and subsequent painting and plastering of walls. These displays only need to be fixed to the wall and are then immediately ready for use.
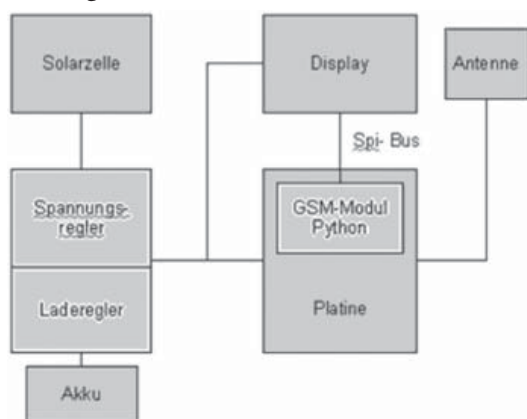
4. Technical solutions

4.1 Name sign
The technical solution of the name sign you will find above.
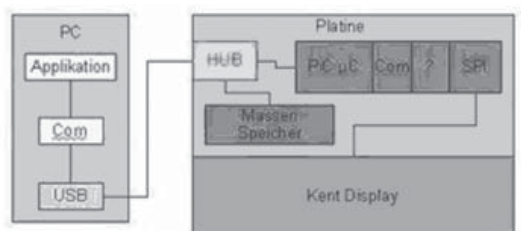
If the is a connection between a PC or Laptop and the name sign by USB interface, the program in the flash memory pops up on the screen. The user can decide now to use the name sign as a USB-stick to save information in folders or to change the name or the background of the name sign. The bistable display need power to change the shown information but they don't need power to save the information and the information is readable all the time till the information is changed.

4.2 Door sign

Tech technical solution for the door sign you will find above.

The wireless door display is composed of solar cells, coupled with a GSM module and a bistable display unit. It permits SMS and MMS messages to be sent directly to the door display via mobile phone and to remain on the display panel until the next message comes in. This device does away with the time-consuming and elaborate installations that are usually required, involving the laying of cables and subsequent painting and plastering of walls. These displays only need to be fixed to the wall and are then immediately ready for use.

5. Conclusion

The new displays are working. They can be produced in a large number. The price will go down. A business can start. It is easy to handle and helpful to use. The name sign is a nice gimmick for a congress like this. The door sign is easy to install and directly useable. You have only a little installation work. The first projects in cooperation with local companies were successful. We are prepared to go on and to offer our students from abroad nice and interesting projects in cooperation with the local companies. Test passed.

Model projektne odličnosti
Kako postati še boljši?

Andreja Križnič

Boljši rezultati projektov so želja številnih podjetij in organizacij, še posebej pa tistih, kjer uspešnost projektov direktno vpliva na uspešnost podjetja. Tam kjer se izpolnjevanje zahtev kupcev, naročnikov, uporabnikov izvaja projektno. V želji po čim bolj profesionalnem vodenju projektov se izobražuje ljudi, postavlja metodologije, vzpostavlja projektne pisarne, ki skrbe za znanje ter nadzoruje izvajanje projektov. Je to res dovolj ali lahko naredimo še kaj več? Prav gotovo. Številna podjetja v svetu uporabljajo model projektne odličnosti kot orodje za nadaljnji razvoj projektnega načina dela v organizaciji. Da, res je, model projektne odličnosti ni le metodologija za izbor in oceno najboljših projektov, ki se prijavijo na tekmovanje, ampak je tudi in predvsem model, ki vodi k boljšim projektom in izboljšanju projektnega načina dela celotne organizacije.

In kaj sploh je **model projektne odličnosti**? Gre za model, ki je nastal po vzoru modela **EFQM** (poslovne odličnosti), s poudarkom na devetih kriterijih, ki so odločilni za odlične projekte: projektni cilji, voditeljstvo, ljudje, viri in procesi sestavljajo t.i. projektni management. Rezultati projekta pa so razdeljeni na štiri kriterije: rezultati z vidika naročnika, z vidika ljudi, z vidika drugih zainteresiranih strani ter ključnih kazalcev in projektnih rezultatov.

Glede na to, da sta se IPMA model in nagrada za projektno odličnost v svetu že uveljavili, je bila tudi v okviru Slovenskega združenja za projektni management (ZPM) sprejeta odločitev, da prispeva k uveljavitvi in poznavanju modela projektne odličnosti tudi v Sloveniji. S tem namenom sta bili v začetku leta izvedeni že dve usposabljanji strokovnjakov iz različnih slovenskih podjetij ter pilotno razpisana **Nagrada ZPM za najboljši projekt 2007**.

Zakaj bi se podjetje odločilo za prijavo?
Nedvomno predstavlja prijava velik izziv za vsakega vodjo projekta, vendar pa je obenem tudi motivacija, saj so najboljši projekti in s tem tudi vodje, timi, organizacije nagrajeni. To je javno priznanje za dobro projektno delo, ki ga številna podjetja uporabljajo ne le za interno promocijo projektnega managementa in odličnosti, pač pa tudi za promocijo pri potencialnih naročnikih in kupcih. Obenem pa vse prijavljene organizacije prejmejo neodvisno poročilo ocenjevalcev - strokovnjakov s področja projektnega managementa, ki prihajajo iz prakse in vsebuje tudi številna priporočila za izboljšanje. Gre za primerjalno analizo t.i. »benchmark« z najboljšimi, ki jo vodje projektov in organizacije lahko uporabijo pri nadaljnjem razvoju in izboljševanju projektnega načina dela.

Kako začeti? Nedvomno je prvi korak seznanitev z modelom ter razumevanje posameznih komponent, sledi izbira pilotnega ali pilotnih projektov, samoocena ali prijava na razpis za nagrado za najboljši projekt ter na podlagi rezultatov plan aktivnosti za izboljšanje obstoječega načina projektnega dela.
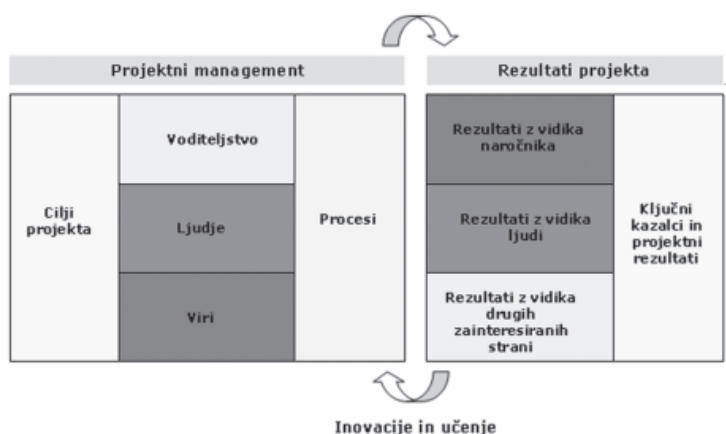
Slika 1: Model projektne odličnosti

Kriteriji in podkriteriji modela projektne odličnosti

PROJEKTNI MANAGEMENT

Kriterij 1: Cilji projekta
Kako projekt oblikuje, razvija, preverja in uresničuje svoje cilje na podlagi obsežnih informacij o zahtevah vključenih strani?
1.1 Kako so opredeljena pričakovanja in zahteve vključenih strani?
1.2 Kako so cilji projekta oblikovani in poenoteni nasprotujoči interesi na podlagi ustreznih informacij?
1.3 Kako so cilji projekta načrtovani, uresničeni, preverjeni in doseženi?

Kriterij 2: Voditeljstvo
Kako vedenje vodstva projekta in vodstva nasploh vzpodbuja, podpira in promovira projektno odličnost?
2.1 Kako vodstvo na vseh ravneh predstavlja verodostojen vzor projektne odličnosti, učinkovito promovira in aktivno podpira izboljšave v okviru projekta?
2.2 Kako vsi vodje skrbijo za naročnike, dobavitelje in druge organizacije?

Kriterij 3: Ljudje
Kako so člani projektne skupine vključeni, kako je njihov potencial prepoznan in izkoriščen?
3.1 Kako je bil prepoznan potencial zaposlenih in uporabljen za doseganje ciljev projekta, vzdrževan ter nadalje razvit?
3.2 Kako so vsi zaposleni vključeni, sodelujejo in imajo pooblastila za samostojno delovanje?

Kriterij 4: Viri
Kako se obstoječi viri učinkovito in uspešno uporabljajo?
4.1 Kako se v projektu načrtujejo in upravljajo finančni viri?
4.2 Kako se v projektu načrtuje in upravlja informacije?
4.3 Kako se v projektu načrtuje in upravlja dobavitelje in njihove storitve?
4.4 Kako se v projektu načrtuje in upravlja druge vire?

Kriterij 5: Procesi
Kako so pomembni procesi v sklopu projekta identificirani, preverjeni in če je potrebno tudi spremenjeni.
5.1 Kako so bistveni procesi za uspešnost projekta sistematično identificirani, upravljani, preverjeni, prilagojeni in optimizirani?
5.2 Kako so bile metode in sistemi projektnega managementa učinkovito uvedeni, uporabljeni in izboljšani?
5.3 Kako se na projektu pripravlja in dokumentira pretekle in sedanje izkušnje, v korist drugim projektom?

REZULTATI PROJEKTA

Kriterij 6: Rezultati z vidika naročnika
Kaj projekt dosega v zvezi s pričakovanji in zadovoljstvom naročnika?
6.1 Kako naročniki neposredno presojajo dosežke in rezultate projekta.
6.2 Kako naročniki indirektno ocenjujejo projektne dosežke in rezultate z upoštevanjem nadaljnjih merjenj.

Kriterij 7: Rezultati z vidika ljudi
Kaj projekt dosega v zvezi s pričakovanji in zadovoljstvom vključenih ljudi?
7.1 Kako zaposleni in vodje (managerji) ocenjujejo projekt, timsko delo znotraj projekta ter direktno dosežke in projektne rezultate?
7.2 Kako zaposleni in vodstvo ocenjujejo projekt, dosežke in projektne rezultate indirektno ob upoštevanju dodatnih meril

Kriterij 8: Rezultati drugih zainteresiranih strani
Kaj projekt dosega v zvezi s pričakovanji in zadovoljstvom drugih zainteresiranih strani?
8.1 Kako so druge zainteresirane strani vključene v projekt in dojemajo direktno sam projekt. Poročilo bi moralo razlikovati med različnimi vključenimi zainteresiranimi stranmi.
8.2 Kako druge zainteresirane strani ocenjujejo projekt posredno, glede na dodatna merila. Poročilo bi moralo razlikovati med različnimi vključenimi zainteresiranimi stranmi.

Kriterij 9: Ključni kazalci in projektni rezultati
Kaj je projekt dosegel glede na načrtovane projektne rezultate?
9.1 Do katere stopnje projekt dosega cilje projekta.
9.2 Učinki projekta glede na kriterije, ki presegajo definirane cilje projekta

Dodatne informacije o Nagradi ZPM za projektno odličnost:

Andreja Križnič, vodja projekta Nagrada ZPM za projektno odličnost
e-pošta: andreja.kriznic@nextlevel.si, GSM: 040 900 601

Program EDUCA je program usposabljanja in izobraževanja s področja projektnega managementa. Je program seminarjev in delavnic s temami, ki jih potrebujejo ne samo projektni managerji ampak tudi managerji, ki so zadolženi za razvoj svojih podjetij, organizacij, institucij, javnih zavodov, ter managerji, ki so odgovorni za obvladovanje projektno usmerjenih poslovanj in proizvodenj. Program EDUCA zajema znanja, ki so v skladu z mednarodnimi standardi:

- ICB (IPMA Comeptence Baseline - IPMA, Version 3.0),
- PMBOK ® Guide 2004 (PM Body of Knowledge - PMI),
- SZPM (Struktura znanj projektnega managementa – ZPM).

Program EDUCA je podlaga za pripravo na strokovne izpite na področjih gradbeništva, inženiringov, projektiranja, mednarodnih projektov, programih projektov EU in na vseh tistih področjih, ki so vezani na projekte in projektni management.

Program EDUCA je tudi priložnost za izmenjavo znanja, izkušenj, vzpostavitev poslovnih povezav. Udeleženci se seznanijo s projekti, projektnim sodelovanjem ter se prepričajo o pomembnosti uspešne izvedbe projektov za razvoj podjetij, organizacij, institucij. V okviru programa udeleženci preverijo znanje, izkušnje in rešitve iz svojega poslovnega okolja ter jih nadgradijo z novimi spoznanji.

OSNOVNI MODUL
V osnovnem modulu pridobijo udeleženci temeljna znanja s področja projektnega managementa, ki med drugim tudi zadostujejo kandidatom za pridobitev mednarodnega certifikata iz projektnega managementa.

Naziv seminarja/delavnice	Nosilec/izvajalec	Trajanje	Datum
Projektna organizacija in projektno delo	mag. Dušan Gošnik	1 dan	13. 9. 07
Vodenje tima, motiviranje in komuniciranje	mag. Aljaž Stare	1 dan	25. 9. 07

NADALJEVALNI MODUL
Delavnice nadaljevalnega modula podrobneje obravnavajo ožja področja managementa projektov, s pomočjo katerih lahko posamezniki ali organizacije dosežejo odličnost projektnega managementa.

Naziv seminarja/delavnice	Nosilec / izvajalec	Trajanje	Datum
Projektna pisarna in projektni informacijski sistemi	mag. Andrej Kerin mag. Aljaž Stare	1 dan	23. 10. 07
Uvajanje projektnega načina dela v podjetje	Andreja Križnič	1 dan	6. 11. 07

APLIKATIVNI MODUL
Aplikativni modul vsebuje praktične delavnice z vsebinami, usmerjenimi v posamezna aplikativna področja, kjer se enkratne naloge izvajajo na projektni način.

Naziv seminarja/delavnice	Nosilec / izvajalec	Trajanje	Datum
Management razvojnih programov in portolia projektov	dr. Brane Semolič	1 dan	9. 10. 07
Evropska finančna perspektiva 2007-2013 - priložnost za uresničitev projektnih idej	mag. Tanja Arh Matic Pipan	1 dan	20. 11. 07

Cena posameznih seminarjev (DDV ni vključen):

- enodnevni seminar **230,00 EUR** (55.117,20 SIT)
- dvodnevni seminar **360,00 EUR** (86.270,40 SIT)

Cena udeležbe na modulu (DDV ni vključen):

- osnovni modul **1.480,00 EUR** (354.667,20 SIT)
- osnovni modul brez MS Project **1.190,00 EUR** (285.171,60 SIT)
- nadaljevalni modul **980,00 EUR** (234.847,20 SIT)

Popusti pri kotizaciji za člane ZPM:

- člani ZPM imajo 10-odstotni popust;
- ob prijavi treh ali več udeležencev iz istega podjetja oz. organizacije priznamo dodatni 10 odstotni popust;
- študentom priznamo 50-odstotni popust s priloženim indeksom za tekoče študijsko leto;
- študentom, članom sekcije MPM, priznamo 80-odstotni popust;
- 3 brezplačne udeležbe na seminarju po izbiri za organizacije članice ZPM – A;
- 2 brezplačni udeležbi na seminarju po izbiri za organizacije članice ZPM – B;
- 1 brezplačna udeležba na seminarju po izbiri za organizacije članice ZPM – C;

Dodatne informacije o programu:

Slovensko združenje za projektni management
mag. Aljaž Stare, Prešernova 10, 1000 Ljubljana
e-pošta: zpm-educa@zpm-si.com

Prijava in dodatne informacije o izvedbi seminarjev:

Agencija POTI
ga. Aleksandra Bončina, Stegne 7, 1000 Ljubljana
Tel.: 01/51-13-921
Faks: 01/ 51-90-247
e-pošta: aleksandra.boncina@agencija-poti.si

Zakaj postati član ZPM?

Mednarodni združenji IPMA, ICEC
Člani ZPM pridobijo hkrati članstvo v mednarodnih organizacijah IPMA in ICEC.

Projektni forum ZPM
Člani ZPM imajo 10 % znižano kotizacijo na vsakoletnem osrednjem strokovnem in družabnem dogodku Forum ZPM, na katerem se srečajo direktorji podjetij, predstavniki javne uprave, direktorji programov projektov in drugi, ki se srečujejo s projekti ali jih zanima področje projektnega managementa.

Program SloCert
Člani ZPM imajo 3 % popust pri vključitvi v ZPM-ov program certifikacije SloCert, v okviru katerega lahko kandidati pridobijo mednarodno veljavni certifikat s področja projektnega managementa.

Revija Projektna mreža Slovenije
V okvir članstva v ZPM spada tudi letna naročnina na recenzirano in v slovenskem strokovnem prostoru uveljavljeno revijo Projektna mreža Slovenije, ki vsebuje vrsto znanstvenih, strokovnih, informativnih in drugih prispevkov s področja projektnega managementa.

Program ZPM Educa
Člani ZPM imajo 10 % popust v okviru programa usposabljanja ZPM Educa, v katerem se v majhnih skupinah - lahko tudi v zaključenih skupinah za izbrano podjetje - vrši izobraževanje in usposabljanje iz vseh področjih projektnega managementa.

Informacije in povezave
Člani ZPM pridobivajo v elektronski, pisni ali ustni obliki najnovejše domače in mednarodne informacije s področja projektnega managementa ter imajo možnost navezovanja stikov in izmenjave izkušenj s pomembnimi nacionalnimi in mednarodnimi organizacijami ali strokovnjaki.

Spletna stran ZPM
Spletna stran ZPM nudi veliko informacij in podatkov, ki so povezani z delovanjem združenja.

Baze podatkov
Člani ZPM prejemajo informacije o literaturi, programskih paketih, kongresih, seminarjih doma in v tujini, po potrebi pa prejmejo tudi informacije o potencialnih partnerjih pri izvajanju projektov ali pa predlog perspektivnega mladega kadra z ustreznim znanjem in osnovnimi izkušnjami na področju projektnega managementa.

Promocija
Člani ZPM imajo možnosti promocije in predstavitve lastnih spoznanj, izdelkov ali projektov z objavo v reviji Projektna mreža Slovenije in drugih brošurah ali ob različnih dogodkih združenja.

MPM
Študenti dodiplomskega in podiplomskega študija se v okviru združenja združujejo v sekcijo "**M**ladih **P**rojektnih **M**anagerjev", ki zagotavlja vzpostavljanje praviloma prvih sodelovanj s podjetji na področju projektov (opravljanje obvezno ali kako drugače dogovorjene prakse), prirejajo srečanja in delavnice s projektnimi managerji in podobno ter si tako pridobivajo izkušnje in poznanstva. Sekcija MPM pa ni namenjena samo najmlajšim članom, pač pa tudi vsem ostalim, saj imajo ob sodelovanju z mladimi možnost prepoznati najprimernejši in najperspektivnejši novi kader za svoje potrebe.

Družabni dogodki
ZPM se zaveda tudi pomena družabnega dela srečevanja svojih članov in drugih projektnih simpatizerjev, zato prirejamo vrsto družabnih dogodkov in ogledov zanimivih projektov, na katerih imate možnost razviti ali pa utrditi osebna in poslovna partnerstva v prijetno sproščenem vzdušju in ambientu.

Vrste članstva v ZPM

Individualno članstvo
Individualni člani združenja uživajo vse prej opisane razloge za članstvo, katere se trudimo neprestano širiti, tako da lahko že med letom pričakujete dodatne novosti in koristi, ki iz članstva izhajajo.

Članstvo dodiplomskih in podiplomskih študentov
Študenti so ob bistveno znižani članarini deležni vseh ugodnosti, kot jih imajo individualni člani. Ob včlanitvi v združenje morajo študentje svoj študentski status izkazati z ustreznim potrdilom.

Članstvo organizacij A
Organizacije, ki se odločijo za članstvo A, pridobijo naslednje pravice:
- ugodnosti v obsegu 6-ih individualnih članarin v združenju,
- dodatnih 10 % popusta pri prireditvah in udeležbi na ZPM Forumu ter konferencah v organizaciji ZPM,
- 15 % popust pri objavi oglasov v publikacijah združenja,
- 3 brezplačne udeležbe na seminarju po lastni izbiri iz programa ZPM Educa,
- pravica do uporabe logotipa ZPM,
- objava naziva in emblema organizacije v publikacijah ZPM in reviji Projektna mreža Slovenije,
- objava naziva in emblema organizacije na spletnih straneh ZPM ter aktivna povezava do njenih spletnih strani.

Članstvo organizacij B
Organizacije, ki se odločijo za članstvo B pridobijo naslednje pravice:
- ugodnosti v obsegu 4-ih individualnih članarin v združenju,
- dodatnih 8 % popusta pri prireditvah in udeležbi na ZPM Forumu ter konferencah v organizaciji ZPM,
- 10 % popust pri objavi oglasov v publikacijah združenja,
- 2 brezplačni udeležbi na seminarju po lastni izbiri iz programa ZPM Educa,
- pravica do uporabe logotipa ZPM,
- objava naziva in emblema organizacije v publikacijah ZPM in reviji Projektna mreža Slovenije,
- objava naziva in emblema organizacije na spletnih straneh ZPM ter aktivna povezava do njenih spletnih strani.

Članstvo organizacij C
Organizacije, ki se odločijo za članstvo C pridobijo naslednje pravice:
- ugodnosti v obsegu 3-ih individualnih članarin v združenju,
- dodatnih 5 % popusta pri prireditvah in udeležbi na ZPM Forumu ter konferencah v organizaciji ZPM,
- 5 % popust pri objavi oglasov v publikacijah združenja,
- 1 brezplačna udeležba na seminarju po lastni izbiri iz programa ZPM Educa,
- pravica do uporabe logotipa ZPM,
- objava naziva in logotipa organizacije v publikacijah ZPM, reviji Projektna mreža Slovenije in na spletnih straneh ZPM z aktivno povezavo do njenih spletnih strani.

ZPM - Individualno članstvo

Prijavnica za leto 2007

Prijavnico za članstvo izpolnite in pošljite na naslov: SLOVENSKO ZDRUŽENJE ZA PROJEKTNI MANAGEMENT, Prešernova 10, 1000 Ljubljana (s pripisom: ZA INDIVIDUALNO ČLANSTVO).

Prosimo, označite vrsto članstva:

☐	individualno članstvo	60,00 EUR	(14.378,40 SIT)
☐	članstvo podiplomskih študentov do 28. leta	30,00 EUR	(7.189,20 SIT)
☐	članstvo rednih dodiplomskih študentov	20,00 EUR	(4.792,80 SIT)

Osebni podatki:

Ime in priimek:

Datum rojstva:

Izobrazba:

Naslov:

Kraj in poštna številka:

Telefon:

E-pošta:

Zaposlitev/Fakulteta:

Podjetje/ustanova:

Naslov:

Kraj in poštna številka:

Davčna številka: Matična številka:

Številka TRR:

Telefon: Fax:

E-pošta:

Podpis naročnika ali pooblaščene osebe in žig:

Obvestila želite prejemati na: ☐ domači naslov   ☐ podjetje

Račun za članarino želite prejeti na: ☐ domači naslov   ☐ podjetje

Ugodnosti, ki izhajajo iz letnega članstva v ZPM, niso prenosljive v naslednja leta. V kolikor v naslednjem letu ne želite biti več član ZPM, nam o tem pošljite ustrezno pisno obvestilo najkasneje do 1. decembra tekočega leta, sicer razumemo, da ostajate član še naprej.

ZPM - Članstvo organizacij

Prijavnica za leto 2007

Prijavnico za članstvo izpolnite in pošljite na naslov: SLOVENSKO ZDRUŽENJE ZA PROJEKTNI MANAGEMENT, Prešernova 10, 1000 Ljubljana (s pripisom: ČLANSTVO ORGANIZACIJ).

Prosimo, označite vrsto članstva:

☐	Članstvo organizacij A	850,00 EUR	(203.694,00 SIT)
☐	Članstvo organizacij B	650,00 EUR	(155.766,00 SIT)
☐	Članstvo organizacij C	450,00 EUR	(107.838,00 SIT)

Podatki o podjetju/organizaciji

Naziv podjetja/organizacije:

Naslov:

Kraj in poštna številka:

Davčna številka: Matična številka:

Številka TRR:

Telefon: Fax:

E-pošta:

Podpis naročnika ali pooblaščene osebe in žig:

Kontaktne osebe v podjetju/organizaciji

(opredelite do 6 oseb za članstvo tipa A, do 4 osebe za članstvo tipa B in do 3 osebe za članstvo tipa C)

	Ime in priimek	Področje delovanja	Telefon	E-pošta
1				
2				
3				
4				
5				
6				

Ugodnosti, ki izhajajo iz letnega članstva v ZPM, niso prenosljive v naslednja leta. V kolikor v naslednjem letu ne želite biti več član ZPM, nam o tem pošljite ustrezno pisno obvestilo najkasneje do 1. decembra tekočega leta, sicer razumemo, da ostajate član še naprej.

Projektna mreža Slovenije

Naročilnica za leto 2007

Naročilnico izpolnite in pošljite na naslov: SLOVENSKO ZDRUŽENJE ZA PROJEKTNI MANAGEMENT, Prešernova 10, 1000 Ljubljana (s pripisom: ZA PROJEKTNO MREŽO).

Cena posamezne številke za fizične osebe je **6,00 EUR** (1.440,00 SIT), letna naročnina (3 številke) za fizične osebe za leto 2007 pa **18 EUR** (4.320,00 SIT). Za pravne osebe je cena posamezne številke **8,00 EUR** (1.920,00 SIT), letna naročnina (3 številke) pa **24,00 EUR** (5.760,00 SIT). V ceno je že vštet DDV. Odjava naročila je možna dva meseca pred iztekom tekočega koledarskega leta za naslednji letnik revije.

Fizične osebe:

Ime in priimek:

Naslov:

Kraj in poštna številka:

Telefon:

E-pošta:

Kraj in datum:

Podpis naročnika:

Pravne osebe:

Podjetje/ustanova:

Naslov:

Kraj in poštna številka:

Davčna številka: Matična številka:

Številka TRR:

Telefon: Fax:

Kontaktna oseba:

E-pošta:

Podpis naročnika ali pooblaščene osebe in žig:

OGLAŠEVANJE V PROJEKTNI MREŽI SLOVENIJE

RAZLOGI ZA OGLAŠEVANJE

Ker menimo, da je revija Projektna mreža Slovenije odlična priložnost za predstavitev dejavnosti Vaše organizacije ali podjetja, v njej namenjamo določen prostor tudi komercialnim oglasom. Ponujamo Vam različne možnosti oglaševanja, z objavo Vašega oglasa pa boste podprli naše nadaljnje delo ter prispevali k širjenju in popularizaciji metod in tehnik projektnega načina dela.

V primeru, da se odločite za oglaševanje v naši reviji, Vas prosimo, da se obrnete na odgovornega urednika revije, dr. Jureta Kovača (jure.kovac@fov.uni-mb.si), ali na tehnično urednico, mag. Tanjo Arh (tanja@e5.ijs.si). Več o oblikah in pripravi oglasov, lahko najdete v **Splošnih pogojih oglaševanja v reviji Projektna mreža Slovenije**.

SPLOŠNI POGOJI OGLAŠEVANJA V REVIJI PROJEKTNA MREŽA SLOVENIJE

1. Cene
Cene v ceniku že vključujejo DDV in veljajo za objavo pravočasno oddanega oglasa, pripravljenega za tisk. Pripravo, obdelavo in popravljanje oglasov zaračunavamo posebej, glede na obseg dela.

2. Naročilo oglasnega prostora
Osnova za objavo oglasa je naročilo dostavljeno v pisni obliki po pošti ali e-pošti. Novi naročniki morajo ob naročilu navesti tudi vse elemente naročilnice, ki jih zahteva zakonodaja. Oglasni prostor je treba rezervirati mesec dni pred izidom revije v pisni obliki po pošti na naslov uredništva (Tanja Arh, Slovensko združenje za projektni management, Prešernova 10, 1000 Ljubljana) ali po e-pošti na naslov jure.kovac@fov.uni-mb.si ali tanja@e5.ijs.si. Revija izhaja trikrat letno: 15. marca, 15. junija in 15. decembra.

3. Reklamacije
Reklamacije sprejemamo le v pisni obliki, v roku 8 dni po objavi v reviji. Za napake, ki so posledica slabe predloge, ne odgovarjamo.

4. Vsebina oglasov
Sporočila oglasov morajo biti v skladu s kodeksom oglaševanja in veljavno zakonodajo. Za vsebino objave je odgovoren naročnik oglasa.

5. Način priprave oglasov
Oglase sprejemamo v TIFF formatu, EPS formatu ali JPEG formatu. Slikovni elementi morajo imeti najmanj **300 dpi resolucije** in morajo biti v **CMYK barvnem modelu**.

6. Dostava oglasov
Izdelane oglase je treba dostaviti 20 dni pred izidom revije v elektronski obliki po e-pošti na naslov jure.kovac@fov.uni-mb.si ali tanja@e5.ijs.si. Revija izhaja trikrat na leto: 15. marca, 15. junija in 15. decembra. Materiale nam lahko posredujete tudi na CD-ju po pošti na naslov uredništva (Tanja Arh, Slovensko združenje za projektni management, Prešernova 10, 1000 Ljubljana).
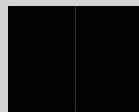
7. Druge oblike oglaševanja
Za oglaševanje v obliki, ki ni opredeljena s cenikom se sklenejo individualni dogovori po posebej dogovorjeni ceni.

8. Ugodnosti za oglaševalce
- oglas v dveh številkah, dodatni 10 % popust,
- oglas v treh številkah, dodatni 15 % popust,
- plačilo oglasa pred izidom številke, dodatni 5 % popust,
- dodatni 5 % popust imajo korporacijski člani Združenja, ki imajo status člana tipa C,
- dodatni 10 % popust imajo korporacijski člani Združenja, ki imajo status člana tipa B,
- dodatni 15 % popust imajo korporacijski člani Združenja, ki imajo status člana tipa A.

MOŽNE OBLIKE IN CENIK OGLASNEGA PROSTORA

Oblika								
Format	1/1	1/2 ležeča	1/2 pokončna	1/3 ležeča	1/3 pokončna	1/4	pasica	2/1 (sredinska stran)
Velikost [mm]	210 X 297	210 x 148,5	105 x 297	210 x 99	70 x 297	105 x 148,5	210 x 35	420 x 297
Cena [EUR]	1.050,00	520,00	520,00	420,00	420,00	270,00	270,00	1.900,00
Cena [SIT]	251.622,00	124.612,80	124.612,80	100.648,80	100.648,80	64.720,80	64.720,80	455.316,00

Navedene cene že vsebujejo DDV. Možni so še dodatni - posebni popusti, ki so navedeni v Splošnih pogojih oglaševanja v Projektni mreži Slovenije.

Korporacijski člani ZPM

ACH, d.d.
Baragova 5, SI-1000 Ljubljana
Tel. 01/5883-000
Faks 01/5883-115
E-pošta: info@ach.si
Spletna stran: www.ch.si

CANKARJEV DOM, Kulturni in kongresni center
Prešernova 10, SI-1000 Ljubljana
Tel. 01/24-17-100
Faks 01/24-17-296
E-pošta: cankarjev.dom@cd-cc.si
Spletna stran: www.cd-cc.si

ELES, ELEKTRO SLOVENIJA d.o.o.
Hajdrihova 2, SI-1000 Ljubljana
Tel. 01/474-30-00
Faks 01/474-25-02
E-pošta: info@eles.si
Spletna stran: www.eles.si

SMART COM d.o.o.
Brnčičeva 45, SI-1231 Ljubljana Črnuče
Tel. 01/561-16-06
Faks 01/561-15-71
Spletna stran: www.smart-com.si

ESOTECH d.d.
Preloška cesta 1, SI-3320 Velenje
Tel. 03/899-45-00
Faks 01/899-45-03
E-pošta: esotech@velenje.si
Spletna stran: www.esotech.si

GOSPODARSKA ZBORNICA SLOVENIJE
Dimičeva 13, SI-1504 LJUBLJANA
Tel. 01/589-80-00
Faks 01/589-82-00
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Zavod za zdravstveno varstvo Celje
ZZV Celje, Ipavševa 18, SI-3000 Celje
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Spletna stran: http://www.zzv-ce.si/

IPM (Inštitut za projektni management)
Razlagova 14, SI-2000 Maribor
Tel. 02/22-90-249
Faks 02/251-66-81
E-pošta: pmi.epf@uni-mb.si
Spletna stran: www.uni-mb.si/~pmi/

ISKRATEL telekomunikacijski sistemi d.o.o.
Ljubljanska 24A, SI-4000 Kranj
Tel. 04/207-20-00
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Spletna stran www.iskratel.si

KRKA, tovarna zdravil, d.d.
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Spletna stran www.krka.si

NUMIP, Vzdrževanje, montaža in proizvodnja,d.o.o.
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ZZZS Zavod za zdravstveno zavarovanje Slovenije
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Spletna stran www.zzzs.si

Navodila avtorjem prispevkov

V reviji Projektna mreža Slovenije objavljamo dela s predmetnega področja revije, ki še niso bila objavljena in niso bila poslana v objavo v kakšni drugi reviji ali zborniku. Avtor dela je odgovoren za vse morebitne kršitve avtorskih pravic. Če je bil prispevek že natisnjen drugje, poslan v objavo ali predstavljen na strokovni konferenci, mora avtor to sporočiti, pridobiti soglasje založnika in navesti razloge za ponovno objavo. Avtorjem prispevkov ne plačujemo honorarjev. Na podlagi mnenja recenzenta uredniški odbor prispevek sprejme, zahteva manjše ali večje popravke ali ga zavrne.

V Projektni mreži Slovenije objavljamo:

- **Znanstvene prispevke**; gre za izvirne ugotovitve, ki so plod znanstveno-raziskovalnega dela. Vsebina je novost, ugotovitve pa prispevajo k razvoju spoznanj iz projektnega managementa;
- **Strokovne prispevke**; gre za predstavitve, ki so prikaz in ocena uporabnih metod in tehnik projektnega managementa v praksi ali pri študiju primera;
- **Razmišljanja in odmeve** na objavljene prispevke ali primere, ki bi prispevali k razvoju projektnega managementa;
- **Pogovore** z managerji in projektnimi managerji o izkušnjah in spoznanjih pri realizaciji projektov v praksi.
- **Informacije** o dejavnosti ZPM in dogajanju v mednarodnih organizacijah.

Znanstveni in strokovni prispevki lahko obsegajo največ eno avtorsko polo (16 strani oziroma 30.000 znakov, skupaj s presledki). Razmišljanja in odmevi lahko obsegajo do 10.000 znakov skupaj s presledki, informacije pa do 5.000 znakov.

Oddani prispevki morajo biti lektorirani. Besedilo naj bo oblikovano za tiskanje na papirju formata A4 s presledkom med vrsticami vsaj 1,5 in odmikom 3 cm od roba zgoraj in spodaj, 2 cm na levi in 4 cm na desni. Besedilo naj bo levo poravnano. Znanstvenim in strokovnim prispevkom naj bo dodan povzetek (10 - 15 vrstic) in ključne besede, ki se pojavljajo v besedilu. Na prvi strani besedila naj bodo napisani naslov prispevka, imena in poštni ter elektronski naslovi avtorjev članka, po možnosti tudi telefonska številka enega od avtorjev. Da bi zagotovili anonimnost recenziranja, naj se imena avtorjev ne pojavljajo v besedilu prispevka.

Članek naj bo razčlenjen v oštevilčena poglavja. Naslovi članka, poglavij in podpoglavij naj bodo napisani z malimi črkami, da so razvidne kratice. Povzetek naj na kratko opredeli temo, ki jo obravnava prispevek, predvsem pa naj na kratko, jasno in čimbolj preprosto povzame poglavitne rezultate, zaključke in ugotovitve prispevka. Na osnovi povzetka naj bi bralec presodil, ali se mu prispevek splača prebrati (ali kopirati, natisniti, …). Povzetek zato ne sme biti neke vrste »preduvod«.

Povzetek, naslov članka in ključne besede naj bodo prevedene v angleščino.

Besedilu naj bodo priložene slike v obliki, pripravljeni za preslikavo (camera ready), vsaka slika na posebnem listu. Barvni slikovni elementi morajo imeti najmanj 300 dpi resolucije in morajo biti v CMYK barvnem modelu. Slike naj bodo oštevilčene z arabskimi številkami. Tudi tiste tabele, ki naj se preslikajo, naj bodo na posebnem listu. V besedilu naj bo točno označeno, kam jih je treba uvrstiti: na tem mestu naj bo številka slike/tabele in njen naslov. Slike bomo praviloma pomanjšali in vstavili v besedilo. Zato naj bodo oznake in besedila na sliki dovolj velika, da bodo čitljiva tudi po pomanjšanju.

Pri sklicevanju na literaturo med besedilom navedite le priimek prvega avtorja (oziroma prvega in drugega - glej vzorec) in letnico izdaje. Popolni bibliografski podatki naj bodo na koncu prispevka, urejeni po abecednem redu (prvih) avtorjev, literatura istega avtorja pa po kronološkem redu izida. Opombe, ki naj bodo kratke, navedite na dnu strani. Označite jih z arabskimi številkami.

Pri citiranju literature v prispevku uporabite enega naslednjih načinov:
"... kot navaja Cleland (1999), metodo uporabljajo pri..." ali "... kot trdijo nekateri drugi avtorji (Lientz in Rea, 1999; Platje et al., 1994)".
Bibliografske podatke navajajte po naslednjem vzorcu:
- *Hauc, A., Kovač, J. (2000): Project management in strategy implementation – experiences in Slovenia, International Journal of Project Management, 31(4), 31 - 39.*
- *Lynch T. & Szorenyi Z. (2005): Dilemmas surrounding information technology education in developing countries, The Electronic Journal of Information Systems in Developing Countries, 21(4): 1-16, dosegljivo na: http:// www.ejisdc.org (22.8.2005).*
- *Hauc, A. (2002): Projektni management,*

GV Založba, Ljubljana.
- *Zupan, N. & Leskovar, R. (2002): Pričakovanja v zvezi z elektronskim poslovanjem v malih organizacijah. Organizacija in management – izbrana poglavja. Uredila: Florjančič J.,& Paape, B. Kranj: Založba Moderna organizacija.*
- *Hauc, A., Kovač, J., Semolič, B. (1998): Strategy start-up, Proceedings in the 14th World Congress on Project Management, Slovenia, Ljubljana, June 10 - 13, 1998, Ljubljana, Slovenian Project Management Association.*
- *Zima, B. (1999): Analiza potrebnih znanj diplomiranih informatikov v Sloveniji, magistrsko delo, Univerza v Mariboru, Fakulteta za organizacijske vede.*
- *Zakon o elektronskem poslovanju in elektronskem podpisu (ZEPEP), Ur.l. RS, št. 57/2000, 30/2001*

Pri internetnih virih/literaturi naj bo poleg avtorja in naslova besedila naveden tudi internetni naslov vira (URL) in datum dostopa do dokumenta, npr:
- *Banka Slovenije, Basel II – Nov kapitalski sporazum, dosegljivo na: http://www.bsi.si/html/basel2/default.htm (15. 5. 2005).*

Prispevek pošljite na papirju ter v elektronski verziji po e-pošti; besedilo v elektronski verziji mora biti v celoti enako besedilu na papirju. Datoteko poimenujte z imenom (prvega) avtorja, na primer NOVAK.DOC.

S prispevkom pošljite tudi naslov avtorja, na katerega naj se obračata urednika, telefonsko številko in naslov e-pošte.

Naslov uredništva:
Slovensko združenje za projektni management
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Roki za oddajo prispevkov:
- 20. januar za marčevsko številko,
- 20. april za junijsko številko,
- 20. oktober za decembersko številko.

Vsi znanstveni in strokovni članki so poslani v oceno vsaj enemu recenzentu, ostale prispevke pa oceni uredniški odbor revije. Objavljenih prispevkov ne honoriramo.