

PM WORLD TODAY – FEATURED PAPER – JULY 2008

Requirements for assessing the managerial capability of organizations implementing projects of public interest – the Greek Standard ELOT-1429

P. Fitsilis, K. Kirytopoulos, V. Leopoulos, J.P. Pantouvakis & I. Saridakis

(Hellenic Organization for Standardization (ELOT) Specialist Group 1 for the development of the Greek PM Standard for the Quality Assurance of NSDP projects of the period 2007-2013)

[Authors names in alphabetical order]

*Editor's note: This paper was presented at the **PM-04: 4th SCPM & 1st IPMA/MedNet Project Management Conference in the Mediterranean, 29-31 May 2008, Chios Island, Greece** (<http://2008.pmgreece.gr>). As a Media Partner for that event, PMForum offered to republish selected papers in PM World Today. This paper is included here with the consent of the author and the permission of the Centre for Construction Innovation of the National Technical University of Athens (www.innovation.view.gr) who is the copyright holder of the conference proceedings. All conditions and disclaimers of the copyright holder pertain.*

Abstract

The objective of this paper is to present briefly the ELOT-1429 standard, which defines a System for Managerial Capability (SMC) for organizations implementing projects of public interest. The standard specifies a set of requirements that have to be fulfilled by relevant organizations in order to increase their project management capability. The implementation of the proposed SMC is expected to improve both organization's efficiency and performance in implementing projects. In addition, the SMC may be used for the evaluation of the organization's managerial capability.

Keywords: Project management, project management standard

1. Introduction

The European Union uses large-scale fiscal transfers to national and regional levels to foster economic and social cohesion. Over the last two decades structural fund programmes supported by the European Union have operated at the level of the member states and regions aiming at providing growth. Greece has been the beneficiary of three structural programmes, where the last ended in 2006.

More than 10,000 projects have being funded in Greece in the period 2000 to 2006 alone in this context. According to a study conducted by the Management Organization Unit of Community Support Framework^{2*} on the managerial capability of Community Support Framework (CSF) beneficiaries (MOU, 2005), a large number of organisations, approximately 22% are not capable in managing projects and an even larger percentage ranging from 30% to 65%, depending on the criteria applied, are not using modern or efficient project management practices.

For the period 2007 to 2013, a new generation of structural funds programmes is envisaged aiming mainly at "convergence", "regional competitiveness & employment" and "European cooperation". Greece is expected to participate also in these programmes

At this point it becomes obvious that public organizations, beneficiaries of support programmes, should improve their managerial capability for project implementation in order to:

- maximize the benefits achieved by support frameworks,
- improve the quality of the project delivered product/service, and
- overall improve their managerial capacity in order to provide better services/products to citizens.

In order, to tackle the problem and improve the performance of organisations that undertake projects of public interest, it has been decided by the Ministry of Economy and Finance (ministerial decision published in Hellenic Official Journal part B 55/18.1.2008) to develop an new standard, named "ELOT-1429", that will define the requirements and capabilities needed by organisations implementing projects of public interest. Moreover, Law 3614/2007 – Article 22 states that organisations wishing to implement projects funded by the Community Support Framework will have to comply with this standard. The application of the standard, (ELOT-1429) will assist organizations undertaking projects of public interest to improve their managerial capability and, at the same time, it will offer a focal point of reference for assessing an organisation's maturity and performance.

The rest of the paper is organised as follows: Chapter 2 presents briefly the available project management standards, models and other standards that have been taken into account for the development of ELOT-1429¹. Chapter 3 presents briefly the structure of the standard while chapter 4 draws the main conclusions from this work.

¹ Authors names in alphabetical order

² [http:// www.mou.gr](http://www.mou.gr)

¹ It should be noted that this paper is based on the preliminary version of the ELOT-1429 standard that has been released (14/04/2008) for comments from all interested parties.

2. Background

The practice of project management has evolved over half a century and permeates all industries, institutions and governments throughout the world. In response to the perceived need to organize thinking about project management a number of frameworks have been produced. Three kinds of frameworks are broadly identifiable, all of which attempt to model the subject area by presenting what is “generally” agreed. These are:

- Life-cycle or maturity models. Common examples include “Project Excellence Model” proposed by the Association of Project Managers (APM), “Project Management Maturity Model” (Kerzner, 2001) and “Portfolio, Programme & Project Management Maturity Model” (OGC, 2006), Organisational Project Management Maturity Model (OPM3) (PMI, 2003), the family of Software Engineering Institute “Capability Maturity Models” in general (CMMI, 2002), etc.
- Bodies of Knowledge and/or Competence Baselines. They provide the norm against which would-be project managers aspire and form the basis for certification. More fundamentally, they also provide a knowledge framework for understanding the elements that comprise project management. Examples of such standards include the International Project Management Association Competence Baseline – ICB (IPMA, 2006), PMI Guide to the Project Management Body of Knowledge – PMBOK (PMI, 2004) and the BSI BS6079 Guide to Project Management (BS6079, 2002)
- International or national standards and guidelines. They provide guidance in project implementation within a specific context, either at a country level or on specific type of projects. For example, ISO 10006:2003, the New York State Project Management Guidebook (2003), Project Cycle Management Guidelines developed by European Commission (2004), Best practices guide for managing public contracts developed by Cyprus General Accounting Office (2007), or U.S. Department of Defence Extension to: A Guide to the Project Management Body of Knowledge (2003), etc.

All the above have been used as background knowledge for the development of ELOT-1429. Furthermore, the following (among other references) have been taken into account and need special reference:

- Greek legislation concerning projects and contracts, which in many cases is extensive, well established and quite restrictive (e.g. Greek Law

1418/84 for public works or directive 2004/18/ EK for public contracts, etc.),

- the basic national and EU legislative framework governing the planning, implementation and management of EU funded projects,
- tools, manuals, guides and other publications available in the managing authorities of operational programs,
- the interim ministerial decision published in Hellenic Official Journal part B 55/18.1.2008 which defined the rules for managerial capability for the interim period up to the adoption of the standard ELOT-1429.

3. The structure of the standard

The ELOT-1429 standard is part of a set of standards for organizations that are implementing projects of public interest. Other related standards, currently under development, are:

- ELOT 1431-1: Implementation guide for public works projects
- ELOT 1431-2: Implementation guide for public procurement projects
- ELOT 1431-3: Implementation guide for projects of special type and
- ELOT 1432: Requirements for managerial capability assessing processes and assessors

The ELOT-1429 standard defines a System for Managerial Capability (SMC) of organizations. It specifies a set of requirements that have to be implemented in order to increase an organization's managerial capability for the execution of projects of public interest. The implementation of the SMC improves organization's efficiency and performance. One important feature of the SMC is that it can also be used for the assessment of the organizational managerial capability.

SMC defines a number of process groups, which are:

- General management and organizational structure. It includes strategic planning, development of SMC, managerial commitment, SMC system evaluation and improvement, as well as the development of the appropriate organizational structure,
- Resource management including processes related to the availability of suitable personnel and appropriate infrastructure.

- Project implementation processes group which forms the core of the standard. It includes processes including project initiation, planning, and implementation, monitoring and closing.
- Project measurement and evaluation

Another view that coexists in the standard is the project management life-cycle. According to this view, each organization that plans its projects, passes through a phase of initiation by doing feasibility studies, securing project financing, issuing all licenses needed etc. and continues with project implementation. Project implementation is performed either by the organization itself or by an appropriate contractor. The whole process should be controlled from a number of different perspectives, such as financially, contractually, etc.

The final phase is project closure. The above process groups along with the structure of the standard are presented in figure 1.

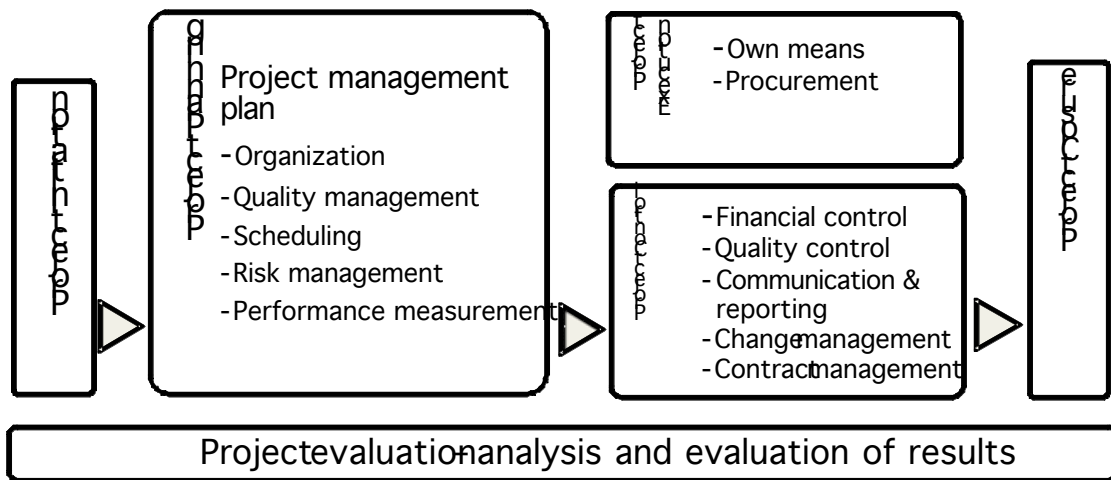


Fig 1: Project life cycle according to ELOT-1429

4. General management and organization structure

Usually, projects are part of an organization which is larger than the project itself. Therefore, the maturity of the organization with respect to its project management system, culture, style, organizational structure and Project Management Office (if one is in place) influences project results. Most public organizations follow a traditional hierarchical/functional management structure. Some disadvantages of hierarchical organizational structures are: There is no direct responsibility for the project, the structure does not provide the project-oriented emphasis necessary to accomplish project tasks, coordination becomes

complex, and additional lead time is required for approval of decisions, responses to customers etc.

For these reasons, it has been decided to suggest a matrix organization. Matrix organizations usually combine functional and projectized organizations and improve some of the above mentioned drawbacks. The approach that has been followed is that of a balanced matrix organization according to PMBOK classification. In a balanced matrix organization the role of project manager is clearly identified, but his authority is limited over the project and project funding. Figure 2 presents the proposed approach.

Further, the standard states that a mature organization should provide organizational units with responsibility for project planning, project maturation, project procurement, financial management and internal auditing. An important requirement set is that the organization should develop a yearly project plan with objective the optimal resource management.

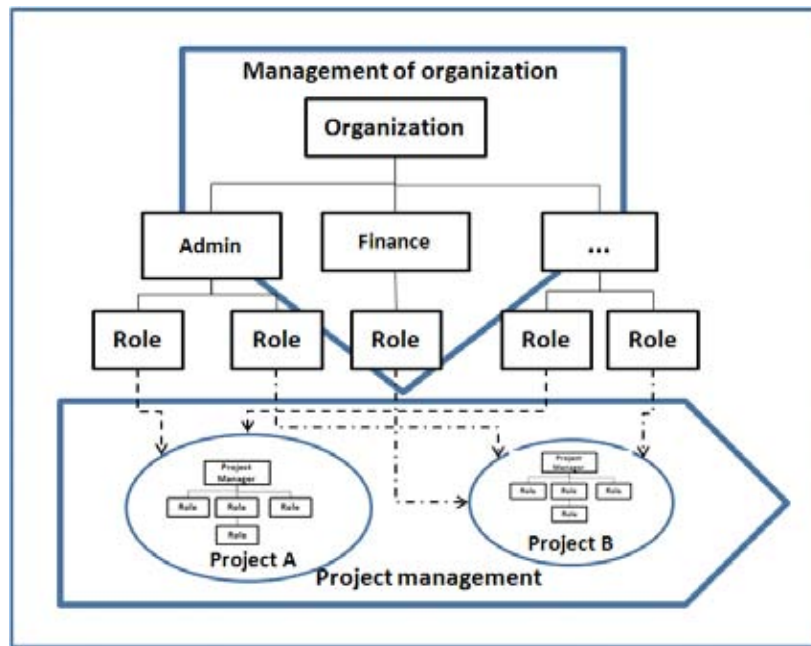


Fig 2: Balanced matrix organisation according to ELOT-1429

5. Project initiation

The project initiation group of processes consists of the processes that lead to the authorization of a new project. The organization should identify and document needs for new services/products that can be realized through a project. The management of the organization should analyze and evaluate the economical and technical feasibility of the project, evaluate alternatives, secure

financing etc. The main outcome of the initiation phase is the development of the project technical annex. The project technical annex contains a short description of project objectives, the overall project schedule, list of deliverables, project financial, main \identified risks, etc.

6. Project planning

The project planning is the most important project management process since it involves planning for all dimensions of the project. The main objective is the development of the Project Management Plan. The PMP according to ELOT-1429 should contain information on the following subject areas:

- Project scope, along with the project Work Breakdown Structure (WBS) and the list of the project deliverables
- Project organization, including project team, roles and responsibilities
- Project quality management plan
- Project schedule, milestones and deadlines
- Project performance indexes
- Risk management plan
- Project budget
- Communication plan and
- Change management plan

7. Project execution

Projects or parts of projects can be executed either by the organization itself or through procurement (external contractors). In each case the requirements are different.

When an organization decides to execute the project on its own, there is a need to have a technical department/service with appropriate know-how able to execute the project, evaluate the project deliverables and a financial department able to manage the financial aspects of the project.

On the other case, where the project is executed by a contractor the organization should have processes for developing tender documents, issuing calls for perspective contractors, evaluate the tenders, and finally award the contract.

8. Project monitoring

Project monitoring group of processes aims at observing project execution so that problems are identified and appropriately controlled. According to ELOT-1429 this group includes the following processes:

- Financial control
- Validation of project product

- Acceptance procedures
- Quality control
- Communication & reporting
- Change management
- Contract management

For example, financial control includes processes for monitoring project expenses and inflow with the use of a Project Management Information System (PMIS), maintain budgetary constraints, enforce expenses eligibility checks etc. Similarly, acceptance procedures include the appointment of committees for the acceptance of project deliverables; enforce quality criteria and metrics as set in the project quality plan, etc.

9. Project closure

Project closure entails the process that ensures that:

- All project objectives have been met
- All project deliverables have been validated
- All project products have been checked
- The maintenance plan has been developed
- The project file is updated and contains all necessary project information

10. Project evaluation– analysis and evaluation of results

One important requirement of SMC is that organizations should have processes to evaluate and measure project performance for extracting conclusions that may lead to organization improvement. Therefore, each organization must evaluate all processes related with project initiation, planning, execution, and monitoring and project closure. Furthermore, each organization should have evaluating indexes that might include the percentage of satisfied project objectives, the compliance of the project product in comparison with the requirements, the validity and the usefulness of the technical annex and of the Project Management Plan, the satisfaction of project stakeholders, etc.

11. Infrastructure

One important group of requirements is that proper project management requires the availability of proper infrastructure. The basic requirement is that all organizations should have a PMIS capable of:

- project information, including activities, dates and resources, in a WBS (Work Break down Structure) form,
- project scheduling, including various scheduling information, constraints, resources calendars etc.,
- resource management including resource forecasting, resource loading and resource leveling,

- cost management including budgeting, cost tracking etc. and,
- Project reporting.

Additionally, if needed, and mostly in larger organisations the PMIS should be integrated with document management and workflow subsystems.

12. Conclusions

It is clear that the implementation of requirements defined in ELOT-1429 will increase significantly the managerial capability of organizations implementing project of public interest. Some of improvements that the ELOT-1429 standard will bring in are:

- The recognition that project management is a concrete knowledge area that requires the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements.
- the recognition that projects should be managed by personnel having sufficient project management competences
- the definition of a process model that covers all phases of the project life-cycle
- the requirement that each project implementing organisation should have a valid, updated and well documented project management plan
- the requirement for a PMIS, and
- the fact that organisations should collect data in order to measure and improve their performance

Most importantly, the requirement that all public organization applying for funding in the context CSF, should implement a SMC system is a strong motive to improve their systems, to train their personnel and to measure their performance.

A lot of work remains to be done. To begin with, the applications guides (ELOT 1431-1, ELOT 1431-2, and ELOT 1431-3) need to be developed, as well as ELOT 1432. However, the biggest challenge is the adoption of the standard by public bodies and organisations since this is a process time consuming and difficult by its nature.

13. References

- BS 6079-1:2002 Project management. Guide to project management, British Standards Institution.
- BS ISO 10006:2003. Quality management systems. Guidelines for quality management in projects, British Standards Institution.
- Cyprus General Accounting Office (2007), Best practices guide for managing public contracts, Cyprus.

- DoD (2003), U.S. Department of Defence Extension to: A Guide to the Project Management Body of Knowledge, USA: Virginia.
- ELOT 1429 (Draft), Managerial capability of organizations implementing projects of public interest – Requirements, Greece: Hellenic Organization for Standardization.
- European Commission (2004), Project Cycle Management Guidelines, Belgium: European Commission, EuropeAid Cooperation Office.
- IPMA (2006), IPMA Competence Baseline Version 3.0, The Netherlands: International Project Management Association.
- ISO 10006:2003 Quality management systems - Guidelines for quality management in projects, Switzerland: International Standard Organisation
- ISO 9001:2000 – Quality management systems-requirements, , Switzerland: International Standard Organisation
- Kerzner, H. (2001), Strategic planning for project management using a project management maturity model, John Wiley & Sons, Inc.
- MOU (2005), Study on the managerial capability of organizations implementing projects of public interest, Greece: Management Organization Unit of Community Support Framework. Available at http://www.mou.gr/index.asp?a_id=385.
- New York State Office for Technology (2003), The New York State Project Management Guidebook, Release 2, USA: New York State Office for Technology. Available at <http://www.oft.state.ny.us/pmmp/guidebook2/index.htm>
- OGC (2006), Portfolio, Programme & Project Management Maturity Model, London: The Stationary Office.
- PMI (2003). Organisational Project Management Maturity Model, Pennsylvania, USA: Project Management Institute.
- PMI (2004). A guide to the Project Management Body of Knowledge, Pennsylvania, USA: Project Management Institute.
- Programme Management Maturity Model, The Programme Management Web Site. Available at <http://www.e-programme.com>
- Project Excellence Model, International Project Management Association. Available at: <http://www.apm.org.uk/ProjectExcellence.asp>.
- Software Engineering Institute (2002), Capability Maturity Model Integration, 2002. CMMISM for Systems Engineering, Software Engineering, Integrated Product and Process Development, and Supplier Sourcing (CMMI-SE/SW/IPPD/SS, V1.1), Carnegie Mellon University.

This paper was originally presented at the PM-04: 4th SCPM & 1st IPMA/MedNet Project Management Conference in the Mediterranean, 29-31 May 2008, Chios Island, Greece. It has been republished here with permission of the author and conference organizers. For information about the conference or to see the full proceedings, visit <http://2008.pmgreece.gr>.

About the Authors:
(Authors names in alphabetical order)



Panos Fitsilis, PhD

Co-Author



Panos Fitsilis, Ph.D. is Professor at TEI Larissa and Head of the Project Management department. He is also Director of “Software Applications” division at Centre for Technological Research of Thessalia.

Professor Fitsilis has extensive experience in managing large IT projects for organisations of the private and public sector. He is the author of three books and of many articles published on prestigious scientific journals. His research interest includes project management methodologies, project software management, software development methodologies and business information systems.



K. Kirytopoulos, PhD

Co-Author



Konstantinos A. Kirytopoulos holds a PhD on Project Risk Management attained at the National Technical University of Athens (2003) and a Mechanical Engineering Diploma (Bachelor plus MSc equivalent) attained at the same University (1999). He is working as an Assistant Professor at the Financial and Management Engineering Department at the University of the Aegean (Greece). His main research interests include but are not limited to Project Management, Risk Management, Investment Analysis and Entrepreneurship. More information about his current activities can be found at <http://www.kirytopoulos.eu>.

About the Authors (continued):***V. Leopoulos, PhD****Co-Author*

Associate Professor **Vrassidas Leopoulos** is a member of the Industrial Management and Operational Research section of the National Technical University of Athens (NTUA). He has been active for several years as a professional production engineer in both industrial and consulting firms. He studied Mechanical and Industrial Engineering at NTUA (1980) and followed post-graduate studies in Paris Ecole des Mines, Ensae, Universite Paris IX (Dauphine). He holds a PhD (1985) in Petri Nets Simulation Technique earned from the aforementioned University. Apart from Petri nets he teaches quality management and project management at the NTUA, along with risk management, which is currently his major scientific concern.

***John-Paris Pantouvakis, PhD****Co-Author*

John-Paris Pantouvakis, PhD, is a tenured Assistant Professor of Construction Management in the Department of Construction Engineering and Management, Faculty of Civil Engineering, at the National University of Athens. He is also an Adjunct Lecturer at Aristotle University of Thessaloniki and at the Hellenic Open University. Professor Pantouvakis holds a PhD in Computer Science and an M.Sc. degree in Information Technology from the University of Nottingham, UK, and a degree in Civil Engineering from the National Technical University of Athens. More information and contact details are available at his website at <http://paris.pantouvakis.gr>

About the Authors (continued):



I. Saridakis, MEng

Co-Author



Ioannis Saridakis, M.Eng. is a Chemical Engineer and Head of the Chemistry and Chemical Department at the Hellenic Organization for Standardization (ELOT).