Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

A CONCEPTUAL MODEL OF NATIONAL PUBLIC PROJECTS IMPLEMENTATION SYSTEMS

Stanisław Gasik, Vistula University, Warsaw, Poland, s.gasik@vistula.edu.pl

Abstract

Many countries have established practices of public projects governance and management which they systematically apply. These practices can be grouped into three well-defined, interrelated territories: Execution, Governance and Development. Each territory consists of functional areas. The Execution Territory consists of The Portfolio Management Area, Project Management Area, Actors Management Area, and Stakeholder Engagement Area. The Governance Territory consists of a single Governance Area, and the Development Territory similarly consists of just one Development Area. These Territories, Areas together with institutions, organizational units and other entities interrelate one with another and together constitute National Public Projects Implementation System (NPPIS). This paper presents conceptual model of NPPIS created on the basis of analysis of public projects governance and management solutions from over 70 countries all over the world. The model contributes theoretically to the knowledge of public projects. As projects are the main tool of public administration, it also contributes to countries' economical development.

Key words: *public administration, project management, National Public Projects Implementation System*
JEL code: *H110*

Introduction

A public project is a project executed by a public administration or with the participation of a public administration, or implemented with the involvement of funds from the budget of such an administration.

Public projects account for a growing portion of expenditure in most countries of the world. Turner et al. (2010) estimate that about one-third of the global gross domestic product ($16 trillion) is generated by projects. Public projects, like investments in road infrastructure or information technology often consume large budgets. The number of publications devoted to public projects management, as well as the growing budgets they involve, point to increasing interest in this type of projects. One can easily find hundreds of pages describing specific solutions for public projects implementation online, with some of them cited in the references section of this article. It is evident that the importance of public projects is growing rapidly. However, to date there exists no consistent model for public projects management. This paper aims to propose a conceptual framework that addresses this gap.

The paper elaborates on, and further develops the concept of National Public Projects Implementation System (NPPIS) defined by Gasik (2014), who defined basic areas of public projects management and governance.

The research, on which the paper is based, consisted of three key stages. First, the literature and Internet resources published by institutions and organizational units responsible for public projects were analyzed, resulting with data collection from over 70 countries. At the

Stanisław Gasik

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

second stage, a survey was conducted amongst people engaged in public projects management, with 512 respondents from over 60 countries.

The research, on which the paper is based, started from the review of literature and internet resources published by institutions and organizational units responsible for public projects management. More than 70 countries were analyzed at this stage. The third phase of the research consisted of face-to-face interviews with 36 public project actors from 6 countries (United States, Australia, Brazil, Canada, Argentina, and Poland). One of the goals of both the survey and the interviews was triangulation of data collected in the first phase of the project by the Internet review, i.e. verification whether earlier identified practices are really performed and beneficiary for project goals. The other goal of interviews was gaining deeper knowledge of public project implementation practices.

Public Projects Governance Territory

Public projects Governance Territory consists of one area of Project Governance. Governance is employing institution, authority structures and collaboration in order to assign resources and to coordinate activities in a society or economy. Public project governance is this part of governance which is applied to public projects and covers the area from the government through institutions down to projects (Klakegg et. al., 2008).

In the United States several regulations starting from guidelines on Cost/Schedule Control Systems criteria (C/SCS) (DoDI, 1967), through Government Performance and Result Act (GPRA) (White House, 1993) up to Program Management Improvement and Accountability Act (PMIAA) (US Congress, 2015) were enacted.

C/SCS guidelines required that all major defense acquisition projects must apply earned value management techniques. GPRA laid the foundations for American public projects management. It required that government agencies must have strategic plans, which set out the objectives to be achieved through the implementation of programs. PMIAA requires, among others, establishing an interagency body on program management, appointing a senior executive responsible for program management, and establishing models of program management in each federal institution.

Governance processes are sequences of operations, usually conducted at planned intervals, checking project status and taking on this basis the key decisions, in particular regarding their initiation, and checking during their implementation the reasonableness of continuing to implement the project. Implementation of such processes is required by several governments. Probably the most popular public projects governance process was defined on demand of UK Government and is called OGC Gateway Process (OGC, 2007).

A special attention of governance process is focused on project initiation. The initiation process may consist of one or two steps. The two-stage start-up process is one in which decisions about the project are taken as a result of two assessments, each of which may lead either to transition to the next phase or to rejection. The first evaluation is usually related to compliance with the strategy, the second to business effects of the proposed project (NTNU 2013). The one-step process is one in which there is only one decision on project initiation (PAF Western Australia 2013). This does not mean that there are no well-defined components within this process, but the execution of each such component does not end with a formal decision being made.

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

Public projects are subject to business supervision during their implementation. The compatibility of the project with its business case, and viability of expected business results are the main areas of interest during such verification. The above mentioned OGC Gateway Process consists of six main gates: strategic assessment, business justification, delivery strategy, investment decision, readiness for service, and operations review and benefits realization.

National standards may be conceived as components of governance systems. They usually deal with knowledge needed for the management of individual projects (e.g., PMBOK ® Guide, PMI 2013; Prince 2 ®, OGC 2009). In addition to such general standards, there is a standard pertaining only to public projects management. This is the government extension of the Project Management Institute's PMBOK ® Guide (PMI 2006). This standard takes into account specific features of public sector projects such as dependence of the complex regulations in the sector, responsibility of the project team members before the communities that are relevant for projects of public interest, or the use of public resources.

Execution Territory

The Execution Territory consists of four functional areas: Portfolio Management, Project Management, Actors Management, and Stakeholder Management.

Portfolio Management

Public project portfolio management covers the processes of selecting, initiating and modifying the set of public projects in a given country, state or local government.

An organization's strategy usually makes up the basis for project portfolio management (PMI 2013b). Government agencies must have strategic plans, for example, for periods of no less than five years (White House 1993), which set out the objectives to be achieved through the implementation of programs. The strategic plan must also include an assessment of ways to achieve these objectives, i.e. the ways to measure the effectiveness of the programs. The annual plan defining a set of programs to be implemented by the agency must be consistent with the strategy of the agency. This approach ensures that only projects aligned with the strategy of government agencies will be selected for execution.

A document specifying the requirements for the formulation of objectives of public administration units may be published each year (PMD India 2013). Such a document is a tool to support understanding between the minister and the particular execution unit. The document requires definition of the measurable goals of the individual organizational units. Projects and programs can only be run when they support the achievement of a specific goal.

The strategy can also be defined directly by identifying the programs that need to be implemented. In Hawaii, ten basic activities of state transition programs (e.g., governance, modernization of taxes, education, and consolidated infrastructure) have been defined. To ensure the achievement of program objectives, rigorous rules of project and program management (OIMT Hawaii 2013) should be introduced – this is one of state's strategic goals.

The predefined strategy is not the only reason to launch a project or a program. The other reason is the occurrence of a specific situation which necessitates a reaction. If there is a chance or if it is found that certain areas of public services operate inefficiently, the government outsources analysis to teams led by eminent scientists and experts in their fields. This approach is often used in the UK. The Byatt Report (Byatt 2002) may serve as an example. It dealt with

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

the situation regarding contracts for local executive bodies. The writing of reports results in the development of recommendations describing new ways of running the administration. These recommendations are implemented through public projects.

One of the categories of services provided by Public Projects Management Offices (PPMO, below) is that of supporting public project portfolio management. PPMO's manage their own project portfolios (EPMO Vermont 2013) and support other public agencies in this area (EPMO New York 2013). PPMO may also define rules for selection of projects for the portfolio (MPA UK 2013). These criteria relate primarily to compliance with the country's strategy, but may also include other parameters, such as cost, risk profile, uniqueness (SP WA 2013). Project portfolios are subject to review by the PPMO (PMO Maine 2013). In appropriate cases, for example when a project is not implemented in accordance with the application or there is a substantial risk of its failure, it may be killed or suspended – this means reducing the content of the project portfolio (ASET Arizona 2013).

Project Management

Projects are managed according to methodologies. Project management methodology is a structured collection of guidelines describing the ways of project management. Methodologies may be associated with the governance processes. From this point of view, the methodology describes activities that must be performed in order to effectively pass the governance process gates. In Texas, for each of the gates of the Texas Project Delivery Framework process (DIR Texas 2013) the processes necessary for passing these gates have been developed, together with the techniques, tools and applicable forms. With this approach, the methodology is complementary to the process of governance.

Methodologies can also be constructed and applied without reference to the governance process. Then the process of governance does not exist alone. The methodologies contain the actions conducive to and verifications of the conformity of the project with the business case (PMBOK ® Guide, PMI 2013). In this case, the project management methodology can be regarded as an extension of the governance process. In Montana, the Project Lifecycle Framework is the parent methodology (SIT PMO Montana 2013), which includes a project governance cycle, project management cycle, procurement cycle and product development cycle.

Project management methodologies may be characterized by the standards on which they are based, by their sets of phases, and by their scope of application. ANSI PMBOK ® Guide (PMI 2013) is used as the basis for building project management methodology. For instance, New York (NY SOT 2013) and Michigan (PMRC Michigan 2004) project management methodologies are based on it.

The set of methodology phases (together called "project life cycle") may cover, for example, the preliminary evaluation phase, business case development phase, sourcing suppliers phase, establishment of service capability phase, and services delivery phase (PAF QTF Queensland 2013). The life cycle of the project can be divided into initiation, planning, execution (with monitoring and control) and closure of the project (PMBOK ® Guide, PMI 2013). Transportation project management methodology (WSDOT Washington 2013c) describes the project's life cycle, consisting of five phases: initiation and alignment to business objectives, planning the work, endorsement of the plan by engaged agencies, implementing the plan, transition of the product to operations, and closing the project.

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

Public Projects Management Offices

Institutions or agencies supporting public projects management – Public Projects Management Offices (PPMO) – have been established in many countries. The overall objective of a PPMO is always to support public projects delivery.

Very often, PPMO's take full responsibility for the implementation of projects and manage them. These solutions have been adopted, for example, in the United Kingdom (UK MPA 2013) and the state of New York (EPMO New York 2013).

PPMO's perform separate, well-defined project management services for other government units. In this variety of PPMO services they take responsibility for specific project management functions, and not for the entire projects. PPMO's generally provide advisory services to project management teams (SSC New Zealand 2011). At the beginning of the project life cycle, PPMO employees develop the business case and feasibility studies (PM Missouri 2013). PPMO's provide services in the area of determining project governance rules (MPV Victoria 2013). In the period of project implementation PPMO's provide various services, such as document management (PM Missouri 2013), management of time, resources, and quality (JKRM Malaysia 2013), and independent risk management (SSC New Zealand 2011). Risk minimization may be the objective of the Project Assurance Team (QAT Texas 2013).

PPMO's check whether projects and programs are implemented according to guidelines of the authorized bodies (SSC New Zealand 2011). They perform audits, reviews and project evaluations (e.g., MPMO Canada 2013; MPA UK 2013). PPMO services do not terminate at the end of the projects. EPMO Vermont (2013) supports the measurement and reporting of benefits after project completion.

Knowledge that can be useful later in the project or in subsequent projects is generated as public projects are implemented. The task of PPMO's is to store and transfer such knowledge (CPPM Singapore 2013). This knowledge mostly has the form of "best practices", i.e. optimal solutions of particular problems, or ones that facilitate smooth process implementation. Knowledge can be obtained as a result of encountering a problem (IPMD India 2013). PPMO's support the exchange of knowledge between the contractors and other stakeholders (PMSC Missouri 2013).

Public Institutions

Public institutions play pivotal role in public projects delivery. They represent and work for communities, which benefit from public projects execution. Public institutions may perform three basic types of public projects: direct service projects (like organizing sport or cultural events), investment projects (like housing and infrastructure projects) and internal projects (like restructuring projects or implementing internal IT infrastructure). All these types of projects are aligned with given institution strategy. Public institutions provide resources for public projects, including the most important of them: funds. Public PMOs, described above are organizational units of public institutions.

The skills and capabilities of public agencies concerned with public projects management are at different levels. Some institutions base their approach to project management solely on the ability of project managers. Others, at the opposite level of capabilities, have deliberate, efficient organizational systems. In some countries, like Canada (TBoCS Canada 2013) and Australia organizational project management maturity models are applied for assessing and

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

improving their capabilities. In Australia, the British P3M3 ® (OGC 2010) model is applied to assess project maturity.

Stakeholder Engagement

The most important stakeholders of public projects are communities for which they are performed. They are involved in each phase of project life cycle, from its inception to gaining project benefits. Their representatives are being obligatory included into the project selection process (e. g. Government of WA, 2016) and into other project phases (PMI, 2006).

Public projects typically have multiple other stakeholders like governments, politicians, regulatory bodies, communities of interest, to name just a few of them. Due to the large number of stakeholders, it is important to provide efficient, easily accessible channels of information transfer between actors implementing projects and other stakeholders. In order to gather such information, repositories of information on public projects are maintained (EPMO Vermont 2013).

Internet tools are used as communication tools. In the simplest case, only the project identification data are published (e.g., DTPR Alaska 2013). The portals also contain data on major projects, their annual reports (MPA UK 2013) and information on project status (POCD California 2013; VAT Vermont 2013). Portals may be a source of knowledge about prospective contracts for subcontractors (MeO Saskatchewan 2013), as well as about awarded and executed contracts (e.g., MPMO Canada, 2013b).

Actors Management

The main actors involved in public projects implementation, in addition to the Public Projects Management Offices, are project managers and external companies implementing projects. Public institutions incorporate such entities into projects in various ways.

Vendors

Including private firms in public projects implementation is based on existing legal regulations on public procurement (e.g., President of the Republic of China 2011). Such regulations usually define the general rules of conduct for the conclusion and execution of contracts between a public and a private party, not only in the area of public project implementation. These regulations form a complex legal system and their detailed analysis is beyond the scope of this study.

The requirements to be met by companies implementing public projects are defined in order to facilitate the management of contracts by contracting their execution only to qualified companies. Such requirements concern the experience and the characteristics of the company (direct qualification) – or they specify certifications required from the companies implementing public projects (indirect qualification). To directly enter the register of qualified suppliers, companies must provide evidence of having qualified managerial staff, experience in implementation of projects and good financial standing (DB Hong Kong 2013). The condition of indirect qualification (DoFD Australia 2012) is met by having CMMI ® (SEI 2006), or OPM3 ® (PMI 2008), or P3M3 ® (OGC 2010) certification. Based on directly or indirectly defined requirements, registers of qualified public project contractors are maintained (DoFD Australia 2012).

Project Managers

In addition to companies, project managers have significant influence on public projects. For them too, as for companies, the pertinent requirements are formulated. In some countries, only people who meet these requirements may manage public projects.

Stanisław Gasik 87

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

Requirements for public project managers usually focus on three areas: general project management skills, specific skills needed to manage public projects (e.g., knowledge of the applicable regulations) and knowledge of local realities.

Having a certificate issued by a recognized body (like the Project Management Institute's PMP®) may be the basis for recognition as a qualified project manager (PMO Maine, 2013). Certificates that qualify to conduct public projects are also issued upon completion of training organized in a given country (e.g., PAI Ireland 2013). A more advanced requirement is the completion of full studies of public projects management (University of Oxford 2012).

Criteria which must be satisfied by public project managers are formulated (VITA Virginia 2011). These criteria may include, for example, the ability to identify project products and services, or the ability to develop and implement a project plan.

The institutions involved in public projects implementation designate professional development of their employees as their statutory goal (IPMD India 2013). They provide training in public projects management. The Washington State Department of Transportation maintains the Academy of Project Management (WSDOT Washington 2013b). Comprehensive training for project managers, including the basics, soft skills and advanced topics is done in the state of Michigan (DTMB Michigan 2013). Training is provided both in the traditional (e.g., EPMO Vermont 2013; IPMD India 2013) and the e-learning mode (WSDOT Washington 2013).

Development Territory

The development territory consists of one area of Development of NPPIS.

Development of Public Projects Management Systems

The countries that want to optimize the benefits gained from public projects, clearly define their strategic goals in this area and prepare plans pursuant to achieving these goals.

The goals and methods of developing public projects management systems are defined in different ways in different countries. The future course of development for project management can be determined on the basis of results from customer satisfaction surveys about these services (Mays and Bromead 2012), as well as audits of public projects management (ANAO 2011). In most countries, such strategies are worked out on the basis of analysis of public projects management systems, often in the broader context of the country's strategic development (Brewer et al. 2013).

The following development prospects for public projects management systems may be defined: general goals (e.g. recommendation that a public projects management strategy be developed (ANAO 2011)), business goals (e.g. increasing the capacity to implement ICT projects (DoFD Australia, 2011)), management goals (e.g. projects should be implemented in a way that achieves the objectives of time and budget (OCIO Washington 2011; OIT Maine 2009)), operational goals (like the creation of a Major Projects Authority), and knowledge-related goals (like collecting knowledge developed in projects for the purpose of reusing it in the future (ANAO, 2011)).

Advisory Bodies

The advisory bodies can define and improve processes, procedures and project document templates (EPMO North Carolina 2013; EPMO Kansas 2008, p. 18). They may also advice at

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

the country level in the area of project governance – this is one of roles of the council of program management established by PMIAA (US Congress, 2015). In addition advisory bodies may have specific tasks, such as general consultation in projects management (PMAC Tasmania 2013). These bodies are involved in promoting and supporting project management (PMOAG Montana 2013c; PMAC Tasmania 2013), removing obstacles to project management and supporting project managers (PMAG North Carolina 2013). They may review applications for the most important projects (ITAC Arizona 2013).

Summary and Conclusions

Many countries have established practices of public projects management, which they systematically apply. These practices can be grouped into three territories and six well-defined, interrelated functional areas.
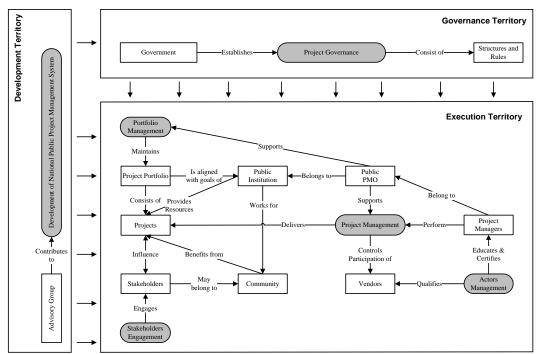

Fig. 1. **A Model of National Public Projects Implementation System**
Source: Author construction

The territory of public projects Governance consists of one area of public Project Governance. Project governance is established by authorized government. The effect of project governance is establishing structures and rules which must be followed while executing public projects.

The territory of project Execution consists of four functional areas: Portfolio Management, Project Management, Actors Management and Stakeholders Management.

The area of public projects Portfolio Management covers identification and maintenance of a set of projects, aligned with public institution strategic goals that are being executed.

Stanisław Gasik   **89**

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

Projects can be initiated on the basis of a strategy operating in a specific area, or as the result of an emergency situation disrupting strategy execution, which requires intervention by public administration. Portfolio management is supported by activities of Public Projects Management Offices.

The main goal of the area of public Project Management is successful delivery of public projects. Public projects are managed by certified project managers. The deliverables are usually produced by external vendors from in majority private sectors. Public projects management is supported by public PMOs.

The area of Actors Management deals with the most important actors engaged in public project execution: vendors and project managers. This area is responsible for education, training, and certification of public project managers. It also qualifies private firms to execution of public projects.

The area of Stakeholder Engagement is responsible for engaging stakeholders into public projects. These stakeholders may or may not be members of communities for which public institutions work. When they are members of these communities, they benefit from public projects. The other stakeholders may positively or negatively influence public projects.

The territory of Development covers only one area of Development of NPPIS. This territory may influence the territory of Project Governance as well as the territory of Project Execution.

These territories, areas and other components together form the National Public Projects Implementation System. Building such model contributes both to the theory and to the practice of public projects delivery. Form the theoretical point of view this is an original model substantially enriching knowledge about public projects execution. From the practical point of view it may be treated as a set of guidelines for governments which desire to implement an effective and efficient NPPIS contributing to development of national economy.

Acknowledgements

References

ASET Arizona, 2013. Project Oversight. 2013. [Online] Available at: http://aset.azdoa.gov/content/project-oversight [accessed 15 September 2013].

Brewer J. K. Smith S. A. & Sandeen A. V., 2013. 2013 Statewide IT Strategic Plan. A Plan for The Future. Phoenix: Arizona Strategic Enterprise Technology. [Online] Available at: http://aset.azdoa.gov/sites/default/files/media/pdfs/120301_FINAL_int.pdf. [accessed 25 September 25, 2013].

Byatt, I., 2002. Towards a National Strategy for Local Government Procurement. The Joint Response of the Government and the Local Government Association to the Local Government Procurement Taskforce Report Delivering Better Services for Citizens. London: Office of the Deputy Prime Minister.

CPPM Singapore, 2013. Centre for Public projects management. [Online] Available at: http://app.sgdi.gov.sg/listing.asp?agency_subtype=dept&agency_id=0000019564. [Accessed 29 September 2013].

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

DB Hong Kong, 2013. Welcome Message from the Secretary for Development. [Online] Available at: http://www.devb.gov.hk/en/home/index.html. [accessed 18 September 2013].

DIR Texas, 2013. Texas Project Delivery Framework. [Online] Available at: http://www2.dir.state.tx.us/management/projectdelivery/projectframework/Pages/Framework.aspx. [Accessed 12 October 2013].

DoD, 1967. DoDI 7000.2, Performance Measurement for Selected Acquisitions, Washington: DoD

DoFD Australia, 2011. Organizational Capability Investment in ICT. [Online] Available at: http://agict.gov.au/policy-guides-procurement/ict-investment-framework. [Accessed 9 September 2013].

DoFD Australia, 2012. Organizational Project Management Maturity Assessment. [Online] Available at: http://agimo.govspace.gov.au/files/2012/04/organisational_project_management_maturity_assessment.pdf. [Accessed 30 September 2013].

DTMB Michigan, 2013. I have a new project. [Online] Available at: http://www.michigan.gov/dtmb/0,5552,7-150-56355_56581_31294 ---, 00.html. [Accessed 9 October 2013].

DTPR Alaska, 2013. Alaska DOT & PF Statewide Project Information. [Online] Available at: http://dot.alaska.gov/project_info/index.shtml. [Accessed 12 September 2013].

EPMO Kansas, 2008. Project Management Overview. Project Management Methodology. [Online] Available at: http://oits.ks.gov/kito/itpmm.htm. [Accessed 11 October 2013].

EPMO New York, 2013. Enterprise Program Management Office. [Online] Available at: http://www.its.ny.gov/enterprise_program_management_office. [Accessed 22 September 2013].

EPMO North Carolina, 2013. Enterprise Project Management Office. [Online] Available at: http://www.epmo.scio.nc.gov/services/default.aspx. [Accessed 11 October 2013].

EPMO Vermont, 2013. Enterprise Project Management Office Charter. [Online] Available at: http://dii.vermont.gov/sites/dii/files/pdfs/EPMO-Charter.pdf. [Accessed 8 September 2013].

Gasik, S., 2014. p-Government - A Framework for Public Projects Management, *PM World Journal*, 3(7), pp 1-26.

Government of WA, 2016. Native Title and Heritage. [Online] Available at: http://www.dsd.wa.gov.au/what-we-do/offer-project-support/project-approval-strategy/native-title-and-heritage [Accessed 7 February 2016]

IPMD India, 2013. Infrastructure and Project Monitoring Division. [Online] Available at: http://mospi.nic.in/Mospi_New/site/inner.aspx?status=2&menu_id=108. [Accessed 11 September 2013].

ITAC Arizona, 2013. Information Technology Authorization Committee. [Online] Available at: http://aset.azdoa.gov/content/information-technology-authorization-committee-itac. [Accessed 30 September 2013].

JKRM Malaysia, 2013. Jabatan Kerja Raya Malaysia. [Online] Available at: https://www.jkr.gov.my/page/64. [Accessed 26 September 2013].

Klakegg, O. J., Williams, T., Magnussen, O. M., Glasspool, H., 2008. Governance Framework for public project development. *Project Management Journal*, 39 (S1), pp. S27–S42.

Mays, G., Bromead, K., 2011. Customer Satisfaction Survey. Enterprise Project Management Office Office of the State Chief Information Officer. [Online] Available at: http://www.epmo.scio.nc.gov/library/pdf/2011Survey.pdf, [Accessed 15 October 2013].

MeO Saskatchewan, 2013. Major Projects Inventory. [Online] Available at: http://www.economy.gov.sk.ca/majorprojects. [Accessed 24 September 2013].

MPA UK, 2013. Major Projects Authority. [Online] Available at: https://www.gov.uk/government/policy-teams/126. [Accessed 7 September 2013].

MPMO Canada, 2013. Major Project Management Office. [Online] Available at: http://mpmo.gc.ca/home. [Accessed 13 September 2013].

MPMO Canada, 2013b . Project Agreements. [Online] Available at: http://mpmo.gc.ca/projects/9. [Accessed 12 September 2013].

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

MPV Victoria, 2013. Major Projects Victoria. [Online] Available at: http://www.majorprojects.vic.gov.au/. [Accessed 2 September 2013].

NTNU, 2013. Quality Assurance Scheme. [Online] Available at: http://www.concept.ntnu.no/qa-scheme. [Accessed 10 September 2013].

NY SOT, 2013. New York State Project Management Methodology, Project Management Guidebook Release 2. [Online] Available at: http://www.its.ny.gov/pmmp/guidebook2/index.htm. [Accessed 2 October 2013].

OCIO Washington, 2011. Policy No. 131: Managing Information Technology Projects. [Online] Available at: http://www.ofm.wa.gov/ocio/policies/documents/131.pdf. [Accessed 12 October 2013].

OGC, 2007. The OGC Gateway ™ Process. A manager's checklist. London: OGC

OGC, 2009. Managing Successful Projects with Prince 2 ®. London: OGC

OGC, 2010. Portfolio, Programme and Project Management Maturity Model (P3M3 ®). Version 2.1. London: OGC.

OIT Maine, 2004. Information Technology Portfolio Management Policy. [Online] Available at: http://www.maine.gov/oit/policies/ITPortfolioManagement.doc. [Accessed 21 October 2013].

OIT Maine, 2009. Information Technology Project Management Policy. [Online] Available at: http://www.maine.gov/oit/policies/ProjectManagementPolicy.doc. [Accessed 15 October 2013].

PAF QTF Queensland, 2013. Project Assurance Framework. [Online] Available at: http://www.treasury.qld.gov.au/projects-queensland/policy-framework/project-assurance-framework/index.shtml. [Accessed 13 October 2013].

PAF Western Australia, 2013. Project Approvals Framework. [Online] Available at: http://www.dsd.wa.gov.au/6737.aspx. [Accessed 12 September 2013].

PAI Ireland, 2013. Course Certificate in Public Sector Project Management. [Online] Available at: http://www.publicaffairsireland.com/events/743-certificate-in-public-sector-project-management. [Accessed 29 October 2013].

PM Missouri, 2013. Project Management. [Online] Available at: http://oa.mo.gov/fmdc/dc/. [Accessed 8 September 2013].

PMAC Tasmania, 2013. Project Management Advisory Committee. [Online] Available at: http://www.egovernment.tas.gov.au/project_management/project_management_advisory_committee_pmac. [Accessed 20 September 2013].

PMAG North Carolina, 2013. Project Managers Advisory Group. [Online] Available at: http://www.epmo.scio.nc.gov/TaskGroups/PMWorkingGroup.aspx. [Accessed 8 October 2013].

PMD India, 2013. Results-Framework Document. [Online] Available at: http://performance.gov.in/?q=rfd-menu. [Accessed 1 October 2013].

PMI, 2006. Government Extension to the PMBOK ® Guide Third Edition. Newtown Square: PMI.

PMI, 2008. Organizational Project Management Maturity Model. (OPM3TM). Second Edition. Newtown Square: PMI.

PMI, 2013. A Guide to the Project Management Body of Knowledge (PMBOK ® Guide) - Fifth Edition. Newtown Square: PMI.

PMI, 2013b .The Standard for Portfolio Management-Third Edition. Newtown Square: PMI.

PMO Maine, 2013. Cross Functional Work Flow Document. [Online] Available at: http://www.maine.gov/oit/project_management/CrossFunctionalWorkFlowforallOITWorkandProjectRequestsFinal_V1%200.htm. [Accessed 5 October 2013].

PMRC Michigan, 2004. State of Michigan Project Management Methodology. [Online] Available at: http://michigan.gov/documents/Michigan_PMM_December_2004_113399_7.pdf. [Accessed 24 October 2013].

Project Management Development – Practice and Perspectives

Fifth International Scientific Conference on Project Management in the Baltic Countries
April 14-15, 2016, Riga, University of Latvia

PMSC Missouri, 2013. Project Management Standing Committee. [Online] Available at: http://oa.mo.gov/itsd/cio/projectmgmt/PDF/PMSC-Charter102605.pdf. [Accessed 9 September 2013].

POCD California, 2013. IT Project Oversight and Consulting Division. [Online] Available at: http://www.cio.ca.gov/ppmo/. [Accessed 26 September 2013].

President of the Republic of China, 2011. Taiwan Government Procurement Act. [Online] Available at: http://greenliving.epa.gov.tw/greenlife/green-life/file/GOVERNMENT PROCUREMENT ACT.doc [Accessed 6 February 2016].

QAT Texas, 2013. Quality Assurance Team. [Online] Available at: http://qat.state.tx.us/. [Accessed 2 September 2013].

SEI, 2006. CMMI ^{SM} for Development, Version 1.2. CMU/SEI-2006-TR-008 ESC-TR-2006-008. Pittsburg: SEI.

SIT PMO Montana, 2013. Project Lifecycle Framework. [Online] Available at: http://pmo.mt.gov/Methodology/methodology.mcpx. [Accessed 8 October 2013].

SP WA, 2013. Strategic Projects. [Online] Available at: http://www.treasury.wa.gov.au/cms/section.aspx?id=3712&linkidentifier=id&itemid=3712. [Accessed 1 September 2013].

SSC New Zealand, 2011. Guidance for Monitoring Major Projects and Programmes. [Online] Available at: http://www.ssc.govt.nz/sites/all/files/monitoring-guidance_0.pdf. [Accessed 22 October 2013].

TBoCS Canada, 2013. Guide to Using the Organizational Project Management Capacity Assessment Tool. [Online] Available at: http://www.tbs-sct.gc.ca/pm-gp/doc/ompcag-ecogpg/ompcag-ecogpgtb-eng.asp. [Accessed 12 September 2013].

Turner, R., Huemann, M., Anbari, F., Bredillet, Ch., 2010. Perspectives on Projects. London: Routlege.

University of Oxford, 2012. Oxford teams up with Cabinet Office to teach leadership. [Online] Available at: http://www.ox.ac.uk/media/news_stories/2012/120107.html. [Accessed 11 October 2013].

US Congress, 2015. H.R.2144 - Program Management Improvement and Accountability Act of 2015. [Online] Available at: https://www.congress.gov/bill/114th-congress/house-bill/2144/text, [Accessed 6 February 2016]

VITA Virginia, 2011. Project Manager Selection And Training Standard. [Online] Available at: http://www.vita.virginia.gov/uploadedFiles/VITA_Main_Public/Library/PSGs/Project_Management_Selection_Training_Standard_CPM11102.pdf. [Accessed 8 October 2013].

White House, 1993. Government Performance Results Act. [Online] Available at: http://www.whitehouse.gov/omb/mgmt-gpra/gplaw2m, modified: http://www.whitehouse.gov/omb/performance/gprm-act. [Accessed 8 September 2013].

WSDOT Washington, 2013. Project Management E-Learning. [Online] Available at: http://www.wsdot.wa.gov/Projects/ProjectMgmt/ProjectManagementPMRSElearning.htm. [Accessed 18 October 2013]

WSDOT Washington, 2013b . Project Management - Delivering the Capital Construction Programs at the Project Level. [Online] Available at: http :/ / www.wsdot.wa.gov/Projects/ProjectMgmt/. [Accessed 12 October 2013].