

PM WORLD TODAY – EDITORIAL – MARCH 2009

Project Management as a National Competence! How Modern Program & Project Management can Strengthen Organizations, Industries and Economies

*By: David L. Pells
Managing Editor*

It has now been widely proven that modern program and project management (PPM) can help an organization become more efficient, more productive and more competitive in the global economy. It therefore seems logical that if more organizations within specific industries embrace PM best practices, then those industries will become more productive and competitive. If organizations and industries within regions, states and countries become more efficient and competitive, then local economies will benefit.

At the same time, if governmental agencies adopt project and program management best practices, and become more mature in the application and usage of advanced program management principles, then those agencies can also become more efficient and productive. As more government agencies implement PM, more programs and projects funded with public monies should be more successful, accomplished in less time and for less money than otherwise. In other words, governments can also become more efficient, productive and competitive in a global marketplace.

If both industrial and governmental organizations become more productive, accomplishing more and better results while using fewer resources, citizens will benefit in various ways and economies will grow. This article builds on that theme originally promoted by Ed Naughton at the Institute of Project Management of Ireland.

This subject is also supported by recent research by Professor Roland Gareis and his team at the Vienna University of Economics and Business Administration in Austria, who have been studying and publishing research results related to the project-oriented organization and project-oriented society. Their research related to project-oriented nations is particularly relevant.

The Value of Project Management

The entire argument that project management can help strengthen organizations, industries and economies is based on the premise that the use of modern project and program management adds value. While most experienced project managers and project management professionals know this intuitively, based on the value

they have seen or created themselves, the Project Management Institute (PMI) actually funded a formal research project on this topic. A good description of that study follows here.

In 2004 the PMI commissioned the researchers at Athabasca University in Canada to conduct a study to find evidence of the value to organizations when project management is appropriately implemented. After conducting 447 interviews, reviewing 418 project summaries, and looking at more than 60 case studies from a globally dispersed array of industries, they concluded that project management has the ability to deliver significant value to organizations. Janice Thomas, PhD, and Mark Mullaly, PMP, documented the three years of global fieldwork and cross-disciplinary analysis conducted by the team in their book, *Researching the Value of Project Management*, published by PMI. [1]

The following types of tangible value were reported:

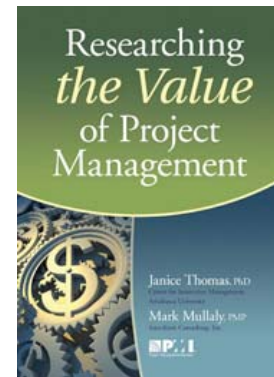
- Cost savings
- Revenue increases
- Customer retention
- Increased customer share
- Greater market share
- Reduced write-offs and rework

The delivery of intangible value included the following:

- Improvements in the decision making
- Enhanced collaboration and communication
- Improvements in effective work cultures
- Alignment of approaches, terminology and values within the organization
- Overall effectiveness of the organization and its management approach
- Improved transparency, clarity of structures, roles and accountability.

The study concluded that value appears to increase in proportion to the maturity of the project management implementation that is encountered. Tangible value can be attained at almost any level of maturity, and is primarily a result of the nature of the organization and the delivery of customer projects. The attainment of intangible value requires a base level of capability and a reasonable level of robustness to be established for it to be realized. As well, continued increase in maturity of the project management implementation appears to lead to greater levels of intangible value. [1]

More concrete benefits from using project management were also described in my February editorial entitled "*Project Management and Accountability! How Modern Program and Project Management can enhance Accountability in Government and Industry.*" [2] I think you get the message. Project management adds value!



Recent Trends in Project Management

Over the last twenty years, project management has become one of the fastest growing fields for professionals in many industries; it has been embraced by organizations worldwide at an ever rapid pace. More organizations are conducting business in the form of projects and programs. The use of modern PM can result in immediate positive results, ranging from more rapid and successful delivery of new buildings, products, services, systems and other changes.

Within the project management world, some of the most widely recognized trends have included the development and rapid deployment of the following:

- Earned value and value based project and program management
- Integrated program management
- Complex and Strategic project management
- Enterprise project management
- Project and Program management offices
- Multi-project management
- Project and program portfolio management
- Individual and organizational project management maturity

I mention these topics because they also provide a good indication of how modern project management has been adopted by organizations in recent years – first as better methodology for managing individual projects, then as standard methodology for managing multiple projects within an organization, then as corporate strategy to improve performance across the entire enterprise. The more project-oriented the organization, the more significant this becomes. For organizations in construction, energy or transportation, for example, where most of their work and revenues involve projects, the impact has been significant.

Project-based Enterprises

The economic downturn in the United States in the late 1980s resulted in dramatic changes in American industry. Flatter, more flexible organization structures became a highly visible trend. Cost cutting and an increased emphasis on efficiency, productivity and profitability led to an increased interest in projects for business delivery and on project management.

In 1990, the International Project Management Association (IPMA), which was known as INTERNET at the time, held their World Congress on Project Management in Vienna, Austria. The theme of the conference was “Management-by-Projects: Project Management in Flatter, More Flexible Organizations”. The conference project manager was Professor Roland Gareis and, as this was my first international conference, I remember the event very well. My eyes were opened to the

relationship of the project management approach to organizational efficiencies, strategic and structural issues, and business success.



During the boom times of the 1990s, especially in the technology sectors, modern project management was discovered by organizations in the information systems, software development and telecoms industries. This trend occurred for several reasons, and has continued, based on globalization and other factors. The increased use of PM in technology organizations has been astounding, as reflected by the rapid growth in PMI membership. PMI has seen its membership increase from 50,000 to over 270,000 worldwide over the last 12 years, with 80% of the new members working in IS, IT, Telecoms and other technology-oriented organizations. [3]

Seven good reasons for the rapid growth of PM in the IT sector were also identified in my June 2008 editorial as follows:

- 1) Massive investments in IT worldwide
- 2) The natural project-orientation of IT
- 3) The increasing complexity of IT programs and projects
- 4) Rapidly changing Technologies
- 5) IT Project Failures
- 6) The Information Age – The Third Wave has arrived
- 7) IT crosses all industries, organizations and projects [3]

In addition, organizations have embraced project management due to increased competition arising from globalization. When competing with global organizations, only global best practices can assure success, or even survival.

Project Oriented Industries

The trends in IT organizations have found their way into other industries, especially those where IT plays an important role. Examples include banking and financial services, automobiles and transportation services, agriculture and food production, entertainment, health and medical services and many others. Today, all organizations and industries include programs and projects as a good percentage of their activity. Now the question is not whether an industry is project-oriented, but rather to what degree.

We can easily see that some industries are entirely program and project-oriented, such as aerospace, construction, defense, real estate development, oil and gas exploration and development, and many others. In addition, many areas of government are almost entirely project oriented, including those associated with environmental remediation, R&D (research and development), and various sciences

– both basic science and R&D (for example, climate change, earth sciences, polar research, renewable energy, space exploration, undersea and water related research, etc.)

Other industries include organizations that have a major portion of their activities in programs and projects. Those include agriculture, emergency response, energy production and distribution, housing, petrochemicals, security, transportation and others. In the governmental sectors, in the USA for example, much of the work funded by and for the US Army Corps of Engineers, Department of Energy, Department of Transportation (air, rail, roads and water), Health & Human Services, Department of Interior, Department of Homeland Security, Department of Defense, and others are in the form of programs and projects.

Other industries that have historically been viewed as services or product-oriented include more and more projects, with projects including new product development, new systems, new technology, restructuring and organizational change projects, mergers, acquisitions and other change initiatives. Such industries as defense, education, entertainment, food production and delivery, health and medical services, medicines and drugs (pharmaceuticals +), telecoms, tourism, transportation, and utilities have a steadily increasing number and mix of programs and projects. And in the government, every department and agency will have programs and projects, all of which must be planned, managed and governed.

The increasing number of programs and projects in both industry and government helps explain the explosion over the last 15 years in professional project management, and in the memberships in PMI and other professional bodies. If entire industries are becoming project-oriented, shouldn't someone pay attention to promoting and improving project management across those industries and in the major organizations in those industries. In some cases, that is happening at the practitioner level, as evidenced by the specific interest groups (SIGs) and virtual communities for some industries within the Association for Project Management (APM) in the UK, in PMI and in online social networks.

Project-Oriented Society

Research has been underway in Austria that takes the concepts of "project-oriented enterprises" and "project-oriented industries" to a whole other level. Professor Gareis, now at the Vienna University of Economics and Business, has led a research team and a number of studies related to "project-oriented society." Here is an introduction from their website:

"A society, which applies frequently projects and programmes, and which provides project management-related education, research and marketing services, can be perceived as a project-oriented society (POS). More projects and programmes are performed in industry but also in new social areas, such as (small) municipalities,

associations, schools and even families. "Management by Projects" becomes a macro-economic strategy of the society, to cope with complexity and dynamics and to ensure quality of the project results. In order to ensure international competitiveness through professionally managed projects and programmes, more individuals and more organisations in the society have to be familiar with project management principles. Project and programme management competences are required not only in the industry but also in these new areas of application."

"A "project management cross-over" between business life and private life can be organised explicitly, to develop project management competences in families, schools, small municipalities, etc. Universities, PM associations, consulting and training companies, etc, have to take on responsibilities for the knowhow transfer from industry to individuals and organisations, representing these new areas of project management application. programm I austria – The Austrian Project Management Initiative promotes on the one hand the professionalisation of project and programme management, and of project portfolio management in the Austrian industry, and on the other hand the application of project management in families and schools, in small municipalities and associations, in politics, in churches, etc. By that the maturity of Austria as a POS shall be further developed. First experiences were made with family projects, school projects and projects of small municipalities. [4]

I fully agree with Professor Gareis that society is becoming more project-oriented. The general public is also rapidly becoming more aware of this trend, now especially with programs and projects at the heart of debates worldwide about economic stimulus packages. Interestingly, in the USA some new project-oriented terms have emerged, including "shovel-ready projects" and "pork projects".

Project Management in Government

Governments now fund, oversee and manage thousands of projects and programs in most countries. Program and project management in the government sector is a huge issue, yet one that few governments have addressed on a government-wide basis. This is especially true in the USA, although that may be changing.



To add some perspective on this issue, the federal budget released last week in the USA included approximately \$26 billion for the US Department of Energy for "fiscal year 2009 to fund programs in its five primary mission areas: science, energy, environment, nuclear non-proliferation and national security. If the average budget for a project within the DOE is \$25 million, then that suggests 1,040 projects. In fact, I know that the number of projects in DOE, DoD, DoT and other federal agencies is much larger. In addition, on each project there may be dozens of organizations, contractors and

subcontractors involved, each of which will have a project and project manager assigned.

If we estimate that each project involves ten organizations in the supply chain (probably a low estimate), and each organization has ten people in key positions on that organization's project (again, a low estimate for many projects), then there are 10 project managers and 100 people who need to be well versed in project management on every project. The numbers begin to add up rapidly, when looking at the impact of a government-funded program or project from a national perspective. In the USA and other large countries, thousands of organizations, executives and professionals throughout the country contribute to the success or failure, efficiency or waste, and productivity on governmental (funded with public monies) programs and projects.

Project Management Competency

There are many definitions and understandings for competency, and of project management competency; this latter topic being the subject of much research and debate among project management academic leaders and professional bodies. Project management competency for individuals has become an underlying basis for education and certification of project managers within the International Project Management Association (IPMA) and IPMA member national associations around the world. [5]

According to **David Hillson** and **Ruth Murray-Webster** in 2002, "Competency can be defined as 'any act of behavior and/or performance that results in effective and/or superior performance on the job (Klemp 1980)." Hillson and Murray-Webster state that the following "fundamental principles must be considered in the competency issue: (1) competency must be demonstrated and observable; (2) competency is demonstrated through appropriate and effective behaviours; and (3) behaviors are influenced by a subtle combination of personal characteristics, experience, attitudes, knowledge and skill." [6]

According to J. **Davidson Frame** of the University of Management and Technology in his 1999 book, *Project Management Competence*, "Successful project management takes more than skilled individuals. It takes individuals, teams, and organizations all working together to achieve excellence." Dr. Frame describes the individual, team, and organizational competencies necessary for overall competitiveness. [7]

According to **Max Wideman**, competency is based on knowledge, skills, attitudes and behavior. Max says, "Knowledge is an important foundation. But by itself, it accomplishes nothing...Skills move us higher up the ladder towards project management competence. They come from experience with the proper application of knowledge. While skills degrade more slowly than knowledge, they do require

coaching, redirection and reinforcement to sustain and grow...Attitudes affect your inclination to change behaviors. Without willingness or eagerness to apply them, knowledge and skills are wasted...Behavioral Attributes... reflect your essential self, your personality. They involve social competences, and include thinking, behavior and leadership styles. They reflect willingness to learn, and to change. They are affected by your value systems, are harder to evaluate, and are, in our opinion, 90% of project success." [8]

To date, much has been written on the project management competencies of individuals, teams and organizations, but not on industries or nations. Even in large developed industrial countries, project management competence varies widely within industries, even those that are primarily project-oriented. Industries and organizations that are not so project-oriented or mature in the implementation of modern project management will contain very little project management competency, since experience is clearly needed for demonstrable competency in any field.

And finally, reflecting on the general state of affairs in developing economies, I quote from an interesting paper by **Pantaleo Mutajwaa Daniel Rwelamila**, entitled "*Project management competence in public sector infrastructure organizations.*" According to Mr. Rwelamila, "Public sector organisations responsible for infrastructure development in most non-industrialised countries, which include infrastructure departments/ministries, parastatal organisations and other statutory organisations qualify as project-oriented organisations (POO). There are strong indications to suggest that these organisations' project management (PM) competencies leave a lot to be desired." [9]

Some Countries are already Winning!

A few nations are moving forward much more rapidly than most, where governmental leaders have recognized the importance of programs and projects, and therefore project management competency, to national interests. The most recognizable today may be Canada, China and the United Kingdom (UK).

Canada has a long history of attention to major projects, project management excellence, and project management governance and oversight. As an example, the Government of Canada created a Major Projects Management Office (MPMO) to overcome delays and a lack of coordination in Canada's regulatory system in 2007. The Honorable **Gary Lunn**, Canada's Minister of Natural Resources, announced the program on October 1 in Vancouver, BC. The new MPMO was part of a \$150 million initiative to improve Canada's efforts to protect the environment and improve the competitiveness of Canada's resource industries. [10]

According to their website, "The MPMO is a Government of Canada organization whose role is to provide overarching project management and accountability for

major resource projects in the federal regulatory review process, and to facilitate improvements to the regulatory system for major resource projects. The MPMO, working collaboratively with federal departments and agencies, serves as a single window into the federal regulatory process, and complements the technical discussions between proponents and regulators. The Office provides guidance to project proponents and other stakeholders, coordinates project agreements and timelines between federal departments and agencies, and tracks and monitors the progression of major resource projects through the federal regulatory review process. The Office also investigates and identifies short- and longer-term solutions to improve the performance of the federal environmental assessment and regulatory process for major resource projects.” [11]

In China, where major projects have been part of the countries history for centuries, the national government has embraced better project management as a national priority. This was even before the ramp up in Beijing for the 2008 Summer Olympics, which were such a stunning success (and set of showcase projects).

According to **Luxi Zhu**, “As in other parts of the world, project management is no longer limited to construction but has been adopted in most economic sectors in China. To a certain extent, credit for this belongs to the World Bank. The World Bank offered a number of training programmes in Beijing, Dalian and Shanghai, aimed at improving the project management capability of China. In July 1994, [IBRD](#) made an



IDF (Institutional Development Facility) grant in an amount of US\$478,000 to China for the development of project management training capability, and the establishment of an institutional framework for such training... Immediately after the training programme a training network was formed with five major universities in Beijing, Tianjin, Shanghai and Xi'an, aiming at training project managers and specialists throughout the country on a regular basis.” [12]

The Ministry of Construction (MOC) has been playing a leading role in promoting project management in China...The MOC launched a number of reform programmes in 1984, aiming to raise the efficiency and effectiveness of the state-owned construction enterprises and the construction industry as a whole... The Construction Project Management Committee (CPMC) was formed under the China Construction Industry Association in 1994... One hundred and forty educational institutions or training centres had been accredited by MOC as project management training providers up to the end of 1995. During the same period, 321,983 project managers took the training courses and 297,774 of them were certified by the MOC. There are now about 500,000 project managers in total certified by the MOC. [13]

PMI has made a significant push to promote project management and PMI's project management standards and certifications in China and has opened regional offices in both Beijing and Hong Kong. PMI signed a cooperative accord with the China National Steering Committee of Professional Education of Master of Engineering (SCME) on 7 March, 2008. The SCME oversees a national consortium of 103 higher education institutions that have been authorised by the Chinese government to offer masters of engineering degree programmes in project management. With China's rapid expansion in the construction, information technology, manufacturing and aeronautics industries, the government has committed significant resources to ensuring the availability of competent project managers to serve current and future projects. Currently, more than 14,000 students are enrolled in engineering master's degree programmes in project management in China.. [14]

According to one PM in China blog, "in Sept 2002 the Ministry of Labor and Social Security promulgated the National Standards for Project Management Professionals in China (CPMP) which forms the basis for CPMP certification. The first National Examination for CPMP Certification was held in Dec 2003 and those who want to apply for the certificate have to attend a one-week training programme offered by agents authorised by the MOLSS and take the 5 hour National Examination for CPMP Certification. According to research, the number of project managers who got a Class a certificate in China is 106,091." [15]



In Great Britain, the UK's Office of Government Commerce (OGC) has been charged with coordinating programme and project management policies, guidelines and standards. According to the OGC's website, "Many of Government's key policies are delivered through major, large-scale programmes and projects, requiring the investment of significant resource by Departments. OGC's goal is to positively

impact on the outcome of these major projects, and contribute to a measurable improvement in the overall health of the Government project portfolio. OGC supports Departments in a number of ways: regular reporting on the most critical programmes and projects; through the OGC Gateway™ process, including an indication of 'delivery confidence' for a project; and, providing a number of best practice tools and products for the Government Programme and Project Management community." [16]

I have been told that a few years ago, then Prime Minister **Tony Blair**, addressing senior government leaders, told them that they must all become experts in programme management, as that is where future investment and achievements will be. Throughout the UK, many leading universities now have research and graduate programs in programme and project management. Some of the world's leading

project management academic researchers, educators and professional leaders are in the UK, including Professors Peter Morris, Rodney Turner, and others. They are the authors of some of the best known textbooks on the topic of programme and project management. In 2007, Oxford University's Said School of Management announced the formation of the BT Centre for Major Programme Management and, in January 2009, that Professor Brent Flyvbjerg, one of the world's leading authorities on large infrastructure projects, as new chair, effective 1 April. [17] Other similar programs exist at UC London, University of Manchester and other major universities in the UK.

Project Management Competency should be a National Priority

Now it seems rather logical that organizations that can accomplish more with less, and those who can accomplish program and project goals more effectively and more quickly, will be more successful. It seems equally logical that where programs and projects exist, the application of modern proven project management principles and best practices will lead to more success, with projects and programs accomplished within financial, schedule and other constraints. It seems reasonable to expect well managed projects and programs to use fewer resources, and to have fewer problems, less negative impact on society, more positive results by all measures. This, after all, was why modern project and program management have evolved and why more organizations worldwide are embracing these approaches.

In industry, the driving value of project management is measured on "the bottom line", by contributions to cost savings, less time to market, more profitability and competitive success. While governments have other objectives, include the creation of public goods and services, they should also be driven to use best practices to maximize efficiency and success.

If both industry and governmental organizations can mature in the use and competencies associated with modern program and project management, then it seems both logical and reasonable to expect more positive outcomes. If government leaders embrace government-wide initiatives to broadly improve project management competency, then the benefits should be equally broad. Productivity will be raised, more will be achieved with fewer resources, national priorities will be achieved faster and more effectively, and the nation strengthened. This same argument applies to states and cities. That is to say, better project management should be a national priority if higher achievement is a goal.

Good luck with your projects!

David L. Pells
Managing Editor

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David L. Pells
Managing Editor
PM World Today
PMForum, Inc.



David L. Pells is the Managing Editor of *PM World Today* and of www.pmforum.org, one of the world's leading online sources of project management news and information. David is an internationally recognized leader in the field of professional project management, with over thirty years' experience in project management. His professional experience includes a wide variety of programs and projects, including engineering, construction, transit, defense and high technology, and project sizes ranging from several thousand to ten billion dollars. He served on the board of directors of the Project Management Institute (PMI®) twice, and was awarded PMI's Person of the Year award in 1998 and Fellow Award in 1999. He has published widely and speaks at PM conferences and events worldwide. David can be reached via email at: editor@pmforum.org