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Global Business Intelligence for Managers
David L. Pells
Editorial

Global Business Intelligence for Managers of Programs, Projects and Project-oriented Organizations

By *David L. Pells*

Introduction

A decade ago, I explored the subject of the impact of global trends and events on the project management profession with papers presented at PMI's annual conferences in Long Beach (1998) [1] and Philadelphia (1999) [2], and at the PMI South Africa conference in Johannesburg, South Africa (1999) [3]. During the development of those themes, I outlined a model for systematically evaluating major developments and trends in such subject areas as wars and international relations; national and global politics; global, regional and local economies; industries, including mergers and acquisitions; technology; social changes; and natural disasters and refugee crises.

Over the last ten years, the field of business intelligence (BI) has matured, but has not yet been widely applied in the program and project management field. There is little literature on the topic. With continued globalization of economies, politics and society, and in the context of the global economic situation today, it is now time to reconsider the subject. At the same time, the pace of change seems to be accelerating in so many aspects of business and society. Futurists and those offering scenario planning to corporate and government leaders are gaining popularity. Such books as *Future Shock* and *The Third Wave* by Alvin Toffler, *Mega Trends* by John Naisbitt, and other similar books predicting future trends for business are no longer adequate, in my opinion, although they get us thinking in the right ways. We need a new perspective, a new way for thinking about change and the future in order to be better prepared. We also need better decision making models. This is especially true for project-oriented organizations, but also for managers of large programs and projects with multiple stakeholders located in different places.

This paper contains some of my thoughts on these topics, and why they should be taken more seriously by executives, program and project managers, and organizations. This covers such related topics as business intelligence, environmental scanning, trend analysis, stakeholder relations and risk management. These can all be directly related to program and project management. But this is a more advanced topic than basic project planning and scheduling; it is therefore addressed to senior executives and experienced program and project managers.

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Business Intelligence – the Context & Current Limitations

According to Wikipedia, Business intelligence (BI) refers to skills, technologies, applications and practices used to help a business acquire a better understanding of its commercial context. Business intelligence may also refer to the collected information itself. BI technologies provide historical, current, and predictive views of business operations. Common functions of business intelligence technologies are reporting, OLAP, analytics, data mining, business performance management, benchmarks, text mining, and predictive analytics. Business intelligence often aims to support better business decision-making. Thus a BI system can be called a decision support system (DSS). [4]

According to Gartner, in a press release issued prior to their January 2009 BI Conference in Europe, "Through 2012, more than 35 per cent of the top 5,000 global companies will regularly fail to make insightful decisions about significant changes in their business and markets." [5] If Gartner is predicting that 35% of the world's biggest companies fail to fully assess their business environments, then the portion of smaller organizations that fail to do so must be much greater. I know of very few program and project management offices that systematically scan the market, business, economic, political and social environments for changes that might affect their programs and projects.

According to mirum.net, some other definitions of BI include (a) BI is a broad category of application programs and technologies for gathering, storing, analyzing, and providing access to data to help enterprise users make better business decisions. BI applications include the activities of decision support, query and reporting, online analytical processing (OLAP), statistical analysis, forecasting, and data mining; (b) a popularized, umbrella term used to describe a set of concepts and methods to improve business decision making by using fact-based support systems. The term is sometimes used interchangeably with briefing books and executive information systems; and (c) normally describes the result of in-depth analysis of detailed business data. Includes database and application technologies, as well as analysis practices. Sometimes used synonymously with "decision support," though business intelligence is technically much broader, potentially encompassing knowledge management, enterprise resource planning, and data mining, among other practices. ... [6]

These definitions all focus on the narrow issues of business performance, competitive analysis, market trends, customer relations and very industry-specific data mining, analysis and communications. The orientation is narrow, often focused internally. It seems to me that BI has been hijacked by information technology (IT) software and consulting companies. When conducting a web search on the topic of BI, one finds millions of entries, with a majority related to BI

software and services, led by big names in the industry such as Accenture, HP, IBM, Microsoft, Oracle and SAP, among others.

I found one good exception in an article by Steve Miller on his OpenBI Forum, in an editorial article entitled "The Harvard Business Review and BI." Mr. Miller rightly argues that many of the articles published in the HBR in fact contain quite a lot of business intelligence, or information directly or indirectly related to BI. This is due to the fact that, in my opinion, BI should be applied to all issues, both internal and external, that can affect the failure, success or survival of the enterprise. [7]

Current limitations to BI therefore include the following:

- BI is currently too narrowly defined
- BI is too focused on data and information processing – rather than "intelligence"
- BI does not currently seem to address much non-business information
- BI does not provide good information for project-oriented organizations
- BI is not broadly seen as a tool for program and project managers
- BI does not seem responsive enough – i.e. immediate feedback on a major event that might impact the organization
- BI does not support responsive decision-making models

These are a few complaints that come to mind, but it is nowhere near the full set of problems and weaknesses associated with current approaches. I would like to propose a new "Global Business Intelligence" that identifies, monitors and communicates information associated with major developments and trends in various categories that can affect, either negatively or positively, the future of an enterprise. Of course, my focus is on project-oriented enterprises, including programs and projects; but since I think a majority of organizations are moving towards project-oriented business models, this focus might soon cover a majority of organizations. Certainly most government agencies should be in this category already, as they deliver services via programs and projects.

Potential Issues for Programs and Projects

Here are some reasons why executives and managers should care about this topic:

Project teams consist of human beings – anything that can affect the motivation, productivity, security or lives of your employees and team members should be of interest, including those factors that can affect them both at the office and at home. What is the affect, for example, of the global economic crisis this year on the lives of your project team, or those working for your contractors? How have external events and issues affected the ability of those people to deliver the project on time and performance goals? What risks have changed?

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Programs and projects are performed by organizations – how have the organizations involved with your project, either at the top level or in the supply chain, been affected by external economic, market, political or social changes? If the customer for your program or project is internal, how might external events affect the health of the enterprise, and how might that affect your project and team? If market conditions change, does your project still have the same portfolio value, or the same priority, to continue justifying the same budget or use of scarce resources?

All programs and projects have external stakeholders – customers, partners, government agencies, suppliers, the general public. How have they been affected by major events or trends, and how does that potentially impact on your program, project or organization? For example, if your project is to create a product or service for a customer in a specific industry, and that industry has been seriously affected by the current economic downturn, your project might be at high risk.

All programs and projects today involve technology – either as a product of the project or used during implementation. What assumptions have been used for planning your programs and projects? What advances or changes in underlying technology, including both hardware and software, are occurring as we speak that might affect your organization, the final products of your project, or the tools being used to perform project work? Do those changes also give your competitors a new advantage? What opportunities can new technology offer to your project or team?

And what about the Supply Chain? How are your suppliers affected by economic and/or political changes? What if a natural disaster strikes somewhere in the world, disrupting shipping services? This is a critical issue in the international construction, infrastructure, oil & gas and logistics industries, among others. By mid-2008, when energy costs skyrocketed leading to dramatic increases in the cost of construction materials and supplies, many major programs and projects were delayed or even cancelled. The same has now happened due to lack of financing, economic impact on owners and customers, and various related problems.

What about cost and schedule? What are the issues, both internal and external, that can affect project costs and schedule performance? Resource costs and availability can be affected by economic, political and other factors. Regulatory changes can affect many programs and projects, adding costs and delaying startup of facilities and services. In the USA, the changes in various US government agencies during the Obama Administration's transition into power in early 2009 had an impact on programs and projects within those agencies, as decisions were delayed and as policy and regulatory changes emerged. Major political changes in

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any country can affect local industries, programs and projects. The questions for managers are, how will his or her project be affected? What are the opportunities or risks? Will the program be delayed? Should we employ different advisors or resources? Should we shift our suppliers or project team to another location? Etc.

There are many other questions. This was just a sample.

Potential Categories for Analysis

Global Business Intelligence for programs, projects and project-oriented organizations should be aimed at some of the same general subject areas as broad risk management. For example, many risk management approaches suggest a systematic review of risks and opportunities in such broad subjects as business and market risks, technical risks, personnel risks, organizational risks, economic risks, political risks, financial risks, etc.

In my 1998 and 1999 papers, I suggested the following categories: (1) war and geo-politics; (2) global and national politics; (3) the global economy; (4) mergers and acquisitions; (5) technology; (6) social changes; and (7) natural disasters and the refugee crisis. [3] At the time, these represented categories where major events, changes and trends were occurring that had potentially significant impacts on project management professional organizations.

Today, I might suggest the following categories for Global Intelligence gathering – focused on identifying and assessing significant change events and trends:

❖ **Business and Industry** – including changes and trends affecting customers, competitors, suppliers, products, pricing, services, etc., and including acquisitions, bankruptcies, mergers, partnerships and other issues. This is the current focus of BI in North America.

❖ **Economic and Market Forces** – the impact of the global economic downturn in late 2008 and the first half of 2009 is an obvious example or how the economy can affect project-oriented organizations, programs and projects. However, equally severe lessons were learned as the price of oil reached an all-time high in July 2008, leading to global price increases in food, fuel, supplies and transportation, in turn leading to shortages and social crisis. And what, for example, is the impact of currency fluctuations, or when the British Pound reaches a nine month high against the dollar.

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❖ **Environment, Global Warming & Extreme Weather** – Environmental concerns affect all programs and projects now; the green economy is emerging, creating opportunities; long term environmental and climate changes are affecting markets and organizations; droughts, fires, floods, hurricanes, tornadoes and combinations create crisis and affect many; stakeholders are often involved or care.

❖ **Geo-politics & International Relations** (including conflicts) – political and economic relations between and among nations and political leaders can create opportunities or cause problems. Ask any American oil company that has worked in Russia, Russian project manager working in Africa, hotel developer watching Cuba, Brazilian power industry executive interested in other South American markets, etc. etc. How do conflicts or wars affect natural resource, infrastructure, agriculture, power or social programs and projects in the horn of Africa, or in Afghanistan, Georgia, Korea, Nepal, Pakistan or Turkey?

❖ **Government and Political Changes** – political changes can have a dramatic impact on programs and projects funded by government, at the national, state and city levels. Peaceful changes in America, Britain and other countries can have major impacts; military coups or the overthrow of governments will have an even greater impact on programs and projects, especially those owned or financed by international investors. Long term political trends must be taken into account if doing business in that country.

❖ **Global Security** – global security threats and issues are now an important issue affecting organizations, programs and projects worldwide. Every project, no matter how simple, small or local, must incorporate information security plans and procedures. Security issues include new viruses and virus protection software, internet security, international and local terrorism, identity theft, and physical security to protect against criminals. The Obama Administration announced this week the formation of an Information Security Plan for the United States and the appointment of a national Information Security "Czar" – does that affect your program or project?

❖ **Society** (including demographics, culture, lifestyles, health, education) – changing social conditions in any location worldwide affect the people living and working there. How do new developments, deteriorating living conditions, cost of living changes, food shortages, health care improvements, availability or lack of good schools, local diseases (AIDs, for example), affect your project teams? How does the aging population or other demographic changes affect your staffing plans for a country?

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❖ **Technology** – technology permeates organizations and activities today. For IT, software, telecoms and other technology projects, the potential impact of technology changes would appear obvious. But what if the project is to develop a new product, processing plant, aircraft, power plant, semiconductor facility, weapons or defense system, satellite or spacecraft, where technology changes can affect designs, performance, costs, schedules and operations? A dramatic technology change can make a product obsolete before the project is even finished. It might be a good idea to know about such technology developments as soon as possible, along with their potential impact on your program or project.

Obviously, some of these categories will be more or less relevant to your organization or project than others. There may be other categories to consider, or one might separate one or more of the above into sub-categories. The main point is to establish a framework for monitoring the environment, and the impact on your organization, program or project of major trends and significant events.

Environmental Scanning – The Art & Science

According to the online businessdirectory.com, Environmental Scanning is defined as "careful monitoring of a firm's internal and external environments for detecting early signs of opportunities and threats that may influence its current and future plans." [8]

According to dictionary.bnet.com, environmental scanning is "the monitoring of changes in the external environment in which an organization operates in order to identify threats and opportunities for the future and maintain competitive advantage. The process of environmental scanning includes gathering information on an organization's competitors, markets, customers, and suppliers; carrying out a PEST analysis of social, economic, technological, and political factors that may affect the organization; and analyzing the implications of this research. Environmental scanning may be undertaken systematically by a dedicated department or unit within an organization or more informally by project groups and may be used in the planning and development of corporate strategy" and is "also known as Environmental Analysis." [9]
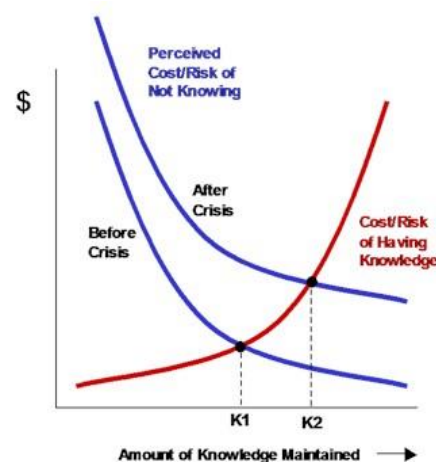
According to Wikipedia, "Environmental scanning is a process of gathering, analyzing, and dispensing information for tactical or strategic purposes. The environmental scanning process entails obtaining both factual and subjective information on the business environments in which a company is operating or considering entering. There are three ways of scanning the business environment: (a) Ad-hoc scanning - Short term, infrequent examinations usually initiated by a crisis; (b) Regular scanning - Studies done on a regular schedule (say, once a

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year); (c) Continuous scanning(also called continuous learning) - continuous structured data collection and processing on a broad range of environmental factors. Most commentators feel that in today's turbulent business environment the best scanning method available is continuous scanning." [10]

By the way, the Wikipedia site contains some good discussion of the issues in some but not all of the categories mentioned above. In all cases, however, environmental scanning, like current BI applications, is discussed primarily in relation to traditional business operations – for example, emphasis on competitive analysis. The focus is not on information needed by program or project managers or project-oriented organizations. Nevertheless, the environmental scanning and analysis processes are the same, to scan the environment for relevant and important information to identify opportunities or threats/risks, with an emphasis on monitoring changes and trends.

A definition closer to the context that I am seeking is "Environmental scanning is the internal communication of external information about issues that may potentially influence an organization's decision-making process. Environmental scanning focuses on the identification of emerging issues, situations, and potential pitfalls that may affect an organization's future. The information gathered, including the events, trends, and relationships that are external to an organization, is provided to key managers within the organization and is used to guide management in future plans. It is used to evaluate an organization's strengths and weaknesses in response to external threats and opportunities. In essence, environmental scanning is a method for identifying, collecting, and translating information about external influences into useful plans and decisions." (Kendra S. Albright, "Environmental Scanning: Radar for Success", Information Management Journal 38 (3), May/June 2004: p. 38) [11]

Dave Pollard provides a good discussion of continuous environmental scanning, as follows: "In their book Jumping the Curve, Imperato & Harari introduce the concept of a Continuous Environmental Scan, which is about using modern technology's 'radar' to harvest a lot of ideas about what is happening in the world in areas (geographical, intellectual, or commercial) that you care about. The best manifestation of this is the RSS Aggregator, which allows you to 'subscribe' to newsfeeds, weblogs, newsletters and additions to websites, and have all the content appear on a single, continuously updated, page. Alas, many of the sources people want to read are

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not available as RSS feeds. And while you can get either titles and headlines only, or complete articles, it is an extra step to then filter the resultant feeds for keywords.

Another approach to doing this is what are called Alerts or Profiles, which allow you to register keywords with a search engine and get daily e-mails sent to you of all news items and new articles containing those keywords. Or, if you use services like My Yahoo, you can have these keyword search results aggregated for you, on a latest-first basis, on one page you can call up when you want. These searches, though they cast a wider net, are not very discriminating, usually returning a lot of irrelevant stuff, and tedious promotional material. Even then, there are a lot of useful sources that aren't online, or are only available for a fee, which your Alerts and Profiles will miss." [12]

This is all to say that you must decide what information you want to gather, how frequently, from what sources and in what ways. There are various guides and papers available to provide examples and directions.

A good treatment of this topic can be found in a 2001 paper by Chun Wie Choo of the University of Toronto entitled "Environmental scanning as information seeking and organizational learning," in which he states "*Environmental scanning is the acquisition and use of information about events, trends, and relationships in an organization's external environment, the knowledge of which would assist management in planning the organization's future course of action*." [13]

Trend Spotting (and Analysis) – Predicting the Future

Trend analysis is used in many fields, including investment analysis, economics, business, financial management and even project management. Essentially, it means assessing data or patterns of data over time to determine future directions, rates of change or possible outcomes. There are a wide variety of financial analysis tools and software for analyzing data and statistical trends. Trend analysis based on data mining also offers some interesting results, again where statistics can be used.

For many things, currency exchange rates, labor and materials cost trends, price rises, cost of living indexes, demographic changes, weather patterns, depletion of oil reserves, etc., such statistical trend analysis can produce useful and important information. For other aspects that might be of equal interest, statistical analysis might be less useful – for example, predicting technology changes,

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international relations, political stability or change, social trends, security threats, acquisition opportunities. In these cases, either subjective trend assessments, or a combination of statistical trend analysis with subjective supplements would seem more useful.

In any case, the important point is to identify those issues and categories of information where trends that might affect your organization, program or project. You can then monitor that issue or obtain some trend analysis, either one-off or on a regular basis. For example, if labor rates are trending higher in some country, you might not want to outsource software services for your project in that location.

Disruptive Changes (Significant Events)

A disruptive change is a significant event with drastic consequences. The most obvious examples might be natural disasters based on extreme weather, a cyclone, hurricane or flood, for example. The loss of a company's data center would be a disruptive change for that organization. A change in government, as occurred with the election of Barack Obama as President in the United States in November 2008, is an example of a disruptive political change, in this case with global consequences. Other examples include stock market crash, currency crisis, breakout of war (Russia & Georgia in 2008), new technology breakthrough (iPod), bankruptcy of major corporations (Chrysler, General Motors, Lehman Brothers), major merger or acquisition, disruptive new legislation or regulations (Sarbanes Oxley in USA), outbreak of pandemic disease (H1N1 Flu this year), international belligerence (North Korea declares 1950 truce void in late May 2009), natural resources discovery (oil under the arctic), etc. The list goes on.

Disruptive events can change your market, industry, organization, program and project, by changing the entire environment within which you are working. While many such events cannot be predicted, executives should be prepared to respond.

Responsive Decision Support Models Needed

According to Wikipedia again, responses when an issue is detected through environmental scanning can include: (1) opposition strategy - try to influence the environmental forces so as to negate their impact - this is only successful where you have some control over the environmental variable in question; (2) adaptation strategy - adapt your marketing plan to the new environmental conditions; (3) offensive strategy - try to turn the new influence into an advantage - quick response can give you a competitive advantage; (4) redeployment strategy - redeploy your assets into another industry; (5) contingency strategies - determine a broad range of possible reactions - find substitutes; and (6) passive strategy - no response - study the situation further. [10]

I think a more robust decision support model is needed. In order to use "intelligence" gathered through the above processes, organizations and executives

need one or more decision support models and systems. I suggest a three-dimensional model that includes the following elements:

➢ **Structural Dimension** – an organizational model that identifies and defines relations between the organization/program/project with various stakeholders (partners, employees, customers, contractors and suppliers, government agencies, etc.), in all geographic locations where the entity has interests or can be affected. This "stakeholder tree" should identify relationships, key decision makers, communication channels, issues and risks. When a negative or positive event occurs, and a decision or action is needed, managers and executives must know who to contact and how to do so.

➢ **Operational Dimension** – a decision support process for actions and decisions that must be taken immediately when a significant change event occurs, for example, a natural disaster, war or international conflict, dramatic political change, economic crisis, merger or acquisition in the industry, dramatic price change in the market, supply bottleneck, human tragedy, funding event, regulatory change, technology breakthrough, and so on. First and foremost, program and project managers should understand that immediate action may be needed at some point in response to a significant development.

➢ **Strategic Dimension** – a way to incorporate new intelligence into the strategic planning process is also needed. That is, how should significant trends be incorporated into near and long term plans and actions? Here again, developments and trends in the business, economic, political, social and technological spheres may dictate changes – projects may need to be replanned, rescheduled or cancelled; new projects may be needed; different resources used; new organizational strategies adapted; or even organizational changes implemented.

This seems logical, but how many organizations actually have a decision support model or process tied directly to a global intelligence gathering or analysis function? This might be common in some global energy, construction, oil & gas, manufacturing and logistics organizations. But very few program or project managers worry on a systematic basis about these things.

Value to Project-oriented Organizations

The two most obvious aspects of program and project management that are directly related to environmental scanning, trend analysis and global business intelligence may be risk management and stakeholder management. As with those two project management functions, the value is created through reduced risks, reduced costs, reduced stress and higher probabilities of success. When potential opportunities are considered, the benefits can be considerable, including increased funding, lower costs, higher profitability and other immediate rewards.

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When stakeholders are considered, it becomes much easier to monitor and respond to stakeholder interests if you are aware of how they may be affected by major events or trends, and how your relationships with them are affected. That awareness can lead to much greater responsiveness to stakeholder needs – including those of employees, sponsors, investors, suppliers, partners and others. Benefits to project managers and company executives can include happier customers (who can bring more business), suppliers (who provide better prices and services), regulators (can provide greater flexibility), employees (higher morale and productivity at lower costs), and general public (in some cases).

In the long run, benefits can include greater stability, better operational and strategic planning, fewer serious problems, less stress, happier stakeholders, higher productivity and, in the end, greater profitability.

New Now What Next?

Change is constant, and occurring more rapidly in all aspects of our lives and in the lives of our programs and projects. While we might not be able to predict the future very well yet, we can all take steps to increase awareness of the major changes occurring around us that might affect our organizations, programs and projects. The following is a natural sequence in the process of improving global business intelligence:

- ➤ Increased Awareness
- ➤ More systematic intelligence gathering
- ➤ Use of business intelligence software and systems
- ➤ Implement formal Environmental Scanning & BI during Strategic Planning process – implement Decision Support Models
- ➤ Establish Intelligence Analyst position/function to systematically populate models with information and ensure internal communications
- ➤ Establish processes and culture for Continuous Learning –

Eventually, we might get better at influencing the future, reducing more risks and helping ensure more successful completion of our programs and projects. In the meantime, we need to keep our ears and eyes open, identify significant events and trends that might impact our projects, and develop more systematic methods for gathering and using real intelligence.

Good luck with your projects!

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References

1. Pells, David L., "*Global Tides of Change: Significant Recent Events and Trends Affecting Globalization of the Project Management Profession*," Proceedings of the PMI'98 Project Management Symposium: Tides of Change, Long Beach, California, USA, October 9-15, 1998. (Also included in "The Future of Project Management", published by PMI in 1999)

2. Pells, David L., "*Global Impact: How Global Events & Trends Might Affect the PM Profession Worldwide*," Proceedings of the PMI'99 Seminars/Symposium, Philadelphia, Pennsylvania, USA; November 1999

3. Pells, David L., "*Aftershocks: How Significant Global Events Can Affect the Project Management Profession*;" Proceedings of the PMI South Africa International Project Management Conference; Gauteng, Johannesburg, South Africa; November 1999.

4. http://en.wikipedia.org/wiki/Business_intelligence

5. http://www.gartner.com/it/page.jsp?id=856714

6. http://competitive-intelligence.mirum.net/business-intelligence/definition-business-intelligence.html

7. Miller, Steve, "*The Harvard Business Review and BI*", February 22, 2007; http://www.information-management.com/news/1076651-1.html

8. http://www.businessdictionary.com/definition/environmental-scanning.html

9. http://dictionary.bnet.com/definition/environmental+scanning.html

10.   http://en.wikipedia.org/wiki/Environmental_scanning

11.   http://scanblog.blogspot.com/2005/07/environmental-scanning-pt-2.html

12.   http://blogs.salon.com/0002007/2005/04/25.html

13.   http://information.net/ir/7-1/paper112.html

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About the Author

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David L. Pells is Managing Editor of the **PM World Journal** (www.pmworldjournal.net) and Managing Director of the PM World Library (www.pmworldlibrary.net). David is an internationally recognized leader in the field of professional project management with more than 35 years of experience on a variety of programs and projects, including engineering, construction, energy, defense, transit, technology and nuclear security, and project sizes ranging from thousands to billions of dollars. He has been an active professional leader in the United States since the 1980s, serving on the board of directors of the Project Management Institute (PMI®) twice. He was founder and chair of the Global Project Management Forum (1995-2000), an annual meeting of leaders of PM associations from around the world.

David was awarded PMI's Person of the Year award in 1998 and Fellow Award, PMI's highest honor, in 1999. He is also an Honorary Fellow of the Association for Project Management (APM) in the UK; Project Management Associates (PMA - India); and Russian Project Management Association. Since 2010 he is an honorary member of the Project Management Association of Nepal. From June 2006 until March 2012, he was the managing editor of PM World Today. He occasionally provides high level advisory services for major programs, global organizations and the U.S. federal government. David has a BA in Business Administration from the University of Washington and a Master's degree in business from Idaho State University in the USA. He has published widely, spoken at conferences and events worldwide, and can be contacted at editor@pmworldjournal.net.

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