

## **Program Management Improvement Team: A Best Practice Based Approach to Process Improvement and Program Governance at the National Nuclear Security Administration<sup>1</sup>**

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### ABSTRACT

The National Nuclear Security Administration (NNSA), a semi-autonomous agency within the U.S. Department of Energy, applies technical capabilities to global nuclear security challenges. NNSA's strategic goals are to maintain and enhance the safety, security, reliability and performance of the U.S. nuclear weapons stockpile without nuclear testing; work to reduce global danger from weapons of mass destruction; provide the U.S. Navy with safe and effective nuclear propulsion; and respond to nuclear and radiological emergencies in the U.S. and abroad. NNSA's Office of Safety, Infrastructure and Operations (NA-50) plans, directs and oversees the maintenance, operation and modernization of infrastructure and facilities at eight NNSA sites. With an annual budget of approximately \$1.5 billion, NA-50 plans, funds, directs and oversees many projects ranging in size and complexity each year.

In September 2015, NA-50 established a Program Management Improvement Team (PMIT) to enhance program, portfolio and project performance through the identification, development and sharing of best practices and to help ensure the achievement of cost-effective, timely, measurable and quality results in support of the NNSA mission. The PMIT is comprised of a small cadre of private industry program management experts who meet with NA-50 federal program managers quarterly to discuss and share successful leading-edge program management practices. This paper will describe the purpose, activities and results to date of the NNSA's PMIT.

### **SCOPE OF NNSA'S INFRASTRUCTURE RESPONSIBILITIES**

The NNSA enterprise consists of more than 6,000 facilities located at eight sites in seven states. The primary NNSA sites are:

- Kansas City National Security Campus (Missouri)

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<sup>1</sup> *Second Editions are previously published papers that have continued relevance in today's project management world, or which were originally published in conference proceedings or in a language other than English. Original publication acknowledged; authors retain copyright. This paper was originally presented at the [3<sup>d</sup> annual University of Maryland Project Management Symposium in College Park, Maryland, USA in May 2016](#). It is republished here with the permission of the authors and conference organizers.*

- Lawrence Livermore National Laboratory (California)
- Los Alamos National Laboratory (New Mexico)
- Nevada National Security Site (Nevada)
- Pantex Plant (Texas)
- Sandia National Laboratories (New Mexico)
- Savannah River Site (South Carolina)
- Y-12 National Security Complex (Tennessee)

The \$12.9 billion FY 2017 President's budget request for the NNSA represents an increase of \$360 million, about 3 percent over the FY 2016 appropriations level. With an annual budget of approximately \$1.5 billion, NA-50 is responsible for enabling safe operations, ensuring effective infrastructure and providing enterprise services to NNSA programs and national laboratories, plants and sites to meet the 21<sup>st</sup> Century needs of the NNSA Nuclear Security Enterprise now and in the future.

## **NNSA INFRASTRUCTURE PROJECTS, PROGRAMS, AND PORTFOLIOS**

NA-50 plans, directs and oversees the maintenance, operation and modernization of infrastructure and facilities that comprise a complex enterprise. With over \$50 billion in real property assets, 41,000 employees, 36 million square feet of buildings including 400 nuclear facilities and 2,000 miles of roads on 2,160 square miles of land, the scope of NNSA infrastructure is vast. This enormous effort requires the planning and execution of hundreds of projects within a smaller number of programs, all managed within portfolios of facilities. These facilities include production, fabrication, testing, and secure transportation and storage of nuclear/radioactive materials and equipment, plus very advanced laboratory, computing and communications facilities.

NNSA has the complex challenge of safely operating and modernizing the nuclear security enterprise, a challenge made more difficult as NNSA's infrastructure is failing at an increasing frequency due to its age and condition. Half of NNSA's facilities are over 40 years old, 30 percent date to the Manhattan Project era of 70 years ago, and 12 percent are excess to current needs. Nearly two-thirds of NNSA's aging and brittle infrastructure is less than adequate to meet mission needs. Deferred maintenance is at an all-time high of \$3.67 billion, posing an increasingly unacceptable risk to the safety of workers, the public and the environment. NNSA's capability to achieve programmatic goals obviously depends upon safe and reliable infrastructure.

## **NNSA INFRASTRUCTURE MANAGEMENT CHALLENGES AND SOLUTIONS**

NNSA's sites are managed by experienced private contractor companies, in some cases in partnership with major universities, under the direction of Federal Government personnel in NNSA's Headquarters and Field Offices. The major infrastructure management challenges include:

- The safety of employees, the general public and the environment related to both active and excess facilities, some of which are contaminated
- Allocation of available funds to satisfy conflicting priorities between the overall NNSA mission demands and enterprise safety and operational demands
- Aging facilities, with some buildings dating to the 1940s, combined with a large backlog of deferred maintenance across all sites

The analytical methods and performance measures NNSA used for the 70 years prior to 2015 to drive infrastructure investment decisions were based on financial metrics that did not capture the relative importance or actual condition of facilities. Furthermore, these investment decisions were stove-piped to individual sites, and in some cases individual facilities, resulting in projects that were prioritized based on site-specific criteria rather than being screened systematically at the enterprise level. While this approach did result in maintenance and upgrades for some facilities, it did not factor in or prioritize supporting infrastructure and facilities that are critical to the mission. The deferred maintenance on critical facilities added fragility to mission objectives and the need to find better ways of performing the right maintenance on the right facilities.

NNSA's long term goals include ensuring that infrastructure investments are prioritized at an enterprise level to enable mission results and reduce enterprise risk. In short, the current strategy is to fully consider the long term health of NNSA as an interdependent unit rather than following the historical, sub-system (site-by-site) approach. An enterprise view considers the health of the organization when making investments and NNSA needed to change the processes and develop new tools to support an enterprise-wide prioritization model.

In 2015 NNSA developed innovative management tools to facilitate a data-driven process that leads to risk-informed investment decisions at the enterprise level. These efforts include deploying, for the first time, an NNSA infrastructure Enterprise Risk Management (ERM) methodology that better measures the "consequence to mission" and the "likelihood of the consequence occurring." To measure "consequence," NNSA created a Mission Dependency Index (MDI), combining the impact to mission if the asset were lost, the difficulty to replace the asset, and the interdependency of assets, to calculate a score from 1 to 100. To measure "the likelihood of the consequence occurring," NNSA is deploying the knowledge-based condition

assessment tool BUILDER to compare inspection data against known failure curves to predict system wear and identify the optimal time to invest. The keystone to NNSA's ERM is the G2 Enterprise Management Information System, which NNSA developed to capture and analyze its enterprise information and topology.

## NNSA'S AWARD-WINNING G2 ENTERPRISE MANAGEMENT INFORMATION SYSTEM

The Project Management Institute (PMI®) awarded the initial version of the G2 system a Distinguished Project Award for 2010<sup>2</sup> (the first ever bestowed on a government IT project), in recognition of the speed with which it was created, the uniqueness of the “Agile” development methods used in its creation and refinement, and the management usefulness of the resulting information system. Over the next five plus years the G2 System continued its advanced development and its application to the total NNSA enterprise. It is noteworthy that the Association for Enterprise Information (AFEI)<sup>3</sup> also awarded its 2015 Excellence in Enterprise Information prize to NNSA for the G2 System.<sup>3</sup>

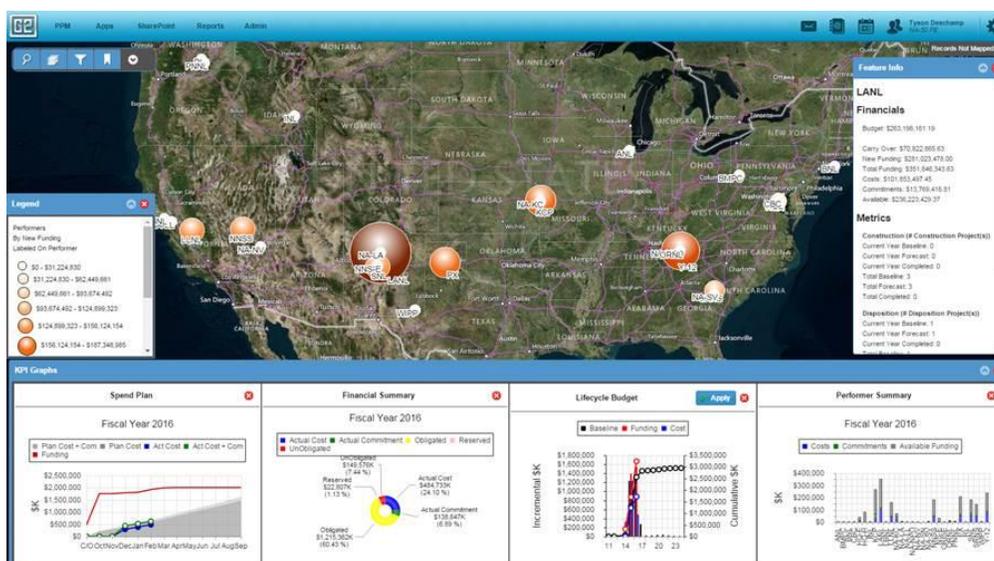


Figure 1. NASA's G2 Enterprise Management Information System uses best-in-class business practices to prioritize and manage scope, schedule, and cost.

It is a monumental effort to change how a \$1.5 billion per year program is managed. The G2 System has helped NNSA revolutionize its infrastructure management and decision-making processes. Each month, G2 enables NNSA to review and analyze data in new and holistic ways.

<sup>2</sup> <http://www.pmi.org/en/About-Us/Press-Releases/PMI-Honors-National-Nuclear-Security-Administration.aspx>

<sup>3</sup> NNSA press release, dated Feb 17, 2016

People are empowered, processes are innovative, and technologies are revolutionized. Using the Agile approach, the G2 System is upgraded every 8 weeks to incorporate new and more powerful features.

For example, the G2 project prioritization tool resulted in a new, innovative process to deliver value and ensure NNSA meets long-term/strategic goals to arrest the declining state of its infrastructure. NNSA reengineered its Recapitalization program management processes, resulting in major improvements in performance and safety. Before G2, it took NNSA months to provide Congress with a complete picture of its Recapitalization program projects. Using G2, NNSA now produces clear, complete and accurate quarterly reports that are sent to Congress within days of each quarter's end. NNSA developed a risk-based Recapitalization prioritization method that the program applied for the formulation of the FY 2017 budget. This was important because NNSA only had enough funds for one-third of the proposed infrastructure projects and needed to make sure the highest priority projects received the limited funds.

### **THE NA-50 PROGRAM MANAGEMENT IMPROVEMENT TEAM (PMIT)**

Based on a previous successful experience using independent program management experts, the NNSA Deputy Associate Administrator for Infrastructure established the PMIT in 2015 to support NA-50's management improvement initiatives. In order to highlight executive sponsorship and to ensure enterprise-wide support, the PMIT was announced in a memo from the NA-50 Associate Administrator to NNSA sites and headquarters leaders in September 2015. That memo included the PMIT charter, as shown below.

#### **PMIT Charter**

##### **Purpose**

Enhance program, portfolio and project performance by sharing best practices including methods, processes and tools for planning, executing and controlling scope, schedule, costs, risks and opportunities. This continual, self-driven improvement will assure that NA-50 achieves cost-effective, timely, measurable and quality results in support of the NNSA mission.

##### **Process**

The PMIT is comprised of a small cadre of private industry program management experts who will meet with NA-50 federal managers quarterly to discuss and share successful leading-edge program management practices. NA-50 may invite M&O Partners, Field Office experts, and others as needed to participate in PMIT meetings. The PMIT will not score/rank NA-50 or M&O Partner performance/practices nor establish new requirements. The PMIT will serve as a no-fault, non-attribution, safe forum to share experiences, discuss examples of successful

initiatives, and provide opportunities to link participants to help one another improve their project, program and portfolio management performance. NA-50 and M&O Partners are encouraged to increase cross-communication and group-learning by openly sharing lessons with the PMIT – both the ones that worked and the ones that didn't work and why.

### **Products**

A Management Best Practices List will be created to identify and share notable best practices. This document will be discussed and updated at PMIT meetings. The “best practices” that will be compiled are meant to be superior and/or unique approaches, not merely good or adequate approaches. If management practices at specific sites are not documented as “best practices” it should not be interpreted to mean those sites are doing less than good sound management practices. Furthermore, the defined “best practices” are not meant to be requirements to be adopted by every site for every situation, but rather a road map that could be used for improvement if applicable to a site.

A PMIT Meeting Report will be developed following each meeting by the PMIT members. The PMIT Meeting Report should include a record of topics discussed and any findings and recommendations the PMIT members may have.

### **Meetings**

PMIT Meetings will be 3-4 times each year, lasting 2-3 days. A draft agenda will be prepared in advance of each PMIT meeting to allow NA-50 to comment on and suggest timely topics and meeting participants. Participants must feel free to openly share management challenges within their respective organization as well as best practices. The host M&O Partner/entity will be given time on the agenda to highlight issues/efforts unique to them.

### **Membership**

The Executive Sponsor for the PMIT is Kenneth Sheely<sup>4</sup> and the Executive Director for the PMIT is Jessica Kunkle<sup>5</sup>. The Executive Sponsor and Executive Director will approve the meeting dates, agendas, locations, and determine what additional participants will be invited to each meeting.

The PMIT member list is as follows:

Wayne Abba – Private sector management expert  
David Pells – Private sector management expert

<sup>4</sup> NNSA Deputy Associate Administrator for Infrastructure (NA-52)

<sup>5</sup> Director of the NA-50 Program Management Office (PMO)

Miles Shepherd – Private sector management expert  
Marc Zocher – Private sector management expert  
Michael Haase – Executive Secretariat <sup>6</sup>

## RESULTS TO DATE

**Meeting Number 1 – December 2015:** The first PMIT meeting was held in December 2015 at Oak Ridge National Laboratory in Tennessee, with approximately 20 participants. Presentations and discussions covered NA-50 mission and plans, tools and systems being employed, enterprise risk management and other topics. In their Outbriefing report, the PMIT highlighted the following very positive observations: strong leadership and teamwork; standardization of processes; excellence of G2 program management information system; and impressive system tools, including MDI, BUILDER, MAP and AMP. They also commended NA-50 for the enterprise perspective, especially related to multi-site planning, stakeholder participation and supply chain management, and for promoting agility as a philosophy and culture. The PMIT recognized NA-50's organizational program and project management (P/PM) maturity, suggesting that NA-50's management approach might also be recognized as a P/PM best practice.

The PMIT identified some potential issues, including sustainability, documentation and institutionalization. Suggestions for consideration included expanding enterprise planning to the strategic level, consideration of long-term strategy for G2, and strategizing for dealing with P/PM on larger projects.

**Meeting Number 2 – February 2016:** The second PMIT meeting was held at Lawrence Livermore National Laboratory (LLNL) in California, in conjunction with “Deep Dive” planning meetings of NA-50 leadership with LLNL managers. Meetings included more than 50 participants. Presentations and discussions covered status, issues, needs and plans associated with facilities and infrastructure at the site. In their Outbriefing report, the PMIT highlighted the following positive observations:

### Best practices at LLNL

- Visible engagement/support of LLNL leadership
- Integration of infrastructure with programs
- Space optimization modeling

### Other positive observations demonstrated by LLNL

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<sup>6</sup> These members are authors of this paper.

- Clear support of NA-50 goals and initiatives
- Active site/lab participation in development of NA-50 tools and solutions
- Use of multiple tools for analysis, prioritization and planning
- Involvement of program staff (critical stakeholders) in infrastructure planning
- Emphasis on future work force and external community during planning

#### Best practices by NA-50

- The Deep Dive approach to engaging with sites (increasing knowledge and teamwork)
- Excellence Awards (NA-50 presented awards to LLNL individuals and teams)
- Enterprise level supply chain management (for cost savings and efficiencies)

#### Other positive observations demonstrated by NA-50

- Visible involvement and commitment of NA-50 leadership
- Active engagement with multiple stakeholders
- Open and frank discussions and communications
- Long term planning rather than focused on annual budgeting
- Enterprise-wide planning rather than individual sites
- Visible emphasis on program, portfolio and project management
- Visible emphasis on risks and risk-informed decisions
- Emphasis on sustainability
- Recognition of tool limitations
- Breaking large projects into smaller sub-projects to reduce risks and facilitate annual budgeting
- Engagement with sites on tool development and pilot projects

The PMIT identified some issues, including potential roadblocks, funding, stakeholder involvement and project management resource availability. Suggestions for consideration included expanding enterprise supply chain management, expanding sustainability to incorporate health and safety, investigation of additional tools, use of six-sigma approaches for selected process improvements, continued emphasis on data quality, expansion of project planning to cover entire facility life cycle, additional emphasis on resilience, more attention on organizational sustainability and possible use of site project management offices.

### **CONCLUSIONS AND LESSONS LEARNED THAT MAY BE USEFUL TO OTHERS**

The PMIT for NNSA's Office of Safety, Infrastructure and Operations is just getting started, but the experience to date suggests some useful lessons that may apply to other organizations and programs.

Positive results have been reinforced from employing traditional best practices such as visible leadership support, active stakeholder engagement, effective communications, emphasis on risk management, thorough planning, and use of good modern software tools and project/program management methodologies.

The independence of the PMIT has also been a positive factor resulting in increased NNSA cross-complex communication and an understanding that PMIT members are looking to share “good practices” rather than an audit or assessment posture at NNSA sites. More importantly, we have already seen evidence of NNSA implementing several best management practices:

- Enterprise-wide approaches to planning, prioritizing and budgeting projects across a large organization involving thousands of facilities
- Enterprise-wide supply chain management, implemented practically through use of pilot projects, selected system procurements and national suppliers
- Adaptation and effective use of best-in-class software tools, some developed by other government agencies, to support both enterprise and site-specific characterization, analysis and prioritization of facilities and infrastructure
- Effective proactive long term planning by a government agency rather than relying on the reactive planning associated with annual budgeting

We think these approaches could be useful to any large government or private enterprise that maintains, upgrades, operates and then disposes of a large number of facilities, buildings or infrastructure.

The PMIT is helping to highlight good practices by NNSA and its site contractors, along with other program management issues that might warrant additional attention in the future.

## REFERENCES

Archibald, Russell D., Wayne Abba, David L. Pells, Miles Shepherd, Marc Zocher, "A Team-based Approach to Continuous Improvement in Program, Project and Portfolio Management: The U. S. Government's Global Threat Reduction Initiative," [PM World Journal, Vol. II, Issue XI – November 2013.](#)

<http://nnsa.energy.gov/>

## About the Authors



### **Wayne F. Abba**

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**Wayne Abba** is an independent consultant specializing in acquisition and program management. His clients include US and foreign government agencies and contractors. He also is a part-time Research Analyst at the Center for Naval Analyses, where he co-authored a 2009 study on using the Rayleigh mathematical model for Earned Value Management planning and analysis. From 1999 to 2004, Wayne was the Vice President for Integrated Management Services with Dekker, Ltd., a provider of software solutions and consulting for project management.

For seventeen years before retiring in 1999, Wayne was the senior program analyst for contract performance management in the Office of the Under Secretary of Defense (Acquisition & Technology). He was awarded the Secretary of Defense Medal for Meritorious Civilian Service in 1993, 1997 and 1999 for leadership in the acceptance of effectively integrated technical, schedule and cost performance management principles throughout the Department of Defense, the federal government, commercial enterprise, and in the governments and industries of friendly foreign countries. He served on the joint government-industry Integrated Program Management Initiative team that received the Department's David Packard Award for Excellence in Acquisition.

Wayne has served on numerous Earned Value and Project Management review teams, and has helped industrial clients prepare for such reviews. His US government work included reviews of Army, Air Force and Navy contractors. He also served on an Australian Department of Defense team that reviewed BAE in UK for the Hawk Lead-In Fighter Trainer program. He performs peer reviews on projects for the National Science Foundation and is an independent program management advisor for the National Nuclear Security Administration (NNSA).

Wayne is a contributing author of the US Government Accountability Office's "Cost Estimating and Assessment Guide: Best Practices for Developing and Managing Capital Program Costs," issued in March 2009, and its companion "Schedule Assessment Guide: Best Practices for Project Schedules," issued in May 2012. He co-authored EVM content in the Project Management Institute's PMBOK® Guide 4<sup>th</sup> Edition. He is one of the world's foremost experts

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Wayne holds a Bachelor of Science degree from the University of the State of New York and a Master of Public Administration degree from The American University. In 1999 his contributions to the advancement of public and private sector project management were recognized by the Project Management Institute's Distinguished Contribution Award and by the Government of Canada. In 2005 he was awarded an honorary fellowship by India's Centre for Excellence in Project Management. He is current president of the College of Performance Management, CPM. He can be contacted at [abbaconsulting@cox.net](mailto:abbaconsulting@cox.net)



### **Russell D. Archibald**

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Now 92, with careers spanning more than 70 years, **Russ Archibald** has had broad international experiences in piloting and designing aircraft and corporate engineering, operations, program and project management. His three project management related careers have been *Military/Aerospace (19 years)*, *Corporate Engineer & Executive (17 years)*, and *Management Consultant (33 years to date)*. Russ has consulted to a wide variety of large and small organizations in 16 countries and he has resided in the USA, France, Mexico, Venezuela, Panama Canal Zone, and Peru with Marion, his wife of 70 years. For the past 23 years they have resided in San Miguel de Allende, Guanajuato, Mexico.

Russ is founding member number 6 of the [Project Management Institute/PMI](http://www.pmi.org), which today has 470,000 members in 205 countries and territories. He presented the first paper, [\*Planning, Scheduling and Controlling the Efforts of Knowledge Workers\*](#), at the formation meeting of PMI in 1969, and was President of the PMI Southern California Chapter in 1991-2, founding member of the PMI Mexico City Chapter in 1996, and in 2006 was awarded the PMI *Jim O'Brien Lifetime Achievement Award*. A PMI Fellow and Certified Project Management Professional, he co-authored with Prof. Dr. Jean-Pierre Debourse the 2011 PMI research report [\*Project Managers as Senior Executives\*](#). He was also a founding member in 1970 and is an Honorary Fellow of the [Association of Project Management](http://www.apm.org.uk) (APM/IPMA-UK).

Russ is co-author with his grandson Shane Archibald of [\*Leading and Managing Innovation-What Every Executive Team Must Know about Project, Program & Portfolio Management\*](#) (2nd edition CRC Press 2015, 1st edition 2013 also published in Italian, Portuguese and Spanish); author of [\*Managing High Technology Programs and Projects\*](#) (3<sup>rd</sup> edition Wiley 2003, also published in Italian, Russian, and Chinese), and co-author of *Network Based Management Information Systems (PERT/CPM)* (Wiley 1967). He has contributed chapters to 15 books edited by others, and presented 88 papers at many PMI, IPMA and other conferences in many countries. He holds BS (U. of Missouri 1948) and MS (U. of Texas 1956) degrees in Mechanical Engineering. Russ was awarded an honorary Ph.D. in *Strategy, Program, and Project Management* from the *Ecole Supérieure de Commerce de Lille* in Lille, France in 2005. See [russarchibald.com](http://russarchibald.com). Russ can be contacted at [russell\\_archibald@yahoo.com](mailto:russell_archibald@yahoo.com)



### **Michael Haase**

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**Michael Haase** has over 21 years of experience in Program Management and Strategic Planning. Mr. Haase currently serves as the manager for headquarters support contracts with the Department of Energy's National Nuclear Security Administration (NNSA) Office of Global Material Security and the Office of Infrastructure and Operations. Mr. Haase has provided program management and policy support to DOE/NNSA programs for the past 21 years focusing on strategic planning, program management, policy analysis and development, budgeting, and communications planning. Mr. Haase is currently President of M-Con Strategic Solutions providing program management consulting services to government clients in the area of program management, strategic planning, and project management support including the U.S. Department of Energy. He is leading program management process improvement efforts for the Office of Radiological Security including development of project work plans for over 40 projects; strategic planning, branding, and outreach efforts; and review and update of program management and policy guidelines. Mr. Haase served on an independent project review team that assessed the Office of Global Material Security program management processes and made recommendations to increase efficiencies and integration across the program. Mr. Haase also provided communications planning and strategic planning support to the NNSA Office of Nuclear Materials Integration and program management support to the NNSA Office of Infrastructure and Operations.

Mr. Haase has previously provided program management support to the Office of Global Threat Reduction, which included development of security strategies to enhance the security of nuclear and radiological materials including coordination of response strategies, interactions with local law enforcement, response training program development, and coordination of table top exercises. He served as Vice President of Aquila Technologies where he directed Washington DC-based government and commercial consulting/ technology programs and served as program manager for initiatives with NNSA for program management and technical support in the area of weapons of mass destruction security including remote monitoring technology solutions. Mr. Haase also has experience serving as a Program Manager for Mele Associates, Canberra Industries, and Booz Allen Hamilton.

Mr. Haase also has experience as a federal manager for U.S. Department of Energy nonproliferation program from 1993-2000. Mr. Haase served as a Division Director for the Office of International Material Protection and Cooperation where he managed a \$65M U.S. nonproliferation program aimed at securing weapons-grade nuclear material at 20 civilian and military nuclear sites in Russia. Prior to that he was a Foreign Affairs Specialist for the Russia/Newly Independent States Nuclear Material Security Task Force and Office of International Safeguards where he initiated and coordinated national security projects in Russia, Belarus, Latvia, Lithuania, Georgia, and Uzbekistan including implementation of nuclear security, control and accounting system projects at over 20 nuclear facilities. Mr. Haase holds a Master of Public Policy from Georgetown University. He can be contacted at [michaelhaase@mconsolutions.com](mailto:michaelhaase@mconsolutions.com)



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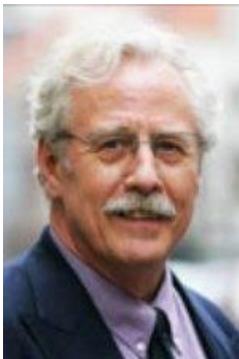
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Management Forum (1996-1998). Mr. Pells was awarded PMI's Person-of-the-Year Award in 1998 and highest award, the PMI Fellow Award, in 1999. He is an Honorary Fellow of the Association for Project Management (UK), Project Management Associates (India), and Russian Project Management Association. Mr. Pells has a BA in business administration from the University of Washington and an MBA from Idaho State University, USA. He lives in Addison, Texas, USA.

Career highlights include: Executive Advisor for multi-billion \$, multi-national Global Threat Reduction Initiative for the National Nuclear Security Administration (NNSA), US Department of Energy (DOE); Senior advisor to Sandia National Lab, Los Alamos National Lab, Savannah River National Lab and Oak Ridge National Lab on nuclear security and other programs; Executive advisor on multi-billion \$ transit programs in Dallas and Seattle; Member of mobilization team & first manager of project management systems for Superconducting Super Collider (green-field, 10-year, \$10B+ project for US DOE); Program manager, project management process improvements, and advisor on several of DOE's largest projects at Idaho National Laboratory (INL); Project controls engineer on large international construction projects; Program controls on two major projects for US Department of Defense; Project controls & project management support for design/construction of nuclear reactor, environmental restoration program, Space Nuclear Reactor Project, New Production Reactor Program, low-level radioactive waste storage program for DOE at INL; executive advisor for multi-billion \$ nuclear power plant project in Finland; and currently a program management advisor for NNSA. David is also managing editor of the *PM World Journal* and managing director of the PM World Library. He can be contacted at [pells@pmworldinc.com](mailto:pells@pmworldinc.com) or [editor@pmworldjournal.net](mailto:editor@pmworldjournal.net)



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**Miles Shepherd** has more than 30 years' experience in project and program management gained in Government and international environments in the fields of defense, information technology, nuclear engineering, transport, standards development and quality management. He has taken leadership roles in projects for the UK Government, British Armed Services, Taiwanese Armed Services and the European Commission. His expertise has been developed on a variety of programs including decommissioning of nuclear reactors in the UK and Eastern Europe. He has undertaken assignments in rail safety and business

development projects, a collaborative project for the European Commission to strengthen Governmental accreditation capabilities in Eastern European countries, and the development of post graduate project management education in USA, UK, Taiwan, Greece and Romania.

He holds significant posts with the Association for Project Management (Vice President, and is a past Chairman) and the International Project Management Association (past Chairman of Council and Past President). He was awarded the President's Medal by the Association for Project Management for his contribution to the global project management community, particularly raising capabilities in developing countries. Since 1990, Miles has been a speaker at international project management conferences and meetings in Austria, Belgium, Canada, China, Finland, Germany, Hungary, Iceland, India, Ireland, Italy, Norway, Russia, Slovakia, Sweden, Ukraine United States of America and the United Kingdom.

He has extensive experience in the development of National and International Standards. Currently Chairman of the British Standards Institute Committee on Project Management, he is also Chair of the ISO Committee responsible for the development of project, program and portfolio management standards.

Miles was an Associate Lecturer and research supervisor for the Open University for 15 years and currently supports post graduate students at the University of Manchester and University College London. He has served as a Visiting Fellow at Bournemouth University, and Honorary Senior Research Fellow at University College, London and is a teaching fellow at 5 other universities in UK and Europe. He is a Board Member for PMI's Global Accreditation Center for academic programs. Mr. Shepherd is managing director for MS Projects, Ltd., providing executive PM consulting, quality management, auditing and academic development work; he is an ISO qualified Lead Auditor and acts as Director for Europe, Middle East and Africa for Business Development Institute International. Miles has a BS in Management Systems, Post Graduate Certificates in IT Strategy and Project Management as well as various government and industry certifications. Miles can be contacted at [miles.shepherd@msp-ltd.co.uk](mailto:miles.shepherd@msp-ltd.co.uk)



### **Marc Zoher, PMP**

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Mr. Zoher has over 1,000 classroom hours as an instructor in project management at three universities and for the Project Management Institutes PMP preparation course. He was a contributing author to Hazardous Waste Cost Control (Marcel Dekker, 1993) and was a founding member, NNSA Project Management Improvement Team. Previously, from 2007-2012 Mr. Zoher supported the Global Threat Reduction Initiative (NA-21) providing support as the lead developer of scope, schedule, and budgets for domestic and foreign partner reactor conversion projects, HEU removal projects and domestic protection NA-21 projects. He also was responsible for three revisions of the NA-21 GTRI Program Management Plan and the Strategic Plan and was Responsible for major project efforts including the development and deployment of the initial G2 software platform (> \$2M) in use by NA-21 and the development of NA-21 Program Management Plan for this worldwide effort.

Mr. Zoher has also been President of Morpich Corporation where he was an executive manager for a \$7 million, 20 employee engineering and project management services company working under contract to Oak Ridge National Laboratory, Los Alamos National Laboratory, Argonne National Laboratory, and Pacific Northwest National Laboratory to support the areas of policy development, remediation alternative engineering, business process modeling, nuclear cleanup and waste management, and environmental restoration. Marc can be contacted at [Marc.Zoher@gmail.com](mailto:Marc.Zoher@gmail.com)