

A. C. MACRIS CONSULTANTS

UPDATE

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HIGHLIGHTS

We like to think that each of our UPDATE issues is special. Over the past year or so, we have written about the concepts of the new business reality of Competition, Performance and Protection (C-P-P). In the current world where the term "Resilience" has become business jargon, the time is right to take C-P-P from the conceptual to the applied. The interesting aspect of this transition is the contextual nature of applying C-P-P. Industry specific applications are just that, unique and specific to an industry within the framework of C-P-P. This issue is the first in a series of industry specific discussions of C-P-P. It takes me back to my roots in nuclear power and looks at the industry from a time post de-regulation through the events of 9|11, and Katrina. It highlights how important and pertinent C-P-P is to the leadership of a deregulated and restructured nuclear power generation industry.

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A State of Bliss? - A look at Nuclear Power in Three Dimensions

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Prologue

We are pleased in this issue of Update to bring you hands on, practical perspectives on the application of Compete-Protect-Perform, the three-dimensional contextual framework, which we have discussed in previous editions. Our strategy for validating and translating conceptual models into practical applications relies on the feedback of our readers and colleagues as much as continuing testing and research. Thus, we welcome to this edition Mr. Dana Cooley, of the SeaState Group, an experienced professional with an impressive record of achievement in industry and government. Dana combines a keen intellect, extensive experience and thorough understanding of C-P-P. His insights reflect important lessons learned in the service of his clients.

A State of Bliss – or Something Else?

Nuclear plant operators have finished coping with deregulation. Restructuring and streamlining have started to pay off. Reliability and availability are generally high. The Nuclear Energy Institute lists new nuclear construction planning by Entergy, Southern Company, Progress Energy, Duke, Constellation, and three consortia. If nuclear stations can hold the line on human performance, and avoid hidden equipment issues that surface abruptly, the industry can stay on course, right?

Well, maybe. And what "course" are we talking about, really? World Association of Nuclear Operators (WANO) statistics for U.S. plants show essentially no nuclear safety system performance improvement since 2000. Significant events while sharply lower than in the 1980s have run more or less level since 1998, according to the Nuclear Regulatory Commission. Industrial accidents may be increasing slightly (WANO data) as the use of supplemental personnel rises, while the median refueling outage length hovers at 35-37 days.

Terrorism? While a genuine threat of armed intruders has entered the equation, security still seems like something to "bolt on" to plant perimeters, while the processes inside remain pretty much unaffected.

Nuclear is better now at selecting and developing leaders. That much is on the right track – right?

Where We Actually Are

The day-today challenges of running a commercial nuclear power station are daunting. Operating safely in a potential mine field of regulatory issues is all-consuming for many line managers, who have little time for anything else, including leadership. Priorities aim at producing solutions to emergent situations or addressing the agendas of a multitude of external stakeholders. Fleet-wide “morning calls” discuss little else.

Pro-activity moves to the proverbial back burner, unless you manage a problem plant, in which case fulfilling your “excellence plan” has become a condition of getting off the list. Whether you are a strong or weak performer, even if your business plan gets attention by everyday folks, it probably targets only two of what we believe are the three central dimensions of management: Competition, Performance, and Protection.

Most businesses understand and address Competition and Performance. Because of power generation’s regulated history, performance was its original focal point. Reliable, consistent service to the public was the goal. Back then, the need to “compete” was relatively nonexistent. Willingly or unwillingly, deregulated nuclear plants are competing successfully today. With national capacity factors approaching 90%, nuclear production costs have steadily declined to 1.72 cents per kilowatt-hour (2005 NEI data, quoting Global Energy Decisions). Coal steam electric is a distant second, at 72.6% average capacity factor and 2.21 cents.

Doesn’t an asset as valuable as a nuclear station deserve comprehensive protection from all threats? That’s where traditional business models continue to fail.

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Protection encompasses the totality of everything the organization does (or doesn’t do) to prevent the disruption of its ability to Compete and Perform.

Protection – The Third Key Business Dimension

Notice we are not calling this aspect “security,” at least not the kind that uses fences, video cameras, and motion sensors. Neither is it about “risk management.” Sometimes all you need to offset measurable risks is an insurance policy or two.

Security is a business aspect of Protection, but Protection is much more. In our experience, Protection focuses on winning and achievement, as opposed to loss avoidance. In this context, Protection encompasses the totality of everything the organization does (or doesn’t do) to prevent the disruption of its ability to Compete and Perform. At its best, Protection becomes cultural, and every employee and manager embodies Protection in his or her decisions and actions.

Adding the third dimension, Protection, to traditional business models yields a comprehensive three-dimensional approach to business achievement that is particularly effective in pressure-laden environments. Protection helps mitigate instinctive, shortsighted reactions to stressful conditions by ensuring that short-term ‘solutions’ do not compromise long-term business objectives.

Successful C-P-P Planning

You could gather everyone together and brainstorm: Am I spending resources as best I can? Are there threats or issues I have not considered? Are there uncertainties I used to dismiss but now are rising in importance?

There is a better way, and nuclear plants have an advantage – if only they squeeze it for every insight it can deliver. Many do not. Called by various names depending on the plant or fleet, we are talking about the performance improvement and learning process. It has seven components:

- Corrective action program (problem identification and resolution)
- Operating experience
- Trending
- Self-assessment
- Field/management observation program
- Benchmarking
- Human performance

Nuclear plant people work long hours on performance improvement and learning. Unfortunately, most of their time goes towards satisfying rigid process requirements. Less prevalent are searches for deep insights that “connect the dots” and promote forward-thinking, i.e., Protect. Finishing problem evaluations and getting credit for reaching numerical goals is often the prime motivator. Determining “extent of condition,” a phrase drawn from root cause analysis, almost always runs into resistance, when it should be welcomed as a window that showcases threats against Compete-Perform.

Meanwhile, as nuclear plant experience and additional research show, workers, supervisors, managers, and executives engage in actions and make decisions that undermine each other’s interests and undermine the Protection dimension. This concept was discussed in an earlier issue of Outlook (“Subversive Leadership”) and is fully described under the heading Three Dimensional Dissonance in the [January 2007](#) issue of Simplicity in Design.

What Do We Recommend?

Again we look to nuclear power. The NRC’s Reactor Oversight Program is maturing. Its criteria, all aimed at protecting the radiological health and safety of the public and plant workers, are grouped into seven “cornerstone” areas. Most licensees have found ways to deliver good cornerstone performance and minimize cross-cutting aspects in the small incidents that do occur.

Unfortunately, every licensee in trouble today seemed to be doing very well until things began unraveling. When the collapse came, it was too rapid to arrest. That collapse triggered huge losses in revenue and public confidence, not to mention the long road back.

Then it became painfully clear that, while self-assessment, process improvement, and operating experience application had been on the books, they were often a stepchild to daily operations. Resources went to satisfying immediate needs, often at the cost of increasing long term risks.

Given competitive, tight-budgeted times, this was almost inevitable. Given the safety orientation of the two principal stakeholders, NRC and the Institute of Nuclear Power Operation, it was

reasonable to rank business continuity as a lesser consideration and to take the lumps when they came.

Our Plan

Quietly, steadily, and at rather considerable expense, your performance improvement and learning processes are acquiring data. At some level, that data is being combined into information and going into some kind of display (e.g., trend charts, color-coded “annunciator” boards, etc.). The element most likely to be weak is the conversion of all that information into meaning.

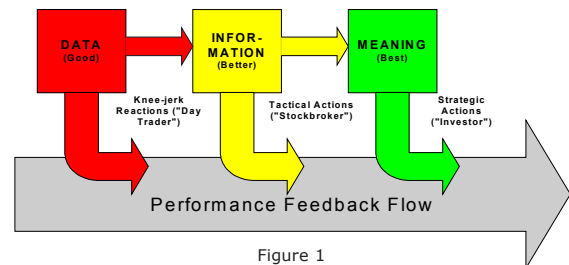


Figure 1

We liken that to the idea of a day trader, a broker, and an investor (see Figure 1). All immerse themselves in the same securities market data, but only the investor makes meaning, and from that makes strategic decisions.

Your duty as an executive, charged with responsibility to Compete-Perform-Protect, is to make sure all the data you paid someone to gather takes on meaning, and that the data producing initiatives satisfy your needs, not just those of the stakeholders who will examine them. You need to ask:

- What else does that series of failed inspections say about my choice of a QA manager?
- Was canceling the outage bonus on a technicality really a sound idea?
- Is the outsourcing partnership with that engineering firm really working?

Even the most highly-motivated performance improvement manager will have difficulty responding to those questions. He or she requires your personal support and encouragement. That manager also needs an outside perspective from a person who is not bound by “the rules” and who will give voice to the difficulty.

We have helped nuclear plants and other complex operations. We can help you, too.

To discuss your specific issues and the benefits you and your organization will realize, please contact us.

- Dana E. Cooley, SeaState Group, Inc. - Dana is a seasoned root cause investigator and team leader with 37 years experience in engineering, heavy construction, environmental protection, and nuclear power. His professional responsibilities have included independent nuclear safety review, event response team leadership, total quality management, and experiential workshop development and delivery. He has been trained in Department of Energy and Institute of Nuclear Power Operations root cause methods as well as specialized techniques developed by Kepner-Tregoe, Performance Improvement International, and System Improvements, Inc. (TapRoot®).

Dana supports executives, corrective action program managers, and performance improvement personnel across the nation. He has been an invited keynote speaker at the American Society for Quality Energy and Environmental Division annual meeting. He contributes regularly to the nuclear Corrective Action Program Owners Group (CAPOG).

He actively designs and delivers experiential adult learning workshops that teach practical problem solving, root cause analysis, investigative interviewing, total quality management, team performance and dynamics, group leadership, facilitation, and innovation. He helps organizations apply SeaState Group's Fix-It-Once® process.

- A. C. (Dean) Macris, A. C. Macris Consultants – Dean has over 30 years consulting experience in the areas of program management, human factors and industrial engineering, training systems design and development, organizational development, managing change, team training and team building, and experimental design. His related professional experience includes extensive applications in systems and task analysis, computer based and internet based training, and human performance improvement seminars such as Leadership, Team Building and Conflict Interventions. Many of these seminars are focused on project teams of large organizations. He has provided programmatic support to senior management for large scale programs involving human performance issues such as man-machine interface systems, training department and program management, and organizational assessments. The industries he has worked with and for include nuclear and non-nuclear utilities, construction, technology, railway, communication, government and legal/insurance.

In light of the national and international challenges of the past six years, Dean has applied his experience and knowledge to develop new and creative models for leadership development as well as enhanced models that address the challenges of a new operating reality. This transition includes technical, procedural, process related and cultural aspects. His combination of a strong engineering background coupled with extensive experience in human performance, represents a unique resource to his clients.

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www.acmacris.com - select the UPDATE icon

- Ozzie Paez, Simplicity Data Systems, L.L.C. – Ozzie is an experienced electrical and systems engineer, who began his career in the civil nuclear power industry, serving in technical, management and project management roles. After a decade in civil nuclear power, he went to work in the US Department of Energy’s Weapons Complex, where he worked in a number of laboratories serving in a variety of roles from systems engineering to software quality assurance and unclassified computer security.

In addition to his work in the nuclear industry, Ozzie brings many years experience working in and supporting communications and information technology projects including network engineering, security, software quality assurance, database design, business process assessment and process re-engineering. He has designed and published technical and business software, and has authored a variety of papers on technology subjects.

Since 9/11, Ozzie has been conducting basic and applied research on terrorism, participating in multiple studies on organizational responses to the terror threat, the radical Islamist movement and their decision-making processes. He has worked closely with Dean Macris on the evolution of new business and organizational models focusing on incorporating threat management within an overall competitive framework. Much of the results of the research and projects have been presented to Federal Law Enforcement, Military Commands and business organizations. They have also been published in academic and practitioner journals. Ozzie is a Certified Information Systems Security Professional and an active member of Denver Infragard where he serves as the Vice-Chief for the Chemical Sector.

Sidebar discussion on Protection

We feel this sidebar discussion on protection is important to understand the importance of the three dimensional model.

Today, Protection is often confused with security, risk mitigation and other activities commonly relegated to technical management levels. This misunderstanding serves to undermine Protection’s primary

contribution to winning and achievement, the protection of those aspects of the organization, which are necessary for it to effectively Compete and Perform.

Protection’s focus is NOT exclusively

connected with security, asset protection, business continuity and disaster recovery, although these are aspects this dimension. Instead, Protection should be thought of as the dimension that focuses on gracefully avoiding disruptions to the organization’s ability to compete and perform, and, where disruptions do occur, ensuring a graceful recovery of all necessary competition and performance related capabilities, assets and functions.

Protection, like the other two dimensions, is stable in approach and highly contextual in application. This means that the general approach for assessing the relative need for protecting specific capabilities, assets and functions is relatively stable, but the driver, factors and other key components of the analysis will be contextually adjusted.

Before Katrina and in the aftermath of 9/11, terrorism and security had become the hot issue. After Katrina, man’s ability to terrorize seemed limited by comparison to nature’s power. Similarly, before Enron became the poster child for corporate malfeasance, financial reporting had become an exercise in investor expectation management.

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These events affected the threat picture by relatively elevating specific aspects in overall importance.

The Protection dimension focuses on the totality of the threat, its implications and its relative importance, which is then used to guide changes in policies, practices, investments and other factors directly related to protecting what the organization requires to compete and perform. In this context, Protection looks beyond current operations to evolving initiatives, future plans and strategies. Thus, its scope transcends operational aspects in focus and time.

Therefore when we speak of Competition, Performance and Protection visualization might be one of a three legged stool. When there is no balance the stool falls. If any one of the three dimensions is focused on more than another an imbalance results. With the imbalance comes instability. With an upset in an instable condition occurs a significant disruption or other failures result. This throws the organization into a reactionary condition and tends to derail normal performance and the ability to be competitive.

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As part of our ongoing research we are conducting a survey titled Industry Perspectives on the Threat of Terrorism. We ask that you visit the links below and spend a few minutes responding to the survey.

Please click on www.acmacris.com or www.simplicitydata.com and scroll down to the link "[Click here to take survey.](#)"

In return for your valued contribution in taking this brief survey, we will offer you the summary results from this important research project.



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