

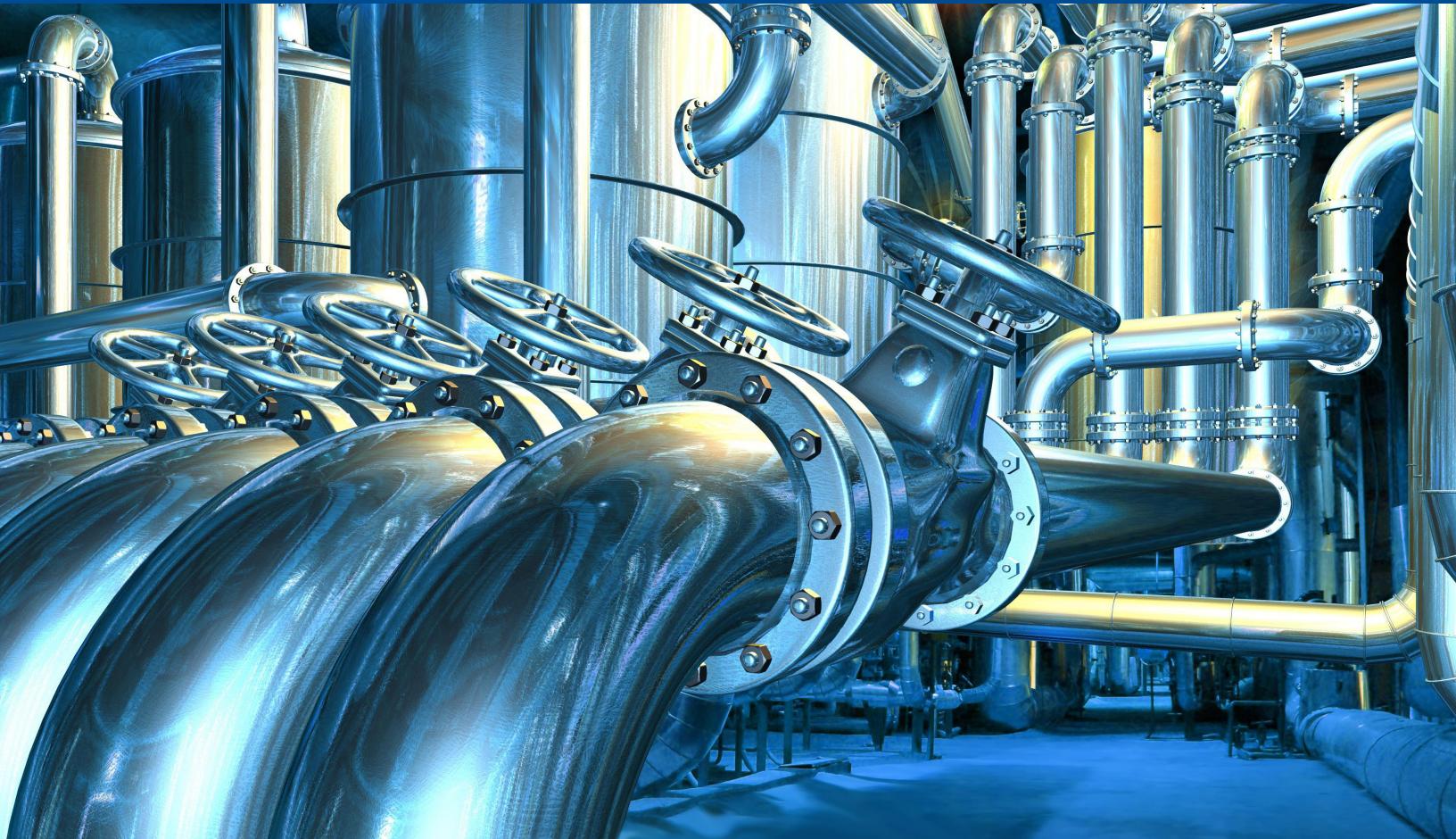
GREY PAPER

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GREATER ORGANIZATIONAL CAPABILITY

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Pilko & Associates Grey Paper

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INTRODUCTION

Reliability conferences and papers appropriately focus on well-known elements of a successful reliability culture. Reliability Management Frameworks, effective preventive maintenance and surveillance programs, Best Practices in hazard recognition and mitigation — combined with focused operational discipline — are important elements that attract lots of attention.

Real-world industry experience points to another critical element required to ensure risk minimization and avoid reliability incidents: the area of “organizational capability” — the ability of the organization to successfully execute defined critical tasks and to integrate the derived information into predictive and preventive measures.

Many organizations believe that simply establishing the elements of risk management and a high reliability culture are sufficient. This premise is a false one.

We have identified three critical elements that directly affect operational reliability and contribute to increased operational excellence and risk control.

I. STAFFING

A North American refinery suffered an unexpected outage due to severe corrosion in the crude column overhead system. The potential for such corrosion was well known; in fact, sections of the overhead system had been metallurgically upgraded over the years as preventive measures. Corrosion monitoring programs were well established.

A Root Cause Investigation revealed that despite the monitoring programs in place, the organization had lost the capability to understand and follow-up on corrosion monitoring protocols. A review found that newly hired engineers were typically assigned to monitor the crude unit. These engineers received little mentoring, as senior technical advisors had been eliminated and were moved out of the jobs so frequently that little chance existed for knowledge development and follow-up. In fact, over a period of a few years, six to seven engineers had been moved through the Crude Unit role with tenures of months rather than years.

The results of this organizational failure to ensure capability and continuity in a key role helped cause an overhead system failure despite robust inspection/monitoring programs. In this case, the desire to move young engineers along quickly to provide breadth of experience came at the expense of the technical depth required to properly monitor corrosion activity. The decision to eliminate the role of senior technical advisor adversely impacted knowledge transfer and follow-up.

2. CONNECTING THE DOTS

In numerous investigations of reliability incidents, information is revealed that should have allowed technical staff to predict a potential problem and implement preventive measures. This problem does not typically occur within a processing unit, rather it occurs when a deviation in one process unit eventually caused a problem downstream — think of BFW quality, changing sulfur distribution or basic crude property changes.

Many organizations have established cross-functional teams to provide technical assurance for specific processing units. In our experience, these teams are effective in managing risks for their specific units, but are not highlighting local deviations that might have downstream impacts.

The result is an organization capability shortfall. The structure and work processes of the cross-functional teams are well-developed and executed; however, knowledge transfer across the teams is poor and often leads to reliability events.

Our approach to address this gap is the assignment of senior operating and technical leaders to “sponsor” each of the cross-functional teams. Their role is to identify risks with potential downstream implications, educate the team and then ensure that the information is properly communicated to the appropriate cross-functional team. Over time, teams improve their ability to identify and highlight potential downstream risks which allows mitigative measures.

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3. CONSISTENT USE OF RISK MATRICES

Most organizations have a risk matrix in place, but its understanding and use vary widely across the site. Risk matrices are typically used to assess current potential hazards and to properly allocate resources. For effective risk management; however, the matrix should be used for all key resource decisions, including capital projects, infrastructure decisions and organizational changes.

Infrastructure management is a key vulnerability for many sites. Not only are these areas typically out of the limelight; they often fall between processing units, resulting in little ownership — think of flare systems, utilities, effluent treatment, etc. How do you decide whether to upgrade a substation, instrument air system or firewater facilities? The risks associated with each of these items should be assessed just as current operating risks are assessed. This work drives current actions and informs the forward business plans.

Without the discipline to address all potential risks in a consistent manner, companies create a real chance that critical risks will be unmitigated. Leadership from the top is required to establish the discipline to follow this approach; and education as to how to use the matrix is required.

GOING THE NEXT STEP

An open question exists in every company and organization, “How have we fallen short in the areas of Organizational Capability?”

Initially, the popular view was that having robust management systems and work processes was sufficient to manage risks. When faced with the findings of such systems and processes; however, Leadership clearly sees that effective risk control can be achieved only with a workforce that is capable of properly executing their roles in the critical work processes — including the ability to “connect the dots” as highlighted above.

To increase Organizational Capability, two areas require attention:

I. Removing Barriers to Success

Our experience shows that effective Organizational Capability is negatively impacted by a number of factors:

- Having the topic considered “soft work,” not fitting an engineering culture
- Avoiding potential major changes to people development that directly impacts succession planning, performance management and lengths of assignments
- Not creating roles and incentives for senior technical leaders at sites to coach young staff and ensure knowledge transfer
- Distraction away from maintaining collective strengths of critical technical groups — i.e. Pressure Equipment Integrity
- Not allocating time to implement changes in a culture where quarterly results drive behaviors

2. Focusing on Key Success Factors

A successful outcome requires approaching Organizational Capability with a commitment to excellence in management systems and work processes, focused on ensuring employee performance to critical risk control activities.

“Soft” issues should be addressed in a “hard” way — with identified priorities, milestones and review mechanisms required for success. Start by taking a “cold eyes” look at the status of these people systems and processes to identify key gaps and priorities (recent RCA’s can be very useful):

- How are young engineers developed?
- What is typical assignment length?
- Are they receiving ongoing coaching from senior staff?
- How is knowledge transfer managed?
- Do performance management practices support desired behaviors on the part of engineers and supervisors?
- How is technical strength maintained in key assurance departments?
- How effectively is information shared and processed?

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At the same time, the examination of critical risk control processes to ensure that they are used properly and consistently across the site is appropriate. Use of a single risk matrix to assess potential risks is one such area. Consistent use of the Management of Change work process is another area of potential concern.

Finally, give Organizational Capability Improvement plans a three to five-year roadmap timeline, embedded in the annual business planning process and outcome. This planning is necessary as Human Resources, Technical Assurance, Finance and other departments will have to align and be supportive of the efforts. And, implement quarterly reviews to ensure progress against key milestones is made and objectives achieved.

PILKO & ASSOCIATES

Pilko & Associates knows Organizational Capability improvement and operational excellence are direct contributors to risk control. Our experience has created industry-leading thought, methods and processes that substantially increases Organizational Capability in diverse operational and regulatory environments.

Pilko & Associates has a number of Advisors who have successfully addressed the challenges of Organizational Capability in complex environments. Each is available to help you understand the challenges and succeed in growing your Organizational Capability to increase operational excellence and risk control.

Leaders depend on the experience, skill, proven Industry Best Practices and **8IGHT DRIVERS® METHODOLOGY** to find, prioritize and eliminate organizational deficiency and “hard” and “soft” risks. You should too.

Calls us today and let's get started on the journey toward Greater Organizational Capability.

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ABOUT PILKO & ASSOCIATES

Pilko & Associates provides industry-focused advisory services in three core areas — Transactions, Operational Excellence and Governance & Assurance — to enhance value for our clients and their stakeholders in the chemical, energy and related sectors. We deliver innovative solutions for publicly and privately-held companies, helping them to identify, understand and manage their Operational Risk and Environmental, Health & Safety needs. For more information, visit www.pilko.com.



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