

GREY PAPER

insights

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Operational Readiness: Incident free, seamless transitions from capital project to reliable operations.



Pilko & Associates Grey Paper

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Pilko & Associates is the industry leading Operational and Environmental, Health, and Safety Risk advisory firm — working with clients in 59 countries and advising on M&A deals worth more than \$600 billion.

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US +1 713 357 1000

pilko.com
700 Louisiana St. | Suite 4500 | Houston, TX 77002
info@pilko.com

INTRODUCTION

Successful capital projects depend on a balance of economic factors, as well as technical design engineering, procurement and tight construction planning and execution.

It's not uncommon for project teams to underestimate – due to incorrect assumptions – how decisions made during project development can impact Operational Readiness.

Disconnects between project development and operations can lead to significant value slippage at transition due to start-up delays, quality problems and rework that contributes to production loss.

Maximizing value recognition from capital project investments requires early attention to Operational Readiness as a key to overall project success.

This Grey Paper focuses on Operational Readiness and details the important considerations that maximize value while increasing Operational Risk control.

WHAT'S THE PROBLEM?

It's really pretty simple. Capital project budget and schedule pressures promote a focus on construction completion, instead of ensuring an optimized operation and maximized production capability.

As a result, during the project, companies struggle to timely and efficiently integrate Operational Readiness requirements within development activities.

The outcome? A compromised Operational Readiness stance that leads to increased Operational Risk, cost and potential incidents.

The good news is that companies can achieve a better outcome.

FIVE KEYS TO OPERATIONAL READINESS

Throughout our decades of hands-on experience with capital projects and operational excellence, we have identified five critical success factors that reduce value loss, Operational Risk and potential for incident:

1. A Well-Defined Vision. The capital construction project team must clearly understand that its role is to deliver a plant that maximizes production capability while lowering operational cost and ongoing risk. The construction project team must have a vision that extends beyond simply delivering the project "on time and on budget." Company, project and operational leadership must share the same vision and ensure that tactical leadership and activities deliver to the vision – from kickoff to turnover.
2. Crisply Defined Success Metrics. Best Practices-based and measurable construction and operational goals and objectives are critical. These metrics should be designed and communicated to ensure proper focus on required operability and capability for safe, incident free and on-time startup, while establishing a foundation for business and enterprise operational excellence.
3. Defined and Agreed Operations Plan. Having the right plan and activities for a successful transition from project to startup - from the very beginning of the project - can help teams avoid costly missteps.
4. Well-Defined Deliverables. Early in the project lifecycle, business, project and operational leadership should align on operational and maintenance deliverables (eg., start-up philosophy, operating plan, maintenance strategy, complete operating and maintenance procedures).
5. Continuous Alignment. Both the project team and operations must work together to establish, communicate and measure the alignment

of project and operational activities and resources to common expectations and required outcomes. This process is not a “one-and-done” activity, but must be reinforced throughout the project and measured for adherence.

Key methods for alignment include workshops, clear role definition, crisp responsibility matrices and well-defined activities, dependencies and owners – backed up by clear and understood accountability.

A CRITICAL OPERATIONAL READINESS DRIVER

Again, it’s simple: Operational Readiness Reviews throughout the capital construction project – managed by a dedicated Operational Readiness team – can make a significant, positive impact.

Typical approaches to Operational Readiness only focus on identifying the operations scope and assigning it to the project team, but this approach simply isn’t good enough.

Today’s capital construction and transition efforts require a far more comprehensive approach delivered by a structured and integrated Operational Readiness team working alongside the project team.

Successful outcomes are achieved by having the right discipline and governance that ensures Operational Readiness is prioritized, managed and delivered. Operational Readiness Reviews during front-end engineering and detailed design and construction phases facilitated by the Operational Readiness team, keep the project on track to deliver seamless, safe and incident free transition from the project phase to reliable plant operations.

GETTING STARTED ON IMPROVED OPERATIONAL READINESS

We’re often asked by our clients how they can begin to improve the integration of Operational Readiness into their capital construction project teams.

The first step is creating and integrating a formal Operational Readiness Review process. This step provides the focus needed to have seamless transitions from the project to plant operations, leading to stable and predictable operations within a short timeframe.

Successful leaders ensure that early influence of operational requirements in the project define the deliverables needed to meet operating and business unit expectations.

Accomplishing this objective requires 10 systems and processes be included in the Operational Readiness Review activities:

- Pre-commissioning, commissioning, startup and normal operations preparedness
- Process safety
- Automated control and safety shutdown information
- Management of change
- Process hazards analysis and process safety information
- Emergency preparedness and response plans
- Safe work practices during pre-commissioning, commissioning and startup
- Health and safety
- Personnel
- Supply chain readiness

Ignoring any of these activities compromises successful transition and increases Operational Risk to the project and business.

A second step in improving Operational Readiness is ensuring the right, experienced leadership and oversight.

Leading companies have realized the benefit of the “outsider’s cold-eyes view” that is deeply experienced and proven in ensuring capital construction Operational Readiness success without the internal, political overhead.

Leading companies know Operational Readiness is not to be compromised. They, therefore utilize the very best leadership and oversight possible, based on and

experienced in proven Industry Best Practices, irrespective of source.

THE BENEFITS OF IMPROVED OPERATIONAL READINESS

When considering the information contained in this paper, understanding and consideration of the business value benefits is vital.

The greatest benefit is reducing Operational Risk through:

- Seamless transition from project to plant operations
- On-time startup
- Incident-free and injury-free startup
- Minimization of the time from commissioning to normal operations and on-specification product

Leading companies achieve these benefits through a formalized and objective Operational Readiness Review process that:

- Verifies quality and completeness of plant operations, maintenance, reliability and support
- Provides independent, non-biased review of Operational Readiness
- Delivers actionable final reports, identifying gaps and findings that return action and closure plans that assist startup plans and schedules
- Drives project and senior management alignment and project delivery, through independent Operational Review processes and Operational Review Reporting

GETTING STARTED OPERATIONAL READINESS

Operational Readiness is critical to increasing control of risk. We trust this Grey Paper series has highlighted how proper Operational Readiness:

- Reduces value loss
- Smooths transitions
- Speeds startups
- Aligns outcome to requirement and drives increased control of risk.

It's now your turn. Will you integrate Best Practices of Operational Readiness disciplines within your existing or next capital construction project? Will you lead your team to better, more effective Operational Risk control? It can be done.

Pilko & Associates has deep experience in Operational Readiness as a means to operational excellence and risk control. We can help you review your Operational Readiness and provide guidance on how to ensure increased risk control.

Industry leaders have consistently relied on Pilko & Associates to increase and accelerate achievement of control of Operational and EHS Risk. These leaders have depended upon the experience, skill, proven Best Practices and **8IGHT DRIVERS® METHODOLOGY** to find, prioritize and eliminate "hard" and "soft" risks within organizations and companies.

Grey Paper Author:
Kenneth Richter, Senior Advisor, Pilko & Associates

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 and energy 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.

