



Day & Zimmermann

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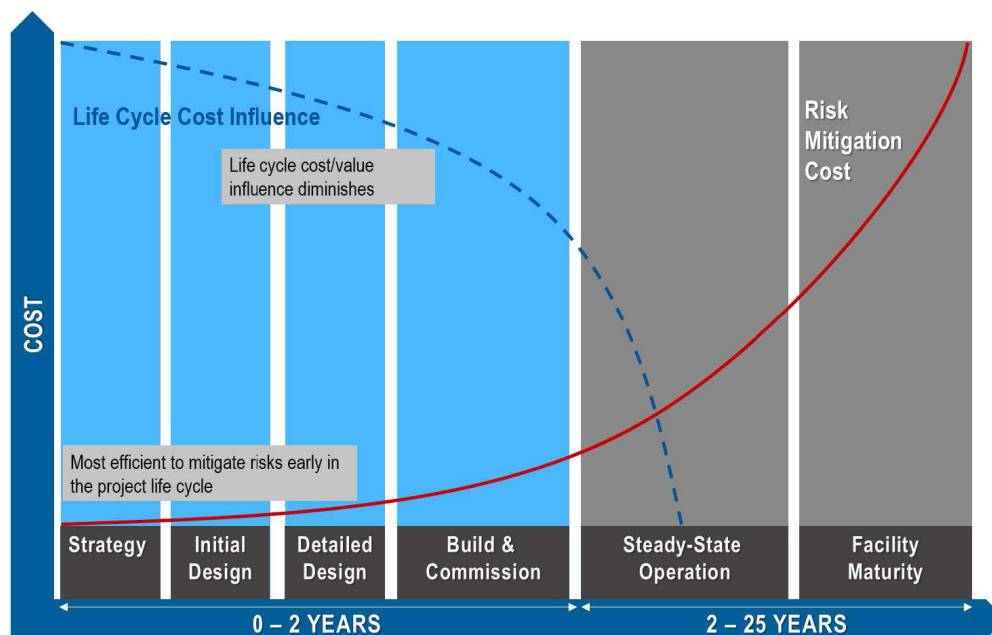
## OPERATIONAL READINESS SERVICES

Operational risks, planning, and development are often overlooked aspects of a capital project. At Day & Zimmermann, we see an opportunity to mitigate operational risks and increase ROIC by ensuring operations is prepared to avoid losses, such as delayed launches, degraded production, or missed time-to-market windows.

Operational Readiness (OR) services can be scaled for a variety of projects, such as, greenfield, brownfield, and international. The approach can create a corporate guideline or standard for a portfolio of projects. Early implementation leads to the greatest benefits, recouping costs in multiples from available capacity, asset reliability, and operating cost certainty.

Per Accenture Research, case studies identify startup losses to be as much as 30% of early stage project life cycle value, with recent chemical industry project losses from \$0.3 to \$1.3 million per day of lost cash flow.\*

Early adoption into capital projects maximizes potential to reduce risk and losses as depicted below.



\*Source: Accenture Research

OR prepares for operational excellence and expected asset performance. The objective is to provide operationally effective project delivery to protect ROIC. Traditionally, operations is a project afterthought resulting in suboptimal handover.

Below are typical attributes of a traditional versus an integrated OR delivery approach.

<b>Traditional Project Delivery</b>	<b>Best Practices OR Delivery</b>
<b>Approach</b> Capital project centric planning Assumed operational performance	<b>Approach</b> Integrate O&M into project Plan for operations excellence
<b>Risks</b> Risk of delayed startup/handover High cost of initial operation	<b>Opportunities</b> Smooth handover to operations Operate at available capacity
<b>Results</b> Suboptimal operating profile High life cycle costs	<b>Results</b> Ensure planned operating profile Optimize life cycle costs

OR helps Owners break down traditional silos and improve communications and delivery among partners, contractors, vendors and internal organizations through disciplined planning and follow-on execution. Three key program elements lead to completion of readiness tasks and deliverables throughout the project

- OR Assessment
- OR Development and Execution
- OR Program Management

## OR ASSESSMENT

D&Z's Plant Services group facilitates OR Assessment workshops to create a structured, collaborative process to review and validate existing plans and identify gaps for an OR program plan. Working with client operations and project team members, we review project, business and OR strategies and plans; identify gaps and needs against objectives; and tailor a path forward based on best practices for transition to operations.

The assessment usually takes between four to six weeks to review, assess and scope an initial OR plan based on the size and scope of the project. The result provides a high-level road map of prioritized, scheduled, assigned and budgeted needs required for efficient on-going operations.

## OR DEVELOPMENT AND EXECUTION

In parallel to the Engineer, Procure and Construct phases, initial focus ensures design for operability and O&M strategies followed by development of programs, procedures, and systems for plant functions:

- Operations
- Maintenance & Reliability
- Materials Management
- Integrity & Safety
- Information Systems
- Engineering & Sustainability

## OR PROGRAM MANAGEMENT

Programs typically require guidance and facilitation to manage governance, risks, schedule, resources, KPI status and mitigation tracking.

Founded in 1901, Day & Zimmermann is a family-owned company with a workforce of 46,000 specializing in construction & engineering, operations & maintenance, staffing, security and defense solutions for leading corporations and governments around the world. Operating from more than 150 worldwide locations with 2.8 Billion USD in revenue, Day & Zimmermann is currently ranked as one of the largest private companies in the U.S. by *Forbes*. Headquartered in Philadelphia, PA, our first work was to develop "Betterment Reports" that helped modernize American factories. Today, we are still in the business of betterment—maintaining the nation's power infrastructure, protecting American freedoms and accelerating innovation around the world.  
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