

# Practices for Shorter, More Cost Effective Turnarounds

*Tough economic times require the elimination of unnecessary expense costs (expense spending is defined as all costs associated with operating and maintaining a manufacturing asset). When a facility must be shut down for maintenance and inspection, the costs can be quite high. Although the time between shutdowns (turnarounds) varies, these shutdown events typically require spending large sums of expense money in a short time span, often more than \$1 million per day. And, with the average turnaround costing \$18 million, the stakes for turnarounds are high. But cost efficiency in turnarounds is not out of reach—on the contrary, just 10 percent improvement in turnaround execution can result in well over \$1 million in savings per turnaround. This program presents key learnings and Best Practices for efficient turnaround planning and execution. The learnings communicated are based on the industry's actual experience, which provides an empirically grounded industry-wide benchmark for assessing and comparing practices and results between various turnarounds and maintenance systems.*

## Key Benefits

- ▶ **IDENTIFY** the drivers of short turnaround durations and lower costs
- ▶ **EXPLORE** how to set and achieve more predictable turnaround cost and schedule outcomes
- ▶ **UNDERSTAND** the business stake for improved turnaround effectiveness
- ▶ **BUILD** an effective turnaround team
- ▶ **SELECT** the best contracting strategy given the level of risk and uncertainty of the turnaround
- ▶ **IMPROVE** construction safety performance
- ▶ **EXECUTE** small capital projects successfully with turnarounds

## Course Format

Practices for Shorter, More Cost Effective Turnarounds is a 2-day seminar. The learnings presented in this seminar are based on the quantitative analysis of over 325 turnarounds executed worldwide, and represent a wide cross-section of the chemical and petrochemical industries. The program also incorporates findings from IPA's database of over 4,500 plant-based projects to understand the integration of capital project into turnaround activities. The seminar is divided into seven separate modules with each focusing on an important area of turnaround effectiveness and practices. Case studies and examples from actual turnarounds are the basis for discussion among participants. Important research findings are presented through lectures with supporting presentation materials and readings. Case studies and examples will form the basis of active class discussions.

## Course Registration Cost

The cost of this 2-day seminar is US\$1350. Early registration and group discounts are available. To view additional registration details and learn about special discounts, please visit our website at [www.IPAInstitute.com](http://www.IPAInstitute.com), or call 703-729-8300.

**Certificates with the number of course hours will be distributed to attendees to attain PDUs and continuing education credits.**

## Target Audience

This seminar is intended for those who manage turnarounds as well as for those who participate in the planning of the turnaround activities. Managers of projects executed during turnarounds and those who participated in plant site capital projects programs would also benefit from the learnings presented in this program.

## Customized Courses to Meet Your Organization's Needs

This course can be customized to meet your organization's needs. Customization can include using your company's turnaround experiences as part of the course case studies. It can also include development of a "roadmap" designed specifically for your organization, to assist in planning more successful turnarounds.

**A turnaround is any scheduled shutdown of a facility or units within a facility, during which maintenance and/or capital work is performed. Turnarounds are critical to the overall operating efficiency of a facility. Minimizing the time a facility is shut down and optimizing the cost for completing these maintenance tasks are important for getting the facility back into profitable production.**

## Course Content

### Introduction and Motivation

- Recent performance of turnarounds and industry trends
- Basic definitions

### Measuring Success and Failure in Turnarounds

- Drivers of short turnaround durations and lower capital and expense costs
- The business stake for improved turnaround effectiveness

### Overview of TAR Work Process

- Defining the turnaround scope, preliminary planning, and detailed planning
- Deliverables for each project stage

### Scope Definition

- Practices for thorough scope definition and their link to outcomes
- The link between turnaround effectiveness and establishing clear objectives and gaining alignment on scope

### Execution Planning and Strategy

- Components of a well-defined execution plan
- The link between execution planning and turnaround success

### Team Effectiveness

- The constituents of an effective turnaround team
- Successful integration of contractors into the project team

### Turnaround Contracting Practices

- Contracting approaches and the rationales for using them
- Presents research on the effect different contracting strategies have on outcomes
- Selecting the right contracting approach given the uncertainty in turnarounds

### Turnaround Safety Practices

- Practices for improved construction safety during turnarounds
- Discussion of safety challenges for turnarounds

### Capital Project/Shutdown/Turnaround Interface

- Success and coordination between the small capital project and the maintenance shutdown/turnaround

### Conclusions and Implementation Strategies

- Session to develop techniques for implementing improvements

#### MOTIVATION: Turnarounds Are Expensive

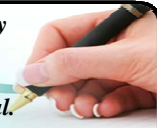


\$4.5 Million *Lost* Income<sup>1</sup>

\$10 Million Maintenance Cost

**Best Practices reduce turnaround durations and so improve outcomes**

<sup>1</sup>Lost income calculated using an average lost income of \$300,000 per day



*"I learned the importance of formally documenting the processes and decisions during the different stages of planning to avoid loss of raw material."  
- 2009 Seminar Attendee*

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