



CONSTRUCTION INDUSTRY INSTITUTE

PLANNING FOR STARTUP: OVERVIEW OF RESEARCH

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Planning for Startup: Overview of Research

**Prepared by
The Construction Industry Institute
Planning for Startup Research Team**

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Executive Summary

Industry participants need to realize that project success depends not only on pre-project planning and well managed project execution, but also on a successful startup. The importance of startup planning is more critical than ever, given such challenges to today's business environment as pressures to increase profits by reducing costs and demands for shorter project cycle times.

The Construction Industry Institute (CII) sought to develop startup procedures that can be integrated into the life cycle of a project. To accomplish this, it created the Planning for Startup Research Team. The overall work of the research team is summarized in this publication.

After reviewing this research summary, the reader is encouraged to seek out CII Implementation Resource 121-2, *Planning for Startup*. That publication provides the key product of this research, the Startup Planning Model. The model was developed to help plan startups in a more thorough, effective, and efficient manner. It provides full details of the 45 startup planning activities identified by the research team. These activities have been organized by eight typical project phases and are supported with 26 tools.

Some of the keys to successful startup identified by the Startup Planning Model include:

- management commitment.
- startup objectives.
- a startup execution plan.
- “quality gates” or time-outs for analysis.

Introduction

Plant startups are high-risk activities that are not easily planned. Few organizations possess and routinely apply thorough approaches to planning for startup. In general, the industry lacks tools to facilitate effective and efficient planning for startup.

The objectives of the Planning for Startup Research Team were to:

- Understand the challenges to startup success and the causes of startup failure.
- Understand the relationship between planning for startup, startup success, and overall project success.
- Increase awareness of the importance of timely and thorough planning for startup.
- Provide implementation tools to support thorough, yet efficient startup planning.
- Establish performance metrics to measure startup success and to facilitate benchmarking.

In accomplishing these objectives, the research team studied a diversity of project types and sizes. No constraining assumptions were made regarding project organizational structure or contracting approach.

Definition of Startup

For the purposes of this research, startup is defined as “the transitional phase between plant construction completion and commercial operations, including all of the activities that bridge these two phases.”

Project Success, Startup Success, and Planning for Startup

Many factors can affect the degree of overall project success. Analysis of both successful and unsuccessful startups shows a strong correlation between overall project success and startup success. Thus, to have a successful project, one must plan for a successful startup.

Further analysis of startups indicates a strong correlation between startup success and the extent of startup planning. Research also indicates that it does not take many startup planning oversights to have disastrous results. Thus, effective startup planning requires a thorough, planned approach. In addition, supportive planning tools are essential for startup success.

To help fill this need, the Planning for Startup Research Team has developed a best-practice model for planning for startup. This model provides a foundation for everyone seeking successful plant startups.