Program Management

COORDINATING THE DEPENDENCIES AMONG A GROUP OF RELATED PRODUCT DEVELOPMENT PROJECTS

Most product development activities, particularly within the high tech, automotive, aerospace & defense, and industrial equipment industries, span multiple enterprises operating in different geographies and using different communication technologies. This complex web of effort must be harnessed to ensure program success.

Definition of Program Management

Program management is the business process responsible for coordinating the complex interdependencies among a group of related product development projects, governed by a contract between enterprises. Customer contracts, proposal requests, or internal business plans drive the program management process. In turn, the program management process initiates other key product development processes, establishing oversight of financial, technical, and scheduling goals.

Realizable Benefits of Improved Program Management

- Greater Return on Investment in Projects: 27%
- Improvement in Project Budget Performance: 30%
- Improvement in Project Schedule Performance: 34%

Understanding the Need for Program Management

Program management is paramount when complex products are being developed across what is typically a complex environment: multiple enterprises consisting of dispersed teams working on separate networks, in many time zones, and speaking multiple languages. Consequently, it’s nearly impossible for project or program managers to disseminate and update vast quantities of product data in a timely manner with any repeatability.

Compounding this problem is the inherent sophistication of product development information exchange and monitoring. It’s difficult to track individual progress, prevent work in isolation, and halt the use of out-of-date information, especially for those operating outside the main work stream. Too frequently faulty decisions, emanating from erroneous information, result in wasteful duplication of effort, time-consuming rework, and lost project cycle time.

Benefits of an Optimized Process for Program Management

A well-defined and consistently executed Program Management process keeps teams in communication and on target. Typical benefits from improving the program management process include:

Improved Program Visibility
- Provide distributed teams visibility to key milestones, dependencies, and schedule changes
- Reduce time spent gathering key program performance metrics

Improved Program Performance
- Bring suppliers and partners into the program more quickly and efficiently
- Communicate accurate, up-to-date status information on cost, schedule, risk, and progress

More Effective Collaboration
- Efficiently share data with suppliers, partners and distributed development teams
- Maximize the value of in-person and virtual meetings

Companies with a much more comprehensive business perspective of program management are more successful...

— Aviation Week
The Solution – PTC’s Product Development System

An effective program management process involves five major steps that range from initial program planning through execution and close.

1. **Plan Program.** The initial step entails the creation of the program schedule. The organizational plan is developed, detailing the allocation of work between internal teams, suppliers and other partners. Also, the criteria for determining whether the program proceeds into the execution step is outlined.

2. **Manage Execution.** Here, the execution of distributed development projects is monitored by reporting on progress, issues, risks and costs. Issue resolution and the flow of information are coordinated across dependent projects. Required program-level decisions are made in order to manage risk, facilitate communication, and ensure cost targets are met.

3. **Manage External Interactions.** In this step, activities consist of reviewing in-progress designs, validating customer requirements, managing engineering changes, and submitting PPAPs. Changes to statements of work and contracts are negotiated and managed. And reports on contract deliverables (CDRL), supplier deliverables, earned value, and technical performance measures are prepared.

4. **Transition to Steady State.** The OEM then receives supplier notification of completion, and customer acceptance of final deliverables. Milestone reports are submitted, and the program is transitioned to manufacturing, service, and support.

5. **Close Program.** Reviews are conducted to capture lessons learned reviews and process documentation is updated as appropriate.
Critical Capabilities

The PTC Product Development System offers the following capabilities necessary for managing programs effectively:

- Web-based collaboration spaces that securely distribute program information, provide visibility to program deliverables, and facilitate collaboration among internal and external program teams

- Document management capabilities that include iteration history, library services, visualization, document templates, and change notification

- Project execution capabilities that include scheduling, execution, status reporting, milestone, deliverable, and cost tracking

- Cross project and initiative reports (e.g., dashboard, scorecards, bubble charts, pie-charts, stack charts) that provide up-to-date project data and real time visibility into performance metrics and project status for any team member or executive to access

- Advanced workflow and routing capabilities for automating review, approval, release, or any custom workflow process

- Direct integration from leading CAD authoring tools such as Pro/ENGINEER®, Cadence®, CATIA®, AutoCAD®, I-DEAS®, Mentor®, Inventor®, SolidWorks®, and Unigraphics®

- Visualization and markup of 2D/3D data

PTC – Uniquely Qualified

An automated and optimized program management process not only requires superior technology, it also requires companies to streamline their day-to-day processes. Just as important, companies need to ensure that everyone across the organization understands and adopts the new processes and technology.

After 20 years of deploying process and technology improvements across thousands of customer sites, PTC Global Services understands all the components required for companies to achieve their product development goals. We offer solutions that include the right blend of process consulting, system implementation, and education services so customers realize the most value from their PDS investment. We implement industry best practices that fully leverage PTC technology, so companies take advantage of the technology’s potential while avoiding costly customizations. Plus, each of our solutions incorporates a unique training approach that accelerates the adoption of new technology and processes.