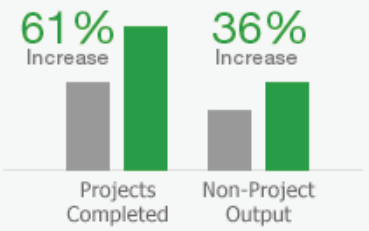
REALIZATION℠

From Multitasking to Synchronized Product Engineering

A major supplier of large power generators increases its engineering output by more than 45%.

Results

61% increase in number of projects completed. 36% increase in non-project output.



Business Background and Situation

Our client needed to improve its engineering performance to:

- Increase the speed of developing new products
- Reduce contractor costs and overtime within engineering
- Reduce delays from engineering to control downstream expediting costs in purchasing and manufacturing

The Multitasking Problem in Engineering

Work schedules had to be synchronized for approximately 300 engineers and experts spread across three engineering and manufacturing facilities around the world. Working with Realization, the client identified the following opportunities to increase engineering productivity and reduce cycle times:

- Local schedules were being created at the beginning of every project, with start and stop dates for every task. Even though the schedules were aligned at the beginning, they soon got out of sync. Each department and location was now working on priorities that were not aligned with each other, causing engineers to be pulled in multiple directions.
- Engineers also had multiple obligations (new orders, manufacturing, R&D, field issues, etc.). That caused the engineers to constantly switch back and forth between designs, which prolonged tasks, reduced efficiencies and hurt quality.
- When engineers multitasked, the experts could not focus on solving one problem at a time. The result was a vicious cycle in which engineers started even more work while waiting for experts.
- Constant rushing and firefighting left no time to fully prepare before starting any project, only exacerbating the “start-and-stop” phenomenon during execution.

How Engineering Was Synchronized

Realization implemented a synchronization system that replaced all local schedules in the company with a single set of priorities for everyone.

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- A flexible schedule now accounts for uncertainties in execution. The schedule keeps work priorities current and aligned across departments and levels in the organization.
- Since non-project work represented a substantial amount of all tasks, a rough ratio of project and non-project work was estimated and separate resources were assigned to non-project work. A mechanism proactively adjusts resources and rotates engineers between project and non-project work.
- The list also batches low-priority tasks into a higher level (for example. a set of drawings for a module) so that engineers as well as experts can focus on the same work and issues.
- Now that projects can be executed faster, there is room in the schedule on the front end for Full Kitting (preparation).

Engineers can now finish what they start with minimal interruption, thereby decreasing cycle times and increasing productivity.

Results

- 61% increase in number of projects completed.
- 36% increase in non-project output.

If doing projects 20-50% faster is vital for your organization, contact us at +1.408.271.5100 to get started.