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Lean Product Development
Project Management &
Set-Based Development

Learnings from a 5-year Partnership with one of the World's Largest Products and Services Providers to the Energy Industry

Lean Product Development Techniques Deliver $160M in Annual New Revenue for Client

RESULTS AT A GLANCE

$160 Million
Increase in annual New Product Revenue

42%
Reduction in product development lead time

65%
Improvement in standard deviation

39%
Increase in projects completed annually

11%
Reduction in average cost/project

The Situation

The client's Organizational Culture had evolved through a long history of mergers and acquisition resulting in 7 primary product lines. Development teams faced tightly controlled regulatory requirements and difficult customer demands. Development was spread across 13 Geographic time zones with mixed Western/Eastern management cultures. Teams suffered a lack of autonomy at the working level and obfuscated accountability within the organization.

Long product development delivery lead-time and unreliable execution caused customers to seek alternative providers resulting in loss of revenue and loss of market share. Development delays eroded the value of business cases as products often missed the key market growth phase with adverse effects on the organization's competitiveness and ability to secure tender awards.

Although most projects were very similar in terms of resource requirements and activities, every project was treated as unique with an independently constructed development plan. The duration of similar activities varied widely across different projects and were typically independently scheduled.

Actions

Argo first helped the client align into cross functional Product Development Teams (PDTs) with clearly defined roles and responsibilities. Focus groups were used to create buy-in and navigate the organizational complexities creating the structure for strong collaboration.

Upon evaluating the development process and rationalizing it against Lean Development Principles, a standard project cadences was developed and implemented. Projects were categorized into '*Bins*' with standard work elements in terms of Scope, Schedule, and Resource buckets. Standard work elements allowed evaluation of projects across the portfolio of work facilitating better flow of work as it was possible to establish a project cadence. In turn cadence and flow of work made learning and improvement possible.

Visual Management was initiated so the organization could 'see the work', and 'see the issues'. This included clear KPI's and dashboards aligned from working teams to global reporting levels.

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Visual Management enabled the Product Development Teams to effectively manage projects in real time, allowing the organization to see at a glance the progress and status of every project in an intuitive and understandable way against the standard work elements and the portfolio cadence. Visual Management created a mechanism within the development organization for a complete understanding of the development efforts across the product portfolio. Visibility enabled effective management of the work dynamics by adjusting and addressing issues as they arose in real-time through pre-established 'help-chains'.

With standard work in place, the use of Visual Management established the framework and promoted a culture embodied by exceptional organizations.

Principles embodied by Exceptional Organizations

1. Create systems that show abnormalities
2. Quickly solve problems and use them to improve the system
3. Share the learning
4. Leadership is integral to the success of the system
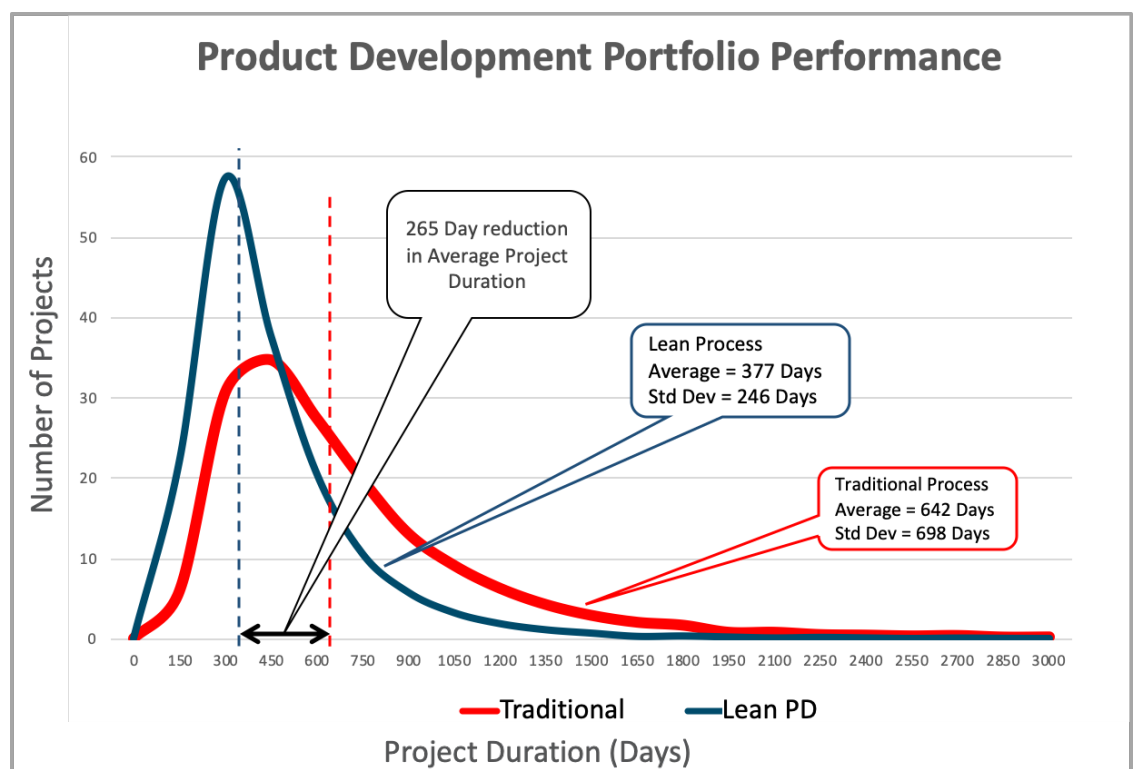
Results

Through the implementation of Lean Product Development principles applied through individual and team coaching, the organization learned to see and address the critical issues, hold the entire Value Chain accountable, and proactively allocate resources in a way that minimized unexpected disruption while creating and deploying reusable knowledge. This resulted in greater innovation in less time and in turn, increased market share and profit with satisfied customers.

42% reduction in average project duration

65% reduction in standard deviation

3% reduction in workforce

Product Development Portfolio Performance

265 Day reduction in Average Project Duration

Lean Process
Average = 377 Days
Std Dev = 246 Days

Traditional Process
Average = 642 Days
Std Dev = 698 Days

Number of Projects

Project Duration (Days)

— Traditional — Lean PD

In addressing the client organization's methods and culture by implementing principles of Lean Product Development they were able to **reduce development lead time 42%**. This allowed the same organization to **deliver 39% more projects** while only increasing spending 24%, resulting in an average **reduction of the cost per project of 11%**.

About the Authors

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