The Guide to Lean Enablers for Managing Engineering Programs

Author: Oehmen, Josef; Oppenheim, Bohdan W.; Secor, Deborah; Norman, Eric; Rebentisch, Eric; Sopko, Joseph A.; Steuber, Marc; Dove, Rick; Moghaddam, Kambiz; McNeal, Steve; Bowie, Mark; Ben-Daya, Mohamed; Altman, Wolf; Driessnack, John

Citable URI: http://hdl.handle.net/1721.1/70495

Publisher: Joint MIT-PMI-INCOSE Community of Practice on Lean in Program Management

Date Issued: 2012-05

Abstract:
This document provides the findings of the Joint MIT-PMI-INCOSE Lean in Program Management Community of Practice that are based on a 1-year project executed during 2011 and 2012. The community was made up of selected subject matter experts from industry, government, and academia. The findings reported in this guide are based on known best practices from the literature, program experience of the subject matter experts, and input from an extensive community of professionals. The findings of the Joint Community of Practice were extensively validated through community and practitioner feedback, multiple workshops at INCOSE and PMI conferences, LAI-hosted web-based meetings, and surveys of the extended professional community. The survey results clearly show that programs that use the Lean Enablers show a significantly stronger performance in all dimensions—from cost, to schedule and quality, as well as stakeholder satisfaction. The core of this document contains (1) the 10 themes for major engineering program management challenges, and (2) the 43 Lean Enablers with 286 subenablers to overcome these challenges, better integrate program management and systems engineering, and lead engineering programs to excellence.

The main engineering program management challenges that were identified and addressed by Lean Enablers in this guide are: 1. Firefighting—Reactive program execution; 2. Unstable, unclear, and incomplete requirements; 3. Insufficient alignment and coordination of the extended enterprise; 4. Processes are locally optimized and not integrated for the entire enterprise; 5. Unclear roles, responsibilities, and accountability; 6. Mismanagement of program culture, team competency, and knowledge; 7. Insufficient program planning; 8. Improper metrics, metric systems, and KPIs; 9. Lack of proactive program risk management; and 10. Poor program acquisition and contracting practices.

The 43 Lean Enablers (LE) and 286 subenablers for Managing Engineering Programs—actionable best practices—are summarized in six categories that represent the six Lean Principles (LP): LE 1.x: Respect the people in your program (LP6); LE 2.x: Capture the value defined by the key customer stakeholders (LP1); LE 3.x: Map the value stream and eliminate waste (LP2); LE 4.x: Flow the work through planned and streamlined processes (LP3); LE 5.x: Let customer stakeholders pull value (LP4); and LE 6.x: Pursue perfection in all processes.

URI: http://hdl.handle.net/1721.1/70495

Keywords: Lean Thinking, Program Management, Systems Engineering

Show full item metadata

Files in this item

<table>
<thead>
<tr>
<th>Name</th>
<th>Size</th>
<th>Format</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oehmen et al 2012 ...</td>
<td>7.425Mb</td>
<td>PDF</td>
<td>Oehmen et al 2012 - The Guide to Lean Enablers for Managing Engineering Programs</td>
</tr>
</tbody>
</table>

The following license files are associated with this item:

- Creative Commons
The main engineering program management challenges that were identified and addressed by Lean Enablers in this guide are:

1. Firefighting—Reactive program execution
2. Unstable, unclear, and incomplete requirements
3. Insufficient alignment and coordination of the extended enterprise
4. Processes are locally optimized and not integrated for the entire enterprise
5. Unclear roles, responsibilities, and accountability
6. Mismanagement of program culture, team competency, and knowledge
7. Insufficient program planning
8. Improper metrics, metric systems, and KPIs