Waste in Product Development
- Study of Industrial PD Projects -

Jin Kato, MIT  March 22, 11:25-11:40

Goal of This Study:
Develop ideas and methodologies of Lean PD into tools and processes that can:
- help PD project managers
  • identify and measure the waste drivers in their teams’ processes;
  • identify root-causes and measure their impacts on PD Processes;
  • and finally, learn the best thing to pursue to improve their PD processes.
- be applied to various PD organizations regardless of cultures and products.

Study of Industrial PD projects
Have been applying VSM, Waste Drivers and Root-Cause Analysis Chart to three complicated PD projects in two big manufacturing companies.
• Company A: an American company developing test and measurement devices.
• Company B: a Japanese electric giant.

VSM and Root-Cause Analysis Chart have been developed, tested, and improved through intensive interviews with both project managers and engineers.

Preliminary Result from One of the Investigated Project:
The analyzed period is the first two months out of 12-month PD project -- more waste is expected to be detected in the later phases of the project.

Other analysis will include the following graphs:
• Waste Driver – Wasted Cost
• Waste Driver – Root Cause
• Root Cause – Wasted Time
• Root Cause – Wasted Cost

Preliminary Conclusion:
• VSM, Waste Drivers and Root-Cause Analysis Chart have made it possible to identify both root causes of low PD performances and their quantitative impact on PD performances.

Tool 1: Swim-Lane VSM
• Helps Project Managers identify and measure Waste Drivers.
• Visualizes Waste Drivers effectively.

Tool 2: Root-Cause Analysis Chart
Helps Project Managers identify root causes of waste.

Research by Jin Kato - Contact: Jin Kato (Graduate Student), Massachusetts Institute of Technology, Department of Mechanical Engineering, Prof. Warren Seering
jkato@mit.edu, Phone: +1-(617)-304-6733, MIT, 77 Massachusetts Av., Room 3-441, Cambridge, MA 02139