Title: Using PDVSM to Better Characterize Waste and Value in Complex Product Development

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Summary Description: Research attempts to better understand value creation and wastes in real-world complex product development programs. Product Development Value Stream Mapping (PDVSM) framework implemented for two programs at an LAI member company, and a PD waste framework is being used for analysis.

Key Points: 1) Product development needs improvement. PDVSM can help, but a better understanding and characterization of what waste and value are within PD are needed before PDVSM can be fully embraced and significant PD process improvement can be undertaken. 2) PDVSM is being implemented with two projects at an LAI member company, and a PD waste framework is being used to analyze waste. 3) Possible updates or changes to PDVSM to make more usable.

Linkage with Research: Creating a better understanding and characterization of PD value and wastes should make the application of lean to PD easier. Specifically, it should make PDVSM more usable and PD process improvement more feasible. Ultimately, PD should be able to be improved so that it encourages the existence of a lean enterprise.

Long-term Implications: A long-range goal that the work of the Lean PD research group could contribute to is the creation of some sort of PD value-stream software that can be used for planning a program, monitoring PD program status (including proper metrics), supporting task standardization, creating and assuring process flow, identifying potential wastes before they occur, and allowing mid- and post-program analysis. Essentially, it would be a lean PD software program that would work with other product development tools (scheduling, solid modelling, analysis, and process simulation software). Besides the obvious usage by executives and managers, the current PD value stream status could be projected on walls around the program offices so that the process becomes more transparent, analogous to the boards in lean manufacturing plants.