

A Lean Approach to Improving SE Visibility in Large Operational Systems Evolution

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Abstract. Understanding the status of evolutionary capability development in large operational systems is often difficult. Schedules are rarely stable due to the size and complexity of capabilities, operationally imposed unexpected changes in priorities, the depth of supplier chains, variety and availability of special engineering resources, contract structure, and the generally complex nature of the operations. Lean approaches use the concepts of work in progress and capacity to maximize flow through a process. Under certain circumstances, these concepts can be applied to systems engineering and development processes. This paper describes a simulated implementation of a flow-based scheduling approach to information management support for a large hospital system. The approach utilizes visualization techniques, pull-scheduling processes, and a services approach to systems engineering to enhance both visibility and flow.