Single Point Lesson: Lean Development

Definitions

Accountability Board: A visual system for tracking individual tasks

Flow Interrupter: Anything that interrupts the

flow of development

Learning Cycle: Short, focused development bursts, usually 2 to 4 weeks in duration

Pace: The time it takes to complete

development tasks

Stage Gate: An approval step in a traditional waterfall process that projects must pass **Set-based design**: The technique to move multiple design options forward in parallel, in contrast to single-point design which carries forward only a single solution

Situation

Observations of stage-gate project development at Steelcase showed that the pace and progress of development is not exposed, with the following symptoms:

- Development status is not completely known
- •The method to help the team is unclear
- Development problems are exposed too late
- •Development stretches out due to late exposure of key problems

Traditional

- •Stage-gate check points are too far apart to maintain pace
- Discovery and knowledge capture are not emphasized

Problem

Traditional Project

- Development cycles are too long
- Focus on a single design alternative thought to be the best (point-based)
- Interrupters are allowed throughout
- Rework late in the process to recover from point-based design

Learning Cycles in Lean Development

- Short and efficient development
- Multiple design alternatives reveal the most robust solution (set-based)
- Flow with controlled interrupters
- Problems identified and made visible to find solutions earlier

Reflection and analysis

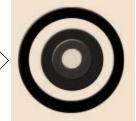
- Infrequent stage-gates not measuring development pace
- Tasks broken down
- Global resource plan
- Timeline based
- 5. **Deliverables measured**
- 6. Linear
- **Separate Testing Phase**
- Point-based solution design

- Accountability within each learning cycle maintains pace
- Problems broken down
- Learning cycles resource plan
- **Knowledge based**
- **Learning Measured**
- Iterative
- Prototype in every cycle
- Set-based with many concepts

Objectives

Business:

- Improve pace
- Increase capacity
- Increase accountability
- Accelerate innovation
- Flawless execution



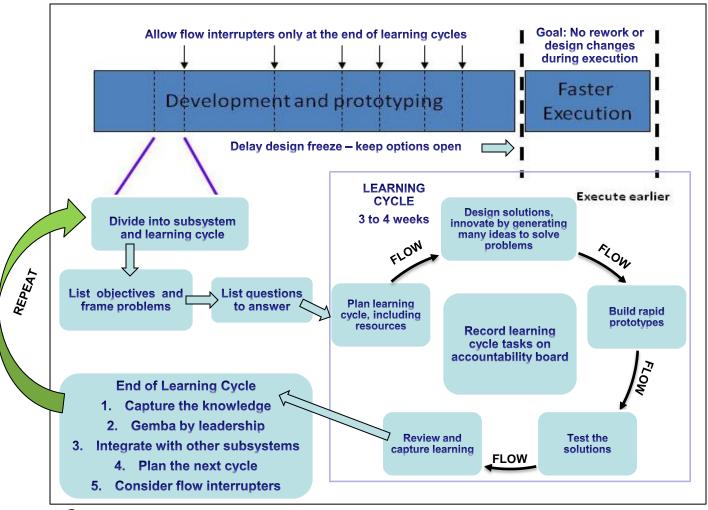
People:

- Work without interruption
- Capacity managed

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- Timely problem solving
- Development is more fun!

Trial solution



Outcomes

- Cycle time reduced by 50% Higher quality/innovative solutions
- Development pace measured Earlier project cancellation
- Fewer test failures in execution Knowledge captured along the way



Resources and Contact Information

Schipper, Timothy H. and Swets, Mark D. Innovative Lean Development: How to Create, Implement and Maintain a Learning Culture Using Fast Learning Cycles, New York, Productivity Press, 2010 Huthwaite, Bart. Lean Design Solution. Mackinac Island, MI. Institute for Lean Innovation, 2004 Timothy Schipper, tschippe@steelcase.com and Mark Swets, mswets@steelcase.com

Have a suggestion or source for a Single Point Lesson? Contact David Mann, Single Point editor: david@dmannlean.com