Implementing Product Development Flow: The Key to Managing Large Scale Agile Development

Will Hayes – SEI

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Agenda

Common Perceptions about Agile
Cadence and Synchronization
Unhealthy Focus on Utilization
Cost of Delay

Conclusion
Agile

Common Perceptions
Common Perceptions

The So-Called “Traditional Approach”

It’s not the **heavy weight** of documentation that gets you…

It’s the **long wait** for course-correcting feedback that can kill your program…
According to Mark Twain…

It ain’t what you don’t know that gets you in trouble. It’s what you know for sure that just ain’t so.

Samuel Langhorne Clemens
Product Development Flow

Cadence & Synchronization
Cadence Enhances Predictability

A Late Bus:
- Makes people scramble to get aboard
- They don’t know when the next one will get here
Cadence and Synchronization

Cadence Enhances Predictability

A Late Bus:
- Makes people scramble to get aboard
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Then the next bus comes along empty
Late Releases Become “Feature Magnets”

As things start to slip
- Influential people get ‘their priorities’ moved up, rather than deferred
- Pressure increases on early releases
- Functions slated for final release can’t be guaranteed…
Importance of Synchronization

Non-synchronized schedules can lead to counter-productive dynamics…

One team’s schedule slip can give other teams the schedule relief they didn’t want to ask for…
Synchronization Promotes Visibility

Added incentive to maintain cadence...

Frequent ‘synch-points’ offer more options for course-correction...
Product Development Flow

Unhealthy Focus on Utilization
Unhealthy Focus on Utilization

Packing Scheduled Tasks is Prone to Risk

100% Utilization:
- Magnifies the impact of variation
- Maximizes task-switching overhead
- Assures slower overall progress

Change is inevitable, plan to learn

Multi-tasking is a myth we don’t accurately comprehend
Unhealthy Focus on Utilization

Maximum Utilization is Counterproductive
Product Development Flow

Cost of Delay
Cost of Delay

Spend Your Time Wisely

Look for the ‘sweet spot’ between
• Analysis Paralysis
• Extinction by Instinct

Reduce integration risk
• Invest in architecture to set the stage for later work
• Validate with each iteration

Plan for learning
• Time the critical design choices with availability of information
Cost of Delay

Example Workflow

Build queues where knowledge can accumulate
Stage items in batches if they belong together
Economies of Batch Size

Specify, build test & ship a **SINGLE** line of code

Specify, then build, then test & then ship **ALL** lines of code

U-Curve optimization problem as described in *Principles of Product Development Flow*, by Don Reinertsen
Product Development Flow

Conclusion
Conclusion

Priorities for Action

For Your Work Processes:

- Devise a regular cadence on which people can rely
- Synchronize often to reinforce cadence and visibility
- Resist the habitual focus on maximizing utilization
- Optimize at the system level – not at the unit level
- Characterize the cost of delay as an economic factor
- Balance holding costs and transaction costs
Conclusion

Credits

See also:
Managing the Design Factory: A Product Developer’s Toolkit
Contact Information

Presenter
Will Hayes
Principal Engineer
Telephone:  +1 412.268.6398
Email:  wh@sei.cmu.edu