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Joe Justice - Scrum For Full Scale Manufacturing

Premise

Summary: Scrum for full-scaling manufacturing: a groundbreaking agile discipline that combines Scrum with modular architecture and Lean/XP practices.

Learning Objectives: -Top reasons companies say they can't embrace agility outside software. -Solutions for those reasons. -How Scrum and Lean enable each other. -How much of the company needs to change, and how, to enable incremental releases each sprint in hardware, and combined hardware/software releases? -Sprinting in regulated industries.

Summary

- Content rating (0-no new ideas, 5 - a new ideas/approach, 9-new ideas):
- Style rating (0-average presentstion, 5 - my level, 9-I learned something about presenting):

Action / Learning

- go build car at wiki speed
- follow joes blog to learn language
- get in touch with manufacturing guys
- find out about local motors

Presentation

Notes

Mostly with hardware

Mass manufacturing with scrum

Extreme manufacturing methods 2 day class Then do 2 day scrum class

Morale is a multiplier for velocity

See number for order

<HTML><ol start="2" style="list-style-type: decimal;"></HTML>
<HTML>
</HTML><HTML> </HTML>Scrum organization Roles and responsibilities Sprints / iterative design Make work visible Measure velocity - to continue scrum Continuous improvement (lean)<HTML> </HTML><HTML>
</HTML> <HTML>
</HTML><HTML> </HTML>XP engineering principles User stories Pairing swarming - gets team size down to 4-5 people, not hundreds Test driven and development<HTML> </HTML><HTML>
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<HTML>
</HTML><HTML> </HTML>Object oriented architecture Modular component (contract that does navigation - inputs and outputs) Contract first design Design patterns Reuse and inheritance<HTML> </HTML><HTML>
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<HTML>
</HTML><HTML> </HTML>Line setup Machine rationalization Material selection Line skills selection<HTML> </HTML><HTML>
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Scale competitive advantage is declining

Lean is essential but not enough Lean - reduce waste without frustrating your customer Agile - reduce cost to make change Scrum - twice

Innovation is variance. If lean then cost effective no innovation

Scrum team as lean cells - weekly process improvement. Object oriented architecture - without saying the word software Shorten supplied chains Keep the line flexible - reduce cost to make change on the line

Volvo - scalable product architecture

Reduction of complexity When was the last time we wrote bubble sort

Long and complicated Supply chains increase WIP, inventory, etc

Find out about Local Motors

3D Green Sand Casting

R&D is production

Mission Bell winery 1/2 wine loss 1/2 loss of champagne

Scrum is the same Different rooms

263x automotive manufacturing that software industry

Velocity metric Quality metric

A lot metric get through away

Backlog is hierarchical But skill set at each level is same - therefore pay the same, flat structure

8x velocity in building john Deere

Manufacturing, Conference