

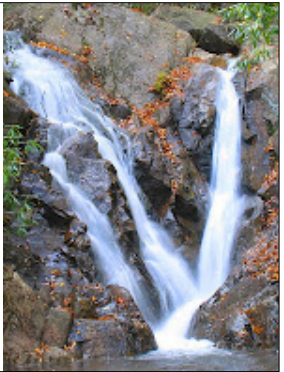


THREE STREAMS

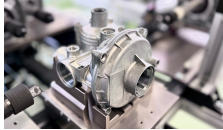


I'll be talking about:

- Lean Manufacturing
- Agile Software Development
- Business Agility

I'll leave it to you to spot which is which 😊




A QUICK GENBA WALK



Let's Take a Gas Regulator as an Example

FLOW OPTIMIZATION

You get efficiency from repeatability



QUALITY ASSURANCE

Check that things are as expected



STORAGE AND SUPPLY

Stuff comes into and goes out from the factory



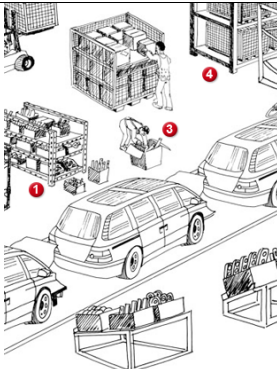
KEY PERFORMANCE INDICATORS

You can't manage what you don't measure



TPS WANTED TO OPTIMIZE MASS PRODUCTION

A systemic perspective that includes people



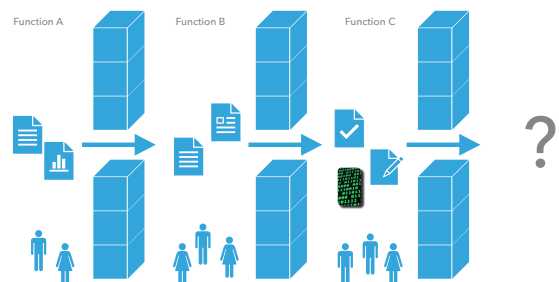
MOVING TO AGILE

THE FIRST INDUSTRY IN HUMAN HISTORY BASED 100% ON COLLECTIVE COGNITIVE WORK

Yes, it's Software Development



PRE-AGILE PAPER PROCESSES TRIED TO COMPENSATE FOR IMMATERIALITY



THE ORIGINS OF AGILE

Create software products with the same discipline and maturity of TPS and Lean

AND

Take into consideration the immaterial nature of our product and the humans dynamics of the people who make the product

Manifesto for Agile Software Development

We are uncovering better ways of developing software by doing it and helping others do it. Through this work we have come to value:

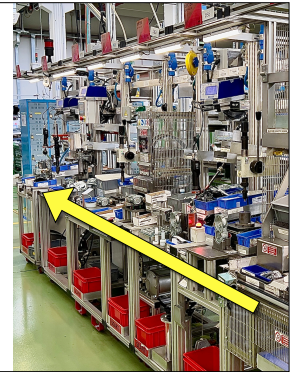
Individuals and interactions over processes and tools
 Working software over comprehensive documentation
 Customer collaboration over contract negotiation
 Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.

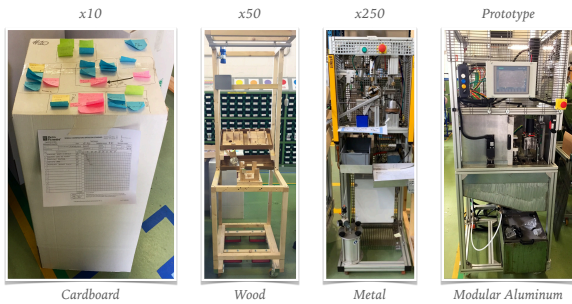
Kent Beck	James Grenning	Robert C. M
Mike Beedle	Jim Highsmith	Steve Mc
Stefan van Bennekum	Andrew Hunt	Ken Schw
Walt Stoltz	Ron Jeffries	Jeff Sutherland

AGILITY CAN BE MATERIAL TOO

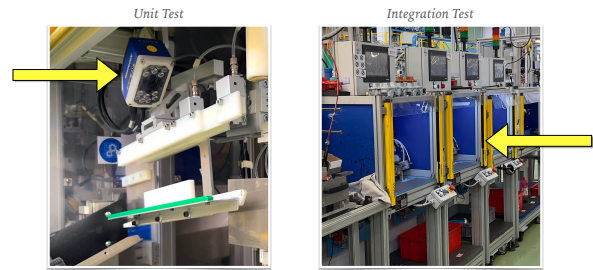
- In manufacturing Agility is not in the product, it's in the process (the line)
- Safety and Quality and Flow are a must, but adaptability is still required
- Exploration and Exploitation are separate in manufacturing, but they overlap in software development



LEARNING INCREMENTALLY TOGETHER WITH RAPID FEEDBACK

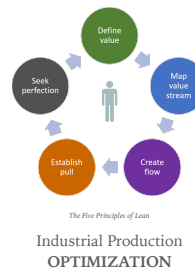


AUTOMATED QUALITY ASSURANCE BEARS RESEMBLANCES WITH SOFTWARE

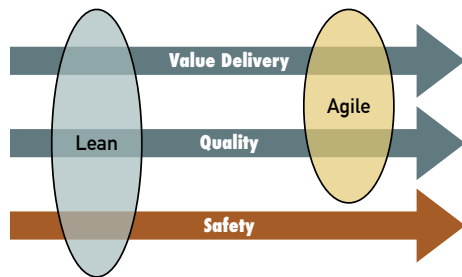


COMMONALITIES (AND NOT QUITE)

LEAN AND AGILE, WHEN DONE RIGHT, ARE HUMAN-CENTRIC



LEAN & AGILE COMMONALITIES - AND NOT QUITE



SAFETY

LEAN

- A critical aspect of Lean Production (ethical and economical)
- Multidimensional
- A priority in a healthy company

AGILE

- Let's face it, we don't take good care of workers' safety



KNOWLEDGE WORKERS INCUR SAFETY RISKS

Stress, burnout, frustration, anxiety and poor physical health



MEASURING THE WRONG THINGS

- KPIs can measure a visible and quantifiable process
- When we learn by experimenting and failing, OKRs or similar approaches seem more fit to promote virtuous behaviors in cognitive workers
- Hint: read "Hitting the target but missing the point" by Bjarte Bogsnes



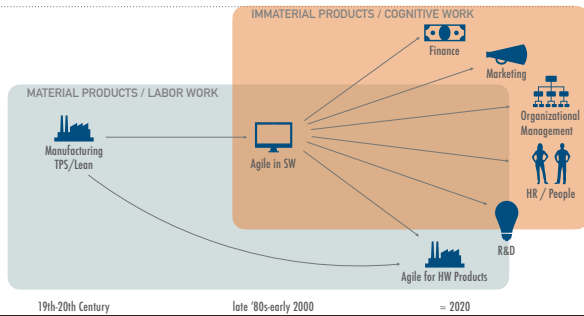
OUTCOME OVER OUTPUT

- If the desired result and how to get it is clear, we can focus on maximizing Output (work done)
- When the goal is more abstract, and the conditions change unpredictably, we focus more on maximizing Outcome
- In the industrial mentality, it's easy to confuse Output (work done) with Outcome (valuable results)



LEAN AND BUSINESS AGILITY

THE EVOLUTION OF AGILE PRODUCT CREATION



MOST ORGANIZATIONS ARE DEFINITELY NOT THERE

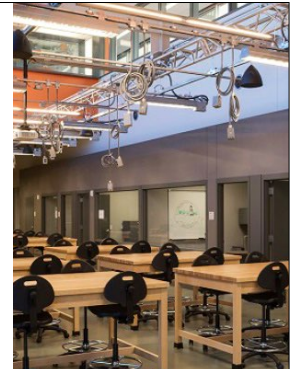
I see very little of both Lean and Agile at the organizational level



SOME LESSON LEARNED

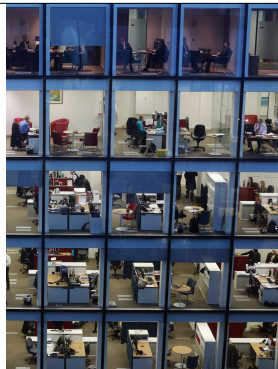
TECHNICAL AGILITY IS ESSENTIAL

To embrace later change gracefully



SHOW ME THE WORK

- In many organization we see Workers, Activities, Hierarchies, ...
- We usually don't see the Work (in the physical sense)
- And so our processes are messed up



AN EXTRA LAYER OF LEADERSHIP SKILLS

LEAN

- Management approach is "Just-in-Time"
- Manager is frequently "the Expert" (tends to create specialists and silos)
- OK when you there are few surprises

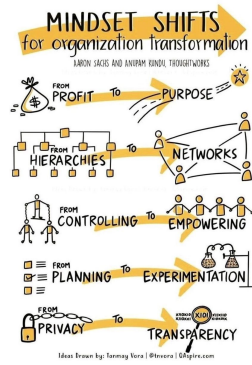
AGILE

- Leadership based on the assumption that things are uncertain by nature
- Foster a safe environment where people can be effective in uncertainty while also being efficient

HERE
TO
HELP

AVOID MANICHAISM

Business is more articulated than a simple dichotomy – and context is king



ANOTHER VIEW OF THE FIRST VALUE

Individuals and Interactions over Processes and Tools



Explore
Adapt
Be Effective

Exploit
Optimize
Be Efficient

WHAT AGILE CAN LEARN FROM LEAN – AND VICE VERSA

*Expect change, be technically ready
Employ leadership styles fit for complexity*



*Make people's safety a priority
Make the invisible visible to everyone
Relentlessly strive for quality at all levels*



ANDREA PROVAGLIO

 <https://linkedin.com/in/provaglio>