Exploring the value of emerging technology in the lean enterprise

Steve Bell, *Lean IT Strategies*

Dan McDonnell, *Ingersoll Rand*
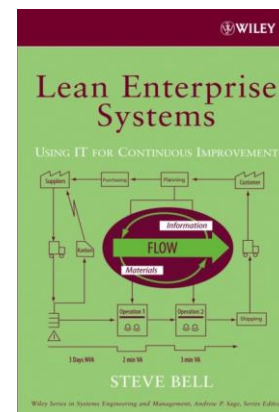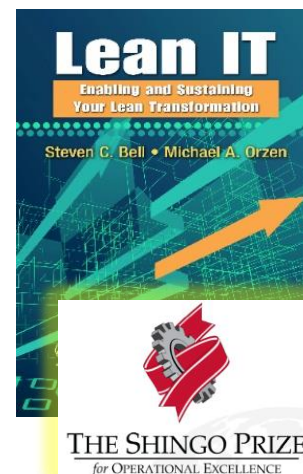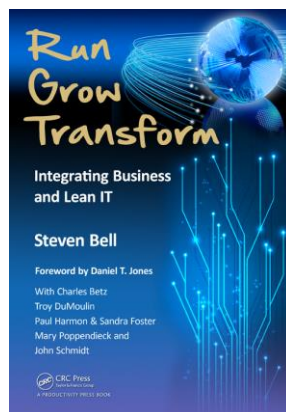
Michael Walton, *Microsoft*

1st	2nd	3rd
~1780	~1890	~1970
Water & Steam Power	Electricity	Computers & Software
↓	↓	↓
Mechanization and Transportation	Division of Labor & Mass Production	Automation Communication Knowledge
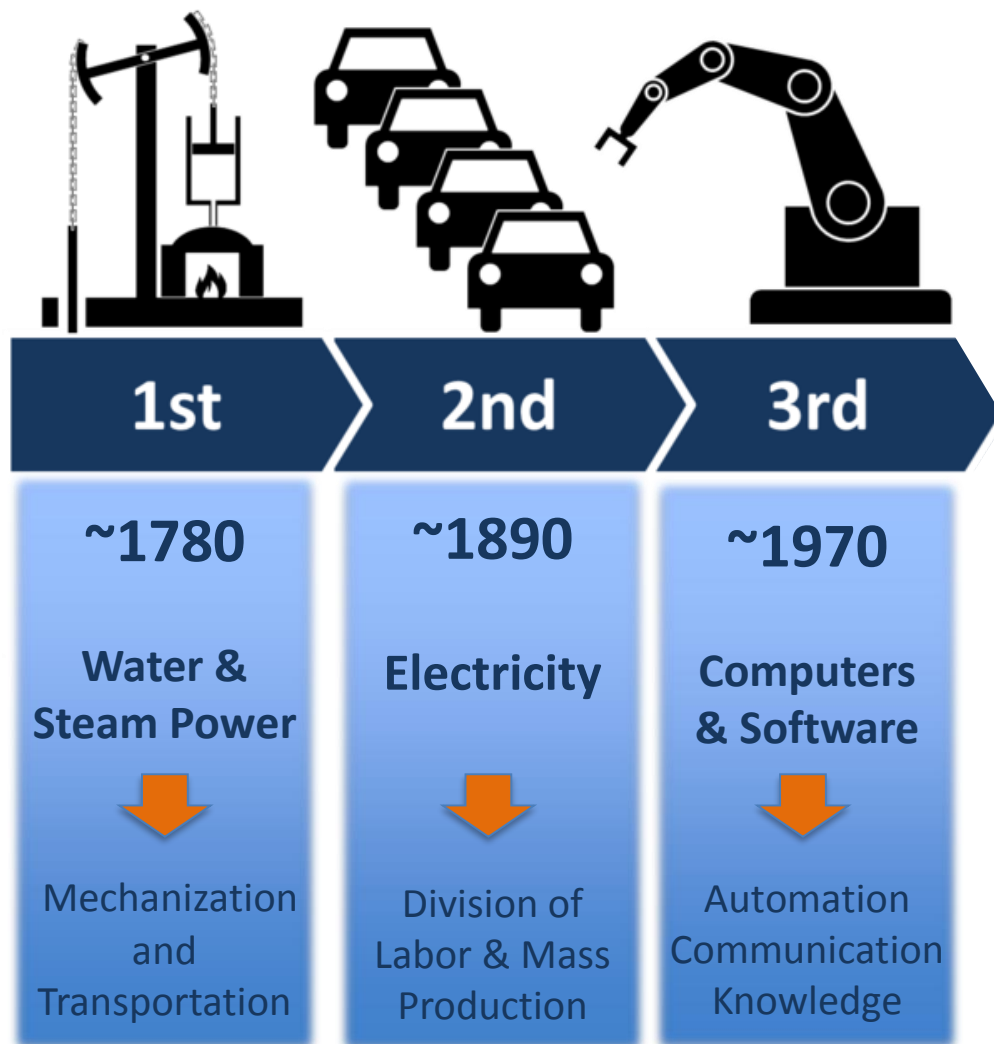
Emerging technology enables each industrial advance
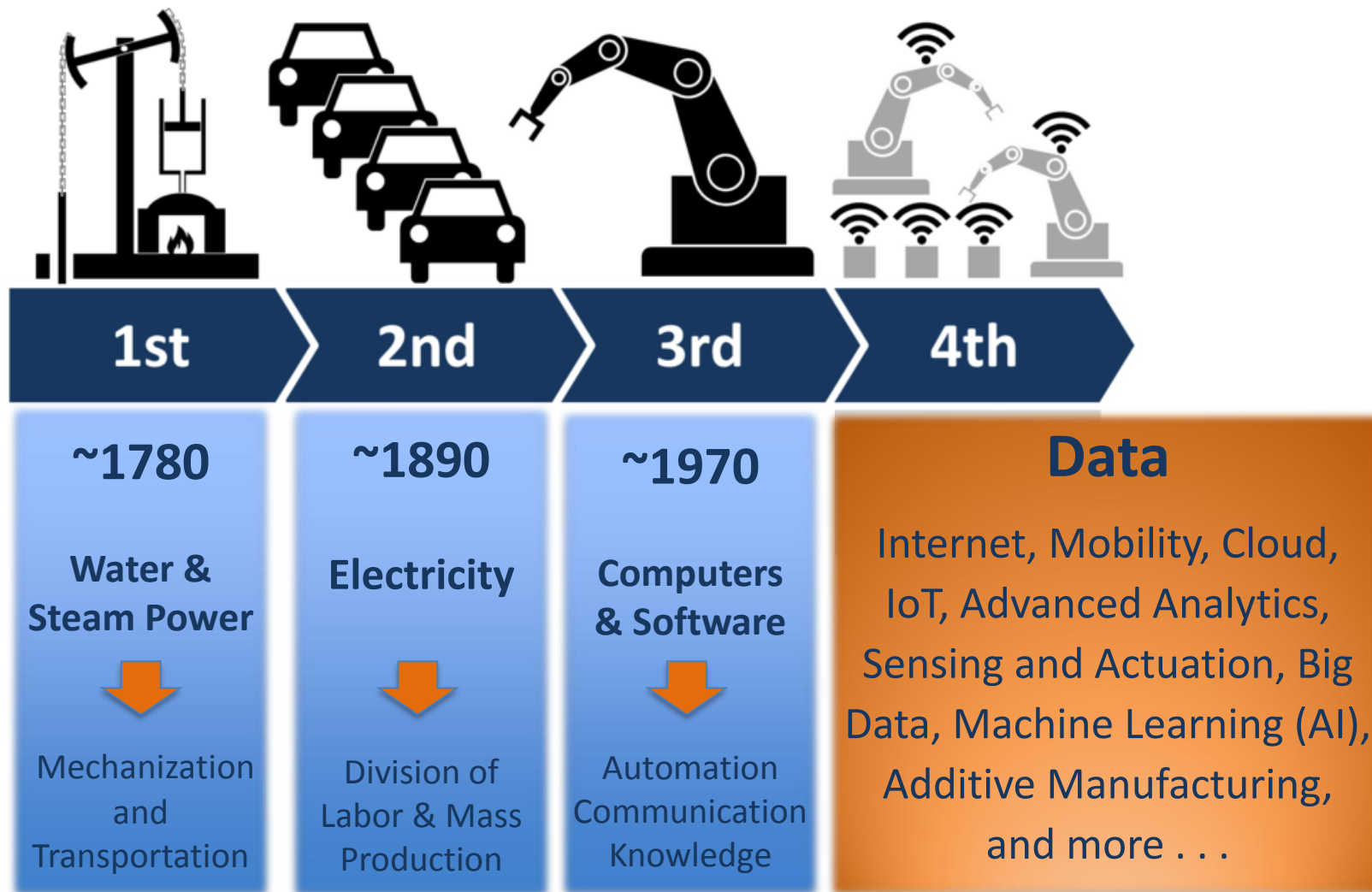
What is "**Digitization**"?

An Adaptive Learning

Human/Digital Ecosystem

Steve Bell, Lean IT Summit, Paris France, March 2017

What is the key takeaway?

Don't follow the Hype
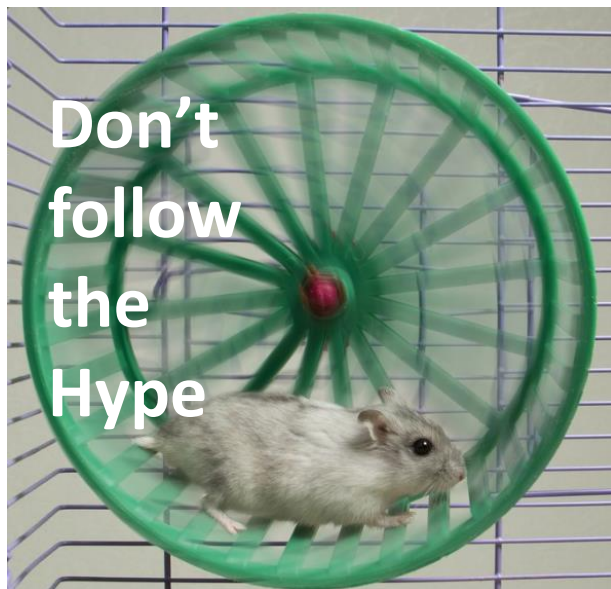
People selectively and rapidly experiment with new "value hypotheses"

© Lean IT Strategies, LLC

Five Dimensions of Digital Evolution

5 **Leadership, Management, Collaboration, Learning**

4 **Business and Operating Models**

1
Product and Service Capabilities

3

2
Development, Production, Delivery and Service Value Streams

Customer Journey: Experience + Value

© Lean IT Strategies, LLC

Three Key Competencies for the Digital Age

1

Data-Driven Problem Solving, Experimentation and Decision Making

Coach's Questions

- What is the quality, timeliness, and accessibility of the data for everyone to:
  - Do the work
  - Identify and solve problems
  - Make informed decisions
- Does everyone across your enterprise have basic analytic capabilities, reducing the reliance on costly and scarce data experts?
- How quickly are your teams able to sense and respond to signals, within the context and cadence of their daily work?

© Lean IT Strategies, LLC

Three Key Competencies for the Digital Age

2

Integrative learning

across the enterprise

© Lean IT Strategies, LLC

Lean is a system for adaptive learning

Lean Management Systems and Behaviors

Lean Startup

- ✓ Innovate in conditions of significant uncertainty
- ✓ Experiment to validate the Value Hypothesis before pursing the Growth Hypothesis
- ✓ Quickly pivot when needed

Pursue the Growth Hypothesis

Lean Product, Software and Process Development

- ✓ Rapid, iterative improvement and innovation of physical and virtual products and services, and the processes that support and deliver them
- ✓ Agile, Scrum, Kanban, DevOps, Continuous Delivery, and Agile at scale are all derived from Lean principles

Lean Operational Excellence

- ✓ Continuously improve speed, quality, cost, customer experience and satisfaction, employee engagement
- ✓ Leverage your strengths, address your weaknesses

© Lean IT Strategies, LLC

Coach's Questions

How do you:

- Understand your distinct customer profiles and make them visible to everyone?

- Focus everyone in the enterprise on your customer journeys?

- Create data visibility, drive data-driven problem prioritization and solving across your three enterprise core value streams (develop, deliver, service) so you can sense and respond quickly?

© Lean IT Strategies, LLC

Lean Leadership for the Digital Age

GO WITH THE FLOW

Accelerate and Scale Digitization with Lean Leadership Practices

by Steve Bell and Karen Whitley Bell

Technology leaders of established enterprises are keenly aware of the vital role they play in helping their organization adapt and thrive in a competitive digital ecosystem. While deep and broad competence with digital tools and methods is essential to continuously deliver innovation, it is only a small part of the equation:

> inspiring Vision + deep and broad Technical Capability + efficient and agile Execution + Continuous Learning = Sustained Competitive Advantage.

"Disruption is out there," asserts Ron van Kemenade, ING Global CIO. "We may not know the name of the next one who will actually take the next billion out of our revenue top line, but it's a matter of how we are prepared to deal with that, and how we find the new opportunities as well…. Why not be the disrupter ourselves and enter into markets where traditionally we haven't played a big role?"[1]

Focusing on customer experience and operational excellence (both core Lean principles) is a central component to high performance.

are embodied in Lean practice. Each principle enables the others, and together they empower large, established enterprises to lead the digital frontier and become what we call "Digital Lean Enterprises."

Lean Practice as a Market Differentiator

For years, anecdotal evidence has suggested that Lean practice is a market differentiator. We've all read about the successes of Toyota, Starbucks, GE, Amazon, Cleveland Clinic, Capital One, Pfizer, Nike, Southwest Airlines, IKEA, Boeing, and others that are practicing Lean and continue to demonstrate successful, sustained market performance. But can enterprises that are *not* Toyota, Amazon, or GE experience similar gains by practicing Lean?

In 2015, we joined with IT researchers to rigorously survey and analyze responses from more than 4,600 technical professionals around the globe in order to identify practices that result in higher IT performance. The results, published in the 2016 State of DevOps Report, demonstrate that:[2]

■ "When employees see the connection between the work they do and its positive impact on customers

Find this article on
www.LeanITStrategies.com

Thank You!

"Pockets of Automation"
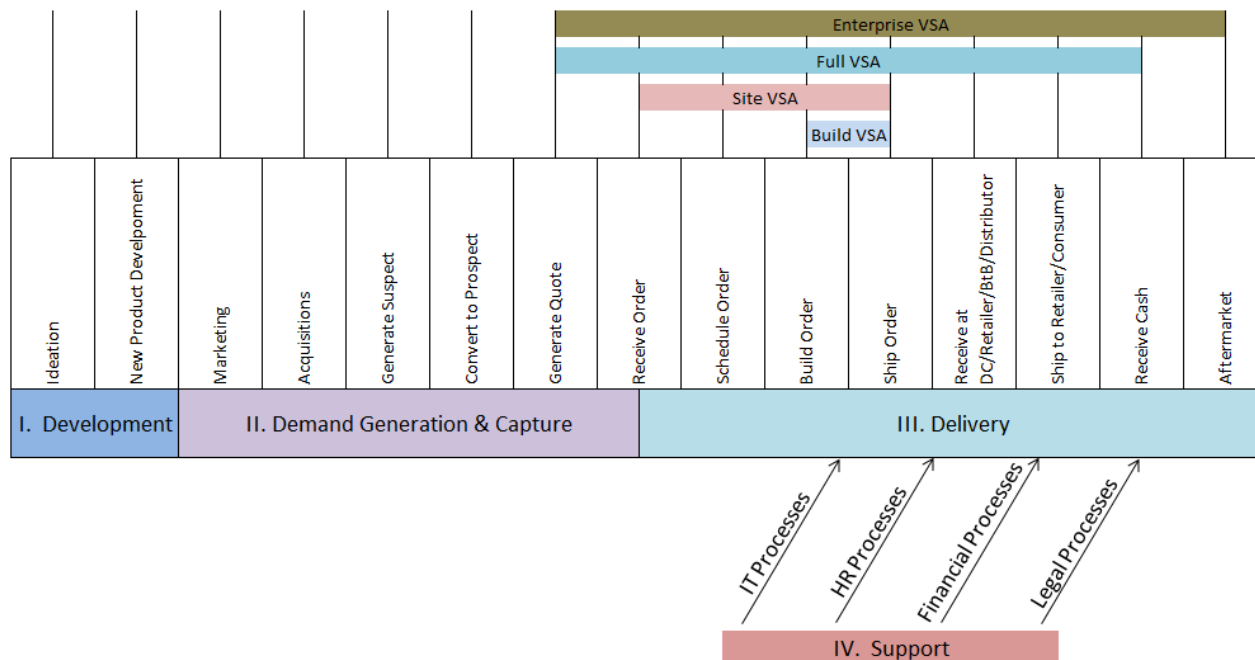
"*A*ll we are doing is looking at the time line, from the moment the customer gives us an order to the point when we collect the cash. And we are reducing the time line by reducing the non-value adding wastes"

Taiichi Ohno

3 Major Flows

*"**A** bad system will beat a good person every time"*
                                                    W. Edwards Deming

Production

- **Conveyance**
- **Moonshining**
- **3D Printing**

Material

- **RFID**
- **AGV**

Information

- **Machine Sensors**
- **Machine Intelligence**
- **Diagnostics**
- **Optimization**
- **Data**

Thank You!

Your opinion is important to us!

Please take a moment to complete the survey using the conference mobile app.

Session No: TS/07
Exploring the value of emerging technology in the lean enterprise
Steve Bell / Dan McDonnell / Michael Walton