



Capable EHS Software Solutions

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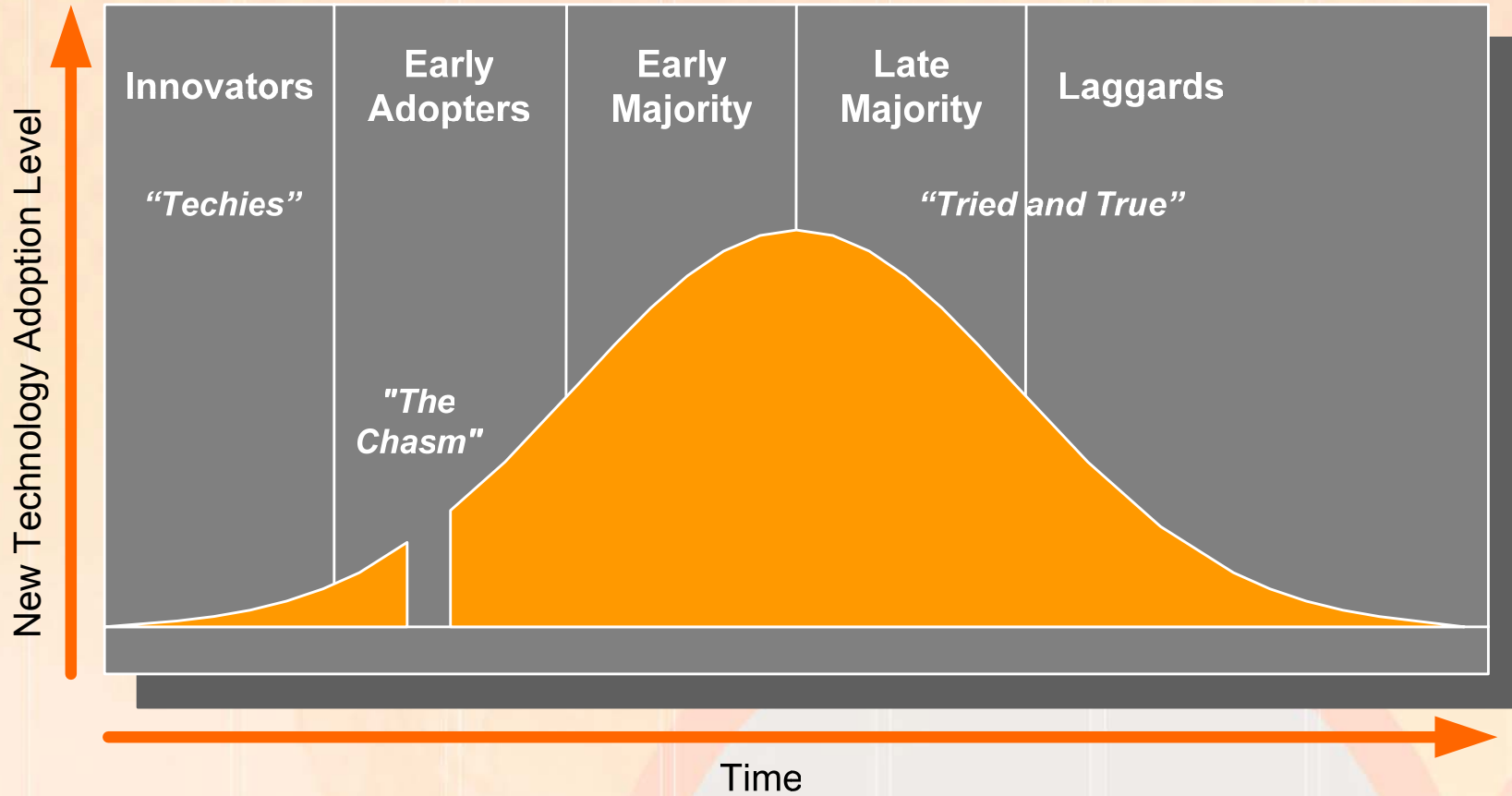
The problem

- ▶▶ *EHS always in state of flux*
- ▶▶ *Complex data, large volume, across the enterprise*
- ▶▶ *Increasing pressure from stakeholders*
- ▶▶ *Doing things manually creates a resource crunch*
- ▶▶ *Many EHS software solutions exist...but what constitutes a capable system?*

The solution

- ▶▶ *Extend accepted IT models and methodologies to EHS software and systems*
 - *Technology Adoption Life Cycle*
 - *Capability Maturity Model*
 - *Agile Development Processes*
- ▶▶ *Evaluate the organization and potential EHS software*

Technology Adoption Life Cycle



Adapted from Moore, Geoffrey A. and Regis McKenna, *Crossing the Chasm*.

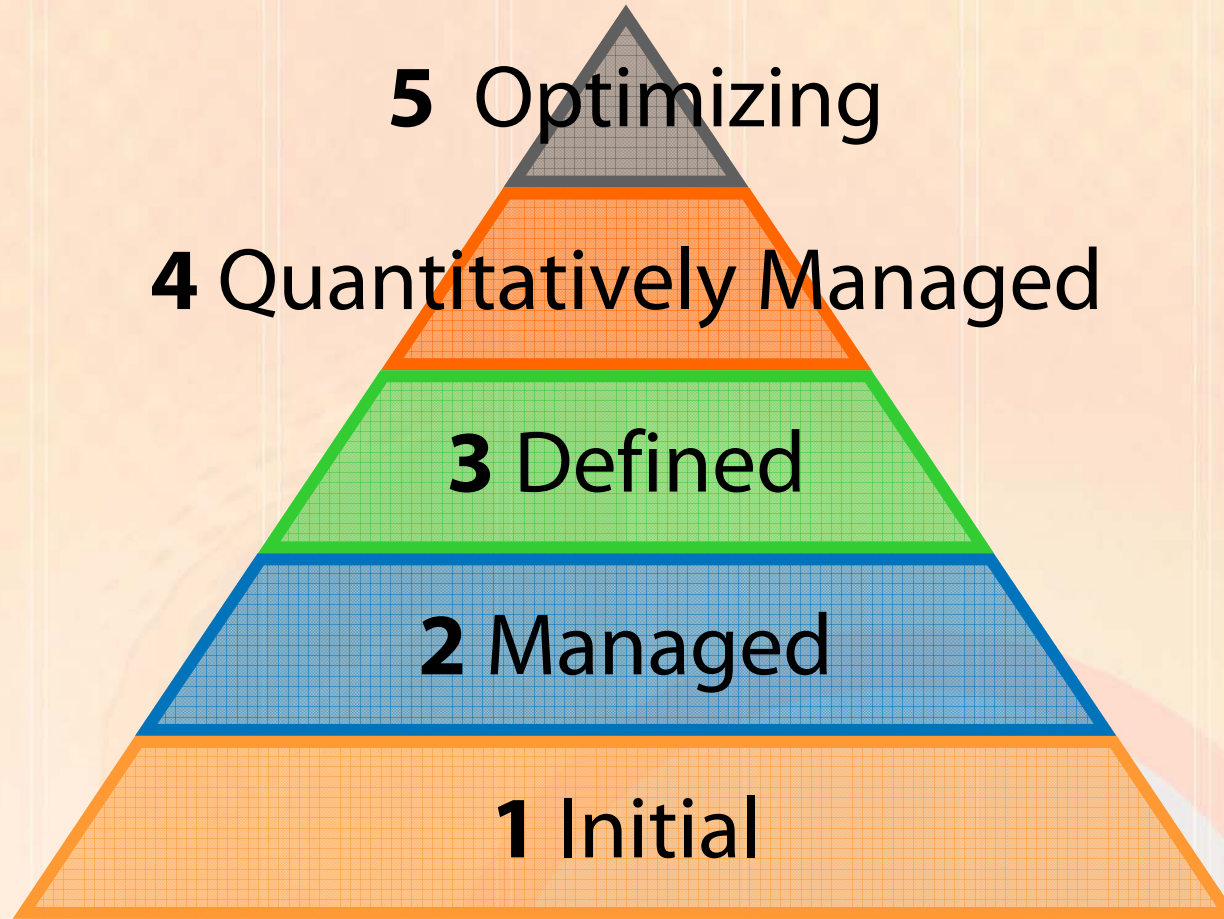
Capability Maturity Model

- ▶▶ *Carnegie Mellon Software Engineering Institute*
- ▶▶ *Organization's maturity*
- ▶▶ *Capability to institutionalize continuous improvement processes*

CMM Parallels ISO EMS

CMM Key Process Area	ISO EMS Concept
<i>Goals</i>	<i>Act</i>
<i>Commitment</i>	<i>Leadership Commitment</i>
<i>Ability</i>	<i>Plan</i>
<i>Measurement</i>	<i>Do</i>
<i>Verification</i>	<i>Check</i>

Capability Maturity Model



Agile (Development) Processes

- ▶▶ *Originated in software industry, Japan, late 1990s.*
- ▶▶ *Initially applied to software development; later applied in other business areas*
- ▶▶ *This paper extends agile processes to EHS Management Information Systems*
- ▶▶ *An agile system should exhibit ten characteristics*

Borrowed from Miller, Randy, The Dynamics of Agile Software Processes, Part I: Characteristics, Borland Developer Network, Revised July 15, 2003 (<http://bdn.borland.com/article/0,1410,29726,00.html>)

Agile Systems: New Standard of Excellence

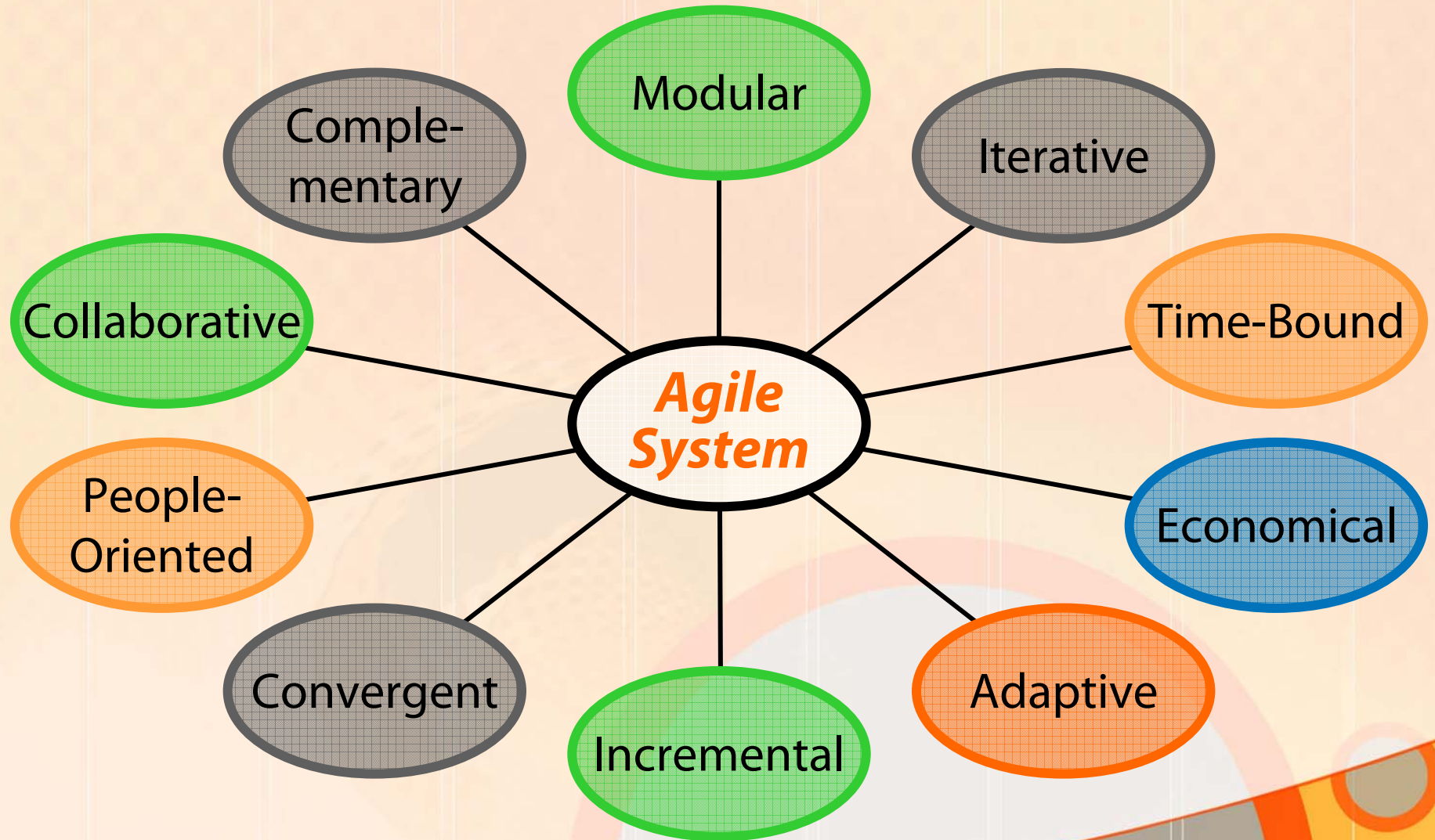
“Agility is the ability to change quickly, at a predictable cost, with a low risk of failure.”

—Agility and Efficiency: Business Process Fusion, Gartner, 2004

“The agile enterprise, characterized by its ability to respond to frequent and unpredictable change, is being promoted as the successful company of the future.”

—University of Texas Automation and Robotics Institute

Attributes of Capable EHS Systems



Conclusions

- ▶▶ *Businesses should seek powerful, flexible IT solutions to automate EHS*
- ▶▶ *An effective or “capable” EMIS enables continuous improvement*
- ▶▶ *Evaluate software and organization’s capabilities*
- ▶▶ *Take the opportunity to improve EHS business*
- ▶▶ *Approach applies whether auditing existing systems, streamlining them, integrating new data sources, or building new systems from the ground up*

For Further Information...

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