Innovate2011

The Premier Software and Product Delivery Event

Software. Everyware.

Measured Improvement in Software Economics

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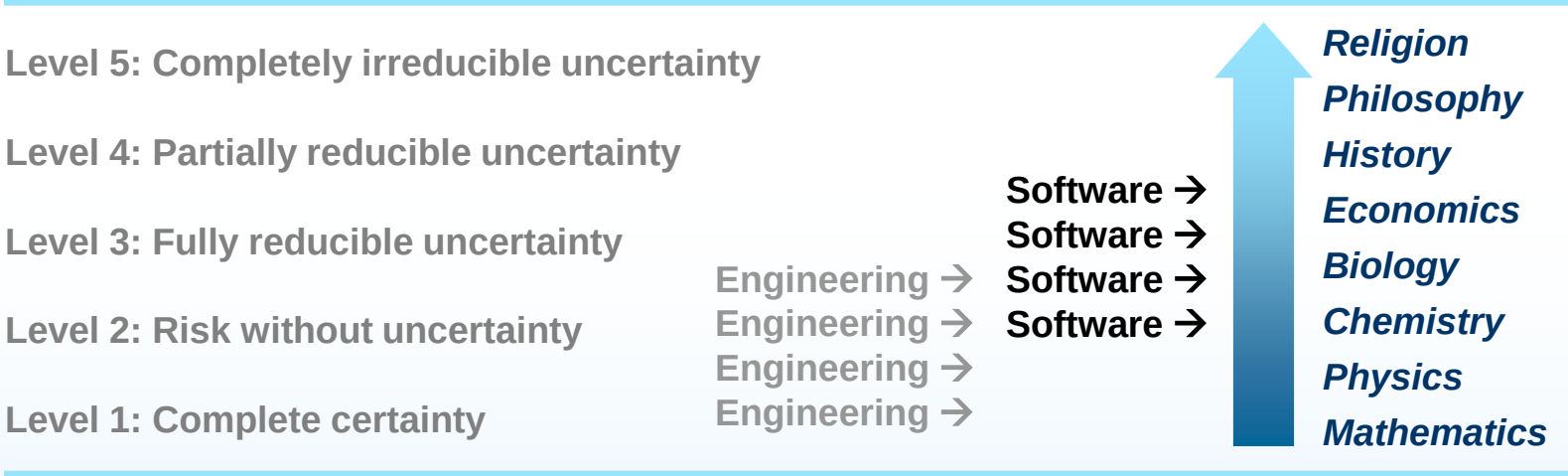
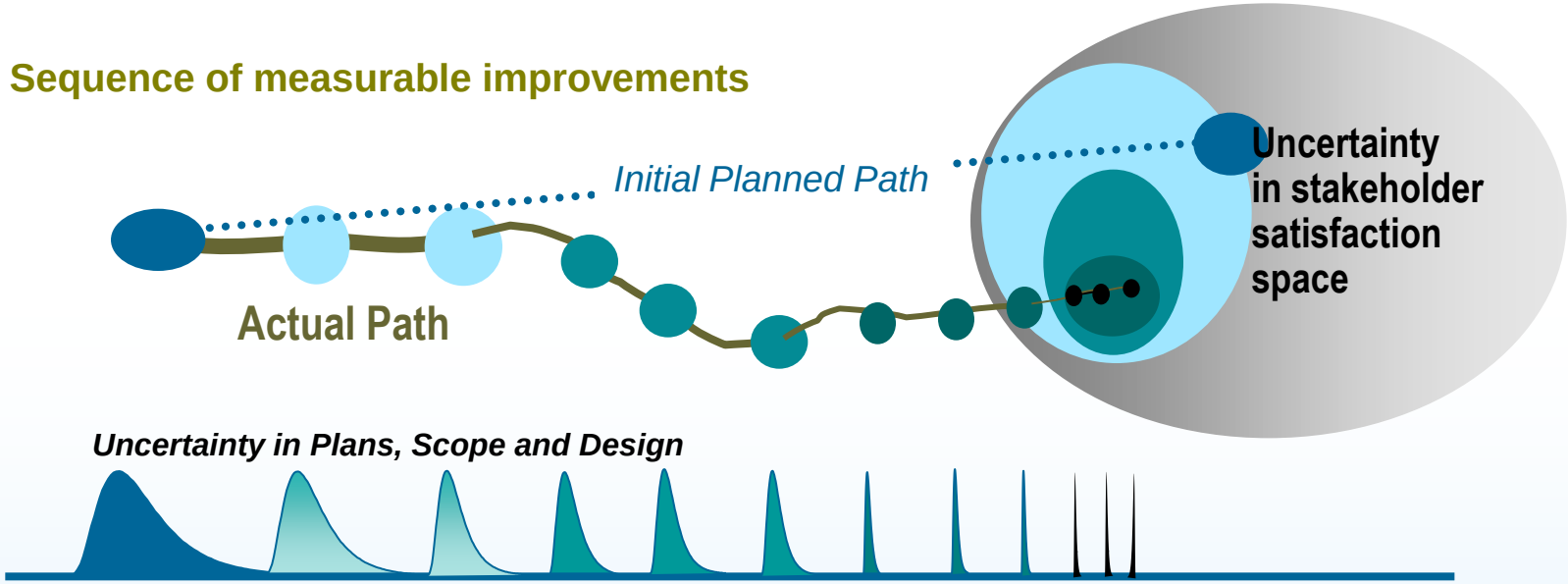
Software Delivery is an Economic Discipline



Lo, Andrew, and Mark Mueller. MIT Sloan School of Management, Moody's/NYU 6th Annual Credit Risk Conference, New York, March 2010.

Economic Governance: Measurement and Steering

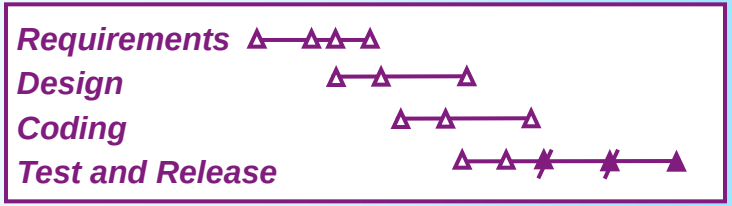
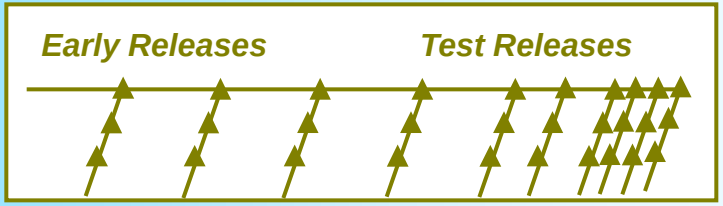
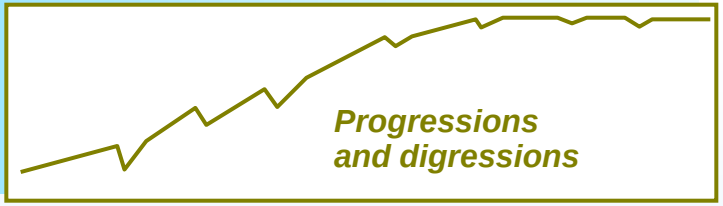
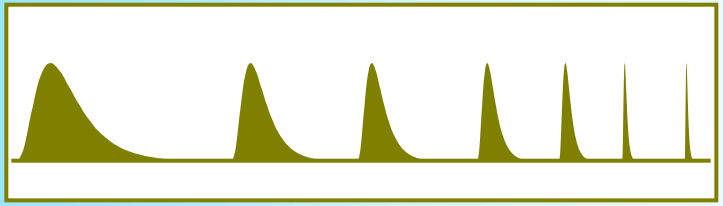


Managing uncertainty requires **MEASUREMENT** → *Measurement builds* **TRUST** → *Trust improves* **EFFICIENCY**

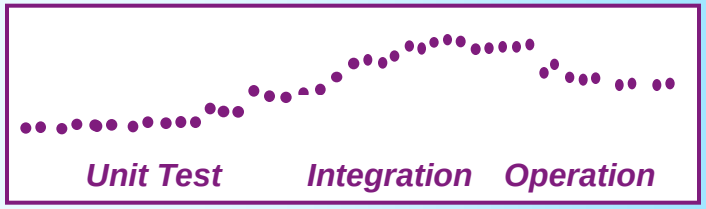
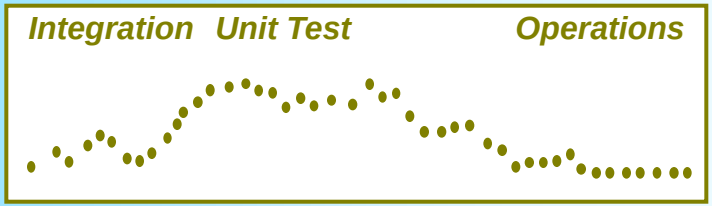
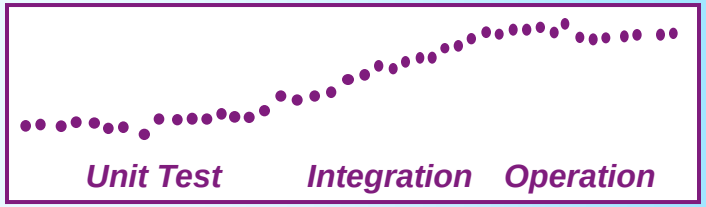
Pivotal Culture Shifts

Integrate	Collaborate	Optimize
Plans/management Plan for integration to precede unit testing	**Progress measures** Quantify progress trends from the integrated code and test base	**Quality measures** Quantify cost-of-change trends to demonstrate true agility
Avoid false precision in plans and requirements	**Don't** attack the easy things first	**Don't** rely on subjective and speculative measures

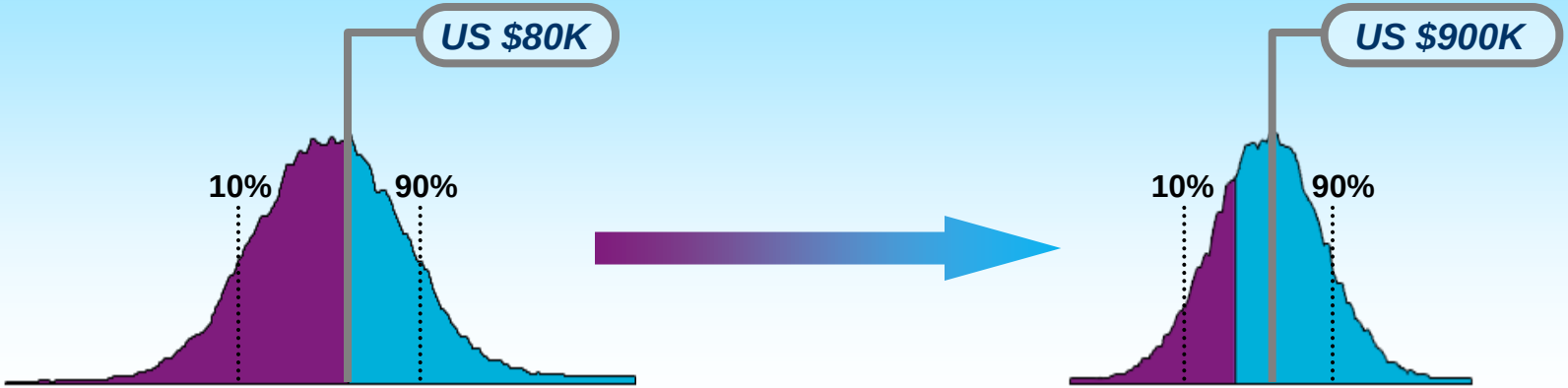
Measured Improvement: *Progress Econometrics*

Conventional Engineering Governance		Modern Economic Governance
	**Planning Progress**	
	**Technical Progress**	
	**Economic Progress**	

Measured Improvement: *Quality Econometrics*

Conventional Engineering Governance		Modern Economic Governance
	**Maturity** *Defect Trend*	
	**Modularity** *Change Volume Trend*	
	**Adaptability** *Cost of Change Trend*	

Measured Improvement: *Quality Econometrics*



Improving Software Economics

VOLUME OF CODE
- Quality/Performance
- Integration first
- Manage scope
- Asset-based reuse

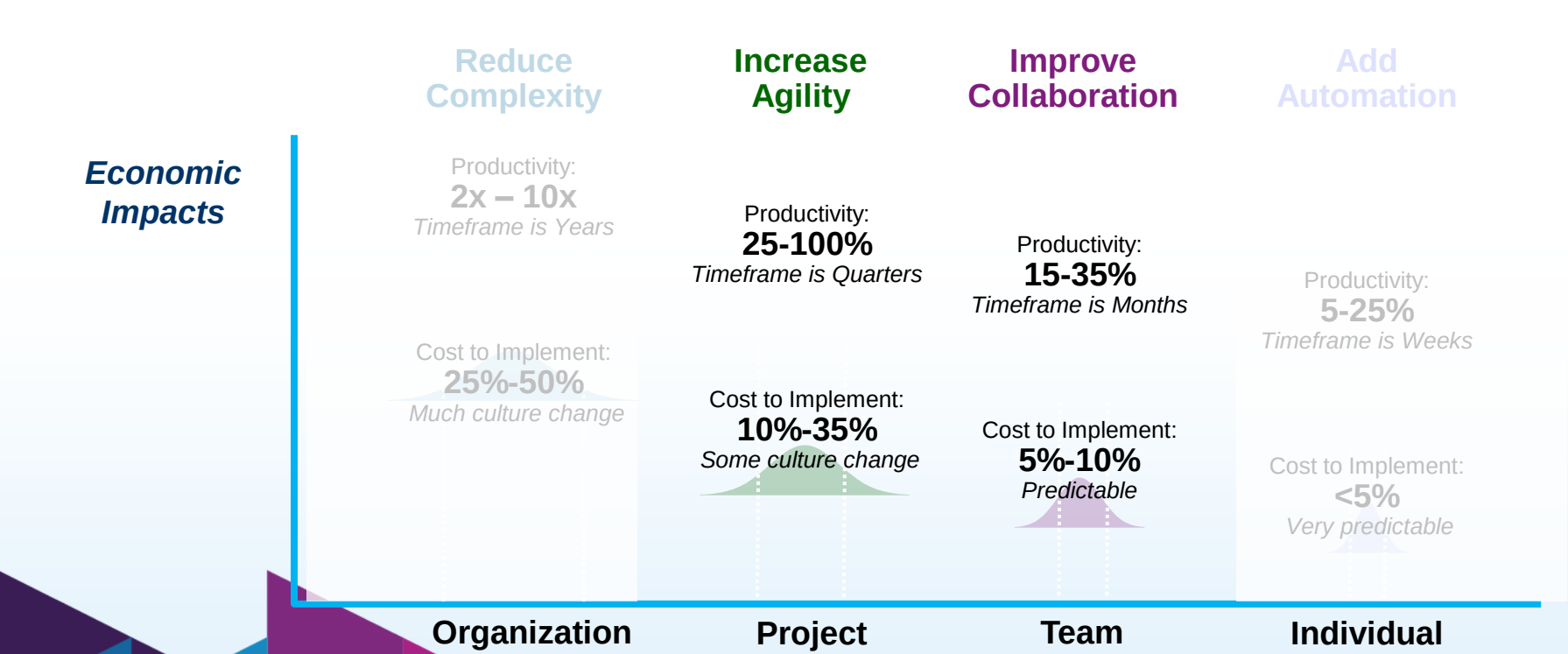
PROCESS
- Steering
- Good practices
- Maturity
- Domain knowledge

Resources = Complexity ***Agility*** *** Collaboration * Automation**

TEAMWORK
- Synchronization
- Skills
- Experience
- Motivation

TOOLING
- Process enactment
- Measurement
- Instrumentation
- Manage complexity

Productivity Improvement Leverage



The Moral of This Story

Better software economics is a result of:

1. Measured improvement for improved predictability

- The foundation of economic governance
- Measurement helps you manage uncertainty

2. Agility for improved operational efficiency

- Best measured by cost of change trends
- Best achieved by accelerating integration testing

If you play better defense you can play more offense!

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www.ibm.com/software/rational