The Five Imperatives –
An Application Lifecycle Management Energy
Drink Boosts the Whole Team

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Realities can stall software-driven innovation
Complexities in software delivery compounded by market pressures

Complex, Multi-platform Systems and Applications

62% of companies have agile projects requiring integration with legacy systems

Increasing Mandates

2010 Spending in U.S. on governance, risk and compliance was **$29.8 billion**

Globally Distributed Software and Product Supply Chains

50% of outsourced projects are expected to under perform

Cost Reduction

70% budget locked in maintenance and **37%** of projects go over budget

Unpredictability in Software Delivery

62% of projects fail to meet intended schedule

Changing Requirements and Time to Market

30% of project costs are due to rework and poor execution of requirements

Source: Numerous sources, see speaker notes for details

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Anytime, for any team, silos inhibit software delivery productivity

Decide

People
Best practices
Data
Tools

1. Business

"At some point, you take a step back, and you realize you have an awful lot of **siloed systems** that are **limiting transparency** across strategic projects."
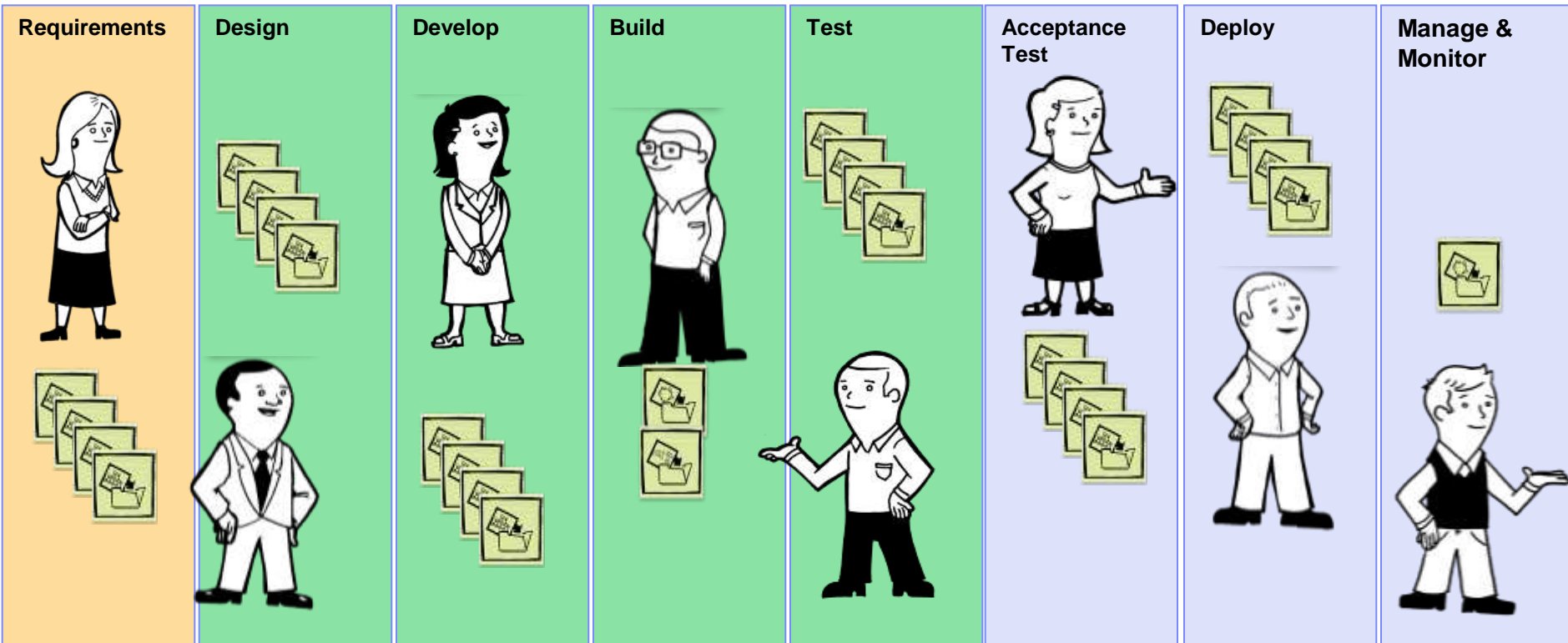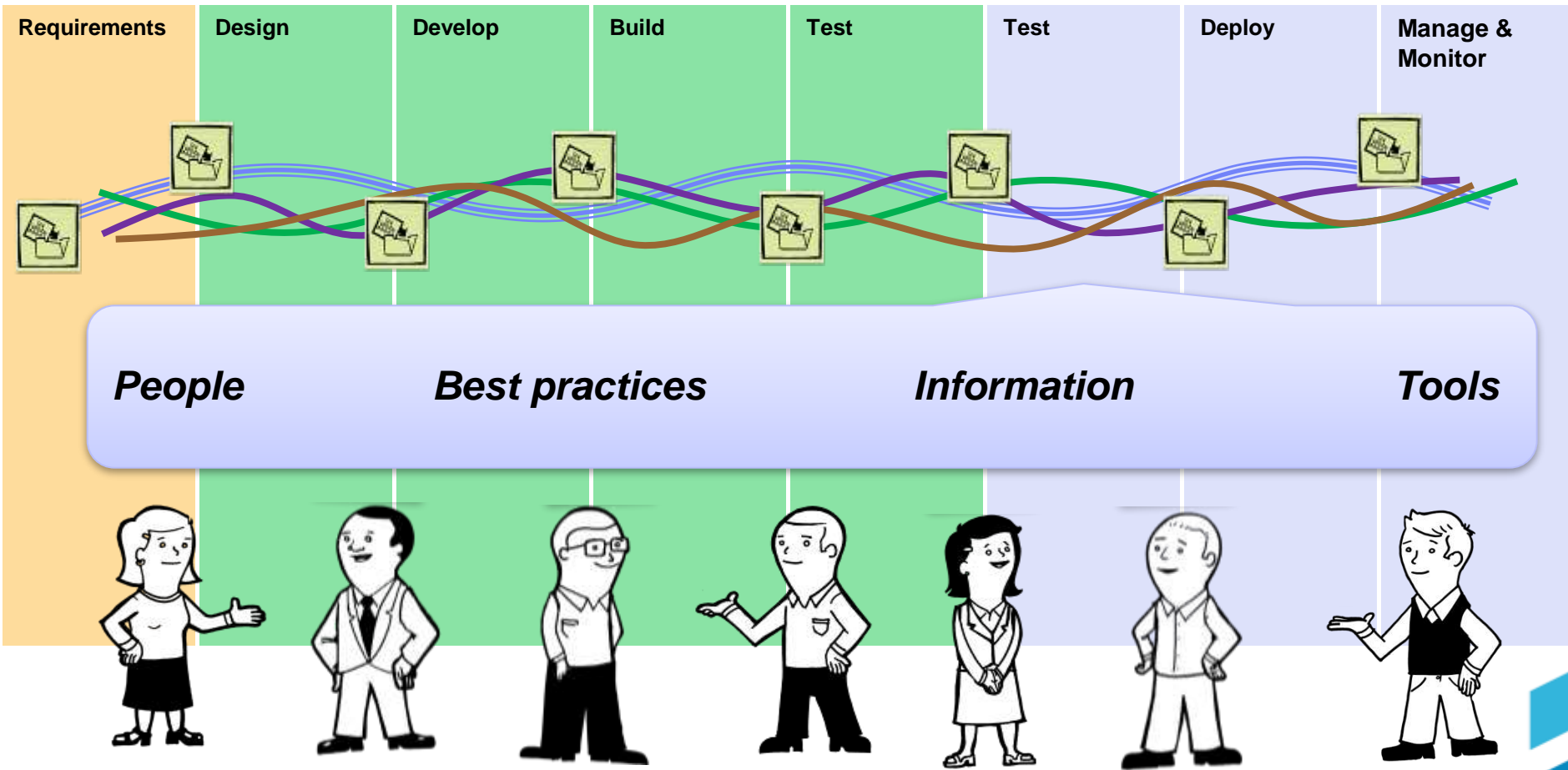
\- Development Director
Temenos, Inc.

Do

Deploy

2. Development

3. Operations

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We're good at going deep in each discipline

Requirements	Design	Develop	Build	Test	Acceptance Test	Deploy	Manage & Monitor

The challenge is coordinating across the disciplines…

Requirements	Design	Develop	Build	Test	Test	Deploy	Manage & Monitor

People   *Best practices*   *Information*   *Tools*

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Application Lifecycle Management can improve productivity

ALM manages the flow of:

People

Process

Information

Decide

1. Business

Develop

Deploy

2. Development

3. Operations

Across the disciplines of requirements, design, development, build, test, deployment
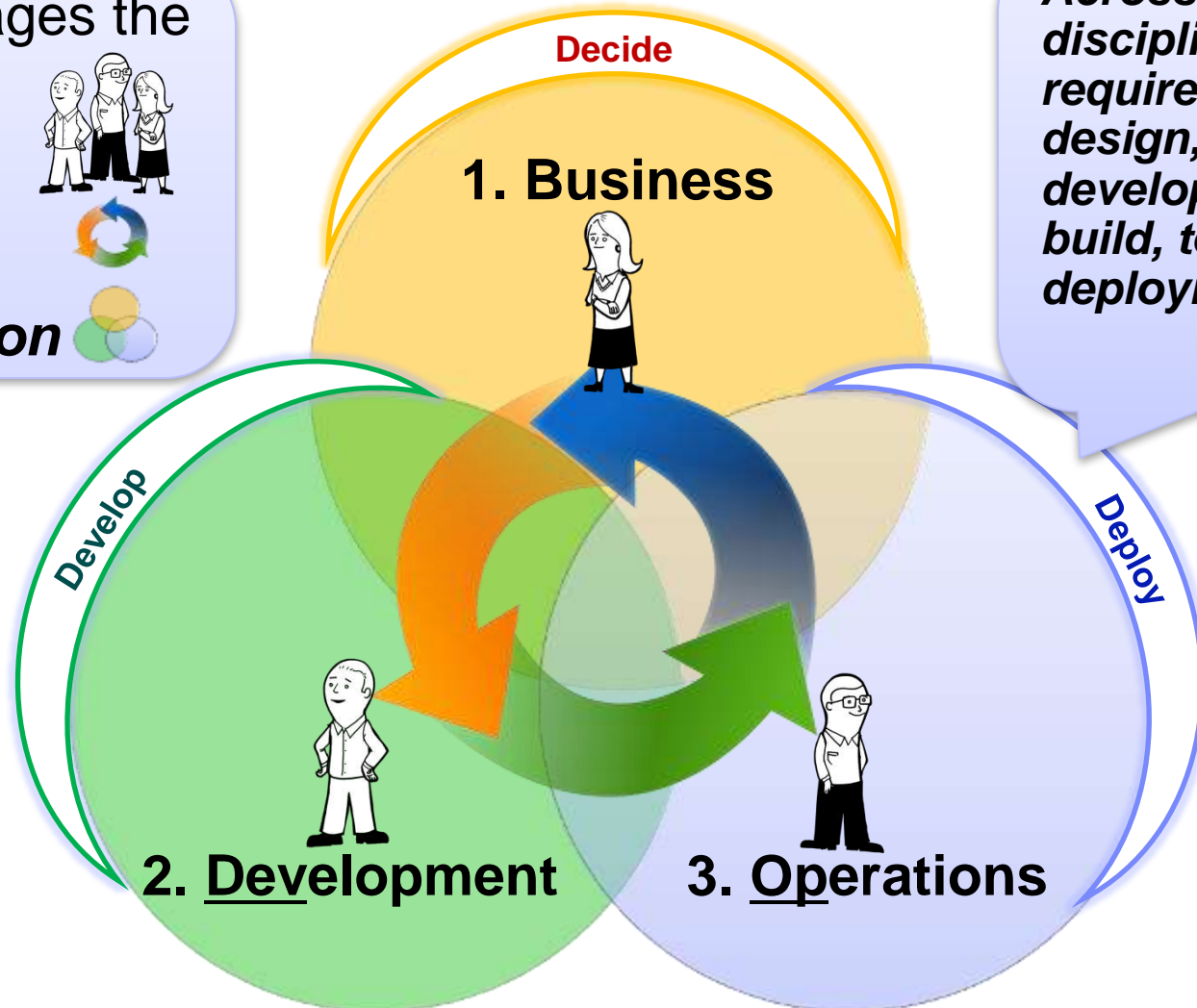
Collaboration challenges
Can your team…

- *…find all the information related to a specific task?*

- *…quickly grasp the* **"who, what, when and why"** *of team activities?*

- *…bring new team members up-to-speed quickly?*

- *…overcome the barriers of multiple time zones when working with outsourced and distributed team members?*
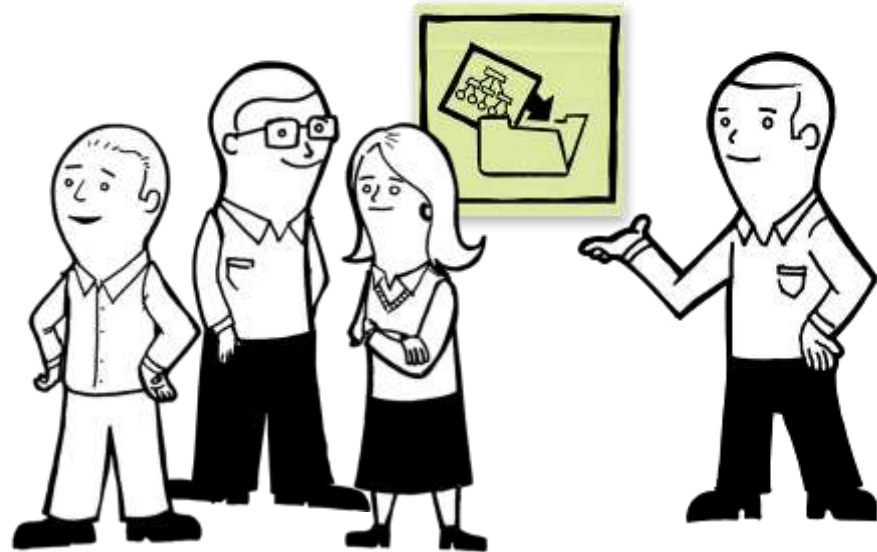
In-Context Collaboration improves product value

- Empower teams to collaborate on and review software development artifacts so they can **incorporate feedback early and often,** aligning delivery with stakeholders' vision

- Provide a **single source of truth** hosted in a shared repository so that team members can collaborate effectively around the globe to build a collective intelligence

- Make **information immediately accessible** to all team members in the context of their work
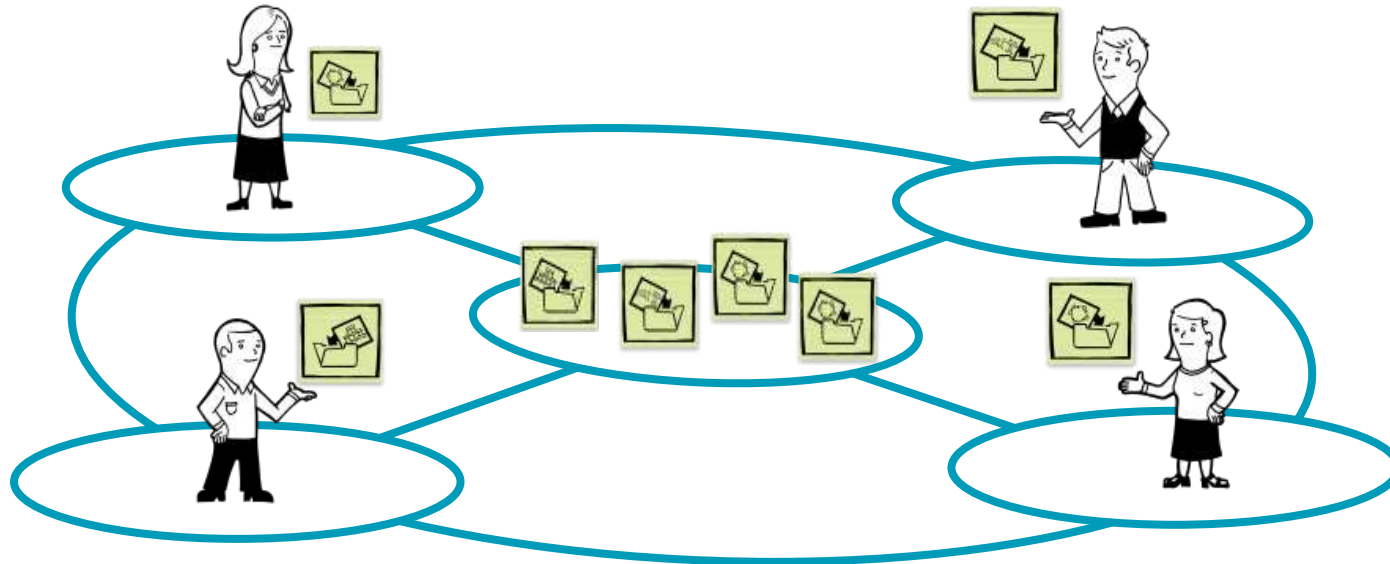
Comments on requirements' details are in-context

A click on the comment highlights the text under discussion.

Formal reviews drive agreement & prevent re-work

✓ Reviews & approvals ensure artifacts are reviewed and/or approved by key team members and capture compliance requirements.

Requirements

Work Items

Test Artifacts

JKE Banking (Requirements) >

Approval

⊕ 👤 Participant's Review: ▭ In progress 0% completed Your role: Approver

⊖ ☑ Overall Review: ✐ Draft — ▶ In progress 65% completed ⏸ Pause Review — ✓ R

Due: Apr 18, 2011

Instructions to reviewers:

List of requirements for our second sprint   All comments have been resolved   Please review and appr requirements as written.

	Participant	Type of Participant	Review results	
☐	Bob	Approver		Done - 5 Approved
☐	Deb	Approver		Done - 5 Approved
☐	Marco	Approver		60% - 2 Approved, 1 Disapproved
☐	Tanuj	Approver		

18 : Dividend Allocation by Percentage
Test Case Overview | Snapshots | History

Originator: Tanuj   Owner: Tanuj   State: Under Review

Description: select a list of potential donations and enter percentages for each

Formal Review

List the people who will be reviewers and approvers of this content and define yo

View: All

Show All — Items per page   ⊮ Previous 1 - 4 of 4 |Ne

	Review Type	Name	Status	Comm
☐	Approver	Bob	Pending	
☐	Reviewer	Sally	Pending	

Task 41 *

Summary: *   Implement - Frequency of dividend transfer

Overview   Links   Approvals   History

Approvals (1) - 1 pending

New ⚒ Approval ▾

Type	Name	State	Due
⚒ Review ▾	Check of algorithm to prevent transfer on weekend	Pending	Apr
	Al	Pending	
	Curtis	Pending	
	Tanuj	Approved ▾	
	Add Approvers		

Rich hover automates information access without having to click

✓ Rich hovers provide quick access to information to determine if additional details are required!

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Align planning across the business, development and test teams

✓ Linked to Requirement Collection

✓ Linked to Test Plan

One plan with multiple views

Everyone sees meaningful data in the context of their work

13

Plan at the right level of detail
Everyone participates in planning

- ✓ Stories decomposed into cross-discipline tasks
- ✓ Plans include all work

- ✓ Whole team sees dependencies

▶ Plan Details

Planned Items ? | Links | Snapshots | Dashboard | Notes

View As: Roadmap ▾

					7/11	7/17/11	7/24/11
							July 31, 2
Actions	Summary	Effectiv	Owned By	Rank	Thu	Fri	Sa	Sun	Mor
⋮ ☐ ▾	▾ ⭐ Dividend processing payment is a one time transaction.	--	👤 Unassigned	3				
	📋 Tester design the test case and test script	--	👤 Tanuj	1				
	📋 Developer implement the requirement	--	👤 Deb	2				
	📋 Analyst elaborate the requirement	--	👤 Bob	--				
	⭐ Improve link colors	5 hours	👤 Deb	--				
	▸ ⭐ Requests sent in form of email	--	👤 Unassigned	--				
	▸ ⭐ Donor Dividend Allocation Criteria	--	👤 Unassigned	--				
	🔷 SWT Exception	1.3 day	👤 Marco	--				
	▸ ⭐ Frequency of dividend transfer	--	👤 Unassigned	--				
	⭐ Donors Deposit Money Into a Pooled Assistance Fund	--	👤 Unassigned	--				
	▸ ⭐ Organization must identify how much money is desired	--	👤 Marco	--				

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Plans tied to execution

Status updates are everyday work

✓ In place updates to status automatically appear in the plan

Lifecycle Traceability challenges

Can your team answer…

Analyst

Which requirements are addressed in this iteration?

Are all of the requirements tested?

What defects are affecting which requirements?

Project Manager

Can we pass an audit?

Are we ready to release?

What defects were resolved in this release?

Are we aligned with the business?

Architect

Can we implement in a way that supports maintainability?

Which requirement the design

Are there reusable components we can leverage?

Beta!

Developer

What requirements am I implementing? **What test uncovered this defect, on which environment and what build?**

What changes occurred overnight?

Release Engineer

How can I standardize when teams use different tools?

Where are the bottlenecks in our processes?

Are build times getting longer or shorter?

How can I speed up my builds?

Quality Professional

What is the quality of the build?

What is ready for me to test?

What defects have been addressed since the last build?

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Lifecycle Traceability improves quality

- Establish **relationships between software artifacts**

- I**dentify and close artifact gaps,** ensuring **coverage** across disciplines

- Provide visibility into the **completeness** of planned items by inspecting all related artifacts

- Provide easy **access to related artifacts** ensuring everyone shares the same view

- Deliver transparency which enables everyone to make **fully informed decisions** based business priorities

Instant access to details from any point in development process
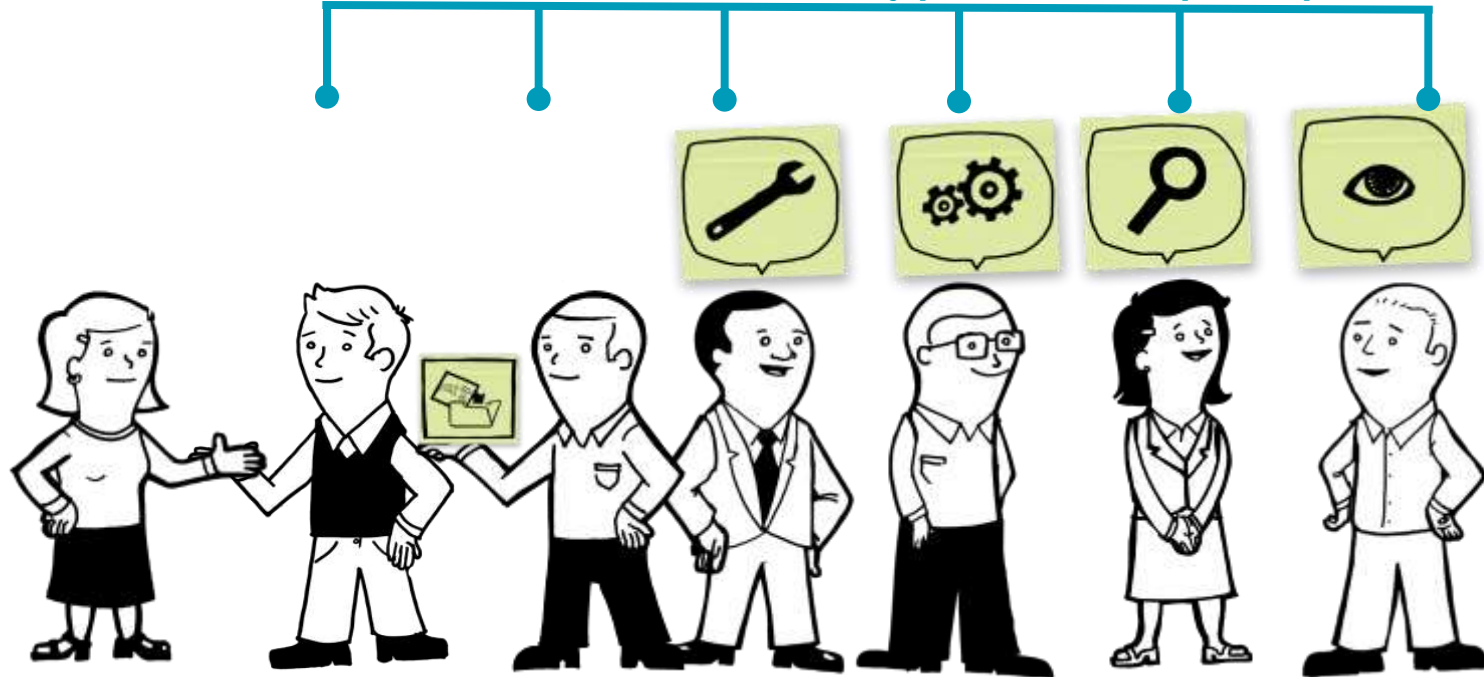
| Customer | Final Product | Build Artifacts | Environment | Supporting Systems | Requirements Management | Initial Idea |

Team leads have visibility into coverage & completeness

- Proactively respond to gaps across all the silos as they surface throughout the project
- Issues are quickly highlighted and resolved

Team leads can improve quality and predictability

✓ Creating a shared vision delivers what the stakeholders want

✓ Whole team buy-in improves team trust, efficiency and focus

✓ Everyone knows what work is needed by whom and when.

✓ Traceability provides insight to knowing when you are DONE!

Architects elaborate requirements and give input to developers **Beta!**
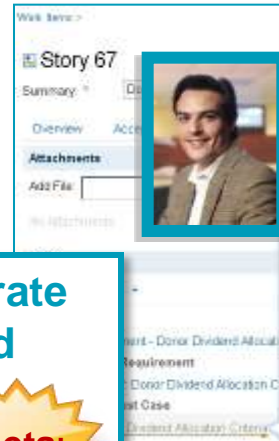
Developers understand the requirements, design, test criteria and test results

Teams collaborate and clarify the details of requirements

Testers define and execute tests cases with a clear understanding of requirements

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Measuring and steering challenges
Can your team…

- …provide one view of project health at multiple levels?

- **…make steering decisions based on facts rather "guesstimates"?**

- …track desired improvements with metrics?

- …minimize administrative overhead by relying on your environment to capture metrics?

Development Intelligence improves predictability

- Enable **fact-based decision making** (to communicate status, monitor progress, diagnose problems, identify corrective actions)

- **Steer projects and programs** to deliver on-time

- Apply **Business Intelligence techniques** to software and systems development

Measurement Practices Impact Project Success

Legend:
- Strong measurement practice
- Weak measurement practice

Chart data:
- Cancelled: 15% (Strong), 5% (Weak)
- Late: 40% (Strong), 20% (Weak)
- On-time: 45% (Strong), 75% (Weak)
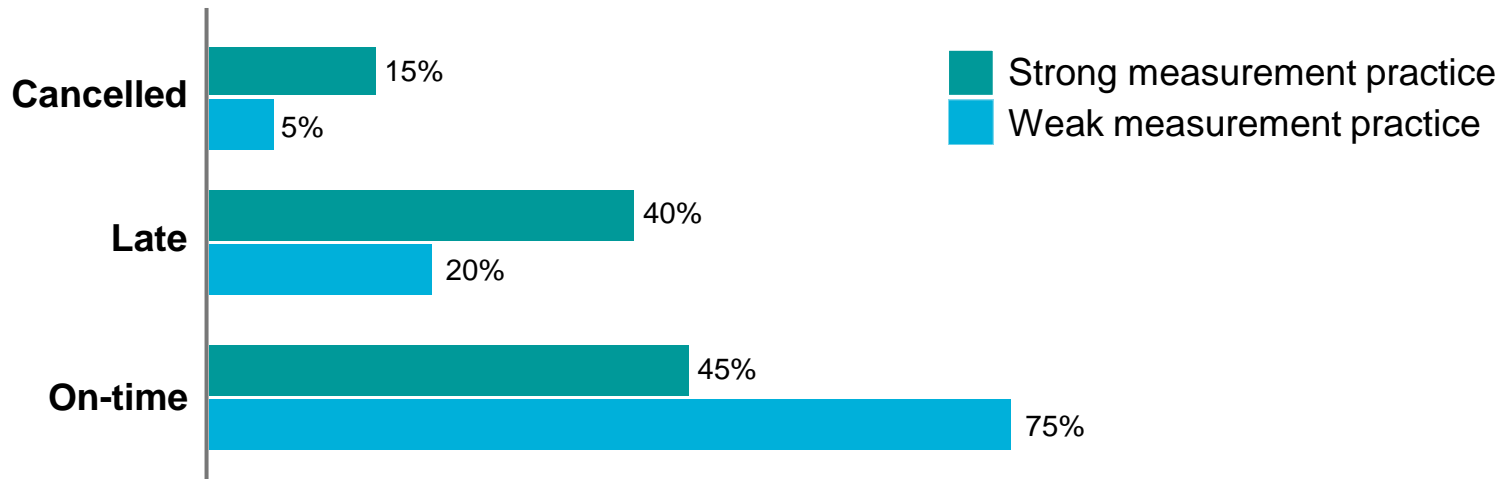
Sources: Capers Jones, Measurement, Metrics and Industry Leadership, Copyright © 2002-2007 by Capers Jones LLC
Capers Jones, Software Engineering Best Practices, Copyright © 2010 McGraw-Hill

Use dashboards to provide that one view of project health

Dashboard details
Easily answer steering questions

✓ Mini-dashboards: available on any page

✓ Click thru on the viewlet to drill into information

Continuous improvement challenges
Can your team…

- …leverage out-of-the-box templates that support traditional and agile workflows?

- …change process "on the fly" as part of a continuous feedback loop?

- …allow team leads to determine how strict or lax the "rules of the road" should be?

- …modify process enforcement over the life of a project, to encourage early-stage experimentation and end-game stability?
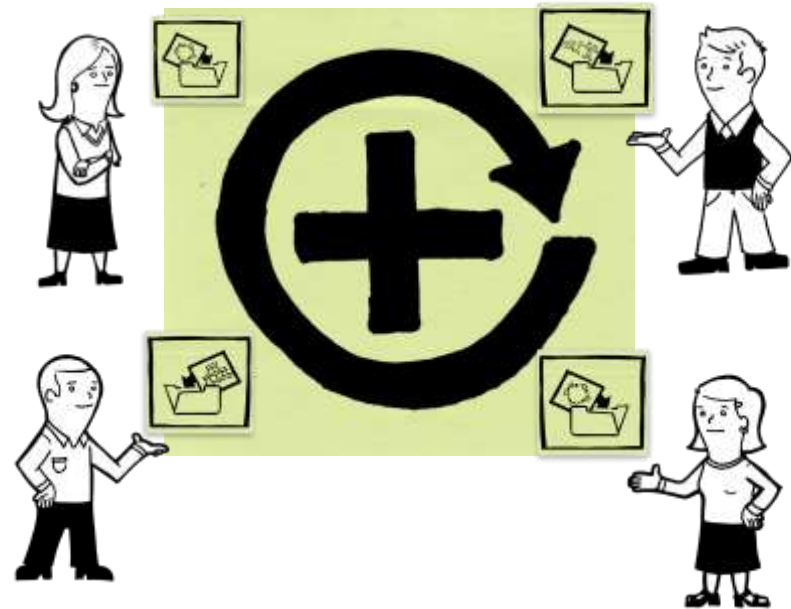
Continuous Improvement reduces cost

- Improve software delivery through the ongoing **adoption of best practices and automation** to reduce manual, non-creative and error prone tasks

- Promote **incremental improvement of a project** when needed

- Enable breakthrough improvement by **capturing best practices and reusing** across teams

- Allow **everyone to participate** with easy to adopt best practices at your fingertips.

Assess

ROADMAP

Act

Steer

Jazz

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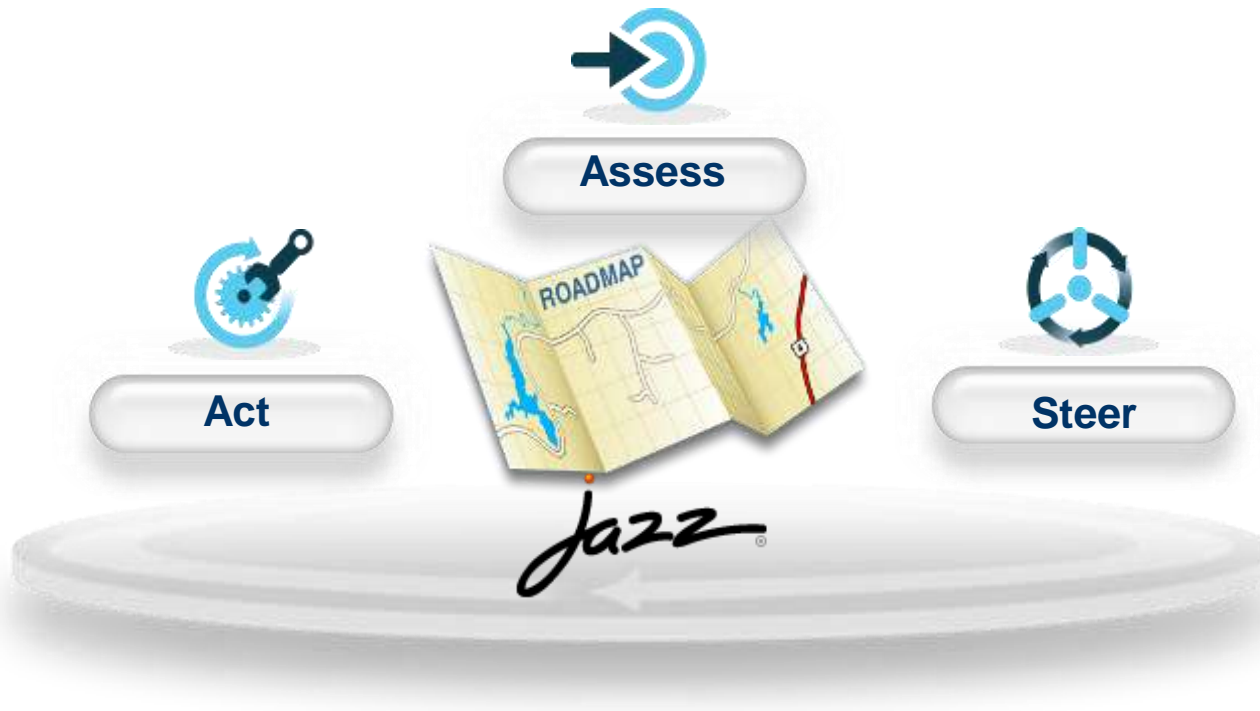
Team retrospectives help identify areas of improvement

- **Tracking Retrospectives help team members to collaborate on improvements**

  - Ranking of process improvements help to focus on where the team feels the biggest pain

Templates
Support breakthrough improvement

✓ Use and reuse of project templates is an example of breakthrough improvement
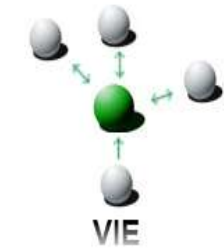
- Modify to match your organization's process

Beyond milestones…
Continuous Integration testing for builds

"Green" builds have passed **meaningful** integration tests
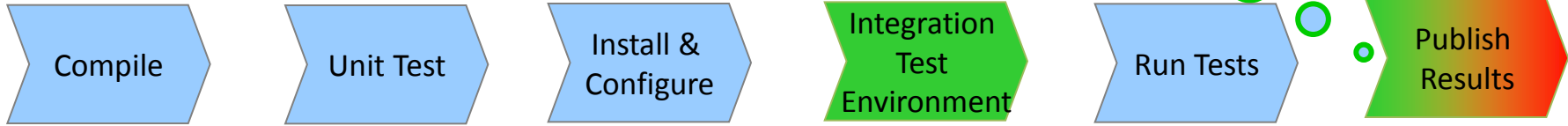
Compile	Unit Test	Install & Configure	Integration Test Environment	Run Tests	Publish Results

VIE

Rational Quality Manager

Nightly build is not **published** until integration tests run.

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Five Imperatives for
Effective Application Lifecycle Management
to improve organizational productivity

Maximize <u>product value</u> with **In-Context Collaboration**

Accelerate <u>time to delivery</u> with **Real-Time Planning**

Improve <u>quality</u> with **Lifecycle Traceability**

Achieve <u>predictability</u> with **Development Intelligence**

Reduce <u>costs</u> with **Continuous Improvement**

Learn more at <u>ALM Everywhere</u>

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1 Download RTC, RRC or RQM for CLM

https://jazz.net/downloads/rational-team-concert/

Sample scenarios for CLM

https://jazz.net/wiki/bin/view/Main/MTM_Lifecycle_Welcome

Track our progress at jazz.net!
We openly develop our software with our own tools!

https://jazz.net/projects/clm/

Interactive White Board

Short, simple way to share the
5 ALM imperatives
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Role-based Demo

VP of Development, a Business Analyst
or Project Owner, Agile Team Lead,
Developer and Test Lead.
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31

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