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# 7 Reasons Why Value Stream Integration Improves Software Quality Assurance

July 25, 2018



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# Hosted By



Adam Jones  
Sr. Presales Engineer  
Tasktop

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# Today's Presenter



Matt Angerer  
Presales Solution Architect  
Tasktop Technologies

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Questions



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## *7 Reasons Why Value Stream Integration Improves Software Quality Assurance*

### **1. Understanding Defect Detection Percentage (DDP)**

- ✓ How monitoring DDP can help improve your organization's software quality!

### **2. Why VSI eliminates QA as an 'afterthought' activity for software releases**

- ✓ QA needs line-of-sight visibility into requirements development

### **3. Driving Effective Change Impact Analysis, Control, and Management of Change Requests**

- ✓ SharePoint, ALM.Net, JIRA, ServiceNow, SAP Solution Manager! Change stems from everywhere.

### **4. How Cross-Platform Artifact Alerting Illuminates Redundancy and Inefficiency**

- ✓ Changes to Requirements should alert Test Automation Engineers
- ✓ Over testing is a waste of time & money – artifact alerting illuminates redundancy.

### **5. Why Shifting-Left Contains Costs While Also Aiding in Root Cause Analysis & Traceability**

- ✓ Swimming upstream and downstream across tools for better software quality

### **6. Reducing Ping-Ponging between Developer and Tester**

- ✓ Developer-Tester Alignment is achieved with Value Stream Integration

### **7. One-Size Does Not Fit All for Testing Centers of Excellence**

- ✓ The fallacy of a single source of truth for requirements, testing, and defect tracking.
- ✓ How Testing Excellence Centers (TECs) are replacing Testing Centers of Excellence (TCoEs) – **Know thy Difference!**

# What is Value Stream Integration?

Connecting the people and activities in the software delivery toolchain by automating the flow of value from ideation to production.

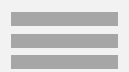
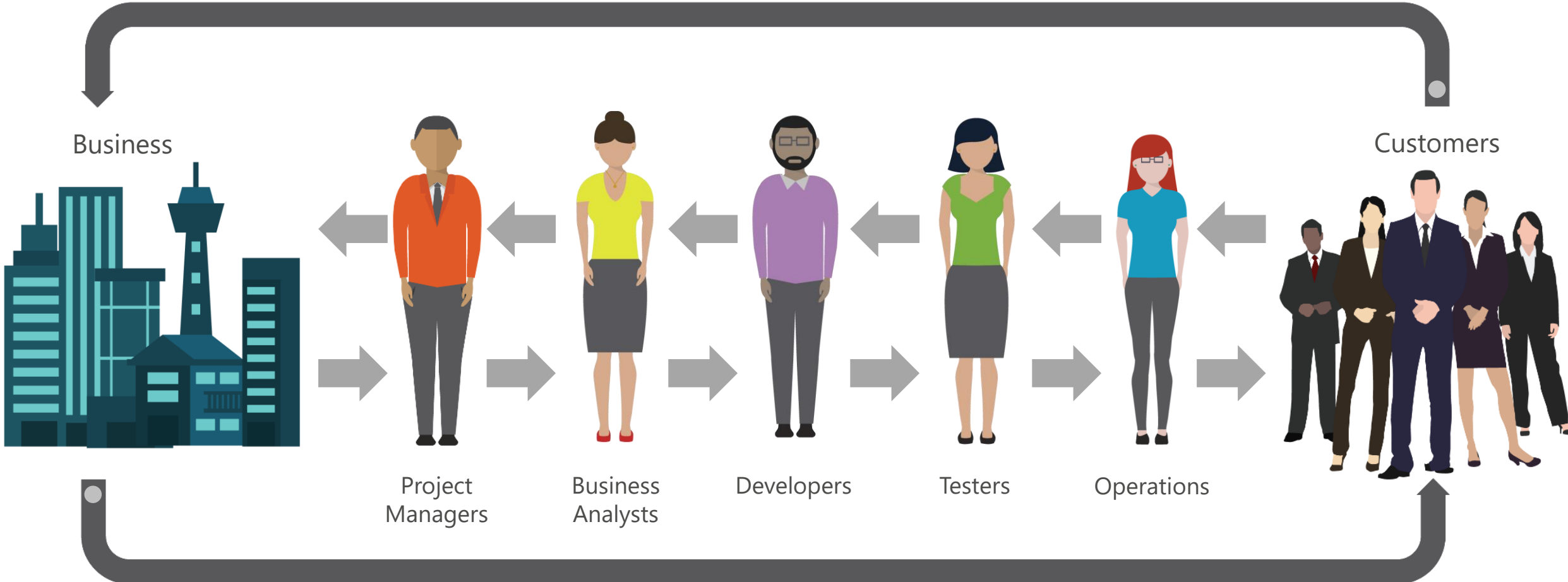


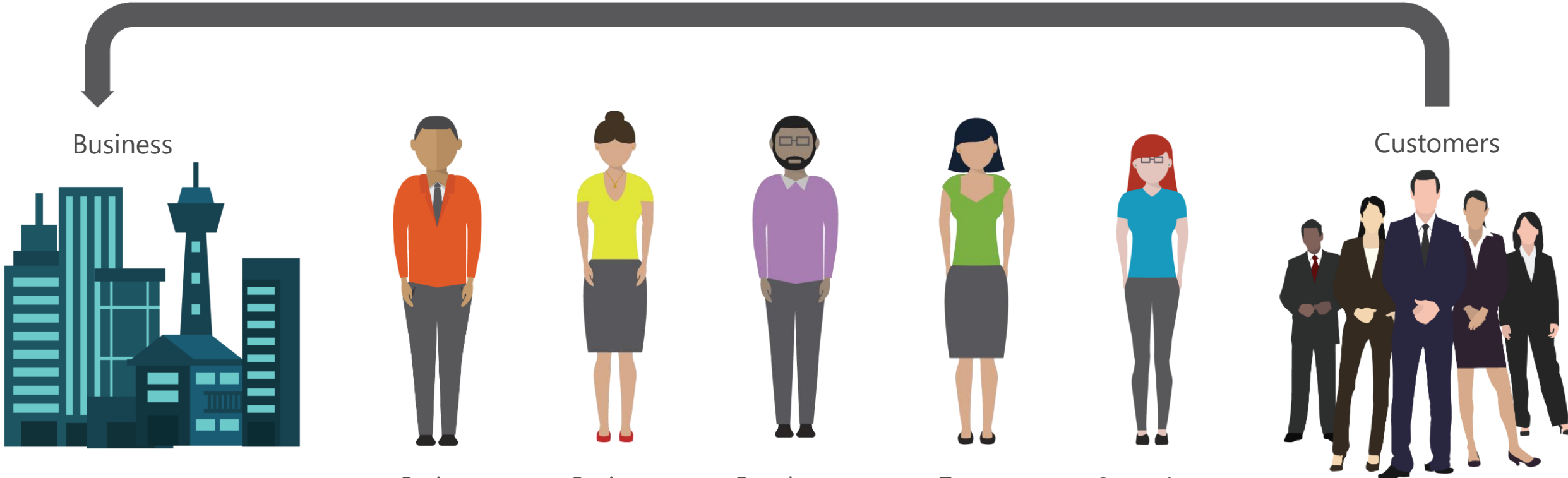
QUALITY

*...is everyone's  
responsibility.*

(Deming, W. Edwards)







Business



Customers



Project Managers



Business Analysts



Developers



Testers



Operations

Speed  
Quality (Scalable)  
Compliance (Traceable)

Demands  
Alerts  
Issues





PROJECT MANAGERS



BUSINESS ANALYSTS



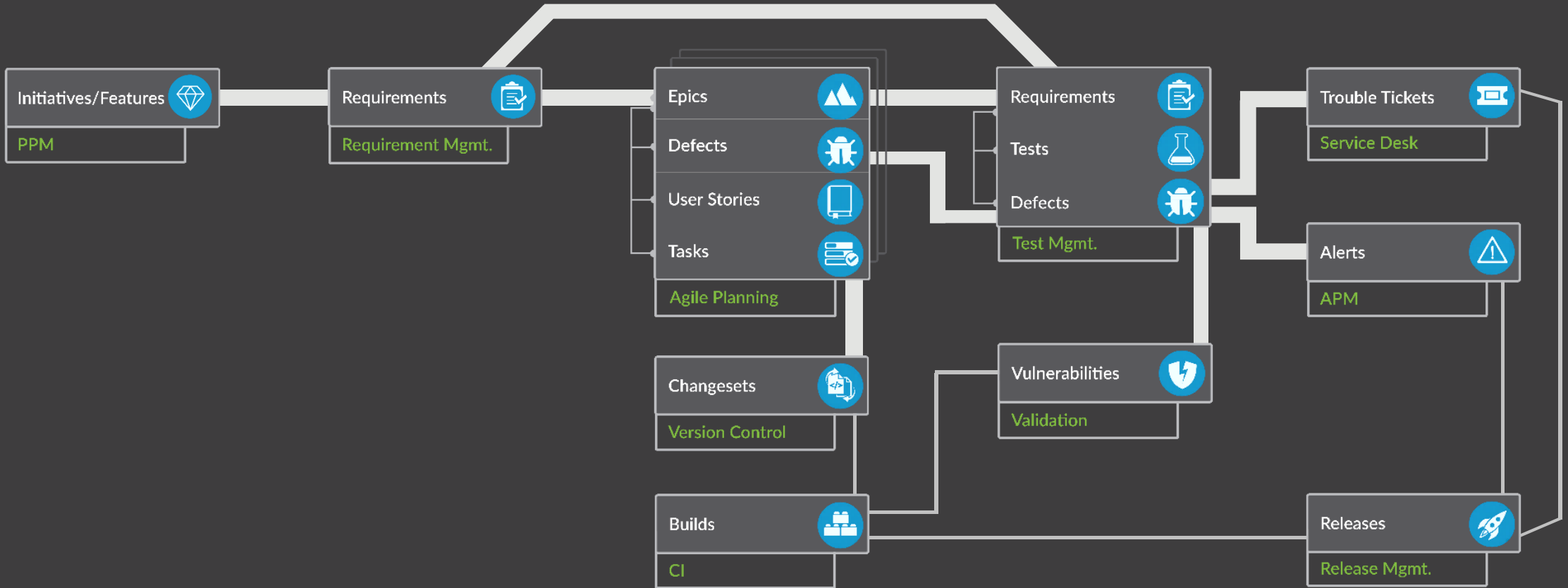
DEVELOPERS



TESTERS



OPERATIONS





PROJECT MANAGERS



BUSINESS ANALYSTS



DEVELOPERS



TESTERS



OPERATIONS

Initiatives/Features

PPM

Requirements

Requirement Mgmt.

Epics

Defects

User Stories

Tasks

Agile Planning

Version Control

Builds

CI



Releases

Release Mgmt.

According to..



# Current Trends in Software QA and Testing According to the World Quality Report

Survey results indicate that 'hybrid Agile' framework is the new norm, with organizations adopting a combination of SAFe, Scrum, Kanban, XP, DSDM, **and Waterfall models** in varying combinations.

99% of survey respondents say they have difficulties with testing in Agile development. This is extremely worrying, particularly as challenges persist across-the-board, with little change since last year's study.

A common challenge among practitioners are '**difficulties in identifying the right areas on which test should focus**' and '**early involvement of testing team in inception phase or sprint planning.**'

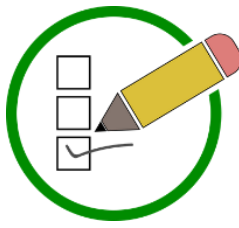
Research shows that there is a large proportion of Test Managers lacking skills in test strategy and design. This has grown from **22% in 2016 to 32% in 2017**. Many QA Leaders and Test Managers have difficulty with the Eagle's Eye View required to uncover inefficiencies in their end-to-end process.

1



# Understanding Defect Detection Percentage (DDP)

# Measuring Test Effectiveness



**How often are you asked these same questions?**

**Q: How effective is our regression testing suite?**

**Q: What data do you have to support the effectiveness of your regression testing?**

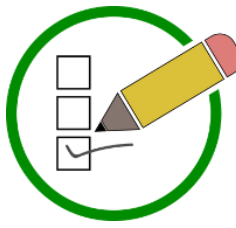
**Q: Can you show me how regression test coverage has improved for this last release?**

**Q: Do we know what regression tests to improve based on bugs we missed?**

**Q: How many bugs have we missed?**

**Q: How are we doing as compared to other teams in the same industry?**

# Poll: How Do You Track Defects and Incidents?



Please take a moment to answer the poll questions

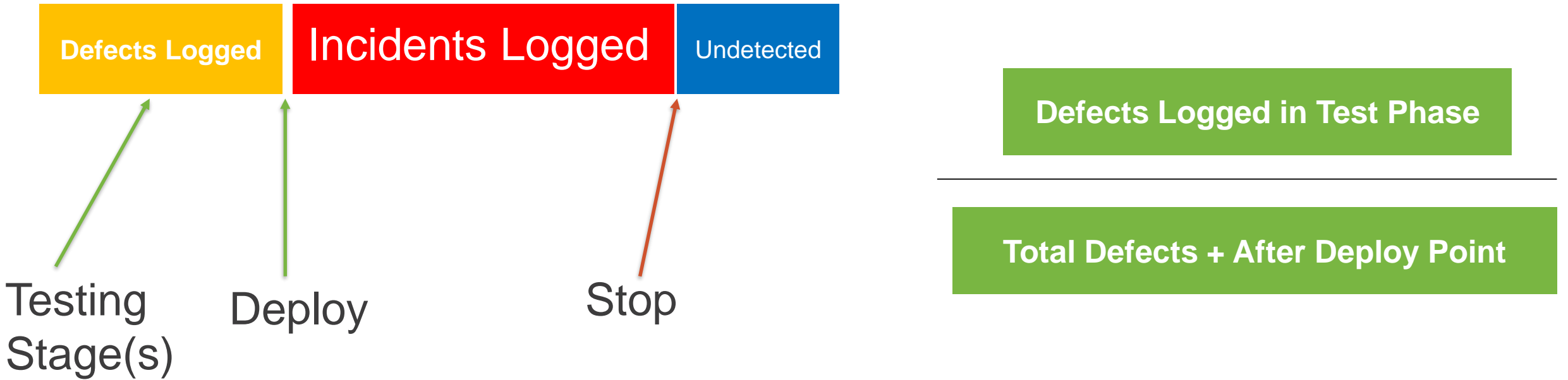
**Q: Do you track defects and incidents in the same tool?**

**Q: Do you track defects by test stages? (e.g., unit, system, interface, UAT, regression)**

**Q: Do you track defects by target release? (e.g., service pack, project, etc.)**

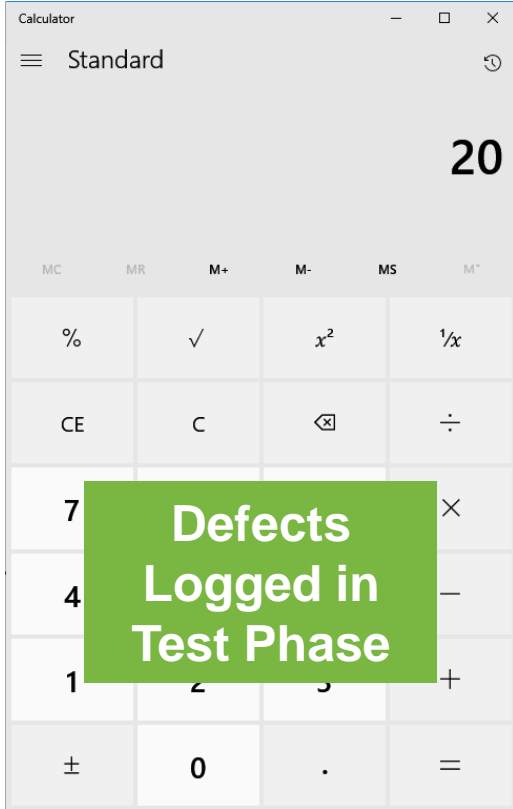


# DDP is Simple, Yet Complex

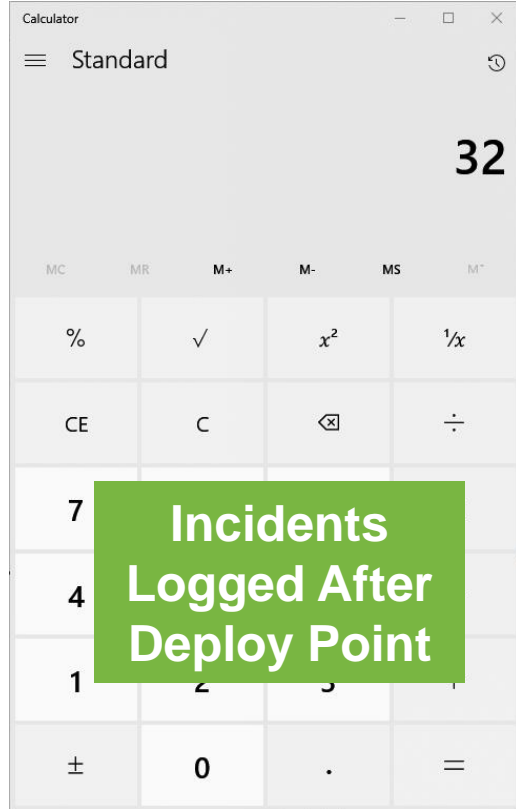


**The Complexity Stems from Multiple Testing Stages and Systems**

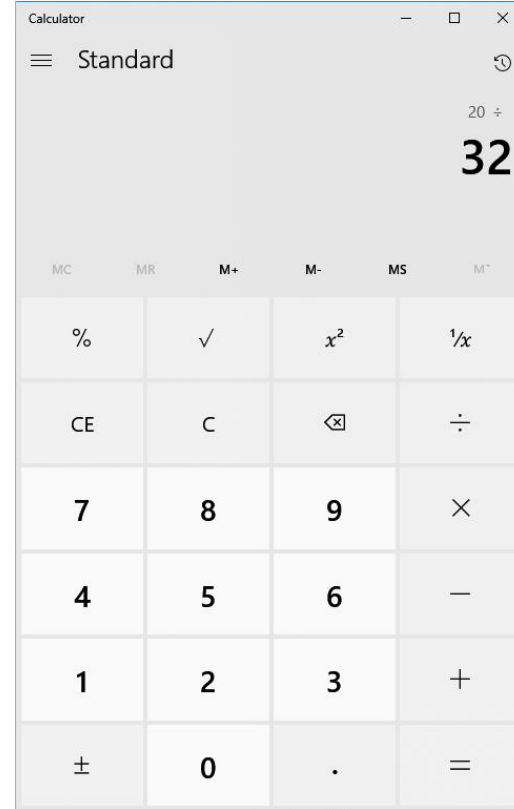
# DDP is a Simple Calculation



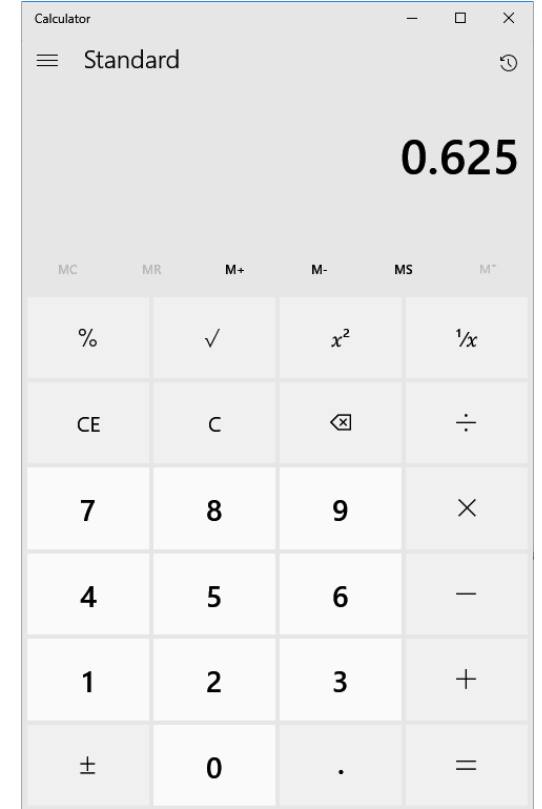
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20 + 12

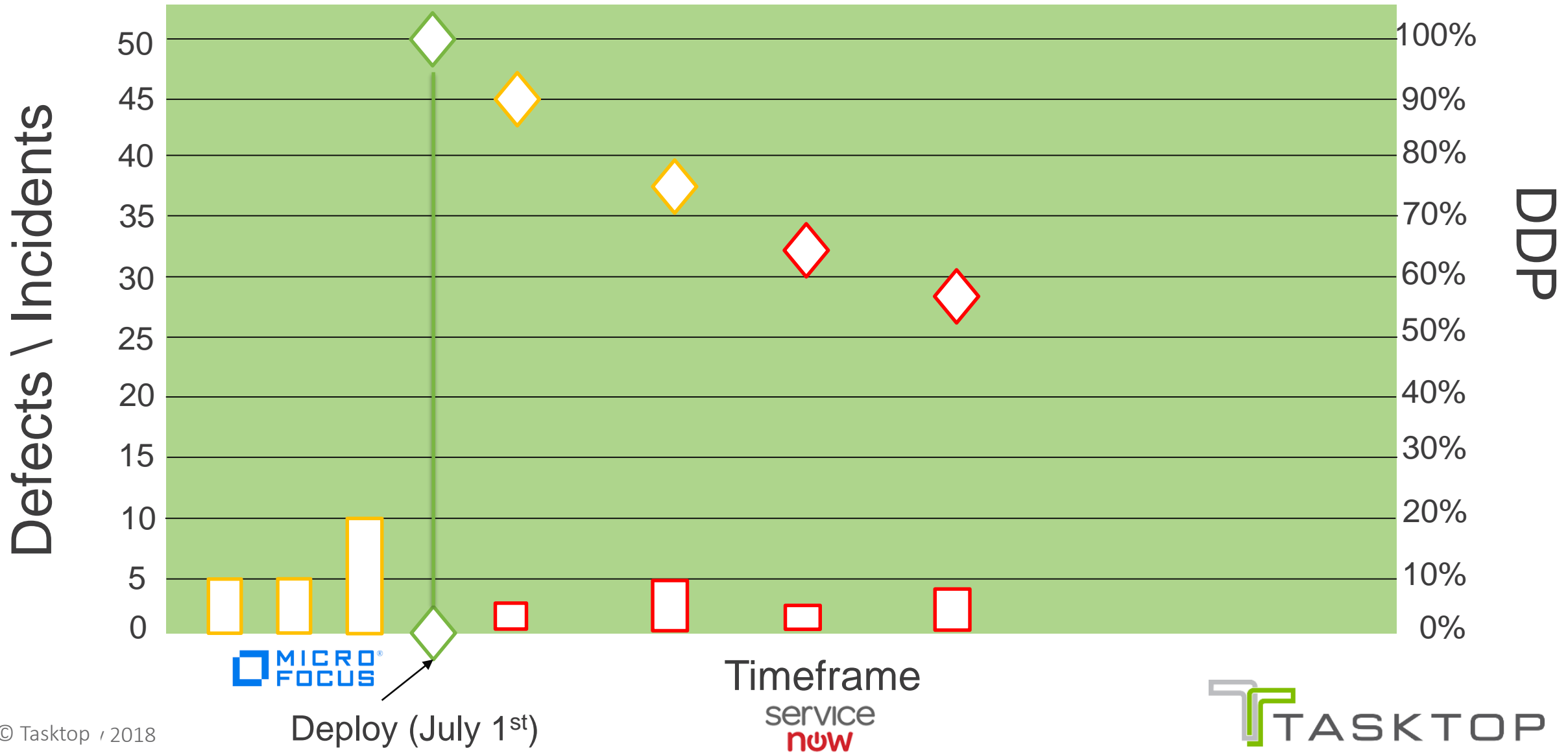


20 / 32



DDP = 63%

# Graphical Representation



# Implications of DDP

- High DDP of 90%+:
  - Testing is outstanding!
  - Limited Usage of the Application Under Test in a real-world scenario during your measurement period.
- Low DDP (< 65%):
  - Ambiguous Requirements resulting in Low Quality Tests?
  - Lack of QA & Testing Involvement Early-On in SDLC?
  - Limited use of Data Sets for Automated Regression Test Cycles?
  - Inexperienced Exploratory Testers?
  - Unstable Software with Not Enough Time to Test!

# Incidents and Defects Converge



# Swimming Upstream like Salmon!

- RCA (Root Cause Analysis) on Incidents
- Many causes contribute to defects & incidents!

## ***Leads to...***

- Identification of Inadequate Test Coverage (**Not Enough**)

## ***Leads to...***

- Improvement in the Quality of Respective Test Cases

## ***Leads to....***

- Traceability back to Originating Requirement
- *(Incident traced back to originating requirement)*

## ***Leads to....***

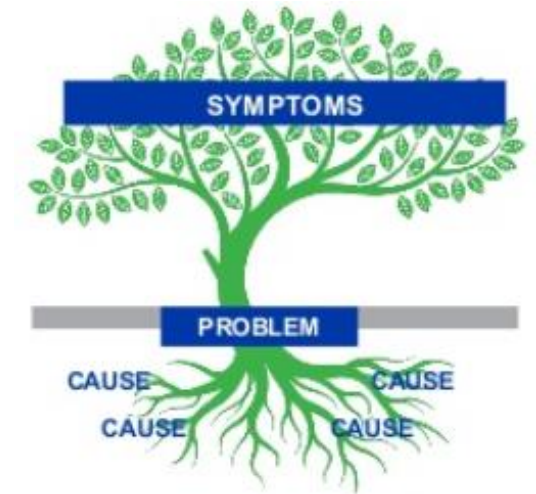
- More effective Risk-based Quality Management (**Prediction**)

## ***Leads to....***

- Increased Business Confidence in Service Packs, Releases, and Deployments (**Better Control!**)

## ***Leads to...***

- **Good Working Software!**



# Ready for a Deep Dive?

## Join us on August 22<sup>nd</sup> at 11am EST

FREE EBOOK



- Join us for a Deep Dive Webinar, hosted by Tasktop, in August 22<sup>nd</sup> at 11am EST
- See how MicroFocus ALM.Net integrates with ServiceNow to calculate DDP in real-time!
- Point your browser to [www.tasktop.com](http://www.tasktop.com)
- and register for this deep dive webinar today. We will provide a live demonstration of Tasktop's Enterprise Data Stream and DDP.
- ***All registrants receive an exclusive insider's eBook on how to implement and measure Defect Detection Percentage (DDE).***

<https://webinars.devops.com/improving-regression-testing-effectiveness-with-defect-detection-percentage-ddp>

2



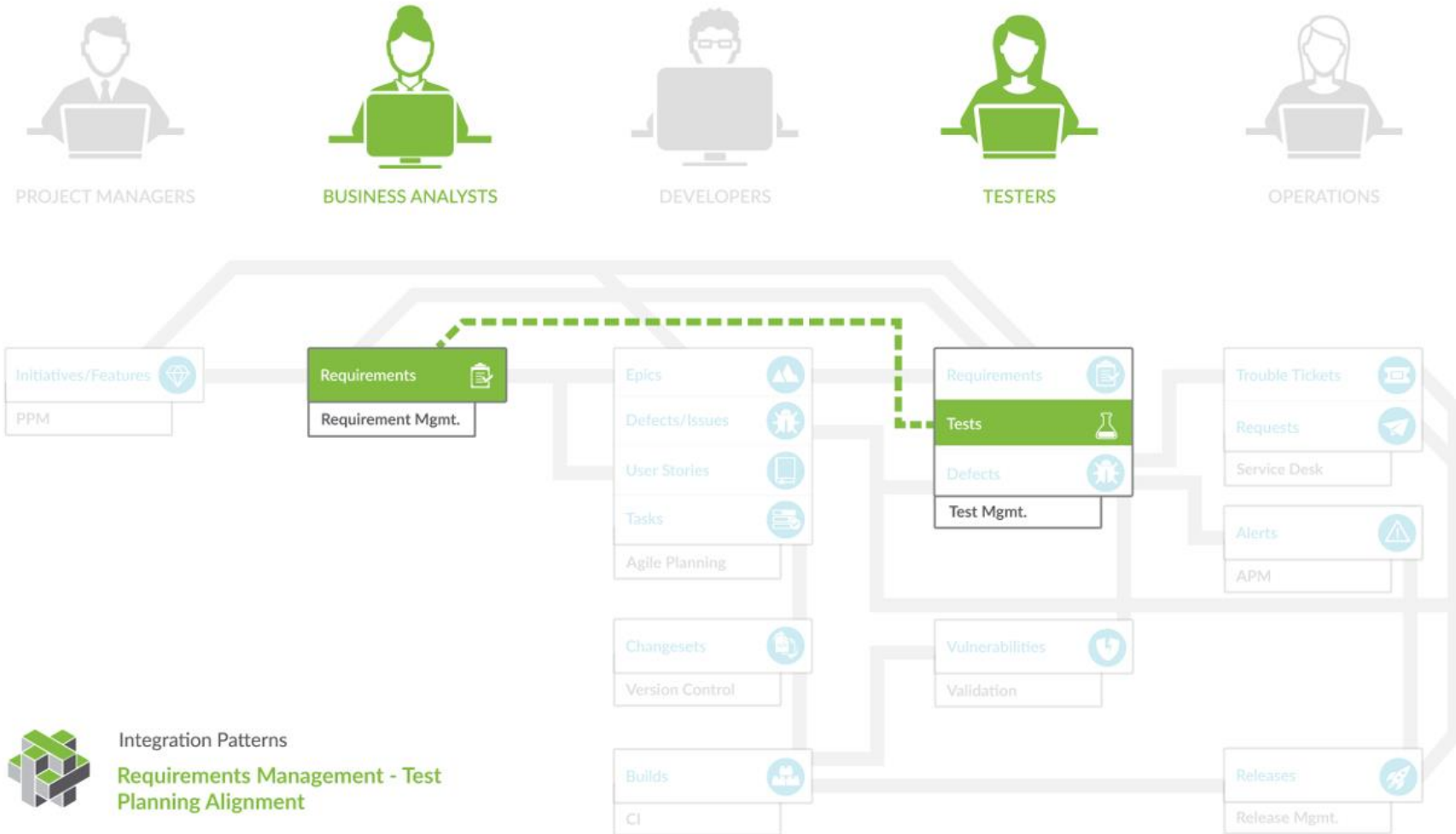
VSI eliminates QA as an 'afterthought' activity for software releases



# Build Your QA and Testing Brand

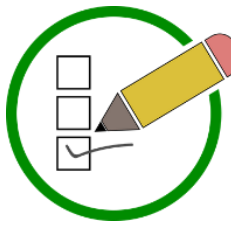
- DDP is a building block to help elevate your brand.
  - Illuminates the need for test process improvements
  - Raises the Profile of QA & Testing
  - Helps Predict Future Defect Levels!
  - Allows you to spot trends and changes over time.
  - Provides Real-Time Monitoring of Test Effectiveness
- Provides a simple tracking KPI other than:
  - Test Execution Report
  - Bug Closure Reports, etc

# Upstream Visibility



# Effective Change Impact Analysis, Control, and Management of Change Requests

# Change Impact Analysis

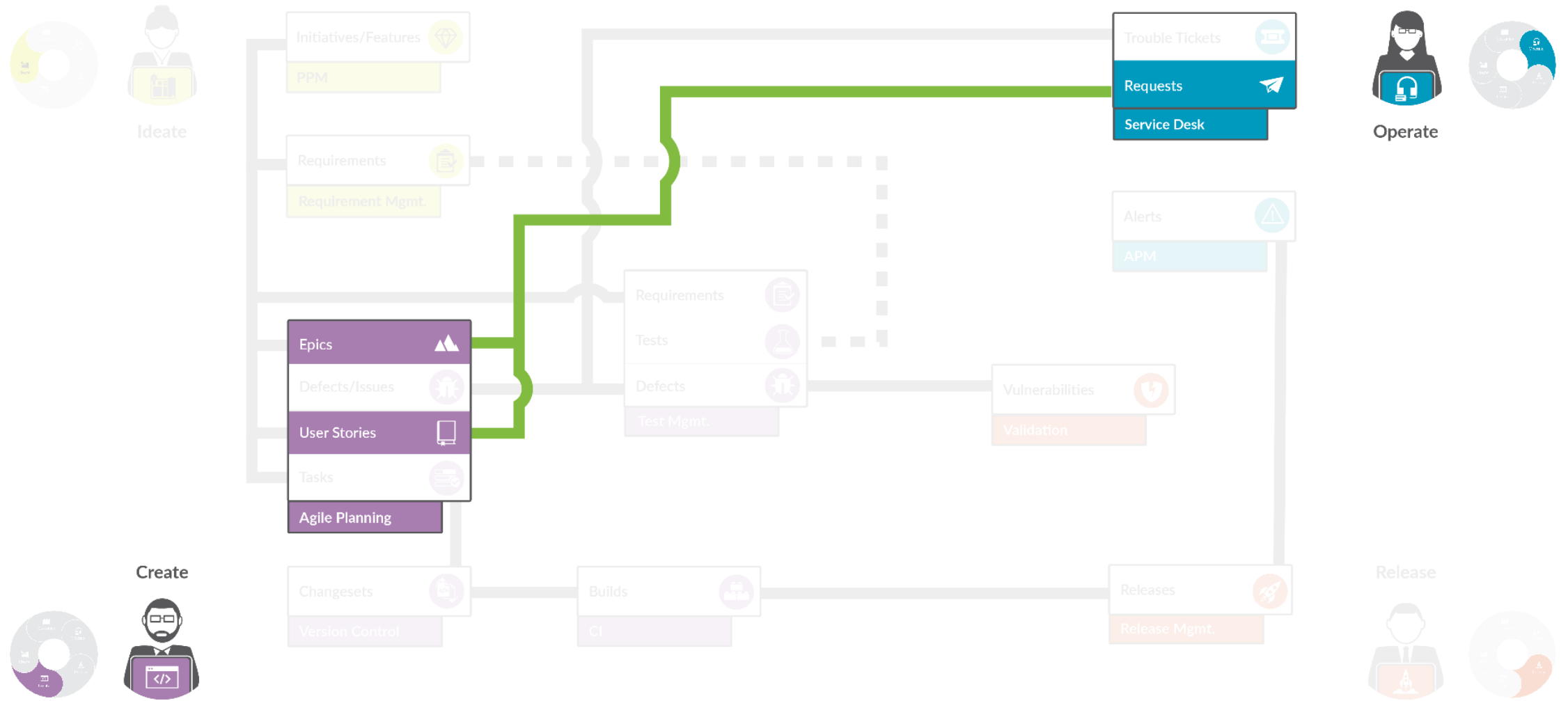


- Too many organizations track CRs separately from their primary work artifacts of the SDLC.
- Let's take a quick poll to see how you track CRs:

**Q1:** Where do you track Change Requests (CRs) today?

**Q2:** Do you trace your CRs back to the Originating Requirement?

# Change Requests

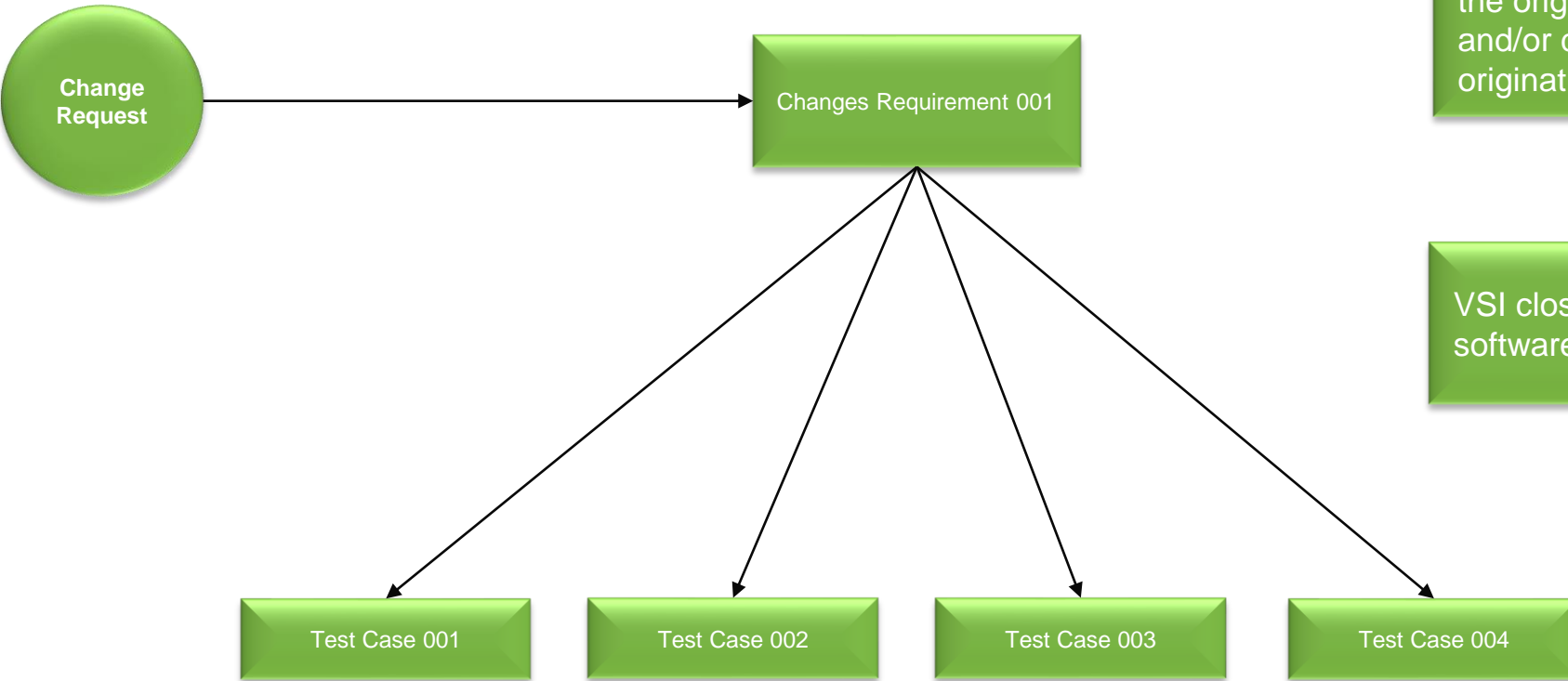


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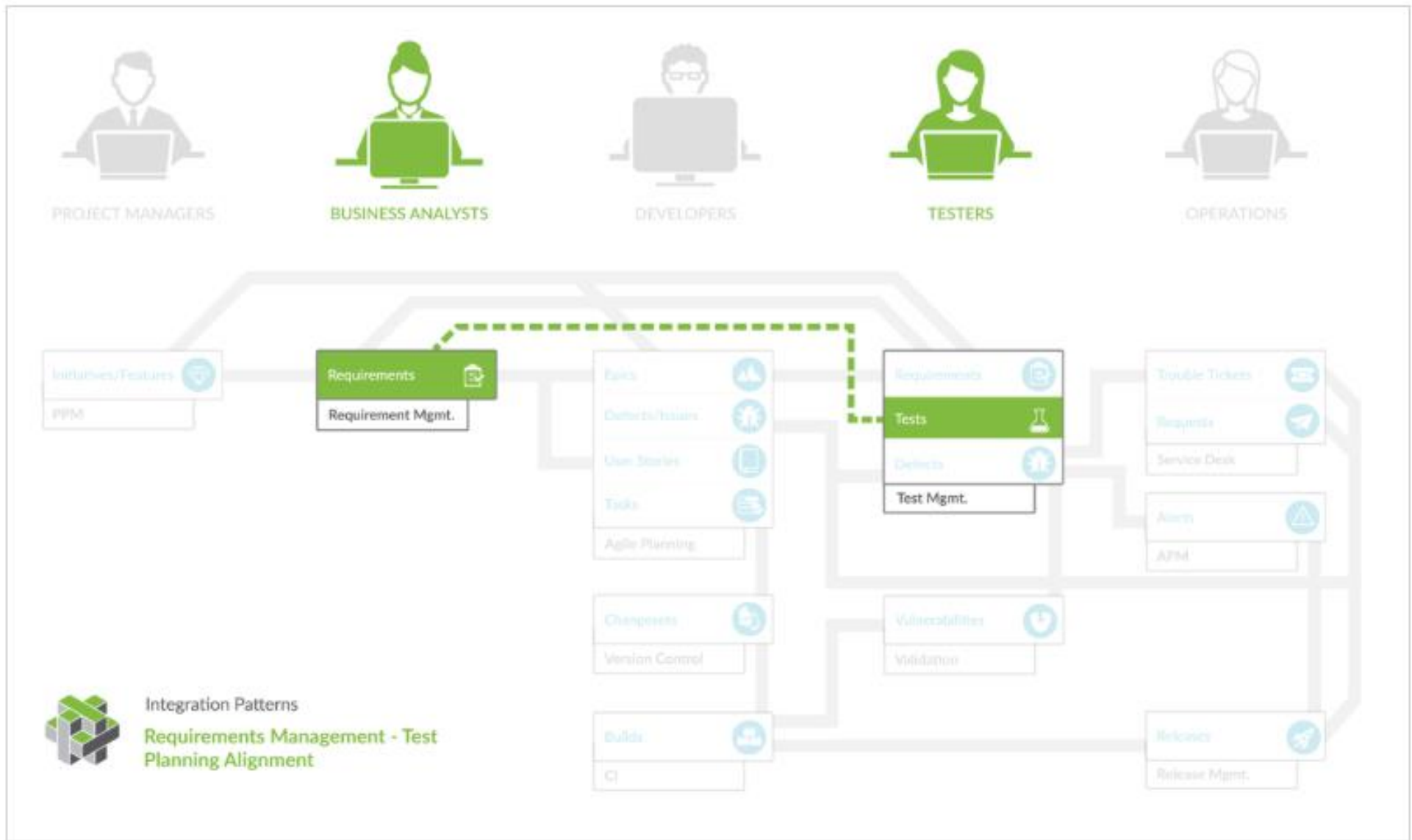
## Cross-Platform Artifact Alerting Illuminates Redundancy and Inefficiency

# Ripple Affect of Changes Required



Without a closed loop process when traversing multiple tools, your test case(s) that were once designed to cover the original requirement may now be missing branch steps and/or data points that are necessary to fully exercise the originating requirement.

VSI closed this gap in a multi-tool landscape to ensure software quality.

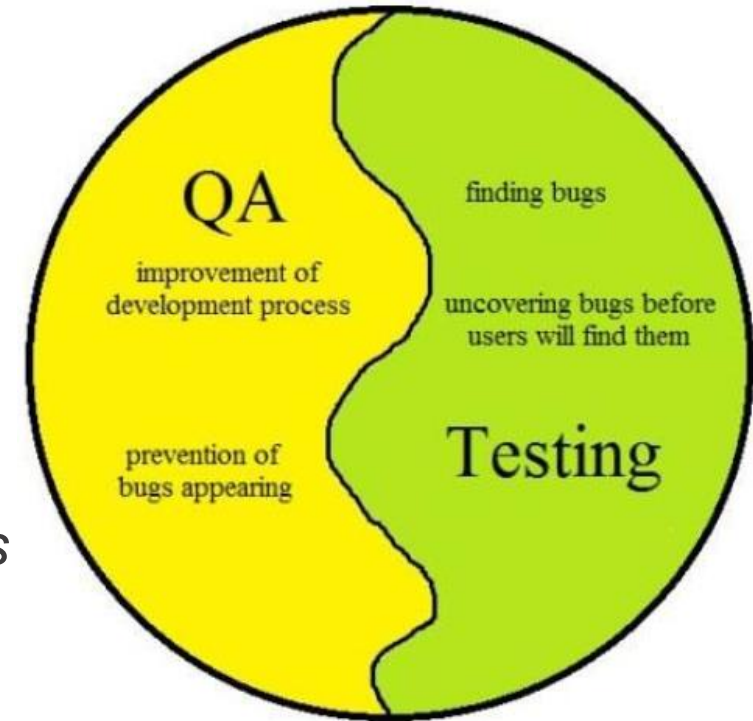




## Shifting-Left Contains Costs While Also Aiding in Root Cause Analysis

# Prevention (QA) vs. Detection (Testing)

- The Yin and Yang of Software Quality
- Organizations tend to focus more on *Detection Techniques*
  - Automated Vulnerability Scanning
  - Exploratory Manual Testing
  - Scripted Manual Testing
  - Automated Regression Testing
  - System Integration Testing, User Acceptance Testing
- Shifting-Left balances the focus with *Preventative Techniques*
  - Value Stream Integration Mindset
    - Line of Sight Upstream to Prevent Ambiguity of Requirements
    - RCA from Incidents to Requirements for RBQM



**Communication Failures (People, Process, or Tooling) are the Root Cause of Defects**

# Value Stream Thinking as Prevention

- Failure in Communication
  - Most common direct cause of ambiguous requirements
    - Developer-to-Developer
    - Manager-to-Developer
    - Developer-to-Tester
    - Executive-to-Department Head
  - Communication breakdowns result in:
    - Missing business needs in User Stories
    - Incorrect specifications for a critical component

6

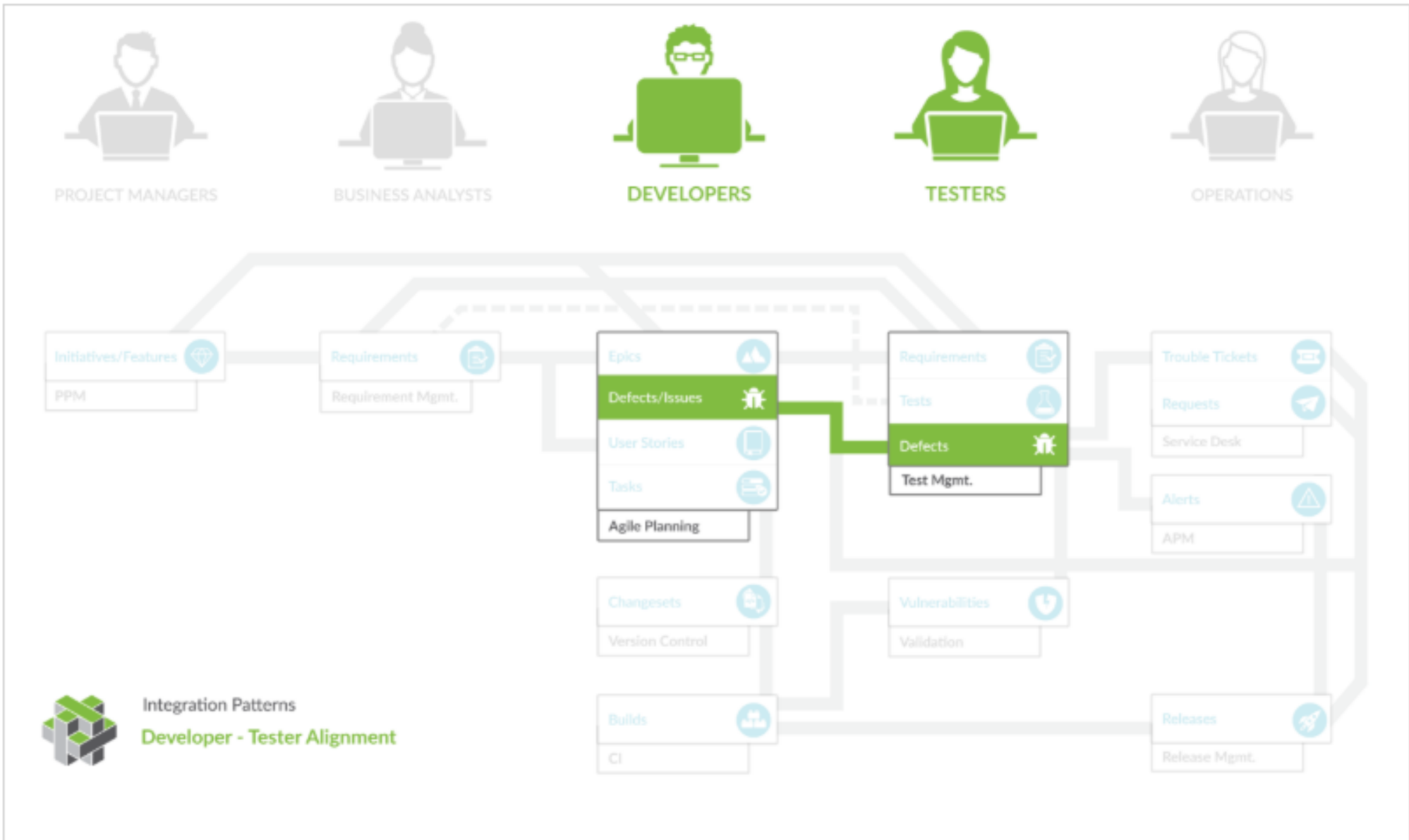


# Reduce Ping-Ponging between Developer and Tester

# The Burden of Proof is Real!

- Manual and Automated Testing Generates Evidence:
  - Inputs, Outputs (Data Sets, Parameters)
  - Screenshots, Videos of the Application Under Test
  - System Log Files
- Developers Require Evidence for:
  - Re-create defects and incidents
  - Root cause analysis of an incident
  - To understand how to fix a defect or issue identified!
- Best-of-Breed Add-on Manual Test Tools Abound
  - Micro Focus Sprinter
  - Visual Studio Team Services Chrome Extension
  - qTest Explorer for QA Symphony





7



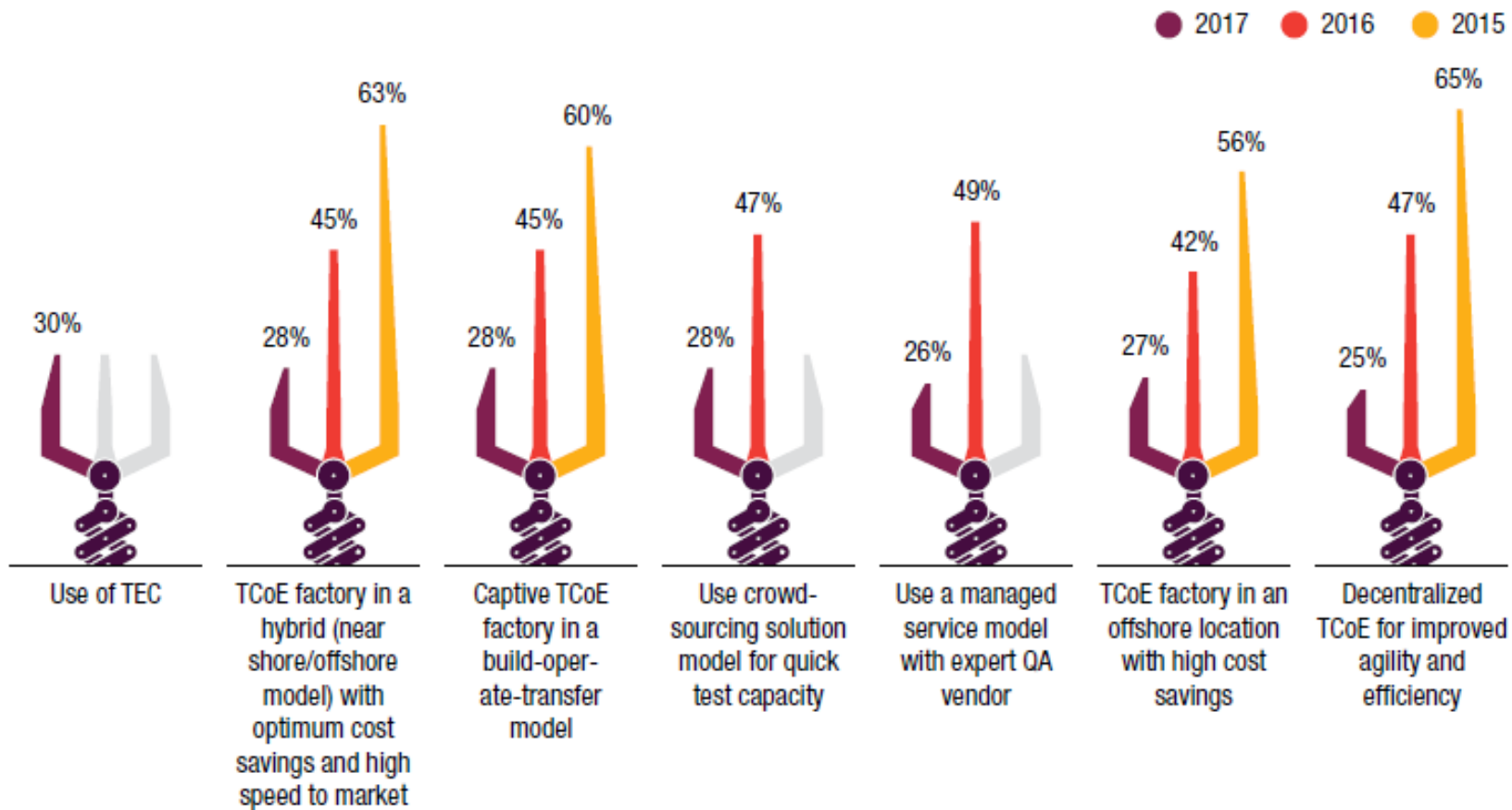
# One Size Does Not Fit All for Testing Centers of Excellence

# Industrialization

## How Test Centers of Excellence Adapt to the Digital Era

### Approaches to Test Centers of Excellence

FIGURE 18



- “Test Factory” models of the past were centralized and undertook testing across multiple programs, domains, and lines of business.
- “Testing Excellence Centers” (TECs) are replacing TCoEs as the authority in test tool selection and integration.
- The Use of TECs, as opposed to TCoEs, is enabling a best-of-breed tool selection approach for organizational teams. VSI ensures the continuity of each best-of-breed tool across your organization.

Source: Pg. 32, World Quality Report





Any Questions?

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August 6, 2018

## **SIG Talk: OpenStack Cloud and SUSE Integration**

8:00 - 9:00 AM PDT (Los Angeles), 11:00 AM- 12:00 PM EDT (New York), 17:00 - 18:00 CET (Frankfurt)

<https://www.vivit-worldwide.org/events/EventDetails.aspx?id=1123094&group=>

September 13, 2018

## **4 Steps to Achieve a Data Driven Culture using TotalView Analytics for ALM**

8:00 - 9:00 AM PDT (Los Angeles), 11:00 AM- 12:00 PM EDT (New York), 17:00 - 18:00 CET (Frankfurt)

<https://www.vivit-worldwide.org/events/EventDetails.aspx?id=1123536&group=>

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**Thank You**  
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