



Your Local-Global Partner for a Digital World

Twin Cities Quality Assurance Association

Agile Quality 2.0 | November 2022





Agenda

- Introduction
- Setting the Stage
- The Inconsistent & Imbalanced Nature of Agile Quality
- Questions
- Closing Thoughts
- References

Agile Manifesto

We are uncovering better ways of developing software by doing it and helping others do it.
Through this work we have come to value:

Individuals and interactions over processes and tools
Working software over comprehensive documentation
Customer collaboration over contract negotiation
Responding to change over following a plan

That is, while there is value in the items on the right, we value the items on the left more.



Agile Quality 2.0

Executive Summary

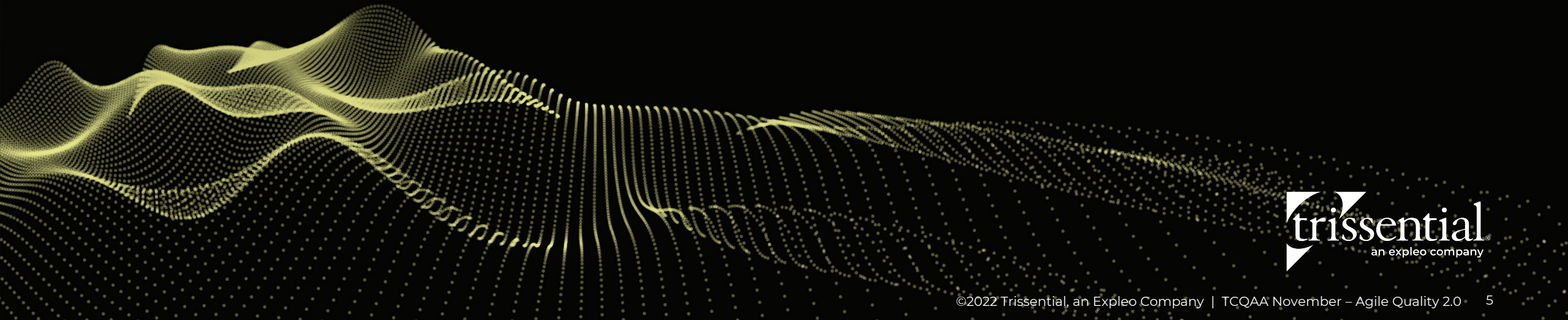
That is, while there is value in the items on the right, we value the items on the left more.

- 1.** In the name of Agile, organizations have inconsistently placed too much value on the left versus encouraging a balance between the left **and** right sides
- 2.** Quality teams aren't evolving fast enough to meet the demands placed on them by Agile



Agile Quality 2.0

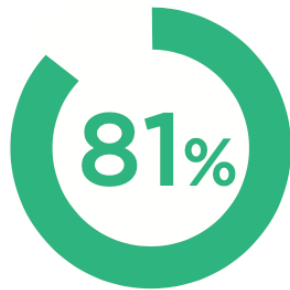
Setting the Stage



Setting the Stage



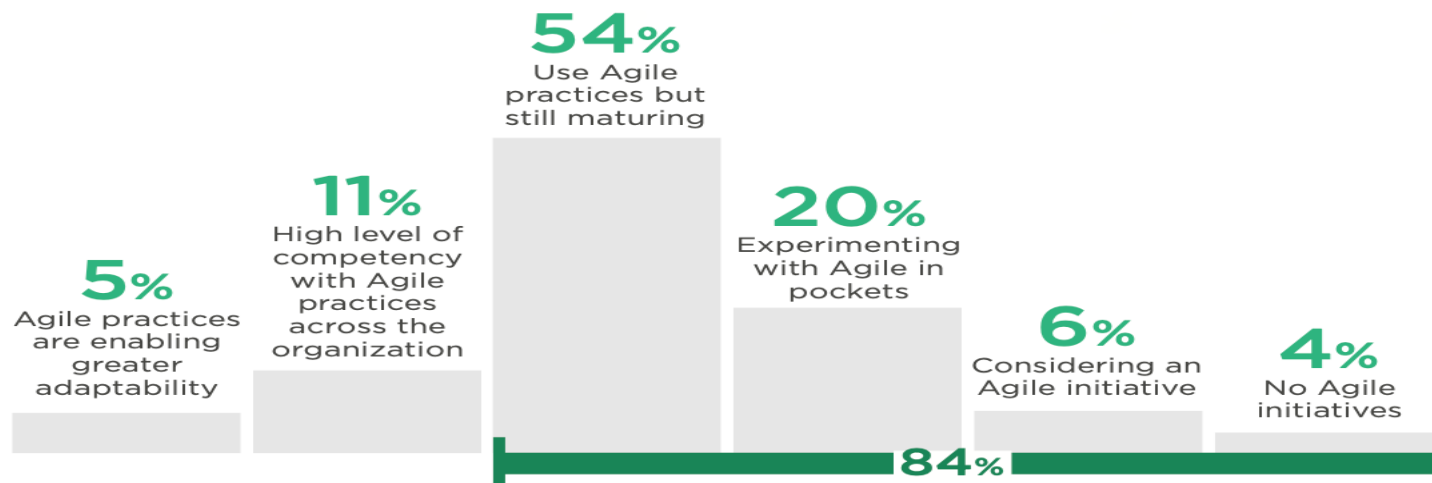
HOW MANY?
95% of respondents report their organizations practice Agile development methods.



81% of respondents said their organization has Agile teams where the members of the same team do not all work in the same location (i.e. not co-located).



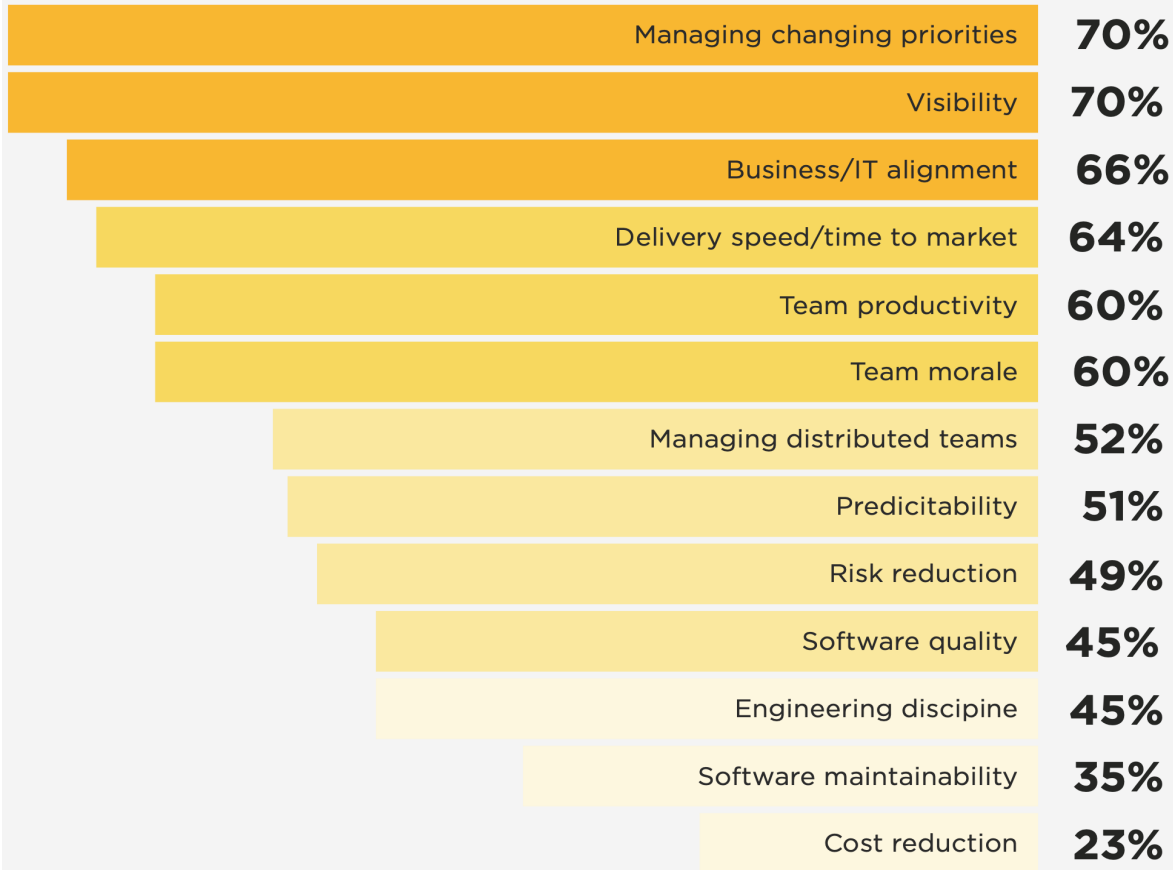
71% of respondents said their organization practices Agile with multiple co-located teams collaborating across geographic boundaries.



Setting the Stage



Has the implementation of agile positively impacted each of the following areas within your company?

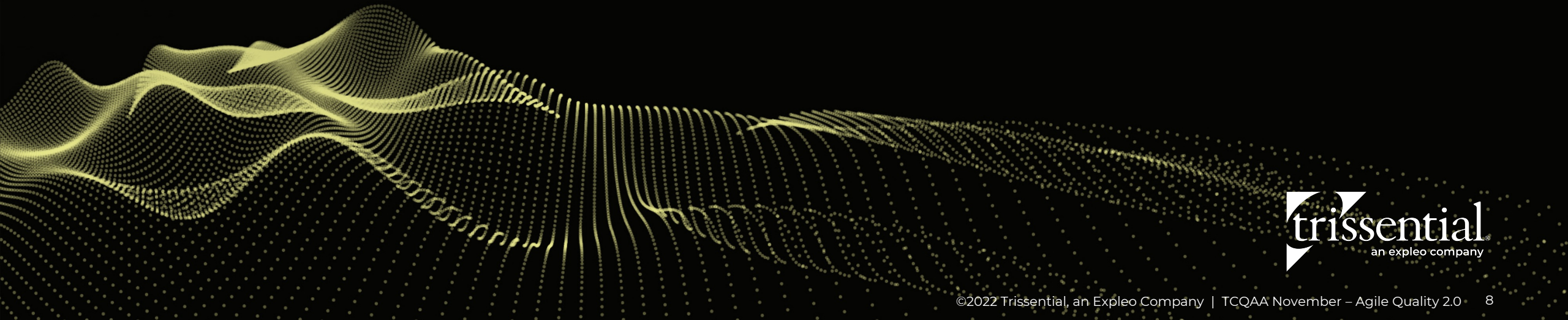


How does your organization measure success of Agile transformations?



The Inconsistent & Imbalanced Nature of Agile Quality

Left Side Inconsistency



Left Side Inconsistency



Individuals and interactions over **processes and tools**

What is the #1 Priority for Quality Teams according to Organizational Leaders?

Test Automation

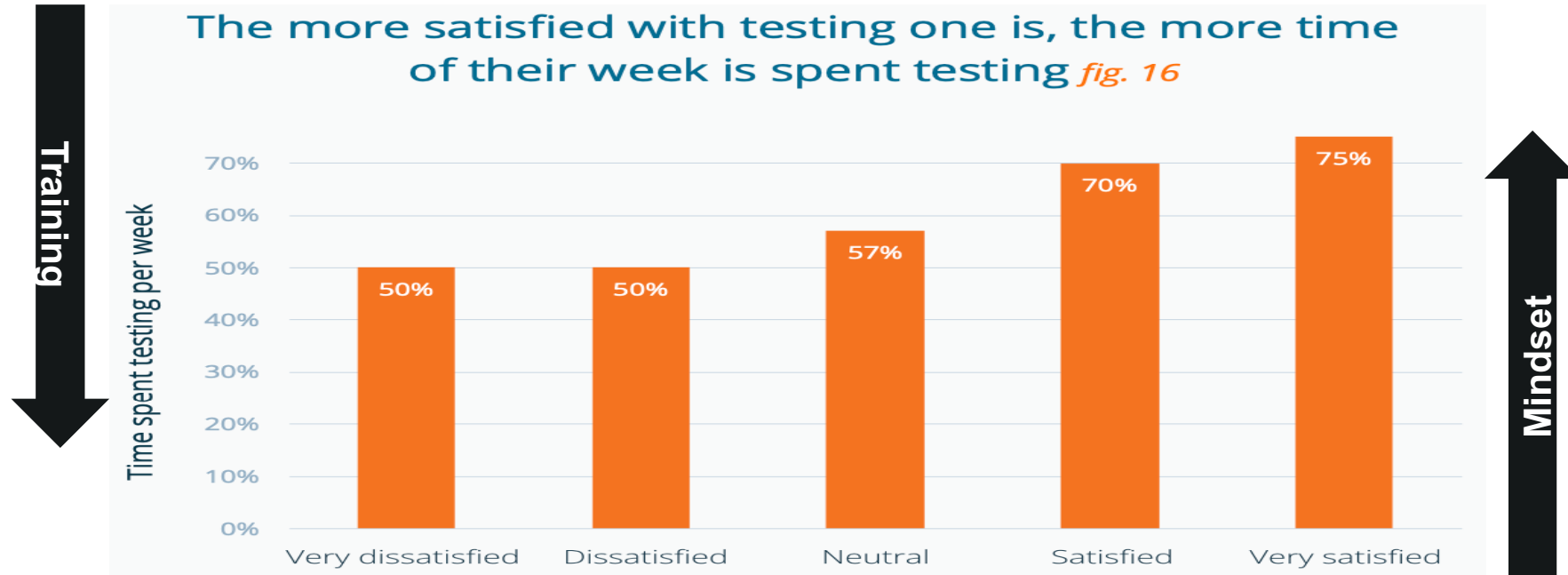
When you breakdown Test Automation, organizational leaders care about **the tool** and **how many** tests have been automated

Depending on who you ask, between 53% to 70% of automated testing is focused on Regression Testing...how much interaction is needed for that?

Left Side Inconsistency



Individuals and interactions over processes and tools



State of Quality Testing 2022 - SmartBear - Page 16

Our survey shows that key success factors for Agile implementation include talent and skill availability, business focus and understanding of business priorities, and **executive commitment and support toward organizational change management.**

World Quality Report 2022-23 - Capgemini & Microfocus - Page 12

Left Side Inconsistency



Individuals and interactions over **processes and tools**

Principle #4

Businesspeople and developers must work together daily throughout the project.

On average, only **56% of Agile teams** have a full-time or dedicated product owner

15th Annual State of Agile Report - @Digital.Ai - Page 15

Who do QA teams interact with least on an Agile Team?

Although some programs include a software development engineer in test (SDET), in 53% of the surveyed programs, developers and Quality Engineers still work in separate silos

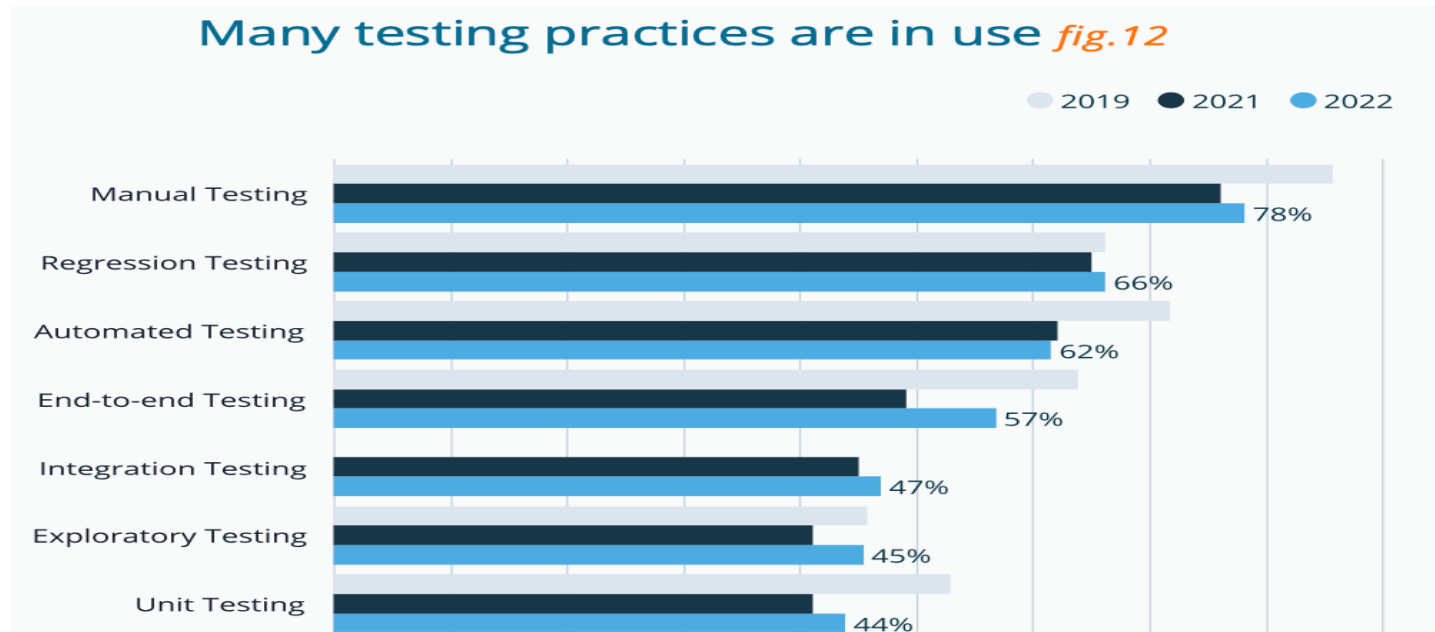
Quality Engineering in a Cloud-Centric World – Wipro – 2022 – Page 5

Left Side Inconsistency



Individuals and interactions over processes and tools

Pre-test activities like test planning, risk assessment, analysis, and document reviews are 25% more effective at finding defects earlier in the process



Left Side Inconsistency

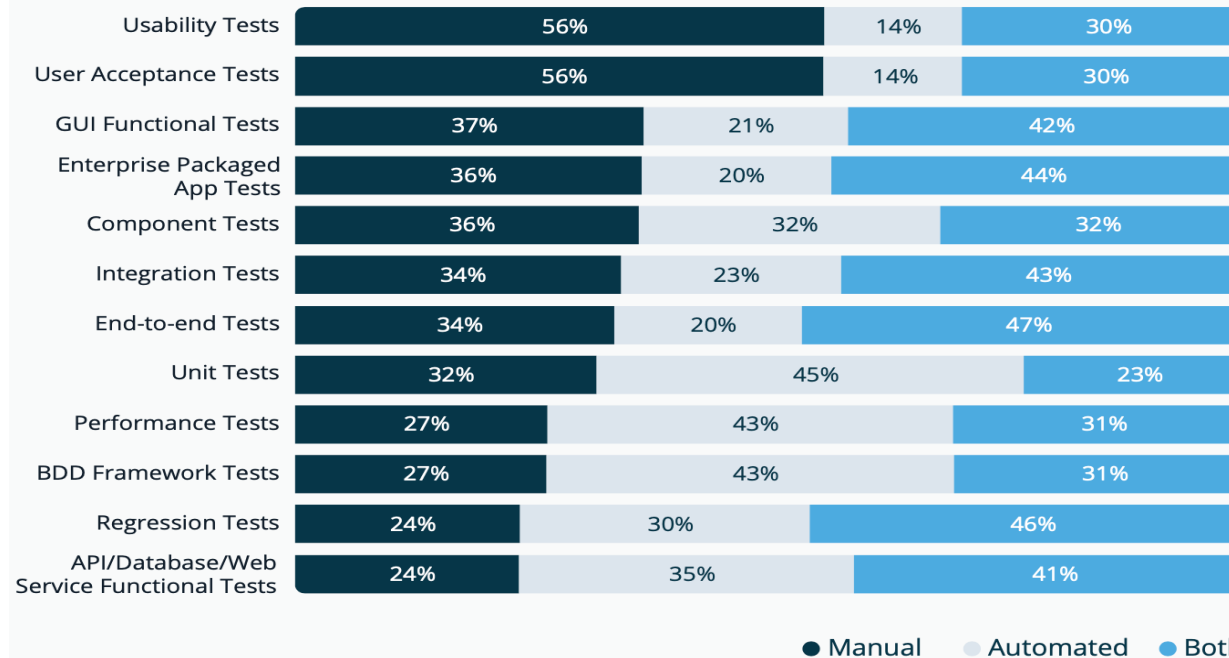


Individuals and interactions over processes and tools

#1 Measure of Agile Success – Customer Satisfaction (49%)

15th Annual State of Agile Report @Digital.AI

Usability and user acceptance tests have the most manual testing *fig. 25*

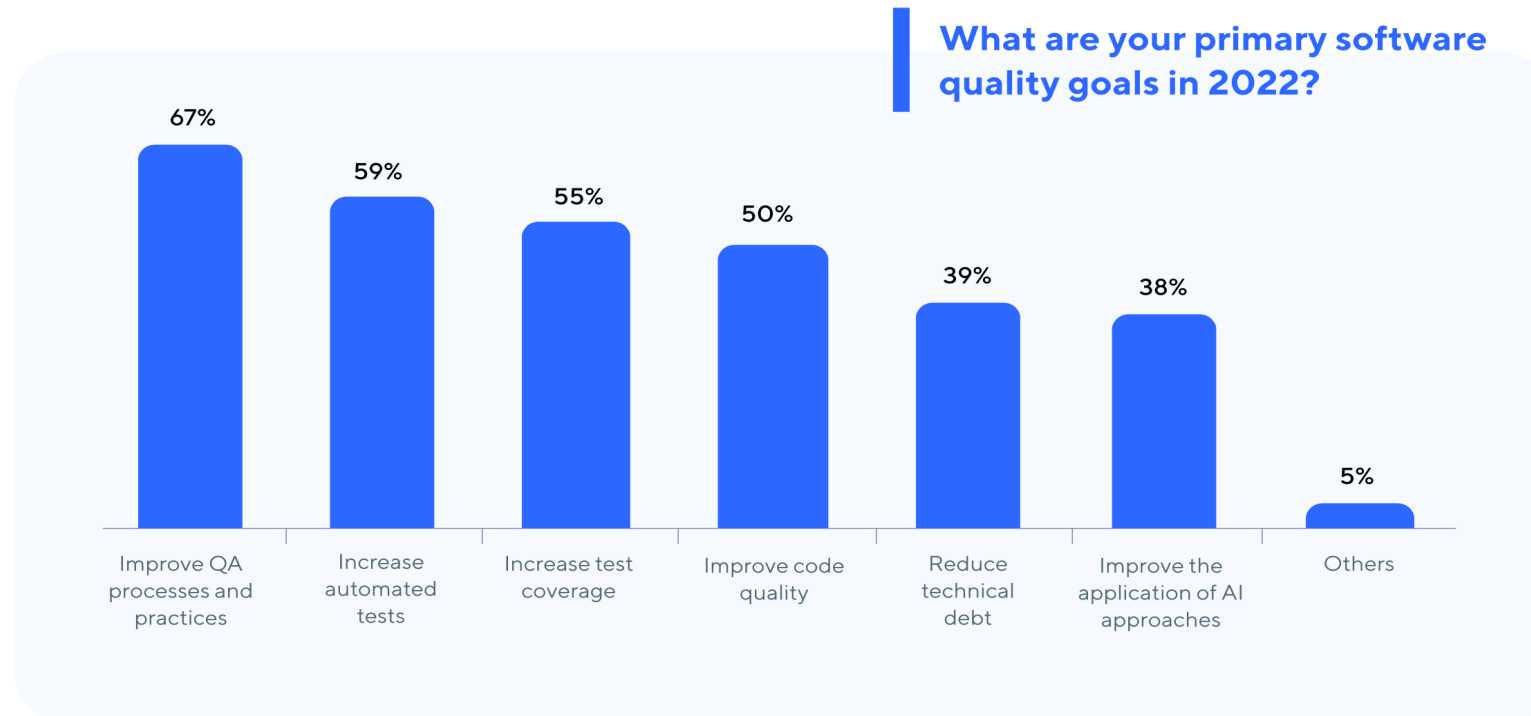


Left Side Inconsistency



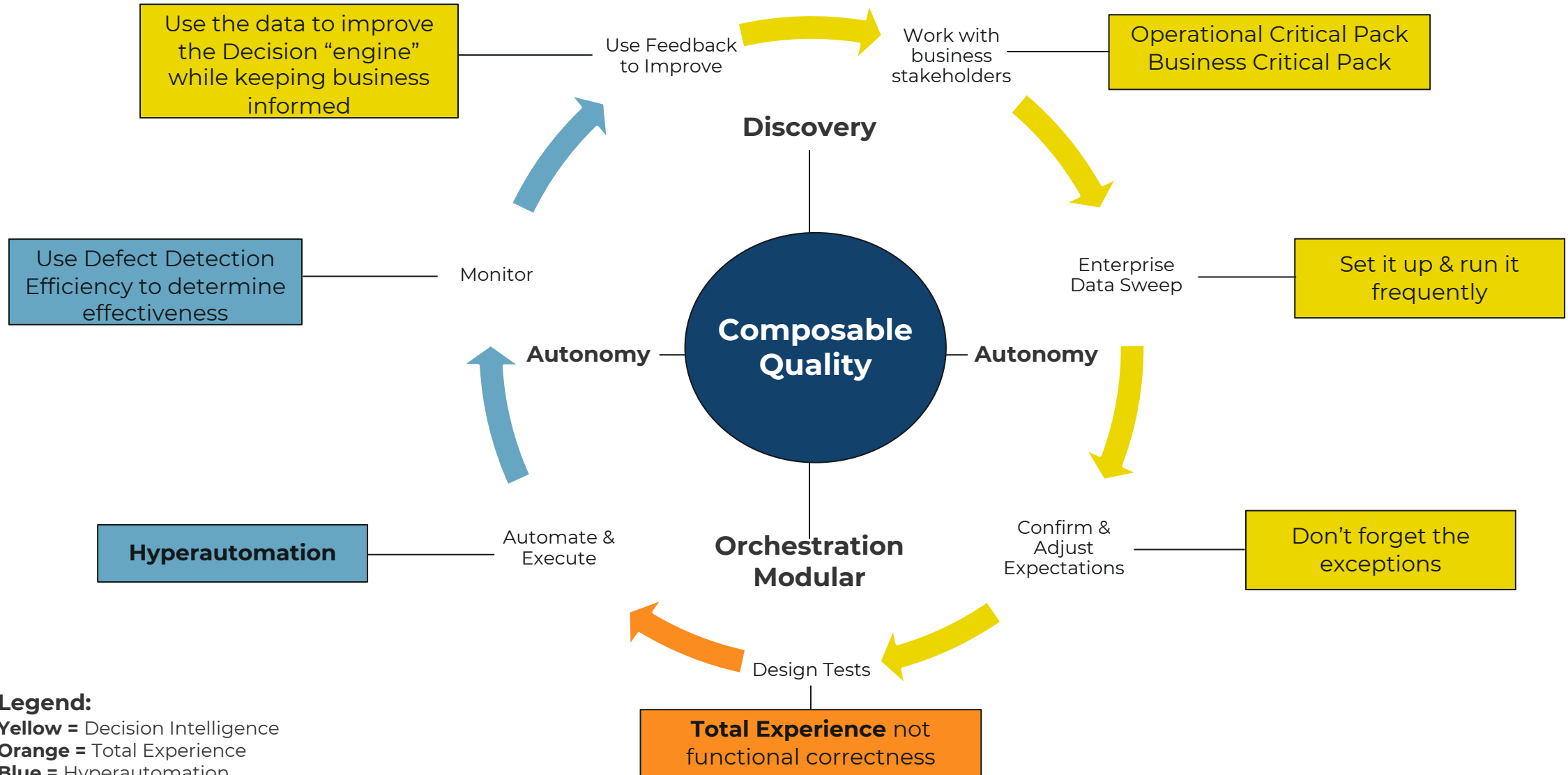
Individuals and interactions over processes and tools

According to Katalon's latest State of Quality Report, what is the primary software quality goal for teams in 2022?



State of Quality Report 2022 - Katalon - Page 41

Left Side Inconsistency



Left Side Inconsistency



Individuals and interactions over processes and tools

Make sure you define with business owners and project owners the expected value outcome of testing and quality activities.

What capabilities will we need to test seamless user experiences between the physical and digital worlds?

Focus on what delivers the best benefits to customers and the business rather than justifying ROI.

Track and monitor metrics that are holistic quality indicators across the development lifecycle.

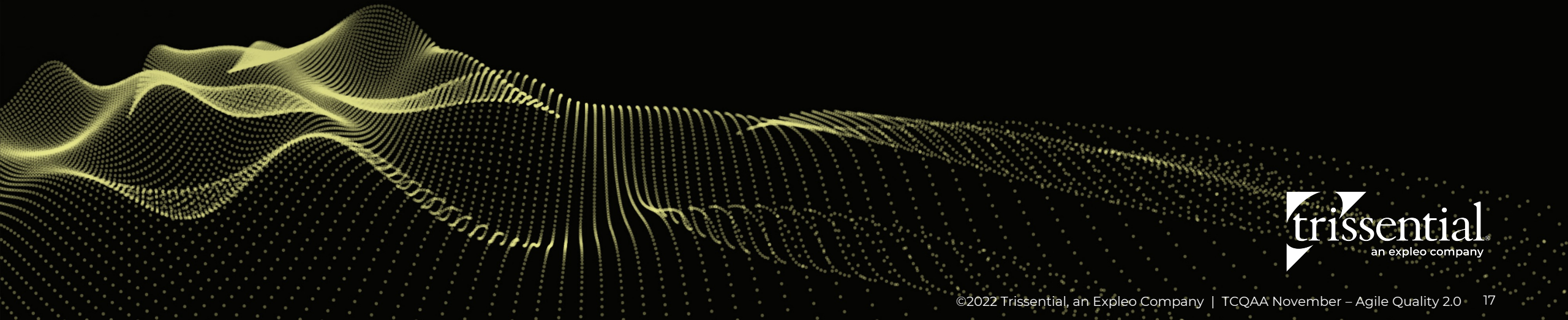
The pace of continuous delivery requires much higher levels of automation **and quality processes.**

Agile/DevOps require a broader view of quality including shift left & shift right.

World Quality Report 2022-23 - Capgemini & Microfocus - Pages 8, 9, & 16

The Inconsistent & Imbalanced Nature of Agile Quality

Right Side Dominance



Working software over comprehensive documentation

Which product team activity generates the most documentation?

Regression Testing

2/3 of Quality strategies still focus on Regression Testing

World Quality Report 2022 - Capgemini & Microfocus

For every dollar spent on Quality by product teams, over 50% will be spent on Regression Testing

Trissential Customer Research

Between 53% (Katalon) - 70% (WQR) of all test automation efforts are focused on Regression Testing

Working software over comprehensive documentation

In most organizations with moderately mature Quality practices, Regression Testing will identify roughly **7-10% of total defects**

Jones, Capers. *Software Defect Removal Efficiency*, <https://pdfs.semanticscholar.org/4e1b/c72a0324664e46e1404c6dc5ce3ed266020d.pdf>, 2011

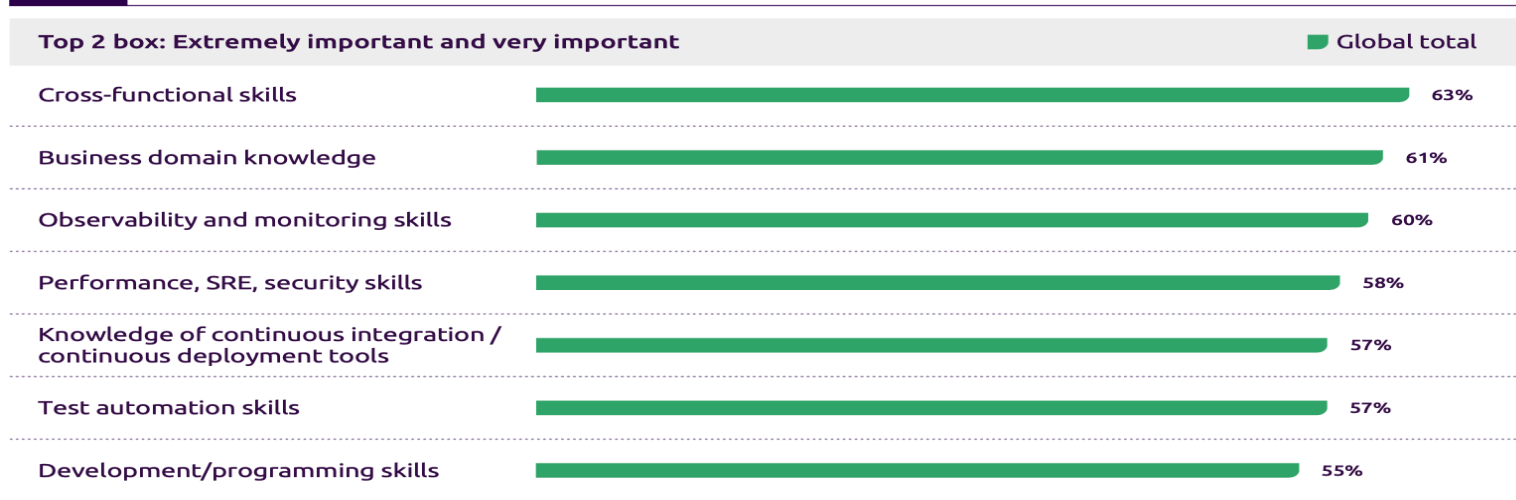
Regression Testing does not typically consider customer experience, user experience, or multiexperience as a basis for what needs to be tested

Only 16% of Agile teams had “professional quality engineers” 45% or more of the time

World Quality Report 2022-23 - Capgemini & Microfocus - Page 16

Working software over comprehensive documentation

Fig 03 How important are the following QA skills when executing a successful Agile development program?



Base: "VP Applications and QA/ Testing Managers and VP Directors of R&D" only (750)

World Quality Report 2022-23 - Capgemini & Microfocus - Page 15

Quality experts will need to develop their skills further from testing and engineering skills to **subject matter business expertise**, alongside growing their knowledge of tools and technical platforms.

World Quality Report 2022-23 - Capgemini & Microfocus - Page 7

Working software over comprehensive documentation

Unscripted Testing (dynamic tests not prescribed by written instructions of test cases):

Ad-hoc testing – A concept derived from unscripted practice that focuses primarily on performing testing that does not rely on large amounts of documentation (e.g., test procedures) to execute.

Error-guessing – A test design technique in which test cases are derived based on the tester’s knowledge of past failures or general knowledge of failure modes.

Exploratory testing – Experience-based testing in which the tester spontaneously designs and executes tests based on the tester’s existing relevant knowledge, prior exploration of the test item, and heuristic “rules of thumb” regarding software behaviors/failures

Working software over comprehensive documentation

Principle #10

Simplicity--**the art of maximizing the amount of work not done**--is essential.

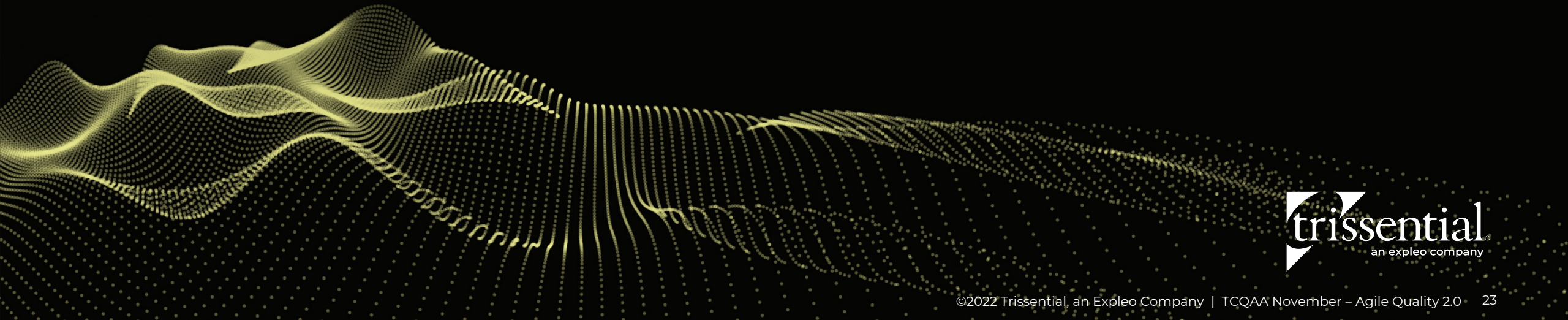
User Story & Acceptance Criteria Analysis – Asking the question “Why” to understand appropriateness at two levels:

- Do we need the feature?
- Is it the right time to develop the feature?

Asking “Why” can help eliminate 20-25% of unnecessary testing activities. Combined with a risk-based approach, you can more effectively right-size your testing effort

Customer Observations

The Inconsistent & Imbalanced Nature of Agile Quality Balancing Act



Balancing Act



Customer collaboration over contract negotiation

On average, only **56% of Agile teams** have a full-time or dedicated product owner

Who do QA teams interact with least on an Agile Team?

<15% of Agile product teams conduct **Usability Testing** (how satisfied are you?)

<20% of Agile product teams conduct **Beta Testing** (early access feedback)

Balancing Act



Customer collaboration over contract negotiation

How many people test homegrown, custom-built software vs. 3rd party COTS software?

For people who test custom-built software, how many use 3rd party vendors to complete the work?

How many people have contracted vendors to support their testing efforts?

100% of organizations are accounted for by answering these questions. So why do we not focus on contracts? In my experience, contracts can single-handedly determine if a product team is going to deliver Quality or not

Balancing Act



Customer collaboration over contract negotiation

Supplier will provide <client> with a detailed test Traceability, documenting <client>'s requirements to specific Supplier tests executed to validate the requirement (customization)

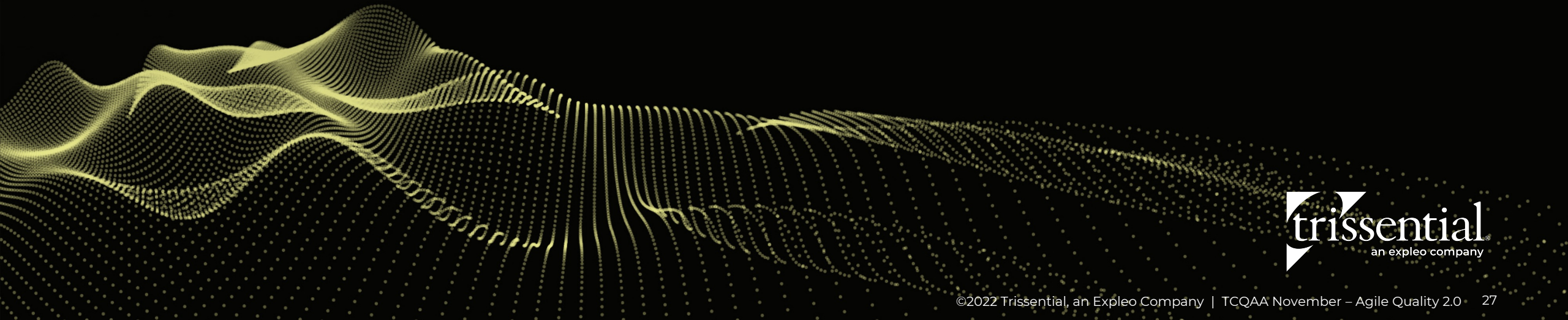
Supplier will ensure that they provide a Defect Removal Efficiency (DRE) of 97%

If Supplier achieves a DRE of 97%, they will not be responsible for providing support beyond what is paid for by <client>

If Supplier achieves a DRE of 93% to 96%, they will agree to provide support to <client> worth 1% of the total value of the engagement contract

The Inconsistent & Imbalanced Nature of Agile Quality

Left Side Dominance



Left Side Dominance



Responding to change over following a plan

#1 challenge for Agile and DevOps teams is quality

Like our surveys in recent years, this survey found the same two most common challenges in achieving high-quality software: **frequent requirement changes reported by 46% of respondents** and **the lack of time to ensure quality by 39%**.

The State of Quality Report 2022 – Katalon – Page 6

Why is frequency of requirement changes such an issue if Agile is about allowing for change even late in the timeline?

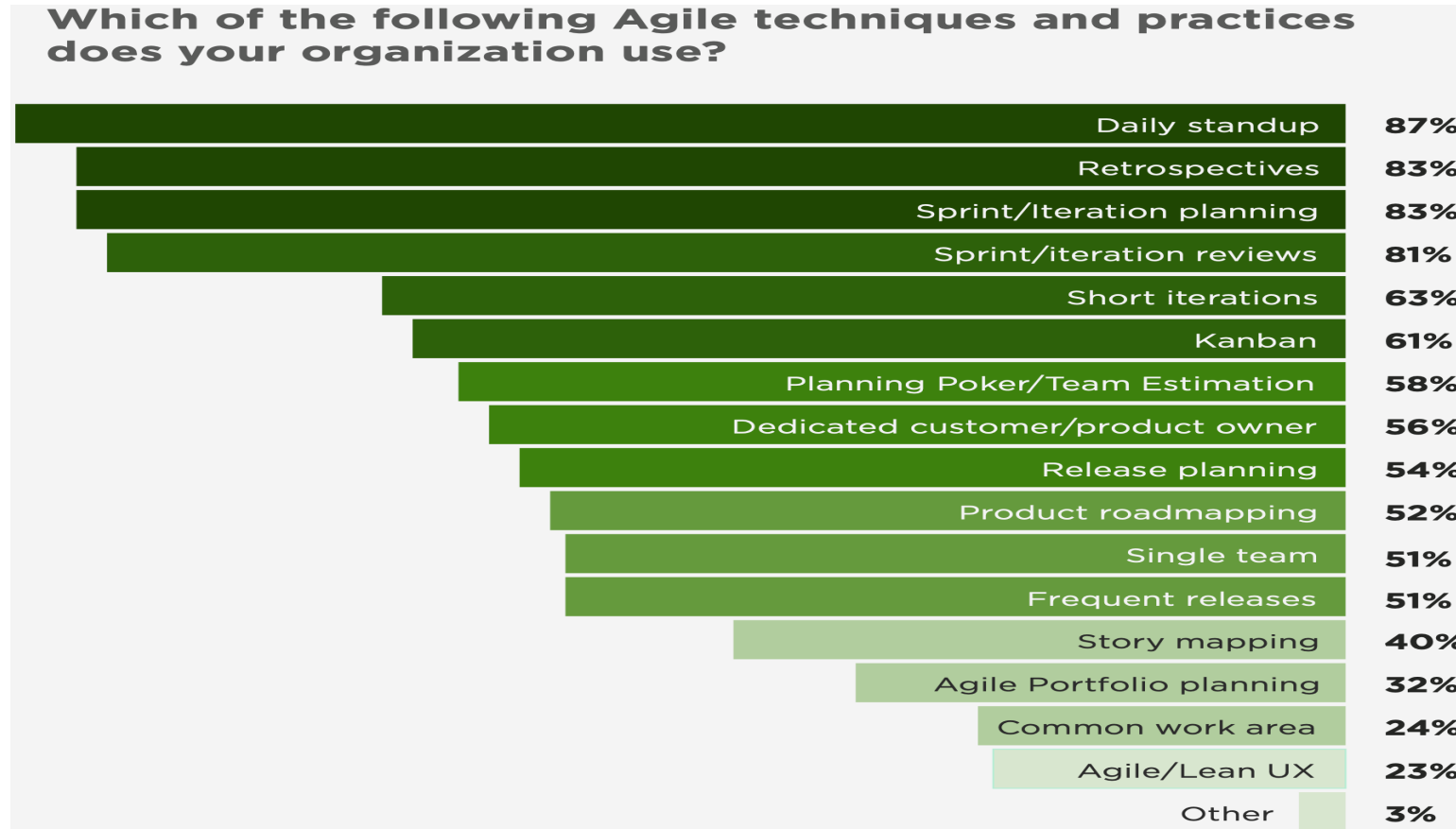
For test transformation, automation is often viewed as a silver bullet useful in all situations. Yet while automation can produce higher ROI, 40% of stakeholders find shift-left or shift-right approaches to be more valuable

Quality Engineering in a Cloud-Centric World – Wipro – 2022 – Page 6

Left Side Dominance



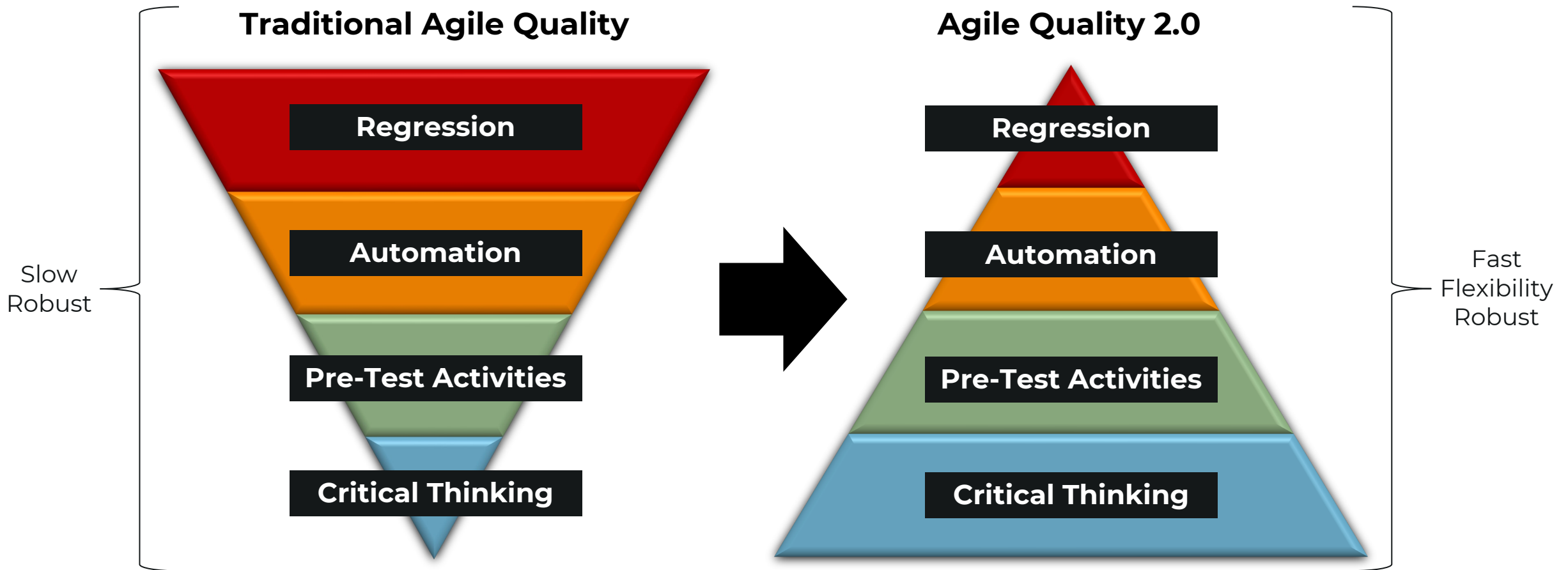
Responding to change over following a plan



Left Side Dominance



Responding to change over following a plan



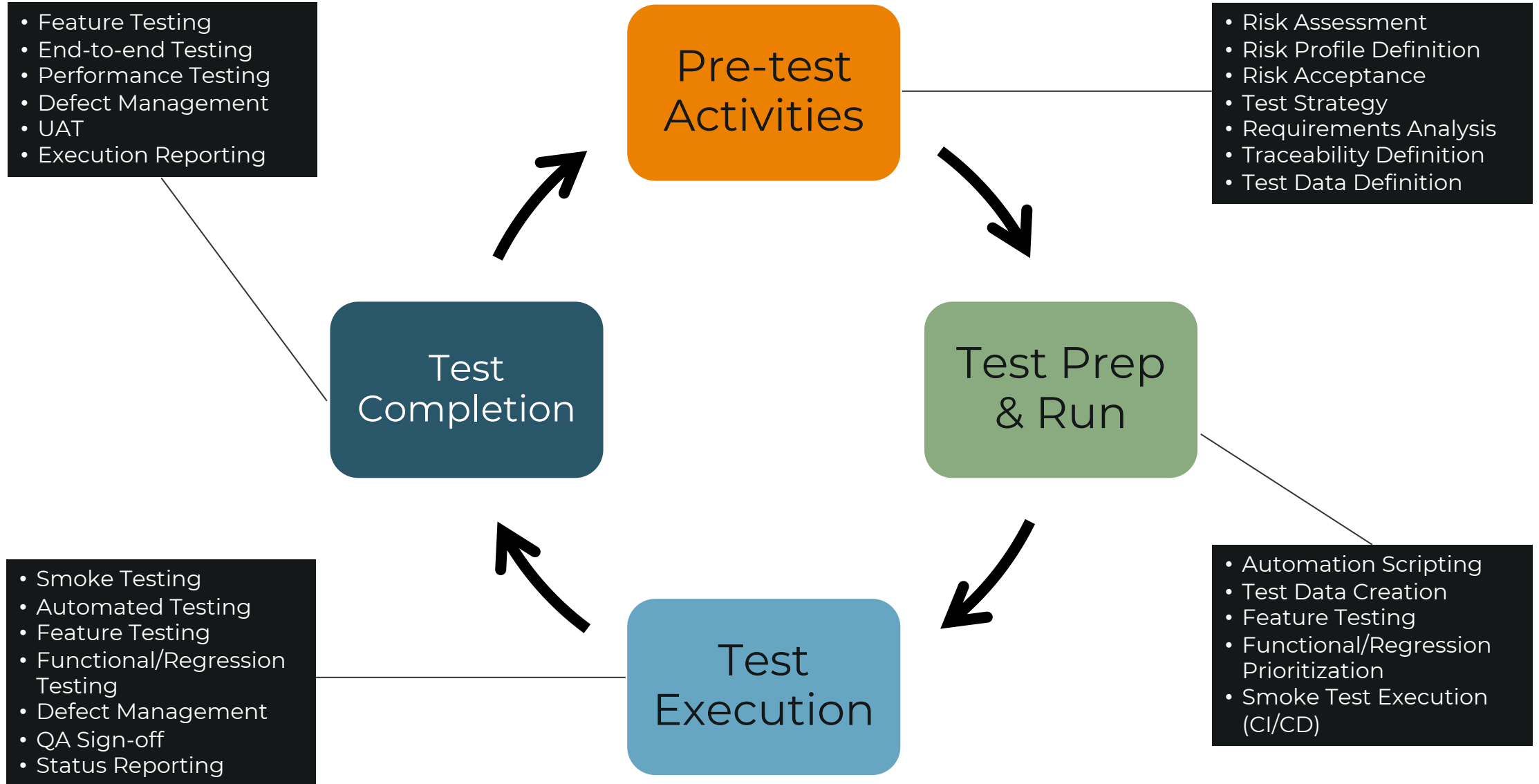
Left Side Dominance



Responding to change over following a plan

Pre-Sprint	Sprint Planning (Day 1)	Test Prep & Run (Day 2 - 4)	Test Execution (Day 5 - 7)	Sprint Completion (Day 8 - 10)
<ul style="list-style-type: none">• Risk Recommendation• Grooming Future Sprint Work	<ul style="list-style-type: none">• Risk Acceptance• Test Strategy• Test Prep• Grooming Future Sprint Work	<ul style="list-style-type: none">• Automation Scripting• Test Data• Feature Testing• Functional/Regression Prioritization• Smoke Testing Execution (CI)	<ul style="list-style-type: none">• Smoke Testing• Automated Testing• Feature Testing• Functional/Regression Testing• Defect Management• QA Sign-off (Story)• Accept Feature• Status Reporting	<ul style="list-style-type: none">• Feature Testing• End-to-end Testing• Performance Testing• Defect Management• UAT• Demo• Sign-off (Sprint)• Retrospective

Left Side Dominance



Questions?



The Inconsistent & Imbalanced Nature of Agile Quality

The Agile Manifesto is over 20 years old and has not been updated since its inception

Avoid Agile Quality Antipatterns by asking yourself “why am I doing this” & “what value am I adding?”

Remember 84% of Agile teams are maturing so when someone says “we should be doing...” ask yourself, are we there yet?

When you hear “that’s not Agile...” respond back “are you going to sign-off on Quality for me?”

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