W16

Exploratory Testing
Wednesday, October 3rd, 2018 3:00 PM

Rediscover Exploratory Testing

Presented by:

Ingo Philipp

Tricentis

Brought to you by:

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Ingo Philipp

Ingo Philipp is a passionate and award-winning Exploratory Testing and Agile thought leader, with a resume of speaking engagements that span the globe. In his roles as Tricentis' Distinguished Evangelist and a product manager, his responsibilities range from product development and product marketing to test management, test conception, test design, test automation, and sharing his rich perspectives and stories with the world. His experiences with software testing embrace the application of agile testing as well as classical testing methodologies in various sectors including financial services, consumer goods, commercial services, healthcare, materials, telecommunications, and energy. You can follow him on Linkedin or Twitter @IngoPhilipp

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Exploratory Testing

Rediscover the art of exploratory testing

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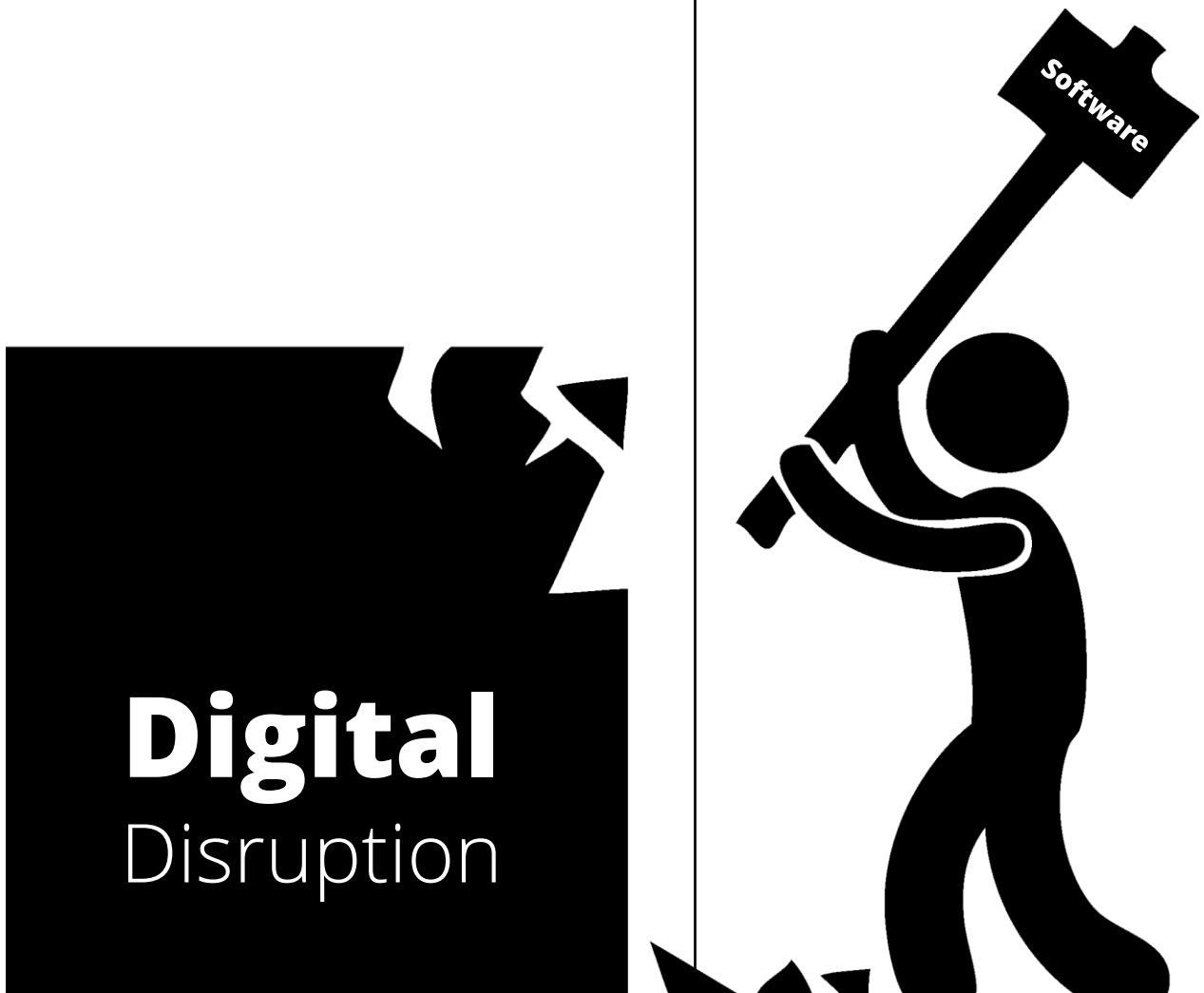
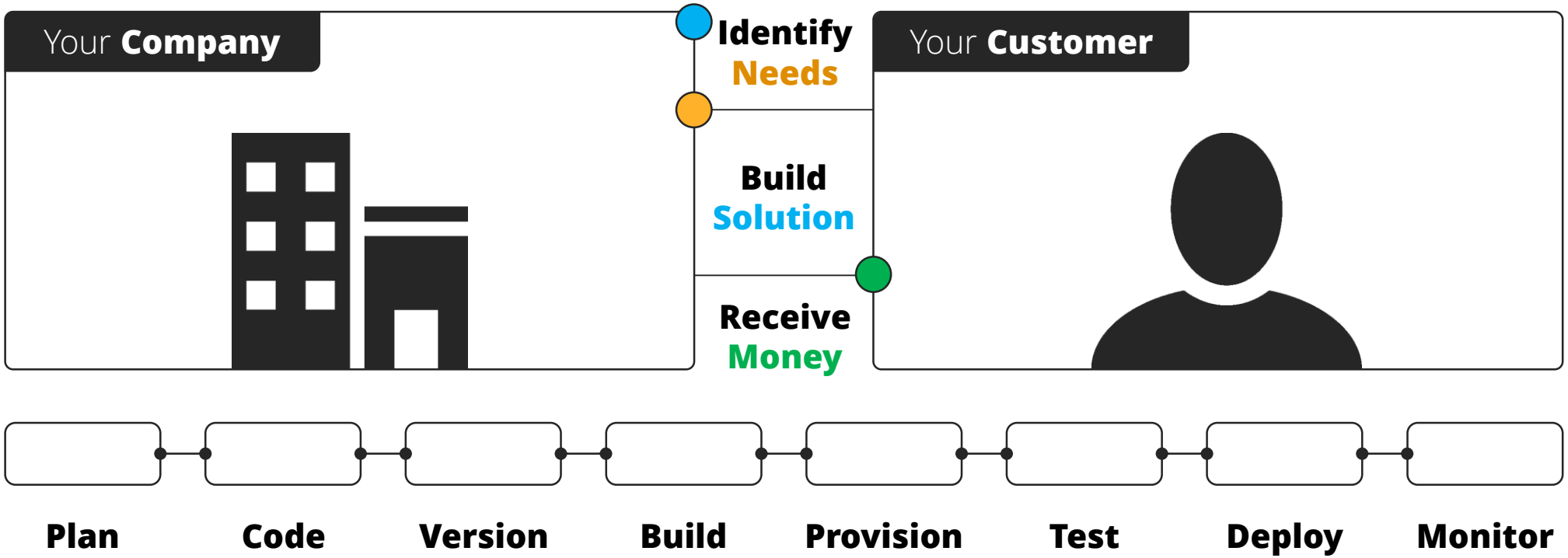
Businesses must continuously exploit digital technologies to both create new sources of **customer value** and increase **operational agility** in service of customers.

Across industries, companies face the challenge of **software-led transformation**



The product is a solution.
If the **problem** isn't solved,
the product doesn't work.

The goal is to
accelerate this
value exchange



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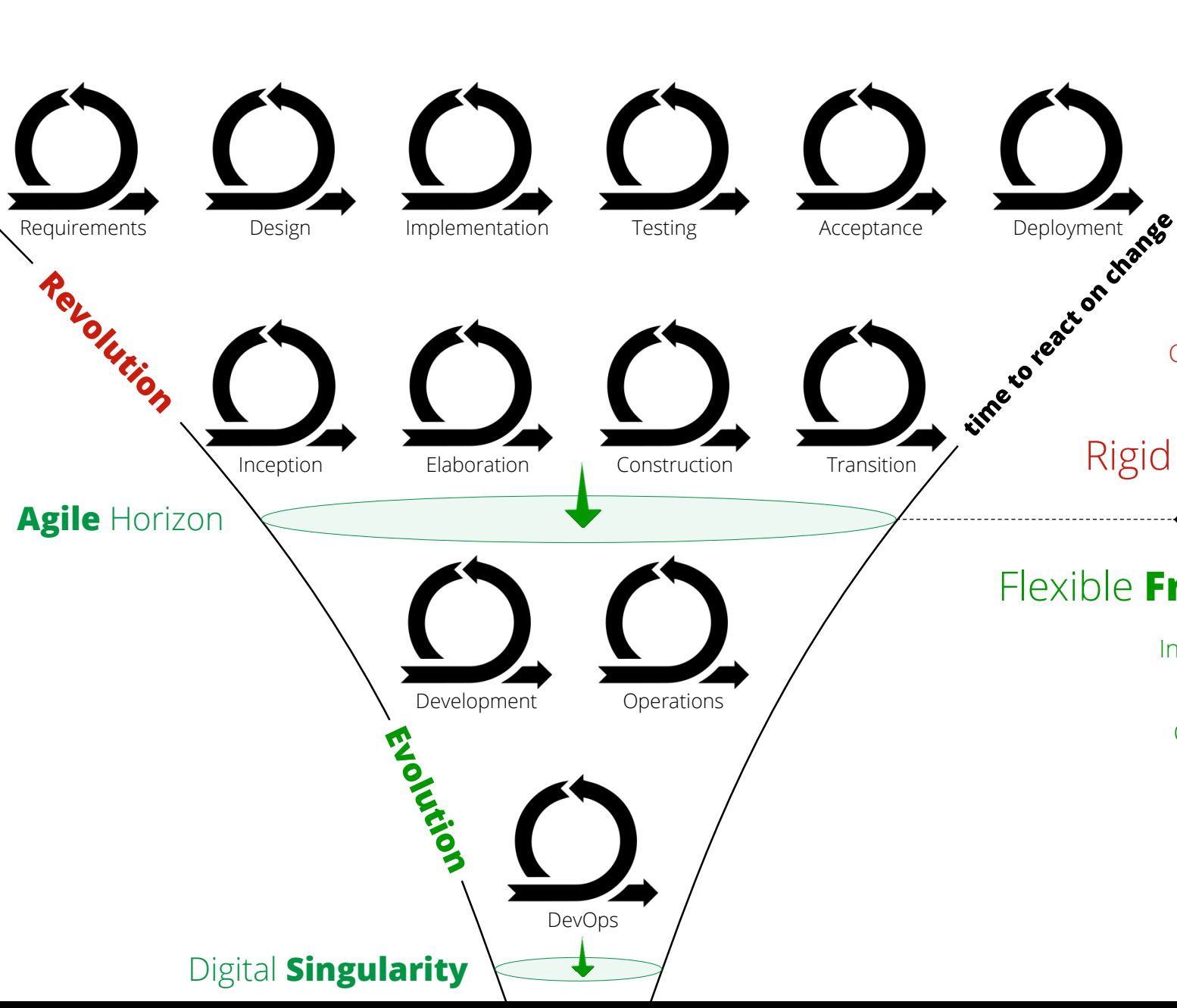
6+
Big Bang
Waterfall

4
Incremental
Rational Unified Process

2
Agile
Scrum, Kanban

1
Continuous
DevOps



Following a Plan
Contract Negotiation
Copious Documentation
Processes & Tools

Rigid **Rules**

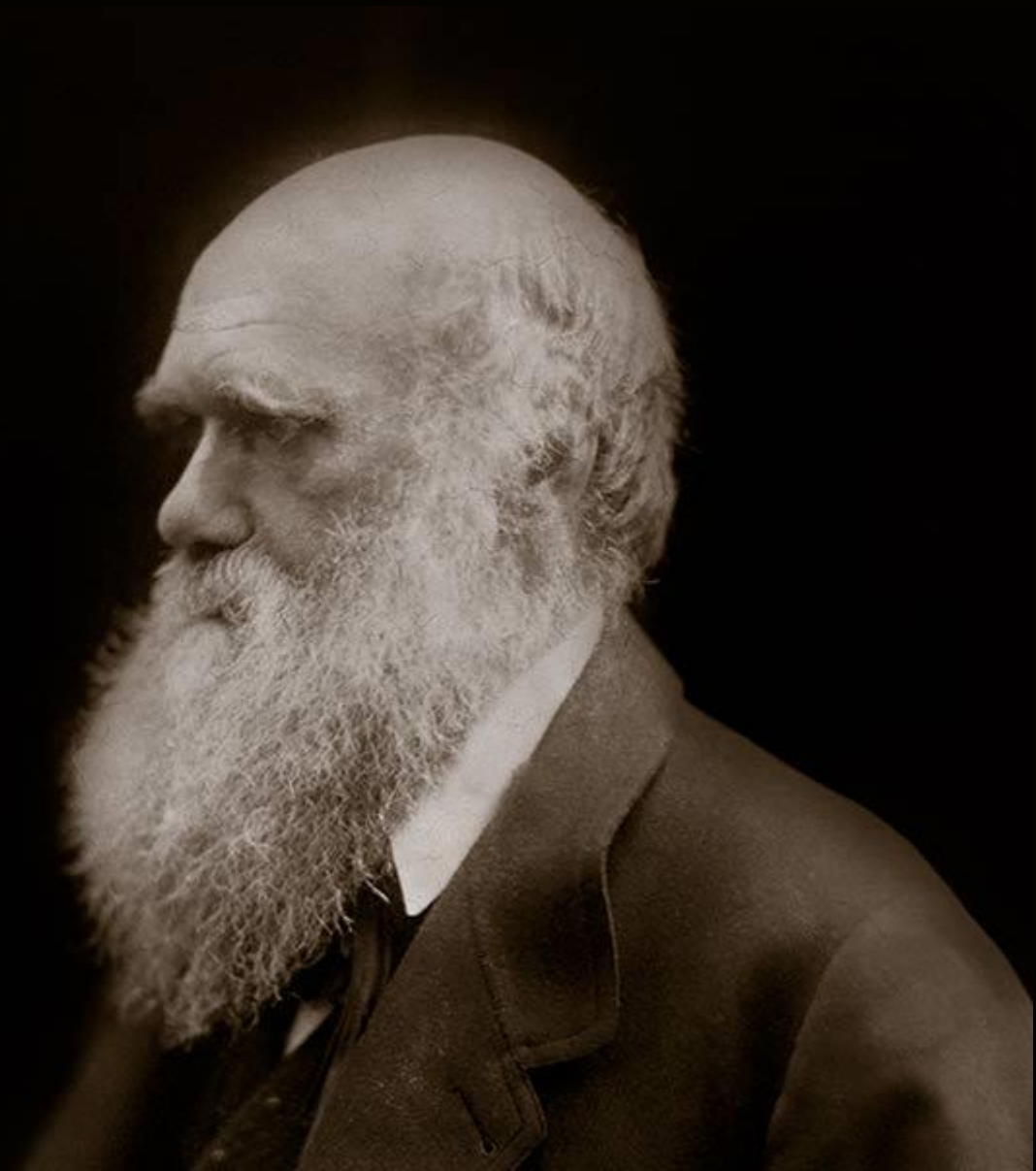
Flexible **Framework**

Individuals & Interactions
Working Software
Customer Collaboration
Responding to Change

Delivery **Processes**

It’s not the strongest that survive, nor the most intelligent, but the one **most responsive** to change

Charles Darwin



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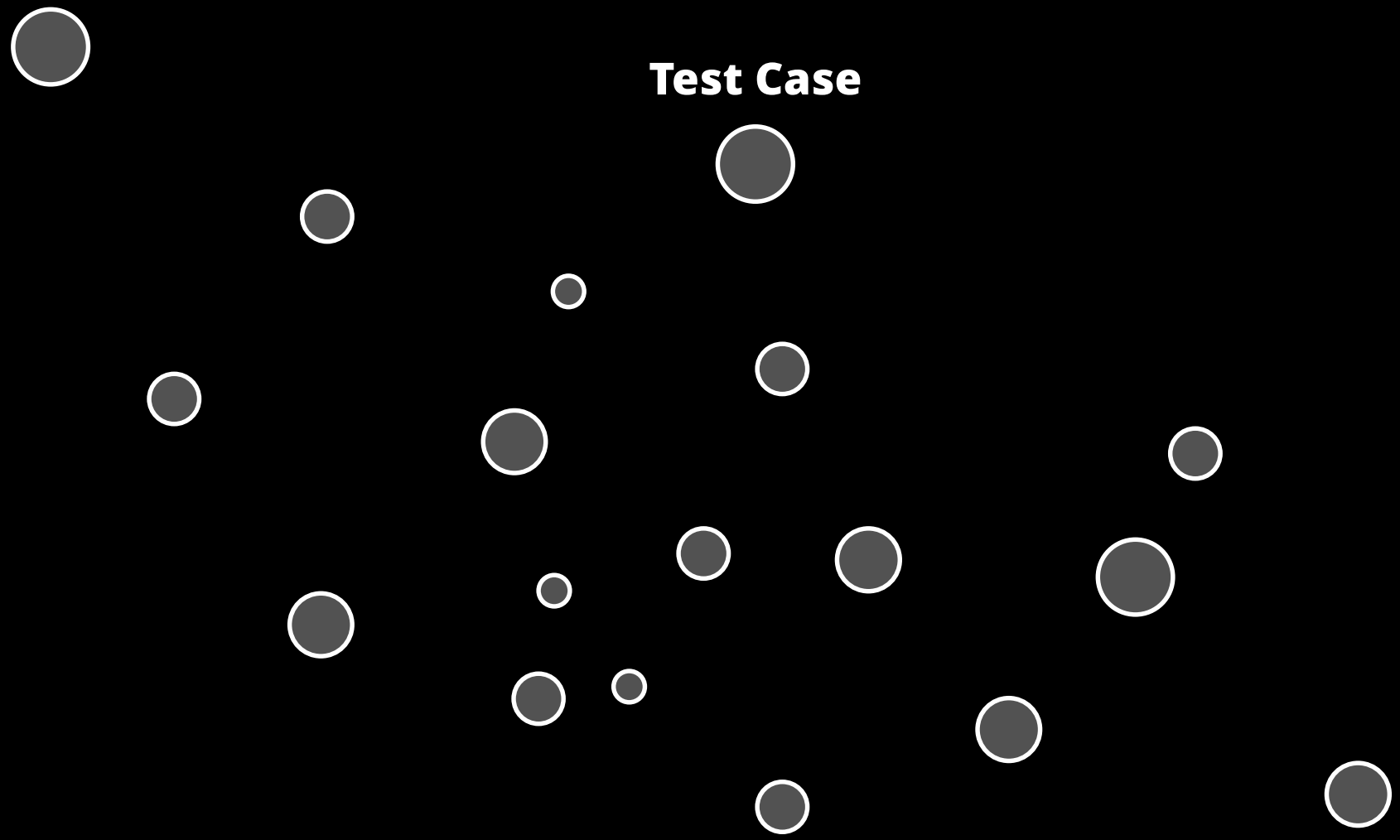
Automation doesn't make testing easy, it makes testing possible

Wolfgang Platz


Test Case

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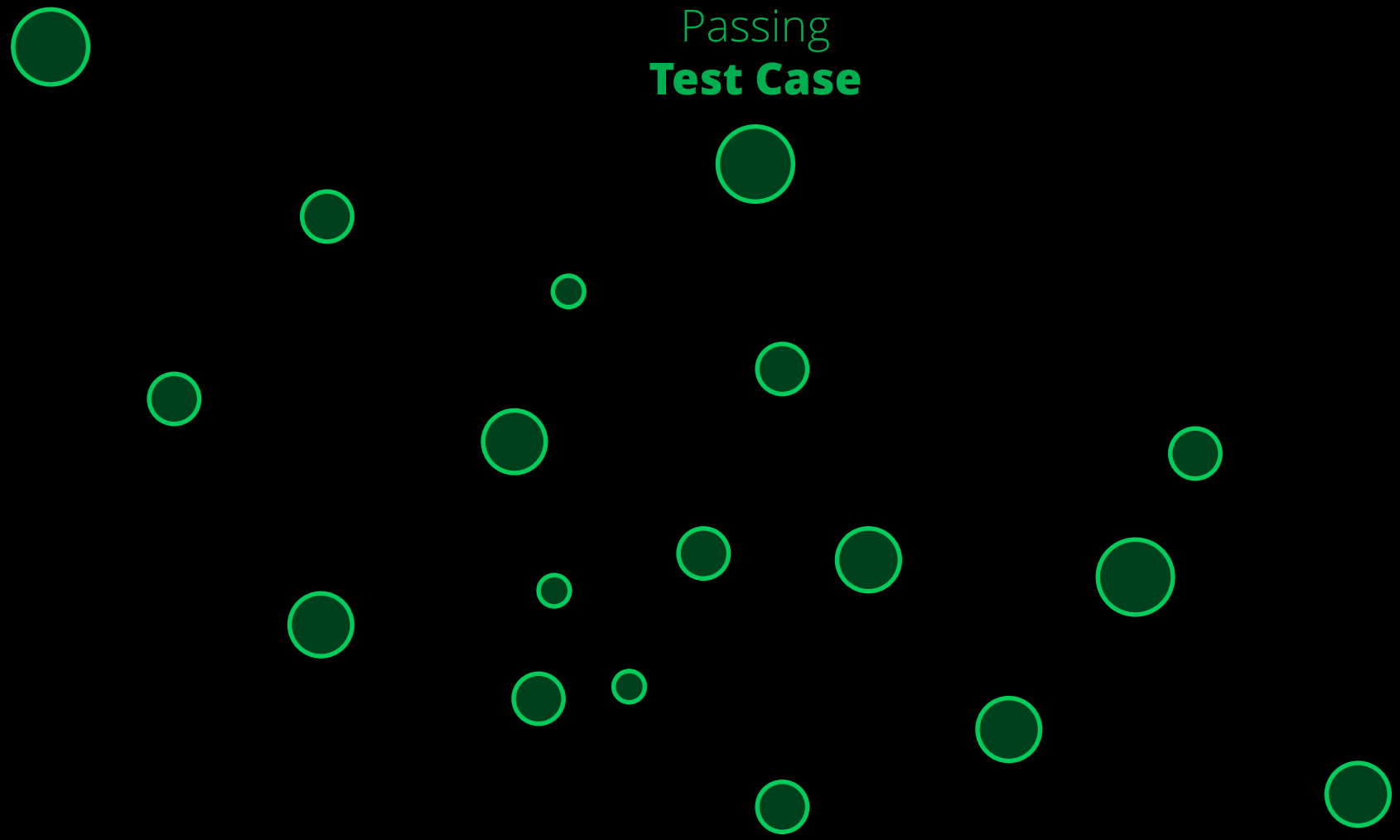
Passing
Test Case



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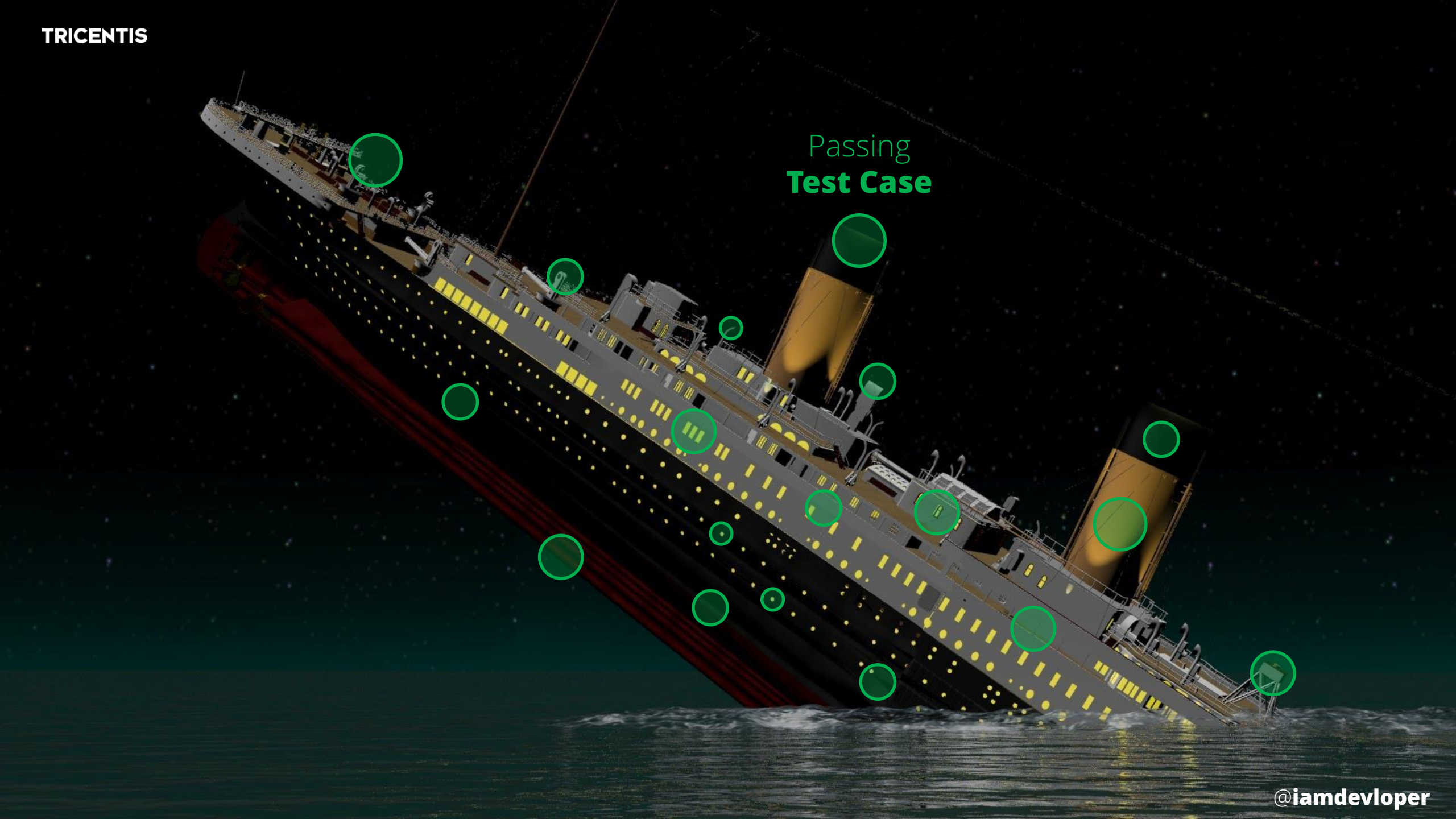

@iamdevloper

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Testing **harder** isn't the answer, testing **smarter** is!

Wolfgang Platz


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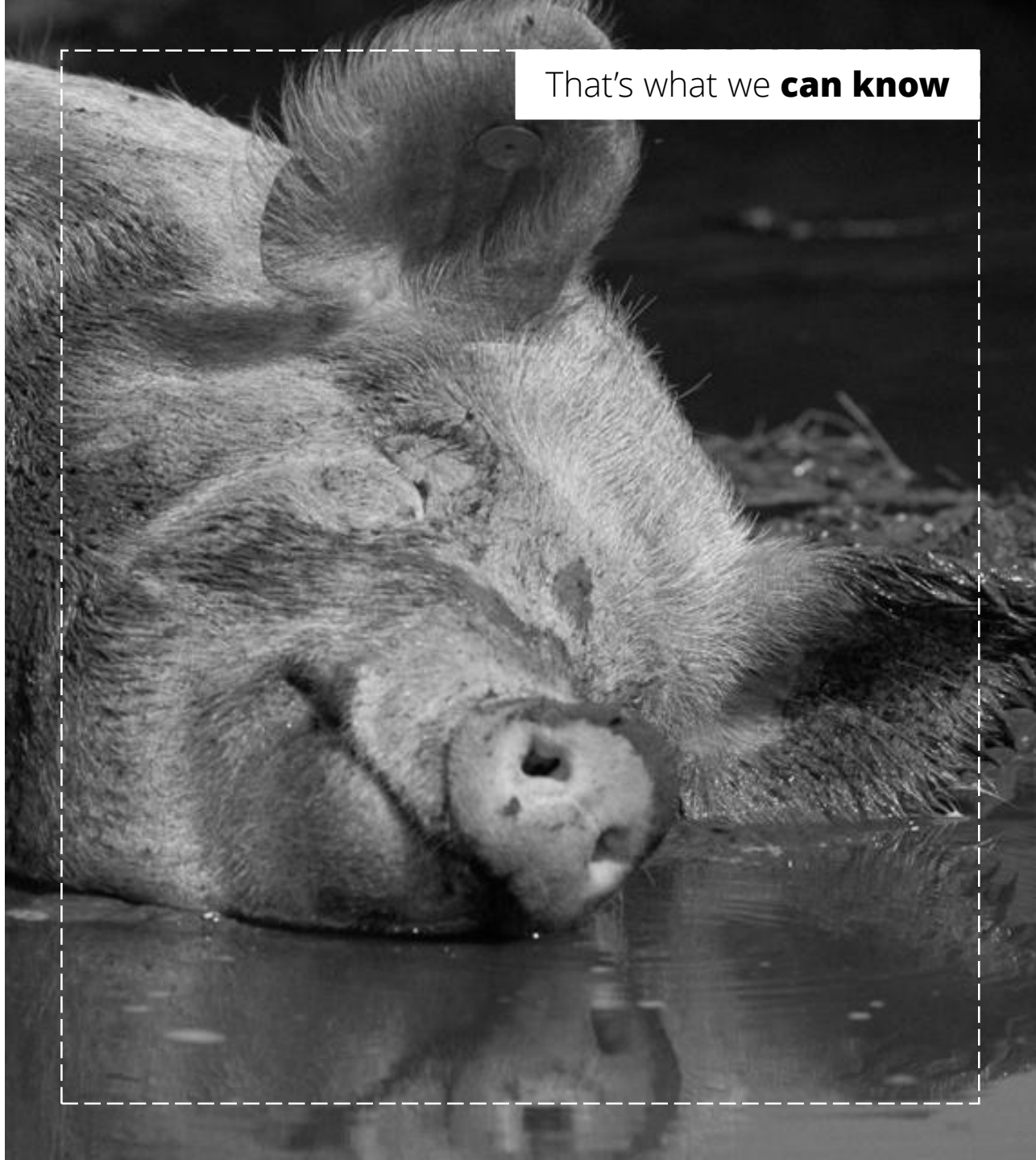
© BBC

Testing is exactly like **washing** a pig. Because it's messy. It has no rules. No clear beginning, middle, or end. It's kind of a pain in the ass, and when you're done you're not sure if the pig is really clean or even why you were washing a pig in the first place.

Testing is exactly like **washing** a pig. Because it's messy. It has no rules. No clear beginning, middle, or end. It's kind of a pain in the ass, and when you're done you're not sure if the pig is really clean or even why you were washing a pig in the first place.



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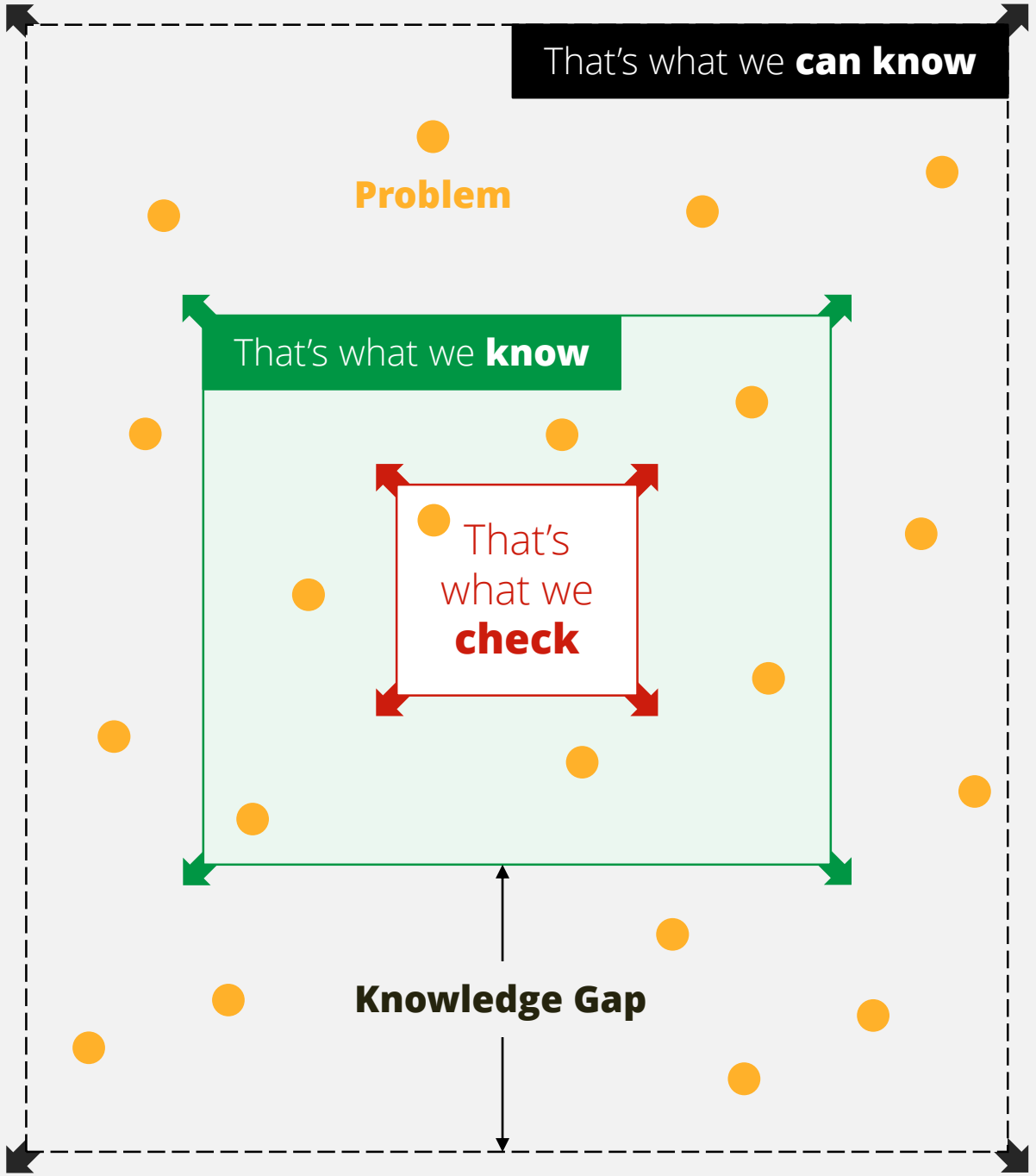


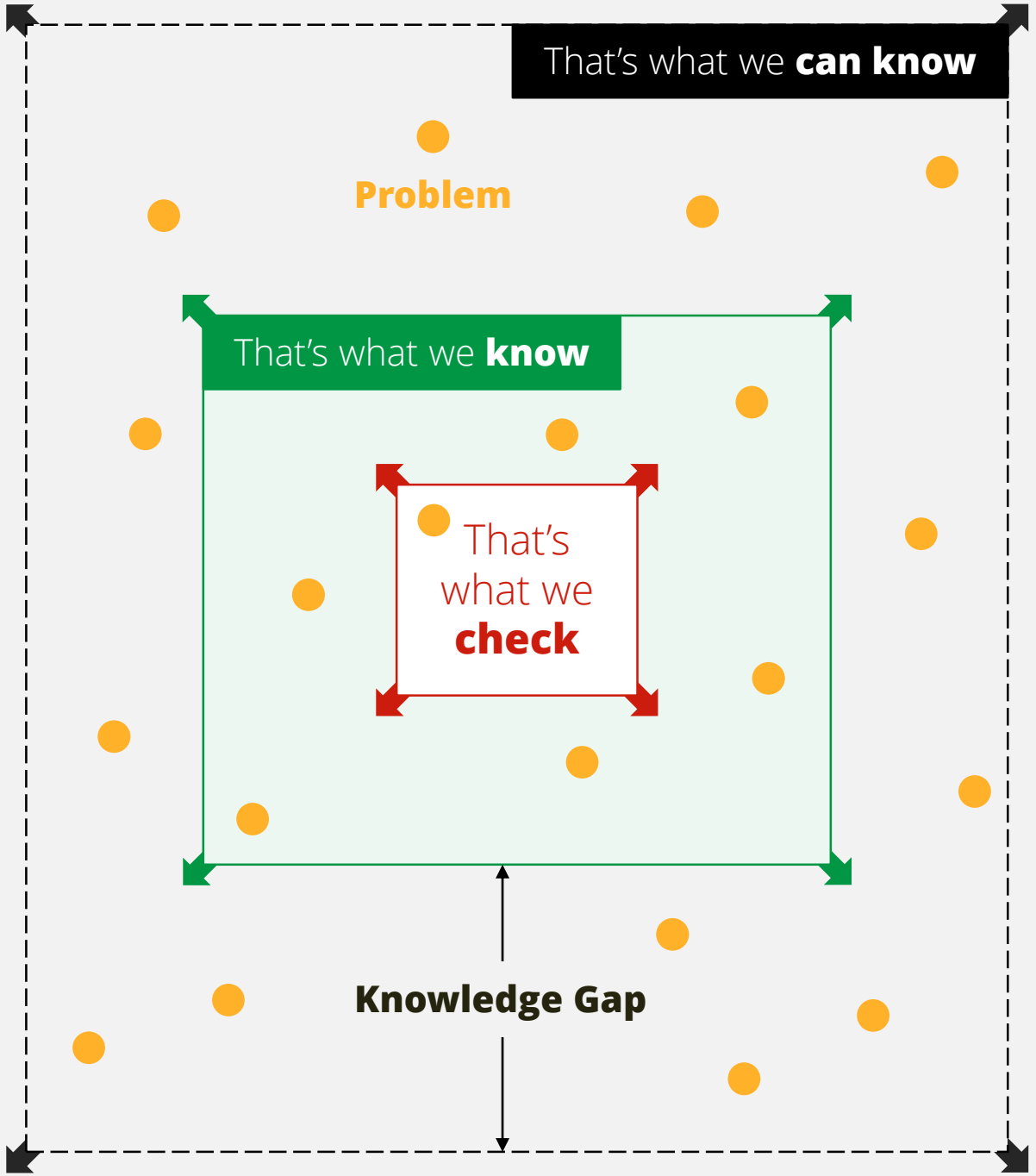
The purpose of testing is to close the **knowledge** gap

✸

The goal is **information**, not gratuitous automation

✸

Testing is and always will be a **search** for information



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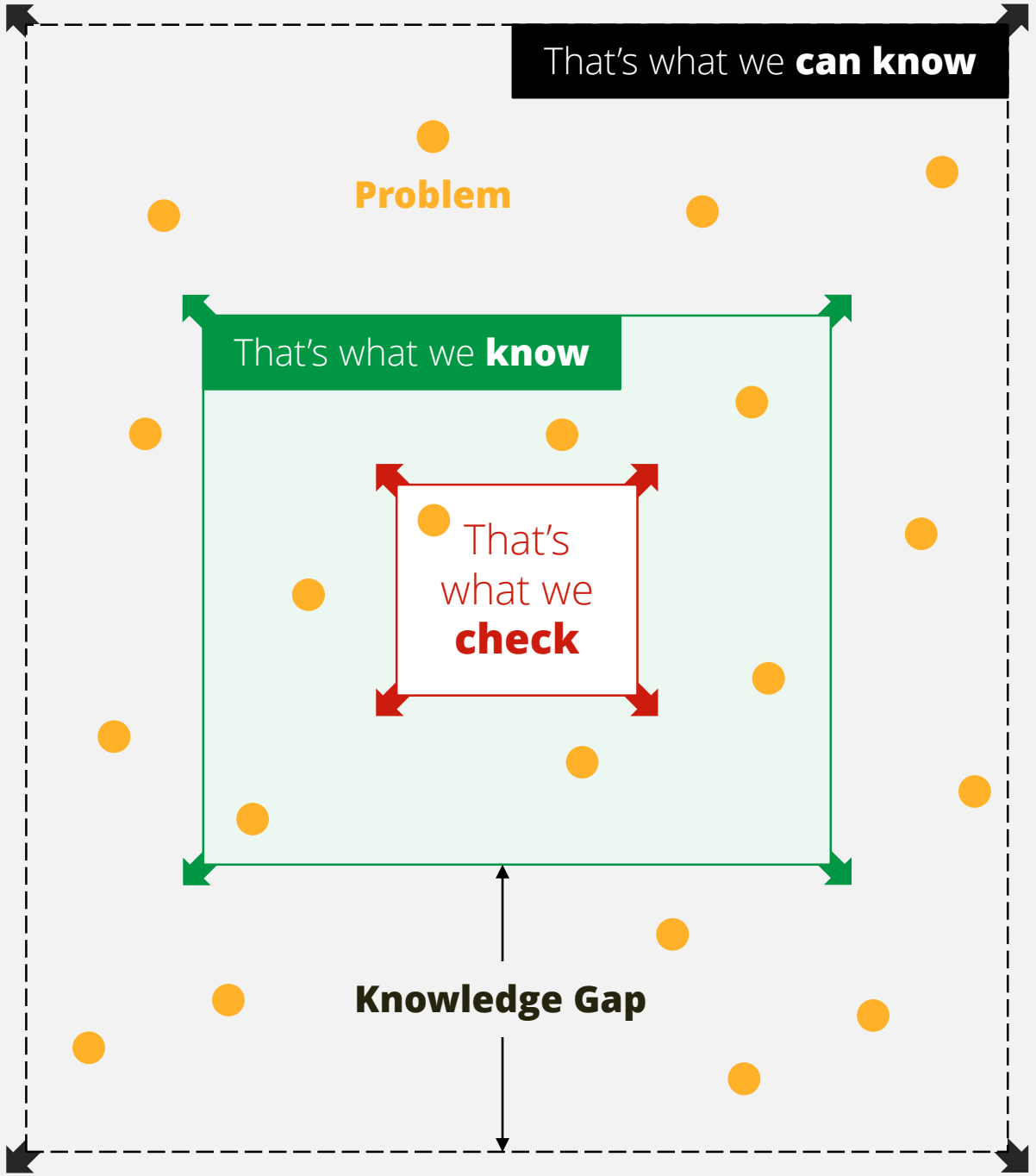
We are an efficient
information service

✸

We enable business people
to make **business decisions**

✸

We are in situ investigators,
we are like **Sherlock Holmes**



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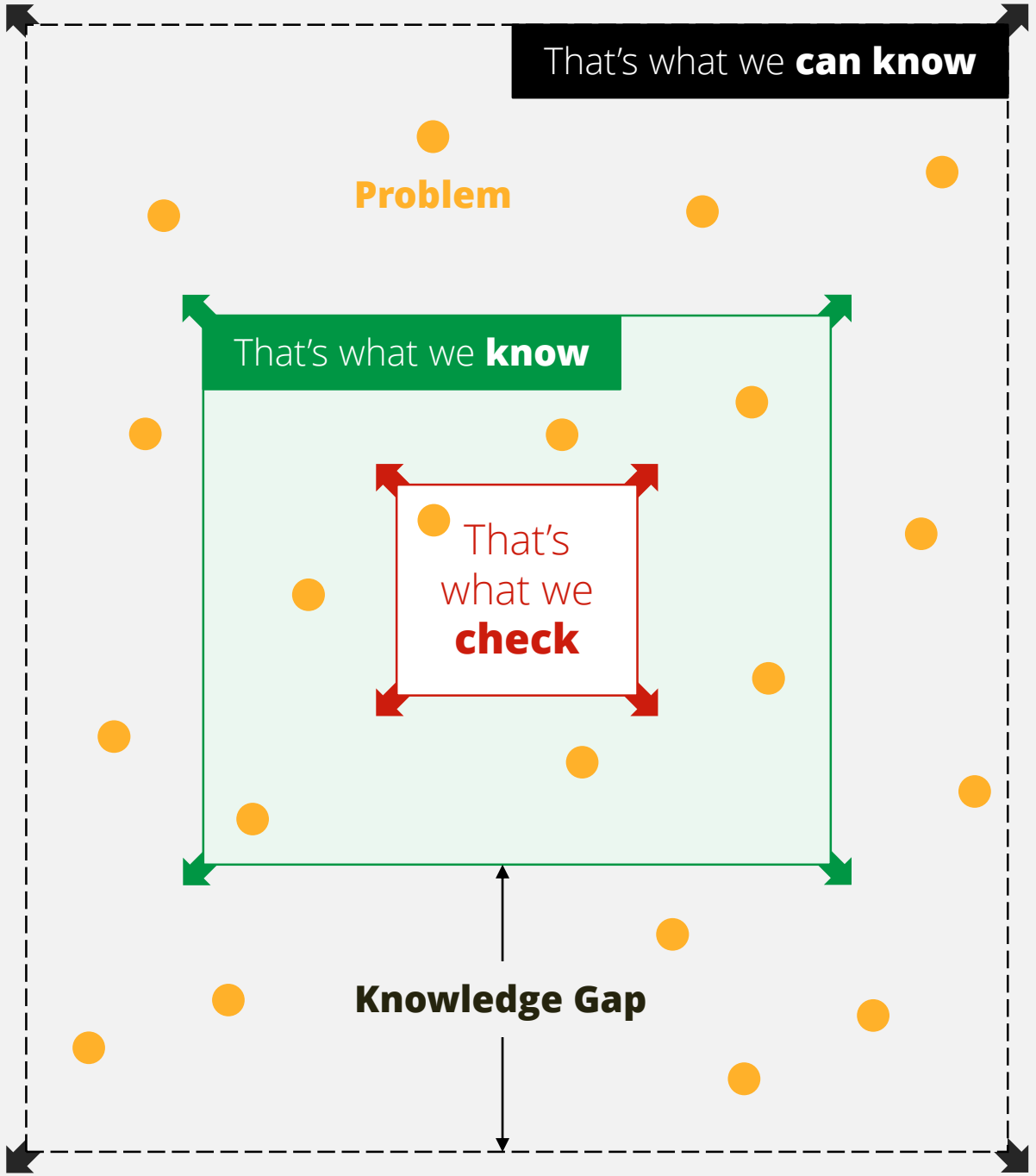
We go to crime scenes (**software**) and search for evidence (**risks**) to enable the police (**developers**) to arrest (**fix**) the culprits (**bugs**)



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Change Detector

High Risk Coverage
Easy to scale because it's parallelizable

Low Information Value
Repeat what you have already learned

Monitor Known Risks
Confirm what you already know

Mechanical Testing
Process pre-defined data in pre-designed steps

Confirmatory Testing

« Demonstrate your **depth** of knowledge »

Problem Detector

Low Risk Coverage
Hard to scale continuously because it relies on humans

High Information Value
Learn something new

Analyze Potential Risks
Focus on the things you don't know

Intelligent Testing
Create new test ideas based on what you have learned

Exploratory Testing

« Demonstrate your **breadth** of knowledge »

TRICENTIS

Change Detector

Evaluate a product by applying **algorithmic** decision rules to specific observations of a product

Checking

« Requires **Processing** »

Problem Detector

Low Risk Coverage

Hard to scale continuously because it relies on humans

High Information Value

Learn something new

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Intelligent Testing

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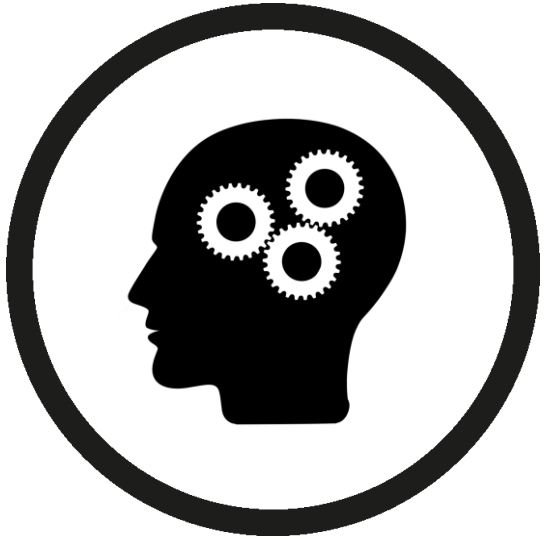
Problem Detector



Evaluate a product by **learning** about it through **exploration** and **experimentation**

Exploring

« Requires **Thinking** »

TRICENTIS

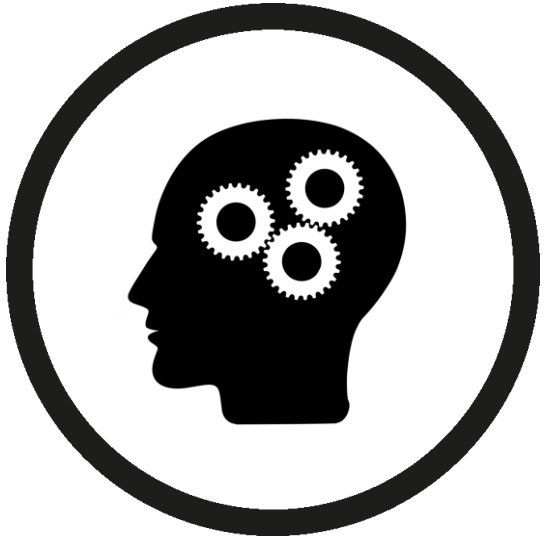
Goal. Check what the product can do

Verify through **Instructions**	Pay attention to **Deviations**
Create **Test Cases**	Follow **Procedure**
Examine **Requirements**	Factory **Process**

Checking

« Requires **Processing** »

Problem Detector



Evaluate a product by **learning** about it through **exploration** and **experimentation**

Exploring

« Requires **Thinking** »

TRICENTIS

Goal. Check what the product can do

Mechanical Process

Verify through **Instructions**	Pay attention to **Deviations**
Create **Test Cases**	Follow **Procedure**
Examine **Requirements**	Factory **Process**

Checking

« Requires **Processing** »

Goal. Find what the product can't do

Cognitive Process

Investigate through **Experiments**	Pay attention to **Oracles**
Create **Test Ideas**	Follow **Clues**
Examine **Risks**	Adaptive **Investigation**

Exploring

« Requires **Thinking** »

TRICENTIS

Agile

Testing Equation

Checking

Efficient **Confirmatory Testing**

+

Exploring

Effective **Exploratory Testing**

=

Testing

Thorough Testing

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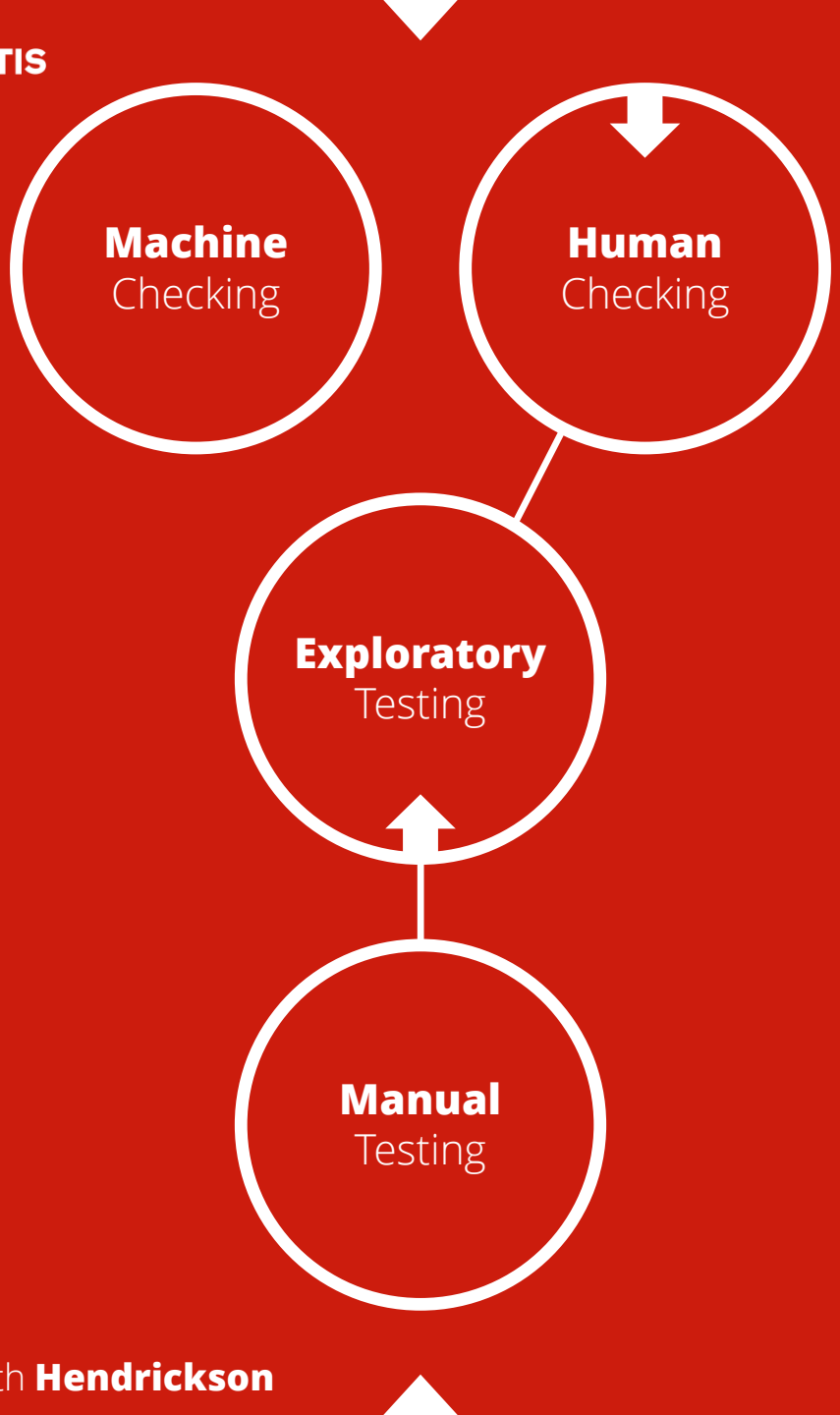

Checking

Efficient **Confirmatory Testing**

+

Exploring

Effective **Exploratory Testing**

=

Testing

Thorough Testing

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Exploratory testing is not a talent, it's a **skill** that can be learnt

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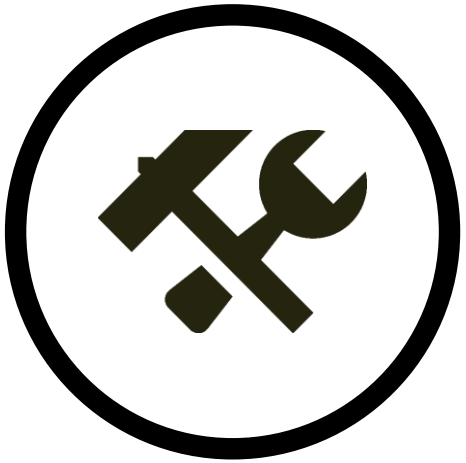

Technique

Provides a **systematic procedure**

Approach

Provides **orientation**

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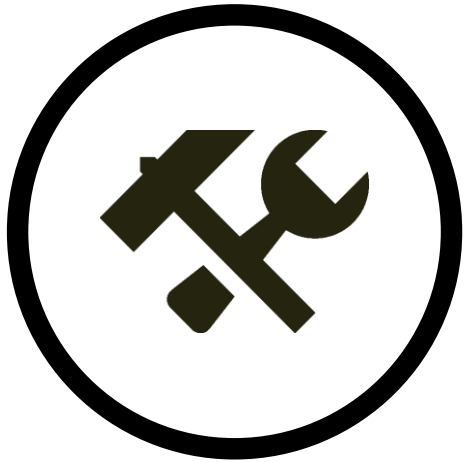

Technique

Provides a **systematic procedure**

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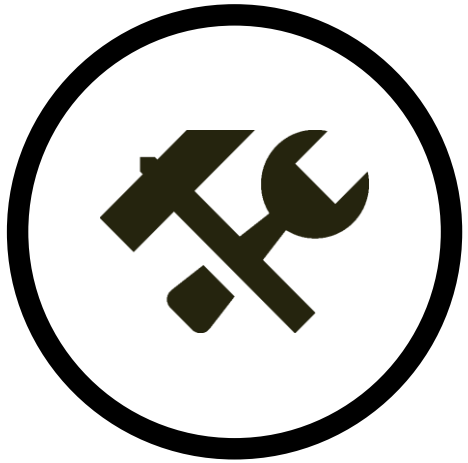

Technique

Provides a **systematic procedure**

Session-Based Testing

Structure exploratory testing to allow large-scale implementations

2

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Imagination in a **straightjacket**

Session-Based Testing

Structure exploratory testing to allow large-scale implementations

2

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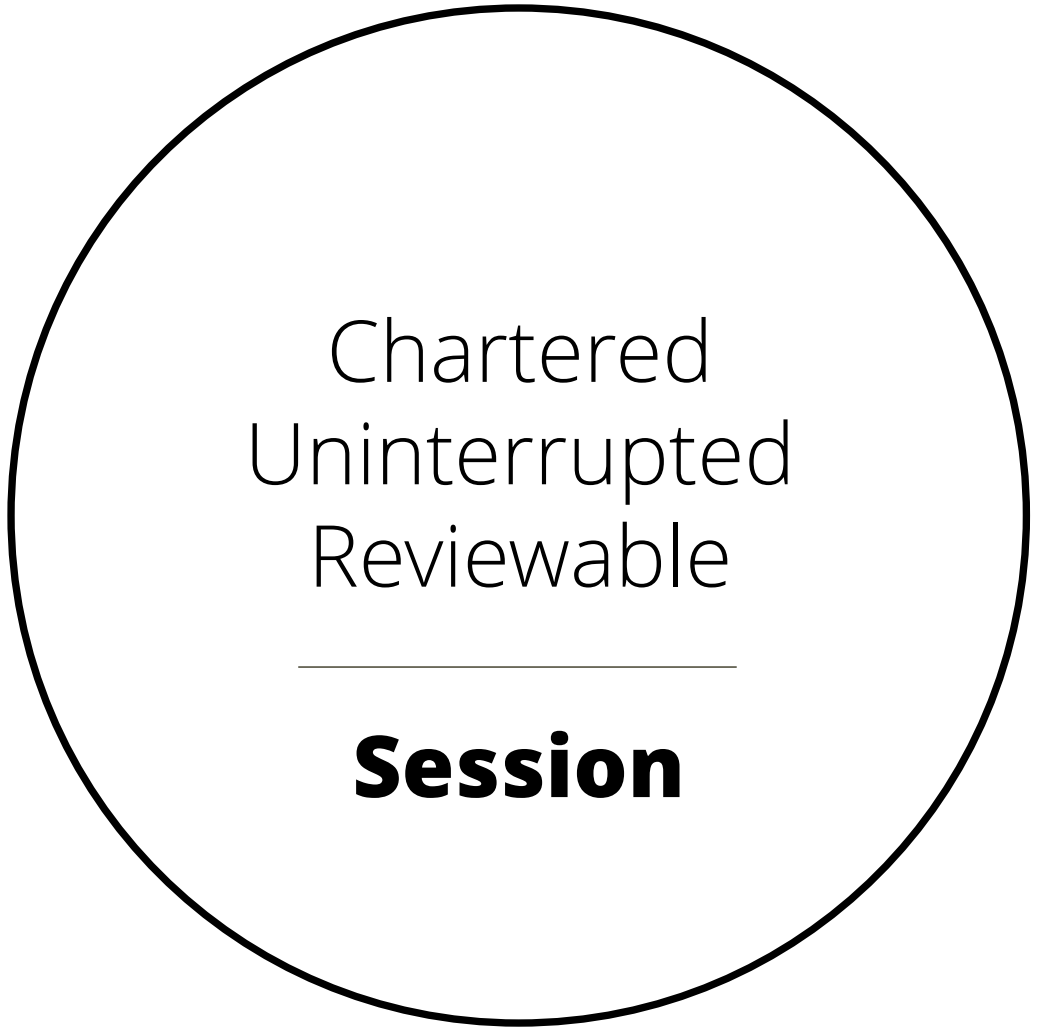

Session-Based Testing

Structure exploratory testing to allow large-scale implementations

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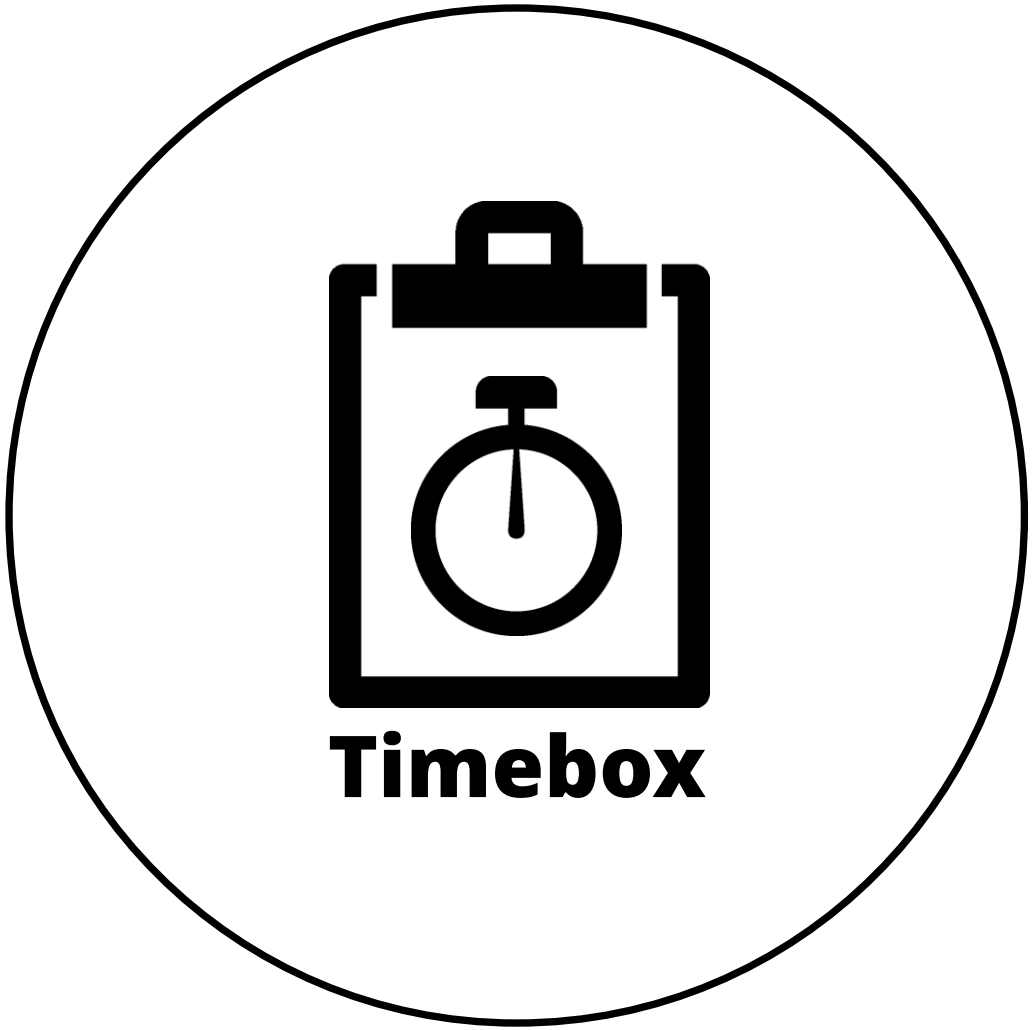

Session-Based Testing

Structure exploratory testing to allow large-scale implementations

2

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TRICENTIS

Session-Based Testing

Structure exploratory testing to allow large-scale implementations

2

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Session-Based Testing

Structure exploratory testing to allow large-scale implementations

Requirements-Based Testing

Limit the scope to make it manageable

3

4

5

TRICENTIS

Session-Based Testing

Structure exploratory testing to allow large-scale implementations

Requirements-Based Testing

Limit the scope to make it manageable

3

4

5

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R » Recent
What parts of the product changed recently?

C » Core
What critical parts of the product must continue to work?

R » Risky
What parts of the product are inherently risky?

C » Configuration
What parts of the product depend on environment settings?

R » Repaired
What parts of the product changed to address defects?

C » Chronic
What parts of the product chronically break?

Session-Based Testing
Structure exploratory testing to allow large-scale implementations

Requirements-Based Testing
Limit the scope to make it manageable

3

4

5

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S » Structure
Test what the product is made of

F » Function
Test what the product does

D » Data
Test what the product processes

P » Platform
Test what the product depends upon

O » Operations
Test how the product is used

T » Time
Test how the product is affected by time

Session-Based Testing
Structure exploratory testing to allow large-scale implementations

Requirements-Based Testing
Limit the scope to make it manageable

3

4

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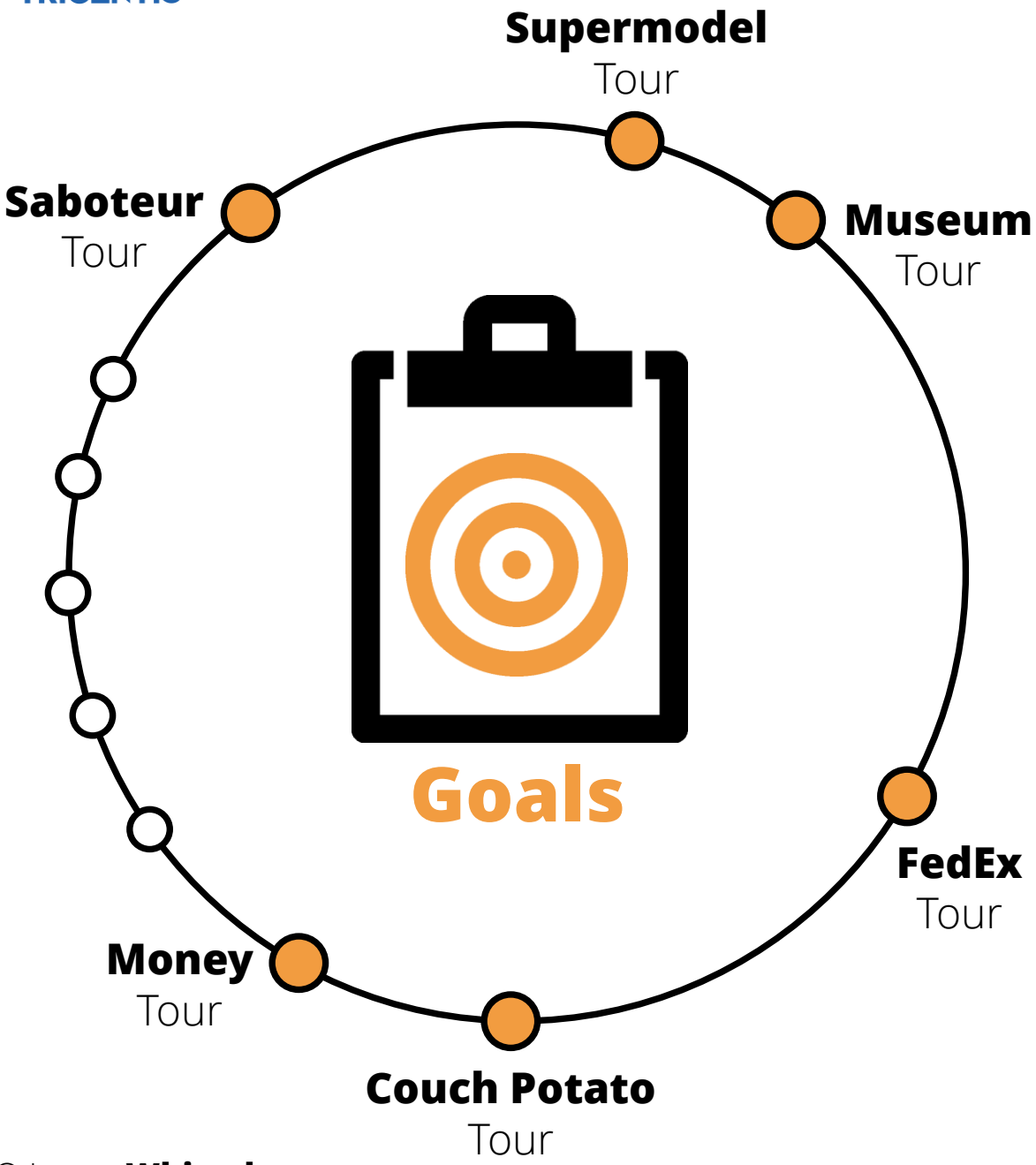
TRICENTIS



Session-Based Testing

Structure exploratory testing to allow large-scale implementations

Requirements-Based Testing

Limit the scope to make it manageable

Tour-Based Testing

Set concrete goals to provide a clear focus

4

5

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@speed Quality

It's just **some value** to some person

Session-Based Testing

Structure exploratory testing to allow large-scale implementations

Requirements-Based Testing

Limit the scope to make it manageable

Tour-Based Testing

Set concrete goals to provide a clear focus

4

5

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Quality is inherently **subjective**

Different stakeholders
will perceive the same product as having different levels of quality

We must look for **different things** for different stakeholders

We must **diversify** testing

© Jerry **Weinberg**

Session-Based Testing
Structure exploratory testing to allow large-scale implementations

Requirements-Based Testing
Limit the scope to make it manageable

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Set concrete goals to provide a clear focus

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5

Session-Based Testing

Structure exploratory testing to allow large-scale implementations

Requirements-Based Testing

Limit the scope to make it manageable

Tour-Based Testing

Set concrete goals to provide a clear focus

Polychrome Testing

Explore the product from different viewpoints to diversify testing

5

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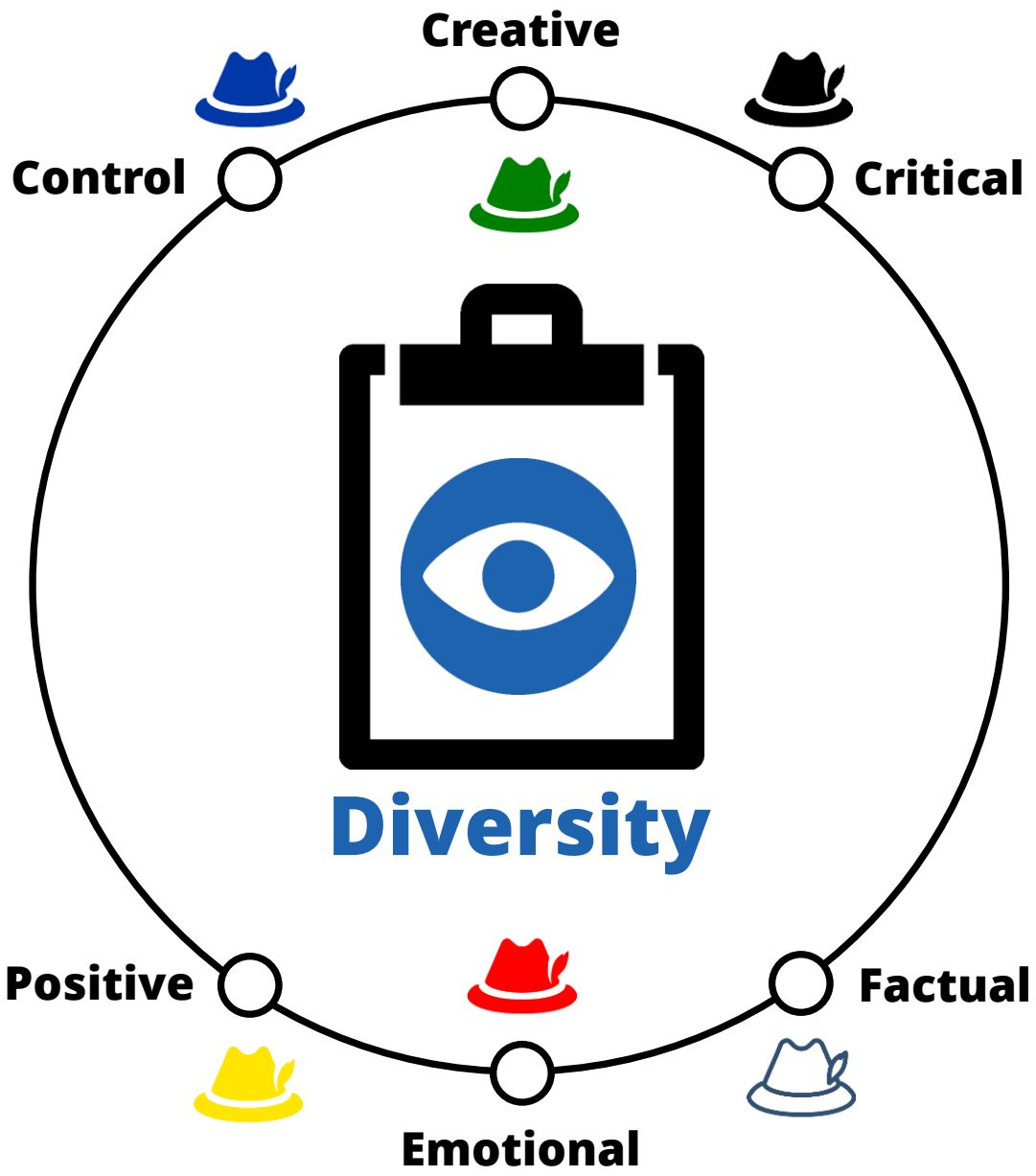

© Edward **De Bono**

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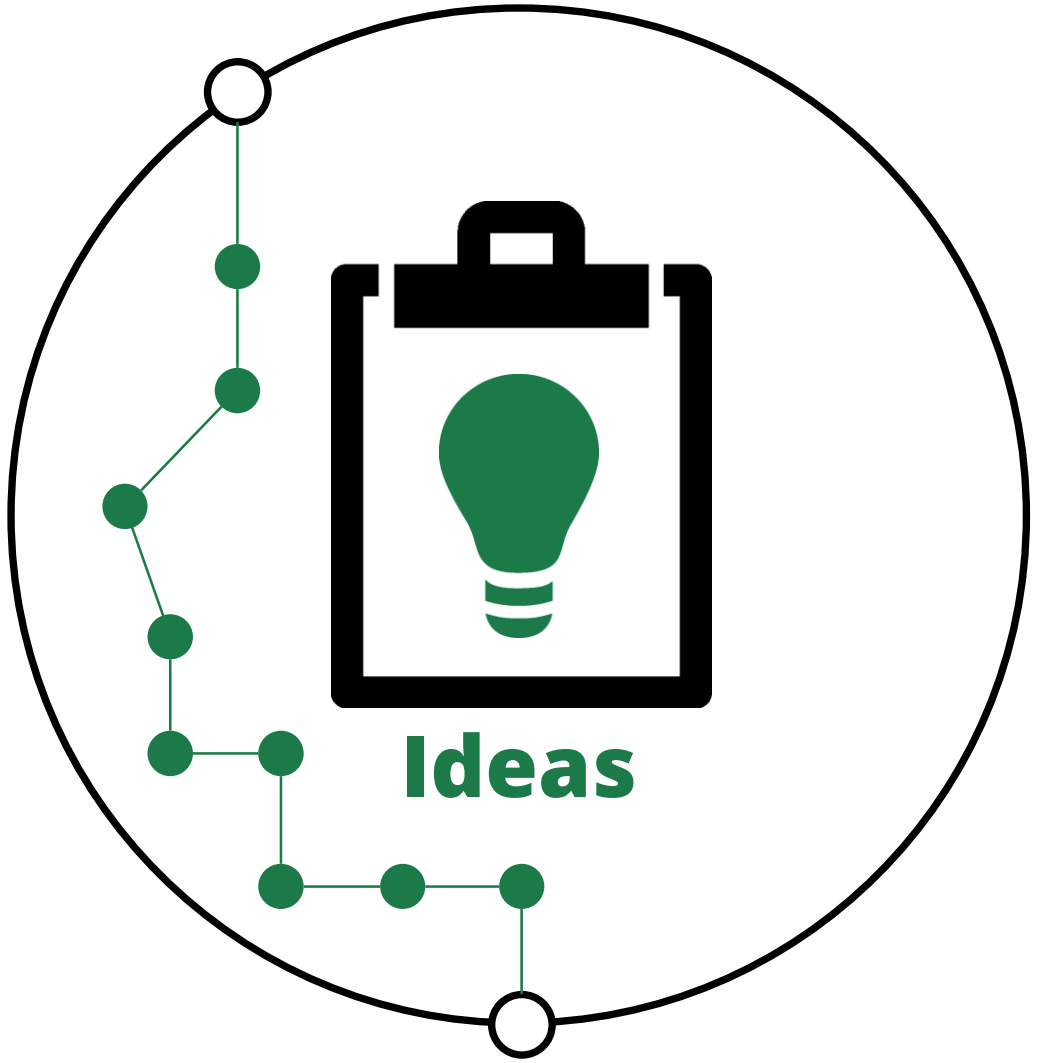

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Structure exploratory testing to allow large-scale implementations

Requirements-Based Testing

Limit the scope to make it manageable

Tour-Based Testing

Set concrete goals to provide a clear focus

Polychrome Testing

Explore the product from different viewpoints to diversify testing

Scenario-Based Testing

Capture each test idea to make it reviewable

Testing is not about creating test cases,
it's about performing **experiments**

James Bach

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The test doesn't find the bug. A **human** finds the bug, and the test plays a role in helping the human find it

Pradeep Soundararajan

Insanity is doing the same thing over and over again and expecting different results

Albert Einstein

If you want to become better at **testing**, then don't just hire somebody who is better at coding.

Steve Watson

Software testing is not so much a thing that you **do**, it's far more a way you **think**

Michael Bolton

Questions

The show is **over**. It's your turn.