Tricentis

Application Testing Solutions

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Agenda

- SAP and Tricentis SOLEX Relationship

- Delivering Quality at Speed

- Benefits of Business Assurance Transformation

- Available Resources

SAP® Solution Extension

Why **SAP** Chose **Tricentis** as Its **Official** Testing Solution

Tricentis-SAP Partnership Value
Partnership OEM | Product Reselling | Co-Development | Premium Support

The Global Leader in Enterprise Testing Solutions

- Leader in Gartner Magic Quadrant
- Proven Results in the World's Biggest Brands
- Versatile Platform for Customers at Any Stage of SAP Modernization

### Enterprise-Grade Platform for SAP Testing and Beyond

- Model-Based Automation for Resiliency and Scalability
- Risk-Based Approach That Minimizes Business Downtime
- Seamless Integrations for SAP and Non-SAP Testing

Modern, AI-Driven Technology for Easy Adoption

- AI-driven Impact Analysis for Fast, Safe Changes
- Cloud-Based Architecture
- No-Code, Business Friendly Platform for Easy Adoption

Tricentis is an SAP Solution Extension (SOLEX) Partner
Highest level of Partnership within SAP
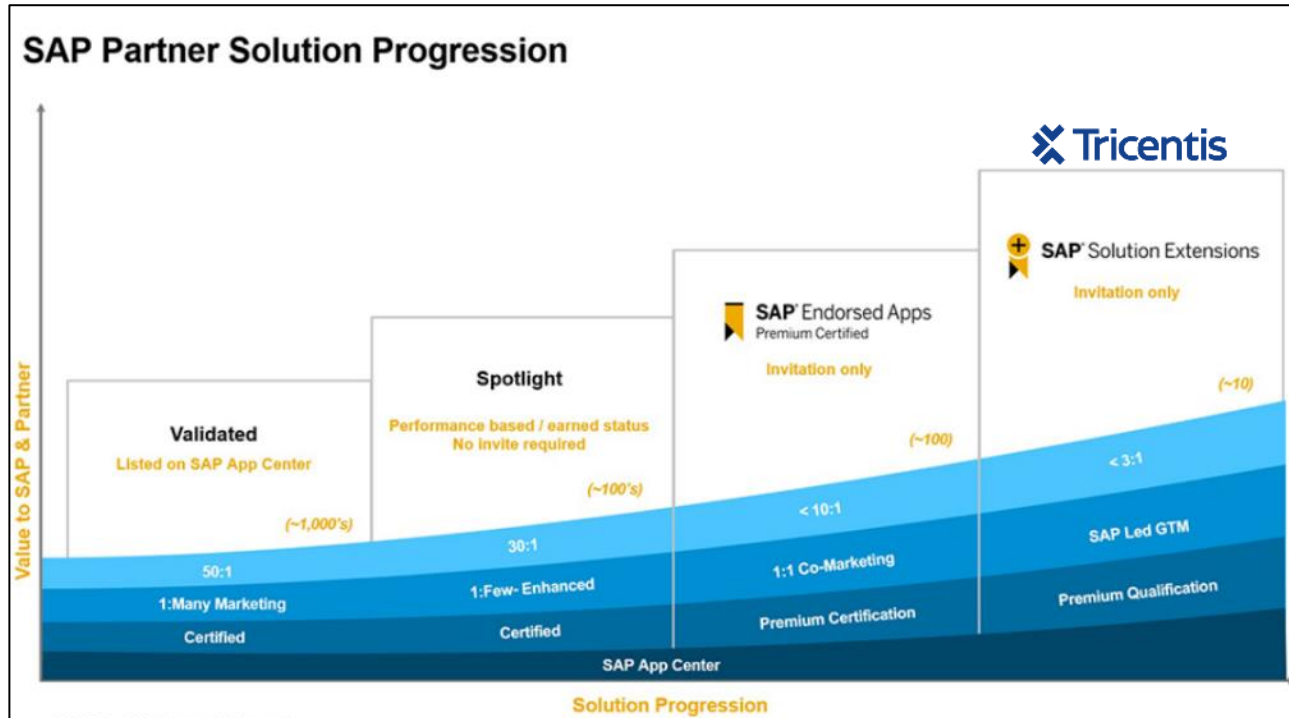
SAP Solution Extensions

- **Highest level** of SAP software partnership

- **SAP Premium Qualification** (PQ) ensures that product quality is same as SAP products

- **Long-term** roadmap planning and joint development

- **Only ~10 partners** "actively" managed in the SOLEX program – **SAP will focus on Top 3 only**

Critical Customer Value | Long-Term Outlook Joint Roadmap Planning

Fastest Growing SolEx Partner... EVER!

Digital Business Initiatives
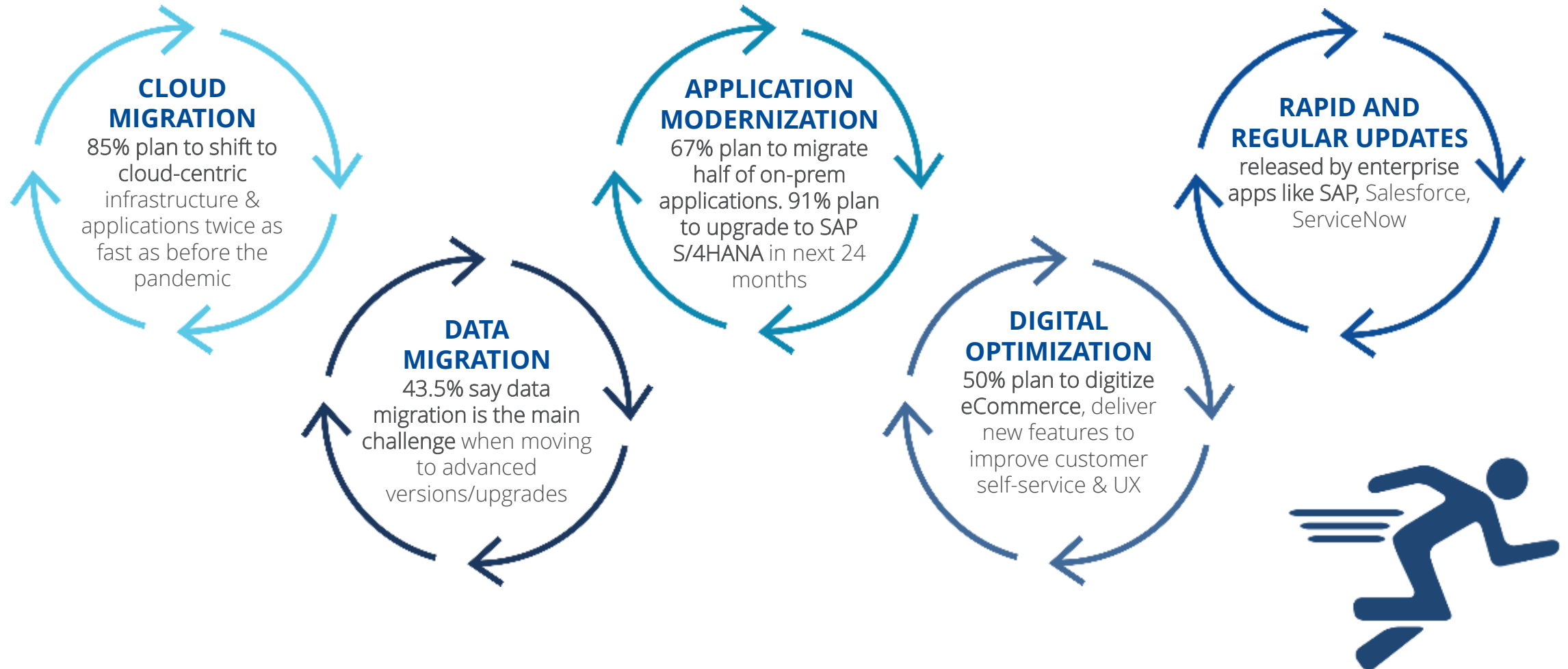
CLOUD MIGRATION
85% plan to shift to cloud-centric infrastructure & applications twice as fast as before the pandemic

DATA MIGRATION
43.5% say data migration is the main challenge when moving to advanced versions/upgrades

APPLICATION MODERNIZATION
67% plan to migrate half of on-prem applications. 91% plan to upgrade to SAP S/4HANA in next 24 months

DIGITAL OPTIMIZATION
50% plan to digitize eCommerce, deliver new features to improve customer self-service & UX

RAPID AND REGULAR UPDATES
released by enterprise apps like SAP, Salesforce, ServiceNow

Deliver Quality at Speed
It's all here.

Tricentis Continuous Testing Platform
Supports 170+ enterprise applications and technologies

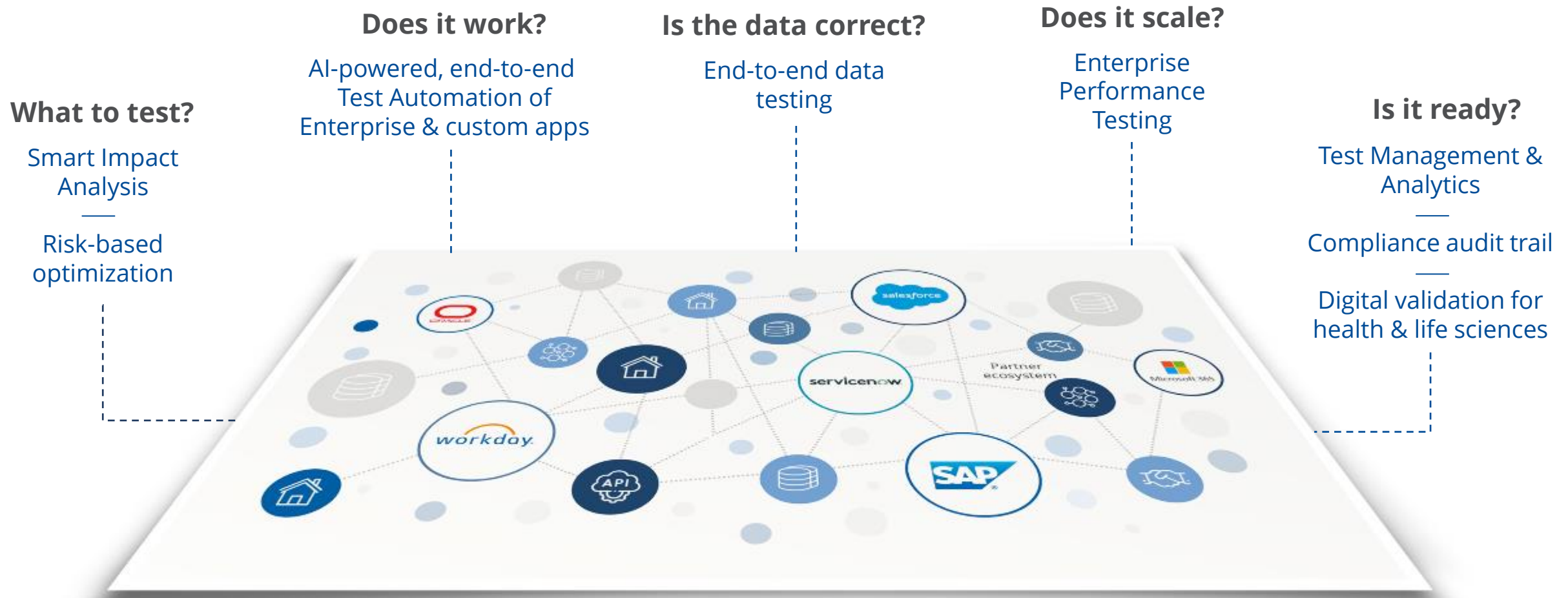| What to **test**?	Does it **work**?	Is the Data **correct**?	Does it **scale**?
Tricentis LiveCompare SAP Change Impact Analysis	**Tricentis Tosca ⊕ Tricentis OSV** SAP Enterprise Continuous Testing	**Tricentis Data Integrity** SAP Enterprise Data Integrity Testing	**Tricentis NeoLoad** SAP Enterprise Performance Testing

SAP **Solution Manager** SAP ALM & Test Management	**Tricentis qTest** Agile Test Management	Tricentis **SAP Transformation Toolkit** Quality Maturity Assessment

Fully automated • AI powered • Completely codeless • Cloud enabled • Risk optimized • Enterprise DevOps • Open and extensible

All the Capabilities You Need
Deliver high-quality applications faster and with lower risk

Does it work?

AI-powered, end-to-end
Test Automation of
Enterprise & custom apps

Is the data correct?

End-to-end data
testing

Does it scale?

Enterprise
Performance
Testing

What to test?

Smart Impact
Analysis

—

Risk-based
optimization

Is it ready?

Test Management &
Analytics

—

Compliance audit trail

—

Digital validation for
health & life sciences

All the Capabilities You Need
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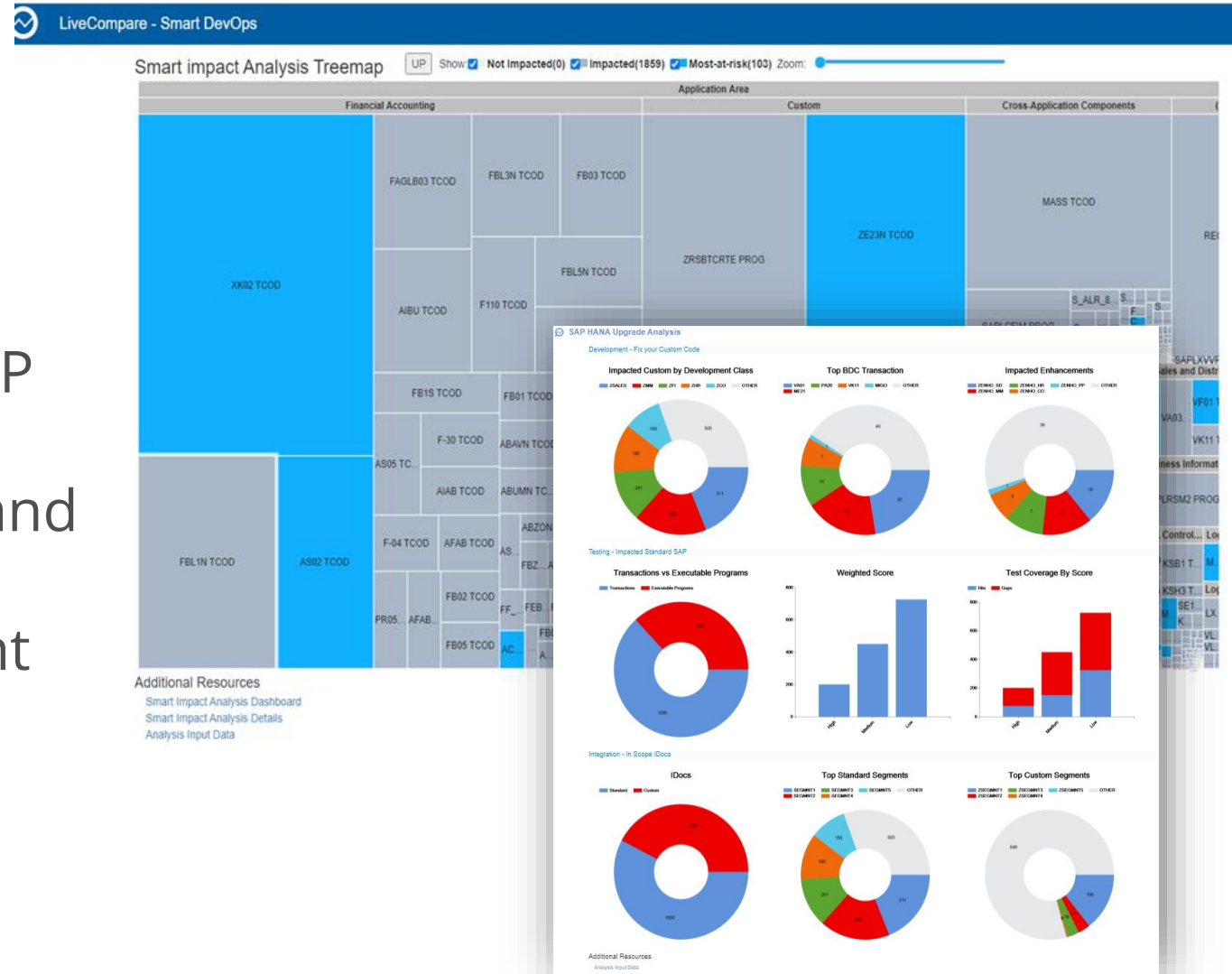**What to test?**

Smart Impact
Analysis
—
Risk-based
optimization

SAP Change Impact Analysis (CIA)

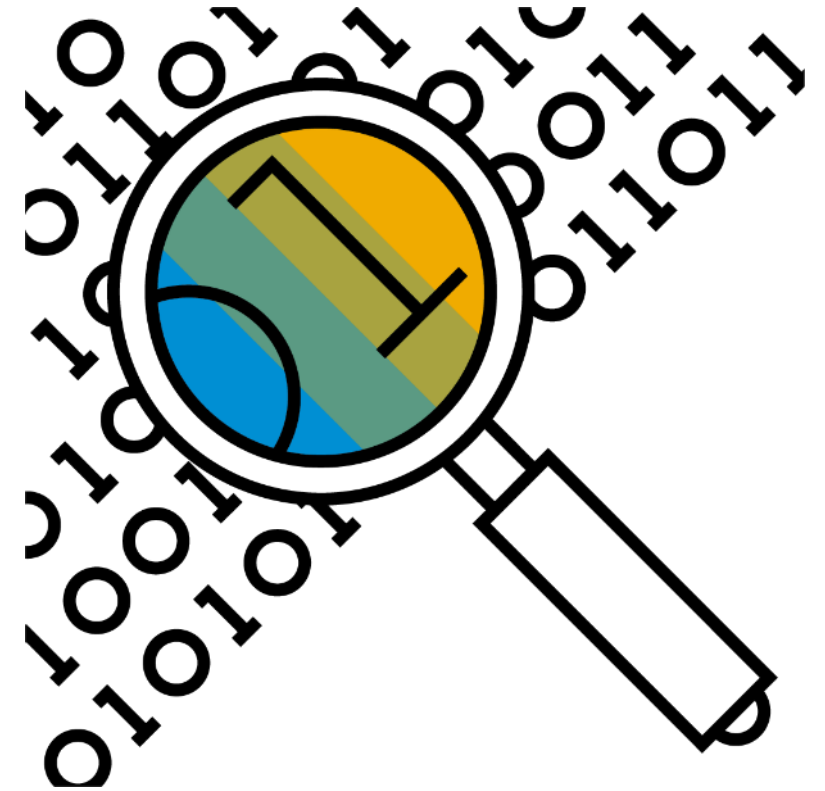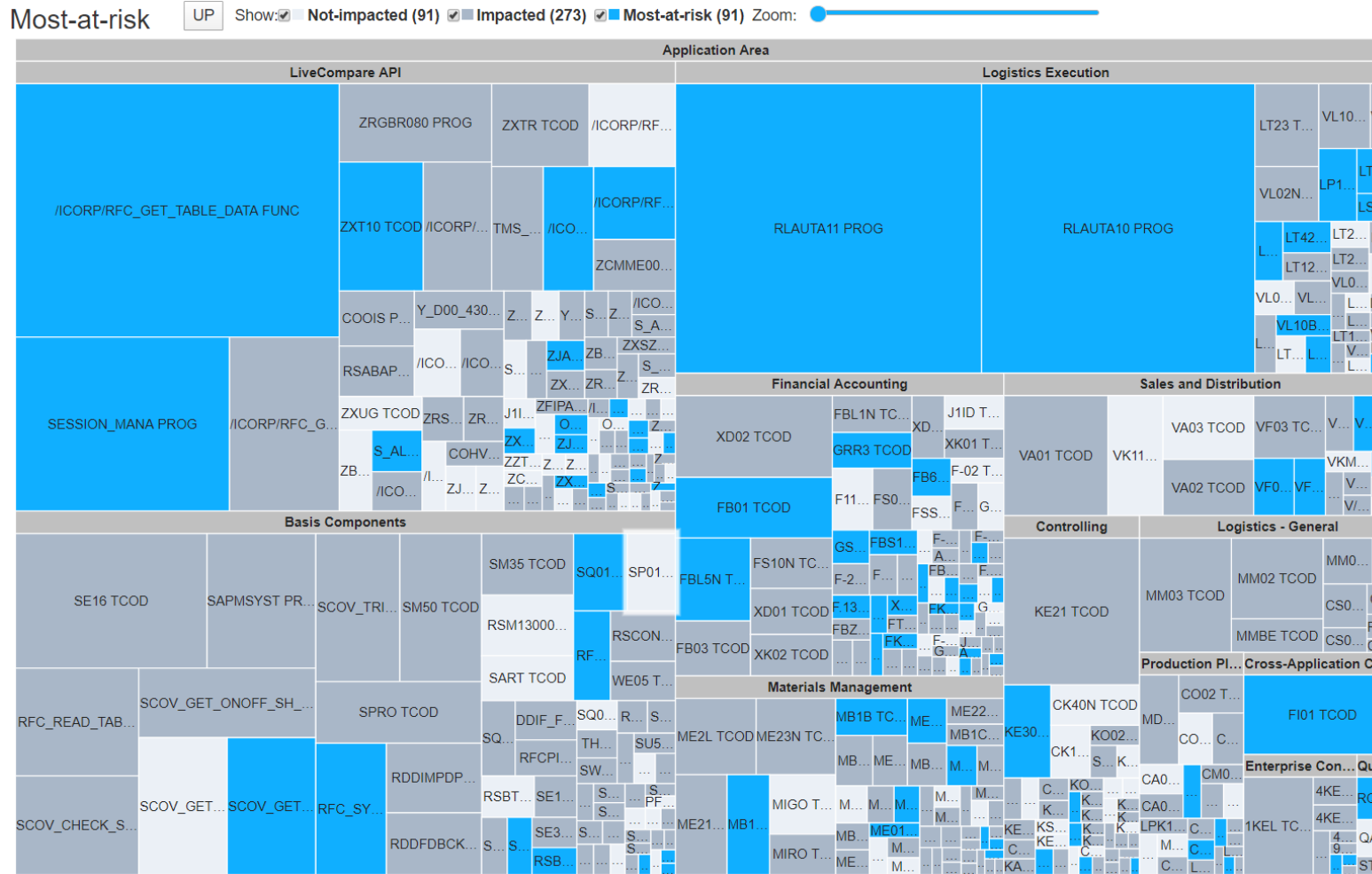## SAP Change Intelligence that lets your teams deploy with confidence:

- **Automated** analysis of your SAP landscapes
- **AI-powered** risk identification and test optimization
- **Actionable** insights that prevent production defects

Most-at-Risk Capabilities
Visualize Your Focus for Testing!

Change Impact Analysis is the bird's eye view identifying application areas that are most-at-risk from an update

Test Scope Reduction

Capabilities

Objects used in System

Traditional impact analysis narrows the test scope down to impacted capabilities.

Instant ROI

reduces the test scope down to **most-at-risk capabilities.**

↓ **- 85%***

3,000 —

2,000 —

1,000 —

0
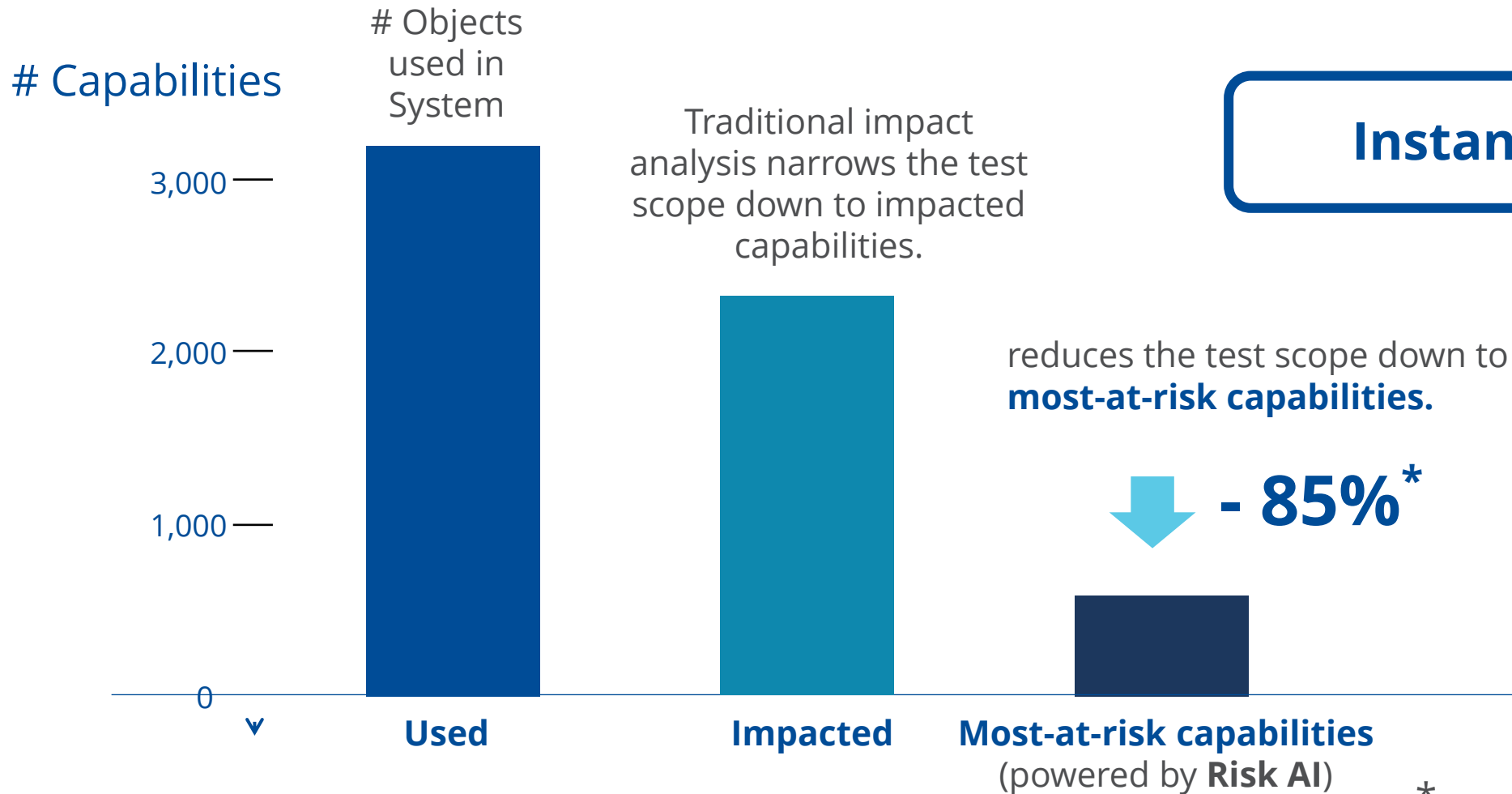
Used   **Impacted**   **Most-at-risk capabilities**
(powered by **Risk AI**)

*Findings from Tricentis customer research

Test Coverage Analysis
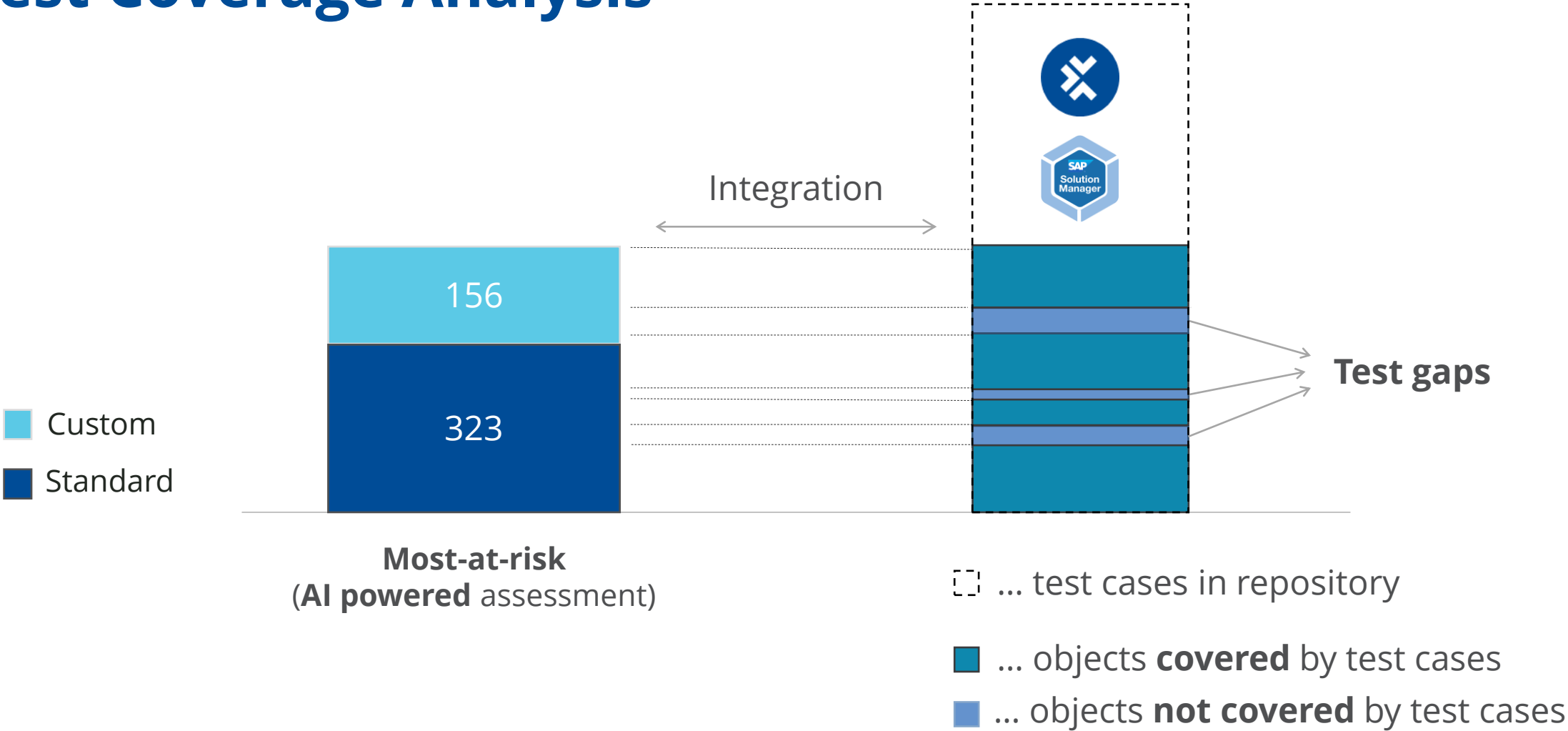
Integration

156

323

Custom

Standard

Most-at-risk
(**AI powered** assessment)

Test gaps

☐ ... test cases in repository

🟦 ... objects **covered** by test cases

🟦 ... objects **not covered** by test cases

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What to test?

Smart Impact
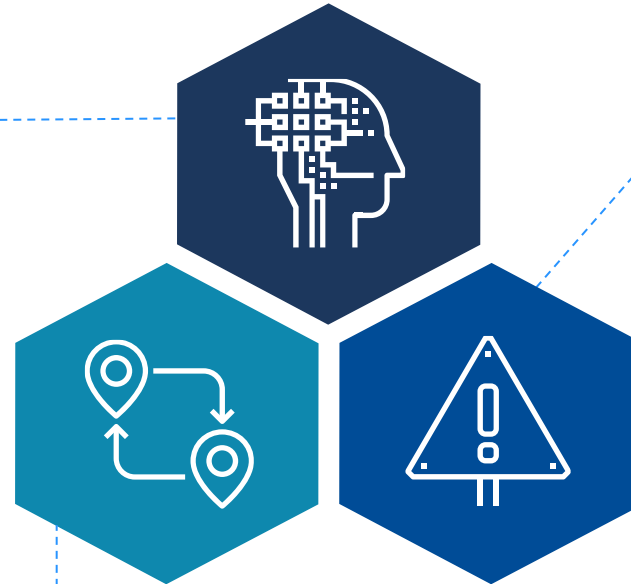Analysis
—
Risk-based
optimization

SAP Enterprise Continuous Testing (ECT)

Optimizes and accelerates end-to-end testing of your entire digital landscape

NO CODE / AI-POWERED

Build resilient, reusable and future-proof test automation without having to maintain tests as applications evolve
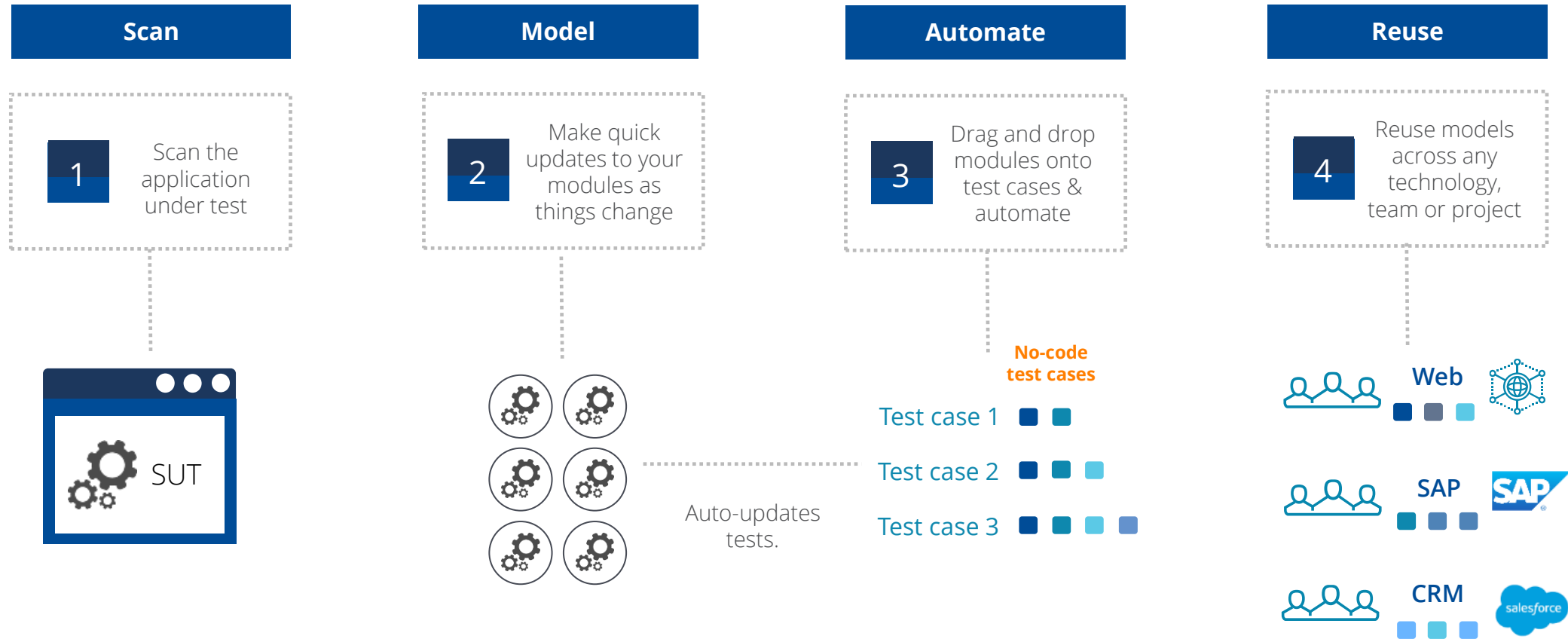
RISK OPTIMIZATION

Reduce the risk in your software releases while prioritizing testing for business-critical functionality – with much fewer tests

END-TO-END COVERAGE

Execute tests at the UI, API and data layer – Tosca supports 170+ technologies and enterprise applications

Model-Based Test Automation – How It Works
Create and maintain no-code, reusable test assets at scale

Scan	Model	Automate	Reuse
1 Scan the application under test	**2** Make quick updates to your modules as things change	**3** Drag and drop modules onto test cases & automate	**4** Reuse models across any technology, team or project

SUT

Auto-updates tests.

No-code test cases

Test case 1

Test case 2

Test case 3

Web

SAP

CRM

Create Sales Order: *Initial Screen*

Create Sales Order: *Overview*

Name	ValueRange
⏩ Create Sales Order: Initial Screen	
Order Type	GAOR; KB; OR; ZOR
Sales Organization	3010; AU01; GABC; TRC
Distribution Channel	01; 02
Division	AU01
Sales Office	AU01; AU02
Sales Group	AU01
⏩ Order - Header	
Standard Order	{Click};{Doubleclick};{Rightclick}
Net value	{Click};{Doubleclick};{Rightclick}
Currency	{Click};{Doubleclick};{Rightclick}
PO Number	{Click};{Doubleclick};{Rightclick}
PO date	{Click};{Doubleclick};{Rightclick}
Display doc. header details	{Click}
Sold-To Party	{Click};{Doubleclick};{Rightclick}
Create Sold-To Party	{Click}
Ship-To Party	{Click};{Doubleclick};{Rightclick}

Tricentis

Create Sales Order: *Overview (Enter Material/Quantity)*

Building Automation for Enterprise Continuous Testing

Name	Value	ActionMode	DataType
Create Sales Order			
Start Transaction			
Business Process			
Initial Screen			
Create Sales Order: Initial Screen			
Order Type	ZOR	Input	String
Sales Organization	AU01	Input	String
Distribution Channel	02	Input	String
Division	01	Input	String
Sales Office	AU01	Input	String
Sales Group	A01	Input	String
Click Enter			
Enter Header data			
PO Number	Test	Input	String
PO date	DATE	Input	String
Sold-To Party	1000000	Input	String
Click Enter			
Material Data			
Enter Material			
All items		Select	String
$1		Select	String
Material	1000000000	Input	String
Enter Quantity			

- Standard modules
  - TBox XEngines
    - SAP
      - SAP Logon
      - SAP Login
      - SAP SubToolBar
      - SAP Statusbar
      - SAP Toolbar
        - SAP Toolbar
      - License Information for Multiple Logon
  - TBox Automation Tools
  - Html
- SAP WinGui
  - SALES & DISTRIBUTION
    - Sales
      - VA11 - Create Inquiry
      - VA21 - Create Quotation
      - VA01 - Create Sales Order
        - Order - Item Overview Tab
        - Create Sales Order: Initial Screen
          - Order Type
          - Sales Organization
          - Distribution Channel
          - Division
          - Sales Office
          - Sales Group
        - Order - Header
        - Header Data
        - Item Data
        - Create Standard Order: Overview

All the Capabilities You Need
Deliver high-quality applications faster and with lower risk

What to test?

Smart Impact Analysis
—
Risk-based optimization

Does it work?

AI-powered, end-to-end Test Automation of Enterprise & custom apps

Is the data correct?

End-to-end data testing

Is the data correct?

Drive better business outcomes through data you can trust

SAP Enterprise Data Integrity Testing (EDIT)

Tricentis capabilities

- Automated, **end-to-end** testing for any type of data and every data journey
- Tests tailored to catch errors on each step of the data journey **(root cause)**
- Model-based test automation for data at scale

Key Benefits

- Comprehensive data testing across **SAP & 3rd-party technologies**
- Actionable reporting (Analytics: Financial & Project, Compliance)
- Customizable risk thresholds
- Low-code/no-code automation
- Integration with DataOps and DevOps tools

Business Value

- Trustworthy BI reports leading to optimal decision making
- Operational excellence across data-driven business processes
- Accurate AI/ML model predictions
- Regulatory compliance and mitigated risk

START

Data ingestion | SAP Data warehouse 3rd Party data lake | Data marts & methods | Analytics/BI & application ecosystems | **SAP** Analytics Cloud

PRE-SCREENING
Metadata checks
Format checks

VITAL CHECKS
Completeness
Uniqueness
Referential integrity

FIELD TESTS
Aggregation
Value range
Transformation

CONTINUOUS MONITORING
Row counts
Job run times
Data distribution

RECONCILIATION TESTS
Detailed source to target comparison tests ETL validation

REPORT & APP TESTING
UI automation
Visual checks
Content checks
Security checks

Easy To Use Wizard-driven test creation

Deliver Trustworthy Data
Example scenario: Verify sales analytics data and dashboards

START

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SAP Data warehouse 3rd Party data lake

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SAP Analytics Cloud

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The Race is on to Find Data Errors
To **TRUST** data in production...you **MUST test end-to-end** in the test environment

Data Sources

SAP S/4 HANA
SAP ECC
Data Lakes
CRM
Flat Files
3rd Party Data

ELT
ELT

HANA Platform

SAP

SAP Data Hub
SAP BW / 4HANA
SAP HANA Enterprise Cloud

Data Virtualization
ELT Replication

Analytics

SAP Analytics Cloud
SAP BusinessObjects

Reporting
Analysis
Cloud Based Systems
3rd Party Data Cubes

Ingest Enterprise Data in Real-Time

Harmonize Using Virtual Models-CalcViews
Analyze Data in Real-Time

Deliver Insights in Real-Time
To Other Applications

The Race is on to Find Data Errors
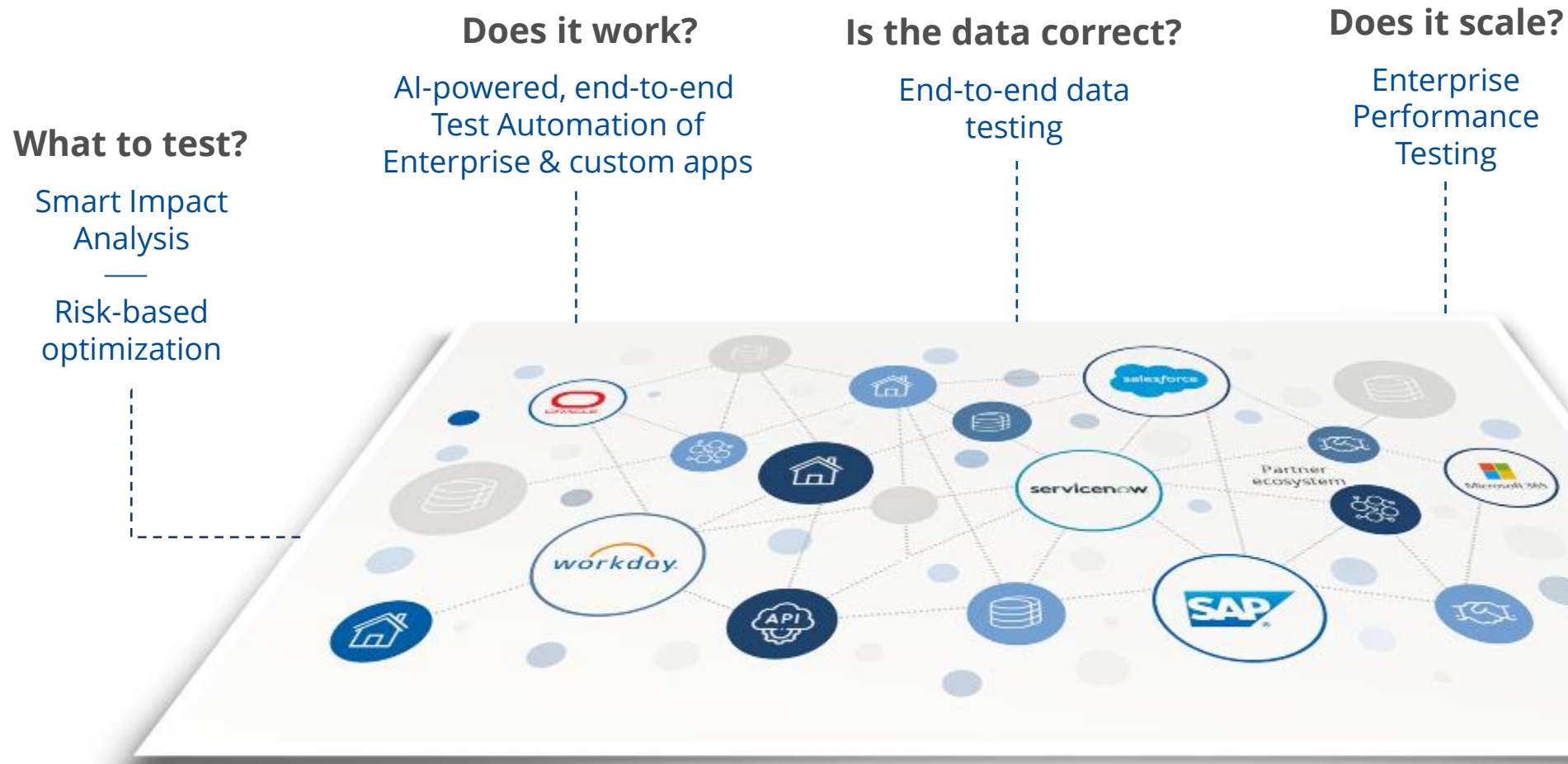To **TRUST** data in production...you **MUST test end-to-end** in the test environment

Data Sources

SAP S/4 HANA — ELT

SAP ECC

Data Lakes

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3rd Party Data — ELT

Ingest Enterprise Data in Real-Time

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Data Virtualization   ELT Replication

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Analyze Data in Real-Time

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Reporting

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Cloud Based Systems

3rd Party Data Cubes

Deliver Insights in Real-Time
To Other Applications

1 Pre-Screening
- Metadata checks
- Format Checks

2 Vital Field Checks & Field Tests
- Completeness: Row count, min/max, avg, sum, checks
- Correctness: Uniqueness, not null, hash-comparisons, data ranges
- Integrity: Relation, domain

3 Reconciliation
- Row by row comparison
- Comparison of 2 data sets

4 Report Testing
- UI Automation
- Visual checks
- Content check for dimensions
- Security

5 Monitoring
- Track row counts
- Job run times
- Data distribution per column over time

Tricentis Offers - All the Capabilities You Need
Deliver high-quality applications faster and with lower risk

What to test?

Smart Impact Analysis
—
Risk-based optimization

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Does it scale?

Enterprise Performance Testing

Does it scale?
## Continuous performance testing for microservice to monolith

SAP Enterprise Performance Testing (EPT)

Tricentis capabilities

- As code & no code approaches for fast test design & maintenance
- Built-in CI pipeline integrations
- One click conversion of functional into performance tests

Traditional testing

- Manual and slow
- Too late in the release cycle, issues difficult to find and more costly to fix
- Prevents continuous releases; leads to slow, buggy releases in production
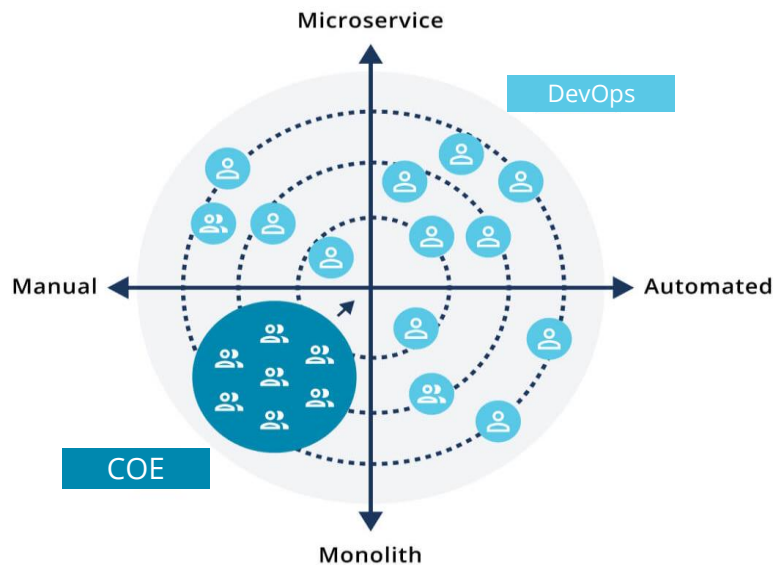
Tricentis customers

- **Up to 80% faster test design & maintenance**
- **Keeps pace with releasing fast decreases production issues by up to 90%**
- Few weeks learning curve, approachable for broad range of skills

Microservice

DevOps

Manual — Automated

COE

Monolith

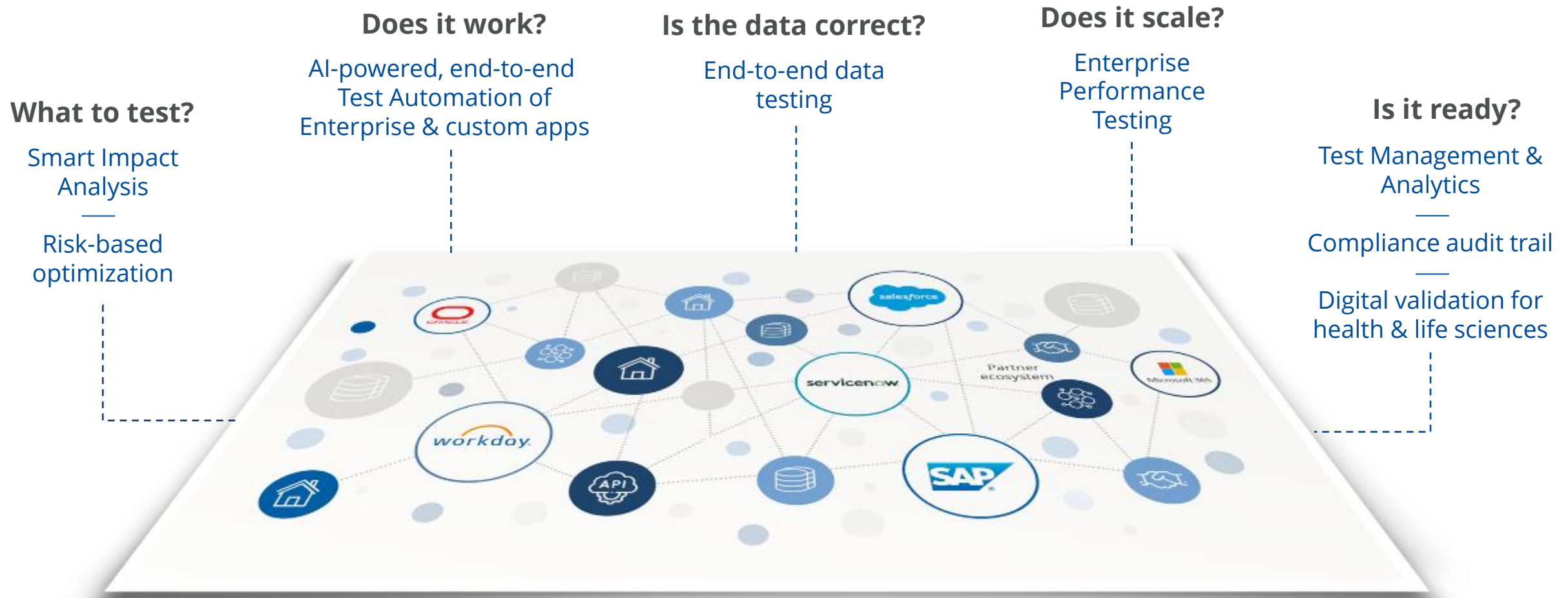# Modernizing Testing
Enterprise Performance Testing

Business Value

- **Faster release cycles:**
  - Rapid test design with low-code, no-code approaches
  - 50-60% faster script maintenance
  - Automated script maintenance

- **Reduce costs across testing:**
  - Reuse functional tests as performance tests
  - Lower TCO for Performance Testing with automation, reduced maintenance

- **De-risking programs and increasing positive business outcomes:**
  - DevOps ready, easily integrates into automated pipelines
  - Simple integration into traditional and modern tech stacks
  - Enterprise ready to support native testing across major packaged apps & protocols

All the Capabilities You Need

Deliver high-quality applications faster and with lower risk

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Test Automation of
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End-to-end data
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Performance
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Test Management &
Analytics
—
Compliance audit trail
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Digital validation for
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Deliver Quality at Speed
It's all here.

Tricentis Continuous Testing Platform
Supports 160+ enterprise applications and technologies

What to **test**?	Does it **work**?	Is the Data **correct**?	Does it **scale**?
Tricentis LiveCompare SAP Change Impact Analysis	**Tricentis Tosca** + **Tricentis OSV** SAP Enterprise Continuous Testing	**Tricentis Data Integrity** SAP Enterprise Data Integrity Testing	**Tricentis NeoLoad** SAP Enterprise Performance Testing

SAP **Solution Manager** SAP ALM & Test Management	**Tricentis qTest** Agile Test Management	Tricentis **SAP Transformation Toolkit** Quality Maturity Assessment

Fully automated　　AI powered　　Completely codeless　　Cloud enabled　　Risk optimized　　Enterprise DevOps　　Open and extensible

Forrester Total Economic Impact
SAP Application Testing Solutions

Through customer interviews and data aggregation, Forrester concluded that **SAP application testing solutions by Tricentis have the following three-year financial impact.**

Tricentis Business Assurance Quantified Benefits

Total Benefits:

$7.8 million

When you put it all together, the benefits are clear: less test condition, less effort, less errors.

ERP principal test manager, telecommunications

BENEFITS

Accelerate innovation and software release cycles.

Reduce risks to critical business processes.

Increase transparency and support real-time insights.

Lower costs by reducing manual test efforts and complexity.

Empower business users and better decision-making.

334%
ROI and six months payback

300%
Improvement in application release rate

84%
Reduction in testing scope, and **78%** reduction in production errors

99.4%
Reduction in performance test maintenance costs

✕ Tricentis   SAP

The Benefits of Business Assurance Transformation
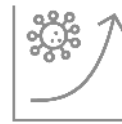
Smart impact analysis

⬇ **85%**
testing effort

Intelligent test automation

⬆ **90%**
automation rate

Enterprise performance testing

⬇ **95%**
maintenance effort

End-to-end data testing

⬇ **100%**
cost avoidance

Unified test mgmt. & analytics

⬆ **30%**
project capacity

10x faster release cycles

40% cost reduction

90% risk coverage

Tricentis

The continuous testing market leader with Agile test management and advanced test automation optimized to support over 160+ technologies

Results

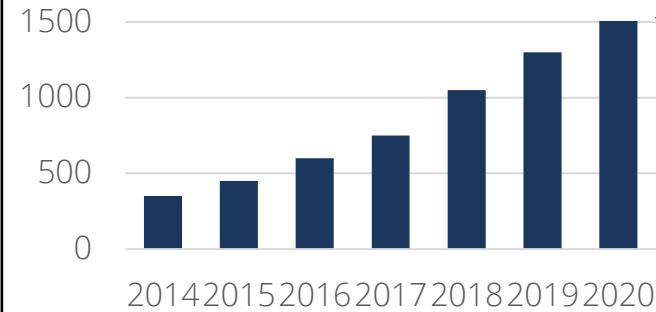| 10X Test Speed Increase	50% Lower Costs	>90% Risk Coverage

Partners

accenture   Capgemini   Cognizant   wipro
cprime   Infosys   Præcipio   (expleo)

Tech Alliances

servicenow   aws   Microsoft
SAP   ATLASSIAN   salesforce
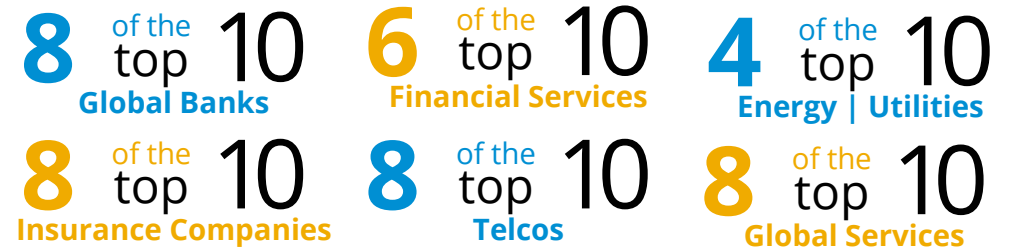
Timeline

2021 — **Neotys** Acquisition — *Performance Testing*

2020 — **SAP Partnership** — **Vision AI**

2019 — **LiveCompare** Acquisition — *Impact Analysis*

2018 — **QASymphony** Merger — *Test Management*

2017 — **Q-up** Acquisition — *Test Data*

2017 — **Flood** Acquisition — *Load Testing*

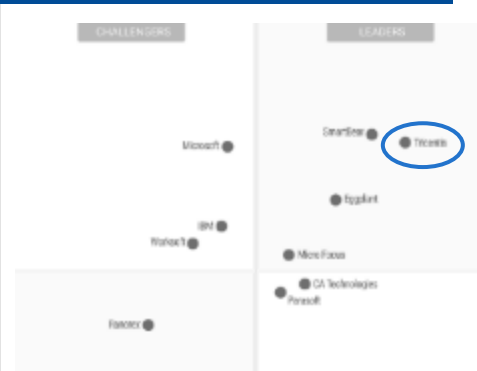**2016** — **Insight Venture Partners** Investment

2007 — **Founded**

Customers

Greater than **2,500+** Customers Worldwide

8 of the top **10** Global Banks

6 of the top **10** Financial Services

4 of the top **10** Energy | Utilities

8 of the top **10** Insurance Companies

8 of the top **10** Telcos

8 of the top **10** Global Services

Analyst Recognition

Gartner

FORRESTER

Drive Better Business Outcomes

With intelligent end-to-end test automation you can trust

Deliver reliable business processes

Ensure your critical end-to-end business processes are working flawlessly from start to finish no matter what change occurs in your complex IT landscape

Minimize business risk

Catch more errors upfront and remove extreme disruption to your mission-critical systems & custom applications caused by faulty functionality & outage

Release at high speed
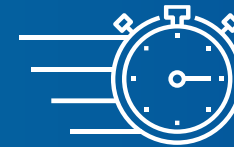
Release changes and updates to your applications at high speed without compromising quality, by creating and running tests at high velocity and at scale

Boost the productivity of your IT and business teams

Let your IT & business teams work on higher value tasks and keep pace with your changing business environment

#because **modern** enterprises need **modern** solutions for testing

Available SAP Resources

- SAP Application Testing Solutions by Tricentis (Video)
  https://www.sap.com/canada/assetdetail/2021/12/a2690166-0e7e-0010-bca6-c68f7e60039b.html

- Forrester Report
  https://www.tricentis.com/resources/forrester-total-economic-impact-sap-testing-solutions/

- SAP Change Impact Analysis (What to test?)
  https://www.sap.com/canada/products/technology-platform/change-impact-analysis.html

- SAP Enterprise Continuous Testing (Does it work?)
  https://www.sap.com/canada/products/technology-platform/enterprise-continuous-testing.html

- SAP Enterprise Data Integrity Testing (Is the Data Correct?)
  https://www.sap.com/uk/products/technology-platform/enterprise-data-testing.html

- SAP Enterprise Performance Testing (Does it Scale?)
  https://www.sap.com/canada/products/technology-platform/enterprise-performance-testing.html

Thank You!

Rick Brown, Tricentis Account Manager
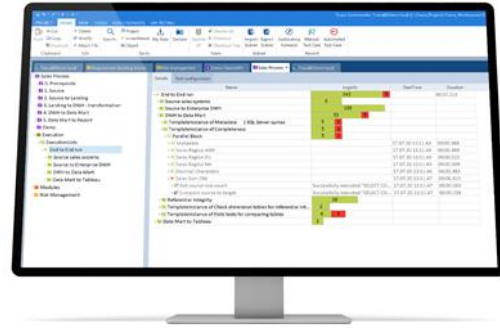**r.brown@tricentis.com**
416-407-6975

RISE with SAP: SAP Solution Extensions
by Tricentis

PREPARE

- SAP Change Impact Analysis

- Analyze the effects of software changes, updates, and upgrades across multiple complex, end-to-end SAP business processes.

PREPARE

- SAP Enterprise Data Integrity Testing

- Automate data testing to maintain data integrity – wherever your data travels and whatever happens to it on its journey. Verify data accuracy with automated data testing.

MOVE

- SAP Enterprise Performance Testing

- Make cloud-based testing available, ensure applications perform under heavy user loads, and support digital transformation.
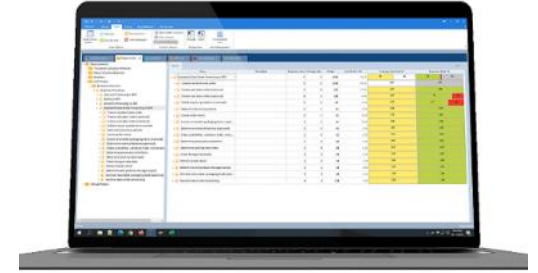
RUN

- SAP Enterprise Continuous Testing

- Enable digital transformation and intelligent operations by reducing business risk associated with application changes.