



Tricentis AI & the Future of Quality Automation

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Tricentis

Las Vegas

2024

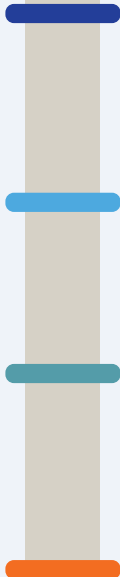
SAPinsider



Introduction

- The AI Evolution
- AI Milestones
- AI in Software Testing Industry

What we will cover

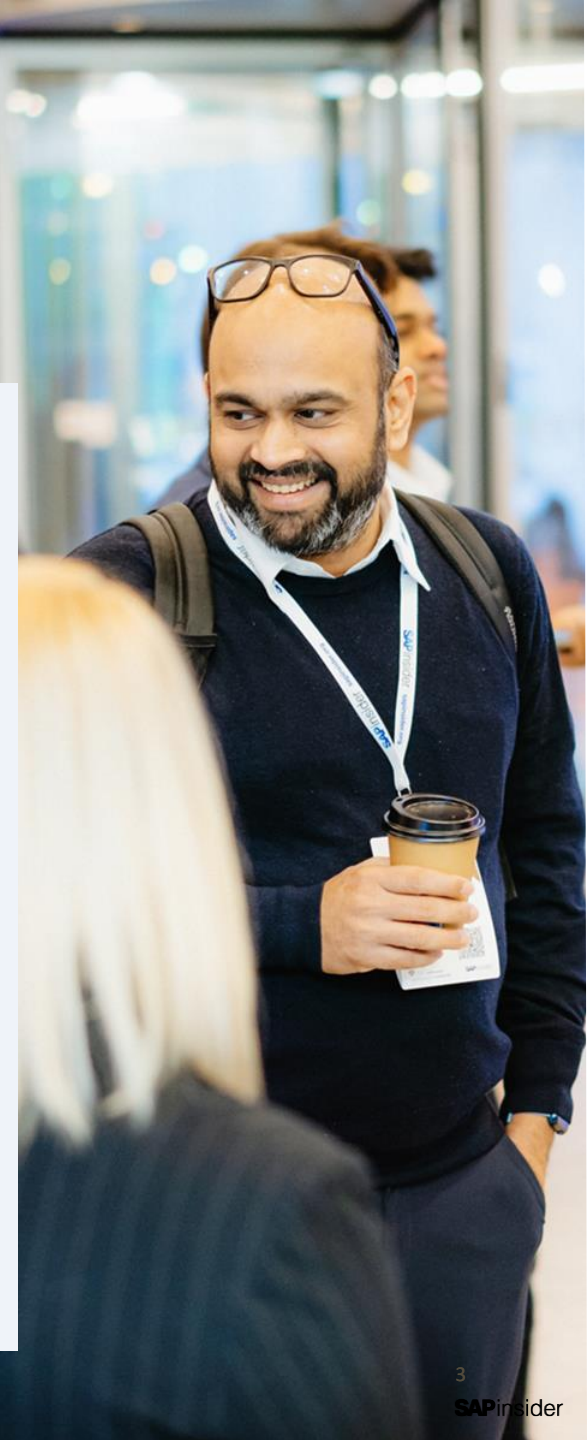


Market Trends and Integration of Generative AI

The Necessity of Testing AI Systems

Tricentis' AI Approach and Solutions

Data Integrity and Responsible AI Implementation



IT Executives response to AI

Accelerate your business and IT transformation initiatives

67%

Integrate Gen AI

of enterprises will integrate gen AI into their AI strategy

79%

ERP cloud migration

of executives are using generative AI in app modernization projects

65%

Build custom apps

will integrate Gen AI in building, managing and delivering new apps

\$6.6T

Improve productivity

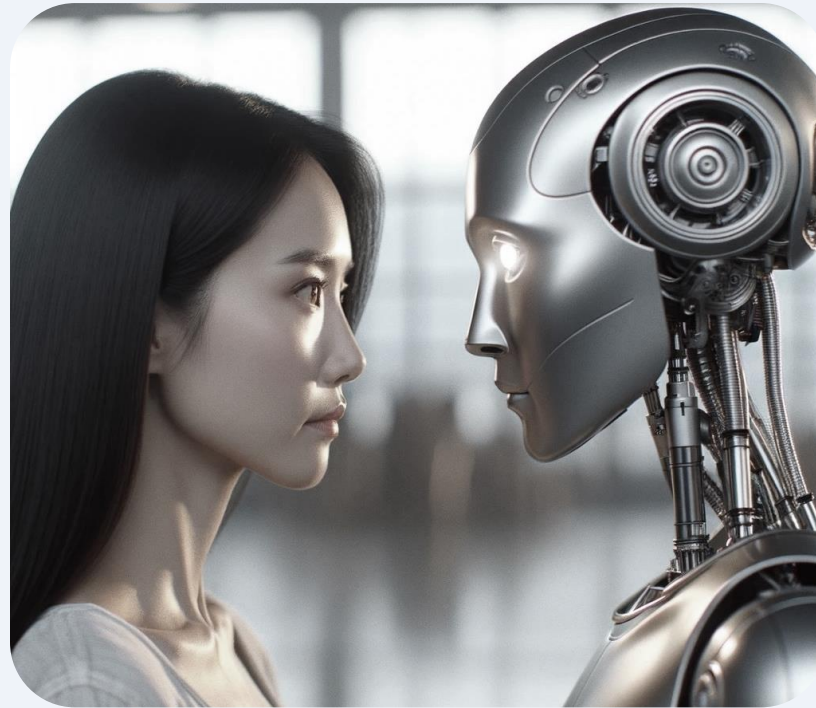
USD contributed by 2030 from increased productivity, 80% of total benefit*

Will **AI** take over **jobs**?

Human Impact – Augmenting Productivity

Misconceptions

- ▶ AI-driven tools will replace human testers
- ▶ Unfamiliarity with AI capabilities
- ▶ Constant evolution of AI models
- ▶ AI testing lacks human touch

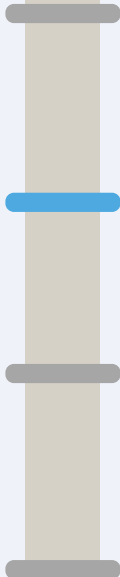


Reality

- ▶ AI will enhance productivity
- ▶ Interactive, iterative, collaborative relationship
- ▶ Tester's role will evolve to testing accuracy, consistency, quality of AI models
- ▶ Humans will supervise highly autonomous Turing Bots – this is the future.

15-20% average human productivity increase in SDLC (Forrester prediction 2023)

What we will cover

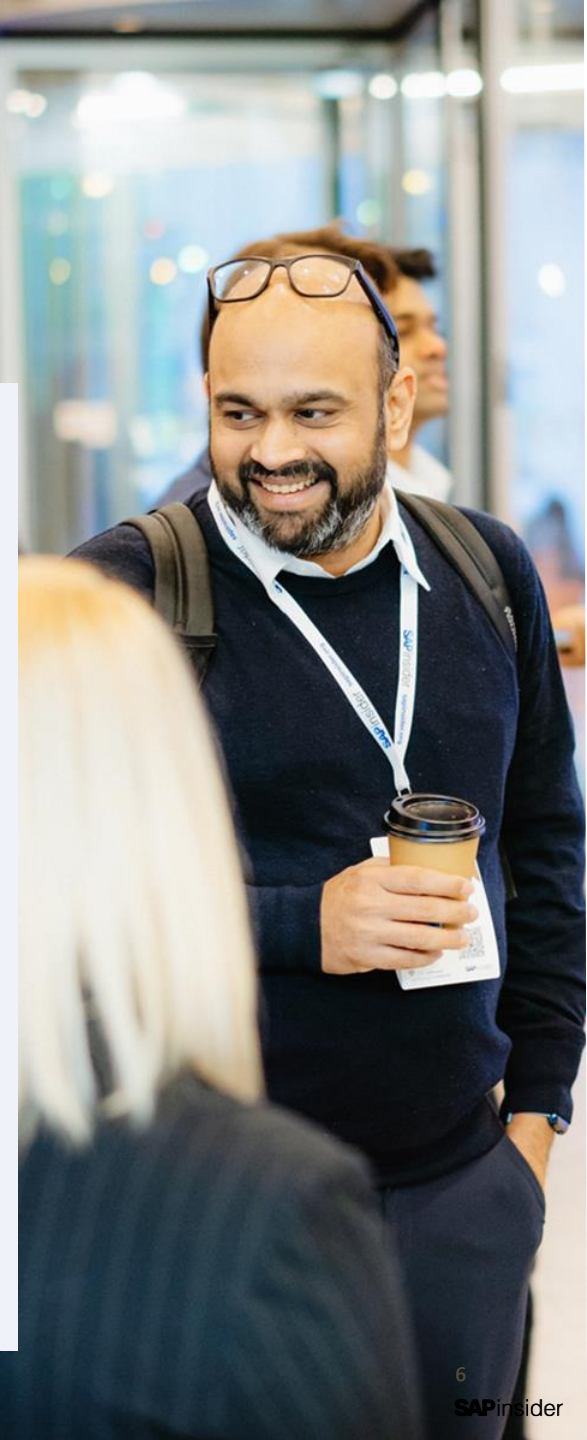


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Un-tested AI can negatively impact business

Potential AI risks



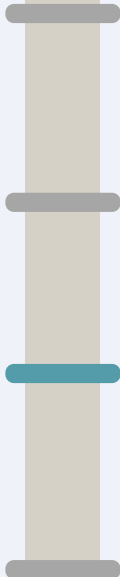
In 2022, there were **110 AI-related legal cases** in the US ([AI index report, 2023](#))

The number of AI incidents and controversies has increased **26x since 2021** ([AI index report, 2023](#))

Only **20% of companies have risk policies** in place to cope with Gen AI-related issues ([McKinsey, 2023](#))

Consequences for QA: biased systems, failure to identify high risk, erroneous data, misguided analytics

What we will cover

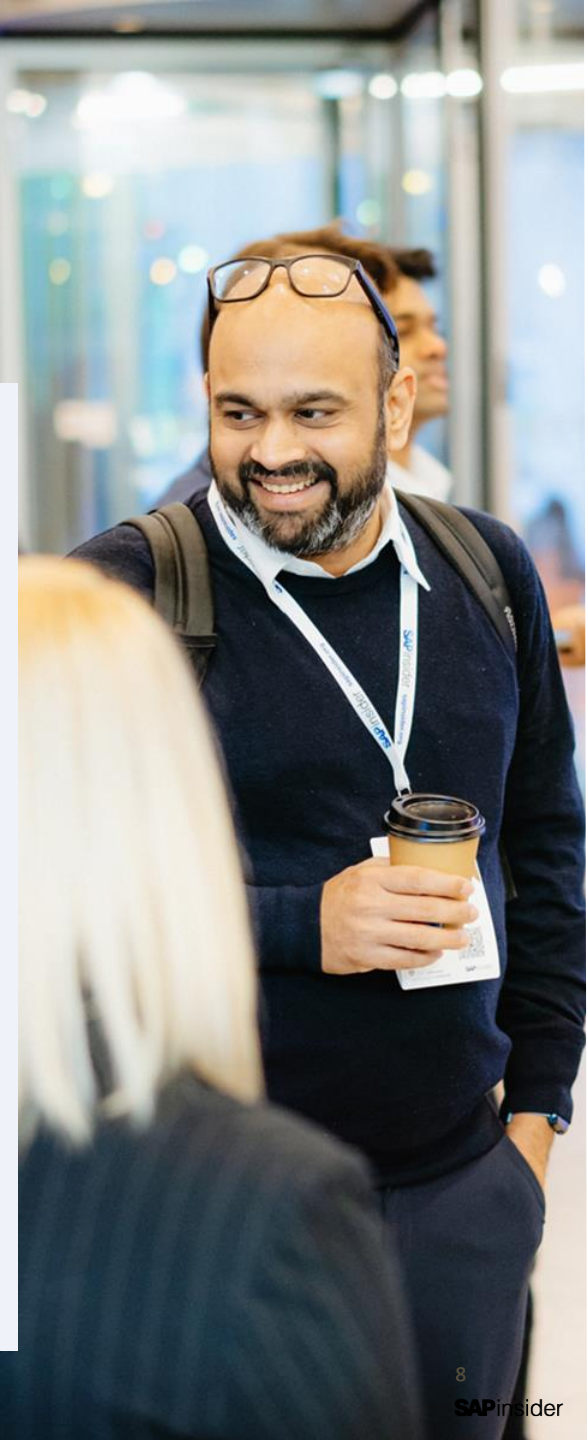


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Our **AI** approach at
Tricentis



Our **AI** approach at
Tricentis

Embrace the **unknown**
Take **precautions**

Customer concerns with generative AI



Interest

Customers understand the potential for productivity

Caution

Concerns about security, IP protection, privacy, compliance, and responsible usage

Skepticism

High variance in efficacy, no one-size-fits-all solution

Our Approach to AI



Quality AI

Combine different form of AI:

Machine Learning
Generative AI



Responsible AI

Responsible AI Principles:

Data Privacy
Security & Compliance
Continuous Improvement & Testing
User Centric & Accessible Design



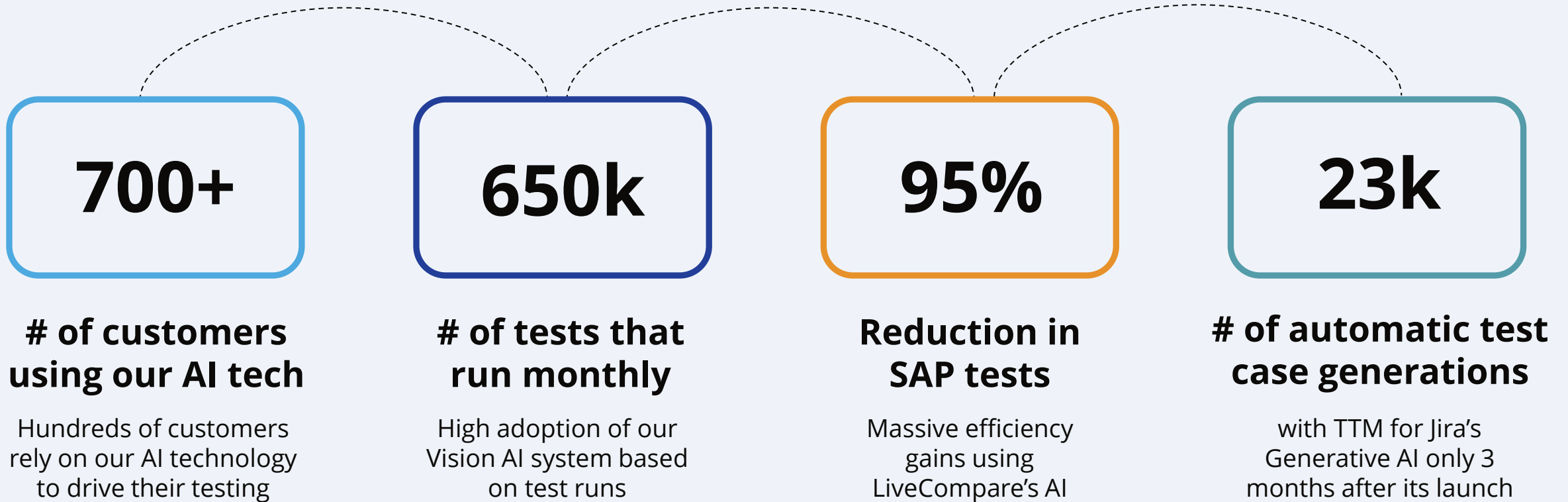
Testing AI

AI Testing Techniques:

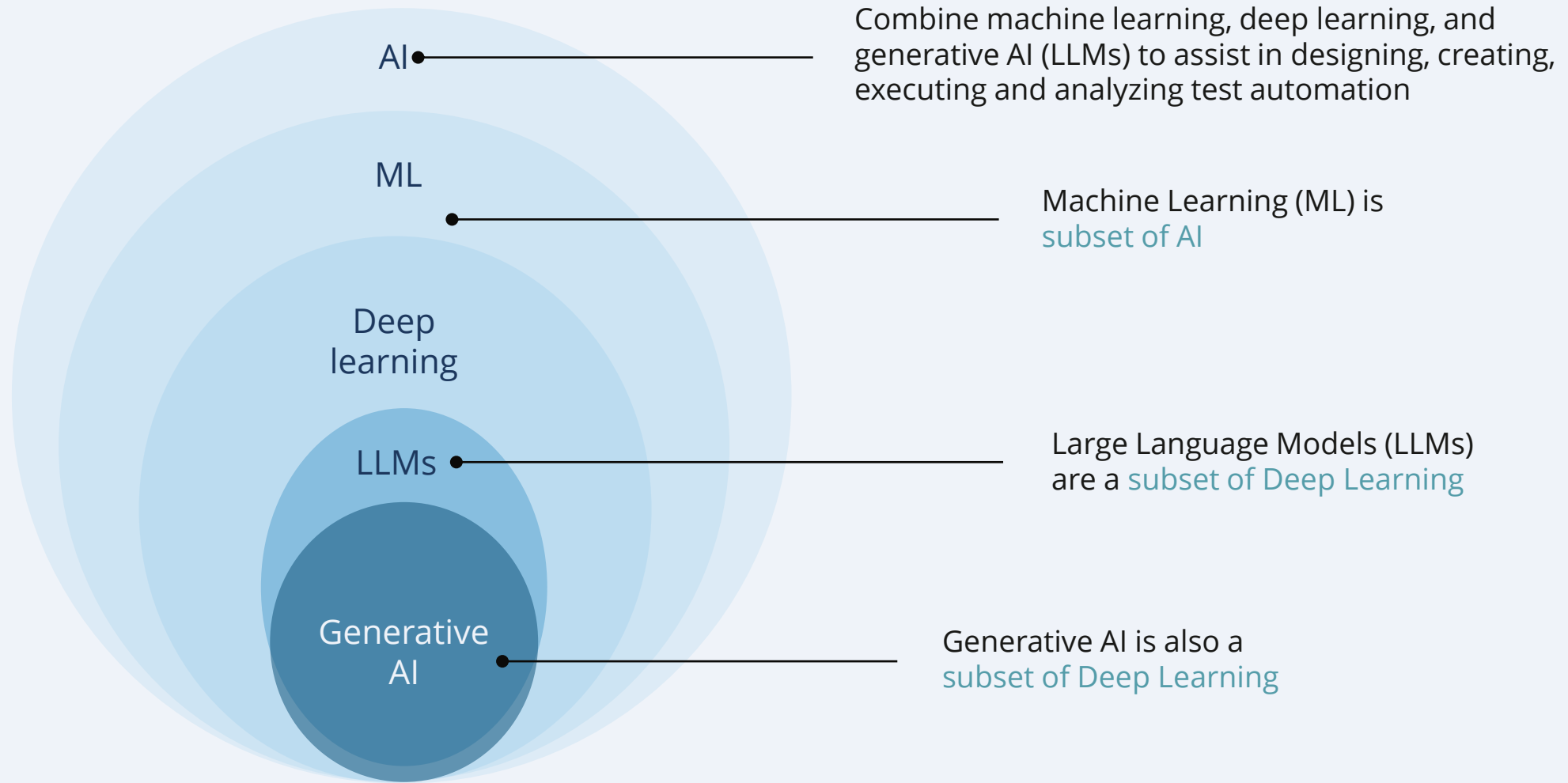
Red Teaming
Chaos Engineering
SQL Injection
Negative Prompt Engineering

Embrace the **unknown**
Take **precautions**

Customer AI Statistics



How we view AI and our focus areas

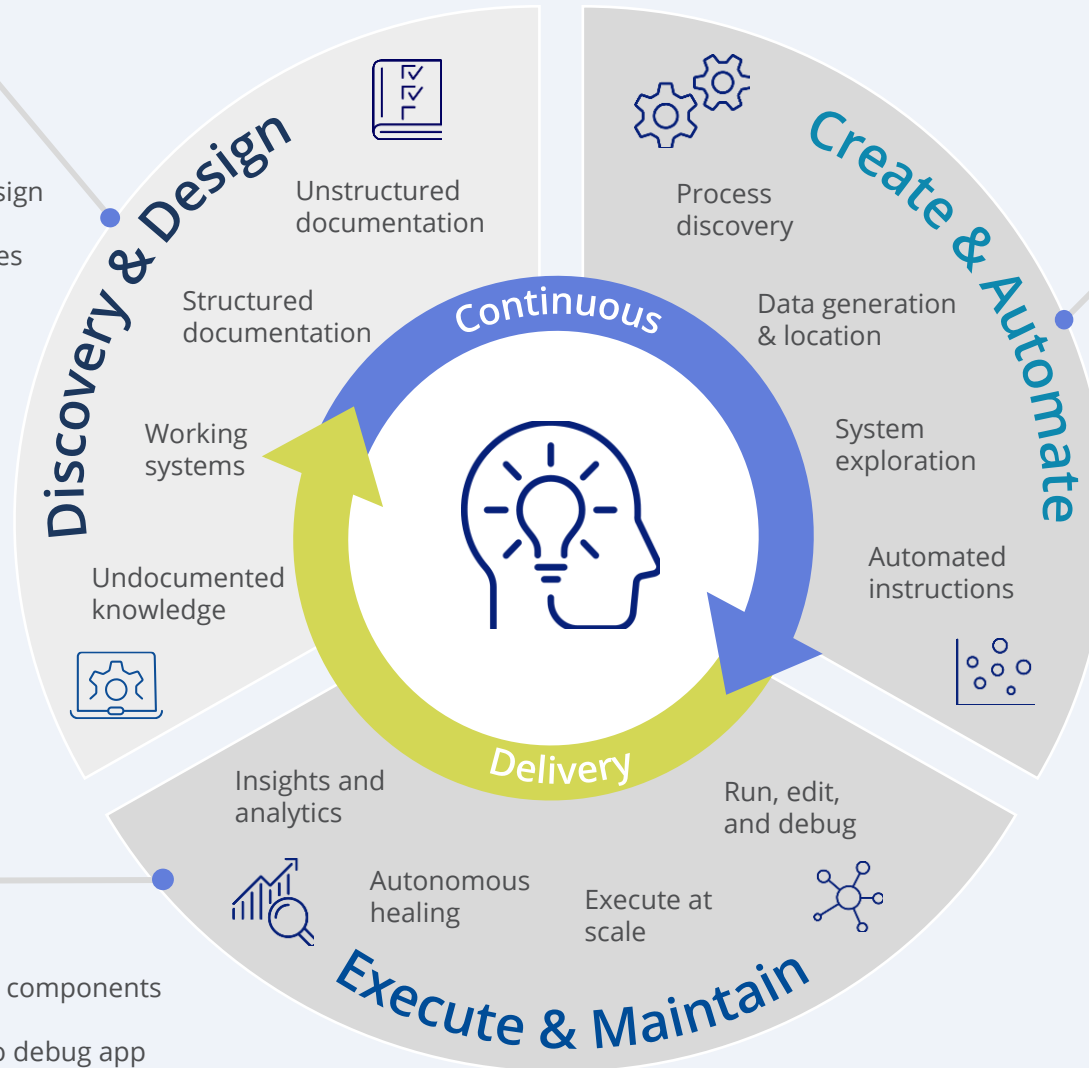


Tricentis Vision – Quality AI



I can help...

- Discover what needs to be tested
- Autogenerate & optimize test case design
- Uncover happy paths & edge cases
- Analyze SUT, requirements, user stories



I can help...



- Autogenerate tests based on requirements
- Test data generation & management
- Automate tests from discovered processes

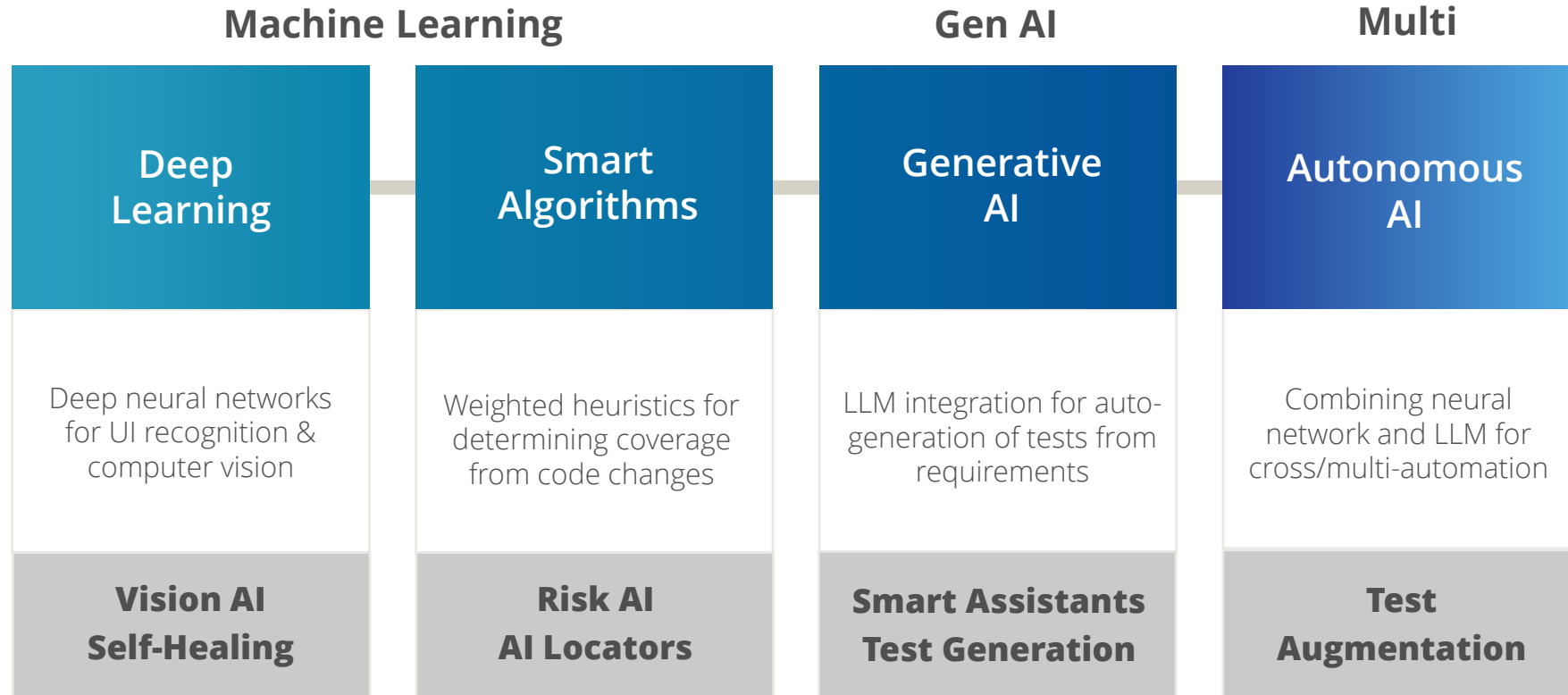


I can help...





- Execute tests at scale / high risk components
- Auto-heal tests & code
- Intelligent insights & analytics to debug app
- Self-diagnose errors & optimize tests

Tricentis AI solutions today

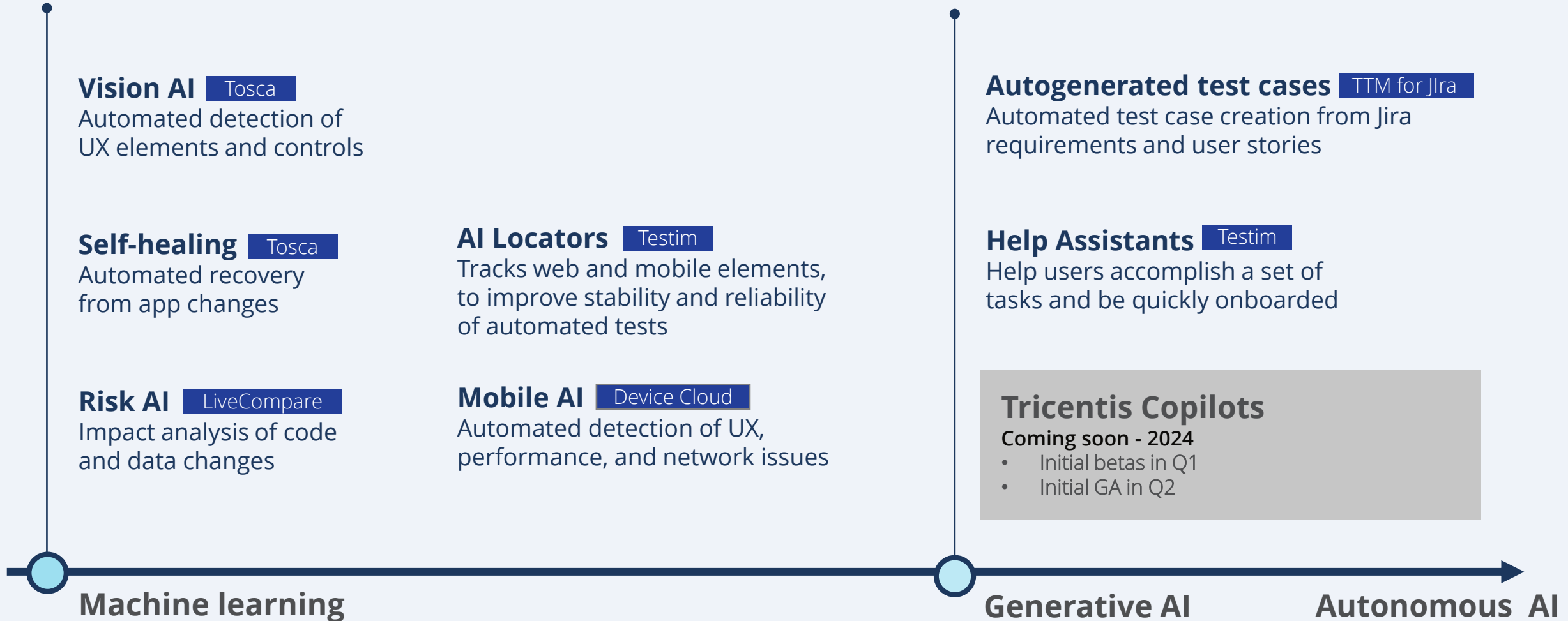
Tricentis offers next-generation, AI-powered quality engineering solutions



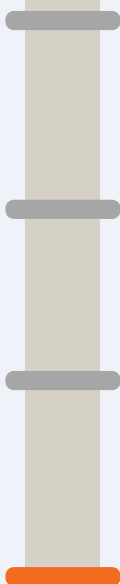
Our AI solutions today

	 Product	 Capability	 What it does	 Use Cases
Machine Learning	Tosca	Vision AI	Patented neural network technology steers UI based interfaces without requiring access to technical layer	<ul style="list-style-type: none"> Citrix automation Mockup designs Technology agnostic
		Self-healing	Recognizes broken object identification to auto-repair test cases and ensure tests run smoothly at run time	<ul style="list-style-type: none"> Support for SAP, SFDC, Oracle Fusion, web and desktop apps
	Testim	AI locators	Dynamically identifies and tracks elements on web and mobile interfaces, enhancing test stability	<ul style="list-style-type: none"> Self-healing AI-powered automation Support for web and mobile
	LiveCompare	Risk AI	Analyzes code changes in SAP environments to help you prioritize testing for most high-risk areas	<ul style="list-style-type: none"> Test coverage analysis Intelligent test selection Test audit
	Tricentis Device Cloud	Mobile AI	Detects user experience issues related to audio, video and image quality using human perception data & tracking 130+ KPIs	<ul style="list-style-type: none"> Intelligent insights Rich analytics User experience & performance
Generative AI	TTM for Jira	Auto-generated tests & test data	Auto-generates manual test cases by parsing a prompt based on the analysis of your Jira requirements	<ul style="list-style-type: none"> Agile test management More efficiency
	Testim	Help assistant	Provides answers to user inquiries helping with onboarding or debugging issues	<ul style="list-style-type: none"> User onboarding Self-service
	TTM for SFDC	Auto-generated test cases	Auto-generates test cases & populates them with test data by analyzing the meta data of SFDC environment today	<ul style="list-style-type: none"> Efficient SFDC testing

How Tricentis uses AI to optimize software testing



What we will cover

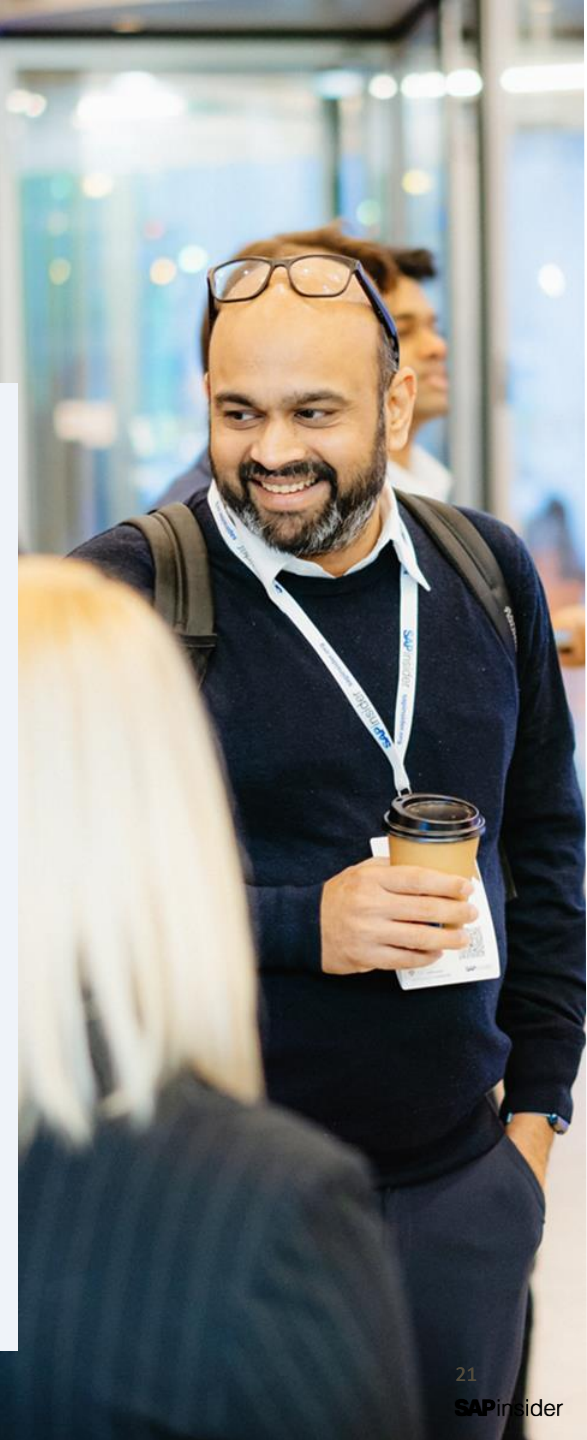


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Optimize your AI/ML initiatives with Data Integrity

How data integrity ensures your AI models are accurate, reliable & compliant

Improved AI accuracy

AI/ML models are only as good as the data they are trained on. High-integrity data ensures that AI models learn from accurate, clean, and relevant data, leading to more accurate predictions and insights.

Efficiency in training

Data integrity reduces the time and resources spent on data cleaning and pre-processing, allowing for more efficient model training and retraining processes.

Reduced bias

Ensuring data integrity helps minimize biases that may be present in the data, leading to more responsible, reliable AI/ML outcomes.

Regulatory compliance

Data integrity helps organizations comply with regulations that mandate the accuracy and reliability of data used in AI/ML applications, avoiding legal and ethical issues.

Field Tests: Database to Database Wizard

Field Tests: Database to Database Wizard

Source Database

Target Database

Match Tables

Select Field Tests

Additional Options

Column Chooser

Search Panel

Source Column

Source Table

Source Type

Target Field

Type

Is

Average value on test fields

Total row count

Row count (not counting null)

Null count

Blank count (blank identified as "-")

Unique values count

Duplicate values count

Value ranges are the same

dbo.Complications and Deaths - Hospital -> PUBLICMEDICARE_HOSPITAL (16 source fields, 18 target fields), 1 tests

Facility_ID

Complications and Deaths - Hospital

text(147483647)

Facility ID

VARCHAR(1677216,0)

Facility_Name

Complications and Deaths - Hospital

text(147483647)

Facility Name

VARCHAR(1677216,0)

Address

Complications and Deaths - Hospital

text(147483647)

ADDRESS

VARCHAR(1677216,0)

City

Complications and Deaths - Hospital

text(147483647)

CITY

VARCHAR(1677216,0)

State

Complications and Deaths - Hospital

text(147483647)

STATE

VARCHAR(1677216,0)

ZIP_Code

Complications and Deaths - Hospital

text(147483647)

ZIP Code

VARCHAR(1677216,0)

County_Name

Complications and Deaths - Hospital

text(147483647)

County Name

VARCHAR(1677216,0)

Phone_Number

Complications and Deaths - Hospital

text(147483647)

Phone Number

VARCHAR(1677216,0)

Measure_ID

Complications and Deaths - Hospital

text(147483647)

Measure ID

VARCHAR(1677216,0)

Measure_Name

Complications and Deaths - Hospital

text(147483647)

Measure Name

VARCHAR(1677216,0)

Commented in National

Complications and Deaths - Hospital

text(147483647)

Commented in National

VARCHAR(1677216,0)

Show columns with differences only

Column visibility

Showing 1 to 10 of 100 entries

Global search: Search

ID

PRIORITY

UNITS_SOLD

UNIT_PRICE

UNIT_COST

TOTAL_REVENUE

TOTAL_COST

TOTAL_PROFIT

Detailed Error

7817

9.33

6.92

72932.61

54093.64

18838.97

Row with key = '2673302531': column = 'TOTAL_PROFIT' value = '18838.97' <> '18837.97'

7817

9.33

6.92

72932.61

54093.64

18837.97

Row with key = '2673302531': column = 'TOTAL_PROFIT' value = '18838.97' <> '18837.97'

3054

9.33

6.92

28493.82

21133.68

7360.14

Row with key = '8127615331': column = 'TOTAL_PROFIT' value = '7360.14' <> '7359.14'

3054

9.33

6.92

28493.82

21133.68

7359.14

Row with key = '8127615331': column = 'TOTAL_PROFIT' value = '7360.14' <> '7359.14'

2004

9.33

6.92

18697.32

13867.68

4829.64

Row with key = '4330298301': column = 'TOTAL_PROFIT' value = '4829.64' <> '4828.64'

2004

9.33

6.92

18697.32

13867.68

4828.64

Row with key = '4330298301': column = 'TOTAL_PROFIT' value = '4829.64' <> '4828.64'

2351

9.33

6.92

21934.83

16268.92

5665.91

Row with key = '8812230941': column = 'TOTAL_PROFIT' value = '5665.91' <> '5664.91'

2351

9.33

6.92

21934.83

16268.92

5664.91

Row with key = '8812230941': column = 'TOTAL_PROFIT' value = '5665.91' <> '5664.91'

1679

9.33

6.92

15665.07

11618.68

4046.39

Row with key = '8009632461': column = 'TOTAL_PROFIT' value = '4046.39' <> '4045.39'

1679

9.33

6.92

15665.07

11618.68

4045.39

Row with key = '8009632461': column = 'TOTAL_PROFIT' value = '4046.39' <> '4045.39'

2182

9.33

6.92

20358.06

15099.44

5258.62

Row with key = '3182029601': column = 'TOTAL_PROFIT' value = '5258.62' <> '5257.62'

2182

9.33

6.92

20358.06

15099.44

5257.62

Row with key = '3182029601': column = 'TOTAL_PROFIT' value = '5258.62' <> '5257.62'

7332

9.33

6.92

68407.56

50737.44

17670.12

Row with key = '8364984391': column = 'TOTAL_PROFIT' value = '17670.12' <> '17669.12'

7332

9.33

6.92

68407.56

50737.44

17669.12

Row with key = '8364984391': column = 'TOTAL_PROFIT' value = '17670.12' <> '17669.12'

2899

9.33

6.92

27047.67

20061.08

6986.59

Row with key = '6722511171': column = 'TOTAL_PROFIT' value = '6986.59' <> '6985.59'

2899

9.33

6.92

27047.67

20061.08

6985.59

Row with key = '6722511171': column = 'TOTAL_PROFIT' value = '6986.59' <> '6985.59'

219

9.33

6.92

2043.27

1515.48

527.79

Row with key = '7129284261': column = 'TOTAL_PROFIT' value = '527.79' <> '526.79'

219

9.33

6.92

2043.27

1515.48

526.79

Row with key = '7129284261': column = 'TOTAL_PROFIT' value = '527.79' <> '526.79'

9197

9.33

6.92

85808.01

63643.24

22164.77

Row with key = '5560256361': column = 'TOTAL_PROFIT' value = '22164.77' <> '22163.77'

9197

9.33

6.92

85808.01

63643.24

22163.77

Row with key = '5560256361': column = 'TOTAL_PROFIT' value = '22164.77' <> '22163.77'

Display 10 records

Previous12345...10Next

Embrace the **unknown**
Take **precautions**

Responsible AI principles

We believe in the power of responsible AI, and are guided by the following principles:



Data Privacy

Strong focus on protecting personal data with clear data governance policies to foster trust and commitment to respecting privacy rights

Security

Prioritize the safety and security of AI systems, protecting them from malicious use and ensuring they do not pose risks to users or other systems. In automation, this is crucial to prevent failures or security breaches.

Compliance

Adhere to all relevant laws and regulations, including those specific to AI & automation. This ensures that Tricentis' AI solutions are not only effective but also legally compliant.

Continuous Improvement and Testing

Regularly update and test AI systems to adapt to new challenges and scenarios. This principle aligns with Tricentis' focus on continuous improvement in quality automation.

User centric and Accessible Design

Design AI systems with the end-user in mind, ensuring they are accessible, compliant, user-friendly, and meet the needs of diverse users.

Where to Find More Information

www.tricentis.com/solutions/ai-powered-solutions

Landing page for all things AI for Tricentis solutions

www.tricentis.com/solutions/ai-powered-solutions#benefits

Benefits of Tricentis AI

www.tricentis.com/solutions/ai-powered-solutions#use-cases

Use cases related to Tricentis AI solutions

www.tricentis.com/solutions/ai-powered-solutions#capabilities

Tricentis AI capabilities and solutions

www.tricentis.com/resources/why-ai-is-the-future-of-effective-sap-releases

White paper on why AI is the future of effective SAP releases

Key Points to Take Home

- AI's transformational impact
- Generative AI's growing integration and adoption
- Critical need for testing AI systems
- Tricentis' strategic AI approach
- Importance of data integrity for AI/ML

Thank you! Any Questions?



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your session evaluation.

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