Tricentis

A new approach to verifying SAP data integrity

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Agenda

1. Today's data integrity landscape

2. Solving top SAP data integrity challenges

3. A new approach for verifying SAP data integrity

4. Use case: The Mercedes Benz story

We are **Tricentis.**
The global leader in Continuous Test Automation

Gartner
FORRESTER
IDC

Named leader in industry
analyst vendor ratings

2,100+
customers

Installed base
world-wide

200,000+
certified

Tricentis test
automation engineers

aws partner network | Microsoft Partner — Gold Application Development / Gold Cloud Platform / Silver DevOps / Silver Application Integration — Microsoft | SAP | SAP® Solution Extensions | ATLASSIAN | servicenow. | ORACLE

Strategic Alliances & Partnerships

SAP's choice for faster, safer, lower cost releases.

10x
faster testing

**Accelerate
release cycles**

Turbocharge your SAP innovation with the test automation platform that helps you make weekly (even daily) releases a reality.

90%
risk reduction

**Improve
software quality**

Protect your business processes with AI-powered risk analysis that enables zero defect releases and eliminates the need for hypercare.

50%
lower costs

**Reduce costs
with automation**

Use the platform that is AI-driven and codeless, shrinking testing costs by as much as 50% or more through reduced test volume and automation of manual tasks.

Deliver **quality at speed** with Tricentis

It's all here.

Tricentis Continuous Testing Platform

Supports 160+ enterprise applications and technologies

SAP
Change Impact Analysis

Smart impact analysis

SAP
Enterprise Continuous Testing

Intelligent test automation

SAP
Enterprise Performance Testing

Enterprise performance

SAP
Enterprise Data Integrity Testing

End-to-end data testing

SAP
Solution Manager

SAP ALM & test management

Tricentis
qTest

Cloud-based unified test management

Fully automated

AI powered

Completely codeless

Cloud enabled

Risk optimized

Enterprise DevOps

Open and extensible

What we **provide**

Deliver higher quality software faster with the Tricentis Continuous Testing Platform

Tricentis Continuous Testing Platform
Supports 160+ enterprise applications and technologies

Tricentis
LiveCompare

Smart impact analysis

Tricentis
Tosca

Intelligent test automation

Tricentis
Test Automation

App-native testing

Tricentis
NeoLoad

Enterprise performance

Tricentis
Data Integrity

End-to-end data testing

Tricentis
qTest

Unified test management

Tricentis
Analytics

Real-time insights & reporting

Fully automated

AI powered

Completely codeless

Cloud enabled

Risk optimized

Enterprise DevOps

Open and extensible

Tricentis Services

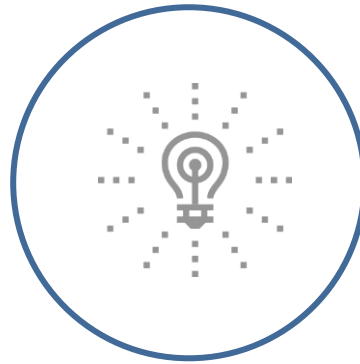Business value roadmap

Continuous maturity assessment

Continuous testing framework

Tricentis Academy

Today's data integrity landscape

To win in the digital economy
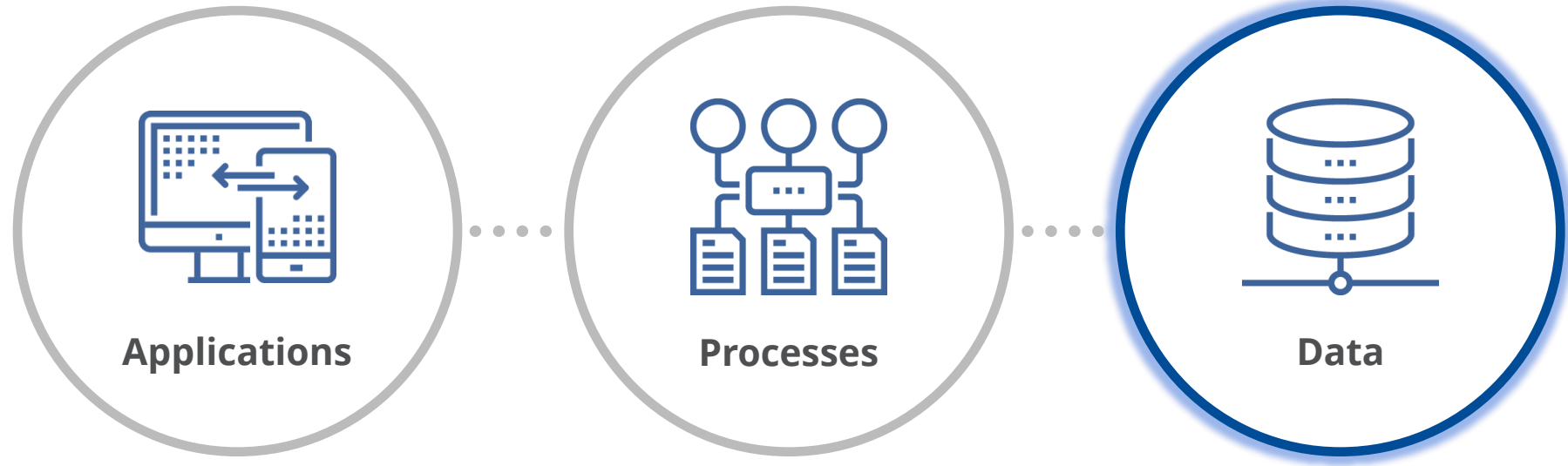## you must deliver

Innovative, high-quality
business solutions

+

Trustworthy
data

And that's never been
more challenging.....

Tricentis

And that means
you must deliver both **quality at speed** across all your...

Applications

Processes

Data

...everywhere in your organization

Today's data integrity landscape: Key stats

Data confidence is low: Only 35% of enterprise executives have a high level of trust in the way their organization uses data and analytics

Data errors erode your brand: 92% are concerned about the negative impact of data and analytics on the organization's reputation

IT bears the responsibility: 62% said technology functions, not the C-level and functional areas, bear responsibility for data quality

The data integrity landscape for SAP systems

- **SAP data errors are common:** In a 2020 ASUG survey, 53% of respondents said they experience data errors in SAP applications or reports after every update

- **Data migration concerns delay SAP modernization:** A joint survey with Tricentis & Capgemini found that the transfer of data to the new environment was the No. 1 reason for delay in migrating to advanced SAP versions

Transfer of master data to new environment	43.5%
Data security vulnerability	42.8%
Change in management structure	42.0%
Pressure to implement changes faster	39.3%
Expectation of doing more with less resources	38.6%
Budget pressure	33.7%
Excessive downtime	29.8%
Lack of technical expertise	27.3%
Lack of process documentation	25.7%

Multi coded per option
Total respondents = 759
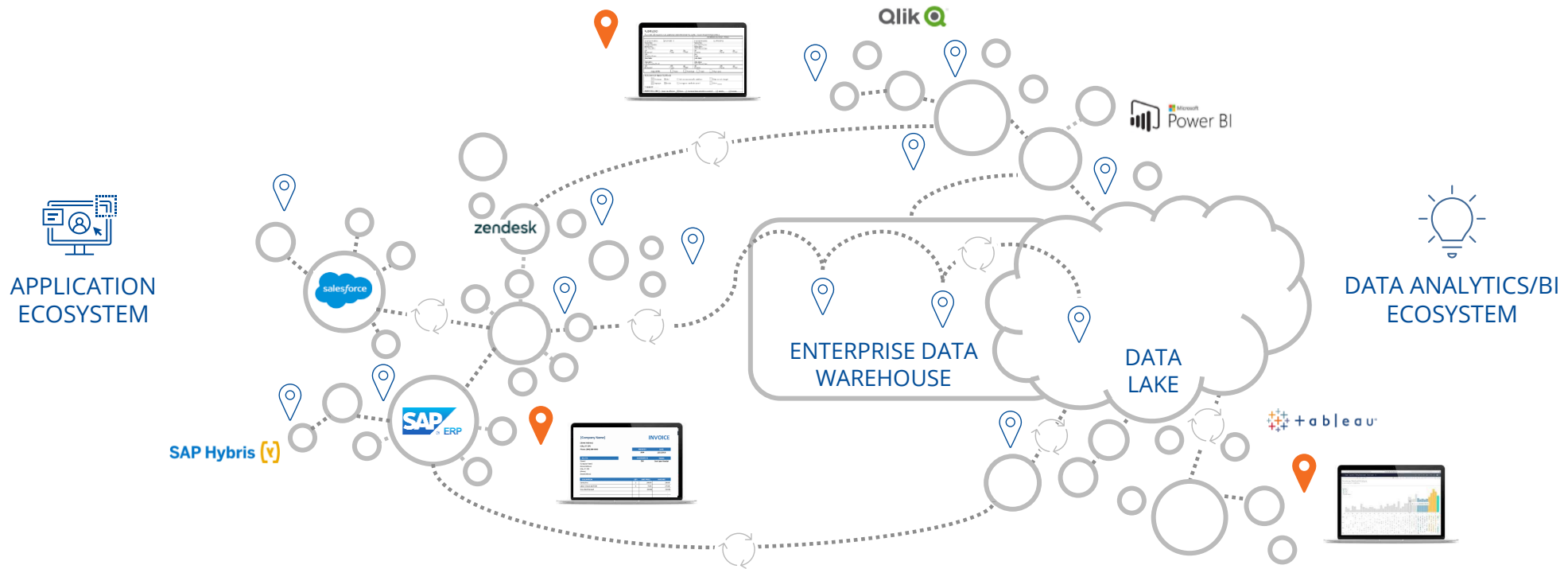
But you can't sacrifice quality for speed

76% **Application leaders agree:**

Improving **speed and quality** is key to achieving top business goals

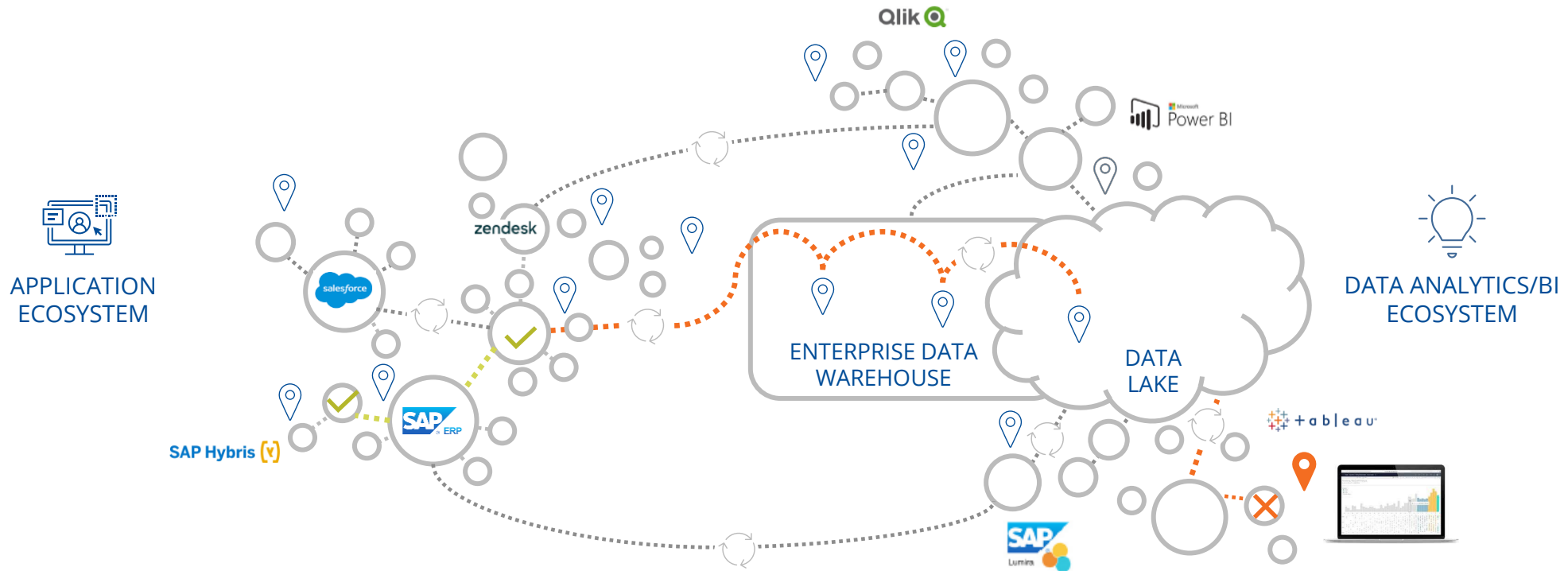FORRESTER®

Sept. 2021

The cost of poor data quality

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Today, your data is always on the move
through increasingly complex landscapes

APPLICATION
ECOSYSTEM

ENTERPRISE DATA
WAREHOUSE

DATA
LAKE

DATA ANALYTICS/BI
ECOSYSTEM

...to many different destinations

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Your data can break
at any point on its journey

APPLICATION
ECOSYSTEM

zendesk

Qlik Q

Microsoft
Power BI

ENTERPRISE DATA
WAREHOUSE

DATA
LAKE

DATA ANALYTICS/BI
ECOSYSTEM

SAP Hybris

SAP
ERP

SAP
Lumira

tableau

...and finding where it broke is time consuming and expensive
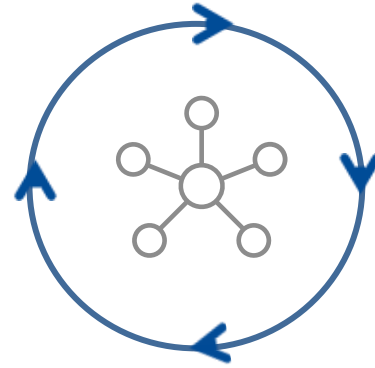
Tricentis

And that landscape is constantly changing
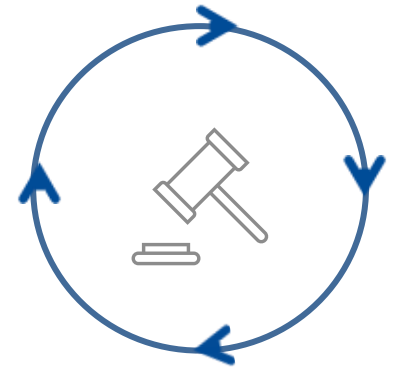## increasing the chance of errors with costly consequences

New demands from the
business and regulators
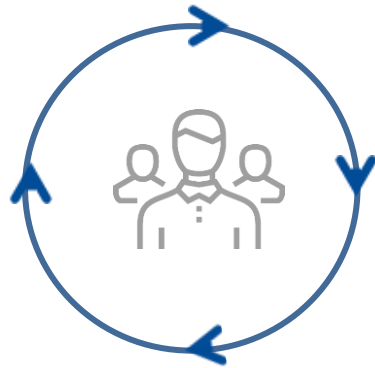
More hands on
your data

Changes to your
application landscape

Changes to your data
models and business rules

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Major
oil & gas
company

$2.2 million
per month

Costly consequences
for your brand and bottom line

Untrustworthy reports,
poor decision making,
data monetization issues

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Costly consequences
for your brand and bottom line

Top 5 US insurance company

40k
Incorrect invoices

Untrustworthy reports, poor decision making, data monetization issues

Operational issues across business processes

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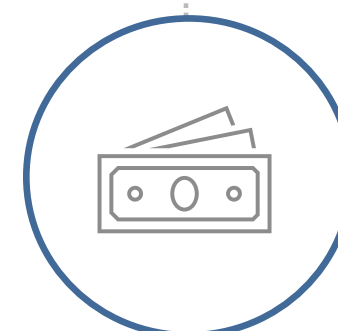# Costly consequences
for your brand and bottom line

Major bank

$50M+
in AML/KYC Fines

Untrustworthy reports, poor decision making, data monetization issues

Operational issues across business processes

Costly compliance issues

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Costly consequences
for your brand and bottom line

Untrustworthy reports,
poor decision making,
data monetization issues

Operational issues
across business
processes

Costly
compliance
issues

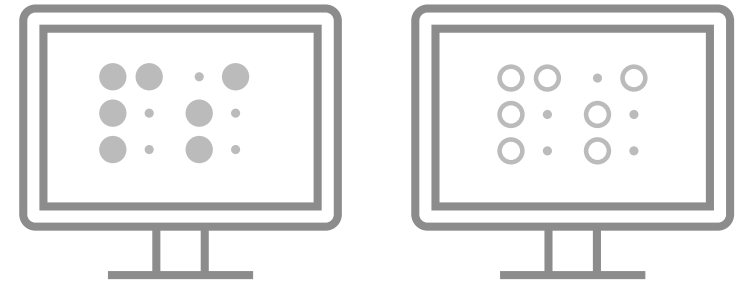Major
pharma
company

$100's million
In failed innovation
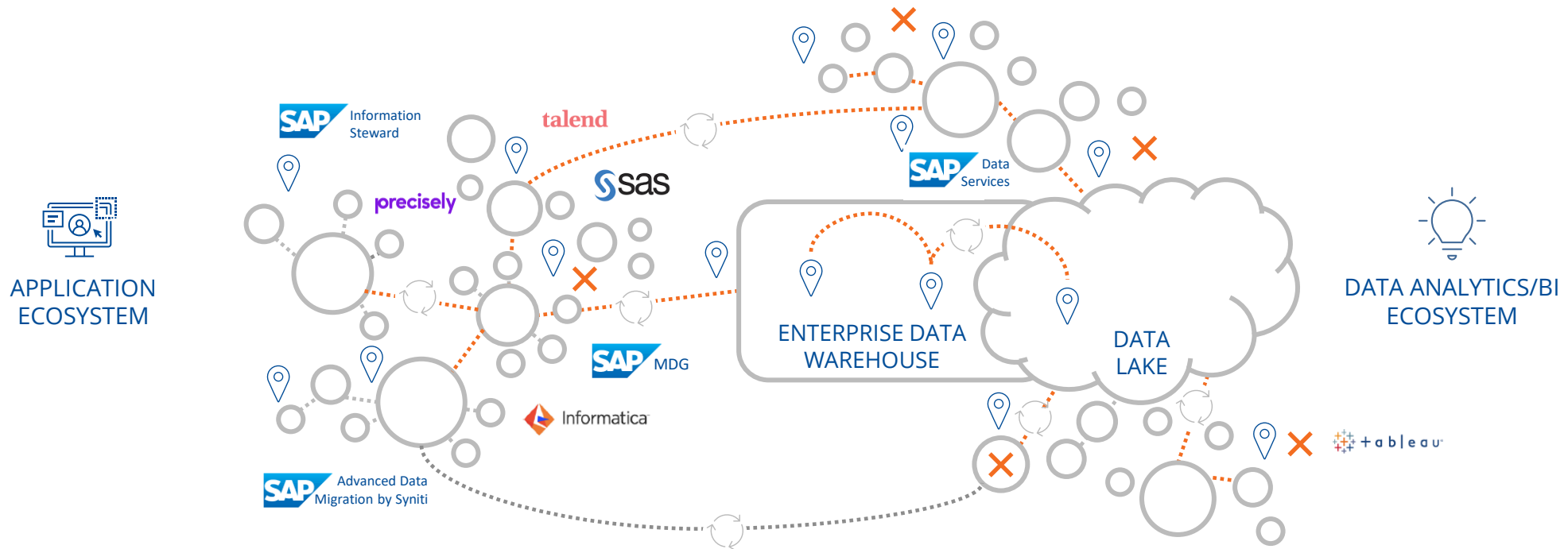
Suboptimal
AI/ML-driven
initiatives

Tricentis

So why isn't your data
better already?

Manual "stare and compare" is **slow and doesn't scale**.
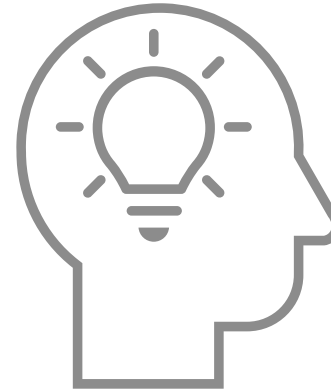And is not a great use of your team's brainpower.

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It's time to think **differently**
about how you maintain
the integrity of your data

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It's time to bring the **discipline**
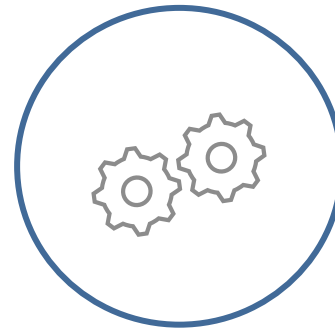of end-to-end testing
to the world of data

Tricentis

Includes data, UI, and API testing for any data type — across your entire landscape.

Tricentis
Data Integrity
A data testing solution that's...

End-to-end

Automated
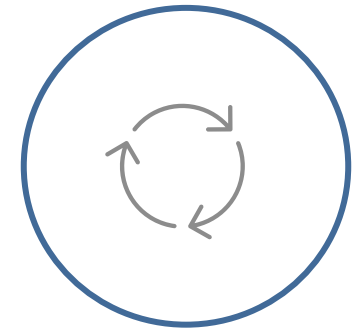
Continuous

✕ Tricentis

Tricentis
Data Integrity
So, you can...

Major global bank

16x
More anomalies caught

70k tests
in **15** minutes

Catch more data errors up front

Test at high volume and velocity

Get higher data quality at scale
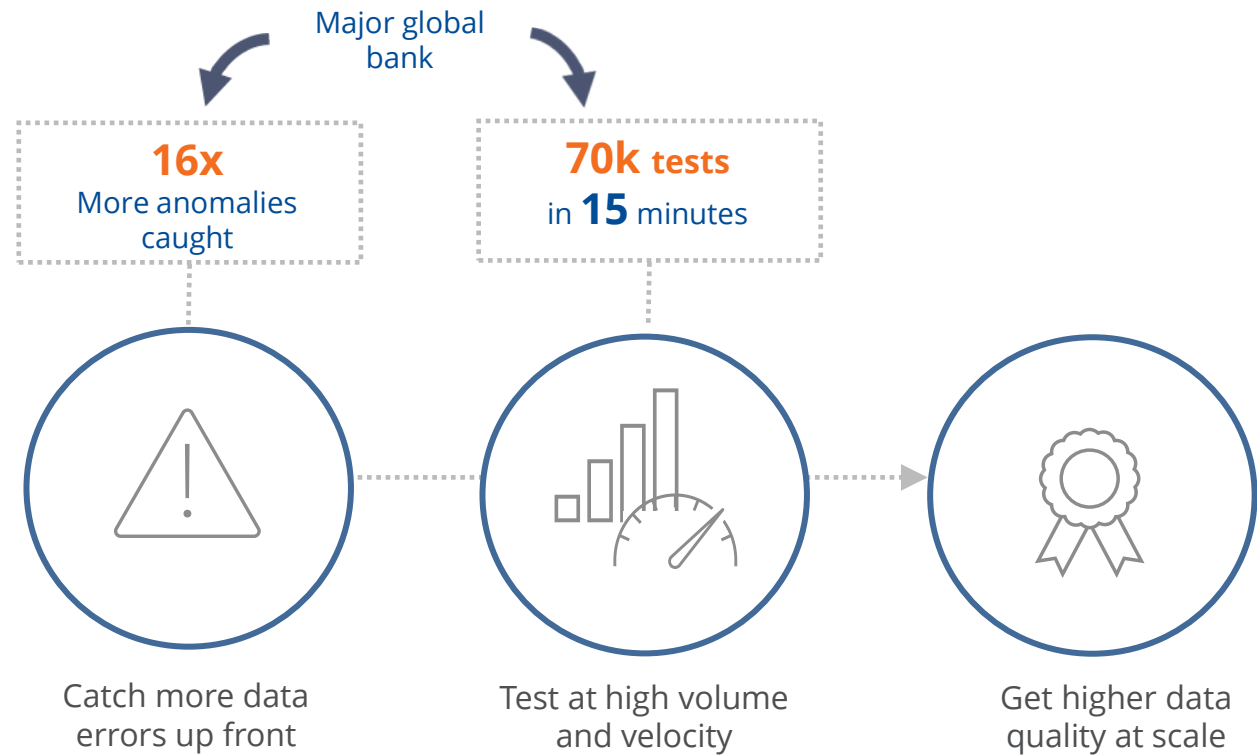
Tricentis

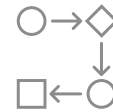**Tricentis**
Data Integrity
Drive better business outcomes through data you can trust

Make better decisions

Get more reliable processes

Be more compliant

Optimize AI/ML initiatives

Drive data monetization revenue

Drive better experiences for customers and all stakeholders, sooner

Increase market share and revenue

Reduce risk and costs

Fill your data management gaps
with data testing that's end-to-end, automated, and continuous

APPLICATION ECOSYSTEM

SAP Information Steward

talend

precisely

S sas

SAP Data Services

SAP MDG

Informatica

SAP Advanced Data Migration by Syniti

ENTERPRISE DATA WAREHOUSE

DATA LAKE

DATA ANALYTICS/BI ECOSYSTEM

+ableau

Tricentis
Data Integrity

✕ Tricentis
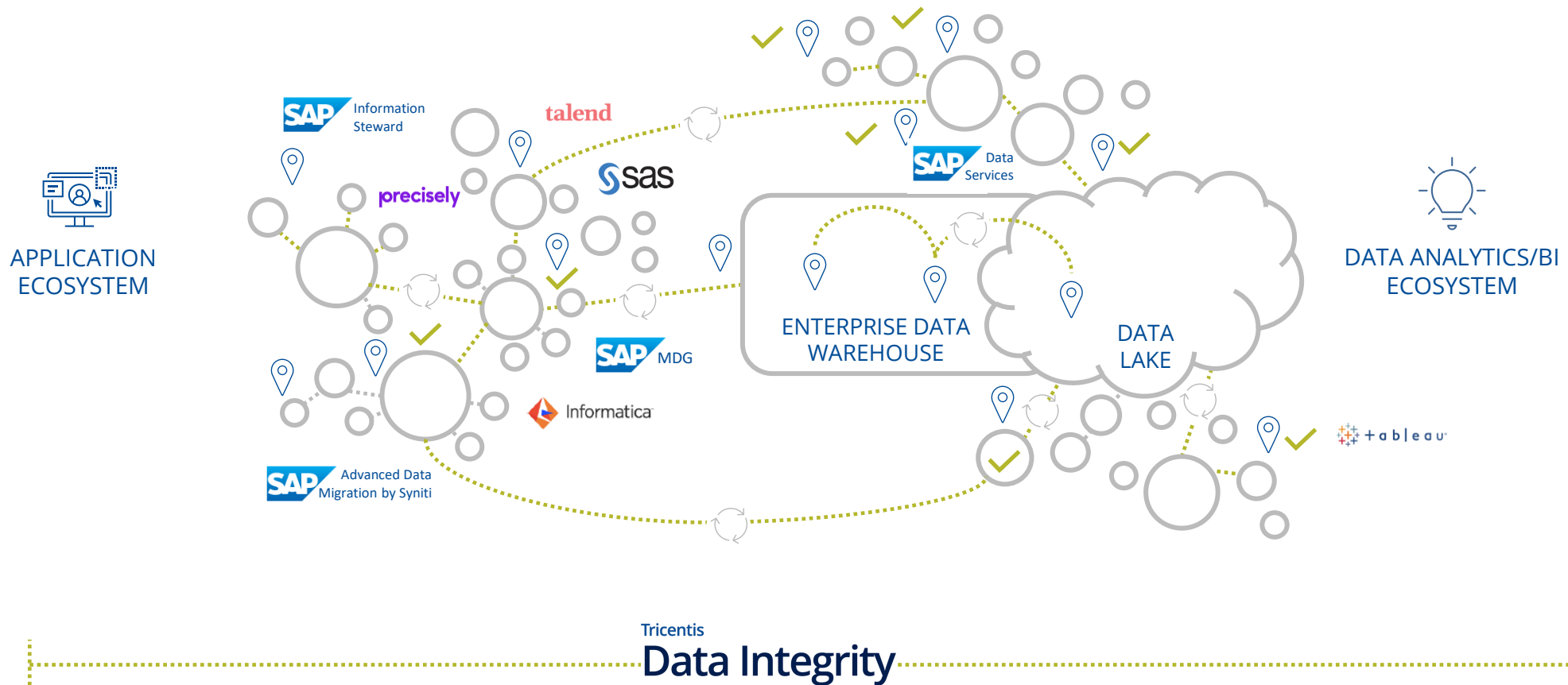
Maintain the integrity of your data
on its journey

Across your data
analytics/BI ecosystem
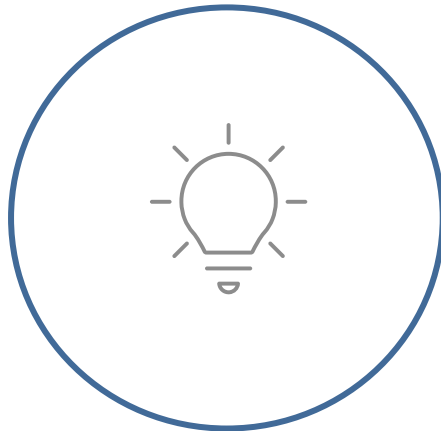
Across your app ecosystem
and business processes

Deliver
trustworthy data

Keep operations
running smoothly

During IT-led
modernization
initiatives

Tricentis
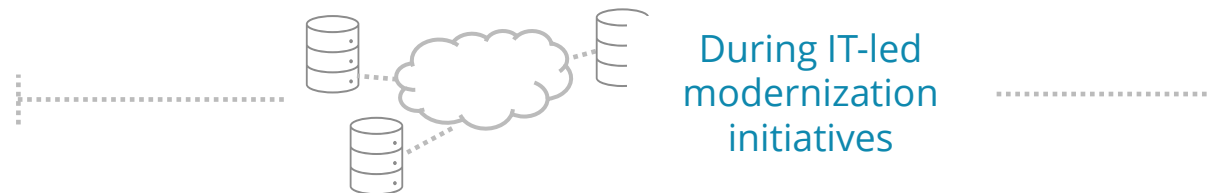
Deliver trustworthy data
Example scenario—sales analytics

Qlik **Q**

+ a b l e a u

Power BI

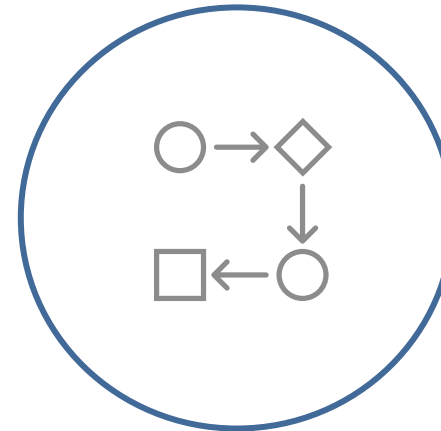Ingest transactional sales and customer master data from multiple systems.

Consolidate into an EDW.

Transform into a sales data mart.

Delivery trustworthy reports to sales executives.

ISSUES FLAGGED

Missing data
Duplicate data

EVENT

Data transformation

ISSUE FLAGGED

Decimal separator misinterpreted
Currency conversion problem

ISSUE FLAGGED

EMEA region sales data does not match amount in data mart

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Keep operations running smoothly
Example scenario—Finance AP invoicing

Ingest raw invoicing data from multiple ERP and accounting systems.

Consolidate into an EDW.

Transform data into finance data mart.

Send accurate consolidated invoices to B2B customers in PDF form.

ISSUES FLAGGED

- Missing data
- Duplicate data
- Data not following business rules
  - Not matching metadata
  - Out of bounds, ranges

EVENT

Data transformation

ISSUE FLAGGED

- Transposition of amounts and other data elements
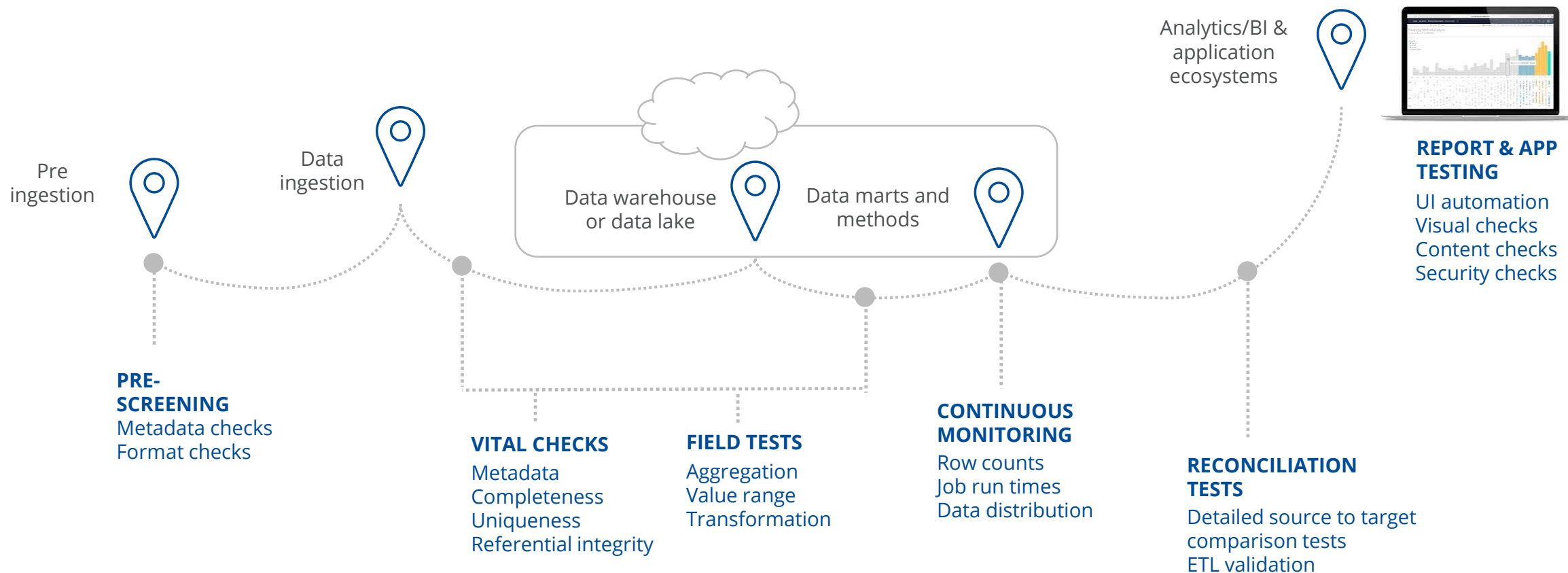- Truncation of data
- Incorrect calculations

ISSUE FLAGGED

Outputs (Invoice PDFs) are incorrect to source data

Tricentis
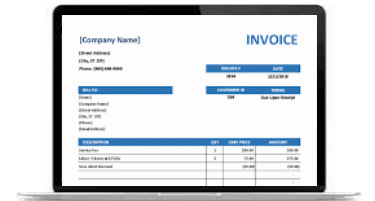
Catch more errors

with tests tailored for each step of your data's journey

Pre ingestion

Data ingestion

Data warehouse or data lake

Data marts and methods

Analytics/BI & application ecosystems

PRE-SCREENING
Metadata checks
Format checks

VITAL CHECKS

Metadata
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

How DI works
to continuously improve your data

400k+
rows tested in
< minute

RUN
against data
at scale and
speed.

Get detailed,
actionable reports.

Collaborate across teams to build better tests—end-to-end

QA   Business   Data

No-code, low-code tool
No expert SQL skills required

CREATE
model-based
data tests.

AUTOMATE

REPORT
Pinpoint
the root cause
of problems.

FIX
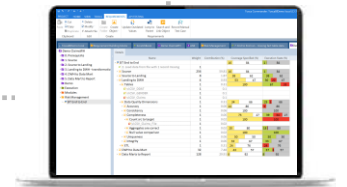
Customer case study

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Mercedes-Benz drives better customer experiences and higher revenue through better data.

About

Mercedes-Benz Sales is responsible for selling Daimler's range of light commercial and passenger cars.

Mercedes-Benz Otomotiv is their legal entity in Turkey and is also an IT base and solution center delivery for more than 40 countries.

Business drivers

Drive better customer experiences across touchpoints and unlock new revenue potential by creating a centralized place for trusted customer 360 data.

Challenges

Project IDA—Integrated Data Architecture

- Complex transformation rules
- Large data volumes
- Frequent changes expected with source systems and new requirements to the IDA solution
- Lack of resources with advanced SQL and SAP BW skills

Initial manual test plan could not:

- Provide end-to-end coverage
- Handle volume
- Keep up with changing environment

End-to-end data testing
for higher data quality at scale

Solution

Ingest customer master and transactional data from dealer, internal, and external systems.

Consolidate into EDW.

SAP BW/4HANA

Transform into data marts.

Provide access to trustworthy customer 360 data:
- Dealers and internal teams via web portal
- Systems via data feeds

ISSUES FLAGGED
Customer names being cut off due to data type mismatches

EVENT
Data transformation

ISSUE FLAGGED
Incorrect vehicle history for customers

Wrong revenue numbers for certain customers

ISSUE FLAGGED
API calls using fuzzy logic return wrong customers

Solution

Solution metrics

Billions
of rows
tested

400k+
rows tested in
< minute

1 test type
25 flexible
test cases
250+ variations

> " It's impossible for humans to test billions of rows of data. We can now test nearly half a million rows in just one minute. There's just no comparison.

**Ezgi Çetin, Test Automation Engineer,
Mercedes-Benz Otomotiv**

Results

Business results

220
Testing days saved

Errors pinpointed for faster fixes

The testing authority

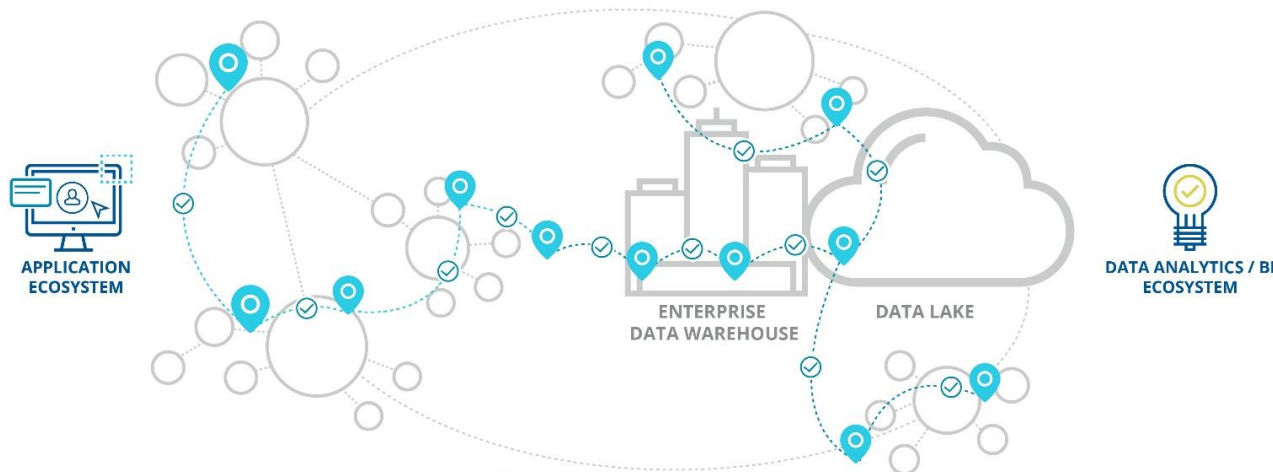Higher quality customer data at speed and scale

Is the data correct?

Drive better business outcomes through data you can trust

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
- Model-based test automation

Traditional approach

- Slow, "stare and compare" manual data testing that doesn't scale
- Point data tools that leave dangerous data management gaps

Tricentis customers

- Catch more data errors upfront
- Test at high volume and velocity
- Deliver higher quality analytical and operational data at scale

APPLICATION ECOSYSTEM

ENTERPRISE DATA WAREHOUSE

DATA LAKE

DATA ANALYTICS / BI ECOSYSTEM

Tricentis
Data Integrity

Thank you!

Want to chat live?
Join our ASUG Think Tank Oct. 7!

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➤ About Tricentis Data Integrity:
tricentis.com/products/data-integrity

➤ About the Tricentis SAP solution:
tricentis.com/sap

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Questions?

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