



How to build a successful DevOps Practice in SAP

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Confidential



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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

Deliver **quality at speed** with Tricentis

It's all here.

Tricentis Continuous Testing Platform

Supports 160+ enterprise applications and technologies

Where's the **risk**?

Does it **work**?

Does it **scale**?

SAP
**Change
Impact Analysis**

SAP change intelligence

SAP
**Enterprise
Continuous Testing**

Intelligent test automation

SAP
**Enterprise
Data Integrity Testing**

End-to-end data testing

SAP
**Enterprise
Performance Testing**

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



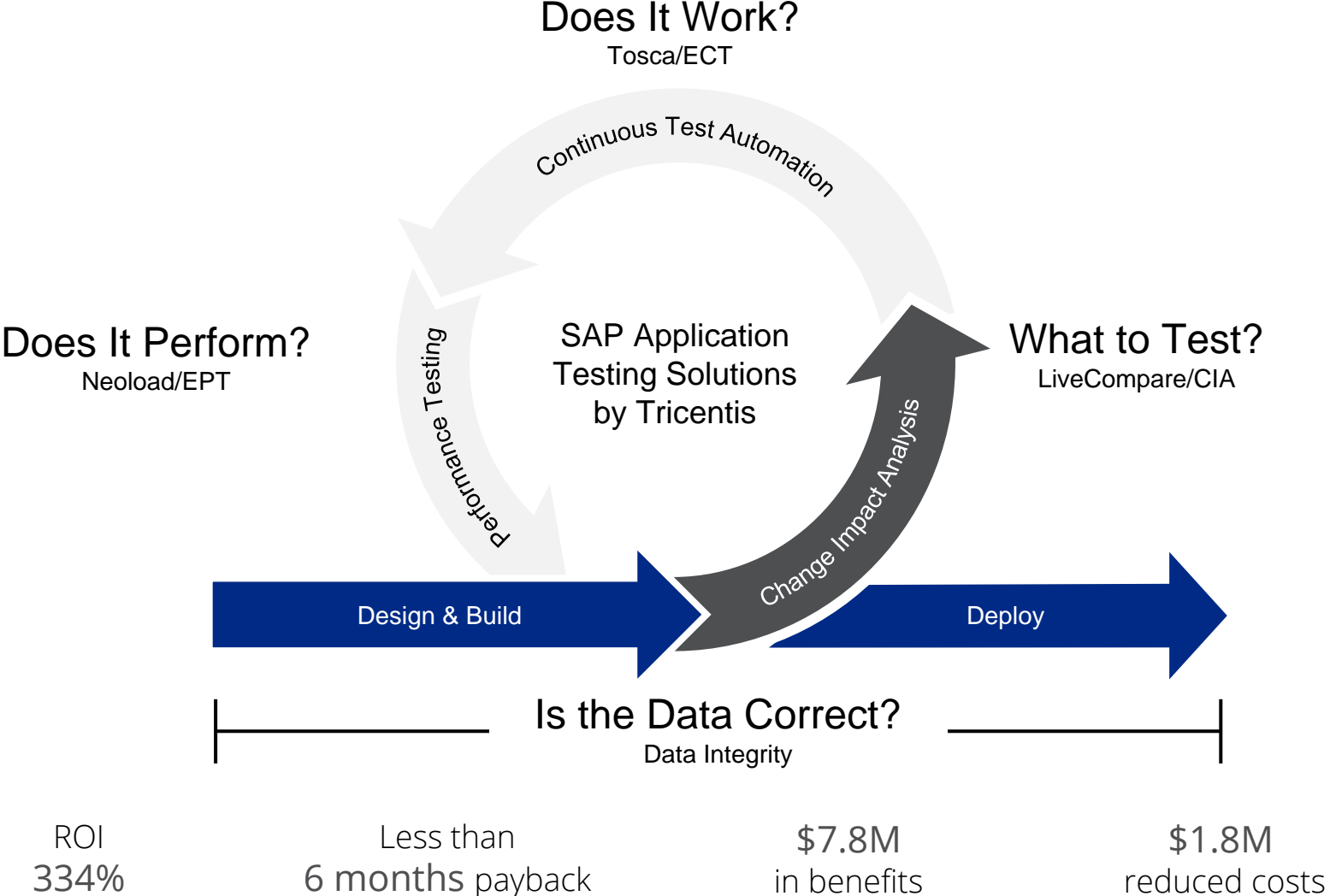
Enterprise
DevOps



Open and
extensible



SAP Application Testing Solutions by Tricentis



Key Benefits

- Application release rates increased by **300%**
- Production errors reduced by **78%**
- Testing scope reduced by **84%**

Increased Ability to Innovate

What is DevOps?

DevOps in 30 seconds...

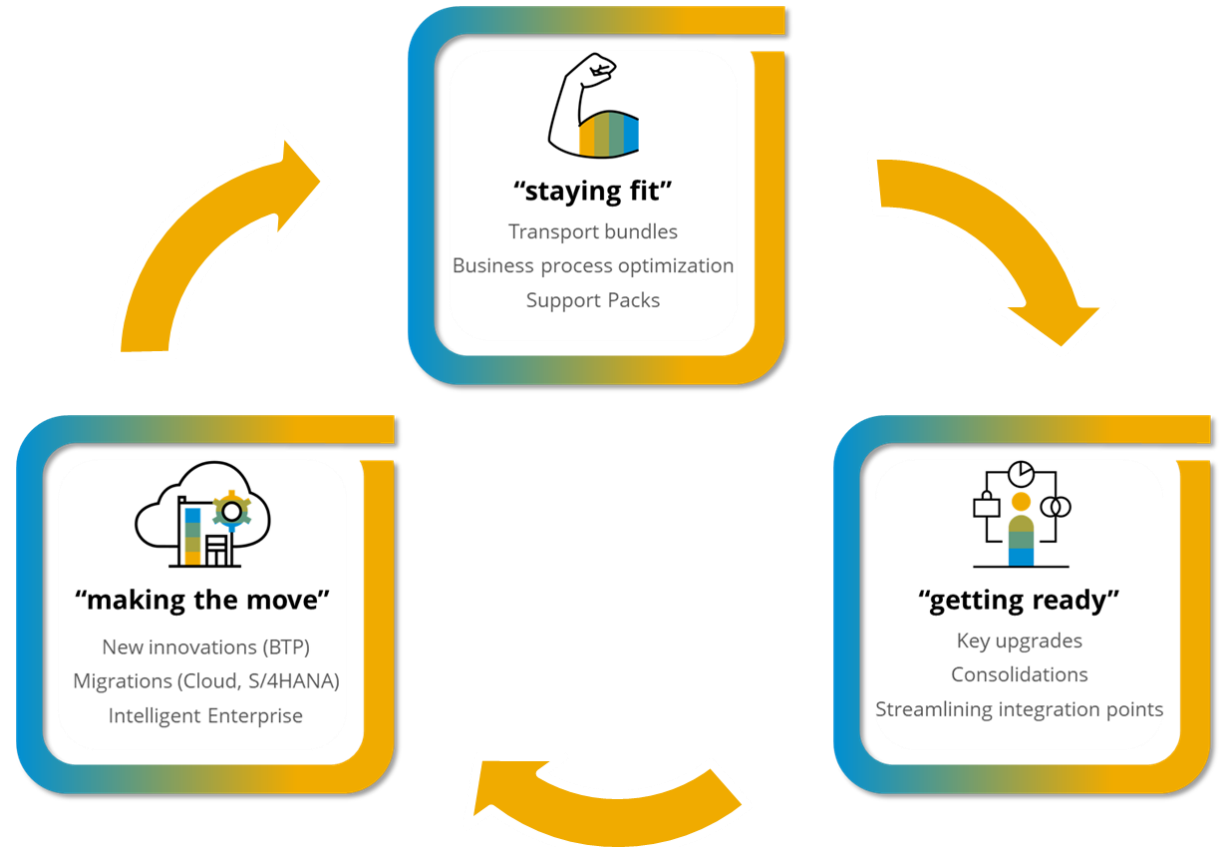
- Modern way of developing and delivering software at high speed
- Maximizes automation, integrations and collaboration between IT & business
- Automated chain of continuous software delivery from development, testing, deployment and continuous improvement
- End goal is to be able to rapidly deploy business value as soon as its ready instead of waiting weeks or months for next release

The Problem



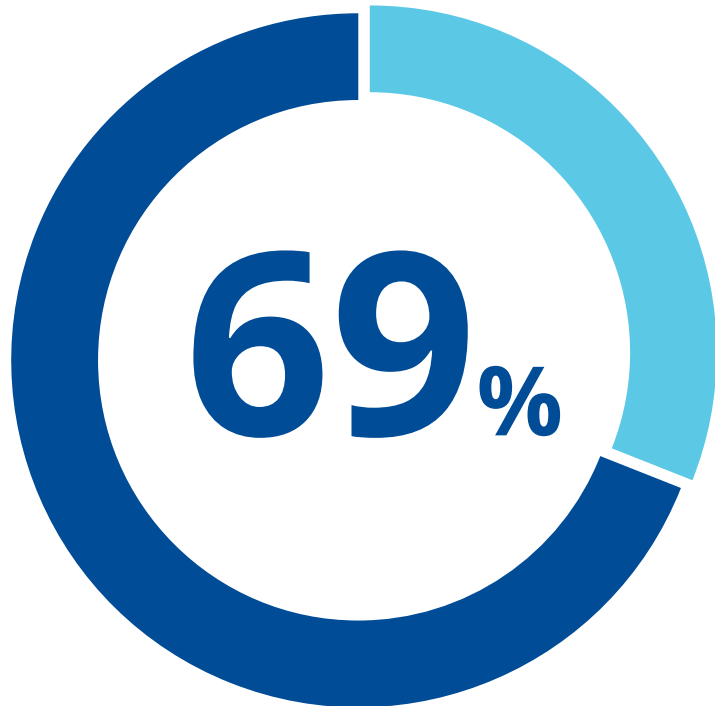
- SAP tech stack is unique, traditional DevOps tool chain sets don't work in SAP
- SAP centric DevOps tool sets are siloed/fragmented that don't integrate
- Outdated test automation & management solutions, no longer fit for purpose
- Companies stuck in old traditional waterfall or semi waterfall methodologies
- Testing has remained the primary bottleneck in slowing the SAP change and release process down.
- IT struggles to keep pace with the high-volume frequency of changes demanded by the business, and the frequent upgrades required by SAP.

Wherever you are on your
SAP journey...
Innovation is a continuous process



What makes SAP innovation so risky?

Every change has a ripple effect



of SAP customers say they are not completely prepared for frequent updates

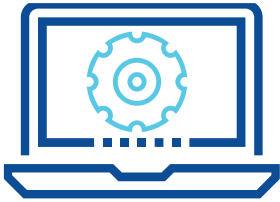
“A key factor could be less than optimal understanding of their SAP systems and lack of necessary tools.”

#missing_intelligence

sogeti Part of Capgemini Capgemini Tricentis™

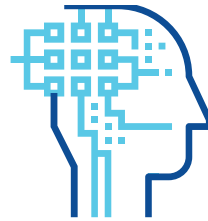
State of Worldwide Business Assurance for SAP Solutions

3 keys to de-risking SAP innovation



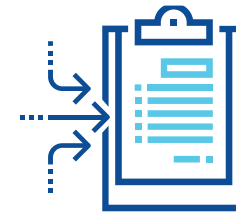
Automate analysis

of your SAP landscapes and application usage



Leverage AI to identify risks

and optimize testing for all your SAP changes



Get actionable insights

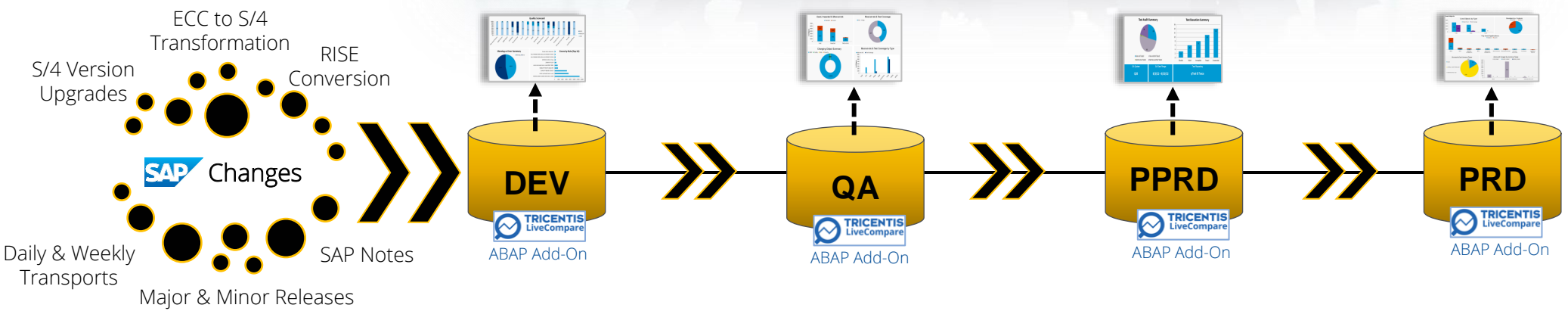
to keep your production systems running smoothly

Tricentis LiveCompare 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



Key Questions



AI-Powered Insights by LiveCompare

ABAP Code Quality Analysis



- Shift left on quality
- Pinpoint coding issues early on SDLC
- Instant feedback for developers
- Data driven insights for commit approvals
- Governance over partner led development work
- Improved SAP application health
- Less production defects

Smart Impact Analysis



- Intelligent targeted testing
- 80% reduced testing efforts
- Faster test cycles
- Speeds up release cadences 2-3X
- Superior quality

SAP Test Coverage Insights



- Clear insights into test coverage in every release
- Prioritize time, resources and money in appropriate areas
- Track test coverage trends and monitor progress
- Eliminate duplicate test work
- Maximize ROI in test automation solutions

Test Audit



- Quality gate for deployment approvals
- Instant feedback for release managers
- improved business continuity
- Zero defect leakage

N+1 Transport Merge Comparison



- Perform Transport merges 80% faster
- Auto discover code and config conflicts for retrofitting
- Eliminate manual analysis & investigative work
- Deliver projects & releases faster
- De-risk transport merges

SAP Custom Code Management Insights



- Continuous visibility into custom code
Manage, govern, optimize customizations
- Track trends and KPI's around custom code
- Eliminate Technical debt

SAP Root-Cause Analysis



- Debug Prod issues 80% faster
- Less resource involvement
- Minimize production downtime
- Improved business continuity

SAP System Synchronization



- Ensure code, config & data stays in sync
- Avoid defects cased by system discrepancies
- Reduced need for system refreshes
- Test data validation

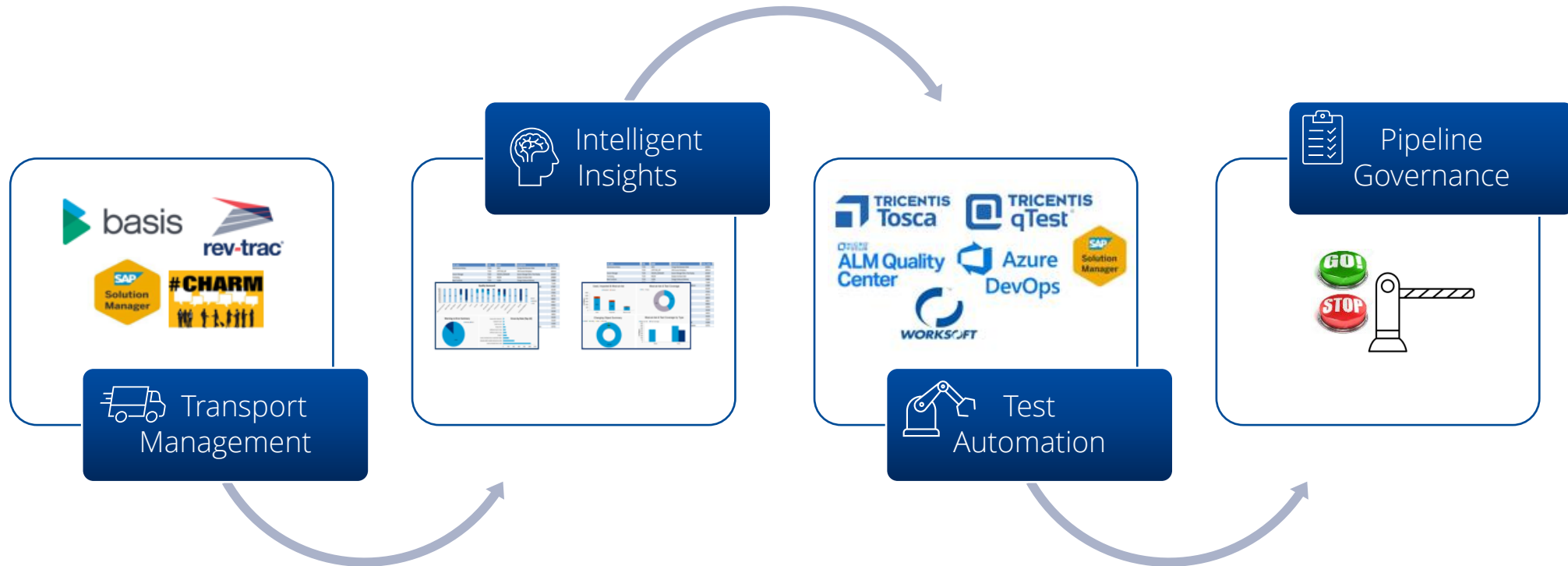
S/4 Readiness Assessment



- Compare existing ECC to target S/4
- Key insights to plan, scope and strategize
- Identify impact & test scope
- Retire dormant custom code
- Improve quality & performance of existing code
- Remediate existing code to be S/4 ready

Orchestrating DevOps for SAP

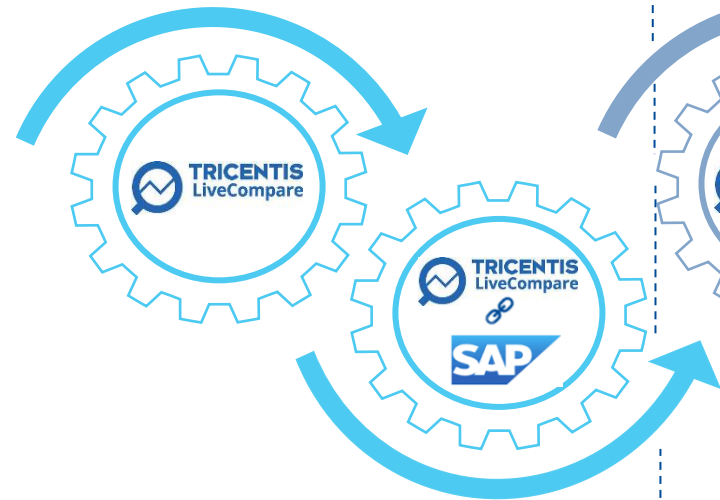
AI-Powered Change Intelligence Platform that combines **Intelligence, Integrations, Automation & Governance** for facilitating a streamlined, more efficient, higher quality SAP change & release process.



Automated Change & Release Process

ABAP Code Quality Insights

Identifies issues in the code

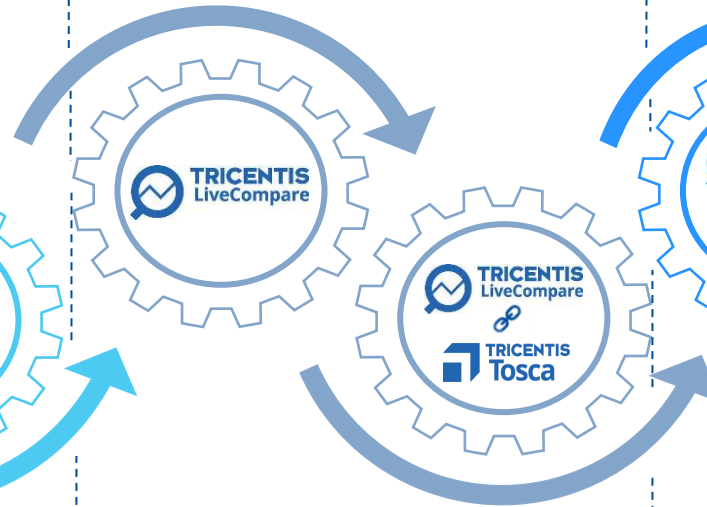


Unit Test Automation

Automates unit tests in SAP's ABAP Unit Test Framework

Change Impact Analysis

Pinpoints what to test

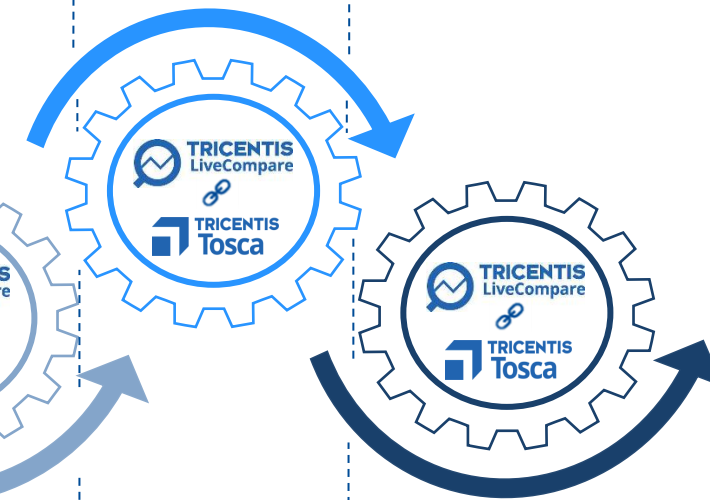


Functional Test Automation

Intelligently selects tests to run auto executes the tests in Tosca

Test Audit

Checks if it's been tested



Test Coverage Insights

Uncovers test gaps and prioritizes test creation



Business Value Summary

Current State

Outdated Testing Strategy

- Limited visibility into system impact & what should be tested
- Test everything approach
- Hard to keep pace with high volume & frequency of changes
- Slow testing cycles
- Resource intensive, costly & risky
- Lacks quality
- Extended & costly hyper care periods

Negative Business Impact

- Long wait times for new functionality & enhancements
- Missed SAP Project go-lives
- SAP Upgrades & Patches are avoided



Future State

Modernized Agile Testing Strategy

- Fact-based data driven insights on what needs to be tested
- Precision targeted testing
- Reduced testing scope – eliminate unnecessary testing
- Faster test cycles
- Release more frequently
- Superior quality
- Reduced & less costly hyper care periods

Positive Business Impact

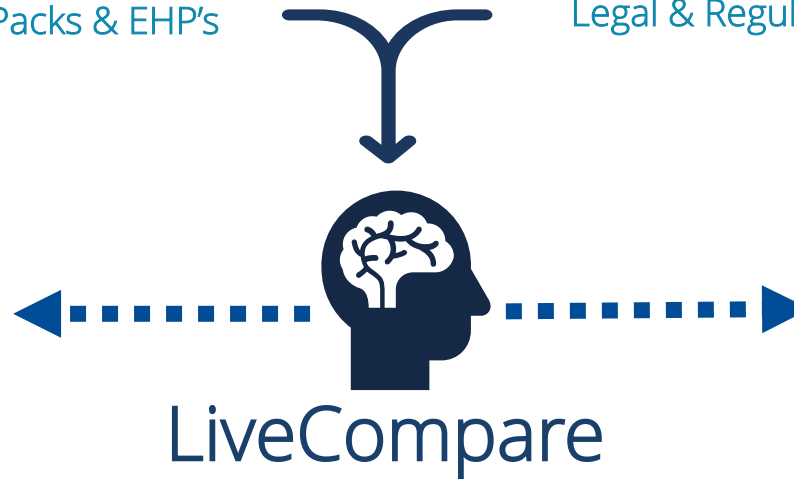
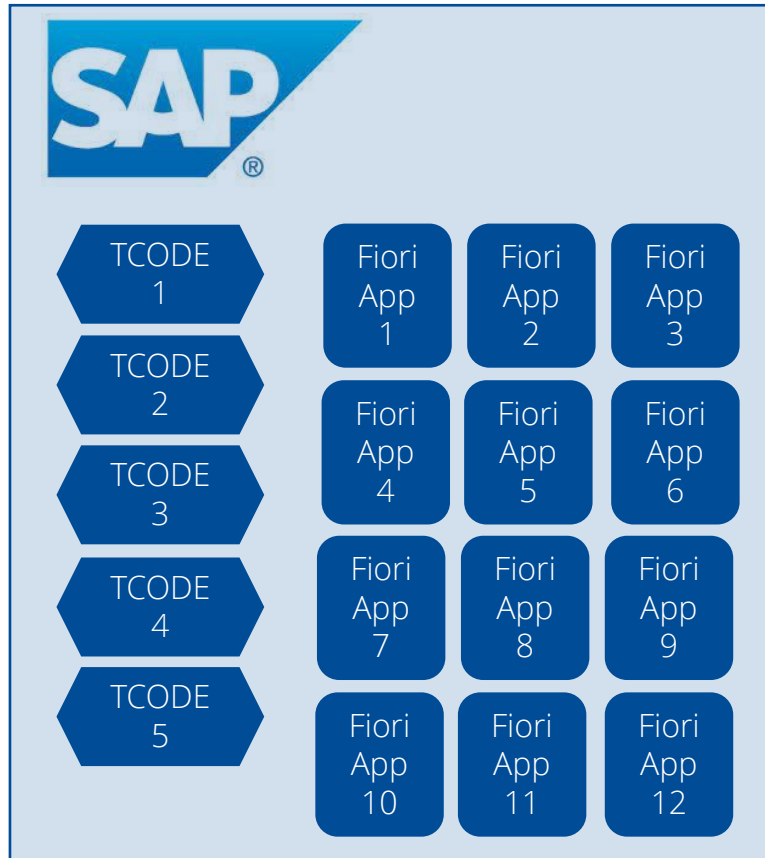
- Quicker Time-to-Production for new functionality & enhancements
- Go-to-Market faster with SAP transformational projects
- Perform Upgrades more often in less time with lower costs

Change Impact Analysis

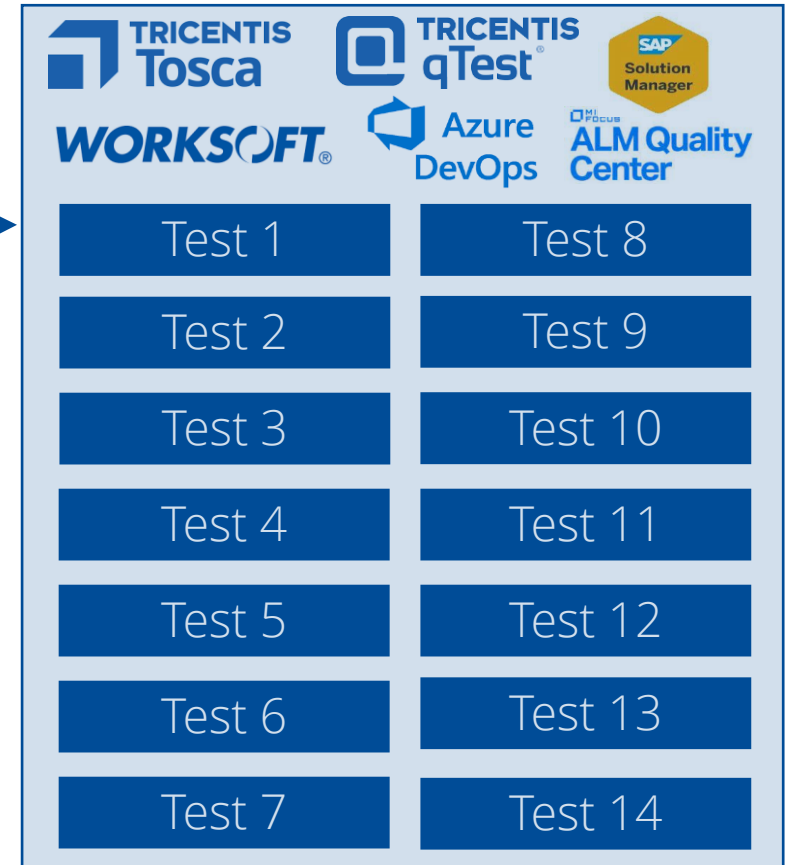


Change Impact Analysis Integrated with Test Repository

Major & Minor Releases
S/4 Version Upgrades Daily & Weekly Transports
Support Packs & EHP's Legal & Regulatory Updates



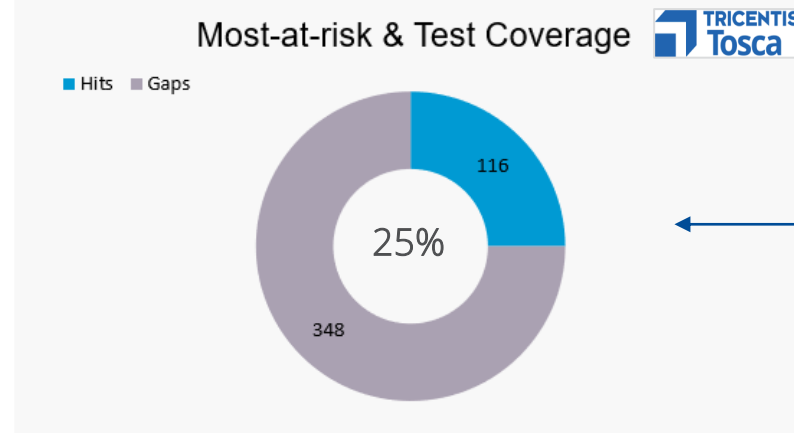
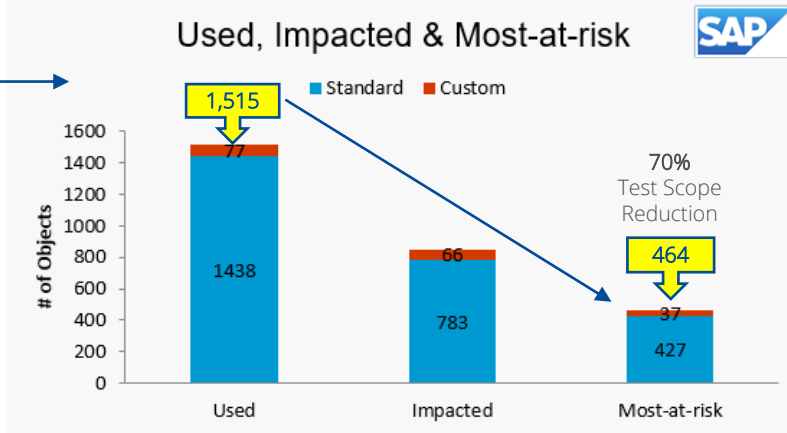
Intelligent Precision Testing
80% Reduced Testing Effort
Faster Testing Cycles
More Frequent Releases
Superior Quality



Impact Analysis & Test Coverage Summary

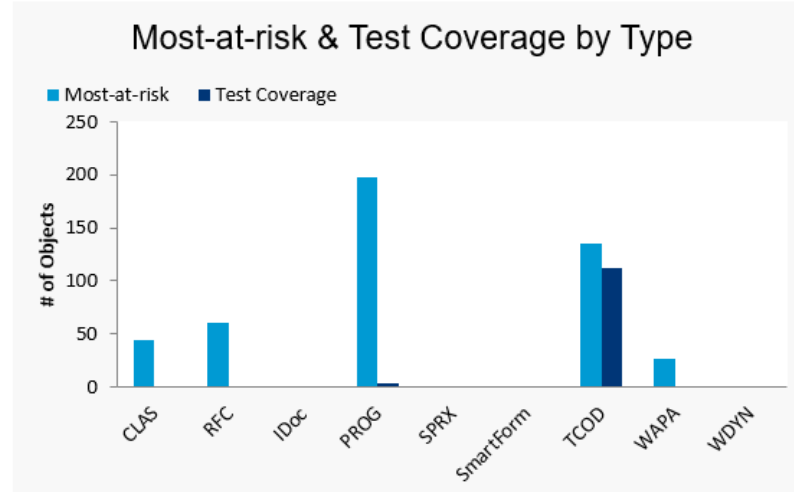
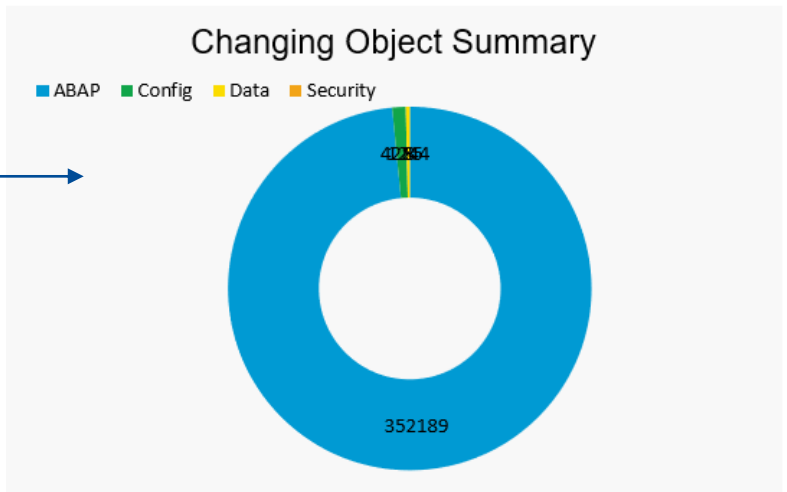
Impact Analysis

Analysis Date	Analysis System	Performance History	Release Stream
2023-02-11	E45_300	E46_100 Jan 2022 - Feb 2023	E45 N+1 Support Pack Upgrade

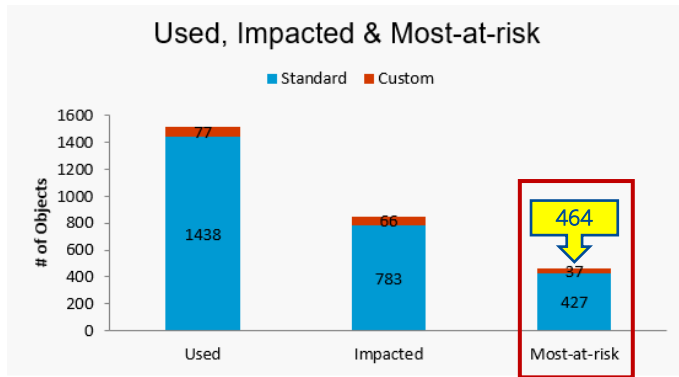


Test Coverage

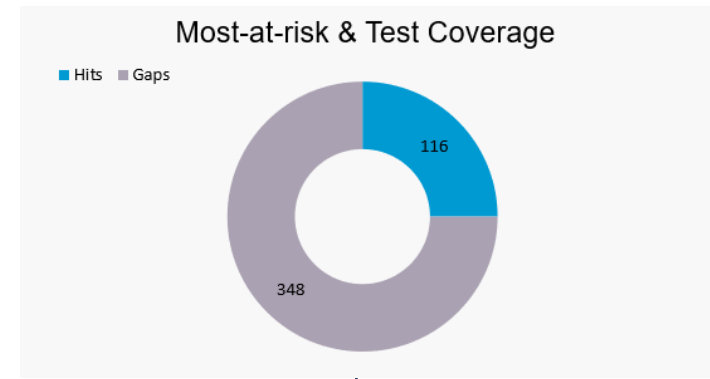
Change Scope



Test Scope & Test Coverage Summary



TEST SCOPE

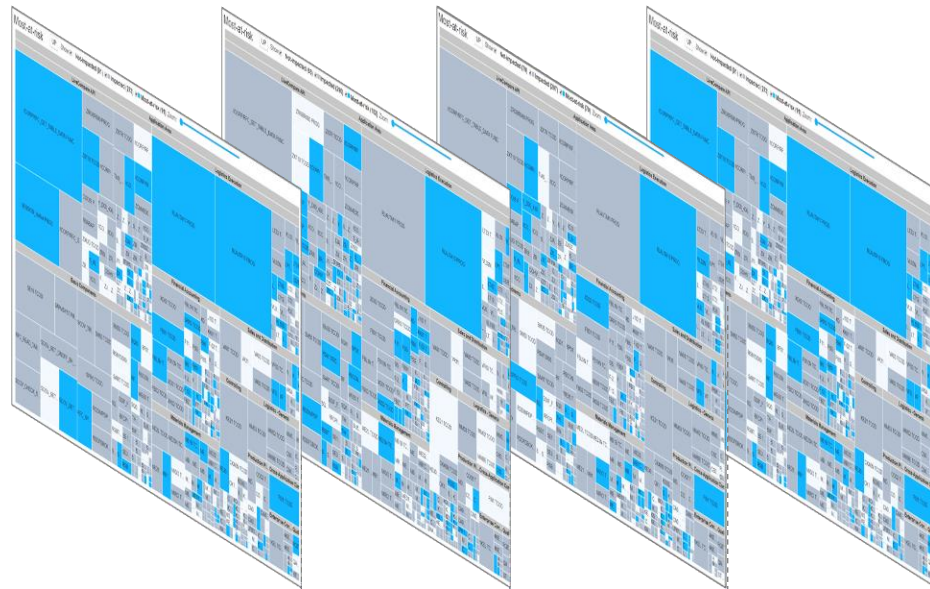


TRICENTIS
Tosca
TEST COVERAGE

APP_AREA	TYPE	NAME	STATUS	IMPACTFUL_OBJECTS	DESCRIPTION	USAGE	USERS	TESTS	CUSTOM	BUSINESS_CRITICAL
	CLAS	/ORS/NON_PO_INVOICE_NEW	Most-at-risk	97	Invoice Approval - Non PO Class	1	1			
Defense Forces and Public Security	PROG	/ISDFPS/EPA_PRINT_ADOBE_FORM	Most-at-risk	91		1				
Business Mobile	WAPA	MM_REQ_MAINTS1	Most-at-risk	90	Maintain Requisitions	7	1			
	PROG	ZPTPI_OB_PAID_INVOICE_TO_S2K	Most-at-risk	9	Paid Invoices to S2K	3	1		Y	
	WAPA	ZPTP_PICK_LIST	Most-at-risk	9	Pick List App	94	8		Y	
Basis Components	PROG	ESH_IX_CRT_INDEX_OBJECT_TYPE	Most-at-risk	9	Indexing an object type (BO, TO)	130	1			
Basis Components	PROG	SAPRSEUT	Most-at-risk	9	Update Object Lists After Transport (Job EU_PUT)	163	1			
Cross-Application Components	FUNC	APOC_OR_ISSUE_OUTPUT	Most-at-risk	9	Perform output of Output Request Items (FOR SAP INTERNAL USE ONLY)	336	28			
Cross-Application Components	PROG	BEH_R_DELETE_QUEUE	Most-at-risk	9	Report for deleting the outbound queue	259	1			
Financial Accounting	PROG	RFF110S	Most-at-risk	9	Report for the Automatic Scheduling of the Payment Program	34	2			
Financial Accounting	TCOD	FAGLB03	Most-at-risk	9	Display Balances	5	1	21		
Logistics - General	TCOD	CS01	Most-at-risk	9	Create Material BOM	2	1	6		
Logistics Execution	PROG	RVADKE01	Most-at-risk	9	Print Program for Picking Labels	1				
Materials Management	PROG	MMPUR_HUB_SYNC_EOP_DEL	Most-at-risk	9	HUB - EOP SYNC	520	1			
Materials Management	TCOD	MB5L	Most-at-risk	9	List of Stock Values: Balances	2	1	1		
Plant Maintenance	TCOD	IH08	Most-at-risk	9	Display Equipment	116	2	61		
Service	PROG	/BDL/SAPLBDL11	Most-at-risk	9	task manager functions	134	1			
Logistics - General	FUNC	WB2_SYNC_TC_FROM_PO	Most-at-risk	87	Sync a Trading Order from a Purchase Order	2195	12			
Plant Maintenance	TCOD	IW32	Most-at-risk	84	Change Maintenance Order	1220	15	162		
Project System	TCOD	CJ20N	Most-at-risk	81	Project Builder	236	9	96		
Materials Management	TCOD	MIGO	Most-at-risk	80	Goods Movement	6540	31	185		
	FUNC	/PGW/JAN_NOTIF_SEND_EVENT	Most-at-risk	8	Wrapper rfc for notif send_event method	5	2			
	FUNC	ARBCIG_PROA_MSG_TRIGGER	Most-at-risk	8	MB Document Update	20	5			
	FUNC	ZEAM_RFC_UPD_WO_USRFLD_IN_PREQ	Most-at-risk	8	EAM.PM.E.0354:Update EBAN using BAPI from work order	6396	3		Y	
	WAPA	ZPTP_GDS_RCPT	Most-at-risk	8	Post Goods Receipt	25	7		Y	
Basis Components	CLAS	CL_ABAP_DOCU_SERVICE_METHODS	Most-at-risk	8	Service Methods for ABAP Keyword Documentation	8	1			
Business Network Solutions	PROG	ARBERP_NAST_CXML_MESSAGE	Most-at-risk	8	Programm ARBERP_NAST_CXML_MESSAGE	1				
Cross-Application Components	CLAS	/UI2/CL_AD_RFC_ACCESS	Most-at-risk	8	RFC access to backend catalogs	41	1			
Enterprise Controlling	TCOD	KEMDM	Most-at-risk	8	Profit Center Master Data Maint.	5	1			
Financial Accounting	TCOD	FCH6	Most-at-risk	8	Change Check Information/Cash Check	5	1	3		
Logistics - General	PROG	RWLFNAST	Most-at-risk	8	Message Control, Form Routines	1				
Logistics Execution	PROG	RVTPSC00	Most-at-risk	8	Delivery Change Notice for Transportation Planning System	1				
Production Planning and Control	TCOD	MB26	Most-at-risk	8	Picking list	2	1			



Analyze Your Previous Releases to Identify Hotspots



Automate the Overlap 

Tricentis Tosca

 updates

-3

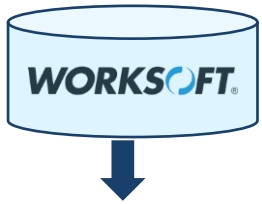
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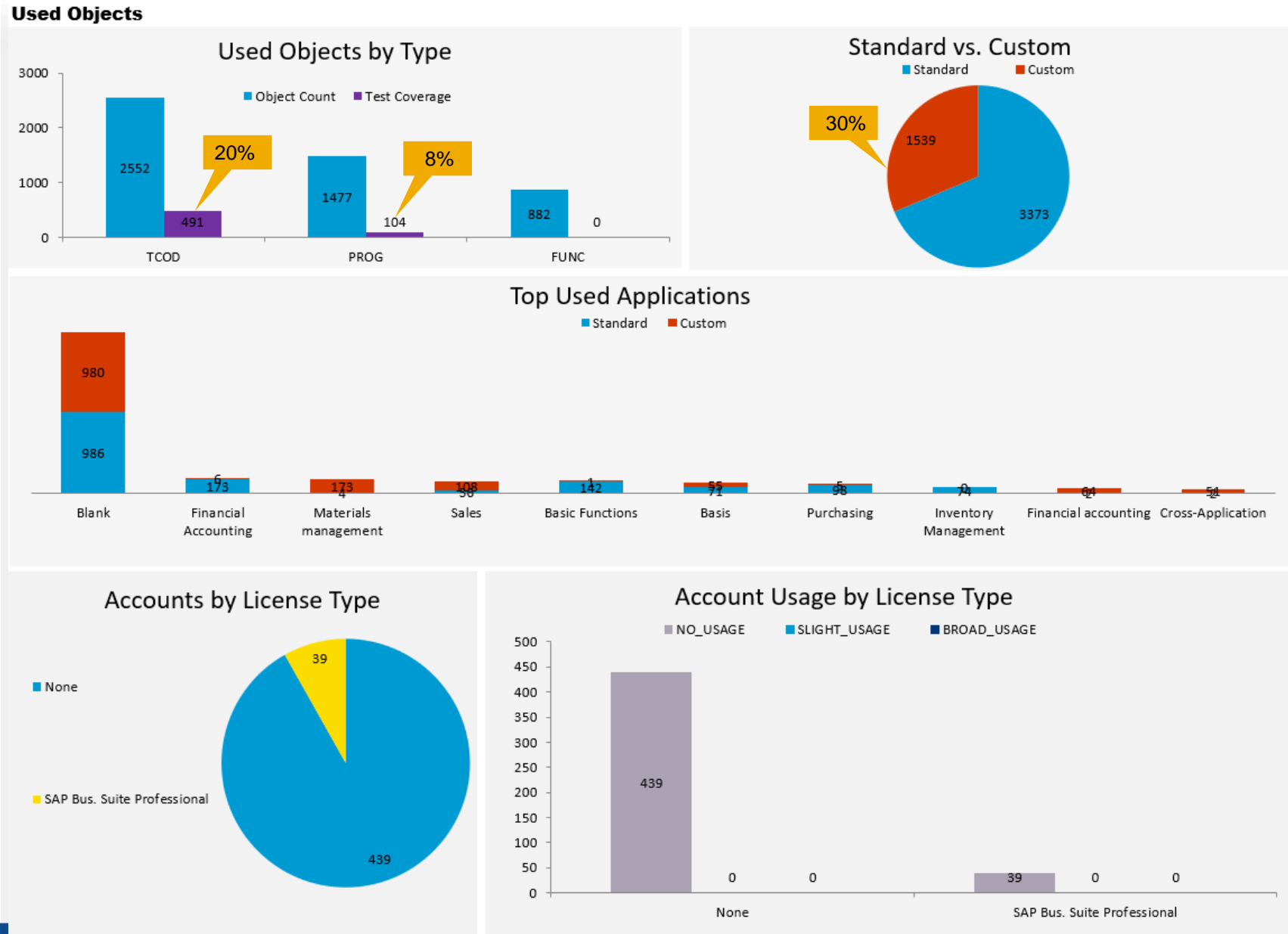
Today

t

Usage Audit & Associated Test Coverage



- 17,636 tests in Certify
- 595 of 4,911 Used Executables from PR1 have Test coverage



Duke Energy

Duke delivers on transforming customer experience
with the move to SAP S/4HANA

PROJECT BACKGROUND

- Transform the customer experience starting with streamlining internal billing systems for a universally optimized customer experience
- Duke's leadership knew testing would be a critical component to the project's success

COMPLICATIONS | CHALLENGES

- Consolidating 4 different billing applications into a single system
- Ensure the S/4HANA project did not negatively impact critical business processes
- Automating testing for multiple SAP applications –SAP for Utilities, SAP Marketing, SAP commerce cloud, ICU, C4C, Fiori and Customer recommendation engine

SUCCESSFUL BUSINESS OUTCOMES

- Test automation is viewed as high quality, high business value
- Advanced from waterfall to weekly SAP releases
- Defects discovered earlier, enabling faster and more efficient defect resolution



250

End-to-End Tests
Run Weekly

0

Defect
Releases

150

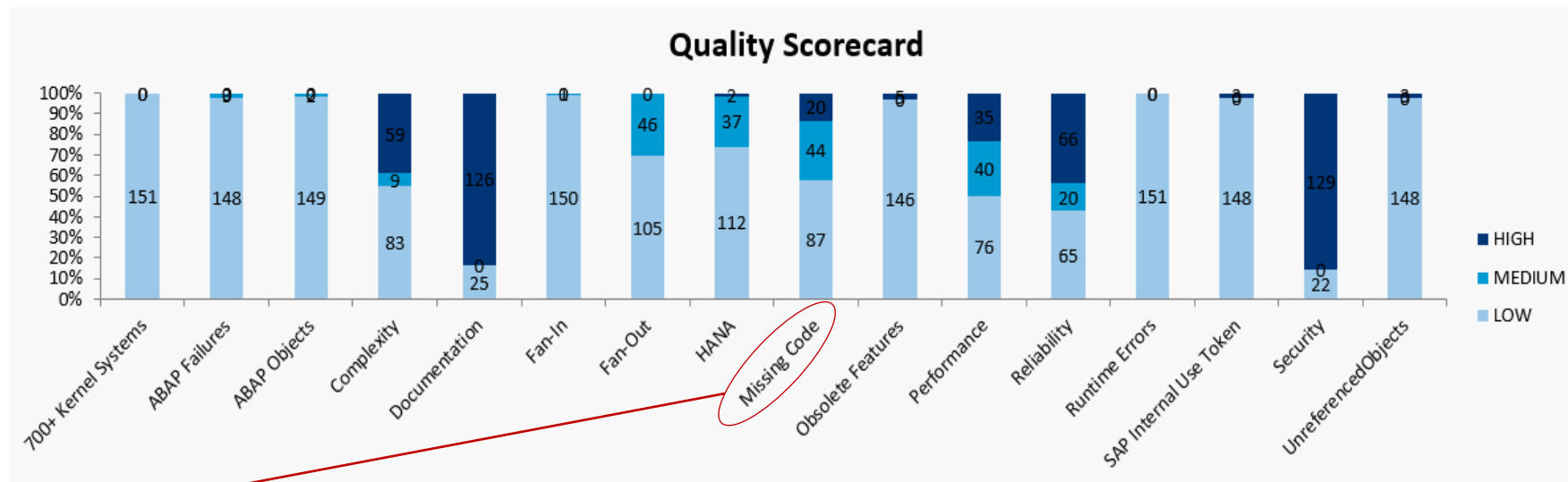
Unattended Tests
Run Nightly
(under 12 Mins)



ABAP Code Quality Inspection

ABAP Code Quality Inspection

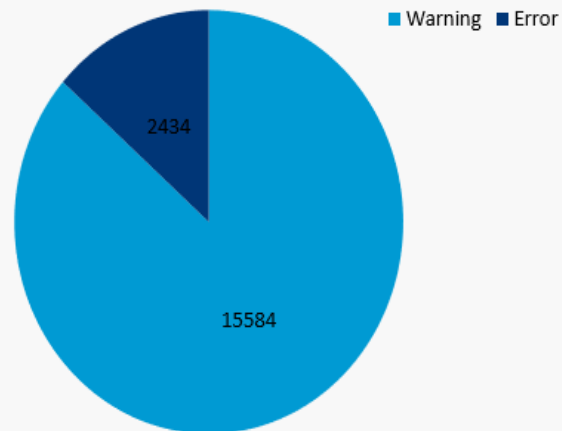
- Passed less than 80% of rules checked
- Passed 80-99% of rules checked
- Passed 100% of rules checked



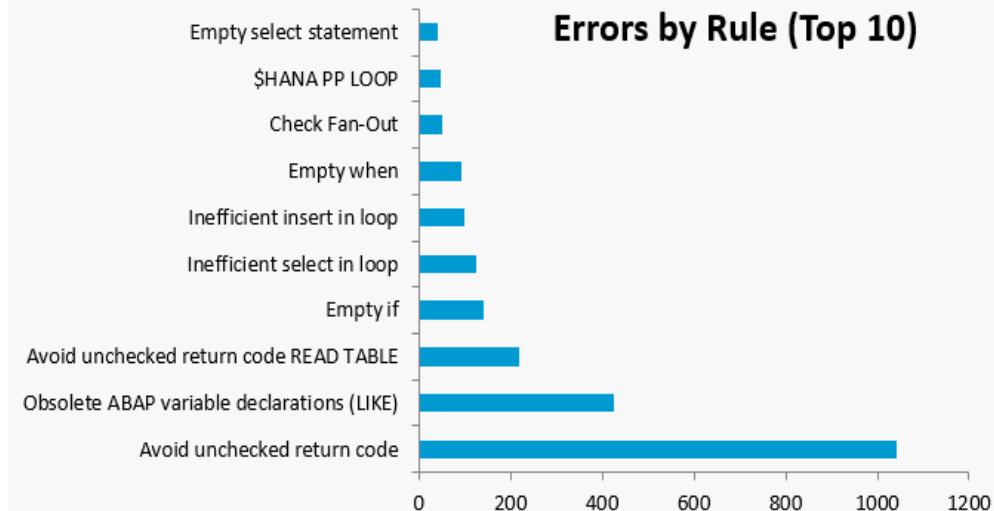
Missing Code Rule Checks

- Missing Code
- Empty case
- Empty Catch Blocks
- Empty else
- Empty elseif
- Empty function/form/module check
- Empty if
- Empty include check
- Empty program check
- Empty select statement
- Empty when
- Missing WHEN OTHERS
- Missing where restriction in select

Warning vs Error Summary

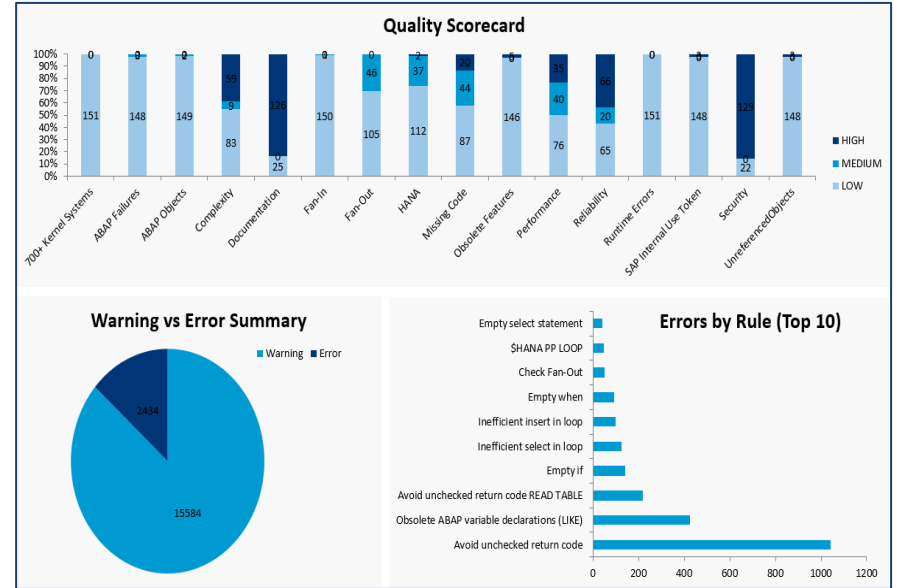
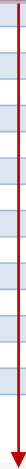


Errors by Rule (Top 10)



ABAP Code Quality - Missing Code

TYPE	NAME	CATEGORY	CLASS	RULE	DETECTIONS
PROG	/ZDMR/DM_CUSTOM_BUS_OBJECT	Missing Code	Error	Empty when	34
INCL	ZMM_I_PR_WF_TABLE_OPERATION	Missing Code	Error	Empty if	17
SFPI	ZPTP_PO_FORM_INTEFRACE	Missing Code	Error	Empty if	11
SFPI	ZUS00_MM_I_PO_FORM	Missing Code	Error	Empty if	11
SFPI	ZUSA_MM_I_PO_FORM	Missing Code	Error	Empty if	11
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	10
PROG	ZPTP_R_AGS_MES_DISP	Missing Code	Error	Empty when	10
PROG	ZOTC_R_MEND_REPORT	Missing Code	Error	Empty if	7
SFPI	ZPTP_I_PO_FORM_CPT	Missing Code	Error	Empty if	6
PROG	ZLES_F_PACKLIST	Missing Code	Error	Empty if	5
INCL	ZEWMI_HU_MASS_PACK_UNPACK_CLS	Missing Code	Error	Empty if	4
INCL	ZEWMI_HU_MASS_PACK_UNPACK_CLS	Missing Code	Error	Empty when	4
INCL	ZOTC_R_SHIPNG_PLAN_CLS	Missing Code	Error	Empty if	4
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty if	4
PROG	ZPTP_R_AGS_MES_DISP	Missing Code	Error	Empty if	4
PROG	ZRTR_I_BLACKLINE_UPLOAD	Missing Code	Error	Empty if	4
SFPI	ZPTP_PO_FORM_INTEFRACE	Missing Code	Error	Empty select statement	4
SFPI	ZUS00_MM_I_PO_FORM	Missing Code	Error	Empty select statement	4
SFPI	ZUSA_MM_I_PO_FORM	Missing Code	Error	Empty select statement	4
SFPI	ZUS_SD_IF_INVOICE	Missing Code	Error	Empty if	4
CLAS	ZCL_SCM_AGS_MES_DATA_HANDLER	Missing Code	Error	Empty select statement	3

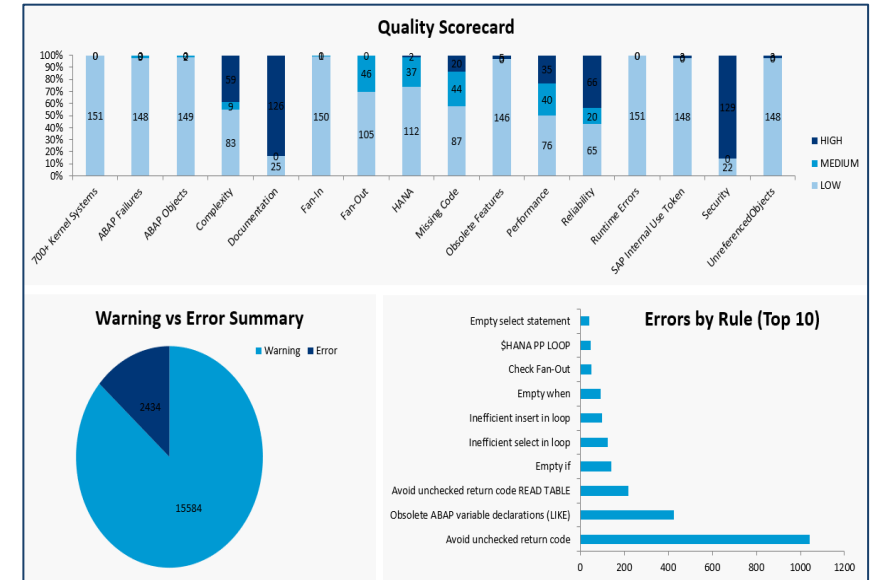


TYPE	NAME	CATEGORY	CLASS	RULE	TOKEN	LINE_NUMBER	SOURCE
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	1670	WHEN ICON_LED_GREEN
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	2392	WHEN 0
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	2417	WHEN 0
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	2442	WHEN 0
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	2467	WHEN 0
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	2627	WHEN OTHERS
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	2685	WHEN OTHERS
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	2738	WHEN OTHERS
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	2789	WHEN OTHERS
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	4742	WHEN OTHERS



ABAP Code Quality - Performance

TYPE	NAME	CATEGORY	CLASS	RULE	DETECTIONS
PROG	ZOTC_R_MEND_REPORT	Performance	Error	Inefficient select in loop	30
PROG	ZMB_SIT_NON_VAL_N_2014887	Performance	Error	Inefficient select in loop	21
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	20
CLAS	ZCL_SCM_AGS_MES_DATA_HANDLER	Performance	Error	Inefficient select in loop	8
PROG	ZMB_SIT_NON_VAL_N_2014887	Performance	Error	Inefficient insert in loop	6
PROG	/ZDMR/CUSTOM_TABLE_LOAD	Performance	Error	Inefficient insert in loop	2
PROG	ZUS00SDR_ORDER_CONFIRMATION	Performance	Error	Inefficient select in loop	2
INCL	ZEWM_MASS_HU_MOVEMENT_C01	Performance	Error	Inefficient select in loop	1
INCL	ZOTC_R_SHIPNG_PLAN_CLS	Performance	Error	Inefficient select in loop	1
PROG	/ZDMR/UNZIP_FILES	Performance	Error	Inefficient insert in loop	1
PROG	ZOTC_R_CPT_INV	Performance	Error	Inefficient select in loop	1
PROG	ZOTC_R_PACKINGSLIGT	Performance	Error	Inefficient select in loop	1
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient insert in loop	1
PROG	ZRTR_I_REUTERS	Performance	Error	Inefficient select in loop	1
PROG	ZSD_F_INVOICE_PRINT	Performance	Error	Inefficient select in loop	1
PROG	Z_T156Q_MISSING	Performance	Error	Inefficient append in select	1
SFPI	ZPTP_I_PO_FORM_CPT	Performance	Error	Inefficient select in loop	1
SFPI	ZUS_SD_IF_INVOICE	Performance	Error	Inefficient select in loop	1
SFPI	ZUS_SD_IF_PROFORMA	Performance	Error	Inefficient select in loop	1



TYPE	NAME	CATEGORY	CLASS	RULE	TOKEN	LINE_NUMBER	SOURCE
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient insert in loop	INSERT	1154	INSERT TB_E1BPACTX09 INDEX V_COUNTER
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	722	SELECT PRCTR FROM CSKS UP TO 1 ROWS INTO V_PRCTR WHERE KOSTL = TB_E1BPACGL09-COSTCENTER ORDER BY PRM
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	748	SELECT SINGLE VBUND INTO V_TRADE FROM KNA1 WHERE KUNNR = TB_E1BPACAR09-CUSTOMER
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	761	SELECT SINGLE VBUND INTO V_TRADE FROM LFA1 WHERE LIFNR = TB_E1BPACAP09-VENDOR_NO
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	820	SELECT SINGLE KTOPL INTO V_KTOPL FROM T001 WHERE BUKRS = TB_E1BPACHE09-COMP_CODE
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	823	SELECT SINGLE KTOGR INTO V_KTOGR FROM ANLA WHERE BUKRS = TB_E1BPACHE09-COMP_CODE AND ANLN1 = TB_E1
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	828	SELECT KTANSW INTO V_KTANSW FROM T095 UP TO 1 ROWS WHERE KTOPL = V_KTOPL AND KTOGR = V_KTOGR ORDER
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	881	SELECT * FROM TVARVC INTO CORRESPONDING FIELDS OF TABLE TB_VARV1 WHERE NAME = 'Z_EXI950_COMP'
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	895	SELECT SINGLE VBUND INTO V_TRADE FROM KNA1 WHERE KUNNR = TB_E1BPACAR09-CUSTOMER
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	908	SELECT SINGLE VBUND INTO V_TRADE FROM LFA1 WHERE LIFNR = TB_E1BPACAP09-VENDOR_NO
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	936	SELECT SINGLE ZTERM INTO V_ZTERM FROM KNB1 WHERE KUNNR = TB_E1BPACAR09-CUSTOMER AND BUKRS = TB_E1B
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	985	SELECT SINGLE ZTERM INTO V_ZTERM FROM LFB1 WHERE LIFNR = TB_E1BPACAP09-VENDOR_NO AND BUKRS = TB_E1B
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	1070	SELECT SINGLE LAND1 INTO V_LAND FROM T001 WHERE BUKRS = TB_E1BPACHE09-COMP_CODE
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	1085	SELECT SINGLE KALSM INTO V_KALSM FROM T005 WHERE LAND1 = V_LAND
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	1089	SELECT KVSL1 INTO V_KVSL1 FROM T683S UP TO 1 ROWS WHERE KALSM = V_KALSM AND KSCHL = TB_FTAXP-KSCHL OR
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	1098	SELECT KONTLS INTO V_KONTLS FROM T030K UP TO 1 ROWS WHERE KTOPL = 'GLOB' AND KTOSL = V_KVSL1 AND MWSKZ
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	1108	SELECT * FROM T007B INTO CORRESPONDING FIELDS OF TABLE TB_T007B WHERE KTOSL = V_KVSL1
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	1687	SELECT SINGLE * FROM PARAMVALUE WHERE FILEPARAM EQ K_WORK
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	1705	SELECT SINGLE FUNCNAME FROM TFDIR INTO TFDIR WHERE FUNCNAME EQ EXITFUNCTION
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	1723	SELECT SINGLE FUNCNAME FROM TFDIR INTO TFDIR WHERE FUNCNAME EQ Y_EXITFUNCTION
PROG	ZRTR_I_BLACKLINE_UPLOAD	Performance	Error	Inefficient select in loop	SELECT	1741	SELECT SINGLE FUNCNAME FROM TFDIR INTO TFDIR WHERE FUNCNAME EQ Z_EXITFUNCTION



Increased Release Cycles 8X

THE SITUATION

- Top-down initiative to transform software delivery process to Agile DevOps

THE NEED

- Needed a more efficient process for applying changes to meet the demands of business requirements

WHY TRICENTIS

- ❑ Complete solution that was easily embedded into existing change process and tools
 - Smart impact analysis
 - Integrated with Solution Manager's ChaRM
 - Integrated with Test Automation suite
- ❑ Provided additional Capabilities
 - Code quality analysis
 - Master Data Governance - Exception Reporting
 - Ongoing transactional usage analysis

RESULTS

- Within 12 months - Increased from 11 releases a year to 44
- Within 18 months - Increased from 44 releases a year to 88

BOSE

Snapshot

Number of releases using LiveCompare **+350%**

Custom testing (reduction) **99%**

Defects eliminated **200+**

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.

Lower costs by reducing manual test efforts and complexity.

Increase transparency and support real-time insights.

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

