

How to build a successful DevOps Practice in SAP



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

- 4
- 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- Outdated test automation & management solutions, no longer fit for purpose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.

Key Questions



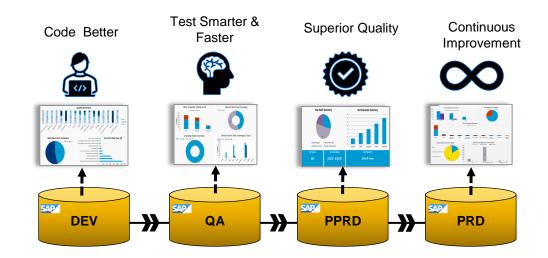
LiveCompare Introduction

LiveCompare is an Al-Powered Change Intelligence Platform to enable customers to facilitate a streamlined, more efficient, higher quality SAP change & release process.

Delivers real-time insights across the SAP delivery pipeline empowering SAP delivery teams to modernize their SAP change and release process leveraging data-driven insights to Code Better, Test Smarter, Release Faster with Superior Quality

Equips SAP project teams with the Intelligence they need to accelerate and de-risk SAP

Transformational projects

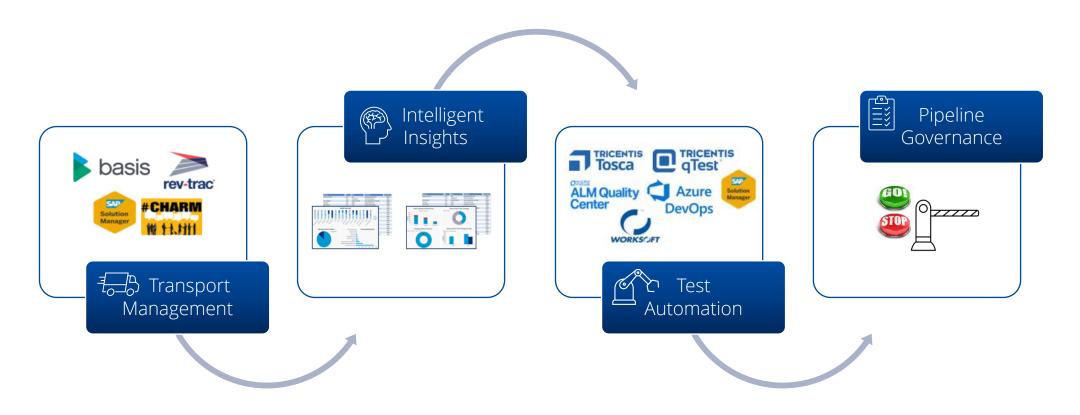






Orchestrating DevOps for SAP

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



Al-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 diagraphs and configuration for
- 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



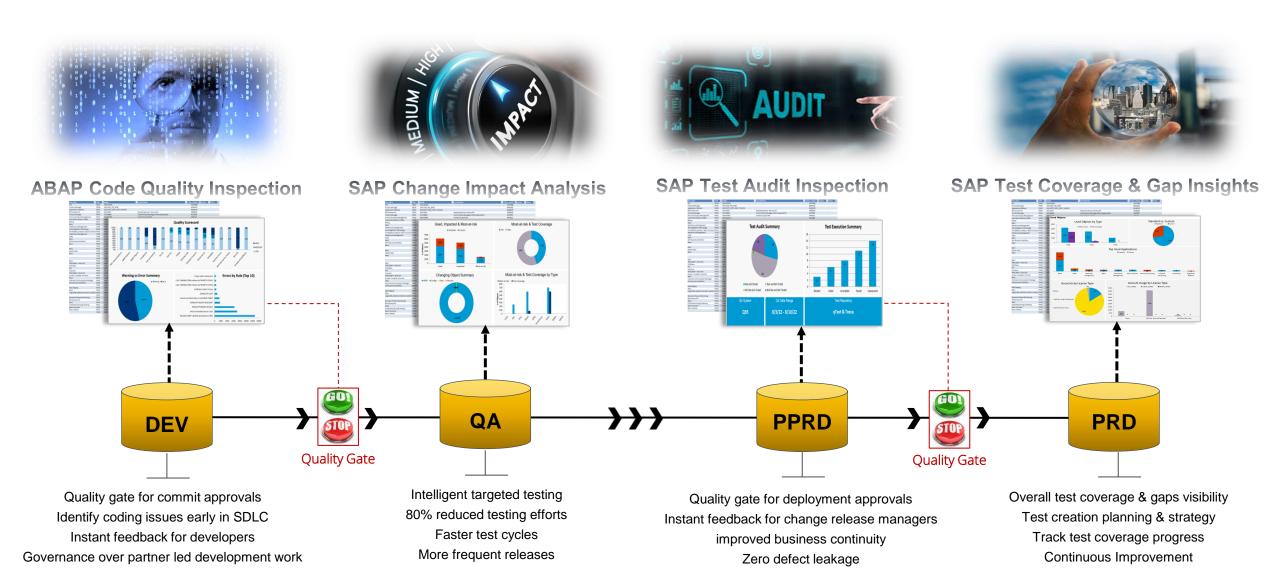
- Ensure code, config & data stays in sync
- Avoid defects cased by system discrepancies
- Reduced need for system refreshes
- Test data validation

S/4 Readiness Assessment

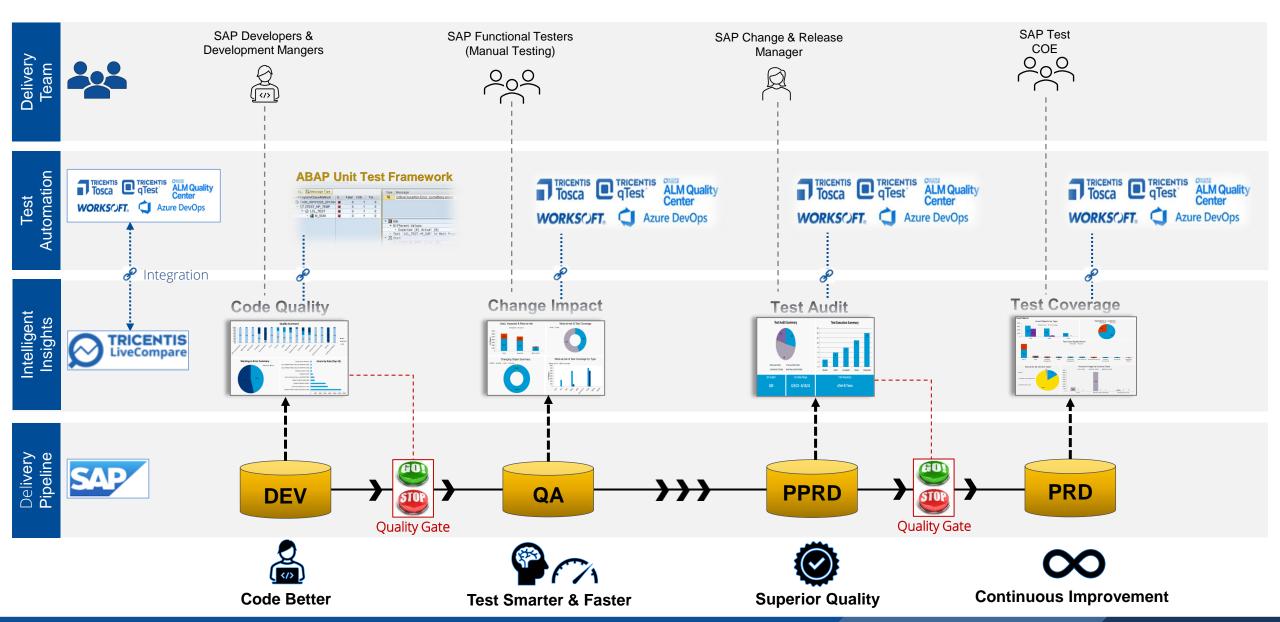


- Compare existing ECC to target S/4
- Key insights to plan, scope and strategize
- Identify impact & test scope
- Retire dormant custom code
- Improve quality & performance of existing code
- Remediate existing code to be S/4 ready

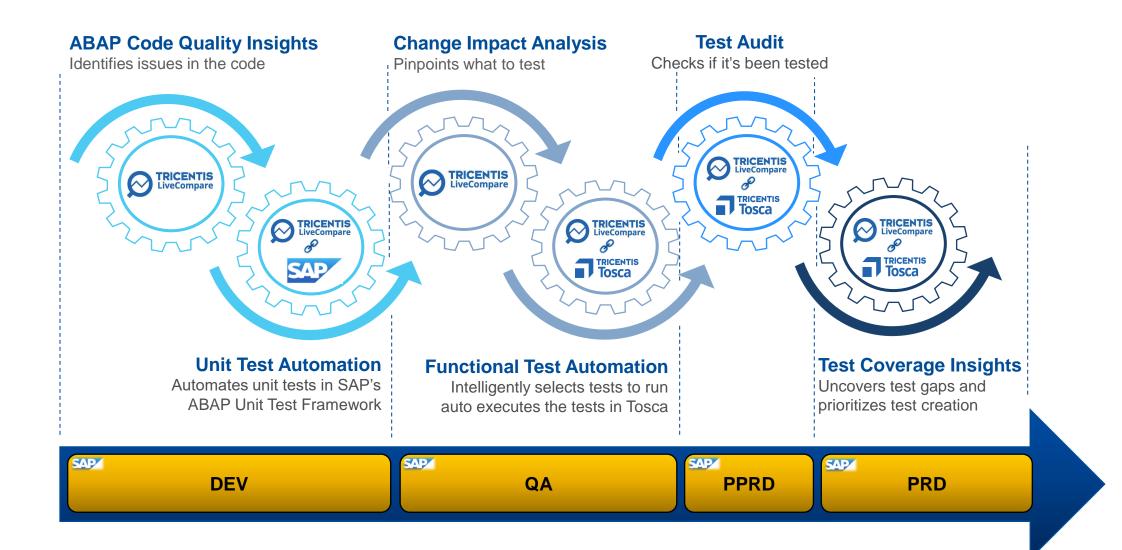
SAP Change & Release Insights



Modernized SAP Change & Release Process



Automated Change & Release Process



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

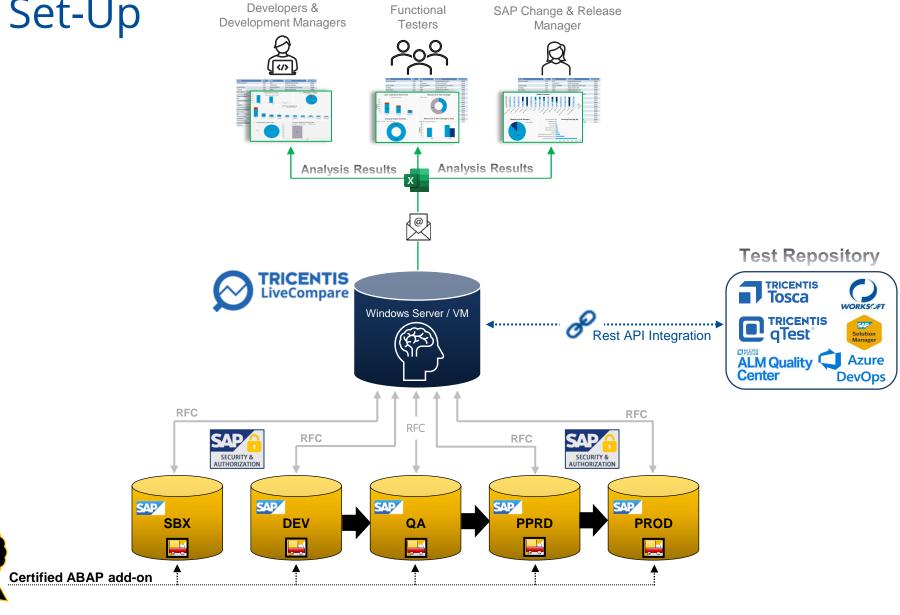
Modernized Agile Testing Strategy

- 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

Architecture & Set-Up



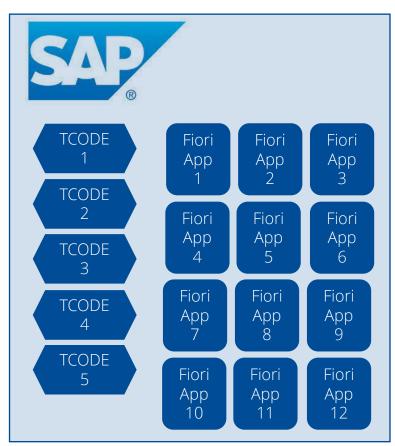


Change Impact Analysis Integrated with Test Repository

Major & Minor Releases

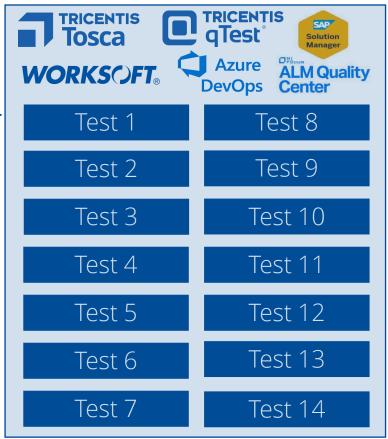
S/4 Version Upgrades Daily & Weekly Transports

Support Packs & EHP's Legal & Regulatory Updates

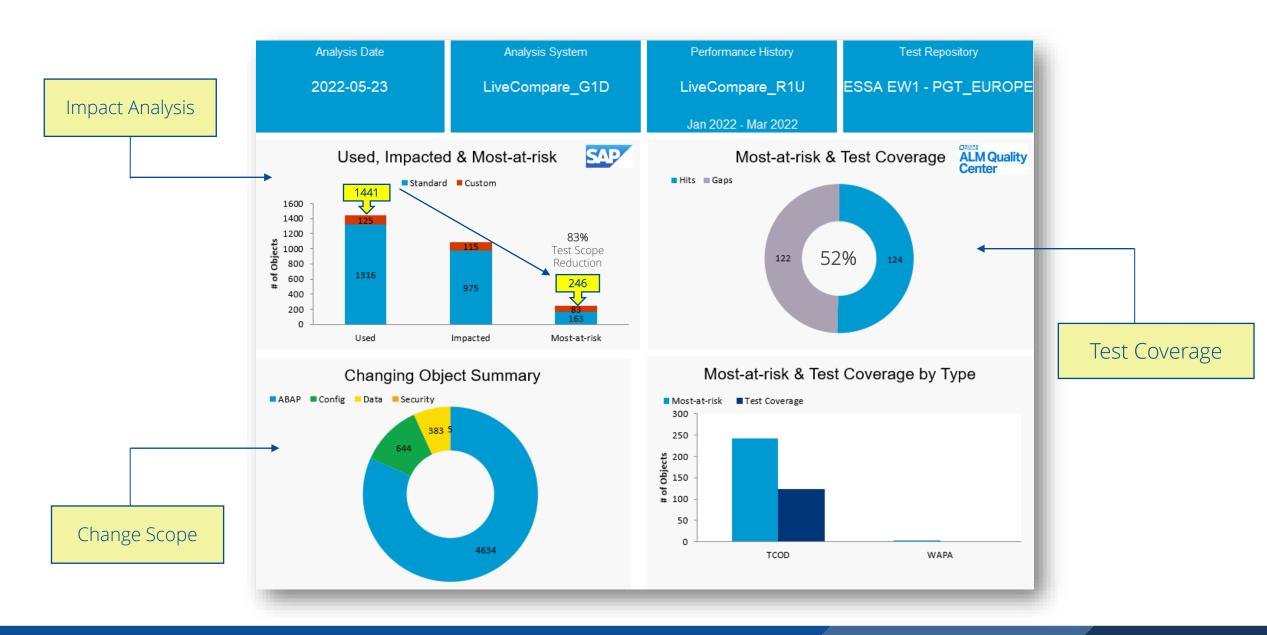




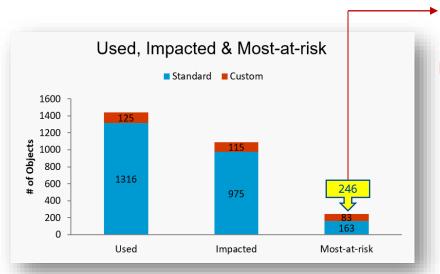
Intelligent Precision Testing 80% Reduced Testing Effort Faster Testing Cycles More Frequent Releases Superior Quality



Impact Analysis & Test Coverage Summary



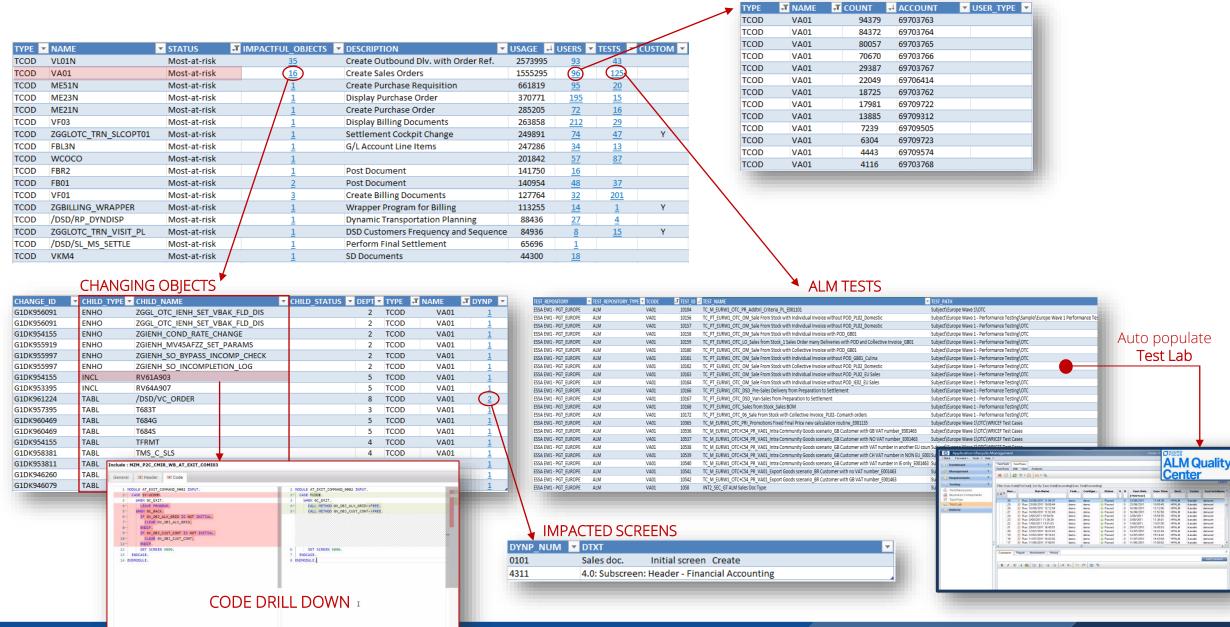
Most at Risk Test Cope Summary



	Test Scop)e						
TYPE ▼	NAME	▼ STATUS	IMPACTFUL_OBJECTS	DESCRIPTION	USAGE →	USERS	▼ TESTS	▼ CUSTOM ▼
TCOD	VL01N	Most-at-risk	35	Create Outbound Dlv. with Order Ref.	2573995	93	43	
TCOD	VA01	Most-at-risk	<u>16</u>	Create Sales Orders	1555295	96	125	
TCOD	ME51N	Most-at-risk	1	Create Purchase Requisition	661819	95	20	
TCOD	ME23N	Most-at-risk	<u>1</u>	Display Purchase Order	370771	195	<u>15</u>	
TCOD	ME21N	Most-at-risk	1	Create Purchase Order	285205	72	16	
TCOD	VF03	Most-at-risk	<u>1</u>	Display Billing Documents	263858	212	29	
TCOD	ZGGLOTC_TRN_SLCOPT01	Most-at-risk	<u>1</u>	Settlement Cockpit Change	249891	74	47	Y
TCOD	FBL3N	Most-at-risk	<u>1</u>	G/L Account Line Items	247286	34	13	
TCOD	wcoco	Most-at-risk	<u>1</u>		201842	57	87	
TCOD	FBR2	Most-at-risk	<u>1</u>	Post Document	141750	16		
TCOD	FB01	Most-at-risk	<u>2</u>	Post Document	140954	48	<u>37</u>	
TCOD	VF01	Most-at-risk	<u>3</u>	Create Billing Documents	127764	32	201	
TCOD	ZGBILLING_WRAPPER	Most-at-risk	1	Wrapper Program for Billing	113255	14	1	Y
TCOD	/DSD/RP_DYNDISP	Most-at-risk	1	Dynamic Transportation Planning	88436	27	4	
TCOD	ZGGLOTC_TRN_VISIT_PL	Most-at-risk	1	DSD Customers Frequency and Sequence	e 84936	8	15	Y
TCOD	/DSD/SL_MS_SETTLE	Most-at-risk	<u>1</u>	Perform Final Settlement	65696	1		
TCOD	VKM4	Most-at-risk	1	SD Documents	44300	18		
TCOD	ZGGLMTD_TRN_PROD_JDA	Most-at-risk	<u>5</u>	Production Method S4 to JDA	35429	55	<u>6</u>	Y
TCOD	VK12	Most-at-risk	4	Change Condition	30278	16	8	
TCOD	VK11	Most-at-risk	4	Create Condition	28576	14	29	
TCOD	ZGGL_OTC_TRN_VK11	Most-at-risk	<u>12</u>	Price Upload Program	25278	18	10	Y
TCOD	ZG_BLIND_SETTLEMENT	Most-at-risk	1	Tcode For Blind Settlement	24646	2		Y
TCOD	ZGROADNET_DELIVERY	Most-at-risk	<u>2</u>	Deliveries interface S4 to Roadnet	20456	11	3	Y
TCOD	FBL5N	Most-at-risk	<u>1</u>	Customer Line Items	18161	30	9	
TCOD	ZG_CREDIT_CONTROL	Most-at-risk	<u>1</u>	Tcode for ZGIOB_CREDIT_CONTROL	18013	3	17	Υ
TCOD	/OPT/VIM_WP	Most-at-risk	<u>1</u>		16706	33	11	
TCOD	ZGGLOTC_TRN_VPLAN	Most-at-risk	<u>1</u>	Visit Plan Data to DSD	11619	7	21	Υ
TCOD	BD21	Most-at-risk	<u>2</u>	Select change pointer	11592	1		
TCOD	VV32	Most-at-risk	<u>1</u>	Change output: Billing	11169	<u>15</u>		
TCOD	ME31K	Most-at-risk	<u>1</u>	Create Contract	11009	27	1	
TCOD	MIGO	Most-at-risk	1	Goods Movement	10820	63	120	
TCOD	ZGGLOTC_TRN_PRC_COND	Most-at-risk	<u>8</u>	Pricing Condition Interface	7079	5	15	Y
TCOD	ZG_TRN_LIS_EXC_HHC	Most-at-risk	<u>2</u>	Listing/ Exclusion Cond Rec to HHC	5365	3	30	Υ
TCOD	F110	Most-at-risk	<u>1</u>	Parameters for Automatic Payment	4717	13	31	
TCOD	ZGSETTLEMENT_CONTROL	Most-at-risk	1	Settlement control report	4621	11	2	Υ
TCOD	VOE4	Most-at-risk	<u>1</u>	Sales EDI Conversion	3357	3		
TCOD	ZGSORTED_PRINT	Most-at-risk	<u>1</u>	Print Program	3227	<u>5</u>	1	Υ
TCOD	ZGMOV_VAN_STOCK	Most-at-risk	<u>1</u>	Move Van Stock to Next Day	2827	7	4	Y

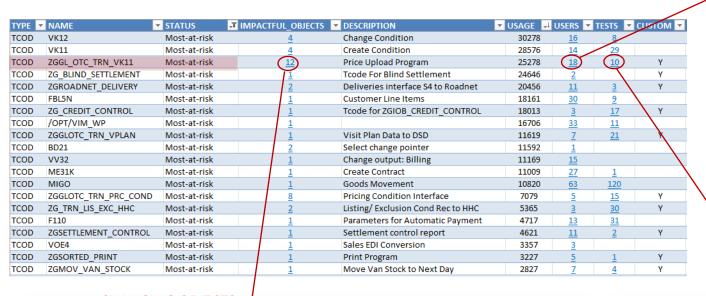
Most at Risk Drill Down

X Tricentis



IMPACTED USERS

Most at Risk Drill Down



IMP	P	ACTED USER	S
TYPE	Ţ,	NAME	Ţ,
TCOD		ZGGL_OTC_TRN_VK11	

TYPE	■ NAME	■ COUNT	→ ACCOUNT	¥	USER_1	TYPE	~
TCOD	ZGGL_OTC_TRN_VK11	8981	69703944				
TCOD	ZGGL_OTC_TRN_VK11	3780	69703945				
TCOD	ZGGL_OTC_TRN_VK11	1271	69709594				
TCOD	ZGGL_OTC_TRN_VK11	643	69702678				
TCOD	ZGGL_OTC_TRN_VK11	374	69703946				
TCOD	ZGGL_OTC_TRN_VK11	149	FFS_R1U_DATY				
TCOD	ZGGL_OTC_TRN_VK11	127	FFS_R1U_DATU	1			
TCOD	ZGGL_OTC_TRN_VK11	110	FFS_R1U_OTC3				
TCOD	ZGGL_OTC_TRN_VK11	35	FFS_R1U_BDTI				
TCOD	ZGGL_OTC_TRN_VK11	31	69703765				
TCOD	ZGGL_OTC_TRN_VK11	31	69709644				
TCOD	ZGGL_OTC_TRN_VK11	31	FFS_R1U_OTCC				
TCOD	ZGGL_OTC_TRN_VK11	17	69704033				
TCOD	ZGGL_OTC_TRN_VK11	17	FFS_R1U_BDTA				
TCOD	ZGGL_OTC_TRN_VK11	10	FFS_R1U_OTC2				
TCOD	ZGGL_OTC_TRN_VK11	8	FFS_R1U_OTC8				
TCOD	ZGGL_OTC_TRN_VK11	5	FFS_R1U_OTCH				
TCOD	ZGGL_OTC_TRN_VK11	4	FFS_R1U_OTCD				

CHANGING OBJECTS

X Tricentis

CHANGE_ID	CHILD_TYP	PE 🔽 CHILD_NAME		CHILD_STA	TUS 🔽 DEPTH	TYPE	■ NAME	DYNP	▼
G1DK961271	DTEL	ZGDEL_CNTX1			2	TCOD	ZGGL_OTC_TRN_VK11		
G1DK961271	DTEL	ZGDEL_INTXT			2	TCOD	ZGGL_OTC_TRN_VK11		
G1DK961271	DTEL	ZGDEL_PRTXT			2	TCOD	ZGGL_OTC_TRN_VK11		
G1DK961271	INCL	ZGGL_OTC_IN	C_PRICE_UPLD_F01		2	TCOD	ZGGL_OTC_TRN_VK11		
G1DK961271	INCL	ZGGL_OTC_IN	C_PRICE_UPLD_TOP		2	TCOD	ZGGL_OTC_TRN_VK11		
G1DK961271	STRC	ZGGL_OTC_ST	R_CONTAINER2		2	TCOD	ZGGL_OTC_TRN_VK11		
G1DK961975	STRC	ZGSTR_COND	NON_KEY_FIELDS		2	TCOD	ZGGL_OTC_TRN_VK11		
G1DK948932	TABL	T681E			2	TCOD	ZGGL_OTC_TRN_VK11		
G1DK948932	TABL	T682I			2	TCOD	ZGGL_OTC_TRN_VK11		
G1DK954831	TABL	T685A			2	TCOD	ZGGL_OTC_TRN_VK11		
G1DK948932	TABL	TMC1D	Table Definition : KNA1						
G1DK948932	TABL	TMC1T	General (X) Header	1 Attributes					
			⊕ (E) J_1IEXCO - E	ccise Commissionera Central Sales Tax Nu					

3 1ILSTNO - Local Sales Tax Number

J_IISERN - Service Tax Registration Number

TABLE/CONFIG DRILL DOWN J 1IPANNO - Permanent Account Number
J 1IEXCICU - Excise tax indicator for customer ■ AEDAT - (Obsolete) Last Changed On âC" do not use
■ USNAM - (Obsolete) Changed by the user âC" do not use

J 1IPANREF - PAN Reference Number SGST_TDS (Only in SE1_900) - GST TDS Registrati Field Name SE1_900 ZE1_900 Position of the field in the table 002583 Offset of a field 000018 Length (No. of Characters) 000018 Internal Length in Bytes DECIMALS 000000 Number of Decimal Places DATATYPE CHAR ABAP Dictionary: Dynpro Data Type for Screen Painter

Conversion Routine 3 3GETYP - Recipient Type Field Name SE1 900 ZE1 900

000002

INTLEN

Position of the field in the table Length (No. of Characters) 000002 Internal Length in Bytes

ALM TESTS TO RUN AINT EURW1 OTC OM SaleFromStockWithListingsExclusions GB ZGGL OTC TRN VK11 AINT_EURW1_OTC_OM_SaleFromStockWithListingsExclusions_IE ZGGL_OTC_TRN_VK11 AINT_EURW1_OTC_OM_SaleFromStockWithListingsExclusions PL ASIT2_EURW1_OTC_PR_Mass Upload new features-UK T-202876 EURW1 OTC ZGGLOTC TRN CHNG LOG Check Change Log Audit report ZGGL OTC TRN VK11 T-212085 EURW1 OTC ZGGL OTC TRN VK11 Mass upload program for pricing TC M EURW1 OTC PR ZGGL OTC TRN VK11 Pricing Upload Program E000225 ZGGL OTC TRN VK11 TC_M_GT_OTC_PR_Create pricing upload, mass change functionality ZGGL_OTC_TRN_VK11 ZGGL OTC TRN VK11 TC_M_GT_OTC_PR_Create pricing upload, mass change functionality TC M GT OTC PR Create pricing upload, mass change functionality

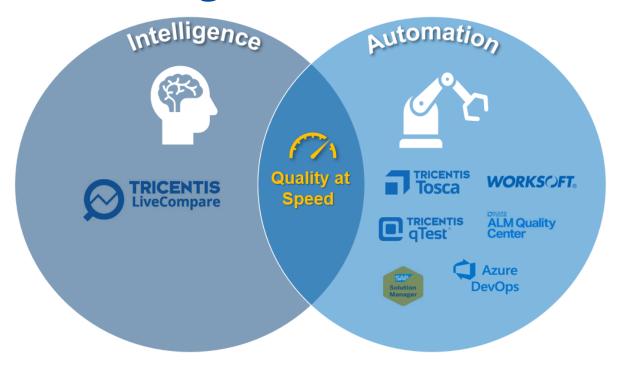
Auto populate Subject\Europe Wave 1 - Automation\AINT 1\OTC Test Lab Subject\Europe Wave 1 - Automation\AINT 1\OTC Subject\Europe Wave 1 - Automation\AINT 1\OTC Subject\Europe Wave 1 - Automation\ASIT2\OTC Subject\Europe Wave 1\OTC\Pricing & Rebates Subject\Europe Wave 1\OTC\Pricing & Rebates Subject\Europe Wave 1\OTC\WRICEF Test Cases **ALM Quality** Sub Test Pure Diff. View Acetotic X B O V-B Q-Q

Change Impact Analysis



- Intelligent targeted testing
- 80% reduced testing efforts
- Faster test cycles
- Increase release cadences 2-3X
- Perform SAP upgrades more frequently in less time with lower costs and less risk
- Superior quality

Intelligent Automation





LiveCompare Pinpoints what in SAP needs to be tested

Intelligent Test Selection

LiveCompare Intelligently selects the tests in the test repository that should be executed.

Livecompare

LiveCompare loads tests into Tosca's test execution folder & auto executes the tests in Tosca

Auto Test

Execution

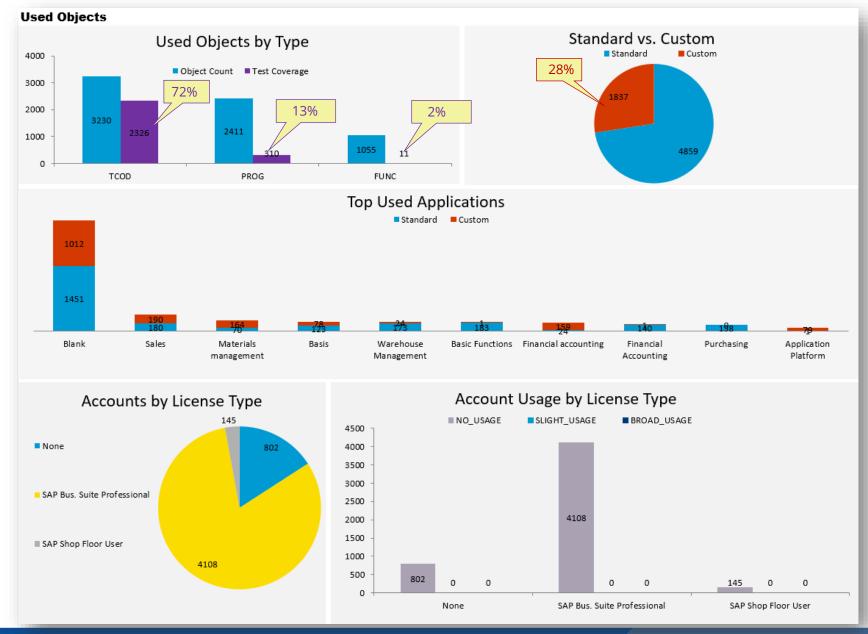
Auto Identify

LiveCompare auto identifies broken tests due to screen discrepancies for faster, easier test maintenance

Sick Test Cases



SAP Usage & Test Coverage Insights



Test Coverage Summary

APP_AREA		▼ TYPE	✓ NAME	▼ The state of th	DESCRIPTION	▼ TO	OTAL_USAGE IT USERS	▼ TESTS ▼	
RFC		PROG	SAPLQOWK				71477888		
Process Message		PROG	SAPLCMX_P	M_SEND			56010625		
Sales		TCOD	VA02		Change Sales Order		42468918	3262	
		TCOD	/COCKPIT/1		Process Director: Accounts Payable		17574129	<u>3789</u>	
Application Platfor	rm	PROG	SAPLZOTC_I	DOC_INPUT_INVOIC			16158279		
BW Service API		PROG	SAPLRSAP		Reporting Server: Service API		13086285		
Session Manager		TCOD	SESSION_M	ANAGER	Session Manager Menu Tree Display		11125979	<u>29</u>	
Sales		TCOD	VA01		Create Sales Order		9963203	<u>7969</u>	
Process Message		PROG	RCOCB004		Send Process Messages (Plant-Dependent)		8557899		
Print and Output M	Management	PROG	RSPOWP00		Frame for Spool WP		8443516		
Shipping		TCOD	VL02N		Change Outbound Delivery		7896601	<u>6005</u>	
Shipping		TCOD	VL01N		Create Outbound Dlv. with Order Ref.		7895329	<u>5413</u>	
Internationalizatio	on (I18N)	PROG	SAPLNLSK_0	3			6612280		
Inventory Manager	ement	TCOD	MB1B		Transfer Posting		6328596	1229	
Inventory Manager	ement	TCOD	MIGO		Goods Movement		6205320	<u>4952</u>	
Maintenance Task	Lists	TCOD	IP10		Schedule Maintenance Plan		5106062	630	
Purchasing		TCOD	ME23N		Display Purchase Order		5093556	3959	
PPC		TCOD	ZPPPI_CALC	_NET_YIELD	Calculate Net Yield		5038378	33	
Inventory Manager	ment	TCOD	MB51		Material Doc. List		4818246	2187	
		TCOD	YOTC_BAY_	MANAGE	Bay Content Management Report		4744810	18	
Inventory Manager	ment	TCOD	MB52		List of Warehouse Stocks on Hand		4621070	1427	
Basic Functions		TCOD	VA05		List of Sales Orders		4351480	670	
		TCOD	ZEWAY_TOO	DL	E-way Tool T-code		4345700	72	
Purchasing		TCOD	ME21N		Create Purchase Order		4281529	4929	
Browser-Based PI S	Sheet / Cockpit	TCOD	CO60		Find PI Sheet		4219176	368	
Warehouse Manag	gement	TCOD	LS26		Warehouse stocks per material		3802105	836	
Conditions		TCOD	VK11		Create Condition		3791282	407	
		TCOD	YMTI RF GI	GR	Tcode for YMTIE RF GIGR DECLARATION		3440904	98	
Material Master		TCOD	MMBE		Stock Overview		3359369	3730	
Master Data		TCOD	MD04		Display Stock/Requirements Situation		3264284	1411	▼ Tests
Information System	m TOKEN		TEST ID	TEST NAME			▼ TEST PATH		
Financial Accounting	ing YOTC BAY MAN	IAGE	40441	LogOps N APAC BOF-Back of Factor	y with QI material AU Logops		Subject\Regression Inve	ntory\APAC\SAP\LogO	ps\Warehouse Management\Manage Stocks
Results Recording			103243	LogOps N_APAC_BOF-Back of Factor					CRF 10215 - CloudNEXT Wave 7\06 UAT - Test Cycle 1\Log Ops\Australia\SAP_WM
Financial Accounting			192909		on lot generation for Process order using Z004 (Posi	tive Release) inspection typ			MEU May Major Release\AMEA\CRF 11651 - Gourmet Food Integration - Australia\
General Ledger Acc			168946	LogOps N APAC BOF-Back of Factor		, , , , , ,			NEU Jun Major Release\CRF 10969 - Project Armstrong - MEU/AMEA/Global SAP U
Transportation	YOTC BAY MAN		168945	LogOps N APAC BOF-Back of Factor					MEU Jun Major Release\CRF 10969 - Project Armstrong - MEU/AMEA/Global SAP U
Billing	YOTC BAY MAN		175483	MTI N APAC Back Of Factory	, = = = 01		•		NEU Jun Major Release\CRF 10969 - Project Armstrong - MEU/AMEA/Global SAP U
Warehouse Manag			174493	LogOps N APAC BOF-Back of Factor	v without QI Material AU Logops		•		MEU Jun Major Release\CRF 10969 - Project Armstrong - MEU/AMEA/Global SAP U
Purchasing	YOTC BAY MAN		30132	LYOTC BAY MANAGEMENTU02	,				\Major Releases\2018-05 May Release\AMEA\APAC SAP EHP Upgrades -CRF 1448
Inventory Manager			91529	MTI N APAC Back Of Factory			Subject\Regression Inve		
Billing	YOTC BAY MAN		91528	MTI_N_APAC_Back Of Factory			Unattached	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Billing	YOTC BAY MAN		196070	RTR-CRF11651-AMEA-CDD3085 - Gou	rrmet Food Integration - Australia			023-05 GLOBAL AMEA N	MEU May Major Release\AMEA\CRF 11651 - Gourmet Food Integration - Australia\
Billing	YOTC BAY MAN		31389	LYOTC BAY MANAGEMENTU03	0		• •		\Major Releases\2018-05 May Release\AMEA\APAC SAP EHP Upgrades -CRF 1448
Billing	YOTC BAY MAN		103244	LogOps_N_APAC_BOF-Back of Factor	y without QI Material AU Logops				CRF 10215 - CloudNEXT Wave 7\06 UAT - Test Cycle 1\Log Ops\Australia\SAP WM
Inspection Lot Com			40442	LogOps N APAC BOF-Back of Factor					ps\Warehouse Management\Manage Stocks
	YOTC BAY MAN		170076	MTI N APAC Back Of Factory	,				NEU Jun Major Release\CRF 10969 - Project Armstrong - MEU/AMEA/Global SAP U
	YOTC BAY MAN		194243	WM E APAC CRF11651 YOTC BAY	MANAGE				MEU May Major Release\AMEA\CRF 11651 - Gourmet Food Integration - Australia
	YOTC_BAY_MAN		180661	MTI N APAC Back Of Factory					Release\CRF 11456 - CTO SAP OS/DB Upgrades October 2022\05 Integration Testin
	YOTC BAY MAN		30934	LYOTC BAY MANAGEMENTO01			•	•	\Major Releases\2018-05 May Release\AMEA\APAC SAP EHP Upgrades -CRF 1448'
	. STO_DAT_WAI		50554	z.o.o_bal_manacmentour			Sasjeet (Additional Test)	siders (impration	timeles transfer from any transfer framer for the over the obligates that the



Test Coverage (hits & Gaps) Financial Accounting & Inventory Management

APP_AREA	™ TYPE	J NAME	DESCRIPTION	▼ TOTAL_USAGE	▼ USERS	▼ TESTS ▼
Financial Accounting	TCOD	FB1S	Clear G/L Account	1050	2	
Financial Accounting	TCOD	FB03	Display Document	788	<u>6</u>	<u>58</u>
Financial Accounting	TCOD	FB01	Post Document	219	<u>4</u>	
Financial Accounting	TCOD	FBR2	Post Document	120	1	
Financial Accounting	TCOD	FF_5	Import Electronic Bank Statement	88	<u>1</u>	
Financial Accounting	TCOD	FB50	G/L Acct Pstg: Single Screen Trans.	70	1	
Financial Accounting	TCOD	FB02	Change Document	44	1	
Financial Accounting	TCOD	FB70	Enter Outgoing Invoices	43	1	
Financial Accounting	TCOD	FBZP	Maintain Pmnt Program Configuration	27	<u>4</u>	
Financial Accounting	TCOD	FB08	Reverse Document	26	3	
Financial Accounting	TCOD	FB60	Enter Incoming Invoices	26	2	
Financial Accounting	TCOD	F-02	Enter G/L Account Posting	24	1	
Financial Accounting	TCOD	FF_6	Display Electronic Bank Statement	24	1	
Financial Accounting	TCOD	F-47	Down Payment Request	15	1	
Financial Accounting	TCOD	F.13	Automatic Clearing without Currency	9	1	
Financial Accounting	TCOD	FBB1	Post Foreign Currency Valn	5	1	4
Financial Accounting	TCOD	FBD5	Realize Recurring Entry	5	1	
Financial Accounting	TCOD	F-48	Post Vendor Down Payment	3	1	
Financial Accounting	TCOD	FB05	Post with Clearing	3	1	
Financial Accounting	TCOD	FD10N	Customer Balance Display	3	1	
Financial Accounting	TCOD	FBA6	Vendor Down Payment Request	2	1	

APP_AREA	™ TYPE	✓ NAME	▼ DESCRIPTION	▼ TOTAL_USAGE	▼ USERS	▼ TESTS ▼
Inventory Management	TCOD	MIGO	Goods Movement	5480	<u>7</u>	<u>884</u>
Inventory Management	TCOD	MB52	List of Warehouse Stocks on Hand	717	<u>10</u>	32
Inventory Management	TCOD	MB51	Material Doc. List	77	<u>4</u>	<u>30</u>
Inventory Management	TCOD	MB5S	Display List of GR/IR Balances	18	<u>1</u>	
Inventory Management	TCOD	MI01	Create Physical Inventory Document	17	1	
Inventory Management	TCOD	MI07	Process List of Differences	17	<u>1</u>	
Inventory Management	TCOD	MI04	Enter Inventory Count with Document	14	<u>1</u>	
Inventory Management	TCOD	MI22	Display Phys. Inv. Docs. f. Material	10	<u>1</u>	
Inventory Management	TCOD	MI03	Display Physical Inventory Document	5	1	
Inventory Management	TCOD	MI08	Create List of Differences with Doc.	4	<u>1</u>	
Inventory Management	TCOD	MI02	Change Physical Inventory Document	3	1	
Inventory Management	TCOD	MB1A	Goods Withdrawal	1	1	<u>107</u>
Inventory Management	TCOD	MB03	Display Material Document	1	1	19





Test Coverage (Most Covered)

TCOD

TCOD

TCOD

PROG

TCOD

TCOD

TCOD

PROG

TCOD PROG

307344

VA01

APP_AREA	▼ TYPE	▼ NAME	▼ DESCRIPTION	▼ TOTAL_USAGE	USERS	▼ TESTS 🚚
Inventory Management	TCOD	MIGO	Goods Movement	5480	7	<u>884</u>
Sales	PROG	SAPMV45A	Sales Order Processing		4	<u>461</u>
Workbench Utilities	TCOD	SE16	Data Browser	660	<u>14</u>	<u>186</u>
Sales	TCOD	VA03	Display Sales Orders	304	<u>5</u>	<u>160</u>
Billing	TCOD	VF02	Change Billing Documents	222	<u>2</u>	<u>130</u>
Billing	TCOD	VF01	Create Billing Documents	261	1	<u>124</u>
User and Authorization Management	TCOD	SU3	Maintain Users Own Data	19	<u>6</u>	<u>111</u>
Inventory Management	TCOD	MB1A	Goods Withdrawal	1	1	<u>107</u>
Sales	TCOD	VA02	Change Sales Orders	778	<u>6</u>	<u>101</u>
Basic Functions	TCOD	V_V2	Updating Sales Documents by Material	3934	1	<u>88</u>
Purchasing	TCOD	ME23	Display Purchase Order	28	<u>1</u>	<u>87</u>
Purchasing	TCOD	ME23N	Display Purchase Order	645	<u>9</u>	<u>87</u>
Enqueue	TCOD	SM12	Display and Delete Locks	27	4	<u>79</u>
Shipping	TCOD	VL02N	Change Outbound Delivery	453	4	<u>76</u>
Shipping	PROG	SAPMV50A	General Delivery Module Pool		<u>5</u>	<u>71</u>
Table Maintenance Tool	TCOD	SM30	Call View Maintenance	447	<u>11</u>	<u>66</u>
Financial Accounting	TCOD	FB03	Display Document	788	<u>6</u>	<u>58</u>
Master Data	TCOD	MD04	Display Stock/Requirements Situation	220	<u>3</u>	<u>58</u>
Routing	TCOD	CA02	Change Routing	11856	<u>2</u>	<u>58</u>
Purchasing	TCOD	ME22N	Change Purchase Order	309	4	53
Sales	TCOD	VA01	Create Sales Orders	1119	<u>6</u>	<u>(53</u>)
Master Data	PROG	SAPMM61R	MRP List		<u>2</u>	51
Overhead Cost Controlling	TCOD	KSB1	Cost Centers: Actual Line Items	26	<u>1</u>	<u>51</u>
Billing	TCOD	VF03	Display Billing Documents	191	<u>3</u>	<u>48</u>
Shipping	TCOD	VL03	Display Outbound Delivery	13	1	<u>47</u>
Shipping	TCOD	VL03N	Display Outbound Delivery	213	7	<u>47</u>
Dialog SAP-GUI	TCOD	TOKEN → TEST_ID ▼ TI	EST_NAME	▼ TEST_PATH		

		Dispiny Cathodina Delivery				
VL03	BN	Display Outbound Delivery				
TOKEN ,T	TEST_ID	TEST_NAME				
VA01	290285	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	298538	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	304350	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	304550	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	304596	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	304653	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	304716	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	304773	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	304830	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	305276	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	305337	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	305393	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	305449	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	305503	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	305558	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	305942	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	305991	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	306115	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	306175	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				
VA01	306234	SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is				

SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is "True"

SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is "True"

SendVKey "Enter" to Z_SD_VA01:9000 Window while Wait For Result is "True"

"True'

"True"

"True

"True' "True

"True'

"True'

"True"

Root/Process/X. Sandbox/ozminkowwm/ZAO1_CreateSalesOrderWithReference
Root/Process/X. Sandbox/ozminkowwm/Regression scripts/credit memo- nafta
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/1.ZA01_RefTo_
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ZA01_CreateFormalQuote_Ref2QuickQuote
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ZA01_CreateFormalQuote_RefToQuickQuote_BelowMOQ_EMEA
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ZA01_CreateFormalQuote_RefToQuickQuote_BelowMOQ_NAFTA
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ZA01_CreateFormalQuoteVC
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ZA01_CreateQuickQuoteNonVC_BelowMOQ
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ZA01_CreateQuickQuoteVC
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ToBeDone/ZA01_CreateQuickQuoteVC
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ToBeDone/ZA01_CreateQuickQuoteNonVC_BelowMOQ
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ToBeDone/ZA01_CreateFormalQuoteVC
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Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ToBeDone/ZA01_CreateFormalQuote_RefToQuickQuote_BelowMOQ_EMEA
Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/ToBeDone/ZA01_CreateFormalQuote_Ref2QuickQuote

Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/1.RefTo/ZA01_CreateSalesOrder_RefToContract_EMEA Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/1.RefTo/ZA01_CreateSalesOrder_RefToContract_NAFTA Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/1.RefTo/ZA01_CreateSalesOrder_RefToFormalQuote_BelowMOQ_EMEA Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/1.RefTo/ZA01_CreateSalesOrder_RefToFormalQuote_BelowMOQ_NAFTA Root/Process/X. Sandbox/debowskip/1.WiP/ZA01/1.RefTo/ZA01_CreateSalesOrder_RefToQuote_HE

Root/Process/B. Corning Optical Communications/01. Production Support (Gold Copy)/01.02. TCodes/Components/SAP/ZA/ZA01_CreateQuickQuoteNonVC_BelowMOQ Root/Process/B. Corning Optical Communications/01. Production Support (Gold Copy)/01.02. TCodes/Components/SAP/ZA/ZA01_CreateFormalQuote_RefToQuickQuote_BelowMOQ_NAFTA Root/Process/B. Corning Optical Communications/01. Production Support (Gold Copy)/01.02. TCodes/Components/SAP/ZA/ZA01_CreateSalesOrder_RefToFormalQuote_BelowMOQ_NAFTA



Logistics Invoice Verification

Material Master

Production Orders

Output Determination

Inventory Management

Inventory Management

Inventory Management

Production Orders

Shipping

Print and Output Management

Test Creation Prioritization

APP_AREA	▼ TYPE	✓ NAME	DESCRIPTION	▼ TOTAL_USAGE	↓ USERS	▼ TESTS J
	TCOD	ZCCMS	CCMS Interface	54911	<u>1</u>	
Batches	TCOD	MSC2N	Change Batch	8448	2	
Implementation Guide	TCOD	SPRO	Customizing - Execute Project	6522	<u>25</u>	
Warehouse Management	TCOD	ZEWM_HU_PACK_UNPACK	Mass HU packing & unpacking in IM	3519	<u>1</u>	
Legacy System Migration Workbench	TCOD	LSMW	Legacy System Migration Workbench	3483	<u>3</u>	
Overhead Cost Controlling	TCOD	SE16N	General Table Display	2965	<u>18</u>	
Localization Data Media Exchange	TCOD	DMEEX	DMEEX: Format Tree Maintenance Tool	1994	<u>5</u>	
Business Process Monitoring	TCOD	ST12	Single transaction analysis	1073	<u>1</u>	
Financial Accounting	TCOD	FB1S	Clear G/L Account	1050	<u>2</u>	
Data Dictionary Tools in ABAP Workbench	TCOD	SE11	ABAP Dictionary Maintenance	1010	17	
Material Master	TCOD	MM01	Create Material &	999	(9)	
User and Authorization Management	TCOD	SU01	User Maintenance	911	<u>II</u>	
Product Cost Planning	TCOD	CK40N	Edit Costing Run	871	<u>2</u>	
ABAP Syntax, Compiler, Runtime	TCOD	ST22	ABAP Dump Analysis	861	<u>7</u>	
ABAP Authorization and Role Management	TCOD	PFCG	Role Maintenance	749	<u>6</u>	
Payment Progam / Payment transfer (DE, JP, US)	TCOD	F110	Parameters for Automatic Payment	654	4	
Basic Functions	TCOD	FSE3	Display Financial Statement Version	556	<u>1</u>	
Basic Functions	TCOD	FS00	G/L acct master record maintenance	511	<u>5</u>	
Product Cost Planning	TCOD	CK11N	Create Material Cost Estimate	489	2	
Basic Functions	TCOD	VA05	List of Sales Orders	427	4	
Cost Center Accounting	TCOD	KP06	Change CElem/Activity Input Planning	426	2	
F1 Help	TCOD	SH02	For Further Navigation	409	<u>11</u>	
Workbench Tools: Editors, Painters, Modelers	TCOD	SE93	Maintain Transaction Codes	373	<u> 7</u>	
Customer Enhancements	TCOD	SE18	Business Add-Ins: Definitions	357	<u>3</u>	
Secure Store and Forward	TCOD	STRUST	Trust Manager	353	2	
General Ledger Accounting	TCOD	FAGLB03	Display Balances	341	2	
Product Cost Planning	TCOD	CK13N	Display Material Cost Estimate	322	2	
Cost Center Accounting	TCOD	KEU5	Perform act. cost-ctr cost transfer	308	2	
Class Builder	TCOD	SE24	ABAP Class Builder	300	<u>5</u>	
Extended Warehouse Management	TCOD	/SCWM/SBST	Sort Storage Bins	298	2	
Transport Organizer	TCOD	SE03	Transport Organizer Tools	297	<u>5</u>	
Cost Center Accounting	TCOD	KEU2	Change Actual Transfer of CCtr Costs	294	2	
	TCOD	OBVCU	C FI Maintain View Cluster	292	<u>3</u>	
Warehouse Order Processing	TCOD	/SCWM/ISU	Stock Data Transfer	291	<u>1</u>	
ALE Integration Technology	TCOD	WE20	Partner Profiles	275	<u>3</u>	
Overhead Cost Orders	TCOD	KO8GH	Acct. Settlement: Int./Maint. Orders	272	<u>2</u>	
Bills of Material	TCOD	CS03	Display Material BOM	267	<u>5</u>	

ACCOUNT	COUNT
SHENZ7	40
WANGW46	26
CHIKKALAPK	7
CUIH3	7
KONGL7	4
<u>GRANTD</u>	3
SHOUZ	2
MM02	2
GOUBEAUXG	





User Usage Audit

ACCOUNT	▼ NAME_FIRST	✓ NAME_LAST	▼ USED_OBJECTS ▼
CHIKKALAPK	Praveen	Chikkala	<u>89</u>
CUIH3	Allen	Cui	<u>15</u>
KOTHARIA2	ARPIT	KOTHARI	<u>18</u>
ZHANQ2	Elvis	Zhan	<u>14</u>
BATHINENA	Adinarayana	Bathineni	<u>34</u>
DODDAD2	Damodar	Dodda	<u>6</u>
FANL4	Terry	Fan	<u>76</u>
SEBASTIAA4	Anil	Sebastian	<u>4</u>
SHOUZ	Rocky (Zhansheng)	Shou	<u>185</u>
ZHENGY19	YAN (BRYAN)	ZHENG	<u>54</u>
BEALED	David	Beale	2
KADIYALAD	DHEERAJ	KADIYALA	<u>44</u>)
KURNIAWAR2	RUDY	KURNIAWAN	<u>84</u>
PERKINSB3	BENJAMIN	PERKINS	<u>17</u>
PILLIH	HARI	PILLI	<u>40</u>
BAOZ	Zhijun (Phil)	Bao	<u>2</u>
GRANTD	DYLANIA	GRANT	<u>25</u>
KASHYAPS	Sumit	KASHYAP	<u>30</u>
KONGL7	LINGWEI (DANIEL)	KONG	<u>178</u>
LIUX4	Xiao (Lenny)	LIU	<u>72</u>
PALS2	SASHIKUMAR	PAL	<u>45</u>
REITERG	Gabi	REITER	<u>4</u>
SHENZ7	ZHENYU (ADAM)	SHEN	<u>443</u>
SUC3	Elvis	Su	<u>39</u>
WANGW46	WEI (ANDY)	WANG	<u>56</u>
XUFY	FuYing	Xu	<u>60</u>
YOUY	Ying	You	<u>87</u>
CHUHB	Mike	Chu	<u>9</u>
CUIY	Sai	Cui	<u>1</u>
GOUBEAUXG	Gabriel	Elisee Goubeaux	<u>43</u>
LUOH	Joicy	Luo	<u>18</u>

TYPE	NAME	▼ ACCOUNT	Ţ	COUNT	¥
PROG	CL_SCCR_PARALLELIZATION_CTRL==CP	KADIYALAD		56	
PROG	SAPLARFC	KADIYALAD		52	
PROG	CL_QRFC_AIF_ADAPTER======CP	KADIYALAD		51	
PROG	SAPLERFC	KADIYALAD		51	
TCOD	SNOTE	KADIYALAD		41	
TCOD	SESSION_MANAGER	KADIYALAD		34	
TCOD	SCCLN	KADIYALAD		33	
TCOD	SCC3	KADIYALAD		30	
TCOD	SM37	KADIYALAD		28	
TCOD	SCC4	KADIYALAD		23	
PROG	CL_STCTM_XML_UTILITIES=====CP	KADIYALAD		22	
TCOD	FILE_OLD	KADIYALAD		18	
TCOD	SALE	KADIYALAD		14	
TCOD	SE11	KADIYALAD		10	
TCOD	SE37	KADIYALAD		8	
PROG	SAPLSMTR_NAVIGATION	KADIYALAD		7	
PROG	RNSERVER	KADIYALAD		6	
PROG	RSBTCRTE	KADIYALAD		6	
TCOD	SMGW	KADIYALAD		6	
PROG	BTC_START_ICP_JOBS	KADIYALAD		4	
TCOD	SM21	KADIYALAD		4	
TCOD	SCCL	KADIYALAD		3	
TCOD	ST22	KADIYALAD		3	
TCOD	STRUST	KADIYALAD		3	
PROG	R_SCWN_NA_NT_BRWSR	KADIYALAD		2	
PROG	SAPLBTCH	KADIYALAD		2	
PROG	SAPMSEM1	KADIYALAD		2	
PROG	SAPMSVMA	KADIYALAD		2	
PROG	SAPMSYST	KADIYALAD		2	
PROG	STC_TM_PROCESSOR	KADIYALAD		2	
TCOD	RZ11	KADIYALAD		2	





SAP Test Coverage Insights



- 360-degree picture of overall test coverage
- Clear visibility into test coverage in every release
- Actionable intelligence for test creation planning & strategy
- Prioritize time, resources and money in appropriate areas
- Track test coverage trends and monitor progress
- Maximize ROI in test automation solution Investments

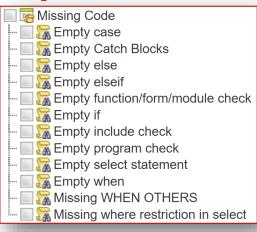


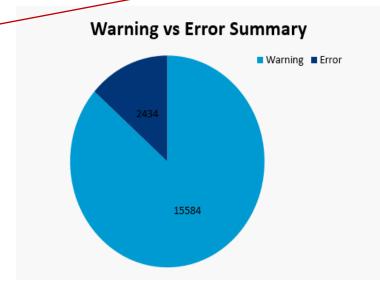
ABAP Code Quality Inspection

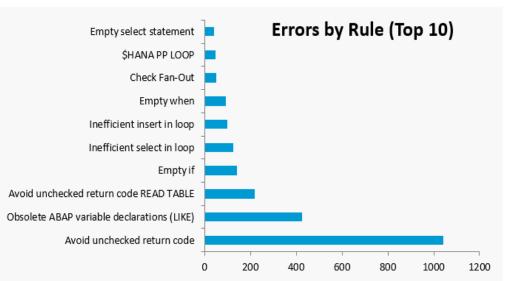
- Passed less than 80% of rules checked
- Passed 80-99% of rules checked
 - Passed 100% of rules checked



Missing Code Rule Checks





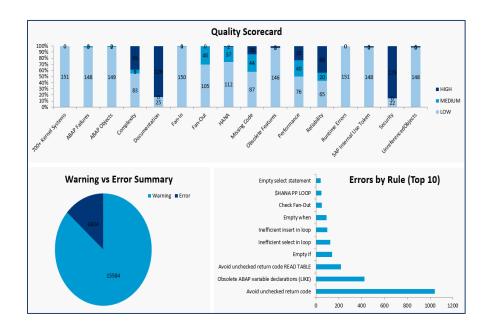






ABAP Code Quality - Missing Code

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



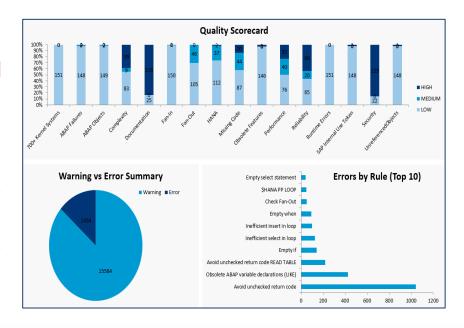
TYPE	▼ NAME	✓ CATEGORY	▼ CLASS	▼ RULE	₹ TOKEN	▼ LINE_NUMBER	▼ SOURCE
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	1670	WHEN ICON_LED_GREEN
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	2392	WHEN 0
PROG	ZPTP_R_AGS_MES	Missing Code	Error	Empty when	[WHEN]	2417	WHEN 0
PROG	ZPTP_R_AGS_MES	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	J 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



CATEGOR UPLOAD Performal UPLOAD Performal UPLOAD Performal UPLOAD Performal	nce Error nce Error nce Error	Inefficient insert in loop Inefficient select in loop Inefficient select in loop	TOKEN INSERT SELECT	▼ LINE_NUMBER 1154 722	SOURCE INSERT TB_E1BPACTX09 INDEX V_COUNTER OF THE STANDARD COUNTER TO STANDARD COU
UPLOAD Performal _UPLOAD Performal _UPLOAD Performal	nce Error	Inefficient select in loop			<u>-</u>
_UPLOAD Performan	nce Error		SELECT	722	SELECT PROTE FROM COVOUR TO A ROUNG INTO A PROTECTION OF THE FARRACCIOS CONTRACTOR OF THE PROTECTION O
UPLOAD Performan		Inefficient select in loon		,	SELECT PRCTR FROM CSKS UP TO 1 ROWS INTO V_PRCTR WHERE KOSTL = TB_E1BPACGL09-COSTCENTER ORDER BY PRII
_		memorent select in loop	SELECT	748	SELECT SINGLE VBUND INTO V_TRADE FROM KNA1 WHERE KUNNR = TB_E1BPACAR09-CUSTOMER
	nce Error	Inefficient select in loop	SELECT	761	SELECT SINGLE VBUND INTO V_TRADE FROM LFA1 WHERE LIFNR = TB_E1BPACAP09-VENDOR_NO
_UPLOAD Performar	nce Error	Inefficient select in loop	SELECT	820	SELECT SINGLE KTOPL INTO V_KTOPL FROM T001 WHERE BUKRS = TB_E1BPACHE09-COMP_CODE
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	823	SELECT SINGLE KTOGR INTO V_KTOGR FROM ANLA WHERE BUKRS = TB_E1BPACHE09-COMP_CODE AND ANLN1 = TB_E:
_UPLOAD Performan	nce 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 ORDEI
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	881	SELECT * FROM TVARVC INTO CORRESPONDING FIELDS OF TABLE TB_VARV1 WHERE NAME = 'Z_EXI950_COMP'
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	895	SELECT SINGLE VBUND INTO V_TRADE FROM KNA1 WHERE KUNNR = TB_E1BPACAR09-CUSTOMER
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	908	SELECT SINGLE VBUND INTO V_TRADE FROM LFA1 WHERE LIFNR = TB_E1BPACAP09-VENDOR_NO
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	936	SELECT SINGLE ZTERM INTO V_ZTERM FROM KNB1 WHERE KUNNR = TB_E1BPACAR09-CUSTOMER AND BUKRS = TB_E1E
_UPLOAD Performan	nce 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
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	1070	SELECT SINGLE LAND1 INTO V_LAND FROM T001 WHERE BUKRS = TB_E1BPACHE09-COMP_CODE
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	1085	SELECT SINGLE KALSM INTO V_KALSM FROM T005 WHERE LAND1 = V_LAND
_UPLOAD Performan	nce 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 OF
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	1098	SELECT KONTS INTO V_KONTS FROM T030K UP TO 1 ROWS WHERE KTOPL = 'GLOB' AND KTOSL = V_KVSL1 AND MWSKZ
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	1108	SELECT * FROM T007B INTO CORRESPONDING FIELDS OF TABLE TB_T007B WHERE KTOSL = V_KVSL1
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	1687	SELECT SINGLE * FROM PARAMVALUE WHERE FILEPARAM EQ K_WORK
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	1705	SELECT SINGLE FUNCNAME FROM TFDIR INTO TFDIR WHERE FUNCNAME EQ EXITFUNCTION
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	1723	SELECT SINGLE FUNCNAME FROM TFDIR INTO TFDIR WHERE FUNCNAME EQ Y_EXITFUNCTION
_UPLOAD Performan	nce Error	Inefficient select in loop	SELECT	1741	SELECT SINGLE FUNCNAME FROM TFDIR INTO TFDIR WHERE FUNCNAME EQ Z_EXITFUNCTION
	_UPLOAD Performar	UPLOAD Performance Error UPLOAD Performance Error	UPLOAD Performance Error Inefficient select in loop UPLOAD Performance Error Inefficient select in loop	UPLOAD Performance Error Inefficient select in loop SELECT UPLOAD Performance Error Inefficient select in loop SELECT	UPLOAD Performance Error Inefficient select in loop SELECT 828 UPLOAD Performance Error Inefficient select in loop SELECT 881 UPLOAD Performance Error Inefficient select in loop SELECT 895 UPLOAD Performance Error Inefficient select in loop SELECT 908 UPLOAD Performance Error Inefficient select in loop SELECT 936 UPLOAD Performance Error Inefficient select in loop SELECT 985 UPLOAD Performance Error Inefficient select in loop SELECT 985 UPLOAD Performance Error Inefficient select in loop SELECT 1070 UPLOAD Performance Error Inefficient select in loop SELECT 1085 UPLOAD Performance Error Inefficient select in loop SELECT 1085 UPLOAD Performance Error Inefficient select in loop SELECT 1089 UPLOAD Performance Error Inefficient select in loop SELECT 1098 UPLOAD Performance Error Inefficient select in loop SELECT 1098 UPLOAD Performance Error Inefficient select in loop SELECT 1108 UPLOAD Performance Error Inefficient select in loop SELECT 1108 UPLOAD Performance Error Inefficient select in loop SELECT 1108 UPLOAD Performance Error Inefficient select in loop SELECT 1687 UPLOAD Performance Error Inefficient select in loop SELECT 1705 UPLOAD Performance Error Inefficient select in loop SELECT 1705 UPLOAD Performance Error Inefficient select in loop SELECT 1705 UPLOAD Performance Error Inefficient select in loop SELECT 1705 UPLOAD Performance Error Inefficient select in loop SELECT 1705





ABAP Code Quality Inspection



- 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

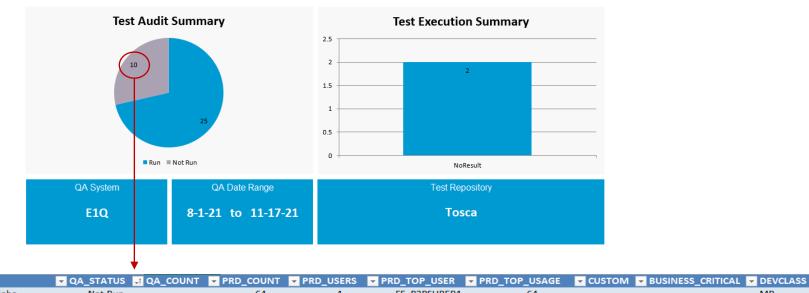


Test AuditTest Inspection Quality Gate

▼ TOKEN

Analyzes daily transactional usage data from QA (within a specified time period) to ensure most-at-risk transactions are not deployed to production untested!

▼ DESCRIPTION



Materials Management	MRKO	Settle Consignment/Pipeline Liabs.	Not Run		64	1	FF_P2PSUPER1	64		MR
Financial Accounting	F-03	Clear G/L Account	Not Run		447	1	UBRRC	447		FIBP
Logistics Execution	VL33N	Display Inbound Delivery	Not Run		18241	42	KJRG5	7119		VL
	/PAYMETRC/BMAPP	Transaction Approval and Reconcilation	Not Run		16	14	HAX33	2		/PAYMETRC/XIBUY
	/PAYMETRC/BMAPP	Transaction Approvals - Manual	Not Run		2861	126	EWBTW	301		/PAYMETRC/XIBUY
Financial Accounting	FB1S	Clear G/L Account	Not Run		47832	1	CPSCOMM	47832		FIGL
Personnel Time Management	PA51	Display Time Data	Not Run		1	1	T1RDJ	1		PTIM
Financial Accounting	PRMS	Display HR Master Data	Not Run		9234	18	L61K0	2090		PTRA_ADDON
	ZPPY_PAYMENT	Mass Load for Payments & Deductions	Not Run		416	6	T1RDJ	157	Yes	ZHCM_ENH
Logistics Execution	VL01NO	Create Outbound Dlv. w/o Order Ref.	Not Run		2	2	MBIPI	1		VL
	ZPPYI_ACA_CORE_PAYR	Tcode for payroll details	Run	30	6	1	MIJQL	6	Yes	ZHCM_INT
Financial Accounting	F-44	Clear Vendor	Run	14	3552	3	O6EUU	2159		FIBP
Financial Accounting	FB08	Reverse Document	Run	84	2308	13	R237F	1093		FIDC
Financial Accounting	FB1D	Clear Customer	Run	3	1296	10	NAM4M	416		FIBP
Financial Accounting	FBD1	Enter Recurring Entry	Run	817	1017	18	N1CKE	366		FIDC
Financial Accounting	FBD5	Realize Recurring Entry	Run	84	1070	5	WF-BATCH	687		FIDC
Materials Management	ME31K	Create Contract	Run	51	1910	21	R3P2E	519		ME
Sales and Distribution	VA01	Create Sales Order	Run	2695	18582	21	TWSIX	4543		VA
Financial Accounting	FB01	Post Document	Run	341	34281	8	CPSCOMM	33383		FIDC
Financial Accounting	FB05	Post with Clearing	Run	55	50619	9	NAM4M	22208		FIBP
Financial Accounting	FBVB	Post Parked Document	Run	121	163931	28	TXJBS	60764		FIBP
Financial Accounting	FV50	Park G/L Account Items	Run	685	63032	95	QZTRQ	6171		FBAS
Financial Accounting	FV60	Park Incoming Invoices	Run	226	733066	740	HJK1L	28332		FFE
Financial Accounting	FV63	Displayed Parked Vendor Document	Run	26	47204	374	PRAP01	7195		FFE
Materials Management	ME32K	Change Contract	Run	21	69022	38	LRLMH	8055		ME
Materials Management	ME33K	Display Contract	Run	35	63214	198	MAWTV	8207		ME
Personnel Management	PA20	Display HR Master Data	Run	319	237891	142	BCF82	22031		PBAS
Personnel Management	PA30	Maintain HR Master Data	Run	1156	121992	53	W1F1W	18799		PBAS
Sales and Distribution	VA02	Change Sales Order	Run	704	116042	23	NIIF1	22359		VA
Sales and Distribution	VA03	Display Sales Order	Run	1079	24905	58	Q5YAQ	3506		VA A
Logistics Execution	VL01N	Create Outbound Dlv. with Order Ref.	Run	199	1490	8	T8ICC	1017		VL T
Logistics Execution	VL02N	Change Outbound Delivery	Run	191	37830	28	NBY61	28498		VL

Business Value



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.



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

Reduction in performance test maintenance costs





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



Snapshot

Number of releases using LiveCompare	+350%
Custom testing (reduction)	99%
Defects eliminated	200+



LiveCompare Summary

Al-Powered SAP Insights	Use Cases	Strategic Business Benefits	Product Value	Transport Management Integrations	Test Repository Integrations	Time to Value
SAP Change Impact Analysis	Internal Change Releases (Major/Minor)	Accelerate & De-risk SAP Transformational Projects	Test Smarter & Faster	STMS	Tricentis Tosca	Certified ABAP add-on that lives inside SAP
SAP Test Coverage & Gap Insights	S/4 Upgrades	Modernize SAP Change & Release Process	Speed Testing Cycles	ChaRM (SAP Solution Manager)	Tricentis qTest	Few hours to implement
ABAP Code Quality Insights	Support Pack & Feature Pack Updates	Orchestrate DevOps for SAP	Increase release frequency	Rev-Trac	ALM	Delivers immediate results
SAP System& Landscape Synchronization Insights	ECC to S/4 Transformations	Reduce cost of SAP Ownership	Perform Upgrades Consistently	Active Control (Basis Technologies)	Worksoft Certify	Easy to maintain
SAP Custom Code Insights	Project Roll-outs		Deliver Superior Quality		Azure DevOps	
N+1 Transport Merge Conflict Analysis	RISE Conversions		Debug Production Issues faster		SAP Solution Manager	
SAP Root-Cause Analysis					MS Excel	
Data Quality, Governance & Validation Insights						
Production Usage Insights						

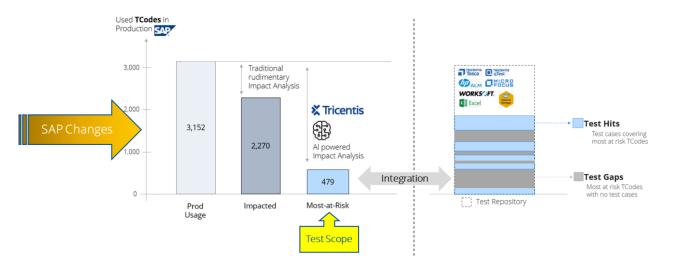
What to test? How to de-risk?

Cover **more** risk with **less** effort

Tricentis LiveCompare

Tricentis capabilities

- Risk AI identifies most at-risk objects
- Risk-based test optimization (Hits & Gaps)
- 85% test scope reduction



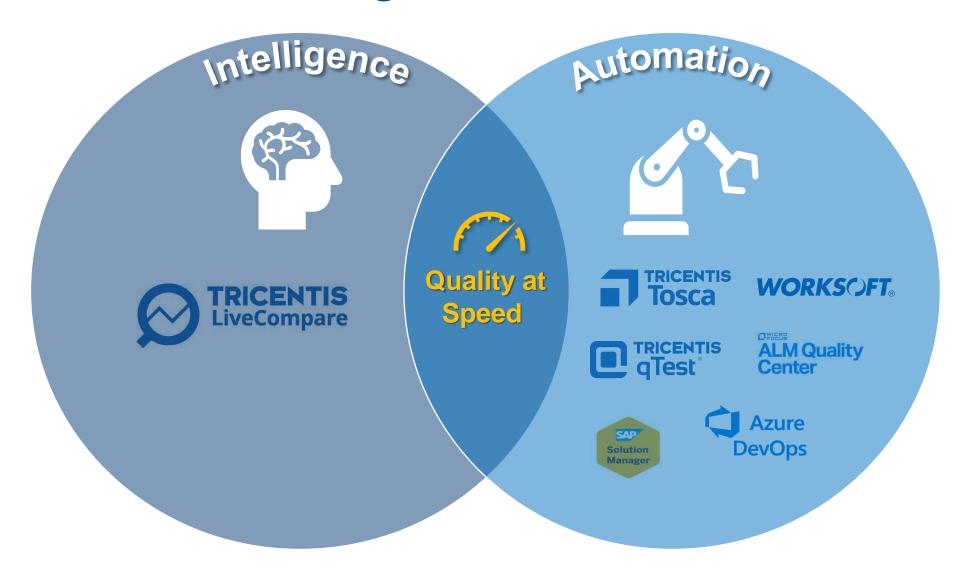
Traditional testing

- Tracks # of tests, not risk covered
- Limited by domain knowledge of testers (especially with packaged apps)
- Let's defects slip into production

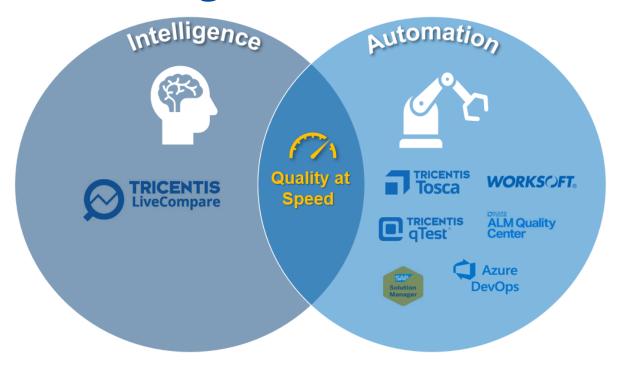
Tricentis customers

- Achieve 90%+ business risk coverage
- Get comprehensive risk assessments and test plans for SAP changes
- Deliver zero-defect updates for only 15% of traditional test effort

Intelligent Automation



Intelligent Automation





LiveCompare Pinpoints what in SAP needs to be tested

Intelligent Test Selection

LiveCompare Intelligently selects the tests in the test repository that should be executed.

Livecompare

LiveCompare loads tests into Tosca's test execution folder & auto executes the tests in Tosca

Auto Test

Execution

Auto Identify

LiveCompare auto identifies broken tests due to screen discrepancies for faster, easier test maintenance

Sick Test Cases