smartShift & asug

The Impact of Custom Code

2023 research from ASUG and smartShift

Speakers

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Research Overview

Background

smartShift conducted research with ASUG to better identify how SAP customers experience custom code, SAP migrations, and automation at their organization.

Timing

Fielding occurred in November 2022

Audience

n=177 participants

Research Highlights

1

Most SAP customers rely on custom code

2

Upgrading SAP systems will require code remediation
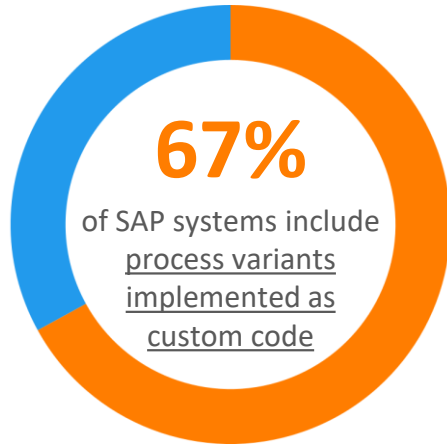
3

SAP customers report issues with traditional solutions

4

SAP customers see benefits to using alternative solutions

Most SAP customers have custom code

67%

of SAP systems include <u>process variants implemented as custom code</u>

Why Organizations Need Custom Code

| 56%	44%	37%	35%	31%	21%
Industry specifics not covered by SAP Standard	Necessary to connect systems	Necessary due to regulatory requirements	Reporting/ analytics requirements of the Business	Essential due to localization or different geographics	To be able to innovate

Q. Approximately how much of your current SAP system would be considered SAP standard?
Q. Approximately how much of your current SAP system includes process variants implemented as custom code processes?
(n=169) *9 respondents selected 'Don't know/not sure'
Q. In your opinion, why does your organization need custom code? (Please select all that apply.)

Custom code needs to be upgraded

72%

plan to continue using custom code
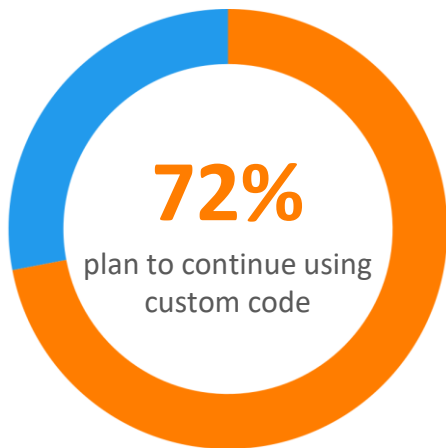
As customers upgrade their SAP systems, they'll need to remediate and transform their custom code.

Q. As your organization moves forward with SAP S/4HANA or other SAP system upgrades, how will your organization's custom code be handled? (Please select all that apply.) (n=177)

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Custom code presents challenges

...and the majority of SAP customers will seek outside help

"What challenges does custom code present to your organization?"

Barrier to upgrading/
migrating to a new SAP offering

58%

Excessive maintenance
costs

39%

Difficulty finding expertise to
maintain/enhance custom code

37%

Source: smartShift/ASUG Market Research

ASUG

Methods to handle custom code

SAP customers have used a variety of resources to address custom code

Custom code migrations (n=152)	
Internal Resources	47%
Partner Resources	30%
SAP Resources	20%
Other	3%

Satisfaction with custom code solutions is lukewarm

<u>Nearly 60% are neutral or dissatisfied</u> with the support provided by their current solution.

Current manual approaches are labor-intensive and time-consuming

What about the hidden risks of a manual approach to code remediation?

Q. How satisfied are you with the level of support you receive from the SI(s) that your organization uses for custom code management? (n=65)
Q. Please explain the challenges working with your SI(s) for custom code management. If no challenges experienced, please type 'N/A' in the text box below. (n=38)

Challenges signal added burdens

1	2	3	4
Not enough familiarity with specific business processes/customizations	**Unresponsive support**	**Lack of proper documentation/report analysis on system changes**	**Too much time spent on decisions/ communications**

In their words...

"Mainly **creates a lot of extra effort** on upgrade...but other complications arise when making system changes, testing, etc. **SI does not always have a good understanding of customizations**."

"Lack of knowledge of **business process** or **reason for customizations**."

"**Mutual understanding** sometimes hard to get and when there is **personnel changes**, it may have to be communicated again due to **lack of documentation or understanding**."

"Our **SI is not always skilled with the new tools** (e.g., SAP BTP) and will default to old methods."

"**Ownership to make the right decisions quickly**."

"They tend to hold things close, so there is **not always a good transition** of the custom code to internal support."

Q. How satisfied are you with the level of support you receive from the SI(s) that your organization uses for custom code management? (n=65)
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Uses for automation to address custom code

Where companies want more automation support for handling custom code:

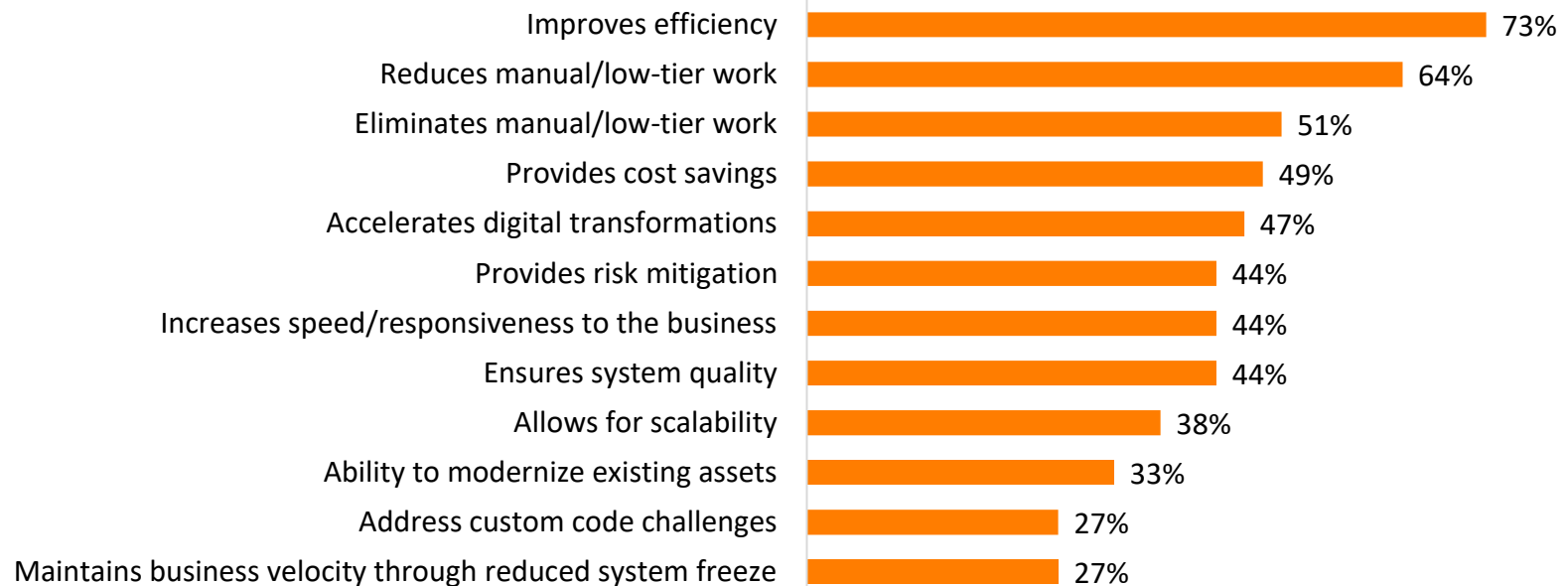| Category	Percentage
Code modernization and standardization	67%
Code performance	60%
Code remediation	47%
Code security	31%
Dual maintenance	29%
Clean core realization	22%
No areas require more support.	9%
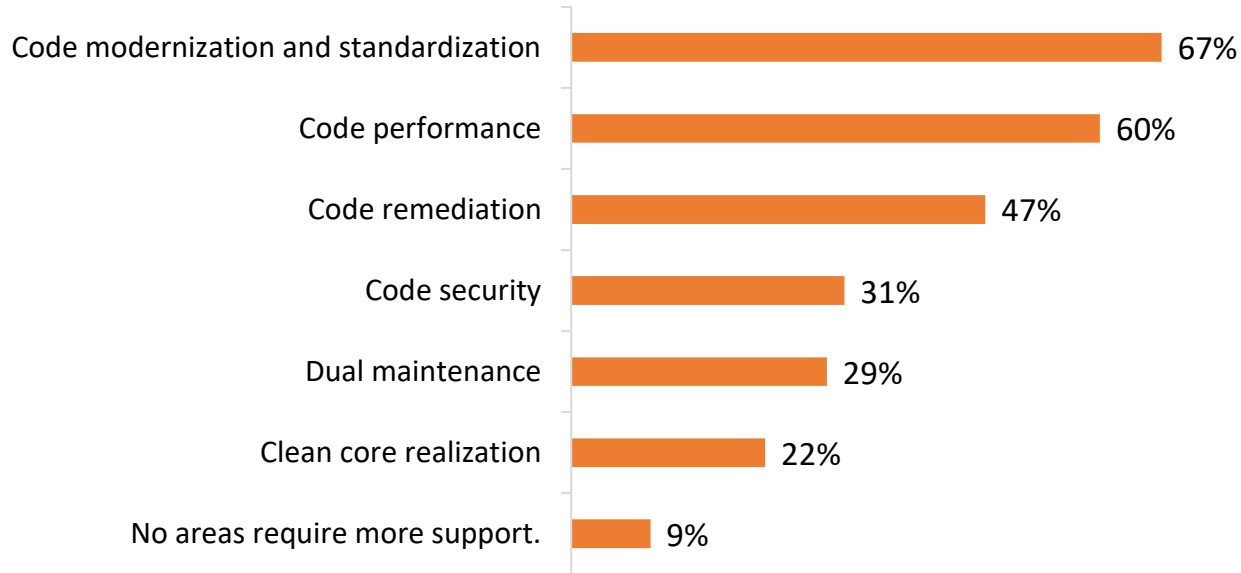
Q. Where do you or will you plan to use automation in your SAP migration/digital transformation process? (Please select all that apply.) (n=177)
Q. [If respondent selected 'Custom code'] Which of the following areas, if any, do you need more support for automating custom code? (Please select all that apply.) (n=45)

Key benefits experienced with automation

Benefits SAP customers experienced:

Benefit	Percentage
Improves efficiency	73%
Reduces manual/low-tier work	64%
Eliminates manual/low-tier work	51%
Provides cost savings	49%
Accelerates digital transformations	47%
Provides risk mitigation	44%
Increases speed/responsiveness to the business	44%
Ensures system quality	44%
Allows for scalability	38%
Ability to modernize existing assets	33%
Address custom code challenges	27%
Maintains business velocity through reduced system freeze	27%

Q. [If respondent selected automation for custom code in SAP migrations/digital transformation processes] What are the benefits, if any, to using automation? (Please select all that apply.) (n=45)
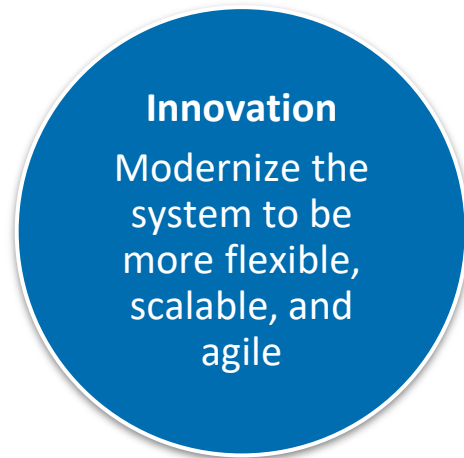
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Automation opens up new options

Custom Code Transformation

Clean Core Modernization

Speed
Accelerate the transformation process by reducing manual remediation

Confidence
Enhance the overall quality, security, and stability of transformed code

Productivity
Eliminate the need for business disruption

Innovation
Modernize the system to be more flexible, scalable, and agile

Today

Future

smartShift Intelligent Automation®

A better way to modernize and optimize SAP custom code

Existing SAP Environment

(ECC)

Custom Code Analysis

Custom Code Transformation

Target SAP Environment

(S/4HANA)

Clean Core Analysis

Clean Core Realization

Modern SAP Environment

(Clean Core)

Automated Dual Maintenance
Continuous version control & code remediation
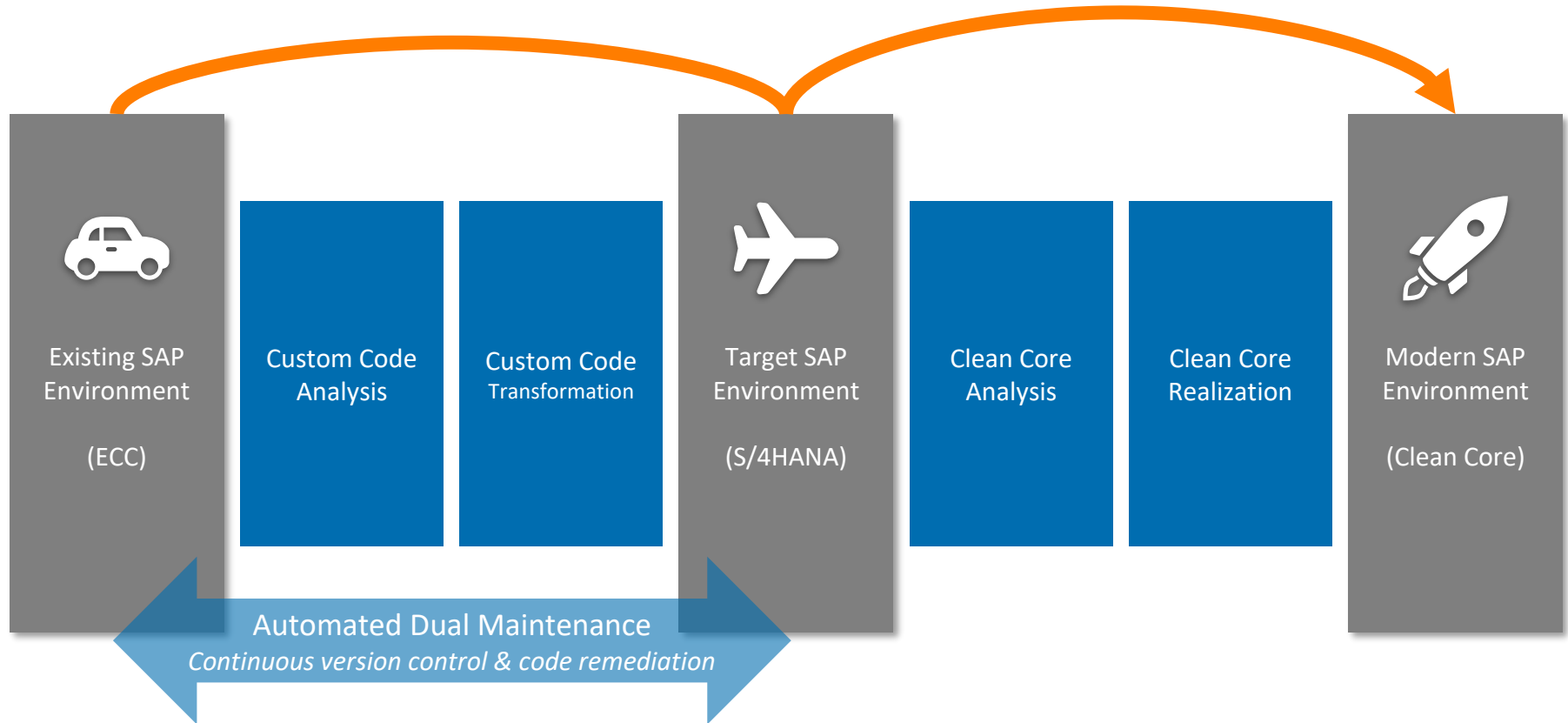
Real-world successes

- S/4HANA migration factory: 70+ system landscapes
- Automated HANA, S/4HANA, security, standardization, performance remediation
- Agile sprint methodology
- To date:
  - 100+ projects completed
  - 58k Custom objects and 9,5M Lines of Code decommissioned!
  - Fixed >5M issues saving 44.000 days of manual labor!
  - IT risk reduced by 50M USD!

Real-world successes

JABIL

- Migrated multiple SAP systems to S/4HANA
- Analyzed and transformed 5 million lines of custom code
- Maintained existing production system and project system in tandem
- Completed full custom code remediation in 5 weeks
- Reduced dual maintenance costs by 20%
- Safely decommissioned 40% of unused custom code

Real-world successes

- Migrated from SAP ECC to SAP S4/HANA
- Consolidated 9 regional systems into 3 global templates
- Maintained production and project landscapes in parallel
- Avoided any disruption to business velocity
- Fixed 1.3M issues automatically saving 42,000 days of manual labor
- Remediated 77,000 custom objects in 8 weeks, with an error rate of less than 0.01%

smartShift was awarded P&G's **2022 External Business Partner Award** in the **Innovation** category:
Congratulations to P&G's 2022 External Business Partner Excellence Award Winners!

Real-world successes

- Selective SDT-based SAP S/4HANA Transformation

- Modernized and carved-out 22 years of custom code

- Automated sync between ECC and S/4HANA to eliminate code freeze

- Saved 30,000 hours of developer time

- Completed full custom code remediation for S/4HANA in a matter of weeks

- 1st wave roll-out of 6 completed very successfully

Next Steps

Test drive our analysis capabilities

A free custom code health check
to gain insight into your SAP
modernization roadmap

https://smartshift.com/rapid-code-analysis/
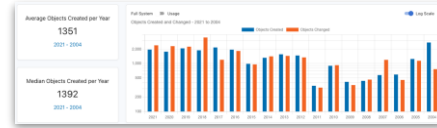
APPENDIX

Firmographics

Industry*	
Consumer Products	15%
High Tech	9%
Utilities	8%
Government	8%
Public Sector	7%
Automotive	6%
Chemical	6%
Life Sciences	4%
Health Care	4%
Industrial Manufacturing, Machinery, and Components (IM&C)	4%
Retail	3%
Education and Research	3%
Mill Products and Mining	3%
Oil, Gas, and Energy	3%
Other	4%

(n=177) *All other industries represent 2% or less of respondents

Annual Revenue	
Less than $500 million	9%
$500 million-less than $1 billion	11%
$1 billion-less than $1.5 billion	4%
$1.5 billion-less than $2 billion	6%
$2 billion-less than $2.5 billion	4%
$2.5 billion-less than $5 billion	12%
$5 billion-less than $7.5 billion	6%
$7.5 billion-less than $10 billion	7%
Greater than $10 billion	23%
Government/Nonprofit	10%
Don't know/not sure	9%

Job Role	
IT Staff	38%
IT director/leadership	23%
Department manager/associate manager	21%
Nonmanagerial	10%
C-level/executive (CEO, CIO, CFO, etc.)	5%
VP/SVP	2%
Other	2%

Purchase Decisions for New Technology	
I am a primary decision-maker.	10%
I have input in the decision, but I am not a primary decision-maker.	69%
I have no input or responsibility about purchasing decisions, but I work with vendors to implement.	17%
I have no engagement with vendors at all	4%

Department	
IT Operations	34%
Development	12%
Enterprise Architecture (EA)	11%
Finance	8%
Supply Chain Management (SCM)	6%
Information Security	6%
Business Intelligence (BI) and Analytics	4%
Database and Data Management	3%
User Experience (UX)	2%
Sourcing and Procurement	2%
Enterprise Asset Management (EAM)	2%
Sales	1%
Marketing	1%
Manufacturing and Production	1%
Human Resources (HR)	1%
Customer Service	1%
Other	6%