smartShift

Intelligent Automation for SAP Transformations

How Automation De-Risks Custom Code Modernization:
ASUG Research, Solutions, & Real-World Results

About Me

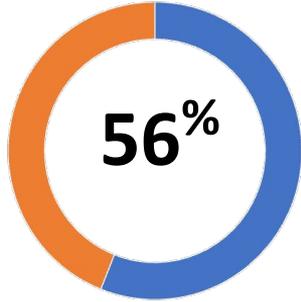**Caitlin Christopher**
Account Executive
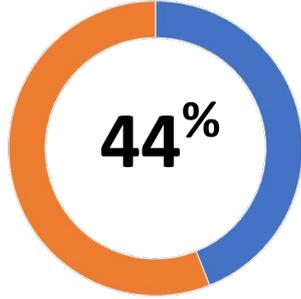
CChristopher@smartshift.com
770-861-0000

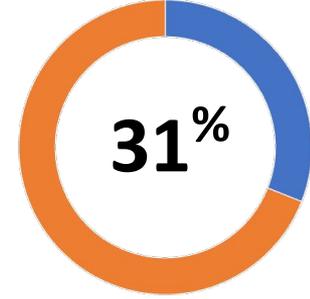# Custom Code is Needed

ASUG Research Findings

56%

Industry specifics
not covered by
SAP Standard

44%

Necessary to
connect
systems

37%
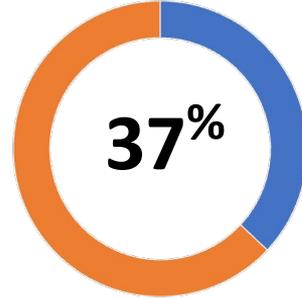
Necessary
due to
regulatory
requirements

31%

Essential
due to localization
or different
geographies

Source: smartShift/ASUG Market Research

Custom Code Remains Critical

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

72%
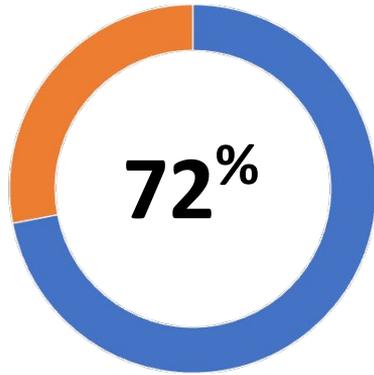
The majority of survey participants plan to retain their custom code as they proceed with upgrading to S/4HANA and beyond

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)

Custom Code Presents Challenges for Modernization
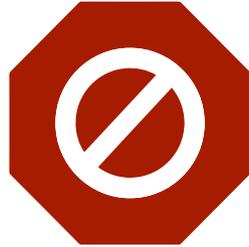
Barrier to upgrading/
migrating to a new
SAP offering

58%

Difficulty finding expertise
to maintain/enhance
custom code

37%

Source: smartShift/ASUG Market Research

Automation Offers Modernization Options

Speed

Accelerate the transformation process by **minimizing the need for manual remediation**

Confidence

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

Productivity

Eliminate the need for **business disruption**

Innovation

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

![smartShift Intelligent Automation® logo]

- The only Intelligent Automation for SAP Custom Code Transformations

- 11 Patents - 10+ years of SAP ABAP Research & Development

- 1000+ Successful SAP Transformation Projects

- 2.5+ Billion lines of Code Remediated with <0.01% Code Transformation Error Rates

![SAP Quality Awards logo]

At smartShift, we develop and deliver automated solutions to accelerate business growth and de-risk the transformation of SAP custom code and applications.

Clean Core

Dual Maintenance

S/4HANA Transformation
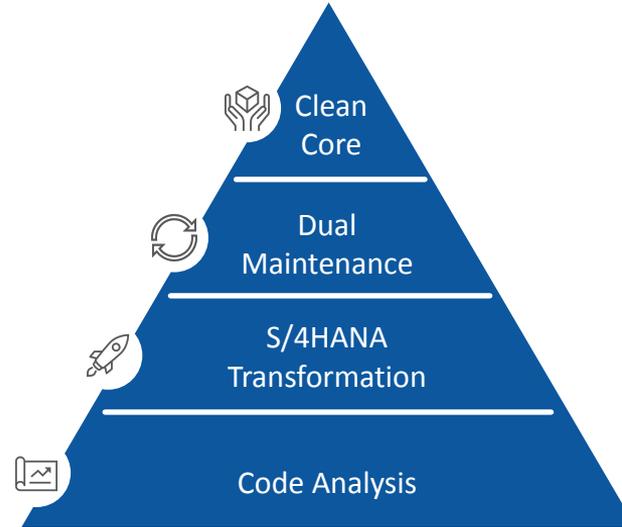
Code Analysis

powered by
smartShift Intelligent Automation®
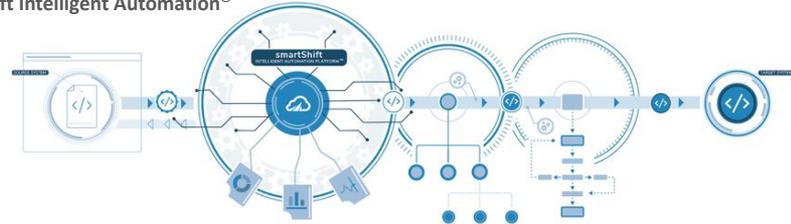
Custom Code Analysis

De-risk with data-driven planning. Know all changes for S/4 upfront & plan with confidence.

powered by
smartShift Intelligent Automation®

Custom Code Transformation

Comprehensive transformation. Guaranteed quality - 1,000X better than manual approach.

Ruleset Summary

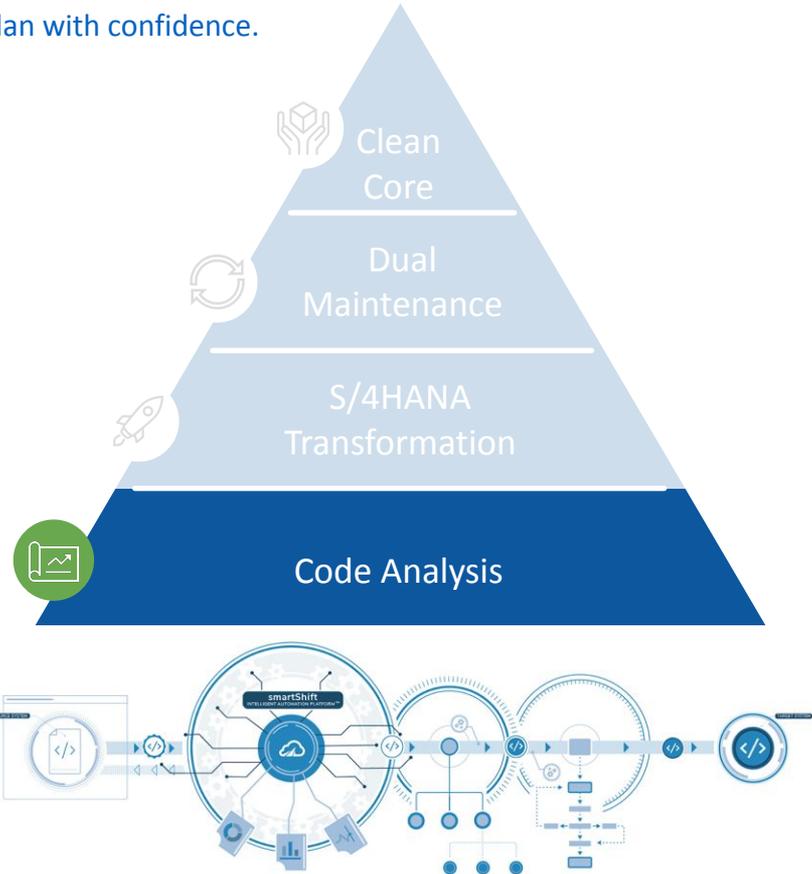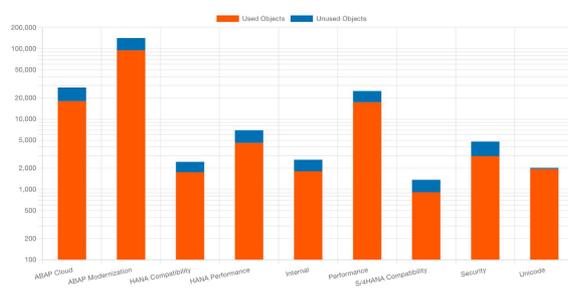| Rule Set	All Objects	Used Objects
ABAP Cloud	28,082	17,906
ABAP Modernization	141,579	94,824
HANA Compatibility	2,463	1,757
HANA Performance	6,910	4,577
Internal	2,635	1,805
Performance	25,035	17,291
S/4HANA Compatibility	1,366	912
Security	4,780	2,974
Unicode	2,023	1,947

Ruleset Summary

Log Scale — Used Objects, Unused Objects

(Bar chart categories: ABAP Cloud, ABAP Modernization, HANA Compatibility, HANA Performance, Internal, Performance, S/4HANA Compatibility, Security, Unicode)

```
TABLES : bseg.

SELECT SINGLE *
  FROM bseg
  WHERE bukrs = '1'
    AND belnr = '2'
    AND gjahr = '3'
    AND buzei = '4'.
```
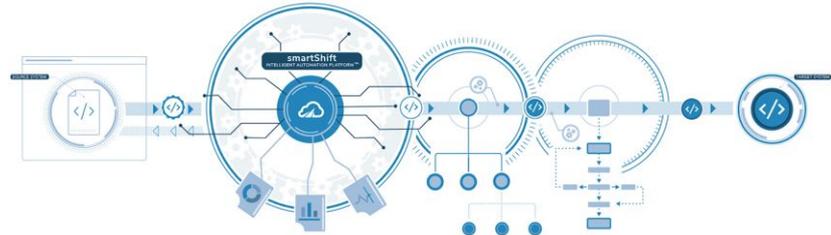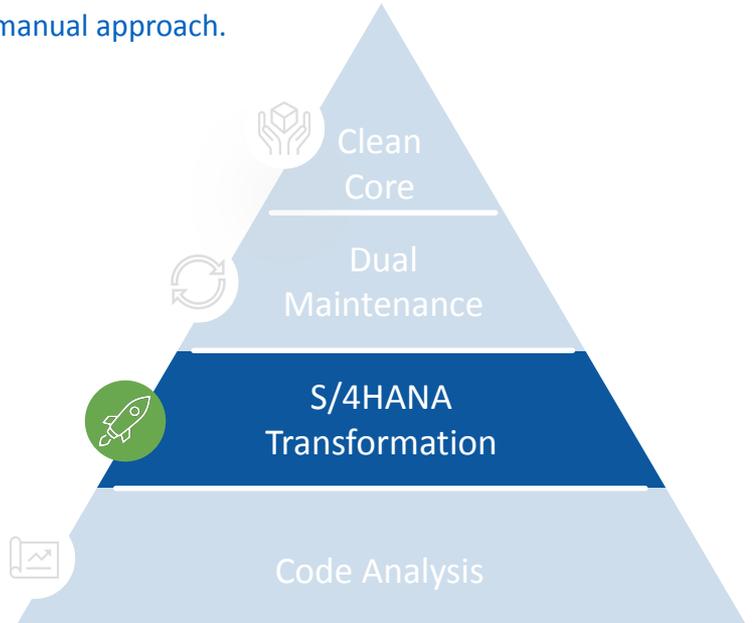
```
TABLES : bseg.

DATA gt_fagl_bseg_tmp TYPE fagl_t_bseg.                    "$smart: 633

*$smart (E) — #633 Detected access to DB table BSEG. (A)

cl_fagl_emu_cvrt_services=>get_leading_ledger(             "$smart: 633
  IMPORTING                                                "$smart: 633
    ed_rldnr = DATA(gv_rldnr)                              "$smart: 633
  EXCEPTIONS                                               "$smart: 633
    error = 4                                              "$smart: 633
    others = 4 ).                                          "$smart: 633
IF sy-subrc = 0.                                           "$smart: 633
  CALL FUNCTION 'FAGL_GET_GL_DOCUMENT'                     "$smart: 633
    EXPORTING                                              "$smart: 633
      i_rldnr = gv_rldnr                                   "$smart: 633
      i_bukrs = '1'                                        "$smart: 633
      i_belnr = '2'                                        "$smart: 633
      i_gjahr = '3'                                        "$smart: 633
      i_buzei = '4'                                        "$smart: 633
    IMPORTING                                              "$smart: 633
      et_bseg = gt_fagl_bseg_tmp                           "$smart: 633
    EXCEPTIONS                                             "$smart: 633
      not_found = 4                                        "$smart: 633
      others = 4.                                          "$smart: 633
  IF sy-subrc = 0 AND gt_fagl_bseg_tmp IS NOT INITIAL.     "$smart: 633
    bseg = gt_fagl_bseg_tmp[ 1 ].                          "$smart: 633
    FREE gt_fagl_bseg_tmp.                                 "$smart: 633
  ENDIF.                                                   "$smart: 633
ENDIF.                                                     "$smart: 633
```

Pyramid (top to bottom):
- Clean Core
- Dual Maintenance
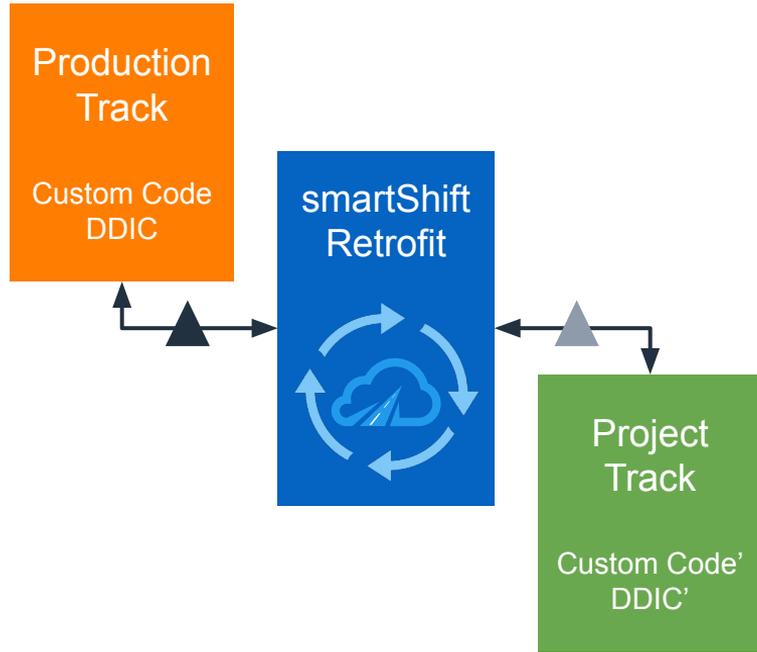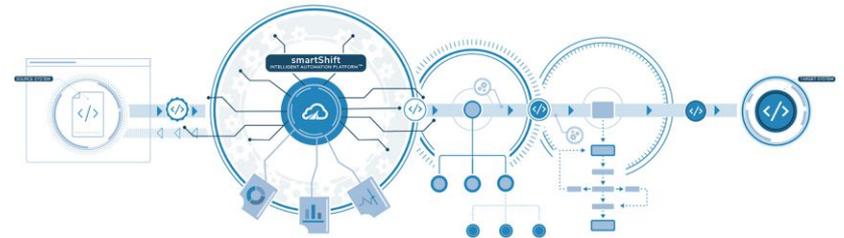- S/4HANA Transformation
- Code Analysis

powered by
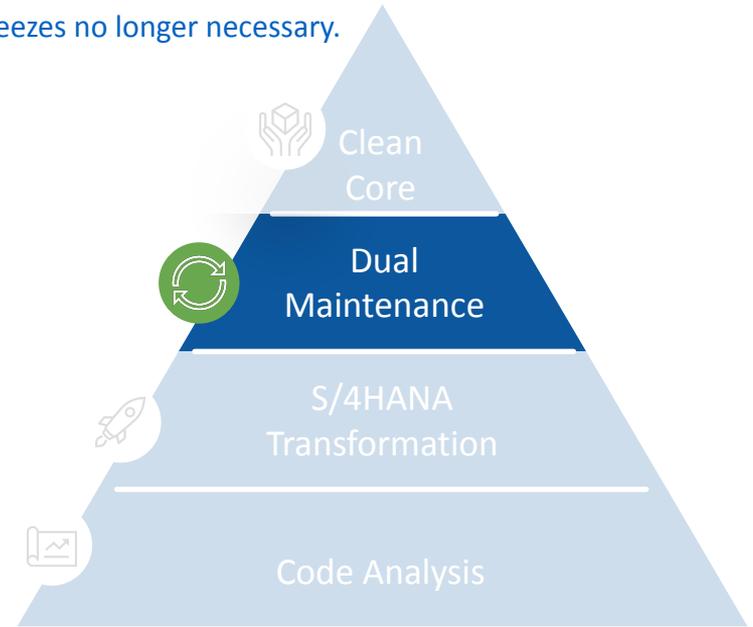**smartShift Intelligent Automation®**

Automated Dual Maintenance

Enables business agility & innovation. Dev restrictions, prolonged code freezes no longer necessary.
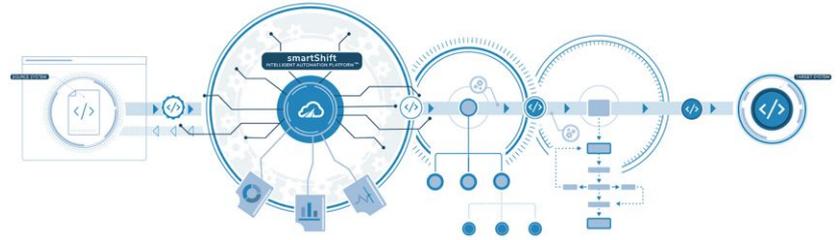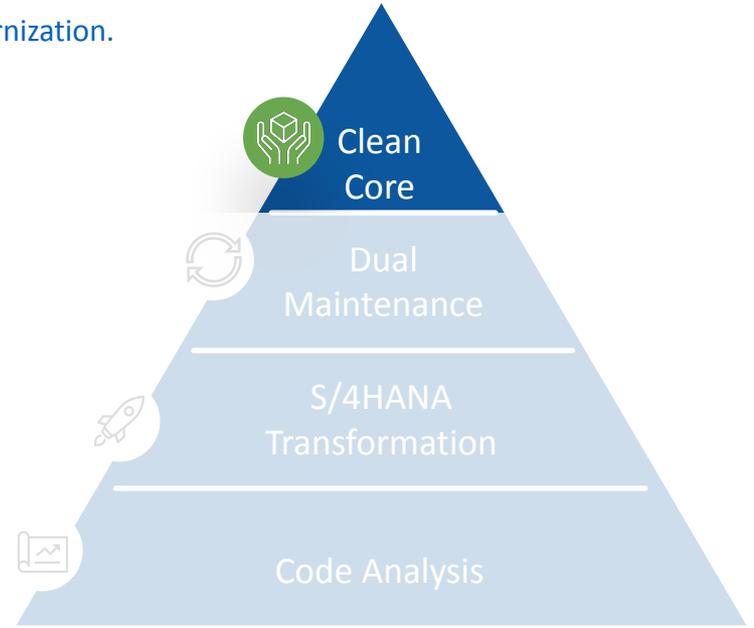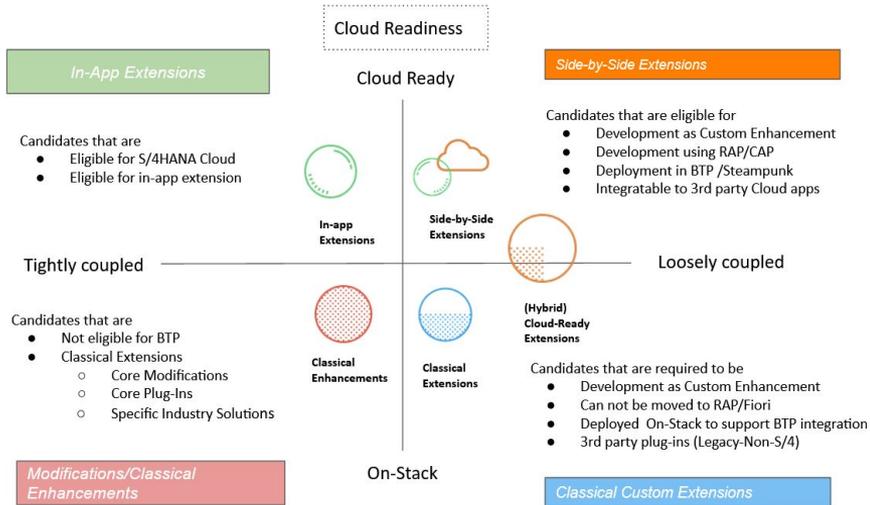

Production Track

Custom Code
DDIC

smartShift Retrofit

Project Track

Custom Code'
DDIC'

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Clean Core

Dual Maintenance

S/4HANA Transformation

Code Analysis

Clean Core Assessment

Informed feasibility, design, approach, and planning for application modernization.

Cloud Readiness

Cloud Ready

In-App Extensions

Candidates that are
- Eligible for S/4HANA Cloud
- Eligible for in-app extension

Side-by-Side Extensions

Candidates that are eligible for
- Development as Custom Enhancement
- Development using RAP/CAP
- Deployment in BTP /Steampunk
- Integratable to 3rd party Cloud apps

In-app Extensions

Side-by-Side Extensions

Tightly coupled

Loosely coupled

Candidates that are
- Not eligible for BTP
- Classical Extensions
  - Core Modifications
  - Core Plug-Ins
  - Specific Industry Solutions

Classical Enhancements

Classical Extensions

(Hybrid) Cloud-Ready Extensions

Candidates that are required to be
- Development as Custom Enhancement
- Can not be moved to RAP/Fiori
- Deployed On-Stack to support BTP integration
- 3rd party plug-ins (Legacy-Non-S/4)

Modifications/Classical Enhancements

On-Stack

Classical Custom Extensions

Clean Core

Dual Maintenance

S/4HANA Transformation

Code Analysis

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smartShift Intelligent Automation®

smartShift Overview - Global Customers

smartShift Advantage

"smartShift works at industrial scale with virtually no errors. The defect rate is so low because they have automated everything and reduced the human touch as much as possible."

Dilip Kumar

Global Supply Chain Platform Architect, Procter & Gamble

Next Steps

Test drive our analysis capabilities

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