



Intelligent Automation for SAP Transformations

Custom Code Transformation – Challenges, Solutions, & Real-World
Successes

ASUG Tennessee Chapter Meeting

About Me

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Custom Code is Needed!



46%

Needed as a result
of regulatory
requirements



45%

Essential for
innovation



35%

Essential due to
localization or
geographics



32%

Provides us with
competitive
advantage

50%

Custom code provides a unique
user experience

28%

Custom code is a core component
in our digital transformation

Source - ASUG Market Research: Custom Code and Digital Transformation

Custom Code Challenges & Opportunities

From a Legacy of Inflexibility to a Future of Agile Extensibility

Average SAP System:

- 15+ years old, 22K custom objects, 2.7MM lines of code
- Often customized ad-hoc
- Poorly maintained

Common Issues:

- ✗ Unused code
- ✗ No standards
- ✗ Performance, stability, resilience, security issues
- ✗ Customization tightly coupled to core
- ✗ Low agility, long release cycles, huge backlogs

S/4HANA

- ✓ Streamlined Processes
- ✓ Simplified Data Model
- ✓ Greater Opportunities to Revert to Standard
- ✓ Enabling Platform for Future Innovation

Clean Core

- ✓ Frictionless Upgrades
- ✓ Scalable customization
- ✓ Lean development teams
- ✓ Agile deployment
- ✓ Standard APIs
- ✓ Focus on innovation

smartShift Overview

GLOBAL LEADER IN AUTOMATED ENTERPRISE TRANSFORMATIONS



Industry
LEADER
Intelligent
Automation



EXPERTS in
legacy
transformations



PATENTED
Intelligent
Automation
Platform
20+
YEARS R&D



1000+
Cloud, SAP
Transformation
and Migration
Projects



100+ successful
Suite on HANA projects
100+ successful
S/4HANA transformations



CERTIFIED
ISO 27001, AWS MAP
& MSP



Cloud Migration,
Managed Services
partnerships with
AWS,
Azure, GCP



smartShift worked with 2 out of 5
**S/4HANA Business
Transformation**
finalists in 2021



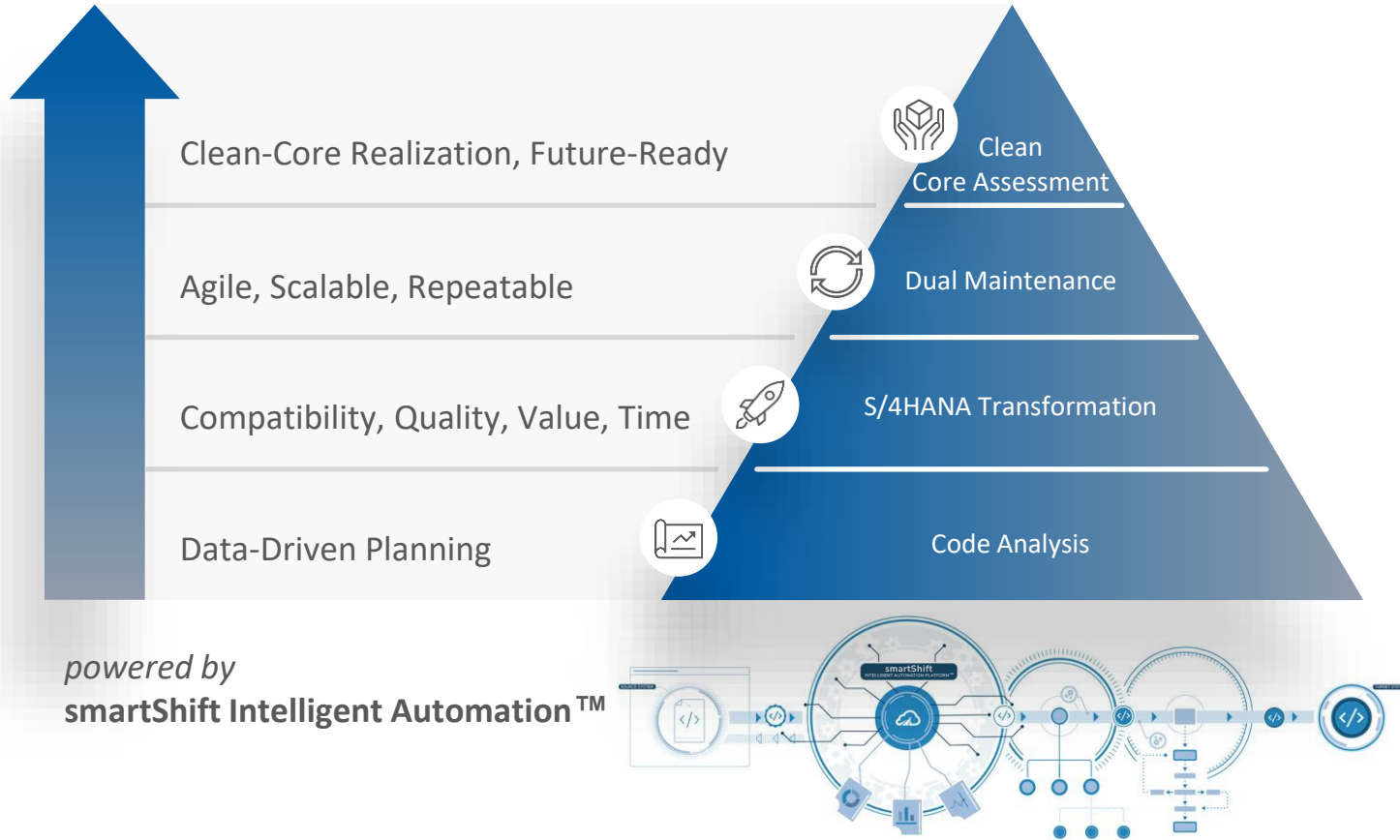
AIRBUS



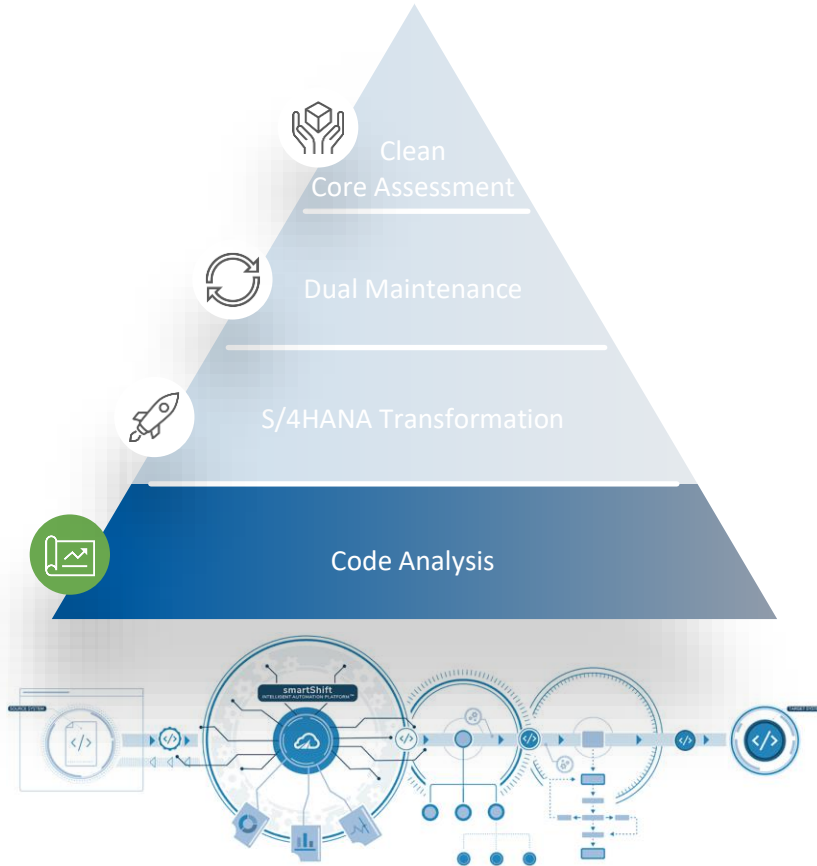
JABIL



smartShift – Custom Code Solution Continuum



Custom Code Analysis



Custom Code Transformation

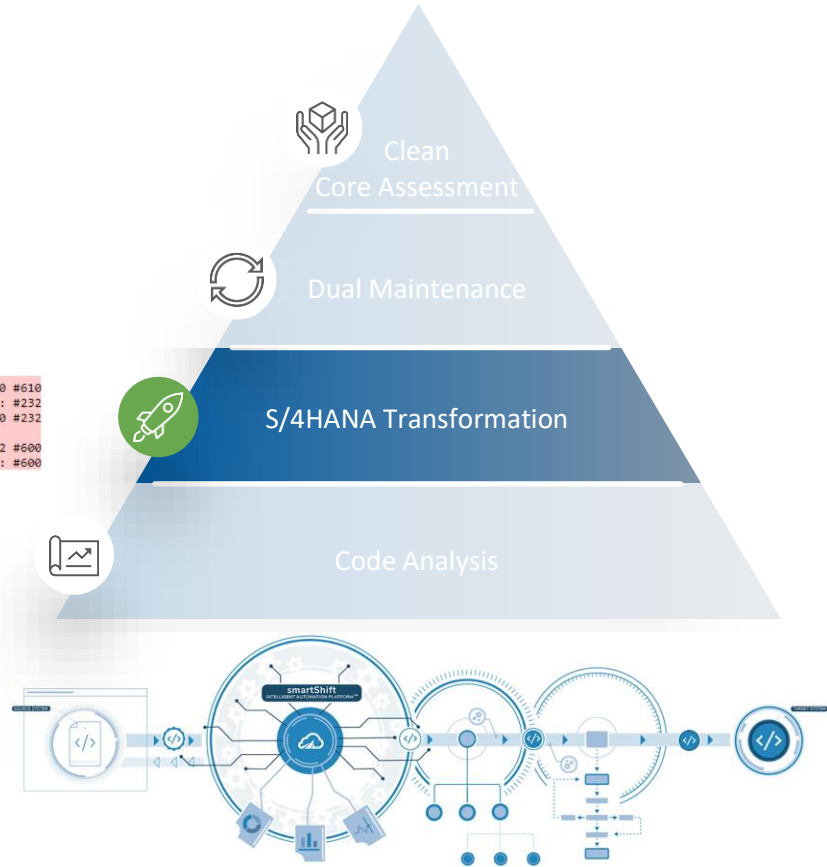
Example: PROG : Z

```
SELECT SINGLE KWERT INTO I_MVMTS-ZFSU FROM KONV "  
WHERE KNUMV = W_KNUMV "  
AND KPOSN = I_MVMTS-INV_POSNR "  
AND KSCHL = 'ZFSU'.
```

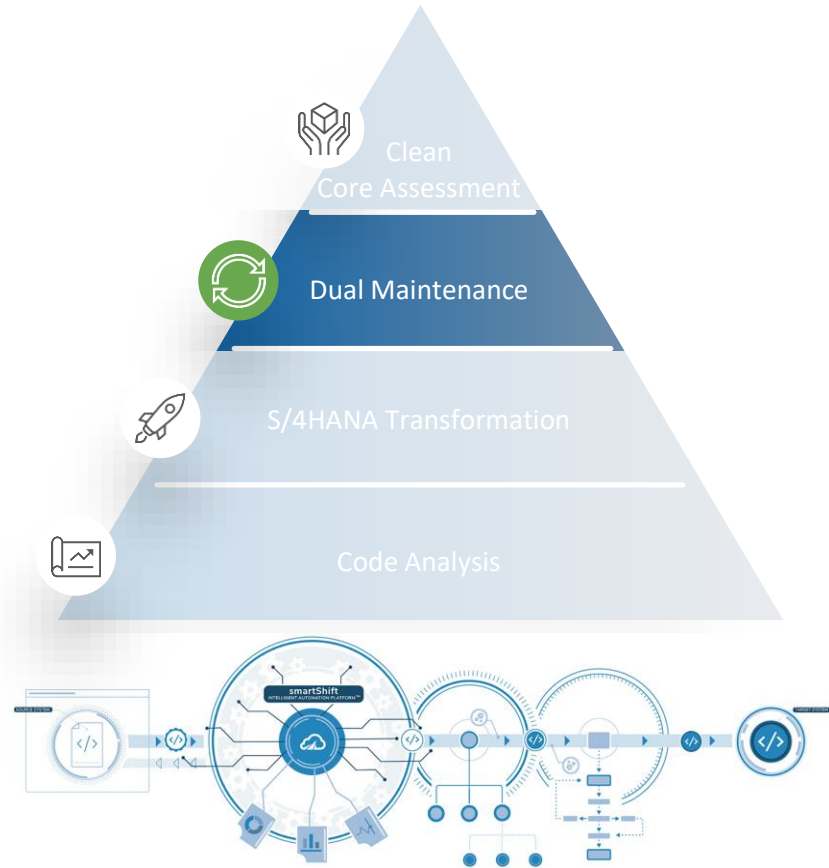
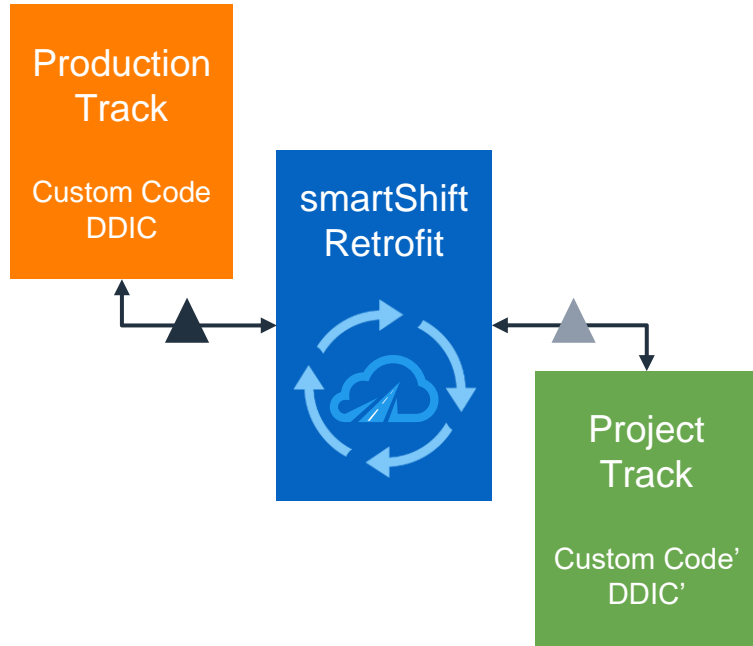
Before code

```
SELECT KWERT FROM V_KONV " "$smart: #600 #610  
WHERE KNUMV = @W_KNUMV " "$smart: #232  
AND KPOSN = @GS_I_MVMTS-INV_POSNR " "$smart: #110 #232  
AND KSCHL = 'ZFSU' "$smart: #110 #232 #600  
ORDER BY PRIMARY KEY INTO @GS_I_MVMTS-ZFSU UP TO 1 ROWS. "$smart: #110 #232 #600  
ENDSELECT. "$smart: #600
```

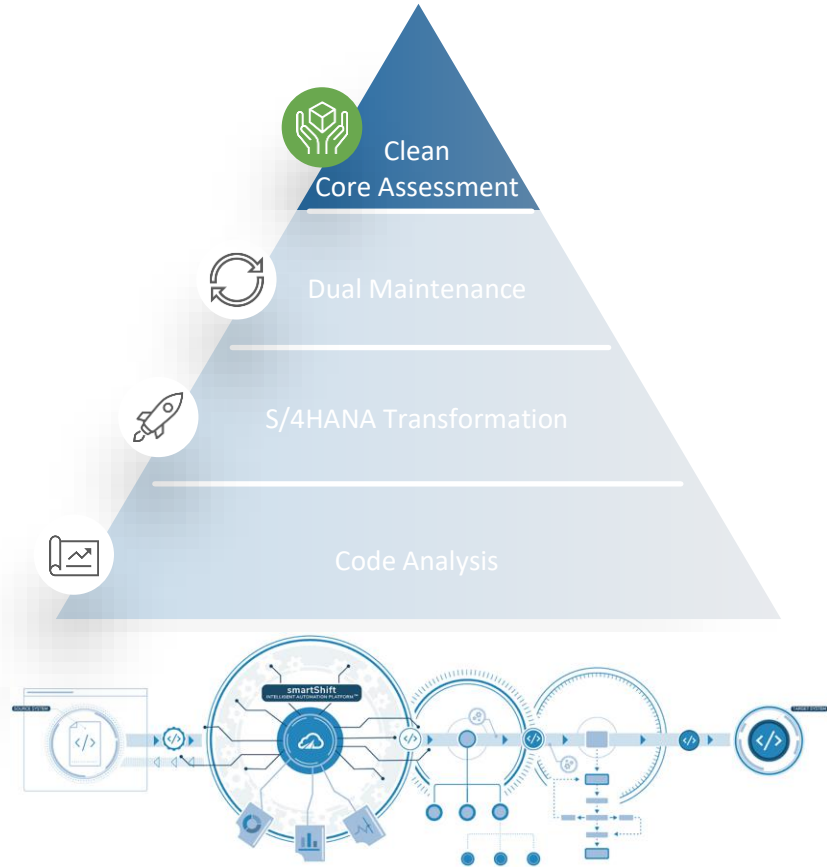
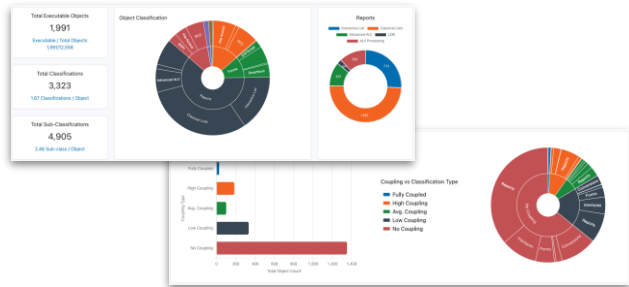
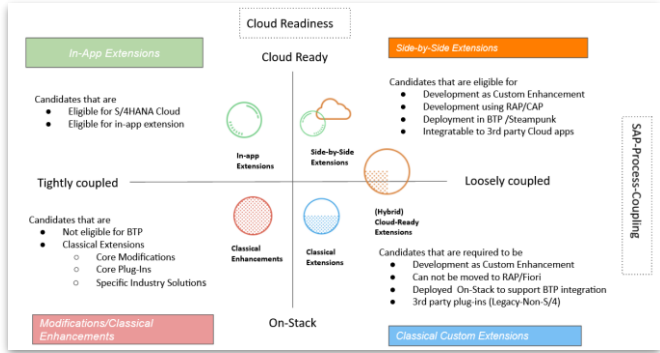
After code



Automated Dual Maintenance Solution



Clean Core Assessment



Recent S/4HANA Customer Success

Trusted solutions for the largest SAP customers in the world



- S/4HANA migration factory for 80+ system landscape
- Automation for S/4HANA, security, standardization, and performance
- Agile, sprint methodology
- To date:
 - Over 70 projects completed
 - 10MM+ LoC, 100k+ objects remediated
 - Over 7MM EUR saved
 - MM of obsolete LoC safely decommissioned

JABIL

- ECC to S/4HANA
- 46K custom ABAP objects
- Dual Maintenance automated with smartShift Retrofit
 - Critical enabler of agile continuous development & test process



- Multi-wave ECC to S/4 rollout
- 42K custom ABAP objects / 3.5MM lines of code
- Transformation and optimization
- Selective data/carve-out approach
- Automated Dual Maintenance with smartShift Retrofit ensuring continuous alignment ECC to S/4HANA



- Automation for 200k custom ABAP objects. Manual approach not feasible.
- 9 system consolidation to 3 templates + S/4HANA conversion
- Strategic development partner
 - Automated Interface Identification
 - Dual Maintenance
 - Clean-Core Modernization

