



CUSTOM CODE · CLEAN CORE STRATEGY · SAP BTP

Clean Core Isn't Optional Anymore

How to Handle Legacy Customizations
Mid-Migration

For twenty years, custom ABAP code was how SAP customers made the platform fit their business. For the next twenty years, that same code may be the single biggest obstacle between where you are and where you need to be. In mid-migration, the question is no longer whether to address it. It is how to do so without derailing everything you have already built.

The Scale of the Problem Most Organizations Underestimate



SAP reports that more than 50% of custom code in enterprise ERP systems is unused – representing millions in ongoing maintenance cost with zero business return. A consumer goods company that ran SAP’s Custom Code Analyzer tool discovered that only 12% of their 3,000 custom objects were still actively used. Retiring the rest cut their migration timeline by 40%.

Practitioners across the SAP ecosystem report that 40 to 60% of custom code in mature ECC landscapes is no longer in use – yet remains in the system, generating upgrade exposure and testing overhead with every release. In a \$2 million annual maintenance environment, custom code adds an estimated \$600,000 per year in additional costs simply to fix breakages caused by SAP updates, support packages, and enhancement package implementations.

The migration to S/4HANA makes this problem impossible to defer. SAP’s Simplification Database documents thousands of table changes, function module deprecations, and transaction replacements between ECC and S/4HANA. Every custom object that references any of these changed elements needs assessment, remediation, or retirement before conversion. Organizations that attempt to carry their entire custom code footprint forward without this assessment consistently discover it during testing – when remediation is most expensive and time pressure is highest.

50%+

of enterprise custom code is unused (SAP data, 2025)

40–60%

typical proportion of ECC custom objects no longer in active use

44%

of organizations cite customizations as top migration barrier (ISG 2026)

Why Clean Core Is No Longer Optional in 2026

In the early years of S/4HANA, Clean Core was aspirational guidance from SAP — a design principle that well-intentioned architects cited in architecture reviews but that rarely changed delivery decisions under project pressure.

In 2026, that has changed fundamentally. Clean Core is now a business-critical prerequisite for three capabilities that enterprises cannot afford to ignore:

WHY IT MATTERS

WHAT'S AT STAKE IF YOU IGNORE IT

AI Adoption

SAP Joule agents and embedded AI capabilities require standardized data models and clean processes. Heavy in-core customizations break the AI context that makes these agents effective. Every Level D modification in your landscape is a blocker on the path to Joule activation.

Continuous Upgrade Cycles

S/4HANA Cloud releases quarterly updates. Custom code inside the core creates upgrade blockers — clean core enterprises absorb updates seamlessly; heavily modified ones face expensive re-testing cycles every quarter. The compounding cost over a five-year horizon is significant.

BTP Innovation

61% of organizations now plan to leverage SAP BTP alongside their S/4HANA investment. The entire BTP extensibility model assumes a clean, standardized core to extend. Custom code that writes directly to SAP internal tables is architecturally incompatible with BTP-side extensions — you cannot layer innovation on an unstable foundation.

SAP leaders at Sapphire 2025 stated explicitly: Clean Core is not optional. It is a baseline for every modern ERP strategy. The question for organizations in mid-migration is not whether to address it – it is how to do so without stopping the program.

Custom code inside the core is not technical debt you can defer. In 2026, it is a direct blocker on AI adoption, upgrade simplicity, and every future SAP innovation that leadership is counting on to justify the migration investment.

The A–D Classification Framework: A Practical Language for Decisions

SAP formalized the A–D extensibility level framework in August 2025 to give organizations a structured, consistent classification for every extension and a clear language for managing the associated upgrade risk. Understanding this framework is the foundation for all custom code decisions in mid-migration:

LEVEL/TYPE

DEFINITION

MIGRATION DIRECTIVE

A
Fully Clean

Uses only released APIs. Built on-stack via ABAP Cloud or side-by-side on BTP. Fully upgrade-safe.

Target state for all extensions. Keep as-is if already at Level A. New development should start here.

B
Managed

Uses classic but documented, generally stable SAP APIs. Acceptable with governance sign-off.

Acceptable to carry forward with documented monitoring. Schedule review for next release cycle.

C
Risky

Accesses SAP internal objects. Carries meaningful upgrade risk with each SAP release.

Document on remediation roadmap. Do not add new Level C code. Prioritize for BTP migration in phase 2.

D
Dangerous

Modifications, implicit enhancements, direct writes to SAP tables. Severe upgrade exposure.

Must have a retirement or migration timeline before go-live. This code cannot be carried forward as permanent architecture.

The Three-Decision Framework for Mid-Migration: Retire, Remediate, or Re-Platform

For organizations already in mid-migration, the goal is not to achieve a perfect clean core before go-live. It is to make defensible, documented decisions about every custom object — and to avoid carrying forward Level D code that will create immediate upgrade risk in the first post-go-live release cycle.

The practical decision framework has three paths:

RETIRE

Best for: Custom objects built for processes that no longer exist, reports replaced by Fiori/Analytics Cloud, interfaces to decommissioned systems.

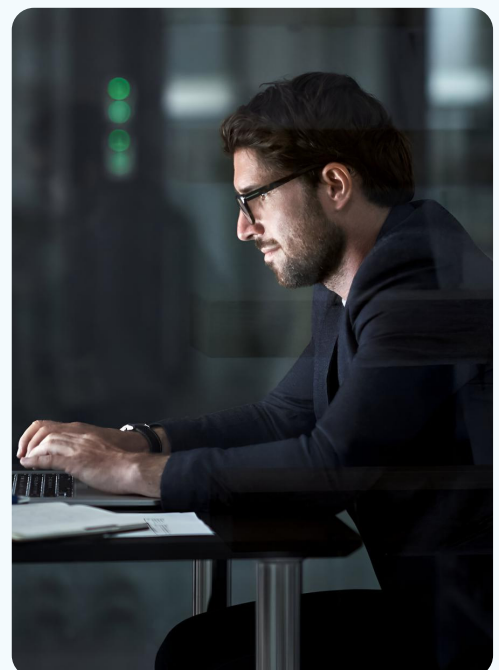
How to identify candidates: Run SAP's Custom Code Analyzer or ABAP Test Cockpit. Objects with zero usage in the last 12 months, objects referencing deprecated ECC transactions, and all custom wrappers around standard SAP functions that now exist natively in S/4HANA are retirement candidates. Every retired object reduces migration time, testing overhead, and future maintenance cost.



REMEDiate

Best for: Core business logic that must survive in S/4HANA and can be made ABAP Cloud-compliant without structural redesign.

How to execute: Use ABAP Test Cockpit to generate a findings list by object. Prioritize FI/CO and Order-to-Cash objects first — these are most likely to affect go-live. For Level C objects using SAP internal APIs, the remediation path is typically to replace internal object references with released equivalents from SAP's Released Object Directory. Level D modifications require the most significant rework: the implicit enhancement or table modification must be replaced with a proper ABAP Cloud extension pattern.



RE-PLATFORM

Best for: Complex custom logic that delivers genuine business differentiation but is architecturally incompatible with in-core development on S/4HANA.

How to execute: Move to SAP BTP as a side-by-side extension using SAP's Cloud Application Programming (CAP) model, SAP Build, or ABAP Cloud (Steampunk). The extension connects to S/4HANA via released APIs and OData services. Key BTP tools include SAP Integration Suite for interface replacement, SAP Build Process Automation for workflow logic, and SAP Analytics Cloud for custom reporting. This approach preserves business-critical functionality while achieving a clean core.



The Mid-Migration Execution Plan: What to Do Right Now

For organizations already mid-migration, the sequencing of clean core work matters as much as the decisions themselves. The following execution plan reflects what consistently delivers results in live programs:

1.

Run the Custom Code Analyzer immediately if you haven't already — SAP's Custom Code Migration App (available in your SAP Landscape Transformation system) generates a complete inventory of custom objects by status, usage frequency, and S/4HANA compatibility. This analysis, which takes hours not weeks, produces the data you need for every downstream decision. Without it, all your decisions are assumptions.

2.

Apply the 80/20 rule to your findings — For most mature ECC landscapes, 80% of migration-blocking findings will be concentrated in 20% of custom objects — often in a small number of high-traffic FI, SD, and MM objects. Identify that 20% first and resolve it before touching the long tail.

3.

Make retirement decisions before remediation decisions — Every object you retire is one you don't have to remediate or test. A retail client using SAP's Custom Code Analyzer found that the retirement exercise alone reduced their active custom object count by 45% — saving months of remediation work. Do the retirement triage before you scope the remediation effort.

4.

Separate go-live requirements from post-go-live clean core roadmap —

Not all custom code must be remediated before go-live. Level C objects can proceed to S/4HANA with a documented remediation timeline. Only Level D objects — direct modifications and implicit enhancements — represent an absolute blocker. Everything else can be sequenced into a post-go-live extensibility roadmap, reducing go-live scope without abandoning the clean core principle.

5.

Build BTP fluency in parallel, not after go-live —

Organizations that wait until post-go-live to develop BTP capability consistently struggle with the re-platforming work. One manufacturer ran a three-month internal BTP enablement program during the S/4HANA realization phase. The investment paid off directly: their BTP extension work executed without the delays that constrain teams encountering the platform for the first time under production pressure.

6.

Establish a Clean Core governance model before go-live —

The worst outcome of clean core work done right during migration is undone in the first six months after go-live by developers who reintroduce in-core customizations because no governance model prevents it. SAP Cloud ALM now provides live visibility into clean core compliance through the RISE with SAP Methodology Dashboard. Implement this governance before go-live so that the clean core you achieve is the one you maintain.

The Specific Challenges of Mid-Migration Clean Core Work

Organizations that are already twelve to eighteen months into their migration face specific constraints that earlier-stage programs do not:



Configuration is already locked

Blueprint decisions made in the Explore phase established the approach for handling customizations. If those decisions were made without clean core discipline — which is common in programs that started before 2024 — reversing them mid-program is expensive. The pragmatic recovery is to: (a) complete planned in-core remediation for go-live scope, (b) create a documented post-go-live BTP migration plan for Level C objects, and (c) enforce clean core compliance on any new development from this point forward.

Testing timelines are compressed

Every custom object remediated mid-program needs to be retested. In a compressed testing window, this creates real risk. The mitigation is prioritization: test remediated Level D objects first (they carry the highest risk), use test automation tools to accelerate regression coverage, and formally accept tested Level B/C objects with documented monitoring plans rather than running full regression on every object.



Team skills may not yet include BTP

ABAP teams that have deep ECC expertise frequently lack BTP experience. The transition from writing custom code inside ECC to building side-by-side extensions on BTP using CAP and released APIs is a genuine skill shift. This is not an overnight transition. Organizations should plan for a structured BTP enablement program and, in the near term, leverage partners with demonstrated BTP delivery experience for the most complex re-platforming work.

The accrete advantage: dual btp and s/4hana expertise

Accrete's S/4HANA practice combines deep ECC-to-S/4HANA migration expertise with active SAP BTP delivery capability. We have executed clean core assessments, ABAP remediation programs, and BTP re-platforming engagements across FI/CO, SD, MM, and Field Service Management. For organizations mid-migration, we can execute a custom code triage in two to three weeks and deliver a sequenced remediation plan that maps to your go-live timeline.

Get Your Custom Code Situation Under Control

Accrete's Clean Core Assessment delivers a full custom object inventory, A-D classification, and a sequenced remediation plan in 2-3 weeks — so you can make go-live decisions with confidence.



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