



More than what you think.

White Paper

Are you HANA-ready?

*Enterprise 'HANAtization' journey
from 'data-to-code' to 'code-to-data'*

Your move from SAP Business Suite or ECC to SAP S/4HANA brings all the aspirations of a modern digital-first business for you and your customers. The migration to a new data model also means, however, that you need to ensure all custom codes run correctly on the new database and seamlessly adopt the underlying architecture from the traditional 'relational' database to S/4HANA's in-memory database.

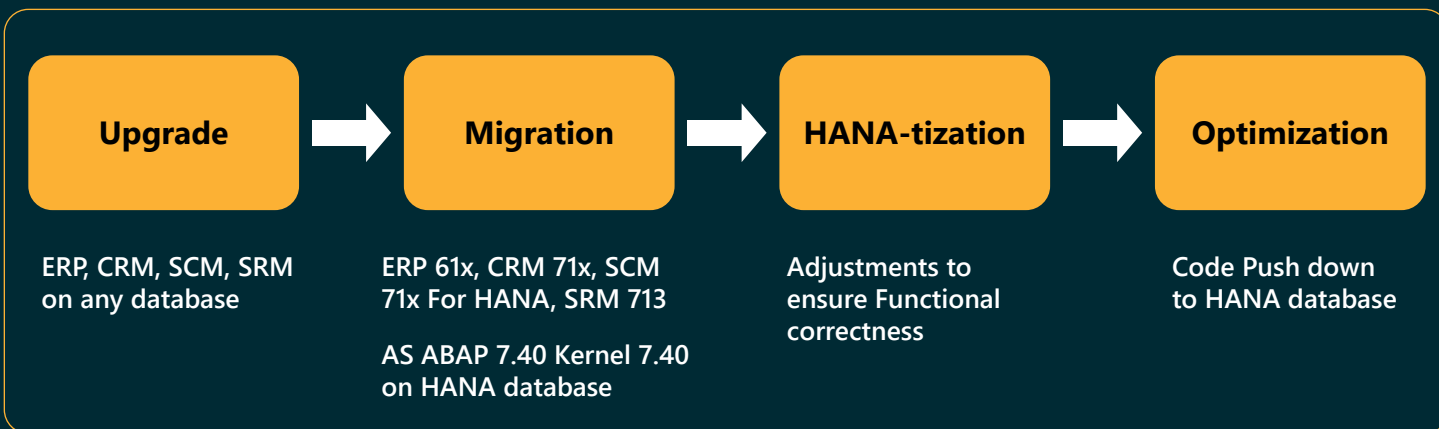
In the context of transition to S/4HANA in particular, there are a few typical compatibility tests to be carried out before, during, and after the migration takes place. This blog shows you how to recognize and resolve incompatibilities between your custom code and the new S/4HANA model using the ABAP Test Cockpit. Because only by ensuring a complete sanitization or – 'HANAtization' – can we ensure a smooth migration to SAP S/4HANA.

Technical changes with SAP HANA that may affect existing DB specific ABAP code

Technical Change	Details and Examples - Effect on DB specific ABAP code
DB migration	Each DB has specific features and unique technical behavior. <i>DB specific code may rely on these features of the used database.</i>
SAP HANA architecture	Column based architecture - as a consequence e.g. secondary DB indexes are less important. <i>DB specific code may rely on the existence/usage of certain DB indexes.</i>
Depooling/Decustering	During the migration to SAP HANA most pool and cluster DB tables are transformed to transparent DB tables (depooling/decustering) so that the tables can be used in analytic scenarios. <i>DB specific code may rely on the technical specifics of pool and cluster tables.</i>

Why be HANA ready?

Before any migration occurs, the first job for the IT lead is to ensure that all custom codes are adjustable to the new SAP HANA database. It's just not a database, but a combination of software and hardware that achieves faster data processing, now that the old ways of ABAP programming guidelines no longer hold up.



As illustrated in the figure above, your migration journey doesn't stop at migration. Still, it requires proper Hanatization (to ensure functionalities are seamless across data, departments, and teams) and optimization (for the ability to push custom codes down efficiently to the central HANA database) after a technical migration occurs. The process ensures that the custom codes run efficiently on the new HANA database, by integrating well with S/4's underlying in-memory architecture.

SAP in fact provides tools for Database Simplification to detect any custom code requiring adaptation before migration. The process of Hanatization takes place in two key phases – the preparation phase and the realization phase. Let us discuss how they help enterprises become HANA-ready.

What it takes to be HANA-ready

SAP's tools (primarily SAP Code Inspector – SCI or ABAP Test Cockpit - ATC) assist in optimizing the performance of custom code ABAP developments. Meaning, you can run an ABAP and SQL trace to gain deep insights into how an app performs with the new S/4 system. These effort estimates can be further complemented with new utilities to ease your transition to S/4. Hanatization also involves checking of variants of the functional databases, typically regarded as mandatory for the analysis of ABAP custom codes to ensure robust programming, performance & security checks, as well as advanced yet simple search functions.

The first phase – preparatory – is custom code scoping and customized code analysis. It allows you to determine whether the ABAP custom code can be taken over to S/4HANA or deleted entirely, minimizing the next phase's efforts. While the latter – realization phase – deals with custom code functional adaptation and custom code optimization after the technical system conversion.

Finally, you need to check which business processes, for instance – performance of critical database inquiries – need to be optimized in the new system. SQL performance optimization using SQL Monitor by far is one of the most important new tools from SAP for an overall analysis of the custom code. An aggregated data of performance from production systems for all executed commands can also be combined with the results of static performance checks. It is important to note that an isolated analysis of these results is never the right way to judge your next step because the process is inefficient at its core and can potentially be unnecessary to your performance-critical operations.

This is where you may need external support of IT consultants like YASH, who have specialized in creating custom-SAP roadmaps for 450+ businesses across sectors in partnership with SAP. If you want to know more about how we have helped them with our 16+ centers of excellence (CoEs), please check out our 'HANA-ready' [success stories here](#).

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