SAP CONSOLIDATION: MERGE WITH CAUTION

DATA IS THE DIFFERENCE BETWEEN SUCCESS AND FAILURE
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THE SIREN SONG OF SINGLE-INSTANCE SAP

With SAP so deeply ingrained into its customers’ enterprises, changes in how a business functions—what it sells, how it goes to market, where it operates, and so on—are almost always accompanied by changes to its SAP system. It is not surprising, then, that SAP customers are constantly evolving their implementations. While this may entail small process refinements or minor upgrades, it is not uncommon for SAP projects to extend to multi-million dollar, multi-year efforts.

Consolidation has become one such project category, particularly for large enterprises looking to realize the benefits of operating a single, global SAP instance: standardized processes, lower TCO, regulatory compliance, and better business visibility. Widespread trends, including globalization and strong M&A activity, have created an environment in which organizations span multiple business units, with each operating an isolated SAP instance. Consolidation projects attempt to unlock synergies by harmonizing landscapes across those various business units.

CONSOLIDATIONS UNFOLD ACROSS THREE KEY SWIMLANES

ALIGN INFORMATION, PROCESSES, AND PEOPLE

Projects may take the form of technical consolidations—for example, migrating multiple SAP applications to a common data center while maintaining logical separation between instances. They may also entail merging lagging SAP instances into a leading SAP instance that already embodies corporate best practices. Finally, enterprises may attempt to combine multiple systems into a new global template, one that blends best of breed practices across instances, or even realizes entirely new operational concepts.

Broadly speaking, consolidations unfold across three swimlanes dedicated to aligning information, business processes, and people:

- Information: Gather business information into a unified and consistent environment
- Business Processes: Define and test the workflows and application logic fueled by the business information
- People: Mold the organization to execute the business processes governed by the application
Aside from pure technical consolidations where project scope is limited to achieving a common infrastructure, consolidation efforts must cut across each of these lanes, with strong interdependencies between each one.

**DATA IS THE KEY TO SAP CONSOLIDATION**

**EFFECTIVE DATA MANAGEMENT SEPARATES SUCCESSFUL PROJECTS FROM FAILURES**

While each swimlane is beset with its own hazards, one difficulty underpins all three of them: the inability to effectively manage data across the portfolio of instances slated for consolidation. Key consolidation activities – for example, migrating data, testing customizations, and training business users – all depend on the ability of the organization to copy, version, and move data. In practice, existing tools do a poor job of orchestrating SAP data, making data management a significant bottleneck.

**Information Swimlane:**
Project teams lack the means to easily migrate and harmonize data

SAP consolidation projects, by definition, involve multiple data sources that must be migrated into a unified environment. Several factors make the process of migrating and cleansing master data a tedious and highly iterative process:

- SAP data sources may be difficult to access, requiring data extracts that contend with a nightly batch window or, even worse, interrupt a production system.
- Data migration often requires expensive temporary staging environments for developers to execute and test their ETL or data cleansing routines.
- Master data often needs to be synchronized to a specific point in time.

*Figure 1: SAP consolidation projects align information, processes, and people.*
Business Process Swimlane:
Data slows the dev/test cycles needed to define the business logic in SAP

Blending functionality from different SAP instances can require wholesale changes to the workflows, forms, integrations, and organizational structures attendant in source SAP systems. The open architecture of SAP ERP means that implementations are highly tailored to specific customer needs, with deeply-embedded customizations sprawling across modules. Defining, realizing, and testing functionality for a master instance is a daunting task for several reasons:

- An SAP instance can include thousands of customizations in the form of ABAP code injected into user exits, enhancement points, and even the vendor-supplied codebase.
- A high volume of custom code means that QA teams must continually regression test the master system as customizations are reconciled and rolled forward.
- Project teams often lack sufficient data and application environments for development and regression testing purposes.

People Swimlane:
Lack of UAT and training environments endangers change management efforts

As the consolidation team closes in on go-live, users must test the system to ensure it meets business requirements, and management must align the organization to the roles and processes embedded in the new application. Too often, the lack of data prevents teams from following a well-defined change roadmap, ultimately derailing consolidation projects:

- Limited SAP environments for user acceptance testing constrains feedback delivery, and threatens business owner commitment to the new implementation.
- Schedule slippage and a lack of dedicated training environments pushes user education to the right, jeopardizing preparedness following go-live.
- Lack of post-production support capabilities threatens user adoption when bugs and change requests cannot be handled expediently.
THE TRANSFORMATIVE CAPABILITIES OF DATA AS A SERVICE

DAAS SOLUTIONS DELIVER DATA IN MINUTES INSTEAD OF HOURS OR DAYS

While existing data management tools and processes constrain the pace of consolidation projects, technologies in the emerging category of Data as a Service (DaaS) promise to serve as accelerators instead of limiters. DaaS solutions serve full copies of source data and have features to enable collaboration and project agility that are especially useful in consolidation scenarios.

The most fundamental capability of any DaaS solution is the ability to deliver multiple copies of data within minutes. DaaS solutions deliver this capability through sophisticated block sharing and virtual files. Instead of moving data from system to system, such solutions keep a single repository of record, and then create virtual data instances by pointing to the correct set of blocks within the repository. This allows data provisioning to occur rapidly and automatically, decoupling time and effort from the size of the data set. Moreover, since DaaS solutions also capture and version data over a window of time, users can:

- Bookmark and share data with teammates
- Refresh data from the latest version production
- Reset data back to prior point in time.
- Branch data for performance and A/B testing

**Figure 2:** DaaS solutions non-disruptively synchronize with production SAP environments and deliver full copies of application data.
HOW DATA AS A SERVICE ACCELERATES SAP CONSOLIDATION

A CASE STUDY

DaaS provides several major benefits within the context of an SAP consolidation project. Consider a hypothetical scenario in which a multinational corporation is attempting to consolidate North American (NA) and European/Middle Eastern (EMEA) SAP ERP systems into a single, global instance.

ACCELERATE DATA MIGRATION WITH VIRTUAL DATA

A DaaS platform could accelerate data migration from the NA and EMEA applications by non-disruptively synchronizing with those applications’ production databases and creating space-efficient virtual copies. Data extracts could then be performed against the virtual copies, eliminating the need for workloads to contend against a nightly batch window. Transforms and cleansing routines could even be performed directly on the virtual copies.

Moreover, DaaS solutions would allow users to synchronize master data across multiple sources to a specific point in time, ensuring consistency between NA and EMEA master data including customer records and sales orders.

**Figure 3:** During data migration, DaaS solutions can synchronize data from multiple SAP instances to the same point in time.
MORE AND FASTER DEV/TEST TRAINS TO RECONCILE CUSTOMIZATIONS

Reconciling differences between the various business processes inscribed into the NA and EMEA systems represents another significant challenge. DaaS accelerates the integration of SAP configurations and custom ABAP code in two key ways.

First, DaaS gives customers additional environments in which projects teams can integrate customizations and regression test the resulting changes. The traditional SAP instance entails a so-called N+1 landscape with one dev/test line devoted to the production system (the ‘N’ line), and another for ongoing projects (the ‘+1’ line). With DaaS, the customer creates virtual environments using far less infrastructure, allowing them to leverage an N+many landscape with multiple, parallel dev/test lines earmarked for consolidation work.

Second, DaaS gives customers advanced data features that accelerate efforts within those parallel dev/test lines. For example, suppose the customer is merging customizations from the laggard EMEA system into the leading NA system. With DaaS, developers can gradually reconcile batches of customizations, knowing they can quickly roll back their environment to a stable, bookmarked state if a bug is discovered.

Figure 4: With virtual data environments, DaaS can give SAP customers parallel development trains earmarked for consolidation dev/test.
The ability to reset an SAP environment is a process that could take days using legacy tools. But by performing a reset in just minutes with DaaS, more dev-test-fix cycles occur earlier in the consolidation project, allowing teams to remediate bugs when they are less costly to fix.

DEDICATED ENVIRONMENTS FOR UAT AND TRAINING

Finally, the SAP customer can use DaaS to elastically provision virtual environments for both user acceptance testing (UAT) and training. Business users typically gain access to SAP systems late in the consolidation process due to lack of available environments. With DaaS-enabled virtual environments, UAT and training can occur in parallel with consolidation efforts. Moreover, business users can bookmark and share errors with development teams earlier in the consolidation process, before the consolidated system nears go-live.

CONCLUSION

Consolidation efforts promise a return on investment in the form of lower TCO and improved overall operational efficiency. By dramatically accelerating efforts across the three key swimlanes in SAP consolidation projects—aligning information, business processes, and people—Data as a Service helps SAP customers realize that return earlier.
SAP Consolidation: Merge With Caution
Data is the Difference Between Success and Failure

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