How important is data management in an SAP environment?

Four experts discuss the challenges of data governance when migrating to SAP S/4HANA and beyond.

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In both B2B and B2C environments, the quality of decision-making depends on the quality of the data available. Where organizations fail to define a data management strategy, they often face challenges with unqualified data inhibiting efficient, data-driven decision-making. The challenges thrown up by an SAP S/4HANA migration project underscore the decisive role played by data management. Organizations have to transition from a heterogeneous structure with data distributed in multiple SAP silos to a highly consolidated logic.

A sound data governance strategy provides the key to a successful transition.

- How can companies set up their SAP environment as a source of good-quality, reliable, managed data?

- What is the best approach to data governance in an SAP environment?

- Should SAP become the sole corporate data repository or does a more agnostic approach make sense?

- What tools should companies use to ensure the success of their migration project?

Q What are the primary considerations of an SAP S/4HANA migration project?

Michael Matovic, TIBCO: SAP has a sizable footprint in many organizations. The magnitude of its business impact is such that it can often be difficult to alter the existing base. The main challenge of a migration to S/4HANA is to turn this obstacle into an opportunity. The priority is to re-examine the status quo, streamline as much as possible, and reduce costs. These objectives can be achieved in particular by optimizing relevant processes. An overview of the existing situation therefore needs to be obtained before a company can go on to use this "forced" migration to improve its data governance.

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Philippe Assuncao, TIBCO: The data structuring model provided by SAP does an efficient job in an SAP context, but it's not as good when it comes to sharing information with other systems. This is a crucial point, however, as SAP systems are overflowing with master data on customers, products, production sites, and so on. Operations can only run smoothly if this data is shared.

Given that the migration to S/4HANA cannot really proceed without an analysis of the structure of the existing SAP systems, it makes sense to capitalize on this step to improve data governance and consider a common agnostic model that can be accessed and shared more easily within the organization.

This step of describing the SAP systems already in place actually makes up a large part of an MDM project. It is worth going all the way and adopting this master data management approach for the whole organization.

Pascal Anthoine, Micropole: Migration poses a challenge for governance. The task becomes even more complex when the organization is migrating multiple SAP instances into just one. Going beyond the processes involved, this calls into question the consistency of the data. Different data dictionaries or customized models can lead to confusion of data that is functionally unaligned.

Therefore, prior to setting out on the migration path, consideration must be given to this issue of consistency between the data dictionaries and preserving the quality of the data. Otherwise, the organization's processes may be severely impacted, especially in the event of a future merger of several companies operating on different SAP logics.

Alaa Hoblos, Apgar: The disruption caused by migration to S/4HANA is comparable to that of a change in business model. The priority is to redefine the processes and the entire resultant organization, with a particular emphasis on data governance. Instead of being managed in silos, SAP S/4HANA brings a centralized approach to data management. This is why it is essential to make data modeling and data governance the first steps on the journey.

Q The migration to S/4HANA is thus a springboard for introducing a data-centric approach. What are the specific benefits of such a strategy?

Alaa Hoblos: An S/4HANA migration project does indeed provide a good pretext for introducing a data-centric approach. Going beyond the migration to S/4HANA, companies can use this as an opportunity to take a closer look at their IT systems. Master data, the exchange of data, analysis, and the ways in which data is used and processed

are not just relevant to SAP S4/HANA. By adopting a sound data-centric approach, companies can achieve their data-driven target outcome while taking both the needs of SAP and the other systems that consume and process data into consideration.

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Michael Matovic: Migration to S/4HANA does indeed provide an opportunity to adopt an agile data-centric strategy and eliminate silos at the same time. Many manual processes can be eliminated in favor of automation. A data-centric strategy should be considered as the starting point for an organization to bring its infrastructure right up to date. It provides an opportunity to decommission redundant or aging systems and consider a gradual transition to the cloud, resulting in cost savings. Organizations can also make their processes more streamlined and reliable, accelerate time to market, and improve their visibility in the market, etc.

Philippe Assuncao: In concrete terms, this data-centric approach gives businesses access to reliable information, for both SAP and non-SAP users. For example, data scientists will have much better access to company data since it will be provided on a centralized basis. Instead of connecting to SAP and struggling to find what they are looking for, they could directly access the data repositories from their BI or reporting tools and extract good-quality, fully reliable data.

Pascal Anthoine: The benefits of such a strategy lie precisely in the creation of a data repository that is independent of SAP. While SAP does cover a large spectrum of business processes, it is not able to cover them all. It is relevant in certain contexts — price lists being one example — but other information

such as marketing processes or product documentation fall outside of its scope. Any attempt to expand the scope of SAP by adding more data and making it the data repository of the organization is rarely a good idea, especially as SAP does not really offer many data quality or management rule implementation algorithms.

Q Which tools should companies use to ensure the success of their migration?

Michael Matovic: Based on the challenges of governance, I would rule out a best-of-breed approach because this brings the risk of the tools not being able to communicate with each other. A better option would be a solution based on tools that complement each other. We could highlight three major aspects leading to applications. The first relates to the need for a foundation of reliable, good-quality data, which is where MDM comes in. The next requirement is having the right data at the right time, which is satisfied by data virtualization. By implementing an abstraction layer, data virtualization guarantees a single point of access to the data while also guaranteeing its timeliness. The third and final aspect is to share data that can be understood by everyone and this is achieved through the data catalog. The advantage of TIBCO is that it covers all three of these aspects.

Philippe Assuncao: The first thing we need to mention is the integration element. Migrating from a legacy SAP ecosystem to S/4HANA requires the performance of data extraction and transformation processes. As a long-time integration expert, TIBCO is more than capable of meeting this requirement.

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Then we have the implementation of a repository into which data can be imported and its quality assured. Aspects like governance processes, access rights, etc. can be defined at that stage. In a further step, MDM could be combined with a data virtualization tool to ensure data reliability and availability. This combination of tools can provide a 360-degree visualization of the organization's data. Thanks to the data catalog, users can then see all the datasets that are available within the company.

Pascal Anthoine: S/4HANA is set to become a true data hub and an accessible interface for all employees. As such, the data catalog is a key preparatory tool for the migration to S/4HANA.

The MDM approach is also indispensable if there are several systems that need to be aligned. At this level, I think that a distinction should be made between the B2B and B2C requirements. B2C data is never created in SAP but rather at the point of sale in CRM or e-commerce solutions, for example via forms. As such, the data will always need some level of processing before it is transferred to SAP. This is where the presence of a data repository becomes important.

On the other hand, it might make sense to centralize the data governance within SAP in a B2B context. The management of B2B customers and contracts is quite well adapted to the SAP structure. In a relatively simple and centralized organization, SAP could be used as a repository for B2B data. But in all other cases, a more agnostic approach would need to be developed.

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Alaa Hoblos: To migrate the legacy system, you first need to know it inside out. This is where the data catalog becomes important. It helps to give an understanding of the location, composition, governance, and use of data within the existing systems.

I also believe that SAP should not be considered as the only source of data, but rather it should be combined into other data sources. The MDM EBX solution from TIBCO is an especially key element in a migration project because it acts as a kind of bumper for S/4HANA. It absorbs all the impact of the integration of SAP with the rest of the IT system.

If S/4HANA is envisaged as the sole master data repository in the IT system, this means that it will have to take into account the needs of a CRM program or other applications, and manage data it does not need. This would also require it to deviate from its own standard requirements. By managing the needs of other systems, the MDM solution thus acts as a buffer against the ERP system, allowing S/4HANA to provide solely on what it needs to.

In addition, data virtualization plays an important role in removing the silos of old SAP modules and promoting a 360-degree overview of customers or products, for example.

Q As an integrator, what do you see as the strengths of the TIBCO ecosystem in this type of project?

Pascal Anthoine: The TIBCO ecosystem can be compared to a Swiss Army knife. As well as being able to model all types of domains, the MDM EBX solution manages everything from customer data to information on products, sites, suppliers, bills of material, etc. In addition, its ergonomic design enables easy interaction with the data. This is important because many projects fail due to a lack of acceptance of the solution by employees. As a simple, agile, and feature-rich solution, TIBCO EBX software makes data governance more widely accessible in a powerful way.

Alaa Hoblos: TIBCO tools give us plenty of room to maneuver so we can adapt to the context of each client. Robust and flexible, they are a particularly good fit for an agile implementation strategy. At Apgar, we prefer an iterative design approach based on a model that evolves as we receive feedback from the client until we arrive at the end solution. Easy to use and configure, the TIBCO tools suit our way of working very well.

Pascal Anthoine: Turning to the other tools offered by TIBCO, we value the data catalog as a good way to obtain a clear overview of the client's IT system, especially when there is a large document deficit. These tools are true accelerators and they allow us to have iterative structures.

As for data virtualization, it has the ability to neutralize the impact of migration while providing a security element. We also rely quite a lot on the exchange layer of TIBCO BusinessWorks software. The value of the TIBCO ecosystem is that it not only provides the repositories but also the exchange layer, enabling the sourcing of data and populating the rest of the IT system with quality information. The advantage of TIBCO, therefore, is that it covers a wide range of data, from the catalog to exchange layers to the repository. This is an important issue for the majority of companies, in both an on-premises and a cloud context.

Alaa Hoblos: We need to emphasize the importance of information buses and ETL in these kinds of migration projects. The benefit of TIBCO is that it offers all of the tools we have just mentioned within a single ecosystem. I would highlight in particular the importance of the data catalog, which is often the missing piece required to enable end-to-end data governance. If the success of a company depends on its data, then it depends above all on its ability to discover and understand this data.

Q   **What are the main pitfalls to be avoided in an S/4HANA migration project? How can this migration be leveraged?**

Michael Matovic: The main thing is to avoid going back to a proprietary application situation. This migration should be used as an opportunity to become more open and agnostic, and to view third-party technologies as assets rather than obstacles. For this, you need to know how to take the data regardless of the source, refine the repositories, and look for a 360-degree overview of the data. This is also the right time to secure data traceability: Who does what? For how long? With what objective? Dealing with this issue also solves the question of GDPR compliance.

Finally, the migration to S/4HANA provides an opportunity to modernize the IT system and to maybe consider a cloud strategy to reduce maintenance costs, take complexity out of the infrastructure, and benefit from the flexibility of the cloud.

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Philippe Assuncao: The "Big Bang" approach should be avoided at any rate. Most of our clients use multiple SAP instances, so implementing everything in parallel is difficult and risky.

After that, you need to avoid falling into the trap of looking to replicate the structuring of SAP within the data repository. The whole point of the migration is to benefit from the context, to provision the data in an agnostic format. This is to facilitate ease of adoption by any application or system. Our partners offer accelerators and methodologies for this purpose.

Alaa Hoblos: Apgar has developed internal modules positioned above the TIBCO layers, in particular the MDM part. For example, our MDM finance module based on the TIBCO EBX solution involves a pre-configured model that is compatible with SAP.

It contains pre-defined processes for an organization with roles and authorizations, all fully compatible with S/4HANA. You can view it as an MDM accelerator that interfaces with SAP to manage the finance master data without bothering with the implementation of A-to-Z master data management. All this while retaining the flexibility of the TIBCO tools. We also have an RDM (reference data management) module and we are in the process of developing a business partner module.

Returning to the pitfalls, it is important to consider how the post-migration IT system will look. You need to create an infrastructure for the exchange of data and an MDM system that can meet the needs of S/4HANA as well as those for the company, independent of SAP. I fully agree with the analyses we have heard regarding the need for advance preparation of the data governance and modeling.

Pascal Anthoine: Remember that everything begins upstream of the migration. Alignment with the data dictionaries, performance of a data quality assessment, and attainment of quality metrics from this are aspects that are too often neglected. More attention tends to be paid to the technical interfaces, the infrastructure, and the processes, to the detriment of the data, which after all fuels the entire system.

Finally, it is important to adopt a progressive approach when building a repository. With SAP projects, you sometimes have to work on all the models in parallel, which gives less time for reflection. This should be pointed out to those overseeing the SAP migration project. They need to be aware of the scale of the project, which goes well beyond the scope of SAP and requires a lot of time. That is why it makes sense to begin the MDM project upstream of the S/4HANA migration project, both to give more time for reflection and to avoid concentrating too much on SAP.

Q How do the TIBCO tools complement the expertise of the integrator?

Philippe Assuncao: TIBCO provides technical expertise and a holistic view of the challenges of data management. Our integrator partners bring their on-the-ground insight, work methodology, and specific professional knowledge. In this respect, the alliance between TIBCO and the integrators accelerates the completion of S/4HANA migration projects.

Michael Matovic: TIBCO provides all the tools for a successful S/4HANA migration by adopting a data-centric approach. The quality of the data is assured thanks to MDM. TIBCO Data Virtualization software makes the data available free of complexity and silos, and the data catalog enables comprehensive management and mapping of the data. When leveraged by an independent integrator with the ability to step back from a purely SAP-focused vision, these tools put the company on a path of continued development.

Pascal Anthoine: Micropole delivers an end-to-end solution, from project qualification to implementation. In particular, we perform evaluation studies on the governance approach to define its impact using specific indicators in terms of sales, customer satisfaction, compliance, or the ability to start new projects. Our teams support the client at all stages of the project, from the data quality assessment to implementation and even maintaining the system in operational condition via our third-party application maintenance offers.

Alaa Hoblos: The support provided by Apgar Consulting begins with a phase where we qualify the data approach within the migration program. It continues with data classification by domain, identification of owners and roles, data cataloging, qualification of the target requirement, and identification of areas to be vigilant of with respect to the existing set-up. The next stages of our support are implementation of MDM domains based on TIBCO's EBX technology, with the possibility of deploying our pre-configured modules.

Finally, it goes without saying that Apgar supports the migration and exchange of data as well as data virtualization. As a partner to our clients, we support them in a phased country-by-country deployment as well as application maintenance.

About the experts

Michael Matovic, Solution Consultant, TIBCO Software

During his fifteen years of experience in the digital sector, Michael Matovic has been involved in projects centered on data management and in particular data governance based on data quality, data virtualization, and data catalog solutions in many contexts, including GDPR. Before that, he worked on projects to create open source application platforms, EDI/EAI projects, projects for the transition to electronic invoices and for the migration and monitoring of key accounts on iPaaS.

Philippe Assuncao, Presales Director Unify Solutions, IBCO Software

Philippe Assuncao is an expert in master data management. He started his career in 2007 as an MDM consultant working on deployment, qualification, and opportunity studies. His current role is presales director of TIBCO's data management offerings, Unify, including TIBCO EBX, TIBCO Data Virtualization, and TIBCO Cloud Meta Data software.

Pascal Anthoine, Partner Data Governance, Micropole Consulting

Pascal Anthoine is partner, data governance at Micropole Consulting, an international group specializing in consulting and innovative technologies with 1,130 employees and a leadership position in data and digitization projects. In 2005, he launched the MDM solution and supported its development in the areas of data governance and data architecture.

Alaa Hoblos, CEO, Apgar Consulting

Alaa Hoblos is the co-founder and CEO of Apgar Consulting. Founded in 2013, this TIBCO partner specializes in data consulting and the implementation of data platform solutions for data preparation, cataloging, MDM, data exchange, and data virtualization. A trained software integration engineer, Alaa started his career in technology consulting and IT systems management at a major European firm. He has provided support to many clients in projects centered on transformation, enterprise architecture, data governance, exchange solutions, and master data management solutions.