

ERP Migration Challenges and Solution Approach Focussed on SAP Customers

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Abstract

Ever-transforming IT environment, increasing spending on cloud-based applications and ever-growing power of digital transformation is forcing companies to embrace change. Digital transformation is the process of undergoing multiple changes internal and external which a company undergoes leveraging digital technologies to a more agile, optimized and efficient state. Digital business transformation is ubiquitous and ERP market is no exception. SAP, the market leader (in revenue terms) has decided to phase out support for SAP ECC in next 5 years and its existing install base customers are bewildered in deciding how they should migrate from earlier versions to S/4HANA. Migration gives the organization a chance to streamline its processes, rationalize interfaces, decommission custom code, enforce standard SAP modules to become more efficient. However, migration from SAP ECC to SAP S/4HANA comes with its own set of unique challenges from organization perspective, vendor perspective, end user perspective and the consultant's perspective. This paper deals with challenges from organization perspective in migrating to SAP S/4HANA and what approach should it take in making the transition to SAP S/4HANA seamless. This paper elaborates how an organization should formulate the SAP S/4HANA migration plan to ensure data integrity is maintained.

Keywords

SAP S/4HANA, Migration, Implementation, ERP, Change Management, Digital Transformation

I. Introduction

The ERP market grew at 10% in 2018 as per Gartner and SAP being the leader (from revenue perspective) as per 2019[1] data. IDC report forecasts, global spending on public cloud services and related infrastructure is anticipated to hit \$500 billion in 2023, from \$229 billion in 2019, a CAGR of 22.3% [2]. MarketsandMarkets data suggests, digital transformation market is envisioned to witness a CAGR of 18.1% to reach \$665 billion by 2023 from \$290 billion in 2018[3]. All these numbers indicate a strong surge in cloud adoption as more and more companies embrace digital transformation to become more agile. And ERP being at the core of an enterprise's IT Landscape is witnessing a seismic shift due to cloud services adoption, big data analytics, IoT, in memory computation and the digital transformation wave across industries & geographies. Even non cloud native ERP systems have multiyear contracts with their client to move their clients to latest generation platforms which are either on prem or deployed on multitenant SaaS based model or private cloud or third-party cloud providers. SAP, the market leader in ERP market (in revenue terms) preempted this shift and launched SAP HANA in 2010 and SAP S/4HANA came in 2015[4]. SAP customers are undergoing digital transformation from earlier SAP ECC to SAP S/4HANA because the support for SAP ECC will cease to exist after 2025[5]. And, SAP S/4HANA is the new digital core of business transformation that offers on cloud, on prem or hybrid alternative to SAP's huge install base. SAP S/4HANA rewrites ECC's core functionality on SAP HANA database to leverage its in memory capabilities, performs analytics in real time and hence gives it the unique positioning in the ERP market. The clients have no option but to transform and embrace migrating to SAP S/4HANA to harness the in-memory computing power of SAP HANA for agility, improved user experience, real time data, flexible API's and streamlined processes. A lot of customers are still wary of this migration/transformation due to its high cost and the meticulous planning that is required to undertake migration.

This paper deals with challenges an organization faces in migrating to SAP S/4HANA and what approach should it take in making

the transition seamless. As this is a classic case of organization wide change management from process and people management perspective[6] both, the migration approach needs to be holistic, catering to both the perspectives. In this paper, when we refer to organization, we mean the company or the end client where the actual migration is taking place and not the implementation partner/vendor/3rd party partner performing the migration.

II. Why organizations need to migrate

The clients have to transform and embrace migrating to SAP S/4HANA to harness the in-memory computing power of SAP HANA for agility, improved user experience, real time data, flexible API's and streamlined processes along with the fact that the support for SAP ECC will phase out in 2025. Migration could be done for various reasons such as: -consolidation of existing operations, moving to a new cloud service provider from existing one, company mergers, data centre relocations etc. Migration could be performed for a new system altogether where client is an existing SAP customer who is migrating to SAP S/4HANA and the initial data is being loaded or an existing client shifting from SAP Business suite to SAP S/4HANA or consolidating its regional SAP systems to global SAP S/4HANA.

III. Challenges in SAP S/4HANA migration

The challenges covered are from SAP ECC organization perspective, which needs to migrate to SAP S/4HANA are as follows:-

A. Legacy Systems Challenges

Legacy systems are the backbone of heterogeneous IT landscape of most organizations which have been in business for many years. Legacy systems are often customized, and tailor made which makes it cumbersome and increases the complexity in implementing the same features which the business doesn't want to discard. Building a compelling business justification for migration and helping users move forward with a new way, new strategic direction is a herculean task which is often easier said than done.

B. Custom Code

Making the custom ABAP code “HANA ready” is a challenging task that most organizations worry about. SAP HANA Database differs from traditional row-based databases which means the code needs clean up wherever we are using these row-based tables beforehand. SAP code inspector [7] does help in finding issues but the onus of fixing those discrepancies and code clean up rests with the organization and its team.

C. Stakeholder consensus and buy in

Knowing the risks associated with migration most, stakeholders are paranoid if the organization is highly reliant on legacy systems created over many years of operations. Most stakeholders fear that the migration challenges will outweigh the forecasted benefits. They believe if the existing system is not broken why change it?

D. Data Challenges

Data is the most critical part of migration process. Whether it's a greenfield (new implementation) project or brownfield (already a customer and upgrading) quality of data that needs to be migrated is at the core of this endeavour. Data validation and Data integrity are quintessential part of the whole migration process. Other challenges such as- migration platform, Information stewardship Challenges, Data Extraction Challenges, Data Transformation Challenges and Data Loading Challenges make the whole migration process a nightmare.

E. Target System Challenges

Whether the customer is moving on prem or on cloud setup, multi-tenant or single tenant cloud are some of the crucial decisions that are to be made. These questions and their answers will define what target system challenges an organization will face. What kind of security measures will need to be put in place to guarantee privacy and security. SAP S/4HANA migration and implementation can be undertaken only with meticulous planning and roll-out.

F. Training and Change Management

End user training will need the organization to rethink how such a transition be handled from people management perspective [6] and not just process perspective alone. As this migration is a chance for the organization to move to better practices than the ones that have been inherited over years of operation, such grass root changes need change management from people focus [6].

G. Vendor search

Finding an experienced partner who has expertise, experience and right resources to help an organization transition from SAP to SAP S/4HANA is quintessential. Staying on timeline, on budget without disrupting existing business operations are the main questions that the organization needs to think of.

IV. Approach for seamless migration to SAP S/4HANA

The decision to migrate to S/4HANA rests on the meticulous planning required for the transformation. The approach to handle these challenges and create a custom transformational plan should be 3 pronged: -

1. Stakeholder Management

Stakeholder buy in needs creating a convincing business case with appropriate justification which will be the baseline to start.

Implementation Cost, security issues with cloud, flexibility and functionality trade-off needs to be addressed before hand. Most stakeholders are also looking at an economic value analysis [8] of this migration from ECC to S/4HANA. And the business case should include not just the benefits but how existing system falls short on delivering the benefits that we are envisioning with SAP S/4HANA migration. Unless there is a buy in from all involved stakeholders, the migration cannot succeed.

2. Data Readiness

Ensuring that we have a clear roadmap on data readiness is the core of the entire migration journey. Ensure single source of data, single point of contact for business rules, data validation and single point of contact for sign off, single body for decision making as far as data is concerned for each of the instances that are being migrated, single style of documentation to ensure we have a common understanding and minimal data duplication. This is the key to have migration ready data at any given point in time. If any SAP company code data needs to be carved out [9] for any business reason such as divestiture [9] that needs to be handled upfront. Decision making pertaining to data governance processes to ensure data quality and data integrity is the ultimate test of how good a system is and hence should always be kept in mind while making any migration plan.

3. Vendor selection

Selecting a right vendor partner who has the required expertise, resources and mutual trust is extremely important to ensure the organization is set up for success. Starting from requirement gathering & management [10] to conducting UAT and final cutover and hyper-care, vendor team will closely work with the organization's IT and business teams. Hence, finding the right fitment will decide if the data migration would be successful or failure.

V. Conclusions

The SAP S/4HANA migration is a huge step in setting up an organization to become more agile and effective and hence there should be buy in from all stakeholders, data readiness should be done beforehand and selecting a vendor who fits into the organizational style of working will go a long way in setting up the migration endeavor for success. Data integrity and data usefulness after the migration is the holy grail of successfully migrating to SAPS/4HANA.

VI. Future Scope Of Research

Our study has been from an ERP practitioner's perspective highlighting the practical aspects faced by an organization while migrating its ERP namely SAP. further research can be done considering other ERP products such as Oracle. Another interesting area could be challenges and solution approach from end user perspective which brings in a whole new perspective and user becomes the centroid of ERP migration.

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Author's Profile



Mithun Gaur is a certified SAP consultant by profession and a researcher/author by passion. He has 14 years of experience in SAP with companies like IBM and L&T working across North America, Europe, MEA and Asia. Mithun holds a Post graduate Diploma in Management (Marketing & IT) from BIMM, Pune and bachelor's in information technology from Guru Gobind Singh Indraprastha University, Delhi. He currently works for L&T Infotech in Wisconsin, USA