

Cloud value convergence for businesses that run on SAP



At TCS, we strongly believe what ERP was to digitization, cloud is to digitalization. As enterprise resource planning (ERP) solutions have been the backbone of a digitized enterprise and reoriented business processes along the way, cloud is becoming the unifying digital fabric of the enterprises so it is important to consider them jointly.

This is reflected in the fact that the global SAP digital services ecosystem market size is expected to reach around \$90 billion by 2026 with rising CAGR of 7.5%.¹

The Cloud for the ERP...

- To innovate, companies no longer look at core business applications such as SAP in isolation.
- The Intelligent Business Platform is a combination of core business platforms such as SAP and new cloud-native applications, IOT, edge, AI and machine learning.
- Many current core and legacy business applications will be unable to cope with the new technology demands and it will be cloud services that will provide the incremental platforms to drive innovation.

...and the ERP for the Cloud

- Likewise, cloud alone cannot deliver as the platform of the Intelligent Business Platform.
- Organization moving to cloud would benefit from the years of business innovation that an ERP platform such as SAP brings rather than re-invent the wheel.
- To deliver a fully integrated intelligent enterprise, the power of the underlying business data and industry depth of SAP solutions must be combined with the innovation of new native cloud services from the cloud providers.

The hold back implications for the risk averse organizations

After having spent years implementing and getting it right for their businesses, many organizations with legacy ERP are now in a dilemma about how and when to embrace the incremental business value of cloud for their mission critical systems. Businesses that still continue to run with aging legacy technologies are now held back by those same technologies that limit growth and are at a competitive disadvantage versus organization born, or thriving, on cloud.

Organizations that run on SAP can learn from the experience of those businesses that still run on a legacy mainframe. They experience limited business model innovation and minimal ecosystem leverage that results in:

- **Extremely prolonged time to market:** It takes months to release and integrate new revenue generating features and functions. New cloud-native applications are also held back as the mainframe is slow to catch up and integrate with valuable data difficult to access and harvest.

[1] <https://www.acumenresearchandconsulting.com/sap-digital-services-ecosystem-market>

- **Skill availability is a major business risk** as few college graduates are willing to enter a legacy skill pool, and organizations have to work with an aging workforce.
- **Cost of ownership continues to spiral** as the alternatives are limited, come with high risk and take a long time to implement.

Organizations that are considering whether to reset their approach to risk should remember that embracing risk brings a wide range of commercial benefits to organizations, including higher productivity, stronger business sustainability, faster time-to-market and lower commercial costs. Openness to risk also enables organizations to operate more dynamically and with agility.

Five incremental and converging innovation paths to SAP with cloud

- **Path to cloud native for SAP:** A single platform approach can modernize business processes and apps using both new SAP solutions and cloud-native services from the major cloud providers. They can access a number of hyperscale cloud services to create new cloud-native business solutions for SAP. These new cloud services are made available natively and by integrating these new services with an SAP digital core in cloud requires less customization, which means this combination is faster and more cost-effective. Adopting SAP's business technology platform can be a critical integration, extension and open ecosystem solution for an SAP environment.
- **Path to unified data cloud platforms and the intelligent enterprise:** With 77% of the world's transactions running on SAP, it has always been a valuable resource of data, but data in legacy ERPs lives in the silos of business warehouse as it moves slowly and is not intelligently combined with non-ERP data to drive a 360 degree view. A shift from business warehouse reporting silos and the maze of expensive data warehouses to a new data intelligence layer is required to enable informed and timely decision making.

Considering the volume of data to be processed, the requirements of scale for analytics and machine learning, and to pull data from beyond the enterprise with specific integration requirements, the cloud becomes the default unified data platform.

Unified data cloud platforms are the new foundation for advanced analytics and AI insights across all data sources. These provide all the data integrations, orchestration, metadata management, and connectivity. The cloud data platform enables a move from the old world of transactional data value to the next level of data transformation that extends to beyond the enterprise.

- **Path to machine learning and data science using cloud:** Building machine learning models requires specialized IT resources, high compute power, on-demand scale and storage, plus specific data management tools to process huge amount of data. Hyperscale cloud providers have created comprehensive environments for machine learning that comprise tools to build machine learning applications, to train algorithms with data, as well as to test, improve, and manage those developments.

In addition, pre-built machine learning models for industry use cases that allow new projects to start with proven and tested baseline machine learning models allow a secure and fast start. Cloud providers are expanding their offering with powerful conversational AI interfaces as end-to-end bot building platforms to innovate SAP business processes and user interactions. On cloud, these machine learning models can process both transaction data from SAP and external data from beyond the enterprise. For example, an AI-driven railroad safety solution can ingest real-time data to create comprehensive safety decision models.

- **Path to an integrated innovation space in the partner ecosystem:** Cloud today is also the joint innovation platform with the partner ecosystem of both customers and partners. By leveraging SAP's open-industry cloud platform, enterprises can access innovative vertical solutions across industries with open APIs, business services, data models and process models to optimize and extend core SAP business processes. For instance, fragmented supply chain processes make it difficult to capture and collaborate using transactional data for medical device companies leading to no visibility of filed inventory. TCS' iFIM (Intelligent Field Inventory Management) for surgical kits enabled by IoT and blockchain is an example of partner innovation.
- **Path to an integrated platform for IOT:** The requirements for IOT generate immense amounts of data that is mined and analyzed with real-time analytics and artificial intelligence. IOT applications require an integration platform that connect devices, machines, vehicles and other equipment. Given these requirements, cloud platforms have become the environment of choice for IoT applications. All businesses that are investing in IoT applications and leveraging IoT-enriched business insights to embed in and extend business processes will naturally have to integrate them with their SAP core. A good example is TCS' TCUP platform that integrates IoT data with ERP data to identify proactive maintenance requirements for aircraft engines.

The five benefits of the move to cloud

1. For organizations running on SAP

The move to cloud provides immediate and direct benefits to both IT and business users of SAP. The ability to scale up and down IT resources (compute, storage) and match specific business needs without the need for manual IT capacity planning cycles and lengthy procurement processes provides agility.

- **Faster development cycles:** Ability to self-provision new SAP development and test instances on-demand reduces development elapsed time and costs.
- **Resilience:** An elastic, automated and resilient cloud eliminates downtime due to aging legacy infrastructure issues.
- **New ways of working:** Organizations that combine the move to cloud with an SAP S/4 HANA move achieve a better database architecture coupled with new cloud operating models with new ways of working. This enables IT infrastructure, database, AMS and security teams to work together more efficiently and effectively.
- **Reduced management effort:** Lastly an automated cloud drives a reduction in overall IT management effort associated with SAP systems that run on traditional data centers as these roles get eliminated.

2. A time to eliminate technical debt

The move to cloud provides an additional but desperately needed opportunity to conduct a serious mass housekeeping exercise mandated before the move. Housekeeping in aging ERPs that typically never gets management attention and funding gets done. This delivers direct benefits:

- **Reduced massive legacy ERP IT junk data** that spans TBs of development and production and backup systems. This includes data that is no longer required, that has been lying around for ages as log files, obsolete meta data and technical data.
- **Low cost and easily accessible storage in the cloud** becomes the catalyst for much needed archiving both business and technical data e.g. IDOC, workflow work items.

- A vehicle to clean up unused code and eliminate this technical debt as an estimated 30% of average code in SAP systems is unused code. Forgotten code can also risk create security loopholes for back door manipulations.
- Obsolete bolt-on and software tools that in today's world are either not required or find easy replacement solutions in the cloud.

3. Gain environmental value from the move to cloud

Compared to typical enterprise-owned, on-prem data centers:

- The cloud consolidates infrastructure across customers and runs machines at much higher utilization rates.
- New cloud technologies demand for more frequent hardware refreshes resulting in the latest and most efficient machines.
- All cloud providers are gradually moving and are committed towards low carbon power sources.
- A move to cloud-native technologies results in an efficient and modern technology stack that right consumes, right-sized resources on demand, eliminating waste and idling of IT resources.

Together, these factors reduce overall carbon impact as these benefits are consolidated across multiple companies who are committed to a move to cloud.

4. Secure future talent with a move to cloud

Over the last many years, there has been a continuous drain of skilled SAP professionals as many, if not all, have crossed over to new technologies such as cloud services, data, AI, others and while few others are on their retirement path.

Secondly, with the gravitas created by the likes of Microsoft and Google most university graduates come skilled and baked into cloud-native technologies. These new world developers like to work in the cloud with cloud-native tools, devops and agile methods. Enterprises running on SAP in the cloud provides employees the opportunity to enhance their skills in applications mapped to ERPs as well as Intelligent Business Platforms developed in combination with IOT, edge, AI, machine learning, and new cloud-native applications. This is the win-win path to the future for SAP organizations, the path to secure and grow talent and the path to innovate in the new cloud ecosystem.

5. Lower total cost of ownership (TCO) with the move to cloud

Cost reduction remains the key driving factor for SAP organizations to consider a move to cloud.

A move to cloud results in:

- **Cash flow:** Cloud drives a shift from capex to opex for IT resource expenditures, and frees up cash flow.
- **Overprovisioned waste:** In traditional on-prem data centers a 20% overprovision hardware to accommodate unknown peak utilizations is not usual to find. On cloud, companies on-demand can provision only what IT resources they need and when they need them. Likewise, they can de-provision resources when they are not required anymore. For example, de-provision dev and test environments after a project is completed.
- **Expensive hardware refresh:** An on-prem hardware refresh is expensive with major hardware refresh expenses hitting every 3-5 years. On cloud, the cloud provider covers these costs.
- **Cost of data center:** Customers can achieve complete capex savings by following the path of capital as they exit their last on-prem data center. This eliminates the cost of physical data center space including power, cooling and others.

- **Lost process hours:** The improved reliability and performance from cloud saves businesses downtime and lost process hours.
- **RUN costs:** These factors plus automated cloud functions drive a reduction in IT RUN costs, operations both infra and AMS RUN costs. SAP developers that can fast provision and spin up new SAP development and test instances cuts down new development elapsed time and cost.
- **Eliminate technical debt:** With a pre-move mandated housekeeping, a lean and optimized SAP footprint reduces costs and gains smarter and leaner utilization of IT resources.

Reinforcing this, a recent statement from SAP CEO Christian Klein set the direction of where SAP sees the next level of digital innovation. “A unified business network is greater than the sum of the individual businesses. It incorporates customers, suppliers, distributors, and other stakeholders — cross company and across company borders. By sharing data and information in the network, enterprises get real-time 360-degree visibility to sense demand, anticipate risks, and manage retail, distribution, and procurement through to the consumer.”

Compound cloud value with a combined move directly to S/4 HANA

Across industries, many organizations are fairly split in their choice of a transition to S/4 HANA. An equal number are considering a system conversion path versus a new green-field implementation. This choice is clearly determined by multiple factors and requires a detailed analysis for each customer scenario.

Enterprises that have decided on a fast path to value via the system conversion approach can now migrate their SAP system directly from on-premise to the target cloud. With a combined single move approach moving to S/4 HANA along with cloud organizations can compound the business value of SAP investments and leverage the additional advantage of a joint execution. Many of the activities and steps in both the moves are replicates and consolidation makes sense in terms of project management, skill utilization and finance.

For some enterprises, a mid-path of selective data transition may be a valid consideration as that option allows enterprises to selectively re-use parts of existing SAP solution while re-designing other parts may be also be considered. This option allows a selective migration of only relevant data to SAP S/4HANA so that companies can choose the data to be kept and migrated, and data to be eliminated. Enterprises should leverage the strong foundations of legacy ERP and optimization experiences, think broadly, think cloud and move to the next level of business innovation with cloud.

[2] <https://www.tcs.com/cloud-first-strategy-business-transformation>

[3] <https://news.sap.com/2020/11/creating-network-of-networks/>

[4] <https://www.business4.tcs.com/foresight>

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