# SAP
on Azure

Simplify the move to cloud

SAP on Microsoft Azure

Today's companies must find a way to stay proactive instead of reactive and identify optimal opportunities to act. Volatility is placing increased weight on liquidity, cash flow and supply chains. At the same time, drastic cost cutting in recent years has given way to long-term financial concerns. Now more than ever, it's critical to build capabilities that can help organizations respond to market disruptions and other economic challenges.

A growing number of companies whose business relies heavily on SAP systems are moving their workloads to the cloud. There are multiple scenarios:

– Move as-is SAP to cloud.

– Move to S/4HANA on cloud.

– Move disaster recovery on cloud.

– Move SAP Surround on cloud.

The rapidly changing business landscape, including a surge in the demand for digital, is making transformation a top priority. At the heart of any new digital transformation strategy is the question of how to modernize one's SAP estate. A survey by Americas' SAP Users' Group[1] found:
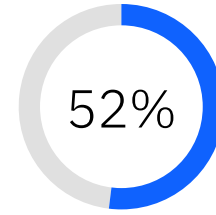
52% are making more investments in SAP
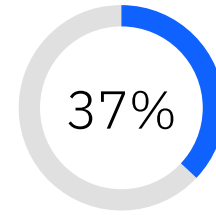
37% are using a hybrid of on-premises and cloud infrastructure
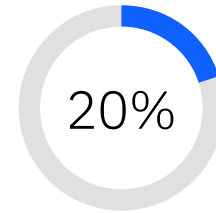
20% are moving all workloads to cloud

Why are clients migrating to the cloud?

Seventy-four percent of CEOs say that cloud computing will help them deliver the results they need over the next 2–3 years,[2] and there has been a growing demand for digital transformation. Organizations across industries are recognizing the importance of digital transformation to remain competitive and meet the evolving needs of customers and employees. They're looking to move their business processes and data to the cloud to take advantage of the scalability, security, cost-effectiveness and features such as real-time insights and the ability to create differentiated customer experiences that set them apart from the competition.

Our experience shows that the investment case for modernizing an SAP estate is built on four tenets:
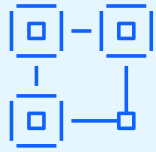
Visibility into supply chain, customers or production is poor.

When older systems and cumbersome analytics prevent quick, accurate decision-making on raw materials, products, pricing, distribution, sales channels or customers, it's time to modernize.

SAP is ending support on older technology or newer technology has already been prepaid.

A surprising number of our clients are using older unsupported technology such as NetWeaver 7.3 or 7.4. Others have prepaid for S/4HANA as part of a licensing negotiation but haven't upgraded. In either situation, it's time to consider a change.

IT costs are weighing on budgets and can't keep up with refresh cycles.

Many companies simply don't believe that data centers, servers and networking are an effective use of capital, especially when margins are depressed.
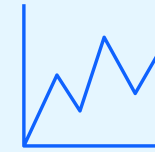
Poor system performance, elasticity and tools inhibit growth.

Beyond a straightforward rent versus buy decision around infrastructure, companies are finding the cloud is not only cheaper and more elastic but vastly richer in tooling.

When should you consider migrating?

In short, when you have a solid business case built around the strategic imperatives of your business.

Most cloud vendors will underline the financial impact of shifting from a depreciated capital investment to an operating expense. And though that's important, many other factors will contribute to the business case.

For example, we've seen that the same SAP environment could be significantly smaller on the cloud than on premises. That's because, in many cases, clients oversize their on-premises infrastructure to account for month-end closings, seasonal demand or adverse events. Azure allows you to size your servers, network and storage dynamically.

Optimize your entire IT infrastructure.

Finally, hyperscalers such as Microsoft Azure have an increasing arsenal of innovative apps and APIs that are being developed for edge, IoT, Industry 4.0, analytics, data lake and machine learning. Beyond cost, uptime and security, it's this broad range of tools that are behind the migration to cloud.

The average score in the first IBM Transformation Index: State of Cloud survey was 55, indicating that many organizations are making only modest progress toward a complete cloud-enabled transformation.[3]
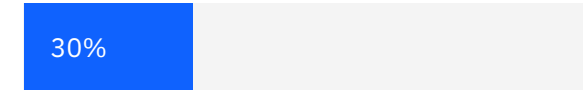
More than 61 points
Advancing (Above average progress)
27%
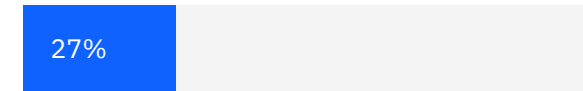
50–60 points
Mainstream (Modest progress)
43%

Fewer than 50 points
Emerging (Still finding their way)
30%

How do you develop your business case for migrating SAP?

Many of our clients either lack a compelling investment case or grapple with organizing the data for an ROI analysis. To address those issues, remove barriers and improve clarity, IBM Consulting™ developed the Rapid IMPACT approach to quickly analyze your existing SAP estate and provide quantitative data to guide your decision.

Rapid IMPACT does this with a balanced view between near-term urgency and a longer-term view of emerging as a stronger, more resilient enterprise. We identify near-term and mid-term opportunities to enhance liquidity and mitigate financial impacts of disruption using a hypothesis-based approach and rapid validation of opportunities.

IBM Consulting benchmarking studies and experience show that many enterprises have excessive working capital in their operations and significant opportunities to rationalize operating expenses.

IBM Consulting has extensive experience using operating model optimization, process optimization and outsourcing, infrastructure and cloud migration, process automation, and related business and technology solutions to drive significant percentage reductions in working capital and operating expenses.

How do you accelerate your SAP S/4HANA implementation?

Today, to win any client business, having a preconfigured SAP S/4HANA solution is a prerequisite. And you need to decide on the frequency of solution updates and enhancements. To address this prerequisite, IBM developed IBM Impact Industry Solutions for SAP Applications. They comprise a complete set of tools that manage risk and accelerate time to value for SAP S/4HANA projects while opening up new possibilities for digital transformation.

Optimize SAP on Microsoft Cloud
Our experience across multiple hyperscale cloud providers also shows that Microsoft Cloud is one of the most reliable, scalable and secure cloud platforms for SAP and the underlying rationale behind the SAP-Microsoft Embrace partnership. Scale and burst capacity, combined with security, privacy, compliance and machine learning capabilities, makes Microsoft Cloud a definitive hyperscale leader for SAP workloads.

Modernize your SAP estate by partnering with IBM Consulting and tapping our multiple capabilities for an optimized digital transformation journey.

Rapid Discovery
IBM Azure Rapid Discovery is a mechanism that helps facilitate organizational alignment by demonstrating associated business value through an enterprise capability model and architecture. It's designed to bring IBM, Microsoft and the customer together to share requirements and discuss the organization's change management, data and insights, and security environment—all of which are critical to the transformation journey. Rapid Discovery is a mechanism that sets the foundation of transformation by answering three critical questions:

– Why should transformation be your strategic priority?
– How do you strategize your digital transformation journey?
– What values can you unlock on this modernized ERP platform?

Rapid Discovery helps clients confidently develop and align on their strategic transformation plan. The key ingredients of Rapid Discovery are executive alignment, the enterprise capability model and its architecture. Our approach outlines IBM's extensive capabilities and intelligence around the capability model and architecture, providing you with a governance model and an implementation roadmap.

Rally your organization with IBM Rapid Discovery

Capturing the opportunity presented by RISE with SAP means rallying your organization around the value while defining your transformation and how it will be accomplished.

Critical questions	**Why** should transformation be a strategic priority for my organization?	**What** transformational opportunities are available, and what considerations need to be factored in?			**How** can we unlock the value of transformation with a modernized ERP platform?	
Ingredients	Executive alignment	Business value	Enterprise capability model	Enterprise architecture	Implementation roadmap	Governance model
Enablers	← ···· OCM ············ Data ············· Analytics ············· Security ···· →					
Outcome			Mission | Vision | Plan *Supporting the transformation*			

IBM-SAP Accelerate Event 2023

IBM Accelerated Move Center: next-gen migration factory

IBM Consulting developed IBM Accelerated Move Center (AMC) to address the challenges of cost and speed of S/4HANA migration to cloud. AMC aims to move clients to a new cloud platform quickly, without the overhead of business transformation, at a reasonable investment.
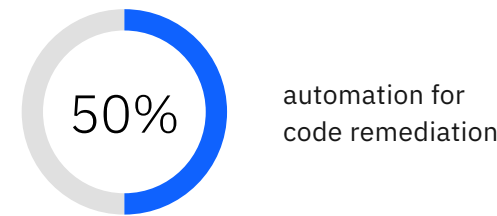
– Sole aim is a technical upgrade to S/4HANA platform while modernizing on the cloud

– Only mandatory process changes

– Take advantage of the best of IBM Consulting and SAP assets and accelerators across the value chain

– Enhance automation tools to drive productivity and quality-leveraged IBM Consulting research

– IBM Consulting next-generation best practice migration factory refined further with SAP design inputs

– Prepackaged bundled offerings based on client size

– High degree of predictability

– Offers cross-industry intelligent workflows

AMC is offered in three models based on SAP estate size, number of countries and SAP ABAP objects. Along with IBM Consulting accelerators and tools, this allows us to deliver with a high degree of predictability.
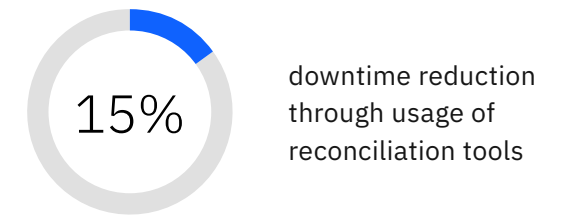
– Provides a cost-effective conversation using automated tools and assets

– Uses existing and proven client business processes and data models

– Requires minimal investment of just a few weeks or months to kickstart ROI calculations

– Allows transition to a platform of new possibilities with minimum change management in client's existing business

– Adopts new innovation at client's own pace

When you decide to move to S/4HANA, the key considerations are the cost, speed and predictability of the upgrade. AMC is a next-generation migration factory designed to address these elements in a seamless manner. Following are some features of AMC:

Reduce project timelines

50% automation for code remediation

Minimize system downtime

15% downtime reduction through usage of reconciliation tools

Shorten preparatory time

20% reduction of preparatory work through tools in finance and master data
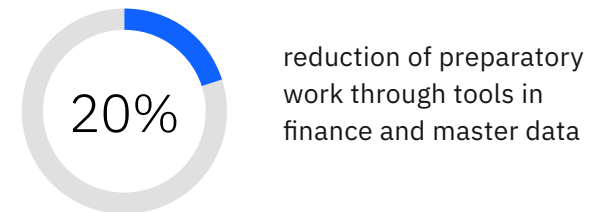
Decrease effort for maintenance teams

25% reduction of time in managing fixes and code changes in a dual maintenance mode
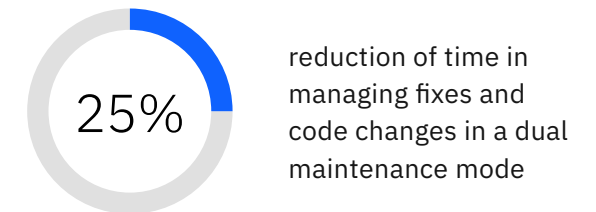
IBM Rapid Move: hybrid approach

IBM Rapid Move for SAP S/4HANA is an IBM Consulting SAP offering that helps our clients with large and complex SAP systems move to SAP S/4HANA. This hybrid adoption approach to SAP S/4HANA offers an attractive alternative to costly greenfield reimplementation or technical system conversion that doesn't always provide the full value of S/4HANA.

Clients have the option of:

– Selective data migration with full or partial historic data retention

– Partial redesign and standardization on selected SAP business processes with IBM Consulting for Microsoft Services

– "Quad A" while taking advantage of existing SAP investment

IBM Rapid Move for SAP S/4HANA building blocks

Domain	Component					
Technology	Cloud	Upgrade	Unicode	Custom code	OS/DB	New GL
Data	Selective data migration	Data harmonization	Data transformation	Data reorganization	Data analytics	Data quality
Process	Standardize	Redesign	Innovate with S/4HANA	Remove	Enhance	Business process transformation
People	UX	Change management	Training			
Business driver	M&A	Consolidation	Carve-out	Big bang	Phased rollout	
Emerging tech	Automation	Machine learning	AI			

IBM Consulting helps clients select the right components for a move to S/4HANA based on requirements and cost constraints, with the IBM Rapid Move building blocks.

Business process transformation with RISE with SAP

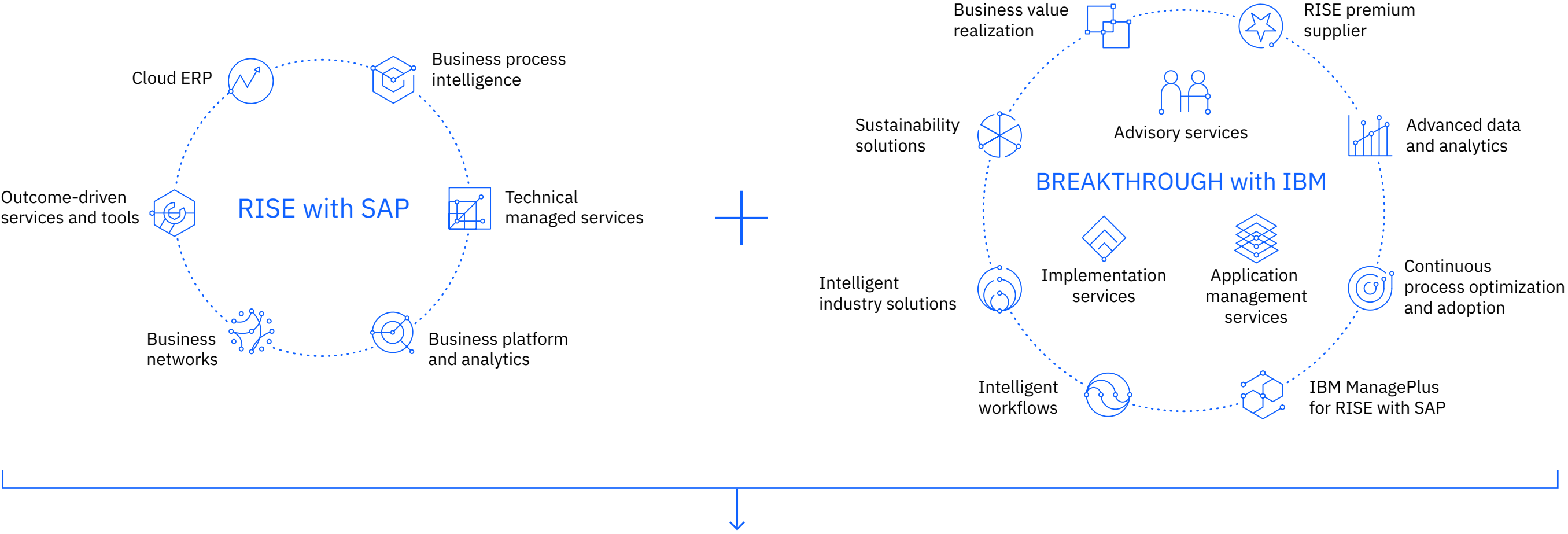**BREAKTHROUGH with IBM for RISE with SAP on Microsoft Cloud**

RISE with SAP enables customers to move their existing SAP ERP systems to S/4HANA with all the basic services needed to drive the transformation. It bundles six service offerings to accelerate your journey to cloud:

– SAP S/4HANA Cloud
– Technical Managed Services
– Tools, Services & Advisory
– SAP Business Technology Platform
– SAP Business Process Intelligence
– SAP Business Network

BREAKTHROUGH with IBM helps deliver the value of RISE with SAP. In addition to outlining how to move to S/4HANA, it provides guidance around the importance of migrating to S/4HANA and creating connected and intelligent, sustainable enterprises. BREAKTHROUGH with IBM combines an end-to-end offering that adopts S/4HANA as a digital platform on hybrid cloud to reinvent core business processes, make more informed decisions and drive business outcomes with automation, data and technologies. This helps our clients capitalize on their investment where it matters most with an innovative portfolio of value-driven advisory services, industry solutions, robust migration accelerators and more. IBM Consulting can help you plan, execute and support end-to-end business transformation, allowing you to capture the value of RISE with SAP.

BREAKTHROUGH with IBM delivers the value of RISE with SAP

RISE with SAP

- Cloud ERP
- Business process intelligence
- Technical managed services
- Business platform and analytics
- Business networks
- Outcome-driven services and tools

BREAKTHROUGH with IBM

- Business value realization
- RISE premium supplier
- Advisory services
- Advanced data and analytics
- Sustainability solutions
- Implementation services
- Application management services
- Continuous process optimization and adoption
- Intelligent industry solutions
- Intelligent workflows
- IBM ManagePlus for RISE with SAP

IBM brings everything you need to plan, execute and support end-to-end business transformation, allowing you to capture the value of RISE with SAP.
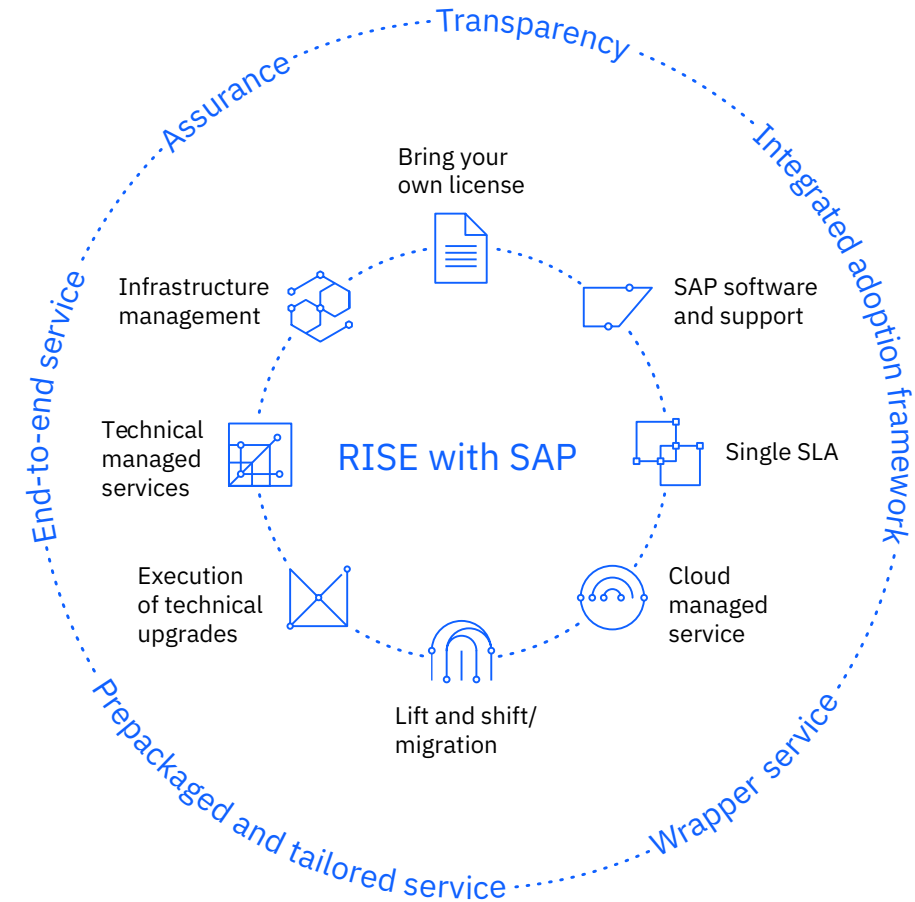
ManagePlus for RISE with SAP

Customers with a hybrid and multicloud environment want a single service across the landscape that allows them to adopt best practices based on AI information while addressing security standards. IBM ManagePlus is the answer because it's integrated within the RISE adoption framework.

A complimentary offering for RISE with SAP, ManagePlus is an assurance service that reduces the risk in delivering implementation services to our clients because it's built on the RISE RACI roles and responsibilities.

It's offered both as a prepackaged and tailored package to cater to every customer requirement, including security standards. IBM ManagePlus can help address multiple scenarios based on the challenges identified:

– IBM ManagePlus for RISE with SAP
– IBM ManagePlus for non-SAP/non-RISE workloads while having RISE with SAP workload
– IBM ManagePlus for non-RISE (SAP and non-SAP) workloads without RISE with SAP

Transparency

Assurance

Integrated adoption framework

End-to-end service

Prepackaged and tailored service

Wrapper service

Bring your own license

Infrastructure management

SAP software and support

Technical managed services

RISE with SAP

Single SLA

Execution of technical upgrades

Lift and shift/ migration

Cloud managed service

IBM Consulting experience with SAP on Azure

Microsoft Azure is one of the most reliable, scalable and secure cloud platforms for SAP and also provides excellent burst capacity combined with privacy, compliance management and machine learning capabilities. These make Azure a definitive hyperscale leader for SAP workloads.

IBM Consulting has completed more than 250 S/4HANA projects and built a portfolio of SAP-specific intellectual property. Our unique offering is geared toward improving liquidity, competitive advantage and your SAP investment.
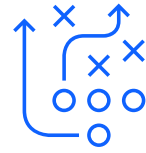
SAP on Azure cloud advisory and strategy services

– SAP Impact Assessment + Azure

– SAP on Azure Architecture and Design Workshop

– Azure Consumption and Financial Modeling

– SAP on Azure Implementation Roadmap

SAP on Azure infrastructure and application transformation services

– Migration/implementation services

– S/4HANA to Azure (IaaS)

– ECC to Azure (IaaS)

– SAP third party to Microsoft Azure App Platform (PaaS/SaaS)

SAP on Azure Managed services

– Cloud operation

– Steady state management

– Optimization

– Automation

Important considerations for moving to the cloud

Stepping back, we recommend that clients look at five important considerations in moving SAP to the cloud:

−   Architecture

+   SAP licensing

+   Hosting options

| |
|---|
| +   Limitations |

+   Data strategy
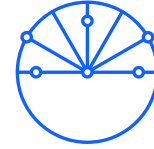
Mind the architecture.

Although Azure certainly allows our clients to quickly spin up and infinitely scale their SAP environment, the architecture itself needs to be carefully designed to avoid out-of-control growth. In addition, IBM Consulting can give you advice on structuring commercial agreements with all the major cloud vendors.

Important considerations for moving to the cloud

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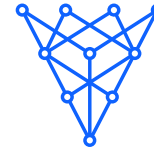
Consider your current and future SAP licensing strategies.

Some clients sign subscription-based contracts that provide limited transparency into the basis for the key SAP cost components. Given that, it's important to understand the interplay between your licensing and hosting terms to best suit your needs.

Important considerations for moving to the cloud

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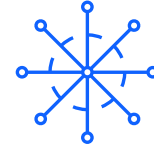
+ Limitations

+ Data strategy
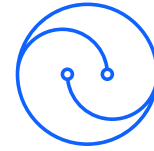
Understand hosting options—keep an open mind but be clear on the goal.

Often, the delivery options for SAP on the cloud, such as bare metal, are complex, if not bewildering. However, support services between the client, the SAP delivery partner and the cloud management partner will differ. Clients need to analyze the cloud, integrator and management contracts to ensure they select the optimal mix for their target outcomes.

Important considerations for moving to the cloud

Stepping back, we recommend that clients look at five important considerations in moving SAP to the cloud:

+ Architecture

+ SAP licensing

+ Hosting options

− Limitations

+ Data strategy

Know your own limitations.

Although cloud platforms offer many advantages, they still require highly skilled resources who have platform and new technology knowledge. Clients should consider the capabilities of their teams when devising their cloud management strategy to ensure that their skill gaps are mitigated.

Important considerations for moving to the cloud

Stepping back, we recommend that clients look at five important considerations in moving SAP to the cloud:

+ Architecture

+ SAP licensing

+ Hosting options

+ Limitations
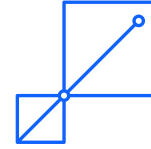
− Data strategy

Design your data strategy.

Integrating data from silos to support real-time insights has become a nightmare for businesses, especially when supporting large and complex data sets. Each persona defines the requirements and purposes of their data. With its ever-improving set of tools, engines and algorithms, S/4HANA is best suited for real-time reporting scenarios. On the other hand, Azure is best suited for massive amounts of data when data mining, data science and AI capabilities are beyond the scope of S/4HANA.

# Infrastructure sizing and architectural decisions

With so many options, deciding on a cloud computing architecture might seem daunting at times. IBM Consulting is here to help simplify those decisions for you.

Traditionally, organizations sized on-premises infrastructure for a 5-year growth trajectory plus projected business peaks. This results in the following scenarios:

– On-premises infrastructure is underused by 20%–30%.

– Growth projections don't take into account unforeseen circumstances such as the current pandemic, government rule changes or sudden business growth.

– Disaster recovery infrastructure is vastly underused.

– Shortfalls are exposed during major application upgrades.

With cloud, you can plan for short-term needs with the flexibility to scale up and down depending on your business volume. Cloud-based computing is ideal for customers that have a growing or fluctuating demand.

This level of flexibility from cloud-based platforms gives businesses a competitive advantage. So, it comes as no surprise to see IT directors and CIOs consider operational agility to be a top driver.
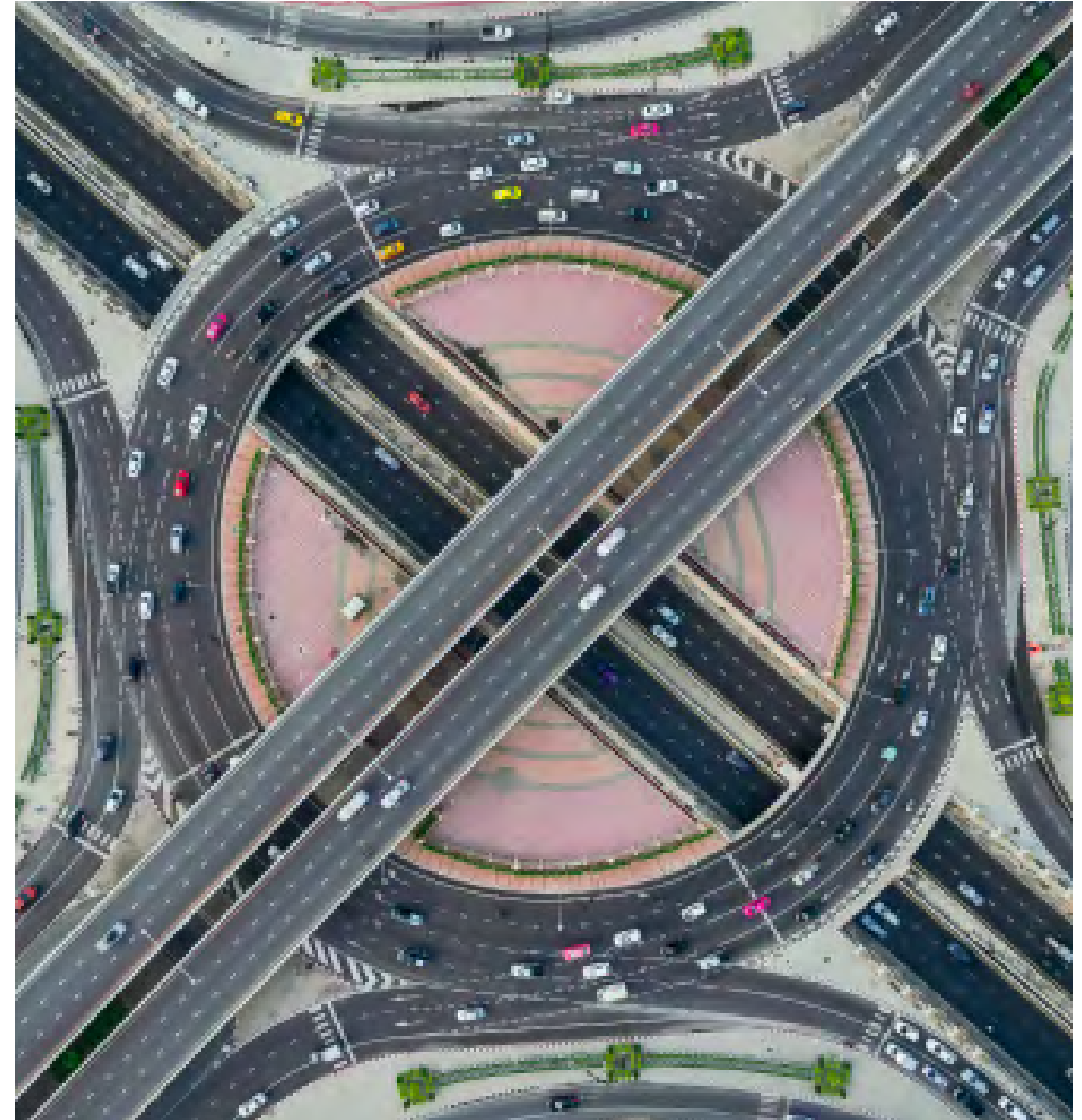
What's the right data strategy?

An IBM Consulting study found that 56% of our clients have already opted for hybrid cloud and 32% have selected a multicloud approach.[4]

To resolve multiple clouds, we advocate a "data fabric" strategy to make data visible—and usable—across an entire enterprise.

A data fabric is not only a technical architecture but also an operating model for how data will be maintained and governed. It's founded on the concept that although business processes, directions and strategies may change, the data underpinning them should be stable. Data fabrics can help avoid data silos, reliance on heritage systems and cost inefficiencies.

There must be a balance between value, latency, structure and volume. Not all data is of high value or time critical.

S/4HANA is ideally suited for fast-changing, real-time structured data.

Azure is ideal for slow-changing, non-real-time structured and unstructured data where machine learning or advanced analytics apply.

With Azure Data Lake, for example, a company could integrate data from multiple sources to provide insights and react more effectively to competitive threats, market anomalies and customer demands. Azure Data Lake can also store data that isn't used frequently but needs to be accessible, such as audit or statutory data.

Example of a client moving to SAP on Microsoft Azure

OMV Aktiengesellschaft

Introduction

OMV produces and markets oil and gas as well as innovative energy and high-end petrochemical solutions. With a workforce of around 22,000 in 2021, OMV is one of Austria's largest listed industrial companies. In upstream, OMV has a strong base in Central and Eastern Europe, with Middle East and Africa, the North Sea, Russia and Asia-Pacific. In downstream, OMV operates three refineries in Europe and owns a 15% share in ADNOC Refining and Trading JV.

Challenge

The three divisions of OMV—Upstream, Downstream and Corporate—had separate highly customized SAP ERP systems for daily operations, thereby complicating the process of integrating acquired companies and measuring financial KPIs globally.

Solution

During the project planning phase, OMV realized the importance of tailoring its SAP S/4HANA deployment methodologies to the respective needs of its Downstream and Corporate businesses. And as part of its cloud-first strategy, the company planned to move as much of its preexisting infrastructure as possible to the hyperscaler.

IBM Consulting recommended a hybrid approach. For the Corporate business, the team proposed a greenfield methodology, building a new SAP S/4HANA environment. For the Downstream deployment, IBM Consulting used its Rapid Move methodology powered by CrystalBridge to reduce the cost and complexity of bringing custom SAP ECC retail solutions into SAP S/4HANA.

Results

With SAP S/4HANA, OMV is building a digital core to enable more efficient future operations. Crucially, defining standardized, integrated processes will make it easier to bring new acquisitions onboard, helping OMV seize the initiative as the industry evolves. Moving to SAP solutions in the Azure cloud has already reduced the company's IT maintenance spend, improving cost-effectiveness.

"Despite the disruption of Covid, we went live with our new Downstream and Corporate SAP S/4HANA solutions on time and within budget, which is a testament to the hard work and close partnership between OMV and IBM Consulting.

"Thanks to our partnership with IBM Consulting and SAP, OMV is now creating the digital core that will allow us to meet the changes ahead of us with confidence."

Markus Brethold
Vice President Corporate IT, OMV Aktiengesellschaft

"As part of our cloud-first strategy, we're looking to move as much of our infrastructure as possible to hyperscalers. Microsoft Azure is one of our go-to cloud providers. We also used the combination of SAP HANA Enterprise Cloud and Microsoft Azure on our recent Asia-Pacific project, so we knew firsthand that the solution could meet our requirements around performance, availability and scalability."

Erich Reiter
SAP S/4HANA IT Program Manager Downstream

Why IBM Consulting?

We are a partner at the intersection of business and technology.

IBM Consulting is one of the top five global system integrators for Microsoft and is recognized as a leader by IDC for worldwide Microsoft implementation services.[1]

The IBM Consulting SAP team includes over 38,000 SAP consultants,[5] 19,000 of whom are trained in SAP S/4HANA. Complementing that team are 4,600 consulting practitioners trained in Microsoft technologies across 27 countries.[6] The IBM Consulting team also has extensive experience delivering highly complex SAP implementations and migrations and has deeply rooted relationships with both Microsoft and SAP. With 34 years of industry experience, proven SAP on Azure expertise, and a deep history as the global system integrator with the largest SAP customer base, IBM Consulting doesn't just provide products; we become a trusted advisor. Our consulting team is uniquely qualified to guide you not only through your SAP on Azure journey but also to optimized decisions for your financial success.

Additional reasons to choose IBM Consulting

– Global Microsoft Cloud capabilities

– IBM Consulting Microsoft Global Center of Competency

– The largest customer base of SAP-enabled customers of any global systems integrator

– Exclusive partnership with SAP on digital transformation

– IBM Consulting Digital Change and Cloud Governance enablement

Our capabilities

IBM's SAP practice brings the capabilities our clients need.

Partnership with SAP	Depth as a solutions integrator	Global consulting capabilities
No other SAP partner has more Global Partner Program certifications	**6,700+** successful SAP programs: – Legacy SAP – SAP Suite on HANA – SAP S/4HANA – SAP LoB (SFSF, Ariba, C/4HANA)	The largest base of SAP Global Solution Delivery Centers
50 years of partnership		**46** Client Innovation Centers (CICs)
37 SAP Pinnacle Awards:	**425+** SAP S/4HANA projects signed to date	**#1** IBM is the largest SAP Learning Hub user
2022 Cloud Business Transformation – Delivery Excellence	**150+** S/4HANA projects in progress	**38,000+** Global SAP consultants
2021 SAP North America Award for Partner Excellence	**285+** SAP S/4HANA go-lives to date	**27,000+** Consultants trained in SAP S/4HANA
2020 Partner-Managed Cloud Excellence Award	**550+** HANA impact assessments completed	

Get started today

The key to making informed and high-impact financial decisions starts with IBM Consulting and IBM Rapid Discovery.

See how to enhance your liquidity and reduce operating costs. Learn which ERP path to take and how to not only survive but thrive in the midst of today's rapidly changing market landscape. And lean into the singular expertise and leading-edge approach of SAP S4/HANA.

Fast-track your hybrid cloud transformation →

Resource links:

RISE with SAP, LinkedIn blog →

HFS Top 10: S/4HANA Services →

IBM Transformation Index: State of Cloud →

1   ASUG Pulse of the SAP Customer 2022 Study, ASUG,
    28 January 2022.

2   From data science to data diplomacy: Chief Information
    Officer insights from the Global C-suite Study, IBM Institute
    for Business Value, March 2020.

3   IBM Transformation Index: State of Cloud, IBM Institute
    for Business Value, September 2022.

4   IBM Named a Leader in IDC MarketScape for Worldwide
    Support Services, IBM, 13 May 2022.

5   IBM Transforms Business Operations with the RISE
    with SAP Solution in Expanded Partnership with SAP,
    IBM Newsroom, 11 May 2022.

6   Rapidly changing markets require IBM Rapid IMPACT,
    IBM and Microsoft Azure.