ABSOFT

SAP on Microsoft Azure Cloud

The trusted path to intelligent, agile manufacturing in 2021

Key trends and challenges UK manufacturers face today and how cloud computing through SAP on Azure helps tackle them

To thrive in today's world, manufacturers are faced with several uniquely modern challenges, further reinforced by last year's events and their impact on the industry.

- Business customers expect them to deliver great products in the moment, forcing them to continuously make sudden U-turns to meet fast-changing consumer needs - at high quality, low cost and increased demand.

- Factories that still use traditional, manual production methods struggle to adapt and meet the increasing pressure of today's fast-moving markets.

- The pressure on manufacturing for digitalisation continues apace and if Industry 4.0 was gaining momentum before 2020, its adoption is now crucial for the sector.

- Skill gaps and talent shortages for new manufacturing jobs erode workforce productivity and threaten economic performance.

SAP® Certified
Partner Center of Expertise

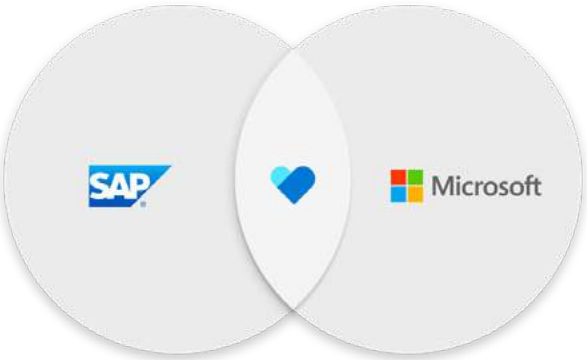
Gold
Microsoft Partner
Microsoft

SAP Gold Partner

These are tough challenges, but companies who take them on successfully will build back stronger in 2021, open new opportunities for growth and gain a powerful edge over rivals.

With decades of shared experience providing best-in-class digital solutions for the sector, Microsoft and SAP Consultancy Absoft are in a unique position to support manufacturers in the current environment and help them claim the promise of the future where the data powered company brings intelligence to every corner of the business.

Read on to learn how.



In this e-book Absoft and Microsoft detail how cloud computing through SAP on Azure can tackle the key challenges UK manufacturers face today including improving operational efficiency and resilience.

Contents:

To help manufacturing break down what they have stated are the most-significant barriers to adopting new technologies - budget, organisational culture and skills, lack of time to focus on improvements - Absoft have created a limited time package deal for migrating and running your SAP on Azure. Get in touch to learn more.

SAP® Certified
Partner Center of Expertise

Gold
Microsoft Partner
Microsoft

SAP Gold Partner

Key trends in manufacturing

The Informed Manufacturer and the arrival of Intelligent Manufacturing

In the past several years disruption has forced manufacturers to consider how they can use modern technology to fundamentally reimagine factory operations.

Consumer expectations of faster and more personalised offerings, as well as unforeseen changes in the market, have brought a whole new level of complexity to manufacturing. This is forcing companies of all sizes to become as nimble and dexterous as a startup.

Manufacturers are learning to meet these challenges by fully leveraging their end-to-end business data, interconnected operations and cutting-edge technologies like AI, machine learning, and IoT to create highly flexible digital smart factories.

67%

of manufacturing decision makers say their **adoption of digital technologies has accelerated** as a result of the pandemic (1).

Factories of the future use intelligent self-optimizing processes with the ability to detect inefficiencies and error patterns without human intervention, helping continuously maintain peak line velocity and output quality.

Tapping into external customer and market signals to predict demand and adjust production flows on the fly, enables more direct models of responsive and personalised manufacturing.

Cloud computing has become one of the Informed Manufacturer's most essential tools for long-term market success.

Cloud platforms like Microsoft Azure are lowering the barriers to digital transformation and delivering the technology foundations to power a new breed of intelligent manufacturers. Which allows them to fortify their perceptiveness, agility and responsiveness - in ways that have never been possible before.

Read Absoft's detailed blog post series on bringing higher efficiency of SAP operations and processes through automation and EDI **here**.

Key trends in manufacturing

The emergence of the smart factory empowers new levels of productivity and business performance

While consumers today enjoy the benefits of personalised data feeds wherever they go, some businesses have been slower to harness the value of their own data assets.

Traditional IT solutions with archaic and outdated or inaccessible data stores prevents them from gaining a complete view of the business.

Now, with increasing adoption of modern and highly integrated cloud platforms, the data-powered business can emerge.

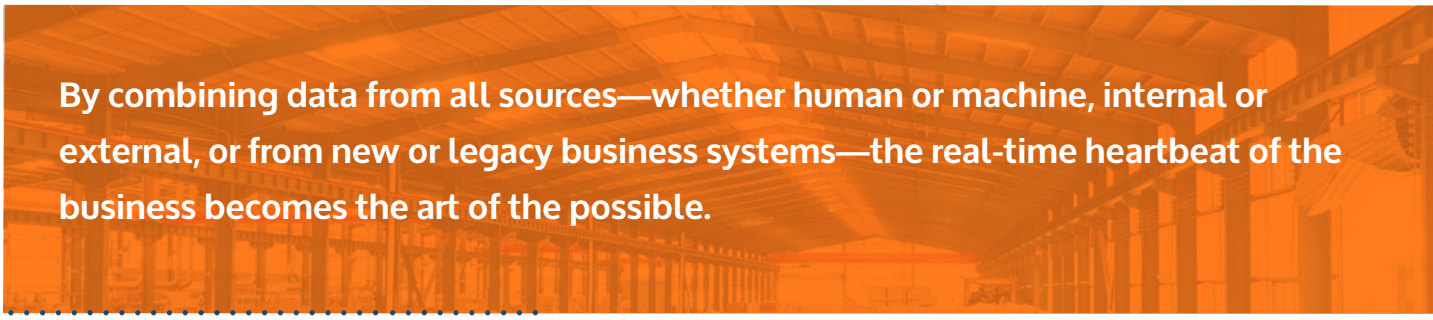
Today's innovative manufacturers are unlocking the value of data by breaking down silos and driving data intelligence into every part of their operations.

91%

of innovative discrete manufacturers say that machine learning is very important to achieve their digital transformation goals. (2)

57%

increase on average of the contribution of machines and algorithms to specific tasks by 2022.(3)



By combining data from all sources—whether human or machine, internal or external, or from new or legacy business systems—the real-time heartbeat of the business becomes the art of the possible.

AI-enhanced data processing techniques applied to pooled data can provide immediate insights on supply chain problems, quality fluctuations, logistics bottlenecks or even changes in market sentiment or customer demand.

These capabilities give companies the digital instincts to manage change effectively and thrive in even turbulent business climates.

17–20%

Manufacturers are seeing an average 17-20% productivity gain from smart factories.(3)

ABSOFT

Key trends in manufacturing

The convergence of IT and OT gives organisations end-to-end operational visibility and control

Companies have become increasingly digitised in recent years. Operational technology (OT) in manufacturing has lived in a silo, with machines continuing to be managed by human input. With the advent of the Industrial Internet of Things (IIoT), that has now started to change.

Today, the machines that do the physical work of manufacturing are being upgraded with smart sensors and controls to bring them into the digital world. These connected assets can communicate status and receive input directly, providing new ways for teams to monitor and automate production lines.

Device signals can report on equipment health and maintenance needs or help identify efficiency problems either at the individual machine level or in the interactions between machines over an end-to-end production workflow.

By incorporating this operational data with existing IT systems and line-of-business applications, manufacturers gain an integrated view of the production landscape and fine-grained control over the physical processes that determine factory performance.

90%

In 2021 90% of manufacturers will leverage real-time equipment and asset performance data to self diagnose issues, trigger service intervention and avoid unplanned downtime.[4]

20%

Integrating IT and OT systems has the potential to increase production capacity by 20%.[5]

Key trends in manufacturing

The skills gap and talent shortages

The new digital workplace is changing the game for employee development and productivity in today's world. Manufacturers navigating the twin forces of automation and digitisation face a crisis to develop a talent pool that meets their business needs. A lack of interest in manufacturing career paths amongst new workers and a shortage of modern skills create a gap reducing workforce productivity and can lead to lower business performance. At the same time, repetitive work continues to be the norm in many traditional manufacturing roles, resulting in low employee engagement and high levels of attrition.

To build the next-generation industrial workforce, organisations need to create a cycle of empowerment that ensures its people thrive at every phase of the employment lifecycle. **Immersive user experiences driven by machine learning and intelligent automation put real-time guidance at user fingertips and foster a more creative work environment.** Automation, AI and other strategies are helping manufacturers grow a committed and future-ready workforce to compete effectively in the digital age.

ABSOFT

The Business Case for Cloud-Enabled Manufacturing

Cloud computing has understandably taken the sector by storm. The forces driving digital transformation in the manufacturing sector today present an existential threat to producers who can't evolve quickly enough to keep pace.

Legacy systems and infrastructure built for a previous era are too limited and inflexible to support modern intelligent manufacturing imperatives.

Companies need a new platform for operating the business that gives them the insight and agility to outmanoeuvre rivals and survive unforeseen economic shifts. At the same time, they need to know that the value to be gained from cloud migration will make the investments needed worthwhile.

Organisations who migrate SAP to Azure typically can expect more than a 100% return on investment within a short time period. More stats on the long-term value here.[6]

Microsoft and SAP are providing a compelling path to manufacturing transformation with state-of-the-art, data-driven intelligent technologies provided through SAP solutions on Azure.

By migrating SAP to Azure, manufacturers can modernise their operating strategy and increase competitiveness through jointly optimised cloud services that help them achieve several key goals:

- Increase focus on innovation through quicker growth identification opportunities
- Engage workers with digitally enhanced experiences that improve productivity and fill skill gaps
- Deploy AI and machine learning tools to create autonomous and self-optimizing processes
- Leverage IoT tools to integrate physical factory assets with digital operations and improve production outcomes

Integrate core manufacturing data from SAP with other 3rd party and external data to unlock powerful insights from across the business and value chain

Running SAP in the cloud has been transformational for many customers who are unlocking the countless benefits that the Azure cloud can offer to UK Manufacturing.

From being flexible and scalable, to enabling lower total cost of ownership, Azure cloud is now a high-priority strategy for most – with companies finding it more and more challenging to justify investment in on-premises hardware.

ABSOFT

The Three Pillars of Intelligent Manufacturing Transformation

1. The Intelligent Supply Chain

The demands on industry in the current digital climate have exposed significant weaknesses in traditional manufacturing materials planning and supply chain management methods. Modern manufacturers need a next generation platform that gives them situational awareness and actionable insights across the value chain in real time. Companies who migrate SAP to the Azure cloud upgrade to an intelligent supply chain that helps them improve operational efficiency, get products to market faster, and synchronise supply chain processes.

Improve efficiency:

Leverage data to make supply chain operations seamless

With data from SAP companies can unlock analytics potential to monitor supplier status, inbound materials flows and logistics in real time. Through Azure, they can overlay operating status with external data such as road closures or inclement weather to predict problems before they can impact production schedules or customer deliveries. And by connecting market and demand impulses to resource planning, they can improve forecasting and deliver more tailored customer service.

Accelerate product cycles:

Tap 360˚ insights to get to market faster

With SAP solutions on Azure, manufacturers can use powerful analytics tools to uncover sales trend and customer preference insights that help them continuously optimise production targets and revenue. By expediting planning cycles in coordination with supplier networks and logistics providers, teams can get products to market faster and deliver tailored product variants at scale. Azure process orchestration helps manage the back-end workflows automatically, so the right products are always being produced for the right customers at the right time.

Standardise processes:

Achieve consistency across different locations

Unifying business platforms and keeping processes synchronised across regions is another challenge to be tackled. With SAP solutions on Azure, companies gain a holistic view of their operating landscape in various locations to enable more standardised supply chain management governance. And large or small manufacturers alike can benefit from Azure's global footprint, giving them the ability to instantly spin up new SAP workloads in-region to run test marketing campaigns or pursue local growth opportunities.

Companies who migrate SAP to the Azure cloud upgrade to an intelligent supply chain that helps them improve operational efficiency, get products to market faster, and synchronise supply chain processes.

ABSOFT

The Three Pillars of Intelligent Manufacturing Transformation

2. The Factory of the Future

In today's hyper-competitive environment, companies who fall behind the digital curve can quickly lose ground to more nimble rivals. There are few places that is more true than in manufacturing, where industrial production has long relied on machine processes and manual labour to get work done. To gain a sustainable edge, manufacturers need a new breed of connected and self-managing factories that bridge the physical and digital worlds to transform plant productivity.

Operate a connected factory:

Bring physical manufacturing assets into the digital world

Companies who run SAP solutions on Azure can merge operational data with their IT landscape to dramatically increase production flexibility. With integrated Azure and SAP IoT services, they can combine business data from SAP with device telemetry data from the plant floor to the network edge. They gain an integrated view of operations and better control over physical production processes. State-of-the-art AI and ML solutions from Microsoft and SAP help enable autonomous workflows that reduce human intervention while improving quality and performance.

Maintain uptime:

Use machine intelligence to keep production lines humming

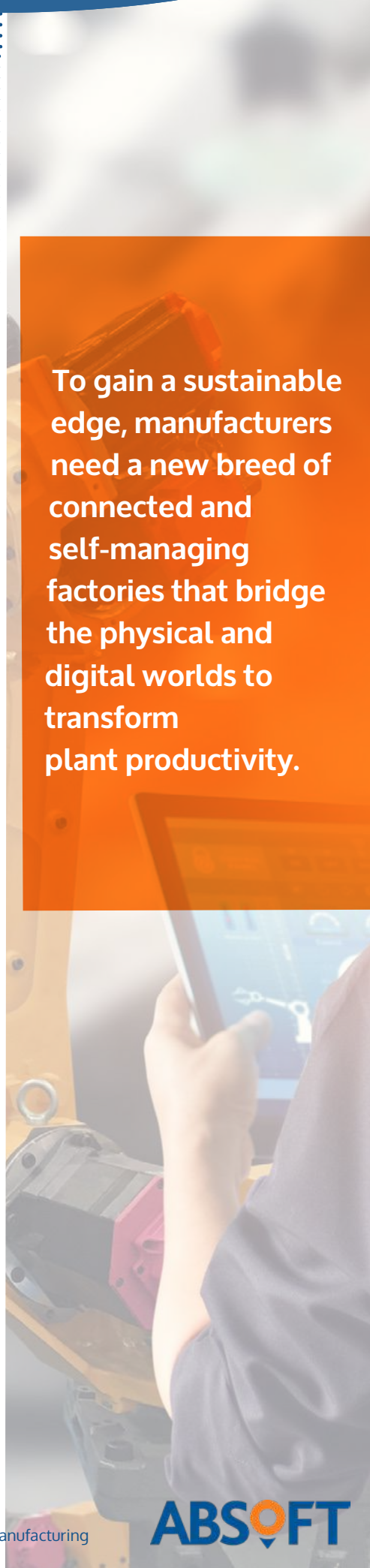
New sensor-equipped smart machines are giving manufacturers the ability to read live status or detect anomalous behaviour patterns between plant floor equipment. Using real-time monitoring and management, organisations can get up-to-the-minute intelligence on asset function and health, enabling predictive maintenance and servicing that avoids breakdowns and lost productivity.

Optimise performance:

Gather closed-loop learnings that drive business results

Migrating to Azure allows companies to bring intelligence to every physical asset, providing a complete view of their extended operating landscape. Integrated management of these resources from within SAP and Azure ensure that business rules are applied consistently, and endpoint performance data can be fed through machine learning algorithms to drive continuous improvement. Azure robotic process automation supports human-like decision making that makes business processes more efficient and reduces errors.

To gain a sustainable edge, manufacturers need a new breed of connected and self-managing factories that bridge the physical and digital worlds to transform plant productivity.



ABSOFT

The Three Pillars of Intelligent Manufacturing Transformation

3. The Modern Workforce

The realities of the modern world have fundamentally reshaped what manufacturers need to build the workforce of the future. To succeed requires a new set of human resources competencies that balances the personality and aspirations of today's workers with the need to cultivate talented and engaged employees who can deliver strong on-the-job results. Companies who run SAP solutions on Azure can leverage a deep bench of joint technology solutions to achieve these goals.

Augment skills:

Leverage a new generation of tools to create breakout worker performance

AI-enhanced tools and development resources from Microsoft and SAP help companies create experiences that guide them and provide personalised learning support. Integration with back-end business logic helps keep workers focused on the most important tasks to improve on-the-job performance. On the shop floor, conversational AI and mixed reality devices can give workers powerful new ways to interact with intelligent machinery, improving process control and production line efficiency.

Deliver intelligence:

Put in-context insights at every employee's fingertips

In the Azure environment, Microsoft business analytics tools applied to SAP data can give workers real time, role-specific insights, enabling more impactful decision making. They can be used to create customised workflows, apps and business insight reports without having to write any code.

Unleash innovation:

Transform employee creativity into a valuable strategic resource

Manufacturers can gain a powerful edge by using Microsoft and SAP AI-driven automation to eliminate mundane tasks and re-direct human resources towards more rewarding pursuits. Purpose-built machine learning algorithms can be used to make processes more self-optimizing and autonomous, freeing workers to drive greater innovation while dramatically improving business results.

Manufacturers can gain a powerful edge by using Microsoft and SAP AI-driven automation to eliminate mundane tasks and re-direct human resources towards more rewarding pursuits.

ABSOFT

How does Microsoft Azure with SAP power intelligent manufacturing in 2021?

For the aspiring informed manufacturer, the path to the future starts with a proven cloud platform capable of powering complex, intelligent industrial operations.

This modern digital foundation must offer a seamlessly integrated environment for applications, processes and data that enables new levels of insight and business agility, helping manufacturers unleash innovation across the organisation.

SAP on Azure transforms insights into actionable intelligence

Manufacturers who transform with SAP solutions on Azure gain both a trusted platform to run the business and powerful catalyst to shorten the cycle of innovation. For SAP customers, the power of Azure is in its ability to bring a comprehensive understanding of the business into focus.

By connecting core business processes with modern digital networks, they escape the constraints of yesterday's static and outdated experiences while simultaneously gaining the agility to experiment and explore.

Organisations can tap sources as diverse as internal ERP and CRM systems and external markets and social networks to create a rich, centralised data repository.

Big data processing and AI-powered analytics can help them detect patterns and draw deeper meaning from data, such as customer sentiment that varies by region, sales trends that signal over- or under-served markets, or reports of regional distribution or quality issues.

Companies can then transform these insights into actionable intelligence that help fine tune the business in specific channels or segments or identify threats and new growth opportunities.

Modern Microsoft and SAP technologies like AI, IoT, augmented reality and cognitive services help clients create totally new, irresistible customer and employee experiences that improve retention and increase performance.

And with over 1,000 pre-built integrations, out-of-the-box SAP HANA services and apps built by Microsoft, SAP and partners, enterprises have access to a huge pool of solutions for every business need.

SAP solutions on Azure gives manufacturers the modern foundation to unlock their inner start-up and infuse intelligence into everything they do.

Companies can deploy adaptive strategies that continuously learn and optimise, helping them deliver the best products and services faster than rivals and build a sustainable performance advantage.

ABSOFT

How does Microsoft Azure with SAP power intelligent manufacturing in 2021?

Azure brings agility and scale to any SAP enterprise

One of the hallmarks of high performing manufacturing companies is the ability to manage through change while staying true to long term strategic priorities.

For issues both small and large—from supply shortages to quality problems to shifting market sentiment—SAP solutions on Azure help manufacturers navigate business turbulence with ease.

AI-backed Azure analytics applied to SAP data can help companies detect and quickly address adverse conditions as they occur, avoiding more serious problems downstream. With surround insights from external market and social data, they can sense evolving demand, threats and growth opportunities before competitors do so they can get to market faster with the products customers want.

Agility also means having a flexible IT infrastructure that can scale to meet changing needs. With datacentres in more regions than anyone, Azure provides the global reach with local presence manufacturers need to support their growing business.

Organisations can spin up or spin down capacity instantly, slashing time to market and lowering barriers to regional product innovation. As the industry's most performant and scalable cloud platform, Azure has a proven track record running the most demanding production SAP workloads.

With many of the latest generation SAP applications including HANA, S/4HANA and SAP Cloud Platform already certified on Azure, companies gain the full power, security, and flexibility of the Azure cloud for all of their most business-critical use cases.

How does Microsoft Azure with SAP power intelligent manufacturing in 2021?

SAP solutions on Azure deliver strong security and business continuity

As digital steward for many of the world's biggest global brands, Microsoft is strongly committed to delivering true enterprise-class security and business continuity in the cloud to organisations of all sizes.

The company invests more than $1 billion annually on cloud security, and offers a state-of-the-art, enterprise grade security architecture that sets the standard for data privacy and confidentiality.

More than 90 international and industry-specific compliance certifications are supported for SAP solutions on Azure, including critical data protection regulations like GDPR and HIPAA. Widespread 3rd party support for Azure Active Directory gives enterprises uniform identity management across business applications to foster secure and seamless team collaboration.

From the earliest stages of cloud migration, Microsoft and SAP take an active role in supporting customers' transformation goals. We offer extensive programs and tools to help clients fast track planning, proof-of-concept development, training and certification.

> 3,500 global cybersecurity experts on staff

> 8 trillion security threats tracked daily

> $1 billion annual investment in cloud security

> 90 compliance certifications with SAP

Joint planning workshops with Microsoft, SAP and select partners like Absoft help manufacturers map priorities and outcomes to a clear plan with timelines. During migration, Azure Backup and Site Recovery with integrated support for SAP HANA provide data protection, continuous availability and recovery services to ensure minimal business disruption.

Why move and run your SAP on Microsoft Azure with Absoft?

A partnership of trust for intelligent manufacturing transformation

The path to intelligent manufacturing starts in the cloud, and no cloud platform is more widely trusted by global organisations running SAP than Microsoft Azure. SAP solutions on Azure provide an integrated business platform that helps unlock priceless operational insights, gain unprecedented agility, and deliver breakout business performance.

From empowered workers to a responsive supply chain to a new generation of autonomous smart factory, manufacturers can give customers what they want when they want it, building lasting relationships and durable brand value. SAP on Azure can help manufacturers achieve the full potential of their digital now and digital future.

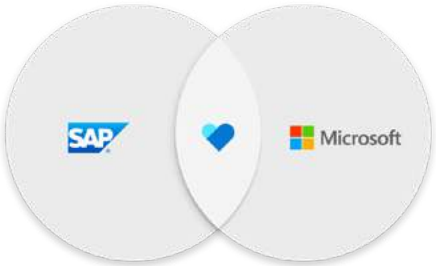
In order to fully realise that potential, it is crucial that you work with a partner who has high level of SAP expertise combined with a sound knowledge and trackrecord within Microsoft Azure projects.

Benefits of moving SAP on Azure

- Data and infrastructure availability
- Reduced Costs
- Data Capacity
- Security
- Flexibility & Scalability

Absoft combines the two, with:

- Over 28 years of SAP experience,
- 10 years of SAP in the Cloud
- Hundreds of SAP system migrations
- UK Manufacturing focus and excellent trackrecord



Ready to take a closer look at what SAP on Azure can do for your business?

Contact us to begin your journey to intelligent, agile manufacturing:

+44 (0)1224 707088

info@absoft.co.uk

www.absoft.co.uk

Endnotes:
(1)The Manufacturer
(2)IDC, "IDC FutureScape: Worldwide Manufacturing 2019 Predictions," Doc #US44467118, Nov. 2018
(3)IDC, "IDC FutureScape: Worldwide Manufacturing Product and Service Innovation 2019 Predictions," Doc #US43135918, Oct. 2018
(4)IDC, "IDC FutureScape: Worldwide Operations Technology 2017 Predictions," Jan. 2017
(5)"Emerging Opportunities for Discrete Manufacturers to Deploy Industry Processes In The Cloud," a Forrester Consulting thought leadership paper commissioned by SAP, July 2018
(6)Forrester, The Total Economic Impact of Microsoft Azure for SAP, March 2019

SAP® Certified Partner Center of Expertise

Gold Microsoft Partner

SAP Gold Partner