TechTarget | Custom Media
Article

Midmarket manufacturers kick their operations into high gear with cloud ERP

Innovations in cloud-based ERP are remaking the legacy ERP landscape for midsize companies. By boosting operational efficiency, business flexibility and real-time visibility, the cloud is turning midmarket manufacturers' ERP systems into true enablement tools.

Midmarket manufacturing is surging around the world. While midsize manufacturing organisations comprise only about 3% of global manufacturing companies, their collective volume of revenue makes up about one-quarter of all manufacturing revenue worldwide. Those organisations also continue to enjoy higher-than-the-norm revenue growth, with 54% of midmarket manufacturers having experienced revenue growth of at least 10% from 2021 to 2022.[1]

Still, challenges abound for midmarket manufacturers, including dramatically intensified competition, higher operating expenses, shortages of qualified personnel and demanding customer expectations and requirements. Additionally, key business applications like enterprise resource planning (ERP), long a staple for manufacturing companies, need to be rethought and rearchitected with heightened functionality. These and other issues have emphasised the need for renewed and accelerated investments in IT and IT-driven systems on the shop floor, on the loading dock, throughout supply chains and in business offices.

In manufacturing, as in all industries, ERP has become a staple for handling a wide swath of business functions and workflows, from materials planning and inventory tracking to core finance activities.

Such IT investments represent an imperative for midsize companies in the manufacturing sector, which have historically invested less in IT than midsize companies in other industries. Recent data indicates that midsize industrial manufacturers invest only about 2.9% of their annual revenues in IT – substantially less than the 4.9% of revenue invested by midmarket companies across all industries.[2] While many manufacturing companies may continue to fall back on legacy thinking about the use of IT for industrial and other applications, the introduction of critical technologies such as robotics, process control, vision systems, sensors, IoT, edge computing, mobility and more has now catalysed new IT investments.

Take ERP, for instance. In manufacturing, as in all industries, ERP has become a staple for handling a wide swath of business functions and workflows, from materials planning and inventory tracking to core finance activities. Most midmarket manufacturers adopted ERP – usually atop on-premises IT infrastructure – as their business needs grew and became more sophisticated.

That's where cloud-based ERP comes in. Since midmarket manufacturers often have challenges similar to those of larger companies but lack their resources, they have to find smarter, more efficient, sustainable and scalable solutions. More and more, that means looking to the cloud. In fact, cloud-based ERP can be an ideal solution for midmarket manufacturers.

1 "Middle Market Manufacturing," Chubb, 2023

2 "IT Spending Across the Board and Digging Into 2023 Metrics – How Do You Compare?" LinkedIn, 7 Feb. 2023

How changes have made IT more complex – and more essential – for midmarket manufacturers

Today, numerous innovations in functionality, performance, user experience and security have opened up new opportunities for midmarket manufacturers to realise large-company benefits with a modernised approach to ERP. That approach must support enterprise-wide connectivity, sensors, automation and sophisticated analytics, enhanced by artificial intelligence and machine learning. This movement is more than harnessing huge volumes of data – although that is certainly essential. It's also about smart manufacturing enabling midmarket organisations to look, act and reap economic benefits like much larger manufacturers.

Today's manufacturing factory is a digital workplace, often described as the "factory of the future." It is marked by such technologies as ubiquitous sensors, robotics for parts picking and assembly, vehicle-mounted computers, manufacturing-specific mobile computers, inventory management systems, smart card access and much more. Of course, generative AI is helping manufacturers further evolve their smart manufacturing efforts by embedding deeper levels of intelligence, automation and efficiency throughout the manufacturing ecosystem.

For manufacturing companies, the factory of the future is actually here today: It is smarter, leaner and less hardware dependent than the traditional factory, using technology tools and services to make smarter, faster and bigger impact decisions. It also is more automated, generating and handling tons of data that must move from the factory floor, to edge locations, to the very limits of the global supply chain. This is particularly true with the increased use of IoT among midmarket

manufacturers looking to transform the factory and entire manufacturing process. Without question, manufacturers using today's ERP systems are benefitting from technologies like generative AI and reimagining how, when and where such technologies can be used.

The digitisation of the factory, inventory centers, loading docks and fulfillment processes has come with an explosion of data. Now, add in a dash of "AI everywhere" to provide essential context to decision-making, ubiquitous automation and sophisticated analytics to make smarter, better decisions and it's clear that midmarket manufacturers face several challenges, including the following:

- The runaway growth of unstructured data due to entirely new classes of endpoints in the factory, at the edge and throughout the supply chain.
- The proliferation of data silos throughout the manufacturing spectrum that breed inefficiency and error. These silos can exist in parts ordering and inventory management, robotic assembly, computer vision systems, industrial-grade handheld systems for ruggedised environments, or systems linking physical and cybersecurity.
- The need for sophisticated data management, analytics and automation to capture, process, store, analyse and create actionable reports in the factory and throughout a product's entire supply chain journey.
- The need to meet customer demands for personalisation and customisation, making build-to-order and build-to-stock models essential.
- Pricing pressure, which creates margin erosion that affects a manufacturer's ability to properly invest in IT and have sufficient in-house resources.
- The need for real-time transparency from suppliers and the factory to the edge and the full supply chain.
- The relentless drive to shorten supply chains, while also making them more resilient.
- More demanding compliance mandates, especially as midmarket companies increase their sales and marketing to new geographic regions with stringent data privacy regulations.
- The need to ensure that production lines can be retooled and reconfigured as necessary, without disrupting day-to-day operations.

The preponderance of data emanating from a wide and expanding range of endpoints throughout the factory and beyond has added complexity and urgency in everything

The preponderance of data emanating from a wide and expanding range of endpoints throughout the factory and beyond has added complexity and urgency in everything from on-premises infrastructure, connectivity and cloud gateways to literally dozens of different manufacturing-related processes and applications – all of which must ultimately feed into the corporate ERP system.

Why cloud-based ERP makes sense for midmarket manufacturers

For midmarket manufacturers looking to turn ERP into a strategic asset without incurring massive upfront Capex and having to invest in numerous ERP-proficient staffers, a cloud-based solution makes a lot of sense. Taking advantage of the tools and services provided in a cloud-based ERP system enables midmarket manufacturing companies to focus their precious resources on activities that provide maximum value in the factory and throughout the supply chain, rather than devote an inordinate portion of their resources to an on-premises deployment.

Cloud-based ERP – especially when done in collaboration with an experienced, market-proven ERP provider – offers midmarket manufacturers a wide range of benefits. These include the following:

- Built-in technology refresh over the long haul.
- Integrated security, governance and risk management to ensure compliance with regulatory statutes across different manufacturing sectors and in multiple geographies.
- Easier, faster scalability, enabling "intelligence at scale" when combined with AI, machine learning and generative AI tools embedded into the cloud ERP platform.
- Less pressure on in-house teams, enabling them to sidestep the need to hire dedicated IT teams to work exclusively on ERP-related issues.
- More efficient upgrade/modernisation paths to incorporate new capabilities, including analytics, automation, diagnostics and cybersecurity.
- A shift from the Capex model to a subscription-based Opex model.
- Out-of-the-box functionality for faster time to value.
- Standardisation to minimise complexity, ease deployment and facilitate necessary functional improvements.

How SAP's cloud-based solution helps midmarket optimise their use of ERP

For midmarket manufacturers looking to use the cloud to help them grow their operations in an efficient, profitable, secure and future-proof manner, SAP's S/4HANA Cloud, public edition, is an excellent fit. It's a ready-to-run platform that enables midmarket manufacturers to look and act like larger organisations by incorporating industry best practices and continuous innovation into a public cloud setting.

The SAP cloud solution makes ERP more accessible, flexible and affordable for midmarket manufacturers looking to reshape their business models without busting their budgets or taxing their IT teams. Manufacturers can make their workflows more efficient and expand their customer bases, product lines and geographic focal points without taking on substantial technical debt or dramatically increasing IT complexity.

SAP S/4HANA Cloud, public edition, comes with automatic and continual updates, making it far easier and faster for IT teams to update their ERP capabilities without disrupting the business with costly downtimes for upgrades, patches and redeployments. This includes incorporating transformative technologies – and new versions of those technologies – such as generative AI, machine learning, robotic process automation and contextual-aware analytics. It also facilitates essential security, compliance protocols and scalability capabilities, including data protection, real-time security alerts and background system maintenance to protect production system uptime.

It also comes with out-of-the-box application programming interfaces to facilitate ERP integration with third-party apps and tools or to easily build new capabilities atop the ERP system.

Of course, a cloud-based ERP solution must be properly implemented for midmarket manufacturers to realise the full scope of benefits. Fortunately, ERP and experienced, certified partners provide a range of implementation services, including the following:

- Out-of-the-box delivery of relevant business processes and industry standards.
- Implementation tools and best-practice methodologies.
- Predictable deployments with predefined scope, timeline and pricing.

Conclusion

Smart manufacturing isn't just using technology to automate existing workflows and processes. It is also about how technologies like generative AI, edge computing, ubiquitous mobility, containers, microservices, hybrid cloud services and sophisticated analytics can turn ERP into the midpoint for all core business and operational functions in a manufacturing setting.

Trying to accomplish all that through traditional on-premises infrastructure and already-stretched internal IT teams represents a major challenge for midmarket manufacturers that need to become more agile and better positioned to take advantage of new business opportunities in an increasingly competitive market environment. That's why using a cloud-powered ERP solution such as SAP S/4HANA Cloud, public edition, is the smart way to go.

Please contact your SAP Partner for more information.

This content was commissioned by SAP and produced by TechTarget Inc.