



Evolving Manufacturing **for the Digital Age**

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The Guide to Evolving Manufacturing for the Digital Age

Manufacturing is evolving for the digital age, like every other industry.

Rapid changes in production, consumption, consumer habits and expectations from the rise of mobile technology and cloud services are affecting almost every industry on the planet. Manufacturing is no exception.

Gone are the days when manufacturing was principally about making products and delivering them. Now manufacturers must take part in a more integrated environment where customer feedback informs production almost in real-time, the manufacturing product lifecycle extends beyond delivery, and services play an increasing role in a manufacturer's revenue model.

The digitization of manufacturing also has become a competitive dividing line, both separating thriving manufacturing operations from those left behind, and introducing new competition that manufacturers must compete against. Upgrading operations for the digital age is one of the most pressing issues that manufacturers face today.

New Pressures in Manufacturing

The digital age has introduced three new pressures that manufacturers must address as they adapt to the times. These include increased product expectations, demand for enhanced customer service, and competitive pressure for improved operational sophistication. These pressures are driving the evolution in manufacturing today.

Increased Product Expectations

Manufacturing good products is no longer enough. Because of online shopping and increased expectations around purchasing products that are personalized or perfectly address customer needs, manufacturers must make production more agile and adaptable to real-time trends and customer feedback. Smaller runs, quick adjustments, increased automation and a tighter engagement with customers are quickly becoming table stakes for thriving manufacturing operations.

As a result, manufacturers are having to adapt operations to include much tighter collaboration with customers and more flexible manufacturing operations.

Demand for Enhanced Customer Service

Because of increased competition and greater customer expectations, manufacturers also are having to evolve and deepen customer service and support around the products they manufacture. Service offerings are becoming essential for avoiding commodification and driving new revenue streams.

Aftermarket services have long existed in the manufacturing industry, but customers now are requiring more than just warranty services and a promise to fix products that break. Prompted by the cloud services model, customers are starting to look for ongoing engagement with manufacturers and proactive servicing with the help of technologies such as artificial intelligence and the Internet-of-Things (IoT).

Instead of selling products, there is pressure on manufacturers to provide solutions and the ongoing support that delivers the outcomes that customers expect. This is both an opportunity for new revenue streams and also a major challenge to the traditional manufacturing business model.

One example is Goodyear Proactive Solutions, launched by the tire manufacturer of the same name. Goodyear uses predictive analytics to help truck fleet managers better understand vehicle use.

Roughly 44 percent of high-performing manufacturers have [seen an increase in profit margins](#) of 20 percent or more as a result of new service offerings, highlighting the opportunity from meeting these new demands.

Competitive Pressure for Improved Operational Sophistication

A third pressure on the manufacturing industry is new technology that all but demands enhanced operational sophistication through digital transformation. Manufacturers either embrace the opportunity for increased operational efficiency and process sophistication or they fall behind to companies that do make such adjustments.

New technologies around artificial intelligence, 3D printing, augmented reality, blockchain, machine learning, voice-controlled user interfaces and robotics are changing how manufacturing is done. This is nothing less than a seismic shift in manufacturing technology.

Competitive advantage is shifting away from hardware, the typical domain of manufacturing businesses and a barrier to entry against new competitors, and moving toward software and a digital technology infrastructure built substantially around analytics, IoT and hardware-software-services.

New competitors that are light on manufacturing knowledge but strong on software and analytics knowledge are challenging traditional manufacturers to upgrade their operational sophistication or cede market share.

How Top Manufacturers Are Adjusting

Leading manufacturers have recognized these new pressures from the digital age, and they are actively adjusting in several ways. A recent study by IDC, [Becoming a Best-Run Midsize Discrete Manufacturing Company Succeeding in an Evolving Market with Intelligent Technology](#), highlights how manufacturing operations are adjusting.

Boosting Operational Agility and Responsiveness

New digital tools are helping the best-run manufacturing operations keep pace with the need for greater manufacturing agility through the creation of smart factories and digital supply chains that operate in real-time.

By far the most important priority over the next 12 months for the best-run manufacturing companies is improving business agility and responsiveness, according to the study by IDC. Roughly 46.8 percent of the best-run manufacturers surveyed by IDC cited agility as their top business priority. This is in contrast to the manufacturing industry as a whole, which is focusing more on attracting customers and increasing employee productivity, with only 22.4 percent overall citing agility as a top priority.

Enhancing the Customer Experience

Improving the overall relationship with the customer is a second area of high priority for leading manufacturers today. Bettering the customer experience is second only to improving agility as a priority for the best-run manufacturers, with 36.7 percent claiming this is a top priority right now, according to IDC.

Understanding the customer also was a big pain point for top manufacturers, at 44.7 percent.



Leading manufacturers are approaching this drive for a better customer experience through the digitization of customer interactions and seamless cross-channel communications that replicate the experience customers have when talking with friends across multiple channels online. Best-run manufacturers also are leaning heavily on analysis of customer data for the creation of new products and service offerings, and looking for ways to better deliver value for customers.

Collecting and Making Data More Accessible

Improving operational sophistication through better use of data is a critical component of the adjustment strategy for the best-run manufacturing companies.

Leading manufacturers are collecting and making data more available in a variety of ways, principally through the use of IoT and integrated business systems. Increased use of IoT devices combined with AI is giving leading manufacturing more actionable data, and integrated backend systems are reducing data silos and making all business data accessible.

More than 90 percent of manufacturers considered best-run are working toward eliminating silos and sharing data across the company, according to IDC research, compared with 71.6 percent of manufacturers overall and just 48.2 percent of manufacturers that are falling behind.

Increasing Data Use

Collecting data is only a preliminary step toward the ultimate goal of using data for improved operations and business outcomes. So leading manufacturers also are ramping up the ways in which they use the data within their organization.

More than 99 percent of leading manufacturers say their data now is actionable, compared with a little more than 80 percent for the industry overall and just half of manufacturers that are falling behind.

The best-run manufacturers are using this data principally to drive operational efficiency, improve customer service and boost access to employee data, according to IDC. Data also is central to achieving business goals for manufacturers over the next three years, with 63.5 percent of leading manufacturers saying data will help them drive innovation and operational efficiency.

Cultivating Innovation and New Business Models

Top manufacturers are taking a strategic approach to combating the disruptive competitive environment brought about by the digital age. Central to this approach is a focus on fostering innovation and new business models such as digital services that tie into the products being manufactured.

Leading manufacturers are cultivating innovative ideas by proactively and programmatically seeking customer engagement and input, actively looking outside of the industry, conducting formal employee training on innovation, creating internal innovation teams, and instituting programs that reward innovation within their company.

Roughly 99 percent of the best-run manufacturers believe this focus on innovation is driving overall company strategy and goals, according to IDC research, compared to just 61.6 percent in the industry overall, and 2.5 percent of manufacturers that are falling behind.

Focusing on Digital Transformation

Central to all of these adjustments is modernizing manufacturing operations for the digital age. The best-run manufacturers are focusing on technology upgrades across the board, with roughly 65 percent of leading manufacturers having already transformed their businesses through technology and the use of advanced digital tools. Almost all top manufacturing operations, 94.6 percent, plan to increase advanced technology use further.

This does not mean that digital transformation is complete for most top manufacturers; roughly 44.4 percent say they still are in the middle of this transformation, with less than 20 percent having fully completed the process.

The top technologies that leading manufacturers are working on adopting include:

Cloud Services

Use: 65 percent use; planning: 32 percent

Internet of Things

Use: 75 percent use; planning: 15 percent

Big Data

Use: 76 percent use; planning: 21 percent

Predictive Analytics

Use: 71 percent use; planning: 28 percent

Chatbots and Digital Assistants

Use: 59 percent use; planning: 26 percent

AI and Machine Learning

Use: 65 percent use; planning: 35 percent

Augmented and Virtual Reality

Use: 44 percent use; planning: 51 percent

For leading manufacturers, the case for digital transformation and greater technology use focuses chiefly on putting their businesses on the right strategic path, better understanding customer needs, and better forecasting financial requirements, according to IDC research.



Digital Transformation: The Core of Manufacturing Evolution

If you went to bed last night as an industrial company, you're going to have to wake up this morning as a software and analytics company.

Those are the words of Jeff Immelt in 2016, then CEO of industrial conglomerate, General Electric. His words are no less true for manufacturers today. At the heart of a manufacturer's evolution is a radical transformation that puts digital tools at the center of products and services, customer experience, analytics, and automation.

Manufacturing operations that evolve to become intelligent enterprises through digital transformation will be the companies that lead the industry in the near future.

These manufacturers will run integrated, automated processes that are transparent and connected to the real world, adapting in real-time. They will talk to machines in the factory, communicate with the products they make, interact with buyers, and be aware of traffic, weather, and customer opinions and feedback. Through this intelligence, manufacturers also will create better customer experience and solve customer problems before they even are noticed.

Instead of selling a turbine engine to an airplane manufacturer or a wind turbine to a utility, for instance, a manufacturer post-digital transformation might guarantee a certain performance and only sell and price the power or energy output based on specific, mutually-agreed-upon performance indicators that are measured continuously.

The future of manufacturing looks substantially different than the old model of making and selling products, in other words.

To make this transformation for the digital age, manufacturers must prioritize five key areas of change.

1. Developing Customer Centricity

Instead of focusing on products, manufacturers need to evolve so the focus is on solutions. This requires a deeper, more ongoing relationship with customers that extends far beyond product sales. Customer-centric companies will interact seamlessly with their customers on a constant basis through multiple channels, from web to direct interaction and ongoing IoT data feeds from the products they make.

In the traditional model of manufacturing customer service, a customer might purchase a concrete breaker and have trouble with the equipment as a result of overheating and high vibrations with the equipment. The customer will complain to the manufacturer, but due to a lack of contextual information the resolution might be inadequate and the customer will return the equipment and go with a competitor instead. Sales and market share will decline, and the manufacturer will not have visibility into the reason for the decline.

With the customer-centric model, however, the concrete breaker will be IoT-enabled and relay performance data back to the manufacturer before the customer struggles with the equipment. The manufacturer then can reach out to the customer with proactive service and merge this performance data with other operational data for both an immediate resolution and a long-term fix to the problem. The customer stays happy, and both sales and market share increase.

The start of this customer-centric evolution begins with omnichannel customer communication and an ongoing, real-time view of customer interactions and behavior, including the products that were purchased, the performance of these products, and the condition of these products over time. This evolution then can be extended with predictive analytics and service-based solutions that help customers drive the results they want from the products they purchased.

Developing customer centricity in this manner can both improve customer satisfaction and increase the revenue from new product offerings by up to 20 percent.

2. Improving Customization Capabilities

Manufacturers need to move from mass-produced manufacturing operations to sophisticated platforms, configurations and mass-customization strategies that allow for completely customized products, services and solutions.

At present, ideas and design requirements come together in a product design, and from that design results and bills of materials (BOMs) are created in a lifecycle management system. Manufacturing master data is set up and maintained, including variants in separate enterprise resource planning and shop-floor systems, and both engineering and manufacturing data are kept in sync. Customer specifications are then handed to manufacturing, and multiple systems are consulted to ensure reliable delivery dates, or manufacturers wait on material resource requirement planning (MRP) batch runs. The order then moves through multiple systems during the manufacturing process, and checks and process-related issue reports are collected.

Manufacturers that have improved their customization capabilities instead start with an integrated product design process integrating both customer and supplier inputs early in the design process to release design and product variant definitions. BOMs to manufacturing and the creation of work instructions are developed in one integrated process that includes closed-loop change management. MRP is performed in real-time, and role-specific dashboards speed up planning and execution of orders. This evolution improves responsiveness and enables greater levels of customization, as well as real-time profitability reporting and analysis using actual manufacturing data.

Improving customization capability begins with rationalizing existing product options using machine learning to understand demand and develop configurations that cover the majority of customer requirements. Manufacturers then can extend this evolution by adding requirements, engineering, and functional modeling for establishing a more formal view of the links between customer needs and product development. With these relationships clear, manufacturers can expose the functional models directly to customers through configurators letting customers define their own products on the fly.

This evolution can reduce manufacturing and logistics costs by up to 10 percent, and increase on-time deliveries by up to 20 percent.

3. Creating Digital Smart Products

As Jeff Immelt hinted in his quote about manufacturers becoming software companies, manufacturing in the future will be less about mechanical considerations and more about digital functionality and even digital configuration flexibility throughout a product's lifecycle. Manufacturers need to start developing products and digital services in tandem, breaking out of silos that limit integrated development.

In the traditional model, creation and maintenance of product structures and BOMs are isolated, as are change records and maintenance views. There is little in the way of end-to-end product lifecycle management, and management of hardware and software versioning dependencies are usually spreadsheet-driven and poorly integrated. This leads to a lack of visibility and integration.

In an end-to-end product lifecycle model, however, there is a single, integrated view of change timelines and BOMs, and future support of configuration of BOMs, including software items as a category. Embedded software capabilities are enhanced by constraints management of both hardware and software components, and there's handover of BOM spare parts positions and software items, including software installation instructions for a network.

The start toward this goal is continuing to equip products with software-based features. Manufacturers then can extend their physical products with digital services that augment and extend product functionality and lifecycle, improving overall value.

The way that carmaker Tesla pushes software updates to its cars and adds functionality through these updates is a prime example of a manufacturer using digital smart products, and such digital smart product creation can help cut manufacturing costs by up to 10 percent and reduce research and development costs by up to 30 percent.



4. Upgrading to a Digital Supply Chain and Smart Factory Capabilities

Manufacturers need to improve operational agility through fully modular, flexible digital supply chains and manufacturing networks that coordinates in real-time and brings added visibility.

With the traditional model, each original equipment manufacturer in the network separately receives asset data, creates master data, and accesses master data. With a digital supply chain and smart manufacturing facilities, however, a central cloud-based ERP system houses all asset information, documents and drawings, maintenance strategies and tasks, and spare parts recommendations that manufacturers in the network, asset operators and service providers tap into for a connected supply chain.

Manufacturers also achieve complete integration internally, connecting the shop floor, autonomous machines used for production, e-commerce solutions for order processing, manufacturing planning systems and artificial intelligence solutions that handle predictive quality control and maintenance.

The first step in this evolution is optimizing supply chain transparency and implementing connectivity across all parts of the company with a cloud-based ERP solution that serves as the nerve-center for the business. Manufacturers then can focus on machine-to-machine connectivity and collaboration for autonomous activity based on sensor data and AI.

Roughly 60 percent of manufacturers will empower shop-floor workers with augmented or virtual reality and intelligent apps by 2021, according to research by SAP, with predicted productivity gains of up to 7 percent.

5. Adding Service-Based Offerings

Moving beyond products is critical for manufacturers in the digital age. A fifth key area of change is developing service-based offerings that complement and extend traditional product offerings. SAP predicts that by 2025, the majority of manufacturing revenue will come from these services built around smart products.

This is a significant evolution away from the traditional model of selling a product, manufacturing it, delivering the product, invoicing and providing service.

In the new manufacturing model, a manufacturer analyzes the risk of a new offering and automates its pricing, then sets up a contract for product use and outcome after the sale. The physical product is then manufactured and coordinated with service monitoring and delivery. Product delivery is tracked and managed, and the product is managed and performance is monitored on-site through IoT. Outcome data also is pulled from the product in the field for billing and field-service optimization, and invoices are automatically generated based on use.

The first step toward this goal is monitoring remote conditions of products and developing value-added services around them. As manufacturers collect increasing data on product use, the next step is offering new digital services based on this data and eventually moving to a pay-for-outcome model.

While few manufacturers are there today, this move toward services is projected to improve service profit margins by up to 10 percent, and reduce invoice processing time by up to 30 percent.

Key Technology and Required Organizational Change

Evolving operations for the digital age requires both a technology upgrade and a cultural shift for most manufacturers.

For many manufacturers, the technology evolution is the most obviously dramatic. Both organizational change and technology upgrade are required for successful digital transformation, however.

Organizational Change

First, manufacturers must prepare their organizations for the digital age by updating company culture so digital transformation achieves the desired results.

This starts with reducing complex and bureaucratic organizational structures so manufacturers can move more quickly and take advantage of connected systems and real-time data. Flexible structures such as agile project management and greater employee autonomy are needed to enable manufacturers to more effectively change and evolve. Roughly 34 percent of small to mid-sized manufacturers said there is the need for creating new executive roles to fully take advantage of digital transformation, according to a recent study by Oxford Economics.

Training existing employees on new technologies and methodologies, and hiring new staff to meet changing roles, also is a critical component of preparing for digital transformation. Change management is an often-overlooked element of new technology rollout, but an important one.

More than 68 percent of manufacturers cited training of employees and management as an important factor of digital transformation, and 41 percent said new hiring also is needed.

Technology Upgrade

Putting the right technology in place is equally important. For manufacturers, there are eight core technologies that are most often required for digital transformation.

Artificial Intelligence

AI and its subset, machine learning, helps manufacturers learn from data and make more informed decisions. It also supports automation and autonomous operations, which is critical for competitive manufacturing operations today.

Roughly 40 percent of digital transformation initiatives this year will use AI services, according to IDC research.

Internet-of-Things

Manufacturers have been using connected devices for years, but digital transformation requires IoT use across all parts of the organization, and along the full length of a manufacturer's supply chain.

Roughly \$1.2 trillion will be spent on IoT investment by 2022, according to IDC.

Advanced Analytics

Real-time operations is a critical component of manufacturing in the digital age, and comprehensive analytics are necessary for bringing visibility and making sense of the data.

In the digital age, data has surpassed the ability of organizations to make sense of it without the use of analytics engines, so manufacturers must have analytics technology at the core of their business.

Virtual and Augmented Reality

Knowledge-transfer and working with real-time data on the manufacturing floor is greatly assisted by VR and AR technology, and manufacturing in the near future will rely on it.

Already 75 percent of manufacturers plan on using searchable video content through mobile and wearables by 2021, according to IDC. The next step in that journey will be VR and AR.

Blockchain

Cryptocurrencies have sullied blockchain's reputation, but the technology has some of its most powerful use cases in supply chain management. Blockchain technology will help manufacturers develop more complex, integrated digital supply chains by providing better provenance, traceability and trust all along its supplier network.

Roughly 30 percent of manufacturers already plan to use blockchain technology as the foundation for digital trust at scale, IDC research has found.

Conversational AI

The next generation of applications will run on voice interfaces, and conversational AI will improve efficiency and make data more accessible on the shop floor for manufacturers that have undergone digital transformation.

Already 50 percent of new software applications use voice as the primary interface, foreshadowing the technology's adoption among manufacturers.

Robotic Process Automation

Robotic process automation streamlines repetitive, rule-based processes, and small to mid-sized manufacturers in particular are adopting the technology. Roughly 43 percent of manufacturers will invest in robotic process automation over the next two years, according to Oxford Economics.

The contribution of machines and algorithms is expected to grow by 57 percent by 2022.

Cloud ERP

Most significantly, manufacturers need to invest in a modern, cloud-based ERP solution for connecting their digital systems, collecting and using their data in real-time, and digitizing their operations. Cloud ERP serves as the foundation for all of the other key technologies, and it is essential for manufacturing in the digital age.

The Importance of Cloud ERP

One of the most important steps for digital transformation is putting a modern cloud-based ERP system in place. If digital transformation is at the core of the manufacturer evolution, ERP is the centerpiece of the technology that supports this transformation.

A modern ERP system is an all-in-one, cloud-based business system that handles all aspects of an organization's operations, including:

- **Supply chain**
- **Logistics**
- **Manufacturing operations**
- **Purchasing and inventory control**
- **Customer management**
- **Financials**
- **Accounting**
- **Planning and reporting**
- **Human resources**
- **Sales**

While all large enterprises and most manufacturers already use ERP for operations, there's a dividing line between older on-premise solutions and newer, cloud-based ERP systems that are built from the ground up for the digital age. Cloud-based ERP systems such as [SAP Business ByDesign for Manufacturing](#) serve as the foundation for the key technologies needed for digital transformation, and supports all five of the areas where manufacturers must evolve.

Customer Centricity. Because cloud ERP sits at the center of a business and is based in the cloud, it enables the collection of customer information in a single place, and real-time updating of that information. It also comes with powerful analytics, can connect with AI engines, and supports connections to IoT devices and services built out of those connections. Cloud ERP ties customer engagement with real-time manufacturing operations.

Manufacturing Customization. Through the centralization of both manufacturing and customer data, cloud ERP is the foundation for ongoing rationalization of product options and the establishment of configurations for customization. Cloud ERP makes mass customization possible by automating orders and inserting them in production schedules, updating BOMs, and handling MRP automatically based on individual order data. By bringing together data from all parts of the company, cloud ERP also supports the unification of engineering, manufacturing and marketing and sales.

Digital Smart Products. The single integrated view necessary for the end-to-end product lifecycle model is built on having all data flow into a unified, cloud-enabled system. That is cloud ERP by definition. Cloud ERP systems also unify manufacturing and digital service operations, and provide the necessary infrastructure for IoT-data based billing and subscription models that are at the heart of digital smart products.

Digital Supply Chain and Smart Factory Enablement. By having all business data flowing into the same system, cloud ERP connects the shop floor with autonomous machines, e-commerce solutions, manufacturing planning, finance, HR and all other aspects of the business. Automation and analytics within cloud ERP then makes these connections useful. Cloud ERP also enables direct connection with supplier systems so supply chain data can move seamlessly up and down the chain and get updated in real-time.

Service-Based Offerings. Because cloud ERP is based in the cloud, it enables the real-time monitoring of IoT-enabled products that is critical for most service-based offerings. By collecting all of a manufacturer's data and coming with a powerful analytics engine and support for AI systems, cloud ERP also helps companies uncover service opportunities and support the management of these offerings.

For these and other reasons such as enhanced operations through improved automation, cloud ERP is a critical component of digital transformation for manufacturers and their overall evolution for the digital age.

Phases of Manufacturing Evolution

The process of evolving from a traditional manufacturing operation to a business ready for the digital age can sound daunting, especially for operations that have not kept pace with advances in technology.

The evolution doesn't have to happen all at once, however, and there are distinct phases in the transformation. Manufacturers can evolve slowly by progressing at their own pace through the three phases of optimization, extension and transformation. Each phase builds on the five key elements that manufacturers must focus on for staying competitive in the digital age.

Optimization

The first phase of evolving for the digital age is optimizing the existing business by implementing a digital core in the form of a cloud-based ERP system. This core will make business processes more transparent and integrated.

Once a digital core is in place, manufacturers can start evolving their operations along the five key areas of change required for digital transformation.

- Move from siloed communication channels to omnichannel interactions, which will improve customer centricity.
- Rationalize current variations in platform and configuration model for better customization.
- Incorporate software-based features for increased flexibility and connectivity, which helps with smart product creation.
- Move to a digital supply chain and smart factory capabilities by optimizing supply chain transparency and enterprise connectivity.
- Monitor the conditions of remote assets for the first step in the creation of service-based models.



Extension

The next phase in manufacturing evolution is extending current processes by connecting them to the real world with IoT integration.

Through IoT utilization, manufacturers can begin to substantively transform their business for the future.

- Connect to products in use by customers to gain performance insights, which increases customer centricity.
- Implement formal requirements for engineering and functional modeling, which extends customization capabilities.
- Extend physical product functionality with digital services, launching digital smart product offerings.
- Increase machine-to-machine collaboration for a deeper level of smart factory capability and a more efficient digital supply chain.
- Offer new digital services via the IoT platform, creating service-based offerings.

Transformation

The final phase of the evolution is the full transformation from a traditional manufacturer to a digital business built on a constant stream of real-time data and substantially driven by service-based offerings.

In this final phase, manufacturers:

- Offer end-to-end customer collaboration from product development to achieving the goals of the customer, the realization of customer centricity.
- Connect functional models with customers via configuration, price and quote, offering manufacturing customization down to the scale of one.
- Introduce a direct feedback loop for product enhancements based on actual usage data, creating digital smart products that meet customer needs exactly.
- Enable a truly modular production process, the goal of the smart factory and an efficient digital supply chain.
- Sell pay-for-outcome services instead of products, the transformation from traditional manufacturing to the service-based model.

Manufacturing is Changing

Partially from new technology, partially from changing customer demands around customization and service, manufacturing is in the middle of arguably its biggest transformation since the industrial revolution. This evolution from making products to providing digital services around products is a huge shift for manufacturers.

Making this change will require new culture, processes and technology. The best-run manufacturers already are in the middle of this digital transformation. But regardless of where a manufacturer is in its digital maturity, the direction is clear: manufacturers of the future will be agile, rely heavily on data and digital technology, and combine digital services with physical product manufacturing.

It is a brave new world, and manufacturing will never be the same.

About Navigator Business Solutions

[Navigator Business Solutions](#) is an SAP Gold Partner with more than 25 years of experience helping small and medium-sized business with digital transformation. As a leading ERP implementation partner, Navigator has assisted businesses with more than 500 ERP implementations worldwide, and it offers a range of turnkey industry solutions for manufacturing and other industries such as retail and distribution.

For more information about ERP system implementation or digital transformation, contact Navigator at **(877) 395-4727 or info@nbs-us.com**.