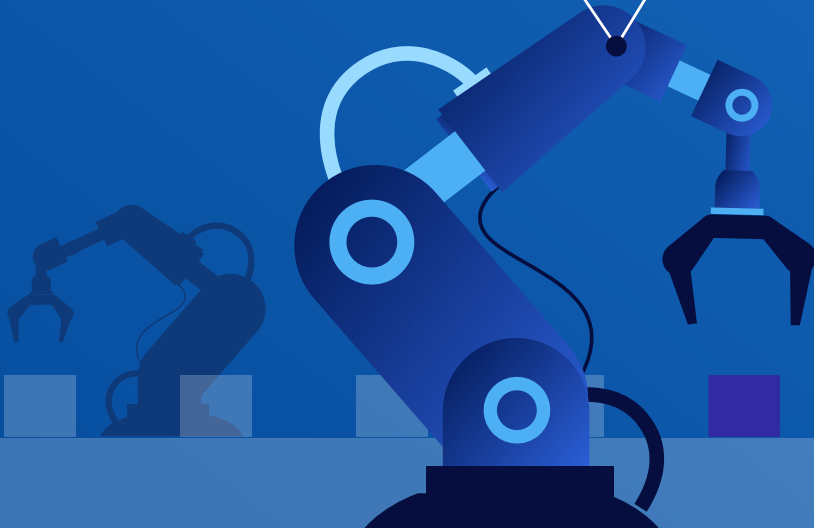
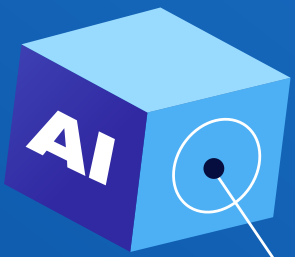


MANUFACTURING MODERNIZATION: UNLOCKING ACTIONABLE INSIGHTS



softserve

Disparate systems and siloed data make it nearly impossible for manufacturers to effectively run analytics that provides insight into supply chain management and demand prediction. Modernizing legacy infrastructures and moving data to a centralized location within a cloud platform lets manufacturers reduce IT spend (from costly maintenance), leverage advanced technologies to transform structured data into actionable insights, and turbocharge productivity. Integrated data gives manufacturers the foundation for insights that power data-driven decisions.

The complexity of modern manufacturing means that even the slightest delay in production can significantly impact a business's bottom line. There's a critical

need to predict the existing and potential future risks associated with the supply chain. The challenge many manufacturers face when gaining inventory visibility is drawing actionable insights from singular streams of data and taking data-driven actions to improve business performance.

To optimize business processes and quickly adapt to market expectations, manufacturers must first improve operational efficiency. The pathway is utilization and organization of big data, including proper data management, a modernized infrastructure, and a cloud strategy that increases operability, scalability, productivity. It provides access to advanced data processing and analysis technologies.



THE NEED TO UNLOCK INSIGHT

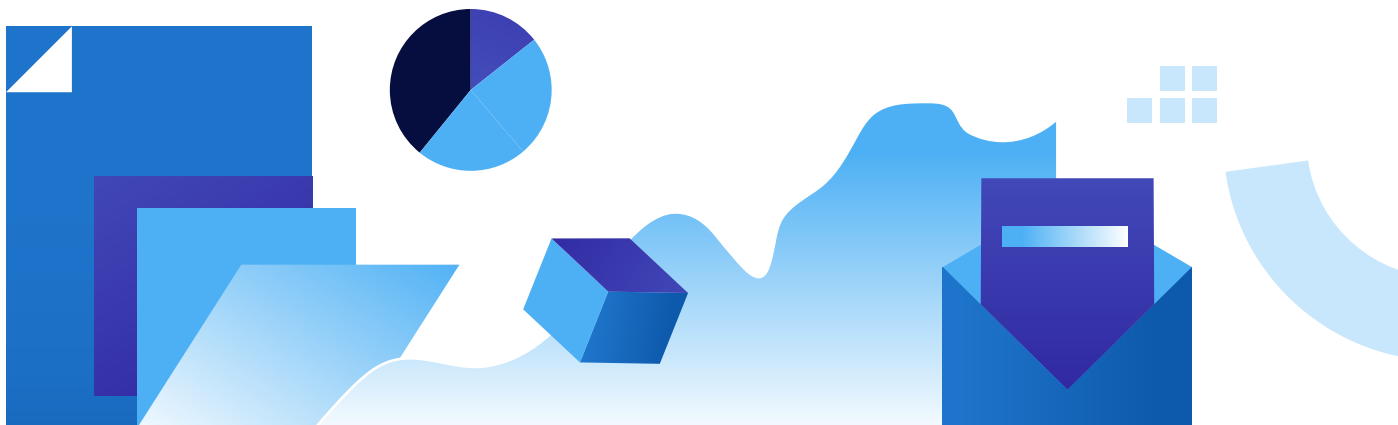
Data siloes and disparate systems make it nearly impossible for many enterprise manufacturers to effectively run analytics to provide insight into their inventory and production. However, AI can provide the solution to issues faced by modern manufacturers.

[A McKinsey report](#) found that using advanced AI in manufacturing operations results in asset productivity increases of up to 20 percent. Overall maintenance costs can be reduced by up to 10 percent. AI can also help alleviate human error by automating up to 20 percent of processes that are not entirely automatable. What's more, AI-enhanced supply chain management can significantly improve demand forecasting by reducing 20 to 50 percent of forecasting errors.

With many data sources and the inaccessibility created by different platforms, a key consideration is how the data can be used to gain insight. Without a workable data strategy and vigilant governance, the data gathered will never be fully employed.

A data-first strategy is a driving force for innovation, whereas data governance outlines the rules by which data is collected, stored, and accessed. A well-designed data governance policy ensures data integrity and security. Structuring and defining data through data governance has valuable benefits throughout the company. Data becomes congruent across different departments—allowing insights to be shared for holistic analysis—while a clear direction and process are established across the manufacturing organization. Finally, data analysts and technology can better derive insights on inventory, production, and demand.

The value of data exists upon beyond uniqueness, how it is being used, and by whom. Its benefits extend when properly managed—including being unified across all systems. This is how effective, data-driven decision-making is realized. For example, integration between inventory and order management, accounting, warehouse management, shipping and fulfillment, POS, supplier management, and the company CRM provides a complete view of how a manufacturing business can anticipate risk and demand changes in real-time.



INFRASTRUCTURE MODERNIZATION

Data strategy, management, and governance are not enough to operate efficiently and maintain an edge against other industry-leading manufacturers and the immediate competition. Another pinnacle factor for improved predictability lies in the reliability and flexibility of an organization's network infrastructure.

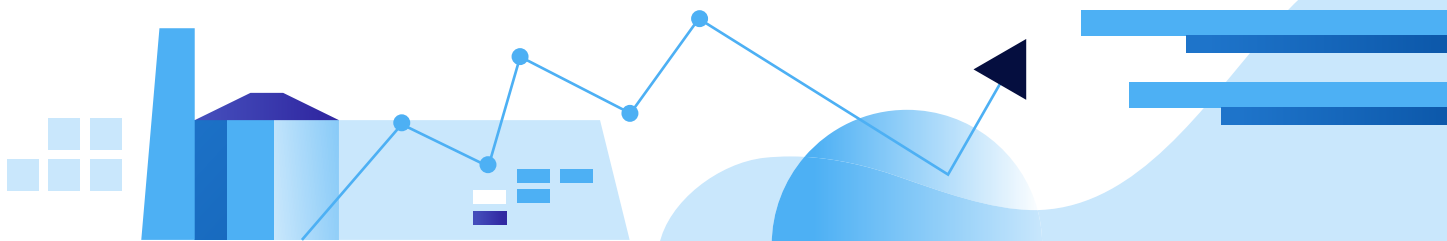
However, many manufacturers today sit behind antiquated systems and infrastructures, costly to maintain and hinder digital transformation initiatives. When outdated architecture and hardware—not traditionally designed to work with various large platforms—are present, a company can experience severe delays in gathering valuable insights and information needed for business operations. The speed at which systems perform is crucial for a manufacturer to optimize backend areas that feed front-end success. Any delay prevents internal stakeholders from having real-time data immediately acted upon or used throughout the decision-making process.

SoftServe's client, a northern European manufacturing and retail company, embarked on an enterprise data transformation in 2017 to deliver a full suite of advanced analytics capabilities. The client was slowed down by forecasting models that took days to execute and required manual data entry from multiple legacy systems. With SoftServe's help, the

client's global forecasting time increased to be 10 times faster and removed the need for manual copying of historical data. What's more, their new data ingestion framework allows up to 10 unique data sources to be onboarded each month.

Although some legacy systems still function, they are not conducive to delivering innovation and developing new applications. A gap exists between IT and the rest of the business. To reduce cost over time, IT teams must be viewed as service providers and enablers of business transformation—aligned with business stakeholders—with the ability to directly impact the company's bottom line. Modernizing legacy infrastructures facilitate a reduction in IT spend (from costly maintenance), improves application performance, and allows the business to leverage advanced technologies to transform structured data into actionable insights—ultimately turbocharging employee productivity.

Finally, updating networks and migrating systems to the cloud allows manufacturers to address application speed while taking advantage of a cloud-based digital network that can scale effectively. Manufacturers can then add technology as needed for operational efficiency and use the cloud to access cutting-edge technologies—like deep learning, AI, and AR.



INTEGRATE THE CLOUD

With operations in the cloud, manufacturers can have the luxury of better operability, scalability, and data accessibility. Cloud data platforms ingest multiple sources of data and prepare it for analysis. It saves an enormous amount of time for data specialists and frees them to focus on modeling.

The cloud also opens opportunities to easily integrate data from external sources and drive insights by leveraging AI, machine learning, and advanced analytics. Integration of SoftServe accelerators, like Demand Prediction, Robotic Process Automation, Visual Product Recommendation Engine, and Smart Shopping Assistant, are a few examples of systems that can run in the cloud and facilitate operational efficiency.

Popular cloud providers, like AWS, GCP, and Microsoft Azure, work with manufacturers to help lower operational IT costs and scale quickly. Here's an example. Our client is a large manufacturing company producing equipment and parts for oil and gas extraction. They needed a solution to provide near real-time visibility on inventory across 100+ locations. SoftServe used Amazon Web Services to build a cloud-based solution that reduced 50 percent of operating costs with automation and better forecasting. The client benefited from a lower risk of product out of stock, making good on their service value promise of "always having the right parts in stock."



OPTIMIZE USING BIG DATA

From small to enterprise, any manufacturer must find ways to utilize the continual stream of information in new and efficient ways. For digitally-native and web-only brands, data is a part of the company's DNA and how it has always operated. However, for traditional manufacturers who have managed their business differently from the start, the challenge is to embrace data science in the same way as the digital native companies. While most manufacturing stakeholders recognize the impact data can have on the organization and the inherent need to think differently, they struggle to know where to start, identify areas of change, and understand what digital success looks like.

Big data can create optimization across multiple parts of the manufacturing organization—from supply chain operations to demand planning. It is the foundation for any technology advancements (AI/ML integrations, predictive analytics, and automation). Through data management, infrastructure modernization, and cloud migration, manufacturers can improve supply chain operations by providing real-time inventory and stock analysis while also making merchandising decisions that will improve the in-store experience.

CONCLUSION

Data is the lifeline for complete visibility into all business areas—and to know and understand customer wants and needs. It plays a vital role in unlocking the power of future innovation. Every data point in manufacturing is essential to target and predict demand, streamline operations, optimize the supply chain, improve business decisions, and ultimately, increase revenue. Manufacturers must have a clear picture of all incoming data sources to act on the incoming information. It's crucial to act fast and with confidence to stay ahead of the competition. The SoftServe team of experts helps manufacturers accelerate their data journey and integrate cloud technologies. It's a partnership that transforms data siloes into actionable insights and improves operational efficiency. Contact us today to get started.



ABOUT US

SoftServe is a digital authority that advises and provides at the cutting-edge of technology. We reveal, transform, accelerate, and optimize the way enterprises and software companies do business. With expertise across healthcare, retail, energy, financial services, and more, we implement end-to-end solutions to deliver the innovation, quality, and speed that our clients' users expect.

SoftServe delivers open innovation, from generating compelling new ideas, to developing and implementing transformational products and services.

Our work and client experience is built on a foundation of empathetic, human-focused experience design that ensures continuity from concept to release.

We empower enterprises and software companies to (re)identify differentiation, accelerate solution development, and vigorously compete in today's digital economy-no matter where you are in your journey.

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