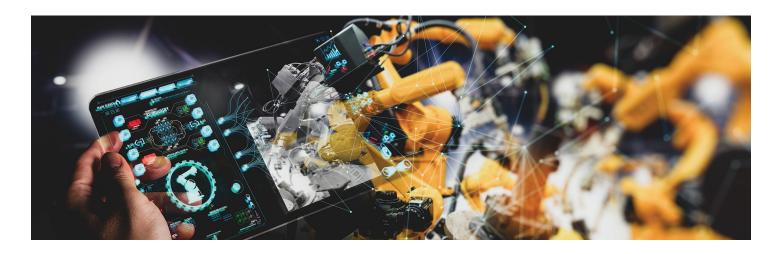SERVICE FEATURE

Increasing Operational Efficiency Through Data-Driven Strategies

Smart manufacturing involves using data-driven technology solutions to improve efficiency, increase productivity, and drive performance within your organization. Developing a strategy and implementing an effective solution requires first understanding the digital maturity of your organization and your overall goals.

Understanding overall equipment effectiveness begins with having a clear, comprehensive view into machine performance — information that can be garnered from proper data collection and management. Your organization's ability to accurately measure equipment uptime, efficiency and effectiveness in real time is critical to improving operational performance.

Only through knowing exactly what needs to be calculated — and for what purpose — can your organization make steps toward finding a scalable solution that not only solves today's issues but uncovers new opportunities to extend productivity and performance.

Achieving smart manufacturing begins with establishing organizational goals and then determining where your organization is in the process of implementing business intelligence tools and applications. Depending on the answers, your organization likely can create opportunity

to meet a variety of goals by starting down the path to smart manufacturing:

Improve visibility into the production floor processes.

- Leverage real-time production data and tie it to the enterprise resource planning system to optimize material scheduling and maintenance activities.

- Increase productivity and return on investment through analysis of asset and resource utilization.

- Increase collaboration among engineering, operations, IT and management to reduce downtime.

- Reduce cost, effort and development time by selecting proven, interoperable hardware and software technologies.

- Realize the value of Internet of Things devices.

In the past, manufacturers identified and handled these issues by simply implementing one-off solutions. Results of

this practice, while solving problems in certain aspects of the business, begin to compound, leaving the organization with various disparate pieces of technology and data, hindering the ability to connect those devices and solutions to make more effective use of the collected data.

Today, a holistic view provides the ability to implement solutions tailored for your organization's needs. Successful smart manufacturing begins with an understanding of your digital maturity level and a vision for what your organization plans to achieve.

Defining a Vision

By understanding your organization's current state, where it is headed and where you ultimately want to go, you can begin to look beyond the immediate concerns and develop a forward-thinking strategy to solve today's tough problems and prepare for future challenges.

In this way, the strategy effectively makes use of the intrinsic benefits of existing implementations, making it possible to leverage those solutions in other areas of the organization. For instance, a complex technology like artificial intelligence or machine learning may not be required. Instead, if you know the issues the organization is facing and the data needed to solve those issues, you can work backward to find solutions that fit the existing infrastructure of the business and are applicable across the organization.

Sometimes, the easiest approach is the most effective solution. Through workshops, interviews and ideation sessions, your organization can define the vision and guiding principles with which to direct the organization's activities to achieve its goals.

Building a Road Map

From technology solutions to equipment modifications, to people and process change management, developing a smart manufacturing strategy consists of various elements that depend greatly on organizational goals and digital maturity. Our team works to help you understand those factors and then focuses on defining scalable solutions that meet immediate needs and future touchpoints.

The strategy developed may leverage existing data, collection and generation of new data, and implementation of a data governance framework to give the data proper context. This enables meaningful, accelerated real-time business decisions, from members on the shop floor to executives in the boardroom. This approach helps lay the foundation for accelerated growth, utilizing a strategy that embraces purposeful change through technology and innovation.

Delivering and Implementing

If you already have a platform of business intelligence applications that you want to use but it lacks certain functionality, our experienced group of engineers, data scientists, security and network analysts, enterprise architects, and software solution developers can modernize those dated systems. By integrating new and existing applications and implementing customized software and process workflow solutions, we enable the realization of your organization's vision.

Realizing the Benefits

The realization of digital transformation to achieve a smart manufacturing stance does not come without challenges. New functionality, skillsets and technology stacks often leave organizations feeling overwhelmed with the daunting task ahead. Often, organizations are strapped for resources and looking for better ways to leverage existing software and technology.

By breaking the digital transformation process down into simplified steps, our consultants help you deliver on your smart manufacturing goals. Through an understanding of current systems, the market and their industry, we build an intelligence platform that can be developed to respond to shifts in production, thereby gaining agility and efficiency in business.

About 1898 & Co.

1898 & Co. is a business, technology and cybersecurity consulting firm serving the industries that keep our world in motion. As part of Burns & McDonnell, our consultants leverage global experience in critical infrastructure assets to innovate practical solutions grounded in your operational realities. For more information, visit **1898andCo.com**.