MANUFACTURING SUCCESS:
Why industrial equipment companies need an intelligent enterprise platform to compete in the new
Companies throughout the industrial industries are confronting massive change. The key drivers? Volumes of digital devices—and the data they generate—are surging. Crucially too, these devices and the customers that use them are growing more connected all the time.

There’s huge value trapped in the enterprise which can now be unlocked by digital technology—but the transformation journey for most industrial manufacturers is just beginning.

The repercussions are far-reaching. Customers expect the convenience and personalization that consumers receive. And delivering on these expectations disrupts the supply chain. Pay-per-outcome business models are on the rise, presenting an urgent need to transform products from hardware to smart platforms. And a universe of unexplored ecosystem potential is waiting to be explored.

New digital technologies, competitors and heightened expectations all impact the industry in a number of ways. And right now, industrial companies are lagging other manufacturing industries in their digital transformation and in their ability to realize the huge opportunities that digital creates (see Figure 1).
Targeting a mindset shift

To compete in this new world, there’s one trend, above all, that industrial companies must address: ‘industrial consumerism’. To meet this challenge, nothing less than an existential shift is needed—the whole B2B dynamic that’s characterized the industry up to now must evolve to a B2C mindset. That demands new agility, new customer-centricity and new flexible organization structures that can adapt and respond to every new opportunity.

Bottom line? Industrial companies must transition to become truly intelligent, data-driven enterprises—powered by collaboration, internally between functions and externally, with ecosystem partners. At the core of this transformation will be living products that combine core hardware with software as the new connective tissue for hyper-relevant services and experiences that drive new value.

Operating in an always-on world, these living products will generate data, analyze it and provide continuous insights in real time. Benefits include predictive insights that enable engineers to predict and prevent process control incidents and/or equipment failures that could result in production losses or health and safety issues. In addition, they enable new as-a-service business models.

Examples? Companies like Caterpillar with its connected vehicles and equipment, Michelin’s pay-by-the-mile business model for tires and Siemens’ Industrial Internet of Things (IIoT) platform for collaborative innovation are all bold approaches that harness digital technologies to forge new industrial paradigms.

As part of the all-pervasive IIoT, living products will operate in new networks connecting everything to everything and to everyone else. To succeed in this new landscape, industrial equipment companies will need to master some key new capabilities and become intelligent enterprises (see Figure 2):

Figure 2: What the NEW looks like—from Business As Usual to Digital Industrial Business
Industrial equipment leaders powering ahead

Some leading industrial companies are already realizing the benefits of becoming intelligent enterprises. They are moving to digital and developing new connected services. Our analysis confirms that these industry leaders have achieved over 220 percent growth in total shareholder returns (TSR) in the last five years, as well as growing operating margins in the same period by more than two percentage points. In contrast, laggards have seen only 40 percent TSR improvement, with shrinking operating margins. In a hypercompetitive global industry, change is non-negotiable.

Characteristics of the intelligent industrial equipment enterprise:

- Enabling subscription business—bundling products and services
- Reaching end consumers/partners
- Enabling products and the software lifecycle
- Collaborative digital PLM with manufacturing
- In memory core ERP (digital core)
- Real time analytics
- Scalable on cloud
- Open to ecosystems
- Secure and open for automation (AI)

Making a wise pivot

To acquire these characteristics, industrial equipment companies must continuously pivot to their new business while growing their core business to fund investments in the New at pace. It’s what we refer to as making a “wise pivot.”

Figure 3: Pivot wisely to get the timing, scale and direction of investment right
So how do they accelerate the move toward the intelligent enterprise today? New capabilities are urgently needed, many of them powered by new technologies to create these intelligent, agile and efficient operations.

**Figure 4:** How to get there? Succeeding in the New requires additional capabilities

### An intelligent enterprise platform for industrial equipment’s digital transformation

We’re seeing more and more verticalized capabilities that are designed to enable intelligent industrial equipment operations. But to realize their enormous potential for innovative, lean business capabilities, companies need to move away from old monolithic enterprise resource planning (ERP) and join an integrated platform-based landscape, with vertical functionalities and a data-centric approach (see Figure 5).

**Figure 5:** Move to a platform based, data-centric architecture
As well as supporting and powering an industrial equipment company’s digital transformation, an intelligent enterprise platform provides the capabilities, agility, speed and customization needed to compete and grow in this new world.

At the core of their operations, this platform is essential for developing living products and integrating processes across project lifecycles. These must span the end-to-end value chain from planning and design to sourcing, manufacturing and in-field services. Using the platform to harness artificial intelligence (AI) and analytics enables industrial equipment businesses to introduce intelligence into everything they do and bring all the data at their disposal into one place, where new technologies can be applied to it in real time. And that, in turn, can bridge the gap between physical and digital worlds, creating new services and evolving these into customer outcomes.

An intelligent platform delivers a number of key benefits. Crucially, it will consolidate data from an increasing number of sources. These include connected assets, customers, ecosystem partners, suppliers and PLM systems as well as enterprise functions such as finance and supply chain. That supports more effective collaboration and integration with crucial suppliers and other third parties. With one source of the truth, industrial equipment companies can reinvent processes end-to-end bringing unprecedented visibility and achieve breakthrough insights through the application of advanced analytics. That can mean reduced asset downtime, for example, through predictive maintenance that keeps machines running efficiently and avoids costly breakdowns. New efficiencies are in reach through digitized processes and intelligent automation. What’s more, augmented by smart machines the workforce can operate in new ways, both more creatively and productively. And with customer-facing channels integrated across the enterprise, industrial equipment companies can become ever-more responsive to changes in demand, reducing inventory carrying costs and continually fine-tuning products and services to maintain relevance.

Companies are moving away from reliance on monolithic single vendor ERP solutions and instead embracing new platform-based, data-centric architectures. These are essential to power end-to-end digital transformation that connects technology and business strategy to support new operating models and processes. And by integrating with the workforce they will support the innovative and lean business capabilities that are the hallmark of operating successfully and competing with new entrants in this digital world.
Unlocking the power of digital in industrial equipment

As traditional industrial equipment businesses evolve into digital enterprises, they’ll increasingly sit at the center of an interconnected ecosystem of partners, dataflows and smart products. To maximize the value they can achieve through collaborative innovation and emerging technologies like AI analytics, blockchain and extended reality, an intelligent platform is a must-have foundation for transformation and growth.

So how should companies move forward? We believe that most successful transformations follow a common path. First, they need to have a clear vision that shows the way ahead from thinking to doing (and measuring what they achieve along the way). As they move forward, the success of their holistic transformation hinges on following a roadmap with predefined targets and outcomes, connecting strategy, business objectives, operating model, processes and workforce to the enabling platform technology.

Of course, digital prowess is a critical component of success. But more is needed. Specifically, deep industry and functional expertise are essential to design and guide the transformation. By bringing together all those elements, industrial equipment companies can develop a robust case to support their journey, including strategic and operational benefits as well as the positive financial outcomes.

Industrial equipment manufacturers that set the pace will continue accelerating to digital, developing new connected services, focusing on customer needs and driving efficiency. A successful journey toward this intelligent platform will have a clear destination established from the outset: capturing the full breadth of business and technology opportunities that are becoming available in the digital era.

Standardizing processes to improve controls

A water treatment products company needed to standardize its processes enterprise-wide to improve compliance and get a consolidated view of global financials. Accenture supported the company through roadmap development for this complex global transformation program, including SAP® S/4HANA®, cloud implementation to provide the backbone ERP and deployment of SAP Central Finance to drive standardized reporting and monthly closure. On completion, the company will benefit from a vastly simplified business and technology footprint, with replacement of aging technology.
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