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A Frost & Sullivan Executive Brief

The Vision for Service Transformation in Manufacturing

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Digital Technologies Upending Industrial Business Models

Heavy industry is undergoing a seismic shift in how it delivers solutions to the market. While core products will persist, such as manufactured goods, energy, and other commodities, the way these solutions are monetized and how their suppliers interact with the market are rapidly transitioning to the version of the “as-a-service” (XaaS) model popularized by software vendors decades ago.

Recent Frost & Sullivan research shows that advancing technologies enable this massive shift from product-based to service-based business models. Figure 1.0 shows the primary drivers for digital technologies in the industrial equipment market, including:

- End-user focus on reducing operational expenditure (OpEx) and total expenditure (TotEx) by extending equipment lifespan with new internet of things (IoT) and service solutions.
- Plant modernization and upgrades with real-time monitoring and predictive maintenance.
- Shift in customer investment from capital expenditure (CapEx) to OpEx.

Figure 1.0: Drivers of Digital Technology in Industrial Markets



The market for digital technologies in the industrial space is expected to grow from \$1.5 billion in 2020 to over \$4 billion by 2027. Frost & Sullivan research indicates that manufacturers, in particular, are engaging with new technologies to lower operational and maintenance expenses and create more cost-effective solutions for all end users.

Manufacturer's Quest for New Revenue Streams

Most manufacturing executives recognize the significance of digital transformation strategies and technologies. The industry is credited with ushering in the next industrial revolution, Industry 4.0, which digitized automation to create solutions such as prescriptive maintenance and digital twins. Advanced tools such as IoT, big data analytics, sensorization, artificial intelligence (AI) and machine learning (ML) have also been instrumental in this transition. These solutions have played heavily in optimizing operations; going forward, manufacturers must leverage new technologies and business models to assist end users in their pursuit of a connected environment.

In a 2021 interview, Oracle's Aniello Pepe, Director, Discrete Industry Solutions, emphasized this point to Frost & Sullivan: "Some companies want to optimize services, so they want to make a revenue stream from their services."

“ There are differing levels of maturity when it comes to developing ‘as-a-service’ or XaaS models. All of this is a major service transformation and represents a significant industry trend. ”

—Aniello Pepe, Director, Oracle

Digitally Driven Solutions Tackle Growing Business Challenges

Recent global events have affected enterprises in many ways, impacting production and demand, altering manufacturing and supply chain operations, and creating market disruptions.

While innovative manufacturing companies are transitioning to a new solution-based business model, they are subject to significant business challenges, including:

- The pace of change in manufacturing.
- Interacting with a much broader, more diverse and complex set of partners in the value chain.
- Reducing the time-to-market.
- Expanding into new markets and segments.
- Improving product quality.

A few of the challenges specific to the shift to XaaS are:

- Streamline and increase the effectiveness of field service operations.
- Anticipate customers' future needs.
- Increase sales volume and margins.
- Build brand and product loyalty.
- Enable remote asset monitoring and management.
- Improve new product development.
- Increase customer satisfaction.



Frost & Sullivan also spoke with Scott Creighton, Vice President, Oracle CX Industry Solutions, who stated: “What we’re learning from our customers is that they are on a very specific pattern. From an IT standpoint, it’s a complete consolidation onto platforms—both front-office and back-office platforms.”

“This is an outcome based ‘customer first’ strategy enabled by digital. What companies are doing here is moving from a typical transaction with a service contract business with low margins to business outcome based as a service solutions for higher margins. In this business model you lose margin if these solutions go down. This requires a service transformation from customer reactive break fix service to predictive service leveraging IOT and AI to improve uptime and availability.”

—Scott Creighton, VP Oracle CX

Oracle observed that its customers were looking for software delivered as-a-service (SaaS), so the company pivoted its business model to capture this market demand. Its transition into the SaaS/XaaS space helped it understand its customers’ challenges at a fundamental level. Industrial businesses migrating to a XaaS-based model—such as offering power as a service rather than selling a generator—have to engage all aspects of the organization. It is not enough to create different marketing materials and draw up new pricing schedules. The entire business has to evolve to meet the needs of the new business model—from the customers’ expectations, not the organization’s old way of doing business.

For example, a XaaS model often has repeating revenue generated through a subscription-like fee structure. This means that an organization that previously recorded revenues through large, individual equipment sales would need to spread out revenue projections, revenue recognition and related costs. While the revenues and profits from a XaaS solution eventually exceed those of comparable equipment sales, there is often a lag as the program ramps up. That is, replacing one-time, short-term equipment sales with a long-term subscription model may take five years or more to generate the same amount of revenues, though often at a higher profit margin. This can affect fundamental business and investor metrics during this conversion period, even if the long-term revenues more than make up for any short-term revenue deferral.

Along with modified revenue projections and ameliorating investor concerns, moving to an X-as-a-Service model can affect inventory control or manufacturing. It may also incur additional costs: a XaaS model in the industry may require value-added services and an upgraded digital user experience. This can mean adding service personnel or partners and expanding IT teams plus compute power (whether cloud or on-premise) with the skillsets to create and manage new customer dashboards and apps. Different revenue streams, new costs, and an expanding partnership ecosystem mean an organization may need to prepare for the new business model months, if not years, in advance.

Armed with first-hand experiences, as well as decades working with the industrial sector, Oracle created value propositions that specifically targeted the challenges and opportunities facing the market. Figure 2.0 shows Oracle's "Anything-as-a-Service" transformation with an industry-specific focus and impact:

Figure 2.0: Anything-as-a-Service Transformation



Source: Oracle

Oracle found it could deliver what customers wanted and what they did not realize they needed. The company shifted from delivering hardware to becoming a successful service provider in a manner that was very efficient. This shift did not negatively impact the business as a result of the transition. Oracle's multi-disciplinary approach toward XaaS, combined with its other solutions, such as customer experience (CX) sales, service, subscription management, enterprise resource planning/enterprise performance management (ERP/EPM), supply chain, financials and analytic capabilities delivered through the cloud, make it uniquely situated in the industry to help customers transform their businesses.

A Necessary Transition Enabled by Technology

Frost & Sullivan research shows that a front-office and back-office business platform can create a strong, scalable foundation for continuous innovation. It streamlines processes and allows standardized information to flow from idea capture to design; even extending the reach to marketing, sales and service. Having this platform in place can accelerate global product launches, service and business model innovation and time-to-market share. And, most importantly, companies can anticipate and exceed their customer expectations.

To thrive in the long term, manufacturers must transform themselves from an organization selling products to one that is focused on customer success. It is fundamental to delivering “as-a-service,” winning the renewal in the future. Breaking down the organizational barriers and providing a single business platform for the front and back office are key enablers of that successful transformation.

The new digital reality for industry and manufacturing that is helping create revenue opportunities needs a sophisticated and robust platform component. The role of enterprise software has shifted from merely being focused on control, cost savings and process cycle times, to being integral for continuous innovation that promotes faster, more responsive change.

Moving to a new “service operating model” implies significant business challenges. Chief among those challenges is finding and choosing the right ideas and partnerships. Investing in the right technology partner reduces the risks and complexities of modernizing an industrial business.



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