SMART SERVICES: CREATING SUSTAINABLE CUSTOMER VALUE
Digital isn’t just disrupting how products are made. It’s also changing how they are consumed and managed, from ideation to end of life: in short, the entire value chain.

Though critical to building internal efficiencies, Industry 4.0—smart connected products built on digitized factories and platforms—is too limited to unlock the full scope of opportunities created by this remarkable transformation.

What’s needed is a more comprehensive view of value creation: one that leverages the power of smart services as the backbone of the end-to-end digital value chain described by Industry X.0 (see sidebar).

The prize for taking such a comprehensive view: significantly more satisfied customers and significantly higher revenues and operating margins for the business.

**INDUSTRY X.0: CREATING A FULLY DIGITAL VALUE CHAIN**

Industry X.0 encompasses a universe of “living” products and services: software-intelligent and closely aligned with their users and ecosystems. At its heart are the smart, interconnected devices and appliances that constitute Industry 4.0.

By delivering hyper-personalized customer experiences with huge value creation potential, smart services are critical enablers of the Outcome Economy that Industry X.0 heralds.

Created through the coordination of an ecosystem of data-transmitting devices linked to a common platform, they are the key to new user services and experiences in the Industry X.0 framework (see Fig. 1).

**Fig. 1: INDUSTRY X.0 FRAMEWORK**

Source: Industry X.0, Realizing Digital Value in Industrial Sectors, Eric Schaeffer 2017
Over the next decade, as Industry 4.0 evolves into Industry X.O, automotive and industrial equipment organizations need to raise their value creation game.

In addition to driving operational efficiencies, they must seek to respond to the seismic shift in customer expectations we call “industrial consumerism” and create new, and differentiated customer experiences. Smart services, built on an orchestrated ecosystem of data-transmitting devices and a common platform, are key enablers of the new business models that deliver such experiences and drive revenue growth. Leading innovators, moreover, are already leveraging their power.

Consider, for example, Mercedes Me, the package of innovative products, services and customer lifestyle offers from car maker Daimler AG’s Mercedes-Benz division. Using data from embedded sensors in its vehicles, Mercedes can provide such value-added services as remote diagnostics and predictive maintenance to its customers.

Consider too the case of Schneider Electric. The global industrial and electrical equipment maker, which already derives 43 percent of its revenues from customer solutions, intends to leverage the power of millions of connected assets across its infrastructure and customer sites to build and rapidly scale new offerings in areas such as predictive maintenance, asset monitoring, and energy optimization.

Accenture research clearly shows that “early innovators” in both automotive and industrial equipment are significantly more successful than “followers” at incorporating such digital components as smart services into their customer experience: 75 percent versus only 25 percent. Critically, these leading innovators also have 5-7 percent higher revenues and 150-240 basis points more operating margin than their peers.
Navigating the transition to smart services and the new sources of value they unleash is, of course, a multi-stage journey.

The journey begins with data-driven customer insights to understand the full scope of available opportunities. By enabling the efficient collection and analysis of usage and configuration data, smart services allow companies to define new, tailored service offerings based on what is most important to individual customers. This approach may also lead to a new type of business model: Product-as a-Service—a partner-based relationship that drives customer intimacy, boosts loyalty, and thus fuels revenue growth.

As industrial consumerism takes hold, some 84 percent of industrial executives believe that delivering differentiated customer experiences can strengthen their competitive advantage. But they’ll have to move fast. By 2030, for example, new entrants responding to mounting demands for mobility solutions in the automotive sector will conquer the majority portion of the entire automotive profit pool of €545bn.
The organizational impact of smart services will be huge. But how many automotive and industrial equipment organizations are fully prepared for it?

Accenture research confirms that around half of players in both sectors have invested comprehensively in digital technologies; while over 80 percent agree that technology advancement has entered an era of exponential change. Yet smart services also challenge organizations to completely re-think their product development processes (including at our own R&D arm, Accenture Labs, where we are working on automation advances that will cut timelines from months to days)—and that’s a big ask.

Organizations must ensure that solutions portfolios are configured to deliver the right products, services and experiences to the right customer at the right time. Especially the fledging industrial disciplines of software platforms, APIs, connectivity and user experience roadmaps need to be integrated, both with each other and with traditional product roadmaps. As product cycle times shorten, organizations must also be agile enough to perform mid-cycle product refreshes that meet constantly evolving customer expectations. And future product development choices hinge on successfully digesting a mass of new data sources from connected devices and customer interactions—particularly in the industrial equipment sector, where Big Data mining has become the most critical source of customer insights.

Few players boast the in-house capabilities to capture all this new value alone. In fact, realizing the full potential of smart services to transform product development will depend on the successful management of multi-dimensional ecosystems (see sidebar).

Some 64 percent of automotive and almost as many industrial equipment executives (63 percent) agree that the strength of their partners and ecosystems will determine their future competitive advantage. Yet only 14 percent have engaged with external parties effectively and efficiently enough to make open, co-innovation capabilities part of their product development and execution.

MULTI-DIMENSIONAL ECOSYSTEMS: EXTENDING THE DIGITAL VALUE CHAIN

Making a success of smart services requires the development of a corresponding ecosystem that transforms traditional value chains into more open, transparent, and comprehensive networks that extend the digital value chain.

Witness, for example, how clusters of start-ups specializing in sensors, drones, robotics, and other farm management technologies are helping create “precision agriculture” service solutions that enhance farming efficiency.

To capture opportunities like these, automotive and industrial equipment organizations must learn to orchestrate an ecosystem of partners that includes software vendors, connected device makers, Cloud and other infrastructure providers, as well as all manner of Big Data and machine-learning companies.

Accenture research indicates that in five years’ time more than 90 percent of automotive manufacturers believe that they will function as unified ecosystems, allowing them to increase the pace and agility of innovation.
The promise of smart services is a digital continuum, end-to-end. But achieving such a fully digital value chain is a journey—and until recently some sectors were making slower progress than others.

Although they were among the original innovators in the connected space, industrial equipment players have generally lagged automotive in shifting their focus from the operational efficiencies of Industry 4.0 to the revenue-driving potential of smart services and Industry X.0. Now, however, they’re catching up.

Take, for example, Caterpillar, the heavy machinery company, which has created several smart services tailored to the various industries it serves: among them, a driver safety system targeted at mine operators where long shifts are the norm, which instantly alerts operators and a monitoring center the moment fatigue is identified. Both Siemens and GE have also invested heavily in the platforms and ecosystems required for smart services, transforming data into predictive intelligence services that help their customers boost productivity. Case in point: the “power-by-the hour” business model of GE Aviation’s TrueChoice™ Flight Hour program.

Automotive players, meanwhile, are accelerating their journey. Fiat Chrysler, for instance, has significantly differentiated the customer experience with Uconnect™, an infotainment platform offering driver aids and services accessed through the vehicle or by smart phone, which has been called the “standout” in the industry. And by embracing the concept of smart services across multiple areas of the driving experience, some players are changing the concept of car ownership itself.

Companies like Zipcar, part of Avis Budget Group, General Motors, which invested $500 million in Uber competitor Lyft, and the online peer-to-peer car-sharing service Getaround are among a cluster of organizations that are allowing more and more drivers to switch to the mobility-as-a-service model that by 2030 is expected to capture 40 percent of global industry profits, from almost zero in 2015. The manufacturers’ portion, by contrast, is expected to decrease from 38 percent (in 2015) to 22 percent (in 2030)
ENABLING A NEW END STATE

The industrial value chains of the future will be end-to-end ecosystems, from product design through to ongoing use by the end consumer.

This end state won’t be accomplished overnight, but there are concrete steps that organizations can take now to start driving sustained, superior returns for both customers and the business.

A digital service “factory” concept, customized to the specific needs of each organization so that the right component is leveraged end-to-end at the right time, might offer the way forward to smart services. It would allow organizations to address customer needs predictively, and enable the personalized, contextual services that drive recurring revenues (see Fig. 2).

Fig. 2: DIGITAL SERVICES FACTORY CONCEPT

Source: Connected Business Transformation: How to unlock value from the Industrial Internet of Things, Accenture 2017
IN ADDITION, ORGANIZATIONS CAN:

UNDERSTAND THE ART OF THE POSSIBLE
by scanning existing uses of smart technologies, including by other industries and start-ups.

SEARCH THEIR EXISTING PRODUCT BASE
for opportunities to add smart services and embed them into next generation roadmaps.

PINPOINT UNMET CUSTOMER NEEDS
an input to generate smart services ideas.

EXPERIMENT REPEATEDLY
with the most promising ideas and use the learnings to continuously refine a bottom-up strategy while ensuring it aligns top-down with the broader Industry X.0 organizational vision.

CONSIDER UTILIZING AN INCUBATOR,
staffed with cross-functional expertise and free from the legacy business model, for experimentation and pilots.
IDENTIFY OPERATING MODEL GAPS that would hinder executing the strategy, with a focus on partnering, solutions management, analytics and product development.

SEARCH FOR CLUSTERS OF ECOSYSTEM PARTNERS who could help you get to market fast with best-of-breed ideas.

UNDERSTAND THE CYBER SECURITY IMPLICATIONS of creating an ecosystem. This is the top concern for industrial organizations regarding ecosystems.

SCALE THE PILOTS THAT ARE MOST SUCCESSFUL and build the operating model foundations for growth.

CONTINUE EXPERIMENTING WITH NEW IDEAS and refining strategy based on incorporating pilot learnings, leveraging ongoing technology trends and capitalizing on newly created business infrastructures.
Leading innovators in Automotive and Industrial Equipment see Smart Services as a digital means, not an end.

Rather than chasing trends, they are leveraging digital technologies to transform their business models. Relentlessly focused on getting strategy and execution right, they are on their way to a new, end state that will ultimately result in realizing the full value of Industry X.0.

Now is the time to join them.
1. Smart services go beyond the operational efficiencies of Industry 4.0 to create the new customer and service experiences and respective business models that generate new revenue streams.

2. Value is being created in new places and organizations must pivot to the new or risk being displaced by new entrants. Accenture research shows that leaders are more focused on the necessary digital transformation and are already delivering significantly higher growth and margin.

3. Organizations must build the ecosystem partnering, analytics, software and product development capabilities to enable the future operating model.
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