



eBook

2018 **After-sales Service Predictions**

Strategies for Empowering Manufacturers to Deliver Game-Changing Value

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2018 After-sales Service Predictions

Strategies for Empowering Manufacturers to Deliver Game-Changing Value

Introduction

As 2017 comes to a close, manufacturers are optimistic about the future. New orders, output, exports and employment are expanding, with demand for new products at the highest levels in six years. Moving into the new year and beyond brings challenges, opportunities and a time to reflect and plan for the goals of the future.

OEMs may find untapped goldmines in aftermarket services by strengthening their core business in parts, repair and maintenance.

Developments in everything from technology, education, healthcare, energy, politics and the economy are transforming many industries, including manufacturing. To succeed, manufacturers must completely transform their organizations, specifically after-sales service. According to McKinsey & Company, “OEMs may find untapped goldmines in aftermarket services by strengthening their core business in parts, repair and maintenance.”

The service organization provides a steadier stream of revenue and higher margins than the sales of new equipment. With average earnings before-interest-and-taxes (EBIT) margins for after-sales services at 25 percent – compared to 10 percent for new equipment – manufacturers are capitalizing on this significant opportunity to optimize service.

In 2018 After-sales Service Predictions: *Strategies for Empowering Manufacturing Organizations to Deliver Game-Changing Value*, Synchron collected insight from multiple industry thought leaders to glean how manufacturers can capitalize on this significant business opportunity to improve customer loyalty and financial performance. Read on to learn more about major trends manufacturers will see in 2018 and beyond, and how to implement new business processes and technologies to win.



A Changing World is Redefining After-sales Service
Anders Grudén, CEO, Synchron

The world is changing, and it's changing fast. Everything from technology, education, health, energy and the economy – there is hardly anything in business (or life) that is not evolving. And, it's all happening very fast, perhaps even faster than our ability to learn and adapt.

A big part of this change includes evolving customer expectations. Today's customers expect quick, reliable service on demand. For manufacturers, this especially impacts after-sales service. The status quo is no longer sufficient, and companies must invest in human capital, new technologies and business practices to succeed.

So, how can manufacturers adapt to these major social, demographic and economic trends, while still increasing customer satisfaction and improving financial performance? Redefine service.

After-sales service is becoming an increasingly important and strategic focus area for manufacturers around the world. There is more interest in the space than ever, as senior executives understand the value that exceptional service experiences can bring to a company's financial performance.



Recent studies from multiple third-party research organizations support this clear opportunity, suggesting that after-sales service is critical to the success of manufacturers' long-term financial performance. A report from Bain & Company suggested service averages a gross margin of 39 percent, which is much higher than margins on most new products (27 percent). The study also revealed manufacturing companies' service business grew by nine percent annually, compared to a five percent growth rate captured on the product side of the business.

The status quo is no longer sufficient, and companies must invest in human capital, new technologies and business practices to succeed.

Moving into 2018 and beyond, manufacturers have two key focus areas to fully optimize their after-sales service organizations to succeed in today's changing world:

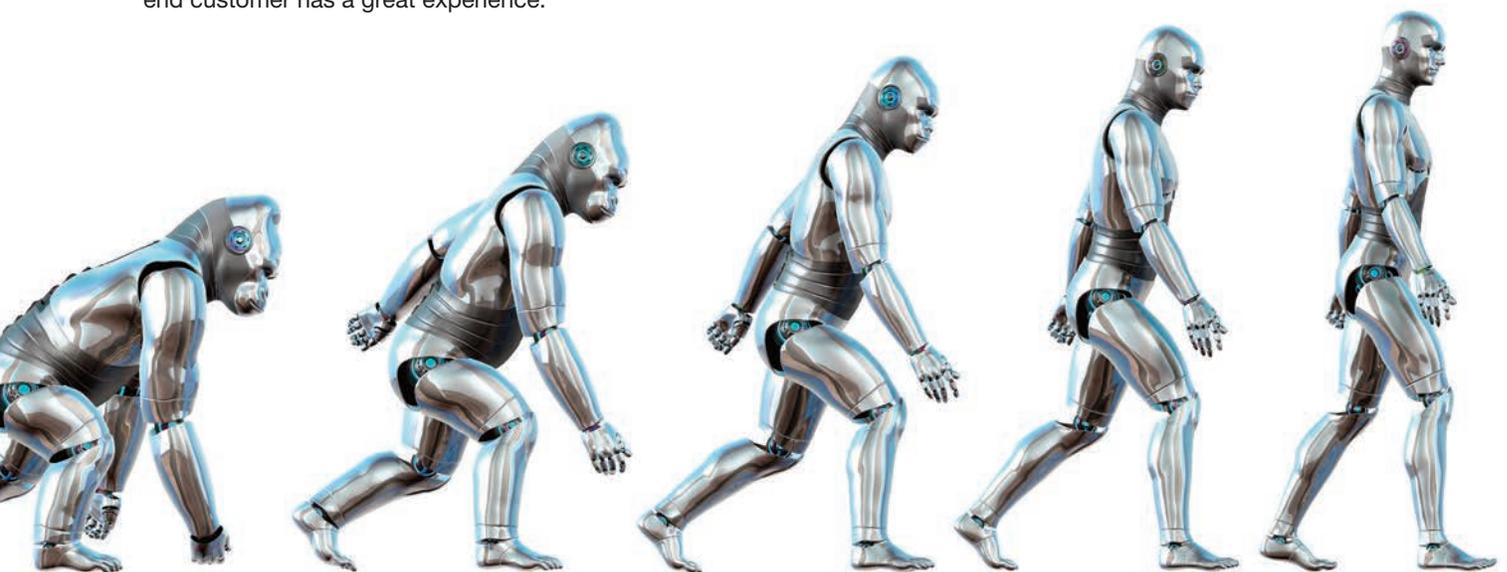
Move beyond the status quo.

Currently, manufacturers base after-sales service predominantly on a break-fix model, which centers on reactively replacing parts after they have failed and leads manufacturers and dealers to

keep a large variety of service parts in inventory in an effort to avoid long customer wait-times. This "just-in-case" way of doing business most often leads to excess stock – creating overhead that negatively impacts the bottom line. To succeed, manufacturers must invest in both human capital and technology to fully optimize the service supply chain. While Microsoft Excel spreadsheets and legacy ERP systems may have been helpful for managing service parts inventory and pricing in the past, using these outdated, cumbersome tools is no longer an effective way to do business.

Cloud-based service parts management solutions help manufacturers increase both margins and revenue from after-sales service and easily integrate into existing ERP systems, allowing manufacturers to track service parts, eliminate excess and obsolete stock and forecast when new parts are needed. These practices are critical for meeting customer delivery expectations and maintaining an edge over both direct competitors and third-party e-commerce sites. Beyond keeping products in the right place at the right time, service parts inventory management technology also reduces carrying costs, which are estimated at a mind-boggling 25 percent of the value of inventory that's on the shelf.

It may seem obvious that selling a service part for the optimal price is critical to increasing revenue and boosting profit margins, but too many manufacturers are still using outdated methods like cost-plus or simple spreadsheets. Making the switch to modern service parts pricing technologies can increase service revenues by as much as 5 percent, and gross profit margins by upwards of 7 percent. These advanced technologies incorporate data from customers, competitors, IoT platforms and other legacy systems to create the optimal price – ensuring the manufacturer is maximizing margins while simultaneously ensuring the end customer has a great experience.



The biggest concern here is adoption: many believe the technological advances are outpacing the ability to implement it – especially when talking about giant corporations where implementing a major shift like this is a heavy lift.

Shift from the transactional, break-fix model to subscription-based product uptime.

Customer expectations are changing, the manufacturing sector is consolidating and new sales of durable goods are fluctuating. Additionally, disruption from companies like Amazon, millennials in the workforce and new emerging technologies are creating a significant business opportunity for manufacturers, and it's time for them to capitalize.

More customers than ever are requiring SLAs, which often guarantee product uptime – or proactively repairing equipment before it fails. It's becoming more important than ever to ensure downtime is minimized (or preferably eliminated) to improve the customer experience and maximize revenue. This requires manufacturers to move from a break-fix, reactive model of service to subscription-based uptime guarantee.

In this uptime world, there is much more emphasis on predictive maintenance, smart parts, remote performance and more. Service organizations should be aware of common failure points and identify strategies on how to best guarantee maximized product uptime and customer satisfaction if they want to hit the ground running in 2018.

Manufacturers need to equip staff, as well as invest in modern technologies, to exceed changing customer expectations. And, seamless integrations between IoT platforms, field service management systems and legacy ERP solutions with advanced after-sales service solutions are key to success.

Maximizing product uptime isn't necessarily a new thought, but it does require a new way of thinking. Manufacturers that properly leverage IoT and advanced after-sales service technologies will be well equipped to succeed in this new way of doing business, edging out the competition and improving both financial performance and the overall customer experience.





4 Major Trends that Could Fundamentally Change Entire Industries

Gene Metheny, Partner, Carlisle & Company

There are multiple trends occurring at one time that could fundamentally change the motor vehicle industry as we know it today. Everything from driverless vehicles, 3D printing, telematics, Big Data, predictive analytics, service lane technology and ecommerce disruptions are forcing manufacturers to ask themselves, *“What will happen in the future, and how should we prepare?”*

In my role, I work with the world’s leading automotive and heavy equipment manufacturers to ensure they properly prepare for the future, focusing specifically on the after-sales service business. Several key trends stand out based on recent conversations with these OEMs and independent research studies. Below, I outline four of these trends and how manufacturers can capitalize on them to succeed in this ever-evolving world:

Autonomous Vehicles and the Share Economy

For years, automotive manufacturers have been adding more automation to vehicles, particularly around collision avoidance. These passive technologies, like blind-spot monitoring and backup cameras, are designed to alert drivers of potential hazards, but not take over control of the vehicle. Now, active technologies, which do take control of the vehicle, are becoming more mainstream. By 2030, Carlisle estimates that most of the cars sold will be fully autonomous. So, what does this mean for after-sales service specifically?

Everything from driverless vehicles, 3D printing, telematics, Big Data, predictive analytics, service lane technology and ecommerce disruptions are forcing manufacturers to ask themselves, “What will happen in the future, and how should we prepare?”

Currently, around 30 percent of OEM income comes from replacement parts for crashed vehicles. But increased automation will result in fewer accidents, so manufacturers need to anticipate a drop in demand for crash replacement parts. Higher repair costs associated with sensors and automation will partially offset this reduction, however. Carlisle predicts that by 2022, there will be a 15 percent reduction in crash repair orders, which will result in a four percent reduction in overall part sales. This will lead to declines in warehouse space, warehouse labor and network transportation costs. In 2018 and beyond, this trend will continue to accelerate as vehicles become fully autonomous and vehicle to vehicle communication becomes more prevalent.

In addition, the growth in autonomous vehicles is likely to lead to further vehicle sharing. Companies such as Lyft and Uber can operate much more profitably with driverless vehicles. As transportation options become cheaper and more convenient, people are likely to own less vehicles. Fleets will gain a much larger share of the business conducting much of their own maintenance and having more negotiation power over manufacturers.

To combat these trends, vehicle manufacturers need to right-size their networks for the loss in collision volume and develop a strategy for the change in mobility that enables brand differentiation in terms of both vehicle and service. This may require substantial changes to the vehicle distribution and service network.

Telematics

Telematics, or vehicle sensors that send out real-time data regarding vehicle position, performance and service requirements, has been expanding for many years. Most vehicle manufacturers now include sophisticated telematics systems as standard

equipment in new vehicles. By monitoring usage and performance data, manufacturers can obtain a host of benefits including improved vehicle quality, faster service response and a more accurate assessment of service market share.

The value of this information increases dramatically as the number of linked vehicles increases. In the past, a combination of owner privacy concerns and the cost of data transmission hindered progress. Manufacturers have previously tried to sell these solutions to owners to cover the cost of transmission and gain their consent, but the acceptance has been spotty because the end owner only obtains a portion of the total benefits.

Access to this data is essential to address many trends, and manufacturers must find a way to overcome these obstacles. This could mean that they have to assume a larger portion of the data transmission cost, or find ways to address consumer privacy issues while still being able to leverage the benefits of the data.

Big Data and Predictive Analytics

The time has come for predictive analytics to finally become mainstream in after-sales service. Predictive analytics – the ability to use data to forecast and predict future activities – enables real-time decision-making and execution. The proactive nature of this strategy makes it a major opportunity for OEMs to streamline operations and improve service.

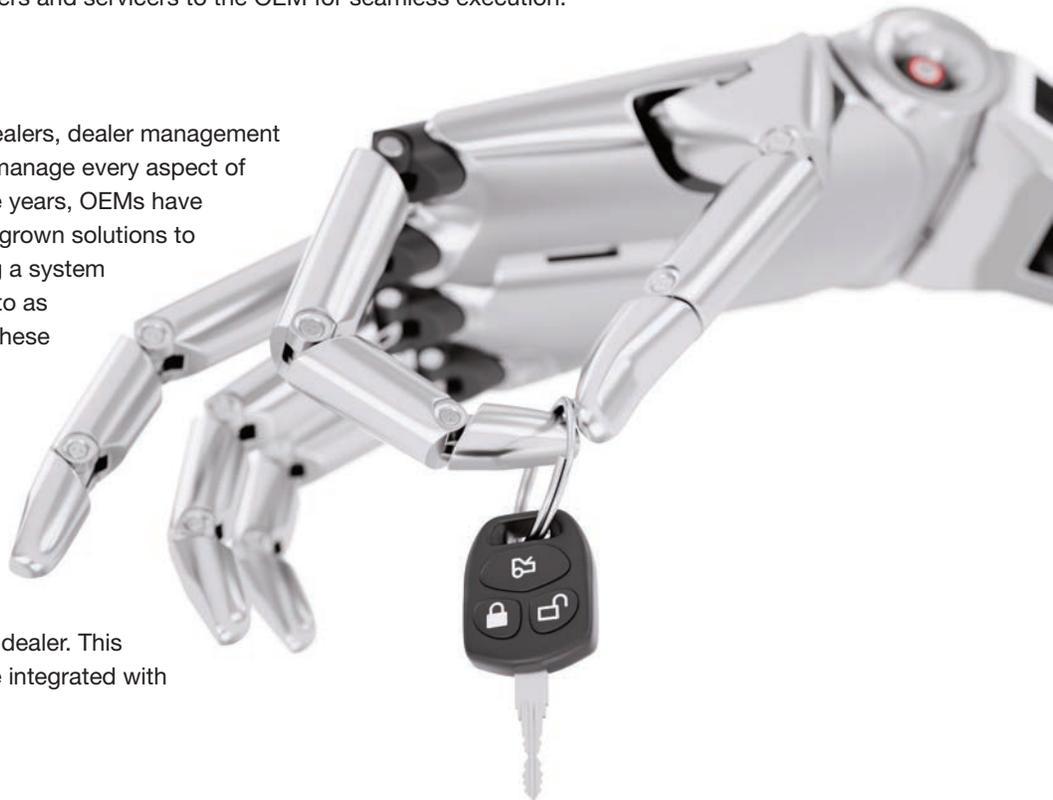
Several major factors have combined to make this an ideal time to leverage these capabilities. OEMs have acquired more access to dealers' retail point-of-sale data, giving them the ability to monitor activity across the supply chain in near real time. In addition, manufacturers have installed telematics equipment on vehicles and are collecting a stream of data about vehicle and component performance. Combining these new data streams with previously available vehicle and part data gives manufacturers the ability to predict part failures and usage much more accurately. Inexpensive data storage, sophisticated new data analytics techniques and creative applications all support these new capabilities.

The industry is still in the very early stages of managing and leveraging data effectively. To succeed, manufacturers will need to hire more data scientists that specialize in advanced analytical techniques and combine their knowledge with business experts who understand practical applications for the information. Additionally, predictive signals must be incorporated into the core planning and execution systems to provide near real-time service. New systems also need to be developed throughout the extended supply chain, connecting dealers and servicers to the OEM for seamless execution.

Service Lane Technology

For automotive and heavy equipment dealers, dealer management systems (DMS) have been designed to manage every aspect of the dealer's business. However, over the years, OEMs have continually been adding their own homegrown solutions to the technology stack, ultimately creating a system where dealers are sometimes logging into as many as six disparate systems. Few of these systems are integrated, and OEMs have poor visibility into the service process itself. This negatively impacts both the customer experience and financial performance.

In comes service lane technology, which is designed to take over the role of managing the service process for the dealer. This cloud technology has the potential to be integrated with



the various OEM systems, the dealer management systems and the car itself via telematics, all to enable more real-time connectivity and streamline and personalize the service experience.

For example, if a customer is driving and receives an alert (either on their mobile device or on the car's own smart screen) that their automobile needs repair, they are prompted to schedule an appointment and can do so directly from either the car or their mobile device. The appointment is pre-planned based on available technicians and parts to complete the job. When the customer comes in for maintenance, they are greeted personally with a foreknowledge of their issue, their service history and their service preferences. The technology then guides the service technician through the diagnostic and repair process, integrating the various manufacturer diagnostic, catalog and warranty systems.

Ideally, all of this is done before the part fails. With predictive analytics in place, OEMs will be able to pre-emptively determine when a part will fail, communicate that to the vehicle, and subsequently schedule a service with the customer, thus eliminating the chance for defection out of the dealer channel.

Currently, the dealer service retention rate (percentage of total non-warranty business) averages around 23 percent for non-luxury vehicles, and 33 percent for luxury. These numbers could drastically improve with the adoption of telematics, Big Data and analytics and service lane technology – ultimately providing exceptional customer service and maximizing the manufacturer's financial performance.

To obtain these benefits, manufacturers need to fully understand dealer service processes and invest in integrated solutions that support and improve service capability. These systems need to be able to react in real time based on service events, customer information, warranty systems and supply chain planning and execution systems.



A Breakout Year for Product Uptime Where Service is the New Product

Gary Brooks, CMO, Syncron

We're experiencing demographic, economic, political, and social changes that will serve as catalysts for massive transformation across diverse industries in the coming year, and this transformation is all thanks to the technological revolution that's fundamentally altering the way we live, work, and communicate.

The scope and scale of this transformation will be like nothing we've ever experienced in the past, and will leave few industries and business functions untouched. But one critical business function that is ripe for transformation is after-sales service – the services original equipment manufacturers (OEMs) deliver after the initial sales of their products.

Service is the New Product

Over the past several years, volatility in equipment orders, diminishing margins and decreasing new equipment sales have caused many OEMs to pause and evaluate their futures. Unfortunately, many are faced with uncertainty, forcing them to explore new business models and sources of revenue and profits. Innovative OEM executives are shifting their focus from the product side of their business to the after-sales service side, where margins are much higher.

In fact, McKinsey & Company recently revealed that upwards of 15 percent of OEMs' total revenues come from parts and service, while a Bain and Co. report suggested that service has an average gross margin of 39 percent, which is significantly higher than margins on most manufactured products. So, as these product-based revenues decline and margins diminish in maturing industries like high tech, aerospace, motor vehicles and consumer and industrial products, after-sales service margins remain healthy. Simply put, service revenue is more predictable, making it the attractive choice during these rapidly changing times.

OEMs that build a culture around maximizing product uptime and delivering exceptional after-sales service experiences will be the early adopters of technology, and the first to start reaping the rewards.

With this shift in focus to after-sales service, 2018 is well positioned to be the breakout year for the transition from a break-fix service model to a model focused on maximizing product uptime. Fueled by factors like the aforementioned declining product margins, changing customer demands and declining tech costs, these accelerations are already gaining momentum on the service side of the house when it comes to finding new sources of revenue and profit.

In today's changing world, though, product advancements alone will not enable manufacturers to gain or sustain the competitive differentiation needed to ensure long term financial performance. Shifting from a product-led growth strategy – which has sustained OEMs for many decades – to a service-led growth strategy will require OEMs to embrace change, think differently, act differently and embrace technology to completely transform their after-sales service functions.

And, transforming service into the new product can't be achieved by simply doing the same things better. OEMs need to start viewing their service organizations through completely different lenses to remove the historical constraints limiting innovation and the speed of adoption. OEMs that build a culture around maximizing product uptime and delivering exceptional after-sales service experiences will be the early adopters of technology, and the first to start reaping the rewards.

Emerging Technology and the Race to Uptime

Emerging technology is the biggest driver of what many are calling the Fourth Industrial Revolution, and the race to maximized product uptime will be reinforced by the OEMs that adopt these new technologies. Advancements and solutions, like Synchron Uptime™, that tap into early detection equipment faults are the key to enabling OEMs to move parts and people where they're needed to proactively perform repairs and avoid costly downtime. The key here is simple: The earlier an OEM can identify equipment problems, the better equipped they will be to drive the value they can deliver to their end customers.

Because of this, equipment uptime will become the new KPI consumers use to evaluate OEMs and the equipment they sell. Take the farming industry, for example: Today's farmers are dealing with difficult commodity markets and razor-thin margins, and they simply can't afford equipment downtime. As agricultural equipment technology advances, farmers will become more dependent on their combines to maximize crop yield. During an interview with Kansas City Public Radio, central Illinois farmer Len Corzine said *"The most expensive time we have is if the combine has to stop or the corn planter has to stop. You know you've got to get it planted in a timely manner when your conditions are right and you know you've got to get it harvested."*

Now, think about driverless cars: When actually deployed at scale, self-driving vehicles will be transformative for a variety of industries. Juniper Research predicted that by 2025, there will be 20 million driverless cars on roads around the world, with them becoming popular in North America and Western Europe by 2021. For field service, specifically, this means that parts management software could be integrated into these driverless service vehicles, creating efficiencies in areas like fill rates, routing, technician prep, driver fatigue and even the number and maintenance of the vehicles in question.



Companies like Google, Volvo, Apple and Tesla are the kind of innovators leading the development of these driverless vehicles, but now it's up to mainstream OEMs to keep up with these industry tycoons and successfully adopt these interconnected technologies into their after-sales service strategies. And while the hype associated with this emerging technology and AI advancements has increased exponentially over the past few decades, the technology is beginning to deliver real world value.

These technologies, like AI and IoT, will enable technicians to compare historical and current equipment states, proactively uncovering abnormalities which could lead to future equipment needs. By identifying these potential failures, service calls can be preemptively scheduled, and parts and materials can be moved to the right location to perform preventative repairs, avoid costly downtime, and maximize product uptime. This powerful combination of technologies will enable OEMs to transform their service parts supply chain from a costly and inefficient "just in case" model, to a highly efficient "just in time" model, where inventory levels are optimized and service parts fill rates are near 100 percent.

OEMs' after-sales service operations are ripe for massive transformation that will deliver significant value in terms of improved financial performance, operational efficiency and the lifetime value of customers, but this transformation can only be accomplished through investments in emerging technology that is specifically designed to optimize the after-sales service chain.



Empowering the Manufacturing Workforce through Digital Transformation
Sumair Dutta, Chief Customer Officer, The Service Council

In 2017, the top three objectives in after-sales service were to enhance the customer experience, improve operational performance with the aid of data and use automation as a way to streamline and empower the workforce. And now, as we head into 2018, the goals are still focused around a drive for improved customer experience and operational advancements, but the growth is shifting from an exploratory perspective to a more strategic approach.

How can we better measure, understand and improve the customer experience? Should we move from a break-fix model to an uptime-driven, predictive strategy? What are the revenue implications of these predictive models? This year, after-sales service leaders will be hyper-focused on answering these questions and hammering out their business models around product uptime.

Some of the biggest opportunities on the horizon for today's manufacturers lie in the revenue share increase from after-sales service and an increasing level of competition in the marketplace. And as these increases happen, we can anticipate changes around organizations' analytics and data-driven decisions, digital transformations and strategies and workforce development.

Analytics and Data

Organizations are already gathering data, and they are even drawing insights from that data today. What needs to happen next is an evolution around data and uptime with the questions:

1. *Do we have the right data?*
2. *Are we confident in that data?*
3. *Can we actually deliver a better uptime experience based on our data?*

2018 will have to bring with it more testing, learning and operational focus and investment from an artificial intelligence (AI) and technology perspective.

In order to make sense of all of this input and turn it into data-driven decision making, 2018 will have to bring with it more testing, learning and operational focus and investment from an artificial intelligence (AI) and technology perspective. The development of products built on an uptime model, and the success of ones that actually deliver product uptime, will have to be measured through customer experience and the commercial strategy for how this model should actually be sold.

This shift from a break-fix business model to an uptime-driven, predictive strategy will lean heavily on data, and the digital vessels by which it is attained. And, as manufacturers start to learn what this means for their specific organizations, they're going to find themselves on the path toward digital transformation.

Digital Transformations

The Service Council conducted a study in 2017 and found that 68 percent of after-sales service leaders said their current IT spend is higher than it was five years ago, and 47 percent expect that spend to increase in 2018. But, past purchases have been made in silos, and the discussion needs to shift to how the overall digital strategy looks for the organization as a whole.

As trends like predictive analytics, block-chain, IoT and other emerging technologies carry over and evolve into 2018, we're going to see better efficiencies, better customer satisfaction and better business performance. But, while those improvements are attainable in theory, it's going to take a good amount of effort in implementation to go from vision to results. With a greater level of maturity in approaching these technologies and analyzing their potential areas of weakness, these tools will have a better shot at success.

How can manufacturers solve some of their biggest problems and start seeing results where they need them most? It starts by attaching resources to these issues and moving away from "promised technologies," to actual implemented and embedded strategies. The technology is there, and there's more to be done from a testing and regulatory perspective, but implementation is the first step in organization-wide digital transformation.

Workforce Development

With the shift to a data-driven business model undergoing a digital transformation, the key to success in 2018 is to remember the human aspect of applying these technologies and cognitive AI. The Service Council found that 20 percent of workforces are actually ready for AI today, but by applying human influence in the adoption process, we can expect that percentage to jump to 60 percent in the next five years.

20 percent of workforces are actually ready for AI today, but by applying human influence in the adoption process, we can expect that percentage to jump to 60 percent in the next five years.

Simply put, the workforce and talent side of business is an attainable way for organizations to improve the strategic goals for 2018. From an improved customer experience to driving operational advancements, someone must deliver these goals from a human standpoint.

Here are five ways manufacturers can develop their workforce and maintain organizational health:

1. Acknowledge your aging workforce and put a strategy in place to keep knowledge from retiring out of your organization.
2. Embrace the millennial generation for technology and software adoption.
3. Form a cross-generational workforce and learn to develop multi-perspective processes.
4. Leverage outsourcing as a part of service and find the right balance to in-house service.
5. Prioritize training and employee engagement.



By 2030, millennials will make up 75 percent of the U.S. workforce, with 60 percent of the population moving to major cities. And, thanks to medical advancements, 2050 will be the year we see the number of people over the age of 65 double. This perfect storm of trends gives organizations the opportunity to succeed, if and only if they embrace data and innovation, digitally transform and develop their workforce appropriately.



Opportunities and Risks Shaping the Future of Manufacturing Johan Stakeberg, Head of Global Sales, Syncron

An improved global economy is leading to a long-awaited rebound in manufacturing. Orders for new durable goods have increased steadily, bringing jobs and an uptick in the economy to regions around the world.

With this boost comes both opportunities and risks for the manufacturing sector's success. Emerging markets outside of the U.S. and Europe, as well as technologies like IoT, will play a critical role in shaping the future of this space.

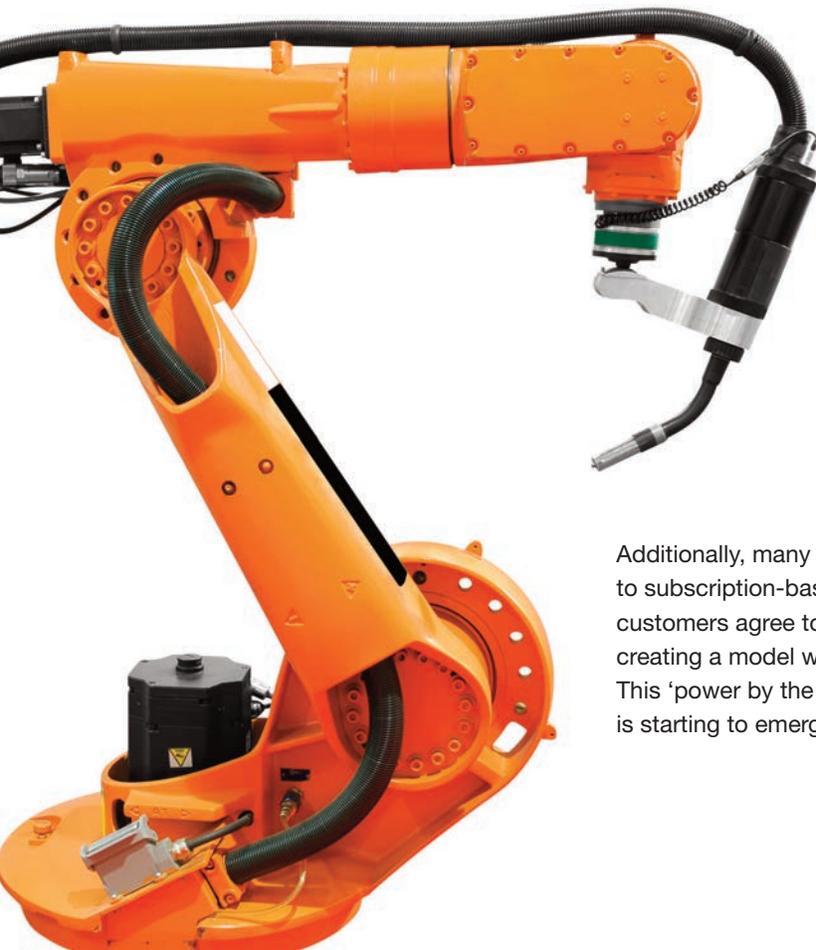
...manufacturers must identify these opportunities and risks, and set plans in place to navigate this ever-evolving world. Those who succeed will not only boost financial performance, but also enhance the customer experience.

To prepare for 2018 and beyond, manufacturers must identify these opportunities and risks, and set plans in place to navigate this ever-evolving world. Those who succeed will not only boost financial performance, but also enhance the customer experience.

What are some of the biggest opportunities for manufacturers to succeed?

As manufacturers across industries and verticals sought new and alternative ways to boost revenue and margins, many companies moved production to areas like China and India to decrease costs. While manufacturing slowed down in China after decades of intense growth due to rising labor costs, negative environmental impacts and intellectual property theft, the country's Made in China initiative aims to modernize factories with advanced manufacturing technologies like robotics, 3D printing and the Industrial Internet. As this initiative pans out, manufacturers will have to weigh if China is still the most cost-effective option, or if it's more economical to bring manufacturing back to the U.S. or Europe.

Additionally, many of the world's businesses – regardless of industry – are moving to subscription-based models. In the manufacturing space in particular, this means customers agree to in-use hours set forth in a Service Level Agreement, essentially creating a model where customers are buying a service instead of a product itself. This 'power by the hour' model is already prevalent in the aerospace industry, and is starting to emerge in similar industries like high-tech and heavy equipment.



What disruptors do manufacturers face in today's changing world?

Manufacturers face more disruptors than ever. One of the most prominent risks comes from third-party parts providers entering the service parts space, especially companies based in far-east and African countries and major ecommerce players like Amazon and Alibaba. Manufacturers must adopt new business practices and invest in sophisticated cloud-based technologies that enable them to remain competitive – and win – against these large, well-known brands. Customers will pay for convenience, and brand loyalty is less of a factor than ever, so the manufacturers that succeed will make the necessary enhancements to compete.

AI and machine learning are powering a shift to predictive maintenance, replacing parts before they have even failed.

While each industry faces its own unique challenges, several emerging technologies are starting to play a major part in most – if not all – manufacturing sectors. AI and machine learning are powering a shift to predictive maintenance, replacing parts before they have even failed. Companies like Uber, Amazon and Zappos have made the on-demand economy the norm, and these high levels of customer expectations have carried over into other industries. Leading manufacturers must adopt emerging technologies to compete, especially on the service side of the business, equipping products with sensed parts that are constantly feeding data back to the manufacturer in real-time. The companies that aggregate this data and act on it to deliver an improved customer experience will win.

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What does the future look like in manufacturing?

The future of manufacturing lies in after-sales service. More service-related conversations are occurring at the C-level, and the head of service now has a seat at the table. Upwards of 27 percent of manufacturers' total revenue comes from service (The Service Council) and provides a gross margin of 39 percent (Bain and Co.), and executives are taking note.

To increase the efficiency of after-sales service and maximize financial performance, manufacturers will have to shift from a break-fix, reactive model of service to one that maximizes product uptime. Early adopters of this mindset will lead the way, properly leveraging IoT to meet demanding customer expectations. The future of service moves from a 'just-in-case' model to 'just-in-time,' and those that move in this direction will win.



Reinventing Service Just in Time for the Fourth Industrial Revolution

Friedrich Baumann, Executive Advisor to Global Companies

"If I had asked people what they wanted, they would have said faster horses." Even at the turn of the century, industrialist Henry Ford knew that in order to succeed, he'd have to reinvent the way we thought about transportation. And now, as we head into the fourth industrial revolution, modern manufacturers need to reinvent themselves, too, by letting go of the idea of being engineering-driven organizations, and shifting toward a solution-based business model.

But what does it mean for manufacturers to truly reinvent themselves? There is a myriad of trends in the marketplace, such as emerging technology and stricter emission requirements in automotive and commercial markets. And, in order to succeed in 2018, the manufacturers of these markets need to rattle their current business models and flip the switch on who's driving innovation.

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In many cases today, the customer comes to the manufacturer and says, *"This is what I want,"* and the manufacturers subsequently build and deliver. It's a business model where the customer demands and the manufacturer delivers, but in a disjointed and reactive process. Manufacturers should instead anticipate the needs of the customer proactively, so that rather than the customer coming up with the specs, the expertise of the manufacturer rises to, *"This is what you need."*

Raising the Manufacturer's Level of Expertise

If you look at the data we have at our disposal today, finding the right solutions for customers is possible through advanced analytics. By leveraging data analytics in a solution-driven environment, manufacturers will have the true ability to maximize uptime, minimize downtime and ultimately, provide better, faster, more efficient service. So, in order for this mindset change to happen in 2018, after-sales service needs to evolve in three different areas:

Logistics: Organizations like Daimler Trucks North America have already significantly improved service parts inventory management, ensuring customers have the right parts available at the right quantity, but all manufacturers need to move to a more predictive demand algorithm.

Digitization: A change from brick-and-mortar sales into a more digital, web-based sales model means that manufacturers should expect a shift to an online presence in part sales. While the industry remains somewhat conservative, this digital change is already happening on the consumer side.

Service: Technology on the service side needs to increase visibility and transparency of the repair process, give better overall measurement of throughput, find the most efficient paths for service diagnostics and repairs, and, ultimately, automate the entire process of data exchange. For example, when a truck comes into a repair facility, there should already be an existing repair/service order started and a diagnostic code in the OEM system, giving the technician a chance to make the right repairs, faster.

But, despite all of these changes, new spend in the systems technology department doesn't have to be extreme. Relatively speaking, tackling these concepts without implementing the most competitive technology is going to be what costs manufacturers more at the end of the day. For instance, fuel efficiency requirements have the potential to be more expensive than a new technology implementation, which would ultimately cut costs on the service side of the house. But, while initial IT

investments may increase as manufacturers adopt some of these new technologies, organizations who shift this budget mindset from an IT spend perspective to a service savings opportunity will be better off financially in the long run.

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The biggest unknown on the horizon, though, is the impact that Amazon and ecommerce sales will have on manufacturers in the coming year. For most manufacturers, the risk hasn't quite been grasped. But, for those who work towards gaining customer loyalty and tying customers as closely as possible to the overall operations process, keeping customers from turning to third party ecommerce buying at all will help them to manage that risk altogether. Manufacturers need as much human customer interaction as possible to keep the personal relationship alive, and those who counter the perceived cost savings impacts of ecommerce successfully are the ones who will remain competitive in 2018.

The Future of After-Sales Service

With current trends like predictive analytics, IoT and other emerging tech, manufacturers should expect to see the first phase of these advancements make way in the start of the new year. And, while there will be lots of room to grow, the growth and maintenance prior to break down will significantly improve thanks to the increased number of sensors on powertrain systems becoming more predictive and visible. At the rate these technologies are improving on the maintenance side, the analytics and evolution of vehicle performance are sure to set the foundation for AI predictability in the future.

All of these improvements focus on service and, ultimately, the customer experience. Electric vehicles are moving into the pick-up and delivery truck market segments to keep diesel engines out of neighborhoods. Technology is focusing on diagnostic improvements in repair facilities to speed and improve service operations. But, the biggest area of opportunity in service in the coming year comes on the people side. Manufacturers may be building the foundation for better service, but their service networks are struggling to find and hire the right technicians for the future. Most high school graduates today want to move onto college, but the OEM networks need more qualified technicians or mechanics in their service networks, hardworking people prepared to utilize digital technologies while getting their hands dirty.

...by rising above a pure product focus, and shifting toward solutions focused on customers' needs and product uptime, manufacturers will be able to reinvent service just in time for the next industrial revolution.



We started in 1784 with the emergence of steam, water and mechanical production, then headed into 1870 with the division of labor, electricity and the birth of the modern factory. 1969 brought about new electronics, IT and computing, but now we're in the age of a post-millennium jump, where we're blurring the physical and digital divide – essentially blurring the lines between actual and virtual reality. But, by rising above a pure product focus, and shifting toward solutions focused on customers' needs and product uptime, manufacturers will be able to reinvent service just in time for the next industrial revolution.



Product Uptime: The Key Opportunity on the Horizon for Manufacturers
Erik Lindholm, Head of Product Strategy, Synchron

2017 has brought immense change to the world of after-sales service. From advanced emerging technology, to a shift in focus to a more customer-driven model, the manufacturing industry is heading into a new era that centers on the most important metric in service: uptime.

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While this new era has already brought about a surge of innovation in existing technology like drones and 3D printing, many of these emerging advancements may seem more fitting for a Jetson cartoon. But, in the midst of inventions that probably won't truly take off for another few years, there are a few existing concepts in technology today that may not be so far-fetched for manufacturers to start applying in the coming year.

Internet of Things

One of today's most accessible technology advancements is the Internet of Things (IoT), the interconnection of computing devices embedded in everyday objects, enabling them to send and receive data. But, while most manufacturers are beginning to be aware of and store that kind of data, few know how to actually apply it. For service, product uptime is the largest opportunity on the horizon for manufacturers, and thanks to IoT, we have enough proof that they can use intelligent data and analytics to improve product uptime in their after-sales service strategies.

Simply put, where the rest of today's emerging technology, such as drones, driverless cars and even 3D printing are immature, IoT is ready to be applied to after-sales service now. But, while the maturity of IoT is its biggest advantage, the biggest risk to its adoption in 2018 is the maturity of its connectivity to existing equipment. As of today, there's no stand-out way to get data from these parts, and most customers are starting to store it in systems that they've developed on their own. There's no industry standard on how they should connect to the myriad of existing platforms.

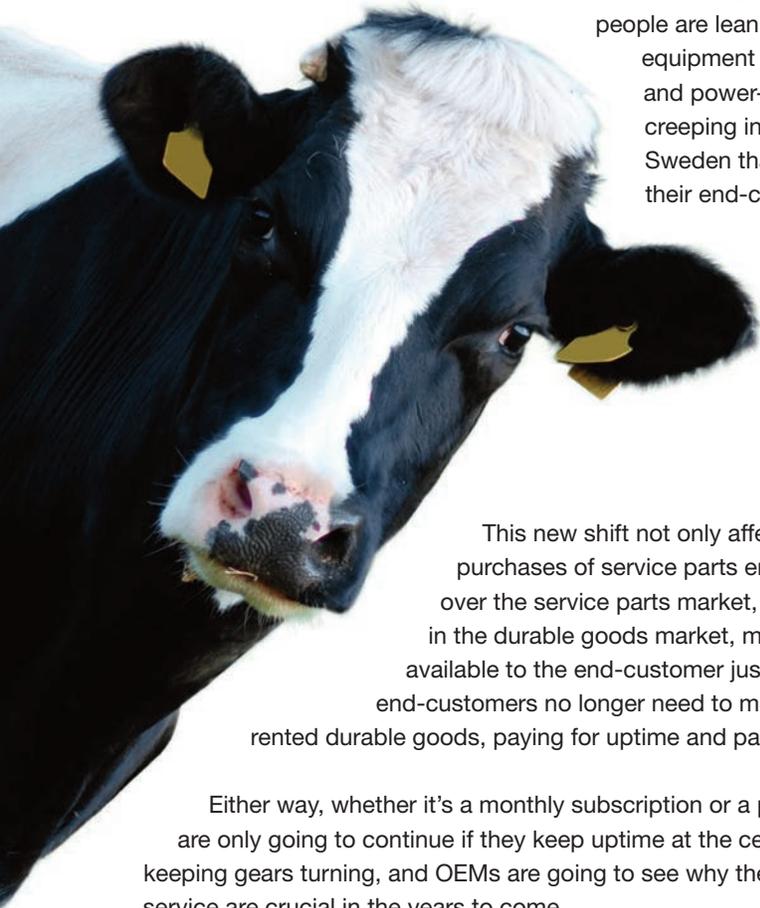
Risk may be a strong word here, though, as risk implies that something could go wrong. In the case of IoT, it's not that it won't work – it's a proven source of success in the world of after-sales service – it's just that it needs a little more time to be fully implemented in existing service models. If you look at manufacturers of long-



lasting durable goods, some equipment is more than 30 years old, and in order to be fully integrated with IoT, these product lifecycles need to be updated to support this new data-driven technology. Once that happens, IoT has the potential to be the main driver of product uptime success in 2018.

From Owning to Subscribing

When it comes to after-sales service as a whole, we're seeing another shift toward product uptime; but, in this case, the shift is on the consumer side. The industry is moving away from buying and owning, to a more subscription-based model, which comes on the heels of the ever-evolving share economy. This change, where people are leaning more on rentals and services for things like homes, cars, equipment and more, is traditionally used for services employed by car fleets and power-by-the-hour heavy machinery. Now, however, that concept is quickly creeping into every aspect of the market. There's even a business model in Sweden that has shifted from selling milking machines, to offering a service to their end-customers where they pay for the number of gallons being milked.



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This new shift not only affects the purchasing use of certain products and services, but the purchases of service parts entirely. While many think ecommerce options like Amazon are taking over the service parts market, that may not be the case with this new uptime model. For example, in the durable goods market, many parts are still captive to the OEM, and may not necessarily be available to the end-customer just yet. And, as the world evolves toward a subscription-based model, end-customers no longer need to maintain their own equipment, but rather rely on the performance of rented durable goods, paying for uptime and parts as part of the overall subscription fee.

Either way, whether it's a monthly subscription or a pay-as-you-go system, these performance-based business models are only going to continue if they keep uptime at the center of their strategies. Maintenance and service will be the key to keeping gears turning, and OEMs are going to see why the investment in things like IoT and predictive analytics in after-sales service are crucial in the years to come.

Predictive Analytics and Maintenance

With such a heavy focus on product uptime as the key to organizational performance, AI and predictive analytics are playing an increasingly larger role in after-sales service and the supply chain. Because the shift from ownership to subscription means that initial sales aren't going to cut it for revenue anymore, that means that proactive maintenance is the new financial lever for manufacturers. That kind of proactivity requires the integration of smart technology like IoT and AI to act as the maintenance applications of predictive analytics.

And even though many industries already have uptime service models guaranteed in their contracts and service level agreements, the after-sales service process still has room for growth when it comes to the physical integration of predictive analytics. As manufacturers start to truly factor data into their proactive maintenance schedules, they'll be able to move away from a rigid, time-based schedule to an intelligent, need-based schedule, structured around the information received from the equipment in need.

For an organization like Synchron that focuses solely on optimizing after-sales service for manufacturers, our hope for the future is that companies don't attempt to piece-meal these processes together on their own, but instead rely on tried and true solutions like Synchron's.

Manufacturers are waking up to emerging technology, data analysis and the importance of uptime and its impact on their organizations, but the key to after-sales success in 2018 lies in the partnership with mature and standardized IT solutions as revenue-building machines.



The Impact of Digitization and Globalization on Manufacturing Success

**Carsten Knudsen, Global Head of Supply Chain Business Improvement,
Siemens Gamesa Renewable Energy**

Digitization and globalization have created an always connected world. The speed at which data and information travel is faster than ever, and is only expected to increase. And, this on-demand economy has led to a very well-informed customer base with extremely high expectations.

Customers can now find competitive information and seek peer reviews faster than ever, and this is forcing brands to find new ways to differentiate themselves from the competition. And, brands that digitize end-to-end processes will win.

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For manufacturers specifically, emerging technologies like IoT, AI and predictive analytics are providing an opportunity to do just this. And, to meet increased customer expectations, many leading brands are realizing that an optimized after-sales service organization ultimately improves the customer experience and increases financial performance.

Changing Customer Expectations and Increased Transparency

In this constantly connected world, customers now have access to the same (if not more) information as manufacturers. In some instances, customers can find reviews and competitive information faster than a manufacturer even knows it exists.

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An outstanding product is no longer a significant competitive differentiator. Today's customers expect 'just-in-time' service, where repairs, maintenance and updates are performed before it ever becomes an issue for the customer. Digitization and globalization have created a homogenous world, and brand loyalty no longer carries much weight in the decision-making process. If one brand isn't performing up to a customer's standards, they will switch to a competitor. To win, manufacturers must outperform in lead-time, quality and price.

In today's ever-evolving world, transparency is more important than ever. The connected world we live in creates an opportunity for manufacturers to connect their internal technologies and processes, making operations more visible than ever. It's critical for teams to see immediate results of their work and see it benchmarked against competitors' performances.

Data and the Future

As digitization and globalization continue to impact businesses, it's more important than ever for manufacturers to have a full view of their operations. This will help them make decisions within a competitive timeframe, and ensure that any insights aren't being missed. A comprehensive Big Data infrastructure does just that, and can help businesses tackle everything from managing product returns to staying up-to-date with distribution issues.

By the end of 2020, Big Data is set to be worth more than \$203 billion (IDC), meaning data management will be a fixture in business for a long time. So, brands that have been slow to adopt more advanced data and analytics capabilities will need to change their approach if they want to compete with both major ecommerce players, as well as traditional competitors that have already become more data savvy.

In the supply chain world, especially in after-sales service, there must be a focus on implementing technologies and solutions that will provide a clear competitive advantage – enabling manufacturers to deliver proactive, and exceptional, service anywhere in the world.



About Synchron

Synchron empowers the world's leading manufacturers to maximize product uptime and deliver exceptional after-sales service experiences, while driving significant revenue and profit improvements. From industry leading investments in research and development, to providing the fastest time-to-value, Synchron's award-winning, cloud-based service parts inventory, price, order and uptime management solutions are designed to continually exceed customer expectations. Top brands from around the world trust Synchron to transform their after-sales service operations into competitive differentiators.

▶ **For more information, visit [Synchron.com](https://www.synchron.com)**



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