

Research Insights

Growing service business models

Industrial machinery superstars show the way

IBM Institute for Business Value



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Key takeaways

Criticality of services

Services deliver a continual revenue stream compared to the cyclical nature of equipment/assets and provide a growth engine for industrial machinery manufacturers. Service offerings also enable them to enhance customer experiences since services span the entire product lifecycle.

Framework to transform services strategy

We identified a small group of industrial machinery leaders—21% of survey respondents—that have a well-defined services strategy. They excel at both service customer satisfaction and cost of service delivery. Their enterprises lead in financial performance for revenue growth and profitability.

Six key actions for success

Leading organizations achieve services transformation by setting services strategy, governance, and cross-business alignment; driving customer engagement; collaborating across the ecosystem; leveraging technology and tools; acting on data and insights; and addressing talent.

Servitization in industrial machinery

For industrial machinery manufacturers, offering and delivering services are critical to address the disruptive market forces driving seismic industry shifts. With decreasing product profit margins, shrinking orders for new capital equipment, and limited brand loyalty based on products, original equipment manufacturers (OEM) are struggling with how to differentiate their product—whether through cost, features, or quality. The COVID-19 pandemic has exacerbated OEM difficulties with a massive decline in new product demand.

Customers are demanding more personalized service. They expect field service engineers to resolve immediate issues, as well as serve as trusted advisors that help them gain more value out of purchased assets. Yet many companies lack the capabilities to meet their customer service aspirations. Customers are not impressed with the experiences provided by manufacturing companies only 15% give the industry high marks in experience.¹

In an attempt to drive growth, industrial machinery companies have shifted from not only selling products but also offering a broad range of services. Service offerings can be based on equipment, performance, and/or usage:

- Product-based services: sustain asset reliability, for example, maintenance and repairs
- Value-added services: provide additional value, for example, service checks, knowledge, and advisory services
- Service levels: reduce risks, for example, 99% equipment uptime
- Process optimization services: provide processand asset-optimization services, for example, services to improve asset health or achieve desired outcomes
- Outcome-based services: deliver business outcomes, for example, production capacity.



14%

higher net promoter score for delivered service experience for "service superstars" versus their cohorts

△ 66% of "service superstars"

of "service superstars" are actively developing new services and business models to differentiate themselves

81%

of "service superstars" reported improved customer benefits and outcomes from their technology investments Services deliver a continual revenue stream compared to the cyclical nature of equipment and provide a growth engine for companies. Typically, an OEM's service operations grow between 5% and 10% annually compared to only 2% for original equipment.² And services tend to generate higher profit margins. The earnings before interest and taxes (EBIT) margin generated by servicebased models is three to seven times higher compared to new equipment sales.³

Services also enable the industrial machinery manufacturer to enhance the customer experience since service offerings can span the entire product lifecycle. Based on better customer intimacy and knowledge, OEMs can improve service levels and tailor targeted product and services offerings. In addition, manufacturers can generate better visibility into how customers use products and how the products are performing. These insights provide the basis for refining product designs and developing the next generation of products and services.

For the end customer, these service offerings address many of their most pressing challenges. With OEMs' services, customers do not have to depend on their own maintenance operations, which may be inefficient or ineffective. Services also allow customers to shift from CAPEX (owning equipment) to OPEX (using equipment), addressing the needs of their cash flow optimization. In addition, process- and outcome-based contracts shift the risk away from customers to suppliers. Only one in five manufacturing companies have strategic asset management operational for asset tracking and monitoring.⁴

To understand where industrial products companies are with their services strategies and delivery, the IBM Institute of Business Value (IBV) and Oxford Economics surveyed 500 executives in 23 countries who are involved in service development and/or delivery at their organization (see "Study approach and methodology").

Only 44% of organizations are providing seamless customer engagement.

State of services

Industrial machinery executives recognize the business need for services. Nearly three in five told us that traditional business models are not sustainable in the current market environment. 56% indicated that customer/consumer behavior is shifting from product based to experience based. And ongoing commoditization of OEM products is reflected by over half of respondents, who agreed that differentiation is dramatically decreasing in terms of products, prices, quality, and delivery terms.

The importance of services is reflected in the companies' business objectives. While nearly two-thirds of executives surveyed indicated they are focused on reducing operational costs today, launching new services was second in importance at 48%, followed by improving cybersecurity and introducing greater levels of robotics and automation. This services priority is reflected in the growth of services revenues and margins (see Figure 1). The expectations are that both will continue to grow in the future. This growth is supported by the expected increase in service offerings leveraging data (see Figure 2). In fact, the offerings with the highest growth rates are process-and outcome-based services: pay-by-performance arrangements and process optimization services.

However, most companies are facing execution issues with their service delivery. Only 44% of our respondents said that their organizations are providing seamless customer engagement associated with their services.

This could be attributable to inconsistency in service channels. Providing service to customers across a variety of channels and providing the necessary support are critical for customer acquisition and retention.

Figure 1

Growth of industrial machinery services

Service revenues and margins will continue to grow in the future.

Services as a percent of revenues

Two years ago

24.1%

Today

27.1%

In two years

30.8%

Average service margin

Two years ago

7.2%

Today

7.6%

In two years

10.3%

Figure 2 Growth of service offerings

The majority of service offerings especially those leveraging data are expected to grow.

Offering	Today	In two years	Growth rate (CAGR)
Knowledge-based services	44%	54%	11%
Online monitoring	42%	46%	5%
Provision of training	36%	42%	8%
Pay-by-performance arrangements	34%	46%	16%
Process optimization services	32%	48%	22%
Repair and maintenance of equipment	32%	31%	-2%
Service level agreements	30%	38%	13%
Predictive maintenance	29%	37%	13%
Facility optimization / consulting on equipment operations	25%	27%	4%
Support of competitor solutions	20%	23%	7%
Provision of spare parts	19%	27%	19%
Joined partner services (ecosystem)	19%	18%	-3%
Outcome-based services	12%	18%	22%
Transformation of existing products/applications to services	5%	8%	26%

Respondents said the top service channels for their customers are through traditional means (for example, contact centers, online chats, and partner/distributor service operations). (See Figure 3.) However, less than half are providing more advanced services (for example, interactive voice response and scheduled field service operations). Even less are offering self-service and creating a service ecosystem.

Insufficient tools hinder service execution. While over half of respondents have customer relationship management tools, only 49% have demand forecasting tools, which are needed to optimize inventory and reduce stock. Just two in five use field service management tools to help optimize service job scheduling. The limited usage of tools makes it harder to empower manufacturing, sales, customer service, and field service functions to make decisions, gain access to expert and customer knowledge, enhance response time, and become highly efficient. Service superstars excel at customer satisfaction, and their average service delivery cost is 40% lower.

Figure 3 Customer service channels

The top service channels are through traditional means.



The lack of customer data and insights contributes to the challenges. Only half of the executives surveyed reported that customer knowledge is available at each customer touchpoint to inform further engagement. And just 51% are maintaining a single view of the customer. This makes it difficult for service members to do their jobs. The service planner needs relevant customer and asset information to effectively serve the customer's broader expectations. The contact center representative and sales team need visibility of all customer engagements and work streams to resolve customer requests or initiate next best actions.

Taking guidance from service superstars

To help organizations improve their service capabilities, we analyzed survey responses and identified a small group of industrial machinery "service superstars," consisting of one in five (21%) of our survey sample. These executives self-reported that their organizations had a well-defined services strategy that their employees understand. These leaders deliver better financial performance than industry peers—71% versus 58% for revenue growth and 74% versus 51% for profitability. These service superstars self-reported that they outperform for innovation—76% compared with 46% for their cohorts—which is important in creating specialized service capabilities.

Service superstars excel at customer satisfaction, and their average service delivery cost is 40% lower (see Figure 4). In addition, they rated themselves as being more effective against their three most important business objectives relative to their peers—33% better for introducing greater levels of robotics and automation, and 1.5 times better for reducing operational costs and for launching new services.

Our research indicates service superstars drive services transformation through six actions:

- 1. Set services strategy, governance, and cross-business alignment
- 2. Drive customer engagement
- 3. Collaborate across the ecosystem
- 4. Leverage technology and tools
- 5. Act on data and insights
- 6. Address talent.

Figure 4 Service excellence

Service superstars have a higher customer satisfaction score with a lower service delivery cost.

Net promoter score for delivered service experience



superstars

others

Service superstars have a **41%** lower annual service delivery function cost as a percent of revenues, compared with all others

Set services strategy, governance, and crossbusiness alignment

Service superstars have made services an enterprise priority. Nearly two-thirds of services superstars are actively developing new services and business models to differentiate themselves compared to just 42% of others. And three-quarters of these leaders have put in place the financial resources to execute their services strategy versus less than half of their peers. Industry leaders leverage analytics and AI-enabled service capabilities to provide premium services.

This service mindset puts the customer and the user experience at the center of attention as indicated by service superstars providing more services today, especially around service levels, process optimization services, and outcome-based services (see Figure 5). For example, process optimization services can tap user insights to better understand product usage and optimize the product portfolio. These services could also tap value chain insights to provide transparency into planned production and usage at a customer.

Service superstars recognize that service excellence is about delivering value to the customer, not about improving the performance of the product. This is a significant mind shift and requires different data sets and insights to define service contracts, risks, and pricing. In the future, these leaders expect to leverage analytics and artificial intelligence (AI)-enabled service capabilities to provide premium services. For example, predictive maintenance triggers proactive activities before possible incidents happen to avoid downtimes. A pay-byperformance arrangement could focus on product lifecycle management directed at a customer to support operations and replace products.

For service superstars, services are a company-wide, management-led approach. Nearly two-thirds have established cross-functional key performance indicators (KPIs) to support customer satisfaction, revenue, and service levels, compared with 41% of their peers. Delivery of process- and outcome-based services requires crossbusiness alignment across legal, commercial, human resources, IT, and operations.

Figure 5 Service offering development

Services superstars actively develop new services.

	Today		In two years	
	Service superstars	All others	Service superstars	All others
Knowledge-based services	50%	42%	60%	53%
Pay-by-performance arrangements	48%	30%	64%	42%
Process optimization services	46%	29%	53%	46%
Online monitoring	41%	43%	41%	48%
Repair and maintenance of equipment	39%	31%	37%	29%
Predictive maintenance	37%	27%	61%	30%
Service level agreements	37%	29%	46%	36%
Provision of training	36%	36%	41%	42%
Facility optimization	34%	22%	39%	24%
Joined partner services (ecosystem)	31%	16%	24%	17%
Provision of spare parts	30%	16%	39%	24%

Significant differences

KONE: Transforming from product to customer centricity⁵

KONE, an elevator company, has pinned its new business models on the customer experience. After understanding customers' needs, KONE embraced technology to connect, remotely monitor, and optimize its management of millions of elevators, escalators, doors, and turnstiles. The system analyzes sensor data to identify and predict issues, minimize downtime, and personalize the experience for users. Instead of having to call in a service engineer or stick to maintenance schedules, KONE can predict and respond to selected technical issues in real time, with the ability to run tests remotely and make commands over the cloud.

KONE's vision is to deliver the best people flow experience as a global leader in the elevator and escalator industry.⁶ "It is increasingly about offering added value through the best possible user experience," says Ilse Vanderlocht, Maintenance Director at KONE for Belgium and Luxembourg.⁷ By quantifying services, service superstars know what they want to achieve and have a clear focus on service accountability. They also reward both their field service organization and their sales force to drive service sales. Four in five have incentives in place for the service and field service organization to sell parts and services, and nearly three-quarters have established financial incentives for the sales force to actively sell service solutions.

Drive customer engagement

Service superstars have made the customer an enterprise priority: Over three-quarters recognize the need for a shift from a product focus to an experience focus. New services require a deeper understanding of customer expectations and being flexible and transparent to deliver on those expectations. Deeply understanding customer expectations allows leaders to shift to data-enabled services, optimize customer experience, and expand their service ecosystem.

Service superstars have figured out the recipe for engaging with their customers. They service customers across multiple channels (see Figure 6). This allows them to provide holistic customer service across complementary dimensions:

- Customer care focuses on the end-user experience around the product. This includes proactive recommendations related to usage, remote assistance, self-service and call-center solutions, product enablement, status tracking, and field service scheduling.
- Field service includes remote or on-site maintenance and support service activities provided by a field service worker and extends toward consulting and advisory services.

Service superstars recognize the need for a shift from a product focus to an experience focus.

Figure 6

Service channels offered to customers

Service superstars provide both traditional and advanced service channels.

	Service superstars	All others
Online chat	70%	64%
Talk to a contact center representative via telephone	66%	67%
Partners and distributor service operations	57%	48%
Scheduled field service operations	56%	41%
Interactive voice response	52%	49%
Self-service	50%	30%
Augmented remote subject matter experts support	34%	19%
Service ecosystem in support of your related solutions	30%	19%
Adhoc field service operations	28%	20%

Significant differences

The COVID-19 pandemic has accelerated self-service, augmented remote support, and ecosystem support to combat ever changing restrictions and health concerns. Service superstars have already embraced these channels to increase customer satisfaction, as well as to reduce costs.

Service superstars leverage data insights in the digital transformation of the service experience. Three-quarters have customer data available at touchpoints to support a seamless omni-channel service experience. And over three-quarters of service superstars have a single view of the customer that is shared across the enterprise, compared to 45% of their peers.

Fisher & Paykel: Connecting field service to brand loyalty⁸

Fisher & Paykel is an appliance manufacturing company based in New Zealand. To increase brand loyalty beyond product sales, its customer service and field service teams needed to deliver a consistent, seamless customer experience across every post-purchase touchpoint to manage delivery, installation, repairs, and routine maintenance.

An external CRM platform was integrated with the company's enterprise resource planning (ERP) system and field service software to consolidate its systems into a single source of customer information and activity. Fisher & Paykel is now able to offer customers a more flexible maintenance and repair service with two-hour repair appointment windows and automated appointment status. As a result, customer satisfaction increased by more than 20%. Contact center training time was reduced by half and employee satisfaction increased by 15%. Service superstars engage with a coalition of partners to continually explore and pilot new services and digitally enable service staff.

Collaborate across the ecosystem

Service superstars use both an inside-out and outside-in approach for services strategy and delivery. More service superstars are building an ecosystem of partners to help them design and develop services and transform the customer experience. Leveraging ecosystem resources permits them to innovate more quickly than if they relied on internal resources alone. Over three in five service superstars are actively working with partners to create an ecosystem of services to broaden market reach.

For service delivery, service superstars recognize that success comes from inside the organization using core capabilities, as well as from outside entities that leverage those enterprises' strengths. These ecosystems accelerate the rate and adoption of complementary services. Service superstars have established supporting processes and data and information sharing with their partners (see Figure 7). For instance, 87% of service superstars reported they

are either operating/optimizing or implementing data sharing and analytics between themselves, suppliers, and partners/service providers, compared to just 45% of others. These leaders are leveraging insights to create flexible service delivery operations that are focused on continuous improvement and built to respond to opportunities.

Services superstars have put in place the necessary management to work with ecosystem partners. Nearly seven in ten of these leaders have established innovation and technical partner management, compared with just 42% of their peers. As a result, service superstars can engage with a coalition of partners to continually explore and pilot new services and digitally enable service staff.

Figure 7

Enhancement of service delivery by collaborating with partners

Service superstars share data, information and processes with their ecosystem.

Implementation of external collaboration initiatives in service delivery processes

- Service superstars implementing
- Service superstars operating or optimizing
- All others implementing
- All others operating or optimizing

Data-sharing and analytics between OEM, supplier, partners/service providers	87%
	45%
Standardized early warning information between OEM, supplier, partners/service providers	69%
	40%
Standardized detection-to-correction process with early warning systems	65%
	34%
Access to diagnostics data for investigation of issues and root-cause analysis (for all types of requests	57%
	31%

Leverage technology and tools

Service superstars view technology as a critical enabler for digital transformation of the service experience. Over four in five reported their customers benefit from the company using technologies to increase agility and responsiveness in service and field service, compared to 46% of their peers. And 81% of service superstars indicated they keep up to date on new technologies that surround their products to service them appropriately.

Superstars confirmed that a collection of technologies is critical to their service delivery (see Figure 8). IoT solutions permit continuous monitoring of assets and process data to provide health status. In addition, IoT technology helps enable a product-as-a-service business model. Cloud computing can be used to run service applications, develop/maintain data around customer touchpoints, and share information across locations. Mobile technologies allow ubiquitous access to information and help with field service execution. Automation improves productivity and efficiency of technical work order flow.

Sandvik Mining and Rock Technology: Providing mining process optimization services⁹

A global supplier of mining and construction equipment, Sandvik Mining and Rock Technology offers a solution to help optimize the full mining process. The solution taps AI, the Internet of Things (IoT), and predictive analytics to analyze and optimize underground hard rock mining and processes. Its platform, based on open system architecture, allows efficient data integration between mining systems and equipment from different providers, providing realtime and predictive insights to improve operations. The Sandvik solution focuses on overall equipment efficiency, identifies possible lost time, and predicts failures.

Figure 8

Harnessing the power of technologies

Service superstars take advantage of IoT, cloud, robotics, and mobile in their service delivery processes.

Implementation - operating or optimizing (today)





Nearly three in five service superstars plan to leverage AI compared to 40% of their cohorts.

In the future, service superstars expect to implement additional exponential technologies in their service delivery processes aimed at enhancing visibility and transparency and increasing speed and scale. Specifically, nearly three in five said they will leverage AI compared to 40% of their cohorts. AI can power customer service chatbots and customer- and employee-facing applications and provide diagnostic insights to guide employees.

43% of superstars plan to take advantage of 3D printing that can used to print non-stock parts/components for repair in a warehouse. And a quarter intend to use augmented reality (AR) that enables field service representatives or customers to perform guided repair. For example, a field service representative could take a 2D product image that is then rendered into 3D via AR, allowing a technical expert to deeply examine it and determine the problem. Then, the expert can add instructions and specifications directly to the image that is sent back to the end user's device.¹⁰ Service superstars provide both customer service and field service functions with the tools to do their jobs (see Figure 9). Field service automation digitizes routine tasks, provides the proper parts, shares necessary customer information, and monitors repairs and parts across the field service network.

Safety and health monitoring helps make work safer and smarter with near real-time insights of worksites and field service technicians. IoT data and analytics are tapped for monitoring and event tracing. Wearable sensors inform worker physical hazard protection.

Process flow automation generates a holistic end-to-end process view that incorporates the service dimensions of the customer service expert, the field service worker, and the service manager. The automation covers service requisition and validation, proposal and sourcing, order disposition, order execution, and service reporting and billing.

Figure 9

Tools to support service delivery

Service superstars provide productivity tools to customer service and field service.



All others

Service superstars have put in place the necessary enterprise IT architecture to support their service delivery. Nearly nine in ten provide flexibility and openness through hybrid multicloud to support the services strategy compared to half of their peers. Three-quarters of service superstars establish a comprehensive enterprise architecture in alignment with business activities versus 47% of other respondents. This foundation allows them to scale, provides openness, and enables a seamless flow of data.

Act on data and insights

Service superstars use richer insights to make informed decisions about service experience improvements. 88% of service superstars have built a data-driven culture associated with their services strategy and delivery, compared with 52% of their peers.

This culture is contagious across cross-functional teams and is reflected in the integration of service data with operational data in product development, supply chain, and marketing and sales (see Figure 10). By connecting customer service and field service with other upstream processes, critical information can be leveraged. The combined data helps customer service and field service employees make service experience strategy decisions and enhance enterprise performance. They are better equipped to identify challenges and shape their services development to proactively anticipate customers' needs and create personalized process and outcome-based services. Enabling early (remote) product configuration and control can help optimize customer output and lower service operational costs.

Armstrong Fluid Technology: Providing predictive maintenance analytics¹¹

Based in Toronto, Canada, Armstrong designs, engineers, and manufactures intelligent fluid flow equipment. Offerings include design envelope technology; system automation and optimization services; and solutions for HVAC, plumbing, and fire safety. Seeking to add value beyond its products, Armstrong wanted to help customers address the issue of predictive maintenance.

The company developed an intelligent cloud-based performance tracking service powered by IoT and predictive maintenance analytics. The service manages pump performance and delivers real-time insights to help building owners operate and maintain HVAC systems for optimal efficiency. For example, at Zhengzhou University in China, Armstrong reduced the university's annual energy consumption by 78% and CO₂ emissions by 43,303 kg. At Carlson Court in Canada, the 300,000 square foot facility uses 87% less energy and has reduced its CO₂ emissions by 131,053 kg. Service superstars leverage decision improvements by combining marketing and sales and service delivery data.

Figure 10 Service data integration

By connecting customer service and field service with other upstream processes, critical information can be leveraged.

Product design, development and engineering data

50%	87%	Improve product quality
47%	75%	Provide input to the risk assessment for new machine, component or services development
38%	70%	Understand product performance under various conditions
Supply chain data		
48%	77%	Identify production quality issues
41%	75%	Support root-cause analysis for product and process failures
49%	75%	Identify materials, parts, or components that lead to service issues
44%	74%	Input to supplier scoring, evaluation, selection, identification
42%	73%	Identify conditions leading to accelerated replacement or wear of parts
42%	71%	Identify products, parts or systems with repeat failures (early identification)
Marketing and sales data		
50%	83%	Drive marketing and sales campaigns
44%	73%	Understand product usage patterns/styles or claims by style (to predict future claims)
37%	68%	Predict service events or repairs and notify owners
43%	68%	Detect support claim trends earlier to intervene with corrective action
51%	68%	Predict service events or repairs, compare to known issues, identify needed parts and notify the nearest serve center
Service superstars All others		

In the supply chain, production teams can see data associated with critical parts or components that need replacement and asset failure rates. Inventory management and replenishment can be optimized. Leveraging these insights and providing the field service technician with the right parts can help improve customer satisfaction. And typically, the sooner issues are identified and resolved, the less costly the problem is to the organization.

Service superstars leverage decision improvements by combining marketing and sales and service delivery data. It allows them to predict service events or repairs and notify customers before a failure occurs. They can then reserve needed parts. Service superstars understand that product usage patterns and styles can help predict future claims or detect customer support trends and difficulties earlier, shortening the cycle time from detecting to correcting it. As a result, service superstars achieve faster detection and resolution of issues. The average detection to correction cycle time for service superstars is 21 calendar days, which is statistically significantly better than 22.9 days for their peers.

Establish necessary talent and resources

Three-quarters of service superstars have put in place the people and skills to execute their services strategy. This compares with less than half of other respondents. Service superstars understand how these assets help their enterprises capture services' value and enhance customer engagement.

84% of these leaders said their services strategy is being supported by change management, versus 45% of their peers. Given the need to create specialized service capabilities to excel at delivery, service superstars have not underestimated the scale of change associated with establishing a cross-business services mindset, executing efficient processes, creating real-time visibility and monitoring, and utilizing exponential technologies and tools.

Hitachi Zosen: Operating Hitz Advanced Information Technology Center¹²

Hitachi Zosen, a major Japanese industrial and engineering corporation, created the Hitz Advanced Information Technology Center as an in-house hub for remote monitoring and use of information and communications technology, including IoT, big data, and AI. The Center supports three services: remote monitoring and operational support; IoT, big data, and AI development; and open innovation.

The remote monitoring and operational support services are for power generation facilities focused on energy-from-waste plants. The Center leverages accumulated data to provide after-sales, operation, and maintenance services, including life extension of facility equipment and advanced operational support and control.

The Center uses Hitachi Zosen technologies energy-from-waste, AI image recognition, drone control, GPS, failure analysis, and so on—to collect and store data, analyze it, visualize it, and use it to expand into new services and business planning. To drive open innovation, the Center includes facilities for collaboration with external firms and university research institutes. By fusing external digital technology with its own expertise, Hitachi Zosen speeds up the development process. Service superstars are uniquely tailoring service employee career, skill, and learning initiatives with employee experiences, goals, interests.

Service superstars have made more talent improvements to support services than their cohorts (see Figure 11). They have placed skills at the center of their service strategy and aim for deep visibility into the skills position across their enterprises. Over three-quarters have a formal process to address skills for their service workforce. With the exodus of retirees, a talent shortage is one of the greatest threats for industrial machinery companies, and difficulty attracting a younger workforce has imperiled knowledge retention and escalated the competition for talent.

Service superstars are uniquely tailoring service employee career, skill, and learning initiatives with employee experiences, goals, interests, and—where possible individual purposes and meanings. This involves knowing where the company and the service individual want or need to progress and creating an attractive career path. Skills are reinforced with additional investments in digital technologies training. This helps retain talent and build the service workforce.

To address changing dynamics and opportunities, these leaders invest in new ways of working. An enterprise-wide perspective is required to determine the operational model, cross-business impacts, and platforms needed to deliver services excellence. Flexible practices allow service superstars to shift actions based on real-time feedback in service development and operational processes. As a result, field service can be supported by digital and physical cognitive assistants, centralized remote support, and less onsite demand for expert knowledge.

Figure 11 Talent investments

Service superstars have made talent improvements to support services.



- Implementing a formal process to identify needed skills for service
- Training service employees to use digital technologies

Creating attractive career paths for service

Introducing flexible employment practices and culture

All others | Service superstars

Action guide

Growing service business models

Service superstars have created the framework to transform their services strategy and delivery, and your organization can as well by focusing on these six key actions:

1. Drive a unifying vision

Make services transformation an integral part of your organization's mindset, supported by offering development, delivery, and governance:

- Determine your service ambition to transition from selling products to added value and outcome-based services.
- Establish a clear services strategy and plan covering customers, employees, and partners that enables crossbusiness and operational alignment (vision, strategy, objectives, and goals).
- Incorporate services KPIs and incentives to measure user and business value and promote success.
- Add services ownership to your C-suite to drive alignment of business functions, enabling transparency, collaboration, and control.

2. Design experiences

Take advantage of multiple channels and customer data to engage customers:

- Conduct thorough research to understand your customers' expectations (B2B and B2B2C)
- Incorporate enterprise-led and experience design into the enterprise's services strategy; find key opportunities and build, evaluate, scale, and enhance.
- Determine the channels, operational model, crossbusiness impacts, contracts, pricing, tools, data, and platforms needed to enable the trusted advisor service experience and offerings.

3. Strengthen your partner ecosystem

Build an ecosystem of partners to help them design and develop services and transform the customer experience:

- Select a network of partners to deliver service excellence and reach new target markets and strengthen value propositions.
- Enable the ecosystem to share and combine products, service, and data to deliver additional valued services/ products to customers (B2B, B2B2C).

4. Integrate data and insights for better engagement

Combine service data with operational data to generate insights to improve efficiency and experience:

- Make sure that your services strategy targets both the structured and unstructured data needed to understand the customer's processes and address their engagement objectives.
- Connecting data horizontally (transparency between commerce, marketing, sales, service, field service, legal, and pricing) as well as vertically (customer lifecycle and engagement, asset and asset performance, and resource management).

5. Overlay your services functions with digital

Equip marketing, sales, and service with digital technologies and infuse them into specific areas:

- Create cross-business intelligent workflows that link processes, people, and insights.
- Infuse digital technologies to optimize processes in sales, service, and field service.
- Streamline and link service operations with asset performance management, advanced analytics, and AI.
- Add automation for process flow and field service.
- Deploy hybrid cloud to access data, put it to new use, and house workflows.
- Move to strategic platforms that enable agile business, operational, and IT practices.

6. Create the right team

Enhance services' talent and manage change:

- Develop services skills, capabilities, career paths, and new ways of working.
- Determine actions to close the talent gap due to retirees and the inability to attract a younger workforce.
- Add data, personal, and tech-savvy skills to supplement existing services resources.
- Capture and disseminate knowledge to enhance skills and service efficiencies.
- Develop proactive change management since services transformation involves significant change in the business, operations, and talent.

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Digitize the industrial machinery supply chain

Industrial machinery leaders digitize supply chains to predict demand, increase visibility, improve customization, and lower downtime. https://www.ibm.com/thought-leadership/institutebusiness-value/report/ industrial-machinery-digital-supply-chain

Standing out in business-to-business customer engagement

B2B customer centricity requires industrial products companies to rethink their approach across strategy and culture, channels, data and insights, technology, and organization and skills.

https://www.ibm.com/thought-leadership/institutebusiness-value/report/b2b-customer



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Spencer Lin is the Global Research Leader for Chemicals, Petroleum, and Industrial Products for the IBM Institute for Business Value. He has more than 25 years of experience in financial management and strategy consulting.

Study approach and methodology

In cooperation with Oxford Economics, the IBV surveyed 500 industrial machinery executives in 23 countries from July to September 2020. The 500 executives come from different roles, geographies, and sized organizations. All data is self-reported.

Respondents by geography



Respondents by enterprise size (annual revenues)



Respondents by role



- 34% Chief Executive Officer
- 9% Head of Strategy or Innovation
- **10%** Head of Products/Services
- 6% Chief Digital Officer
- **10%** Chief Financial Officer
- 10% Chief Marketing Officer
- **11%** Chief Operating Officer
- 9% Chief Information Officer

Notes and sources

- 1 "State of the Connected Customer." Salesforce Research. June 7, 2019. https://www.salesforce.com/form/conf/ state-of-the-connected-customer-3rd-edition/?leadcr eated=true&redirect=true&DriverCampaignId= 7010M000000ujR9QAI&FormCampaignId= 7010M000000ujR4QAI
- 2 "After Sales Services: The Quest for Faster Growth and Higher Margins." Barkawi Management Consultants. Accessed October 8, 2020. https://www.barkawi.com/ fileadmin/templates/barkawi/images/Publikationen/ BMC-Study-Industrial-Services-Final-Web-02.pdf
- 3 "Product-as-a-Service, the Shifting Model in Industrial Machinery." FutureBridge blog. Accessed October 8, 2020. https://www.futurebridge.com/blog/ product-as-a-service-the-shifting-model-inindustrial-machinery/
- 4 "Building Resilient Manufacturing Operations." IDC. August 2020. https://www.ibm.com/downloads/cas/ KQ1WYQG9
- 5 "IBM and KONE: Watson IoT Gives Lift To Innovation In Smart Buildings." YouTube. February 22, 2017. https:// www.youtube.com/watch?v=EVbd3ejEXus
- 6 "Vision and strategy: Our vision is to deliver the best people flow experience." Kone. https://www.kone. com/ en/company/vision-andstrategy/
- 7 "How technology supports the best people flow experience at KONE." IBM website. January 1, 2019. https://www.ibm.com/blogs/think/ be-en/2019/01/09/ technology-for-best- people-flow-experience-atkone/

- 8 "Fisher & Paykel: How Fisher & Paykel Connects Field Service to Brand Loyalty." bluewolf. Accessed October 26, 2020. https://www.bluewolf.com/content/ fisher-paykel
- 9 "OptiMine® analytics and process optimization." Sandvik. Accessed October 26, 2020. https://www. rocktechnology.sandvik/en/products/automation/ optimine-information-management-system/ "Knowledge is power. Unleash your insights." https:// www.rocktechnology.sandvik/en/campaigns/ optimine/
- 10 Teich, David A. "IBM Augmented Reality Working To Support And Accelerate How Support Services Are Changing." Forbes. April 28, 2020. https://www. forbes.com/sites/davidteich/2020/04/28/ ibm-augmented-reality-working-to-support-andaccelerate-how-support-services-arechanging/#5465e9e42c56
- 11 "Armstrong Fluid Technology: Manage HVAC systems to optimize performance and save up to 40 percent." IBM case study. August 2019. https://www.ibm.com/ case-studies/armstrong-fluid-technology
- 12 "Hitachi Zosen Commences Operation of Hub of ICT Use: Hitz Advanced Information Technology Center." Hitachi Zosen website. October 23, 2018. https:// www.hitachizosen.co.jp/english/ news/2018/10/003198.html

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