



The Future of Service Supply Chain

Service@Core: insights into maturity, ambitions and challenges





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1. Introduction

Changing consumer expectations, new digital technologies and changing business drivers are pushing companies to continuously reflect on the way they offer and deliver products and services to their clients. Many organisations are reinventing their service strategies to provide services in a proactive and customised way – a transformation PwC refers to as ‘Service@Core’. Preparing the service supply chain for the future is a challenge many companies are struggling with.

Organisations must not only assess their traditional service offerings, they also need to focus on developing customised service solutions that cover the requirements of each customer segment. The times of the customer settling for basic service solutions are over.

What's Service@Core?

It's a business strategy that puts services at the core of the organisation. It integrates products and services into solutions that are offered to customers, from the moment they express the need for a solution you provide until this need is met. Since companies who implement this strategy look to continuously improve and innovate their solutions with the latest technologies, they're able to create a competitive advantage. As a consequence, Service@Core goes beyond ‘servitisation’, a strategy that's defined as the capability of offering service solutions as a supplement to the product on offer.

The tech-savvy world of the Internet of Things (IoT), big data and applications like virtual and augmented reality, additive manufacturing and predictive and condition-based maintenance, provides major innovative ingredients that have a big influence on service solutions. New business models emerge every day, with a focus on long-term relationships over short-term transactions.

On top of technical and digital developments, customers are moving towards a preference for access to services on demand over owning devices. Therefore, service offerings are critical enablers in preparing companies for the future. For example, several developers and manufacturers of tools for construction and maintenance have disrupted the market by shifting from a purchase to a rental-based business model. This way, customers have access to their entire range of products without having to buy a new product for every application or project.

The five dimensions

This report focuses on the five key dimensions of a service supply chain in which we see the biggest disruption: **business model, planning, data and analytics, emerging technologies, and human capital**. Companies can assess their maturity on these five dimensions and can use the results to understand where the biggest challenges will lie in preparing their service business for the future.

Business model

In the past, physical products were considered to be the centre of a company's business model, and the ultimate goal was to maximise profit from the sale of the goods. Gradually, companies began looking for ways to differentiate themselves in the market. Organisations started to acknowledge service as a value-creating aspect of the firm. Goods were no longer seen as the end products, but rather as intermediate items used in value creation. This change of mindset sparked an evolution in offering strategies. We're in the middle of a transition, where companies are putting services at the core of their business models.

Planning methods

Mainly enabled by new technologies, the supply chain planning landscape is changing rapidly. Information is available in (near) real time, allowing for immediate replanning. Forecasting has improved dramatically due to advanced techniques, including external data sources and machine learning. The IoT allows for constant monitoring of product performance and maintenance requirements. This new information on both the actual situation and the projected future allows companies to be more proactive. Planned interventions such as predictive, preventive, condition-based and prescriptive maintenance solutions will become standard offerings in many industries. Additionally, the planning team in a company using the Service@Core strategy needs to align both product and service delivery, which adds another dimension to planning methodologies.

Data and analytics

Today's digital technologies allow companies to capture data in larger volumes, that's more complex and with increased speed. Data and analytics (D&A) is a domain that's constantly in motion, with new technologies and capabilities constantly emerging. The IoT, artificial intelligence (AI), machine learning, deep learning, and Blockchain are just a few of the upcoming technologies that are disrupting today's D&A landscape. Although many companies have yet to embrace these technologies, it's important to understand how D&A can bring actual business value.

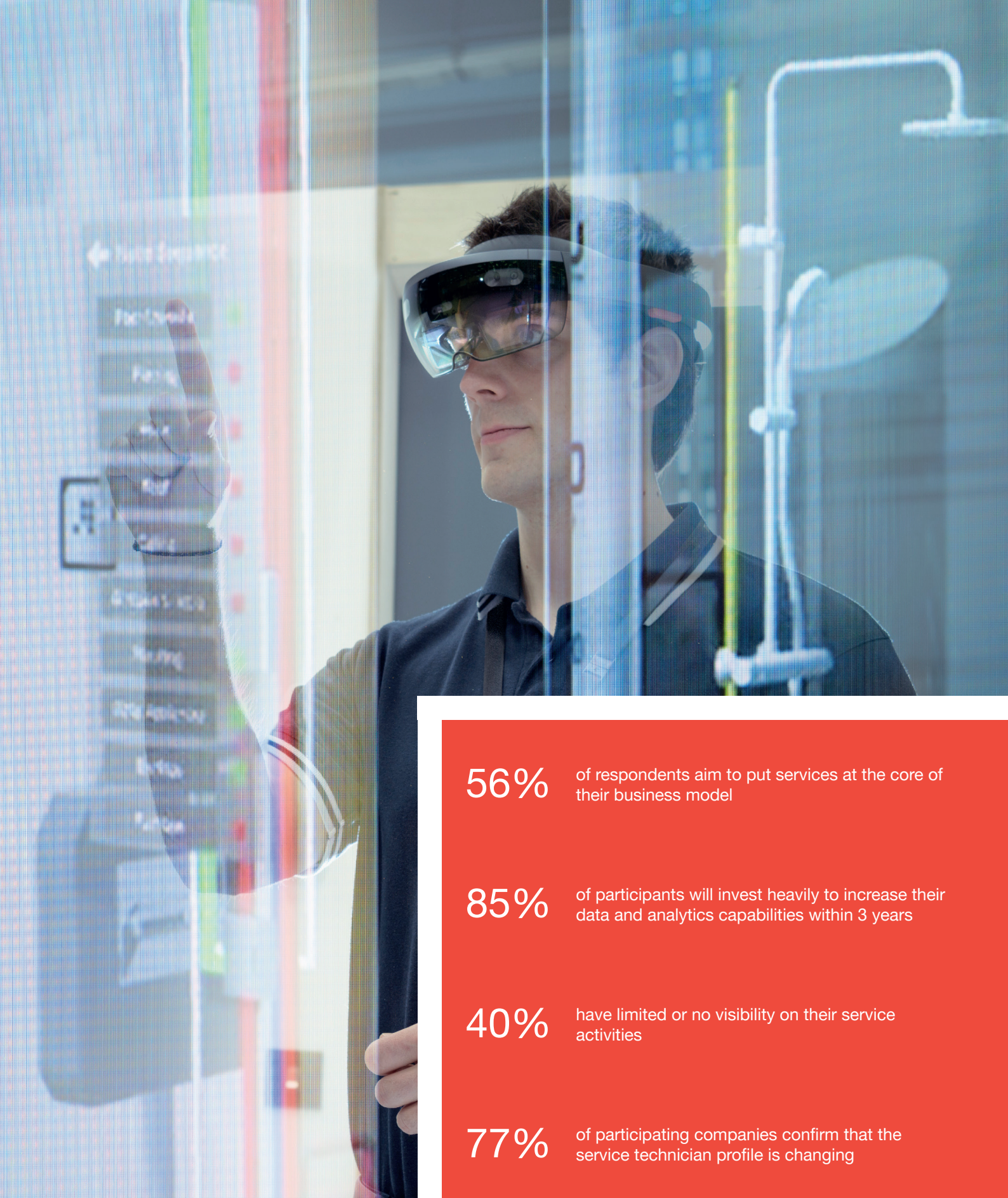
In a service context, for example, continuous big data collection and analysis via IoT-connected devices and sensors can provide an invaluable source of information that allows companies to gain insights and support in decision making. The D&A landscape's evolving from backward-looking analytics that describe past performance and identify root causes, to forward-looking analytics that are predictive, preventive and cognitive.

Emerging technologies

The potential applications of emerging technologies in a service environment are extensive. Technology's evolving so quickly that trying to spot the next big thing can feel overwhelming. PwC's 'Essential Eight' technologies are those we identified as having the most potential to revolutionise today's businesses over the next five or so years. The Essential Eight are the technological building blocks that we believe every organisation must at least consider, due to their potential to create value for the company. This article investigates which of these technologies are the most promising in a service environment.

Human capital

With increased application and implementation of new technologies in many business areas in the industry, the war for talent is more brutal than ever. A good way to help keep your skilled workforce on board and motivated is to upskill them with new digital competencies. A well-defined change management strategy that embraces digitisation and continuous learning in the company culture helps with employee retention and satisfaction.

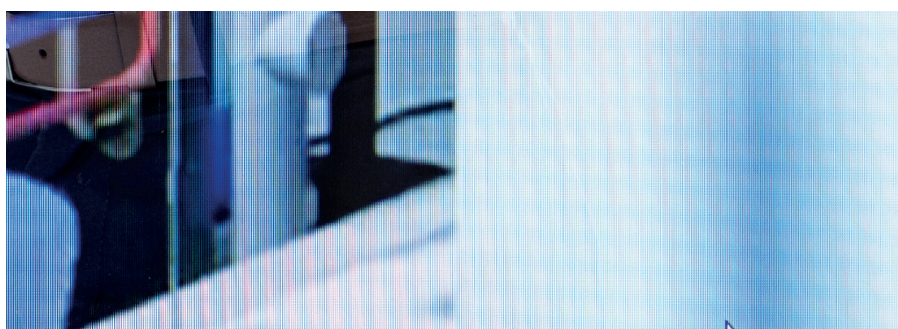


56% of respondents aim to put services at the core of their business model

85% of participants will invest heavily to increase their data and analytics capabilities within 3 years

40% have limited or no visibility on their service activities

77% of participating companies confirm that the service technician profile is changing



2. Executive summary

The service supply chain integrates sales, field service management and customer services into a unique, unified service offering for the client. Products are no longer seen as the end product but rather as leverage tools used to create value for the customer. The observations expressed in the introduction were the triggers for PwC to launch the Service@Core survey. PwC defines the Service@Core approach as a strategy that puts services at the centre of every organisation.

The 81 service professionals who participated in our survey are active in a broad spectrum of industries (like automotive, industrial machinery, healthcare, construction, the handling, maintenance and repair of equipment and operations) and fulfill C-level, director, and (senior) manager roles. Respondents represent companies of both high and low service maturity levels.

The goal of our survey is to answer three key questions:

1. Where do companies stand today in their Service@Core transformation?
2. Where do they want to go to in the near future?
3. What are the challenges that companies face in preparing their service activities for the future?

To evolve towards the customer-centric organisation that is vital for a service supply chain to be successful, companies are required to transform their business models to be more service-focused. Our survey indicates that 56% of participants aim to put services at the core of their business model within the next three years. To support such a business model, proactive planning of service

activities across the supply chain is essential. We see, however, that currently still 40% of companies have limited or no visibility on their future service activities.

Developments in the field of D&A are critical enablers in maturing your service organisation. This topic is increasingly high on C-levels' strategic agendas, with almost nine out of ten organisations indicating that they'll heavily invest in these competencies in the short term. Additionally, the emergence of new technologies provides the opportunity to rethink the way services are provided to customers. In a service context, the IoT and new customer interfaces are seen as the technologies with the most potential to create business value.

The consequence of these developments is that the skill set of most of today's service profiles is rapidly changing. It's therefore critical to upskill your current workforce and attract new capabilities to be able to stay ahead of the competition in an environment that remains, no matter how digital it becomes, a people's business. These five dimensions form the structure of this report, as areas in which the biggest disruptions occur. To mature your service organisation, you must mature in each of these areas.

Improving the maturity level of your service organisation has a direct impact on your company's long-term profitability. It allows companies to be perceived as not just a single vendor, but increasingly as a strategic partner with whom customers want to engage in a long-term relationship. This results in higher customer retention and therefore, companies can develop a sustainable competitive advantage that enables long-term, profitable growth.

3. Trends in the future of service supply chain

3.1. Business model

To get a grip on what the future of service will be in a supply chain context, we first need to understand what role services play in the value creation process of organisations today. In the last decades, we've seen a shift from business models completely focused on products to those that increasingly put services at the core of their market offering and organisation.

Our survey indicates that 23% of companies continue to treat services as add-ons to their current product offerings. However, **within three years, 56% of respondents aim to put services at the core of their business model.**

As explained in the introduction, there's an emerging trend in the way companies offer products and services to the market. Pure product offerings have been transformed into product offerings with add-on services, then gradually into total solution offerings where products and services are combined in a unique blend of value. This evolution is changing the way services are delivered to customers. In other words, it's transforming the entire service supply chain.

While many companies are beginning to understand the value services can bring to clients, **only 25% of respondents characterise their service operations as taking responsibility for the uptime of their installed base through service contracts or value-based models like pay-per-use** (selling outcomes rather than assets). Compared to our previous survey in 2018, this is a **15 percentage point increase** and empirical evidence of the trend we're describing.

We don't want to create the illusion that value-based solution offerings should replace all products and service offerings you have today. To tap the full potential of a service offering, **you must understand the needs of your customers first**. There is, for example, no need to approach customers with a total value offering if they perceive your product as a commodity and are therefore looking for the most cost-effective solution on the market. Still, we see that **customers are increasingly looking for solutions that go beyond the basic product and service offerings that many companies provide today. Customers of tomorrow will have higher expectations and be more service-oriented, and companies that are prepared will get a head start in creating a sustainable competitive advantage.**

With change comes challenge. Shifting towards a business model that's customer- and service-oriented also has its challenges. **The main challenge respondents have experienced or expect in the future is the organisational culture shift that comes with this transition.** More than 79% describe this factor as very or extremely important. Lack of infrastructure (physical or IT) and capabilities to support new business models (76%) is also perceived as a key challenge. There's also a general concern that the current customer base is reluctant to change (57%), which could make the shift towards

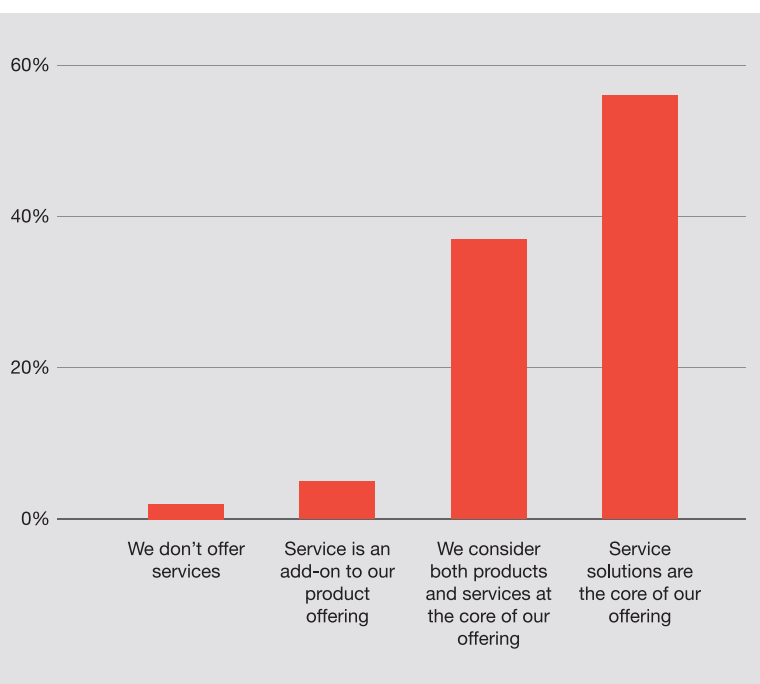


Figure 1. The role of service in business models within the next 3 years

value-based business models and pricing more difficult. Finally, top management support is a critical enabler for the successful implementation and integration of the new business model (46%).

3.2. Planning

A service business model adds an extra dimension to the planning exercise that needs to be performed: ensuring that both products and services are available in the right place at the right time. Where production planning is often asset-driven (machines and capacity), services planning often involves people and expertise. Additionally, the focus on the supplier-customer relationship often shifts from a transactional focus from the moment the customer buys the product, to a partnership with quality services at the core. **To nurture such relationships, companies need proactive planning to avoid or quickly resolve issues faced by customers.** This method is applied by companies that want to generate sustainable revenues and foster solid links with their partners.

In the quest to become more proactive, companies often use advanced forecasting techniques, including external data sources and machine learning, to dramatically improve predictability of both product and service requirements. Higher planning visibility can also be obtained through the use of technologies such as the IoT, which we'll discuss below.

In practice, we see that few supply chains have reached this stage of planning maturity. Our survey indicates that 40% of companies have limited or no visibility on their service activities. On the other hand, 39% have mid-term visibility on their service activities in the future, which allows them to adopt a more proactive approach for the planning of service activities.

New-generation enterprise resource planning (ERP) platforms and advanced planning solutions make information available in (near) real time and allow for immediate replanning. This **vertical integration** connects strategy to execution and back, meaning shop-floor information or information about service execution is instantly visible, so that corrective or proactive actions can be planned. These solutions enable faster planning cycles and exception-based planning, allowing planners to spend more time on value-added activities and decision making.

Cloud-based solutions allow for **horizontal integration**, meaning the different links in the value chain can share information which can be used in the planning. Demand signals, from either customers or IoT-enabled devices, can be transferred to suppliers and generate requirements, and supply constraints (material or capacity) can be taken into account in the planning of consecutive nodes in the chain. To enable this integration, companies throughout the entire service supply chain need to cooperate, and an efficient IT system and data architecture that supports such an ecosystem will be a key success factor. The result of this connected value chain will be increased product and service availability, efficiency and reduced inventory or time buffers.

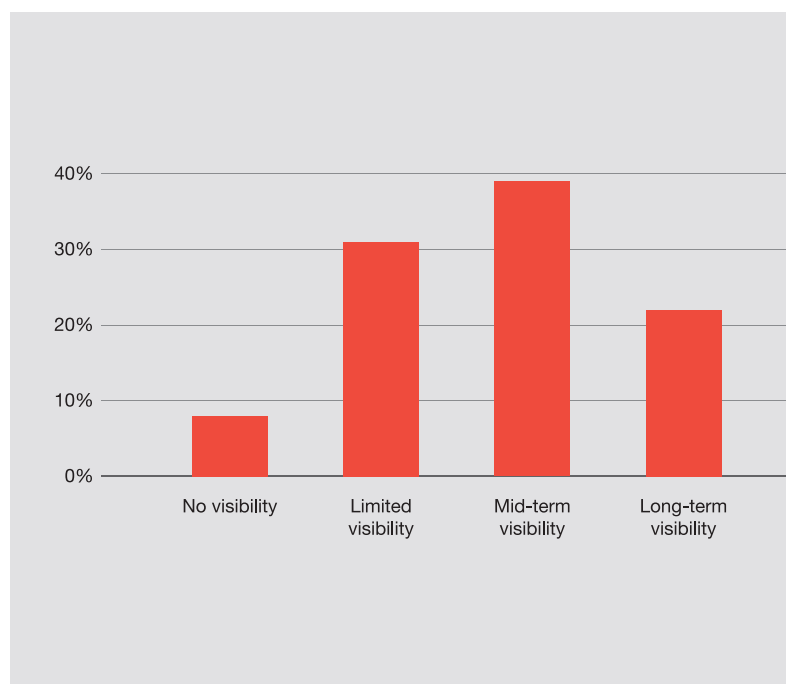


Figure 2. Visibility of service activities in the future

Of companies surveyed, 39% still use manual or spreadsheet-based planning tools to support their resource and service activity planning. As mentioned, to truly enable the advantages that come with higher visibility, more advanced planning tools such as planning as part of the ERP system, specific field service management tools and cloud-based connected planning systems are a better fit to support mature service offerings. Of our participants, **86% indicated that they're planning to evolve towards these mature planning tools within the next three years.**

Companies that offer a wide spectrum of services to accompany the sale of their products have a stronger focus on long-lasting relationships with their customers. Using the available techniques and technologies as described above, it's possible to become more proactive and meet your customers' requirements as soon as, and perhaps even before, they've been articulated.

3.3. Data and analytics

D&A's a field that's increasingly getting pushed to the top of the strategic agenda of many service organisations. The amount of data that companies have at their disposal is increasing dramatically, and new technological innovations allow them to extract insights from that massive pool of information. **Our survey indicates that 85% of participants are actively working on increasing their maturity in D&A within three years.**

Data's a growing priority for service organisations, and it comes in all shapes and sizes. The study shows that companies are capturing a lot of different types of data from various sources. Traditionally, only historical sales data was considered important in a spare parts environment. In a broader context, historical service activities such as previous customer interactions are logged to provide valuable information on quality,

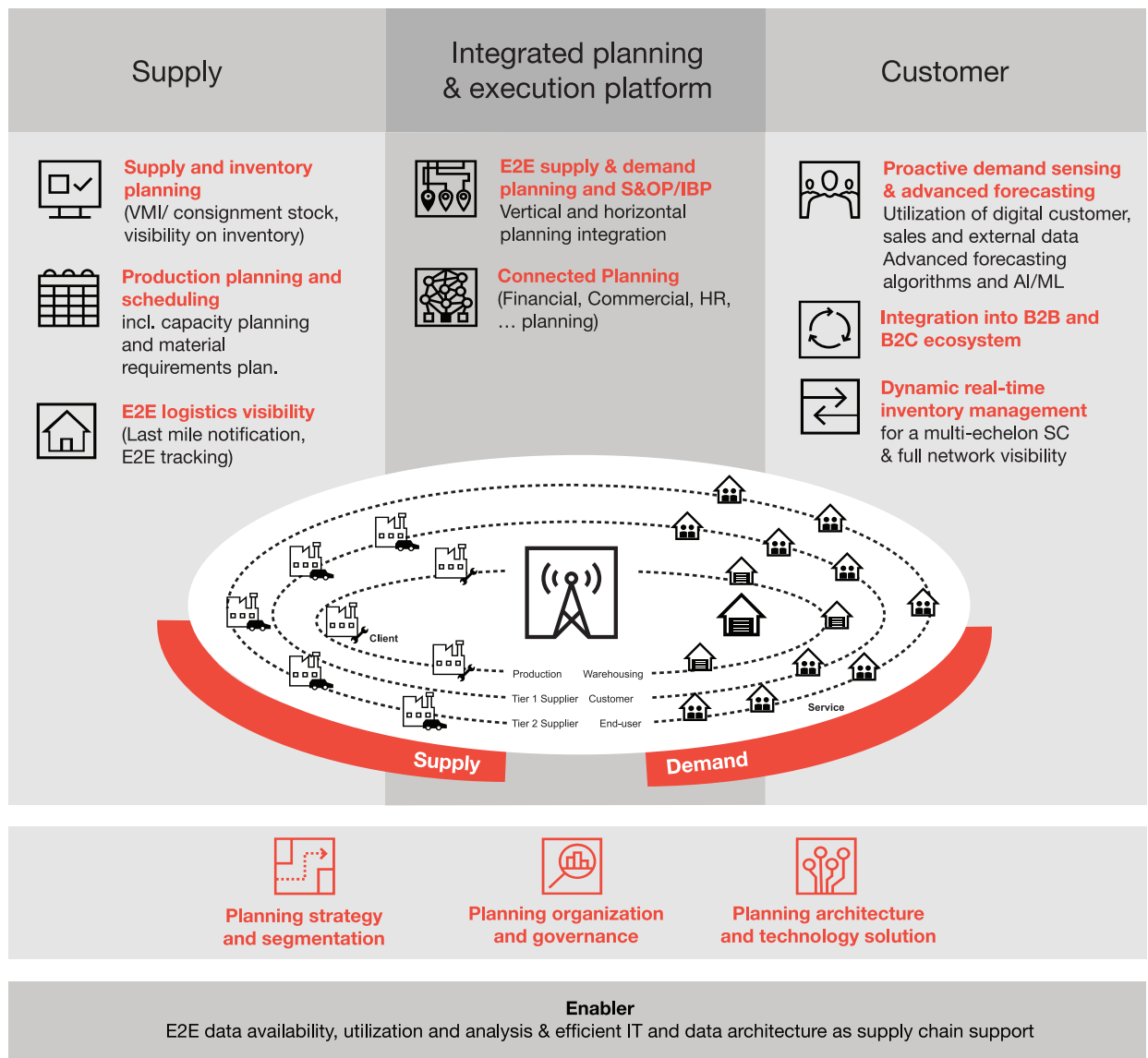


Figure 3. Horizontal and vertical integration of all planning-related activities to create an end-to-end planning strategy across the value chain

previous maintenance interventions, mean time between failures, mean time between repairs and more. In addition, customer feedback and satisfaction are critical sources of information to improving the service delivery process. Finally, developments in the IoT, sensors and cloud solutions have enabled increased efficiency and volume in the capture of streamed data from an installed base.

Gathering data is one thing. **Extracting information and insights from data is another.** We still see that **spreadsheet-based tools are the most common tools used to draw conclusions from raw data.** However, spreadsheets are very limited in the data sources and volumes they can process and analyse. To cope with unstructured and large volumes of data, data warehouses and lakes are increasingly gaining popularity. More mature companies make use of open source analytics tools and licensed analytics tools to exploit the generation of business insights.

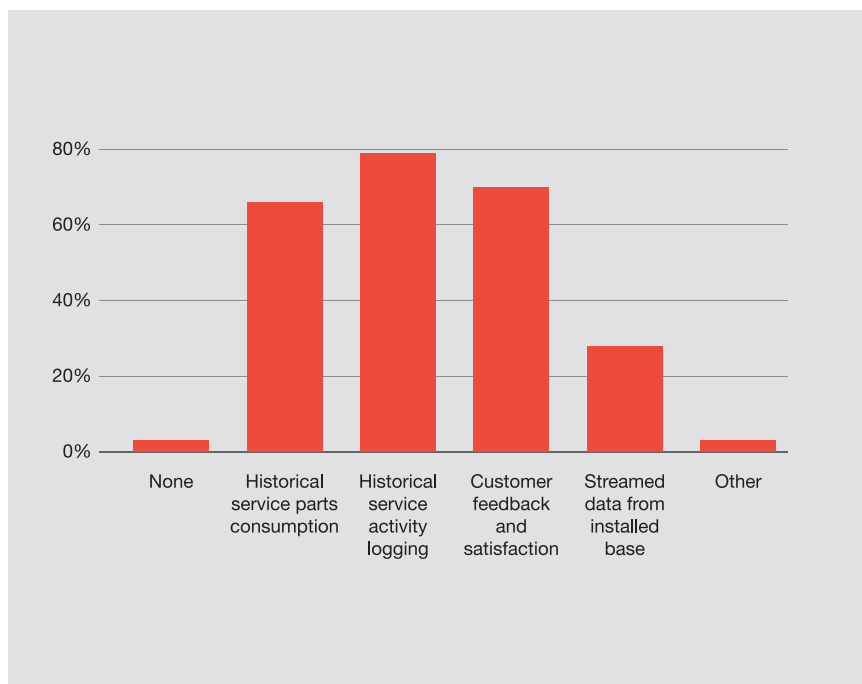


Figure 4. Data source(s) captured

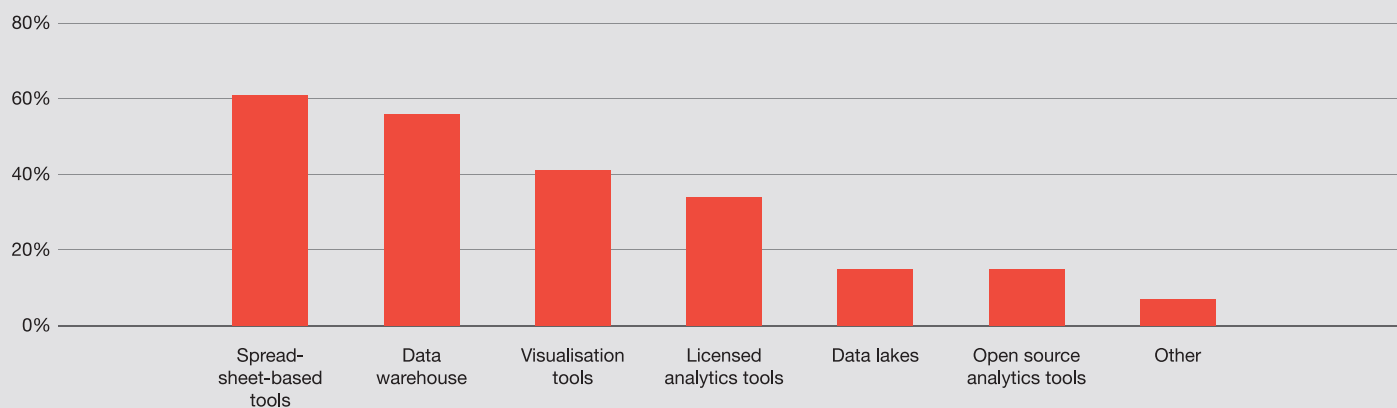


Figure 5. Tools currently used in the area of data and analytics



Given the complex D&A environment, companies need to build a holistic strategy to systematically turn data into real business value. Leading service companies build the right mix of analytics capabilities according to the potential in business value that can be generated for the company and its customers.

The figure below explains the different stages of D&A maturity. The focus of today's companies is still mainly on backward-looking analytics, i.e. describing what has already happened and identifying root causes. Forward-looking analytics, however, can provide significant value to service providers. Predictive maintenance, for example, allows maintenance experts to predict to some extent machine failure before it actually happens. In this way, as a service provider, you can increase your customers' effectiveness and efficiency by avoiding downtime or quality issues. A step further on this maturity scale is the use of analytics to recommend the right or optimal actions.

Mature D&A capabilities are strong enablers for other dimensions, as mentioned above. The evolution in business models towards selling service solutions, for one, is only possible if the capabilities internally are ready to support such a business model. Similarly, proactive planning is only feasible if the D&A are also in a forward-looking maturity stage.

However, building analytics capabilities requires overcoming barriers that are common across industries. Our survey identified *structural* challenges, such as a fragmented system/IT landscape, poor data quality and lack of data-capturing infrastructure. We also saw that *organisational* challenges, like fragmented analytics teams, insufficient funding and an unclear governance structure can also seriously slow down the maturity process. Finally, the impact of *behavioral* challenges cannot be underestimated: in a company culture that's characterised by intuitive decision making, with a lack of information sharing and the spotlight on near-term solutions, significant behavioral obstacles need to be overcome before developing D&A capabilities.

Backward-looking			Forward-looking		
Analytics Maturity Spectrum	Descriptive Analytics	Diagnostic Analytics	Predictive Analytics	Prescriptive Analytics	Cognitive Analytics
	Describe, summarize and analyze historical data (What happened?)	Identify causes of trends and outcomes (Why it happened?)	Predict future outcomes based on the past facts and future simulations (What could happen?)	Recommend 'right' or optimal actions or decisions (What should be done?)	Monitor, decide, and act autonomously or semi-autonomously (How do we adapt to change?)

Figure 6. Maturity stages of data and analytics

3.4. Emerging technologies

A sustainable, future-proof service supply chain can only be obtained by implementing the appropriate and necessary technologies that can help optimise the service offering. It's easy to get overwhelmed by the pace at which new technological innovations emerge. **Our survey indicates that connected products/the IoT and new customer interfaces are perceived by service professionals as the two technologies with the highest potential in a service environment.**

The Essential Eight technologies make up PwC's shortlist of technologies with the highest potential impact on businesses. Cloud computing and AI are seen as two technologies that enable the existence of the Essential Eight. According to surveyed companies, the IoT is undoubtedly the most promising one for service supply chains. Next to the IoT, new customer interfaces and AR/VR are perceived as the best emerging technologies to boost service execution, planning and the customer experience.

Products are increasingly equipped with smart sensors. The IoT allows for constant monitoring of product performance and maintenance requirements, creating a wealth of real-time and trustworthy information that's captured directly. This provides an opportunity to change the business model and make efficient use of the newly available information, ranging from optimising the product itself to increasing uptime and proactively proposing services to your customers like maintenance and product replacement. Advanced D&A can reveal signals that predict product failure and allow for corrective actions before the failure occurs. Via control dashboards, the performance and settings of the machine park can be

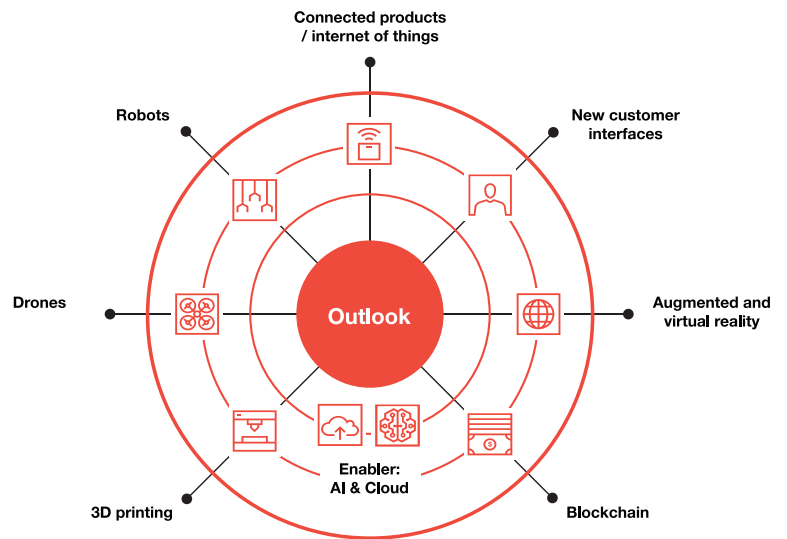


Figure 7. PwC's Essential Eight technologies

monitored and adjusted remotely to avoid a breakdown. This allows service contracts to include critical KPIs such as uptime, output performance and intervention time, which require commitment from the service provider and ultimately help foster strong relationships with customers. D&A can generate a competitive advantage for companies, as it enables strategic business partnerships.

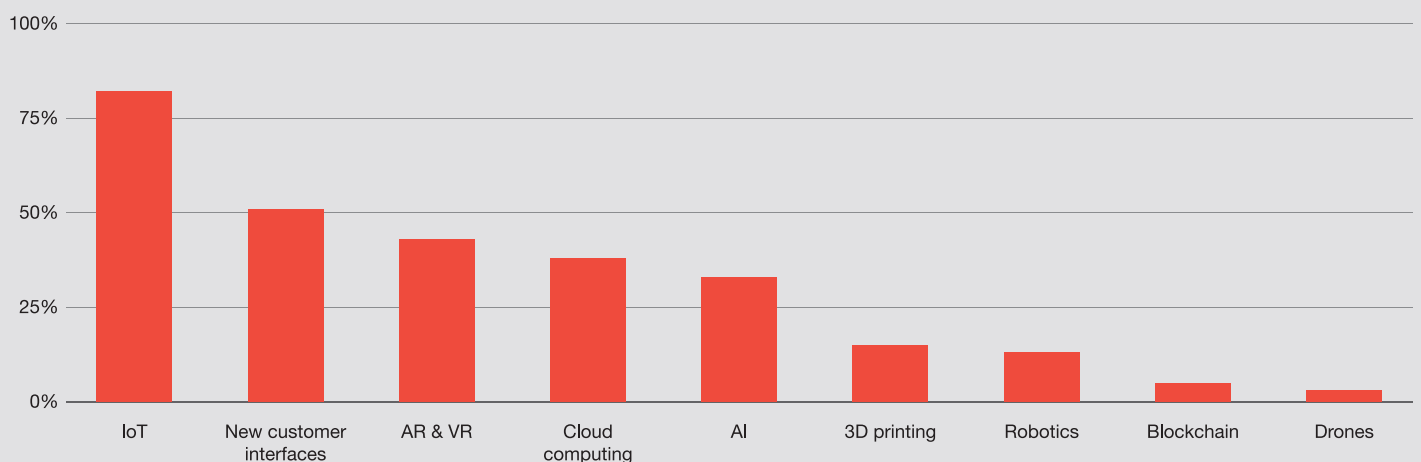


Figure 8. Technologies with the most potential in service supply chain

Evolving into an efficient service supply chain with running IoT processes is a long and challenging path. **More than half of participants perceive change management as a critical enabler to making new technology implementations a true success, yet 42% also expect to face challenges regarding the application of the technologies to their business.**

Besides the IoT, **new customer interfaces are being increasingly adopted in the market.** These are the base for innovative tools to communicate with clients, enabling an improved customer experience and enhanced service execution. For instance, chatbots can answer standard or frequently asked questions that are typically handled by the first-line customer service support in such a way that customers hardly notice they're not communicating with an actual human being.

Readily available information such as delivery requests and order tracking can be communicated in an easier and more transparent way than in the past. Combined with machine learning, this kind of customer interface will become more 'intelligent' by the massive assimilation of information. Natural-language interactions powered by machine learning's slowly becoming the default standard of online interaction, therefore ensuring a direct connection between human users and computers. This transparent, innovative and on-demand communication improves the customer experience journey, leading to increased retention. **The results of our survey clearly indicate that the biggest challenges companies experience when implementing such solutions are the investment in the technology itself and the user adoption rate after implementation.**

Our Service@Core survey also shows that **artificial reality (AR) and virtual reality (VR) also have a high potential to support the service supply chain**, especially in the domain of service execution for AR and training for VR.

AR, for example, can support field technicians with repairs. Manuals or holographic structures can provide real-time information, especially in complex environments. Technicians can remotely ask for support and more experienced profiles could visually guide them to assess the problem and undertake the steps for repair.

VR, on the other hand, is well suited for service training and test simulation purposes. It can generate realistic simulations at a fraction of the cost of building physical scenarios, providing low-cost alternatives to extending field engineers' experience. Participants in the survey believe that an increased use of these two technologies can mainly help to boost workforce satisfaction and improve the efficiency. The main challenge foreseen by 58% of the companies interviewed is – again – the struggle to convince end-users to adopt these technologies.

Finally, 3D printing, a technology that creates three-dimensional objects based on digital models by layering or 'printing' successive layers of materials, has the potential to disrupt the way spare parts are produced. When a customer needs a specific replacement part, it can be difficult for a supplier to provide the required piece while maintaining a high service level and keeping inventory holding and production costs to a minimum, especially for slow-moving spare parts. Even though it's not immediately recognised by our participants, we believe 3D printing will enable companies to enhance their service offering in the eyes of customers thanks to a reliable spare parts supply business.

3.5. Human capital

Most companies that participated in the survey have a considerable proportion of their employees allocated to service activities. Of our respondents, 74% have at least one employee in three dedicated to service-related tasks. Having the appropriate skilled resources working for service is key to fulfilling customers' requirements and to performing in accordance with predetermined SLAs. **Emerging technologies and the increasingly complex environment in which service companies need to operate have changed the required competencies of people active in services. The war for digital talent is the main driver to upskill the existing workforce.**

Automation is threatening certain existing jobs, and there's a severe shortage of qualified talent for the new digital economy. Together, these trends have broadened the gap between the skills people have and those needed for the digital new world. There's an urgent need for service organisations to fix this growing problem. Not only is there an upcoming shortage of technically experienced staff due to the aging of current staff in many firms, but also the reluctance of digitally skilled new graduates to choose a service job is a hurdle many companies face in attracting new talent. To secure their digital fitness, companies need to accelerate the digital upskilling of their own administrative and technical staff and field engineers.

The jobs related to service are changing, and so are the service profiles organisations are looking for. Companies need to be ready for this transformation. Of those that participated in our survey, 77% confirm that the service technician profile is changing. This is echoed in PwC's 22nd Annual Global CEO Survey, which states that 79% of chief executives around the world assert they face

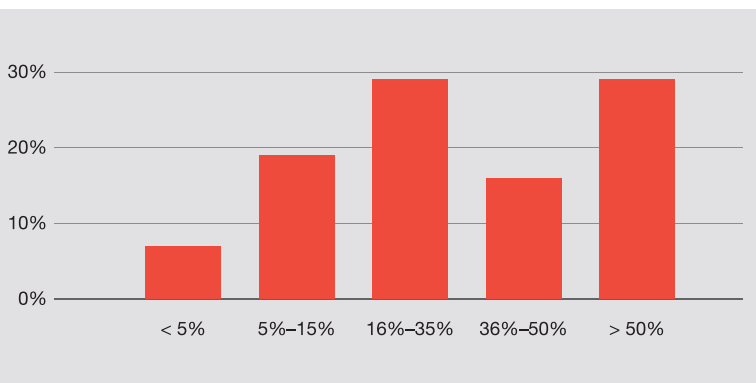


Figure 9. Percentage of the total staff in your organization in services related jobs

a lack of key skills that threatens their future business growth. As mentioned, **companies must either hire new profiles with the right skillset, or upskill their existing workforce.** Since the war for talent is more brutal than ever, the importance of training your existing employees cannot be underestimated. Of our survey respondents, **60% prefer cross-training and upskilling existing employees over hiring new profiles.** This approach has a positive effect on employee retention and motivation rates, since they feel more empowered and valued by their employer.

There are various training methods available, both innovative and traditional, and companies need to assess which is most appropriate in a given context. Based on our survey, the preferred training methods companies use in a field service environment vary from the use of service manuals or 'on-the-job training' to instructor-led classroom training over e-learning with remote assistance and VR features. The use of more innovative technologies such as AR- and VR-aided training can bring significant advantages to staff development. For instance, field technicians who are located all over the world can be trained in a standardised and more cost-efficient way than performing training with physical assets. In practice, however, the use of these digital training methods is still limited, with only two percent of our participants indicating they use technologies like AR and VR for training purposes.

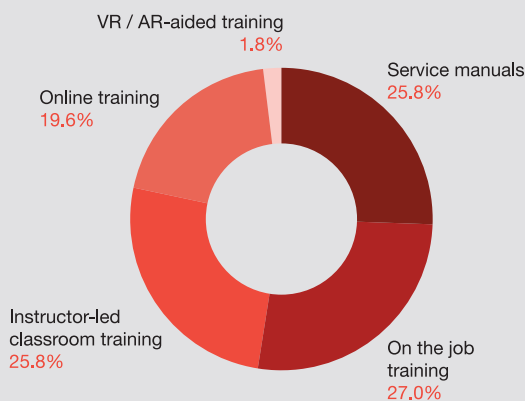


Figure 10. Current forms of field service training

The workforce transformation that we just described is a critical enabler in a company's journey towards service maturity. Without preparing your workforce for the future, the initiatives in the other four dimensions we described won't gain traction in the organisation. On the other hand, if your organisation has skilled employees with an open mindset, the road towards becoming a service leader is wide open. No matter how digital the future of service becomes, the human aspect of providing services will remain a critical factor.



4. How can PwC help?

The first step in growing your service maturity is to assess how mature your company is today and in which of the five dimensions your major improvement opportunities lie. We've assigned the key elements from the previous chapters to the different stages of the maturity model, as shown in the table below. Note that this is merely an example; the list of improvements and keystones is non-exhaustive.

Our team of experienced specialists can guide you on your way to the service supply chain of the future. We have specialists in each of the five dimensions, and we can help you grow as a company in each.

A true service offering change or a complete service business model transformation requires not only a lot of dedicated resources, but also the necessary expertise. That's where PwC brings you added value.

Our clients face multiple challenges, want to implement new ideas and seek advice. We provide them with comprehensive support and develop customised, end-to-end solutions with the greatest possible benefits.

For every client – from global players to family businesses or public sector authorities – we bring our entire arsenal of skills to the table: experience, industry knowledge, specialist expertise, quality assurance, innovative spirit and the resources of our network across 157 countries.

We're committed to fostering a close collaboration with you. The better we know and understand your business, the more tailored support we can provide.



	Maturity level 1 Informal	Maturity level 2 Structured	Maturity level 3 Integrated	Maturity level 4 Holistic	Maturity level 5 Cooperative
Business model	<ul style="list-style-type: none"> Reactive service based on customer requests High competitive environment Fragmented service organisation 	<ul style="list-style-type: none"> Service as a support for sales Basic service offerings as add-ons to product offerings Service is often part of other business functions 	<ul style="list-style-type: none"> Service portfolio meets customer's needs throughout the lifecycle Service business unit with own profit and loss statement Basic customer segmentation 	<ul style="list-style-type: none"> Advanced service offerings High customer retention Service as a cross-enterprise process in which all divisions participate Multiple service offering solutions 	<ul style="list-style-type: none"> Service as part of a total value offering Long-term customer relationships Service activities as an independent organisation with its own C-level management Integrated, customised service value offerings
Planning	<ul style="list-style-type: none"> Reactive planning Manual spreadsheet planning tools Basic/intuitive setting of planning and inventory parameters (min-max, etc.) 	<ul style="list-style-type: none"> Reactive planning Empirical setting of planning and inventory parameters (e.g. reorder points, safety stock, EOQ, etc.) Basic short-term forecasting 	<ul style="list-style-type: none"> Preventive planning Standard medium-term forecasting 	<ul style="list-style-type: none"> Predictive planning Advanced forecasting with basic collaboration between supply chain partners 	<ul style="list-style-type: none"> Prescriptive planning Advanced forecasting with extensive collaborative planning throughout the entire supply chain
D&A	<ul style="list-style-type: none"> Capture historical data (historical parts consumption, historical customer interactions) Describe historical data and events 	<ul style="list-style-type: none"> Capture observed customer behavior (historical parts consumption, historical customer interactions) Describe historical data and events and identify root causes 	<ul style="list-style-type: none"> Use data to compare multiple scenarios to find the best performance under given constraints 	<ul style="list-style-type: none"> Use data to predict trends or future events 	<ul style="list-style-type: none"> Use data to recommend one or more courses of action and show the likely outcome of each decision
Emerging technologies	<ul style="list-style-type: none"> No interest in emerging technologies Not part of the strategic agenda 	<ul style="list-style-type: none"> Not implemented No proof of concept (POC) planned Awaiting initial results of other companies' POCs Engineering does not incorporate new technology capabilities in new product releases 	<ul style="list-style-type: none"> POC planned No large-scale projects No collaboration with technological innovators 	<ul style="list-style-type: none"> First implementations with selected technologies based on POC First investments made Clear mission to apply selected technology as a differentiator Limited interest in collaborating with technology niche players 	<ul style="list-style-type: none"> Innovators, market leaders Large budget Top priority Multiple programmes in place Partnerships with innovative technological companies
Human Capital	<ul style="list-style-type: none"> No digital skills No training on new technologies or competencies No recruitment of new skills (digital) Training via service manuals 	<ul style="list-style-type: none"> Regular use of traditional training methods Raising awareness of new technologies 	<ul style="list-style-type: none"> Active investment in upskilling current workforce Frequent use of traditional and more innovative training methods 	<ul style="list-style-type: none"> Frequent use of innovative training methods Combination of upskilling programme with search for digital talent 	<ul style="list-style-type: none"> Frequent use of innovative training methods Top performer in the war for talent High employee retention

5. Conclusion

When companies want to go to the next level in offering service solutions, service needs to be considered a core business development driver that differentiates them from competitors. This ‘Service@Core’ approach acknowledges a customer-centric mindset and the appropriate service solutions as the major revenue generators of today and tomorrow. Therefore, a complete service business model transformation needs to involve all stakeholders and departments such as sourcing, marketing, sales, operations and customer service. It’s key that everyone understands the value of the customer at any point in time. Not only at the moment of the purchase, but throughout the entire life cycle of the customer relationship.

Companies’ success in their service offerings will be reflected in the overall customer experience. As the customer experience represents all interactions between company and consumer, the best companies will be those that offer a seamless service solution adapted to customer expectations. The service leaders of tomorrow will be companies that are proactive, responsive, agile and performant in their service delivery at all times. Embracing and applying new digital technologies is inevitable to enable this growth in service maturity. To protect their market share, companies will have to find a way to engage the customer to invest in a strong partnership. There’s an increased willingness from customers to share information, which fosters collaboration and interaction.

Our survey found a strong correlation between the maturity of service offerings and the share of revenue obtained

through service-related sales. The correlation between the maturity of the service business model and the profit margin on services, however, is more ambiguous. This can be explained by making the distinction between short- and long-term profit. Short-term profit is mainly created by spare parts consumption, or the actual execution of the maintenance or repair job. As companies grow in service maturity, profits will increase as well.

First of all, higher customer satisfaction and retention, stronger brand image, increased market share, etc. will lead to higher profits in the long term. Second, as the organisation becomes more service mature, different types of service revenue models can be established. For example, service can be organised through service contracts that embed different types of KPIs, such as output performance and intervention speed, to guarantee better uptime performance and improved output performance for the customer.

As a consequence, revenue and profit are no longer collected at the sale of the product or the completion of the service, but are based on output or the pay-per-use principle. The whole point of maturing your service offering is the establishment of long-term customer relationships where you’re no longer seen as one of many vendors, but as a total solution provider that’s a trusted advisor and perhaps even a strategic business partner. This change in customer perception fosters higher customer retention, therefore increasing profit in the long term.

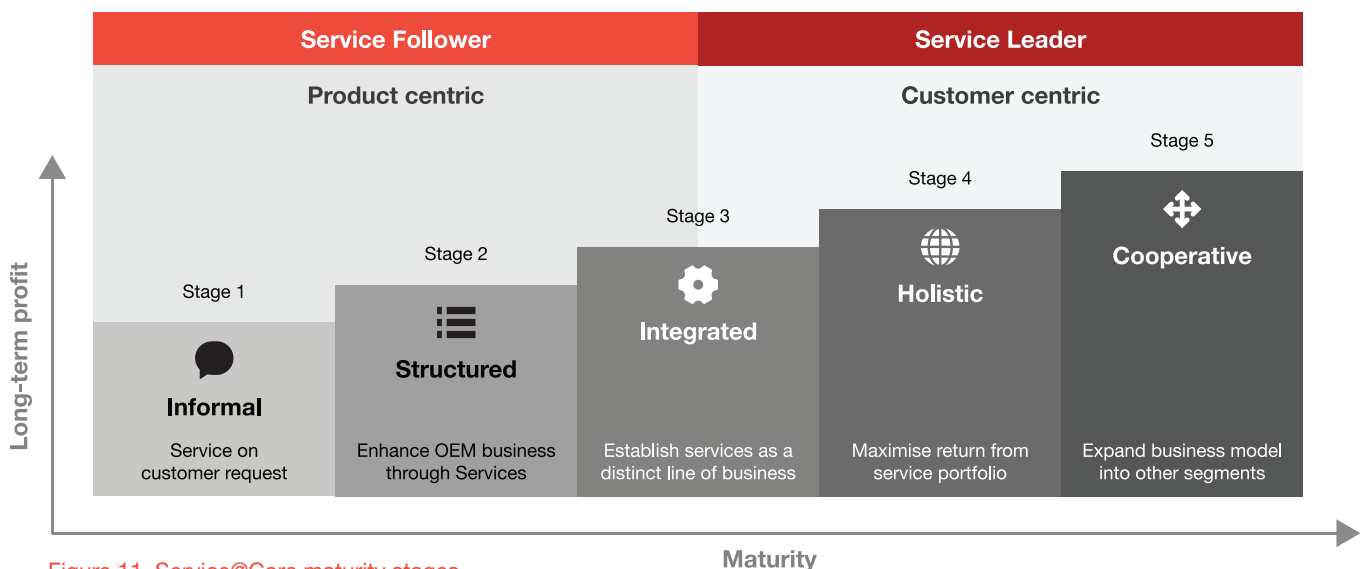


Figure 11. Service@Core maturity stages

6. About the survey

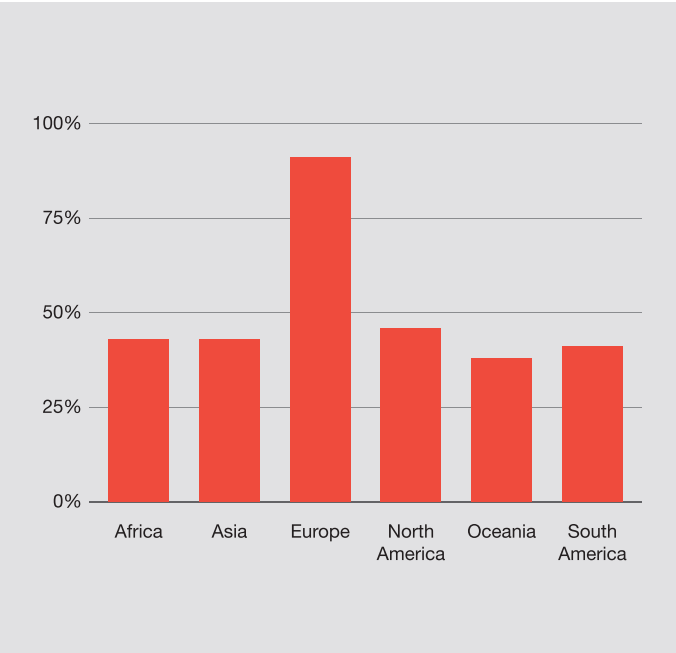


Figure 12. Where does your company offer services?

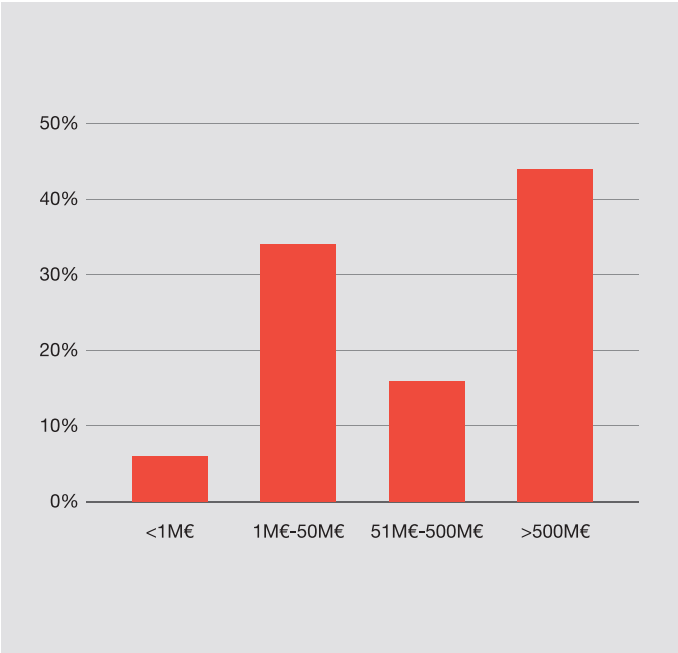


Figure 13. What was your company's annual revenue in the last year?

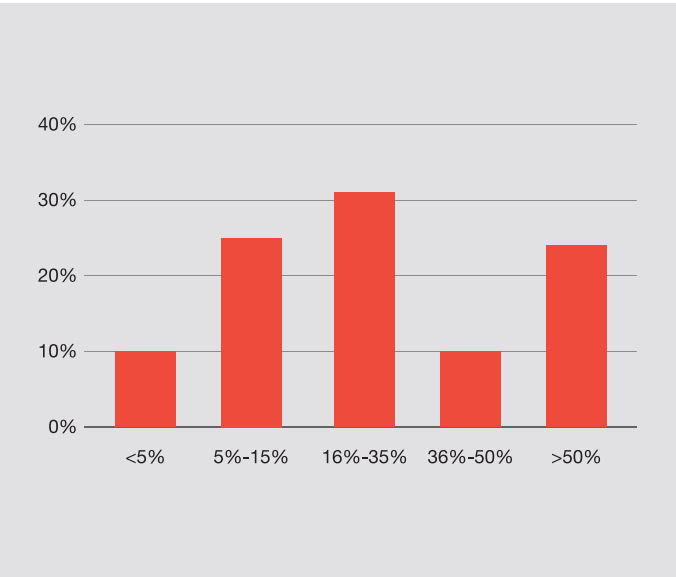


Figure 14. What percentage of your total business revenue is service related?

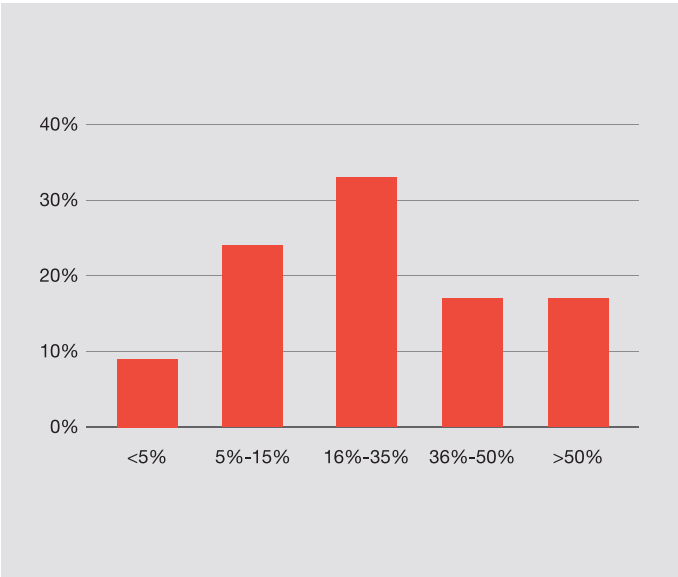


Figure 15. What is your gross profit margin on your services?

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