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The Impact of Digital Transformation on Service Organizations

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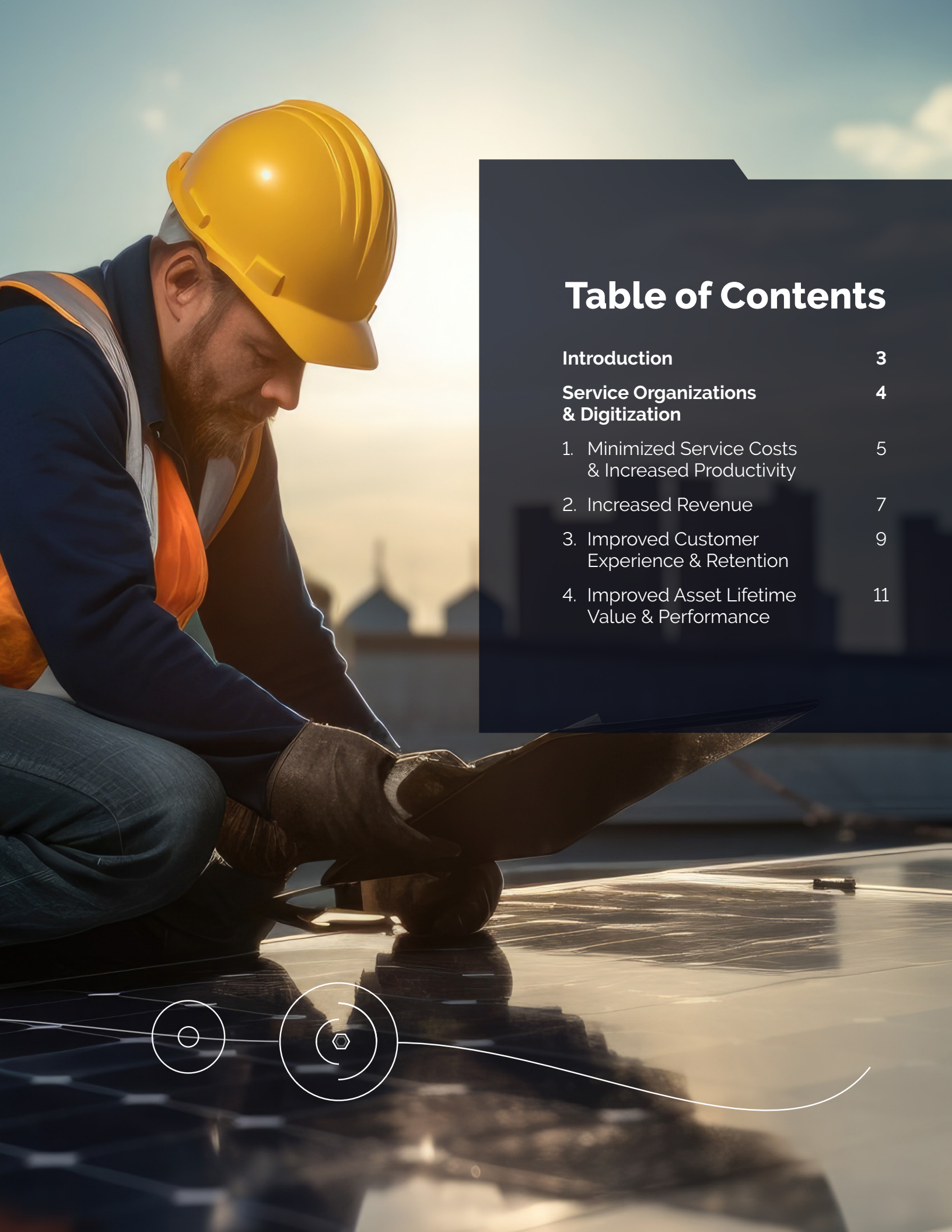

Table of Contents

Introduction

Twenty years ago, organizations began to take a fresh, customer-driven approach to business. Enabled by increased computing power and the growing predominance of technology, companies across all industries began to embrace the digitization of business processes. The trend became known as "digital transformation."

Today, the potential extent of a digital transformation has expanded to include virtually all processes and operations of the business. New and evolving technologies like Artificial Intelligence (AI) and machine learning (ML), connected assets and the Internet of Things (IoT), and cloud computing have been incorporated into the digital transformation toolkit for their ability to better leverage data, improve workflows, enable agile responses to market changes, improve data-driven decision making, and reveal new business opportunities.

While many organizations are just now beginning to implement digital transformation programs, a few have already made substantial progress. Even though these early adopters still have work to do, their achievements thus far are sufficient to illustrate the significant benefits derived from a digital transformation and to hint at the potential advantages of a total transformation.

According to Boston Consulting Group, if all financial institutions worldwide were to reach the highest level of digital maturity, "they could collectively grow revenues by **$100 billion per year** for the next decade." That's just one industry-specific example of why organizations spend millions annually in the pursuit of digital transformation.

This report covers the current state of the digital transformation inside the service industry, with a focus on those in the heavy equipment, industrial and medical device manufacturing, and energy sectors. We explore how these trailblazers are leveraging digital technologies and the outcomes they've achieved thus far in their implementations.

While the customer results cited in this report are anecdotal, they are reflective of a larger population of global companies with whom ServiceMax has strong business relationships.* The examples herein are fortified with quantifiable numbers to illustrate the results being achieve

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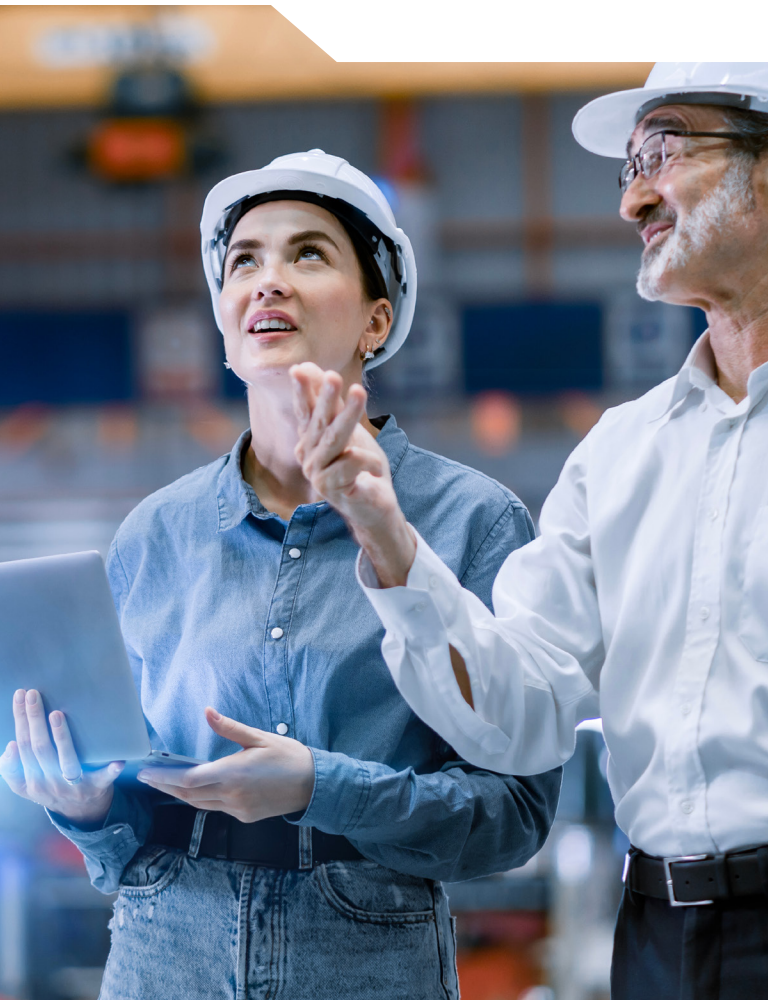
> Boston Consulting Group

*ServiceMax is proud to partner with leaders from many industries and has published individual digital transformation stories on its website. All customer facts and statistics are a part of verified case studies that can be found on servicemax.com. For more information on thought leaders at ServiceMax customer teams, reach out to Servicemax.customermarketing@ptc.com.

Service Organizations & Digitization

Many service organizations have leaned into digital technologies that address the inefficient use of people and parts and, in doing so, have minimized service costs and improved resolution times, workforce productivity, and first-time fix rates.



While digitization has proved valuable across all industries, this report is focused on its impact on the industries where equipment and asset service are prevalent. Service organizations have adopted digitized platforms for myriad reasons: to support the functions of their service and support workforces, empower sales and account management, to manage service contracts and assets, to leverage mobile functionalities for work execution, and so on. And digitization has given organizations valuable insights not only for the service department, but also for research and development (R&D), supply chain, sales, finance, marketing, and executive teams.

By focusing on the achievements of digital adopters within the service sector, we can analyze and measure real-world outcomes to illustrate how digital transformation technologies have the potential to impact businesses. The results are encouraging, and we have grouped them into four categories that speak to the results service organizations can expect to see:

1. Minimized service costs and increased productivity
2. Increased revenue
3. Improved customer experience and retention
4. Improved asset lifetime value and performance

In general, specific benefits within these categories begin to emerge early in the digitization process. Companies do not have to complete their digital strategies to experience positive outcomes—they routinely experience value with each step forward. This incremental success has acted as the main driver in pushing the process continually forward.

1. Minimized Service Costs & Increased Productivity

Amid rising operational, labor, and material costs, combined with constantly changing market conditions and intense pressure to improve service efficiency and productivity, services departments must now reassess the entire value chain to improve processes, incorporate new innovations, and enable fast and easy access to information.

While legacy systems may do an adequate job of capturing key data points, few collate and package the information in a way that's easily accessed and leveraged. This leaves technicians in the field (among other roles in the organization) disconnected from the information they need to execute a job in a timely, cost-efficient matter, and impedes attempts at driving field productivity and profitability.

In fact, service organizations face many issues that increase the cost of providing services and limit gains in productivity.

These center mainly around the inefficient use of people and parts and the organization's inability to:

- Incorporate preventive maintenance programs and tools effectively to resolve problems and issues before they escalate.
- Enable customers to manage and view service information to support self-service initiatives.
- Remotely triage and resolve situations prior to technician dispatch.
- Have a clear line of sight into critical asset and entitlement data to ensure the best path of resolution.
- Ensure the best-fit technician with the right skills and parts is available and selected for work.
- Ensure technicians have up-to-date information, knowledge, and resolution tools.
- Ensure technicians and other service workers can effectively capture necessary information to reduce time-consuming and error-filled paperwork.

To solve these challenges, many service organizations have leaned into digital technologies that address the challenges above and, in doing so, have minimized service costs and improved resolution times, workforce productivity, and first-time fix rates. These tools streamline the management of service work as well as tasks associated with preventive maintenance, parts management, and contract and entitlement management.

They also enable the service organization to develop a deeper understanding of field performance metrics and act on that data to increase productivity.

The following organizations have leveraged field service management software as part of their digital transformation strategy to reduce service costs and increase productivity:

GE Power

GE Power

GE Power's digital strategy involved implementing greater efficiencies around the planning and scheduling of over 6,000 field technicians, improving their effectiveness on the job, and decreasing their reliance on contract staffing. GE Power Services experienced significant outcomes.

7%
INCREASE IN TECHNICIAN PLANNING EFFICIENCIES

$5M
SAVINGS THROUGH THE MORE EFFICIENT DISPATCHING

$30M+
TOTAL SERVICE COST SAVINGS OVER 5 YEARS

Pitney Bowes

pitney bowes

Pitney Bowes implemented a digital strategy to ensure their technicians had clear visibility into customer installations; simplify access to accurate parts information, reporting and consumption; combine disparate ticketing systems into a unified CRM system; and minimize the costs associated with technicians in the field.

Over a two-year period following their digital transformation, results included:

$250K
DECREASE IN COSTS ASSOCIATED WITH FREIGHT EXPENDITURES

$4.7M
IN SAVINGS THROUGH THE REDUCTION OF INVENTORY

52%
REDUCTION IN THE NUMBER OF BACK ORDERS

$800K
DECREASE IN REVENUE LEAKAGE AFTER YEAR ONE

Solta Medical

Solta Medical implemented a digital strategy to integrate customer and product data into one system, increase visibility into customer accounts to support customized sales and marketing programs, upgrade legacy systems and manual processes, and make customer cases, warranties, customer history, contracts, entitlements, and SLAs easily tracked and visible to employees.

2
LEGACY SYSTEMS ELIMINATED

50%
REDUCTION IN AVERAGE REPAIR TIME

How to lower service costs & boost productivity

To maximize service resource utilization and make work more efficient, companies are connecting traditionally disparate parts of their service organization to allow for a more complete view of work that needs to be done and the resources needed to complete that work. Therefore, these organizations are adopting solutions that help determine and triage the appropriate work need while filtering technician skills, expertise, and other factors to match resources to the work required, increasing effectiveness on the job and decreasing the time spent on each service call.

Organizations are also investing in tools to reduce the administrative burden on their service workers in looking for work or asset-related information that already exists within their systems. Finally, the integration of service parts inventory management and work execution is being pursued to significantly improve fill rates, reduce parts waste, and ensure the right resources land on the customer site the first time.

While the results seen by GE Power, Pitney Bowes and Solta Medical may seem far off for companies at the beginning stage of digital transformation, they aren't that out of reach when you consider the everyday ways digitization impacts members both inside and outside of the service organization.

If we focus solely on technicians, digitization assists by:

- Enabling them to be the hero onsite, arriving with the right parts and skills to repair the asset on the first visit.
- Providing them with smart checklists that ensure all safety measures are taken, reducing HSE risks.
- Reducing the time spent on navigating non-value-added information and paperwork.
- Enabling them to review overall asset trends and service history to determine the right path to resolution.
- Surfacing appropriate resolution tools and parts information when needed to ensure improved work completion.

If we turn our attention to supply chain managers, digitization assists by:

- Tracking actual parts usage and consumption to support forecasting of future need and to eliminate excessive inventory.
- Bundling shipments of high volume/high demand parts as determined by established stocking and inventory levels.
- Providing live demand signals for service part needs based on scheduled reactive or preventive service visits.
- Viewing inventory across all service and customer locations to determine net new part ordering quantities.
- Understanding part return and refurbishment requirements to augment inventory planning.

2. Increased Revenue

Among service organizations, the most frequently cited reason for implementing a digital strategy was to drive additional revenue. In a macro-environment characterized by increasing global competition, disruptive new technologies, executive pressure to improve margins, and the need to differentiate products and services, service leaders have been searching for innovative ways to generate revenue.

To achieve this growth, digitization has been used to address numerous challenges primarily focused on addressing the organization's inability to:

- Incorporate service entitlement related commitments into the service workflow leading to revenue leakage.
- Accurately capture and document service work leading to the giveaway of free service and parts.
- View available installed base, executed service history, and attached service plans to identify upsell potential.
- Monitor and analyze key performance indicators around contract attach, renewal, and profitability to support account management and sales engagements.
- Connect service actions and recommendations with sales, marketing and account management stakeholders to bring together asset-centric and customer-centric opportunities.

Over the last decade, countless service organizations have implemented a digital approach to remove revenue-oriented roadblocks and enable new revenue growth, both service-driven and enabled. As a result of implementing digital strategies, some early adopters have now effectively transformed their services teams into revenue growth engines.

Schneider Electric

Schneider Electric implemented a digital strategy to support and maintain a complex legacy customer base while extending their sales focus to include the tracking and identifying of additional service revenue opportunities within that base. Over two years, Schneider Electric enjoyed significant results.

€65M IN ADDITIONAL UPSELL/CROSS S ELL REVENUE	8% INCREASE IN WON OPPORTUNITIES	500% INCREASE IN NUMBER OF SERVICEABLE ASSETS TRACKED
3 Point INCREASE IN FIRST TIME FIX RATE	7 Point RISE IN VIP CUSTOMER NET PROMOTER SCORE	70% OF PAPER-BASED PROCESSES ELIMINATED

GE Healthcare

To advance customer service and improve the patient experience, GE Healthcare embarked on a digital transformation that would replace paper-based, manual scheduling systems, expand their knowledge of products installed at customer sites, and maximize productivity. GE Healthcare improved field service productivity at every level of the service delivery process and increased revenue.

Equipment Supplier in New England

With half their employees residing in the service department, this automotive equipment supplierunderwent a digital transformation to address multiple pain points by providing field technicians with access to work orders, customer history, scheduling, and reporting information, as well as a single messaging app for improved field collabor ation, all available through company-issued mobile devices. The result was increased field service revenue.

$10M
INCREASE IN NEW SERVICE REVENUE OVER 3 YEARS

30%
INCREASE IN OVERALL SERVICE REVENUE

5%
INCREASE IN AVERAGE REVENUE DRIVEN BY TECHNICIANS

7 days
IMPROVEMENT IN THE SPEED OF INVOICING CUSTOMERS

How to drive revenue

For many asset-centric organizations, large percentages of revenue and profitability are derived from services, making it necessary for sales, service and other business departments to act in unison. This is achieved through the capture of relevant data around the asset and the surfacing of relevant asset-centric insights that can be acted on by commercially minded teams. The digitization of business processes to allow for a more complete view of the asset and its attached commitments has generated strong inter-departmental synergy that creates revenue opportunities and improves win rates while enabling ideation and execution on the creation of new services business models.

The primary revenue-focused stakeholders impacted by digitization are service and sales. Digitization assists the service team by:

- Ensuring that the work being done is being validated against warranty or contractual commitments.

The digitization of business processes to allow for a more complete view of the asset and its attached commitments has generated strong inter-departmental synergy that creates revenue opportunities and improves win rates while enabling ideation and execution on the creation of new services business models.

- Allowing for accurate and timely billing of transactional (time and material) work.
- Providing service team members with access to relevant installed base data to proactively recommend solutions to customers.
- Enabling technicians to easily capture cross-sell and upsell leads for the sales-focused teams.
- Capturing accurate cost and margin data on all service work to determine appropriate coverage models for customers.

Digitization assists the sales team by:

- Providing access to detailed asset and service information that can be used to justify or validate a service relationship.
- Enabling real-time customer status updates, helping sales quickly address new opportunities.
- Providing complete visibility into upcoming commercial events such as warranty or contract expirations, allowing sales to proactively target customers with extended warranties or other service products.
- Surfacing profitability and margin data on service work to bolster the case of additional service contracts and programs.
- Recommending solutions (parts, services) for customers based on the profile or life of their asset.
- Streamlining the quote to cash process for service offerings.

3. Improved Customer Experience & Retention

Customer retention rates are one reflection of a positive customer experience and relationship. While improving customer service is a major contributor to increased customer retention, there are other actionable roadblocks and challenges that impact net retention. For example, contract renewal teams find their jobs unnecessarily challenging when they must traverse disconnected databases across field services organizations. As one executive put it, "Each entity had its own database, and to perform any kind of analytics, we had to extract information from all of them. It could take a month to conduct the analysis we needed."

Improving customer retention is therefore a two-pronged approach:

1. **Deliver on customer expectations and improve the overall experience:**

- Reduce asset downtime with proactive and efficient service processes.
- Deliver on contractual customer commitments and expectations.
- Make it easier for customers to access relevant asset and service-related information.
- Deliver trusted guidance that allows the customer to minimize disruptions and overall maintenance and operating costs.

2. **Remove the obstacles that impede the retention and renewal process, including:**

- Disparate and siloed data storage systems that surface incomplete information.
- Limited visibility into critical data and service events.
- Limited data to justify service and contractual relationships.
- Disconnected processes that require significant man-hours to ensure customer inquiry or resolution management.
- Lack of necessary automation connecting relevant stakeholders in the retention lifecycle.

A digital transformation that targets process and information inefficiencies can greatly magnify the reach of those resources that are responsible for customer retention and renewal. In the process, a successful digital initiative must be focused on surfacing the right customer and asset information to drive proactive service experiences that improve customer value.

The following companies have taken this approach:

Lowry Solutions

Lowry Solutions embarked on a digital transformation to better serve their customers, scale the business, and obtain clear visibility into key performance indicators and financial metrics with a consolidated, cloud-based system that connects sales and service via a 360-degree view of the customer relationship.

17%
INCREASE IN CONTRACT ATTACH RATES

14%
INCREASE IN CONTRACT RENEWAL RATES

Kodak Alaris

To consolidate dozens of disparate systems, create standardized global processes, and increase service efficiency, Kodak Alaris undertook a digital transformation centered around a cloud-based field service management platform that would empower technicians in the field, achieve a best-in-class first-time fix rate, grow the business, and ensure an exceptional customer service experience while lessening the pressure on their IT department.

80%
OVERALL RENEWAL RATE

141
DIFFERENT IT SYSTEMS THAT WERE CONSOLIDATED

2 days
LESS TIME REQUIRED TO ADD A PRODUCT TO A SERVICE CONTRACT

MilliporeSigma

MilliporeSigma implemented a digital strategy across 40 countries to create one global unified field service system, gain visibility of their installed base for their entire organization, improve customer service, and increase customer retention rates. Today, the service organization is more efficient and improvements in its first-time fix rates are rising, translating into increased customer satisfaction and customer renewal rates.

94%
CONTRACT RENEWAL RATE AVERAGE

100%
IMPROVEMENT IN NPS SCORE

1 click
ACCESS TO UTILIZATION & CUSTOMER SATISFACTION DATA

400%
RISE IN CONTRACT ATTACH RATES AFTER THE FIRST YEAR

36
KPIS NOW MEASURED IN REAL TIME

How to improve customer experience & retention

In the pursuit of improved customer retention, customer support and field service teams have yielded the maximum benefit when it comes to their digital initiatives.

> "Each entity had its own database, and to perform any kind of analytics, we had to extract information from all of them. It could take a month to conduct the analysis we needed."

Digitization assists the field service team by:

- Improving the understanding of asset performance and condition to support the development of proactive and predictive service models.
- Creating new avenues and portals of engagement for customers to acquire and augment relevant service information.
- Surfacing the right content to critical field service stakeholders to ensure effective and efficient resolution.
- Raising the right level of insight to allow teams to adjust their resource allocations and commitments.

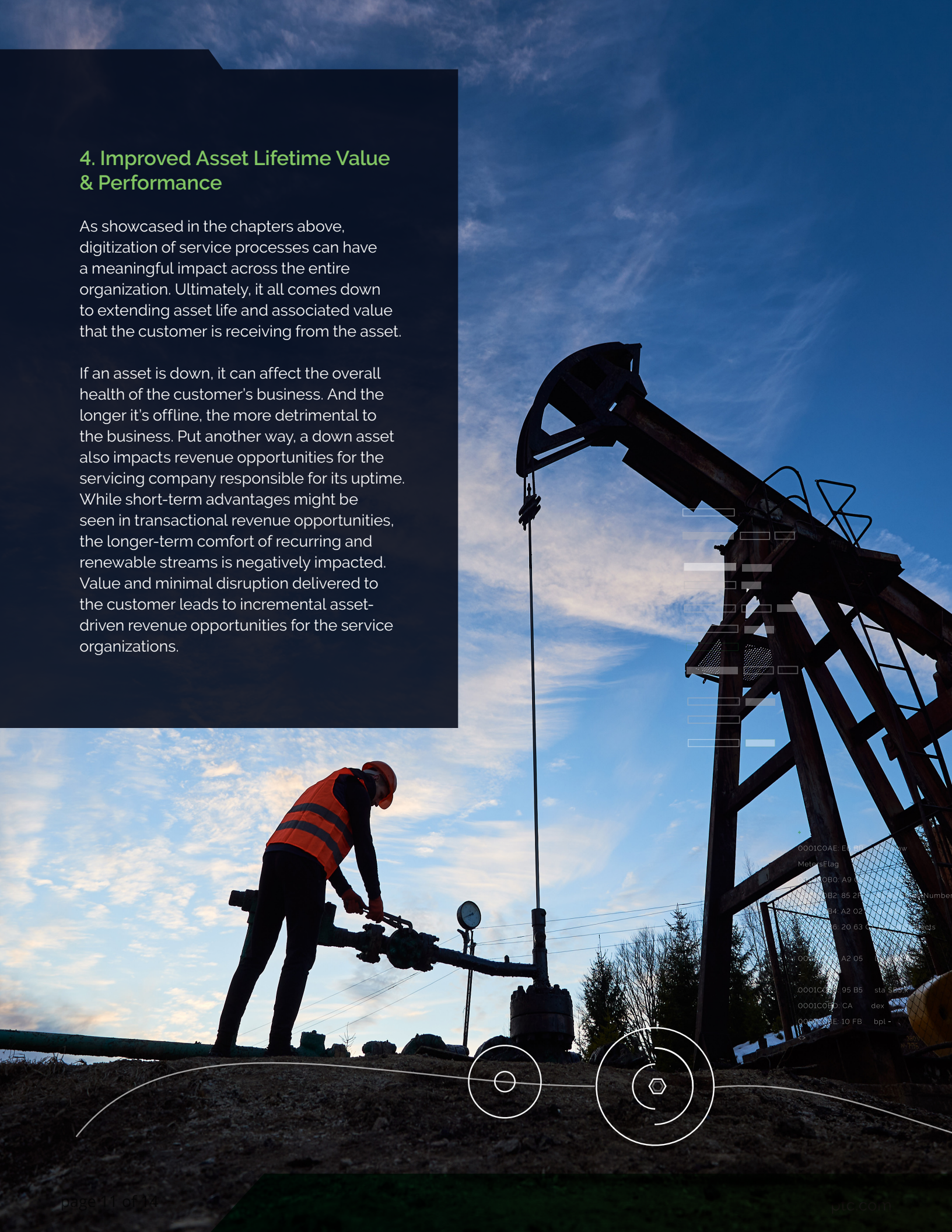
For those in customer support who are tangential to field service but not always aligned, digitization assists by:

- Providing real-time visibility into relevant service, customer, and asset information to maximize issue resolution with minimal routing.
- Highlighting the critical and recommended next best step or resource that will maximize the probability of resolution.
- Determining the criticality of a customer's request based on their contractual, commercial, or other relationship.
- Routing a customer inquiry to the right service channel or mode to achieve maximum resource utilization while supporting specific customer requirements.

4. Improved Asset Lifetime Value & Performance

As showcased in the chapters above, digitization of service processes can have a meaningful impact across the entire organization. Ultimately, it all comes down to extending asset life and associated value that the customer is receiving from the asset.

If an asset is down, it can affect the overall health of the customer's business. And the longer it's offline, the more detrimental to the business. Put another way, a down asset also impacts revenue opportunities for the servicing company responsible for its uptime. While short-term advantages might be seen in transactional revenue opportunities, the longer-term comfort of recurring and renewable streams is negatively impacted. Value and minimal disruption delivered to the customer leads to incremental asset-driven revenue opportunities for the service organizations.



The key to success is in optimizing the right outcomes for the customer, delivering service and maintenance in the right channel when it is needed, and making data-driven decisions to get the most out of the asset. Excessive service events that are not delivering additional outcomes for the customer can be equally disruptive and costly leading to less-than-optimal service execution. This is one reason why IoT-enabled or other real-time data capture technologies are becoming a key component of digital transformation strategies.

Many companies have made improving asset performance and longevity central to their digital transformation:

A Medical Device Manufacturing Company

This company implemented a digital strategy focused on connectivity, smart devices, and IoT technologies to help differentiate its service business, expedite field service management, and reduce or eliminate unplanned downtime. Their customers and their customers' patients now experience more efficient, cost-effective services with significantly fewer outages.

600

PREVENTIVE ACTIONS BEFORE DOWNTIME OCCURRED IN A YEAR, TRANSLATING TO UNINTERRUPTED TREATMENTS FOR 14,000+ PATIENTS

Enphase Energy

Enphase Energy expanded the replacement of a costly, in-house legacy system into a full digital transformation focused on automating processes, reducing the use of manual spreadsheets, and streamlining over 400 workflows. Enphase's digital transformation resulted in an adaptable, scalable, and flexible new system.

30%

COST REDUCTION IN IT OPERATIONS AND MAINTENANCE

How to improve asset lifetime value and performance

To extend the lifecycle of assets and improve overall performance, organizations are looking to move past reactive and time-based maintenance strategies in favor of proactive and more condition-based maintenance that effectively reduces unplanned downtime. At the crux of these strategies is the focus on improving asset visibility starting from very basic information on asset location and ownership, to improved documentation of asset actions, to real-time insight into true asset performance. All of this has to be captured and overlayed across the lifecycle of the asset to raise relevant and usable insight.

Today, IoT solutions are an integral part of an asset-centric strategy as they directly connect to the cloud, assisting in the maintenance and parts optimization by surfacing data on the status of devices. Issues are identified as they occur and are addressed as needed. This allows service organizations to minimize unnecessary site visits and parts replacements, right-size their maintenance work, lower costs, and extend the life of these assets. By pairing these solutions with digital tools, many organizations have found that the goal of achieving zero unplanned customer downtime becomes attainable.

Taking it a step further, organizations are applying asset performance management frameworks and capabilities in addition to their asset-centric service tools to monitor assets and prevent downtime-generating events before they occur. In fact, digitization has been characterized as having the potential to reduce unplanned downtime by up to 5%, decrease false alarms by up to 75%, and minimize operations and maintenance costs by up to 25%.

Moving beyond response and prevention, improved asset information and data can become a critical part of the digital thread, therefore, allowing those who design the product to adjust features, modules, and capabilities that are commonly found to impact quality and reliability. These designers can also incorporate additional design changes that improve the sustainability and serviceability of these products, thereby yielding greater benefits to customers who are both internal and external. This continuous loop of benefits is the end goal of a digital strategy and highlights the significance of the asset in supporting digital success and outcomes.

As companies leverage a digital strategy to focus on asset lifetime and performance, multiple functions of the business benefit. The benefits to the service organization are clear and documented in previous chapters. What's now measurable is the benefit to other organizations.

Digitization assists product design and engineering by:

- Allowing for easier creation and sharing of complex product-relevant data ranging from schematics to user manuals and parts lists.
- Providing real visibility into how products and their features are being utilized.
- Providing insight into how assets perform during various stages of their lifecycle.
- Enabling access to accurate failure data to help with quality and reliability analyses.
- Surfacing relevant quality information of parts and components to determine future supplier partnerships and relationships.
- Allowing for a richer collaboration between design, manufacturing, and service to ensure that serviceability and reliability become key objectives of a unified digital plan.

In fact, digitization has been characterized as having the potential to reduce unplanned downtime by up to 5%, decrease false alarms by up to 75%, and minimize operations and maintenance costs by up to 25%.

Digitization with a cross-functional point of view also assists the IT team responsible for execution by:

- Reducing customization of solutions that need to be reviewed and updated to allow for new capabilities and features.
- Reducing IT hours spent in reviewing and supporting critical security requirements of out-of-date customized solutions.
- Reduced time spent on maintaining costly integrations that impede the flow of data from one business function to another.
- Ensuring the faster inclusion and adoption of new technologies and capabilities without the need to scale IT expertise.

A cross-functional digital strategy creates a more flexible and agile IT organization that can be much more focused on addressing critical security and other vulnerabilities while extending the reach of the digital platform to take full advantage of advanced technologies.

About ServiceMax

ServiceMax, a **PTC technology**, is on a mission to help customers keep the world running with asset-centric field service management software. As a recognized leader in this space, our cloud-based software and mobile apps provide a complete view of assets to field service teams. By optimizing field service operations, customers across all industries can better manage the complexities of service, support faster growth, and run more profitable, outcome-centric businesses.

ServiceMax has helped hundreds of service organizations around the globe implement digital transformations that help to grow revenue, decrease costs and improve customer support.

To learn how we can help your organization maximize its potential, visit: **www.servicemax.com**.

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