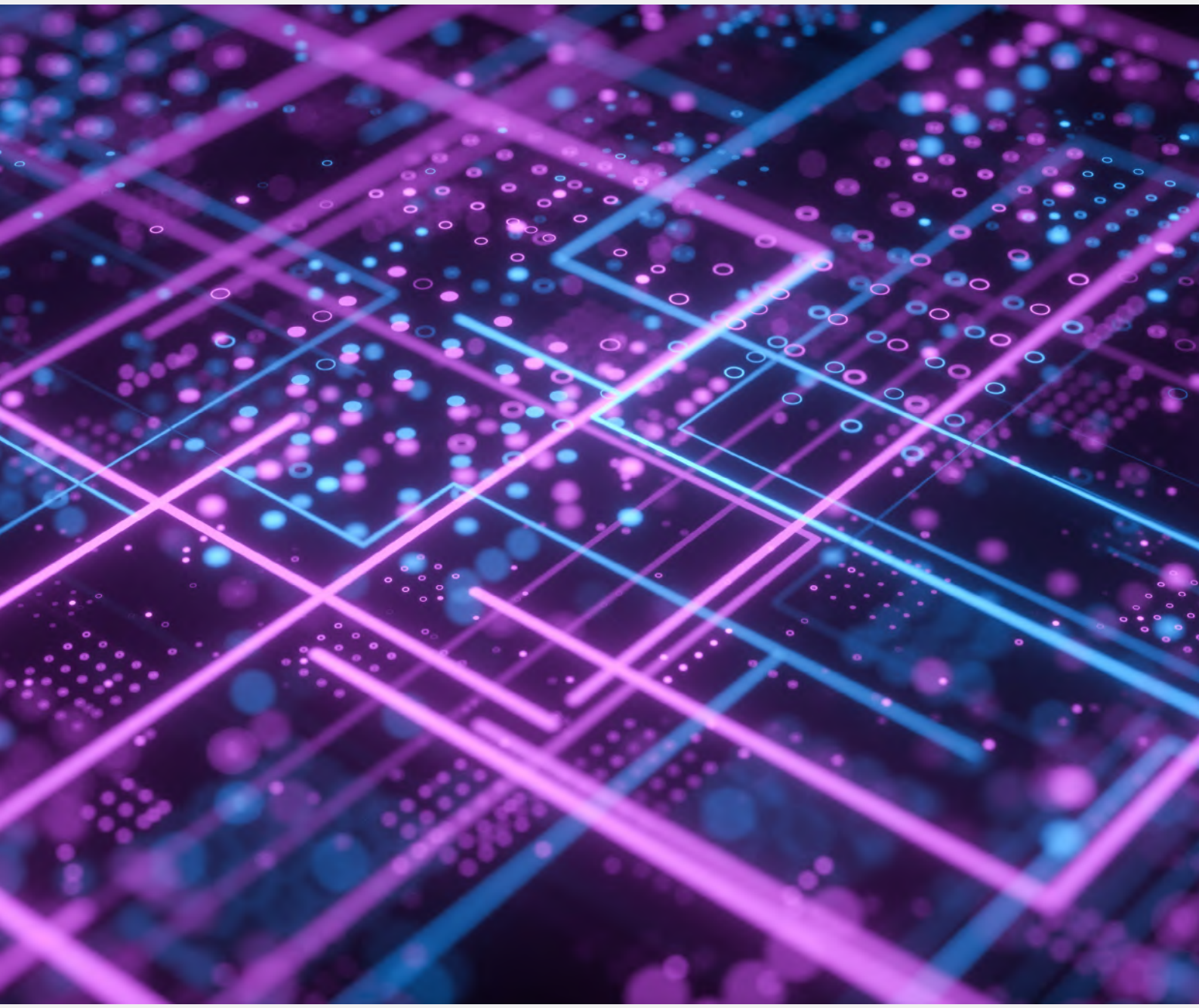
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WHITE PAPER

The Closed Loop Lifecycle: Breaking the Barriers of Traditional Aftermarket Service

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Introduction

In today's competitive landscape, manufacturers are facing numerous challenges, from global competition to price deflation and rising commodity costs. To thrive in this environment, manufacturers are increasingly turning to alternative sources of revenue growth, with servitization emerging as a strategic priority.

Servitization represents a shift towards offering value-added, outcome-based services, rather than solely focusing on product sales. This transition requires a fundamental change in mindset and business approach, emphasizing the importance of service operations in driving value for customers and generating sustainable revenue streams.

Data is the most valuable asset when approaching a change like this. Having it as the backbone of your operation ensures everything runs smoothly going forward. That's where closed-loop lifecycle management comes in.

Chapter 1

The Link Between Servitization and the Closed Lifecycle Loop



Closed loop lifecycle management (CLLM) is a holistic approach to tracking and managing your company's activities.

The goal is to get as much data as possible across departments. You then use this data to create the most effective processes possible.

When manufacturers strive to make major changes to their offerings, like shifting to a servitization model, this data is invaluable. Not only does it create stronger relationships with your clients, but it gives you the insights you need to make effective change.

Understanding a Closed Lifecycle Loop

To implement CLLM, you need to have a complete view of your organization. This includes your customers, assets and resources, as well as your product and service offerings.

Asset Lifecycle Management (ALM)

From the moment assets are deployed at a customer's site, it is crucial to manage their lifecycle effectively. This allows businesses to optimize their resources and ensure they are getting the most out of their investments.

Key stages in the asset lifecycle include

- **Deployment** – Determining the need for new assets, choosing the best procurement options based on cost, quality, and efficiency
- **Installation and Activation** – Properly installing and activating assets to ensure they are functioning correctly and meeting performance standards
- **Monitoring and Maintenance** – Utilizing IoT technology and regular maintenance to keep assets running at peak efficiency

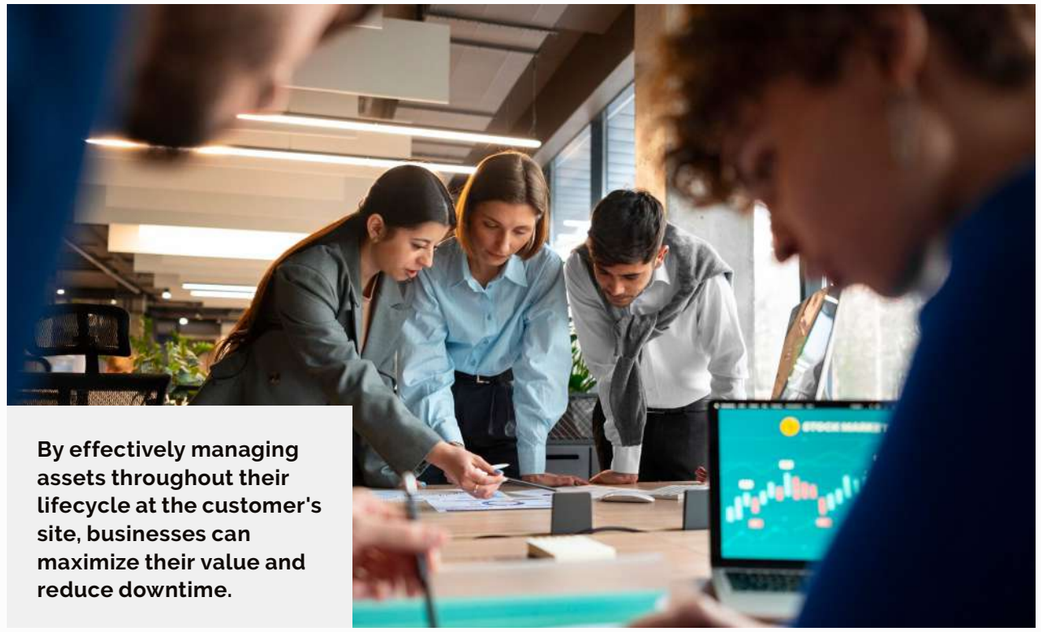
- **Upgrades and Enhancements** – Staying current with technology and industry standards by upgrading assets to remain competitive in the market
- **Decommissioning and Disposal** – Properly retiring assets by following environmental regulations, exploring recycling options, and considering repurposing or re-deploying assets

By effectively managing assets throughout their lifecycle at the customer's site, businesses can maximize their value and reduce downtime, leading to a more efficient and cost-effective operation.

Service Lifecycle Management (SLM)

Delivering services to customers and maintaining quality throughout the end-to-end lifecycle is made possible with service lifecycle management. This management involves

- **Understanding Customer Needs** – Market research, customer feedback, data analysis



By effectively managing assets throughout their lifecycle at the customer's site, businesses can maximize their value and reduce downtime.

- **Designing and Developing Services** – Create service offerings, pricing strategies, and service delivery processes while keeping everything high-quality
- **Delivering Services** – Ensure they are on time, as promised, and meet customer expectations
- **Managing Customer Relationships** – Provide ongoing support, address customer concerns, and continually improve service quality

When you give each of these processes the time and attention it deserves, you can build a loyal customer base that considers you a trusted partner.

Product Lifecycle Management (PLM)

PLM is all about monitoring and optimizing your products from design and development to end-of-life. It involves

- **Ideation and Design** – Ensuring good Environmental, Social Governance (ESG) and easing of the service impact can be baked into the design from the start, and providing paths for service engineers to give feedback on future ideation
- **Development** – Refining the product design, choosing materials, and creating processes through collaboration with suppliers, partners, and stakeholders
- **Manufacturing** – Sourcing materials, assembling components, and conducting quality control checks
- **Distribution and Supply Chain Management** – Inventory management, logistics, and fulfillment
- **Maintenance and Support** – Track product performance, manage warranties and provide timely support and maintenance services to clients
- **Retirement and Disposal** – Recycling, disposal, and refurbishment to minimize environmental impact and comply with regulations

By managing your products in this way, you can track KPIs, monitor production processes, and identify any opportunities for improvement.

Benefits of Closing the Loop

By integrating these lifecycle management processes, manufacturers can create a closed-loop approach that optimizes product design, asset performance and service execution. This kind of optimization leads to a whole host of benefits, including

- **Enhanced Visibility** – Get real-time data for every decision and customer interaction
- **Improved Product Quality** – Identify issues as they arise in the manufacturing process, leading to better quality control and customer satisfaction
- **Increased Efficiency** – Eliminate redundancies and inefficiencies by streamlining your process. This reduces waste and brings down operational costs
- **Regulatory Compliance** – As more laws and regulations come into effect around the production and disposal of products, having a clear picture of every step of your process prevents fines and reputation damage
- **Sustainability** – Find areas within your product lifecycle that can be made more sustainable with recycled materials, reduced energy consumption, and more
- **Improved Customer Relationships** – By providing transparency into the product lifecycle, you can build trust with customers and enhance your brand reputation. With service lifecycle management you can provide custom, specific care to each of your clients, increasing trust even more
- **Risk Mitigation** – Identify potential risks in advance and have multiple options for solutions
- **Continuous Improvement** – Having a birds-eye view of your entire process allows you to track key performance indicators with ease and make improvements as you go



Servitization is all about finding ways to provide value-added services to your customers.

Ultimately, understanding your entire process through closed-loop lifecycle management leads to improved customer satisfaction, operational efficiency, and revenue growth.

Servitization and Lifecycle Management

Servitization is all about finding ways to provide value-added services to your customers. This concept encompasses many innovative offerings, including subscription-based models, XaaS, and even predictive maintenance packages.

With CLLM empowering your organization to provide exceptional service, you are well on your way to incorporating servitization into your business model. When you are seen as a trusted advisor, differentiating your company from competitors who rely solely on price, you pave the way for a strategic shift in structure based on value and trust.

By leveraging data gathered through closed loop lifecycle management, you can easily demonstrate the effectiveness of your operation, ensuring the value proposition resonates with both new and existing clients.

When offering services in addition to products, or by shifting to a service-based model wholesale, your team can provide a more comprehensive solution to meet the needs of your customers.

Chapter 2

The Role of Service Lifecycle Management in Servitization



Delivering services alongside your physical products is a huge undertaking.

Many manufacturing companies have done business in the same way for decades, and servitization requires an entirely new mindset, organisation structure and processes.

This is even more true when you're looking to change your business model completely. Offering outcome-based contracts and XaaS will dramatically affect the way you interact with customers, moving from a transactional relationship to one of ensuring success throughout the customer lifecycle. In order to navigate this journey you must have end to end visibility.

Enter service lifecycle management. This facet of closed loop lifecycle management is often overlooked by traditional manufacturers, but it is key to the transformation we're discussing.



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Integrating the Service Lifecycle Into the Closed Loop

In the past, most iterations of closed loop lifecycle management have focused on integrating asset and product lifecycle management. This has had astronomical effects on the sustainability and cost savings of manufacturing. However, this only scratches the surface of what CLLM can be.

Service lifecycle management takes the same attention to detail and applies it to the services you provide your clients. From customer service to installation to XaaS, bringing this process into your practice opens the door to new revenue streams and gives you complete control over the innovations required for servitization.

Simply tracking the data around services isn't enough. In order to glean actionable insights from the information and make bold moves in the future, requires a holistic approach. As you bring service lifecycle management into your process, it should be fully integrated with both your asset and product lifecycles on one platform.

A great example of this is predictive maintenance. Since the introduction of the IoT, manufacturers have been focused on solving problems before they arise. This goal is made exponentially harder when information is trapped in silos.

When data from your assets is not connected to work order execution and maintenance, it's easy to let tasks fall through the cracks or to perform unnecessary work.



When service lifecycle management is properly integrated into your workflow, it can transform the way your team handles a variety of situations.

If your organization is looking to streamline processes, reduce costs, and minimize the carbon footprint caused by on-site work, eliminating these silos is crucial. By embracing a holistic approach, you can empower your entire team to make data-driven decisions.

Key Functions of Service Lifecycle Management

When service lifecycle management is properly integrated into your workflow, it can transform the way your team handles a variety of situations. As you plan for integration, keep in mind these key functions

- **Customer Support** – Track and manage customer issues, efficiently schedule and dispatch service teams, and deal with service requests quickly and effectively
- **Service Planning and Execution** – Create a seamless process with a roadmap through initial planning, resource allocation, scheduling, support, and performance tracking
- **Predictive Maintenance** – Automatically schedule maintenance before breakdowns occur based on historical data and performance trends
- **Remote Monitoring** – Analyze data from all connected products throughout their lifecycle, and track maintenance as it happens
- **Service Analytics** – Track KPIs across the entire client and service lifecycle all in one place
- **Spare Parts Management** – Efficiently monitor and optimize spare parts inventory based on when they are used for repairs
- **Warranty Management** – Track warranty usage, and ensure repairs are executed quickly
- **Recalls** – Manage the recall process in full, from identifying affected products, communicating with customers, and coordinating repairs and replacements

With data at the core of your functions, these results will be just the beginning. Your team will be able to collaborate with other

departments, eliminate information silos, and stay on top of every client interaction and service request.

Empowering Servitization Through the Service Lifecycle

A well-thought-out strategy for service lifecycle management naturally lends itself to servitization. This is especially true if you hope to offer outcome-based services. By leveraging the service lifecycle effectively, manufacturers can unlock new revenue streams, enhance customer satisfaction, and drive business growth.

Getting a comprehensive view of your service offerings allows you to maximize their effect. As you shift to selling clients on specific services, you'll be bolstered by

- **Streamlined Predictive Maintenance** – With advanced analytics, you and your team can guarantee uptime and ensure your clients are ahead of any potential issues
- **Tailored Offerings** – When you have access to individual customers' needs and preferences, you can ensure they are met at every service touchpoint
- **Enhanced Communication** – CLLM allows data to flow freely from department to department, giving clients a streamlined experience across communication channels
- **Improved Cost Efficiency** – By optimizing service delivery processes and maximizing resource utilization, you can reduce costs for both you and your clients

These functions will help you sell clients on a servitization model and ensure you can deliver on your promises. The more satisfied your customers are, the more they trust you. This trust will allow you to make the major structural changes that come with an XaaS business model and differentiate yourself from competitors who are looking to make the same changes.

Chapter 3

Unlocking Value Through Scalability, AI, and Customer Engagement



Business growth inherently requires agility. As you shift to meet your customers' demands, you need to be prepared to make changes quickly and respond to external factors.

While closed-loop lifecycle management goes a long way to creating agile processes, there are other ways to ensure your servitization plan is ready for growth. Building scalability, AI, and customer engagement into your service from the start allows you to plan for the unexpected and grow with market demand.

Scalability and Servitization

At its core, servitization is about the convergence of your product and service offerings, focused toward a successful customer lifecycle and resulting in a new monetization model, one that is more predictable and recurring, via longer-term, outcome-driven service contracts. Scalability and sustainment can be incredibly challenging for such complex service strategies unless a solid foundation of processes and technologies is established from the outset. As you seek to grow your operations, there are a few best practices to ensure your infrastructure scales with you.

Standardized Processes and Systems

When you have a consistent process, you can replicate it across regions and markets. This is why it's so important to have closed-loop lifecycle management in place before you start your servitization journey. This allows you to see and control every aspect of your process to make it as streamlined as possible for easy scaling.

Investing in Technology

Advanced technology like IoT and cloud computing allows you to automate processes. The more efficient your services are, the easier it will be for you to attract more clients. For example, you

can schedule service visits in tandem with remote monitoring and predictive maintenance. This eliminates the need for extra trips and satisfies multiple customers at once.

Collaborating With Partners

Bringing in strategic partners such as distributors and SaaS allows you to expand your reach without investing in new infrastructure and personnel. By leveraging your partners' strengths and relationships, you can offer your services to a wider customer base without sacrificing quality or efficiency.

Closing the Loop With AI

CLLM requires vast amounts of data, and when you start including new service models the information only grows. Building AI into your servitization strategy from the start allows you to harness this data and make it work to your advantage.

Predictive Analytics

With the help of AI, you can analyze the data you collect to identify patterns and predict potential failures or issues. The right AI will be able to compile data from both internal and external sources to give you a full view of your business and its role in the manufacturing ecosystem.

This allows you to be more proactive in your servicing and provide better value to your clients. It can also open the door to new business opportunities and help you scale your operations with ease.

Automated Servicing

AI can also be used to automate certain servicing tasks, freeing up your technicians to focus on more complex issues and improving efficiency. This allows you to scale your services without increasing your workforce. Automation is especially effective for roles that require lots of repetitive work, such as scheduling maintenance

tasks or processing payments. Some AI solutions like IFS.ai can even identify automation-ready tasks before you do to jumpstart your growth.

Personalization

With fully integrated AI, you can instantly personalize your services based on individual customer needs and preferences. By analyzing customer data and behaviour, AI can make recommendations and suggestions for services that would best benefit each customer. This helps to create a more personalized and tailored experience, increasing satisfaction and loyalty.

Workflow Optimization

Empower every member of your team to create the most impactful workflow possible with AI. The perfect tool will bring together business data, telemetry, and AI to suggest places for optimization within your workflows. By examining user behavior, data, and even the most unusual patterns you can create process automation that fits your team like a glove.

Service Lifecycle Management Empowering Customer Engagement

Service excellence comes from ensuring that customer expectations are consistently met and maintained. Service lifecycle management allows you to set clear expectations, monitor service performance, and proactively address any issues that may arise.

By effectively managing service levels, you can increase customer engagement over time. Engaged customers are both satisfied and loyal. This allows your team to foster long-term relationships, enhance brand loyalty, and drive repeat business. With this firm foundation, your clients will easily follow you into the world of servitization.

Conclusion

The Roadmap for Closed Loop Servitization



Ultimately, if your organization wants to find success with servitization, closed-loop lifecycle management is key.

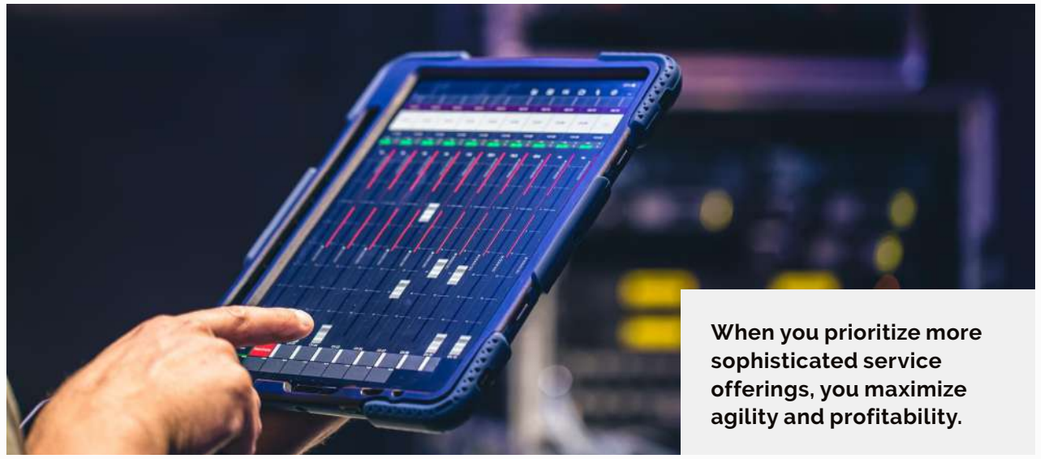
Understanding everything that happens with your customers, assets and resources allows you to deliver exactly what your clients need, exactly when they need it.

As you continue your journey toward servitization, these are the steps you'll want to follow.

Step 1: Embrace Service Maturity

Rather than simply selling products, take time to understand your client's needs and provide specific services for those needs. To ensure your service offerings are sufficiently mature, your team should

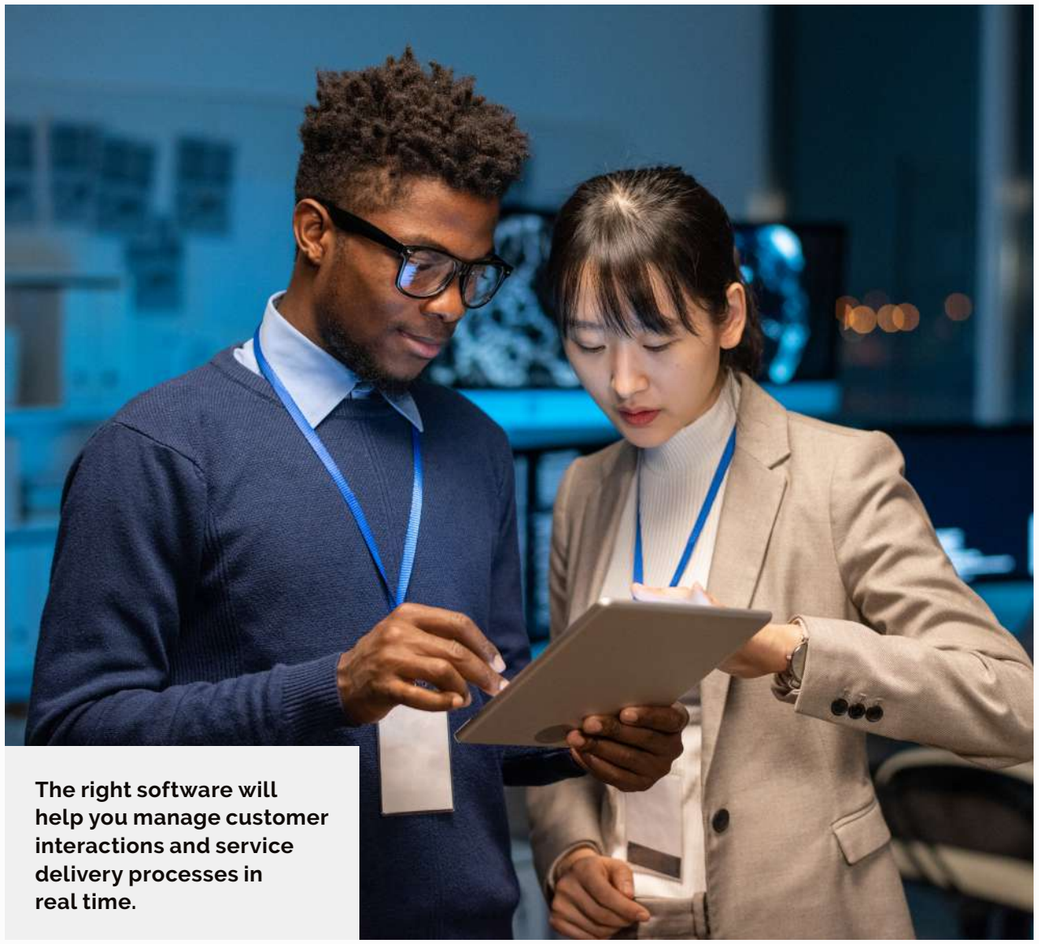
- **Invest in Training and Upskilling** – Ensure employees understand the data coming from CLLM and how it impacts customer service, technical support, and general service management



When you prioritize more sophisticated service offerings, you maximize agility and profitability.

- **Establish Service Performance Metrics** – When you track metrics like customer satisfaction scores, service response times, and service revenue growth you can pinpoint the things that need improvement
- **Develop a Service Portfolio** – Offer a range of options to meet different customer needs, including preventive maintenance, repairs, training programs, and consulting services

When you prioritize more sophisticated service offerings, you maximize agility and profitability.



The right software will help you manage customer interactions and service delivery processes in real time.

Step 2: Optimize Your E2E Platform for Integration

While your service portfolio and management processes are growing, you need the right software to support your team. Servitization requires a holistic view of your service components and the customer journey, and enterprise software is the key to achieving this.

The right software will help you manage customer interactions and service delivery processes in real time. This will level up your work across your organization.

- Technicians will have the right information at their fingertips for fast, effective service
- Executives can forecast, spot opportunities for revenue growth, and improve sales prospecting
- Marketers effectively target and communicate to customer segments based on needs

The most effective system will include a Composable Enterprise platform that encompasses asset, service, and product lifecycle management to provide a single digital thread.

Step 3: Focus on Service Contracts

Service contracts are one of the most powerful tools in the servitization journey. They shift the focus from product sales to customer outcomes, driving revenue and building customer loyalty.

Working to develop service contracts will help you package all of your existing technology, processes, and services into simple, concrete customer offerings.

Focus on customer outcomes and offer service packages accordingly. Whether it's uptime guarantees, productivity improvements, or cost savings, make sure your contracts align with what your customers are looking for.

Include service level agreements (SLAs) to ensure performance standards. These are important for both you and your customers, as they outline expectations and provide accountability. Offer flexible pricing options. This could include subscriptions, usage-based models, or a combination of both to provide your customers with the most cost-effective option for their needs.

Make sure your contracts are easy to understand and transparent. Customers should have a clear understanding of what is included in their contract, as well as any pricing and payment terms.

The Bottom Line

While the road to servitization isn't always clear, Closed-Loop Lifecycle Management can clearly outline your company's path. It helps to start from the ground up as you work to transform your customer interaction.

Only with a clear picture of your customers, assets and resources will you be able to create the perfect servitization strategy to take your company into the future.



About IFS

IFS develops and delivers cloud enterprise software for companies around the world who manufacture and distribute goods, build and maintain assets, and manage service-focused operations. Within our single platform, our industry specific products are innately connected to a single data model and use embedded digital innovation so that our customers can be their best when it really matters to their customers – at the Moment of Service™.

The industry expertise of our people and of our growing ecosystem, together with a commitment to deliver value at every single step, has made IFS a recognized leader and the most recommended supplier in our sector. Our global team of over 6,000 employees every day live our values of agility, trustworthiness and collaboration in how we support thousands of customers.

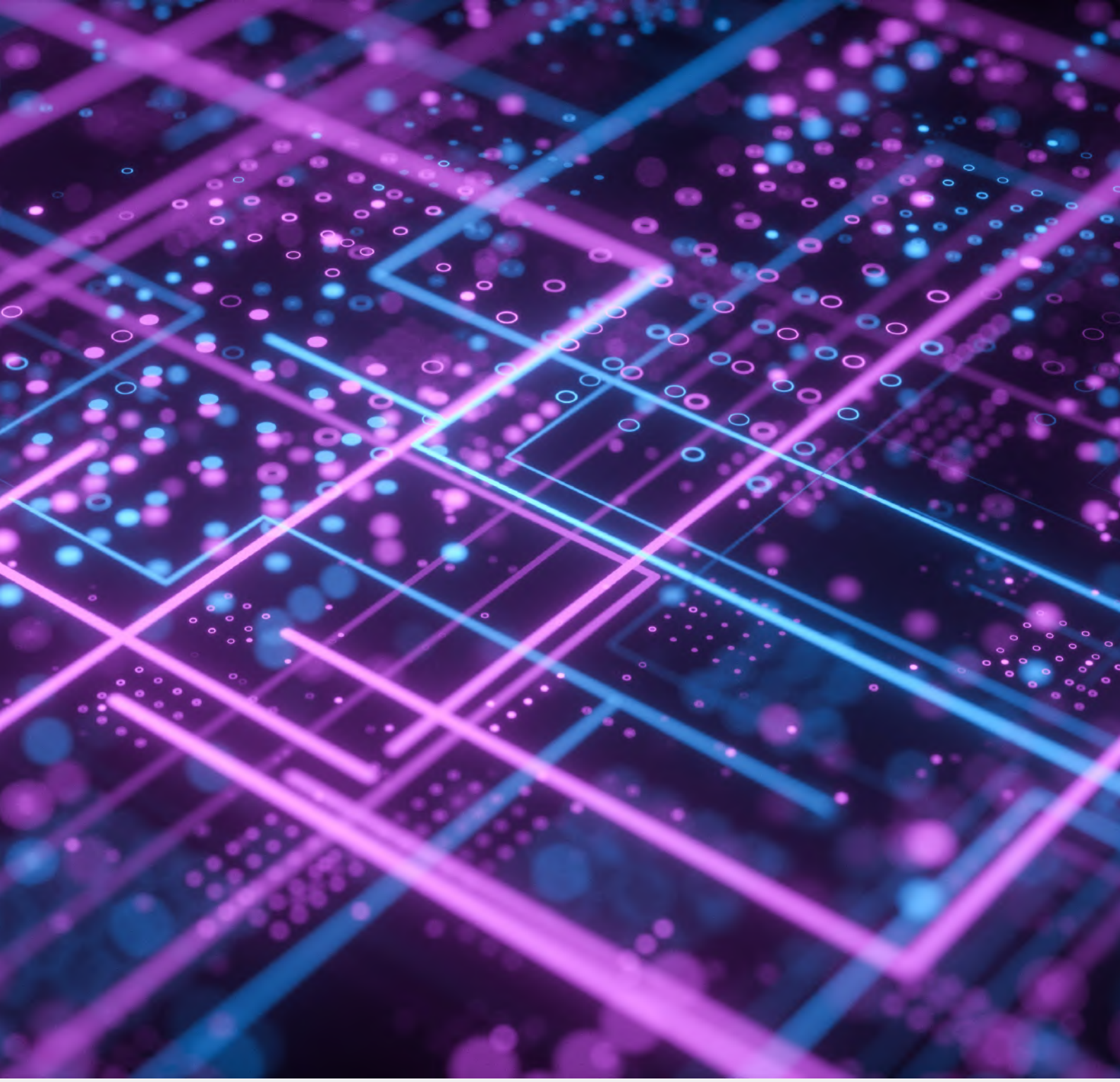
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