SENSEYE PREDICTIVE MAINTENANCE

Is your Sector Ripe for **Servitization?**

New technology means the time is right to take a fresh look at servitization.

Find out more: **siemens.com/senseye-predictive-maintenance**

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Introduction

Aerospace and defense are arenas in which the consequences of equipment failure can be catastrophic. They are also industries featuring high-value assets that demand regular maintenance throughout their long service lives. These factors combine to put operators under great pressure to deploy effective maintenance regimes at a price that maximizes the return on their considerable investments.

It's no wonder that these high-risk, high-value industries led the way in servitization. A properly managed and resourced servitization contract passes at least some of the risk of breakdowns back up the chain to equipment suppliers, who are tasked with delivering, say, a certain number of flying hours or uptime, rather than just the assets themselves.

Servitization has become a successful contractual model in these industries in recent decades and other sectors have followed suit. Agriculture and transport have also enjoyed the advantages of servitization for tractors and trains, for instance.

Today there is enormous potential to roll out similar servitization agreements across other industries and a growing number of companies are wising up to the possible benefits. End users across the board are looking to increase the reliability of their assets and manage costs more predictably by offloading some of their risk onto suppliers. Meanwhile equipment suppliers are looking to build better relationships with customers and reap the considerable revenues available from after-sales support.

Until recently, cost and scalability have been the two big obstacles preventing servitization from rolling out across many otherwise promising sectors.

The crucial difference today is that smart new asset monitoring technologies mean that the risk and costs for original equipment manufacturers (OEMs) of adopting after sales service commitments are more predictable and manageable than ever before. That's good news for them and for their end user customers.

Building on a trusted model

Servitization has been a feature of aerospace and defense contracts for decades, where it has proved to be extremely successful. So-called integrated operational support (IOS) has grown to become the typical contractual model over the past 15 to 20 years.

In one of the latest examples, January 2019 saw the UK Ministry of Defence award Leonardo a £293 million (approximately €325 million) Apache IOS contract, extending the current Apache AH Mk.1 IOS service agreement until 2024, which covers the remainder of these helicopters' service lives. Leonardo says the Apache IOS contract will enable it to deliver the required levels of aircraft availability while reducing through life costs. The company also provides integrated support and training services for the UK MoD's AW159 Wildcat and AW101 Merlin helicopter fleets.

Evolving technologies are the key to making the same benefits available in other industries. More scalable and cost-efficient sensor and monitoring technologies, coupled with machine learning and artificial intelligence, are opening up the possibility of using a similar approach to manage and maintain assets in activities ranging from injection moulding and welding to bottling and renewable energy generation.

Why now **for end users?**

For end users, servitization is typically part of a wider drive to increase operating efficiency and capitalize on opportunities in the market. Servitization can support these ambitions by reducing the risk of investing in new equipment, as well as increasing efficiency and reducing downtime. All this benefits the bottom line. Now is the right time for them to consider servitization because margins are being squeezed and the drive for increasing productivity and automation means that the number of assets they need to maintain is on the rise.

Automotive manufacturers, for example, might typically run a factory with 700 welding robots and 300 handling robots. They're only too happy to offload the hassle of maintaining all those assets if the robotics companies can step up and shoulder the responsibility of delivering the necessary number of welds per hour.

Why now **for OEMs?**

As margins are squeezed on equipment sales, services can provide a welcome boost for OEMs. In a report prepared for the European Commission, 60 per cent of OEMs say they believe that service contracts will be their top service strategy going forward. Traditional reactive and preventative maintenance are still being offered, but Predictive Maintenance is increasingly seen as the way to go.

Predictive Maintenance enables OEMs to offer a better service to customers, resulting in fewer unplanned breakdowns and reduced downtime and costs. For many OEMs, more predictable workloads, spares inventory and other cost savings associated with Predictive Maintenance also make servitization a reliably profitable business model for the first time.

Technology opens the door

The big question is this: If servitization is so great, why has it been largely confined until recently to high-risk, high-value 'edge applications' such as aerospace and defense?

The answer: technology.

Industry 4.0 includes a basket of innovations that add up to a transformative moment for servitization.

Factories are increasingly populated by smart, connected machines and instruments that collect data automatically. The same machine data that is already being used for other purposes can feed into condition monitoring systems that can enable Predictive Maintenance. What's more, because the data is already being collected, introducing Predictive Maintenance doesn't require any disruption to existing factory operations.

Condition monitoring systems use the latest advanced machine learning algorithms to take machine data and turn it into valuable information about the state of assets across the organization. In other words, automated systems can now deliver advanced condition monitoring without the need for human intervention.
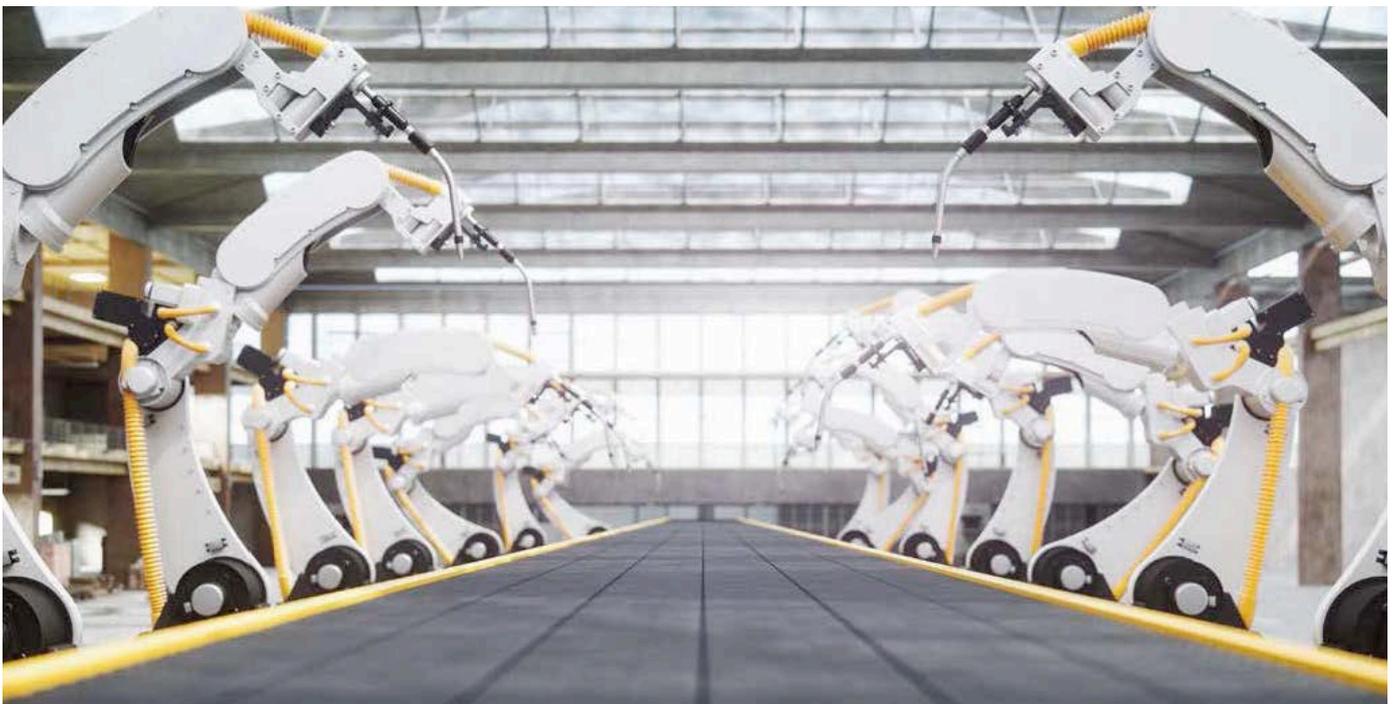
Condition monitoring enables the OEM to monitor assets remotely and predict when maintenance is needed. Ideally, the system provides an alert in time for the OEM to take action and avert any problem before it can impact on the end user.

At the same time, cloud-based solutions minimize the upfront investment, enabling users to rent the necessary condition monitoring capabilities rather than having to buy dedicated onsite software, the hardware needed to run it and the experts previously necessary to analyze the outputs. In addition, these solutions are readily scalable, making it easy to deploy initially a small number of machines to start with, before rolling out the solution seamlessly across the entire factory.

This Software as a Service (SaaS) delivery model means that the price per machine typically reduces as the number of machines included in the project grows.

Together, these innovations sweep away the traditional barriers of cost and scalability that have previously prevented the wider adoption of servitization. They add up to a step-change in the practicality and affordability of implementing predictive maintenance, which is the key enabler of profitable servitization.

In other words, there has never been a better time for OEMs across all industrial sectors to take another look at servitization and consider whether it's right for them and their customers.

How Senseye Predictive Maintenance can help

Senseye Predictive Maintenance is at the leading edge of using advanced machine learning for condition monitoring. Its unique algorithms can turn data into an accurate prediction of the Remaining Useful Life (RUL) of manufacturing assets – a technique known as prognostics.

Senseye Predictive Maintenance delivers proven results by enabling true predictive maintenance:

50% reduction in downtime

55% increased productivity

85% increase in maintenance accuracy

This scalable system breaks down old cost barriers to condition monitoring and brings servitization business models within the reach of many more OEMs.

See how Senseye Predictive Maintenance has lowered the barriers to entry into servitization. Book a demo of Senseye Predictive Maintenance today.

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