Manufacturing in full flow: ServiceNow’s role in the delivery of Industry 4.0

shaping tomorrow with you
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Manufacturers have always been good at the ‘big picture’. They understand that what happens on the production floor is part of a broad ecosystem of partners: From raw materials suppliers, to transport operators, to production line technologies and workers, back to transport again and of course the final customer. Manufacturing is all about flow. Turning metals, plastics, rubber, and a wide range of organic materials into every kind of product you can imagine. Manufacturing is about making things and doing it at the best quality and price possible.

Nothing stands still, literally. Manufacturing has been the engine of change since the first industrial revolution began in the 18th century. That’s why manufacturers know how to invest in the right technology at the right time.

The debate within this Spotlight is a simple one: ServiceNow represents a critical element in the delivery of smart manufacturing and the running of the digital factory. The flow of goods, data, and ideas needs a strong foundation, and that’s what the solution delivers.

ServiceNow may sound like an intangible element within a sector that’s renowned for its physicality, but data is now becoming one of the most critical elements in the entire manufacturing process. It’s becoming an important element within products themselves and is now another important output of the production line. The challenge you face is that the digital factory demands new ways of working. And those new ways of working are vital to leveraging the power of technology.

It’s not a new idea. Back in 1990, the economist Paul David studied the introduction of electricity across the US manufacturing sector in the late 19th and early 20th centuries. He pointed out that for a factory to make the most of electrical power, it needed to restructure the way it worked in radical ways. David pointed out a simple, but obvious fact: in the era of steam, every machine had to be connected to a single rotating shaft. In the era of electricity, every machine or production line could have its own motor and power supply, transforming how and when things could be made. Electricity changed the way manufacturers thought about making things. The ones that understood that faster than their competitors achieved competitive edge. Their operations evolved faster, and their productivity soared. Authors Jonathan Haskel and Stian Westlake, experts in innovation and the ‘intangible economy’, speculate that ‘It’s possible we are still in that phase with digital – it hasn’t really taken off yet.’

Introduction: It’s all about workflows

Manufacturing is all about flow. Turning metals, plastics, rubber, and a wide range of organic materials into every kind of product you can imagine. Manufacturing is about making things and doing it at the best quality and price possible.

Introduction: It’s all about workflows

Well, perhaps they’re right. But, at Fujitsu, we’re sure that the tipping point is close, and we can help our customers in the manufacturing sector make the most of the opportunity. ServiceNow is one of the critical elements which will help us do it.

ServiceNow is all about effortless flow. It enables you to leverage the power of the cloud to power a service-centered organization. ‘Servitization’ is one of the key trends in the sector, and it’s predicated on data. The rise of The Internet of Things (IoT) is enabling manufacturers to extend the reach of their products and services and transform business models to make them much more service based rather than solely focused on physical goods. But servitization is not just one part of the process, it’s the total process: from beginning to end.

ServiceNow delivers advanced automation and process workflow capabilities to create a single platform for your enterprise service management. You can automate service relationships across your operations and optimize your service model so that it not only meets current demands in a fast-moving marketplace, but also enables you to evolve to a state where all your service disciplines become proficient service providers.

Because ServiceNow solutions use one user interface, code base, and data model you can create a single system of records. Everyone - your IT, shared services, and all your lines-of-business can make the most of one system to define, offer, and manage consistent enterprise services.

Optimized flows depend on frictionless systems. Any friction slows your ability to serve your customers in a timely way. And that could mean loss of sales and, with the rise of social media, brand damage via bad word-of-mouth or sentiment analysis - a critical factor in the digital age. ServiceNow gives you the freedom to apply a mature IT service model or create custom applications within your enterprise service domains to cut out any business friction and deliver a high impact service experience for all users.

In the end, any 21st century manufacturer needs to achieve the following:

- Deliver high-quality customer experiences by leveraging automation and knowledgeable employees.
- Provide updates to inventory systems across dispersed locations easily and with complete transparency.
- Make the on-and off-boarding of staff (full, part-time or seasonal) more efficient through the automation of processes.
- Improve your IT service management and enterprise service management capabilities.
- Reduce the complexity of reporting and do it in real-time

We asked three specialists, Hannes Hirvikallio, Mikko Pääkkönen, and Glen Koskela to share their experience and knowledge about how you start doing all the above.
IoT is revolutionizing manufacturing. That’s a statement most manufacturers are hearing a lot. In fact, it’s being said so often that you might start to think it’s not true. But it is. Futurists trade predictions about how many ‘things’ will be out there, but whether it’s 50 billion or 75 billion misses the point. IoT is changing the entire business model. It’s opening new ways to engage with customers, service their needs and generate revenue not just from selling goods, but from how they’re used by the end customer.

We’re hearing more and more examples about major manufacturers changing the way they look at the goods they produce. For instance, the makers of jet engines are changing the way they operate. They develop ever more efficient jet engines and then sell flying hours rather than great chunks of metal and wiring. The airline pays for the engine based on how many hours the plane spends in the air, and how efficiently it uses fuel. So, the manufacturer gets a stream of revenue, rather than just the cost-price, plus profit for the engine. That means the better the engine, the longer it is in service, and the more predictable the revenue.

It’s all based on data. The IoT sensors in the engine deliver that data. They alert the manufacturer to any developing problems so that they can be proactively addressed to ensure that the plane keeps flying and the turbines keep turning. As they do, the money comes in. It also means that valuable analytical data is collected which helps not only service the specific engine, but also design its eventual replacement.

To achieve that flow of work and insight, you need the best form of Enterprise Service Management. And it must be holistically deployed. It can’t be focused on just the IT function, but across the entire organization; from HR to finance to customer service and logistics. ServiceNow is most effective when it can be used across all functions to achieve both efficiency and transparency. You need to be able to integrate all partners, from supply chain to production line, to after-sales and revenue collection. Simply, you need a single view of your organization’s entire operations, managed and controlled from a single point within your business.

ServiceNow is proactive. For me, that’s the most important point. It actually does things. It turns the vision of a totally integrated system of workflows into a reality. It makes it real. Think about the manufacturer of a fork-lift truck. It’s a machine you find in countless warehouses and facilities all over the world. Without it, most would find it difficult to operate successfully. So, they need to be able to work hard every day and keep working. They’re just as vital as those jet engines I talked about.

ServiceNow enables the manufacturer to not only integrate all the functions that are needed to make the fork-lift truck to the right design and quality, but also then ‘servitize’ it so that customers get maximum uptime and manufacturers generate maximum revenue because the fork-lift truck keeps moving. The IoT sensors are critical to both sides of the equation. ServiceNow makes it easy to create that flow of data, based on unique identifiers for each truck, and all its important components. The manufacturer monitors performance in real time and can raise tickets instantly if there’s even a hint of a problem.

Without a unifying solution like ServiceNow, the servitized manufacturing model could not exist. It’s a transparent, centralized way of matching each product with each customer. A single platform. A single focus. And, let’s be honest, it does all the boring stuff, but does it brilliantly.

By Hannes Hirvikallio,
Regional Director, Fujitsu
ServiceNow helps you turn your business into a platform

Everyone’s talking about platforms. The ‘Platform Economy’ has developed rapidly after the last decades, and its stars are disruptors like Uber and Airbnb. But, the concept of platforms has been around for a long time. Go back to the late 90s and you can see the rise of Amazon and Google in platform terms. You can go back further and find other examples too. But the point I’m making is that the concept of the platform is a deceptively simple one. It is a ‘business model that uses technology to connect people, organizations, and resources in an interactive ecosystem in which amazing amounts of value can be created and exchanged. At least, that’s how leading experts in the field describe it.²

Alibaba, Twitter, YouTube, iPhone and Instagram, are all platforms. They offer the people who work for them, supply them, and buy from them, a 360°view of the entire ecosystem, and the ability to yield value from relationships, workflows and tangible resources. My argument is simpler; all manufacturers are platforms. They already are, and they need to become more open and frictionless, so they can make the most of a new era of smart manufacturing based on the digital factory.

The experts are clear about the opportunity: ‘The platform is a simple-sounding yet transformative concept that is radically changing business, the economy and society at large. Practically any industry in which information is an important ingredient is a candidate for the platform revolution. Any business where access to information about customer needs, price fluctuations, supply and demand, and market trends has value.’³

Manufacturing is adapting to the new world of Industry 4.0, which is all about creating a much broader definition of what a manufacturer does, who they do it with, and who they do it for. ‘Servitization’ is a buzzword which, at first glance, seems to suggest a change in relationship with the end customer, but on deeper reflection has consequences for every stage of the production process, from supply change to after sales and revenue generation.

My argument is that to become a smart manufacturer you need to create a ‘platform economy’ for your business. You need a 3D, 360° view of all your partnerships, suppliers, workers, production and operational processes, as well as your customers; needs, behaviors and the market trends that they are seeking to adapt to. And that takes data and control.

ServiceNow gives you both. It underpins the platform approach to your business and enables you to combine all your tools – external and internal – into one, central solution which helps you cut down on duplication, ease the flow of data, get work done, and leverage the power of analytical insights so you can innovate and create new ways of delighting your customers.

³ Ibid
ServiceNow helps you turn your business into a platform

If you have great visibility you can achieve efficiency. You can cut costs, add value to processes, identify tasks that can be automated, and deploy your people to do higher-value work that leads to better customer service. In my experience, manufacturers have struggled to manage their data, and use it to drive innovation and efficiency gains. They need to ensure that actionable data flows to the center.

That’s where ServiceNow comes in. I like to say it’s a way of creating your very own Uber inside your business. A radical change to the way you work that generates network effects (which is how companies like Uber have succeeded). When you can engage with more people then you get more benefits via feedback and insights. That then helps you generate momentum for change whilst controlling and channeling it toward specific business objectives.

And that all depends on your partners, and the ecosystem they create around your business. Fujitsu has a long history of bringing people and organizations together, so they can work together. You can call that service integration or SIAM or anything you like, but we see it as a way of achieving a single source of truth at all levels of your business and your operations.

Truth is always powerful. ServiceNow gives you a firm platform from which to find it, use it, and benefit from it.
Adding value to the value chain: ServiceNow breaks out of its IT origins

ServiceNow isn’t just about IT. It’s now critical to the entire enterprise. John Donahue, the company’s CEO, says that’s his vision for the future: ServiceNow as the enabler of a more open, efficient, and data driven organization. It’s why the company has been launching cloud-based services for HR, security and customer support. “The ServiceNow platform is your digital transformation partner as you drive transformation, not just in IT, but across the enterprise,” he said at Knowledge17.

That’s good news for manufacturers. The sector is changing fast, but it’s also changing in a smart way. The rise of ‘servitization’ means that most manufacturers need to change their outlook and go from seeing themselves as makers of products to service providers. That means moving from transaction management to relationship management. Though, of course, the products and transactions are a key part of those relationships.

ServiceNow delivers the ability to move from that transactional model to a service based one, and then provides the visibility and control that Mikko Pääkkönen says is so important. My perspective brings that point into the leadership of the manufacturing organization. It’s important to understand the challenges that face CEO’s, CIO’s, and COO’s across the sector. In the past, they have not had access to the systems that run the day-to-day operations of their businesses. They haven’t really needed them. But, now it’s vital that they can achieve a broader picture of what is happening, so they can set policies for the future and cope with rapid change.

This might sound like a hard sell, but I believe it’s necessary for the entire leadership team to understand service management to ensure that it can be improved to achieve competitive edge. The key to doing that is to use ServiceNow to improve cross-functional workflows, make work more transparent, improve in-context collaboration, and open new ways to leverage the power of automation to achieve process efficiencies that weren’t possible before. Products and services need to be integrated so that the organization is more agile and can manage change across day-to-day operations to support new ways of working.

The point of servitization is to bundle services together with the product itself. To do that you need to classify those services in groups – such as assets, products and their life-cycles, as well as maintenance and so on. Those are services that support both the product and the services that the customer benefits from. ServiceNow offers a toolset that describes the workflows that support all those things across your organization.

The point is to deliver a new vision of manufacturing, and the fact that ServiceNow has broken free of the IT department and is now being used across other vital functions means that the board and departmental leaders can understand how it solves their problems beyond the usual IT challenges. Internal services get better and more responsive. They can flex and change as the entire organization changes to achieve that new vision I mentioned.

Glen Koskela,
CTO & Head of New Business Development, Fujitsu
Adding value to the value chain: ServiceNow breaks out of its IT origins

It’s a mindset change that needs to happen quickly. If you see ServiceNow as a tool that supports your development of new business models as well as helping you run your existing business, then you can share learnings across functions, and focus on the bigger objectives in a spirit of co-creation. It’s what Fujitsu has always done. That approach means you can get to market quicker and make more of an impact where it matters – with your customers, existing and potential.

Again, that’s important because, very soon, the service that a manufacturer provides will be more valuable than the products that come off its production line. It’s a radical thought, but it’s true. It’s the services that generate the ‘will to pay.’

An approach that some manufacturers have taken is to start by applying ServiceNow principles internally and learn important lessons from the exercise. Bringing together maintenance, supply chain, logistics, HR, staff training, transport and service, and then working out what can be automated and what can be done manually, yield insights into how the same principles can be applied to customers.

What those organizations learn is how ServiceNow delivers real-time insights into what’s happening across the business, and how efficiencies can be achieved in often simple ways. Such as the issuing of tickets when there’s a technical issue. In the past, there was a lot of duplication in that one process. Manual tickets issued by overlapping functions led to delays and bureaucracy. ServiceNow automates it, offers instant tracking and data, and cuts the time it takes to implement repairs. Everyone is happy. And staff, who used to spend their time chasing pieces of paper, can focus on higher value tasks that benefit both user and customer experience.
Talk to us about how we can help you can make the most of ServiceNow.

As a ServiceNow Global Partner, Fujitsu combines years of experience and know-how with the power of ServiceNow, to deliver ESM processes that improve efficiency, reduce cost and free your staff to concentrate on what they do best – which is running your business.