UNTAPPED POTENTIAL:

THE FIVE SUSTAINABILITY OPPORTUNITIES FOR SERVICE EXECUTION

SERVICEMAX

WHITEPAPER SERIES

EXECUTIVE SUMMARY

The sustainability initiative may have started out with the sole focus of "doing good" for the environment, but it has now emerged as an important economic performance metric. Today, little doubt remains about the correlation between improved sustainability practices and better financial results. Companies that are committed to sustainability are increasingly efficient, use fewer resources, create less waste to generate a unit of revenue, and produce higher returns on investment.

In fact, Aberdeen found that nearly half of the Best-in-Class companies currently have a service-specific sustainability initiative in place. More telling than current adoption rates is the reason why organisations are looking to sustainability initiatives in the first place - to increase productivity and resource utilisation, enhance speed of service delivery, and eliminate service-related costs.

Likewise, consumers have also shown they are more likely to buy or use the services of a company that supports sustainability. And if the economic performance metrics and customer acquisition weren't reason enough, sustainability also enhances brand reputation, customer loyalty and retention, as well as employee retention and overall efficiency.

But perhaps what's less widely known is the role service execution management plays in facilitating and accelerating the execution of sustainability strategies. In the same way that economic metrics joined the choir of sustainability, service delivery has added volume and harmony to the chorus with a natural alignment between sustainability objectives, customer service improvement and financial performance.

Yet many organisations using service execution management technologies to automate, digitise and improve service delivery often overlook the untapped potential of service management with regards to corporate sustainability objectives. While service leaders are busy reaping and measuring the financial and customer satisfaction benefits of service execution management, they are almost certainly helping with corporate sustainability metrics – even if they are unaware they are doing so.

In this white paper, we outline five key areas where digitised service execution benefits corporate sustainability and how it can be leveraged. We also explore why sustainability metrics should be factored into your wider service execution strategy.

FIVE WAYS SERVICE EXECUTION BENEFITS SUSTAINABILITY

As digitisation matures across all industries, organisations will move away from a 'take, make, consume, dispose' mentality and move towards 'extending asset life, reusing, refurbishing, and recycling'. When this happens, sustainability will become second nature because it will be the de-facto side effect of mature, digitised service delivery.

Whilst not all organisations have reached that milestone yet, there are still numerous ways service execution management is significantly benefiting sustainability practices as soon as they're implemented, regardless of where your organisation is in its digital maturity.

For example, there's a direct link between field service and the number of fleet vehicles out on the road at any one time. Until now, this has just been a given. But field service management is helping to reduce the number of fleet vehicles on the road through remote monitoring and management, reducing both Co2 emissions and wider environmental implications around less paper, ink and waste.

''In Europe, less than 5% of vehicles are commercial vehicles or heavy duty trucks, but they contribute to almost 20% of greenhouse gas emissions''

According to the ACEA, the global vehicle fleet continues to grow, the EU has a total fleet of 39.1 million commercial vehicles (2017). Vans ('light commercial vehicles') account for around 12% of the EU market for light-duty vehicles. ''In Europe, less than 5% of vehicles are commercial vehicles or heavy duty trucks, but they contribute to almost 20% of greenhouse gas emissions,'' says Ananth Srinivasan, mobility expert with research consultancy Frost & Sullivan. The EU committed in the Paris climate accord to cut its greenhouse gas emissions by 40 per cent by 2030.

Service execution management is helping organisations to mitigate these – and other wider effects - in five key ways.

1. EQUIPMENT EFFICIENCIES & REDUCED ENERGY CONSUMPTION

Longer Asset Life Expectancy - Thanks to technology advances and better predictive maintenance insights, today's industrial equipment will have a longer lifespan. The future is equipment-centric, with a paradigm shift around longer lifespan, all possible thanks to more accurate equipment data, equipment-focused business processes, better service history and insights about operating conditions.

BENEFIT | Less decommissioning, less waste material, and less material consumption for new assets

Installed Base Management - Knowing where your assets are is also key to sustainability. Tracking equipment accurately allows companies to better understand where their physical installed assets are located, the exact status of the assets, usage and service history. This enables some parts to be reused, obsolete components to be refurbished, repaired, or recycled, or even properly disposed of in order to minimise waste. Furthermore, the lifecycle is prolonged.

BENEFIT | Intervention avoidance, less travel, less material usage

Increased Whole-Life Asset Efficiency and Performance - Having the right tools and data increases the efficiency and the whole-lifetime performance of equipment, saving energy and extending its lifecycle. Equipment which is better-maintained not only leads to fewer emergency service calls, but often requires less energy, and generates less emissions.

BENEFIT | Reduced operating expenditure and lower cost of operating the asset

Closed Feedback Loop from Service to R&D – Thanks to IoT, R&D departments and engineering can now leverage insights from a feedback loop from the service and maintenance operations to help shape the design of equipment based on how it is being used in the field. This not only helps to make them more reliable and durable, but also enables companies to evaluate which parts frequently fail or break and need to be redesigned to ultimately improve their lifespan.

BENEFIT | Design for service and better diagnosis, more efficient maintenance, less interventions, less travel, less material usage, better efficiency & longer product life cycle

Minimising Risk and Safety – Risk & Safety is not only paramount for field engineers, equipment operators and organisations, but also for the environment as a whole. Compliance of equipment, processes, and procedures help reduce or eliminate potential harmful consequences for the environment. A work order system -as part of a service execution platform that includes check-list capabilities, and takes equipment-related skills and knowledge into consideration can considerably improve compliance. It can also ensure sustainability objectives by reducing or eliminating critical failures with an in-depth analysis of every job. New field "intelligence" can report malfunctions before the equipment fails with real-time data about critical equipment, converted into information, and mined into actions to prevent accidents. Capturing information and knowledge about failures and repair procedures is also key to train other engineers to work on assets.

BENEFIT | Maintain and operate the asset the right way, reduce customer induced damage leading to avoidable repairs

Tracking and Accountability for Asset Disposal – Compliance regulations like the corporate "Restriction of Hazardous Substances" and "Waste Electrical and Electronic Equipment" place the responsibility for the disposal of waste of electrical and electronic equipment on the manufacturers or distributors. Having a system in place to track the equipment and process for technicians to collect at the time of the service, or follow the compliant process to dismantle, recycle or maintain those processes is hugely beneficial for compliance with asset disposal.

BENEFIT | Material reuse and recovery

2. REDUCING CARBON FOOTPRINT, COSTS AND MEAN TIME TO REPAIR THROUGH BETTER DISPATCH OF TECHNICIANS OR REMOTE SERVICE

Optimising Routes & Fuel Consumption - With large pools of available service technicians on hand, field service management lets companies determine which field service workers are best skilled but also geographically positioned to respond to specific service requests. With the help of scheduling tools, GPS-based tracking devices, route optimisation, and scheduling software dispatchers can identify the routes for resolving multiple work orders with the least environmental impact. A customer location-optimized schedule with geo-productive route planning can also outsmart traffic. Indeed, traffic congestion costs commercial truck drivers $27 billion annually in lost time and fuel – not to mention wear and tear on vehicles.

BENEFIT | Optimise travel

Increasing First Time Fix, Decreases Repeat Visits - This also reduces the need for repeat visits as the best qualified technicians are matched to individual customers, increasing first-time fix rates and eliminating the need for repeat visits. In addition to saving valuable time and fuel, all activity is tracked and monitored on a technician's mobile device without excessive communications with the company's back-end offices.

BENEFIT | Avoid travel and associated costs and improve customer satisfaction

Remote Technicians Triage & Diagnostics - Service execution platforms and communications tools also reduce the number of on-site technician visits by fixing equipment remotely. In particular, mobile applications that leverage Augmented Reality technology are making it possible to connect on-site technicians with remote experts, eliminating the need for specialists to drive or even fly around the world to remote locations. The remote expert can assess the issue and walk the technician through the required repair steps. This will allow a much higher first-time fix rate and avoid repeat visits. Sometimes dispatching a field technician is an unnecessary expense. With AR-powered video assistance, you can see the issue your customer is facing, and guide them towards resolution. In one year, Sightcall saved Allianz Spain from driving 6.3 million miles for onsite visits (that's enough to circle the globe 157 times).

BENEFIT | Avoid travel, shorten time to repair, reduce costs

3. SMARTER PARTS MANAGEMENT CUTS COSTS, WASTE AND IMPROVES PLANNING

Optimising Parts Inventory Reduces Fuel Costs - Having an in-depth view of all your equipment - from the basic location knowledge, to its service status, all the way to real-time production tracking through IoT-connected sensors (smart connected products) - gives a much better chance to meet the demands of both sides: the service and the supply chain organisation. By analysing equipment and service data, you can now predict and receive an alert when a part is about to break. This not only caters for greater assets availability and less parts inventory, but also reducing weight in the vans whilst reducing the overall fuel consumption.

BENEFIT | Less storage, less material usage, less transportation

Reduce Expensive, Unplanned Freight Costs - Knowing the frequency of when parts fail, and the correct intervals for preventative maintenance visits reduces freight costs with fewer 'emergency' shipments. If you know what parts you are going to need and when, you can consolidate shipments, sending them directly, and in time for the scheduled jobs to the technician. At a basic level, just knowing where your assets are located, means you can concentrate your inventory in more strategic locations, thus reducing costs and increasing availability -especially if you're using third-party contractors with limited space/room to maintain an extensive parts inventory.

BENEFIT | Use cost effective transportation, combine shipments

Product Lifecycle – The Delayed Curve - A supply chain is expected to cover the assets through their

lifecycle. However, without a system of records for service data you do not have visibility into your installed base, and you can't align inventory accordingly. That means it's on a delayed curve which will either result in back orders for new product ranges as the planning tries to catch up or obsolete stock for products as they come to the end of their lifecycle, and usage slows down as planning has not reacted quickly enough. Addressing this issue also means you get insight into the true profitability of a contract or product. Likewise, knowing the top 20 required shipments rather than just focusing on 200 of them makes a huge difference to how to react and prioritise efforts and resources in a supply chain.

BENEFIT | Optimised material usage, less material movements

Addressing Back Orders After The Fault Is Fixed - A small change in business process and practice can pay huge dividends. This may not work for all businesses, but it will work for many. Once the fault has been fixed and the work order is closed, the parts on back order are automatically canceled. Work Orders are only closed when the fault is eliminated therefore the part is no longer required. Historically, the problem was that if a technician ordered extra parts or borrowed them from an other technician, they would typically not cancel the back order. This part would then turn up a week or so later at the customer's site and because the machine was now working, it was often left in a drawer and lost by the time the technician had to return. The other technician who lent the part is now second in line to get it back, which has a knock-on effect and could lead to a potential 'urgent' order. A ServiceMax client who introduced this practice reduced their back orders by 52%.

BENEFIT | Reduced material usage, less material movements

IoT Condition-Based Service Reduces Inventory - Many companies are now firmly into the IoT realm and already benefit from connected-equipment data. From smart sensors telling them what parts need replacement before an issue arises to optimum intervals between preventative maintenance services. Using this voice of the product alongside customer demand means you can plan your inventory, consumables and after-sales items to a level that was not possible before. This moves you into the servitisation market with confidence and a predictable profit margin. Both the supply chain and service organisation benefit hugely from analytical information, real time data feeds, and expected, predictable outcomes supplied by IoT and its communications. In the last section of this white paper you will discover how new service models, enabled by IoT and predictive maintenance, allow companies to shift to more sustainable businesses.

BENEFIT | Excess material avoidance, less scrap

4. DIGITISING SERVICE PROCESSES REDUCES PAPER, INK, COSTS & WASTE

Reducing Paper Drastically Reduces Greenhouse Emissions - Before Service Execution Management tools, field service was hugely paper-intensive. The production of paper is the third most energy-intensive of all manufacturing industries, and accounts for 40% of the world's logging. Going paperless – or significantly reducing paper-based processes - is one of the immediate sustainability benefits of using a service execution platform.

- Price estimates and work orders can be created electronically in real time
- Technicians can capture images and notes on mobile apps on site, attaching them to compiled job reports
- Customers can electronically sign off on completed jobs that can be sent immediately to the back office for electronic invoicing via email.

BENEFIT | Less paper

Reducing Ink and Printer Cartridges Cuts Costs - Likewise, going paperless not only eliminates paper, but also reduces the usage of ink, and printer cartridges. Ink waste presents itself in two forms – from the plastic casing that stores the ink as well as the ink itself. According to Greener Refill, some 375 million empty ink and toner cartridges are thrown away with most ending up in landfills or in incinerators. Printing reportedly cost more per ounce than caviar. The average cost of a laser-printed page is $.25 while an inkjet-printed page costs $.15. For service operations that rely on printed reports, work orders, inventory lists and other service related materials, such as customer invoices and maintenance contracts, the print savings are substantial.

BENEFIT | Less ink/toner, cartridge material, packaging & transportation

5. NEW SERVICE MODELS ENABLING SUSTAINABILITY

Fostering The Circular Economy - Leading companies have begun to adopt new, more circular approaches to using resources. These approaches focus on reuse and repair, on upgrades and refurbishments, on capacity sharing and renewability. New technologies and IoT-connected equipment enable organisations to gather intelligence across all usage points. From the manufacturing stage to point of consumption, which helps support their circular economy initiatives. A flawless and more transparent Service Execution allows organisations to recover useful resources from disposed products or byproducts, effectively turning waste disposal costs into resource management revenues. It also helps extend the working life of products and components by repairing, upgrading or reselling them.

BENEFIT | Smaller ecological footprint

Alignment with Servitisation Business Models - Servitisation and the move to outcome-based business models has sustainability at its core. Selling an outcome rather than a physical product, is an important shift for competitive survival, as well as for the transition to a more sustainable world. For industrial applications, servitisation is about extending the life of existing assets, which aligns with intelligent and predictive service maintenance. Allowing customers to pay for performance and offering product usage rather than ownership, is naturally encouraging companies to create efficient products that last, and are easily upgraded and serviced. Planned or built-in obsolescence with an artificially limited life and manufacturing products that break after a certain period of time, should not be accepted.

BENEFIT | Smaller CAPEX base, reuse & sharing of existing CAPEX
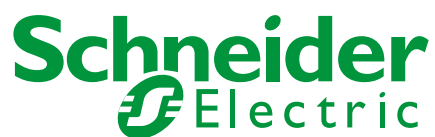
Schneider Electric

As a global specialist in Digital Transformation of Energy Management and Automation with operations in more than 100 countries, Schneider Electric provides integrated energy solutions across multiple market segments.

The company is committed to reduce, reuse and recycle its own waste from manufacturing operations, with its 'waste recovery ratio' increasing year after year, which now exceeds 87 per cent. Schneider Electric's circular economy ambitions involve multiple parts of the business, from marketing, engineering, design, logistics, and field services.

Field service management is a key enabler of its sustainability strategy, which has reduced Schneider's paper utilisation by 70 per cent. The company is also using field service management to provide a feedback loop with its R&D team, shaping future design considerations. Likewise, Schneider Electric products are also eco-designed and, depending upon their specific nature, are designed around repairability, ease of dismantle and recyclability with field service and sustainability objectives in mind.

CONCLUSION

Sustainable attributes are a natural side effect of good service execution automation. Whilst the initial commercial drivers for investing in service delivery tools and platforms may centre around service and s upport metrics, it is short-sighted not to factor in the wider sustainability benefits into your service delivery strategy or business case.

As society places increased weight and recognition on sustainability, service delivery management is now playing a critical role, performing an often under appreciated dual purpose in parallel without any additional effort.

Early adopters of service execution platforms have only realised this in hindsight as sustainability has come to the fore. This is now changing with more forward-thinking organisations embracing, leveraging – and indeed measuring – the full range of field service management attributes in the wider context of business performance.

Investment in service execution management platforms pays much greater dividends than were ever originally envisaged. Not only are organisations reaping the primary benefits of service execution management itself – such as reduced cost, increased revenues, increased customer satisfaction and retention and mitigating contract leakage – but they are also enjoying the 'double dip' of simultaneous benefits to their sustainability index.

Thanks to technology advances, automation and wide spread adoption, the ROI of service delivery management is now much wider, far reaching and long lasting than ever previously realised.

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