Beyond the Data: Asset Data Flow Beyond the Silo of Field Service

FIELD SERVICE NEWS

in partnership with:

SERVICEMAX

Beyond the Data: FSN Research Methodology and Report Overview

Field Service News Research Studies are undertaken in a three part process.

The initial phase of the study is a quantitative study, conducted online. This is designed to provide key data that outlines headline trends relating to core areas of interest for those within the field service sector and an executive briefing report is published that analyses the findings of this first study.

After the publication of this report we then invite a panel of subject matter experts to discuss in detail what these findings mean for our industry, to assess the trends that we are seeing emerge from the data and to explore further where there is a need for further clarification and discussion within regards to these trends.

The final part of our study approach is to then undertake a series of follow up interviews with a selection of the respondents to look beyond the data and take the direct insight from those who participated. In this qualitative phase of the study the aim is to establish a deeper understanding behind the reasoning for their responses. We also provide the interviewees an opportunity to reflect on the broader industry trends that were surfaced during the research and how this relates to their experience in their own organisation.

These follow-up interviews are undertaken with the promise of anonymity to allow the interviewees the freedom to comment openly and honestly on their experience. However, their geographic region, industry and job title are included alongside quotes attributed to them in order to provide context to their comments.

The first phase of this study was conducted in late Q4 2021 and involved a sample of 238 respondents all of who were active field service professionals and came from a wide variety of industry verticals including manufacturing, utilities, telecommunications, power generation, healthcare, med-tech, security and many others. There was also representation of service organisations from across both Europe and the US as well as a smaller representation from the APAC region.

In the second phase of the study the panel of subject matter experts included Sumair Dutta, Coen Jeukens and Mark Wilding of ServiceMax. As well as havng multiple touchpoints with the industry and deep-level knowledge of the tools used to leverage asset data in their current roles with ServiceMax each have extensive experience within the industry as well.

Dutta is one of the industry's most respected analysts having previously worked for Aberdeen and The Service Council. Jeukens was seen as a pioneeer in the field of both advanced services and data-driven services during his time as a Service Contract Director with Bosch. Wilding also has an extensive resume that includes Rolls Royce, Airbus and Hexagon Manufacturing.

In the final, qualitative phase of the study Kris Oldland, Editor-in-Chief, and Chris Hird, Editor, Field Service News conducted interviews with 34 individuals, all of whom had also participated in the initial phase of the research.

Within this report you will now find the final analysis of this study as we move 'beyond the data' produced in the initial phase of the study and explore further what the trends revealed mean for the field service sector with commentary that is based around both the debrief session and our series of follow up interviews.

While this report is written so it is possible to read as a stand-alone document, for those wishing full context you can also find the initial Executive Briefing, and two 45-minute videos from the debrief session at fieldservicenews.com within the FSN Research section within our premium resources library.

Identifying the biggest change in the industry for field service providers

We know that our industry has changed significantly after the events of the last two years. However, have we just seen the acceleration of a journey down a path we were already on? And how do we ensure that the progress we have made in many instances largely out of neccesity, maintains momentum moving forward?

Our initial study saw that the most significant shift in service processes within the last eighteen months was the introduction of remote services added to the service portfolio. Almost two-thirds (64%) of our respondents in the original study stated that this was the case. The second-highest response, more flexible shift patterns within the service division, was cited by only a little over a tenth (12%).

Of course, both of these adaptations were likely to have been influenced by the unprecedented impact of the pandemic and the immediate need to offer more flexible solutions for both employees and customers alike. Equally, both are aspects that will remain part of our working operations for the long term as we move beyond the pandemic.

However, the adoption of remote service is set to completely change the way our industry operates at the most fundamental level.

During our series of follow-up interviews, one service leader responsible for UK service operations for a major industrial and residential supplier within the HVAC sector commented, "for us, the adoption of remote-service delivery is now a fundamental aspect of our workflow."

Another interviewee, a service director providing financial management solutions for large box-store outlets nationwide in the US, similarly stated: "We will no longer send an engineer out to a store until one of our remote-service technicians has had 'eyes' on the asset so that we can provide a more detailed and effective triage.

"This is a win-win because, in most instances, we can guide the customer-operator through the maintenance remotely and get them up and running quickly – which is all they [the customer] really want at the end of the day.

"In those situations where the resolution is more complex, and we need one of our guys to visit the customer site, then our triage from that initial remote service call means that our technician is arriving on-site with a better understanding of the problem already, what has been tried, what the fault isn't and what it is likely to be. This, of course, then relates to improvements in other core KPIs such as first-time fix-rate and technician utilisation."

While the pandemic ultimately made the need for remote service delivery far more pressing, it should be noted that for many in our follow up interviews, a lot of the work in establishing such offerings, both in terms of processes and tools used, had begun long before the pandemic, albeit often in smaller trials.

One interviewee, a senior service leader for a managed print and optical solutions provider with responsibility across Europe, commented: "We have been looking at remote service for a long-time now. We have been able to connect to all of our new assets in the field for a number of years and have slowly been edging towards moving to a remote-first-as-a-default approach to service across a period of years.

"Where the pandemic played a role, was in accelerating the acceptance of this approach from the customer side. Wheras prior to the lockdowns they would often be insistent that they wanted one of our team on-site, suddenly they wanted to know how we could offer our service without breaking their bio-security.

"Fortunately, we had been working down that path for some time already so we were able to make that transition quickly and, despite some initial logistical challenges relating to having to move faster than we had planned, relatively seamlessly."

Indeed, as has been noted previously on the pages of fieldservicenews.com, as an industry, we were somewhat fortunate that we already had many of the tools in place to allow us to adapt to these new challenges with a minimum of pain.
As Coen Jeukens, VP Global Customer Transformation, ServiceMax, commented

during the study debrief session, "the technology for remote service has been out there for a very long time; I recall IBM with their system 390 in the 1990s where they experimented with the capability of the remote machine to communicate with the back office.

"However, I think the pandemic really has been a driver in the speed of adoption of the much more sophisticated technologies that are at the heart of remote-service delivery today. This is mostly because service organisations have true commitments to keep equipment up and running.

"Of course, even if your technicians cannot go to the site because of pandemic reasons, the service provider still has to keep that equipment up and running.

"This means that we need to move to plan B and make sure we have mitigating strategies to ensure that we can meet our obligations as service providers. I think that has been a key reason for a lot of companies to finally decide to move beyond their objections around data security, which was a large barrier for many when it comes to accepting remote-service delivery.

"It was a case of accepting that allowing a service provider access to the firewall may put a hole in the cyber-security, but the other side of the equation was a genuine threat to business continuity if the service providers couldn't maintain machines and assets, and granting remote access was the only way this could be overcome.

"I think it is the experience of a lot of companies in this period, that have now seen this [remote-service delivery] working, and while they of course will have to consider potential additional cyber-security measures, they now realise that remote-service isn't as scary a proposition for their business as they may have perceived.

"If this is the case, then I can see remote service becoming dominant within the service portfolio of many organisations."

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- Coen Jeukens, VP Global Customer Transformation, ServiceMax

Identifying the biggest change in the industry for customer requirements

Having seen in the opening section of the study, the largest single impact on our industry from the service providers' perspective is the introduction of remote-service delivery; the next critical area for assessment within the design of the original study was to see how this would dovetail with the changing requirements from the customer side within a similar timeframe.

Again, we saw the requirements for increased remote service options appear as one of the top responses, with well over half of respondents (58%) stating this is a requirement they are receiving from their customers.

However, what was particularly interesting was that the options that scored both above and just below this also offered a glimpse of a world where remote service operations play a more central role in service and maintenance.

These were faster response times and a better understanding of asset performance which were cited by 67% and 42% of respondents, respectively.

This indicates a growing alignment between the service provider and customer. One of the biggest challenges service organisations had pre-pandemic was outlining the value proposition of remote service as we shift to becoming an industry more focused on uptime guarantees than service level agreements.

As Sumair Dutta, Senior Director Product Marketing- Customer and Market Insights, ServiceMax commented during the debrief session; "while the provision of remote services growing so significantly was, of course, a big statistic from the study. However, I think that being grounded in the fact that customers are also demanding these services, it was the most important finding of this study for me."

In our follow-up interviews, we also spent time with the service leaders involved to get their thoughts on the seeming alignment between the requirements for quicker service and better insight into asset performance on the customer side and the need to adopt remote service strategies on the service provider side.

"I think it is, in many ways, something that has been coming for a long time and the pandemic just brought us further down the path sooner, to be honest," commented a senior service manager working in medical device manufacturing working across the DACH region.

"Increasingly, we have been moving towards guarantees of uptime, so we would say to our clients within your contract that your device will be operational when you need it.

"However, to do this does require remote access, and in some of the sectors we work in, this can be a challenge. We were seeing the barriers beginning to be removed slowly; however, when the pandemic struck, all objections were removed. The customers were saying, 'if you can get it done, just get it done!'

"Now, however, while the urgency the pandemic has brought is less, these same customers who were very resistant before, have seen for themselves the benefits such an approach can bring to them. So yes, it makes sense to me that the study is reflecting this alignment."

Another interviewee, working as a Customer Service Operations Director for a consumer electronics brand in France, explained that it is a convenience that their customers want.

"In our industry, and by that, I mean field service because I have worked in many other companies in service roles in other sectors, including telecommunications and white goods manufacturing, but whenever you are interacting with a customer as a consumer, rather than a business, over the years we have squeezed the appointment window down from a day to half a day, to an hour – and now you can track your engineer and stay updated just like you would an Uber taxi.

"This process has been done for one reason, because offering convenience to the customer, allows a service provider to deliver a competitive advantage. The obvious next step is for the customer not to wait at all for an engineer, but to be able to access an engineer when they need them through remote connectivity."

"Even with installations, as the millennial generation gains more consumer power, they are more technically savvy, they don't need an engineer to set things up, they just need an expert to troubleshoot if they run into a problem.

I think almost all services in the home will be done remotely in the future, or at least this will be the first approach, and then if an engineer is required they will be dispatched. This is not just because it is better for the service provider, although it is of course less expensive way to serve customers, but more importantly I think it is because this is what the customer will want and will expect."

Again this echoes with Dutta's comments during the debrief session. "The technology has existed for some time, but the fact is that there is now a need for it and a demand for it from some customers, I think is the biggest driving point for remote," he explained.

"Traditionally, the idea in the customers' mind would be that if something is broken while it was possible to try and resolve the problem remotely, it would simply be easier for them to wait for the service provider to send a technician to sort everything out. That is what they were paying for, which is the service they would expect.

"Now the customer is thinking that maybe it is not the easiest option to have a technician sent. Maybe there are new protocols or other challenges in place as a result of the pandemic so are there other ways we can make this faster, better and more efficient?

"I think because the customers are driving it from both a response point of view and from a safety point of view that is why the momentum we are seeing in terms of companies adopting remote services will become a sustained trend."

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Understanding what effective use of asset data looks like...

Having established the most significant shifts in the industry from both the service provider and customer side that we have seen across the last eighteen months, in the next part of the study, we shifted our attention towards how field service companies were utilising data within their organisation...

We had entered into the study with the hypothesis that having seen the massive shift towards remote service delivery, indicated in several prior Field Service News Research studies across the last few years, our industry would become increasingly reliant on the effective utilisation of data analysis.

However, while we are all becoming more comfortable with discussions around and the application of technologies such as the Internet of Things, Augmented Reality, and Big Data processing within a field service context, the reality is that we are still very much in the early stages of putting these technologies in place.

Digital transformation has been a commonly referenced buzz phrase both inside and beyond our industry for some time now. The common consensus of many technology-focused analysts is that the pandemic accelerated our journey through this digital revolution.

However, while we may have taken some significant strides across the last two years in this area when change is forced upon us by external disruption, it can take time for processes to be realigned. Often, we find a way forward that doesn't necessarily involve optimally redesigning processes in such situations. In times of crisis, we just get to where we need to. Only after the dust settles and we have time for reflection can we begin to fine-tune our operations.

With this in mind, we felt it was critical to assess where we were as an industry concerning the effective use of data.

In our initial study, we asked our respondents if they believed the field service business unit receives enough data from their assets in the field into their systems of record to impact their field service operations positively. The responses showed an industry still somewhat in flux, with 43% of respondents stating that they do receive asset data and it is used effectively. In comparison, 57% of respondents said that while they receive asset data into their relevant systems of record, they felt it wasn't being utilised effectively.

Of course, this question is just utilised to provide a barometer of an overarching feel for the industry. As Jeukens pointed out during the debrief, "my first counter-question would be 'define effectiveness.'"

This is, of course, exactly why we engage in the three-staged approach within Field Service News Research studies, wherein we undertake quantitative research that allows us to assess the critical headline trends, then dig deeper into the meaning of those trends alongside subject matter experts through our debrief sessions, before returning to our respondents in a series of one-on-one interviews that allow us to extrapolate further meaning via a qualitative methodology.

Therefore, understanding why certain respondents felt that their application of data wasn't effective was a central part of many of the follow-up interviews.

Across these discussions, we saw three common themes appearing. These were:

- Too much data to draw meaningful insight
- The wrong data being collected
- Data getting stuck in business silos.

Some of the comments around this line of questioning included:

"Our biggest challenge is not the collection of data; it is knowing what data can drive insight to allow us to plan better actions. Each asset in the field generates huge amounts of data which is all collected but realistically, the majority is just collected and left alone.

"I'm not even sure where we would start to fix that issue either, to be honest. It seems to be a big job that would benefit many different departments but is the classic case of everybody, somebody and nobody. Everybody thinks that somebody else should be doing it, so in the end, nobody does it!

"Ultimately, I think that we would need someone at the exec level to take

ownership of our data strategy in general because I do agree with the study report that data is going to be critical for service organisations and frankly at the moment we don't have the processes in place to use the vast amounts of data we collect in anything other than a very basic form." - UK Service Director in the Manufacturing sector.

"I think our challenge as a business is identifying what data we need to be able to draw upon and making sure that is directed to the right place. I'd like to see us reach a point where we can establish a closed feedback loop between us as a service department and our R&D and development team – and I think that asset data really is the mechanism that will allow that to happen. However, what I need to know in terms of service operations, is different to what the guys in R&D need to know about asset performance.

"There is overlap across the two and this is the important part we need to do better. We need to make sure the insight we need in service operations is readily available to us, the insights the R&D team require is readily available to them, and then the insights that sit in the overlap in the centre should form the backbone of a common language discussion between our two business units so we can close that loop. That is certainly the goal we are working towards; however we are not there yet so I do think we can be a lot more effective in our use of asset data." - European Group Service Director, Mining and Aggregates sector.

"For our business, I would say that in terms of getting the data we need as the service operations team, we are starting to get quite close to effective use of data. We have been moving much more towards a proactive model of service, and utilising asset data in our newer assets and even some retro-fitted older devices, has been a core part of that transition.

"However, the reason I stated I felt we weren't utilising the data effectively is that currently, much of the data that we leverage within service operations could and should really be much more readily available to our service sales agents. They have access to rudimentary data, of course, like top-level asset history and warranty length etc.

"However, if they were able to look up, for example, the percentage of uptime that we have delivered throughout the service contract, that would enable them to build a much more compelling sales pitch. Currently, they have to go through too many hoops to get that information because they have to come to us for that level of information, and while we are always willing to help, that can add delays as we are busy with the day job!

"So I think if we could move the data from one business system to another with greater ease, really develop that 360 degree customer view, not just built around the customer data but also the asset data, then we could be moving to a whole new level of effectiveness." – US National Service Lead, Manufacturing Sector.

Many of the responses reflected Jeukens' commentary during the debrief session. "We have seen a lot of organisations setting up Big Data and IoT to process and collect asset data, and they have ended up with many data lakes because they focused on collecting the data and not so much how they want to use the data," he explained.

"I think if you focus on the use, you can better define what is effective. However, by also defining use, you can define the persona, and this is in turn linked to the business silo. So if the use of collecting data is defined by service delivery personas, they will typically only invest in collecting the data that is valuable to them, and when they only collect the data that is valuable to them, there is very little sharing of the data beyond that silo.

"Only in an organisation where there is someone who can supersede the various silos and can look at data from a broader perspective could this be overcome.

"However, in such scenarios, you are often asking the service operation, and often it is the service technician collecting data in a 'poor man's IoT situation for somebody else in the organisation. As we know, man-hours are the key currency in service operations, so asking our technicians to spend time collecting data for a different department without any incentivisation is a tough ask. It is a tough business case to build.

"This is why you really need a strong personality within the organisation, who sits outside of the established business silos, if you really want to collect and leverage data in a cross-silo capacity."

A key correlation between the extended use of asset data and wider business success...

While many hugely insightful data points were revealed both within the initial quantitative phase of the study and within this final qualitative phase, undoubtedly the greatest revelation was the apparent correlation between the prevalence of asset data being shared within an organisation and the standard of service execution...

As we saw in the original report, those organisations that shared asset data across the wider business ranked their performance in critical areas far higher than those who stated their data was locked away in business silos.

These key areas included:

- Margin
- Revenue growth
- Employee retention
- Product quality
- Service efficiency
- Customer satisfaction

And in each of these areas, those respondents whose organisations shared asset data beyond the silo of service operations ranked their performance between 1.5 to 2 times higher than their peers.

Similarly, of those organisations that stated that asset data was available outside of the field service business unit, nearly two-thirds said they had introduced a layer of advanced service or servitisation into their service portfolio.

Indeed, the headline findings of the study would seem to indicate a significant correlation between service performance, service maturity and the broader use of asset data.

Certainly, while we may have anticipated some uplift in performance amongst those organisations actively sharing asset data, the consistency and size of the uplift we have seen, from a robust response set, clearly sets out the foundations of a strong argument in favour of doing so.

"I was pleasantly surprised at how significant the difference is between the two when I saw the data," commented Mark Wilding, VP of Global Transformation, ServiceMax, during our debrief session.

"We do anticipate all of the opportunities that asset data can generate, particularly with regards to margin and growth.

"I think all of us in the industry can be slightly guilty of underestimating the significance of properly utilising asset data and seeing this data and these trends, in its true scale, really does shine a light on how vital it can be to driving operational success in so many different aspects of the business."

Similar comments were made by a number of the respondents during our follow-up interviews. One service leader with responsibility for a nationwide service team for a German manufacturer commented:

"I was one of those whose organisation does share asset data outside of the service operation. Our asset data is accessible to a number of other business units, including development as well as sales and, of course, our contact centres who do first layer triage. I also have scheduled monthly meetings with other department heads as well, so a stronger working relationship with other departments than I have had in previous companies I was working within.

"In one way this data doesn't really surprise me, as it makes sense that the more collaboration across a business, the more we are pulling in one direction, the greater the likelihood of success. And of course, data is the common language that allows us to do this more effectively.

"However, seeing the trends very clearly in your study, I must admit though it is very pleasing to see what I think we intuitively assumed to be the case being backed by solid data."

However, as another interviewee, a VP of service for a US-based energy producer, outlined, while the correlation is interesting, it doesn't necessarily prove causation. Could the sharing of asset data within the wider business be an indicator of service maturity levels, perhaps?

"For me, while the correlation is interesting, my suggestion would be that those

organisations that are able to share data more broadly within the business are likely further along the service maturity curve and so it should be anticipated that they would also outperform their peers in all of the metrics outlined," they commented.

"I'd say that this is also supported in the data from the study by the fact that there is also a larger percentage of companies in this group who have introduced servitization.

"In my experience, the more an organisation is positioned to see service as a key part of their revenue strategies, the more need there is for them to share critical information such as asset data. It is when service no longer becomes a standalone function but part of the broader business strategy – and I think this is what we are seeing in this study."

This latter comment echoes Sumair Dutta's thoughts as he reflected on the study during the debrief session, in that for those organisations less advanced in the service maturity curve, this study perhaps shows an indicator of what can be achieved if they follow the path walked by their peers and competitors who are further along that journey.

"These are very powerful findings in terms of showing a consistent gulf between those organisations who share data and those who don't," Dutta commented.

"Directionally, it points to the fact that if you are not sharing data, you should start considering doing so.

"One of the largest gaps between the two sets of companies was within the customer satisfaction ratings, and I think perhaps for those who are currently not sharing asset data beyond the service operation, this could be something to rally around is this concept of customer-centricity.

"There is a lot of ideas of what being customer-centric is and a large part of that is understanding the customer, which is of course very relevant, but ultimately the customer is the person who has ownership and usage of the asset so the asset is a proxy for the customer in a certain way. So having visibility into the asset data is a real way of measuring customer value and business value."

> "I think all of us in the industry can be slightly guilty of underestimating the significance of properly utilising asset data and seeing this data and these trends, in its true scale, really does shine a light on how vital it can be to driving operational success in so many different aspects of the business..."
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> - Mark Wilding, VP of Global Transformation, ServiceMax

A period of transition where asset data is collected through mutiple sources...

With the study findings established a clear correlation between the extended utilisation of asset data and improved levels across multiple key business metrics, does this mean that those service organisations currently not collecting and utilising asset data effectively need to invest in expensive retrofits of existing assets while simultaneously developing all-new assets to be IoT enabled to be able to take the next step on their own maturation path?

When it comes to the collection of asset data, all too often, the discussion automatically turns to data collection via remote digital connections.

However, the truth is that, while undoubtedly the Internet of Things is only going to play an increasingly important role within our industry, it is still only one mechanism of collection for asset data.

In the initial report in this study reflecting on the quantitative data from the first phase of the project, we saw that while slightly over half (52%) of companies stated that they utilised direct connectivity to the asset to collect asset data, we also saw a similar amount of asset data collection from technical support agents, and an even greater number (65%) collecting asset data via their field workforce, further to this nearly a third (29%) of companies collected asset data from customer-driven updates. Additionally, almost a fifth (18%) collected asset data from partner-driven updates.

In many ways, this is indicative of the industry we occupy being caught between the past and the future. It is becoming increasingly clear that the future of field service will be heavily reliant on our application of data.

As older assets in the field are replaced with newer, IoT enabled models, this will become a standard mode of operation. However, in the present, we have to face the reality of seemingly endless pressure to achieve more with less. It is a challenging dichotomy to resolve. On the one hand, in the here and now, we need to reduce the time each field service worker takes per job.

On the other, we need to request that they spend extra time collecting asset data at each job so we can begin to build the processes that will allow us to operate in a more data-centric manner moving forward.
Again, to quote Jeukens, “It is a tough business case to build.” So how have those who are successfully utilising their field technicians and their contact centre agents, and even their customers to collect asset data going about this task?

“We’ve literally baked it into every single interaction,” explained one senior service leader working within the med-tech space. “Whether it is provided by the customer when they are speaking with the service desk, when our field service engineers are onsite or via IoT, the required data is taken down at every point.

“For us, we see the investment in time that it takes to do this is a necessary cost that will allow us to generate further efficiencies both potentially down the line with any given asset but also in terms of understanding how to better optimise the whole install base. The slight additional effort now at each asset interaction, we believe, will pay dividends moving forwards.

“Additionally, we are still restricted by what connectivity we can implement in certain situations where our assets are operational, so manual collection of asset data is critical for us to be able to establish a coherent and comprehensive approach to how we will continue to grow our service strategies around consistent data analysis.”

For another of our interviewees, a VP of service for a Canadian HVAC provider working in commercial real estate, the biggest key is convincing customers to provide regular updates for asset data.

“The conversation that we had to have with a number of our customers was that while we would be collecting asset data every time our technicians would be onsite providing maintenance, if they wanted to move to a more proactive level of service, where we would offer a guarantee of ongoing uptime, then

there were two choices.

"They could either upgrade their existing equipment so we could install systems that allowed us to connect remotely, which was, of course, our primary recommendation, but for those customers who wanted to continue with their existing system for a little while longer, we would be looking to them to provide regular updates of key data from the system so we could enter it into our own systems that would allow us to begin working towards a more sophisticated means of delivering maintenance.

"In essence, using the customer to provide asset data allowed us to have a more gradual transition for them from their existing SLA based service agreement to a more proactive model. When this was explained to them in that way, when it was outlined that the maintenance of their heating and aircon system would be more efficient and could be better scheduled around their off-peaks hours, they, in the most part, saw the value in this.

"We also made it as easy as possible for them to provide that data, so it was a small effort for them, and I think the fact that they saw us as engaging with them in providing an alternative other than invest in new equipment was also appreciated."

As mentioned earlier, it does indeed appear that as an industry, we are in something of a state of flux as we move from a world of traditional break-fix service offerings to one where service becomes proactive, preventative and driven by data- and it is through approaches to bridging this gap as outlined above, where we can work with our customers and utilise our field service engineers to allow us to transition from the past to the future.

"There a couple of ways to approach this transition," explained Wilding, when this topic came up during the debrief session.

"There are retro-fittable solutions to provide connectivity. Yes, these won't harvest the same volume of data as a device that is designed with all the sensor suite, but they do allow for certain information to be harvested. Additionally, we have to consider the evolution lifecycle of some of these devices that don't have the capability to be connected – these will naturally be replaced over time with devices that do have that layer of connectivity.

"The other aspect is when you are looking at a customer service agreement; expectations are growing. As we deliver more as a service organisation, the customer then begins to expect that standard. Then as their expectation grows, you have to keep ahead of their expectations because every time you deliver something new, they will expect even more . So in exchange for that increasing expectation of service standards, they have to invest more in the products.

"They have to recognise the lifecycle of the product and so if the customer wants a new standard of service, they want improved response levels, connectivity levels reliability and uptime then we are moving into equipment as a service. They have to move to that with the service provider.

"Therefore, if they have equipment that cannot fit within that profile, that cannot be served at the same level as their expectation and so leaves them with a level of risk, then you as the service provider have to work with that customer collaboratively to bring them out of that lifecycle a little bit quicker to enable that expectation to be met."

"As we deliver more as a service organisation, the customer then begins to expect that standard. Then as their expectation grows, you have to keep ahead of their expectations because every time you deliver something new, they will expect even more..."

- Mark Wilding, VP of Global Transformation, ServiceMax

Does asset data analysis require fresh technology or fresh processes?

In the previous section of this report, we saw that a mix of both process and technology was deployed in collecting asset data effectively from the field.

However, when it comes to making sure that organisations are then utilising the data collected effectively, we must also consider whether the road to improvement for those organisations that currently state they are not able to do so is also one that is based in technology, processes or a blend of the two?

In our initial study, we asked those companies who had stated they were not currently using data effectively what they felt was the barrier to them being able to do so.

The majority of companies within this response group, totalling almost two-thirds (63%) of these respondents, stated that they felt it was an equal mix of inadequate processes and technology. Meanwhile, a quarter of respondents cited inadequate processes as their key barrier, while just over a tenth (12%) stated that it is inadequate technology.

"For our organisation, and how we are intending to develop our service offering looking forward, it really is quite a radical shift away from the status-quo that we have operated within for the last two decades," explained one of the respondents, a service director for a UK based manufacturer, in our series of follow up interviews.

"If I'm being honest, I think the technology piece will be the easier part of the equation, although currently, we don't have the right tools in place, so when I answered the question in the original study, I stated it was an equal mix of both processes and technology.

"However, currently we are trying to completely re-imagine our service offering as we move from a traditional break-fix model to a preventative model. This is going to require some significant process change and we need to have a good understanding of what information we need to be pulling from our asset data sets – and also we need to be thinking how that will impact our workflows in both directions."

This sentiment was echoed across a number of our follow up interviews with another interviewee, a service lead for a company working in the telco space within Italy, stating, "in terms of the technology side of the discussion, we are already a technically savvy organisation, but also, this is where we would seek support from our solution provider to help us with any technological challenges. This is, after all, why we would employ them; this is their business and area their of expertise.

"With our processes however, this is our business and our area of expertise so the burden is more on us. It is also important that we get this right as our processes directly affect our customers, and so we must make sure we are positioned to serve them better."

Someone who has spent many years discussing the importance of establishing a blend of process and technology when introducing change for many years is Sumair Dutta.

"I agree with the statistic here in the report with this not being an issue that can just be resolved with technology because it typically is not a technology problem," Dutta explained during our debrief session.

"However, that being said there is a role that technology plays in solving or assisting in this problem. There is technology to collect all this data whether it is directly from the machine or entered into a system like ServiceMax but is it easy to collect that data from a process perspective?"

"Is it easy for a field service technician to collect that data? Are they incentivised to collect that data? If we are asking our technicians to complete their jobs fifteen per cent faster but are then giving them five more forms to complete then, that seems to me to be sending out the wrong message.

"I think there is a role that technology will play to make it easier to get to

data, but I think at the level where most companies are at, the technology is sufficient to get there, and improvements can only be incremental after a certain point.

"Ultimately, for me, it [removing barriers to effectively utilising data] comes down to process, and I think incentive is the number one objective there. What is the number one objective to collect and use this data, whether it is in service or outside in the broader business as well?

"I think the other thing we are beginning to uncover is that there is this nebulous concept that we really need data, and we really need to do 'things' with data.

"However, many are still in the phase of figuring out what are those things they need to do and understanding what does good data look like to allow them to do those things.

"We've opened up this new area of discussion in the industry that begins with 'we need asset data'. OK, that is a good start, but what does asset data look like? What fields of asset data do you need for the fields that you have? How are you going to use that?

"I think we are now starting to move from this nebulous space of 'we need data because we don't have data' to more productive conversations around what are we going to do with the data we now have?

"As we have seen across the study, this discussion is not just contained within service, we need to look at this from a business wide perspective as well."

"We've opened up this new area of discussion in the industry that begins with 'we need asset data'. OK, that is a good start, but what does asset data look like? What fields of asset data do you need for the fields that you have? How are you going to use that?"

- Sumair Dutta, Senior Director Product Marketing - Customer and Market Insights, ServiceMax

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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.

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