



How IoT Will Solve the Ageing Workforce Crisis

Does solving the biggest challenge we face today, set us up for a brighter future tomorrow?

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As Multiple Disruptive Forces Put Pressure On Us Like Never Before, We Can Still Be Building For The Future...

Numerous challenges in the fast-paced field service management landscape can often prevent seamless operations and customer satisfaction. The Internet of Things (IoT) very much offers a path forward to a much more effective approach to service and maintenance delivery, but it is not in and of itself a magic bullet...

The reality is that today, manufacturing and field service organizations face many challenges but also many opportunities to leverage IoT technology to enhance service delivery and customer satisfaction.

Ultimately though, even those field service organizations that have begun to exploit and harness IoT's vast potential have only started to scratch the surface.

In essence, when it comes to field service and manufacturing, we face many challenges in the current era, some perennial, some newer and increasingly pressing.

Yet, each and every way we turn, we soon discover that the effective use of data is the key to establishing the almost impossible task of doing more with less. The one thing we do need more of, though, to achieve that is more data. We need robust, reliable data. We need robust, reliable, and regular asset data. We need the IoT.

However, asset data generated from IoT-connected install bases does not simply lead to asset or fleet optimization.

By overhauling traditional methodologies and adopting a data-led approach to service delivery, we fine-tune the whole service operation, and this in and of itself can and will solve many more of the most pressing issues we face as an industry today.

So, in this exclusive Field Service News white paper, published in partnership with the Peach Group, we shall set out to chart the current landscape of IoT in terms of field service, take stock of the challenges we face today, and explore how the effective adoption of connected field service workflows could help us overcome the most critical issue of all: the looming tsunami of an aging workforce crisis.

First, let us review the multiple challenges we as field service leaders face.



A Maelstrom of Disruption for the Field Service Sector, With a Workforce Shortage Crisis at its Heart.

We are arguably in the midst of the most significant period of disruption within the field service sector ever...

Radical, disruptive forces are driving change from almost every corner of our industry. Supply chains are shifting to a post-globalization era. Remote service is rapidly becoming an accepted approach to providing maintenance. Sustainability initiatives are forcing major rethinks of tried-and-tested methodologies.

And yet, it is perhaps the issue we have seen coming from the furthest away that is at the heart of most service leaders' nightmares, keeping them up at night.

That is of course, a global ageing workforce crisis, hitting many industries but field service in particular, is feeling the pain harder than most.

No matter where in the world you go or what industry vertical, there is a scarcity of skilled field service technicians and engineers. This issue is magnified by an increasingly aging workforce and the uphill battle to attract fresh talent into the sector.

Of course, we can do more to increase the pool of talent we are exploring in, Field Service News has championed the need for seeking to diversify our talent pool for the best part of a decade. Not just because bringing gender parity into the field service sector is long overdue, but because as an industry we face an existential threat if we do not.

However, no matter how successful we may become with new recruitment drives, we will likely never achieve the balance of employing (and retaining) enough field workers to keep up with demand, particularly as we step more boldly into a service-led economy.

Quite simply, we will need to work out how we can achieve more with less. Yet, a significant workforce shortage is not the only pressure we face that requires us to achieve more with less.

Indeed, many field service leaders will know all too well the somewhat perennial challenge of doing do. However, as the ageing workforce crisis reaches breaking point, we are concurrently faced with an ongoing economic contraction while customers' soaring expectations for quicker, higher-quality, and more personalized services seem to continue each passing day.

It is no surprise that since the pandemic, we have seen field service organizations, out of necessity, lean into digital transformation projects en-masse.

In fact, the field service sector, which has often been accused of moving slowly to embrace change, largely due to a natural conservatism underpinned by its mission-critical nature, is now boldly stepping to the forefront of innovation, adopting new technologies and service models in a bid to not only survive today, but thrive tomorrow.

As traditional service models begin to fracture under the weight of such widespread and variable industry disruptions and evolving consumer preferences, the need for digital transformation for many companies is now simply essential.

Digital solutions, remote service offerings, and self-service alternatives are prompting a major re-evaluation of age-old strategies, urging businesses to adapt and embrace this new paradigm of service delivery or risk being left behind.



The Next Paradigm For Field Service Is Being Established Now and Will Be Built On The Internet Of Things

With the field service sector in a period of flux, evolution, and disruption, it is perhaps unsurprising that many technologies that have emerged in the last decade have become widely deployed. Yet, to date, many of these have been done so in only a rudimentary manner...

IoT solutions certainly appear to fit into the above definition.

In general, IoT technology is chiefly employed in our sector today to amass data, providing field service organizations with the immediate insights needed to make well-informed decisions and bolster effective maintenance decisions.

Of course, this is an important first step into a brave new world that we are on the precipice of entering. Accumulation of data is pivotal in refining operational efficiencies and reducing instances of unscheduled downtime.

Through the use of the sensor technology that underpins it, IoT grants a detailed view of equipment and asset conditions, informing them of their health and usage patterns. With these insights, field service organizations can proactively fine-tune and optimize service delivery and prolong the service life of their assets, leading to enhanced service delivery and increased customer contentment.

Indeed, many organizations are beginning to unlock some of the potential that connected assets can yield. However, many are not.

Despite its transformative potential, the effective uptake of IoT within many

organizations lags. Effective is the keyword here. While FSN Research has outlined ongoing growth in the number of connected assets, we do not see a similar maturity in the strategic leverage of these assets' data.

While the reasons fluctuate from industry to industry and company to company, barriers such as strategic misalignment, disconnected data ecosystems, and a reluctance to adopt new technological paradigms are, in many instances, hindering the full-scale leverage of IoT in field service management.

Without a roadmap that aligns day-to-day operations with longer-term business goals, the integration of IoT can often be fragmented, missing the mark on its many possible benefits.

Ill-thought-out, fragmented data silos often obstruct the flow and analysis of IoT data, thus limiting its impact while this is often a technological issue, with disparate systems not 'talking to' each other, it is also often the by-product of siloed business units.

Critically, a huge amount of IoT's potential is being overlooked as different business units do not understand each other's workflows thoroughly enough to see where there is the opportunity for mutual gain from the intelligence



overlaps that can be unearthed through more fluid data flow.

Additionally, the sheer scale and complexity of data from IoT devices can often overwhelm many field service organizations, leading to underutilized insights. Data is often stored in data warehouses or data lakes.

The problem is that things in warehouses often become dusty and forgotten, while all too often, we can drown in the depths of a lake.

Yet, it cannot be stated more explicitly- IoT technology will be pivotal in field service management. It will continue to drive transformative change and enable field service organizations to meet the demands of modern field service delivery.

Its integration into service operations is vital for improving efficiency, resource management, and service excellence, setting the stage for lasting success and a sharp competitive edge. IoT solutions can and will help field service companies directly tackle industry challenges by becoming the bedrock of predictive

maintenance and proactive service – which will be the central tenet of the future of field service operations.

Indeed, IoT will be the central platform on which all future field service operations are built, promising enhanced productivity and customer-focused service delivery. The question is not if but when we will reach that point.

Of course, in such a scenario, when entire industries are being reshaped in the wake of unprecedented and ongoing disruption, those who adapt quickest will be those who thrive in the new landscape.

To paraphrase Charles Darwin, it is not the fastest nor the strongest of the species that survive; it is the most adaptable. So, it is true of organizations, as we have seen, whenever we move from one paradigm to the next.

So, the pressing question is, what can your field service organization do today to begin adapting to an era of connected field service, and what should you be doing to fully embrace this brave new future?

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Does Solving The Biggest Challenge We Face Today, Set Us Up For A Brighter Future Tomorrow?

As discussed in the previous section of this paper, the most pressing issue facing field service organizations worldwide today is the diminishing pool of field service engineers and technicians. This should not be understated; we are facing an emerging workforce crisis across all sectors and corners of the world...

As we've stated at length now, the answer to this overwhelming challenge lies within a simple and familiar yet incredibly challenging equation: We need to establish a means of doing more with less.

We must rethink many tried and tested mechanisms employed within field service delivery to achieve this. The good news is that by embracing digital transformation and placing IoT in tandem with multiple other technologies, there is a means of achieving that.

It is not just a loss of numbers but a loss of experience

The stark reality is that field service organizations in all regions, and industry verticals are grappling with the ripple effects of an aging workforce. The inevitable tide of retirements is creating not only limited numbers of field service engineers but also a vacuum of seasoned expertise.

Indeed, the departure of many veteran field engineers and technicians will carry with them years of irreplaceable hands-on experience and a nuanced understanding of complex systems. Overcoming a loss of headcount across the industry will be hard enough, but the all-too-familiar loss of institutional

or tribal knowledge and technical acumen within a business can deal a critical blow.

Even if this issue could be overcome, and technologies such as advanced knowledge management and remote service delivery tools are mitigating some of the impact of that loss of intelligence, there are still significant barriers to replenishing the ranks of field service workers as the sector struggles to attract and retain new talent.

The field service sector, which is often perceived as less glamorous than some other adjacent sectors, is in fierce competition for fresh engineers who can adapt to the evolving technological landscape and customer service expectations.

The face of tomorrow's engineer has changed significantly from yesterday's. Major requirements for a mixed skill set are increasingly sought out. A skillset that balances traditional technical skills with softer interpersonal skills is in high demand.

So simultaneously, we need to streamline the workflows, make the role of the field service engineer attractive to a new generation, a centralise our subject



matter expertise. Fortunately, all of this and more is possible as we begin to really understand the true power of IoT and the connected field service operation.

Potentially, the IoT can serve as a crucial bridge between the physical and digital realms. This will, in turn, allow for far greater streamlining of field service operations than ever before.

By connecting equipment to the IoT, field service organizations can collect data in real time, ultimately allowing them to leverage that data for immediate, actionable insights.

This enhanced visibility and control over operations allows a shift towards truly proactive maintenance, reducing downtime and facilitating better service delivery methods for the customer, the engineer and the service organisation alike.

With IoT, the constant stream of data provided by sensors captures a detailed performance profile for each piece of equipment – from the component level to the entire install base. This information is the cornerstone for predictive maintenance and can and should feed improved decision-making processes to both fine-tune operations and drive efficiency.

Yet, we've heard about the promise of IoT before, many, many times – but still we are not seeing the bigger picture in how the shift to preventative and proactive maintenance will have far wider ramifications on our future success.

For example, real-time data integration into field service management systems empowers technicians with up-to-date intel. This enables the field service tech to address the right issue faster and more effectively.

In turn, this allows the field service tech to complete more work, in a less stressful environment. Of course, this is just a simple outline of the wider impact of IoT on the field service organisations.

However, as we shall see in the next section of this paper, whether directly or in a more indirect, less-tangible, but equally powerful way, effective use of the IoT and a suite of tools built upon this can play a major role in overcoming the aging workforce crisis.

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Five Ways IoT Alleviates the Workload on Field Engineers

As we continue our exploration of these aligned themes, let us now outline five key areas where the impact of real-time IoT data across the field service workflow can help us achieve less with more...

Indeed, there are multiple benefits that the introduction of an IoT-based workflow can have on field service operations, in turn, help to mitigate the impact of the workforce shortage we universally face.

However, when our human resource is our most valuable asset, as we've expressed throughout this paper, it is also important to consider the impact that introducing such technology into our workflows can have on our field service engineers as we seek to provide them with an engaging and enjoyable working environment, which will play a major role in reducing employee churn – something we must of course, avoid at all costs.

Pro-Active Maintenance Schedules:

The implementation of IoT systems allows field service leaders to offer customers timely repairs due to real-time alerts, dramatically reducing system downtime.

While this is, of course, a benefit to the customer, it also allows for much greater efficiency in the allocation of the field workforce, allowing for optimized routes that can be far more productive than a break-fix-reliant approach to service delivery would yield.

For the field service technician, a proactive schedule can be optimized so that their final job of the day is the closest to home. This is in contrast to the break-fix call that comes in just before the end of their shift, requiring them to travel for an hour in the wrong direction.

Enhanced Technician Efficiency:

Field service engineers, equipped with data-driven insights provided by IoT, can diagnose and resolve issues with much greater efficiency. This empowerment through information streamlines workflows and elevates the capacity for on-site problem-solving, optimizing engineers' productivity and effectiveness in the field and increasing the key metrics for field service operations, first-time fix, and technician utilization.

For the field service engineer, one of the most fundamental aspects of the job that appeals is resolving the customers' problems. Empowering them to do this and reducing uncertainty from the job as possible will undoubtedly lead to a happier field service workforce.

Cost Savings Through Efficient Scheduling:

IoT's intelligent diagnostics significantly reduce emergency call-outs, which are both costly and disruptive.

Efficient scheduling, made possible through accurate data interpretation, allows for cost-effective planning and resource allocation. Such strategic planning directly translates into considerable cost savings for field service operations, driving greater return on investment per head across future field service technician recruitment, training, and development programs.

For the field service engineer or technician, reducing total cost savings



across the field workforce could open up further training and development opportunities for those who wish to grow with the company, offering a great incentive for loyalty.

Improved Customer Satisfaction Through Faster Response Times And Minimal Downtime.

IoT advancements contribute to improved customer satisfaction through markedly faster response times to service requests and the minimization of equipment downtime.

Customers benefit from swift service and enduring equipment performance, bolstering their trust and satisfaction with the service provider. IoT's reliability to field service operations reinforces customer loyalty and enhances the company's reputation for quality service delivery.

Although a soft benefit in terms of mitigating the issues of a reduced workforce, providing a better working environment can reduce employee churn across the field workforce. Simply put, happy customers will always result in happy field service engineers.

Of course, these are just a small selection of ways in which IoT may help a field service organization to overcome the challenge of reducing the number of field service technicians.

The intention of this paper is to highlight the broader impact of IoT on the field service operation in general, but should you wish to explore any of the above or additional benefits that can be leveraged by adopting IoT tools within your field service operation, our partner on this project, Peach Group have an excellent team that has been helping their customer base move beyond surface level benefits of IoT for many years- you will find their contact information on the final page of this paper.

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Through IoT We Can Resolve Today's Biggest Challenge While Building For Tomorrow. Five Key Considerations

Implementing IoT in field service management is not just a remedy for the current workforce shortage; it's a strategic pivot toward a future where efficiency, satisfaction, and innovation can be met...

By harnessing the rich data and connectivity IoT offers, field service organizations can truly optimize their service delivery, empower their field technicians with insights and foresight, and ultimately, delight customers with unprecedented service levels.

Indeed, the world we exist in today is one of many disruptions but also one of huge technological leaps forward. So, as we navigate these new technological frontiers, remember Darwin's observations – the adaptive, insightful, and collaborative field service organizations will not merely endure but flourish.

The IoT revolution is not on the horizon - it is very much here, and it beckons field service entities to embrace its potential fully, ensuring a competitive edge in the ever-evolving service landscape.

As we conclude this paper, let's look at five clear action points that you can use to leverage IoT to solve today's workforce shortage and build the effective workflows of tomorrow.

#1. IoT is not about digital transformation, or even service transformation it is true business transformation

Field service organizations must pivot towards proactive maintenance, leveraging IoT to anticipate and address issues before they escalate. However, the transition from reactive to proactive servicing is often hampered by

ingrained processes and resistance to change.

To overcome this, leaders should cultivate a culture of adaptability and offer comprehensive training, ensuring teams can embrace and utilize IoT data effectively for maintenance predictions and planning.

#2. Invest in good life jackets so you don't drown in your own data lake

Data collection and utilization through IoT technology are crucial for operational efficiency. Yet, this data's sheer volume and complexity can overwhelm existing infrastructures and analytical capabilities.

Organizations should invest in robust data management systems and skilled analysts who can translate IoT data into actionable insights, transforming potential information overload into a valuable decision-making tool.

#3. Remember your Change Management Fundamentals

To mitigate the workforce shortage, IoT can facilitate remote monitoring and diagnostics, reducing the need for on-site visits. This approach may encounter resistance from traditional field service technicians accustomed to hands-on work.



The key to easing this transition is clear communication of benefits, such as reduced travel and enhanced work-life balance, and training that emphasizes the value of their evolving role within the IoT-enhanced service model.

#4. Don't try and boil the ocean and remember perfect is the enemy of good.

Efficient resource allocation through IoT optimizes the deployment of field service technicians and contributes to cost savings and sustainability. A common barrier is the initial investment and the shift in the operational mindset needed for such optimization.

To address this, organizations should stage the integration of IoT, demonstrating quick wins and long-term benefits to secure stakeholder buy-in and sustainable implementation.

#5. Don't forget to bring your customers with you on your journey

Enhancing customer satisfaction through faster response times and reduced downtime must be a priority, achieved via the IoT-driven service delivery model. Obstacles here include customer apprehension towards new technology and service models.

Field service organizations should focus on transparent communication, demonstrating the direct benefits to the customer, and ensuring customer feedback is integral to the IoT strategy and its continuous improvement.

Bonus thought: The best day to start something new was always yesterday. The next best day is always today.

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Experienced team at your service

PeachGroup is made up of specialists in service and maintenance processes with at least ten years' experience in their field. However, at PeachGroup it's not just about having the right skills and experience, but also about getting the right personal match. Over time, a team of specialists has formed in which the strengths of each individual complement that of the others. Because of that, you benefit from expertise across the board and a team of specialists for whom working together is second nature.

We work with you to find the right solution:

In order to optimise the process, we immerse ourselves in your organisation. We look at what it is you really need from the ground up and walk through all the steps together. By consulting closely with you, PeachGroup is able to find the solution that fits your organisation best. We don't waste your time by communicating in confusing jargon. We explain things so that it is clear and understandable to all.

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