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Transforming Field Services in the Age of Hybrid Working

A research paper on the challenges in modern field services and opportunities to enhance employee experience

Table of Contents

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Executive Summary

Field support is a key pillar of managed workplace services, as it ensures the highest user satisfaction by offering dedicated, in-person expert assistance. However, field support is a function that incurs high cost for IT organizations because of expenses related to travel, inventory and labour. Hence, global IT organizations are consistently looking for enhancing and transforming this support channel to improve their efficiency and optimize costs. The COVID-19 pandemic and the subsequent rise in the adoption of the hybrid/remote working model have brought many transformative changes in workplace support services, including field support. Global workplace leaders and many managed service providers and global system integrators were exploring opportunities to enhance user experience with field services even before the pandemic hit. Clients and providers were experimenting with proof of concepts and pilot projects on associating field services with user self-service enablement and providing a consumer app-like experience for end users when they request field technician support. There were already initiatives to enhance real-time data insights, leveraging predictive analytics and proactive monitoring technologies, to reduce the number of tickets and the need for in-person field support.

The pandemic and subsequent norms of social distancing and isolation affected field service operations, and firms providing workplace technology solutions and services started transforming these services to be more innovative. This includes exploring the latest technologies, such as augmented reality, and fostering stronger collaboration among field technicians to assist all field service agents irrespective of their skillsets.

As we move into an era of hybrid/remote working, workplace technologies are transforming considerably to focus more on end-user experience enablement, measurement and enhancement. There is an increasing focus on adopting more eXperience-level agreements (XLAs) as opposed to the traditional service-level agreements (SLAs). To bring more end user or employee experience focus within field services, enterprise IT organizations have multiple opportunities from both technology solutions firms as well as their managed digital workplace service partners.

This paper highlights the key aspects that influence and transform legacy field service operations. It highlights the key challenges in implementing and managing field service operations in the new hybrid working model. It also suggests approaches to enhance end-user or employee experience, make field services efficient and reduce the need for in-person support, leveraging the latest technologies. It also highlights some key capabilities offered by Wipro in managing field service operations in modern times, leveraging the latest technologies and its strong partnerships.

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IT Field Services Related Challenges in the Hybrid Working Model

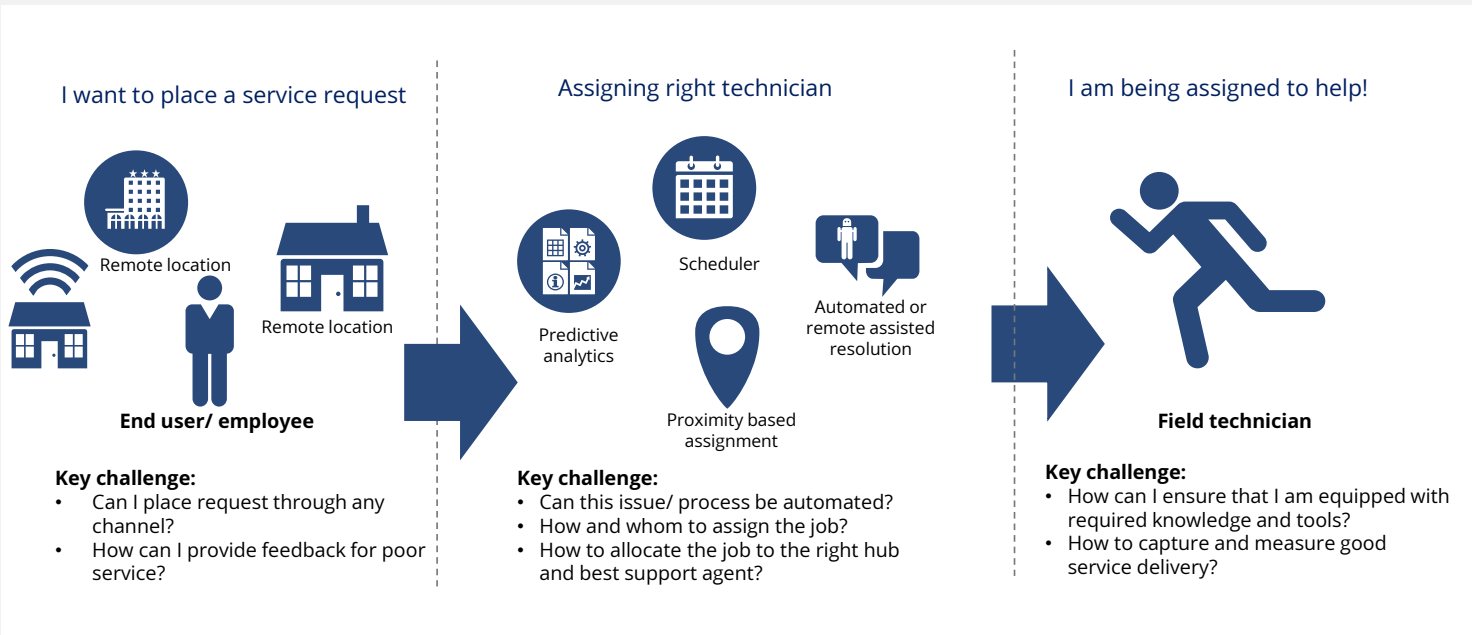
As the world struggles to get used to the aftermath of the COVID-19 pandemic, IT organizations are adjusting and conforming to new realities and challenges. The emergence of the hybrid working model has brought about massive changes in envisioning, strategizing and carrying out day-to-day enterprise IT operations. Employees are exploring more options regarding the modes and locations of their work, and many enterprises are providing flexibility to their workforce to work from anywhere. This puts up enterprise IT against a challenge to not only enable, support and maintain a technology ecosystem that conforms to this flexibility but also ensure a seamless technology experience as employees change their preferences of working from office to home or vice versa.

There is a widespread adoption of cloud-enabled workspaces, where end users can access applications and content from everywhere. However, the endpoint devices used to access such digital workspaces still form the focal point for workplace technologies. The end-user experience with a digital workspace can be good or bad, depending on the performance of devices.

Hence, device maintenance and support are the most important IT support functions needed to provide good user experience. While working from office, employees can leverage on-premises tech bars or tech-cafés where they can physically take their devices for all install, move, add or change (IMAC) services required. However, while working remotely, IT organizations deploy field service technicians who can visit end users at their locations and perform the required maintenance work.

Field support services are facing massive challenges and consistent transformations in the post-pandemic world where the hybrid working model is gaining traction. Employees are working from the locations of their choice and leveraging technologies to access their workspaces from devices of their choice. This puts a pressure on the field support function to support users ubiquitously by providing good user experience. The key challenges faced by the field support function in this era of hybrid remote working are illustrated in the following graphic and summarized broadly below:

Figure 1: Modern field service related challenges



Source: ISG

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1. Diverse workforces and devices entering workplaces

As employees, both permanent and gig, join a workplace and continue to work from the location of their choice, enterprise IT no longer has control over the devices and networks used to access digital workspaces. This poses a huge challenge for field service operations, as technicians are expected to assist employees and fix issues for all device types. Many technologies, such as virtual desktops and virtual private networks, allow users to access corporate workspaces even using devices that are not enrolled and cannot be managed remotely. This requires the field technician to be equipped with knowledge about diverse devices, their issues and knowledge to fix them.

2. Need to deploy the best field technicians in remote locations

Employees, irrespective of their working location, would expect immediate resolution of their technology issues. In a remote working scenario, the next available field technician may not necessarily be the most experienced with the issue. Deploying the best field technicians across many locations is a costly affair for an IT organization.

3. Users expecting more self-help and proactive resolutions

Workplace technologies focus on providing self-help to users for most of their IT issues, as it reduces cost and empowers end users. Self-help workplace support requires a high degree of automation and the use of the latest technologies, such as artificial intelligence (AI) and machine learning. Proactive automation requires the monitoring of devices and applications' performance to predict and prevent system failures and auto correct them without users knowing about them. Enabling more self-help and proactive resolutions for remote users would reduce the need for field technicians. However, it would also mean the need to enrich the self-help knowledge base with extensive information and to support issues outside the traditional scope.

4. Need to assist field technicians from remote locations

There is a strong need for using the collective knowledge of field technicians. In a remote setup, a field technician would significantly benefit from the support of colleagues with more experience. Owing to the pandemic-induced restrictions and associated costs, it is not practical to always dispatch a team of experienced technicians to users' remote locations to solve issues. Instead, such issues can be resolved on the premises of an office or in a tech bar. However, in the hybrid work model, the field services team struggle to support a fellow technician with expert help working in a remote location.

5. Non-traditional IT devices needing configuration

Unified communication and collaboration solutions have come to the forefront of workplace experience in the hybrid working model. These solutions enable collaboration and enhance productivity irrespective of users' working location. There are many hardware devices that enable and strengthen the use of these solutions, and not all such devices are issued by enterprise IT to end users. In the hybrid working model, users make use of devices such as external cameras and microphones to collaborate efficiently from the location of their work. Although IT field support technicians are not always expected to resolve the issues with non-traditional IT devices, for efficient and uninterrupted working, progressive IT organizations would want to anticipate and fix the issues with such collaboration devices as well.

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Ensuring Good End-user Experience with Field Services in the Hybrid Working Model

Global workplace leaders focus on providing technology solutions that ensure good user experience. Managed workplace service providers, that also offer break-fix and IMAC support, are continuously improving their capabilities to overcome the Watermelon effect where users end up having a terrible experience even when support services are meeting all the required SLAs. The preference for enhancing user experience over adhering to traditional SLAs has led IT support organizations to meet XLAs. While traditional SLAs are transactional in nature, XLAs are indicators of good user experience and associated with operational and business improvements. Many traditional service-level key performance indicators (KPIs) are now being taken over by new eXperience indicators (XIs). For example, first-call resolution, a traditional KPI, would measure the percentage of IT incidences resolved in the first call of users to the help desk. The percentage of tickets resolved through self-help, an XI, is an indicator of enhancing users' ability to solve the incidences themselves without reaching out to a service desk agent.

Although XLAs and XIs focus strongly on automated resolutions and resolutions through self-help, there are issues that still need the support of human technicians. Field services is a key area that needs a special focus while taking an XLA approach for IT organizations. While employees would still need a human to meet and hand over their devices for break/fix or IMAC support, the factors that would influence user experience with such a service would be different in an XLA-based model compared to a traditional SLA model. For example, a traditional SLA model would only consider the time taken to resolve or respond to an IMAC or break/fix issue. At the same time, an XLA-focused model would also consider each step of the field support request, ensuring user satisfaction and good user experience; this model would also favor approaches that would enable user self-help or remote resolution.

Employee experience enhancement with field services

Since devices form the core component of a digital workspace, IT organizations and managed digital workplace service providers are offering services around device enablement and support, measuring user experience at every step. Enterprises are exploring multiple approaches to enhance employee experience with IT field services, as explained below:

1. Device lifecycle management with predictive analytics

Device-as-a-Service is not a new service offering and has been around for a while. In this model, a managed service provider, typically in partnership with device original equipment manufacturers (OEMs), manages the complete device lifecycle, from procurement to disposal, while also offering maintenance and support in the as-a-service format. This model has been very popular among enterprises of all sizes, as it offers a predictable total cost of ownership (TCO) and takes away the burden of managing large inventory of devices and retiring legacy devices. In this model, devices are shipped to end users' locations, and leveraging the latest Unified Endpoint Management (UEM) solutions, they can be auto enrolled or self-enrolled by users into modern management. A key value-adding feature offered by this model is predictive analytics, which analyzes real-time data on devices and application performance and predicts and prevents issues that could cause the breakdown of devices. Predictive analytics can help auto resolve issues without users knowing of them or can assist users working from any location to self-correct the issues they face. The auto resolution of incidences prevents the need for a field technician visiting employees' locations of work.

2. Combining experience data with operational data

Modern workplace analytics solutions such as Lakeside and Nexthink can generate insights that cover both operational-level performance indicators and employee-centric experience indicators. While operational data (O) considers system-centric attributes derived by telemetry-based device and application performance, experience data (X) is based on personalized automation and experience reporting. Many modern digital workspace solutions and tools claim to measure user experience, but in reality, what they measure is device and application performance without its actual implication on user experience. For example, an analysis of the number of incident tickets not raised because

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of auto resolution is often touted as a measure of enhanced user experience. However, it can be misleading, as users never get to know of such incidences. Hence, this is not always a direct indicator of good user experience. However, augmenting this data with experience-indicators, such as users' response to the notifications of such auto resolutions, can provide solid experience-level information.

3. Uberization of field services

IT organizations can enhance user experience with field services by offering features such as location tracking. This Uber-like feature helps end users have information on the exact location and arrival time of a technician. It enables not only predictability and efficient tracking but also complete transparency in handling service requests. This Uberization also enables reaching out and assigning tasks to the best and closest technician to get issues resolved efficiently. In such a scenario, both end users and field technicians have a similar application interface on their own devices, typically powered by the same technology. This application not only assigns the appropriate technicians and assists them to reach users' locations but also enables users to track the request and provide service feedback.

4. Augmented reality usage

The augmented reality technology offers immense help in enhancing user experience with field services. It enables an end user to self-resolve issues with hardware and devices, leveraging the expert help provided in a remote augmented reality mode. This may or may not involve investing in heavy augmented reality headsets that would enable a user to remotely connect with an expert technician who could guide the user with the required steps; this prevents the need for the expert to visit the user's location. In case of break/fix, where a field technician does not have the required skills and expertise to resolve an issue, these technologies can assist the available field technician to connect with a more experienced colleague who sits remotely and can guide the technician toward the fix. Often, the application of these technologies would not require the need for investing in heavy headsets, and these solutions could rather provide a similar functionality over common touchscreen-enabled handheld devices or modern mobile phones. The effective use of these technologies ensures strong knowledge sharing and high user experience with field services.

As per ISG's experience with clients, predictive analytics is the most widely accepted of the above four approaches and is one of the key drivers to adopt a Device-as-a-Service model. ISG has also observed clients are increasingly willing to engage their managed service providers with XLAs. Uberization of field operations is gaining traction among the most progressive organizations focused on workplace transformation. Usage of AR for field operations is most relevant for industries with heavy industrial and complicated machinery setups in remote locations.

Wipro's Approach Toward Field Services in Modern Digital Workplaces

Wipro illustrates an example of how a progressive and transformative managed service provider can assist global IT organizations to leverage field services to ensure enhanced user experience. Wipro is leveraging multiple offerings and capabilities to address the key challenges associated with modern field services, with a focus on enhancing user experience. Through its modular and strong suite of services, Wipro provides effective field support services for its clients by leveraging collective knowledge sharing, providing omni-channel support, utilizing the latest and innovative technologies, and analyzing the massive amounts of data generated by devices and applications.

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Highlighted below are some approaches adopted by Wipro in transforming modern field services:

Analysing 'O' and 'X' data with Wipro Experience NEXT

The Wipro Experience NEXT platform collects both operational-level and experience-level data from employees' usage of workplace technologies and the periodic voice of employee surveys and other soft parameters. The combination of the "X" and "O" data provides comprehensive visibility across enterprise platforms and contextualizes the analytics customized or curated for a user type. Wipro Experience NEXT aggregates data inputs from multiple sources, such as telemetry-based solutions that monitor devices and application usage, incident ticket handling by agents, ticket resolution via automation or user self-service and security audits. The key differentiators of Wipro Experience NEXT are aggregation and the inclusion of experience indicators of employees, such as digital adoption level, employee well-being, degree of connectedness and engagement through enterprise collaboration solutions. It also complements this data with employee survey, customer satisfaction score (CSAT) and net promoter score (NPS). Wipro Experience NEXT also helps IT organizations measure and drive contextualized outcomes, with XLAs mapped to employee personas.

Data analysis from Wipro Experience NEXT supports field operations and eliminates the need for physical agents by continuously monitoring the usage pattern of end users. It also provides periodic user satisfaction scores, with diverse support channels including field services. Furthermore, a field engineer can leverage this information to understand end users' behaviour and better assist them for incidences that cannot be resolved via automation and self-help.

Virtual collaboration among field technicians with Wipro RealView

Wipro RealView is specifically targeted at addressing the key challenges in field service operations, such as reducing agents' skill gap, better managing training, and onboarding and managing security and safety risks. As the industry grapples with skill shortages and the retirement of experienced technicians, Wipro RealView enables collected knowledge sharing with elements of crowdsourcing and virtual collaboration. It heavily leverages the augmented reality technology to support the training of newly joined field technicians and for real-time expert guidance with graphical direction to on-site agents. It also supports interaction using smartphones, tablets or smart glass headsets. For field technicians' training, Wipro RealView supports voice- and video-led assistance, with features such as a session recorder and web browsing. In this era embracing the hybrid working model, there is also an increase in the reliance on non-IT equipment, such as heating, ventilation and AC (HVAC) systems; conference room equipment; and facility equipment. A field technician dispatched to perform IMAC services on these devices/equipment may not be knowledgeable in these devices. Wipro RealView enables those technicians to connect with a remote expert, leveraging the augmented reality technology via mobile phones or smart glasses. It also offers strong benefits to IT organizations in terms of increasing the productivity of lower-level support agents. Leveraging this solution, Wipro can reduce the incident resolution time handled by an L1 agent by 80 percent and the need for field visits by L2 or L3 agents by 20 percent.

Device-as-a-Service with Wipro WaaS360

Wipro WaaS360 is modular Device-as-a-Service offering that provides complete device lifecycle management services. It leverages Wipro's consulting services and uses the patterns of end-user behavior to select the best devices to boost their productivity. It helps recommend device refresh in case of failures. By analyzing the usage patterns of end users, Wipro WaaS360 can recommend the most appropriate devices for end users that could be shipped to their location, leveraging the Device-as-a-Service model. It assists in providing an evergreen enterprise IT estate, along with a predictable TOC and an improved turnaround time. Wipro partners with several OEMs for WaaS360 and offers a vendor-agnostic, customizable solution that offers user-persona-specific services. It also supports global coverage with localized billing for centralized management. Workplace support offered with Wipro WaaS360 relies on predictive analytics and proactive monitoring to reduce the need for field support.

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Uberization of field services with Zenier

Wipro leverages its partnership with Zenier, a firm specializing in field services and offering a diverse range of products and solutions to support user experience with field technician services. It offers schedule and dispatch support that enables the automated scheduling and dispatching of field services, eliminating the need for manual intervention by users and enterprise IT. It provides the required 'Uberization' support by intelligently assigning tasks to field technicians based on their location, availability and business policies. It also provides seamless experience for technicians, leveraging updates and workflow applications on any device, and Wipro enables the same for end users by providing an end-to-end view of the service request status. Wipro also provides the required integration with the enterprise asset management system to provide the required information about the asset or device a field technician is required to inspect, maintain and repair. In this case, Wipro also leverages its extensive reporting and analytics expertise via its Experience NEXT offering to provide real-time visibility to the field technician. Zenier also provides detailed reporting and analytics, providing information such as total available hours for technicians, open tasks, first-time resolution rates and technician utilization.

Out of band management Leveraging Intel vPro

Wipro leverages the Intel vPro platform to enhance its remote field support in the post-pandemic era. The Intel vPro platform includes Intel® Active Management Technology (Intel® AMT) and Intel® Endpoint Management Assistant (Intel® EMA). The platform is a system-on-a-chip solution available with all devices that support the Intel Core i5 vPro, Intel Core i7 vPro and Xeon processors. Intel Active Management Technology enables Wipro to manage and repair devices, including personal computers (PCs), laptops and connected Internet of things (IoT) devices, based on the Intel vPro platform. It is used in combination with Intel processors and network controllers and is a key component of the hardware-enhanced manageability and security strategy.

ISG has analyzed and written about Wipro's capabilities with the Intel vPro platform in **a whitepaper.**

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Conclusion

Time to relook at field support services with modern technologies

As the modern tech-savvy workforce is about to enter the workplace in coming years, the importance of automating field services and transforming user experience with these services has grown manifold. IT organizations should leverage data based on technology usage analytics to predict and prevent incidences that require field technician support. Field support is the most expensive support channel for workplaces, and IT organizations must leverage the available technologies to help reduce the need for expensive support and enable users' self-help, which will, in turn, enhance user experience.

In cases where the field technician requirement is absolute, leveraging the latest technologies, such as augmented reality and crowdsourcing, to connect with experienced agents can help reduce cost and improve the resolution time, thus enhancing user experience.

Field support services are the oldest and most important channel for workplace support. As enterprises consider transforming user experience in several ways and approach every workplace technology element with the goal of enhancing user experience, they should also relook at and transform this traditional service, leveraging the immense possibilities presented by modern and emerging technologies.

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