Optimizing Mobile-Worker Experience by Digitally Transforming IT Service Operations

Connect Inc White Paper, 2024

Optimizing Mobile-Worker Experience by Digitally Transforming IT Service Operations

Shari Christofferson, Chris Christofferson and Greg Kling
October 2024

ABSTRACT

The use of mobile applications to facilitate work is now a competitive requirement for manufacturing, logistics, retail and healthcare enterprises. This reality makes the mobile-user experience a business priority. Despite this fact, mobile workers report technology-related work interruptions verbally or manually, not digitally, to IT and the business.

IT Service teams receiving verbal complaints lack the required visibility into the mobile-user experience to accurately determine the causes of reported interruptions. As a result, IT and Operations do not share a single source of truth to evaluate and improve the mobile-worker's experience in mission-critical or customer-facing tasks; and executives lack a clear understanding of how existing technology performance impacts business and customer outcomes.

Incorporating digital technology and a process that directly informs IT Service teams of incidents and associated root causes quickly improves the frontline experience and drives a technology strategy focused on performance.

In this paper we discuss how transformative technology advancements are carrying IT Service Operations from legacy to digital and why that advances continuous operational improvement, labor cost controls, and customer retention aligning IT and business to drive successful technology innovation and investment.

The Mobile-Worker's Technology Experience

The term "mobile worker" covers almost any remote or deskless employee with a repeating and task-focused job enabled by mobile computers and digital applications. This means that without the full functionality of their mobile computer, completing tasks becomes difficult or impossible. The period mobile employees are remote is often referred to as "in the wild."

Encounters 'in the wild'

In the wild, away from IT managers or technical support resources, diverse types of issues arise that interrupt their work. One type is immediately resolvable with a known process, such as a battery requiring a replacement or charge. Other types are technical issues that are intermittent and without an obvious cause or mitigation procedure. These issues interrupt workflows and are not immediately resolvable.

Repeating but intermittent interruptions most commonly manifest as either slowness or delays in a screen advancing (colloquially referred to as the "wheel of death"), a blank screen, a "drop" or disconnect or any number of examples that render the mobile computer temporarily unusable. In many cases the mobile worker may recover functionality with a reboot or device swap, however, clocking in at 3 minutes on average to stop, reboot and login this workaround can quickly add up to significant lost time and productivity. When the mobile worker is customer facing, the waiting and frustration of the employee may result in a poor customer experience, which directly impacts revenue.

Current Methods and Rates of Communicating Feedback

The most common means for mobile workers to give feedback to a manager about tech-related issues is in-person. In some cases, mobile workers may have access to corporate internal messaging (Teams, Slack), SMS or a process that allows for the mobile worker to open a support ticket with the IT helpdesk, but this is rarity in manufacturing and distribution environments.

Mobile workers are often incentivized to complete production or customer service tasks more quickly with rewards that increase their take-home pay. Initiative-taking employees who run into tech-related issues want to report these issues, however, reporting means stopping their work to find a manager or call it in, which may waste more time than the issue itself. This is why less than 10% of mobile workflow interruptions are reported to the business (Connect Inc, proprietary data analysis). Workarounds to speed processes may involve skipping scans of products causing missing items for orders and directly impacting customers.

The IT Support Experience and the Mobile Worker

The Triage Gap

Once a report is given to a manager, it is out of the mobile worker's hands and either in the hands of their supervisor or a helpdesk. Feedback is generally qualitative in nature and filtered through a

local or onsite supervisor, as is typically the situation in a store, warehouse or manufacturing facility.

Unstructured feedback and reporting leads to a need for a technician to query the worker directly and/or an attempt to recreate the issue before it can be understood well enough to move to troubleshooting and diagnostic steps. This is both a time and information gap we call the "triage gap." Without an adequate capture of the reported problem, the support technician uses trial and error to test resolution. This is time consuming and has a low chance of success driving up support costs while lowering efficiency for both IT support and the mobile worker.

It is during the triage gap when workarounds become entrenched. Workers hide assets, avoid areas of the warehouse and report a loss of motivation leading to productivity delays. As many as 30% of workers surveyed gave up reporting issues all together (*Independent research, B2M Solutions, 2019; and Connect Inc data analysis of enterprise customers)*. In customer service facing situations avoidance of interactions and inability to quickly access information degrades customer service and may result in loss of revenue or loss of the customer entirely.

If IT Service Operations exist to meet end-user expectations, then the first step of incident or event management does not meet the process's goals because IT service teams cannot effectively service the end user. The mobile workforce is at least twice removed from the incident management process as discussed above, and the IT service teams have virtually zero visibility into the mobile user experience in the wild. For example, a mobile worker may believe it is normal that a function in the mobile app requires ten or more seconds for a response. If not reported as a problem to IT support, then the wait-time persists without resolution affecting productivity and increasing labor costs.

Recreating Issues and Accountability Avoidance

From a resolution process standpoint inaccurate triage and lack of problem capture or a data-driven root cause determination leads to accountability avoidance for both internal teams and vendors. Due to the tightly coupled nature of the networks, applications and edge devices required for optimal functionality at the edge, it is common for the vendors and support owners to claim "no fault found" and push the troubleshooting responsibility to another group. Most vendor technicians wait to see evidence that their system domain is contributing to the problem before making changes.

Mishandling of Support Requests

Where 3rd party organizations are utilized as an IT Helpdesk, or internal helpdesks are organized similarly, mishandling of the support request can lead to a scripted response with the goal of closing the ticket but not solving the problem. Rate of ticket closure is a helpful metric for a helpdesk that uses closed tickets as a proxy for resolution, or for billing the customer. Consistently, a low number of helpdesk or support requests implies to IT Management that the mobile workforce is having a relatively good experience. For the reasons outlined here this is a

mistaken assumption that has consequences for the business such as, operational cost increases, productivity loss, revenue loss, and customer dissatisfaction.

Business and IT Misalignment

Mischaracterizations of the mobile-user experience feed into business alignment with IT Management. The use of inaccurate and inadequate information for decisions relating to IT infrastructure and edge technology directly affects the frontline mobile worker and their operational goals. The extent of which will be difficult to measure unless there is a meaningful baseline.

Significant spending reductions and cost controls are available to enterprises that utilize mobile-user experience analytics in technology scoping and purchasing decisions. A large, recurring technology investment for the mobile enterprise is the change or upgrade of mobile devices or the addition of robotics to enable or aid frontline labor. During a typical request for proposal vendors provide trial technology for demonstration and testing. Enterprises with direct-user feedback tied to consistent performance metrics accurately compare and evaluate incumbent technology alongside trial technology and therefore confidently invest and deploy at a lower cost. Data analytics of 'in the wild' performance puts purchasing executives in a better position to acquire technology that performs best for the lowest price.

The Business's View of The Mobile-User Experience

Assessing Acceptable Risk

IT infrastructure, software applications, networks and mobile computers are the key components that contribute to the mobile-user experience. Enterprises invest heavily into these components as well as into the related support and maintenance of the entire system. The cost of those investments pale in comparison to the annual cost of labor in manufacturing, distribution and retail, and yet most enterprises do not continuously track the link between technology uptime and performance to frontline labor representing business and shareholder risk.

Technology Strategy and Planning

Planning for technology purchases, changes, services and other budgeting decisions also depend on how the business perceives technology needs at the frontline. Innovation projects start with looking at problems that cannot be solved with the existing technology and processes. How can accurate and effective technology strategy and planning decisions be made without an accounting of the current technology performance and impacts to frontline workers and by extension - customers? In other words, how can a company chart their path to the next horizon if there is not a clear understanding of where they are now?

Bridging the Gaps

In order to stay competitive with technology innovation and change, control costs, and grow a supply chain enterprise it is important to identify and bridge existing technology, process, and visibility gaps quickly and effectively. The fundamental gaps that continuously degrade the mobile worker's technology experience and therefore the business are:

1. Verbal or manual reporting mechanisms between frontline mobile workers, IT Service Operations and Operations.
2. Lack of relevant details to characterize and recreate mobile-user issues for root cause analysis.
3. Limited or discreet analytics that do not characterize the mobile user's experience within the complex and tightly coupled systems on which it depends.
4. Requirements on enterprise IT service teams to learn, manage and become fluent in multiple 3rd party logging and analysis tools to understand and resolve causes of mobile or robot enabled worker downtime.

Utilizing technology and related services that enable digital processes and visibility, data-driven triage, and automated synchronization of relevant data, results in an ITSM program that effectively automates the information gathering and sharing needed for understanding the mobile worker's experience and the impacts on business goals. The key requirements of a system that effectively fills the gaps to optimize the mobile-user experience are:

1. On-device, digital reporting mechanisms that are accessible to mobile workers in the wild and send real-time feedback into a monitoring system capable of isolating each mobile-users interaction with the live IT system.
2. Digital problem capture containing data about the mobile device's interaction with the connected infrastructure before, during and after the time frame of the worker's submitted feedback or automated detection.
3. A notification mechanism that shares unbiased root cause analytics with the correct system owners for action, resolution and accountability.
4. Consistent, always-on observability of the users within the system for performance metrics, resolution validation and curated analytics for a variety of business and IT alignment projects, including innovation.

When these requirements are met, user experience ties directly to problem analytics and the resulting actions needed for improvement are accessible and actionable. An enterprise that incorporates mobile-user experience into its core business performance metrics drives improvements and innovations more effectively and at a lower cost.

Documented Outcomes of An Optimized User Experience

The recommendations presented here align with fundamental practices for improving business success by increasing customer satisfaction while lowering the costs to deliver products and services.

Empowerment, Labor Efficiency and Direct and Indirect Labor Cost Reduction

A labor force that is enabled to communicate feedback digitally report higher morale and job satisfaction. Removing feedback barriers clears a path to increasing efficiency in workflows. In cases where workers are incentivized by compensation or advancement for their efficiency or customer satisfaction ratings, providing a means to give feedback empowers them to align their own career goals with the business mission.

Reducing unintended overtime, providing tools to increase efficiency, and reducing turn-over reduces both direct and indirect labor costs. Documented and consistent improvements in the mobile-worker experience result in a cascade of cost reductions and competitive advantages. Positive workforce reviews, for example, retains workers and makes it easier to attract desirable candidates.

Customer Experience and Retention

The link between labor morale and retention with customer experience and retention needs no further explanation. A lay person who knows nothing of mobile technology shares the frustration of a delayed delivery, slow customer service or an inaccurate order. Mobile workers who are less frustrated, enabled and empowered to be successful in their work because of optimized technology, increase the chances of delivering on-time, accurate orders and help increase the satisfaction of customers.

Digitize and Automate IT Service Operations to Control Cost and Drive Innovation

Shifting an IT Service Operation's focus from fielding incidents and investigating problems to resolution activities drives down the cost to implement, manage, support and advance technology initiatives. By digitizing and automating the process to share feedback while eliminating investigative steps, the IT Service Operations functionality streamlines time, resource allocation and delivery of IT functions.

A lower cost and better performing IT department carries value to technology strategy, design, and implementation. Access to critical metrics reduces testing and deployment cycles for technology change and innovation. The ability to observe and evaluate critical IT systems during change is a significant cost-control measure when those changes directly impact mission critical operations. When technology advancements involve enabling frontline workers with robotics and automation, the critical nature of understanding the worker experience with those technologies increases as does the cost-benefit ratio for streamlining IT Service Operations.

Driving Success Through Digitally Transformed Best Practices

Closing the communication and visibility gap between the IT Service Operations teams and mobile workers advances IT support functions from reactive and manual to proactive and digital. IT transforms the core functionality from supporting end-users to optimizing the user experience. Tracking the success of this transformation is inherent in the technology requirements to automate the support of mobile workers.

As manufacturing, distribution, logistics, retail and healthcare race to incorporate the use of automation to increase business outcomes, it is critical that the lines of communication between the daily users of enterprise technology systems, IT Service Operations and executive leadership are open, accessible, and meaningful. Whether it is a mobile hardware upgrade or the inclusion of robotics and AI into mobile workflows, digitally enabled, data-driven communication and action is critical to meeting business goals.

About the Authors

Chris Christofferson, CEO/CTO of Connect Inc, leads product development, management and engineering. Greg Kling, VP of Support and Engineering, interfaces daily with enterprise IT teams to understand and improve processes. Shari Christofferson, President, aligns with customers and partners to analyze frontline and IT systems that support the digitization and automation requirements for Digital Transformation and Industry 4.0.

www.connectrf.com