The Rise of the Digital Field Worker in Utilities

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The Rise of the Digital Field Worker in Utilities

How the new breed of digitally-savvy field technicians can help utilities maximize customer satisfaction, operational efficiency, and business growth

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The New Digital Landscape

The utilities industry is facing many challenges, including regulatory pressures, new competitive threats, and slowing growth, to name a few. To counteract these challenges, many leading utility organizations are looking to their field service team to make them more competitive. Fortunately, two developments are converging that will positively transform the current operations of utility field service teams, enabling them to lead change.

1. A new generation of digitally-born field service professionals are entering the workforce. This group is adept at using technology and actually require companies to provide them with the most current technologies and tools to perform their work.

2. Utility field service teams have been digitally transforming their service operations through the adoption new technologies such as IoT, machine learning, mobility, and artificial intelligence to arm field professionals with the modern data and tools to enable a higher level of service in the field.

As a result of these two developments, a new type of digitally enabled service professional is emerging—the digital field worker. The digital field worker will enable utilities to get more from current and future technology investments, helping to increase customer satisfaction, develop new services, and improve operational efficiencies.

The Rise of the Digital Field Worker

Baby boomers in field service are retiring in great numbers and they are being replaced by the millennial generation. The millennial generation is the first cohort that was born digital with broadband, smartphones, laptops and social media intricately entwined in their daily lives.

Millennials expect and require modern technology to do their jobs and will specifically look for employers that offer cutting edge tools. Fortunately, utility field service organizations have been adopting the types of modern technology they require and this will enable the digital field worker to be more efficient and responsive to customer needs.

» **Connected devices:** The Internet of Things is connecting billions of products across the globe. For example, Gartner forecasts that 8.4 billion connected things will be in use worldwide in 2017, up 31 percent from 2016, and will reach 20.4 billion by 2020. These connected sensors can monitor the "health" of an asset and can predict when it might fail allowing a worker to be dispatched. These sensors are on vehicles, substations, towers, and more and can help utilities improve asset performance as well as increase technician utilization.

» **Machine Learning and Artificial Intelligence:** All of these IoT sensors are collecting massive amounts of data. In fact, there is so much information being captured that it is almost impossible for a human to analyze and utilize the data to spot trends and act on the information. That is where the advances in [artificial intelligence and machine learning](#) are providing invaluable benefits to utility field service groups. Armed with AI and ML based solutions, field service providers can collect and turn the vast amount of data collected about products, customers and service interactions into actionable insights that can drive meaningful improvements. From optimizing technician travel routes, sending predictive alerts about impending failures and uncovering commonalities that can be used to improve maintenance schedules, AI and ML technology is making the digital field worker smarter by optimizing the whole service chain. In fact, [80 percent of leaders](#) say AI increases productivity.

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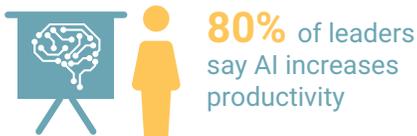
» **Mobility:** Providing technicians with the right information at the right time is the key to better outcomes. Smart phones and other connected devices are now the standard of leading field service teams. Technicians rely on these devices to receive real-time alerts and schedule updates, to communicate arrival times with customers and access online repair information. With the ability AI and ML to uncover trends in data from IoT sensors, these devices take on added importance as digital field workers will be able to receive even more information to make them more efficient.

The influx of millennials and wider adoption of these and other technologies have been the catalyst for the new digital field worker and the impact will be felt in three areas:

» The emergence of predictive field service

» A new and better customer experience

» New work models and revenue streams

Predictive Field Service

By embedding sensors on utility assets, service providers can now analyze equipment performance at scale, enabling a new form of [predictive service](#). Predictive field service uses artificial intelligence (AI), machine learning, and data science to increase schedule accuracy and ultimately deliver better service to customers. By applying an added layer of machine learning algorithms, service providers can forecast equipment performance with increased accuracy. For example, utilities can use IoT gauges on customer tanks to more accurately forecast gas needs and optimize delivery times.

Data-driven insights will help utility service teams better understand equipment, [predict exactly when specific parts might fail](#),

and forecast when equipment should be serviced, or replaced.

Typically, these sensors communicate through the layers of the IoT stack and generate a ticket into the Field Service Management system. In turn, this ticket generates a work task, which can be automatically scheduled based on the characteristics of the case and the resources available. An alert can then be sent directly to the digital field worker through multiple communication channels such as voice, text, and IVR, helping to utilize resources more efficiently.

The new digital field worker will no longer be idly waiting for the next call, but rather be informed in real-time about events before they happen, helping increase resource utilization and improve customer experience.

Customer Experience

Consumers have high expectations on what constitutes exceptional service. The new consumer is immersed in the digital world though smart phones, apps and devices. They expect to be able to interact with service providers across various channels such as chatbots, text, online self-service, and mobile apps.

79% of utilities believe they are customer centric, but only **7%** of consumers share that view
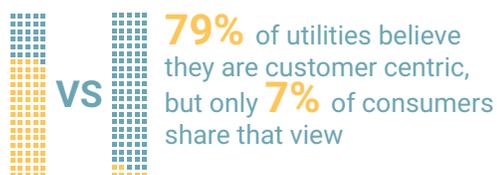
The "Uberization" of service has become the expected norm, and consumers will leave a provider if expectations are not met. However, utilities are not meeting expectations. For example, Capgemini research on customer experience reveals that 79 percent of utilities believe they are customer-centric, but only seven percent of consumers share that view. The digital field worker in utilities will play a key role in enabling a better customer experience in the following ways:

» **Faster Service Resolution:** Consumers no longer tolerate multiple calls to fix a problem. The access a digital field service worker has to online knowledge bases enables them to have the most up-to-date information on an asset to assist with repair. In fact, Best-in-class field service organizations are 72 percent more likely than peers to utilize visual collaboration tools in service.

» **Increased Transparency:** Consumers expect real-time technician travel updates and direct communication with technicians prior to service. The digital field worker is equipped with mobile devices to communicate with a customer through their preferred method of communication, provide real-time updates on their location and offer accurate arrival time so the consumer is fully informed.

» **Scheduling Convenience:** The days of long service window times are coming to an end. As an example, 73 percent of consumers say valuing their time is the most important thing a company can do to provide them with quality field service. In the past, scheduling was an inexact science but now a technician can be utilized much more efficiently with AI

technology that can use predictive data to reduce idle time, better anticipate travel time, and allow for back up resources to step in quickly when necessary.

Digital technology not only makes the lives of consumers much more efficient, but this connectivity greatly improves the ability of the digital field worker to deliver exceptional service.

New Business Models

PwC reports they have found that some field service teams in the retail gas industry have realized as much as $20 million in annual cost savings through new digital approaches. This is important as all utilities are under pressure to control costs and increase revenues. The digital field worker enables a provider to accomplish both of these objectives, as follows:

» **Cost Savings:** The millennial generation greatly values work/life balance. As a result of this attitude, younger workers are more open to taking temporary, "gig" work. This new labor model is often referred to as the Gig Economy and is highlighted by driving for Uber or listing your services on TaskRabbit. Tapping into this gig economy is now a viable option for utility service providers to supplement staff, scale to meet new market demands, or use freelance talent to serve hard-to-reach areas. Becoming more efficient with talent management through the gig economy model is essential to the profitability of field service

operations. The new digital field worker does not have to be a full-time employee, but could be a freelancer that a service manager can rely on to help deliver skilled service while maintaining costs.

» **New Services:** Homes and commercial properties are becoming "smarter" with internet connected devices and appliances. End users now have more information on energy use and can make choices to reduce consumption. According to PWC, about two-thirds of utility executives interviewed in a survey said their companies currently have smart home or building and energy analytics offerings, and 90 percent expect to be offering such products within three years. In addition, the International Energy Agency released a report that stated that more than 1 billion households and 11 billion smart appliances could join interconnected electricity systems by 2040. However, as the number of devices grows so too does the difficulty implementing and maintaining them. A recent study found that nearly 90 percent of consumers would be very likely to have a service technician deliver help in connecting their smart home. Utility service teams do not necessarily have to add full-time staff to support this market, but can rather utilize new workforce models like freelancers and contractors to help control costs while developing a new revenue stream.

Conclusion

By 2022 IDC predicts that 80 percent of revenue growth will depend upon digital offerings and operations. The digital field worker will be a key component in transforming field service operations. The digital field worker provides utility firms the opportunity to differentiate themselves from other vendors with exceptional customer service, create new business opportunities to increase revenue, and utilize new worker behavior to become more efficient in their talent management operations. The digital field worker has the potential to be the catalyst that enables utilities to use digital technologies to drive organization-wide success and growth.

Key Takeaways

» A new type of field service professional is emerging to help deliver a better customer experience as well as create new revenue opportunities.

» The digital field worker has the potential to be the catalyst that enables utilities to use digital technologies to drive organization-wide success and growth.

» The new digital field worker will no longer be idly waiting for the next call, but rather be informed in real-time about events before they happen, helping increase resource utilization and improve customer experience.

Additional Resources

» A Field Guide to Recruiting Millennials

» Demystifying Predictive Field Service

» 3 Ways Electric Utilities Can Use Field Service to Gain a Competitive Advantage

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ClickSoftware is a global leader in field service management solutions, delivering value through improved efficiency, effectiveness, and enhanced customer experiences. ClickSoftware blends unparalleled industry expertise and state-of-the-art computer science to deliver meaningful, measurable business value—optimizing critical business processes and delighting customers. Click Field Service Edge arms field service leaders with the smartest technologies and best practices from around the globe to deliver real-world results, real-time recommendations, and real operational intelligence.

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