

GUIDE

Bidirectional data flow for quicker, safer power restoration

When a community experiences a power outage, every second counts. Utility companies spring into action, relying heavily on streamlined communication as their cornerstone to battle against the ticking clock to avoid lost revenue and mitigate inherent safety risks. This intricate dance involves field teams working in concert and interfacing smoothly with established systems, command centers, and GIS platforms. In the upcoming sections, we'll explore how this bidirectional communication not only facilitates a quicker response but also paves the way for continuous improvement in addressing future challenges.

Communication Between Field Teams and Existing Processes and Platforms

Bidirectional data flow is a crucial tool that connects field teams with existing processes and platforms, allowing for quick, data-driven decisions that can significantly speed up the restoration of power. This approach prioritizes direct, efficient communication, helping crews on the ground to relay vital information without delay, streamlining operations and minimizing the duration of outages system-wide.

Call in the Cavalry

Mutual aid agreements are undoubtedly a boon in times of power outages, fostering swift and collaborative responses. Yet, they are not without their hurdles. These reinforcements need to be brought up to speed quickly to understand the lay of the land, the systems in place, and how to work efficiently in a new setting.

Hit the Ground Running

Here, bidirectional data flow plays a pivotal role in bridging these knowledge gaps and fostering efficient collaboration between diverse teams. In these situations, data collection platforms like Fulcrum step up as an indispensable hub, adept at quickly weaving incoming aid workers into the existing workflow.

Initially, mobile data collection technology offers these teams a clear glimpse into the operational procedures of the host utility, providing a streamlined yet comprehensive briefing that enables them to coordinate their efforts with existing processes. By communicating with the host utility's asset management systems, visiting

utility workers are given access to details about the region's layout and the specifics of the local electrical infrastructure, equipping them with the knowledge needed to navigate efficiently and operate safely in the new area.

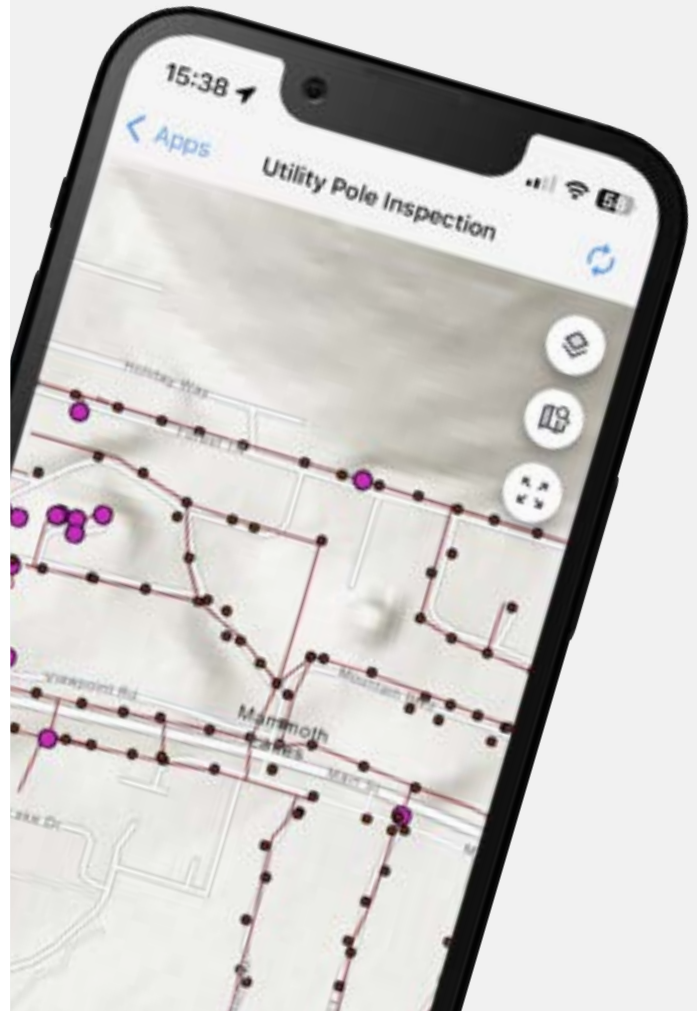
Utilizing a data collection platform with bidirectional data flow capabilities, the host utility can streamline operations significantly. They equip responding crews with tablets preloaded with SaaS data collection software, which is synchronized with backend processes and GIS. This approach eliminates the need for initial onboarding or understanding the host company's SOPs. Instead, responding teams can just follow along with the application checklists, ensuring that the information that's collected is just as accurate as that gathered by the host utility's own workers.

Foster Real-Time Exchanges

But this conversation is not one-sided. It's a dynamic exchange where work crews on the ground share real-time updates and insights with existing technology infrastructure, allowing for updates, added information, and changes as warranted by site conditions.

Ensure Data Accuracy

An operation as complex as power restoration hinges on being able to trust the data that's collected. Platforms like Fulcrum, customized for each utilities' specific needs, facilitate this trust by offering detailed checklists and in-app guidance, ensuring the data collected from the field is both accurate and reliable. Whether it's a veteran from the host utility or a journeyman from a neighboring utility sharing the data, it is the same comprehensive information that won't mar your existing database, or lead to ill-informed decisions. In addition, photos, videos, and details from workers' gauges and equipment, automatically annotated to each record, provide even more rich insight to further feed existing data stores, aiding in both the instant power restoration as well as future initiatives.



Evolve Insights

Bidirectional communication also facilitates a two-way street of learning and adaptation. As the assisting crews begin their work, they can share observations through the platform, adding a fresh set of eyes to the situation. This exchange can potentially bring to light new approaches or solutions that may not have been considered otherwise, and also inform corrective action procedures. Additionally, real-time updates from these crews can be integrated into the larger data stream, eventually aiding the command center in maintaining a cohesive overview of the evolving situation.

Bidirectional Communication between Field Teams and Command Centers

As field teams arrive on-site and begin receiving guidelines and standard operating procedures, they also start sharing the data they gather. This brings us to a vital element of the restoration process: the bidirectional communication between field teams and the command center. This continuous back-and-forth is key to rapid and effective power restoration, ensuring both sides are equipped with real-time information for informed decisions and prompt responses.

Harness Data in Real Time

Field teams are the eyes and ears on the ground, witnessing firsthand the extent of the damage and the intricacies of the situation. The ability of field teams to share their observations, data, and insights in real-time with the command center is essential for swift power restoration. Photos, videos, and readings from various equipment are sent directly to

the command center, creating a vivid picture of the ground realities. This real-time data is a goldmine of information, enabling the command center to make data-backed decisions quickly, without relying on estimations or outdated information.

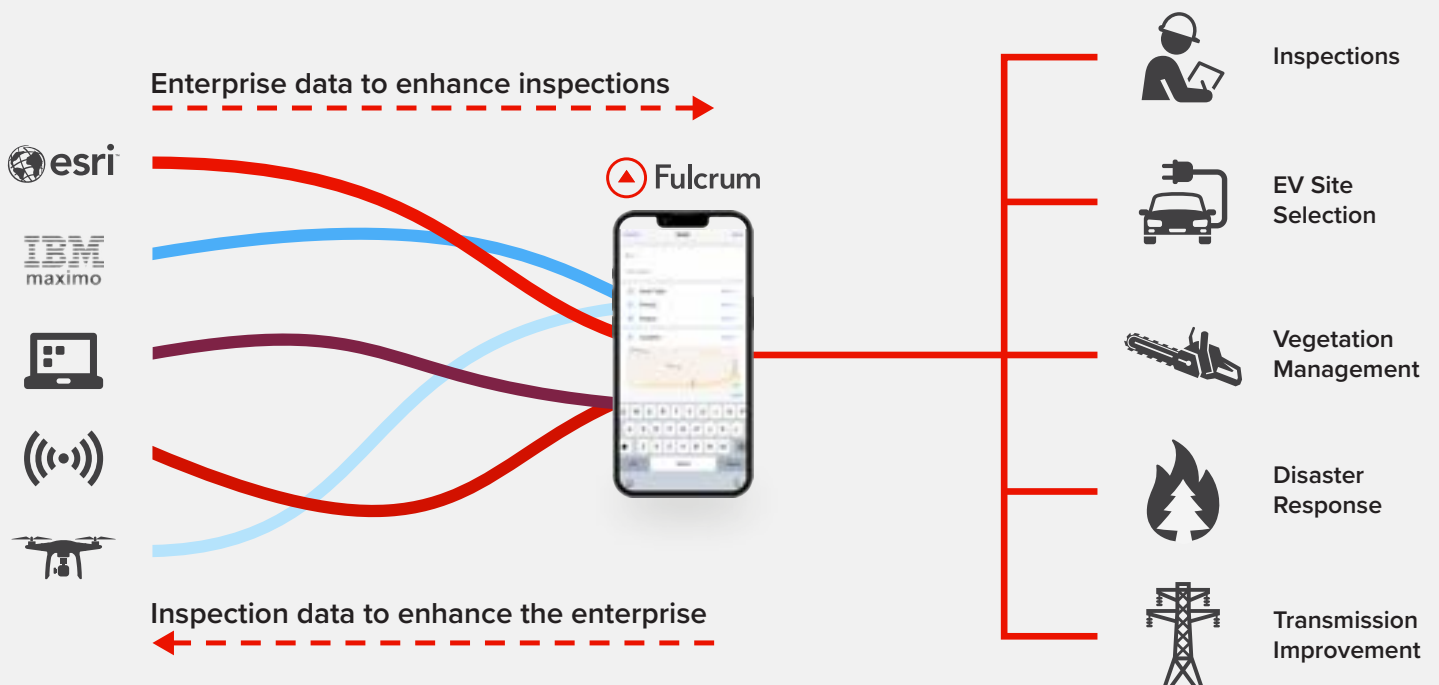
Moreover, field teams can highlight unexpected challenges or opportunities that may not be visible from a bird's eye view, facilitating a more nuanced response strategy. This dynamic relationship ensures that strategies aren't just formulated based on pre-existing protocols, but are constantly adapted to meet the changing conditions on the ground.

Adjust on the Fly

But the communication isn't one-way. The command center, equipped with an overarching view and analytical capabilities, can analyze the incoming data, and swiftly send back insights, guidance, or modified plans to the field teams. This two-way dialogue ensures that field teams can quickly adapt to changing strategies, saving precious time that might otherwise be lost.

Integration with the enterprise

Optimize your field data collection processes while expanding the collected data's practical use in the enterprise.





For instance, if a field team reports a downed power line in a specific location, the technology can communicate the GPS coordinates that enables the command center to immediately dispatch additional resources to cordon off the area and address the issue, while also communicating the status back to the reporting team so they can advance. This nimbleness can drastically reduce downtime, getting the power back up much faster than a one-way communication system would allow.

Analyze and Improve

The advantages of a bidirectional data flow aren't confined to immediate response strategies. This continuous flow of information fosters a learning environment where utility companies can glean insights for future strategies. By analyzing the data collected during restoration efforts, companies can identify patterns, bottlenecks, and areas for improvement, shaping smarter, more efficient strategies for future outages. This culture of continuous learning ensures that with each event, the restoration process becomes a bit more refined, setting the stage for quicker responses in the future.

Bidirectional communication between workers and GIS

The collaboration between GIS (Geographic Information System) platforms and utility field teams, made easier by data collection tools like Fulcrum, is a great example of modern technology at work. This alliance not only speeds up the power restoration process but also enriches GIS platforms with nuanced data and invaluable insights.

Optimize Operational Efficiency

At the heart of this transformation is the evolution of GIS into a two-way communication system, facilitated by integrated data collection platforms such as Fulcrum. Field teams, equipped with GIS data as they work to restore power, can quickly adapt to evolving situations on the ground. They are not only recipients of data but active contributors, channeling real-time insights and updates back into the GIS platform. This bidirectional flow creates a vibrant feedback loop, where strategies are continually optimized based on actual field experiences and observations.



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Enrich GIS with New Data

When used in conjunction with a data collection tool such as Fulcrum, GIS platforms transform into a living database that continually evolves with every new piece of information fed into it. Every detail captured on the field – from photographic evidence to equipment readings – finds a place in the GIS data repository, giving context to the GIS content for a richer understanding of the conditions in the field. This continual enrichment not only aids in the current restoration process but lays the groundwork for a robust data reservoir that can be utilized for analytical insights and future planning.

Adapt Strategies

The continuous influx of data from the field, then integrated with existing GIS data, offers an unprecedented advantage in terms of strategic adaptability. Decision-makers can dynamically adjust their strategies, making data-driven decisions that reflect the ground realities more accurately.

This fluid approach ensures that power restoration efforts are not rigid but can shift gears swiftly, responding adeptly to the changing nuances of the field situation.

Iterate and Improve

In the fast-evolving world of utility management, there's a growing emphasis on developing systems that bounce back quickly from disruptions. A big player in this transformation is the use of GIS platforms, particularly when integrated with sophisticated data collection tools that allow for easy use in the field.

These platforms bridge the communication gap between the GIS databases and the boots-on-the-ground teams, encouraging a cycle where quick responses and ongoing learning are just part of the daily routine. This shift not only streamlines present-day approaches but also shapes smarter strategies for future power restoration efforts, setting a faster and smarter pace for recovery during outages.

By analyzing the field data combined with GIS information, utility companies can refine their game plans, ushering in an era where restoring power is faster and more pinpointed to prevent the same issues from cropping up again. It's all about building a framework that's not only resilient but also continually adapting and improving.



Conclusion

In conclusion, the quick restoration of power greatly depends on the smooth communication between field teams and existing systems, command centers, and GIS platforms. This two-way exchange of data doesn't just allow for quicker, on-the-spot decisions but also helps in constantly improving the response plans with each experience. It's a system where field teams actively participate in sharing valuable insights, helping to make more informed decisions swiftly. Moving forward, this cooperative approach not only promises faster recovery times but also a stronger, more adaptable infrastructure ready to meet future challenges.

About Fulcrum

Fulcrum is a SaaS-based platform that delivers industrial-strength, GIS-enabled mobile data collection and management for mission-critical, field-based operations.

Organizations worldwide trust Fulcrum to help them capture and share reliable data about any field activity, in far less time than paper or other digital solutions. By providing a single, SaaS-based platform for field inspections and data collection, Fulcrum improves performance, increases data quality, and enables digital transformation with downstream benefits and bottom-line impact.

Ready to leverage the power of bidirectional data flow in your utility operations?
Schedule a chat with one of our experts to learn how Fulcrum's data collection platform can revolutionize your approach to quicker, safer power restoration today!