

Innovative Outage Mapping

KUA's Strategic Response to Florida's Hurricane Challenge



Introduction

Hurricanes are a frequent occurrence in Florida, with the state historically being one of the most hurricane-prone areas in the United States. Statistics show that, on average, one to two hurricanes make landfall on the U.S. East Coast every year, with Florida bearing the brunt of many of these storms. Bordered by the Gulf of Mexico and the Atlantic Ocean, the state is particularly vulnerable due to its peninsular geography. The intensity and frequency of these hurricanes have been increasing over recent decades, a trend that is consistent with global patterns showing a rise in the frequency and severity of weather-related disasters.

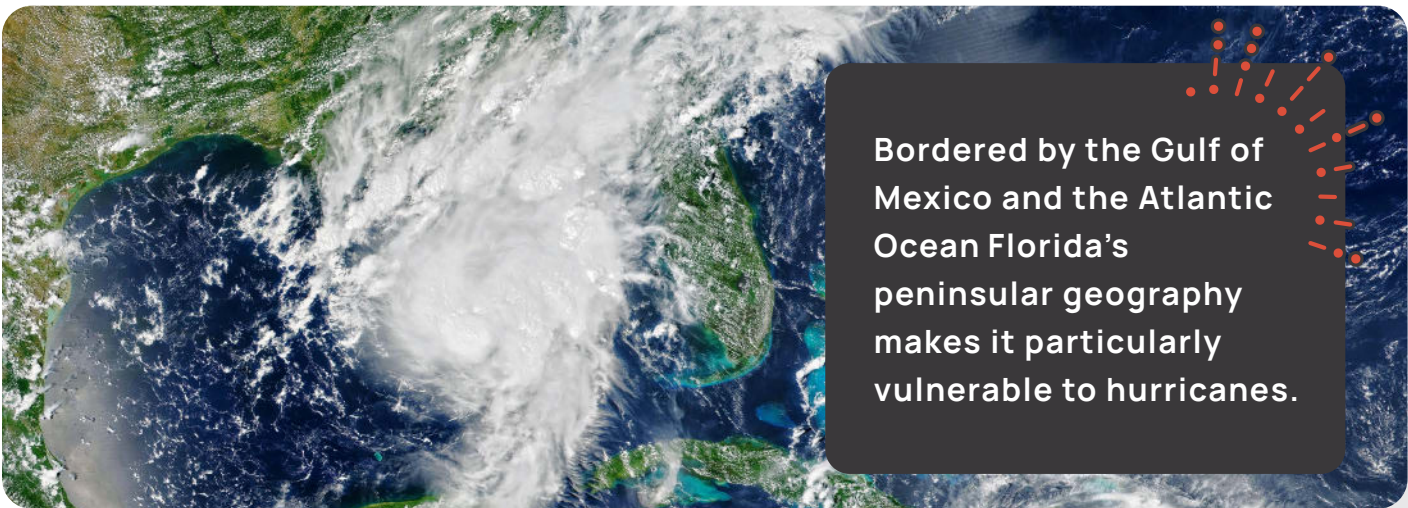
Utilities in the state often experience temporary relief from major storms and resultant outages, only to face severe hurricanes years later. The annual onslaught of these powerful storms presents a relentless test to the resilience and reliability of the state's utility infrastructure, challenging utilities to innovate and adapt continuously. The Kissimmee Utility Authority (KUA) team realized the importance of upgrading their storm communication methods and outage map to prepare for future weather emergencies. Their goal was to not only respond to immediate threats but also to strengthen their systems against future challenges.

Before the 2022 Atlantic Hurricane Season, KUA partnered with DataCapable to enhance their outage map through the innovative DataCapable Platform.

This case study explores the timely enhancement of KUA's outage map, a strategic move as they confronted one of the most catastrophic storms in U.S. history – Hurricane Ian. Learn about how KUA's forward-thinking approach to adopting advanced technology helped them overcome the challenges brought about by a devastating hurricane. In doing so, they set an example for other utilities on the importance of being prepared and finding innovative ways to respond to natural disasters.

"Outages hit close to home. It was imperative for us to have a map that captured the personal impact of these events."

-Michael Wagner
Manager of Dispatch Compliance at KUA



Bordered by the Gulf of Mexico and the Atlantic Ocean Florida's peninsular geography makes it particularly vulnerable to hurricanes.

Background

DataCapable is a Software-as-a-Service (SaaS) company that specializes in delivering critical situational awareness when most needed.

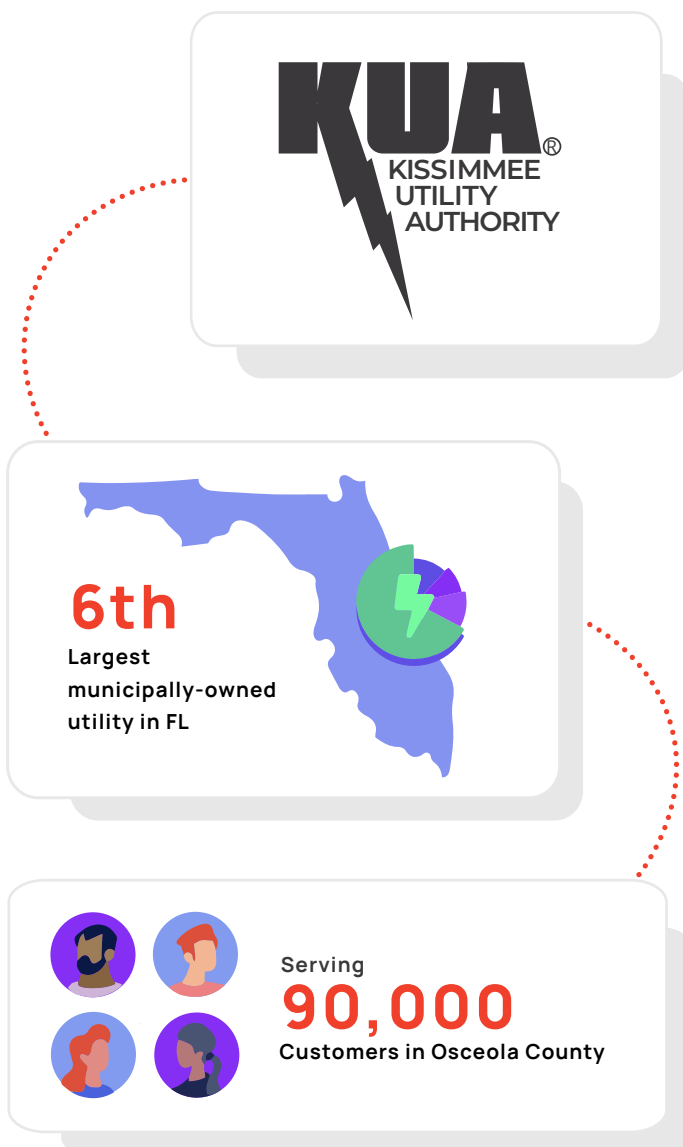
The DataCapable® Platform™ provides real-time, detailed intelligence solutions for the utility sector, emergency responders, governmental entities, and corporations.



Established in 1901, Kissimmee Utility Authority (KUA) is the sixth largest municipally-owned utility in Florida. Serving 90,000 customers in Osceola County, KUA is recognized for its customer service excellence and operational achievements in the utility industry. The utility's vision, "To be the right utility, providing the right services at the right time," underscores its commitment to delivering reliable services with a community-focused approach.

Upon discovering DataCapable's innovative outage maps at an industry conference, the KUA team recognized an opportunity to enhance their services in preparation for the challenging Atlantic hurricane season of 2022.

Previously, KUA utilized a different provider's outage management system and mapping solution, which was often seen as slow and challenging for customers to navigate for specific outage information. Transitioning to DataCapable's solutions marked a strategic shift towards more efficient, accurate, and timely management of utility services during natural disasters.



DataCapable's Role



Outage Map Implementation

Provided a feature-rich outage and event map that provided immediate access to critical outage information.



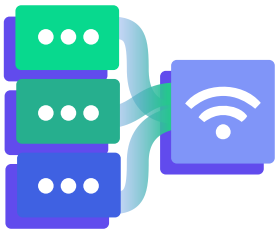
Dynamic Updates

Enabled dynamic updates and sharing of restoration plans during events, enhancing communication and reducing call center load.



Proactive Communication

Assisted in KUA's transition from a largely reactive call center-based response to proactive communication with customers about outages and restoration times.



Rapid Assessment and Restoration

Facilitated rapid assessment and restoration of services, particularly during Hurricane Ian, helping HUA to restore power to over 90% of affected customers swiftly.

What Challenges Did KUA Face?

- Deploying a customized new outage map for KUA in under 30 days before the hurricane season.

The challenge was the rapid, customized deployment of a new outage map for KUA within less than 30 days before the hurricane season.

The impending Atlantic Hurricane Season, spanning from June 1 to November 30, sets a period of heightened vigilance and preparation for regions prone to tropical storms. As the 2022 season neared, Kissimmee Utility Authority (KUA) was determined to enhance its customer service capabilities with an upgraded outage map, aiming for a quick rollout from DataCapable to ensure readiness before the storms' arrival.

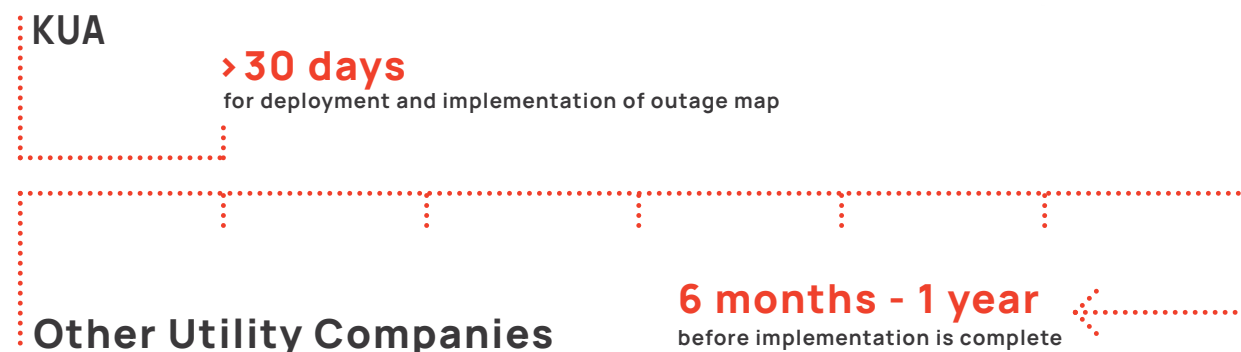
With a tight timeframe of less than 30 days before the season's start, KUA was eager to have the new system operational, allowing customers to familiarize themselves with the map's advanced-view features and capabilities as quickly as possible.

"While our solutions are designed to be immediately operational, our development team customizes features and functionalities based on each partner's specific needs and challenges. This ensures the delivery of a truly supportive resource tailored for their team."

-Katy Desjardins
Director of Customer Success at DataCapable

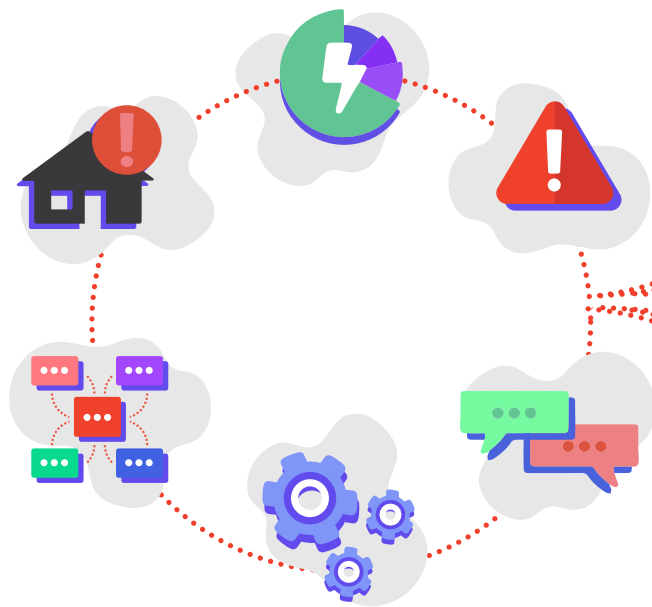
Well-experienced in the quick turnaround deadlines necessitated by the hurricane season, the DataCapable team embraced the challenge with their rapid deployment capabilities and customer-centric approach.

Outage Map Implementation Timeline



Additional Challenges

Beyond the swift deployment of the enhanced outage map, KUA faced several other significant challenges during Hurricane Ian, reflecting the broader complexities inherent in managing a catastrophic weather event. These challenges underscore the multifaceted nature of disaster response and the need for comprehensive preparedness strategies.



Such challenges highlight the extensive planning and robust response capabilities necessary to manage a utility's duties during a severe hurricane. KUA's experience with Hurricane Ian demonstrates the importance of preparedness, flexibility, and the ability to quickly adapt to changing conditions in the face of natural disasters.

The utility's ability to confront these challenges head-on contributed to the resilience of the community and the rapid restoration of services following one of the most powerful storms in recent history. Incorporating these lessons into future planning will continue to strengthen KUA's disaster response and recovery strategies, ensuring that the utility is prepared for whatever challenges the next storm may bring.

Infrastructure Damage: The intense winds and storm surge associated with Hurricane Ian led to substantial physical damage to the utility's infrastructure. This included downed poles, severed lines, and damaged transformers, all of which required rapid assessment and repair to restore service.

Resource Allocation: Effectively mobilizing and allocating resources such as repair crews, equipment, and materials in the right places at the right times was a critical challenge. Ensuring that these resources were used efficiently to address the most urgent needs required careful planning and coordination.

Safety Concerns: Ensuring the safety of both the public and KUA's utility workers was a paramount concern. The utility had to manage risks associated with downed power lines, unstable structures, and extensive flooding, all while coordinating with emergency services to prioritize rescue and repair efforts.

Customer Communications: Despite the upgraded outage map, improving communications, managing customer expectations, and providing consistent, accurate updates during widespread outages remained significant challenges. KUA needed to ensure that their messaging was clear, helpful, and reassuring to guide customers through the crisis effectively.

Logistical Hurdles: The widespread devastation caused by Hurricane Ian created considerable logistical challenges. Ensuring timely access to affected areas, especially if roads were blocked or areas were severely flooded, was crucial for damage assessment and power restoration efforts.

Coordination with Other Agencies: KUA had to coordinate with local, state, and federal emergency management agencies, as well as other utilities and organizations involved in the response. This coordination was vital for a unified response effort and to leverage mutual aid agreements effectively.

Benefits of DataCapable's Partnership

Outage Map Enhancement

DataCapable provided KUA with an upgraded, interactive outage map, enhancing the utility's ability to monitor and respond to outages in real time. This tool was crucial for both internal coordination and external communication with customers.

Real-Time Data Integration

The DataCapable Platform™ integrated real-time data, including weather updates, outage reports, and restoration progress. This integration allowed for more accurate and timely decision-making and resource allocation.

Customized Solutions

Understanding the unique needs and challenges of KUA, DataCapable tailored the outage map's features and functionalities to meet these requirements. This customization ensured that the map was a valuable resource tailored specifically to KUA's operational framework and customer base.

According to a survey by the Electric Power Research Institute (EPRI), utilities that invested in comprehensive training and implementation programs for new technology saw an increase in operational efficiency by up to 35%.

Operational
Efficiency

+35%

"During Hurricane Ian, KUA was able to update the map every minute instead of every 5 minutes, providing near real-time outage data and a better customer experience."

Customer Communication Enhancement

By enabling dynamic updates and direct communication through the outage map, DataCapable helped KUA improve its communication with customers. This included providing customers with real-time information about outages, expected restoration times, and safety notices.

Rapid Deployment and Support

Given the tight time frame before the hurricane season, DataCapable committed to rapid deployment of the upgraded outage map. Their team worked closely with KUA to ensure the system was operational ahead of Hurricane Ian, offering ongoing support and adjustments as needed.

Training and Implementation

DataCapable provided training and support to ensure that KUA staff were fully equipped to utilize the new system effectively. This training was crucial for maximizing the benefits of the outage map during the hurricane.

Solution

An upgraded, real-time interactive outage map provided by DataCapable enhanced communication and efficiency for KUA's storm response.

In collaboration with DataCapable's development team, the enhancement of KUA's Outage Map yielded immediate and significant advantages throughout the implementation phase.

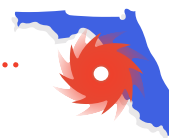
Chris Reigle, the Application Development Manager at KUA, noted the prompt positive impact, revealing that the map facilitated corrections in their internal data. The upgraded system also allowed for the real-time posting of updates and the sharing of restoration plans with stakeholders, which in turn minimized call center inquiries and boosted transparency and operational efficiency.

Jef Gray, KUA's Vice President of Technology, reflected on the evolution of their storm response strategy. What was once a reactive approach reliant on extensive call center operations has transformed into a proactive, direct communication strategy using the outage map. This tool enables KUA to inform customers about the status of outages, crew dispatches, and expected restoration times.

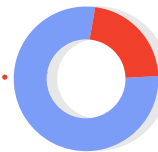
The true test of this modernized approach came with the arrival of Hurricane Ian on September 28, 2022. As the Category 5 storm made landfall, affecting **17 percent** of KUA's customer base, the robustness of the new outage map was put to the test under severe conditions.

Despite the daunting challenge, the data-driven and customer-centric features of the map enabled KUA's teams to rapidly assess and address the damage, leading to a swift restoration of services. By September 29, over 90 percent of the impacted customers had their power restored. This episode not only demonstrated the effectiveness of the new system but also highlighted the deeply personal nature of power outages and the critical role of efficient, informed responses in mitigating their impact on the community.

KUA during Hurricane Ian



Landfall
Sept. 28, 2022



17%
of KUA's customer
base impacted



Outage Map
rapidly assess damage and
address outages



**Over 90%
Restoration**
of impacted customer power
by Sept. 29, 2022



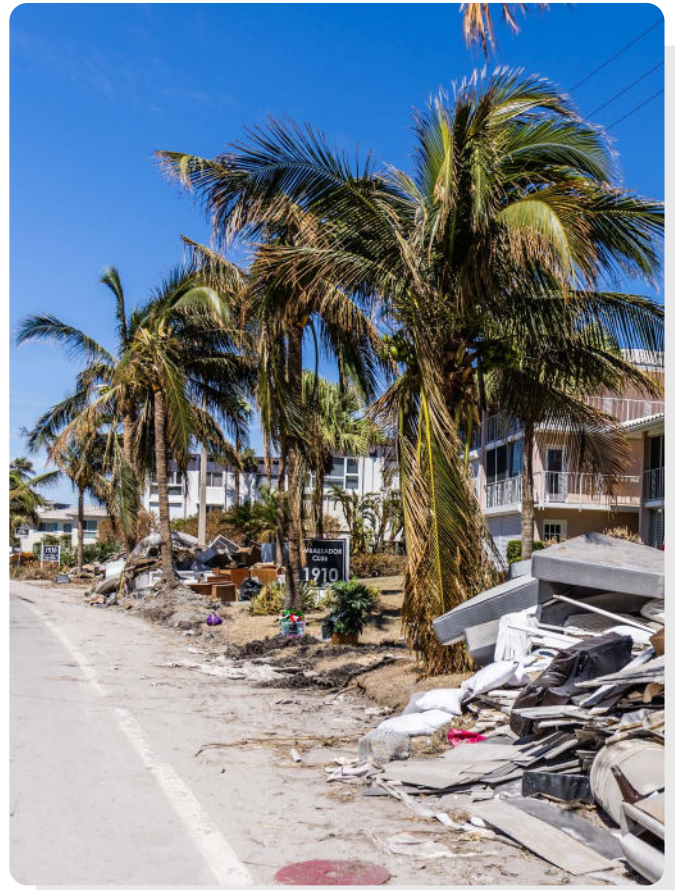
Results

Enhanced communication and efficient crisis management during outages with KUA's real-time updates.

Every storm has a story, and every power outage has an impact. Hurricane Ian's \$112 billion path of destruction left millions affected in its wake. Thanks to KUA's keen insight into what critical information customers need to know in a storm, they were able to ensure customers were kept in the loop during the worst hurricane to impact Florida in the state's history.

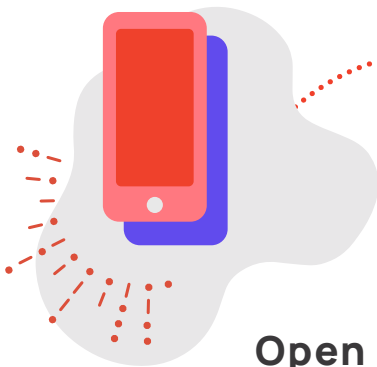
While Hurricane Ian's fury led to widespread power outages across the region, Kissimmee Utility Authority (KUA) achieved an unprecedented feat by mitigating customer communication crises. By providing access to a visual gateway featuring real-time information and restoration updates, KUA helped prevent outage events experienced throughout its most recent hurricane season from evolving into communications crises.

"During outage times, access to electricity drives key decision-making for every customer and family," said Gray "We live in an age where customers can track a pizza online; it's reasonable that they should also have the latest restoration details from their electric utility."



KUA's Remarkable Achievement

In contrast to the widespread disruptions, KUA's robust infrastructure and proactive storm response strategies resulted in an extraordinary outcome—for the first time in history KUA maintained operational phone lines for its customers throughout the storm.



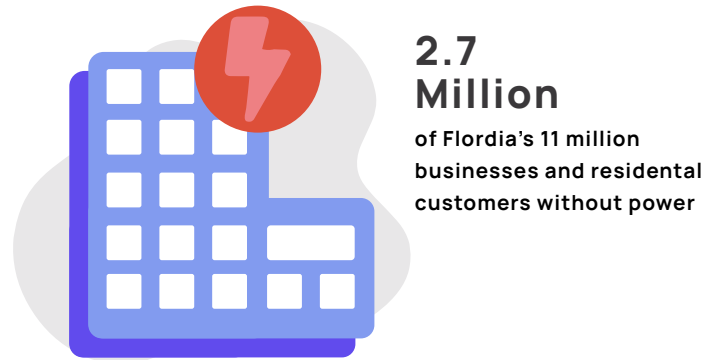
Open Phone Lines

KUA was able to keep their phone lines open during hurricane Ian

Hurricane Ian Data and Statistics

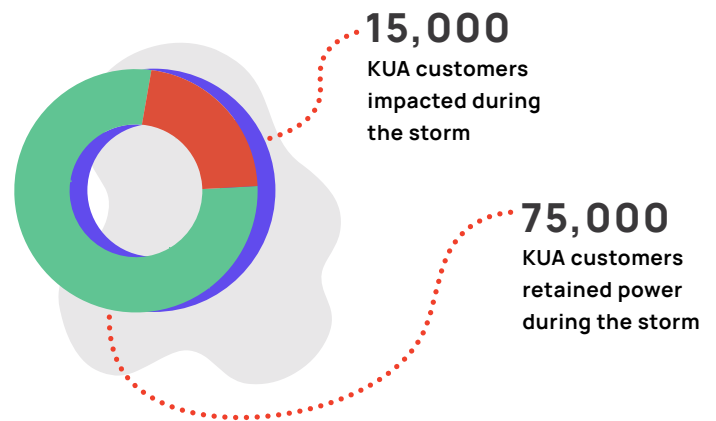
Regional Impact

According to unofficial estimates, at the peak of Hurricane Ian's impact, roughly 2.7 million of Florida's 11 million business and residential customers were without power, concentrated around Lee, Charlotte, and Sarasota counties in the southwestern part of the state. This paints a stark picture of the widespread disruption caused by the storm across the region. Outages were significant, with utilities across multiple states responding to restore services.



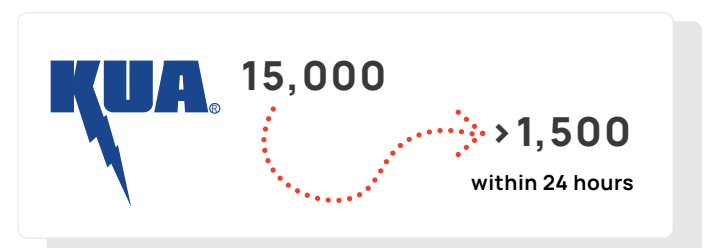
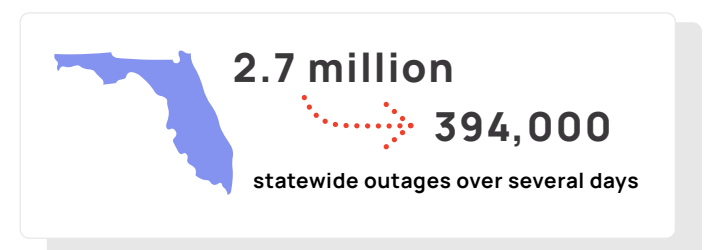
KUA's Achievement

Against the backdrop of regional turmoil, KUA's achievement in maintaining power and operational phone lines during Hurricane Ian stands out starkly. At the height of Ian's impact, only 15,000 – or approximately 17 percent – of KUA's 90,000 customers lost power. This significant achievement is a testament to the robustness of KUA's infrastructure and the effectiveness of the proactive strategies implemented in collaboration with DataCapable. Within a short period, KUA's dedicated crews and support personnel moved quickly to assess damage and restore service, achieving more than 90% power restoration shortly after the storm.



Comparative Analysis

While the state grappled with reducing outages from 2.7 million to approximately 394,000 customer outages over several days post-Ian, KUA demonstrated an exceptional capability in disaster response and operational resilience. Comparing these figures highlights the effectiveness of KUA's storm preparedness and rapid response, significantly outperforming the broader trends observed in the state.



Conclusion



In conclusion, KUA's collaboration with DataCapable proved to be a pivotal decision in facing one of the most destructive hurricanes in recent history. The enhanced communication capabilities and efficient crisis management provided by the upgraded outage map significantly mitigated the impacts of Hurricane Ian on KUA's customer base.

The case study underscores the importance of innovation, preparation, and strategic partnerships in the utility sector, particularly in areas prone to natural disasters. **KUA's success story serves as a testament to the utility's commitment to its vision and to providing reliable, efficient services even in the face of the most severe challenges.**

DataCapable

Many utility companies struggle to meet their customers' growing expectations. DataCapable's industry-leading software equips utilities with outage map and threat detection tools to improve their operations, ultimately delivering an exceptional customer experience.

Schedule a demo today!



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