PRIMATE TECHNOLOGIES

CASE STUDY

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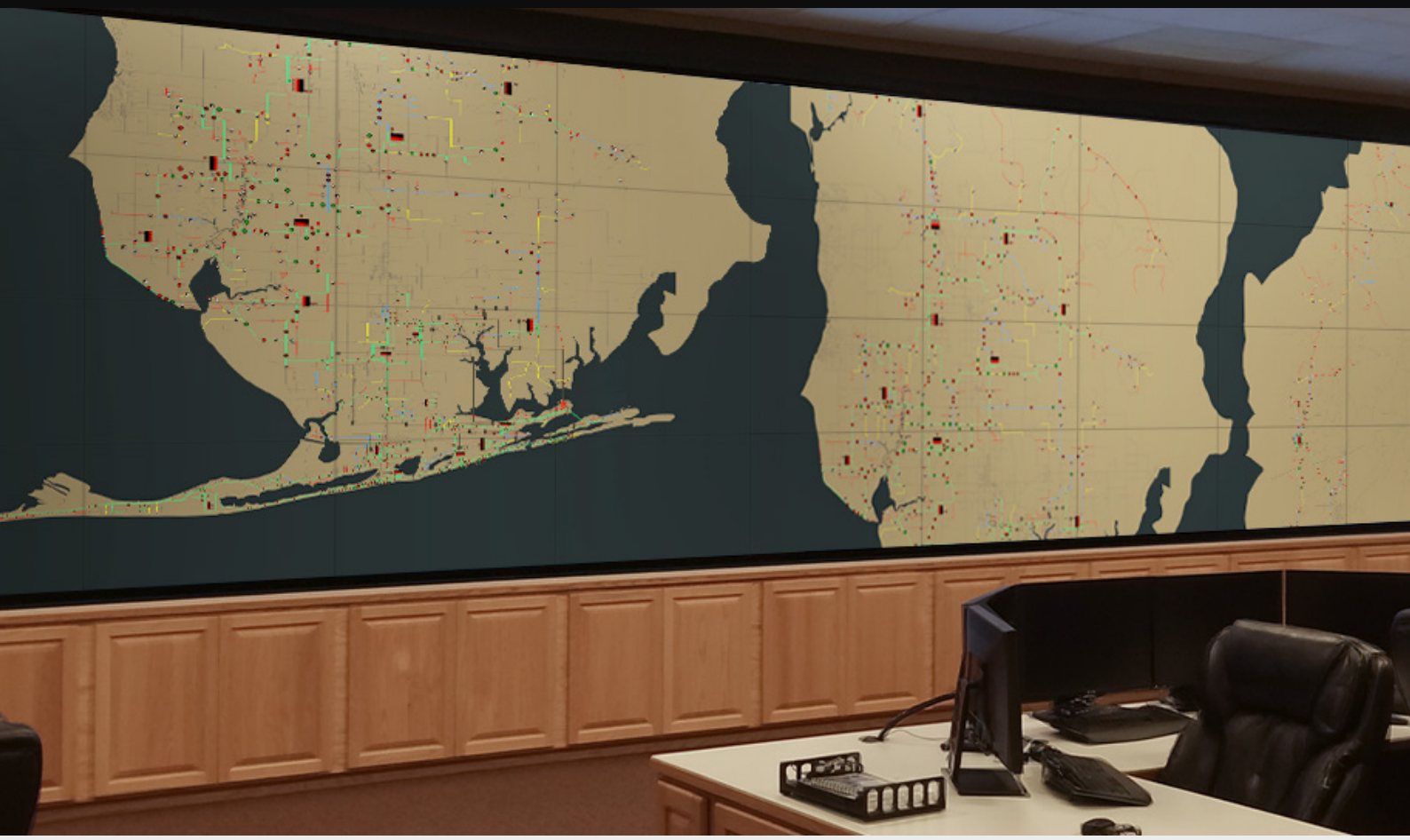


BALDWIN EMC:

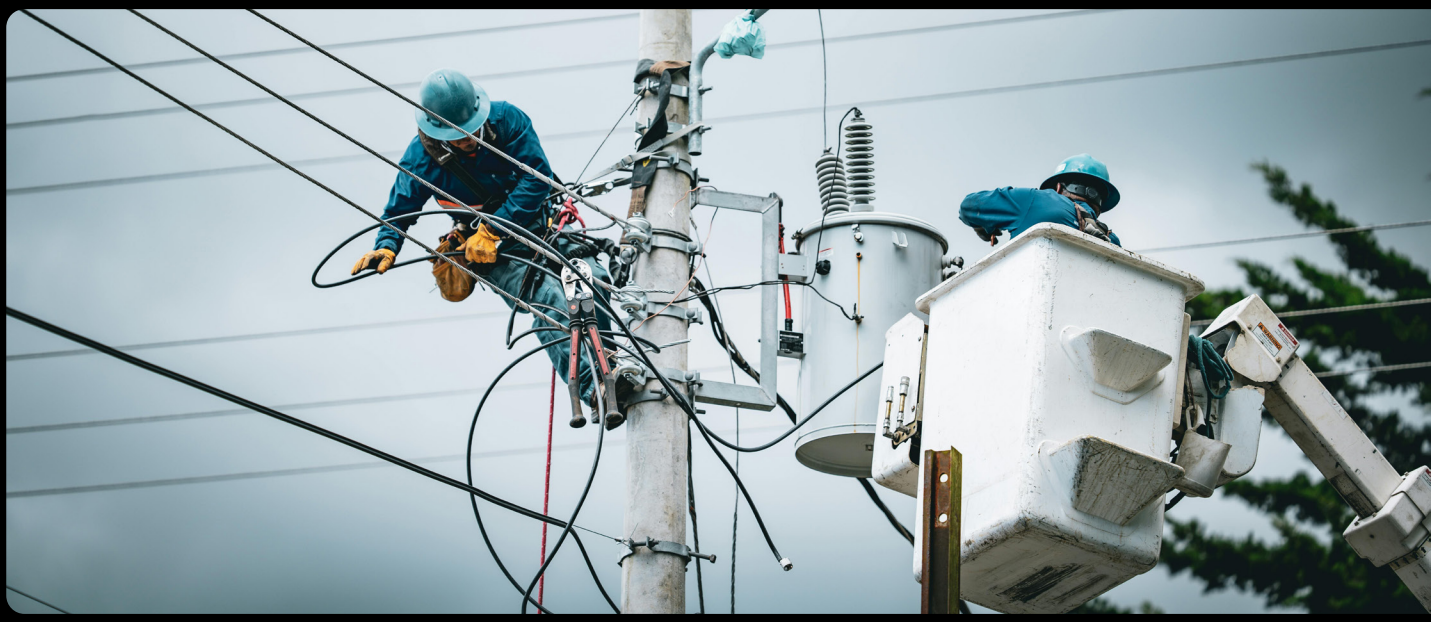
From Static Mapboard to Dynamic Control Room

Discover how Baldwin EMC transformed their operational visibility with Primate Technologies, replacing a manual mapboard with a custom digital visualization system to enhance grid awareness and response coordination.

EXECUTIVE SUMMARY

Baldwin EMC, Alabama's largest electric cooperative, is a not-for-profit, member-owned cooperative that strives to provide the most reliable and affordable electricity possible to its members and to improve the quality of life in their communities. Serving over 92,000 meters across a vast and diverse geographic region, Baldwin EMC faced increasing operational complexity as their service territory and responsibilities expanded.

With a static, manual mapboard at the center of their control room, the co-op lacked a modern, scalable way to share operational visibility across teams. By partnering with Primate Technologies, Baldwin EMC transformed its situational awareness through a fully customized video wall and integrated display system. Today, teams across the organization, from field crews and public relations to operations staff, control room operators, district managers, and executives, are able to work with clarity, speed, and confidence during normal operations and dark sky events alike.



THE CHALLENGE

A static mapboard slowing down critical decisions

Baldwin EMC has provided 24/7 dispatch operations since 1995, with full-time SCADA capabilities dating back to 1989. The co-op relied on a static mapboard to display system status. It was 12 feet high and had to be updated manually by using tape, holes, and LEDs. Display meant climbing ladders and hard wiring LEDs into place, a time-consuming and inflexible process. As Baldwin EMC's distribution area and evolved, this mapboard became reasingly difficult to maintain and update. At the same time, it was deeply embedded in the operational muscle memory of the team.

Baldwin EMC started using custom displays by Primate Technologies in 2013. Over the past 12 years, they have continued to evolve and enhance their visualization environment, upgrading display capabilities and expanding the role of situational awareness across their organization. Each phase of that work has been grounded in the same goal: making complex grid data easier to see, interpret, and act on in order to provide reliable power to their customers. As a cooperative that treats each member like family, Baldwin EMC works with a sense of urgency when even one customer loses power, striving to restore service as quickly as possible.

When the time came to build a new control center, Baldwin EMC's leadership recognized that a static, physical board would no longer meet their needs. But standard video wall vendors only offered replication of existing OMS or SCADA screens, essentially duplicating one view on a larger display. Baldwin EMC needed something more. They needed a customized solution that could bring multiple data sources together in a single common operating picture, giving their operations an at-a-glance view of the state of their system without having to look at multiple sources.

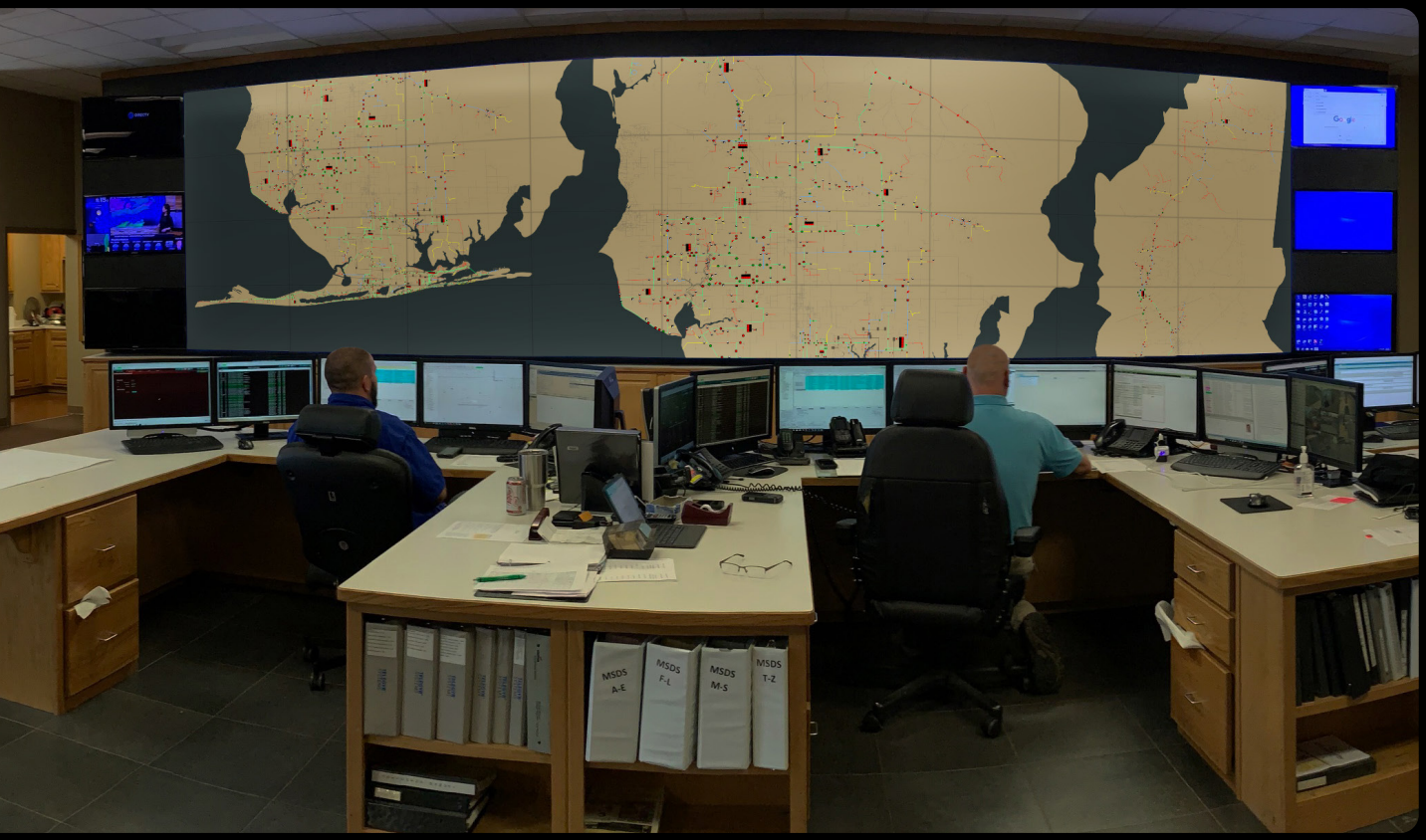
THE SOLUTION

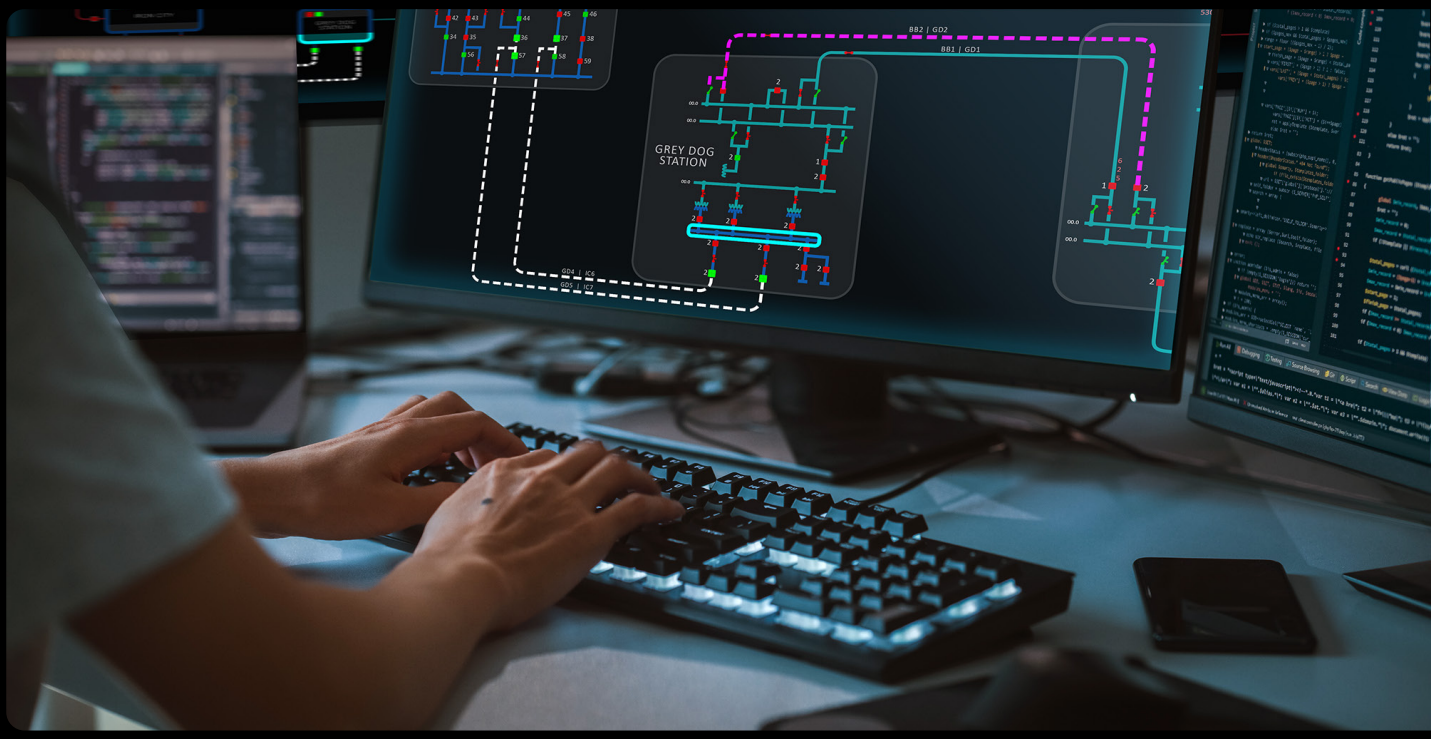
A custom-fit system for Baldwin's needs

Primate Technologies was introduced through a referral from another cooperative. Unlike other options, Primate was willing to start with Baldwin EMC's specific operational needs, rather than forcing them into a pre-packaged solution.

From the start, Primate worked closely with Baldwin EMC to translate their static mapboard into a dynamic visualization tool that presented their operators with real-time data, enhancing their ability to diagnose their system. Rather than offering a standard template, Primate developed a custom-built schematic that could display Baldwin EMC's entire system in a single view, while still allowing for different zoom levels and regional perspectives. The resulting configuration stacked three district views on the wall, providing clarity for district-specific discussions without sacrificing system-wide visibility.

> *Transitioning from physical to digital wasn't easy. Primate helped us bridge that gap. They knew how to interpret what we needed.*
>
> **Doug Byrd, Manager System Communication & Control**





Key integrations included:

- Real-time OMS data for outage locations and meter counts
- SCADA data for system performance and switching
- AVL data to track trucks and crews by region
- Crew assignment information
- NOAA weather overlays to assist during storm response
- Custom layers for dynamic outaged lines and substation-level metrics

Primate also created TileViewer displays for area superintendents, public relations and office personnel. Now, leaders across the organization can track live events without having to interrupt operators or rely on manual updates.

> *You walk into the room now, and you're immediately going to see the outages. You don't have to ask anybody what's going on. It's all there.*
>
> **Doug Byrd, Manager System Communication & Control**

The solution was designed to be hands-off. Operators continue working within their SCADA and EMS systems, while the wall passively reflects the state of the grid, updated automatically. This makes it useful not just for those running the system, but for anyone who needs to see what's happening at a glance like support staff, public relations, engineers, and executive leaders.

THE RESULTS

Faster decisions and system-wide clarity

The impact of the implementation has reached every corner of Baldwin EMC's operations.

Cross-departmental visibility. Executives and operations support teams now enter the control room and see the system's status at a glance. They no longer need to interrupt operators for updates.

Improved response coordination. District Managers of Operations use the wall to assess outage severity in their district and shift resources accordingly. Dynamic circuit-level data allows them to focus efforts where they are needed most.

Streamlined public communication. Baldwin EMC's Public Relations team can now access outage counts and affected meters through TileViewer, enabling faster and more accurate updates to members and the media.

Operator clarity. While the wall is not an active workstation for operators, it plays a critical role during shift changes, storm events, and switching scenarios. Providing immediate awareness of system status and active events.

Confidence in performance. The control room is now a centerpiece for visitors, partners, and the board of directors. Leadership views the display as evidence of Baldwin's commitment to system reliability and service excellence. As one board member put it, "Well worth it.

> *You can't put a number on it. But when your board of directors walks in and says, 'This was well worth it,' that's your ROI.*
>
> **Doug Byrd, Manager System Communication & Control**

TECHNICAL SNAPSHOT

INDUSTRY
Distribution-only Utility

CUSTOMERS
92,000+ meters

REGION
Southwest Alabama

DATA SOURCES
OMS, SCADA, AVL, NOAA Weather

SCALE
2 substations, 3 offices

USERS
Control room operators, district superintendents, public relations, engineering

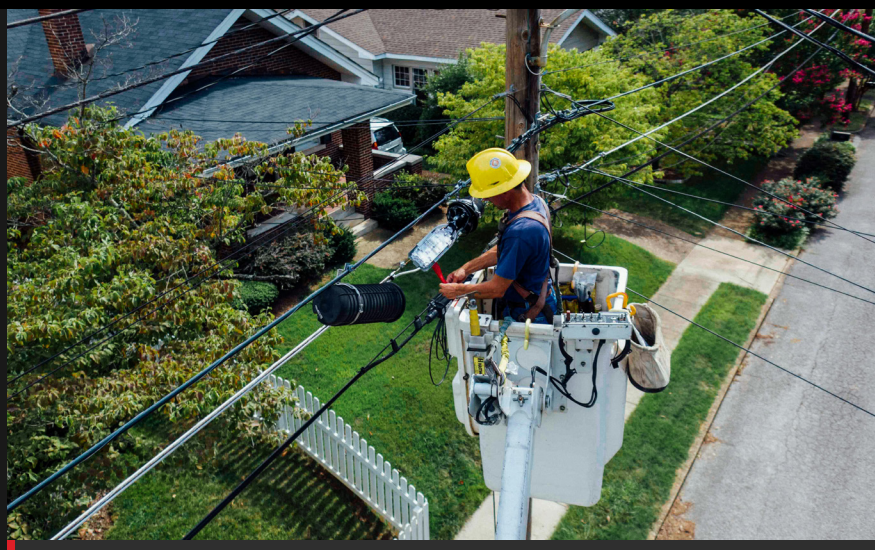
KEY FEATURES: Circuit-level outage display, dynamic lines, regional tiles, weather overlay

FINAL THOUGHTS

Baldwin EMC didn't just upgrade their technology. They redefined how their teams interact with critical information.

The success of this project wasn't about adopting a new screen. It was about enabling better decisions, improving communications across teams, and ensuring that the right people had the right information at the right time.

This is what Primate Technologies builds: tailored solutions that fit the needs of the individual operating center, designed to evolve with them as they grow.



> *What attracted us to Primate was that they didn't come in with a one-size-fits-all product. They listened. They tailored a solution that worked for us.*
>
> **Doug Byrd, Manager System Communication & Control**