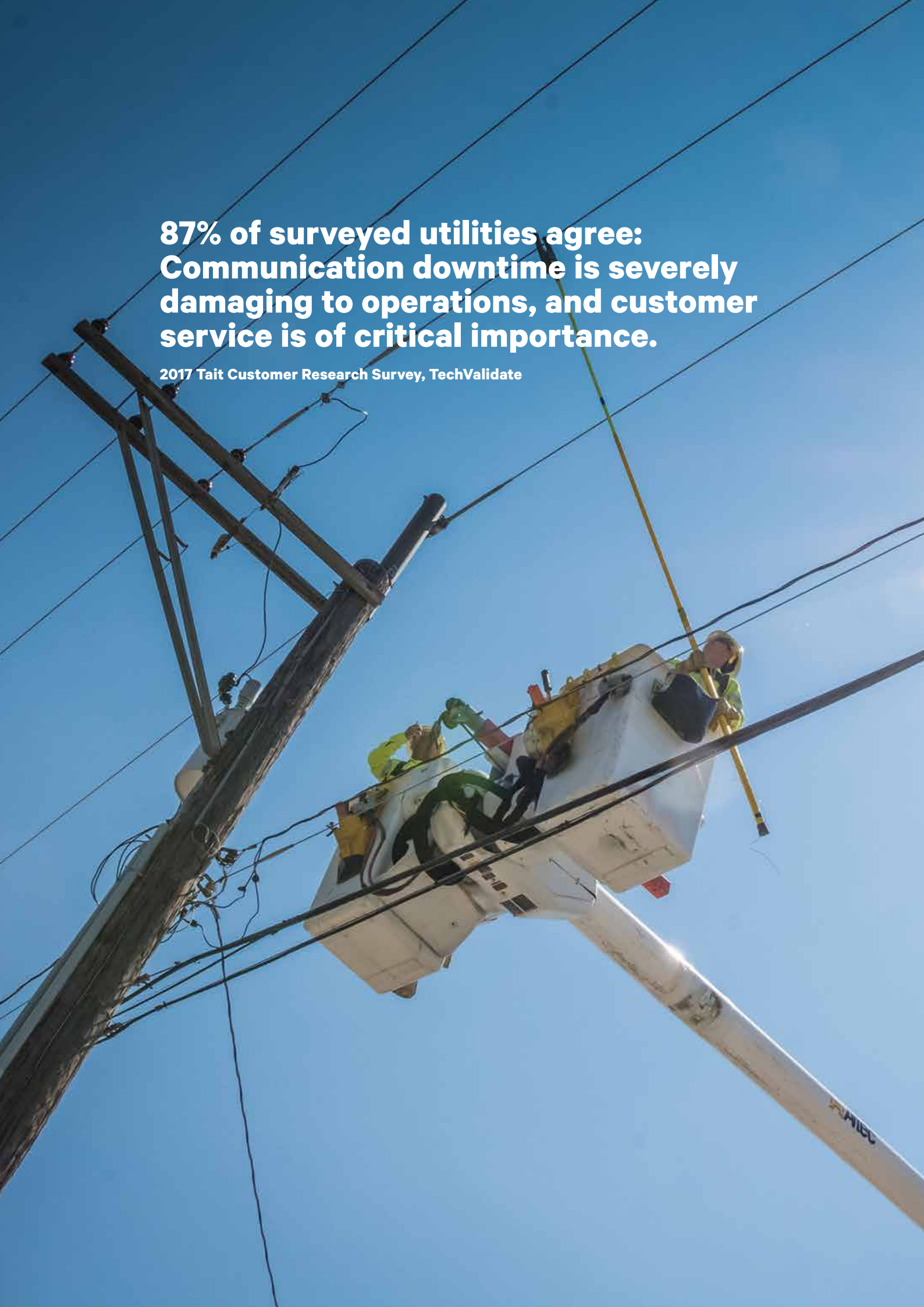
Tait Unified Solutions

UNIFYING CRITICAL COMMUNICATIONS FOR UTILITIES



87% of surveyed utilities agree: Communication downtime is severely damaging to operations, and customer service is of critical importance.

2017 Tait Customer Research Survey, TechValidate

DELIVERING CUSTOMER SERVICE IN A CHALLENGING ENVIRONMENT

Utility companies are constantly challenged to provide cost effective, safe and reliable distribution of power, gas, and water services. Monitoring and control of the systems are core to these challenges. Employees in the field, often working in dangerous and difficult situations from BAU to black start, are continually making real-time decisions that can have huge budget and customer service implications and all reliant on voice based, workgroup-centric, dispatch services for a safe and efficient work environment under all conditions.

Critical infrastructure network or service downtime can have significant, immediate economic and social impact for customers and stakeholders. For service providers, if issues are not responded to and resolved quickly and with regular, timely updates, there are major implications in terms of customer satisfaction and profitability. With customer minutes being lost there is also impact on service level agreement and potentially safety and regulatory-compliance with the resultant penalty clause implications this could have.

WHY CHOOSE TAIT?

Tait communication systems are the result of intensive research in conjunction with operators and fellow technology providers around the world.

Tait has been designing, manufacturing, installing and supporting effective and reliable radio and integrated voice and data solutions for the utility sector for more than 50 years. Utility organizations around the world have put their trust in Tait to supply networks that enhance user safety and deliver improved customer service.

Tait has significant experience delivering small, medium and large-scale projects and understands the needs of both systems solutions providers and utility operators. We work closely with stakeholders, identifying requirements and meeting them within a specified framework.

SUPPORTING COMMUNICATIONS CHALLENGES

When it comes to having efficient critical communications, utility companies face three major issues:

- **Maintaining network reliability**
- **Ensuring safe and reliable field staff communications**
- **Protecting network investment**

MAINTAINING NETWORK RELIABILITY

Ensuring that management and telemetry devices throughout the network are providing visibility and management to deliver required performance metrics at all times from all sites and areas of the network.

Feeding the right information back to control maintains visibility of the network, speeds up decision making to forestall any problems, reduces the need for field force roll out and improves network reliability.

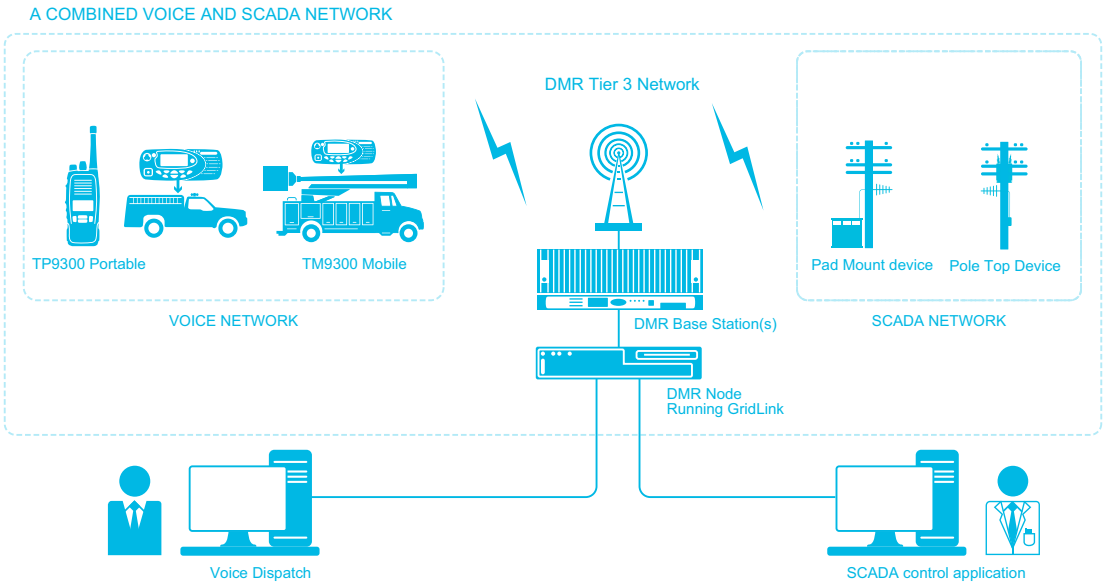
Structural changes across the industry, with for instance a range of dispersed, small scale energy generators now feeding into core distribution networks, also raises the need to support a significantly increased telemetry population in ever more remote areas across networks.

There are a range of technology options available, and utilities need an integrated solution.

Tait GridLink provides a telemetry and distribution automation layer that can cover long distances affordably and at the same time provide mission-critical reliability.

By utilizing and integrating the multiple network systems available, including LTE, fiber and LMR, Tait GridLink can offer the highest possible level of reliability and coverage across urban, rural and geographically remote networks.

With Tait GridLink, a trunked voice and data DMR network carries both workforce voice and telemetry data, offering excellent and extensive coverage with resiliency built in at its core. It provides utility managers with a layer of network intelligence that delivers both visibility and control over the grid, ensuring operational cost reductions, optimized energy usage, and improved reliability and resilience. With better visibility, utilities are able to more quickly isolate and resolve faults, as well as limit the number and scale of any outage in less time and with fewer people resulting in operational cost reductions.



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ENSURING SAFE AND RELIABLE FIELD STAFF COMMUNICATIONS

Having the communications infrastructure in place to ensure that actionable information is in the hands of the people in the field who need it, whenever or wherever they are – safely and reliably.

Fiber is too costly to reach everywhere and cellular cannot guarantee priority or service, particularly after emergency or adverse weather events – these systems can be complemented with radio services to reach more of your critical infrastructure. A unified critical communications solution combines coverage, resilience, reliability and usability whilst leveraging existing infrastructure to deliver sustainable, incremental cost effectiveness.

Tait DMR is a digital radio communications platform that delivers commercial and safety benefits for mission critical users. With the capability to carry both voice and data, Tait DMR gives a powerful combination of flexibility, control, resiliency and safety features. If for instance a line worker is in danger and unable to manually call for help, automated safety features like Man Down and Lone Worker will immediately send an alarm to dispatch. Working with GPS and location services, these features can help resolve emergencies quickly.

Tait DMR uses both authentication and encryption to ensure that no unauthorized parties can access your network.

Tait Unified Vehicle combines industry proven radio technology, the latest connectivity options, and application processing into a single device allowing you to leverage investment in an existing radio network, while providing a platform for the future. In creating a network of networks, Tait Unified Vehicle – in addition to radio – can utilize GSM, 3G, 4G/LTE, and Satellite, expanding the effective coverage outside the range of traditional communications networks and becoming the mission critical communications device to provide the connectivity options that ensure vital voice and data calls between vehicle, staff on the ground and SCADA control centers always get through.

In the field, Tait Unified Vehicle extends workforce automation capability, ensuring that staff are in voice and data contact at all times wherever they are to receive critical fault location and repair detail, to send back real-time reports and ensure assets can be organized, repair protocols initiated and repair crews dispatched in the most timely and cost effective manner.

The Tait Unified Vehicle platform runs on a flexible operating system with an easy to use interface. Custom applications can also be created that help utilities to improve their communications experience, enhancing staff safety and improving operational efficiency.

With **Tait TeamPTT**, communications capability can also be extended beyond the radio system, connecting to staff on the ground with smart devices. Tait TeamPTT provides a bridging solution, joining radio, WiFi and cellular with Push-to-Talk ( ) connecting both radio and smart-phone users into a secure and unified critical communication system. It provides a choice of end-user devices that are familiar and are aligned to the user's job function.

By enabling location data of people and vehicles, as well as having integrated text and picture capability, it offers a location service in the hand, providing real-time integrated, secure and auditable access to those on the ground to provide essential insight for clearer and more rapid situational analysis.

PROTECTING NETWORK INVESTMENT

With major investments in infrastructure, grid and assets expected to last 15-20 years, voice, data and radio communications networks in many utilities are now having to support a range of both new and legacy applications, a mix of protocols, various methods of network connection, legacy apps, web based, IP etc that they were never designed to support – and with all the associated costs.

Tait Enable is a suite of software and hardware that places the control of your radio assets firmly in your hands. It provides a set of industry leading tools to manage, monitor, protect and optimise your radio communications network and your fleet of devices

Tait EnableMonitor: Real-time monitoring gives assurance that your network is operating as expected and allows you to minimize impact if problems occur.

Tait EnableFleet: A powerful configuration management system that provides total visibility and management of your radio fleet from a central point of control, including Over-The-Air-Programming meaning you can optimise your fleet without the time and cost of visiting every radio.

Tait EnableProtect: Securely control the programming across your radio fleet, so you can have confidence that no unauthorized parties can interfere with it.

Learn more about Tait solutions for utilities at

taitradio.com/utilities

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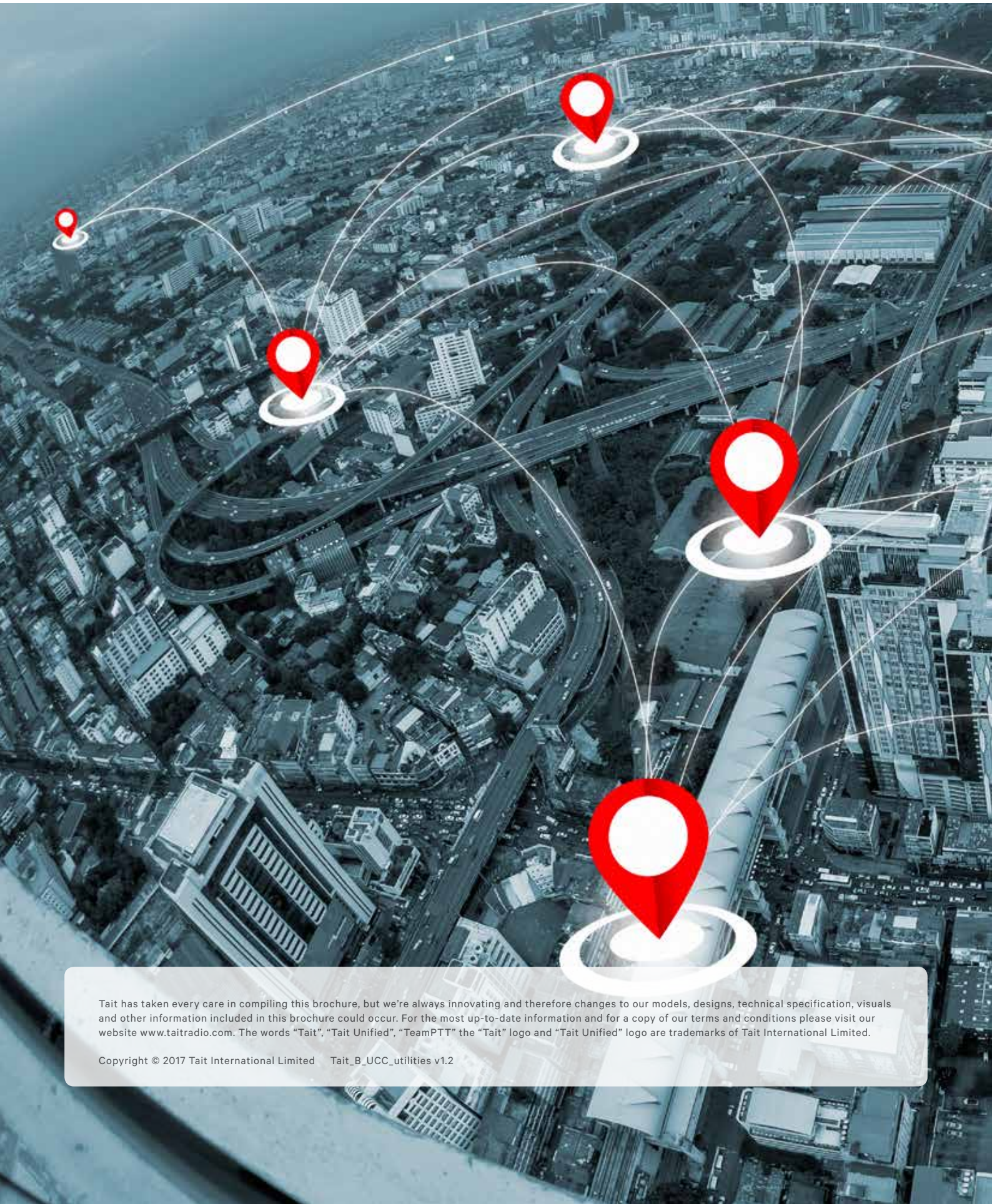
“The Tait system allows us to communicate faster with the field during storm situations, to restore power, get problems fixed, and keep the lights on.”

Tina Andrews, Distribution System Operations, KCP&L



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