Tackling Today's Utility Challenges

Environmental, weather, and market uncertainties compound challenges for utilities that aim to access restoration and other resources in a competitive field.

AGENDA

DTN

- The consequences of climate change..... 3
- Democratisation, scalability, and access..... 5
- Bridge the data gap..... 7
- Restoration efforts..... 9
- Data as revenue protection 11
- Prosper in a dynamic world.....13

The consequences of climate change

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- Restoration efforts
- Data as revenue protection
- Prosper in a dynamic world

The consequences of climate change

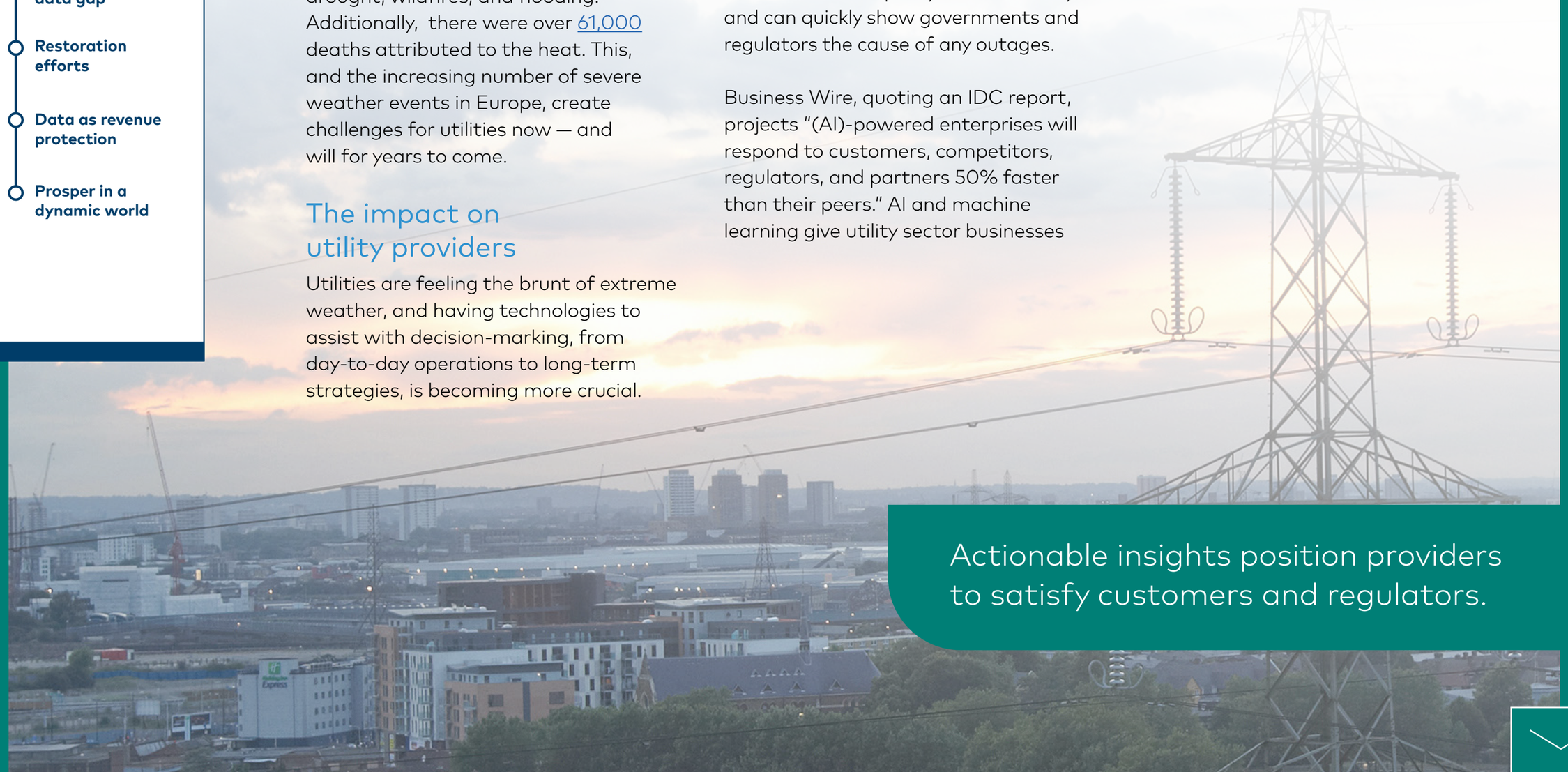
2022 was the second warmest year and the hottest summer on record in Europe, resulting in widespread drought, wildfires, and flooding. Additionally, there were over 61,000 deaths attributed to the heat. This, and the increasing number of severe weather events in Europe, create challenges for utilities now — and will for years to come.

The impact on utility providers

Utilities are feeling the brunt of extreme weather, and having technologies to assist with decision-marking, from day-to-day operations to long-term strategies, is becoming more crucial.

Advanced forecasting capabilities with weather-related hazard predictions, AI, and machine learning shorten the time between data collection, analysis, and action. Businesses that leverage these new capabilities strengthen their position to access resources and serve customers more quickly and effectively — and can quickly show governments and regulators the cause of any outages.

Business Wire, quoting an IDC report, projects "(AI)-powered enterprises will respond to customers, competitors, regulators, and partners 50% faster than their peers." AI and machine learning give utility sector businesses the capability to deal with difficult-to-predict weather events and initialise fast, targeted responses. Solutions with artificial intelligence capabilities that deliver insights help utility providers improve response time, restoration, and access to resources.



Actionable insights position providers to satisfy customers and regulators.

Democratisation, scalability, and access

- The consequences of climate change
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Democratisation, scalability, and access

Advanced forecast capabilities and machine learning meet weather events and other environmental uncertainties head-on through data democratisation, scalability, and accessibility.

This enables utilities to objectively declare events to initiate incident command procedures and escalation levels. Additionally, it leverages data insights for the following:

- Size internal and external resources for response and any restoration needs.
- Identify regions and event windows for the most significant weather impact on pre-stage and holdover resources.
- Prove any outages were caused by wind speed and quickly turn the power back on if lightning strikes a distribution pole.
- Justify weather event preparation decision-making to governments, regulators, and customers.

Data democratisation and scalability directly impact utility provider responses to weather events and other scenarios that require immediate action to serve customers and avoid regulatory penalties.

Clear, usable data, delivered in near real time, empowers companies to determine where, when, and what resources must be accessed and deployed. This enables them to scale and customise responses. As a result, guided by data, companies can save on time, money, and labour.

Data-driven decisions support time, cost, and resource savings.

Bridge the data gap

- The consequences of climate change
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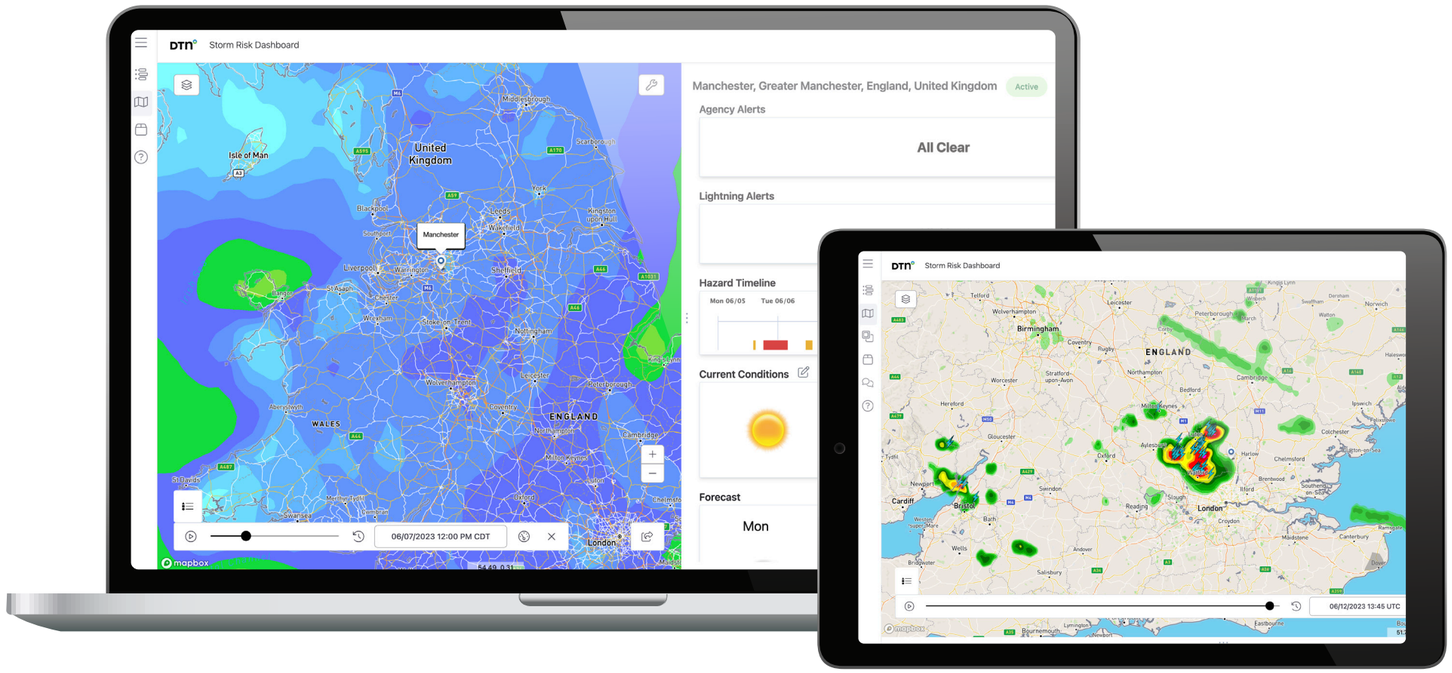
Bridge the data gap

Smaller and mid-size operations grapple with data gaps. Solutions like Storm Risk Dashboard (SRD) and Storm Impact Analytics (SIA) from DTN utilise advanced forecast capabilities, machine learning, and AI to bridge that gap.

With solutions like SRD and SIA, mid-size utility providers — and even their smaller counterparts — gain access to accurate data that turns weather information into actionable insights relevant to the utility's unique service region, assets, and regulatory environment.

Powered by advanced forecasting capabilities, SRD helps companies do the following:

- Establish weather thresholds based on the utility's risks and receive alerts when those thresholds are reached.
- Monitor critical assets in multiple locations by geographic point or custom parameters.
- Plan and prepare for weather events up to seven days in advance of potential impacts.
- Run reports that help prove outages were caused by force majeure or wind speed exceeding certain thresholds to avoid fines and penalties.



Restoration efforts

- The consequences of climate change
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- Bridge the data gap
- Restoration efforts
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Restoration efforts

Advanced forecasting capabilities with weather-related hazard predictions help utilities identify exactly which assets were affected by lightning, so with the flick of a switch, power can be restored within seconds of an outage.

Declare incident command events

Data insights enable utility providers to objectively declare incident command events. This opens the pathway to secure outside restoration contractors and pre-stage resources. Ultimately, that leads to faster service restoration for customers.

Use data to manage restoration

Once the incident is declared and resources allocated, data streamlines restoration management. This includes making informed crew staffing, call centre resourcing, and materials allotment decisions.

Predictive data to justify restoration response decisions to all stakeholders, including management and regulators. Data makes better decision-making possible because it clarifies what utility providers should anticipate related to weather incident type, severity, location, and cost. These insights make it possible to mobilise contractors, if needed, in advance and make the right materials available at the right locations for repairs.

Data as revenue protection

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Data as revenue protection

Outage duration, inefficient responses, and misaligned resources all can negatively impact revenue.

Data protects utility providers from these losses by generating insights that lead to targeted decisions that get the right resources to the right locations at the right time. In fact, it is access to data that fuels accurate anticipation, appropriate response, and informed incident management.

Improve scores

In addition to the impact on revenue, solutions empowered by machine learning help utility companies improve SAIDI/CAIDI scores, ETR goals, and overall customer confidence and satisfaction.

Prosper in a dynamic world

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Prosper in a dynamic world

DTN provides operational intelligence to our customers who feed, fuel, and protect the world.

Industries we serve

DTN empowers customers in agriculture, aviation, mining, offshore, refined fuels, renewable energy, shipping, transportation, and utility sectors with intelligent, actionable insights that exceed expectations and enable success.

Storm Risk Dashboard

DTN solutions, like Storm Risk Dashboard, can help utilities get ahead of bad weather events by supporting more accurate and efficient planning and resourcing for power disruptions. The result is the potential for ensuring reliable power for customers, protecting a company's reputation, and supporting revenue growth.

Visit our Storm Risk page to learn more about our suite of utility solutions and the role weather intelligence plays in helping utilities better prepare for extreme weather caused by climate change.

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