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Creating the smart  
infrastructure of tomorrow

Enzen's Digital Reality Platform

# Empowering communities for a digitalised world

**Climate change and extreme weather events are requiring all utilities to adapt. The global energy transition demands urban and rural infrastructure work more efficiently than ever before, delivering reliable life essentials to communities at low-cost and with low emissions.**

Fundamental to this is achieving superior visibility of infrastructure networks, so utilities can maximise asset performance in the most sustainable way. Also crucial is understanding more deeply the interdependence between cross-sector systems, from power, water and gas to agriculture, transport and waste.

Enzen's Digital Reality Platform (DRP) is a unique, cloud-based, AI-powered, end-to-end big data environment that works seamlessly with both spatial

and time series data, generating intelligent insights of all above-ground infrastructure in real time.

Applicable to myriad use cases across government, utilities, councils, business, forestry and farming, Enzen's DRP lowers cost, risk and outages, reduces carbon emissions, improves network resilience and enables communities to create prosperous, connected societies that thrive in a technology-enabled world.



# A unique asset inspection solution for multiple sectors

**Our solution integrates a range of data sources and digital technologies, supplying high quality data and services across multiple business sectors enabling greater cross-sector collaboration.**

The DRP features Light Detection and Ranging (LiDAR), AI, satellite data, high resolution photography, Big Data modelling and real-time sensed data from Internet of Things (IoT) LoRaWAN® networks.

Through this combination, utilities can achieve improved visibility of asset condition and more effective management of assets' surrounding environments, including vegetation.

The outcome is a virtual world view of spatial data at high efficiency and low cost, enhancing the performance of electricity infrastructure, ensuring more reliable power for citizens and mitigating the risks caused by natural disasters.

Moreover, the DRP can drive economic growth by giving businesses and communities access to the data so they too can make smarter infrastructure decisions.



# Applications and use cases

- Safety management
- Water management
- Energy / demand management
- Network / outage management
- Asset management
- Network design
- Disaster resilience and response
- Environmental management
- Vegetation management
- Waste management
- Access management
- Customer services
- Smart metering
- Smart lighting
- Smart parking
- Livestock and crop management
- Asset / material tracking

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### The DRP delivers value by:

- Enabling digital twinning based on full network scans, so utilities can scrutinise future network planning, disaster resilience and LV-HV connections modelling more effectively.
- Accelerating asset innovation so utilities can access entire network models and data, running their own scripts within the platform and operationalising innovations within a 4D world.
- Driving cross-sector digital collaboration and smarter planning, by sharing data with organisations in government, councils, transport, agriculture and forestry.
- Identifying assets with greater accuracy, locating all above-ground assets including poles, wires, towers, conductor spacers, stays, guys, bollards, padmounts, streetlights, pillar boxes and the existence of pole top assets, then running a match against existing GIS data.
- Improving safety, by removing the high-risk use of low-flying helicopters.
- Generating more accurate insights into risk, damage and defects, such as structural integrity, debris, conductor sag, loss of clearance separation, leaning poles and vegetation risk.
- Analysing surface texture to identify potential failures in an asset, such as rot, rust, crack, missing bolts, broken or missing tie wires.
- Reducing cost, emissions, risk and time associated with more traditional inspection methods, instead capturing whole-of-region data at scale, pace and with greater reliability.





## Virtual TAS: a 4D digital twin of Tasmania

**The climate emergency is seeing a rise in extreme weather across Australia. From severe floods to raging bushfires, such natural disasters have devastating consequences for the safety, wellbeing and prosperity of communities both urban and rural.**

Powered by Enzen's DRP, Virtual TAS is a 10-year joint venture between 42-24, the technology subsidiary of TasNetworks, and Enzen to create a 4D digital twin of Tasmania's above ground infrastructure, built and natural environments.

Enzen's DRP does more than collect data for the power utility. It is the first time a state in Australia has been captured at such high resolution for the specific

purposes of supplying high quality data and services to multiple business sectors.

By giving Tasmania's businesses and communities access to spatial data, intelligence and analytics that otherwise they could not afford, Virtual TAS enables these organisations to make superior infrastructure investments and drives the state's economic growth.

## CASE STUDY

## Driving sustainable agriculture in Tasmania

Through Virtual TAS, we are supplying spatial data to agricultural technology innovator Agronomeye, which will use it to build digital twins of individual farms in Tasmania.

This will deliver dynamic insights for the state's farmers on everything from infrastructure and water to biodiversity and carbon farming projects, while enabling them to access new revenue streams like carbon credits.

In a further indication of Virtual TAS's potential, the National Recovery and Resilience Agency's Preparing Australian

Communities grant programme has funded Enzen to deliver a disaster risk reduction and community resilience application using data and modelling provided by Enzen through the vehicle of Virtual TAS.

As the Australian utilities industry focuses on becoming more customer-centric, Enzen's DRP is a clear demonstration of how the public and private sectors are using digital innovation to deliver real value for consumers and businesses, creating smarter, more sustainable infrastructure solutions in Tasmania for the long-term.



**To learn more about Enzen's  
Digital Reality Platform, contact:**

**Australia**

James Bangay  
Global Leader of Digital Reality  
james.bangay@enzen.com

**UK**

Srikanth Arya  
Global Head of Digital  
srikanth.arya@enzen.com

**Virtual TAS**

Ian McLeod  
Director of Smart Energy and Water  
Enzen Australia  
ian.mcleod@enzen.com

enzen

**Enzen Australia**  
1 King William Street  
Adelaide  
SA 5000  
Australia

**Enzen**  
The Hub  
Central Boulevard  
Blythe Valley Park  
Solihull  
B90 8BG  
United Kingdom

enzen.com

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