## CATALYST



# Royal Mail: A Success Story in Scalable Energy Data Transformation



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# Agenda



- About Royal Mail
- The Story
- See it in Action
- Q&A

# **About Royal Mail**

#### **Royal Mail: Powered by Posties**

UK and Northern Ireland's national postal service, trusted to deliver mail for 500 years

Our posties walk up to a billion steps a day visiting 32 million addresses to deliver over 6 billions letters and a billion parcels

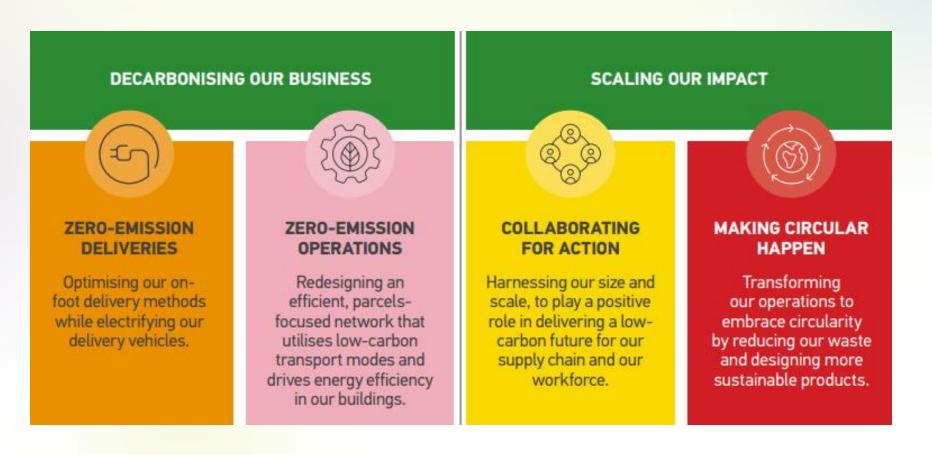
Property estate of over 1,400 sites, ranging from large regional mail centres and parcel hubs to local delivery offices

We have over 100,000 employees and operate the UK's largest electric van delivery fleet with over 6,000 final mile vehicles



#### **Steps to Zero**

Proud to be UK's greenest parcel operator (200g CO2e per parcel) with Net Zero goals by 2040 and with interim targets to be achieved by 2030 and 2035. Targets validated by Science Based Targets Initiative (SBTi).



#### **Steps to Zero**

#### **UNDERSTANDING OUR EMISSIONS**





#### SCOPE 1 Direct emissions

- Vehicle fleet fuel consumption
- Building estate natural gas consumption for heating
- Fluorinated gases for cooling and heating systems



#### SCOPE 2 Indirect emissions from electricity

- Building electricity consumption
- Electric van fleet electricity consumption
- Rail freight electricity consumption
- On-site solar electricity generation



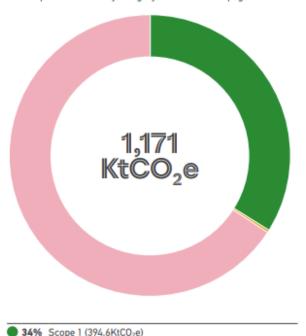
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#### SCOPE 3 Value chain emissions

- Purchased goods and services
- Well-to-Tank (WTT) emissions the emissions associated with the production, transportation, transformation and distribution of fuel consumed
- Domestic and international air freight
- Downstream transport and distribution of freight
- Business travel
- Employee commuting

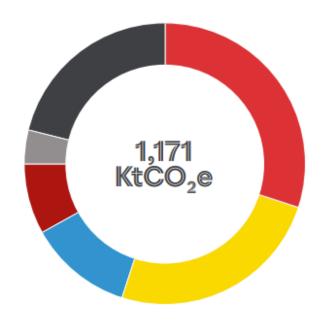
#### **EMISSIONS BY SCOPE**

Our direct emissions (Scope 1) and indirect emissions (Scopes 2 and 3) are equally significant, recognising the need to decarbonise our fleet of around 46,000 vehicles and 1,400 properties, along with supply chain transport providers and other purchased goods and services. Under a market-based approach, our Scope 2 emissions are near zero because we predominantly purchase and generate 100% renewable electricity. A further breakdown of our Scope 3 emissions by category can be found on page 19.



#### **EMISSIONS BY ACTIVITY**

We segment our emissions into key business activities and recognise that our international and domestic transport networks are our highest emission activities at present. Our final-mile emissions are comparatively very low for our industry due to our local delivery office presence, coupled with a growing zero-emission delivery model.



- 30% Domestic transport network
   25% International transport network
- 12% Domestic final mile
- 8% Our estate
   Our people
- 21% Supply chain spend and other

# **The Story**

#### Before...

- Previously manual, spreadsheet-based processes
- Data only available from third party providers or utilities suppliers
- Limited visibility into energy anomalies, trends and efficiency
- Difficult to overlay different utilities and integrate other data sets
- Need for better automation, analytics, and behavioural insights
- Half-hourly gas and electricity data logging at over 1,400 buildings going back nearly a decade
- Over 500 billion data points but no way to extract value from the data!

"It was all manual. It was all spreadsheet-based." - Aleem Hussain, Energy Manager - Royal Mail

#### Now...

Smart Analytics for real-time data tracking

Quick and easy access to utilities data, e.g. from phone or tablet

Ability to overlay different utilities and compare buildings

Dashboards and simplified charts to help drive behaviour change

Data loggers installed on water supplies covering half of our estate usage

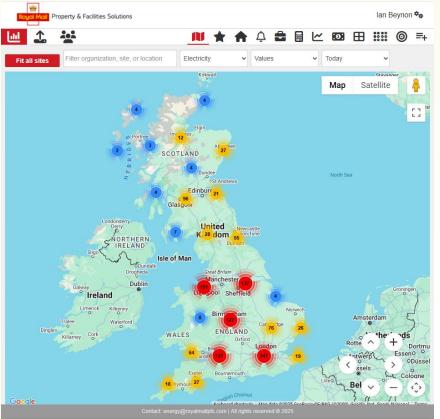
Sub-metering in our largest sites to measure HVAC, lighting and process loads

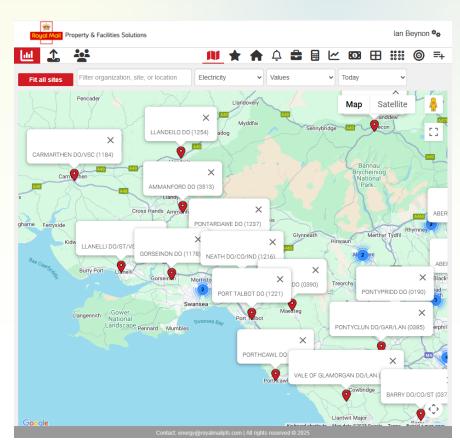
Ability to readily provide measurement and verification (M&V) of projects and provide accurate data for business cases

# See it in Action

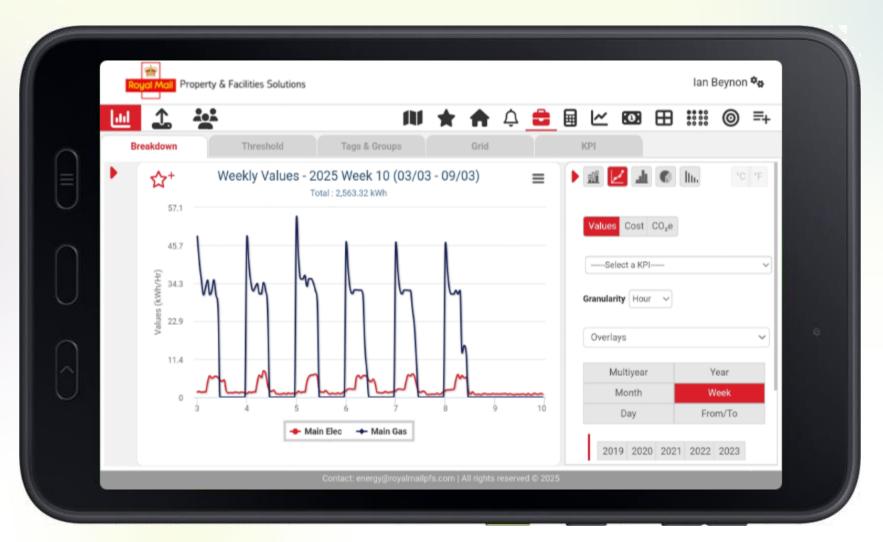
## **Map View**



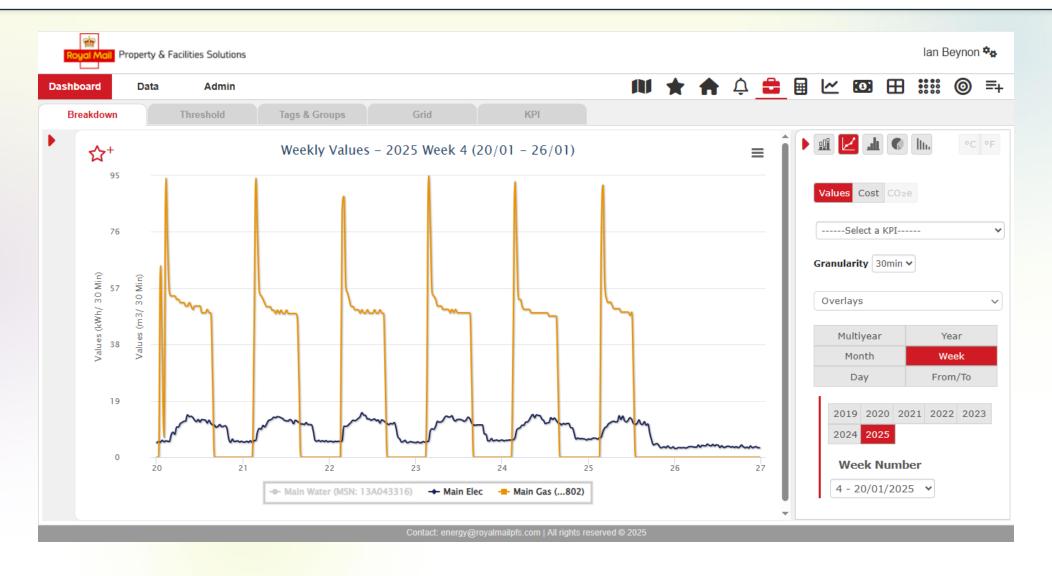


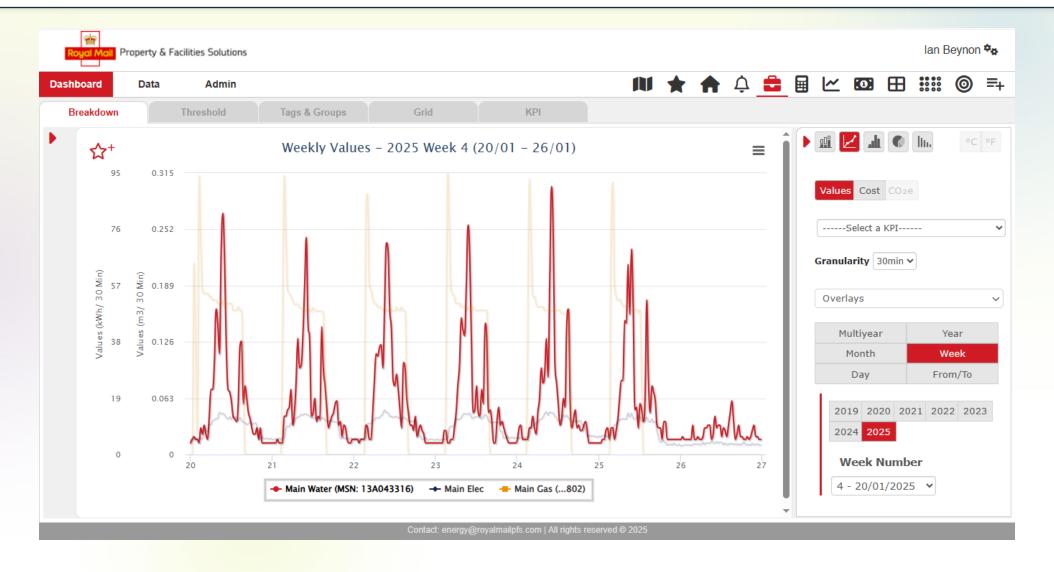


#### **Mobile Devices**





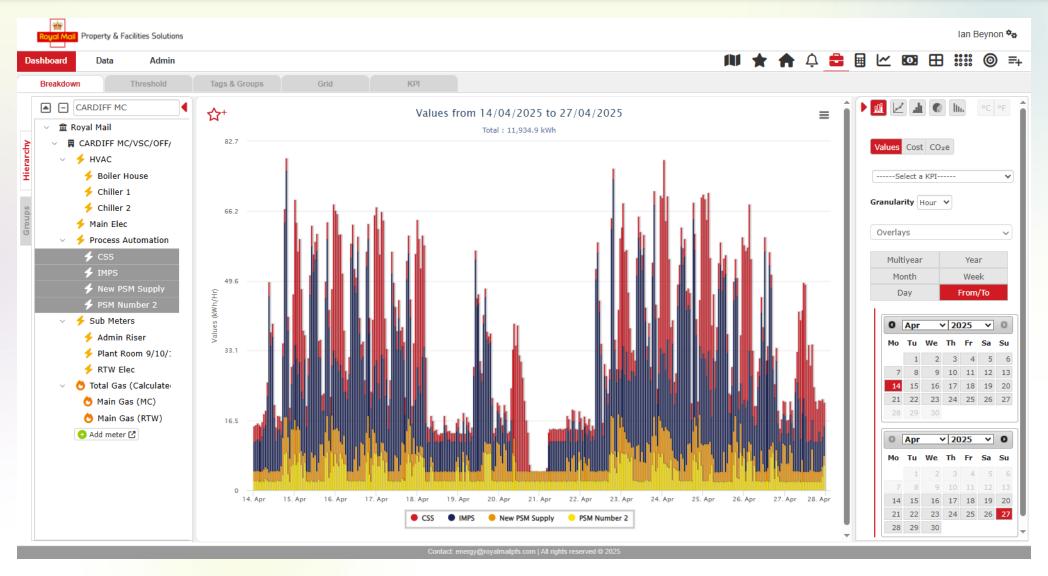








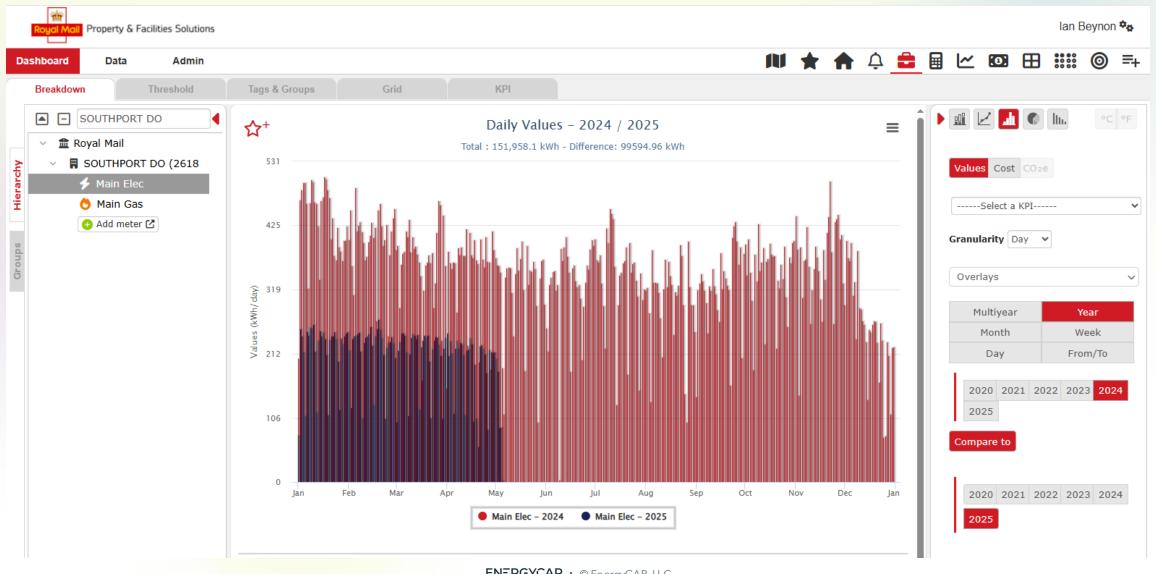
## **Sub-Metering**



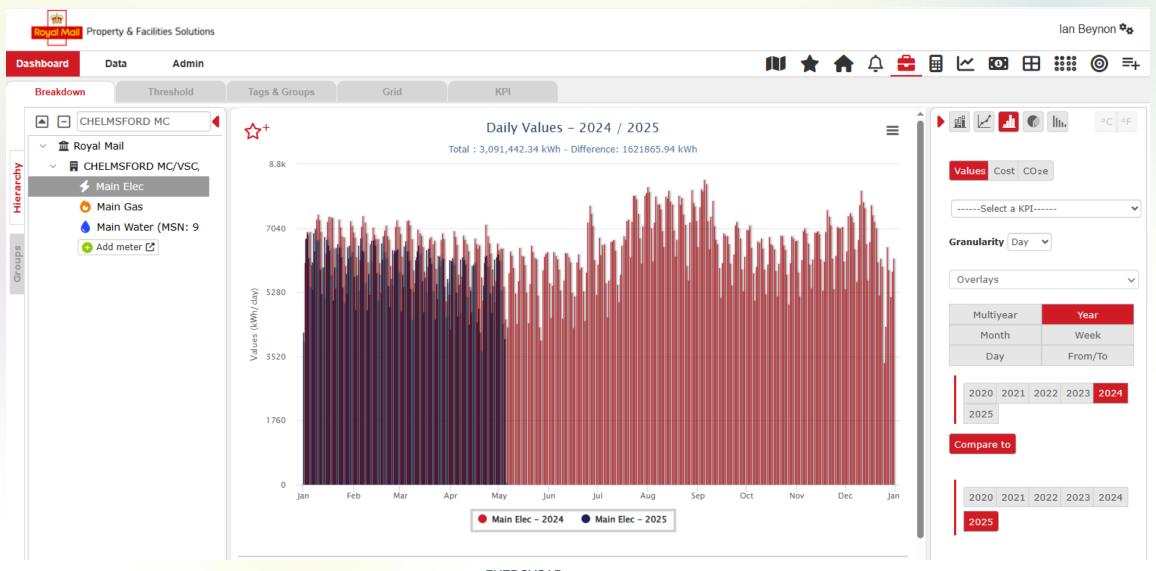
## **Sub-Metering**



#### **Measurement and Verification (M&V)**



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#### Measurement and Verification (M&V)



#### What's next?

- Migrating to EnergyCAP's modern Utility Management platform
- Improved (public) dashboards and benchmarking tools
- Leveraging machine learning for insights
- Expanding sub-metering (400+ new meters across 40 sites)
- Installing more water meter data loggers

"We haven't used it to its full potential yet, but the opportunity is there."

– Aleem Hussain, Energy Manager - Royal Mail

## **Key Takeaways**

Automation is key to scaling energy management

Dashboards drive engagement

Data quality and trust are critical for adoption

# Q&A