



Case study: Precision support for vulnerable customers in the age of data-driven networks

Spotlight Innovation Project

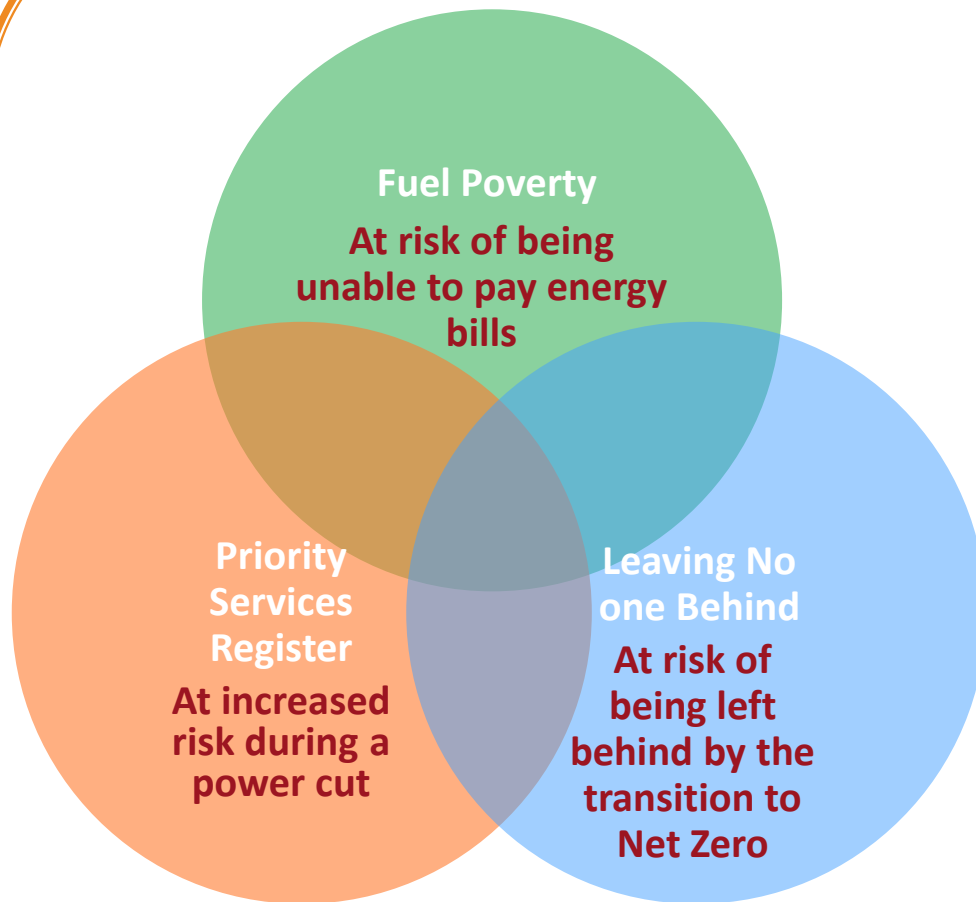
Andrew Burton – UK Power Networks



INVESTORS IN PEOPLE™
We invest in people Platinum



Consumer Vulnerability: The Challenge



27

Priority Services needs
codes

Different needs during a power cut

6 million

Fuel Poverty households

Households unable to afford to heat
their homes to the temperature
needed to keep warm and healthy.¹



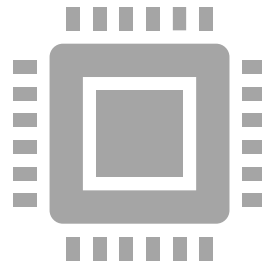
*'If these households are left behind
running old technologies and
inefficient energy systems... they will
likely face higher costs, deepening
economic inequalities'*²

How can we effectively identify our customers, and provide the right support at the right time?

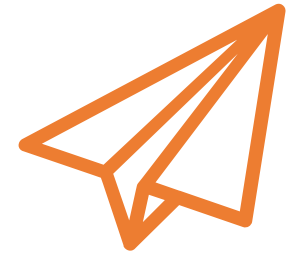
Spotlight: Overview



Identifying Priority Services Register (PSR), Fuel Poor (FP), and Leaving No One Behind (LNB) customers at a much more detailed and granular level



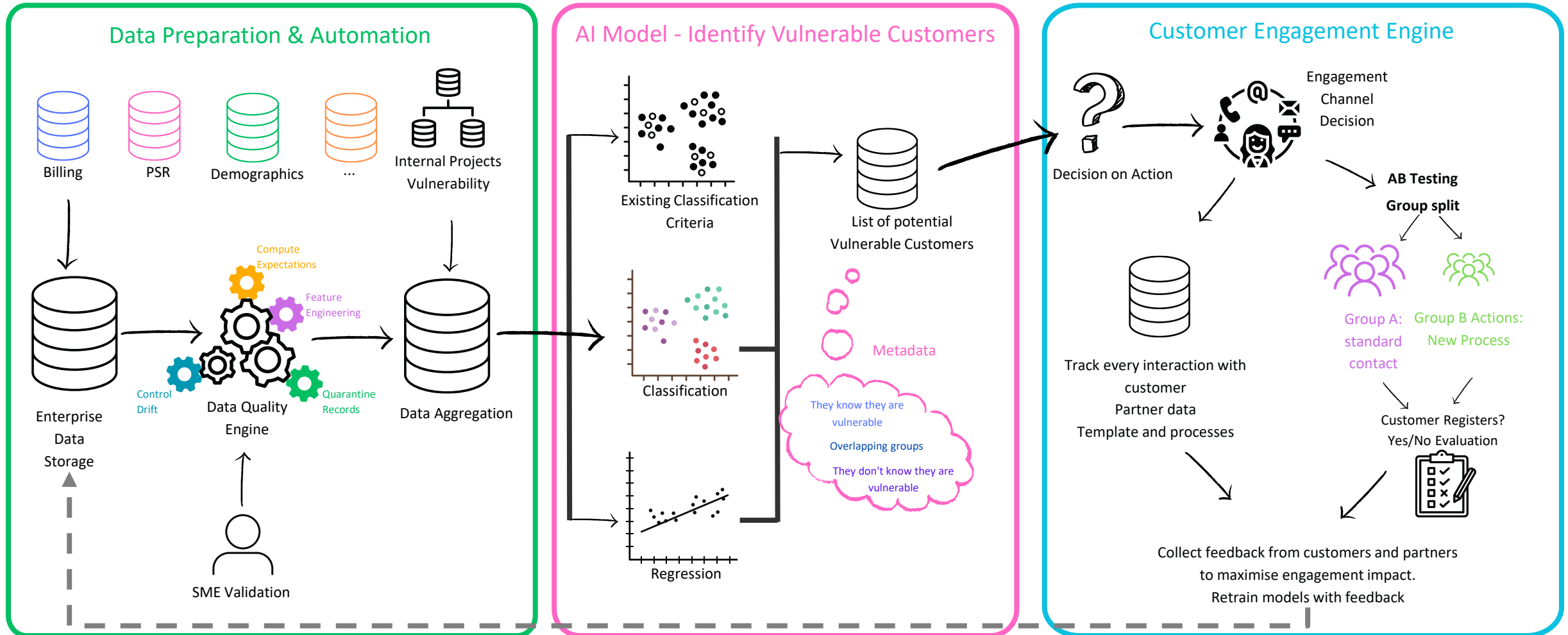
Accessing additional data from sectors such as healthcare, telecommunications, and finance to improve customer identification



Optimising engagement strategies through data insights, improving customer interactions by enabling effective engagement channels tailored to different customer needs and vulnerability categories

Spotlight: Solution and Features

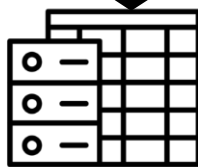
An AI model trained to divide existing customers into different vulnerability groups. This knowledge will be used to identify new and additional unknown vulnerable customers.



Spotlight: Modelling

Modelling structure

Diverse data to create a rich profile of customers



Analytic
Basis
Table

Train
Test
split

80%

20%

Random
Forest

Catboost

KNN

Logistic
Regression

LightGBM

XGBoost



OPTUNA

Cross Validation
&
Hyperparameter
Optimisation



Model Testing
Model selection
Model Serving

Spotlight: Benefits and Values



Improved Service Accessibility & Experience

- Caters to the unique needs of vulnerable customers.



Personalised Communication & Engagement

- A repeatable and optimised communication strategy for each customer.



A Force For Good

- Supports our commitment for social responsibility and customer welfare.



Scalable Nationwide

- Applicable across other industries.

1.8 Million

Identified priority
services eligible

900,000

Identified at risk of
fuel poverty



We're UK Power Networks, trusted by millions of people to keep the power flowing across London, the South East and East of England.

While power cuts are rare, they can still happen, and for households with young children, being prepared can make all the difference.

That's why we offer the Priority Services Register (PSR), this is a free, long-standing service used by thousands of families and run by our expert teams. It's tailored support from the people who know the network best, ready to help if the power ever goes off.

Sign up now. It's quick, free, and could make all the difference during a power cut.

Why join? Here's why



438,000

PSR eligible
households
engaged

250,000

PSR sign ups

Thank You



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