

Leeds Building Society selects 4-Xtra to plug gap of missing EPC data

- *SaaS, AI-based Extreme Event Forecasting and Synthetic Data Generation Engine enables Leeds Building Society to incorporate ESG considerations into credit decisioning and risk management processes for mortgages*
- *Highlights how university tech spin-outs play a key role in driving innovation and business growth*

Leeds, 20 April 2023: [4-Xtra Technologies](#), a Leeds University deep tech spin-out, is pleased to announce that its SaaS, AI-based Extreme Event Forecasting and Synthetic Data Generation Engine has been selected by Leeds Building Society to estimate missing EPC (Energy Performance Certificate) data to more accurately evaluate the emissions of its mortgage portfolio. The relationship follows a successful three-month Proof of Concept, when 4-Xtra demonstrated it could provide the missing data to a level that would satisfy the Society's requirements.

With the UK committed to achieving net zero by 2050, regulators now expect financial institutions to factor ESG (Environmental, Social and Governance) considerations into their risk processes and decision-making. The Prudential Regulatory Authority¹ has also stressed the need for financial institutions to address capability gaps in identifying, measuring and managing climate risks.

EPCs, which measure the energy efficiency of buildings, are a valuable source of data for the risk processes related to mortgage applications. They are also key for calculating mortgage portfolio carbon emissions to satisfy climate change reporting requirements. The challenge is that not all properties have a valid EPC, which means financial institutions have to estimate the missing data.

Andy Mellor, Chief Risk Officer at Leeds Building Society, explains, "We want to demonstrate how we are effectively incorporating climate risk considerations into our risk management processes and credit decisions. Missing EPC data was a particular obstacle in meeting these requirements for our mortgage portfolio. The successful PoC undertaken with 4-Xtra Technologies and its SaaS solution has demonstrated that we can now instantly estimate data for any gaps, which in turn improves our credit decisioning processes and enables us to report our mortgage portfolio emissions more accurately."

Built upon academic work in the theory and predictability of extreme events and utilising machine learning and AI, 4-Xtra's Extreme Event Forecasting Engine and complementary Synthetic Data Generator have been developed with flexibility in mind. They can be used for a variety of use cases in financial services, with data outputs delivered via web-based interfaces or via APIs for ready integration with a financial institution's own systems.

"We're delighted to support Leeds Building Society in factoring in ESG considerations to its risk processes" states David Potter, CEO of 4-Xtra Technologies. "Our SaaS solution can accurately predict missing EPC data, while also providing clients with enhanced data analytics capabilities to manipulate the large data sets involved. We are working on providing further enhancements to our solution, to include other physical risks while also actively developing other financial services solutions using our extreme event forecasting and synthetic data generation technology."

The relationship between 4-Xtra and Leeds Building Society is a great example of how university research can be turned into commercial success. This topic is the focus of an independent review² into the UK's spin-out landscape announced by HM Treasury in March 2023. The review seeks to identify best practices to promote innovation and grow the businesses of the future, with a view to developing the world's next Silicon Valley here in the UK.

Professor Nick Plant, Deputy Vice-Chancellor: Research and Innovation at the University of Leeds, said: "Universities have a key role to play in driving innovation and fuelling economic growth. It is wonderful to see how 4-Xtra's Extreme Event Forecasting Engine and Synthetic Data Generator is being used in the commercial world by Leeds Building Society."

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Notes to Editors

1. [Bank of England report on climate-related risks and the regulatory capital framework](#)
2. [University and investor experts to head up review of UK spin-out landscape](#)

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About 4-Xtra Technologies

Building upon initial academic work in the theory and predictability of extreme events, and utilising innovative machine learning and artificial intelligence methods, 4-Xtra has developed an extreme event forecasting risk modelling solution and a complementary synthetic data generator for the increasingly complex world of the financial markets and beyond.

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About Leeds Building Society

The Society operates throughout the UK and had assets of £25.5bn at 31 December 2022. The UK's fifth-largest Building Society has its head office in the centre of Leeds, where it was founded in 1875. The Society won the title of Best Shared Ownership Mortgage Lender in the 2022 What Mortgage Awards, its seventh consecutive year of success in this category. It also received a five star rating in the Financial Adviser Service Awards, as well as a Gold Ribbon from Fairer Finance for savings accounts for the fifth year running, based on customer happiness and trust, along with the ability to explain things clearly.