

BE Faster

Flexible trading of energy supply and demand between assets

Focusing on how building managers can trade energy assets, the ITEA project BE Faster (Building Energy Flexibility at Scale for Trading and Earning of Revenues) will create a scalable platform that utilises existing software and hardware to control assets and connect more low-carbon assets to grid infrastructure.

Addressing the challenge

Energy users need to convert from fossil fuels to electricity while optimising production from low-carbon sources. However, the intermittency of solar photovoltaics and wind requires modulation to ensure sufficient supply during peak demand. The operational and implementational cost difference between gas and electricity also disincentivises decarbonisation at the user level, while grid operators defer investment where the network is constrained as it is cheaper to pay for flexibility during periods of over-supply/need than to upgrade the physical distribution network.

Proposed solutions

To help enable net zero, BE Faster will work with energy suppliers and network operators on a scalable platform for flexibility trading based on energy prices, markets and carbon signals. The project's novel algorithms will handle thousands of simultaneous transactions in a state-of-the-art operating system and digital twins will define trading parameters such as asset lifecycle, weather and building usage. This will send information to cloud-based virtual gateways to turn assets on or off. Using modular architecture allows application stacking when adding new features and capabilities, open protocols will be used to integrate other products (like renewable technologies and building management software) into a wider ecosystem. With this platform, energy assets can be placed into various energy and flexibility markets via portfolios while

edge computing at each site can enable assets to be aggregated and controlled based on algorithms set per portfolio. Evidenced reports on carbon savings and revenues will also be visible on a user dashboard and certified with blockchain.

modulating assets to better match carbon grid intensity. This is expected to deliver carbon savings of 60% per individual baseline. From a business perspective, the platform will connect to existing systems to reduce implementation costs by up to 75% compared to competitors focusing on hardware integrations. Users will therefore enjoy flexibility revenues and carbon savings at low upfront costs, while partners can benefit from license fees or trading revenues. Overall, the long-term impact of these factors is anticipated at revenues of GBP 11,000

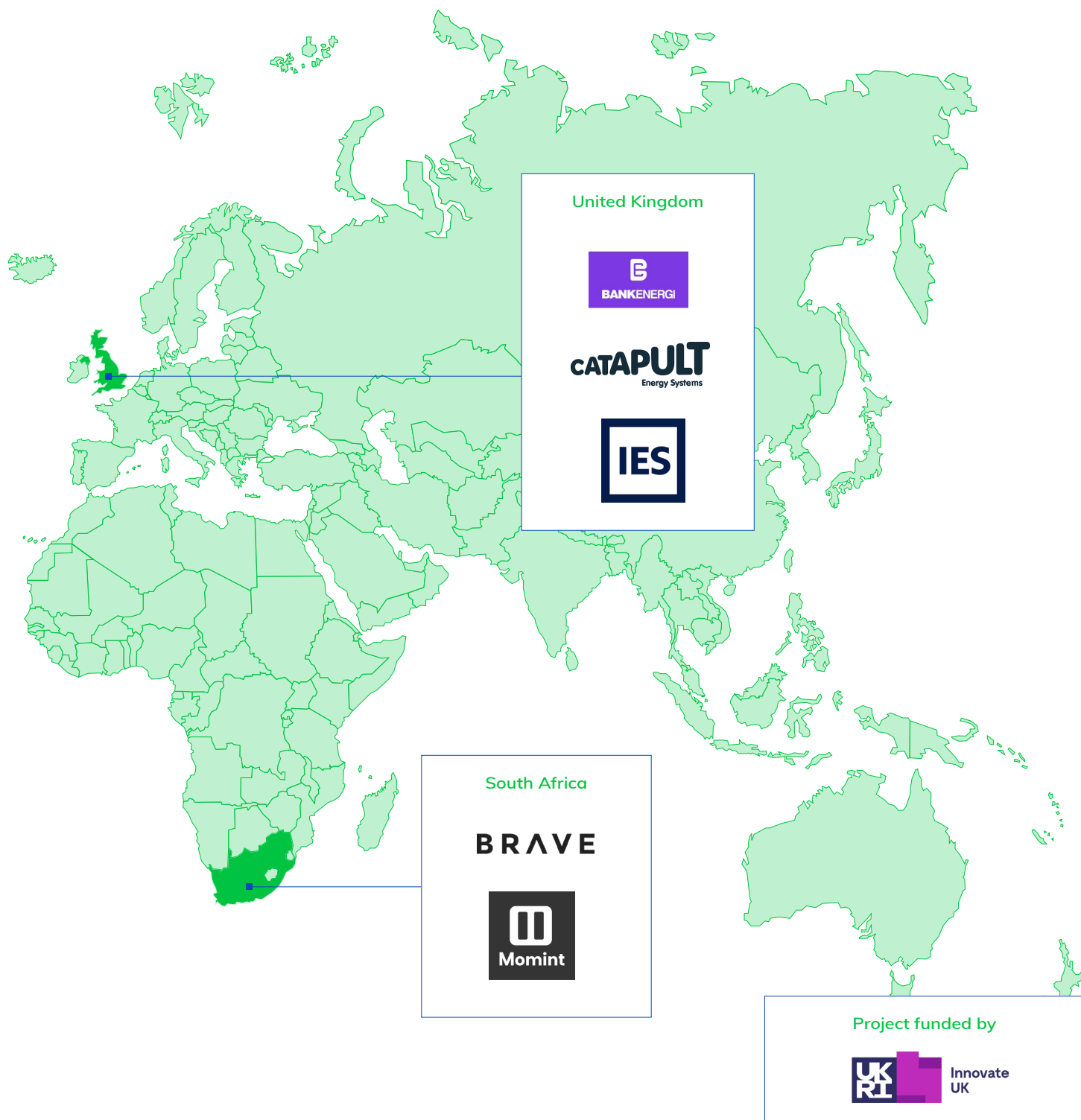


^ BE Faster will create a scalable flexibility trading platform enabling a smarter use of data and controls to reduce energy wastage and support grid supply-demand balancing.

Projected results and impact

BE Faster will enable the trading of energy supply and demand between assets, for which no software currently exists. At a societal level, the project will explore how national and local supply issues can be mitigated through better grid balancing, thereby expanding the local grid capacity with more renewables and low-carbon technologies while

per asset and annual carbon savings of 43.7 tCO₂e. Finally, BE Faster will make its ecosystem accessible using open-source code and build a user community via channel partners and open-source platforms, helping it to reach the necessary uptake for a lasting influence on energy supply security.



Project start
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Project website
<https://itea4.org/project/be-faster.html>

Project end
November 2026

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