



A Joint Sustainability Call 2023 project

iDT4GDC



Intelligent Digital Twin Platform for Climate-Neutral Data Centres

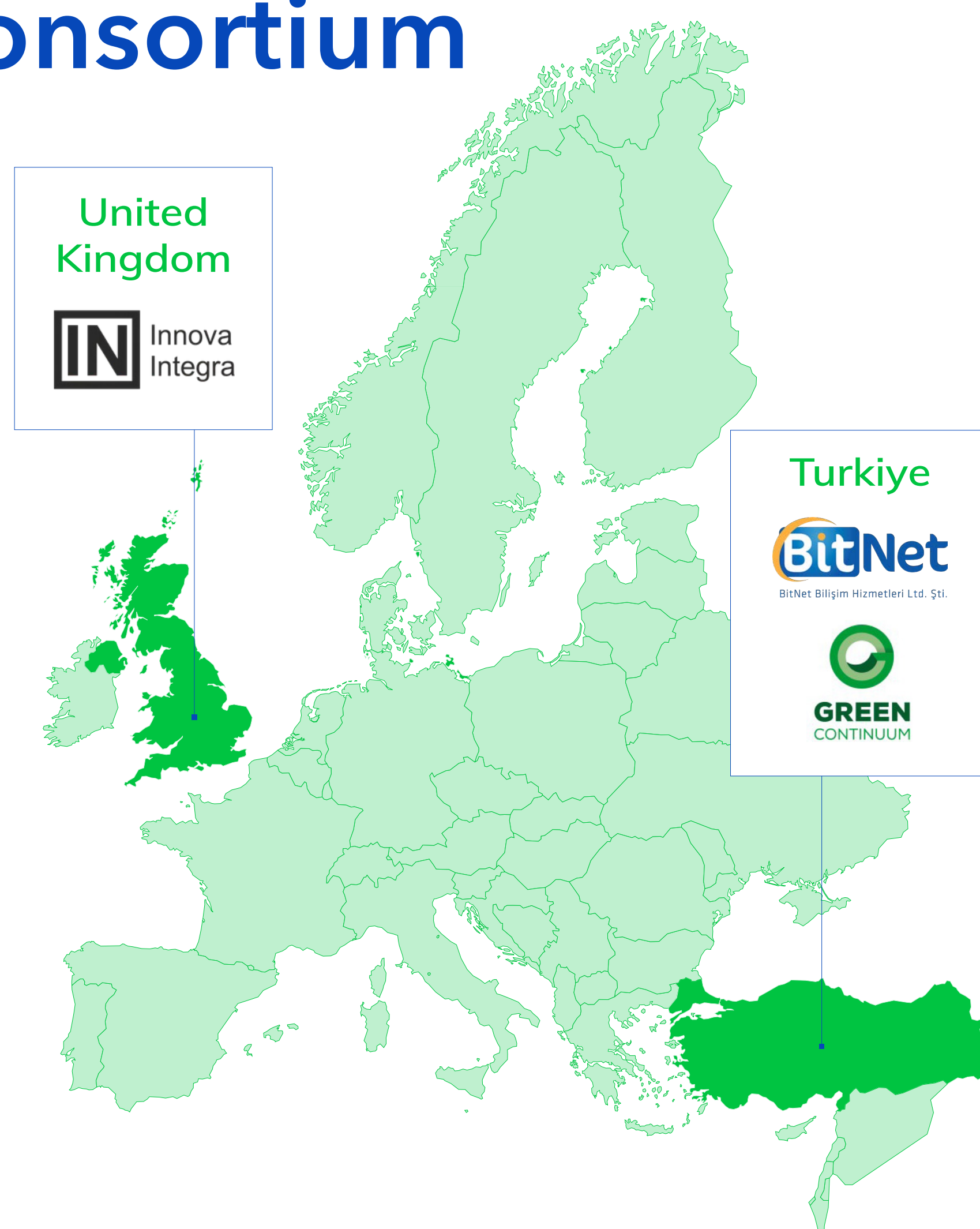
Project summary

iDT4GDC aims to develop AI methods that use digital twin technologies to create an AI platform to digitalise, optimise and automate data centre operations in order to manage and improve data centre energy consumption. iDT4GDC will help data centre operators and customer move towards a sustainable future guided by the five pillars of power, carbon, water, circular economy and governance.

Project duration

January 2024 - December 2026

Consortium



Expected key results / USPs

- > **Energy Source Optimisation Engine:** Dynamically selects energy sources for data centre operations based on real-time grid signals, carbon intensity data, and renewable availability
- > **Green Energy Forecasting Module:** Predicts energy mix for workload scheduling aligned with green energy availability
- > **Dynamic Energy Pricing Mechanism:** Dynamically adjusts pricing for compute jobs based on real-time energy cost and carbon intensity. By creating market incentives aligned with green energy availability.
- > **Hardware Optimisation Engine:** Dynamically maps compute workloads to the most energy-efficient hardware resources available.

Leaflet



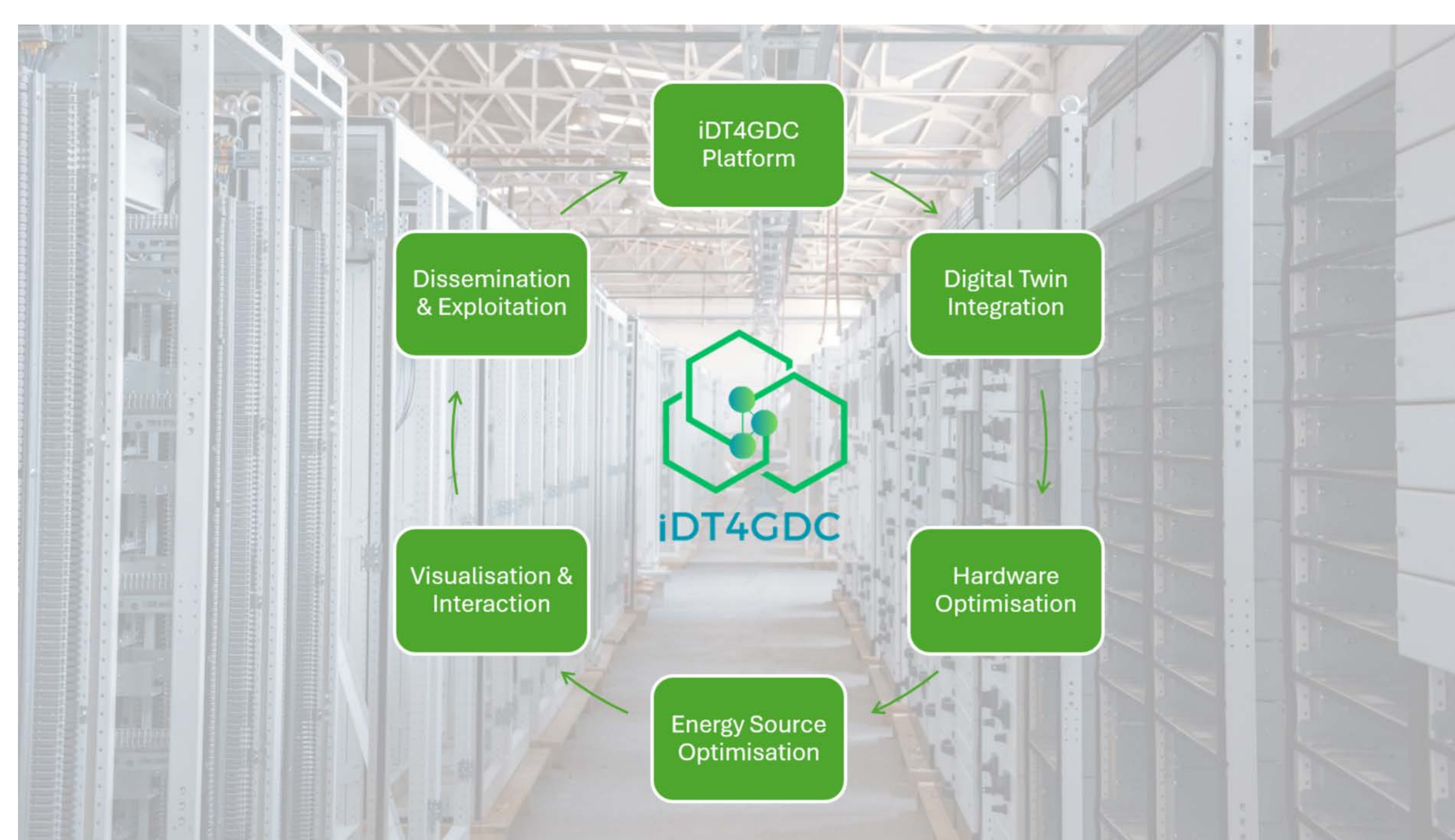
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Website



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