



Ricardo
Energy & Environment

Ricardo Global Energy Infrastructure & Utilities

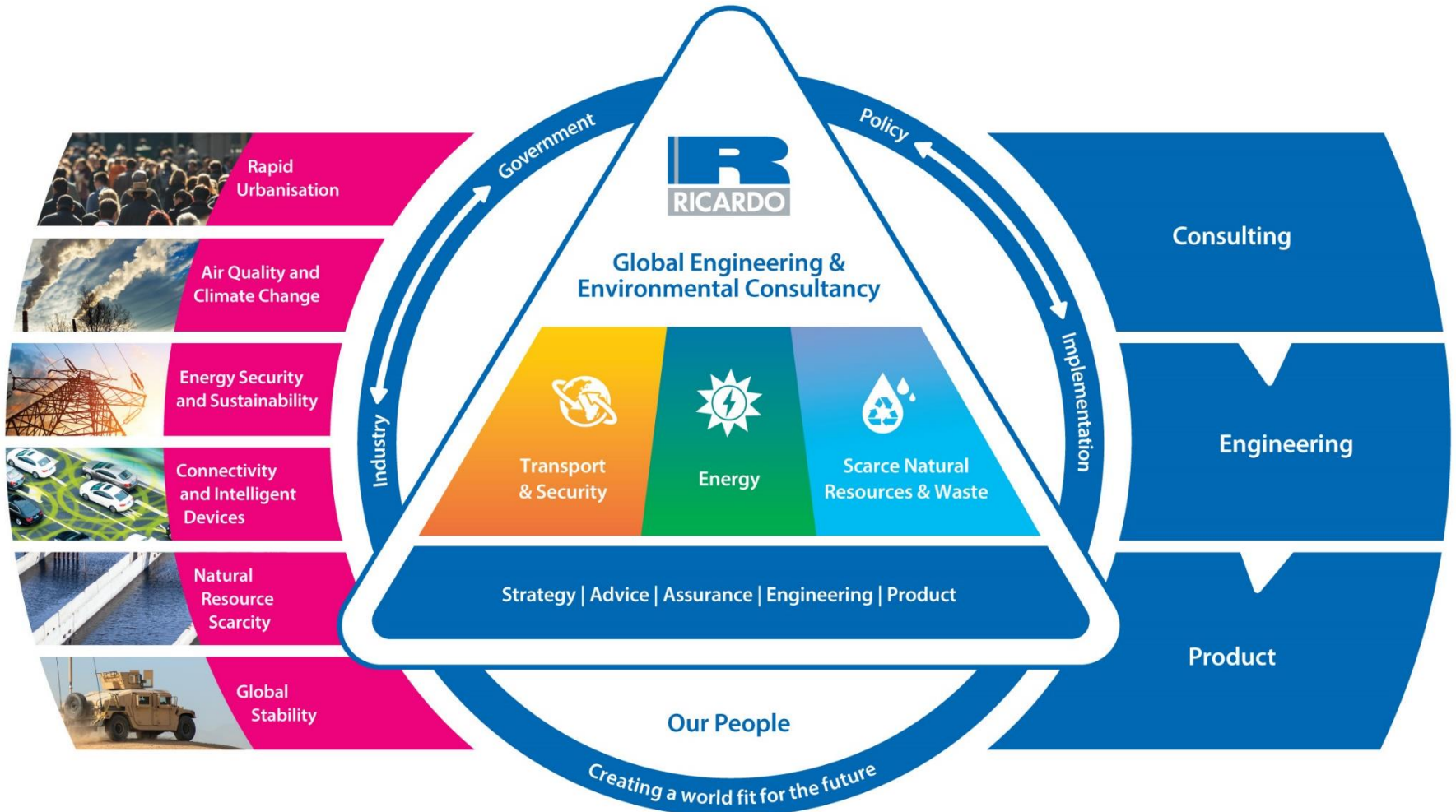
Dipak Mistry,
Practice Director

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Our mission: Creating a World Fit for the Future



Our mission is to be the world's leading organisation for engineering, technical and environmental consultancy within the markets of Transport & Security, Energy, and Scarce Natural Resources & Waste



Technical
Consulting



Automotive
systems



Rail
consulting



Energy &
Environmental
consulting



Strategic
consulting



Independent
assurance

Performance
Products



Niche
manufacturing



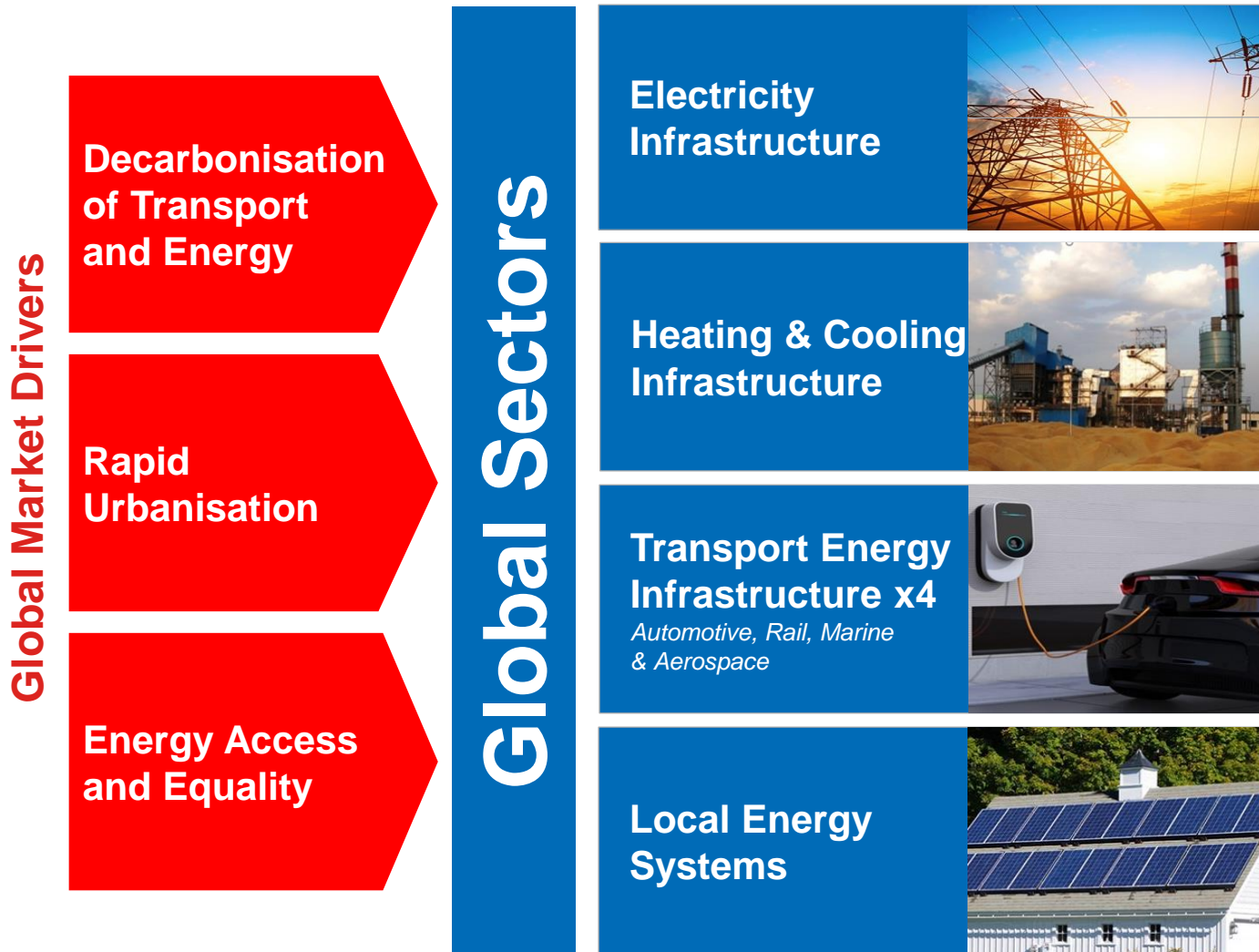
Computer-aided
engineering software



Software
simulation

Global Energy Infrastructure and Utilities

Decarbonising Energy Infrastructure



Our energy experts have worked on over 800 energy projects in over 90 countries



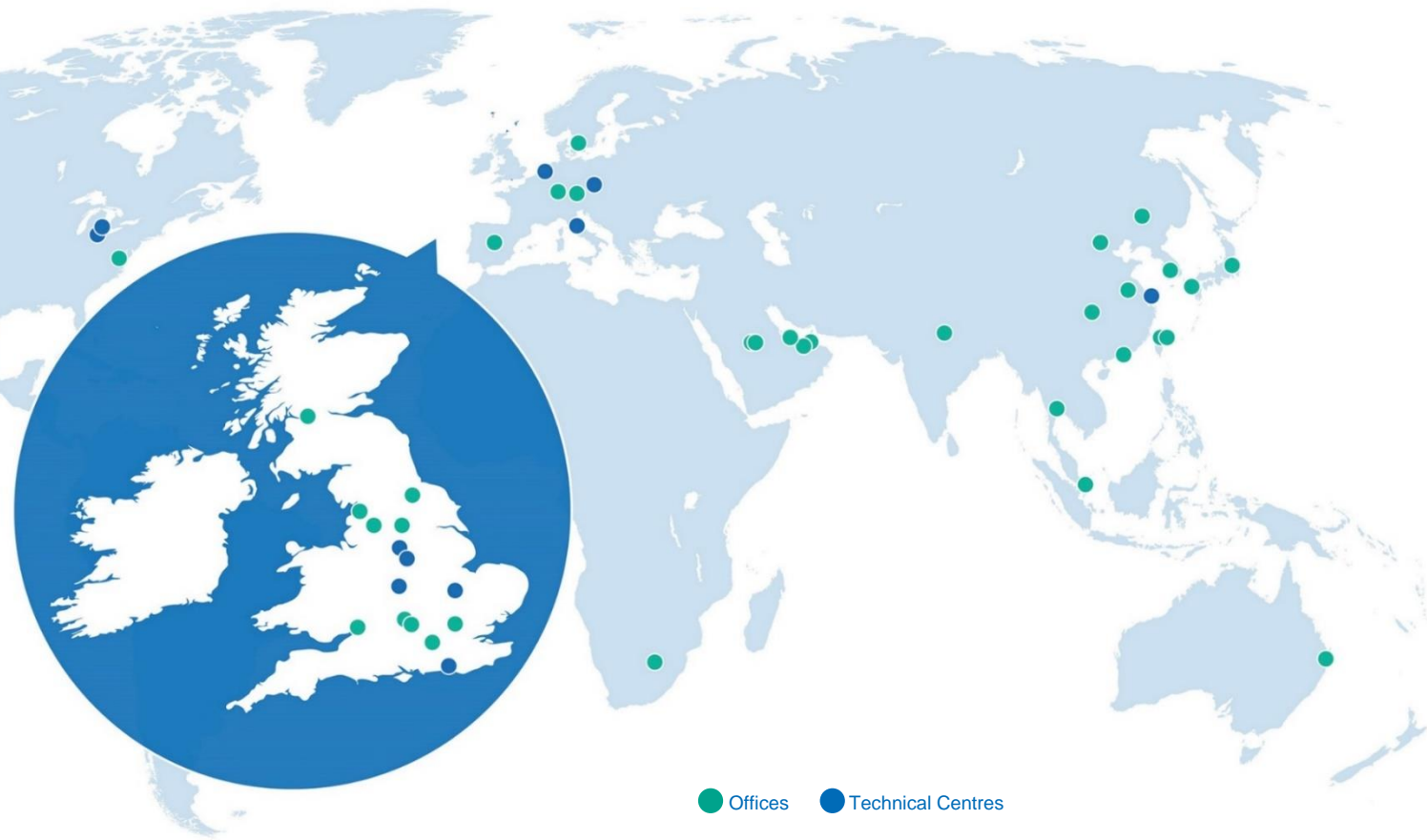
Ricardo Group

3,000+ people

85 nationalities

48 sites

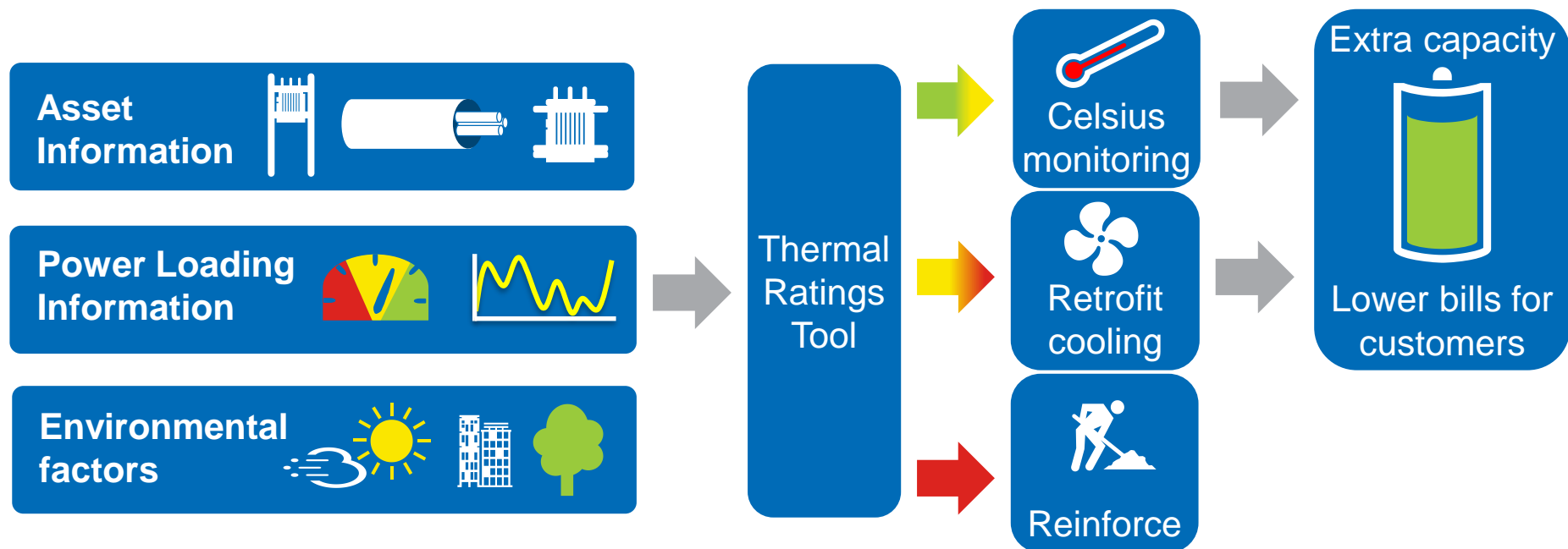
21 countries



Deferring Capex using Smart Monitoring Systems

Thermal measurement and management of distribution network transformers, using easy and quick retrofit equipment.

The data enhances understanding of electricity asset thermal performance, to enable improved asset management and deferral of reinforcement. Ricardo has been collating and analysing data from over 500 sites in the UK.



Deriving Network Benefits from V2G (Vehicle to Grid) Technology

V2G technology - a smart solution to reduce network reinforcement costs due to EVs

Ricardo are evaluating the technical and commercial proposition of V2G technology through network modelling and piloting:

- Network impact analysis
- Use case development



Deferring Capex & Managing Uncertainty of EV Uptake

Automatic Network Configuration

Assessed application of power electronics to maximise use of current assets for emerging market needs i.e. EV Charging

- The objective is to supplement capacity at one substation with spare capacity at a second substation
- Participating substations with complimentary load profiles have been identified
- Power electronic devices have been specified and ordered that will enable controlled export of power from on substation to the other
- Site installation is imminent



Digital Resilience (Cyber Security) of National Critical Infrastructure

Together with our partner Roke Manor Research Ltd we provide the a comprehensive cyber security service from installation audit, identifying strategies and preparing policies, to implementing hardware and software solutions

- Intrusion Prevention
- Asset Vulnerability Management
- Network Segmentation & Firewalls
- OS configuration and lockdown
- AI Analysis of Network Traffic
- Logging & Breach Detection
- Breach Recovery
- Legal and Regulatory Compliance



Thank-you