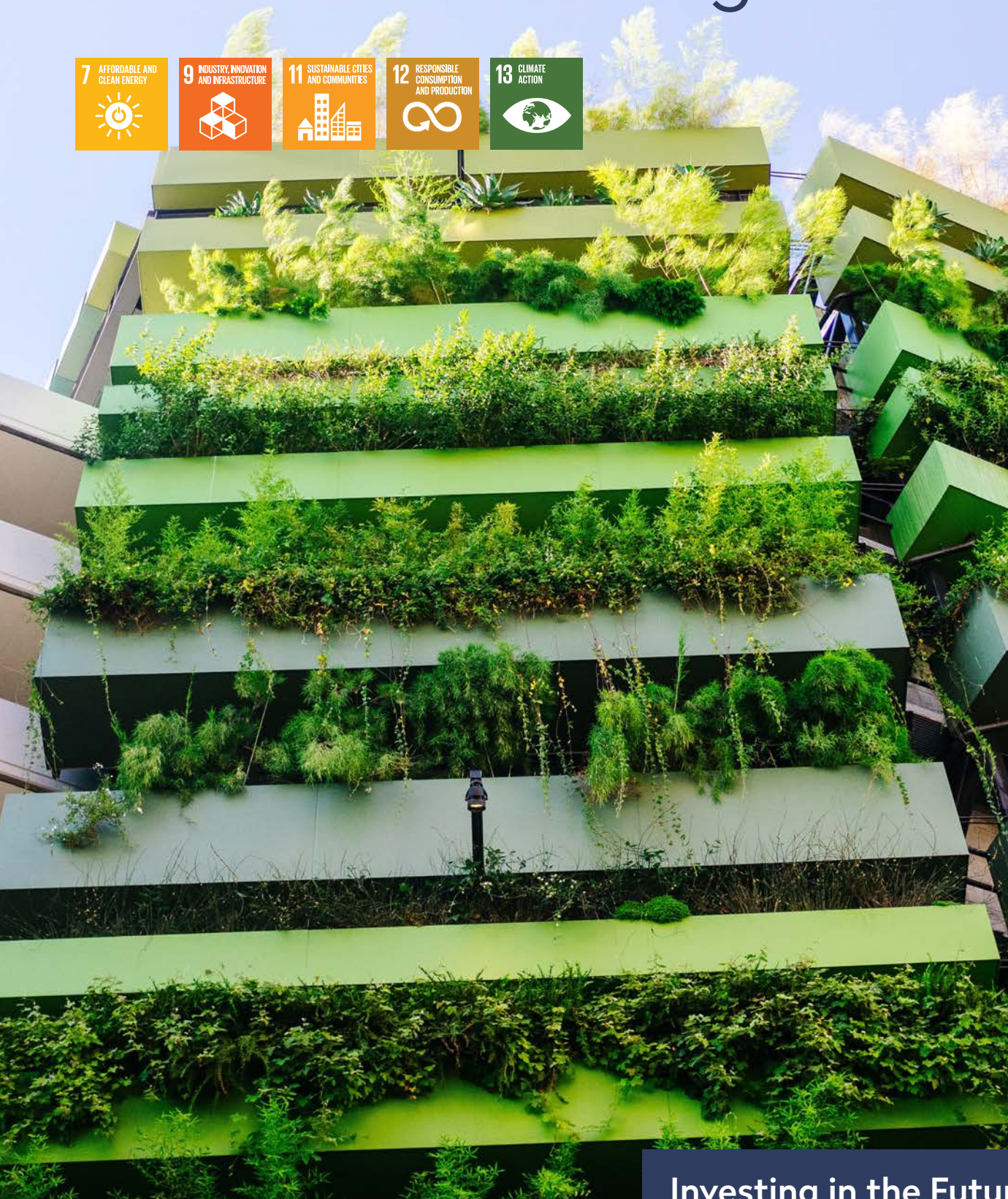


The value of low-carbon buildings



Investing in the Future

Business solutions
to the Global Goals

The Challenge

30%

of the UK's
greenhouse gas
emissions come
from buildings

16.7m

UK homes have an
Energy Performance
Certificate (EPC)
rating below C (58%)

>85%

of buildings in
existence today will
still be here in 2050

Our existing building stock is one of the most significant contributors to climate change – and thus one of the biggest barriers to achieving Net Zero

In the UK, buildings are responsible for **40%** of **total energy consumption**...¹

...and **30%** of **total carbon emissions**²

The UK in particular has an issue with **old/energy-inefficient buildings**:

- c. **38%** of homes in the UK pre-date 1946, while only 7% were built post 2000³
- Of our 28.6m homes, **58%** (16.7m) have an EPC rating below C⁴
- On average, UK homes lose heat up to **three times faster** than homes in the EU, which increases costs for residents⁵
- **91%** of public buildings need upgrading to meet the 2030 EPC B target¹

85-95% of the buildings in the EU today are likely to be still standing in 2050⁴

- So it is not enough to rely on new-builds; we also need to make existing buildings more energy-efficient
- This is likely to be a key target for the UK Government as it seeks to achieve its ambitious Net Zero goals

As regulation becomes more stringent, inefficient buildings are likely to see **significant value discounts**

=> Net zero buildings must be a priority for Government, businesses and individuals over the next decade

The Opportunity

Over the next two decades, there will be significant public and private investment into decarbonising buildings as part of the drive to achieve Net Zero

Governments around the world are beginning to invest in **decarbonisation**

The UK Government's landmark Heat and Building Strategy⁴ included **£3.9bn** of support for decarbonisation solutions

- In theory, its ambition is to be installing **600,000 heat pumps** per year by 2028

But **more investment** will inevitably be needed:

- The United Nations Sustainable Development Target 7.3⁶ suggests that by 2030, we must **double the global rate** of improvement in energy efficiency
- Retrofitting the UK's inefficient housing stock alone could cost **£250bn**⁴
- One estimate suggests⁷ that an annual Government investment of **£8.7bn** for four years could unlock **£71.9bn** of private capital investment.

Advances in technology are creating promising new commercial opportunities across the net zero building value chain, including:

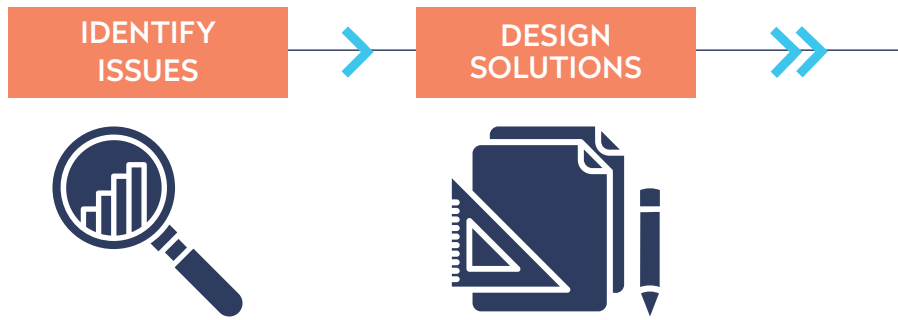
- Solar panels
- Heat Pumps
- Battery Storage
- Clean Energy procurement
- LED Lighting
- Building Energy Management Systems (e.g. in 2022, the UK Building Energy Management Systems industry grew 8.0% year on year, to **£835m**⁸)

As the urgency of this challenge increases, there will be **ever-stronger demand for products and services** that can improve the efficiency and reduce the emissions of our existing building stock



Business solutions

We're seeing a number of interesting and innovative business models emerge across the value chain – from **building energy management solutions**, to **on-site energy generation**, to **green procurement**, to **energy efficiency technologies**



Building Energy Management Systems (BEMS)

Integrated hardware and software solutions to monitor, control, and optimise buildings' energy consumption

- Collect data from various systems, such as HVAC, lighting, and equipment, to provide insights into energy usage patterns
- This enables building owners and operators to implement energy-saving measures, automate controls, and optimise building performance

Information Service Providers

Collect, analyse, and disseminate data on building energy performance and environmental impact

- Leveraging technologies like IoT sensors and cloud-based platforms, they gather data from building systems and generate valuable insights and reports for owners and operators

Demand Response Providers

Solutions that allow buildings to adjust their electricity usage in response to grid signals or pricing incentives

- DRPs help buildings implement smart energy management systems and curtail energy consumption during peak periods, contributing to grid stability and reducing the need for additional power generation

EXAMPLES



ZESTEC RENEWABLE ENERGY

- Funds, designs, develops, installs and manages high quality renewable energy solutions including solar PV, battery storage and EV charging
- Revenue growth of 14.32% in 2022; acquired by Octopus Energy in 2022



UTOPI

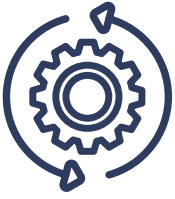
- Technology platform designed to supply intelligent building software for multi-tenant real estate, leveraging IoT and mobile application-controlled sensors
- Received £5M development capital from Scottish National Investment Bank

Consulting Services

DELTA EE

- Provider of energy research and consulting services
- Services include heat research, energy storage and flexibility research, business model research and distributed power research
- Acquired by Lane Clark & Peacock (via Charterhouse)

PRODUCTION & MANUFACTURING



INSTALLATION & MAINTENANCE



TESTING & MONITORING



FINANCING



Energy Generation & Integration

Companies that design and implement clean energy technologies that allow buildings to generate and utilise renewable energy on-site or integrate existing renewable energy sources, including:

Heat pumps

Companies specialising in the design, install, and maintain of heat pump systems, which offer high energy efficiency and reduced greenhouse gas emissions vs traditional methods

Specialised storage systems

Companies that design, install, and maintain energy storage systems that enable the efficient capture, storage, and use of excess energy generated from (on-site and external) renewable sources, reducing reliance on the grid

Energy-efficient Consumption Technology

Companies providing products that enable energy-efficient consumption

- E.g. LED lighting, smart thermostats, and energy-efficient appliances

Sustainable Energy Procurement

Companies that source clean/renewable energy for commercial customers

- Negotiate contracts with energy suppliers, to enable the purchase of renewable electricity generated from sources such as wind, solar, or hydro

Consulting Services

Providers of expertise and advisory support to organisations seeking strategic guidance, technical knowledge, or project management services

- Consulting services may cover a range of areas, e.g. energy efficiency assessments, renewable energy integration, green building certifications such as LEED (Leadership in Energy and Environmental Design) or BREEAM (Building Research Establishment Environmental Assessment Method), regulatory compliance, and financial analysis
- Goal is to help clients develop and implement sustainable building strategies

EXAMPLES



HYCUBE

- Bridges-backed manufacturer of renewable energy storage devices that enable users to store energy from solar panels to be used later, thereby cutting grid electricity consumption
- Pre-deal 4-year sales CAGR c.100%



OPTIMISED GROUP

- Provider of energy services to real estate, retail, manufacturing, hospitality, and public sectors
- Services cover energy supply, procurement, energy analytics, demand side management, energy management systems
- Certified B-Corp; £9.0M sales and strong growth

Consulting Services

EVORA GLOBAL

- Bridges-backed environmental management software and services provider
- Offers finance consultancy strategy, reporting, and climate resilience services
- Strong QoE via recurring software licence sales and consulting engagements

INVESTING IN THE FUTURE THE FUTURE OF INVESTING



GET IN TOUCH

At Bridges, we believe that investing in a better future for people and planet is both a moral imperative and an economic opportunity. By reducing our impact on the planet and helping more people to achieve their potential, we will boost productivity, reduce climate risks and foster new high-growth industries – creating lasting economic value.

The Bridges Sustainable Growth Funds invest in ambitious growth companies that are helping to build a more inclusive and sustainable economy.

We would love to talk to businesses that are developing new products and services supporting the move towards low-carbon buildings, to see whether we can help accelerate their growth and optimise their impact.

Please get in touch via:

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