



DECARBONOMICS™

Industrial



Engineering
Net Zero™

Decarbonomics™ for industry – tailored roadmaps to net zero

There is an urgent requirement for all sectors and organizations to decarbonize at pace to reach net zero.

The Challenge

The industrial decarbonization landscape is evolving. Clients are committed to net zero targets, but face ongoing changes to regulatory, technological and reporting frameworks. They also lack the specific expertise and knowledge to implement their commitments. At corporate and site level, the challenge is exacerbated by the limited applicable solutions available, specific to the sector.

The Opportunity

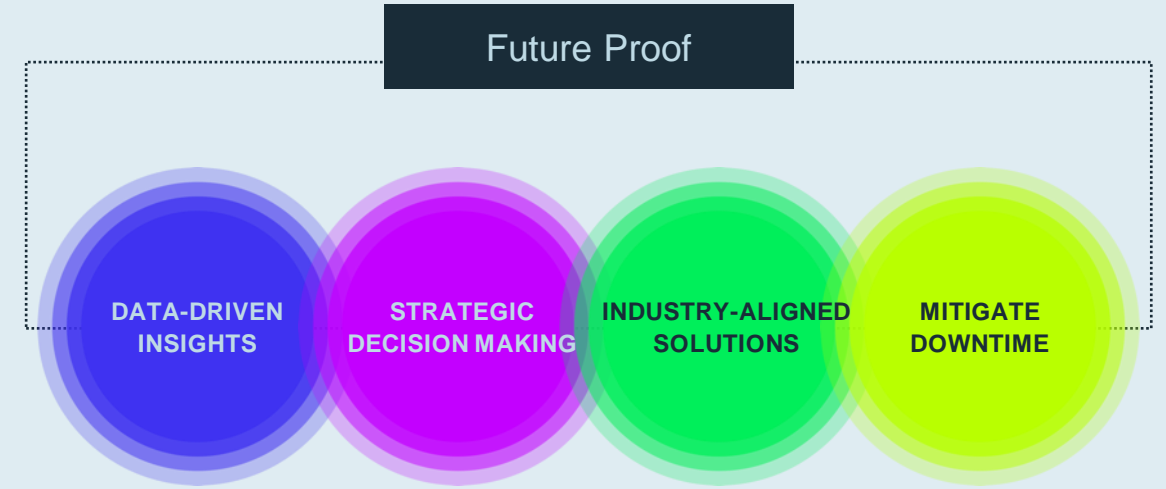
Decarbonomics™ empowers clients to meet new net zero targets and improve strategic decision making by providing early, data-driven insights into the financial and operational impacts of transitioning to net zero. We work holistically with clients to create tailored roadmaps, alongside their industry-aligned, existing solutions, reporting systems and streamlined audit processes, to implement the changes required and mitigate downtime per process.

Decarbonomics™ for Industry – Our Solution

Due to AtkinsRéalis' vast global expertise across multiple industrial sectors, we are uniquely placed to support businesses at every stage of their decarbonization journey.

Our Services

Decarbonomics™ is a data-driven, systems-level approach to decarbonizing existing assets and processes, through tailored cost and program-optimized net zero strategies.



Key Benefits



Cost effective decarbonization



Systems level reporting



Future proofing complex assets



Robust investment case



Empowered decision making



Operationalising strategic intent

The Decarbonomics™ solution

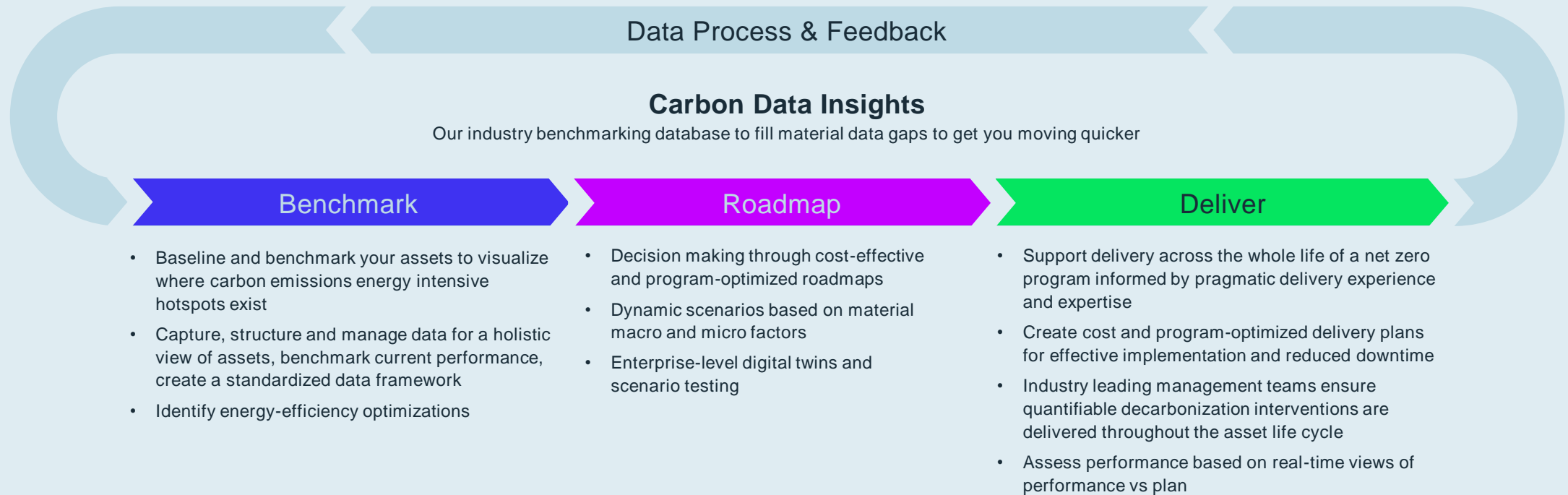
Our innovative solution combines people, data and technology to provide:

- Implementation and delivery of decarbonization strategies
- A real-time, systems-level view of carbon baseline
- Net zero roadmaps with macro scenario-modelling capability
- Industry-leading program management for optimized delivery and performance tracking
- Proxy carbon, cost and asset data to fill data gaps
- End-to-end expertise across a broad range of interventions for optimizing decarbonization
- Program management and asset management tools and processes in one platform
- A simple, dynamic end-to-end dashboard to measure asset performance

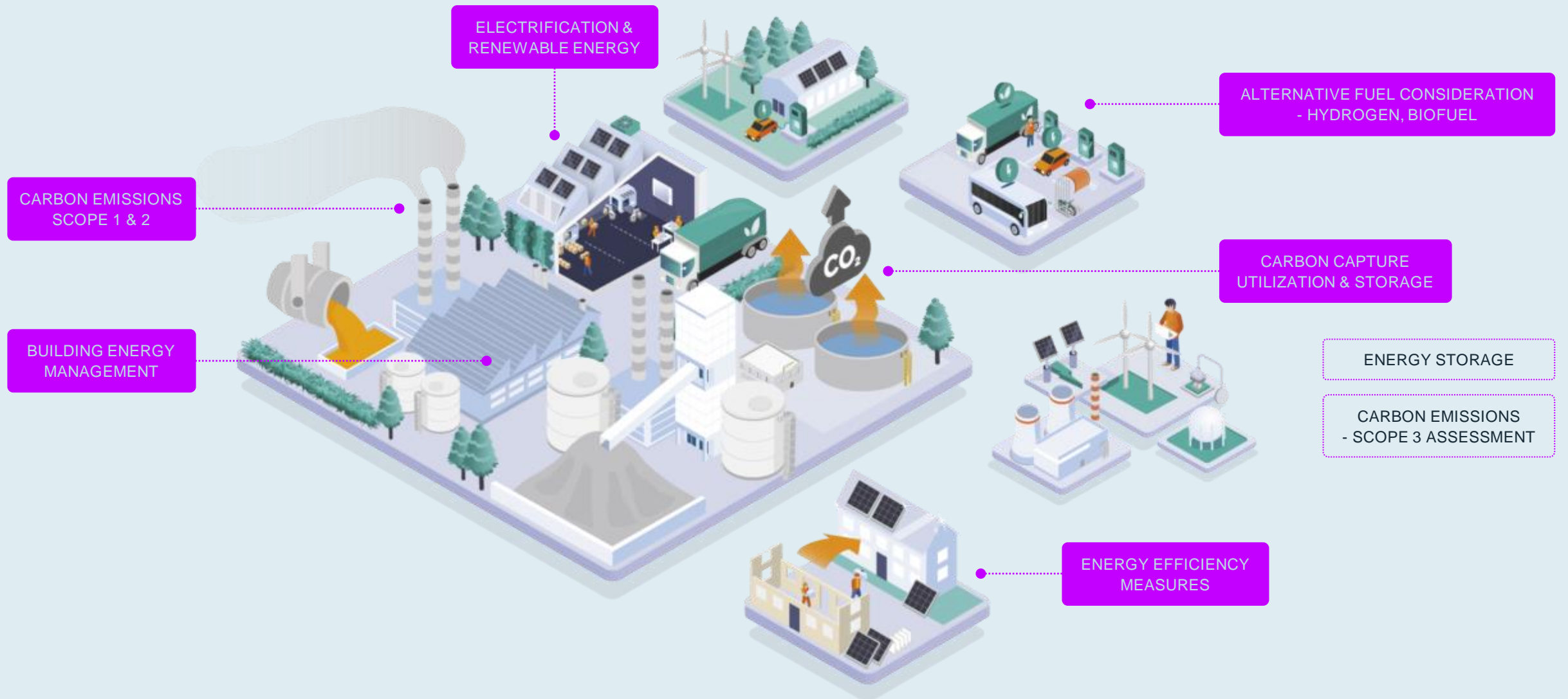
Client benefits

- Program-optimized implementation strategies
- Improved, data-driven decision-making
- Supporting sites regardless of data maturity
- Maximize ROI
- Visualize carbon cost and operational impacts of decarbonization
- Consistent and reportable data
- O&M benefits / asset management
- Combine lean manufacturing with carbon-reduction measures
- Tailored, site-specific solutions
- Scenario modelling
- Sensitivity analysis

Our process



Decarbonomics™ Industrial covers...



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Carbon Emissions

- Scope 1, 2 and 3 emissions assessment
- Carbon Capture Utilization & Storage (CCUS)



Fuel Switching

- **Electrification:** Renewables, electrification of heat
- **Fuels:** Hydrogen, bioenergy etc



Energy

- Review of energy assets
- Energy storage options
- Evaluation of energy efficiency measures

Case studies



Department for
Business, Energy
& Industrial Strategy



BEIS / Industry of Future Programme (IFP)

A decarbonization study for UK Government, Department for Business, Energy & Industrial Strategy (BEIS), generating net zero roadmaps, identifying technical and economic viability for 15 sites across 7 sectors: paper, chemicals, minerals, food & drink, waste water, pharmaceuticals and transportation.

- Improved government and market understanding
- Informed government decision making
- Aided funding and investment

Nestlé Net Zero Carbon Strategy UK

Nestlé's engineering partner for decarbonization services across UK, including energy strategy development, carbon assessments and mechanical, electrical engineering and carbon accounting. Included replacement of steam heating with hot water systems and heat pumps, anaerobic digestion to produce fuel gas and removal of gas-fire CHP assets.

- Identified significant carbon savings
- Supports wider decarbonization strategy
- A decarbonization template for other sites



Syngenta Huddersfield Manufacturing

A project to achieve company-wide carbon emission reduction targets and reduce operating costs. Our data-driven tool demonstrated how different decarbonization strategies would align with changes in demand for steam and power, considering 20 modifications against 7 future operating scenarios.

- Data-driven tool to guide strategic decision making
- Improved efficiency and flexibility
- Reduced carbon emissions



Cheshire energy hub

Cheshire Energy Hub

Developing outline business cases for Invest Net Zero Cheshire consortium, identifying low-carbon options for the NW of England. Provided low-carbon technology and engineering advice and project feasibility review/assessment for proposed concepts for the region, for heat decarbonization and low-carbon fuel supply/refuelling.

- Multiple low-carbon technologies and applications considered
- Improved stakeholder understanding of commercial and practical aspects
- Complete client support/partnership

THANK YOU

Get in touch for more information.

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