ATKINS

Member of the SNC-Lavalin Group

Unlocking Value

GET STARTED

Here’s the problem...

Climate change is changing business - and business cases

Value is increasingly measured in social and environmental terms - making business cases more complex.

Tightening regulations are making greater demands on firms to deliver and demonstrate environmental and social value - whilst investors are demanding stronger assurances for the duration of the asset’s life cycle against the growing volatility of the climate. Meanwhile, the demand for resilient, impactful, and measurable development continues to grow.

Developers and operators of major assets are being asked to do more with less. Yet without integrated, informed and data-driven decision making processes, builders and operators of infrastructure will struggle to value social, economic and environmental benefits, and deliver the sustainable outcomes the world desperately needs.

Why is defining value becoming more challenging?

1. Growing global uncertainty around climate and resources is making planning harder:

For many organisations, there are multiple uncertainties that make investments hard to plan. How strong, for example, do our flood defences need to be and how confident do we need to be of their performance under what conditions? The instability caused by growing volatility makes it harder for construction firms to plan ahead, win investment, and gain confidence.

2. Pressure is growing to deliver social value and inclusive infrastructure

As our measurement of value grows more nuanced, so does the pressure on firms. No longer is simple return-on-investment enough - now, major projects must deliver a range of social, economic, and environmental benefits, while proving they are doing so. But traditional delivery models, narrow business cases, and old fashioned notions of value are proving hard to shift.

3. The need for fast-paced innovation brings risk:

Changing processes or systems that support value creation is challenging. Many organisations end up stalling, unwilling to risk the instability that new processes and behavioural shifts can bring and preferring to stick with what they know - but by doing so, they miss out on the benefits new approaches can bring, losing precious time in the race to sustainability.

4. Decision-making is complicated by a lack of good data:

Today, major projects must make choices that will help determine quality of life for years to come for local communities. To make difficult decisions, construction firms need reliable, accessible, and properly processed data, to give them the environmental baselines and insights they need to create a positive impact. But too few projects are capable of harnessing this data from multiple stakeholders at an early stage, limiting their impact.

How we can unlock more value from infrastructure

The need for new infrastructure - especially in the developing world - is as compelling as ever, but now investors must demonstrate that their funding of infrastructure investment is clean, sustainable, and efficient. With multiple ways of calculating value, how can investors know how to assess the positive and negative impacts?

With multiple ways of calculating value, how can investors know how to assess the positive and negative impacts? Our integrated digital approach, coupled with expertise and insight, reveals untapped opportunities. This recognises environmental and social value by engaging stakeholders and driving better investment decisions.

1. Identify, analyse and present critical data sets in the optimal way to the right stakeholders.

2. Use data and informed insights to show the public the social benefits, the regulators how we adhere to the latest legislative agendas, and the investor clarity on how their investment will perform.

3. Develop stronger, highly tailored business cases, resulting in higher funding success rates.

So that you can deliver the right decisions at the right time for each project, ensuring maximum outputs and favourable outcomes.

How Unlocking Value creates social, environmental, and economic value

From uncertainty and doubt... ...to informed decision making

As the climate rapidly changes, predictions get harder, making assuring asset performance in volatile conditions more difficult. Moreover, construction firms must also demonstrate the real social and environmental value their projects will bring. Using industry-leading digital tools and approaches, we translate complexity into usable information, enabling horizon scanning, scenario development, and resilience assessments - supporting decision-making, demonstrating value, and winning support.

From low visibility... ...to line of sight

Without harnessing reliable data, processing it, and applying its insights early on, we cannot unlock real value. We utilise a range of digital tools and approaches to demonstrate the achievable outcomes from each option - resulting in faster approvals and attractive investment propositions.

From insecurity... ... to confident investment

With specific, accurate environmental data, you can enrich your business cases for change, replacing vague generalities with site-specific insights that build credibility and confidence - leading to informed, far-sighted decision-making.

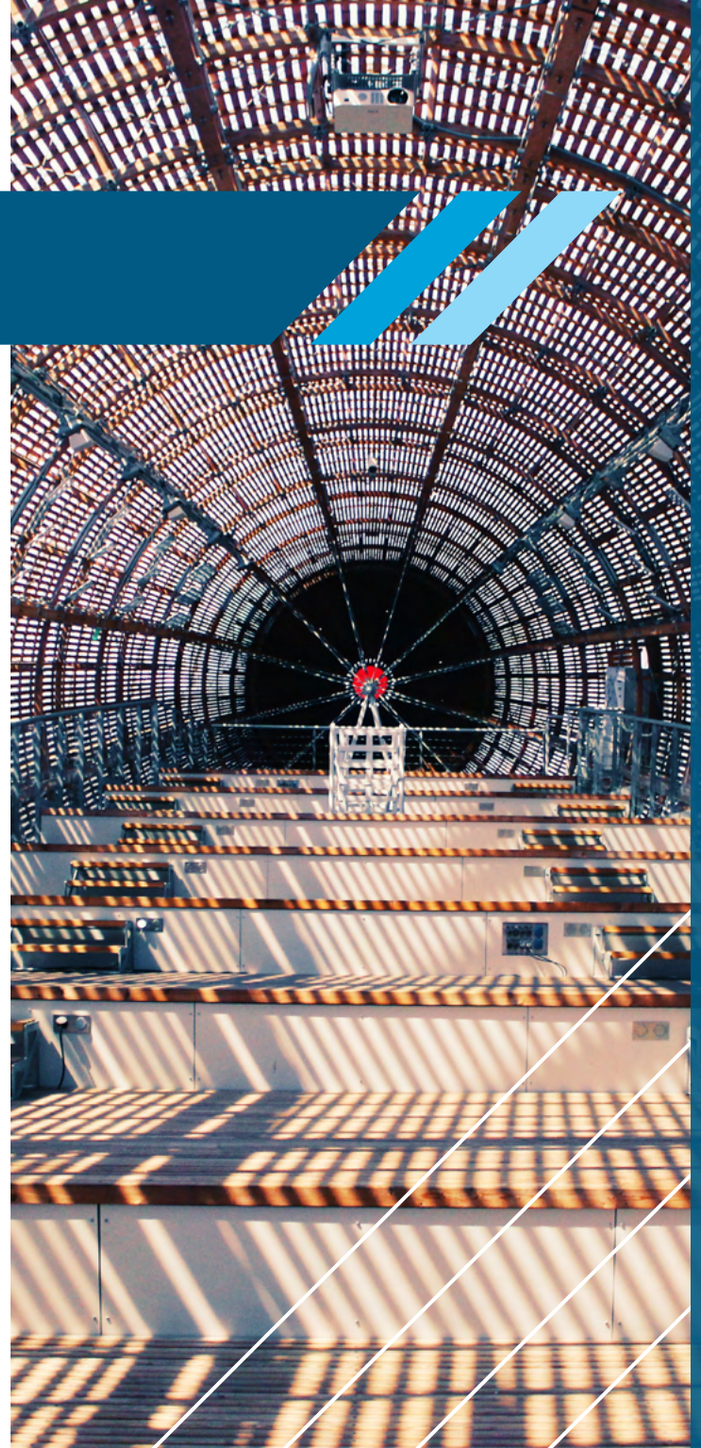
How Unlocking Value creates social, environmental, and economic value

From struggling to meet regulations... ...to complying with confidence

Environmental regulations are changing rapidly - and becoming more demanding. We work closely with those who set the frameworks and methodologies for the latest regulations, and help our clients adhere to them. For example, in the UK we have developed a ‘common’ value framework for the water industry, framing the value measures and value functions shaping investment decisions. So that you can prepare for the future, comply with confidence, and enjoy peace of mind.

From lagging behind... ...to leading the way

Changing the processes or systems that support value creation is challenging. Many organisations struggle to change legacy processes, unwilling to risk the instability that new behaviours can bring. That’s why we implement a systematised working method, to complement your organisation’s needs. By guiding you through the process of embedding new ways of working, we increase uptake and maximise potential - and your positive impact on society and the environment.



We proactively and rapidly identify the most promising areas for environmental gains...

...allowing you to pinpoint and avoid risks and their consequences - like programme constraints, costly compensation, and reputation.

Unlocking Value

What

Unlocking Value is an approach to development that utilises a range of services that identify value and support investment, such as nature based solutions, social value, multi-capitals approaches.

How

With a sector-leading environmental business, we provide value across all stages of a project to ensure that maximum outputs are achieved from existing or future activities.

Why

So that you can deliver a more sustainable project, reduce risks, and maximise the benefits of investment in green and grey infrastructure

We bring together a team of experts and use digital tools to ascertain the level of value each will provide, and how to maximise social, environmental and economic outcomes.

We offer a joined-up, collective approach, making us a ‘one-stop shop’ for services that unlock value. This means you can benefit from more robust, future-proofed solutions that help to prolong the lifetime of your assets, and make it faster and cheaper to deliver. Thanks to our links with governing bodies and industry regulators, we don’t just bring best practice together - we lead and pave the way for others. So that you can have a global impact, delivered locally.

From revitalising local habitats to offsetting emissions, the positive social and environmental impact is vast - saving money, improving outcomes, and enabling you to do more good in the world.

It delivers benefits across the project lifecycle...

Transform

embed sustainable thinking into the design process, and enhance your ability to deliver real socio-environmental benefit to stake-holders.

Collaborate

align stakeholders from the start, harness their insights, and report relevant data in formats that they understand, improving relationships and avoiding conflicts.

Automate

Quickly process complex data to demon-strate the impact of decisions at each stage of the project.

Integrate

inform your decision making with insights gained from disparate sources, and reveal opportunities for environmental gains.

Secure

reduce risk, anticipate challenges before they arise, and go through the planning and consent process with confidence

Comply

meet your environmental duties, demonstrate compliance through robust evidencing, and win consent more easily.

...tailored to your organisation

Infrastructure knowledge

We take complex issues and distil them into the critical set of options enabling you to make informed decisions that deliver maximum return on investment.

Sector-specific expertise

Through consultative workshops, our engineers, designers and digital experts bring their knowledge to your project, with sector-specific insights gained from projects around the world.

Collaboration

We design information management processes according to your specific organisational need, so that you receive a service genuinely tailored to your organisation.

Our approach

We believe that, together, innovation and collaboration have the power to create more effective and efficient ways of working. We work with clients to guide them through the complete process. We coordinate the different moving parts and draw on our breadth of expertise to make the right decisions, based on interpretation of the best available data.

We unlock hidden potential, so that our clients can enact programmes that are leaner, less environmentally disruptive, and more cost effective, giving their customers – the general public -

Sustainable by design

sustainability is embedded like a watermark in everything we do as part of achieving planning consent for development - from initial design consultancy to completion.

Asset management expertise

our team is led by world-leading specialists in asset, cost, and programme management, with support from our in-house partners Faithful+Gould.

Collaborative

our consultative approach facilitates early stage stakeholder engagement to maximise value.

Digital innovators

turn complex information into easy-to-understand content that clearly demonstrates the project's value.

Diverse skills

from geospatial specialists to software development and product management, we bring a range of abilities to your project.

Environmental knowledge

with experience gained from projects around the world, over 1700 environmentalists on staff globally, and a track record of pioneering sustainable innovation, we deliver nature positive solutions and help our clients on their journey to net zero.

Technical expertise

drive innovation to release benefits such as increased productivity, cheaper solutions or faster implementation.

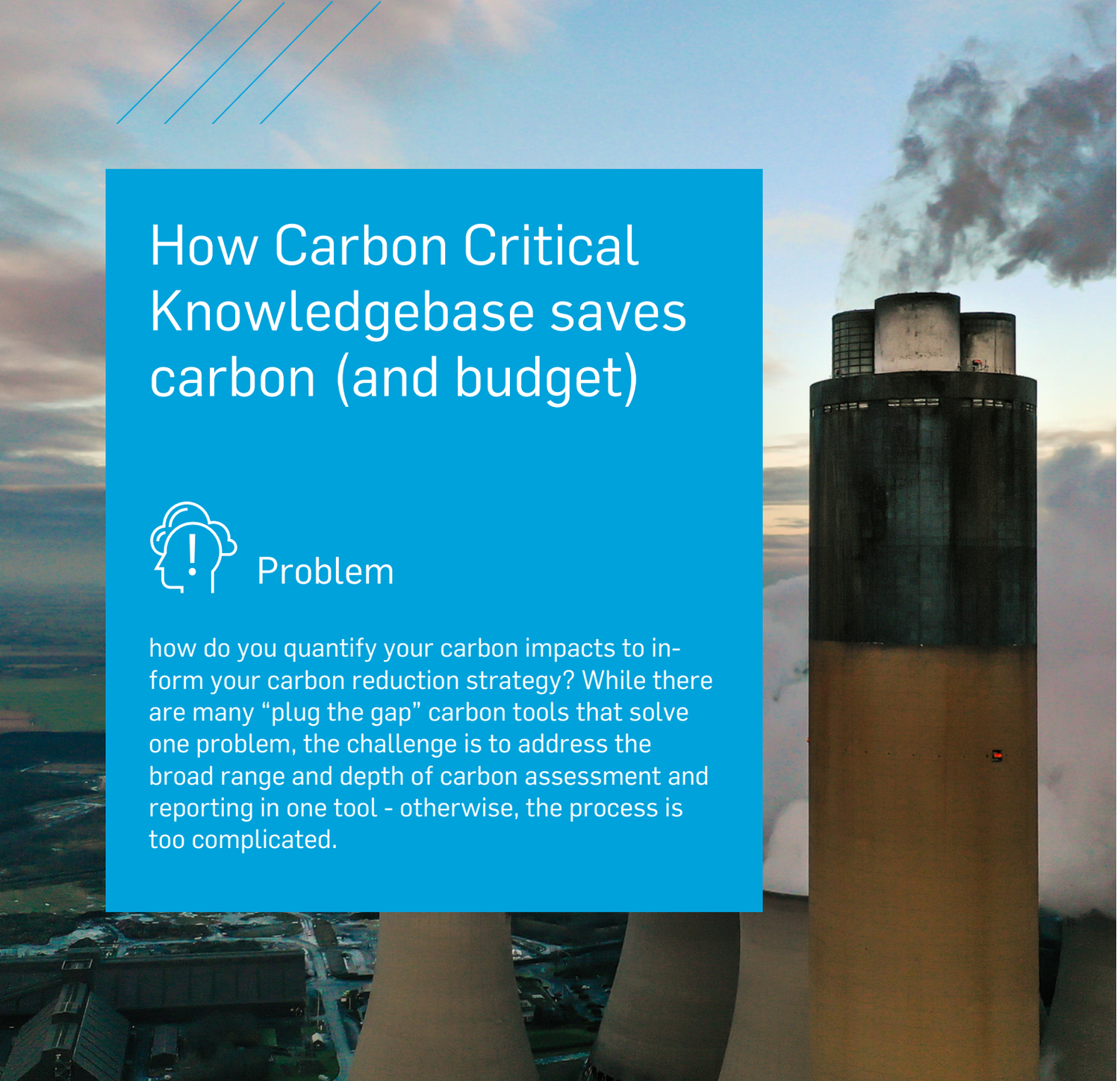
We’re proud to have been recognised by the industry for our work...

...because behind every great innovation, every impeccable safety accolade, every award-winning design, are excellent people.

Our team

They’re at the heart of everything we do, because we understand that every project is all about how the wider team works together. It’s the relationships between individuals and teams, infrastructure and environment, stakeholders and society that enables a project to succeed.

From ecologists to architects, data scientists to geospatial engineers and creative strategists, we‘re uniquely able to connect people, data and technology, transforming the world’s infrastructure and engineering a better future for our planet and its people.



How Carbon Critical Knowledgebase saves carbon (and budget)

Problem

how do you quantify your carbon impacts to inform your carbon reduction strategy? While there are many “plug the gap” carbon tools that solve one problem, the challenge is to address the broad range and depth of carbon assessment and reporting in one tool - otherwise, the process is too complicated.

Solution

Our web-based Carbon Critical Knowledgebase tool calculates, assesses, analyses and reports your carbon footprint by evaluating low-carbon options using verified, centrally available carbon factor data.

- **Live database:** the knowledgebase continually evolves and improves as it is populated with greater carbon data through a live database; ensuring it can be adapted to meet your requirements.

- **Library of real-world components:** through its creation of ‘packages’; collections of carbon data relating to real-world components, CCK allows you to assess and mitigate the true impact of your assets.

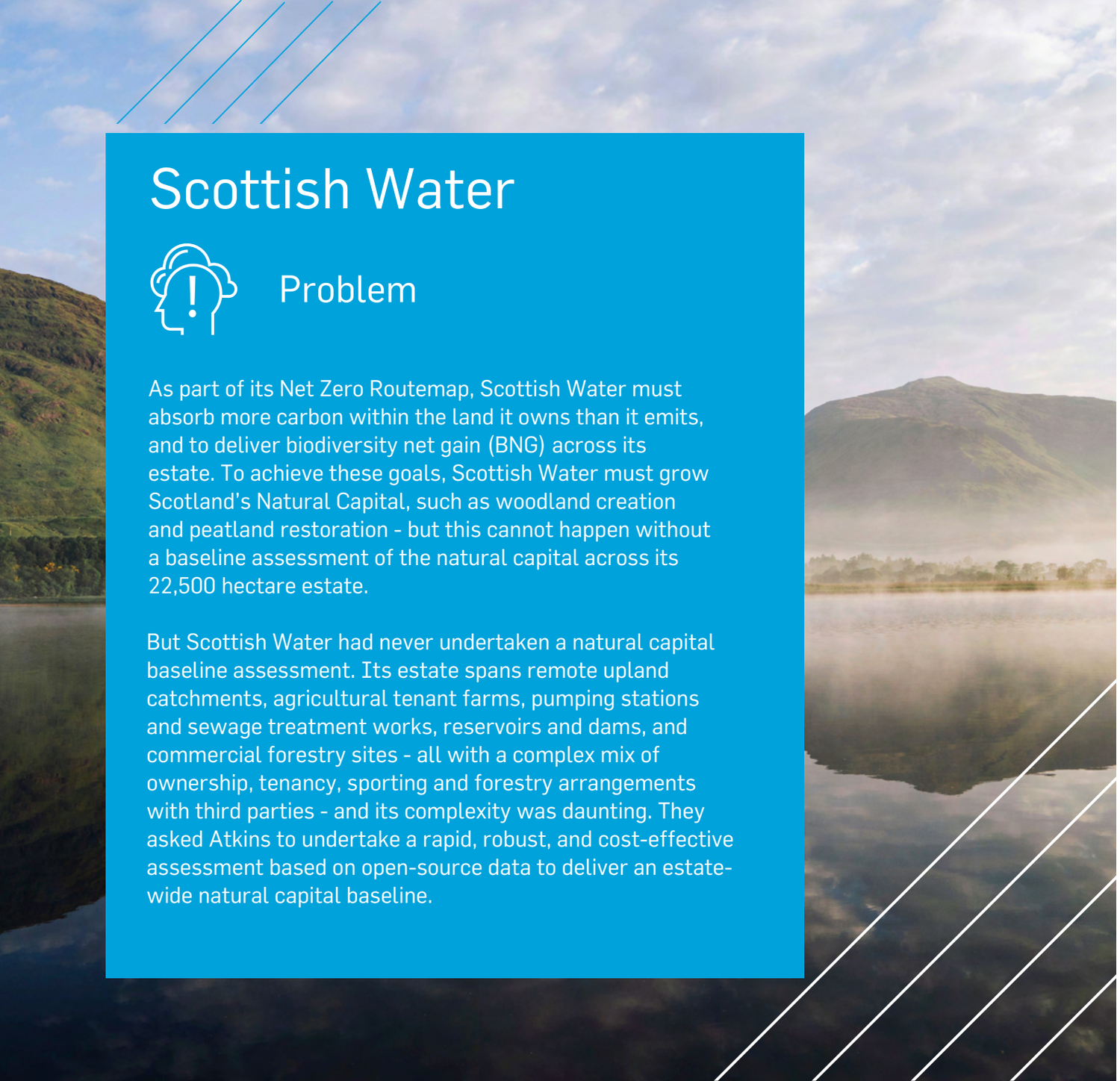
- **Clear visual reporting:** Graphical analysis and tabular outputs allow you to easily understand the operational and embodied carbon impacts of your components, assets or project as a whole; and to rapidly compare various options being considered.

- **Fewer emissions, more control:** Flexible and adaptable to your requirements, CCK’s easily-digestible outputs enable you to understand your carbon net zero journey and turn your ambitions into reality.

Results

CCK delivers results through by making carbon data more accessible, allowing you to comply with emerging standards, deploy embodied and operational carbon data, and enact carbon estimations and scenario testing:

- **Reduced costs:** by reducing operational carbon through lower energy usage.
- **Improved reputation and investability:** give shareholders and investors evidence of green, sustainable growth for their investment portfolios.
- **Market leadership:** demonstrate ethical leadership while economising, giving you the edge on competitors.
- **Growth:** help deliver a recovery that generates growth while also being good for the environment.



Scottish Water

Problem

As part of its Net Zero Routemap, Scottish Water must absorb more carbon within the land it owns than it emits, and to deliver biodiversity net gain (BNG) across its estate. To achieve these goals, Scottish Water must grow Scotland's Natural Capital, such as woodland creation and peatland restoration - but this cannot happen without a baseline assessment of the natural capital across its 22,500 hectare estate.

But Scottish Water had never undertaken a natural capital baseline assessment. Its estate spans remote upland catchments, agricultural tenant farms, pumping stations and sewage treatment works, reservoirs and dams, and commercial forestry sites - all with a complex mix of ownership, tenancy, sporting and forestry arrangements with third parties - and its complexity was daunting. They asked Atkins to undertake a rapid, robust, and cost-effective assessment based on open-source data to deliver an estate-wide natural capital baseline.

Solution

Through a pilot study of five of their landholdings across Scotland, we worked with Scottish Water to develop a suitable methodology - covering a total area of over 11,920 hectares and including an arable farm, upland livestock farm, reservoir complex, commercial forestry are and remote upland catchment. We developed a methodology aligned with current best practice, such as Defra's (2020) Enabling A Natural Capital Approach guidance, IPCC guidelines, Woodland Carbon Code and Peatland Code.

The fully scalable GIS-based approach used open-source data, such as the Habitat Map of Scotland (HabMoS) and transfer value sources listed in Defra's natural capital data books. We worked collaboratively with Scottish Water throughout the project, such as sharing feedback on quality of landholding data.

Results

Scottish Water received a natural capital baseline for the five pilot sites in under two months, comprising tabulated accounts, maps, and a comprehensive GIS database compatible with their internal GIS systems.

We developed decision matrices to summarise the implications of the findings for targeting management actions at the estate and site level by combining maps of different services. These were used to identify opportunities for “easy wins” in terms of biodiversity and carbon net gain. Scottish Water viewed the pilot work as a major success in proving the approach. We fully engaged with Scottish Water throughout the project, by providing feedback on landholding data, conducting a workshop to review draft reports and maps, and through regular meetings. This tailored approach and process of engagement ensured that the methodology allowed Scottish Water to easily meet their corporate reporting policies and requirements for decision making.

The use of innovative GIS solutions and Atkins’ in-house tools, Natural Capital Studio and Biodiversity Net Gain Studio, resulted in a consistent and robust approach to mapping natural assets at a high-level that could inform decision making. In turn, this enabled a rapid carbon and biodiversity baseline estimation as well as estimates of other wider benefits or ‘ecosystem services’ provided by the natural assets in Scottish Water’s landholdings.

As there is currently no established approach for assessing biodiversity net gain in Scotland, we used our range of experience and technical expertise in the areas of natural capital and biodiversity net gain to develop the first baseline biodiversity study of its kind. The approach adapted Natural England’s Biodiversity Metric 2.0 for application in Scotland (the best available established methodology) via it’s Biodiversity Net Gain Studio tool.

SUED (Sustainable Urban Economic Plans)

Problem

Unplanned urbanisation, a weak private sector, and natural resource strain caused by climate change: as in other developing countries, secondary towns in Kenya are struggling to grow sustainably. They need to create market-driven growth to become economically viable centres for sustainable urban development.

Solution

Atkins delivered Urban Economic Plans across twelve towns in Kenya: identifying climate resilient infrastructure projects and value chain opportunities that will help promote economic growth and support sustainable urbanisation.

Atkins took a ‘bottom- up’ approach in economic and investment planning where local government and stakeholders, including businesses and community, were engaged to help develop a local strategy for economic growth, that is pro-poor, inclusive, green, resilient and clear, ensuring ownership for implementation and a clear role for private and public investment.

For each town, we completed a Gender and Social Inclusion (GeSI) Study, helping to understand how their exclusion manifested and recommended measures and instruments for their inclusion. We also undertook a Climate Risk Vulnerability Assessment (CRVA) exploring the potential impact of the changing climate and tailoring the economic and infrastructure proposals to ensure longevity. We worked closely with business owners and the municipality to identify potential for private sector engagement.

Outcome

- Strengthened the capacity of local municipal officials, supporting them to develop and interpret relevant policy decisions resulting in greater private sector growth.

- Boosted opportunities for public private partnerships, raising investment for bankable, climate-resilient infrastructureand value-chain projects.

- Enhanced the quality and reliability of key services to residents and promote job creation, helping to establish long-term sustainable urban development.

A14 Natural Capital (Highways England)

Problem

For Highways England, the A14 Cambridge to Huntingdon Improvement Scheme cannot just mitigate environmental damage - it must actively enhance the environment and create a positive legacy for the region - all whilst delivering a major improvement to its transport.

Approach

Highways England commissioned the Atkins CH2M Hill Joint Venture (ACJV) to undertake a natural capital valuation of the A14 scheme habitat creation areas, funded by the A14 legacy programme.

Six borrow pits were identified as sources of minerals for road building and which must be restored after use. Most of the areas will be restored to mosaics of wetland, woodlands and other habitats that maximise social as well as ecological value. The assessment was undertaken using Natural Capital Studio (Atkins' natural capital and ecosystem services valuation tool). Using the draft designs available in 2018, we estimated the likely type and extent of various habitat types, taking an asset-based approach.

From these overarching asset types, we mapped the flow of ecosystem service benefits arising from the scheme. These were monetised to reveal how changing land use (from before to after scheme) could add value across a range of services, including recreation, carbon, air quality and biodiversity.

Result

Our economic analysis highlighted the variation in the contribution of the various habitat types and sites to ecosystem services provision and ultimately wider net benefits of the scheme. This revealed that, of those quantified, recreation is by far the most valuable service supplied from the habitat creation programme - empowering Highways England to make the optimal choices for long-term value creation for Cambridgeshire.

Get in touch, and discover how **Atkins** could help you

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We're always keen to work with clients wanting to deliver greater social and environmental benefits.

If you want to explore how to enable more sustainable, cost-effective solutions, get in touch today.

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