

SUSTAINABILITY



Arke Ltd



Thank you
for your interest in
Arke – how can
we help **you**?

We simplify complexity to enable
better strategic decisions.

Arke is a small independent SME consultancy based in Wiltshire. We provide our clients with independent and objective Research, Strategic Analysis & Decision Support services. Whether it's with strategic, complex, novel technology options or tough organisational challenges, we help you to make the right decisions.

Our mission is to make a difference – to our clients, our community and each other. We pride ourselves on delivering outstanding analysis expertise for our clients. We instil our values of being collaborative, innovative and agile in all our projects. This underpins our approach of working in partnership with our clients to fully understand all challenges and to determine how we can provide high quality, pragmatic, tailored, sustainable solutions.

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ABOUT US

We understand the benefit of experience, creativity and new ways of thinking.

Our highly professional team consists of people at all stages of careers from graduates through to recognised industry experts. This ensures we create teams that provide our clients with the right blend of knowledge and experience, innovation and challenging thinking.

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OUR TEAM



OUR SERVICES

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We made our reputation providing cost engineering and evidence-based decision support across Defence. As we have grown, we have expanded to support our clients across the public and private sectors with our **Cost, Decision Support, P3M, Business Analysis, Modelling and Simulation, Technology Design, Sustainability, Futures and Stakeholder Communications** services.

We work for UK and overseas public and private sector organisations. We have considerable experience of working with all tiers of Government departments and agencies, enabling our clients to get the best from novel and disruptive technology, maximising the value of research and better understanding barriers to change.

We have assessed options for satellite communications capability and technology. We have provided cost and benefits analysis delivering digital business and capability change in open systems architectures, communications systems and technologies. We have provided planning and analysis services for the development of novel technology concepts such as adoption of networked architectures, Edge processing and AI.

Our demonstrable track record of delivering responsive and innovative cloud and digital projects across our service catalogue has ensured we are a trusted supplier that offers high value for money for our clients.



If you need help to understand your challenges, assess your options and provide you with all the evidence you need to make the right decisions, please get in touch.

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AN OVERVIEW OF OUR SERVICE

Arke is an experienced provider of sustainability services that address a wide range of client challenges.

With the UK aiming to reduce all government building emissions by 50% by 2032 and UK PLC to reach net zero by 2050, it is imperative that organisations are able to measure and monitor their emissions to understand their key drivers and develop reduction and offsetting strategies.

We help clients from across many parts of Government to put these targets into context, using our in-house modelling tool, Carbon Flow and our suite of methods to calculate the carbon of a system. This includes: Greenhouse Gas Protocols, Sustainable Development Goals and Life Cycle Modules. We also appraise cost and qualitative elements of setting and meeting goals by using cost benefit achievability analysis and strategic supportability assessments. We provide business case support across the 5 Case model, where carbon and cost are of increasing importance. This helps our clients assess and prioritise options and communicate their impact.

We specialise in taking a whole life systems approach to any problem, considering coherence, robust evidence capture and assumption management. This approach considers the problem holistically, by assessing intrinsic embodied carbon within products and systems as well as the through life and disposal implications. This enables our clients to understand the drivers of carbon, identify quick wins and long term goals, giving clear areas to target, action, monitor and measure.



Our service offerings include:

- **Carbon Estimating:** Bespoke, Specific Estimating
- **Carbon Modelling:** Whole life/system modelling, used for business cases
- **Carbon Flow:** Our in-house tool, useful for assumptions management
- **Net Zero Analysis:** Situated the problem against wider net zero goals
- **Supportability:** Considers qualitative through life assessment

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We work with you to understand your goals and design and deliver a uniquely tailored solution that provides you with the outputs and benefits you need to achieve them.

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Recent examples include:

Net Zero Analysis and Carbon Estimating:

We helped our client to understand the cost and carbon impact of achieving net zero across their sites, working collaboratively with a consortium of organisations. We generated whole life cost and carbon estimates for client sites and forecasted carbon savings against a “do nothing” scenario, to demonstrate benefit. This work informed balance of investment decisions, helping our client understand where (and when) they should invest money to reach their target of Net Zero by 2050.

Systems Engineering – Carbon Modelling and Net Zero Analysis:

Our client is reinventing the way their people are trained. We analysed their current vs proposed training method to understand the drivers of carbon emissions in both scenarios, which included accounting for hidden consequences of virtual training such as the cooling requirements of servers. This allowed senior stakeholders to be cognisant of the key drivers of emissions and understand the impact on society of their training. Qualitative factors such as impact on training from changing from live to virtual training were also considered.

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OUR SERVICE IN DETAIL

Carbon Estimating

Carbon Estimating is a service that delivers bespoke, one off estimates for systems and services. We spend time with the necessary individuals to understand their system or service, enabling us to provide carbon forecast estimates for generation after next capabilities and non-standard products and systems.

We provide a clear breakdown of the carbon emissions of individual elements in systems, sites and operations. We generate bespoke models and outputs that meet the needs of the client, highlighting what are the key drivers of carbon emissions and recommendations focussing on how to minimise emissions. We use recognised and documented data sources and assumptions to build our carbon estimates, which are made clear to the client every step of the way.

Our evidence-based approach supports you when making key decisions to achieve carbon goals. We help our clients understand the carbon implications of procuring/building new systems or products, with an aim to improve their carbon footprint. This brings clarity to stakeholders allowing them to confidently make effective decisions.

Carbon Estimating Tool – Carbon Flow

Carbon Flow is our in-house estimating tool. The tool is used to break down complex systems into their constituent parts and estimate both the embodied and through life carbon. It takes into account the manufacturing processes used and also the transportation of materials to and from the manufacturing plant. We can use the tool to produce estimates by the PAS 2080 Life Cycle Modules or by Scope 1, 2 and 3 emissions depending on our clients' requirements.

Our clients see a clear breakdown of every step of the manufacturing process and the assumptions and sources used to derive the estimate, enabling them to add or modify steps where necessary. Carbon Flow highlights the key drivers of carbon for a particular system and, with the help of an expert user, the quick carbon saving wins.

These features deliver numerous benefits to our clients including having the ability to compare manufacturing options of products on a like-for-like basis, being able to react to the key drivers of carbon, having the flexibility to adapt estimates at a high level of detail and understand their knock-on impacts. This leads to a comprehensive understanding of a client's system and therefore an improved carbon output.



Carbon Modelling

Carbon modelling allows us to take our client's existing estimates for projects or programmes and convert them into a whole life, system wide estimate. It identifies uncertainty in estimates to help our client review the maturity of their programme. We use this process for both carbon and cost, categorised in a way that is most beneficial to meet our client's evidence and communications needs, whether that is Resource versus Capita, Greenhouse Gas Protocols or PAS 2080's Lifecycle models.

Our modellers build up a clear picture of a system, which often drives out hidden monetary and carbon costs. This process often serves to translate products and systems into a way that is easily understandable and communicable to senior leaders. Using an iterative process, assumptions can be more clearly and coherently presented across different levels of seniority. This increases technical understanding and rigour of models. This ensures robust outputs that can be presented as part of the 5 case model.

This process enables a smoother journey for our clients when they go through business case approval. As the carbon and costs are broken down into specific systems, it allows for more impactful discussions around drivers of cost and carbon. By modelling the whole life of a system, this service ensures there are no hidden consequences of implementing new technology and that they can be compared consistently with business as usual.



OUR SERVICE

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Net Zero Analysis

Net Zero analysis looks at the wider, non-monetary and non-carbon impacts of implementing a solution in addition to the quantitative values. It considers situating the problems in a wider framework such as the Sustainable Development Goals or looking at the UK's Climate Change Committee trajectories within their carbon budgets.

This is particularly beneficial when working with clients whose drivers are not purely monetary, for example a council or a charity. This is also beneficial when considering trade-offs of wider sustainability issues, e.g. the health and wellbeing of users. Additionally, this service can allow for clients to see how their systems and services can contribute to more holistic targets e.g. the UK's 2050 net zero target.

Our clients benefit from being able to see the totality of the problem through robust evidence and understand whether they are unintentionally causing problems in other sustainability areas. This analysis can also be used as evidence to assess eligibility for grants to support a project that has a positive sustainability impact. A project's primary aim, such as improving people's quality of life by increasing accessibility to green spaces, may generate a secondary benefit of contributing to meet net zero targets, which creates the eligibility. Our analysis will contribute to the application process.

Supportability

Supportability Analysis forms an iterative activity that can be conducted both during system development and for existing in-service systems. We analyse the intrinsic characteristics of a system and its enabling components to identify drivers, dependencies, blockers and ultimately options for both efficient and effective sustainment across the life cycle of the system.

This service allows clients to understand the steady state of their current processes and procedures. This forms the baseline that enables assessment of where our clients are now, where change is needed and the impact of any change options. We can also identify and track a system's performance and dependencies through its lifecycle. This provides evidence to support our clients and their stakeholders to make decisions on the need for change and to assess and compare unique and competing options.

Benefits to our clients include increasing the capability of their existing systems, optimising the footprint of a system and identifying system bottlenecks, which is the key indicator of an opportunity for change. By using our service our clients find and remove previously unseen waste from a system and identify, design and prioritise ways to reduce both cost and carbon drivers.

To find out more about
how we can help you
please contact:

Jess Green, Director: jgreen@arkeltd.co.uk
And visit our website: www.arkeltd.co.uk

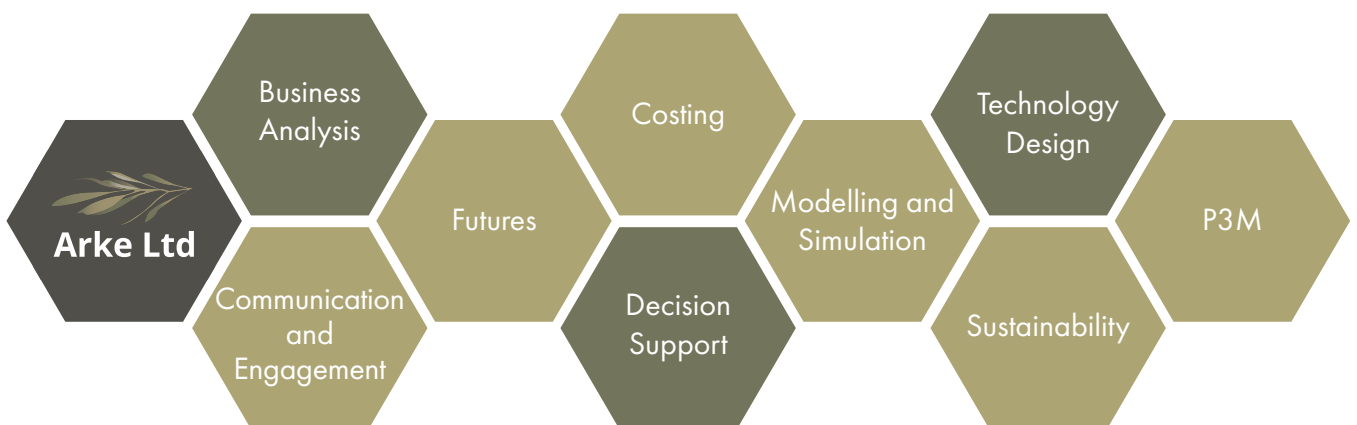
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Company Accreditations

We are ISO9001 and ISO14001 compliant. We hold Cyber Essentials + and hold a Silver Award in the Armed Forces Covenant Employer Recognition Scheme.

Social Value

We are committed to the creation of social value through all aspects of our operations. As members of the Arke family, all staff are invited to engage and be part in the creation of social value as an integral part of their working life. We aim to create positive value for our clients and our community in all we do.



Arke offers a range of services to help you make the right decisions
Details of all our services can be found by simply using the G-Cloud search facility.

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