



Government
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Economic Opportunities of Climate Adaptation for the UK

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Foreword

During the heatwave in 2022, parts of the UK experienced temperatures above 40°C for the first time on record. Rail services slowed, roads buckled, and hospitals and workplaces were forced to adapt to conditions that few had previously planned for.

Climate adaptation is no longer a future problem. It is already shaping decisions for businesses, public services and national infrastructure, often in ways that are reactive rather than planned. The Climate Change Committee's (2026) recent Well Adapted UK report makes clear the scale of the challenge and the need to strengthen resilience across the economy.

But effective adaptation for long-term resilience is not only about responding to these risks. It also means acting more deliberately — investing earlier, innovating faster, and building the capabilities needed to thrive in a changing climate. Recent estimates suggest that around £150 billion is already being invested globally each year into climate adaptation, in response to more frequent and severe climate impacts.

This report identifies a significant economic opportunity for the UK. The market for British products and services that help people manage climate risks could be worth as much as £355 billion between today and 2035. Established domestic strengths in climate risk analytics, engineering services, finance, insurance and advisory expertise underpin this prospect. These are competitive advantages for the UK in the adaptation market and align closely with priority areas for supporting wider economic growth set out in the UK's Industrial Strategy.

The imperative now is to act with intent. Markets for adaptation are still fragmented and evolving, and those who move early will help to shape them. By building capability and delivering at scale here in the UK, we can strengthen resilience at home while also creating a foundation for growth in international markets. This is particularly important for place-based and infrastructure-led solutions, where demonstrating what works in practice will build confidence in UK expertise internationally.

This is why adaptation matters not only for managing the impacts of climate change, but also for economic growth. It sits at the heart of the UK's priorities — from delivering the National Adaptation Programme to strengthening infrastructure and public services, whilst supporting innovation and industry.

With the right ambition, the UK can reduce the risks we face and position itself as a leader in a growing global market — helping to build a more resilient, innovative and prosperous future.

Professor Dame Angela McLean,
Government Chief Scientific Adviser.



Executive Summary

The global average temperature is currently about 1.4°C higher than pre-industrial times. This change in our climate has already had significant impacts around the world, including heatwaves, flooding and accelerating coastal erosion. As greenhouse gas emissions continue to drive this warming trend, the associated impacts will place further strain on businesses, public services, infrastructure, health and food systems, and global supply chains. Pursuing ambitious national and global action to reduce greenhouse gas emissions is crucial to minimise further temperature increases.

At the same time, we must also adapt to climate change that has already occurred, and build resilience to the impacts of further warming. Adaptation includes a wide range of measures: from the physical infrastructure needed to defend against flooding, to the breeding and propagation of climate-resilient crops, and insurance services that cover losses caused by climate-related catastrophes.

The economic consequences of failing to adapt are substantial. The Office for Budget Responsibility (OBR) forecasts that climate-induced damage to physical assets and reduction in labour productivity could reduce UK GDP by 3% to 4% in 2050, deepening to 7% to 8% by 2070, based on current policy trajectories (OBR, 2025). Adaptation therefore plays a critical role in managing long-term economic risk, alongside global efforts to reduce greenhouse gas emissions. The economic case for adaptation is primarily about avoiding future losses by reducing disruption to communities, services and economic activity. Many investments in adaptation also deliver nearer-term benefits, such as improved public health and infrastructure performance.

But climate adaptation also presents huge economic opportunities. Growing demand in this area is shaping markets for adaptation solutions — technologies, goods and services that reduce the risks and impacts of climate change on people, assets and systems.

This report explores the scale of those opportunities, and considers what they mean for UK firms, economic growth, and exports. It also offers recommendations about how the UK could position itself to compete in this fast-growing global market.

Our key messages are:

1

Global demand for adaptation solutions is already substantial and set to grow rapidly. Yet markets remain fragmented and unconsolidated, creating a window of opportunity for early movers. As climate impacts intensify, governments, regulators and markets are responding by strengthening expectations and incentives for adaptation, creating growing demand for the goods and services needed to manage climate risks. Investment in adaptation is set to increase significantly over the coming decades, translating into a rapidly expanding market. Countries that build capability, credibility and export pathways today are likely to lock in advantage as this market develops.

2

Adaptation offers a significant market opportunity for UK growth and trade. Over the next 10 years (2026 to 2035), we forecast a global adaptation market of around £3.5 trillion. Of this, the UK could capture 4-10% of global adaptation spending, equivalent to £154-355bn market opportunity across measures that directly reduce physical climate risks (such as infrastructure and cooling), alongside insurance and financial services (see Figure 1). The UK's leading status in insurance and reinsurance accounts for the comparatively large market opportunity. The export component is estimated at £70 billion to £230 billion to 2035. This has the potential to make a meaningful contribution to the UK trade balance, particularly if concentrated in high value services where the UK is already competitive. Decision support climate services such as risk analytics, modelling and consultancy represent an additional opportunity but were not included in this estimate due to a lack of market data.

3

The UK already produces a wide range of adaptation solutions. Our analysis identifies 648 adaptation-related goods and services currently offered by UK firms, spanning infrastructure, engineering, data and analytics, finance, insurance, and advisory services.

4

UK strengths sit predominantly in knowledge-intensive adaptation services and align strongly with the UK government's Industrial Strategy. The strongest export opportunities include: insurance and reinsurance (sometimes described as 'insurance for insurers'); climate risk modelling and analytics; and advisory services such as engineering, legal and financial. Indeed, 92% of solutions with high-export potential fall within the 8 Industrial Strategy sectors, particularly financial services, digital and technologies, and professional and business services.

5

The UK will not automatically capture this market opportunity, but the barriers are identifiable and actionable. We identify five system-level challenges holding back market growth, and frame possible next steps where the UK government and wider public sector have a significant role to play:



Generating demand: set clear adaptation expectations and build confidence in what works.



Mobilising capital: empower local and regional bodies to collaborate on adaptation projects so that they achieve economies of scale; deploy effective financing structures; and bring together actors in this sector to clearly define their roles.



Data gathering and accessibility: improve access to consistent, decision-ready climate risk data, building on shared public data assets so that risks and outcomes can be compared, priced and acted on with confidence.



Embedding climate risk in financial decisions: translate the assessment of climate risks into meaningful portfolio-level decisions by financial institutions.



Developing export pathways: align fragmented export support with domestic adaptation delivery to create clearer pathways to international markets.

Tackling these challenges does more than open markets — it also ensures that much-needed adaptation is delivered in the UK. This domestic delivery will build evidence, capability and credibility around the country's adaptation solutions. It will also turn the UK adaptation programme into a visible 'shop window' for these solutions, particularly for place-based and infrastructure-linked markets.

6

This is not a statement of government policy

Global adaptation spend and UK market opportunity 2026-2035

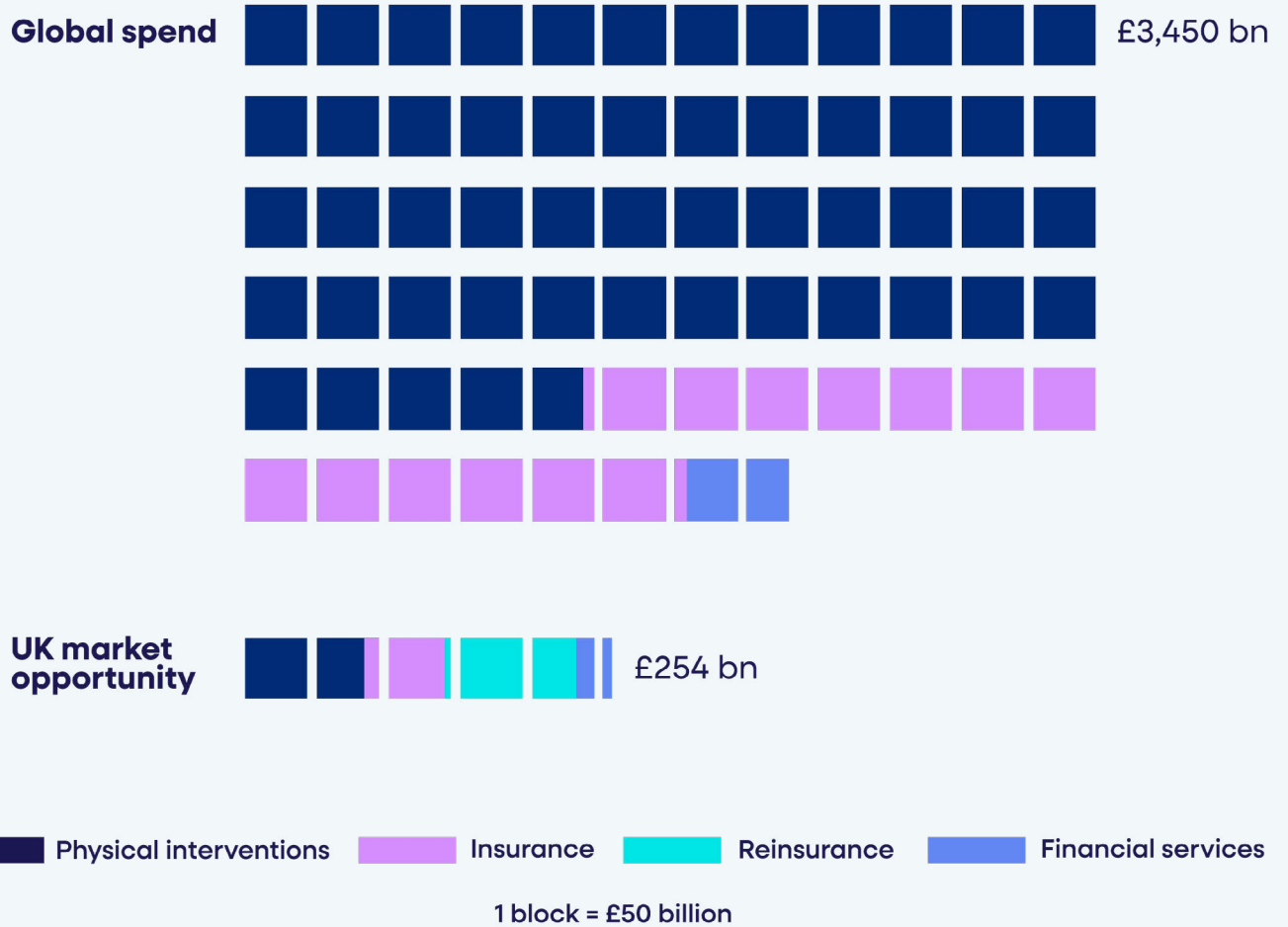


Figure 1: Global adaptation spending is projected to reach around £3,450 billion over 2026-2035, with an estimated £254 billion UK market opportunity spanning physical interventions, insurance and reinsurance, and financial services.¹

¹ Note that reinsurance is not included in the global visualisation because it is a subset of total insurance spend. The UK can export reinsurance to international markets, so it can be considered additional in this context.

Aim of report

In this report, we explore emerging market opportunities for the UK in response to growing global demand for goods and services that support climate adaptation. In doing so, we lay out the potential for the UK to become an established global provider of adaptation solutions. We estimate the size and nature of the adaptation market over the next decade, identify areas in which the UK might have competitive advantages, and discuss what government could do to capitalise on them. The report offers insight relevant to the government's growth mission and Industrial Strategy plan. It does not reflect UK government policy or official positions.

Data and evidence were drawn from an AI-assisted review of the literature, as well as interviews with 20 stakeholders working on adaptation. The report was peer reviewed by experts from industry, government, academia, and the policy space. Details of the methodological approach are presented in each section and expanded upon in the Annexes. Growth opportunities are considered by the gross value of traded goods and services. We have deliberately provided transparency about the method used in our marking sizing work, with the intention that this first attempt will be improved upon following circulation of the report and associated engagement.

Our analysis is exploratory. It seeks to examine growth potential in goods, services and technologies that will become more critical due to climate change. By engaging a broad cross-section of actors involved in providing and using adaptation solutions, we aim to synthesise the latest insights into trends in the adaptation economy and articulate the barriers to scaling innovative ideas, based on a range of informed perspectives.

The focus on growth opportunities in this report is intended to complement adaptation narratives that take a systemic view of costs and benefits, extending beyond the purely financial to encompass broader and more diverse economic and societal perspectives (Rising and others, 2026). Understanding the capabilities of the UK relative to other countries can help allocate finite resources to adaptation solutions that will deliver a well-adapted UK and offer good prospects for economic growth through exports.

Economic opportunities for the UK arising from climate adaptation do not undermine the case for the net zero agenda. While this report identifies potential for economic growth linked to climate adaptation, this in no way contradicts the rationale for decarbonisation. Delivering security of supply, decoupling from price volatility, and participating in collective action to mitigate global warming remain fundamental imperatives. This report seeks to acknowledge the dynamics of climate-driven changes in the global economy, and how the UK can best respond to new challenges.

1. The adaptation economy

1.1 Increasing need for adaptation

The physical effects of climate change are altering our planet in significant ways, posing an increasing challenge for governments, businesses, and people around the world. On average, global temperatures have risen by about 1.4°C above the pre-industrial level (Copernicus, 2026), with significant global impacts. Across the world, we see an acceleration in long-term trends such as sea-level rise and the spread of vector-borne diseases. Extreme events — including heatwaves, drought, violent storms, flooding and coastal erosion — have become more severe, and are happening more often (Otto and others, 2025; IPCC, 2022a). As the planet continues to warm, the associated impacts will place further strain on businesses, public services, infrastructure, health and food systems, and global supply chains (IPCC, 2022a).

Climate change is having a substantial impact on the UK and global economies, and this will intensify as temperatures rise (CCC, 2026). In the UK, climate-change damages could cost 3% to 4% of UK GDP by 2050, deepening to around 8% by the 2070s based on implementation of current international climate policies (OBR, 2025). This is due to a combination of direct damages (for example, flood repair costs) and indirect effects that reduce productive capacity (such as heat-related labour impacts).

Global impacts are likely to be worse, because many other countries and supply chains are more exposed to the effects of climate change than the UK. Baseline estimates point to 4% global GDP losses by 2050 under current trajectories, accelerating to as much as 20% by the end of the century (UNEP, 2025a). Estimates that attempt deeper analyses of how climate shocks propagate through the wider economy are even more severe, pointing to losses of 10% by mid-century and up to 50% later in the century (Kiehl 2022; Vanguard 2022; IFA, 2025). These losses are unlikely to be evenly distributed, masking severe impacts in some countries (Royal Society, 2023).

Alongside climate mitigation efforts that seek to reduce greenhouse gas emissions, there is a growing need to pursue adaptation strategies that build resilience to current and future climate impacts. Efforts to reduce society's vulnerability and exposure to these impacts will require everyone — individuals, communities, companies and countries — to adjust the way they do things, where they do them and when they do them.

Throughout this report, we use the term 'adaptation' or 'climate adaptation' to encompass adaptation and resilience activities, under the following definitions:

- **Climate adaptation** is the process of adjustment to the actual or expected climate and its effects in order to moderate harm or exploit beneficial opportunities (IPCC 2022b).
- **Climate resilience** is the capacity of interconnected social, economic and ecological systems to cope with a hazardous event, trend or disturbance, responding or reorganising in ways that maintain their essential function, identity and structure (IPCC, 2022b).

1.2 The economic case for adaptation

Physical climate risks and their associated damages are already translating into substantial economic costs, a process which is expected to intensify over time. Against this backdrop, adaptation plays a core economic role by reducing future loss and damage, relative to a scenario where no action is taken.

Economic evidence shows that adaptation can deliver high social and economic returns and represents good value for public investment (Watkiss, 2022). By lowering exposure and vulnerability to climate hazards, adaptation can reduce the accumulation of damages to assets, public services, and labour productivity, helping to stabilise long-term growth and public finances. Importantly, we are already paying for extreme events. Our exposure to these hazards and the costs of adaptation will only increase (Vandeloise and others, 2025) as historic emissions continue to warm the climate to 2050 (IPCC, 2022c). Investment in adaptation can reduce the macroeconomic costs of climate change, resulting in net positive fiscal outcomes. However, there is limited data on the effectiveness of solutions in avoiding costs, with existing studies reporting a wide range of capabilities for different adaptation interventions to reduce impacts of various risks (Rising and others, 2026).

The economic value of adaptation also extends beyond avoiding losses. Many adaptation investments generate wider economic, social and environmental benefits, forming part of the ‘triple dividend’ of adaptation (see Box 1; Tanner and others, 2015). The latest evidence synthesis suggests median cost-benefit ratios of around 4:1, with a typical range of 3:1 to 6:1. Many interventions deliver benefits that exceed costs within around three years (Rising and others, 2026). Crucially, these are benefits that accrue even if the predicted climate hazard event does not occur (WRI, 2025). While avoided losses are often realised over longer time horizons, many co-benefits can be more immediate and are widely shared across society (Global Commission on Adaptation, 2019).

Taken together, this underpins a strong economy-wide case for investment in adaptation.

Box 1: The triple dividend

- 1. Avoided losses:** future climate-related damage is reduced
- 2. Wider economic gains:** upfront investment creates jobs, skills, and supply chains, contributing to future demand.
- 3. Potential social and environmental co-benefits:** improvements in public health and environmental resilience.

1.3 Rising expectations and demand for adaptation

There is growing evidence that governments, the private sector and consumers are paying more attention to the importance of adapting and building resilience to physical climate risks:

- **Policy and regulatory expectations for adaptation are increasing.** National legislation and associated national adaptation programmes (NAP) are now widespread, with 141 countries having adaptation plans as of October 2025. There has also been a rapid growth in adaptation-related laws since 2015, even though many plans lack clearly prioritised and costed actions (Krishnan and others, 2025; Chan and others, 2026).
- **Disclosure and regulatory frameworks are embedding physical climate risk into decision-making.** The Adaptation Reporting Power, established by the Climate Change Act 2008, enables government to direct infrastructure operators and public bodies to report on climate risks and adaptation. The UK Sustainability Reporting Standards, due to be phased

in by the Financial Conduct Authority from 2027, will fortify existing requirements for a range of public and private actors to identify and manage physical climate risks.

- **Physical climate risk is beginning to impact decision making in the financial sector.** Climate risks are increasingly factored into credit ratings (S&P Global Ratings, 2024) and are contributing to rising insurance premiums in climate-exposed sectors and locations (International Association of Insurance Supervisors, 2025).
- **Corporate governance and risk management practices are evolving.** The senior management and boards of private-sector companies are increasingly aware of financial risks posed by climate impacts to their assets, operations and supply chains (Austruy and others, 2025), and face growing pressure to comply with regulation and voluntary disclosure (TCFD, 2023).
- **Customer and investor expectations around resilience are strengthening.** Customers (both businesses and end consumers) are increasingly concerned about supply-chain resilience, while a growing share of investors are scrutinising companies' exposure to physical climate risks and their approach to managing them (KPMG, 2021).
- **Companies are taking meaningful action today.** A recent comprehensive survey of publicly listed companies showed that 89% are already taking hazard-specific actions to improve climate resilience. Half of all companies surveyed also generate revenue from adaptation and resilience goods and/or services (Lee and others, 2026).

As the importance and value of adaptation has become more pronounced, annual global spending on adaptation has reached around £150 billion (Krishnan and others, 2025). Recent assessments suggest annual investment demand for adaptation solutions must reach £1 trillion in the 2030s to deliver a well-adapted planet (Trittipo and others, 2025; Boston Consulting Group, 2025; UNEP, 2025b).

1.4 Adaptation as a market opportunity

Growing investment from public and private enterprise into adaptation creates rising demand for market-facing goods, services and technologies that help organisations and communities understand, manage or reduce physical climate risks (we refer to these hereafter as 'adaptation solutions'²). Supply of these adaptation solutions creates a significant market opportunity, and market signals will likely only intensify under a changing climate. Adaptation solutions include:

- **Engineered systems, technologies and nature-based solutions** that directly reduce physical risk by changing assets, infrastructure or systems. These include engineered flood defences and drainage infrastructure; building retrofits to manage heat stress; engineering and design services for resilient infrastructure; coastal protection works; urban greening; and life science technologies. Some of these interventions are known as nature-based adaptation solutions: for example, urban greening to alleviate heat stress; river catchment restoration as natural flood management; or renewal of coastal ecosystems like dunes and saltmarshes to mitigate storm surges.
- **Financial services** that mobilise capital or shape incentives for adaptation investment, including specialised debt issuance to raise capital for adaptation measures (resilience bonds), structuring and managing bespoke public-private or international adaptation financing deals (blended finance), and private loan facilitation.
- **Insurance and reinsurance** that transfers or pools risk through financial mechanisms rather than reducing risk directly. These mechanisms include property and business interruption

² There are a range of enabling solutions (such as policy and regulatory measures) and social, behavioural and cultural solutions (such as organisational change and community practices) that are important adaptation tools, but are not part of our presented definition of solutions as they are not directly commercial.

insurance; insurance products that pay out on specific triggers (parametric insurance); catastrophe bonds where risk is transferred to private investors; and reinsurance services, where insurers spread climate related risk, and losses across the insurance market.

- **Data, modelling and analytics** that measure and price climate risk. These include flood- and heat-risk modelling platforms; asset-level climate risk analytics for property and infrastructure portfolios; and early-warning systems. These data-based solutions also include tools that measure the effectiveness and benefits of adaptation actions.
- **Professional, operational and assurance services** that embed adaptation into organisational decisions and operations. These services include resilience planning, response protocols, governance, training, verification and performance monitoring.

There is recent evidence for increasing investment interest in adaptation solutions. In 2025, several reports showed the growing range of investor types and the increasing mobilisation of private capital into these solutions (Oehling and others, 2025; Oxera, 2025; Wong and others, 2025).

1.5 Understanding the adaptation market

Defining boundaries

Climate adaptation and resilience do not form a traditional market with clear boundaries. Instead, they span a diffuse set of economic activities with adaptation-relevant components. Evidence from post-COVID-19 recovery spending illustrates this complexity: Sadler and colleagues estimate that around £220 billion to £270 billion of spending across 88 countries (10% to 11% of the total recovery spending) delivered direct adaptation benefits, while a further 28% risked locking in outcomes that would not improve resilience (Sadler and others, 2024). Adaptation and resilience considerations are unevenly embedded across economies and sectors, and because many interventions are dual purpose — such as transport or utilities upgrades — apportioning adaptation-relevant spend is inherently challenging. This structure creates difficulties in identifying where genuine, contestable market opportunities exist, underscoring the need for careful analysis of how adaptation demand translates into market activity for UK firms.

Demand-side actors

Adaptation markets are mediated through a set of actors that shape how climate risk translates into spending and investment. These actors include governments and regulators, who set expectations and frameworks; infrastructure and asset owners, who determine whether and how adaptation is commissioned; end-users such as households and businesses, who experience climate risk directly; and financial counterparties, including insurers and creditors, who assess, price and channel risk within the financial system. In this sense, market activity reflects not only underlying exposure to climate risk, but also how that risk is interpreted and acted upon within existing institutional arrangements.

Supply-side actors

Supply-side actors in the adaptation market span a wide range of firms and organisations, reflecting the different types of solutions set out in 1.4 — from construction and engineering firms to manufacturers and providers of services such as risk modelling, consultancy, finance and insurance.

These activities have distinct supply characteristics. Physical interventions are inherently local, with construction, engineering and maintenance largely delivered through domestic supply chains, often supported by international design and advisory inputs for large infrastructure. However, some technologies — particularly cooling systems — depend on established international manufacturing and component supply chains. If running costs are factored in, cooling could account for a large share of global adaptation demand in the 2030s (Krishnan and others, 2025), with production concentrated in established manufacturing centres (IEA, 2025b; S&P Global Ratings, 2023).

At the same time, services such as localised climate and risk modelling, consultancy, finance and insurance are more easily traded across borders and are highly exportable. In practice, adaptation may often be delivered through projects that combine these elements, bringing together locally delivered works with internationally supplied technologies and services. This mix of local delivery, global production and tradable services shapes how supply is organised and where economic value is captured.

Who finances adaptation?

Investment in adaptation will be financed through a mix of public and private sources, with the public sector playing a central role. Many high-impact adaptation measures — such as flood defences, resilient infrastructure, public health preparedness and nature restoration — deliver long-term benefits that are shared across society, which reduces incentives for private investment and underpins the case for public financing.

However, private finance can play an important complementary role when adaptation solutions provide benefits to specific individuals, groups, or companies. Key private financial actors include insurers and reinsurers (see Box 2); mortgage lenders and other creditors; as well as institutional investors and asset managers. Private actors can also contribute to adaptation measures with public-good characteristics, but typically only where strong policy, regulatory or contractual frameworks align private returns with public benefits — for example, through regulation, public co-investment, risk-sharing or clear demand signals. Figure 2 briefly introduces the characteristics of public, mixed, and private adaptation spendings and includes relevant examples.

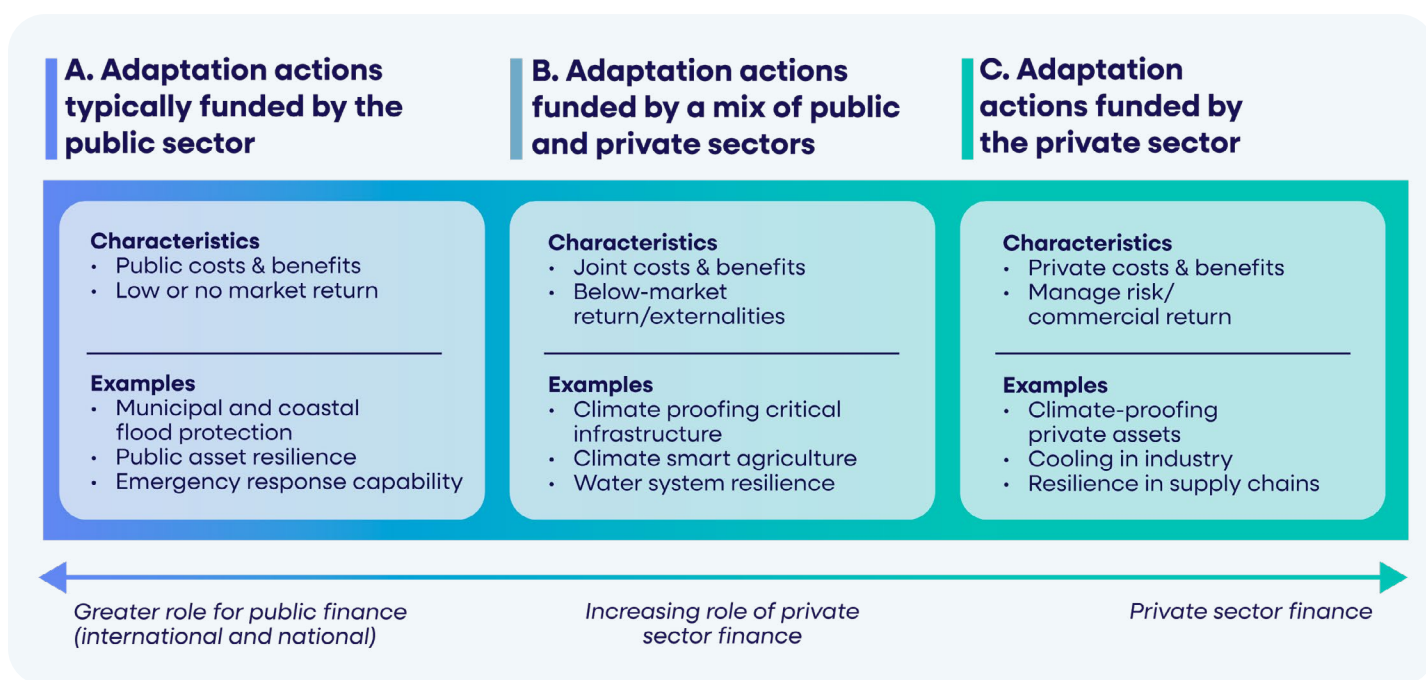


Figure 2: Different sources of adaptation investment (top row) have distinct characteristics (middle) and deliver specific types of projects (bottom) (Paul Watkiss Associates, 2026).

While some estimates suggest private sources could fund a substantial share of adaptation investment, these are largely modelled scenarios rather than evidence of investment today and carry significant uncertainty (Zurich Climate Resilience Alliance, 2025; Krishnan and others, 2025; Paul Watkiss Associates, 2026). In practice, market failures mean that achieving a more balanced public-private split would require sustained government intervention, discussed further in Section 3. In any case, market suppliers of adaptation-related goods and services may engage with both publicly funded programmes and privately financed investments, depending on how demand is structured and delivered.

Box 2: How insurance shapes demand for adaptation solutions

The role of insurance in climate adaptation is complex. While the rising physical impacts of climate change will increase demand for insurance products, the complexities of accurately pricing risk may mean that a high percentage of assets become uninsurable if global average temperatures rise by more than 3°C (Allianz, 2024). Beyond offering policies, insurers have the potential to act as a vector for adaptation solutions, advisory services, and 'patient capital' for investments in large scale projects that have long repayment horizons. However, the extent to which insurers will perform these roles is currently unclear.

How insurance affects demand:

- **Risk pricing and coverage decisions** can both dampen and incentivise adaptation. Insurance may substitute for physical risk reduction through risk transfer; while rising premiums, exclusions or insurability limits can encourage investment in physical adaptations that lower expected losses.
- **Protection gaps** arise when climate-exposed assets are uninsured, meaning losses fall directly on asset owners or the public sector. Insurability gaps occur when risks become too large or too uncertain to insure at any price. Both can increase demand for data, modelling and physical adaptation solutions that reduce risk and help maintain coverage (Swiss Re, 2025a).
- **Premium responses to risk reduction** can reinforce demand for adaptation solutions, because it prompts asset owners to demonstrate resilience in order to retain access to insurance or reduce costs.

Insurers can take different roles in the market:

- **Solution purchasers and providers:** Insurers actively procure adaptation solutions, or acquire firms to offer risk-reduction services alongside insurance products, such as localised flood-forecasting technologies (Verisk, 2025).
- **Incentivise uptake of solutions:** Through underwriting standards, risk assessments and claims processes, insurers can specify or endorse adaptation solutions, helping scale new markets.
- **Long-term investors:** As institutional investors, insurers can provide patient capital for assets with adaptation and resilience benefits, particularly where these support long-term risk reduction (Association of British Insurers, 2026).

2. Sizing the adaptation market opportunity

This section provides an estimate of the size of the UK market opportunity from delivering adaptation solutions over the next decade. It covers the market for adaptation-related physical interventions, financial services and insurance. Our findings provide an indicative value range to help inform strategic framing and policy discussion around climate adaptation as a source of economic growth.

2.1 Market sizing approach

Market segmentation

We define the 'UK market opportunity' as the total revenue that UK-based firms could capture from providing adaptation goods and services. We split this into a domestic market size and an export market size and assess the opportunity over a decade (2026 to end of 2035). Following a review of available literature and data, we developed market size estimates for three of the five types of adaptation solutions identified in the introduction.

- 1. Physical interventions** that directly reduce climate risks. Several independent sources have modelled global investment needs for these interventions (UNEP 2025b, Krishnan and others, 2025; Oehling and others, 2025). These consist of engineered systems, technologies, and nature-based solutions.
- 2. Adaptation-related financial services** that facilitate adaptation investment, primarily through structuring and facilitating finance. The analysis also estimates revenue from related auxiliary services, including legal and compliance.
- 3. Insurance and reinsurance mechanisms** that transfer and pool climate risk rather than reducing it directly. The analysis estimates the revenue potential for climate-driven insurance and reinsurance premiums driven primarily by climate risk. Auxiliary services provided by insurers, such as risk engineering, were not considered.

There are two other classes of adaptation solution: **data, modelling, and analytics services**; and **professional, operational and assurance services**. These are not included in the quantified market size. While these play a critical enabling role in adaptation, and are examined later in the report as areas of competitive advantage for the UK, the absence of consistent global expenditure data meant they could not be satisfactorily factored into the market sizing calculation.

TAM-SAM-SOM framework

To calculate the market size within each segment we applied a TAM-SAM-SOM framework to estimate the share of global adaptation demand that UK firms might plausibly capture (see Figure 3). It includes the following factors:

- **Total Addressable Market (TAM)** represents either the total global (export calculation) or UK (domestic calculation) market size for adaptation solutions over the period to 2035.
- **Serviceable Addressable Market (SAM)** reflects the share of TAM that international commerce could realistically hope to serve.
- **Serviceable Obtainable Market (SOM)** represents the portion of the SAM that UK firms could plausibly capture, based on current and prospective competitive advantage. This is the 'market opportunity' for the UK.

The market size for each segment in the TAM-SAM-SOM framework was calculated as the sum of domestic opportunities (UK adaptation spending captured by UK suppliers) and export opportunities (overseas adaptation demand met by UK-based suppliers).

The TAM-SAM-SOM framework was chosen for the intuitive top-down structure and transparency of method, allowing for clear communication of assumptions made from the limited data available.

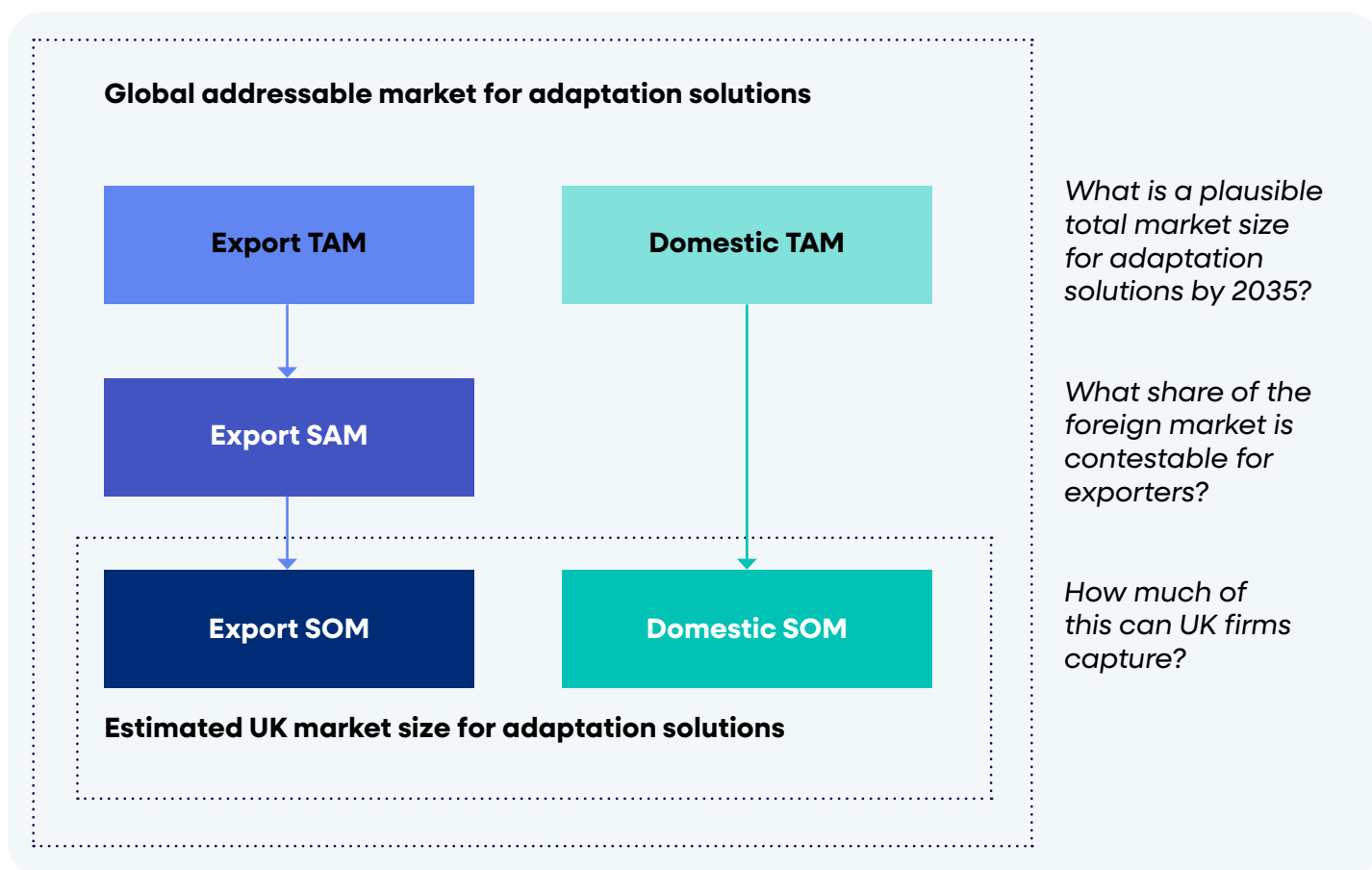


Figure 3: UK adaptation market opportunity using the TAM-SAM-SOM methodology.

We used quantitative estimates of spending need, trade flows, and market trends from industry, consultancies, and United Nations publications to inform the initial TAM figures. These figures comprise total required spend, including the private sector. From this starting point, we used published figures and our best judgement to account for the factors necessary to reduce TAM figures to SOM figures for UK suppliers. Box 3 details the approach to the market sizing estimates. A full description of variables, rationale, data sources, and calculations of TAM-SAM-SOM are presented in Annex A. It is acknowledged that there is some uncertainty in the literature estimates which inform our market sizing. Forecasting spending demands on national and international scales which are directly linked to an increasingly volatile climate is challenging. We have used ranged estimates wherever possible to try to account for these uncertainties as reasonably as practicable.

We have calculated gross revenue opportunity for UK providers, including public procurement of private goods and services within the UK. Exploring the precise economic impact of these revenue opportunities for the UK is beyond the scope of this report.

Box 3: Market Sizing Calculations

1. The UK's market opportunity for **physical interventions** is defined as:

$$SOM_{pi} = eSOM_{pi} + dSOM_{pi} = [E \times S \times R \times (G - g)] + [U \times R \times g]$$

Where: $eSOM_{pi}$ is the UK export market opportunity for physical interventions, $dSOM_{pi}$ is the UK domestic market opportunity for physical interventions.

E is UK share of global exports, S is share of international markets that is accessible, R is share of spend realised, G is required cumulative global spend on physical adaptation measures 2026-2035, g is required UK spend on physical adaptation measures and U is share of domestic adaptation spend directed to UK firms, cumulative to 2035.

2. The UK's market opportunity for **financial services** is defined as:

$$SOM_{fs} = eSOM_{fs} + dSOM_{fs} = [H \times M \times F \times R \times (G - g)] + [I \times J \times R \times g]$$

Where $eSOM_{fs}$ is the UK export market opportunity for financial services, $dSOM_{fs}$ is the UK domestic market opportunity for financial services.

H is UK share of global financial services, M is share of global adaptation spend mediated by financial services, F is total services fees (revenue) percentage for export finance, R is share of spend realised, G is required cumulative global spend on adaptation 2026-2035, g is required UK spend on adaptation cumulative to 2035.

I is share of UK domestic spend mediated by financial services, J total service fees as a percentage for domestic finance of total cost.

3. The UK's market opportunity for **insurance and reinsurance** is defined as:

$$SOM_{i+r} = eSOM_i + dSOM_i + eSOM_r \\ = [Y \times Z \times C \times p_e] + [Y \times Z \times C \times p_d] + [P \times L \times W \times V_e]$$

Where $eSOM_i$ is the UK export market opportunity for insurance (i), $dSOM_i$ is the UK domestic market opportunity for insurance, and $eSOM_r$ is the UK export market opportunity for reinsurance (r).

Y is an estimate of global property premium revenue from 2026 to 2035, C is the percentage of property premium value attributed to climate change, Z is UK share of global property premiums sold worldwide, p_e is the proportion of UK property premiums sold abroad, p_d is the proportion of UK property premiums sold domestically.

P is an extrapolated literature value for global written premiums (GWP) of reinsurance to 2035, L is the UK share of GWP, W is share of global reinsurance driven by climate change, and V_e is share of UK written reinsurance focused internationally.

Methodological Limitations

This analysis aims to provide an order-of-magnitude estimate of potential adaptation-related market opportunities, rather than a precise forecast. As such, the results are subject to some methodological limitations and sources of uncertainty:

- **Forecast uncertainty:** all long-term market estimates are subject to uncertainty, reflecting changes in intervention costs over time, differences in underlying assumptions and price

bases across published sources, and the compounding effects of future projections. Estimates that informed global TAM figures were not presented as ranges in the literature and were thus incorporated as precise figures to our calculations, despite being subject to the uncertainties noted above. We have used ranges in variables wherever practicable to account for the difficulties of extending forecasts out to a decade.

- **Data gaps and inference:** in several areas, limited or inconsistent data required variables to be inferred using best available estimates and expert judgment, particularly when translating global adaptation needs into marketable revenue opportunities.
- **Source transparency:** some industry and consultancy estimates used to inform total spend do not disclose their underlying methodologies, limiting independent validation of headline figures.
- **Unquantified enabling and service revenues:** insufficient consistent expenditure data meant that some enabling and service-based activities could not be robustly quantified in the market sizing. This includes data, modelling and analytics services, as well as certain adaptation-linked financial and insurance advisory services, despite their potential to represent growing revenue opportunities for UK firms.

2.2 Estimates of market size

Table 1 summarises our market sizing results. Ranges reflect uncertainties in variables used to estimate TAM, SAM, and SOM. The cumulative additional UK market opportunity across all analysed market segments over the next 10 years (2026-2035) is £154 billion to £355 billion, comprising £86 billion to £126 billion from domestic spending and £68 billion to £229 billion from export revenue. Notwithstanding uncertainty in the estimates, the domestic opportunity is concentrated in physical interventions and insurance. In export markets, reinsurance stands out as the largest segment, with a substantially higher upper bound than other categories. Physical intervention exports are also significant, while financial services opportunities are smaller overall but more concentrated in exports.

Market segment	UK Domestic Market Opportunity (dSOM)	UK Export Market Opportunity (eSOM)	Total UK Market Opportunity (SOM)
Physical interventions	57-64	11-48	68-112
Financial services	0.5-1.2	6-27	6.5-28
Insurance	29-61	5-20	34-81
Reinsurance	-	46-134	46-134
TOTAL (2026-2035)	£86-126bn	£68-229bn	£154-355bn

Table 1: Market sizing results (values in £ billions, 2024 prices, cumulative growth 2026-2035).

Physical Interventions

For physical interventions, the opportunity is £16 billion to £46 billion larger for the domestic market than for exports. This difference reflects an assumption in our market-sizing approach: that a significant share of adaptation value is often captured locally through labour and implementation costs. In a domestic market, this is advantageous for UK providers and the retention of wider supply chain value within the UK. The reverse is true for exports, where labour, related services, and wider supply chain value is retained in the destination market.

The forecast for the UK domestic market is a relatively narrow range of £57 billion to £64 billion. This is partly due to a single figure being used for a total cost estimate to adapt the UK³, rather than a ranged estimate. It is also due to large-scale costed infrastructure projects that are expected to be delivered over the next ten years (such as resilience upgrades to national water and energy infrastructure (Ofwat, 2026; Steller and others, 2023)). These projects form a major part of overall costs, so if we assume that a high portion of the revenue related to engineering works is captured locally, UK firms' share of revenue is projected to be high (85% to 95%, see Annex A). However, large scale infrastructure project costs in the UK often don't meet initial estimates, and actual project costs may be higher than those assumed in initial budgets (Loxton and others, 2026; HM Treasury, 2026). Additionally, other as-yet uncostered spending on large infrastructure projects with adaptation components, such as land-transport, ports, and airports, may increase the market size for domestic physical interventions.

Exports of physical interventions have a much wider forecast range, stemming from uncertainties around global market composition and the extent to which UK firms could provide solutions (Table 1, Annex A). The upper bound of export market size could increase significantly if UK engineering firms are able to capture a growing share of large adaptation-linked international projects. Forecasting the ultimate revenue potential of these works for the UK is challenging, as engineering works are a prime example of an adaptation measure where much of the overall project value is retained locally. Revenue streams for UK engineering primes from international markets could include design and consultancy services, intellectual property and management fees, and supply of specialist components.

Financial Services

At £0.5 billion to £1.2 billion, the additional revenue opportunity associated with domestic adaptation finance is less than 1% of the total for UK financial and professional services (the latter estimated in ONS, 2026a). This reflects a deliberate methodological choice to quantify only those revenues that can be robustly attributed across projects: primarily financial structuring, arrangement and advisory fees associated with major infrastructure investment in privately operated sectors such as water and energy.

While tens of billions of pounds are expected to be mobilised for domestic infrastructure upgrades, applying indicative fee rates of 2% to 3% yields a financial services market that is materially smaller than those for physical interventions and insurance. Other financial services revenue streams — such as adaptation linked product issuance, ongoing management and risk bearing activities — have not been included in this analysis due to insufficient data availability.

Adaptation-driven growth opportunities for financial services are rooted in export markets. Nation states (Guterres, 2025) and the UN Environment Programme (UNEP, 2025b) acknowledge that an international financing gap for climate adaptation must be closed by massively increased flows to at-risk low- and middle-income countries (LMIC). Whether adaptation finance is facilitated through development banks, international climate funds, UN programmes, or philanthropy, there is a significant role for financial services providers. Adaptation financing is bespoke, and often project-specific, involving multiple institutions and legal jurisdictions. The complexity of these pathways results in a high revenue potential for financial services, including potential for ongoing management and administration fees over the lifecycle of projects (OECD, 2025).

Insurance

There is already a large domestic market in property insurance, which is the major insurance class most affected by physical climate risk (Fantini and others, 2023; International Association of Insurance Supervisors, 2025). This market size will persist over the next decade as physical climate

³ Since this analysis was completed, the CCC's Well Adapted UK report has been published, which presents updated estimates of domestic adaptation investment need (£11bn/yr). Our analysis draws on earlier CCC and Paul Watkiss Associates estimates (2026) to inform the domestic component of the market sizing (£9bn/yr to 2028, and £25bn/yr from 2029-2035).

risks will not diminish for most assets. There is a limited opportunity for exports of direct insurance for commercial assets. Property insurance is largely covered by domestic providers in countries where there is an established insurance industry.

Internationally, the market opportunity (£51 billion to £154 billion) is driven by reinsurance. Reinsurance enables large, infrequent losses from climate-related catastrophes such as floods, storms and wildfires to be shared across global markets. The revenue from direct insurance premiums is effectively broken up and distributed between insurers in exchange for a share of the risk. The UK is a leading global hub for these activities, with specialisation in natural-catastrophe risk (Swiss Re, 2025b). Critically, UK reinsurers accepting a transfer of international risk generate net income for the UK from international policy revenues. UK reinsurers accepting a transfer of risk from UK insurers do not generate net revenue for the UK, as the original insurance premium value was already captured in the UK, and it is effectively only being redistributed. As extreme weather events become more frequent and severe, demand for global risk-sharing has increased, reinforcing the central role of reinsurance in managing climate risk and driving growth in reinsurance premiums (Global Reinsurance Forum, 2021; Swiss Re, 2025a; Swiss Re, 2025c).

UK-based reinsurers are reporting significant recent growth in their business. For example, they are selling more policies to insurers, driven primarily by international property risks (Lloyds; 2025, 2026). Insurers are also expanding into climate- and risk-related advisory and innovative insurance products, such as parametric insurance and catastrophe bonds (Aon, 2025; PRA, 2025; Reitmeier, 2024). Developing new products and capabilities will be important for UK insurers to maintain current market shares and realise the growth opportunities projected here.

Finally, while this analysis quantifies potential market sizes for UK insurance and reinsurance, the longer-term implications for insurer profitability and wider UK economic growth are uncertain and beyond the scope of this report. Higher premium revenues do not automatically translate into higher profits, because rising climate risk increases both expected losses and the difficulty of pricing risk accurately, exposing insurers to greater volatility and potential mispricing. At the same time, this uncertainty creates strong demand for improved risk modelling and decision-support services, representing both a constraint and an opportunity for market growth.

Contextualising the adaptation market opportunity

The total market opportunity calculated here is £154 billion to £355 billion. For context, we can compare this with the UK low-carbon and renewable energy economy (LCREE) to give a sense of scale (this is not to suggest any equivalence between mitigation- and adaptation-led markets). The LCREE was worth £77 billion in 2024 and would reach around £180 billion by 2035 if it continues to grow at recent rates (ONS, 2026b). On an annual basis, the adaptation opportunity would therefore be material but not dominant — equivalent to around 9% to 20% of the projected size of the low-carbon economy in 2035 if realised. The export component of this opportunity, £68 billion to £229 billion by 2035, is also modest in macroeconomic terms, equivalent to around 0.75% to 2.5% of total UK exports in 2025 (Jozepa, 2026).

However, not all of this represents new market growth. A portion of adaptation-related spending is already happening today, although it is difficult to measure precisely – a gap the Climate Change Committee (CCC, 2026) highlights as a priority to address for NAP4. Based on conservative estimates of current spending on adaptation measures, associated financial services and climate-driven insurance, we estimate that an additional £50 billion to £100 billion of market growth could be realised by 2035. The export component of this growth is £20 billion to £60 billion; at the midpoint, this could make a material contribution towards reducing the UK's current trade deficit over the next decade (Jozepa, 2026).

This analysis does not assess the effectiveness of adaptation solutions in mitigating physical climate risk but instead quantifies the market activity that arises where adaptation investment takes place. In practice, sustained market growth will depend on a multitude of factors, including whether adaptation interventions are shown to reduce losses in a cost-effective manner, and are appropriately reflected in risk assessments, standards and pricing.

Beyond 2035

The market opportunity for UK firms supplying adaptation-related goods and services will extend well beyond 2035 and may be larger than implied by this analysis. After 2035, UK firms could capture £149 billion to £280 billion in additional revenue from supplying physical interventions and related financial services. This is based upon the conservative approach used in the 2026 to 2035 analysis, which assumes that only around one-third of total global adaptation need is met in practice, consistent with historical funding trends and current rates of delivery (UNEP, 2025b). There will also be an opportunity for additional growth in insurance and reinsurance services beyond 2035, but these could not be quantified using the same method.

Adaptation demand is expected to remain strong through mid-century, largely independent of future emissions pathways. Much of the warming expected by mid-century is already locked in by past emissions, and even under optimistic scenarios warming of around 2°C remains highly likely, sustaining demand for adaptation investment (UNEP, 2025b). Beyond 2050, uncertainty increases: faster-than-expected warming could raise adaptation costs or push some systems towards limits where adaptation becomes less effective (IPCC, 2022a). As a result, while the post-2035 estimates are illustrative and conservative, the longer-term opportunity for UK firms could be larger, albeit with rising physical and delivery risks.

Establishing the UK as a leading provider of key adaptation solutions over the next decade will be particularly advantageous, as the market opportunity will grow post-2035. The types of solutions the UK can offer are explored in detail in the following section.

Unquantified market segments

As identified in the limitations section, our analysis did not include decision support climate services like data and risk analytics, climate modelling, and advisory services due to insufficient data availability on historic spending and future growth projections. A recent World Meteorological Organization paper provides a good baseline for the value of these services in 2024, at £3 billion to £4 billion globally (WMO, 2026). Given the well-established increasing demand for these services, this could conceivably grow to ~£30 billion to £40 billion by 2035 (Oehling and others, 2025; Verisk, 2025).

3. Understanding UK adaptation solutions and their export potential

In the previous section, we identified a significant market opportunity for UK providers of adaptation solutions (goods and services). This section examines what types of adaptation goods and services are currently produced in the UK, and where the UK appears to have a competitive advantage. We particularly focus on business sectors where UK firms are relatively well positioned to supply adaptation solutions based on existing capabilities, expertise and market position.

3.1 Approach to mapping adaptation solutions

To understand the range of adaptation solutions produced in the UK, we developed a database of UK-produced adaptation related goods and services. This provides a comprehensive picture of the current supply base across sectors, based on the 'adaptation systems' of the UK's fourth climate change risk assessment (CCRA4) process (CCC, 2024). We then conducted 20 interviews with stakeholders between October 2025 and February 2026 to quality-assure our database and help interpret our findings. These interviews involved people working in government, public bodies, industry, academia and finance.

Data categorisation

The database mapped the range and composition of adaptation related goods and services currently produced by UK firms. Each item was tagged according to the following categories:

- **Primary use case:** this captures the practical role the solution plays within adaptation activity (such as forecasting and decision support, or monitoring and measurement).
- **Physical climate risks addressed:** this indicates which hazards each solution is designed to address (such as flooding and heat).
- **CCRA4 sectors addressed:** these are the systems where climate risks show up and where adaptation solutions are deployed. They cover food security, land, sea, digital and telecoms, energy, transport, waste, water and wastewater, built environment and communities, culture, public services, health, economy and finance, and international collaboration (CCC, 2024; CCC, 2026).
- **Alignment with Industrial Strategy sectors:** the sectors in which adaptation solutions are developed or deployed include advanced manufacturing, clean energy industries, creative industries, defence, digital and technologies, financial services, life sciences, and professional and business services.
- **Example UK providers:** representative UK firms, small and medium-sized enterprises (SMEs), consultancies, research bodies or public agencies active in supplying a particular solution.
- **Indicative export relevance and competitive advantage:** a qualitative judgement of tradability, international demand, and UK capability strength, expressed as a brief rationale.

Analysis across these categories enabled us to identify patterns of activity, sectoral concentration, and areas where UK capability appears strongest. The database does not assess the effectiveness of individual solutions in reducing climate risk, nor does it provide evidence on market scale, maturity, enablers, and growth potential.

AI-supported data gathering

The database was developed using an AI supported approach, with Microsoft 365 Copilot used to search, collate and structure information from publicly available sources. Initial lists of adaptation related goods and services were generated by sector and then reviewed and expanded through author oversight, targeted gap filling, and quality assurance checks to ensure broad coverage of relevant solution types.

Competitive advantage and export potential were assessed through structured prompting that asked Copilot to consider the tradability of each solution, evidence of international demand, and the UK's relative capability compared with competitor countries, drawing on additional contextual documents and expert judgement. The resulting shortlists were subjected to external peer review. Further methodological detail is provided in Annex B.

3.2 Reproducibility, caveats and limitations

The following caveats and limitations should be noted:

- **Accuracy and completeness:** while reasonable steps were taken to quality assure the information presented, inaccuracies will remain. The database is intended to provide a qualitative picture of the UK adaptation economy and should be built upon with more rigorous methods to support detailed policy decisions.
- **Reproducibility:** the database is not strictly reproducible because Copilot is a continually updated system, and identical prompts may yield different outputs over time. The workflow presented here should be understood as indicative of the approach used and would be expected to produce similar results if repeated using Copilot or an equivalent commercially available large language model.
- **Non exhaustiveness:** despite efforts to be comprehensive, the database is not exhaustive. Many adaptation related goods and services will not have been captured.
- **Visibility bias:** AI supported web searches are biased towards established companies that are visible online. This is likely to have resulted in an over representation of larger engineering firms and consultancies, and an under representation of early stage or less visible innovators.
- **Subjectivity of export potential assessment:** although numerical summaries are presented, assessments of competitive advantage and export potential rely on qualitative judgement and opaque algorithmic weighting. Conclusions drawn from these analyses should therefore be treated as indicative and supportive of broader narratives, rather than as precise measurements.

3.3 Patterns in UK adaptation solutions and export potential

Composition of adaptation solutions: goods, services, and risk focus

The [full database](#) is published alongside this report and can be accessed.

In total, we identified 648 adaptation solutions for which at least one UK firm is currently developing or marketing a relevant good or service. The distribution of goods (52%) and services (48%) by volume is broadly even, although the balance varies by sector. Land, health, and built environment solutions include a mix of physical products (such as sensors, specialist equipment, and materials) and services (including analytics, and advisory and design services). In contrast, economy and finance adaptation activity is dominated by services such as parametric insurance products and climate-risk pricing tools.

Adaptation solutions are also unevenly distributed across sectors. Around 83% fall within six sectors: land; built environment and communities; health; economy and finance; energy; and water. This indicates where adaptation activity is currently most visible in the UK supply base. Lower counts in areas such as UK food security, waste, public services, seas, digital and telecoms, and transport may reflect thinner domestic market provision, greater reliance on non-market or public delivery, or the use of imported or internationally sourced solutions. Figure 4 illustrates the range of solution types identified across the 6 most common sectors.

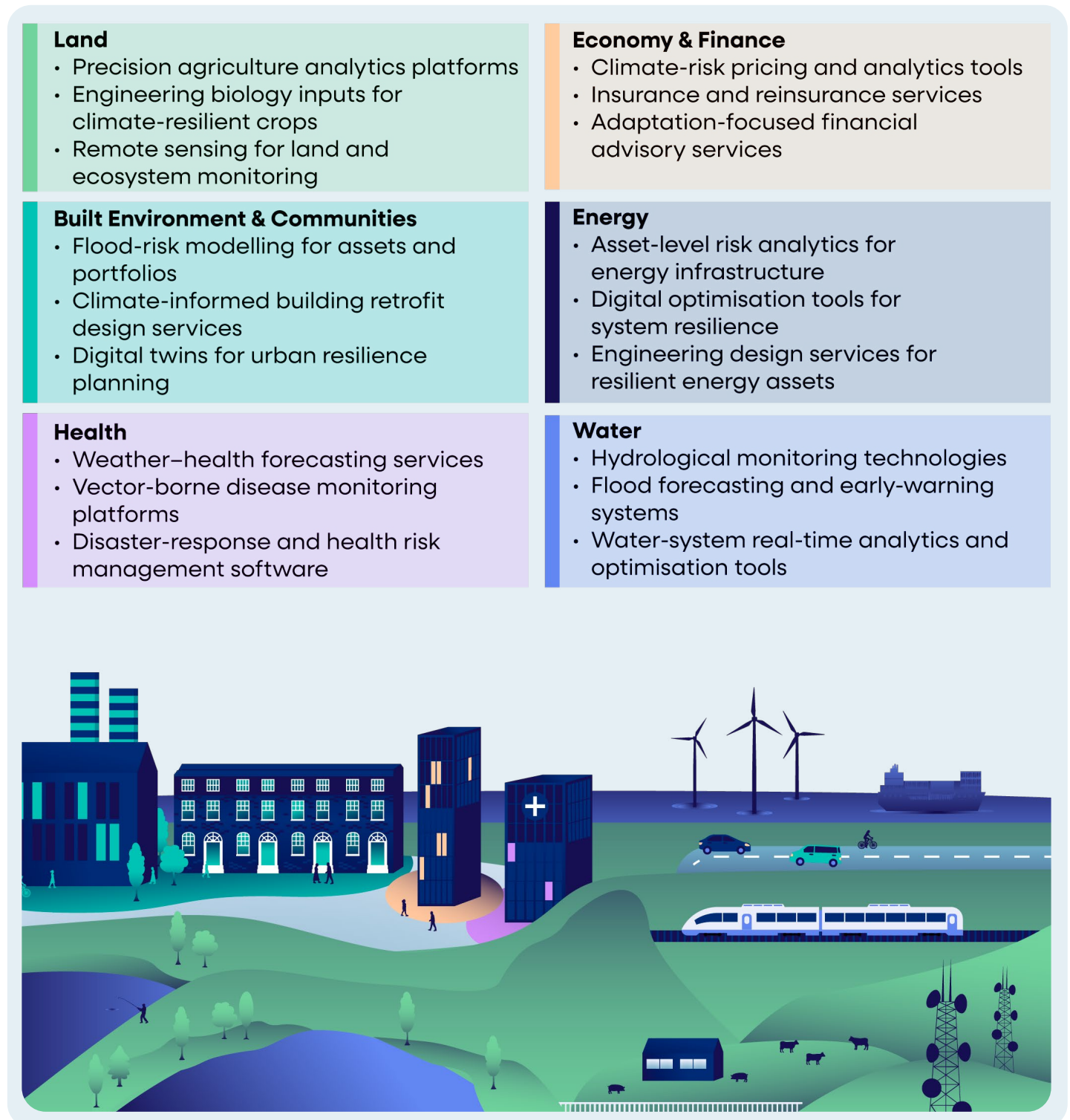


Figure 4: Indicative examples of adaptation solution types from the six largest sectors in our database.

With regards to physical risks, UK produced adaptation solutions are most frequently focused on flooding and temperature extremes, which together account for approximately 44% of all solutions identified in the database (see Figure 5). Several other physical risks are also represented but appear less frequently in the solution count.

Flood-related solutions range from information and decision-support services (such as hydrological monitoring, early-warning systems, and flood-risk modelling and analytics) to asset-level and site-specific interventions (including property-level protection measures and sustainable drainage). Temperature-related solutions show a similarly mixed profile, combining analytical and planning tools (such as heat-stress modelling and urban heat-island analytics) with physical and design-led responses (including passive and active cooling technologies and building retrofit services).

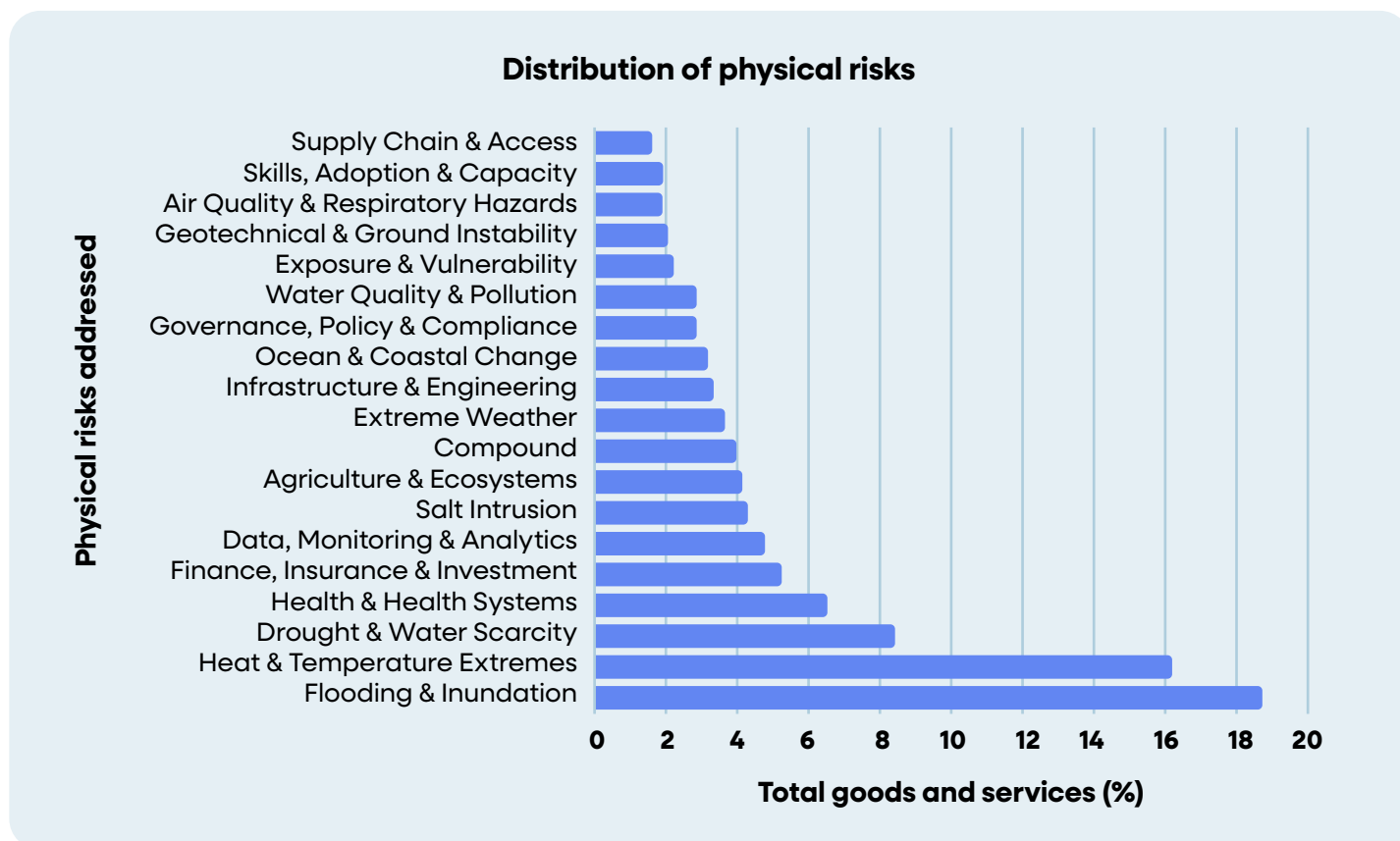


Figure 5: The database of climate adaptation solutions includes goods and services that target a wide range of physical climate risks.

Distribution of solutions with higher export potential

Around 30% of solutions in the database were assessed as having high export potential. This assessment came from an experimental stage in the analysis where Copilot was prompted to consider competitive advantage of the UK versus competitor countries for each specific technology in turn, based on publicly available data sources (see Annex B for more detail). Here, the inclusion of the UK exemplars for each individual technology, along with other critical descriptors, informed the automated critical assessment which considered existing capabilities and overseas activity as key factors. The subset of high export potential entries comprised 79 goods and 112 services.

These solutions are clustered in a small number of sectors, with around 67% found in land, built environment, economy and finance, and health. The physical risks addressed by these solutions mirror the wider database, with flooding and temperature-related risks appearing most frequently.

These solutions vary in form, but the UK's strongest export-oriented opportunities consistently sit in knowledge-intensive, data-enabled and service-led activities that can be delivered across geographies, rather than in labour- or place-dependent physical works. This was corroborated by our interview data. Specific solution clusters include:

- **Climate-risk analytics and decision support:** the UK has a strong base of digital, modelling and data-enabled services that can be delivered internationally. National programmes in digital-twin and synthetic-environment technologies (DAFNI, NDTP, CERIA, CreDo+) help the UK test and apply climate-risk analytics at scale. This is supported by world-leading climate-science and data institutions, from the Met Office to university spin-outs in modelling, sensing and decision-support.
- **Insurance and risk-transfer products:** the UK's insurance and reinsurance ecosystem has a strong international reach, anchored by London's role as a global hub for international insurance markets, with established capability across catastrophe modelling, reinsurance, and specialist risk instruments.
- **Professional and advisory services:** the UK has high-value technical, legal and advisory services that support adaptation planning and risk assessment, alongside a smaller but internationally significant role in structuring adaptation finance and preparing investible projects.
- **Engineering design and specialist consultancy:** UK strengths lie in risk assessment, modelling and adaptation design. These tend to be the higher-value stages of flood, water and infrastructure projects, where expertise and software enable UK firms to retain value even when construction is delivered locally.

Specialist agri-tech and life-science applications: these include upstream, science- and data-driven innovations such as engineering biology, precision-farming tools, and biosensors that support adaptation in land, food and ecosystem sectors. These applications were seen as the UK's most competitive niches within an otherwise crowded global agri-tech market.

Alignment with Industrial Strategy sectors

Almost all (92%) high-export-potential solutions fall within the Industrial Strategy sectors. In absolute terms, they are most associated with professional and business services, digital and technologies, and financial services, with smaller numbers mapped to life sciences, advanced manufacturing, and clean energy (Figure 6). This again reflects the strong presence of knowledge intensive, service led and technology enabled solutions within the export potential subset of the database. Many of these services could not be quantified in our market sizing work due to insufficient evidence, so any associated growth would be additional to the presented estimates.

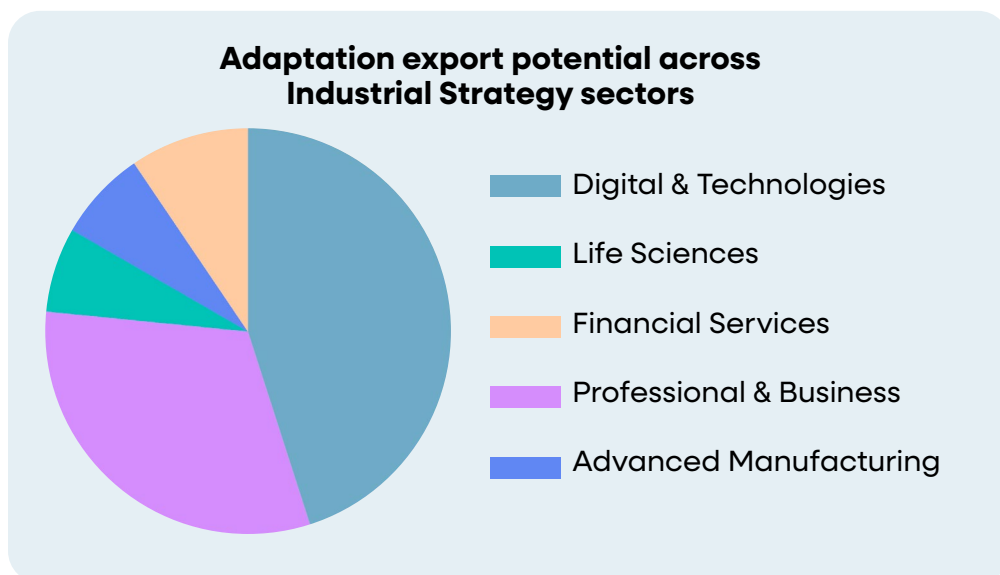


Figure 6: Approximate proportions of high export potential adaptation solutions in our database that correspond to in whole or in part to selected Industrial Strategy sectors.

Figure 7 shows the ratio of high-export-potential solutions to total solutions for select Industrial Strategy sectors. More than one third of adaptation solutions in digital and technologies, professional and business services, life sciences and financial services are assessed as having high export potential. This points to where UK capabilities are already producing adaptation solutions with strong potential for international scaling. Service-led activities stand out as promising, aligning with existing UK strengths in international trade (ONS, 2026a).

Most notably, we identified around 60% of digital and technologies adaptation solutions as having high export potential (Figure 7). These include climate risk analytics, decision support tools, monitoring platforms and data driven services that can be deployed across multiple geographies.

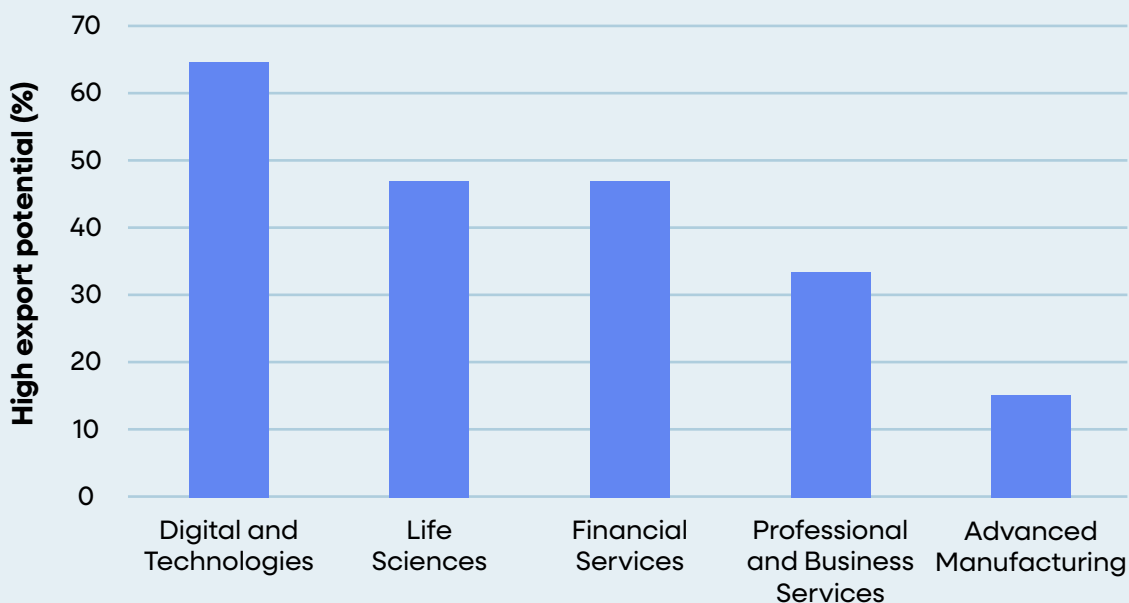


Figure 7: Proportion of adaptation goods and services deemed to have high export potential for relevant Industrial Strategy sectors.

At present, the recognition of adaptation-related capability in the Industrial Strategy is uneven. Some sector strategies, such as finance and business services, already identify climate resilience as a source of growth (Gov.uk, 2025b). Others, particularly digital and technologies, do not yet explicitly treat resilience as a demand driver, even though digital tools appear across almost every adaptation use case identified earlier (Gov.uk, 2025b).

This gap matters: when adaptation is invisible within sector plans, relevant firms and technologies risk being undervalued, and export-support pipelines may overlook a growing source of global demand.

The database developed for this report provides a starting point to analyse economy-wide UK adaptation capabilities. Future work could build on this by developing a clearer picture of market value and maturity, patterns of adoption, evidence of real-world risk reduction impact, and how economic benefits are distributed and captured across the value chain.

4. Unlocking UK adaptation opportunities

In the previous section, we presented the breadth of adaptation solutions offered by UK firms and provided insights on where the UK has competitive advantage. This section explores why these areas of competitive advantage have not yet developed into a more visible or scaled adaptation economy, and considers how to ensure sustained value over the long-term.

Drawing on interviews with key stakeholders (as described in the previous section), we identify five key challenges where the public sector⁴ has an important role to play (Figure 8). These are related to sustaining, scaling and keeping UK capabilities competitive as global demand for adaptation grows.



Figure 8: Addressing challenge areas 1–4 will be critical to building the UK domestic market for adaptation goods and services (G&S) and enabling export to the global market.

4.1 Challenge 1: Generating demand

Despite the clear need for adaptation in the UK and globally, turning that need into clear, investible demand for adaptation solutions remains difficult. Across sectors, expectations around what adaptation is required, where it should be delivered, and to what standard, are usually unclear, fragmented, or implicit. This tends to weaken incentives to invest in adaptation. Isolated examples of good practice — such as the UK building information modelling mandate, and the guidance on overheating included in building regulations (HM Government, 2021) — show how clear standards can generate market pull while delivering cost savings and productivity gains (Centre for Digital Built Britain, 2021).

⁴ Relevant public sector actors include: national and local governments, regional authorities, regulators, and arm's length bodies like the Catapults.

Catalysing demand for adaptation solutions — and attracting investment into the area — is further complicated by the fact that they are rarely recognised as a standalone market or investment category. Instead, their adoption tends to be embedded within broader risk management, infrastructure development, or sectoral investment decisions, often as a byproduct or as a secondary consideration. While this reflects adaptation's cross cutting nature, it makes activity harder to track and limits the ability to articulate adaptation solutions as a coherent market or opportunity.

Addressing this challenge requires setting clear adaptation expectations that establish demand for adaptation solutions, an approach currently being pursued by the UK government (Council for Science and Technology, 2025). When organisations know they will be expected to manage physical climate risks to a defined standard, they are more likely to invest early and procure solutions rather than defer action. In practice, this can be achieved by embedding minimum performance standards in regulations, funding conditions or sector guidance, which signal clearly when and where adaptation action is expected.

Alongside clear standards, it is equally important to build confidence in the effectiveness of adaptation solutions. If decision-makers cannot assess whether a measure will reduce risk or deliver co-benefits, they are more likely to defer procurement. Investment in evaluation, monitoring and outcome documentation — made accessible to regulators, investors and buyers — enables this vital evidence to accumulate over time, helping to drive demand.

Another approach that could stimulate the sector would involve explicitly integrating adaptation requirements into existing infrastructure, land-use or development decisions. This would open a wider set of budgets and procurement processes to deliver resilience outcomes.

4.2 Challenge 2: Mobilising capital

Individual adaptation projects frequently fail to attract private finance, even when the need for action is clear. This may be because the benefits of these projects are frequently uncertain, long term, or distributed across multiple actors, making them difficult to price or capture as private returns. Consequently, identifying the monetisable co-benefits of a project, such as emissions mitigation or efficiency gains, will often be crucial to unlocking investment decisions.

Even when solutions demonstrate promise at pilot scale, they often struggle to reach widespread, repeatable delivery. Uncertainty over demand can suppress the investment needed to scale up, while access to markets may remain limited, and suitable financing may not be available for buyers to place large orders. Moreover, potential customers for these solutions may not have the capacity to implement the projects. For example, local authorities often lack the resources and technical capability to translate identified risks into well-specified, financially credible projects, constraining demand for adaptation solutions and slowing the transition from pilots to wider deployment.

To address these constraints, the public sector can play a coordinating role so that adaptation solutions can be developed and procured in forms that are attractive to investors. This could involve setting clear frameworks that enable local or regional bodies to bring actors together, such as local businesses, affected communities, contractors, firms, financiers, and so on. Established processes should clarify who benefits, and combine multiple adaptation project sites into a single programme capable of attracting blended public and private finance. Allocating clear responsibilities for bringing stakeholders together is also key — for example to a statutory body, combined authority or sector regulator — as demonstrated by the roles played by the Environment Agency (Environment Agency, 2024) and Ofwat (Ofwat, 2026) in managing water related risks.

There is ongoing activity in the research community (ATTENUATE, 2026) and public sector (Connected Places Catapult, 2026a; 2026b) on how to advance the economic case for adaptation. Public co-investment guarantees and risk sharing can lower risk premiums where benefits are shared, long-term or uncertain. Clearer revenue models, including regulation that allows operators

to recover adaptation costs, can improve commercial viability, while adaptation-focused financial instruments like bonds and blended finance have been shown to enable proactive risk reduction (WRI, 2025). Establishing who pays, how risks are apportioned, and where revenues are distributed or invested is critical to large adaptation projects. These functions would be well suited to a convening authority if sufficient institutional knowledge and experience can be developed.

4.3 Challenge 3: Data gathering and accessibility

Many actors lack the information and tools needed to assess climate risk, value outcomes, and justify adaptation decisions. They often cannot access key datasets, including geospatial and infrastructure data, and these datasets may not be interoperable. In the context of flood risk, for example, there have been difficulties in accessing drainage performance data needed for accurate surface-water modelling, with smaller firms unable to obtain this information without regulatory intervention.

When data is available, there can be limitations in the tools and methodologies used to interpret it. Many firms lack consistent approaches to assessing physical climate risks. Investors often lack standardised tools for assessing asset vulnerability, meaning hazard exposure is often better understood than the assets' resilience to those hazards. There has been a rapid expansion in climate-risk data providers, but much of the underlying data is not validated against observed outcomes, and different providers can produce materially different results for the same asset or hazard. This creates uncertainty for investors and buyers, and limits the usefulness of risk information for prioritising adaptation actions across assets. Additionally, organisations are disincentivised to supply proprietary data to shared datasets unless there are clear commercial, regulatory or operational benefits to them in doing so.

Addressing this data challenge requires efforts to provide common data baselines and standards — essentially, what to measure and how to measure it — so that risk information can be used widely and consistently across markets to inform decisions. This could include improving access to key public datasets, agreeing shared assumptions about data, and setting clearer expectations for transparency and interoperability. The UK Climate Projections produced by the Met Office are a good example of established scenarios and guidance that enable resilience planning (Met Office, 2026). The public sector can act as an impartial data convenor, bringing together fragmented datasets held across public bodies, regulators and infrastructure operators. For example, work from the UK's innovation accelerator for transport, the built environment, cities and local growth (Connected Places Catapult, 2025) has shown how sharing asset-level data across utility sectors can identify cascading infrastructure failure risks that no single operator could detect alone. Together, these steps would make climate risk analytics more usable in decision making, strengthen incentives to act on risk, and support the scaling of markets for climate risk analytics and adaptation solutions.

4.4 Challenge 4: Embedding climate risk in financial decisions

Even when adaptation activity is funded and delivered, the financial system does not always follow through by treating lower-risk assets differently from higher-risk ones. Banks and insurers often respond to rising climate risk using broad measures — such as raising prices, tightening terms, or withdrawing insurance cover — rather than recognising assets that have invested in resilience. As a result, buildings, infrastructure and businesses that reduce their exposure to climate risk do not consistently receive better insurance cover or lending terms. This weakens incentives to invest in adaptation and limits the financial system's ability to reinforce what works.

Where lenders and insurers do recognise lower risk — for example, through lower insurance premiums or more favourable loan terms — they can actively encourage adaptation by improving the business case for investing in resilience. These signals also increase demand for better climate

risk data, and for services that help firms demonstrate how adaptation measures reduce risk. Regulation can influence how far these signals develop.

In the UK, the Prudential Regulation Authority (PRA) expects banks and insurers to assess physical climate risk across their portfolios, including risk reductions from public adaptation measures such as flood defences. By requiring firms to consider these system-level effects, prudential supervision makes it more likely that adaptation interventions are recognised in financial decisions over time. However, the PRA's role is to protect financial stability, not to drive adaptation outcomes. This means that, on its own, prudential supervision may not lead to consistent changes in pricing or behaviour. Where stronger uptake of adaptation is a policy objective, additional incentives are likely to be needed. As set out in Challenge 3 and acknowledged by the PRA (2025), gaps in climate risk data and evidence make it harder for financial institutions to identify, compare and act on the benefits of adaptation.

4.5 Challenge 5: Developing export pathways

A range of public programmes support adaptation and resilience exports to varying extents, including the Foreign, Commonwealth and Development Office Growth Gateway; British International Investment's Climate Innovation Facility; UK Export Finance; Infrastructure Exports: UK; and the UK Agri-Tech Centre's Global Growth Accelerator. However, this support is typically partial and fragmented. These programmes are housed within different public bodies or government departments, with no nominated co-ordinating centre. While adaptation is recognised as a distinct export opportunity in some quarters, it has not yet been taken up in a consistent or strategic way across government export support.

Addressing this challenge could involve giving adaptation greater strategic visibility within export support, including closer alignment with what the UK is already developing through its research and innovation system, or delivering domestically. Stronger links between domestic deployment, research and innovation, and export activity, would help translate proven UK capabilities into clearer export propositions. At the project level, UK partner organisations could also support earlier consideration of adaptation when engaging on large international projects with strong resilience components, such as utility or agri-engineering schemes. When resilience requirements are built into projects at the design stage, solutions are easier to specify and finance, creating clearer entry points for firms with relevant expertise. In practice, this could include recognising adaptation more explicitly within existing trade and finance channels, as well as supporting bundled UK offers that combine analytics, engineering, finance, insurance and delivery.

One promising mechanism for stimulating international engagement is through countries' National Adaptation Programmes, particularly when partner countries are supported to make these plans more specific and delivery focused. UK involvement in NAP processes can help translate high level adaptation priorities into clearer sectoral and geographic programmes, strengthening the pipeline of delivery ready opportunities. Through the NAP Global Network, of which the UK is a founder member, and related bilateral initiatives, the UK already plays a role in supporting the rigour and credibility of NAP design and implementation. This upstream engagement can help identify future procurement priorities and create earlier entry points for UK adaptation expertise, strengthening pathways from international climate policy to future export opportunity (NAP Global Network, 2025).

5. Conclusion

In this report, we have explored emerging market opportunities for the UK in response to growing global demands for adaptation goods and services. The UK has the potential to be a global provider of adaptation solutions.

Climate adaptation is a substantial economic opportunity for the UK, worth an estimated £154 billion to £355 billion in gross revenue to 2035. Our modelling does not include wider climate services, like risk analytics and consultancy, due to a lack of relevant data. These services could conceivably add £billions in additional annual adaptation revenue by 2035. Global demand for all types of solutions will continue to rise beyond 2035 as the effects of climate change become more acute and risk modelling services continue to improve.

The UK has marketable areas of expertise in knowledge-intensive, high-value niches. Digital, data, insurance and financial services, complex engineering consultancy and operations, and specific argi-tech and life sciences applications are promising examples. These capabilities map closely onto existing UK strengths identified in the Industrial Strategy. The UK has the structural economic components in innovation, academia, regulation, and export pathways to provide adaptation goods and services globally, but it is not guaranteed to be competitive without harmonising action, led by the public sector.

Cultivating competitive advantage in adaptation solutions will require coordinated action. For example, an effective domestic delivery programme is critical to building international buyer confidence in UK solutions. Delivering adaptation at scale and pace in the UK acts as a 'shop window', generating the evidence, standards and operational experience that make solutions commercially and internationally viable.

Prominent UK services such as insurance, reinsurance and advisory activities are less dependent on the domestic adaptation agenda. These products can scale internationally in response to growing global demand for climate risk management, based on data, modelling and professional expertise. However, they would still benefit from integration into export pathways designed for bundled UK adaptation solutions.

The unifying theme across the challenge areas we have identified is that concerted action can boost investability. Private capital has significant potential to increase both the supply and demand of adaptation solutions, but this is currently not being met. With the adaptation market set to grow up to an order of magnitude by mid-century, a clear-sighted approach could unlock private investment, deliver a resilient domestic economy, contribute to economic growth, and secure a market share for high-value UK exports.

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Annex A: Market sizing data and assumptions

A.1 Data values and source for calculation variables

A full description of variables, rationale, data sources, and calculations for TAM-SAM-SOM in Section 2 are presented below.

Variable	Description	Value	Source / Rationale
E	UK share of global adaptation exports	2.1–6%	The lower bound is the current level of global goods export attribute to the UK and the upper is the UK's global share in service trade minus financial services which is treated separately in this exercise (ONS, 2026a).
S	Share of international markets that is accessible	20–30%	GO-Science approximation of what is accessible to international firms of total adaptation spending, given that adaptation measures are place-based a significant portion of value will be retained locally. E.g., active cooling and irrigation works form large part of total projected costs (Krishnan and others, 2025). Here, running costs and engineering/labour costs are challenging for international providers to capture.
R	Share of spend realised	33.3%	Consensus position of adaptation economists GO-Science engaged with for this report. COP29 and COP30 lead to commitments to increase international adaptation finance. Krishnan and others (2025) model total current spend as ~1/3 of demand but forecast demand to rise 30–50% by 2030.
G	Required global spend on adaptation 2026-2035	£8,240bn	Cumulative 2026-2035 spend using estimates of today's global spend and required 2035 spend from Krishnan and others (2025) and a constant growth rate assumed from 2026-2035. Adjusted from 2020 to 2024 prices and converted from USD to GBP using average 2024 conversion rate; 1 USD = 0.8 GBP.
g	Required UK spend on adaptation	£202bn	Paul Watkiss Associates (2026) forecasts: £9bn/year to 2028 and £25bn/year 2029-2035. To note, the CCC's Well Adapted UK report was published after the presented analysis was conducted (CCC, 2026). The CCC state that £11 billion/yr of domestic adaptation investment to 2035 and beyond is required.
U	UK firms share of domestic spend	85–95%	GO-Science estimate. Value from major engineering works for water and energy resilience is retained through labour, supply chain, materials, and services. Some international value leakage through material imports and energy costs via foreign-owned generators and operators.

H	UK-mediated share of global adaptation finance	15–30%	GO-Science estimate. UK particularly well placed to capture adaptation finance business. London is largest foreign exchange hub, accounting for 38% of all transactions (The Global City, 2026). London hosts the Sustainable Bond Market and Loan Market Association, setting international standards. Full stack of financial and auxiliary services, including insurance, plus well-established links to development banks, makes London an attractive place to arrange adaptation finance.
M	Share of global adaptation spend mediated by financial services	50–68%	GO-Science estimate. Based on UNEP (2025) figures for public and private spending demand for LMIC and HIC. Estimates of what fraction of public and private spending in LMIC and HIC would be facilitated by financial services were combined and weighted by overall spending demand to give estimated range. E.g., we projected a limited role for financial services in mediating public spending in HICs which would largely originate from public budgets. UNEP (2025) acknowledges a large role for financial services in supporting both public and private spending in LMIC.
F	Total services fees (revenue) percentage for export finance	3–5%	GO-Science estimate based on complexities of bespoke adaptation finance arrangements, and the potential for ongoing management/administration fees (OECD, 2025). Financial services will facilitate international adaptation flow whether they are through development banks, international climate funds, philanthropy, or UN agencies. Direct treasury-treasury intergovernmental transfers are rare.
I	Share of UK domestic spend mediated by financial services	40–60%	GO Science estimate. Based on average split of public-private adaptation spending in HIC (42%-58% split, from Paul Watkiss Associates, 2026) . Where 10-30% of public spending was estimated to be facilitated by financial services (e.g. through public-private partnerships) and 60-80% of private spending was estimated to be facilitated by financial services. Large infrastructure projects in water and energy will be >90% facilitated by financial services by design. A limited amount of debt spending on adaptation was assumed for corporates, and a low rate of debt spending on adaptation for households.
J	Total service fees as a percentage for domestic finance of total cost	2–3%	These are standard fee rates for corporate or infrastructure finance in the UK. Reflects streamlined regulatory environment and established frameworks compared to international adaptation finance.
Y	Extrapolation of literature value for total global climate-impacted premium value (property) to 2035	£6,603-7,924bn	2024 property premium values (£500-600 billion) approximated using global property and casualty (P&C) premium value of £2 billion (Allianz, 2025) and an estimated property share of P&C of (25-30%, US Department of the Treasury, 2025). Extrapolated to 2026-35 period using 5% compounding annual growth rate in property premiums (Lloyds 2025; 2026).

Z	UK share of climate-driven premiums sold worldwide	7.3-9.4%	Property insurance was used as the proxy for climate-driven premium share, as it is the most climate-affected of the primary insurance types (casualty, life, special). PRA data for total 2024 UK property premiums sold compared with global written premium (GWP) value for property insurance policies (Swiss Re, 2021). London Market Group (2024) also quotes UK share of world property premium as sense check at 8.3%.
C	Estimate of property premium value directly attributed to climate change	7-11%	Approximately 20% of property premiums today are driven by natural catastrophe, potentially rising to 30% over the next decade (Fantini and others, 2023). If 1/3 of natural catastrophe losses are directly attributed to climate change (Romao and others, 2025), this implies climate change share of total premium value will rise from ~7% (1/3 of 20%) today to 15% in 2035 (1/3 of 30%), an average of 11% over the decade.
Pe	Proportion of UK climate-driven premiums sold abroad	15–25%	GO-Science estimate. We assume all personal property insurance premiums are sold domestically, and a subset of commercial premiums are sold for non UK-based assets.
Pd	Proportion of UK climate-driven premiums sold domestically	85–75%	GO-Science estimate. Domestic property insurance is a large share of climate-driven premium revenue (Lloyds; 2025, 2026).
P	Extrapolated literature value for global written premiums (GWP) of reinsurance to 2035	£3,750bn	S&P Global Ratings (2024) published historic trends of reinsurance GWP up to the end of 2023. Historic 6% annual growth rate was used to extrapolate 2023 figure out to 2035.
L	UK share of GWP for reinsurance	11–15%	Based on historic 2016-2024 data (London Market Group, 2024), and published figures from Lloyds (2025) and International Underwriting Association of London (2025) for reinsurance premiums.
W	Share of global reinsurance driven by climate change	15–25%	Based upon brokers' data (Lloyds, 2025) showing property as majority of UK reinsurance premium class (~60%) and GO-Science estimate of catastrophe vs non-catastrophe split (25-40%) of property reinsurance as a proxy for the climate-driven fraction of total reinsurance premiums.
Ve	Share of UK written reinsurance covering international assets	75–95%	GO-Science estimate. Based on Lloyds (2025) reporting that 89% of 2024 revenue was from international business. Industry report says 68% of total premiums (including direct insurance) were written outside the UK (London Market Group, 2024). Vast majority of insurable assets also sit outside the UK, particularly in the eastern seaboard of the US which is prone to extreme weather events.

A.2 Caveats regarding insurance calculations

Approximating the climate-driven opportunity in insurance required considering direct insurance and reinsurance separately. Reinsurance is the transfer of risk from direct insurers in exchange for a share of the direct premium value. Insurance calculations are presented with the following caveats:

- There are data gaps for climate-driven reinsurance risk premiums (IAIS, 2025)
- Reinsurance isn't new business globally, because it involves risk transfer from direct insurance policies, so we cannot sum reinsurance and direct insurance sold globally to give a cumulative market size (this is known as 'market activity').
 - However, for the UK, reinsurance sold to non-UK insurers can be added to UK direct premiums sold to give a cumulative total of market size. This is because the capital for the direct premium originated outside the UK.
- As UK is the global reinsurance leader, and the vast majority of asset value is held outside the UK, climate driven premium growth should be a net opportunity for UK reinsurers.
- Reinsurance is sold again amongst other reinsurers (a process known as retrocession), but tracking and accounting for these flows is beyond the scope of this report.
- It was assumed that UK insurers insuring UK-based assets was a domestic opportunity, even if the ultimate owners of those assets were located outside the UK. It was beyond the scope of the report to account for this.

Annex B: Database development

B.1 Tools and scope

The database of adaptation goods and services was developed using an AI supported approach to identify and structure information on adaptation related economic activity by UK firms. The primary tool used was Microsoft 365 Copilot (Microsoft Corporation), a cloud hosted large language model-based assistant integrated within Microsoft 365 Copilot Chat. The system is continuously updated by Microsoft and does not publish a fixed version or build number.

All interactions used to generate the database content occurred between September and December 2025. Copilot was used to search, collate and structure information from publicly available sources, including company websites, government publications, academic literature and established industry reports. A sample of the iterative prompts used is provided at the end of this Annex.

B.2 Analytical workflow

The database was produced through a structured, multi stage workflow designed to balance breadth of coverage with analytical consistency. The workflow is shown in Figure A1.

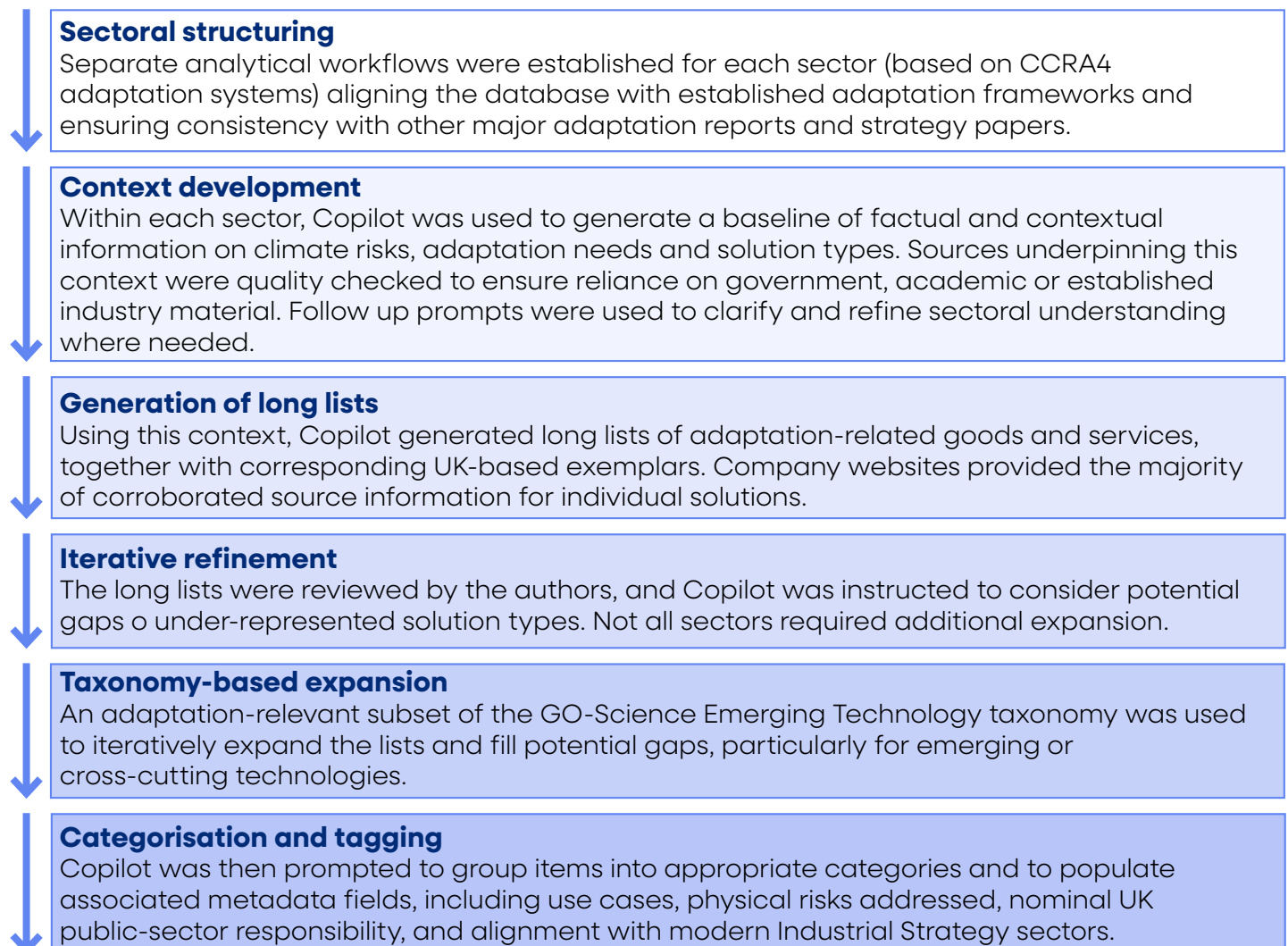


Figure A1: Analytical workflow

B.3 Assessment of competitive advantage and export potential

To assess competitive advantage and export potential, additional contextual documents were uploaded for each sector, describing adaptation trends, international markets and competitive dynamics.

Copilot was prompted to critically assess each item in the database in relation to the (a) tradability of the solution, (b) evidence of international demand, (c) UK capability relative to competitor countries, and (d) potential for value capture by UK firms.

Based on this qualitative assessment, a shortlist of goods and services was produced for each of the 14 sectors where a 'clear' or 'niche' export potential was identified. Competitive advantage was considered relative to international competitors' capabilities, drawing on both the uploaded contextual material and publicly available evidence.

B.4 Quality assurance and peer review

A two-step quality assurance process was applied:

- 1. Desk research verification:** A randomised 10% sample of the database entries was corroborated through desk research. This revealed that two start-ups identified as providers had actually ceased trading.
- 2. Expert peer review:** Shortlists for the 6 largest sectors (comprising over 85% of total export potential goods and services identified) were sent for external peer review, with a minimum of 2 reviewers per sector. Reviewers were asked to assess the plausibility of the export potential judgements, comment on the robustness of the analysis, and identify clearly omitted goods or services. Reviewers were fully briefed on the AI supported methodology used to generate the database and shortlists. Peer review comments were actioned, resulting in approximately ten goods and services being added and another ten removed. Reviewers also suggested several additions to identified exemplars which were also added.

The peer reviewed shortlists were then carried forward for comparative analysis alongside the full database.



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