

AN INTRODUCTION TO  
**ALIGNING TRANSITION  
PLANNING AND  
FINANCIAL PLANNING**

**KEY QUESTIONS  
FOR FINANCE  
TEAMS**

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# INTRODUCTION

There is increasing pressure on organizations to align transition planning and financial planning. This pressure is coming from stakeholders, investors, and voluntary or mandatory frameworks and standards.

There are two ways to achieve alignment of transition planning and financial planning: either through a separate, but fully costed, transition plan, or through embedding transition planning within the wider business strategy and planning and thereby including it in financial planning.

## The benefits of aligning transition planning and financial planning include:

- Understanding the potential financial implications of the actions required to deliver an organization's transition plan, making it more likely that targets will be achieved
- Considering whether the organization will be profitable in a net zero world
- Ensuring that the organization has estimated the funding needed, to be raised or allocated, to meet its goals and respond to climate-related risk, thereby making the organization more resilient
- Demonstrating to internal and external stakeholders that the organization is committed to turning targets into action and responding to the climate emergency
- Showing adherence with the requirements of various disclosure standards and frameworks

The disclosure frameworks and standards that reference or imply financial planning associated with transition planning include:

- International Financial Reporting Standards (IFRS) S2 Climate-related Disclosures
- European Sustainability Reporting Standards (ESRS, see boxout)
- The Disclosure Framework developed by the Transition Plan Taskforce (TPT, see boxout)

**“Transition planning should be integrated into the financial planning process to enable an organization to understand the financial implications of reaching net zero and respond to climate-related risks and opportunities.”**

Helen Slinger, Executive Director, A4S

- The net zero transition plan framework developed by the Glasgow Financial Alliance for Net Zero (GFANZ)
- The Global Reporting Initiative (GRI) Standards
- The questionnaire developed by CDP (formerly the Carbon Disclosure Project)
- The International Organization of Securities Commissions (IOSCO) Objectives and Principles of Securities Regulation, requiring investors to be provided with information necessary to make informed investment decisions on an ongoing basis, which may include in relation to transition planning

## ESRS

### DISCLOSURE REQUIREMENTS UNDER ESRS

“14. The undertaking shall disclose its transition plan for climate change mitigation.

... The information required by paragraph 14 shall include: ...

(h) an explanation of how the transition plan is embedded in and aligned with the undertaking's overall business strategy and financial planning;”

“64. The undertaking shall disclose its:

- (a) anticipated financial effects from material physical risks;
- (b) anticipated financial effects from material transition risks; and
- (c) potential to benefit from material climate-related opportunities.”

[Extracts from ESRS E1](#)

## TPT

### DISCLOSURE REQUIREMENTS UNDER THE TPT DISCLOSURE FRAMEWORK

“An entity shall, to the extent the financial effects of its transition plan are separately identifiable, disclose information about the effects of its transition plan on its financial position, financial performance and cash flows over the short-, medium-, and long-term, including information about how it is resourcing or plans to resource its activities in order to achieve the strategic ambition of its transition plan.”

[Extract from the TPT Disclosure Framework](#)



However, limited progress has been made to date on integrating transition planning into financial planning processes. The CDP 2025 Corporate Health Check found that “just 9% of companies reported to have aligned at least 5% of their capital expenditure with their climate transition plan”.<sup>1</sup>

Aligning your transition planning and financial planning will require you to draw on existing skills (eg using assumptions and forecasts) and develop new ones (eg looking over longer time horizons). The key areas to consider include:

- **Time horizons** – financial planning typically considers a short-term time frame, focusing on a period of around 12 to 24 months. Transition planning needs to consider the short, medium and long term, as organizations often have goals up to 2050, supported by interim targets.
- **Uncertainties** – reaching net zero will require innovation and is likely to involve products and solutions that either do not currently exist or are in the early stages of development. This uncertainty can make it challenging to estimate accurately the financial impact, so it is important to use assumptions and to report them transparently. For example, it may be difficult to estimate how much it will cost to deploy new technologies essential for the transition, or in which jurisdictions carbon prices may be mandated and in what time frame. Dealing with uncertainties and using estimates is within the skill set of the finance team, for example in determining provisions or forecasting future revenues.
- **The evolving nature of action** – the action that you need to take today will be different from the actions needed in the future. Initially, the focus may be on initiatives that are easy to implement and have a short payback period, such as certain energy efficiency measures. As organizations evolve their transition planning, other actions will be required.

- **Business models** – aligning to a net zero world may result in a fundamental change to your business model or business structure. For example, you may have specific activities or subsidiaries that are solely focused on high-emissions activities. You may find that you need to take tough decisions about winding down certain operations or assets or to undertake a merger or acquisition.
- **Knowing where to start** – understanding the financial implications of transition planning can be overwhelming. Transition planning is likely to affect every part of your organization, from your business model to your products and services. This can make it difficult to decide where to start.

#### TIP: FOCUSING EFFORTS

Financial planning should sit alongside your organization’s work to develop a greenhouse gas (GHG) emissions baseline and set targets. A baseline, even a high-level estimate, will help you to identify GHG emissions hotspots so that you can direct efforts and capital to areas where the greatest emission reductions can be achieved, for example via the managed phasing out of high-emitting assets. Targets are likely to have been developed based on the key actions required to achieve them, eg fleet vehicles to become 100% electric by 2030. These actions provide a good starting point for estimating the financial implications of delivering targets.

Further A4S resources on carbon accounting and reporting include [guidance](#) and a [case study on Deutsche Post DHL Group](#).



1. CDP (2025): [CDP Corporate Health Check 2025](#)

The finance team is well versed in undertaking financial planning, with producing budgets and forecasts generally a key part of its work. However, at the moment, few teams are likely to have experience of fully integrating transition planning into financial planning. From within the finance team, you have a crucial role in accelerating action to ensure that your organization is resilient to climate-related risks and that sufficient resources are being allocated to reaching net zero.

These questions aim to help finance teams to identify transition planning activities that have an impact on financial plans. You can work through the questions with relevant colleagues to access the information you need.

### NATWEST GROUP: DEVELOPING A NET ZERO TRANSITION PLAN

At NatWest, the finance team, with collaboration across the bank, drove and coordinated the transition planning process. The team completed work to integrate financial planning and transition planning, including understanding:

- The impact of the products and services in the transition plan on forecasting
- How the proposed actions from the transition plan were driving changes in the balance sheet

More information on NatWest's work can be found [here](#).



# THE QUESTIONS

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For the purposes of these questions, transition planning includes:

- The decarbonization of the organization
- The contribution to economy-wide decarbonization
- The organization's response to climate-related risks and opportunities

The questions are designed for internal use only and are sector and geography agnostic. The questions aim to provide useful insights for both real-economy organizations and financial institutions.

The questions are intended to help finance teams get started and identify key activities. They may not provide a comprehensive list of every possible transition planning activity that your organization will undertake, nor do they consider accounting treatment in accordance with specific accounting standards.

You can ask colleagues these questions to help you identify activities that may affect different areas of budgets and forecasts. The questions should give you a starting point for costing your transition plan. The questions have been drafted on the assumption that your organization has already started work on GHG emissions reduction and understating its climate-related risks, but that your transition plan is not yet fully integrated into your financial planning activities.

The first set of questions are grouped under the line items of:

- **Capex**
- **Revenue**
- **Opex**

Although we look at these three line items in turn, transition planning activities identified under one line item may impact all three. For example, if you introduce a new low-emissions product, it may require new manufacturing machinery (capex), generate new sales (revenues) and incur additional production costs (opex). There are also potential impacts on other line items that are not covered. When you use the prompting questions you should also consider impact on all other line items.

The next questions consider wider implications beyond the primary line items:

- **Value chain**
- **Regulation, internal pricing and offsets**

The value chain must be considered because for many entities, the delivery of their net zero ambitions are reliant on the decarbonization of their value chain and the actions in the value chain impact the entity's transition. Regulation, internal pricing and offsets should also be considered as this is an evolving space and has financial implications.

Finally, there are questions on **raising capital**. One of the benefits of aligning transition planning and financial planning is a better understanding of the capital resources that you may require.

This document also includes practical examples of organizations that have already integrated aspects of transition planning into financial planning, in order to illustrate the different line items and areas with real-life examples. Examples are drawn from publicly available CDP questionnaire responses and A4S case studies. The sources are linked throughout, and you can find a complete list of examples in the [Resources](#) section.

## LINE ITEMS

### CAPEX

- New assets
- Existing assets
- Revalue, write-off, impair or retirement

### Examples:

- Levi Strauss & Co
- Sainsbury's

### REVENUE

- New products and services
- Existing products and services
- Circularity of products and services

### Examples:

- Levi Strauss & Co
- Westpac
- Sainsbury's

### OPEX

- Energy
- Transportation
- Staff
- Legal and compliance
- R&D

### Examples:

- Unilever
- Levi Strauss & Co
- Hilton
- Adecco

## WITH CONSIDERATION OF

### VALUE CHAIN

### Example:

- Sainsbury's

### REGULATION, INTERNAL PRICING AND OFFSETS

- Emissions trading schemes
- Carbon border adjustment mechanisms
- Tax credits and penalties
- Other regulations
- Internal carbon fee or shadow price
- Carbon offsets

### Examples:

- Unilever
- Kering
- Storebrand
- National Grid

## LEADING TO

### RAISING CAPITAL

### Examples:

- Unilever
- Apple
- Solvay
- Sainsbury's

Once you have used the questions to identify your transition planning activities, you will need to do further work to understand the timing and size of the financial impact. The size of the financial impact will depend on multiple factors, and you should consider materiality when deciding where to focus your efforts. You may also find that the financial impact of some of the activities outlined in the questions are difficult to quantify in monetary terms. Any estimates and assumptions you use in your calculations should be clearly noted and provided to decision makers where appropriate.

## CONSIDERING NATURE AND JUSTICE

When undertaking transition planning, important considerations include:

1. Nature – protecting and restoring nature should be an essential part of transition planning as nature plays a key role in both mitigating the effects of climate change and adapting to its impacts.
2. People – the transition to net zero should be “as fair and inclusive as possible to everyone concerned, creating decent work opportunities and leaving no one behind.”<sup>2</sup> This may include, but is not limited to, labour rights, cultural preservation, economic inequality, health impacts and job training and education.

You will need to factor in potential significant impacts regarding nature and people, where relevant, and to understand the possible financial consequences. For example, if your organization can anticipate the significant impacts on stakeholders of transitioning to net zero, it will be better prepared for these impacts, eg changes in staff wellbeing, productivity and potential redundancy costs.



<sup>2</sup> International Labour Organization (2024) [Climate change and financing a just transition](#). Accessed: 6 January 2025.

# CAPEX

Significant capital expenditure (capex) will be required to develop new low-emissions assets and to retrofit existing assets, both to reduce emissions and to make the assets more resilient to physical risks.

Existing assets may become stranded, ie suffer from unanticipated or premature write-downs, devaluation or conversion to liabilities. If you identify early which assets may become stranded assets as your organization (or the wider economy) decarbonizes, you may plan to stop investing in these assets, smooth the writing-off period or have time to find alternative opportunities for these assets.

There may be significant decommissioning costs for some existing assets that need to be replaced or disposed of as they are no longer viable in a net zero economy, such as coal-fired power plants.

Development costs, eg for the development of new products, are also likely to be partially opex and partially capex.

The value of your existing assets may increase (eg highly rated energy-efficient buildings) or decrease (eg machinery used to produce gas-powered cars), depending on how suited they are to the net zero world.

Understanding your capex requirements, along with the cash you have available, can help you to determine where you will need to raise additional finance.

## QUESTIONS

- Q. Are you installing any new low-emissions assets (eg wind turbines, solar panels or EVs – either owner or hire purchase)?
- Q. Are you buying any assets that are required to manufacture new low-emissions products or to increase the circularity of products?
- Q. Are you upgrading or retrofitting any assets on the basis of preparedness for the transition (eg making old buildings more energy efficient)?
- Q. Are you likely to incur costs to ensure assets are resilient to physical risks (eg adding in flood defences)?
- Q. Are you likely to need to revalue, write off, impair or retire any existing assets due to the transition?
- Q. Are your fixed assets likely to increase in value?
- Q. Are you investing in any capex to support your value chain?

### AN INVESTOR'S PERSPECTIVE ON CAPEX

Investors are increasingly using capex as an indicator to assess whether an organization's transition plan is credible. They evaluate whether or not capex has been allocated to decarbonization activities and, if so, whether the amount is realistic.







### CAPEX: APPAREL COMPANY (LEVI STRAUSS & CO)

All major capital investments must go through a rigorous review process, including consideration of sustainability impacts of these investments. For example, in 2021, the Board authorized the investment in LS&Co.'s sixth distribution center in Europe, which will address the region's growth and capacity needs and feature responsible design features inspired by Cradle to Cradle® principles. Sustainability requirements were a key consideration in the authorization for this project that broke ground in 2022. To secure funding for smaller capital expenditure projects, we must perform financial analysis on each of the energy or emissions reduction initiatives that are scoped for our global facilities. We have certain payback criteria for capital projects that must be achieved for funds to be allocated from the total company financial plan, for example, all the following implemented initiatives required capital expenditures: HVAC upgrades, installation of Energy Management Systems, boiler, and lighting upgrades (Plock facility), and installation of an automated energy efficient conveyor belt system and water recycling system (Henderson, Nevada distribution center). When capital projects are needed to our facilities, we look for opportunities for additional energy and water efficiency. These factors influence which projects are approved. The magnitude of impact on our financial planning for capital expenditures is medium.

[Extract from Levi Strauss & Co's CDP climate change questionnaire 2023](#)



### CAPEX: SUPERMARKET CHAIN (SAINSBURY'S)

Our financial planning related to capital expenditures has been influenced by climate change risks and opportunities primarily through the earmarking of funds for investing in the purchase of fixed assets such as technology and equipment that will support Sainsbury's with climate change adaptation and mitigation efforts. In line with our Net Zero by 2035 Plan, the time horizon covered by this aspect of our financial planning is medium-term (5-15 years). We build strong business cases with clear narrative around the carbon savings achievable. In terms of a case study, Sainsbury's is committed to Project Graphite, which is in its 12th year. Project Graphite is focused on achieving the key objectives outlined in our Net Zero Roadmap: improving energy efficiency in our buildings, decarbonising and electrifying heat, switching to natural refrigerants, sourcing 100% renewable electricity and clean gas alternatives and transitioning to zero carbon vehicles and infrastructure. This includes measures such as replacing existing lighting with energy efficient LED lamps, investing in renewable energy, removal of fossil fuels through the installation of refrigerated integrated heating and cooling and engineering innovation. In terms of key activities undertaken this year we spent over £70 million on carbon reduction measures, including installing LED across our remaining stores resulting in 100% LED across our estate, Solar PV optimisation and the installation of solar, refrigeration efficiency, the removal of HFCs and engineering innovation. We have also committed to spending £5 million over four years through Sainsbury's Innovation Investments.

[Extract from Sainsbury's CDP climate change questionnaire 2023](#)

# REVENUE

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As part of your transition planning, you will need to consider changes to your future revenue streams, along with the associated cost of sales:

- You may introduce new and innovative low-emissions products and services – and retire old, high-emissions ones.
- Your existing products and services may also no longer be financially viable due to increased prices driven by the physical impact of climate change. For example, a supermarket chain may no longer be able to source certain products due to prolonged periods of drought in regions where the products were previously grown, resulting in lack of availability or increased costs to produce.
- In a net zero world, there is likely to be more emphasis on circularity, with reuse and repurpose being commonplace.

This work to secure your revenue streams can help you to manage your climate-related risks and opportunities while supporting your efforts to decarbonize the organization and contribute to economy-wide decarbonization.

## QUESTIONS

- Q. Are any new low-emissions products or services going to be introduced?
- Q. Are any existing products or services likely to be retired or reduced?
- Q. Are any programmes being introduced to increase the circularity of products or services?



### NEW PRODUCTS AND CIRCULARITY: APPAREL COMPANY (LEVI STRAUSS & CO)

As we work to meet the needs and shifting preferences of our customers around the world, we have an opportunity to develop new products which will give us a better competitive position and continue to solidify our position as an apparel industry leader, while driving revenues. As part of LS&Co.'s ongoing effort to reduce the impact of our source materials, we have long been investigating and innovating new fiber and fabric strategies that we believe can deliver more sustainable products. WaterLess® Case Studies include: our commitment to the Ellen MacArthur Jean Redesign Guidelines where we deliver more sustainable products to market, which includes but is not limited to maintaining water volume at less than 30 liters/meter. Additionally in 2022, we launched into the market, the circular 501 jeans. We blended certified organic cotton with Re:NewCell's pioneering Circulose® fiber, a sustainably sourced viscose made in part from post-consumer recycled denim and textiles. We also maintain our SecondHand buyback and resale platform. We conduct market research to understand our consumers' preferences which influences our product offerings and revenue forecasts.

[Extract from Levi Strauss & Co's CDP climate change questionnaire 2023](#)



### NEW PRODUCTS: FINANCIAL INSTITUTION (WESTPAC)

Revenues may increase due to efforts to increase our exposure to the climate solutions sector. This has been factored into our processes by setting short- and medium-term targets for lending to the climate solutions sector ([A]\$3.5bn by 2023 and [A]\$15bn by 2030). Revenues may also be impacted negatively as other sectors of the economy reduce in size as the result of efforts to mitigate climate change. The magnitude of this risk is considered low given Westpac's relative low exposure to carbon intensive sectors. This has been factored into our processes by setting lending criteria and targets for high transition risk sectors (e.g. thermal coal, oil & gas and coal-fired electricity generation). Similarly, revenue growth linked to physical changes caused by climate change may increase due to greater investment in adaptation measures and the emergence of new products.

[Extract from Westpac's CDP climate change questionnaire 2020](#)

## SCENARIO ANALYSIS

Scenario analysis is a process of analysing possible future events by considering alternative possible outcomes. It is not about predicting the future – it is about understanding the dynamics and variables that can lead to different future states. Climate scenario analysis is a useful tool that can enable organizations to consider the potential financial impacts of climate change on their business under different warming scenarios. For example, climate scenarios have been developed by the Network for Greening the Financial System (NGFS) and the Intergovernmental Panel on Climate Change (IPCC). However, caution should be exercised when using climate scenarios, as many of the existing scenarios significantly underestimate climate risks.

As the climate transition involves a high degree of complexity and inherent uncertainty, preparing a scenario analysis can present challenges. You can start with a simple scenario analysis, being transparent about the assumptions and challenges.

Explore the following resources, focused on financial institutions, which may help you to address the challenges as you develop your own scenario analysis:

- [Webinar Recording: Decision Useful Climate Scenarios](#)
- [Q&A: A Narrative Approach to Climate Scenario Analysis at USS](#)
- [TCFD Climate Scenario Analysis](#)
- [Emperor's New Climate Scenarios: A Warning for Financial Services](#)



### RISK EXPOSURE: SUPERMARKET CHAIN (SAINSBURY'S)

As part of a wider scenario analysis, sourcing data was used to identify the key products exposed to chronic climate-related risks, which was then applied to our sales data to determine the products with the highest financial materiality. Two of the product lines at highest risk were coffee and tea, which we undertook a full scenario analysis on to determine the impact of drought and extreme temperatures on production capacity and future revenue.

... Our scenario analysis considered the impacts of chronic physical risks and diminished/lost crop yields resulting in increased cost of supply of coffee and tea. We assume these costs are passed to the consumer, reducing product demand and revenues.

[Extract from Sainsbury's' CDP climate change questionnaire 2023](#)

# OPEX

The impact of transition planning on operating costs (opex) is likely to be far reaching – and both positive and negative.

Initiatives in certain opex categories – such as moving to renewable **energy** tariffs or changing to low-emissions **transportation** – are likely to reduce both your costs and your GHG emissions. This makes the business case for change easier than for other GHG emissions reduction initiatives which may increase opex.

However, there will also be **people and skills** costs associated with transition planning, both internal and external, as well as **legal and compliance** costs. Employees and consultants alike are grappling with the full implications of the climate emergency and what it means for their organization, including the potential increase to staffing costs.

The products and services required for a net zero world may not yet exist or may not be available at the scale required. Research and development (**R&D**) expenditure can help you to progress these products and services, with benefits for both your organization and wider society. R&D is also likely to affect other financial areas. For example, you may be able to capitalize some development costs.

Transition planning is likely to impact both your direct operations and your value chain (both upstream and downstream). Likewise, taking action in your value chain will affect your organizational decarbonization and your opex. For example, if your logistics operators are decarbonizing, the cost of their services may decrease, which will have a knock-on effect on your own opex.

## QUESTIONS

### ENERGY

- Q. Are you switching to renewable energy tariffs?
- Q. Are you implementing any energy efficiency initiatives that will reduce consumption?
- Q. Are you developing a renewable energy procurement strategy?

### TRANSPORTATION

- Q. Are you changing your distribution practices to reduce emissions (eg switching fossil fuel transportation to EVs or using sea freight rather than air)?
- Q. Are you encouraging employees to select low-emissions travel options?
- Q. Are employees changing behaviour to reduce travel (eg having online meetings rather than in-person)?

### PEOPLE AND SKILLS

- Q. Are you hiring new staff to develop your transition planning approach?
- Q. Are you bringing in consultants to assist with your transition planning work?
- Q. Are any of the current roles in your organization likely to become redundant in the net zero transition?
- Q. Are you providing support to employees who are made redundant, and are you taking action to address the impact on communities?
- Q. Are you retraining any staff whose role will no longer be required in the net zero transition?
- Q. Are you providing training to current employees to raise awareness on climate action and help to implement the transition plan effectively?
- Q. Are any remuneration policies linked to action, inaction, or outcomes on climate?

## QUESTIONS

### LEGAL AND COMPLIANCE

- Q. Are your insurance premiums likely to change as the risk profile of certain assets changes due to the climate emergency?
- Q. Are you likely to need any provisions for fines and lawsuits due to your approach to addressing the climate emergency?
- Q. Are you likely to incur legal expenses to understand the changing landscape of climate or transition plan requirements?
- Q. Are your compliance costs likely to increase as the economy transitions to net zero?
- Q. Are you seeking external verification of aspects of your transition plan?
- Q. Are your reporting costs likely to increase as a result of developing and publishing your transition plan?

### R&D

- Q. Are you planning to undertake R&D into innovative low-emissions manufacturing and production processes?
- Q. Are you completing R&D into technology for product or services recycling, reuse and resale?



### ENERGY EXPENDITURE: CONSUMER GOODS (UNILEVER)

Energy is one of the major overhead costs in running Unilever's 290+ factories – energy costs are around 5-10% of Unilever's total operating spend e.g. in India we spend around €25m on electricity annually. There is an opportunity to make cost savings through the installation of on-site renewable energy, wherever possible and feasible, or through local or market instrument such as [Power Purchase Agreement] PPA agreements which not only reduce carbon emissions but also deliver cost savings. We expect that our ambition to eliminate direct greenhouse gas emissions from our operations by 2030 through renewable electricity and energy while, at the same time, improving our energy efficiency, will not only lower overhead costs but will improve resilience in our energy supply and attract investors who are increasingly considering carbon risk. In the future, there may also be opportunities in on site energy storage through third parties.

[Extract from Unilever's CDP climate change questionnaire 2023](#)



### ENERGY EXPENDITURE: APPAREL COMPANY (LEVI STRAUSS & CO)

We see incorporating climate-based analysis as an opportunity to reduce our operating costs through energy and water efficiency measures. In 2022, LS&Co. rolled out a Global Energy Management system which allows for improved management of energy data and crucially allows LS&Co. to analyze potential financial investments for focused site-level interventions. Based on insights from this system, LS&Co. performed LED lighting replacements in 2021 in the Canton, MS and Northampton, UK distribution centers. The LED lighting replacement in the UK distribution center is anticipated to yield annual energy savings of almost 240 MWh. In the short-term, we expect a slight increase in costs due to these capital expenditures related to energy efficiency but in the long-term we expect to see a significant reduction in energy-related costs. These assumptions have been incorporated into our financial plans.

[Extract from Levi Strauss & Co's CDP climate change questionnaire 2023](#)



### ENERGY EXPENDITURE: HOSPITALITY (HILTON)

Climate-related opportunities have influenced our financial planning for indirect costs related to operational efficiency of our buildings, including utility costs. We recognize that by operating our hotels more efficiently we can reduce our impact on the environment, contribute to our 2030 Goals and science-based targets, and significantly reduce our utility costs. Utilities are the second highest spend at a hotel after labor, so any steps that we can take to reduce our utility consumption has the potential to significantly benefit us financially. We use our LightStay system to measure and manage our hotels' utility costs and sustainability investments. Through the use of LightStay, we have achieved significant reductions in operating costs as our hotels continually seek to improve their efficiency in energy, carbon, waste and water. Since 2008, Hilton has reduced carbon emissions intensity by 49%, waste intensity by 70%, energy use intensity by 40% and water use intensity by 39% per square meter across our global managed portfolio. We estimate that our reductions have saved over a cumulative \$1 billion in utility costs. These savings are significant to our bottom line and demonstrate how integration of climate-related opportunities into our financial planning has resulted in value to our bottom line and that of our owners. The time horizon for integration of climate-related opportunities into our financial planning is immediate: we continuously use LightStay to drive efficiencies across our portfolio and ensure that we are taking steps to reduce our environmental footprint in line with our 2030 Goals and science-based targets.

[Extract from Hilton's CDP climate change questionnaire 2023](#)



### STAFF EXPENDITURE: RECRUITMENT AGENCY (ADECCO)

As of 2020, we furthermore made additional budget available to engage an external consultancy to strengthen our footprint measurement efforts towards [Science Based Targets initiative] SBTi commitment and external assurance.

[Extract from Adecco's CDP climate change questionnaire 2023](#)

# VALUE CHAIN

Engaging with your value chain may be a cost outlay in the short-term but may offer cost savings if you embed more sustainable practices into your organization, making your value chain more resilient and better able to take advantage of climate-related opportunities.

## QUESTIONS

- Q. Are prices likely to increase due to supply issues resulting from climate change (eg will it become increasingly challenging to grow certain crops in certain parts of the world)?

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- Q. Will you have to stop using certain suppliers due to their inaction on net zero or on addressing a physical risk that they are exposed to?

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- Q. Are you likely to have to change suppliers due to switching to lower GHG emissions alternatives?

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- Q. Are you engaging with upstream/downstream members of your supply chain?

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- Q. Are you incentivizing upstream/downstream members of your value chain (eg discounts if they reduce their GHG emissions, or grants or low-interest loans for suppliers who invest in low-emissions technologies)?

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- Q. Are you delivering education and training for upstream/downstream suppliers/customers?

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- Q. Are there any system change requirements to enable GHG data acquisition and handling in your supply chain?

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- Q. Are you engaging with the government, policymakers and peers on transition planning?

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- Q. Are you undertaking R&D into technology for better supply chain GHG emissions tracking?



### SUPPLY CHAIN: SUPERMARKET CHAIN (SAINSBURY'S)

To mitigate the impact of this risk [being the risk from extreme temperatures and drought], we continue to work with suppliers to understand growing locations and adaption plans. We are exploring supply chain adaption options, including higher altitude locations, vertical farming, glass growing structures, reservoirs, drainage channels, and drought and temperature resistant crop strains. We also ensure at risk commodities are sourced via sustainable certification programmes, where possible, such as Fairtrade, Rainforest Alliance, and BCI Cotton.

... Our approach to responding to climate risk is to engage key groups (e.g. suppliers, industry collaborators) with the aim of increasing supply chain resilience by identifying and implementing mitigation activities. We have worked with our suppliers to identify climate risks and put in place mitigation measures to minimise the impact on the supply chain. Such measures include conducting supply chain risk assessments to identify vulnerabilities along the supply chain (e.g. location of facilities in high flood risk areas, low altitudes etc.). We then work with suppliers to implement mitigation measures such as vertical farming, reservoirs, drainage channels, drought & temperature resistant crops. An annual budget of £1.7 million has been allocated to conduct research and analysis with our key partners and support improved resilience with our suppliers.

[Extract from Sainsbury's' CDP climate change questionnaire 2023](#)



# REGULATION, INTERNAL PRICING AND OFFSETS

Different types of taxes and pricing exist in relation to carbon, and these can be regulated or voluntary.

In the regulated space, there are:

- **Emissions trading schemes** – such schemes operate under the principles of ‘cap and trade’. Governments set a cap on the volume of GHGs a company can emit and issue permits, which can be obtained from the government or traded with other firms. The cap is reduced over time. The schemes typically cover high-emitting sectors (eg power, heavy industry, air transport) but some have wider scope – the New Zealand emissions trading scheme covers all sectors of the economy.
- **Carbon border adjustment mechanisms** – these mechanisms involve charging importers based on the production emissions of the goods they import. This is to avoid ‘carbon leakage’, where organizations transfer their production activities to countries with more lax emissions constraints. The European Union (EU) agreed the world’s first carbon border adjustment mechanism in 2023.
- **Tax credits and penalties** – tax can be used to encourage investment in low-carbon energy and manufacturing activities and in carbon capture and storage, and to discourage high-carbon activities. The US Inflation Reduction Act, signed in 2022, includes a range of tax credits and penalties.
- **Carbon tax** – this involves companies being taxed at a set rate based on their emissions, to encourage them to reduce emissions. Sweden implemented a carbon tax in 1991. The tax applies to fossil fuels used for heating and transportation. Sweden’s carbon tax rate has gradually increased over time to encourage decarbonization.
- **Other regulations** – jurisdictions are increasingly introducing sustainability legislation that has ripple effects through global supply chains. For example, the Corporate Sustainability Due Diligence Directive (CSDDD) in the EU expects organizations to take wider responsibility, extending to their supply chains.

Given the various regulations, it is important to understand how your organization may be impacted now and in the future. This includes the potential impact directly on your organization as well as through its supply chains.

In the voluntary space, some organizations are also introducing internal carbon pricing or buying carbon offsets. Currently, in most cases the cost of carbon to an organization is zero but the environmental cost is borne elsewhere. There is currently no globally agreed, standardized cost for carbon. Internal carbon pricing can be used for risk management and to aid long-term decisions, as it allocates a cost to generating carbon.

## INTERNAL CARBON PRICING

Internal carbon pricing tends to take one of two main forms: an internal carbon fee or a shadow price.

- **Internal carbon fee** – with this approach, money changes hands. You can use money raised from an internal carbon fee to fund aspects of your transition plan: this will be discussed in the next section.
- **Shadow price** – this involves setting a hypothetical price that you apply to inform decision-making with no money actually changing hands. A shadow price can influence capex investment decisions. For example, you may decide that a lower financial return on investment is acceptable in return for mitigating the risk of future carbon taxes in the medium to long term.



## CARBON OFFSETS

Offsets and credits are terms that are often used interchangeably, but can mean quite different things and definitions may change depending on the source that you are using. For the purposes of this work we have used the term offsets as being connected to voluntary markets, with credits being connected to regulated markets.

Although GHG emissions avoidance and reduction should be the priority, some organizations are choosing to use carbon offsets. The price and demand for carbon offsets is likely to change over time.

If your organization has chosen to use carbon offsets, from a financial planning perspective you will need to consider:

- How many offsets are required?
- How is this likely to change over time?
- How will the cost of offsets change over time?

You should also consider the potential controversies of offsets, including possible impacts on people and planet. Organizations should take steps to identify and purchase high-integrity offsets which minimize the risk of undesired outcomes.

The use of offsets generally, as well as the use of offsets that have a negative impact on the environment and planet, can cause reputational damage for an organization, and this may have financial consequences.



## QUESTIONS

### REGULATED AREAS

- Q. Are you going to buy or trade any permits under emissions trading schemes?
- Q. Are you importing goods into countries with a carbon border adjustment mechanism?
- Q. Are you undertaking any activities that may benefit from tax credits?
- Q. Are you undertaking any activities that are subject to tax penalties?
- Q. Are you operating in countries with a carbon tax?
- Q. Are there any upcoming relevant regulations?

### VOLUNTARY AREAS

- Q. Are you using an internal carbon price?
- Q. Are you charging an internal carbon fee?
- Q. Are your decisions likely to change due to shadow pricing?
- Q. Are you buying carbon offsets?



### REGULATION AND OFFSETS: CONSUMER GOODS (UNILEVER)

Tightening regional or national regulations as well as climate commitments across individual businesses could drive widespread implementation of carbon taxes or market schemes. This could translate into rising direct and indirect costs linked to carbon emissions, where the strongest impact would likely be on costs of sales linked to raw materials, production, and distribution emissions. Carbon taxes on household emissions or costs passed through to our consumers linked to household emissions may impact their disposable income and ultimately their purchasing power. We quantified how high prices from carbon regulations and voluntary offset markets for our upstream Scope 3 emissions might impact our raw and packaging materials costs, our distribution costs and the neutralisation of our residual emissions post 2039.

[Extract from Unilever's CDP climate change questionnaire 2023](#)



### CARBON OFFSETS: LUXURY GOODS (KERING)

The risk “Increase in direct costs associated with carbon pricing” has been assessed to be a material, through the assessment of Kering’s carbon hotspots (such as direct emissions, logistics and packaging) ... This risk has influenced financial planning through the decision to offset GHG emissions and become carbon neutral. Indeed, on top of efforts already made by the Group in recent years to reduce its carbon footprint and energy consumption (and therefore exposure to energy prices), Kering took a further step in 2019 by deciding to offset not only the GHG emissions falling into Scopes 1 and 2 of the GHG Protocol, as has been the case since 2011, but also all remaining annual Scope 3 emissions within its own operations and in its supply chains. The carbon offsetting (in 2021 in respect of 2020 CO<sub>2</sub> emissions) of all of the Group’s activities (Scopes 1 and 2 and part of Scope 3) and its supply chain (Scope 3), representing a total of 1,779,888 TCO<sub>2</sub> via REDD+ certified projects, protects and restores sensitive ecosystems (forests, wetlands, coastal areas) as well as supporting green energy generation projects. This decision led to the integration of related costs in the Group’s financial provisions and yearly planning.

[Extract from Kering’s CDP climate change questionnaire 2022](#)



### CARBON FEE: ASSET MANAGER (STOREBRAND)

In 2019, we decided to implement an internal carbon price and develop a tracking tool to measure air travel. Each manager can get information about the number of flights made by their respective teams, how this compares to the organizational average, as well as the emissions reduction target for different business units. They can also get information about the carbon price of these flights. For details on Storebrand’s approach to reducing its internal carbon footprint, see Storebrand Annual Report 2019, page 57. Thor Heyerdahl Climate Park, the first climate park to restore and protect the mangrove forests in Myanmar, created in honour of Thor Heyerdahl, the Norwegian adventurer and ethnographer. The project is registered under Verra’s Verified Carbon Standard (VCS) Program. The Kasigau Corridor REDD+ Project, which is registered under Verra’s VCS Program and Climate, Community & Biodiversity (CCB) Program. The money collected from the internal carbon price is used for internal or external sustainability projects. So far, funds raised from the carbon price have contributed to projects including a mangrove tree planting project in Myanmar and a project to halt deforestation in Kenya.

[Extract from A4S \(2021\), Storebrand: Using Internal Carbon Pricing as a Catalyst for Change](#)



### SHADOW PRICE: UTILITY COMPANY (NATIONAL GRID)

In our electricity transmission business, we use a carbon price to inform investment decision making, alongside other tools such as low-carbon policies and carbon weightings. We have embedded carbon data into our existing cost estimation tool which is used by our investment engineers to cost proposed investments. This enables us to measure the carbon impact of new infrastructure when we are making investment decisions.

[Extract from A4S \(2021\), National Grid: Embedding a Carbon Price into Investment Decisions](#)

# RAISING CAPITAL

Transition planning activities can generate or erode cash balances, so you should consider all activities together. Taking a holistic view of transition planning will help you to understand your financial position, financial performance and cash flow. This will help you to determine whether you need to raise capital. You can raise capital internally (for example, through a carbon fee) or externally (for example, through issuing a green or sustainability-linked financial product). If you are raising capital, the cost of financing (eg interest expense) will need to be included in your financial plans.

## SECURING TRANSITION FINANCE

Many financial institutions are now deploying capital to transition finance. Although work is ongoing regarding a universal definition of transition finance, GFANZ has proposed that it includes:

- 1. Climate solutions** – entities and activities that develop and scale climate solutions
- 2. Aligned** – entities that are already aligned to a 1.5°C pathway
- 3. Aligning** – entities committed to transitioning in line with a 1.5°C-aligned pathway
- 4. Managed phaseout** – accelerated, managed phasing out of high-emitting physical assets

Companies should consider how they align with the definitions of transition finance, as this may help them to access capital that financial institutions have specifically allocated for this purpose.

Some financial institutions may deploy capital at a lower interest rate to companies or projects that have a science-based net zero transition plan.



## CARBON FEE: CONSUMER GOODS (UNILEVER)

Over the past five years, we have piloted different carbon pricing schemes for our direct operations including a programme that ‘taxed’ divisional capital expenditure budgets (initially formed from the carbon emissions of the divisions) to create a centrally managed Low Carbon Fund. The Fund was used to accelerate clean technology investment through energy and emissions reduction projects globally.

[Extract from Unilever’s CDP climate change questionnaire 2023](#)



## GREEN BOND: TECHNOLOGY (APPLE)

In February 2016, Apple issued a \$1.5 billion green bond and in June 2017 an additional \$1 billion green bond to support capital investments in environmental projects like those that reduce carbon emissions -- such as energy efficiency and renewable energy projects. The \$2.5 billion in aggregate green bond proceeds represents a substantial financial commitment to address climate change and demonstrates how our business strategy has been influenced by climate change. In fiscal year 2018, we fully allocated the \$2.5 billion of green bond proceeds to a number of environmental projects, including renewable energy and energy efficiency projects. Most recently, in 2019, Apple issued a €2 billion green bond issued focused on financing emissions reduction projects that would help meet our 2030 carbon neutrality goal. The green bond included 2 tranches, one with a 6-year maturity, the other with a 12-year maturity.

[Extract from Apple’s CDP climate change questionnaire 2023](#)





### CAPITAL PROGRAMME: SUPERMARKET CHAIN (SAINSBURY'S)

We have committed to spend £1 billion to become Net Zero by 2035 across our own operations and this is built into our financial plan, approved by the Board, this has been based on a detailed capital programme and financial plan up to 2035, aligned with the emission reductions required. Our decarbonisation strategy will be enabled by this capital expenditure and our future capital investment is fully aligned with our Scope 1 & 2 decarbonisation roadmap and is approved by our operating board.

The expenditure required has been thoroughly planned, identifying the Carbon savings achievable versus our decarbonisation pathway, which is then split down into each corresponding emissions Scope and category, enabling us to fully understand the areas and quantum of our footprint that needs to be tackled, to what extent each investment year and the cost of doing so. The decarbonisation strategy is integrated within the main property investment programme, from feasibility, to design and delivery. We have aligned our Net Zero Roadmap with the store selection investment programme, to consider lifecycles and Carbon emission considerations, ensuring that investments are coordinated and the most impactful from an operational and embodied Carbon perspective – we have a clear investment programme up to 2035 ensuring that we hit the required project run-rate to reach Net Zero. We have accelerated our investment programme in line with our 2035 Net Zero target, increasing the number of initiatives deployed and the capital available to do so, particularly from a refrigeration replacement perspective, which supports in removing HFCs and improving efficiency. New store investments consider whole lifecycle costs and Carbon to ensure that we are operating the most efficient Net Zero stores possible. This can be seen in the instance of Hook – our most efficient Net Zero store delivered to date, using up to half the energy of a typical store. Detailed post investment reviews take place following investments to identify the carbon, cost and energy savings to determine their efficacy, ability to save Carbon and cost, providing confidence in the programme and supporting further deployment of similar projects.

[Extract from Sainsbury's' CDP climate change questionnaire 2023](#)



### SUSTAINABILITY-LINKED LOAN: CHEMICALS COMPANY (SOLVAY)

In January 2019 Solvay announced it had agreed a revolving credit facility (RCF) linked to its ambitious greenhouse gas (GHG) reduction targets. The corresponding interest margin incentive is significant enough to support further low-carbon projects in the company.

[Extract from A4S \(2019\), Solvay: Credit Facilities](#)

# RESOURCES

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## CDP QUESTIONNAIRE RESPONSES

[Westpac Banking Corporation – Climate Change 2020](#)

[Kering – Climate Change 2022](#)

[Adecco Group AG – Climate Change 2023](#)

[Apple Inc. – Climate Change 2023](#)

[Levi Strauss & Co. CDP Climate Change Questionnaire 2023](#)

[Hilton Worldwide, Inc. – Climate Change 2023](#)

[J Sainsbury Plc – Climate Change 2023](#)

## A4S CASE STUDIES

[Solvay: Credit Facilities](#)

[National Grid: Embedding a Carbon Price into Investment Decisions](#)

[Storebrand: Using Internal Carbon Pricing as a Catalyst for Change](#)

## GFANZ

[Expectations for Real-Economy Transition Plans](#)

[Financial Institution Net-Zero Transition Plans: Fundamentals, Recommendations, and Guidance](#)

## TPT

[Build Your Transition Plan](#)

## LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE

[Curran, B, Robins, N, Muller, S, Subramoni, A and Tickell, S \(2022\), Making Transition Plans Just: How to Embed the Just Transition into Financial Sector Net Zero Plans, London: LSE](#)

## GRI

[Project for Climate Change Standards](#)

# ABOUT A4S

A4S was established by HM King Charles III, when he was The Prince of Wales, in 2004 to make sustainable business, business as usual. We are part of the King Charles III Charitable Fund Group of Charities.

We work with the global finance and accounting community to:

- Inspire finance leaders to adopt sustainable and resilient business models
- Transform financial decision making to respond to the opportunities and risks posed by the climate crisis and other environmental and social issues
- Scale up action to transition to a sustainable economy

A4S leverages its global networks, including the CFO Leadership Network, Circles of Practice, Accounting Bodies Network and Asset Owners Network, to enable the finance and accounting community to take a leadership role on sustainability. Through our outreach activities and A4S Academy learning and implementation programme, we empower and equip finance and accounting teams to embed sustainability in their organizations.

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- ▶ Capex

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- ▶ Social and Human Capital Accounting
- ▶ Valuations and Climate Change

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- ▶ Enhancing Investor Engagement
- ▶ Debt Finance
- ▶ Implementing the TCFD Recommendations
- ▶ Implementing a Sustainable Finance Framework

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