ACCOUNTING FOR SUSTAINABILITY

ALIGNING TRANSITION PLANNING AND FINANCIAL PLANNING

A GUIDE FOR FINANCE TEAMS

BY THE A4S NET ZERO TASKFORCE

THE A4S NET ZERO TASKFORCE

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FOREWORD

The role of finance in delivering net zero cannot be overstated. Chief financial officers (CFOs) and finance teams must go beyond traditional financial planning to ensure that capital allocation, risk management, growth and investment strategies fully reflect the realities of the net zero transition. This is not just about managing risk, it's about seizing opportunities to drive long-term value and resilience.

As chair of the A4S Net Zero Taskforce, I have seen first hand the challenges organizations face in integrating transition planning into financial planning. Many businesses have set ambitious climate targets and are developing methodologies to ensure financial planning fully accounts for transition risks, carbon emissions and emerging opportunities, embedding sustainability into the core of decision making.

Through the Taskforce, our focus has been on equipping finance professionals with the tools, frameworks and insights needed to navigate this shift. By aligning financial and transition planning, we can safeguard business resilience and build confidence among investors and stakeholders. The transition to a low-carbon economy requires decisive action from finance leaders – now is the time to step up and lead.

Sally Ding, CFO, Heathrow,
Chair of A4S Net Zero Taskforce

INTRODUCTION

The climate crisis presents unprecedented risks and opportunities, demanding strategies that move beyond short-term profitability which may require fundamental changes to business models. The crisis is not only an environmental one but also an economic one of historic scale. Businesses need to act not just because of regulation but because their long-term viability depends on it. Achieving the shift that is required depends on connecting finance and sustainability. Transition planning is essential for organizations to understand the consequences of both action and inaction and ensure their long-term resilience[1] – while financial planning turns ambition into action.

Organizations face growing expectations – from regulators, investors and market initiatives – to disclose credible climate transition plans. Frameworks such as the International Sustainability Standards Board (ISSB), the EU's Corporate Sustainability Reporting Directive (CSRD), the Global Reporting Initiative (GRI) Standards and guidance from the European Financial Reporting Advisory Group (EFRAG),[2] the Glasgow Financial Alliance for Net Zero (GFANZ), and the UK's Transition Plan Taskforce (now supported by the IFRS Foundation)[3] reinforce the role of transition planning in corporate climate disclosure. While the EU Omnibus Directive has introduced some implementation delays, the overall direction of travel remains clear: transition plans are becoming a central element of climate accountability.

There is also a strong market driver for disclosure. Stakeholders need to be confident that organizations can continue to generate cash inflows – something that is increasingly dependent on clear, well-governed plans to manage climate risks and seize new opportunities.

Financial planning is a critical element of transition planning, but organizations have so far made limited progress in integrating these 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".[4] However, if organizations do not align their financial and transition planning, they risk underestimating the costs of transition, delaying action and misallocating resources.

Aligning and ultimately integrating financial and transition planning presents several challenges. Finance teams have historically focused on short- and medium-term financial planning to drive business growth, not on how business plans and investments can reduce emissions or enhance resilience to financial exposures from climate change. Now, financial strategies need to integrate decarbonization and account for transition planning. This includes ensuring that uncertainty and future risks are embedded in capex appraisals.[5]

Organizations must also address cross-sector and value chain dependencies and collaborate to overcome shared challenges and drive change. This requires clear strategies for practical implementation and sufficient financial allocation.

A fundamental shift is needed – from financial planning led by central or divisional finance teams with little input from sustainability teams, to a combined approach where financial and transition planning are integrated and considered together by the same teams. Organizations must leverage financial planning personnel, processes and governance to ensure that net zero and climate resilience are embedded in every aspect of their operation. To manage climate-related risk and keep pace with the 1.5°C climate target, organizations need to develop robust transition plans and to bridge the gap between financial and transition planning.[6]

1. Within this guidance we use 'resilience' to refer to preparedness for physical climate risk but also transition risks such as regulatory risk, carbon pricing exposure, customer behaviour etc.
2. EFRAG (2024), Implementation Guidance [draft]: Transition Plan for Climate Change Mitigation.
3. The Transition Plan Taskforce (TPT) was active from April 2022 to October 2024. The IFRS (International Financial Reporting Standards) Foundation is now responsible for the TPT's 13 disclosure-specific documents.
4. CDP (2025), CDP 2025 Corporate Health Check: The Annual State of Earth-Positive Business Action.
5. Costs incorporated into appraisals should take into account carbon costs relating to future pricing and emissions impacts, asset impairments for stranded or devalued assets, and the costs of transition risks and physical climate risks, such as regulatory changes or extreme weather.
6. While limiting warming to 1.5°C above pre-industrial levels is increasingly difficult, it remains a critical target. Every fraction of a degree matters, and efforts to keep the 1.5°C goal in sight can significantly reduce the risks and impacts of climate change.

ABOUT THIS GUIDANCE

Achieving net zero and climate resilience requires a clear top-down, long-term vision. Developing a clear roadmap, in the form of a transition plan, is essential to understanding the scale of the investment and transformation required, and the associated risks. Transition plans are strategic plans and should be treated as such: they should be integrated into governance as part of the board's oversight of strategic direction and risk mitigation, approval of business plans, and review of the financial projections that support these plans.

This vision must also be incorporated into the three-to-five-year financial planning process, where important decisions about resource allocation and investment are often made. Doing this ensures that the entire organization integrates net zero into core business decisions, aligning short-term actions with longer-term goals.

Financial planning plays a dual role: it enables delivery of the organization's strategy through budgeting and financial resourcing, and it informs decision making by providing insights. In practice, finance teams are increasingly contributing to the development of transition plans through their involvement in scenario analysis, risk modelling and investment appraisal. While full integration across all organizational levels is the goal, in practice this will be iterative, with shared responsibilities across finance and sustainability functions.

This guidance is primarily for organizations that have begun transition planning but have not yet fully aligned or integrated it with financial planning. It assumes that much of the preparatory work to shape a strategic transition plan is underway, and it refers to external resources for further detail on transition planning where relevant.

While the guidance is primarily for finance teams, collaboration with sustainability teams is critical. Many responsibilities and actions set out here may be shared between the teams, and we have included them here to give a clearer view and to support effective governance. Upskilling will likely be needed across finance and sustainability to enable progress.

This guidance can be used across all markets and sectors and reflects the reality that many organizations are in the early to mid-stages of integration – where responsibility for financial and transition planning may still sit in different teams or follow separate cycles. An iterative process may be needed to reach an aligned or integrated approach. In the early stages of alignment, organizations of the A4S Net Zero Taskforce are finding it pragmatic to develop a clear picture of the divergence between the two processes and start to close the gap.

Below we outline seven practical steps to support that process. We include insights from members of the A4S Net Zero Taskforce, illustrative case studies, and practical tools and tips to support implementation. The guidance builds on the A4S Key Questions for Finance Teams on aligning transition planning and financial planning, which provides a structured approach to engaging colleagues across departments and identifying transition activities that have financial effects. Organizational structures vary, and you should adapt the guidance to fit your context.

It also acknowledges the growing alignment between financial and sustainability reporting, and the importance of understanding dependencies, impacts, risks and opportunities relating to people, nature and the wider value chain. While these factors are not explored in detail here, they are referenced throughout and supported by additional resources.

Aligning financial and transition planning requires not only new processes but new ways of working. This guidance is a practical tool to support that shift. Use the key below and the navigation buttons to move through the guidance.

Financial planning disclosure requirements under the TPT Disclosure Framework

A wide range of disclosure frameworks refer to or imply the need to associate financial planning with transition planning. For the purposes of this guidance, financial planning includes the need to understand the financial effects of transition planning, which could impact capex, revenue, opex, cash flows, valuations and more.

"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."

TPT (2023), Disclosure Framework

NAVIGATING THIS GUIDE

TASKFORCE INSIGHTS

Throughout the guide you will find informative insights from members of the A4S Net Zero Taskforce, demonstrating what real-world organizations are already doing in this area.

CASE STUDY

We have used a fictional company – ResilieNZ – to draw out specific concepts or processes that may be helpful for finance teams.

ADDITIONAL GUIDANCE, SUPPORTING MATERIALS AND TOOLS

Use these materials to supplement this guidance and to help you with practical implementation.

NAVIGATION TABLE

Step 1

Prepare

Understand how financial planning needs to adapt

Develop an understanding of how financial planning and transition planning are different, and how they need to adapt to align.

Build awareness of preparatory transition planning work

Liaise with wider teams to build finance team awareness of preparatory work undertaken by the organization.

Step 2

Understand position

Conduct a gap analysis: emissions and adaptation forecasting for current business plan

Conduct a gap analysis to understand your baseline emissions and adaptation trajectory (ie the direction of your organization in the absence of any transition planning) and the current gap between transition planning and financial planning.

Focus on what matters for financial planning

Focus on what matters by considering what is significant or material for your organization and where you can drive effective action.

Estimate the costs and savings associated with delivery of the transition plan

Estimate the costs and savings associated with planned activities to reduce emissions, respond to climate-related risks and opportunities, and achieve broader strategic objectives. Consider the short, medium and long term. This will provide you with a broad perspective on the financial implications of net zero.

Cross-sector and value chain considerations

Understand cross-sector and value chain considerations for your transition plan to focus on areas that are meaningful for your sector and organization. Drive collaborative action towards decarbonization by identifying the actions and initiatives that you will take to support change.

Step 3

Prioritize

Prioritize action based on feasibility, risk, costs and benefits, and emissions reductions

Support transition plan owners in reviewing the timing of planned actions and activities, working closely with the sustainability team to understand and critique the rationale behind proposed schedules. Factor in the likely financial resources required and assess trade-offs to help prioritize actions that drive long-term sustainable value and enhance resilience. Prioritization should balance feasibility, risk, the costs of delivering net zero, and the opportunities arising from emissions reductions.

Allocate actions to different time horizons

Allocate action across short-, medium- and long-term time horizons to get more clarity about what you need to focus on in the three-to-five-year plan.

Step 4

Embed transition planning in the three-to-five-year financial planning process

Bring the top-down organizational net zero strategy into the three-to-five-year financial planning process

Embed transition planning into the three-to-five-year financial planning process.

Engage with business units

Engage with business units to set financial planning and transition planning requirements and to ensure planning at business unit level is aligned with the long-term strategic transition plan.

Collaborate with and support business units

Provide guidance and support to facilitate alignment of financial planning and transition planning at business unit level.

Step 5

Consider financing

Finance the transition
Explore different approaches to finance the transition.

Share the costs and benefits of the transition
Understand how collaborative action could result in shared costs and benefits.

Provide direct financial support to your value chain
Consider how your organization could provide direct financial support to your value chain to support the transition and whether this is an effective way to achieve desired outcomes.

Step 6

Improve decision making

Practical tips to ensure decision making supports net zero and climate resilience
Improve decision making to consider emissions reductions alongside financial outcomes, and to consider lifetime costs, benefits and impairments, and broader strategic benefits for nature and people.

Step 7

Monitor, analyse, report

Consider data capture and systems
Align data and systems to ensure that the information is collected as and when financial transactions occur, and that the information required for emissions performance aligns with financial reporting.

Ensure management information is sufficient to deliver action
Support decision makers to understand and interpret data, with clear management information that supports meaningful interventions. This could include decoupling business-as-usual emissions changes and emissions reductions derived from transition action, or setting out meaningful key performance indicators (KPIs) to track progress against in-year business plan targets.

Consider what to include in external reporting
Report externally on progress and action to build best practice and aid collaborative action.

KEY

- Financial planning for the long-term net zero strategy
- Three-to-five-year financial planning process

Navigation buttons – you can click in the table above to navigate to the area where your organization faces the most significant challenges in aligning transition planning and financial planning

Swire Pacific Limited highlights the importance of bridging the gap between long-term ambition and near-term financial execution

Achieving net zero requires long-term vision, impact and scenario planning, and detailed risk assessment, which can be broken down into short- to medium-term targets, action plans and investments. Setting a pathway to 2030, 2040 and 2050 in a clear roadmap provides strategic direction, focus and understanding of the investment required. This can only be achieved when our net zero transition plans are fully integrated into our annual business operating models and plans.

As CFOs, we must mitigate climate risk on our long-term ambitions by ensuring that our operational and governance frameworks, risk assessments and financial modelling full integrate our long-term net zero vision into our short- to medium-term action plans.

Martin Murray OBE, Group CFO, Swire Pacific Limited

SWIRE PACIFIC

1.0 PREPARE

1.1 UNDERSTAND HOW FINANCIAL PLANNING NEEDS TO ADAPT

Finance teams have a critical role to play in aligning and integrating transition planning and financial planning, but doing so requires a shift in mindset and approach. A good starting point is to understand the key challenges, and how traditional perspectives on each area differ.

Financial planning must consider short-, medium- and long-term aspects of your transition plan

Finance teams have historically focused on short- and medium-term financial planning to drive business growth, with little consideration of how business plans impact emissions, broader sustainability impacts, or the investment needed to achieve net zero and resilience to physical risk exposure. However, organizations must now integrate decarbonization and adaptation into financial strategies, accounting for climate-related physical and transition risks and opportunities in the short, medium and long term.

Table 1: Financial planning – time horizons

Financial planning	Transition planning
○ Focus is on three-to-five-year time horizon ○ Driven by desire for growth and achieving strategic ambition	○ Driven by emissions reductions, mitigation of climate-related risks and realization of opportunities, and contributions to economy-wide decarbonization ○ Often not deeply developed with financial growth in mind ○ Often fails to consider the impact of transition plans on nature and people, which can have financial consequences for the organization
Integrated approach	
○ A longer-term perspective for financial planning, with consideration of transition planning ambitions, which is used to inform short- and medium-term plans ○ Driven by enhancing resilience to both physical and transition risk, understanding both the costs of delivering net zero and adaptation and the financial opportunities in taking climate action ○ Considers impacts on nature and people	

Financial planning must balance the trade-off between short-term return and long-term organizational resilience

Traditionally, financial planning supports the delivery of the organizational strategy. This often prioritizes short-term profitability and growth for shareholders, with minimal focus on the associated impacts, risks, opportunities and dependencies. An integrated approach requires a broader perspective, incorporating significant transition impacts and risks (eg including both financial and emissions implications). Appraisals should also consider carbon costs relating to future pricing and emissions impacts, impairments for stranded or devalued assets, and transition and physical climate risks such as regulatory changes or extreme weather. Appraisals should also consider nature and people.

Table 2: Financial planning – short-term return versus long-term resilience

Financial planning	Transition planning
○ Activities accounted for in financial plans often support organizational strategies that focus on maximizing short-term shareholder returns, with limited consideration of long-term sustainability, resilience, impacts, risks, opportunities and dependencies ○ Definition of 'cost' typically focuses on the short term and includes financial capital but not broader impacts on natural, social and human capital[7]	○ May address nature and people, but without clear understanding of the practical steps for embedding this in business processes ○ Actions and initiatives can conflict with value drivers for the organization
Integrated approach ○ Prioritized actions and initiatives drive long-term sustainable value creation, considering nature and people ○ Decision making balances financial and non-financial trade-offs	

Focus on the value chain as well as the organization's own operations

Organizations must also address cross-sector and value chain dependencies, fostering collaboration to overcome shared challenges and drive systemic change – supported by clear implementation strategies and sufficient financial allocation.

Table 3: Financial planning – the value chain

Financial planning	Transition planning
○ Prioritizes ownership and control over collaboration ○ Traditionally focuses on debt and equity funding	○ Typically requires value chain and cross-sector collaboration, but without being clear about how to do this in a way that prioritizes strategic resilience ○ Usually lacks a clear funding plan for the transition, or the financial resources allocated are too limited to meet its challenges effectively
Integrated approach ○ Supports meaningful value chain and cross-sector decarbonization and adaptation in a way that aligns with achieving the transition plan and overcoming key dependencies ○ Facilitates broader approach to financing which supports value chain transition	

7. This area is not addressed at length in this guidance; see the A4S Nature Guidance Series and the A4S Guide to Social and Human Capital Accounting for more information.

Financial practices

Financial planning, monitoring and reporting is typically led by central or divisional finance teams, while transition planning, monitoring and reporting may sit as a separate, stand-alone process. To advance towards net zero and respond to climate-related risks and opportunities, these processes need to become more connected and ultimately integrated. The core business strategy is what drives financial planning, so to align transition and financial planning, transition planning must first be embedded in the business strategy. Then, financial planning can ensure that transition-related activities are appropriately resourced and financed as part of core strategy. This requires financial planning to evolve to cover new areas and to engage new actors with broader skill sets. This represents a fundamental shift in financial practices to ensure that net zero and climate resilience considerations are fully integrated into systems and processes and embedded at every level of the organization.

Table 4: Financial planning – a shift in financial practices

Financial planning	Transition planning
○ Governance, processes and systems focus on financial information ○ Finance-led process with little input from sustainability or risk teams ○ Senior leaders and external stakeholders are typically provided with strategic insights centred on financial performance	○ A range of people, processes and systems may be involved in reporting on transition planning, with different levels of rigour and controls to those for financial data and information ○ Sustainability-led process that considers short-, medium- and long-term horizons ○ Senior leaders and external stakeholders may be presented with data independently from financial information
Integrated approach	
○ Iterative process of collaboration between finance, sustainability and broader teams, informed by wider business ○ Financial and emissions data are collected and processed alongside resilience metrics in an aligned or integrated way,[8] with the same governance structures and the same levels of controls and rigour ○ Senior leaders and external stakeholders are presented with emissions and financial data in a comparable way	

1.2 BUILD AWARENESS OF PREPARATORY TRANSITION PLANNING WORK

To align and integrate transition planning with financial planning effectively, you need to understand who should be involved and what the emissions hot spots and climate risks are. In many organizations the sustainability team may be responsible for elements of this work. A collaborative approach is required to understand the preliminary work needed and to facilitate knowledge sharing.

Ultimately the finance team will need to understand what is in the transition plan and how the organization plans to reduce emissions and enhance resilience, and then to consider how this will be costed and built into the financial plan. The areas that the finance team will need to be aware of to support this are outlined below but are not discussed at length in this guidance. Use the additional guidance and tools to help you prepare.

- Engage your board, ensure cross-company ownership and map key stakeholders
- Assess climate-related risks and opportunities (both transition and physical)
- Gain a clear understanding of your emissions (and consider significant impacts beyond emissions)
- Know the transition levers that your organization can employ to reduce emissions and increase climate resilience
- Develop an understanding of the organization's impacts and dependencies
- Understand the organization's strategic ambition,[9] key actions and initiatives, and the responsibility it should take for historical emissions
- Understand the role your organization will play in delivering a net zero, climate-resilient economy taking into account the views of stakeholders and shareholders
- Understand the reporting frameworks, standards and regulations that the organization will disclose against

Understanding these areas is a good starting point for embedding net zero and climate resilience in financial planning. If any of them are unfamiliar or have not been addressed by broader teams outside of finance, review foundational resources to build your knowledge first.

8. Bringing finance teams and sustainability teams/expertise together to work collaboratively can be a useful step towards fully integrated processes across strategy, planning and reporting.
9. Including objectives and priorities, key assumptions and external factors on which the transition plan depends, and strategic changes to business model and value chain.

SUPPORTING MATERIALS TO HELP YOU PREPARE

Finance teams will not generally be responsible for preparing a transition plan, so we have not included detailed guidance on doing so here. However, you may find it useful to be aware of what guidance is available, to support your collaboration with colleagues who are developing the plan. We have included links to guidance on governance and on reporting in relation to transition plans, as these are areas where finance teams are also likely to have a role.

TPT Transition Planning Cycle and Disclosure Framework

TPT's Transition Planning Cycle supports organizations to undertake transition planning in four iterative and stylized stages. It can be used alongside the TPT Disclosure Framework to offer a helpful steer on what to consider. You can use it as preparatory guidance to support your organization in getting to a point where aligning transition planning and financial planning is feasible. Many of the key points outlined in section 1.2 are discussed further in that guidance.

GRI 102 Climate Change

The Global Sustainability Standards Board (GSSB) recently released guidance to support disclosure against GRI 102 Climate Change. GRI 102-1 (Climate Change Transition Plans) and 102-2 (Climate Change Adaptation Plans) require disclosure of the work that needs to be done before an organization can understand its financial position.

A4S Guidance

Important considerations when undertaking transition planning include nature and people. Nature plays a key role in both mitigating the effects of climate change and adapting to its impacts. The transition to net zero should be "as fair and inclusive as possible to everyone concerned … leaving no one behind".[10] This might include labour rights, cultural preservation, economic inequality, health impacts, and job training and education. It is important to factor in potentially significant impacts regarding nature and people, where relevant, and to understand the possible financial consequences. See the A4S Nature Guidance Series and the A4S Guide to Social and Human Capital Accounting for more information.

UN Sustainable Development Goal Impact Standards

The UN SDG Impact Standards are a set of voluntary internal management standards designed to help organizations align their processes with the Sustainable Development Goals (SDGs). They focus on four interdependent themes: strategy, management approach, transparency and accountability, and governance. The standards serve as a self-assessment tool for organizations to address sustainable development risks and opportunities, facilitating their contribution to the SDGs. They also provide a framework to help donors and private sector partners make financial decisions that generate a positive impact on sustainable development. They can be used to broaden the perspective of an organization beyond net zero and climate physical risk resilience.

EFRAG Guidance on Transition Plans

EFRAG's DRAFT Implementation Guidance: Transition Plan for Climate Change Mitigation can support implementation of transition plans for climate change mitigation as required under the European Sustainability Reporting Standards. The guidance highlights the importance of considering social and biodiversity impacts, risks and opportunities connected to the climate transition plan.

10. International Labour Organization (2024), Climate change and financing a just transition. Accessed: 19 February 2025.

Board engagement and governance

This guidance assumes that you have an active, engaged board and management team that is aware of the benefits and opportunities of proactive transition planning. However, in reality there is often still a lot of work to do to win the hearts and minds of those who will ultimately ensure the transition plan becomes part of the financial plan. Read The business case from Chapter Zero, which provides content to support you to create a compelling business case for climate action, and the A4S Essential Guide to Engaging the Board and Executive Management, which suggests practical ways to secure board engagement and support.

Reporting frameworks, standards and regulations

You should consider the relevant reporting frameworks, standards and regulations to ensure that transition planning meets mandatory reporting requirements (as these evolve) and best practice (as much as possible). These can help you to identify material areas for reporting, metrics to monitor progress, and sector-specific considerations which can be taken into account as part of transition planning.

The A4S Guide to Navigating the Reporting Landscape provides an overview of the changing corporate reporting landscape. It summarizes key developments in sustainability reporting and how they impact the role of the accountant. The document also includes links to further resources, from A4S and beyond.

The Assessing Transition Plans Collective (ATP-Col), co-chaired by the World Benchmarking Alliance (WBA) and Columbia Center on Sustainable Investment (CCSI), has released an assessment framework aimed at assessors. Assessing the Credibility of a Company's Transition Plan: Framework and Guidance provides harmonized guidance to assess the credibility of companies' transition plans.

Chanel uses science-based targets to support the development of clear action plans for net zero

Setting clear targets, supported by action, is so important to bring together transition and financial planning effectively. At Chanel, we have evolved our targets and roadmaps in line with the Science-Based Targets initiative (SBTi)[11] Corporate Net-Zero Standard, the world's only framework for corporate net zero target setting aligned to the latest climate science. This means we strive for more ambitious goals, while making sure we prioritize robust, measurable action plans. As part of our holistic commitment to sustainability, these actions are integrated seamlessly into our financial and operational strategies. By leveraging measurement and tools to assess our pathways, hotspots and impact, we can drive meaningful progress.

Severine Nickler, Global Head of Financial Planning and Analysis and Sustainable Performance, Chanel

11. Science Based Targets (2024), Ambitious corporate climate action. Accessed: 22 February 2025.

2.0 UNDERSTAND POSITION

2.1 CONDUCT A GAP ANALYSIS: EMISSIONS AND ADAPTATION FORECASTING FOR CURRENT BUSINESS PLAN

An emissions forecast of your existing business plan (which may not fully incorporate the transition plan) can provide valuable insights into the work needed to achieve net zero and help you to understand your organization's baseline trajectory in the absence of transition action. Consider adding in any additional information you can access relating to the value chain, based on business-as-usual emissions and adjusting for any likely or known changes (eg due to regulation, anticipated sector growth etc.). You can use this forecast to identify key risks to achieving your transition plan, and to deepen your understanding of how emissions relate to the value drivers for your organization. For example, by conducting an emissions forecast based on anticipated revenue growth for new products or services, you can identify which of those revenue drivers result in significant emissions increases.

Emissions forecasting can highlight challenges, such as the tension between planned business growth and decarbonization targets. For example, planned expansions into new regions or via acquisitions will likely increase emissions, and you may need to take additional action elsewhere to stay on track for net zero. An emissions forecast is also a clear way to present these challenges and necessary actions to the board and senior leadership.

Figure 1 shows the key steps for your emissions gap analysis. See the visual tools section on page 51 for an overview of how year-on-year changes could be visually presented.

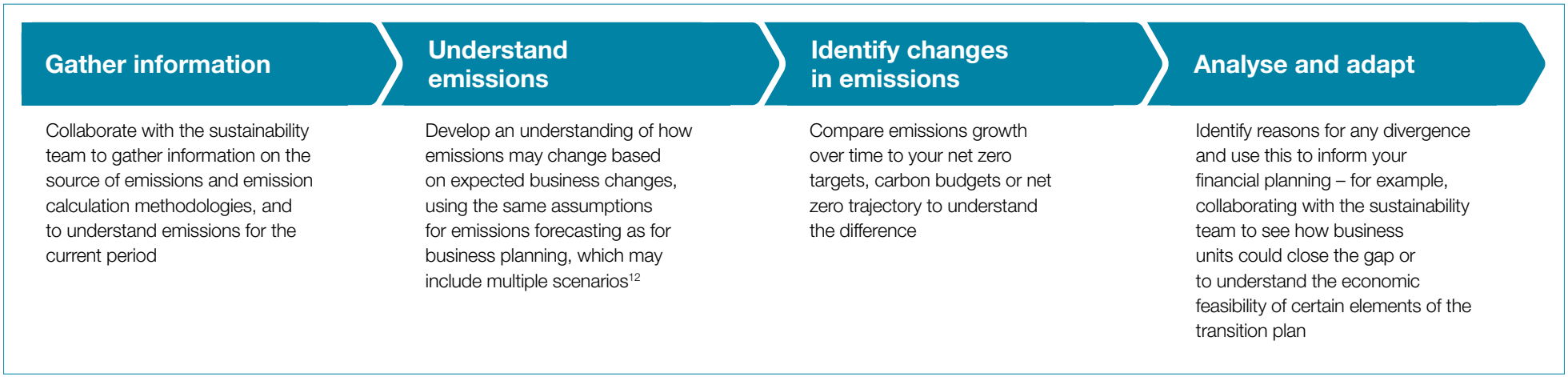


Figure 1: Key steps for emissions gap analysis

12. There can be a tendency to focus on climate-related scenario analysis when considering transition planning. However, there is also a lot of value in setting out different business growth scenarios before adding climate overlays.

Carbon budgeting

Carbon budgeting is the process of setting a limit on the total amount of greenhouse gas (GHG) emissions an organization can emit over a specific time period, in line with climate targets. It can be done either alone or combined with monetary budgets. For example, an organization could set a financial budget which restricts spending on energy costs, alongside a nonmonetary carbon budget which restricts emissions from energy. Once you have a good understanding of forecasted emissions, it can be helpful to set a carbon budget with the objective of restricting carbon emissions to align with the strategic ambition of the transition plan. Setting a carbon budget can be helpful to translate strategic targets into quantifiable limits on carbon for different areas of the business.

- Read the A4S Essential Guide to Strategic Planning, Budgeting and Forecasting to learn more about capitals budgeting
- Read the A4S Net Zero Guidance to explore how different approaches to budgeting can support net zero
- See the ResilieNZ case study on page 16 to explore how to set a carbon budget

Physical risk and adaptation

As well as aligning your business plan with emissions targets, you should evaluate whether assets, investments and operations could be exposed to physical risks such as flooding, heatwaves or supply chain disruptions. Wider teams such as sustainability and risk may have information to support this evaluation.

In practice, this means:

- Mapping physical risk exposure across key assets and planned activities (eg new acquisitions, facility expansions)
- Applying climate scenario analysis to understand how different climate futures could affect asset values, insurance availability or costs, or operational reliability
- Using this to assess how your projected future damages should be incorporated into considerations today

By forecasting both emissions and physical risk impacts, organizations can make more informed decisions and build more resilient, climate-aligned business and financial plans.

Climate adaptation

The UK Climate Financial Risk Forum's Mobilising Adaptation Finance to Build Resilience provides a comprehensive framework for financial institutions to integrate climate adaptation into their strategies and operations. Recognizing the increasing physical risks associated with climate change, the report emphasizes the urgent need to scale up investments in resilience to protect economies and communities. The report recommends that organizations aim for 1.5°C, build and budget for a 2°C scenario (or stated policy scenario), but also contingency-plan for a 2.5°C trajectory (and consider the possible extreme impacts in this scenario, as opposed to the median climate response).

Sainsbury's has modelled the emissions impact of its five-year business plan to help pinpoint the most material areas in which to focus efforts

At Sainsbury's, to identify our gaps, we modelled the potential emissions impact of our five-year business plan by applying the same financial assumptions used in our business planning to our emissions forecasting. This helps us understand and articulate the expected trajectory of our emissions, providing a clearer view of the challenge in achieving our net zero target.

Given that the significant portion of our GHG emissions comes from our supply chain, a greater understanding of our emissions footprint allows us to pinpoint the most material areas to focus our efforts on both internally (demand-side levers like developing lower-carbon products) and externally within our value chain.

Courtnay Ip Tat Kuen, Finance Manager, Sustainability, Sainsbury's

ResilieNZ – carbon budgeting

ResilieNZ translates its emissions reductions targets into a carbon budget for the wider business. This provides a clear limit on how much carbon different business units can emit over time.

ResilieNZ is a global multinational entity with a complex operating model. Its enterprise-wide targets alone are not enough to drive effective action across the organization. The carbon budget provides clarity on what each part of the business is accountable for and a tool to monitor progress and adjust course in line with climate ambitions.

ResilieNZ applies the following steps:

- Obtaining corporate emissions reduction goals (eg 90% reduction in scope 1, 2 and 3 emissions by 2040), based on science-based pathways
- Translating the company-wide target into annual emissions limits by business unit, based on factors like current footprint, forecasted emissions and estimated reduction potential
- Cascading carbon budgets down further at business unit level, setting budgets for different functions or teams within that business unit
- Monitoring and tracking actual versus budgeted and forecasted emissions regularly to identify differences and needed interventions

2.2 FOCUS ON WHAT MATTERS FOR FINANCIAL PLANNING

Aligning and integrating transition and financial planning is a new challenge for many organizations and is likely to require an iterative approach. Start by concentrating on the key value drivers, emissions drivers and sources of physical risk most relevant to your organization, both now and in the future. Use existing work on transition planning to inform your approach for financial planning.

Table 5 outlines different strategies to help you focus on what matters most. Use it to support a more targeted and efficient approach and to help you identify the strategy or combination of strategies most suitable for your organization. You can pilot-test a strategy in one area, such as a specific business unit or region, to develop a process that you can expand to the wider organization.

Table 5: Strategies to help focus on what matters most

Strategy	Description
High-emissions assets, revenues or processes	High-emissions assets such as manufacturing facilities, revenue streams such as plastic products, or processes such as logistics or distribution can be significant levers for change. Focusing on them can help you to prioritize areas where your current business model may not align with your transition plan, and where reductions can have the greatest emissions and financial impacts. Emissions forecasting can support this step.
Areas linked to strategic horizons and asset and product lives	You may wish to focus on material capex spend on assets with long useful economic lives that would be required for you to reach net zero. These may also be the assets that need the most investment from a climate resilience perspective given their value and long life. You could also consider how research and development (R&D) influences your product portfolio, or focus on how changes in your product composition in future could affect emissions and physical resilience.
Areas of high risk or high reward	Products connected with high emissions may be affected by climate regulation, presenting risks to your future sales and revenue. You may also have assets exposed to significant physical climate-related risk. Regulation may be a significant driver for your organization, and preparing for new regulatory requirements may be an important place to start. High-reward areas could include new products that you consider strategically important in a low-carbon, climate-resilient future and that you expect to generate significant revenue. You may also have projects that could generate financial returns quickly, or areas where you could make significant progress with little investment. Areas of high reward could also include areas with significant broader benefits for nature and people.
Areas requiring significant investment	In order to prepare for an uncertain future, focus on areas where you anticipate you will need significant capex, opex or R&D investments to achieve net zero and climate resilience. This will ensure clarity about the implications of transition planning.
Areas under direct control	Start with financial planning for actions and initiatives relating to scope 1 and scope 2 emissions and the physical risk profile of owned assets, as these are typically more measurable and under your direct control. This focus can help you to build internal capability and develop methodologies that support more complex elements, such as scope 3 and value chain physical resilience (which can often be significant for transition planning).

Google focuses on its biggest levers of change and where actions will significantly reduce emissions

At Google our commitment to decarbonization and energy resilience strategically drives the development of our net zero roadmap. This roadmap prioritizes key areas for emissions reduction across our operations and value chain.

Our comprehensive process includes tracking hundreds of initiatives and assessing their feasibility and cost. We then work closely with finance partners to establish annual and long-term financial plans that support our net zero ambitions. This collaboration is essential to operationalize net zero such that it is intrinsically linked with the business and informs our financial planning.

Vrushali Gaud, Global Director, Climate Operations, Google

Sainsbury's started with scope 1 and 2 before moving to scope 3

For Sainsbury's we treat scope 1, 2 and 3 quite differently. Financial planning for scope 1 and 2 is a lot more straightforward, because by definition these emissions are under our direct control. Scope 3 emissions are, by definition, beyond our direct control, which creates uncertainty in meeting our scope 3 targets. Our scope 3 plan is reliant on both demand-side levers (eg changes to products) and supply-side levers (eg through engagement with our suppliers).

We started with scope 1 and 2, because we could build a much clearer picture of the implications of transitioning, and we then moved to scope 3.

Courtnay Ip Tat Kuen, Finance Manager, Sustainability, Sainsbury's

Ahold Delhaize focused initially on scope 1 and scope 2 due to the added complexities and uncertainty of scope 3

At Ahold Delhaize we effectively have two transition plans: one is for scope 1 and 2, and the other is for scope 3. The challenges and approach to scope 3 are quite different and focus a lot more on supplier engagement such as climate hubs, pilots and working directly with strategic suppliers to think about the protein transition and the implications for our products. Financial planning for scope 3 also has significant uncertainties, so it's helpful to segregate the two.

Frederieke de Haas-van den Vlekkert, Finance Director, Ahold Delhaize

Chanel has focused on areas of significant emissions to pinpoint where efforts should be concentrated

Giving equal attention to our transition and financial planning is really important to advancing positive impact and meeting our sustainability goals. To make sure we are addressing the right focus areas, we analyse the areas of most significant emissions as part of our process. Aided by the data, we pinpoint where we can improve. With different business activities across the House, our areas of opportunity for reduction include raw materials, events and freight. However, through harnessing better measurement, we've been able to make improvements and develop roadmaps aligned to our net zero targets. Once you have a clear idea of key drivers, you can integrate these into financial planning.

Severine Nickler, Global Head of Financial Planning and Analysis and Sustainable Performance, Chanel

2.3 ESTIMATE THE COSTS AND SAVINGS ASSOCIATED WITH DELIVERY OF THE TRANSITION PLAN

It is important to engage with wider teams and business units to understand the financial implications of transition planning. Focus on key transition actions that are significant for your organization and that align with your existing strategic time horizons.

Table 6 sets out potential information to collect, and actions to take, to help you to estimate the costs and savings associated with different actions and initiatives. More information to support this step can be found in the Financial Planning Checklist (Tool 1). While the table and the related tool focus on separate line items or areas of the transition plan, you should consider them together, along with broader environmental and social considerations that are material for your organization. For example, a significant capex investment now may result in operational savings over the long term. Upgrading an item of plant may also have benefits for clean air and a positive impact on wider communities. It is important to take a balanced view which looks more broadly than financial capital.

A consideration that finance teams often overlook is the cost of rectifying something in the future (eg a future retrofit) that could have been addressed today at a lower cost, resulting in better operational savings in the long term. For example, developing nature-based solutions to support water capture or to solve drainage problems (eg constructed wetlands) may be more cost effective in the long term than seeking drainage solutions in the future when physical climate impacts get worse. It is important to challenge short-termism to ensure the best overall outcomes.

Upgrading assets and considering retrofits

- Read the ResilieNZ case study on page 26 to explore how an organization could focus on overall outcomes and avoid short-termism
- Use the TPT Transition Planning Cycle to explore what strategic changes to business models and the value chain could mean for your organization and how to plan your actions relating to transition planning

Finance teams play an important role in supporting these steps.

Table 6: Information required and actions to help estimate costs and savings

Area of financial planning	Relevant information to collect across key financial areas	Estimating the potential costs and savings
Capex	Identify existing and planned assets and their associated emissions and climate-related risk profiles, refurbishment needs, potential impairments, and decommissioning costs. Consider locked-in emissions[13] and anticipated stranded assets.[14]	Calculate the initial or replacement capex investments required, including investment for new assets, infrastructure or technology, and assess potential impairments.
Revenue	Gather information on existing and new sources of revenue and the associated emissions and climate-related risk profiles, anticipated lifetimes of products and services, and anticipated R&D investment needed to develop new products and services.	Estimate revenue growth or reductions from changing products or services. Compare costs of existing supply chain practices with those of low-carbon or climate-resilient alternatives.
Opex	Understand existing and proposed sources of energy, decarbonization expectations, potential efficiency savings and future carbon policy, including policies relating to carbon taxes and offsets[15] or adaptation, and how staff costs may need to change.	Assess how operating expenses will change over time (eg lower energy costs from efficiency gains). Estimate financial exposures to carbon taxes, emissions regulations and offset purchases. Identify cost savings from business model changes or efficiency gains. Understand how staff costs may change (eg because of training requirements or redundancies).
Value chain	Understand value chain considerations such as emissions hot spots, risks and opportunities, impacts and dependencies, the transition plans of suppliers and customers, sectoral challenges, and how value chain transition could impact on costs for the organization.	Determine who will be involved and how much time is required to support value chain initiatives, estimating whether this can be achieved with existing personnel or not. Identify additional costs relating to value chain engagement such as collaborative investment. Understand how value chain costs could be passed down through products and services, and the implications for costs of sale and also for revenues (ie whether the costs can be passed on to customers).
Financial institutions	Gather information on financed and insurance-associated emissions – those associated with loans, investments and insurance – using frameworks such as PCAF.[16] Understand portfolio exposure – high-carbon assets, transition risks and sectoral dependencies in loan books, investment portfolios and insurance policies. Collate information about how climate-related risks impact credit risk, asset valuations, insurance liabilities and investment performance.	Consider what is required to reduce financed, underwritten and portfolio emissions. Identify potential stranded assets and determine the financial implications of decarbonization or physical resilience levers – eg engagement and divestment. Identify transition opportunities and assess the scalability and financial viability of transition-aligned products.

13. Assets may give rise to 'locked-in' emissions for a set period, depending on the investment horizon of your organization and the availability of green technology at the time the investment was made. For example, a gas boiler may have an economic life of 20 years and will not be replaced before that term ends under current corporate policies. You will need to take this into account when developing your decarbonization plan, as you may need to drive action faster in other areas to compensate for locked-in emissions or replace assets earlier than at the end of their expected economic life. This in turn may affect balance sheet values, which may need to be impaired, and any associated financing.

14. A 'stranded asset' arises when changes in market perceptions and behaviour, demand for certain kinds of assets, and non-compliance with changing legislation result in a premature write-down in asset value or early obsolescence.

15. Offsets should be used as a last resort after the maximum abatement possible.

16. The Partnership for Carbon Accounting Financials (PCAF), Enabling financial institutions to assess and disclose greenhouse gas emissions associated with financial activities. Accessed: 30 January 2025.

Financial planning checklist

Use the Financial Planning Checklist (Tool 1) as a starting point to understand the type of information you may need for financial planning and to consider what's important for financial planning teams to support transition planning. The tool includes resources relating to capex, revenue, opex, value chain and financial institutions, building on Table 6 above.

Questions for finance teams to consider

A4S's Key Questions for Finance Teams on aligning transition planning and financial planning is a starting point for identifying activities that may affect different areas of financial planning. It groups questions under different line items, including capex, revenue and opex, with additional questions about implications beyond the primary line items, such as for value chain, regulation, internal pricing and offsets. It also includes questions relating to raising capital. All these areas need to be considered to understand the cost and benefits of the transition.

Use assumptions and estimates

Using assumptions (including estimates) and assessing future uncertainty are important elements of forward-looking financial planning so that you can understand the range of possible futures. Finance teams may need to become more comfortable with applying assumptions and estimates to support forward-looking financial information for transition plans, as well as the associated monitoring and reporting.

When considering costs and savings, you will need to consider how they may unfold over the short, medium and long term. The method chosen to estimate financial impacts will affect how actions and initiatives are prioritized and scheduled. Some financial impacts are uncertain, with levels of uncertainty increasing as you look further into the future. Historical data and cost trends can provide valuable context for developing assumptions. Use reasonable assumptions to estimate costs and savings, using Table 7 to inform your approach. Document, review and update all assumptions periodically, to ensure that your transition plan remains aligned with evolving market conditions.

Table 7: Key considerations and questions to support assumptions and estimates

Area to consider	Key questions
Technology costs	Are there any existing or emerging technologies that may help you decarbonize or increase physical resilience? What is the current cost of these technologies and how do you think the costs will change over time?
Regulatory requirements	Are there clear national or sectoral transition plans that set out how regulation may change in the future? Are you exposed to carbon taxes or emissions trading schemes (ETSs) and are there any projected increases in the associated rates?
Energy market changes	What state-based action is there on grid decarbonization? Are there any models which provide insight into the price or availability of renewable energy?
Operational feasibility	How are national or sector-based transition planning expected to affect workforce and skills availability (for example as a result of government support for training in green skills), supply chain dependencies (as a result of grants or incentives available for specific sectors such as agriculture) or infrastructure readiness (for example decarbonization of the grid)?
Customer sentiment	How do you expect consumers to act in response to new or refined products and services based on historical behaviours (eg based on historical patterns, how might product pricing changes impact consumer demand)?
Physical climate-related risk exposure	What assumptions can be made about asset damage, based on climate-related scenario analysis connected with physical risk? Is it clear what proactive measures, such as enhancing and upgrading assets or adapting operations, are needed to enhance resilience to physical risk or do they need to be estimated across a range of assets? How will reducing exposure to physical risk (such as through asset disposals) impact balance sheet value and access to finance? Is exposure to physical risk sufficiently covered by insurance or are there additional operational delays or penalties that need to be incorporated into financial planning? How would an inability to access insurance impact asset values or licence to operate? How is climate change expected to affect commodity pricing based on historical impacts of availability and demand, and how would this affect cost of sales and revenue?

Use analysis and assessments to understand the range of financial effects

Analysis and assessments are important elements of estimating the costs and savings associated with transition planning. Scenario analysis and sensitivity analysis are key tools here. Connect with broader teams to understand the level of work undertaken by your organization and to assess how it could be used for financial planning.

Scenario analysis and sensitivity analysis

Scenario analysis: "The purpose of scenario analysis is to consider and better understand how a business might perform under different future states (ie, its resiliency/robustness) … Climate-related scenarios allow an organization to explore and develop an understanding of how the physical and transition risks and opportunities of climate change might plausibly impact the business over time. Scenario analysis, therefore, evaluates a range of hypothetical outcomes by considering a variety of alternative plausible future states (scenarios) under a given set of assumptions and constraints."[17]

Sensitivity analysis: "Sensitivity analysis is the process of recalculating outcomes under alternative assumptions to determine the impact of a particular variable. Forecasting is based on past and present data and analysis of trends. Often it takes the form of predicting a single, most probable trend for and into the future."[17]

Resources:

- Review the A4S Guide to TCFD Climate Scenario Analysis as a useful starting point, and supplement with A4S Scenario Analysis Resources and Guidance which provides insight on the use of narrative scenarios to reflect uncertainty (eg non-linear change, tipping points), complexity (eg carbon tax, market disruption) and system change (eg geopolitical instability, regulatory upheaval)
- Use the TPT Transition Planning Cycle ('Assess Your Climate-Related Risks and Opportunities' section) and associated resources to support your analysis

The way that organizations use these tools will depend on the maturity of the organization and its approach.

Modelling a range of inputs can help you to understand the financial implications of different factors, informing financial planning and decision making. Scenario analysis and sensitivity analysis can test variables linked to technology, carbon pricing, energy pricing, operational costs and more and can be used to assess both optimistic and pessimistic scenarios. For example, for financial planning you could assume favourable conditions (eg declining technology costs, stable energy prices or mild regulatory pressure) and compare this to non-favourable conditions (eg higher-than-expected costs, stricter regulations, supply chain disruptions or rising carbon prices). You should also consider the likelihood of fluctuations in these conditions.

Use Table 8 to help you consider questions that are important for financial planning.

17. TCFD (2017), Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities.

Table 8: Questions to help you understand the range of financial effects

Question	Impact on financial planning	Example
How sensitive are financial projections to variations in cost drivers (eg energy prices, carbon taxes, technology costs)?	If the financial viability is threatened by small changes in cost drivers, you may decide that affected projects are beyond your organizational risk tolerance and choose not to proceed.	Organization A is a property owner and wishes to invest in solar and sell the energy to its tenants. Technology costs and energy prices will affect the initial capex costs of solar and the price at which energy can be sold to tenants. In the current environment, energy costs are high, so the financial return is positive and the payback periods are short for the investment. If energy costs reduce, the financial return will decrease and the payback period may get longer. The organization can use scenario analysis to explore how technology costs and energy prices may change in a range of different future scenarios. It can also use sensitivity analysis to assess, say, how a 20% increase in technology costs or a 10% change in energy price would affect profitability. The range of outcomes can determine whether the decision to invest in solar remains within the risk tolerance of the organization.
Are there opportunities to accelerate investment that would result in positive financial returns in a range of scenarios?	There may be actions and initiatives set out in the transition plan that could result in financial benefits for the organization if they were brought forward.	Organization B's transition plan doesn't include investment in low-carbon lighting until 2030. However, investing early would offer operational energy savings due to reduced energy use. Scenario analysis tests the benefit in a range of scenarios, including how technology and energy costs in different climate pathways would affect the payback period. The analysis determines that the outcome remains within the organization's required parameters. The organization can also conduct sensitivity analysis to assess the impact of, say, a 10% increase or 10% decrease in energy prices.
How sensitive are supply chain yields to the impact of changing weather?	Increased supply chain costs could result in a strategic shift to alternative products and services with a lower price point.	Organization C sells significant volumes of coffee and cocoa to its customers. In a scenario where yields reduce, prices would be expected to increase, causing some customers to switch to cheaper alternatives such as tea (assuming these have not been similarly impacted). Based on the implications of climate scenarios, the organization can use historical purchasing data to understand which products customers may move to. This helps it to understand which products may need to feature within forward-looking financial planning.
What is the impact of equipment and power costs being higher or lower than expected?	Higher-than-expected transition costs could result in a barrier to achieving net zero. Lower-than-expected transition costs, or increased benefits from delivering on net zero, could result in surplus funds for investment or reallocation across the organization.	Organization D wishes to invest in biofuel generators to replace its fossil fuel generators. It expects the cost of sustainable fuel to reduce in the future. If it does, the decision to pursue sustainable fuel would fit within the organization's risk tolerance. However, sensitivity analysis shows that sustainable fuel costs increasing by 5% rather than decreasing would mean the biofuel generator project would no longer fit within the organization's investment hurdle rate or risk tolerance. The organization chooses to explore the impact of making a different investment decision instead. Conducting similar sensitivity analysis for solar-powered generators shows that the decision to invest would remain within the organization's risk tolerance.

Swire Pacific Limited sets out the importance of considering physical risk as part of transition planning

For CFOs, understanding climate-related risks and opportunities is essential for shaping transition plans. Recent global conflicts have highlighted the vulnerability of supply chains, a risk that will only increase with climate change. As physical risks, like supply chain disruptions and water shortages, become more frequent, they introduce unpriced financial impacts that must be accounted for. It is imperative that the financial planning process and frameworks incorporate an 'outside in' risk assessment of these business end to end supply chain exposures, to ensure there are adequate mitigation plans and investment measures undertaken to address this risk.

Martin Murray OBE, Group CFO, Swire Pacific Limited

Schroders Investment Management uses green R&D spend as one of many indicators to assess whether an organization is invested in the net zero transition

Many view capex as the key solution for tracking sustainability, but the growing focus on green R&D is even more interesting. Unlike capex, R&D and potentially patents are easier to track from an investor perspective. It's about developing specific technologies, like electric vehicles, rather than broader infrastructure decisions.

However, R&D budgets are typically small, just 0.5% to 1% of sales for most companies, making it hard to draw meaningful insights about a company's long-term trajectory from such limited spending. While useful, R&D alone is unlikely to provide a complete picture of future progress.

Andrew Howard, Global Head of Sustainable Investment, Schroders Investment Management

Ahold Delhaize uses assumptions and estimates to understand the financial resources required for net zero and documents the level of uncertainty in these assumptions and estimates to revisit over time

At Ahold Delhaize, we wanted to understand the indicative financial resources required for each step of our science-based target roadmap, so that we have a clear idea of the cost of net zero action over the next decade.

There is so much uncertainty due to the long-term time horizons, so we use a lot of assumptions and estimates in this approach.

It is important to note down which assumptions we are using and the level of uncertainty, so that we can revisit these regularly as time progresses, and as the uncertainty gap closes. This is also so that we can raise anything that may be material to our stakeholders in terms of the assumptions applied. For example, we assume that there is no reduction in the cost of technology, but we also assume that there is no inflation linked to the cost of technology. Both assumptions will need to be tracked and monitored, but it enables us to set the foundation for our financial planning.

Frederieke de Haas-van den Vlekkert, Finance Director, Ahold Delhaize

National Grid considers a range of future scenarios to help to plan for unforeseen circumstances within financial planning

In our climate transition planning, we establish assumptions about potential policy change, consumer behaviour, energy outlooks, technology innovation, competition, and global temperature change and their impact on the business. This involves setting upper and lower ranges to account for uncertainties, particularly in areas critical to our emissions footprint. For example, we consider the transition of the energy sector, from the decarbonization of our gas supplies with renewable natural gas and green hydrogen in the long term, to the adoption of electric vehicles and the electrification of heating systems.

Our scenarios are built around assumptions across our seven most material emissions areas (~90% of our combined scopes 1, 2 and 3 GHG emissions). Each scenario is different, and in some we will not be able to meet our targets. We believe it is important to acknowledge that non-delivery of, or a delay in, policy, regulation and other dependencies on which achieving our targets are contingent will impact our capability to achieve our targets.

In the first scenario, everything aligns within our transition plan – with policies and consumer behaviours supporting the desired outcomes. Our headline GHG reduction targets are at the upper limit of what we consider feasible, but there are credible pathways to achieving them. In the second, we envision a more challenging pathway where progress is slower, and things don't go entirely as planned. This approach helps us prepare for unforeseen developments. For instance, AI is rapidly reshaping energy demand, but its full impact remains uncertain. By addressing these uncertainties upfront, we can better understand how to navigate potential challenges and adapt our strategies accordingly.

Joe Collins, ESG Controller, National Grid

ResilieNZ – locked-in emissions

Locked-in emissions pose a major challenge for ResilieNZ, as long-lived assets could continue emitting carbon even as other areas decarbonize. This misalignment between climate goals and operational infrastructure could lead to higher costs, regulatory risks and stranded assets. ResilieNZ proactively addresses this risk to ensure smarter investment decisions and to minimize future liabilities.

ResilieNZ has a manufacturing arm to its operations and must upgrade its ageing plant and machinery, with some heavy equipment reaching the end of its 25-year life cycle. Given the long-term use of these assets, ResilieNZ seeks to understand their impact on the company's net zero targets before making investment decisions by:

- Assessing the emissions linked to potential asset investments over their useful life (eg by estimating fuel use)
- Comparing emissions with the required decarbonization trajectory for the business segment utilizing the plant and machinery
- Considering the compatibility of the asset with net zero
- Exploring the financial implications of retrofit and refurbishment to remove reliance on fossil fuels, and early decommissioning or impairment to build this into asset investment decisions such as Internal Rate of Return (IRR)
- Using sensitivity analysis to test potential future exposure to carbon taxes (or similar)
- Developing an understanding of how the asset acquisition will impact externally stated net zero targets

ResilieNZ – upgrading assets and considering retrofits

ResilieNZ uses the Carbon Risk Real Estate Monitor (CRREM)[18] to understand the financial and emissions implications of decarbonizing its real estate. This provides insight into the need for capex investment for retrofits and other actions it can take across the real estate portfolio to achieve net zero.

As part of its transition plan, ResilieNZ identifies that significant asset upgrades will be needed to decarbonize its owned office buildings. It conducts emissions forecasting and notes that if no property improvements are made, it will not achieve its stated net zero target. In addition, the assets are at risk of asset stranding if no action is taken.

In order to develop a high-level transition plan, ResilieNZ estimates that each property will require an average of £2m in capex upgrades every five years. However more work is needed to develop a more granular understanding of the financial implications of upgrading assets so that a detailed financial plan for the short, medium and long term can be developed, and so that sufficient finance is allocated to decarbonizing the property portfolio.

ResilieNZ also wishes to factor in staff wellbeing to property upgrades to meet its broader strategic targets. To do this, it will factor in the costs of upgrading buildings to incorporate wellbeing, enhancing features such as living walls, prayer rooms, disabled access and breastfeeding rooms.

ResilieNZ uses the CRREM to:

- Identify the nature and type of retrofit required for each property
- Determine optimal upgrade timing to meet net zero targets
- Estimate costs to inform financial planning

The exercise provides an overview of the capex investment needs for retrofits between now and the net zero target date, and the different combination of actions that could achieve net zero. In some instances, minimal capex investment is required in the next three to five years to remain on course with the organizational net zero target. However this would mean that another later retrofit is required in between five and ten years' time, resulting in disruption and added cost.

Future retrofits could be avoided by bringing action and capex investment forward, offering key benefits:

- Lower operational costs through energy savings
- Regulatory resilience against carbon pricing and building codes
- Reduced disruption and costs by avoiding multiple upgrades
- Progress towards broader wellbeing targets

Having a clear overview of the action required provides a clear understanding of the financial implications of the different routes for action. ResilieNZ will further assess the benefits of bringing action forward and the availability of finance before determining next steps.

18. Carbon Risk Real Estate Monitor, About CRREM. Accessed: 11 February 2025.

2.4 CROSS-SECTOR AND VALUE CHAIN CONSIDERATIONS

Transition planning – unlike financial planning – typically requires working with the value chain and collaborating within and across sectors. However, your transition plan may depend on things over which you have no direct control. Work through the questions in Table 9 with relevant colleagues. Use these discussions to identify what to incorporate into your financial planning.

Table 9: Key dependencies, areas of influence and role in transition

Government policy	Infrastructure	Materials	Customer behaviour	Technologies
What is the current trajectory outlined in government or sectoral transition planning? What policies do you need from government to support the transition? What trade bodies or associations are you part of that could support you in communicating and advocating for those policies?	What regional plans are in place to upgrade or improve infrastructure? What infrastructure will you need? Can you liaise with local governments to strengthen their understanding of local business needs?	What raw materials or ingredients do you rely on as a business? How are you engaging with suppliers to understand and support their approach to decarbonization and physical resilience?[19]	What do existing trends tell you about how customer behaviour may change in the future? How do customers need to act to support the transition? How are you facilitating or incentivizing this behavioural change?	What technologies do you rely on to accelerate progress? What progress is being made to develop these nationally or internationally? How are you investing in their acceleration?
Which of these areas are appropriately resourced and financed? Which require further attention for financial planning?				

Financial planning for cross-sector and value chain considerations requires a deep understanding of the financial implications of dependencies, impacts, risks and opportunities. It also involves assessing the financial and other resources needed to support net zero action across the value chain and through industry partnerships. Given the wide range of potential initiatives, it is essential to focus your attention on areas that deliver the greatest impact, ensuring that resources are allocated effectively for meaningful progress.

You should also embed climate-related risk and opportunity exposures across the value chain in your financial planning, including physical risk and adaptation. Consider the value chain questions outlined in A4S's Key Questions for Finance Teams to explore what types of exposure you may need to price into financial planning. You can also consider:

- Suppliers or products which significantly contribute to emissions, and which may have large exposures to carbon pricing
- High-emissions customers who also significantly contribute to revenues or balance sheet composition
- Suppliers which you depend on for raw materials
- Suppliers which are unable or unwilling to commit to net zero

Life cycle assessment (LCA) can be a helpful tool when considering value chain focus areas, as it provides a comprehensive understanding of emissions across the entire life cycle of a product or service – from raw material extraction to disposal. By pinpointing the most carbon-intensive stages, it can help you build a deeper understanding of how revenues and costs relate to emissions.

19. There may be existing systems in place to gather data and information on supply chain transition planning (eg relating to information on emissions). These can be leveraged or expanded to support broader engagement for financial planning.

Sainsbury's focuses on the suppliers which contribute the most to scope 3 emissions and engages with them to understand their pathway to net zero: this helps it to understand where uncertainties and challenges exist in supply chain decarbonization, and whether emissions forecasts are realistic

Our first step for prioritization within our value chain is to understand where the emissions arise and where we might need to focus our attention. We have focused our engagement strategy on our top suppliers that contribute the most to our scope 3 procured emissions. We have good relationships with our suppliers and our goal is to make sustainability asks as simple as possible but also aligned to our net zero ambition. We are currently engaging with suppliers to understand their net zero ambitions and their roadmaps for achieving their net zero targets. This helps us to understand where uncertainties and challenges are within our supply chain so that we can understand whether our emissions forecasts are realistic.

Once we have this information we can use the assumptions to forecast realistic emission reduction plans across our supply chain and key product categories which will also be useful for internal engagement with our category teams.

Courtnay Ip Tat Kuen, Finance Manager, Sustainability, Sainsbury's

National Grid recognizes its critical role in supporting the broader economy to decarbonize and balances this key role with the emissions investments required to support the transition

A key consideration in our strategy is our critical role in helping the economies in which we operate to decarbonize and how we can support the clean energy transition. Achieving this requires significant investment in infrastructure, which represents a substantial portion of our emissions. However, it's vital to recognize that this infrastructure is essential for enabling other organizations across England and Wales in the UK, and in New York and New England in the US, to decarbonize.

Our biggest contribution to reducing GHG emissions, both in society and within our operations, lies in enabling the transportation and distribution of clean energy to homes and businesses in our regions. Beyond this, we are committed to reducing our scope 1, 2 and 3 GHG emissions. This underscores the need to adopt a broader perspective beyond our reported emissions. Facilitating a cross-sector transition involves not only addressing our direct emissions but also considering the ripple effects of our investments, network upgrades and connections to facilitate the clean energy transition which will enable industries and organizations to meet their own decarbonization goals. By taking this holistic approach, we can align our efforts with the collective ambition of driving a transition to a low-carbon future across the geographies in which we operate.

Joe Collins, ESG Controller, National Grid

Sainsbury's engages with sector-specific collaborative groups to create a collective voice for the supply chain with similar requests and performance requirements coming from multiple retailers

Cross-sector collaboration is key to achieving industry-wide change. We continue to participate in industry-wide working groups such as the Institute of Grocery Distribution (IGD)[20] to help build resilience in our food system. We have set external metrics for our suppliers to set 1.5-degree science-based targets and disclose on environmental disclosure platforms to collect environmental performance data.

For us, it's important to bring suppliers on the journey with us, helping them to understand what our transition plan looks like and then working with them to understand what their roadmaps look like and to understand the barriers that exist so that we can target action in those challenging areas.

Courtnay Ip Tat Kuen, Finance Manager, Sustainability, Sainsbury's

20. IGD, homepage. Accessed: 23 April 2025.

ResilieNZ – life cycle assessment to identify emissions hot spots

ResilieNZ analyses sales and emissions data to identify high-emissions, high-revenue products, focusing on synthetic textiles. A life cycle assessment reveals that dyeing and finishing contributes heavily to emissions but little to cost. Engaging with suppliers to implement changes in this area cuts emissions while maintaining profitability.

ResilieNZ identifies that synthetic textiles in clothing is a focus area for transition planning. The company identifies high-emissions, high-revenue products to focus further attention on and prioritize products which require transformation or elimination as part of its net zero transition. By doing this, the company can proactively explore alternative sourcing, redesign or replacement while safeguarding revenue streams, and it can then apply the principles learned from this to the wider product portfolio.

To achieve this, ResilieNZ extracts detailed sales and emissions data, mapping products on a matrix with emissions (low to high) on one axis and revenue (low to high) on the other. This approach has identified t-shirts as a key focus area.

An LCA for these products reveals that dyeing and finishing significantly contribute to emissions but make up a small proportion of overall costs. Recognizing an opportunity for emissions reduction without major financial impact, ResilieNZ engages with suppliers to explore low-carbon alternatives for these processes.

Through supplier discussions, ResilieNZ assesses the cost implications and consumer willingness to pay for sustainable alternatives. It determines that low-carbon dyeing is financially viable and secures advanced contracts to implement the change. This strategic approach ensures that ResilieNZ can reduce emissions while maintaining product quality, affordability and profitability in its transition to net zero.

Figure 2 illustrates ResilieNZ's analysis of each component of synthetic t-shirt production, comparing the cost of that element of the process and the emissions associated with it. It identifies dyeing and finishing as a low-cost but high-emissions area to focus on.

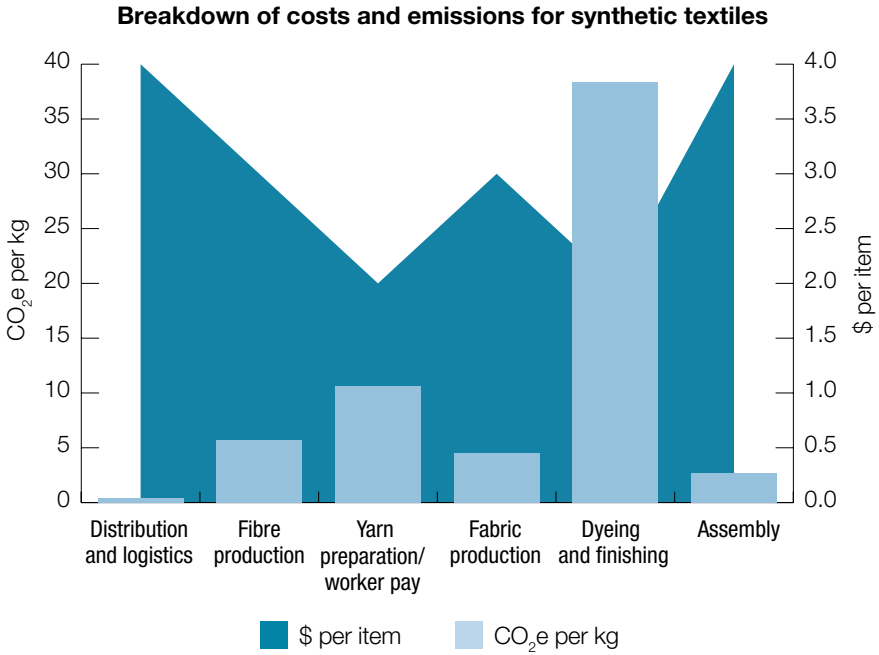


Figure 2: Comparing costs and emissions

TOP TIPS

- Focus on the most significant areas for your organization, considering what will be important for the future rather than just what is significant today
- Liaise with wider teams to build a deeper understanding of exposure to physical risk, organizational emissions and plans for adaptation and decarbonization, key dependencies in your value chain, and the financial implications for your business
- Consider using tools such as the CRREM to support your analysis of costs and savings
- Use scenario analysis and sensitivity analysis, and get comfortable with using and documenting assumptions and estimates
- Consider any exposures to climate-related risks and opportunities connected with your value chain that should be reflected in financial planning

3.0 PRIORITIZE

3.1 PRIORITIZE ACTION BASED ON FEASIBILITY, RISK, COSTS AND BENEFITS, AND EMISSIONS REDUCTIONS

Transition plan owners may have outlined planned actions and initiatives, but these often have not yet been prioritized or assessed through a financial planning lens – particularly in terms of the likely financial resources required. It is crucial to work closely with transition plan owners and sustainability teams to understand and critically assess the rationale behind proposed timelines and sequencing. Resources are limited, and you need to choose the right mix of actions to reach net zero and climate resilience, focusing on what is achievable, impactful and aligned with your wider goals.

Bring together the potential actions from across the business. These may reflect differing priorities and perspectives from each team. Examine each proposed action through multiple lenses – alongside emissions and financial forecasts – to model different outcomes and understand the full implications of each action and any challenges to implementing it.[21]

A marginal abatement cost curve (MACC) can also help you to prioritize. You can use a MACC to compare emissions and financial performance according to their cost-effectiveness and impact. A MACC visually represents the marginal cost per tonne of carbon dioxide equivalent (tCO_2e) reduced for various actions, alongside their cumulative emissions reduction potential.

Figure 3: Prioritization criteria for financial planning

21. Implications could include financial impacts, emissions impacts, alignment with broader strategic objectives (including those relating to nature and people), information about feasibility etc.

As you prioritize, consider the sequencing and timing of implementation. You won't be able to achieve everything at once, and actions might clash or need to happen in a specific order.[22] Some may need to be spread over multiple years due to financial constraints.

Drawing on this analysis, you can organize actions into four groups, in priority order:

1. Quick wins
2. Must haves
3. Co-benefit bringers
4. Extra enablement required

Prioritizing action in this way helps to align short-term pressures with long-term resilience planning. Setting out which areas of your transition plan are not currently feasible also enables strategic decision makers to factor this into financial planning, for example through value chain investment or action. While this approach will evolve as the benefits of long-term strategic thinking become clear, it offers a realistic and actionable path forward.

Figure 4: Allocation of actions into groups

22. For example, you cannot replace a machine and improve the manufacturing process of that machine at the same time.

Co-operators Group makes significant investments in research and development to understand exposures to climate-related risks as they relate to insurance products

At Co-operators, we take a forward-looking approach to our climate strategy that allows us to innovate and create solutions. We have made significant investments in research and development through our CHARM (Climatic Hazards and Advanced Risk Modelling) team that provides strategic insights using data analytics and sophisticated risk models to better understand our exposure to climate-related risks. These insights allow us to better plan for financial impacts and inform decisions related to how we design and deliver our insurance products.

Erica Oliver, Senior Sustainability Reporting Consultant, Co-operators Group

Schroders Investment Management incorporates net zero considerations in strategic decisions, demonstrating the practices it wishes to see within investee companies

We are driven to invest in net zero because it's a strategic priority. For many capital investments, the financial benefits are not always immediately clear in the short to medium term, but having a strategic focus allows us to prioritise investments with a view to broader benefits. For example, many of our clients incorporate sustainability in the decisions they make about their investment portfolios. By having our own emissions targets and taking positive actions to meet these, we can demonstrate the behaviours we want to see in other companies. This helps us engage constructively with the companies in which we invest and align our investment portfolios with our clients' sustainability focus. By bringing these broader organisational benefits into our financial planning we can better support the strategic decision-making process.

James Grant, Global Head of Finance, Schroders Investment Management

WPP acknowledges the challenge of balancing strategic priorities amid financial constraints and emphasizes the need for long-term thinking in transition investments

Prioritizing transition spend is challenging if we are considering the investor perspective rather than the impact perspective. Electric vehicles is a good example, where they may be more expensive initially, and may have a shorter life, so they need to be replaced more quickly because of the battery life. Even where they are saving opex in terms of fuel, the overall return might not be good from a financial standpoint, so the decision has to be one that is strategic and not based on financial return. Many equity investors tend to focus on short-term results, often looking only at the next year's performance. Bond investors might have a slightly longer perspective, typically considering a three-to-five-year horizon. It's common for financial executives to align with these time frames, concentrating on short- to medium-term plans. However, exceptional leaders often think beyond these periods, which contributes to their long-term success and stability.

There's a real fight for available capex within our organization, and many others. With the drive of technology and other investments really needed to position ourselves strategically, it's difficult to put forward the business case for transition investments, especially when there's global uncertainty, inflation and many other challenges.

Alex Ashby, Group Treasurer, WPP

ResilieNZ – marginal abatement cost curve

ResilieNZ uses a MACC to assess emissions reductions and financial impact side by side. This allows the company to compare proposed actions from across business units and prioritize those that deliver the greatest value. In the next planning cycle, ResilieNZ will prioritize initiatives that deliver both emissions and financial savings. Actions without dual benefits will be staged according to available financing and capex budgets.

A MACC shows the marginal cost per tonne of carbon dioxide equivalent (tCO_2e) reduced and the cumulative emissions reduction potential of each initiative.

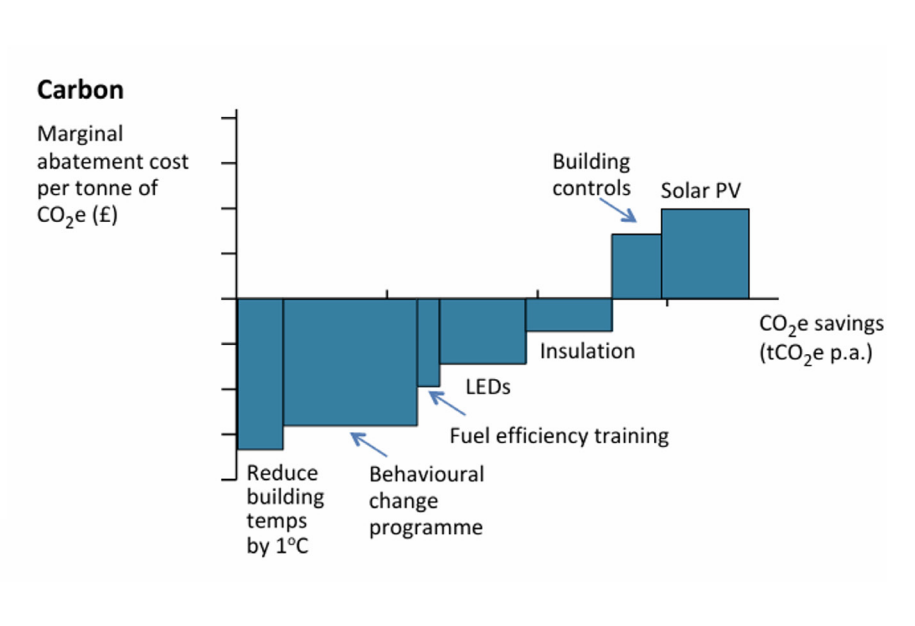


Figure 5: Marginal Abatement Cost Curve (source: A4S, 2018, A4S Essential Guide to Strategic Planning Budgeting and Forecasting)

In order to develop a MACC, ResilieNZ:

- Lists potential emissions reduction actions and initiatives, collating information from across the organization
- Calculates the emissions reductions (expressed as tCO_2e) for each initiative compared with business as usual
- Estimates the marginal cost or benefit of the initiative, compared with business as usual, using assumptions to support the calculation; the cost or benefit will include capex, revenue and opex (including efficiency savings)
- Calculates the marginal abatement cost of the initiative by dividing the net present cost of implementing it by the emissions reduced to obtain a $\$/tCO_2e$ value; capital costs are generally amortized and annualized to make all opportunities comparable
- Plots the results on a graph (see Figure 5)

On the X-axis, the MACC shows the total emissions reduction potential of each initiative, typically measured in tCO_2e. The width of the box represents the emissions reductions potential that opportunity can deliver in the chosen year, compared with business as usual. The wider the box, the more carbon saved per year.

The Y-axis represents the marginal abatement cost per tCO_2e, indicating whether an initiative saves money (negative cost below the axis) or incurs additional expense (positive cost above the axis).

The graph is ordered from left to right from the lowest to the highest cost measures. The opportunities that appear below the horizontal axis offer potential net financial savings as well as carbon abatement. Opportunities above the horizontal axis incur a net cost.

Using this graph, ResilieNZ can identify and pursue initiatives that result in both cost and emissions savings. Delivering initiatives from left to right can unlock funds to help deliver the more expensive options. ResilieNZ will spread broader actions across different time horizons based on anticipated available capex budget.

3.2 ALLOCATE ACTIONS TO DIFFERENT TIME HORIZONS

While net zero and adaptation ambitions are long term (with many organizations setting targets to 2030, 2040 or 2050), financial planning generally focuses on three-to-five-year planning horizons.

Transition planning actions and initiatives need to be segmented into short-, medium- and long-term time horizons. This helps to:

- Clearly allocate actions over time
- Identify which actions will fall within your current financial planning cycle
- Focus in more detail on nearer-term actions

Figure 6 segments the long-term view into different time horizons. Once you have a costed transition plan (section 2 supports this step) and have prioritized action (section 3.1 supports this step) you can build a clearer picture of what will fall within the next planning cycle. You can then revisit step 2 to develop a more granular picture for the three-to-five-year plan.

In line with the traditional financial planning approach, you will need to refine your short- and medium-term plans through further engagement with business units.[23] Once the transition plan is embedded in business unit plans and budgets, monthly actuals and forecasts can be aligned and integrated with the broader monitoring and reporting process of the organization.

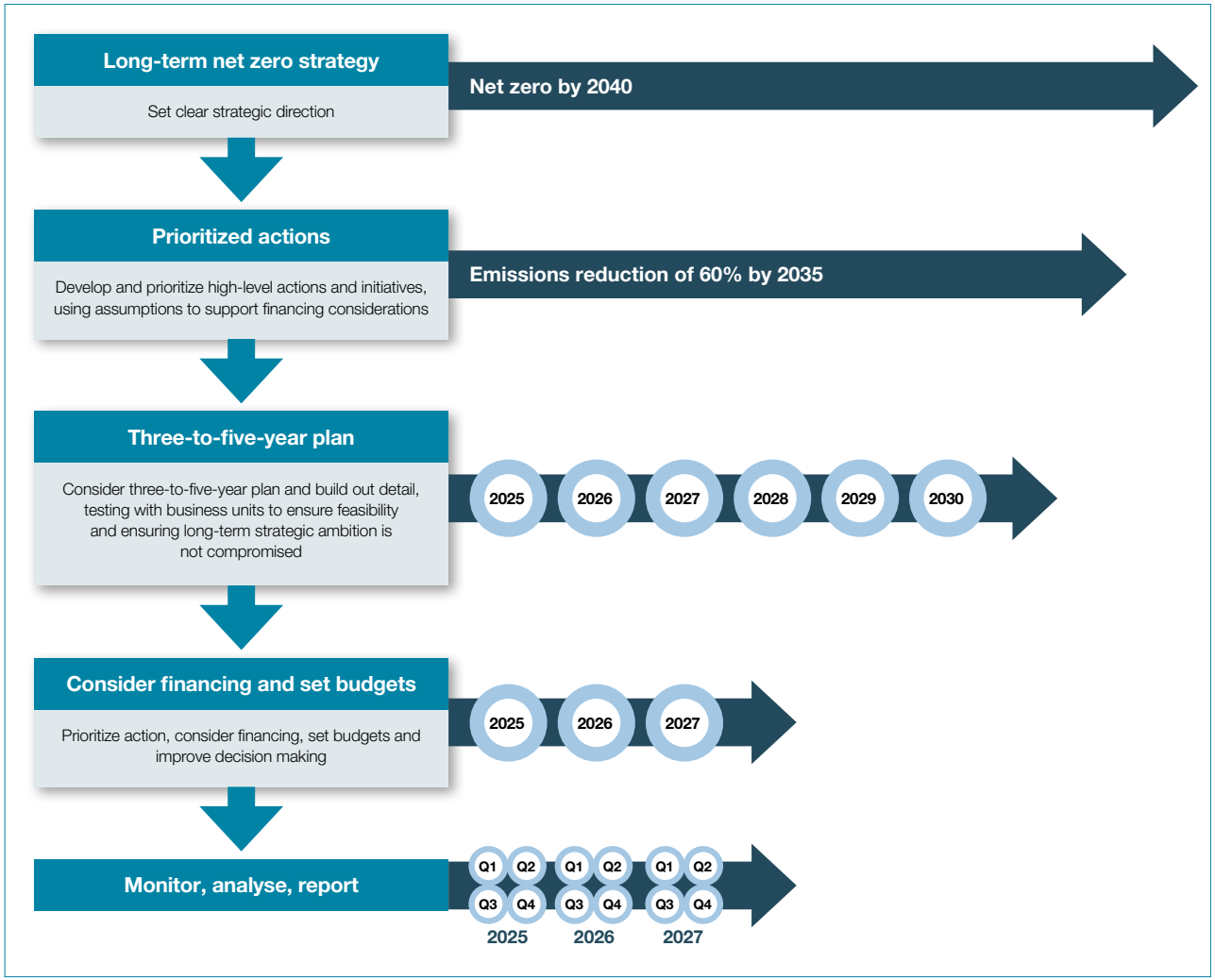


Figure 6: The long-term view in different time horizons

23. Those you engage with may be regional teams, divisional teams or business units. The goal is to reach and engage with those responsible for managing and delivering on business plans.

The finance team at DHL takes clear and practical steps to incorporate organizational transition priorities into the mid-term plan and budget. This enables seamless integration into planning cycles, monthly reviews and forecasts

As with any strong business plan, we started with clear strategic direction which set out long-term ambition. However, in order to understand what our transition plan would require we needed to:

- Capture our baseline emissions reliably
- Model changes in our emissions based on our anticipated growth
- Develop a detailed understanding of our levers of influence
- Set clear annual targets for carbon reductions for each area of influence
- Develop a detailed understanding of how the targets would be reached for each area of influence
- Build up a picture of the financial implications of decarbonization with wider stakeholders in the organization

This gave us a really clear picture of how our emissions reductions mapped to decarbonization expense, and when the costs would be incurred. This insight enabled us to identify what could come from existing budget allocations, and where there may be shortfalls or where additional financing may be required.

Once we had these steps in place we could develop a clearer mid-term plan and budget for the next three years, getting in a lot more detail in the same way that we would with our regular planning cycles. We then embedded carbon emissions and finance considerations within monthly actuals and forecasts.

Adam Pradela, CFO Corporate Sustainability, DHL

Embedding sustainability into strategic planning, budgeting and forecasting

Watch Annabelle DeGroot, Global Finance Sustainable Performance Management Lead, Unilever, discuss the company's approach to embedding sustainability factors into financial planning in A4S's Sustainability in Action Webinar: Strategic Planning, Budgeting and Forecasting.

TOP TIPS

- Consider both financial and emissions forecasts to assess financial and transition planning outcomes, taking account of different pathways for achieving net zero
- Balance trade-offs and prioritize action, taking account of financial returns, impacts, risks and opportunities mitigated or realized, emissions reductions, resource requirements, feasibility constraints, and alignment with strategic objectives (including those relating to people and nature)
- Use tools such as a MACC to support prioritization
- Segregate transition actions into different areas to foster effective communication with strategic decision makers, and to focus value chain or cross-sector action
- Set out near-term action clearly by allocating across different time horizons
- Prepare to build in more detail for short- and medium-term actions

4.0 EMBED TRANSITION PLANNING IN THE THREE-TO-FIVE-YEAR FINANCIAL PLANNING PROCESS

4.1 BRING THE TOP-DOWN ORGANIZATIONAL NET ZERO STRATEGY INTO THE THREE-TO-FIVE-YEAR FINANCIAL PLANNING PROCESS

This is a critical step for aligning financial and transition planning. To do this effectively, engaging with the wider organization will be essential so that those responsible for developing and delivering business plans are kept informed and involved with the process. The scope of the information that you bring into these discussions is also likely to be broader. Tool 2: Liaising with Business Units provides illustrative considerations to support this process. This step involves:

- Obtaining support for the top-down[24] plan from the wider business
- Providing clarity about the expectations for business units to embed and achieve net zero and climate resilience pathways
- Improving alignment and integration between those responsible for transition planning and those responsible for financial planning

Heathrow notes the importance of stretching business units to embed net zero

Finance teams often focus on short-term planning, but achieving net zero requires a long-term perspective. Our decisions must account for all costs and benefits beyond the typical three-to-five-year horizon.

To accelerate progress, we must challenge business units to think bigger, act sooner and push past financial constraints. Too often, they operate within set budgets without questioning if greater impact is possible. If key net zero actions can't be met within current budgets, we must ask, 'What do you need to make it work?'

By empowering teams to challenge limitations and advocate for resources, we can unlock greater benefits and bring net zero within reach sooner rather than later.

Sally Ding, CFO, Heathrow

Heathrow
Making every journey better

24. In this context we use 'top-down approach' to refer to the overarching transition plan, which may be managed centrally. Significant input from across the organization (ie a bottom-up approach) is also a fundamental part of developing the transition plan.

The process set out in Figure 7 is designed to align with a typical three-to-five-year planning process. We have assumed that the central finance team is the owner of the revised financial planning process that firmly integrates transition planning considerations.[25] This team should be responsible for taking the mid-term plan and building out the detail, testing it with the wider business and gaining support for successful delivery of the organization's strategy.

To make an informed decision on planning, finance teams need to assess a full range of factors, looking beyond in-year capex and opex budgets. This includes impact on operational costs or maintenance costs, access to grants, impacts of carbon regulation and avoidance of future penalties. Finance teams also need to consider strategic risks such as energy security, fuel price volatility, regulatory shifts and the potential for locking in future emissions with high-carbon assets. There may also be infrastructure requirements or wider operational impacts to consider. For example, if an organization is looking to replace fossil fuel vehicles with electric fleet, it may need charging stations, and the time needed to charge vehicles may impact operational planning and shift patterns, which in turn may have financial implications. Ultimately, finance teams will need to make decisions looking at a bigger picture than in-year financial budgets alone.

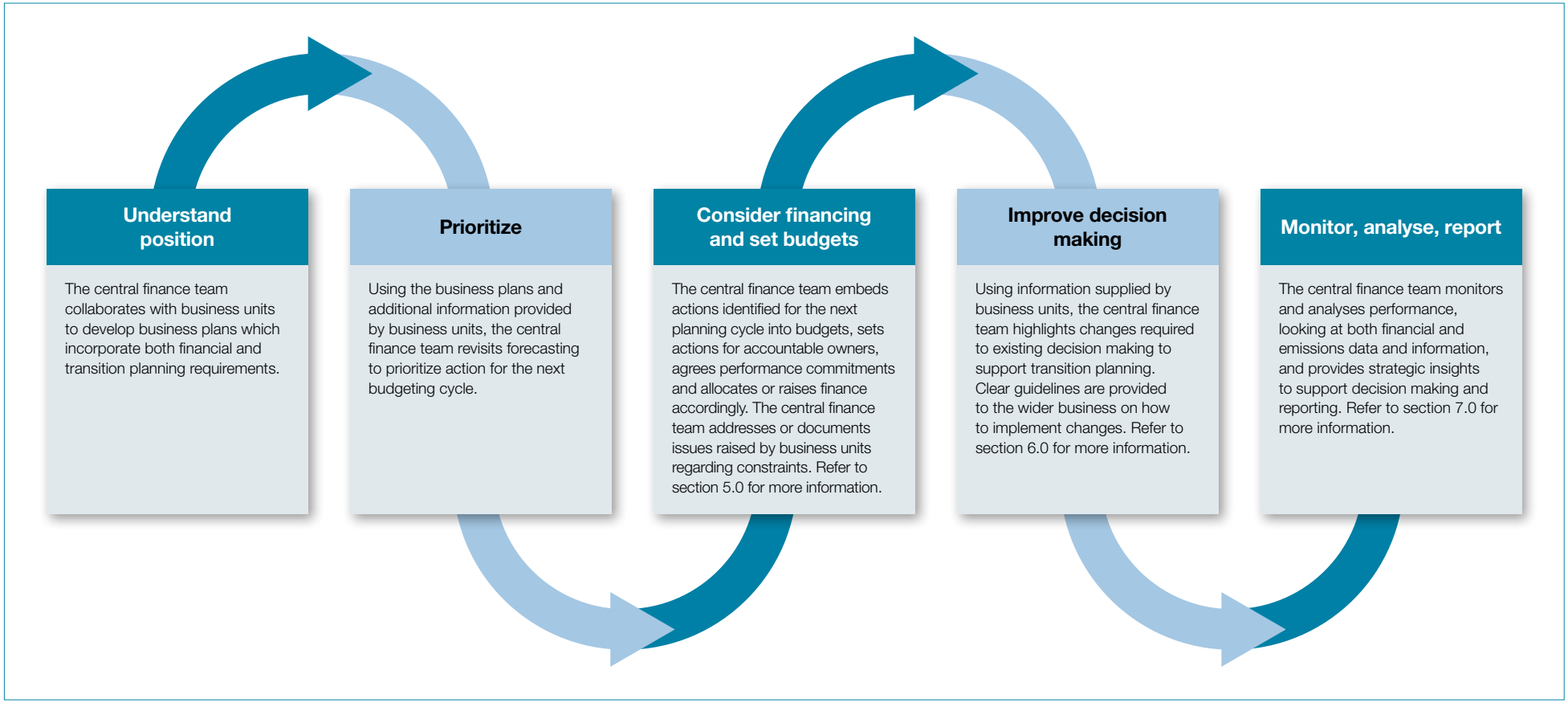


Figure 7: Embedding transition planning in the three-to-five-year financial planning process

25. The process is suited to an organization with a centralized financial planning function which works with other teams to develop a financial plan (referred to as 'business units', which could also represent divisions or geographies). This structure may not align with all organizations: you will need to modify it to suit your own approach. The individuals involved are also not likely to be limited to finance, and could include sustainability, HR and others.

4.2 ENGAGE WITH BUSINESS UNITS

Understanding the position will require engagement with business units. By setting out financial planning and transition planning requirements, the central finance team can help to ensure that planning at business unit level supports the transition plan. In turn, the business units who are ultimately responsible for delivering on business plans should have responsibility for incorporating transition planning into these plans. Figure 8 sets out what is required at each level.

Understanding the practical constraints for business units can make it clear to central finance teams where transition action may not align with parameters set by the organization. This will inform the broader work on embedding net zero and climate resilience within financial planning.

4.3 COLLABORATE WITH AND SUPPORT BUSINESS UNITS

Business units will need support to deliver the steps above. Getting initial buy-in can be relatively straightforward, as many individuals within organizations want to support the net zero transition. Maintaining this buy-in, however, can be much more challenging due to the multiple priorities that individuals must navigate. This may require strategic direction and support from teams responsible for delivering the transition plan. Being clear about the importance of action but also the consequences of inaction (such as increased exposure to climate-related risk) will be an important element of this dialogue.

In addition, there may be little awareness in the wider organization about how to embed transition planning into business plans. In the early years the central team may need to provide significant knowledge and expertise (alongside, or in collaboration with, others such as sustainability teams) and plans may go through multiple iterations, improving over time as alignment increases.

It is important that responsibility and ownership for delivering on net zero and climate resilience ultimately sit with all teams and business units responsible for delivering the organization's business plan. Individual employee performance objectives and integrating climate-related remuneration or bonus and incentive structures for delivering climate action can support engagement within business units (see additional resources listed on page 46 on remuneration). Internal carbon pricing can act as a mechanism to incentivize change where it has a financial impact on business unit profitability.

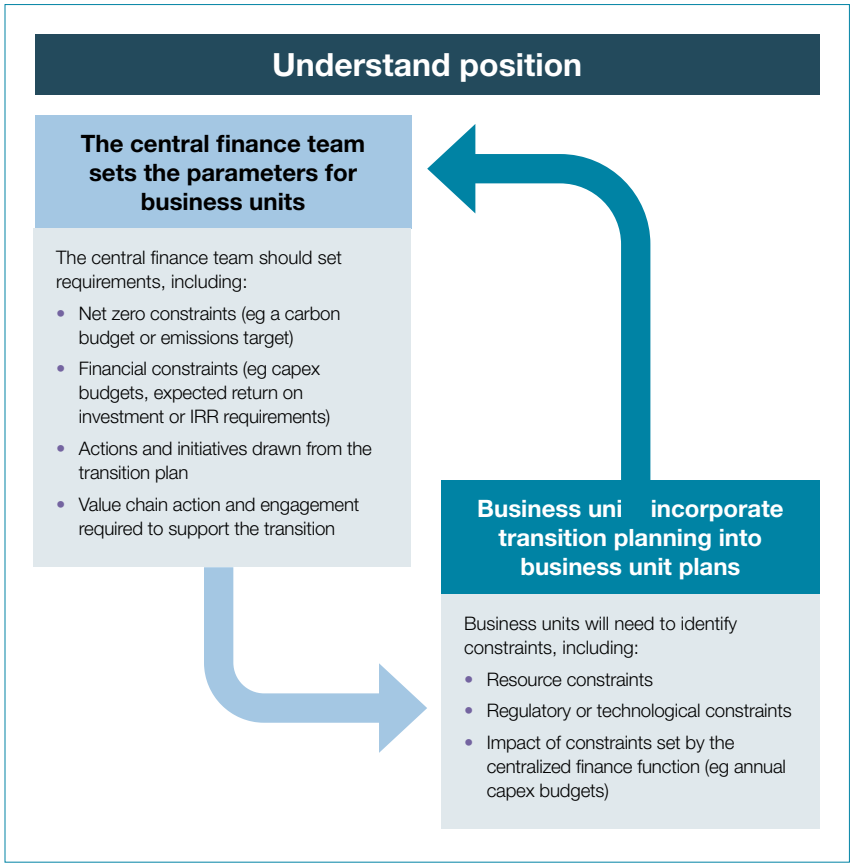


Figure 8: Central finance team engagement with business units

Internal carbon pricing

- Internal pricing involves assigning a price to a sustainability factor such as carbon or water.
- This can involve the real transfer of funds between geographies or divisions, eg charging different divisions a carbon fee based on emissions, or a 'shadow price', where an organization incorporates a cost into decision making but no transfer of funds takes place.
- The money charged should incentivize divisions to reduce carbon emissions, but the funds raised can also be collected in an internal fund and used for investment in decarbonization.

SSE case study

Read this SSE case study, which discusses how the group sustainability team, together with group finance, worked with the business unit finance teams to make sure that group-level ambitions took into account practical feasibility in the business units, and how those conversations helped the group to understand the level of emissions of the current forecasts and the scale

Liaising with business units (see Tool 2)

Use Tool 2 to understand the type of constraints that could be set for business units and the type of information that may be required from them.

Google's central net zero planning team collaborates with functional and business groups across the organization to explore carbon reduction initiatives, set realistic targets and timelines, and build budgets and investment requirements

Collaboration is essential to explore pathways for achieving our net zero goals and determine a realistic level of ambition to integrate into financial plans. Our iterative approach acknowledges that each function – from carbon-aware designs and energy efficiency to clean energy procurement – plays a role. Since each initiative impacts emissions, feasibility and finances differently, we assess possibilities and roadblocks to determine the achievability before financial plan integration. Support and coordination from the central net zero team is critical for effective governance and execution.

Vrushali Gaud, Global Director, Climate Operations, Google

NatWest's finance team leads on the development of the climate transition plan and provides support to the wider organization[26]

2024 was the final year of our three-year collaboration with the University of Edinburgh Centre for Business, Climate Change and Sustainability. The collaboration developed bespoke climate training for colleagues across the bank and was delivered through our digital learning academy. Its aim was to build confidence and capability, and to provide support to enable better conversations on climate change with customers, and each other.

Supriya Sobti, Climate Reporting, TCFD Implementation Lead, NatWest[28]

26. Insights from NatWest are based on extracts from the 2024 Annual Report.

During 2024, NatWest continued to integrate the climate transition plan within the financial plan to ensure that climate-related opportunities and associated risks are actively considered

Active balance sheet and risk management is a fundamental part of NatWest Group's strategy, and, from a sustainability perspective, identifying and addressing the risks arising from the physical effects of climate change and from the transition to a net zero economy support the safety and soundness of the bank. We continue to support our customers' transitions to a net zero economy by offering products and services, including specialist advisory and engagement services and education tools.

We have continued to integrate our climate transition plan within our financial plan to ensure that climate-related opportunities and associated risks are actively considered. This approach is intended to enable colleagues in our franchises and sector teams to make decisions which support our climate ambitions. During 2024 we made enhancements to our financial planning tools, to further automate and simplify our forecasting of climate-related initiatives across all our customer franchises and sectors. This continued to enable the review and challenge of our forecast financial plan and associated emissions profile by senior stakeholder groups in business areas, finance and other functions. Through our integrated financial planning work and our climate transition plan, we can identify some of the financial opportunities and actions required to assist with our climate ambitions. Climate-related opportunities have been identified on a sector-by-sector basis across our core customer franchises through the climate transition plan.

To support embedding of climate in decision making across NatWest Group, we are working to develop processes to incorporate climate as a consideration as part of our financial planning process, similar to other financial and non-financial considerations, such as costs. This is intended to be a mechanism to monitor progress against our decarbonization ambitions and alignment with overall strategic ambitions and financial plan.

Assessing climate alongside other financial and non-financial considerations will also help us to consider trade-offs as part of the strategic decision-making process.

Supriya Sobti, Climate Reporting, TCFD Implementation Lead, NatWest

NatWest Group

ResilieNZ – setting an internal carbon price

Subsidiary management teams need to be incentivized to recognize their roles and responsibilities in driving down emissions. ResilieNZ researches various mechanisms for supporting decarbonization and determines that setting an internal carbon price to tax emissions that exceed the carbon budget would be a useful next step.

Carbon pricing translates the impact of emissions into a monetary price which can be understood by subsidiaries or business units. A real transfer of funds using internal carbon pricing demonstrates the impact of emissions on divisional budgets and builds awareness for those responsible for driving change. ResilieNZ:

- Develops an understanding of where an internal carbon price would be most effective (ie whether this should sit at the subsidiary level or divisional level, or whether it should align with specific types of emissions and the associated responsible party)
- Considers the appropriate carbon price for different types of emissions (eg relating to travel, energy use, and procured goods and services), connecting the price with risks relating to exposure to external carbon prices or taxes
- Develops a mechanism to collect and pool funds and determine how best to use those funds
- Provides training for relevant teams, to ensure understanding of the purpose of the internal carbon price and to support effective data collection and reporting

TOP TIPS

- Provide guidance and support to help business units to develop their business plans with transition planning constraints in mind
- Adapt existing financial planning processes to reflect transition plans rather than inventing something new
- Ensure transition actions and initiatives are managed and embedded by the business units that can effect change

5.0 CONSIDER FINANCING

5.1 FINANCE THE TRANSITION

Achieving the transition will require significant investment across the economy.[27] At an organizational level, this may include developing new products, transforming operations or adapting infrastructure. Organizations can access a range of funding or financing mechanisms tailored to their specific needs and goals. Access to these, and the benefits of them, may be closely linked to progress made against transition planning. Areas that you could consider include:

- Debt (including sustainability-linked loans or bonds)
- Equity
- New products and services to replace lost revenues
- Sharing costs across the value chain (such as passing costs on to customers)
- Government grants and subsidies
- R&D tax credits
- Public–private partnerships
- Joint venture initiatives
- Licensing arrangements for intellectual property or pre-sales agreements
- Reallocation of internal cash reserves, budgets or existing ring-fenced funds (such as R&D investment budgets)
- Internal carbon pricing as a mechanism to reallocate finance within the organization

SSE talks about the financing allocated to its five-year Net Zero Acceleration Programme (NZAP)

Net zero is a core part of SSE's strategy and we have set out our short-, medium- and long-term carbon targets along with the key actions we will take to achieve them in our net zero plan.[28]

Our more granular NZAP Plus sets out how we will achieve our short- and medium-term targets. This is a five-year investment plan to 2027. For the short to medium term, net zero is therefore fully accounted for, and we revisit the funding needed twice a year to ensure that it remains sufficient.

For our longer-term financing needs, we revisit our long-term view to ensure we are aware of significant financing requirements that fall outside of business planning norms.

Barry O'Regan, CFO, SSE

27. According to a recent report by Boston Consulting Group, "the net cost of inaction – that is, the cost of not addressing climate change after accounting for the investment required for mitigation and adaptation – equates to 11% to 27% of cumulative economic output" by 2100. In contrast, "the total investment required equals 1% to 2% of cumulative economic output to 2100". Boston Consulting Group (2025), Landing the Economic Case for Climate Action with Decision Makers.

28. SSE (2022), From Targets to Action: SSE's Net Zero Transition Plan, page 6.

5.2 SHARE THE COSTS AND BENEFITS OF THE TRANSITION

There is a risk that you may overlook the benefits of cross-sector and value chain collaboration, as they fall outside direct operational control or are too costly to incorporate into financial planning. Yet achieving net zero and climate resilience requires substantial collaboration: this ensures that both the financial responsibility and the financial upsides of the transition are shared across organizations, and it recognizes that many organizations face similar challenges. Revisit the key value chain considerations outlined in section 2.4, including key dependencies. By working together, businesses can help to shape policy, share transition costs, accelerate progress and drive systemic change.

This could include:

- Dedicating personnel to engaging with government, to support and shape policies such as those on carbon taxes or incentives (to set out what financial support is needed for your sector to decarbonize or adapt to physical risk) and to set out sectoral implications of cross-border adjustments such as Carbon Border Adjustment Mechanisms (CBAMs)
- Investing collaboratively in seed technology and startups to facilitate emerging technologies and products (such as through joint venture arrangements or early-stage investing)
- Working with peers in your sector to facilitate advanced procurement of emerging products and services, to demonstrate demand and support cash flow for suppliers (eg committing to purchasing a set amount of low-carbon concrete or sustainable aviation fuel but reducing the cost through collective procurement)
- Partnering with local organizations (such as community groups) on climate adaptation or decarbonization relating to specific physical assets; eg multiple real estate owners in one location may face a common flooding risk or a decarbonization challenge such as access to electric vehicle charging stations: collaboration could unlock mutual financial and other benefits
- Investing in customer engagement and advertising to increase consumer willingness to pay for low-carbon products and services (eg moving towards sustainable investments or water-free products)
- Working with government bodies and non-profit or community organizations to design ways of splitting or reducing the cost of decarbonization or adaptation, so that the most vulnerable people (low-income households in particular) aren't unfairly burdened
- Supporting insurance customers to adopt property repair policies that require the use of equipment and construction designed to improve resilience against severe weather events

These actions can then be embedded in your financial plan, taking into consideration what is required to facilitate action.

Heathrow explains how banks and investors need to incentivize the transition through pricing mechanisms

Banks often reward companies with lower interest rates for meeting carbon targets and penalize them for falling short, creating a clear financial incentive for emissions reductions. However, the same logic doesn't fully apply to investors. Green bonds may impose penalties for missing targets, but they rarely offer rewards for exceeding them.

To accelerate meaningful change, we need a financial landscape where green bonds and green loans actively incentivize progress. More finance leaders and CFOs need to advocate for changes in these mechanisms to ensure we can achieve a low-carbon transition.

Sally Ding, CFO, Heathrow

5.3 PROVIDE DIRECT FINANCIAL SUPPORT TO YOUR VALUE CHAIN

Organizations can support cross-sector decarbonization and adaptation by providing financial support to suppliers or customers. You will need to consider whether this is an effective way to achieve desired outcomes. Financial support could include:

- Favourable payment terms so that suppliers (especially small- and medium-sized enterprises and startups) can manage cash flows effectively; such terms could be based on timely and complete emissions data disclosures, managed through a supplier portal platform
- Direct loans to suppliers to support investment in low-carbon assets or processes such as installing renewable energy assets
- Reduced bank lending rates to customers for investments that support adaptation or decarbonization
- Acting as a guarantor for suppliers' bank loans, so that suppliers receive the same lending rate as is secured by the guarantor

Engage with your investors and lenders to discover what flows of finance you could access to support net zero and climate resilience. For example:

- Discuss with investors where investment can both support the adaptation or the low-carbon transition and potentially generate future returns
- Liaise with your debt provider on the types of loan finance that could support your supply chain
- Consider where collective investment or collaboration on R&D could scale action while sharing risk (eg collective lending between multiple actors in the construction sector to create demand for low-carbon steel or concrete)

Incentivizing action

- Read the A4S Essential Guide to Incentivizing Action along the Value Chain to explore how direct financial levers could support your value chain to decarbonize
- Consider the World Business Council for Sustainable Development (WBCSD) case study on Value chain co-financing mechanisms to explore the benefits of co-financing emissions reductions

TOP TIPS

- Consider a financing strategy that looks beyond traditional debt and equity
- Consider the benefits and opportunities of action
- Make cross-sector engagement and collaborative action a core part of your transition plan
- Leverage industry alliances and coalitions to understand the issue and drive action
- Engage in proactive advocacy with government, customers and peers
- Explore diverse funding sources
- Share costs through collaboration and industry-wide initiatives
- Support your supply chain with direct or indirect financial support
- Engage with investors, lenders and policymakers to facilitate flows of finance to where it is most needed

Google is collaborating with peers to support early-stage low-carbon energy projects, reducing risks, encouraging investment and accelerating advanced clean energy adoption

We are teaming up with Microsoft and Nucor to develop new ways to buy and support low-carbon electricity technologies like advanced nuclear, next-gen geothermal and long-duration energy storage. We plan to combine their demand to support early-stage projects, making it easier for these projects to get the funding and backing they need to succeed.

To shift to a carbon-free energy future, we need new clean energy sources that can reliably fill the gaps left by solar and wind power. However, these technologies are still new and risky, making it hard to fund and build early projects. By joining forces, our aim is to reduce the risks, encourage investments and accelerate the adoption of these technologies, which could help lower our costs over time.

We have started by issuing a call for project proposals in the US, inviting developers, technology providers and investors to participate. We will then test a model where we combine their energy demand, making it easier to fund these early projects by sharing costs and risks. Our focus is on securing agreements for advanced tech, working with policymakers on improvements and creating new, supportive pricing structures with utilities. Through this collaboration, we will help drive innovation in clean energy and set a path for other companies to get involved.

Vrushali Gaud, Global Director, Climate Operations, Google

Google is collaborating with investors to support green energy infrastructure in regions with high fossil fuel dependencies

At Google we are committed to advancing a suite of energy solutions to support our local data center and operations with clean electricity, while opening up pathways to scale geothermal development across the Asia-Pacific region and globally. An example is our partnership with BlackRock to support the development of a gigawatt solar power pipeline in Taiwan by investing in New Green Power (NGP), a leading Taiwanese solar developer owned by BlackRock's Climate Infrastructure Fund. Through this we can procure power for our operations in Taiwan and help decarbonize our supply chain by sharing surplus energy with local suppliers. Google also signed the first corporate Power Purchase Agreement (PPA) for geothermal energy in Taiwan, and our first in the region. The initial projects – developed by global geothermal developer Baseload Capital – will add 10 megawatts of 'always on' power to the grid and help catalyze Taiwan's geothermal market.

By enabling such partnerships to expand renewable infrastructure, we advance clean energy in our own operations and across our supply chain and pave the way for a more sustainable energy landscape in the Asia-Pacific region.

Vrushali Gaud, Global Director, Climate Operations, Google

NatWest Group continued to work with McCain in 2024, offering potato growers additional funding and incentivized terms for those seeking to invest in regenerative farming practices

During 2024, Tesco and NatWest Group worked together to offer financial assistance to the retailer's farmers who wanted to invest into low-carbon energy solutions but needed help accessing finance. Incentivized rates are available to help farmers install renewable energy solutions and fossil fuel-free heating and cooling systems. This support was launched in 2024 and we anticipate take-up of this support to grow as farming businesses that are part of Tesco's supply chain continue their sustainability journey. In January 2024, NatWest Group, through its asset finance arm, Lombard, launched a new partnership with agricultural market leader Cefetra, with an aim to reduce the financial barriers for farmers transitioning to more sustainable agricultural practices.

Supriya Sobti, Climate Reporting, TCFD Implementation Lead, NatWest

6.0 IMPROVE DECISION MAKING

6.1 PRACTICAL TIPS TO ENSURE DECISION MAKING SUPPORTS NET ZERO AND CLIMATE RESILIENCE

You will need to identify and remove blockers in your organization's decision-making processes to ensure that net zero and climate resilience are considered in financial planning. This will help you both to meet your transition goals and to demonstrate your net zero commitment to investors and stakeholders. This is a key element of the three-to-five-year financial planning process. Use the key steps shown in Figure 9 to amend decision-making processes.

Decision makers need relevant information in an understandable format. This may include financial and emissions information that sets out the implications for both over the medium and long term in a range of future states. Optioneering is the process of exploring and evaluating multiple options or solutions to determine the best approach. It usually involves generating multiple alternatives, assessing the pros and cons (eg cost, feasibility, emission reductions, risk), comparing different options, and selecting the most suitable. In the context of net zero and climate adaptation, this may take into account the prioritization criteria set out in section 3.0.

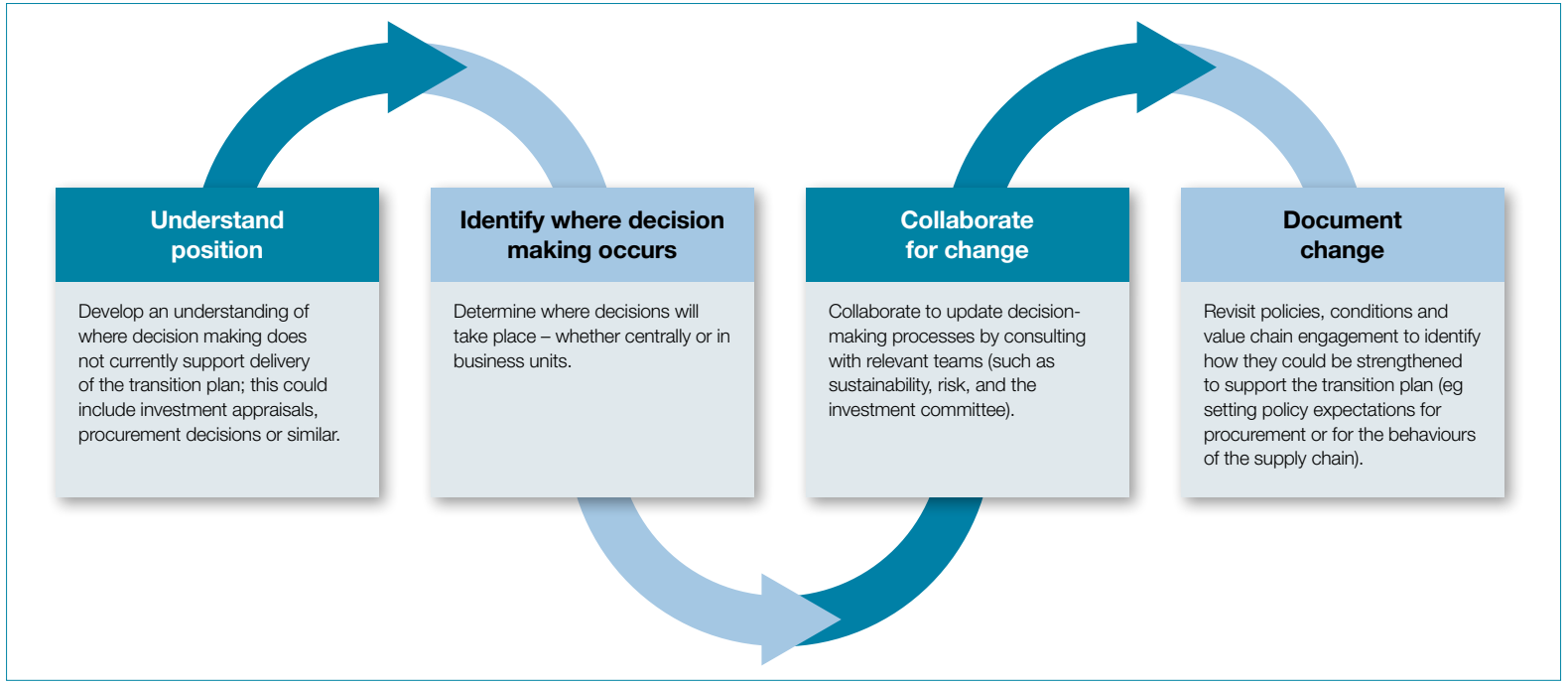


Figure 9: Process for amending decision making

You can amend decision-making processes in many areas to ensure transition planning is properly integrated into decision making. In the early stages you may wish to focus on the most significant areas for your organization before expanding more broadly. You can also use pilot testing to assess how different approaches affect organizational outcomes. Key considerations include:

- Incorporating a shadow carbon price into future cash flows and IRR or net present value (NPV) calculations (see the case study on page 48)
- Considering whether the carbon budget of a business unit will cover the carbon impact of the investment (see additional guidance and tools: carbon budgeting on page 16)
- Considering whether the financial budget of a business unit will cover the carbon impact of the investment at an assigned carbon price (which could reflect potential future exposure to carbon taxes or similar)
- Embedding physical risk into capex investment appraisals or supplier selection processes
- Aligning revenue or capex with taxonomy criteria, eg by procuring taxonomy-aligned assets
- Engaging with suppliers who align with your strategic priorities, eg decarbonization
- Requiring zero-carbon or low-carbon options to be included when exploring project options, and allowing them to be ruled out only for specific, clearly defined reasons
- Assessing the energy performance of proposed new assets
- Considering totex[29] under different energy and carbon prices rather than just considering the in-year capex budget
- Considering low-carbon energy in energy procurement decisions
- Incentivizing progress on transition plans through board/leadership remuneration

Decision makers will need support to be able to achieve this. For example, you could empower design and procurement teams to embed decarbonization into their processes, supporting the shift with some flagship zero-carbon investments. However, decision making may continue to be driven by financial return rather than a balanced perspective – even if emissions reduction is formally included in processes. This can be because leadership culture, internal politics or remuneration policies reward short-term gains over long-term impact, reflecting a misalignment between stated sustainability goals and what is actually valued in practice.

To address this, you need to identify critical decision points in your investment optioneering and approval process where decarbonization and adaptation may be overlooked and deprioritized and build in appropriate training and governance to mitigate this. This could include developing clear internal rules for considering any circumstances in which the transition-aligned option can be eliminated or rebutted, and who can make that decision. Requiring senior-level justification or board-level oversight for such decisions helps to create the accountability needed to shift culture. You could also consider how to broaden remuneration policies to support actions associated with delivering the transition plan, for example by expanding focus beyond short-term financial goals.

Decision making

- Read Chapter Zero's Climate Action and Remuneration: A Pocket Guide for Remuneration Committees and Chapter Zero New Zealand's Effective Climate Governance: Remuneration and Incentivisation to understand how remuneration can help or hinder climate action
- Explore the Integrated Performance Management report by AICPA (Association of International Certified Professional Accountants) and CIMA (Chartered Institute of Management Accountants) to learn how performance management needs to evolve
- Consider Transition Plans and Remuneration Policies: What Are the Challenges for Financial Actors? by the Institute for Climate Economics (I4CE) to explore how to ensure remuneration can support transition planning (within the banking sector)
- Read the A4S Essential Guide to Engaging the Board and Executive Management to consider how to engage the board and executive management on sustainability

29. 'Totex' stands for total expenditure. It captures the combined sum of capital expenditure (capex) and operational expenditure (opex) over a given period, giving a full picture of the total costs and savings of an action or initiative.

Schroders Investment Management uses decision-making processes as an indicator to assess how fully climate considerations are integrated into business strategy: this helps to determine whether a company fully understands the long-term sustainability and profitability impacts of climate-related risks

Capex is a useful indicator for transition planning, but it has limitations. It is more relevant for organizations with significant assets with a long useful economic life. For organizations where capex investments have shorter lifespans or limited strategic impact it may not provide a full picture. While the EU taxonomy has pushed for tracking green activities through capex, this measure provides only a partial view of how a company is aligning with long-term sustainability goals, particularly for complex issues like climate change. The capex dollars spent today may only shape a company's business for the short term, depending on what the specific assets are. Therefore, relying on capex alone doesn't provide a clear view of a company's trajectory over the next decade or its readiness for future challenges.

Moreover, the real challenge for transition planning isn't just about where companies spend their capex, such as building a factory versus a wind farm, but about how they allocate that capital. Key questions include whether investments are being made in energy-efficient or resilient infrastructure, not just in green projects. Our focus, therefore, needs to shift from asking about the specific destination of capex to understanding the underlying mechanisms of capital allocation. We and other investors should be more concerned with whether companies are using tools like internal carbon pricing or factoring climate-related risks into their investment decisions to ensure long-term sustainability and profitability, rather than simply tracking the dollars spent on green activities.

Andrew Howard, Global Head of Sustainable Investment, Schroders Investment Management

GSK distinguishes between centrally driven decisions that are implemented across divisions and those requiring leadership from business units, ensuring alignment with their involvement and ownership in execution

We make significant transition planning decisions which involve large projects centrally and then push them out to the wider business units. In addition, business units receive continuous improvement objectives for which they need to plan their local capital strategy. Involving the wider organization in transition planning is therefore key.

Charlotte Landy, Senior Finance Director, GlaxoSmithKline

WPP incorporates sustainability goals and objectives into the business cases put forward to and assessed by the investment committee

When it comes to investment decision making, our approach at WPP is to enhance our existing methods to include sustainability. We incorporated an additional consideration in business cases on sustainability goals and objectives, rather than creating a separate or stand-alone process for investment approvals.

Alex Ashby, Group Treasurer, WPP

Co-operators Group continually assesses and evolves decision-making processes

We continually assess and evolve our investment decision-making process to ensure alignment against leading frameworks for impact investing. These decisions are guided by interim and long-term targets.

Erica Oliver, Senior Sustainability Reporting Consultant, Co-operators Group

ResilieNZ – embedding a carbon price into cash flows

ResilieNZ embeds carbon in NPV and IRR calculations to understand and mitigate the potential risk of future carbon taxes and energy price increases. By embedding a carbon price in investment decisions, ResilieNZ can better assess how these factors may influence financial returns.

As governments and regulatory bodies continue to push for greater environmental responsibility, businesses that do not factor in these costs may face unexpected financial burdens. Embedding a carbon price in NPV and IRR may influence decisions by demonstrating how financial returns could reduce in an enhanced regulatory environment. Using a carbon price also helps to translate the environmental impact into a more understandable financial metric, enabling decision makers to make more informed decisions based on carbon-related data. This can support them to prioritize sustainable outcomes more effectively.

ResilieNZ focuses on manufacturing equipment and will:

- Understand the emissions associated with the assets over the life cycle
- Multiply the expected emissions for each year by the corresponding carbon price for that year to estimate the potential financial impact of future carbon taxes; carbon prices will be extracted from well-known climate scenarios and will test a range of different scenarios
- Adjust NPV or IRR calculations by incorporating the projected carbon price into the future cash flows; sensitivity analysis will be used to model different scenarios with varying carbon price levels
- Calculate the break-even carbon price – the price at which NPV switches from negative to positive – to understand the maximum carbon price that the asset investment can tolerate while staying within existing IRR and NPV thresholds

Depending on the outcome, ResilieNZ will refine its approach to adjust investment thresholds or select a higher carbon price such as the social cost of carbon, to reflect the organization's commitment to long-term sustainability better.

Integrating emissions into decision making

- Read the A4S Essential Guide to Capex and the A4S Capex Deep Dive to explore how to integrate social and environmental factors into capex appraisals and decisions
- Hear Rhiannon Dowdall, Head of Finance, Capital Portfolio and Investment Appraisal, Heathrow Airport Holdings, and Giles Ridgley, Head of Technical Accounting, Rolls-Royce, talk about how they are incorporating sustainability into capex decision making, in the A4S Sustainability in Action Webinar on Capex
- Hear Rob Sherrington, Senior Business Finance Manager, Ramboll UK, talk about how he developed a tool to support employees to choose lower-carbon travel options, in the A4S Sustainability in Action Webinar on Management Information
- Hear Omar Hanif, Director, Sustainability Reporting and Analytics, Ontario Teachers' Pension Plan, and Marcel van Lankveld, Head of ESG and Carbon Accounting, DHL Supply Chain, discuss how they have embedded sustainability into management information systems, in the A4S Sustainability in Action Webinar on Management Information

TOP TIPS

- Adopt an iterative approach, starting with areas where decisions significantly impact transition planning (eg significant capex investments)
- Pilot-test novel approaches to decision making to assess the implications for transition outcomes
- Engage with the wider business (through the financial planning process) to provide insight into areas where current decision-making practices do not consider or are acting against net zero or climate resilience

7.0 MONITOR, ANALYSE, REPORT

7.1 CONSIDER DATA CAPTURE AND SYSTEMS

Financial data is generally captured and reported frequently, to enable monthly or quarterly reporting, but there is often a lag for emissions data. The difference in timing makes it harder to see how business activities are impacting emissions and whether the organization is on track to achieve its decarbonization targets.

A key change includes embedding carbon tracking at the source of financial transactions as far as possible, for example by:

- Capturing emissions linked to procured goods and services when those goods and services are invoiced
- Connecting loan transactions or the sale and acquisition of investments to changes in financed emissions balances
- Linking energy usage or fuel consumption to live data capture for emissions

You can move towards aligning or integrating emissions reporting with financial reporting – whether live, weekly, monthly or quarterly. This will enable decision makers to assess financial and emissions data at the same time, to build a deeper understanding of the interaction between the two. The approach will depend on the current alignment or integration between your finance and sustainability reporting.

7.2 ENSURE MANAGEMENT INFORMATION IS SUFFICIENT TO DELIVER ACTION

More frequent reporting that combines financial and emissions data enables decision makers to take early action and keep emissions reductions on track. Transition-related data and information may be poor compared with historical financial data and information with robust controls. Finance teams (with support from internal audit) will need to get comfortable with this, while ensuring sufficient reliability to inform management decision making. Data imperfection is not a reason to delay progress, as getting started will lead to improvements over time.

DHL explains how transition planning is integrated into financial data and reporting systems and processes

To fully integrate sustainability key performance indicators (KPIs) into our broader financial planning cycles, we have adopted an iterative approach that has evolved into a seamless process. This process now includes:

- Annual planning and budgeting – sustainability KPIs are fully integrated into standard planning processes, aligned with the same timelines as financial planning. This ensures resource allocation and budgeting are directly linked to achieving sustainability goals.
- Integration with divisional plans – ESG KPIs, along with the associated opex and capex requirements, are embedded within divisional plans. Notably, the ESG initiatives are managed within the overall business budget.
- Functional board involvement – functional boards actively review, refine and enhance planning efforts before final approval by the corporate board. This process follows the same schedule as financial planning, ensuring alignment and coherence.
- Comprehensive forecasting – full-year forecasts of key sustainability KPIs are provided to top management monthly. These forecasts are included in the same reports as financial data, ensuring full transparency. They detail performance against targets and outline the capex and opex implications, as well as the associated benefits.

Adam Pradela, CFO Corporate Sustainability, DHL

Emissions reporting: Emissions reporting should show the difference between changes arising from normal business activity and those driven by transition initiatives. This will allow decision makers to see whether reductions are the result of deliberate actions, or external factors such as economic downturns and market shifts. Forecasted emissions projections are also necessary, enabling decision makers to understand whether the organization is on track to achieve year-end and medium-term targets.

Reporting for decision makers could include:

- Changes in emissions linked to business activities (eg increased sales leading to higher emissions)
- Carbon reductions from transition initiatives (eg emissions reductions arising from investment in low-carbon technology and efficiency improvements)
- Projected versus actual emissions performance, allowing for swift intervention if targets are off track
- The parameters and assumptions underlying forecast emissions, and the circumstances that could impact their accuracy (including any insights on projected performance derived from scenario analysis or sensitivity analysis)
- Changes in assumptions that could affect reporting and require restatement of baseline figures or comparatives (eg changes to emissions calculations and underlying data sets)

Transition costs and savings and connectivity with emissions: Mapping the financial costs and savings of transition actions and initiatives alongside their emissions or resilience impact is a powerful way to show what's working. By linking spending to emissions reductions or enhanced resilience to physical risk, organizations can better justify investment decisions and spotlight initiatives with the greatest climate and cost efficiency. This may be more straightforward for stand-alone projects and investments (such as installing low-carbon lighting or surface water flood drainage systems) where both spend and impact are relatively simple to measure. It may be more challenging for changes to elements of a larger system (such as changing to a lower-carbon material which forms one part of a continually evolving product raw material list). To support decision-useful analysis, organizations should identify what is meaningful and helpful for decision makers.

Key performance indicators: Consolidated emissions reporting is an important element of reporting, but it is only one part of the picture and does not reflect progress on enhancing resilience to physical risk. In addition, it may not always link clearly to the specific actions and initiatives delivered within business units. Broader and more practical metrics are often needed to provide useful management information. Considerations include:

- Tracking activities linked to transition plan delivery – look beyond emissions to monitor the actual actions being undertaken (eg the number of high-emitting assets replaced, changes in product sales mix, upgrades made to equipment or infrastructure).
- Using forecasted changes or a carbon budget as a benchmark – scenario analysis and business planning often include setting out expected changes to key activity levels. Retaining these original expectations helps to track whether transition efforts are progressing as planned.
- Linking actions to financial line items – every transition initiative is likely to have a financial indicator. Identifying the relevant accounting or general ledger (GL) codes allows for better integration of climate and financial performance and supports financial reporting.

KPIs linked to transition action could include:

- Number and percentage of fleet vehicles converted to electric vehicles compared with the target for the year (ie how many electric vehicles did you intend to buy/lease as set out within your transition plan and how did you perform against that target?)
- Amount and proportion of green energy procured compared with the target
- Amount and proportion of taxonomy-aligned capex[30] and revenue compared with the target
- KPIs relating to physical risk such as the asset value at risk

Risks and opportunities: Transition-specific risks and opportunities should also be highlighted to decision makers, for example:

- Key opportunities such as revenue potential or enhanced asset values
- The risk of stranded assets and the projected date of stranding (based on quantity of assets or percentage of portfolio)
- Locked-in emissions arising from recently approved capex investments, those held on the balance sheet and the risk of additional locked-in emissions resulting from the current business plan
- The risk of revaluations or impairments to assets, or to cash-generating units and goodwill
- An assessment of feasibility based on key dependencies or assumptions (consider what your organization knows can be achieved in terms of decarbonization and what is currently uncertain)

30. 'Taxonomy-aligned capex' refers to capex that meets defined sustainability criteria under a recognized taxonomy, such as the EU Taxonomy. It typically includes spend on assets or projects that support environmental objectives, such as emissions reduction or energy efficiency.

Visual tools

Finance teams often use visual tools such as waterfall charts to illustrate how income or profit has changed from one year to another. These can, for example, break down year-on-year changes into key drivers such as increased revenue, lower operating costs, higher raw material prices and one-off expenses. Charts can be used in a similar way to show why emissions have gone up or down over time, or to forecast business plan emissions. This could include, for example, information on efficiency improvements, renewable energy use, reduced production or sales, product redesign, or supply chain changes. Combined charts can show the interconnectivity between financial performance and sustainability performance.

Figure 10 is based on and evolved from the waterfall chart included in PwC's Typico plc: Greenhouse Gas Emissions Report page 9. It sets out how changes in emissions can be reported and connected with the in-year financial impacts associated with those changes. It also sets out how activities in the business plan, such as acquisitions and organic growth, can impact emissions.

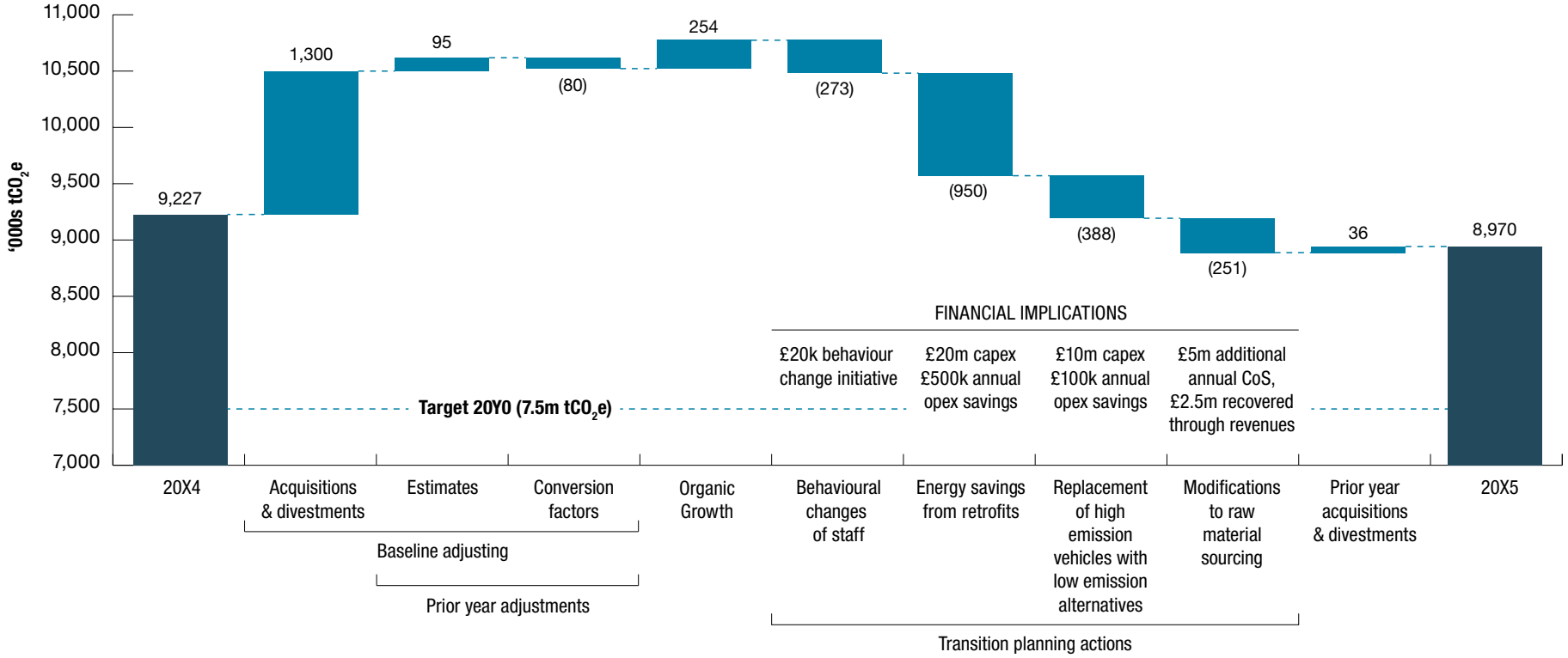
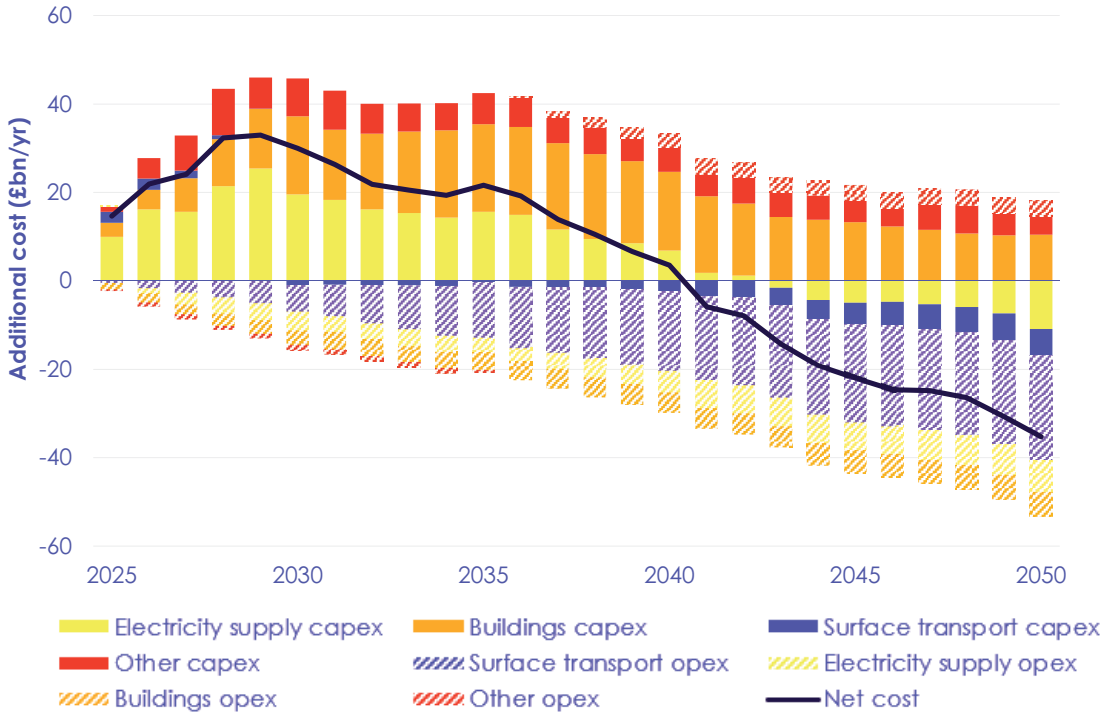


Figure 10: Visual tools to set out emissions and financial impacts (source: based on illustrative figures from PwC, 2009, Typico plc: Greenhouse Gas Emissions Report).

Visual tools

Explore the visual tools used as part of DHL's 2024 Sustainability Presentation, including the diagram on page 33 setting out "additional expenditures for decarbonization" which could be modified to support internal management information for decision makers.

Explore the Climate Change Committee's The Seventh Carbon Budget: Advice for the UK Government, page 89, for a visual representation of additional capital and operating costs within the Balanced Pathway, compared with the baseline (see Figure 11). Diagrams like this can help decision makers to take a longer-term perspective. It shows how capex investments today may lead to opex savings later, ultimately delivering positive outcome for the organization.



Description: Additional costs in the Balanced Pathway are front-loaded, peaking in 2029. Investment costs are offset by operating savings in later years, with the pathway becoming a net cost saving overall in 2041.
Source: CCC analysis.
Notes: See Chapter 4. 'Capex' is additional capital expenditure and 'opex' is additional operating expenditure. Both are relative to a baseline of no further decarbonisation action.

Figure 11: Visual representation of additional capital and operating costs within the Balanced Pathway (source: Climate Change Committee, 2005, The Seventh Carbon Budget).

Management information

- Read the A4S Essential Guide to Management Information for suggestions on how to produce insightful management reporting
- Use the TPT's Transition Planning Cycle to explore how to set metrics and targets (including GHG reduction targets, governance, engagement, business and operational targets, and financial targets) and to access the additional resources collated in the document
- Read the TCFD's Guidance on Metrics, Targets and Transition Plans for insights into characteristics of effective climate-related metrics, the types of information organizations should consider including in their disclosure of climate-related metrics, and categories of metrics for disclosure across industries
- Explore ISSB's IFRS S2 Climate-Related Disclosures: Industry-Based Guidance to consider industry-based metrics tied to business models, activities, or other industry characteristics

DHL ensures that management information and internal reporting are effective for driving action

Our management reporting includes a continual three-year plan of emissions which shows the trajectory of our emissions plans based on anticipated sales growth and the actions we have planned for the next three years. Against that plan we track actual emissions based on live data captured through our data systems. For example, when we procure sustainable aviation fuel we also capture the emissions data to enable live reporting. This sets out how we are tracking against expected progress in our key areas. Within the areas we also monitor additional KPIs – for example, we may have a set number of electric vehicle purchases outlined for the year, and we will report actual versus planned purchase to monitor progress. Getting this clarity over reporting is essential to enable early intervention if we are not on track.

Adam Pradela, CFO Corporate Sustainability, DHL

7.3 CONSIDER WHAT TO INCLUDE IN EXTERNAL REPORTING

Many organizations report against frameworks and reporting regulations that require disclosures about transition plans, and many investors and lenders scrutinize this reporting to assess a company's commitment and progress towards net zero. Embedding transition planning in financial planning can support external reporting requirements and add credibility to transition planning.

Transition plans are iterative by nature, just like any other aspect of corporate strategy. External reporting must balance transparency with flexibility, providing investors and stakeholders with confidence that the organization is taking action while allowing room for amendments when operating circumstances change. Finance teams may be wary of being overly prescriptive about future actions, but they need to ensure sufficient detail is provided to enable the users of financial statements to form an external view on an organization's ambition and progress.

The level of detail to include in external reporting is a matter of judgement for each organization. It's often more practical not to make very detailed commitments when assumptions cannot support disclosures. Being overly prescriptive about what action you will take and when (for example committing to decommissioning a particular asset by a set date) may increase the risk of making external commitments that will later need to be adjusted or retracted due to unforeseen events. In contrast, setting broader commitments (for example, the anticipated number of vehicles that will be replaced in a specific year and the range of anticipated cost, along with key assumptions and dependencies) can create clear expectations for stakeholders.

As better information becomes available, errors may be corrected and accuracy improved. Restatements are traditionally perceived as a negative for finance teams, as they imply an error in reporting, but for transition plan reporting they could instead mean that better information has become available. A shift in mindset will be required for finance teams as forward-looking statements become more commonplace.

First and foremost, organizations need to ensure that they adhere to reporting frameworks and regulations in the relevant reporting jurisdiction. Considerations for reporting include:

- Transition roadmaps outlining significant milestones and strategic priorities, with high-level financial indicators
- Key financial investments set aside in the short and medium term for capex and opex
- Scenario assumptions (eg cost estimates) that provide a range based on different market conditions and regulatory developments
- Key dependencies, such as what needs to happen at a system or regulatory level to support the achievement of net zero
- Detail on how the transition plan will be financed
- Management of the risk of greenwashing or greenwishing[31] (eg through close monitoring of messaging in communications and what is planned and achieved in actual transition)
- Detail on the level and appropriateness of assurance obtained, with the opinion clearly disclosed (scope, coverage etc)
- The value of liaising with external assurance providers to ensure that reported information is relevant and reliable

TPT Disclosure Framework

Many organizations report against the TPT Disclosure Framework. The IFRS Foundation is now responsible for TPT's disclosure-specific materials which can help companies with disclosure. This framework supports external reporting for transition plans and provides detailed guidance about what could be included within each section. Finance teams will play a key role in exercising judgement on how much detail should be included within each TPT element.

A transition plan should translate ambitious objectives and priorities into concrete steps to be taken in the short-, medium- and long-term. It should include a roadmap of planned actions that will contribute to meeting its strategic ambition. Organizations should ensure that their planned actions are underpinned by appropriate resourcing plans. An organization should assess the sensitivity of its plan to changes in key assumptions and external factors on which it depends, and should seek to mitigate delivery risks where possible.

Disclosing against the TPT framework therefore allows adjustments in response to unforeseen events, as long as the rationale and changes in assumptions are transparently communicated. Such transparency supports both ambition and adaptability in transition planning.

31. In line with definitions set out within the TPT Disclosure Framework, greenwashing can arise when entities make unsubstantiated climate and environmental claims, potentially misleading consumers and wider stakeholders. Greenwishing can arise when entities rely too heavily on optimistic assumptions relating to longer-term developments, such as the emergence of new technology, at the expense of short-term action.

Monitor, report, analyse

- Read the A4S Essential Guide to Strategic Planning, Budgeting and Forecasting from page 143 to understand data requirements and system and functionality requirements for new systems, to assess your current systems and to avoid common pitfalls
- Consider the A4S Reporting Insights: Data Collection to consider challenges in obtaining timely, complete and accurate sustainability data (including consideration around information quality and control environment; technology and automation; data sources; and assurance)
- Explore PwC's article on Data for the sustainable enterprise: Going beyond reporting to create business value to consider how data and systems can be improved for sustainability reporting

Connecting IFRS Accounting and IFRS Sustainability

- Ensure connectivity between climate-related reporting and financial reporting; Connecting IFRS Accounting and IFRS Sustainability offers practical resources including webcasts to support finance teams in understanding how climate-related and other uncertainties could impact on financial statements, and how they connect with IFRS S1 General Requirements for Disclosure of Sustainability-Related Financial Information and IFRS S2 Climate-Related Disclosures
- Monitor updates to IFRS Accounting standards such as those relating to Climate-Related and Other Uncertainties in the Financial Statements to ensure that financial reporting correctly embeds transition planning

TOP TIPS

- Align emissions reporting with value drivers of the organization, eg linking emissions connected with costs of sales to associated revenues
- Provide training and support to wider teams to ensure accurate data entry and robust controls, and involve finance in the collation of this data
- Connect financial and emissions forecasting so that decision makers can see both the financial impact of transition planning actions and the emissions impacts of financial investments and expenditures
- Report management data and information that is meaningful to decision makers and enables them to understand true progress against targets
- Set out a high-level external reporting roadmap as clearly as possible and in line with disclosure requirements, with strategic actions and initiatives and an estimate of capex, opex and other financial considerations
- Set out the level of uncertainty in costed figures, and provide clarity on challenges and dependencies which could impact financial planning

Sainsbury's includes overarching roadmaps and key actions in external reporting rather than reporting about specific asset replacements: this helps the organization to manage unforeseen events which may lead to a change in asset replacement plans

In our external reporting, we focus on the overarching roadmap and the key actions we're taking to achieve our near-term and net zero targets. We have externally committed to allocating capital investment to become net zero in our own operations by 2035 and our future capital investment is aligned with our decarbonization roadmap.

Forecasting at the specific asset replacement level is challenging because unplanned events can disrupt even the best-laid plans, so sometimes we need to revisit our forecasting if events outside of our control occur, like unexpected breakdowns. We continually review our capital plans and reforecast when unforeseen events occur. Where possible we align any replacements with the life cycle of assets (either due to age or condition) so that we continue to make progress against our commitments.

Courtnay Ip Tat Kuen, Finance Manager, Sustainability, Sainsbury's

GSK communicates externally about planned capital investments, focusing on major initiatives and overall direction of travel

Sustainability reporting regulations increasingly require forward-looking statements as stakeholders seek reassurance that we are on the right path.

We have communicated externally about our planned capital investments to achieve our net zero targets, and we use these commitments as the foundation of our financial planning process. For example, our low-carbon inhaler programme has significant dedicated capital budget to enable transition to production of a next-generation lower-carbon propellant, with phase III trials begun in 2024.

In our external reporting, we focus on major initiatives and the overall direction we are pursuing. However, we do not disclose details at the asset-by-asset or site-by-site level.

Charlotte Landy, Senior Finance Director, GlaxoSmithKline

Schroders Investment Management considers a range of indicators to assess preparedness for a low-carbon economy, including capex and opex allocation, shadow carbon pricing, R&D for green innovations, and executive accountability

We are increasingly focused on how companies align their transition plans with financial planning, seeing this integration as a key indicator of preparedness for a low-carbon economy. Beyond headline commitments, we want to understand whether climate goals translate into meaningful financial decisions and operational strategies.

We can evaluate several factors to determine if a company is embedding climate considerations into its financial and operational planning. Levels of disclosure vary a lot, but companies may report things like:

- Capital investment decisions – this could include the mechanisms companies use to stress test capital allocation decisions and hurdle rates to reflect different climate scenarios. Are you considering the potential returns on investment under different scenarios, or how water stresses could impact your operations?
- Shadow carbon pricing – this can help companies to think about the future viability or profitability that could be generated on different dollars of investment
- R&D for green innovation – investment in clean technology and decarbonization efforts highlights long-term strategic intent, especially in industries undergoing significant change

While we do analyse corporate disclosures, meaningful insights often come through engagement. Many transition plans are still disconnected from broader financial strategies, with companies reluctant to disclose some details of their transition plans or performance due to regulatory and auditing concerns.

Despite this, the growing board-level focus on sustainability is fostering change. Greater scrutiny ensures resources are allocated to transition efforts, driving improvements in transparency and governance. However, investors also face challenges in navigating a flood of sustainability data, needing to prioritize actionable metrics over exhaustive disclosures.

Effective transition planning is not about meeting disclosure requirements alone. The real objective is to assess risks, identify opportunities and pinpoint which companies will succeed or struggle under climate transition scenarios.
By clearly linking climate goals to financial and operational strategies, companies can demonstrate resilience and attract long-term capital.

Andrew Howard, Global Head of Sustainable Investment, Schroders Investment Management

TOP TIPS

- Align emissions reporting with value drivers of the organization, eg linking emissions connected with costs of sales to associated revenues
- Provide training and support to wider teams to ensure accurate data entry and robust controls, and involve finance in the collation of this data
- Connect financial and emissions forecasting so that decision makers can see both the financial impact of transition planning actions and the emissions impacts of financial investments and expenditures
- Report management data and information that is meaningful to decision makers and enables them to understand true progress against targets
- Set out a high-level external reporting roadmap as clearly as possible and in line with disclosure requirements, with strategic actions and initiatives and an estimate of capex, opex and other financial considerations
- Set out the level of uncertainty in costed figures, and provide clarity on challenges and dependencies which could impact financial planning

A4S NET ZERO TASKFORCE

This guidance has been developed in collaboration with the A4S Net Zero Taskforce (the Taskforce) and would not have been possible without their valuable insights. We would like to thank them for this input. The Taskforce comprises members of the CFO Leadership Network across North America, Europe and Asia Pacific and includes representatives from real-economy organizations and financial institutions. Taskforce members include:

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