

# 5 Effective Ways to Embed Sustainability in the Value Chain

How to achieve true change towards  
a sustainable company

Thought Paper

# 5 Major Steps Towards Sustainable Value Chains

## How to Embed Sustainability in the Value Chain

Managers responsible for sustainability and environmental strategies are faced with the demanding task of paving their company's way towards climate neutral. Gathering robust facts about CO<sub>2</sub> drivers along the company's value chain, screening, identifying and implementing the most effective ways to reduce the carbon footprint, getting management buy-in for sustainability initiatives, convincing external and internal stakeholders, or achieving a true impact that goes far beyond fulfilling reporting and reputational requirements: these are just some of the challenges sustainability managers have to master. In particular, smaller companies often lack the baseline for effective sustainability strategies, as they have no holistic approach and only insufficient transparency on their CO<sub>2</sub> footprint and the CO<sub>2</sub> drivers along their value chain.

The following 5 major steps can help those that are responsible for business sustainability and environmental strategies in an organization to overcome these challenges and move from a patchwork of well-meant single initiatives to a holistic sustainability strategy, which is grounded in facts and addresses key drivers with bold measures, while balancing economic and ecological impact.

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## Achieve tangible CO<sub>2</sub> footprint transparency

In the last years, we have seen progress in companies' transparency of CO<sub>2</sub> footprint mapping, as can be witnessed by many sustainability reports and the increasing traction of voluntary information sharing like the Carbon Disclosure Project<sup>1</sup>. However, it seems fair to say that sustainability metrics are still not sufficiently integrated into day-to-day planning and decision-making in companies' value chains. CO<sub>2</sub> emissions and other sustainability metrics need to be elevated from abstract reporting to tangible input for decision-makers along the value chain. A critical prerequisite for that is an increased level of CO<sub>2</sub> footprint transparency using analytics and giving easy access to emissions and energy usage data to managers in commercial affiliates, stores, production sites, and suppliers. There are already tools available such as CAMELOT's Carbon Footprint Analyzer, that help companies determine CO<sub>2</sub> drivers along the value chain. Only with that level of transparency, sustainability will enter the decision-making arena for strategy, procurement, manufacturing, and supply chain, and allow value chain practitioners to define targets and properly evaluate trade-offs including ecology and economy.

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## Conduct strategic scenario planning based on sustainability

The above-mentioned CO<sub>2</sub> budget and a series of accelerating disruptions (e.g., wildfires, droughts, summer heatwaves) prove that the impacts of the climate change are already noticeable and should play a major factor in any company's strategic planning horizon. However, only 42% of all companies surveyed by the Carbon Disclosure Project<sup>2</sup> conduct climate-related scenario planning and many of those only qualitatively. Thus, climate-related planning needs to be elevated from a purely environmental function to a key ingredient of corporate strategy. Business strategy, value chain strategy and CAPEX planning, among others, should be informed about quantitative climate-related scenarios. This includes not only the impact assessment of energy / CO<sub>2</sub> taxation and regulatory developments, but also scenarios for climate-related risk events and shifts in decision patterns of consumers, investors, partners and other important external stakeholders.

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<sup>1</sup> Mercator Research Institute; <https://www.mcc-berlin.net/en/research/CO2-budget.html>

<sup>2</sup> CDP Global climate change analysis 2018; <https://www.cdp.net/en/research/global-reports/global-climate-change-report-2018>



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### Put a price tag on emissions to incentivize creativity

Environmental issues and greenhouse gas emissions have typically been externalities which do not impact the companies' financial performance. This situation is gradually changing, with political actions such as the European emissions trading systems or the CO<sub>2</sub> tax being imposed in many countries. Still, the existing external pricing signals are often insufficient to incentivize companies' aspirational journey towards a low-carbon economy. To raise the incentives, sustainability executives should consider the implementation of internal carbon pricing for emissions along their value chain. Carbon pricing or other incentivization mechanisms – e.g., funds for incentivizing carbon reduction measures of suppliers – can be designed to balance ecology and economy in procurement, capital expenditure projects, and operational decisions in the value chain and commercial.

Carbon pricing is an important concept which is gaining traction but still has a lot of room for growth. In its report on carbon pricing in October 2017, the Carbon Disclosure Project counted 600 companies using internal carbon pricing in their business plans, a 4-times increase over 3 years<sup>3</sup>. Equally interesting, the Carbon Pricing Dashboard of the World Bank shows as of today many regional, national, and sub-national carbon pricing initiatives globally, which are covering approximately 21% of global emissions<sup>4</sup>. Thus, both on the corporate and governmental side, carbon pricing has still a lot of potential for growth.



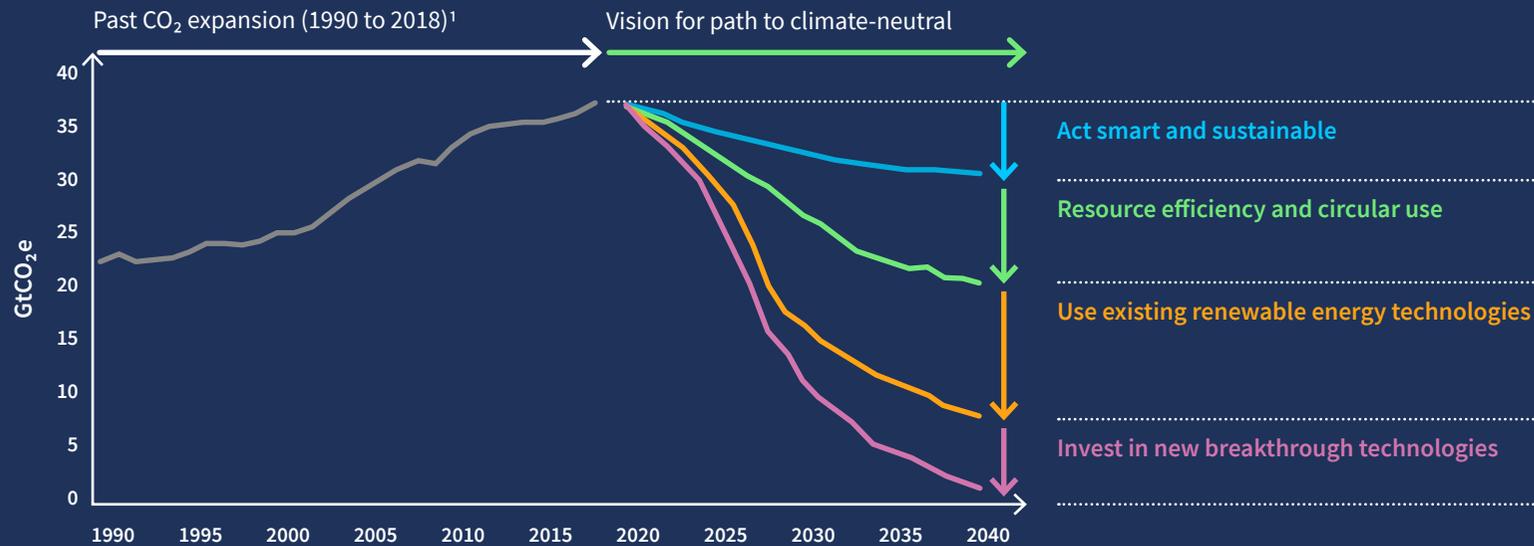
<sup>3</sup> CDP, Putting a price on carbon, October 2017

<sup>4</sup> <https://carbonpricingdashboard.worldbank.org/>

## 4 Use unconventional approaches

Companies need to think bold and define their individual path to climate-neutral, starting now until 2030 (response horizon based on remaining carbon budget) and 2040 (vision for a zero-carbon future). It needs to be acknowledged that single measures will not solve the challenge: neither radical behavior change nor investing in new breakthrough technologies will be the sole savior. Therefore, sustainability executives need to think holistically and use a broad portfolio of measures. We group these measures in four major categories:

Companies need to define their individual path to climate neutral along four categories of measures  
Annual CO<sub>2</sub> emissions (worldwide)



<sup>1</sup> <http://www.globalcarbonatlas.org/en/CO2-emissions>

**Act smart and sustainable:**

Increase of work share in the home office; smart business travel (minding good ratio of meeting and travel time, else moving to virtual collaboration); waste avoidance in materials, consumables, catering; redesign or repurpose office space.

**Resource efficiency and circular use:**

Process development and optimization; re-use and commercialization of own process waste; capturing and re-use of process heat; incentivize sourcing of products with a high share of circular materials; recycling of durables like appliances and electronics; move from buying to sharing; energy efficiency through efficient devices, insulation, facility design, steering of usage, analytics.

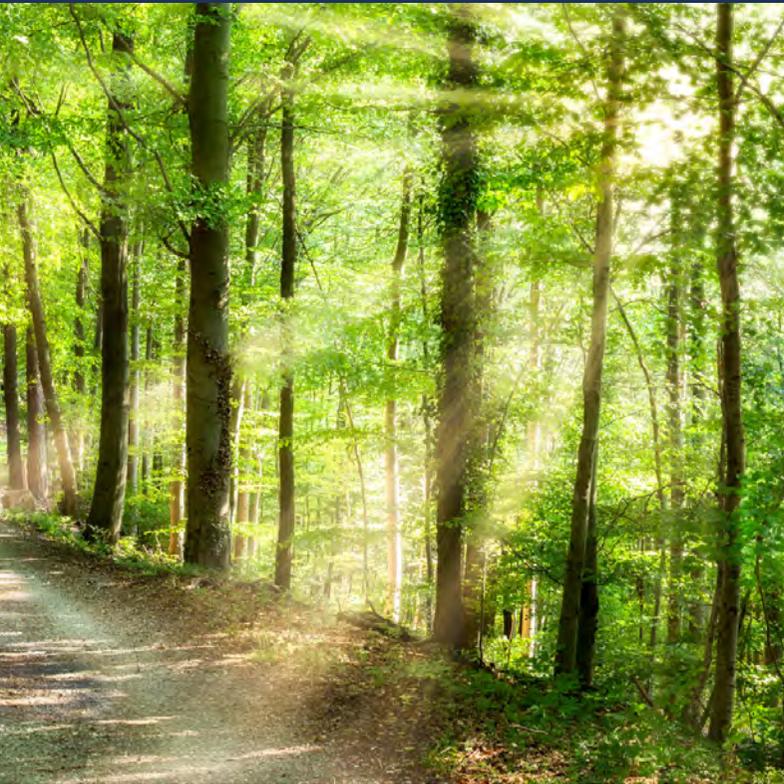
**Use existing renewable energy technologies:**

Maximum leverage of existing technologies like wind, solar, biogas through own installations and upgrades, or else power purchase agreements, accompanied by investments in energy storage and power to X technologies (e.g., power to gas, power to steam, molten salt energy storage, battery technology).

**Invest in new breakthrough technologies:**

Invest in new potential breakthrough technologies which are not yet ripe for use at scale or still require long-term infrastructure investments, e.g., green hydrogen use in power plants or fuel cells, carbon sequestration and storage or use in agriculture.

Companies need their individual and tailored sustainability strategy which balances climate impact with OPEX and CAPEX impact across a portfolio of measures. Whereas many CO<sub>2</sub> measures require significant pre-investment and lead to increased cost, others can also help save cost and provide additional funds for investing in a more sustainable value chain.



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## Engage employees and external partners to make a difference

Your path to climate-neutral is a true team effort and >80% of the success will be owed to the engagement of people, both of employees and external partners. Surveys show impressively the importance of environmental protection and sustainability, and especially for the younger generations (Generation Z and Millennials) sustainability is becoming a non-negotiable requirement.<sup>5</sup> However, more importantly, effectively engaging your team from idea-generation over strategy definition to implementation can boost your path to climate-neutral and set free unprecedented energy and momentum.

Equally important are effective approaches to make your external suppliers and partners an integral part of your sustainability effort. Depending on industrial value chain structures and the share of outsourcing, the emissions from external sourcing (Scope 3 emissions) will have a share of 50–90% of the total CO<sub>2</sub> footprint, in industries like consumer goods as high as 95%. Thus, effective approaches for emissions transparency of suppliers, target setting, knowledge sharing, as well as incentivization and penalty mechanisms need to be integrated into sourcing strategies and supplier management routines.

By moving to climate-neutral value chains, companies have the lever to make a difference in the global fight against climate change, accelerate new business models, and protect their competitive advantage for the future. To achieve that target, they need to understand sustainability as an integral part of operational and strategic decision-making, define a holistic and aspirational strategy towards 2030/2040, and effectively engage their employees and external partners to green the end-to-end value chain.



**Following these new ways, sustainability executives have the right lever to embed sustainability deeply in the value chain – and help their company make a difference in the global fight against climate change.**

## CAMELOT Management Consultants

CAMELOT Management Consultants is the globally leading consulting specialist for value chain management in the process, consumer goods and industrial manufacturing industries. The company is part of the CAMELOT Group with 1,800 employees worldwide and head-quarters in Mannheim, Germany. The integrated consulting approach and close collaboration with renowned technology specialists, guarantee project success along all consulting phases: from decision-making to the organizational and technical implementation.

[www.camelot-mc.com](http://www.camelot-mc.com)

### Why Camelot

- With GreenMind<sup>2</sup>, CAMELOT helps clients explore new business and operating models for a sustainable future.
- Cross-functional capabilities of a diverse and talented team of value chain strategists, sustainability experts, industry specialists, and technology masterminds.
- Collaboration with the most inspiring, innovative, and committed partners for a 360° view and accelerated outcomes.

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