

Sustainability Management in the Aviation and Tourism Industry

Frankfurt University of Applied Sciences

September 2022

Section 1: Sustainability - Introduction and strategic implications

Sustainability Management in the Aviation and Tourism Industry

Content

Sustainability - Introduction and strategic implications

Footprint

Regulatory

Industry Action

Sustainability Management



Sustainability - Introduction and strategic implications

Sustainability – Behind the words

Trends for the Business and Societies

Risks and Challenges

Need for Management

Section 1:

Sustainability - Introduction and Background

Sustainability - Introduction and strategic implications

Sustainability – Behind the words

Risks and Challenges

Towards responsible value creation: 6 steps

Need for Management

Sustainability definitions and categorization (1/2)



Sustainable development – a holistic concept

Sustainable development is the overarching paradigm of the **United Nations**. The concept of sustainable development was described by the 1987 Bruntland Commission Report as:

“development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”



Corporate Social Responsibility (CSR) – the micro-economic translation

CSR is described by the **United Nations Industrial Development Organization (UNIDO)** as being a way for companies to achieve a balance of economic, environmental and social imperatives (“Triple-Bottom-Line-Approach”):

“Corporate Social Responsibility is a management concept whereby companies integrate social and environmental concerns in their business operations and interactions with their stakeholders”

Sustainability definitions and categorization (2/2)



CSR vs. Environmental, Social and Governance (ESG)

ESG is an acronym for **E**nvironmental, **S**ocial, and **G**overnance:

“ESG is a framework that helps stakeholders understand how an organization manages risks and opportunities around sustainability issues”

CSR and ESG are different frameworks that companies use, to assess sustainability. Core distinctions are:

- To incorporate CSR think about the culture of the business (internal framework)
- To incorporate ESG, conduct audits, and set measurable goals

It could be argued that ESG is currently overtaking CSR as a measure of sustainability in the corporate world.

Making Sense Of ESG: A Primer On Social Corporate Responsibility by George Strobel



- ...concepts like ESG... are **not a new development** but ongoing for the past 20-30 years
- ESG means “environmental, social and governance”:
 - “E”: **How to operate in an ecologically sustainable manner** - carbon footprint but also water quality and waste
 - “S”: Stands for the **social impact of business and products**, e.g. combat discrimination or donating money to communities
 - “G”: This prong **entails several things**, e.g. open and straightforward decision-making processes and open with the public information
- **Related Concepts** have a much **narrower scope**:
 - A “carbon footprint initiative” only focuses on a single business activity
 - “Impact investing” is trendy but often too narrow in focus to have a truly transformational impact
- **Lack of standards** with no publicly known standards and barely any industry-specific standards
- This **results in no immediate pressure** for companies to adopt specific ESG proposals with specific targets

The ESG concept has a broad amount of action fields that need the attention of companies

A snapshot of FTSE Russell's ESG Ratings



An example from sustainable investment product engineering:

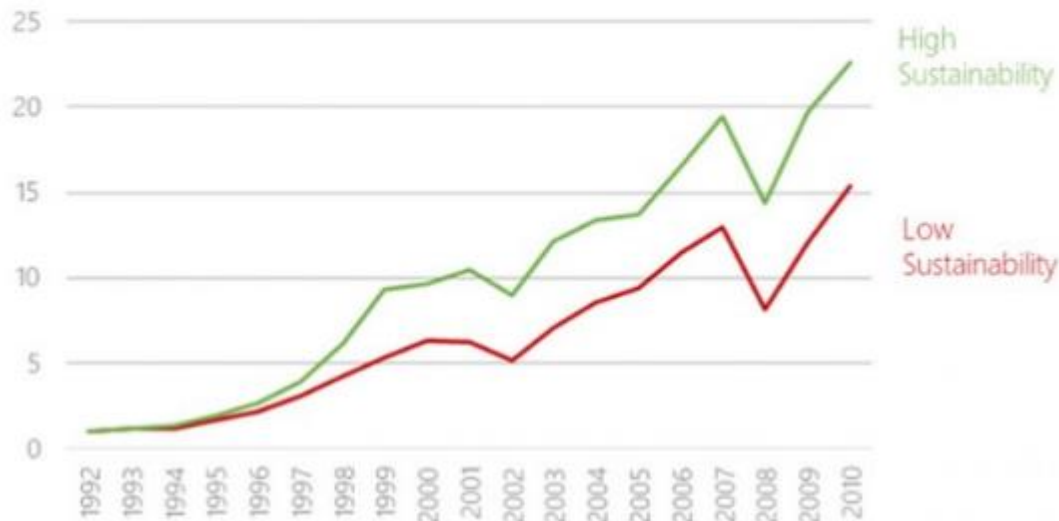
FTSE Russell is measuring Environmental, Social, and Governance risk and performance on 7,200 securities across 47 Developed and Emerging markets

ESG requires a shift in mindset: ESG must be considered as an investment, rather than a cost

ESG & Market Performance

Stocks of sustainable companies tend to significantly outperform their less sustainable counterparts

Evolution of \$1 invested in the stock market in value-weighted portfolios



“...high sustainability companies significantly outperform their counterparts over the long term, both in terms of stock market and accounting performance.”

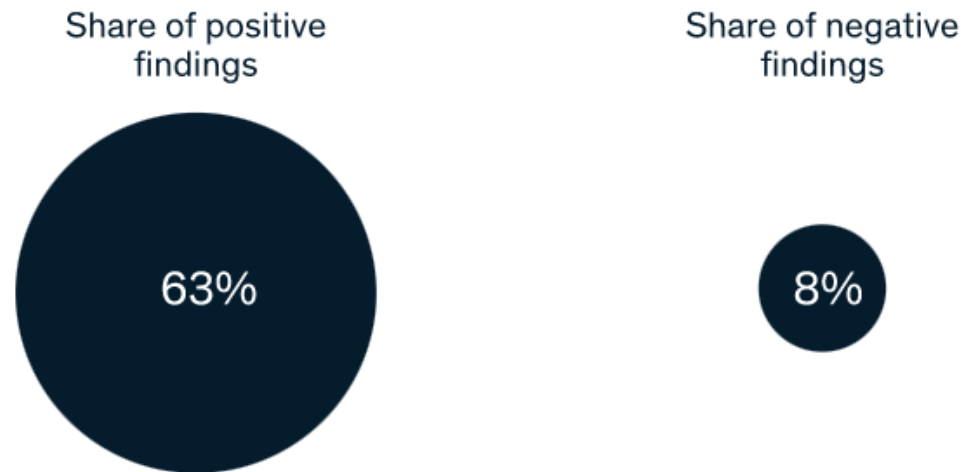
Study details:

- Sample of 180 U.S. companies
- Companies voluntarily adopted sustainability policies by 1993

Source: Robert G. Eccles, Ioannis Ioannou, George Serafeim (2014) The Impact of Corporate Sustainability on Organizational Processes and Performance. Management Science 60(11):2835-2857

Paying attention to ESG concerns does not compromise returns – rather the opposite

Results of >2,000 studies on the impact of ESG propositions on equity returns



Source: Gunnar Friede et al., "ESG and financial performance: Aggregated evidence from more than 2000 empirical studies," *Journal of Sustainable Finance & Investment*, October 2015, Volume 5, Number 4, pp. 210–33; Deutsche Asset & Wealth Management Investment; McKinsey analysis

„A process with the aim to achieve an accepted result within needs and restrictions in economy, ecology and society“



The diagram consists of three large triangles forming a larger triangle. The top triangle is blue and labeled 'Economy'. The bottom-left triangle is orange and labeled 'Society'. The bottom-right triangle is green and labeled 'Ecology'. In the center, where the three triangles meet, is a white triangle labeled 'Sustainability'. Inside the 'Sustainability' triangle is a circular arrow icon. The entire diagram is set against a light yellow background.

Economy

Sustainability



Society

Ecology

- Resilience for natural resources
- Consistency in resource cycle
- Sufficiency in social life
- Fairness and respect for individuals
- Highest efficiency when using resources and energy
- Responsibility for sustainability in management actions

Section 1:

Sustainability - Introduction and Background

Sustainability - Introduction and strategic implications

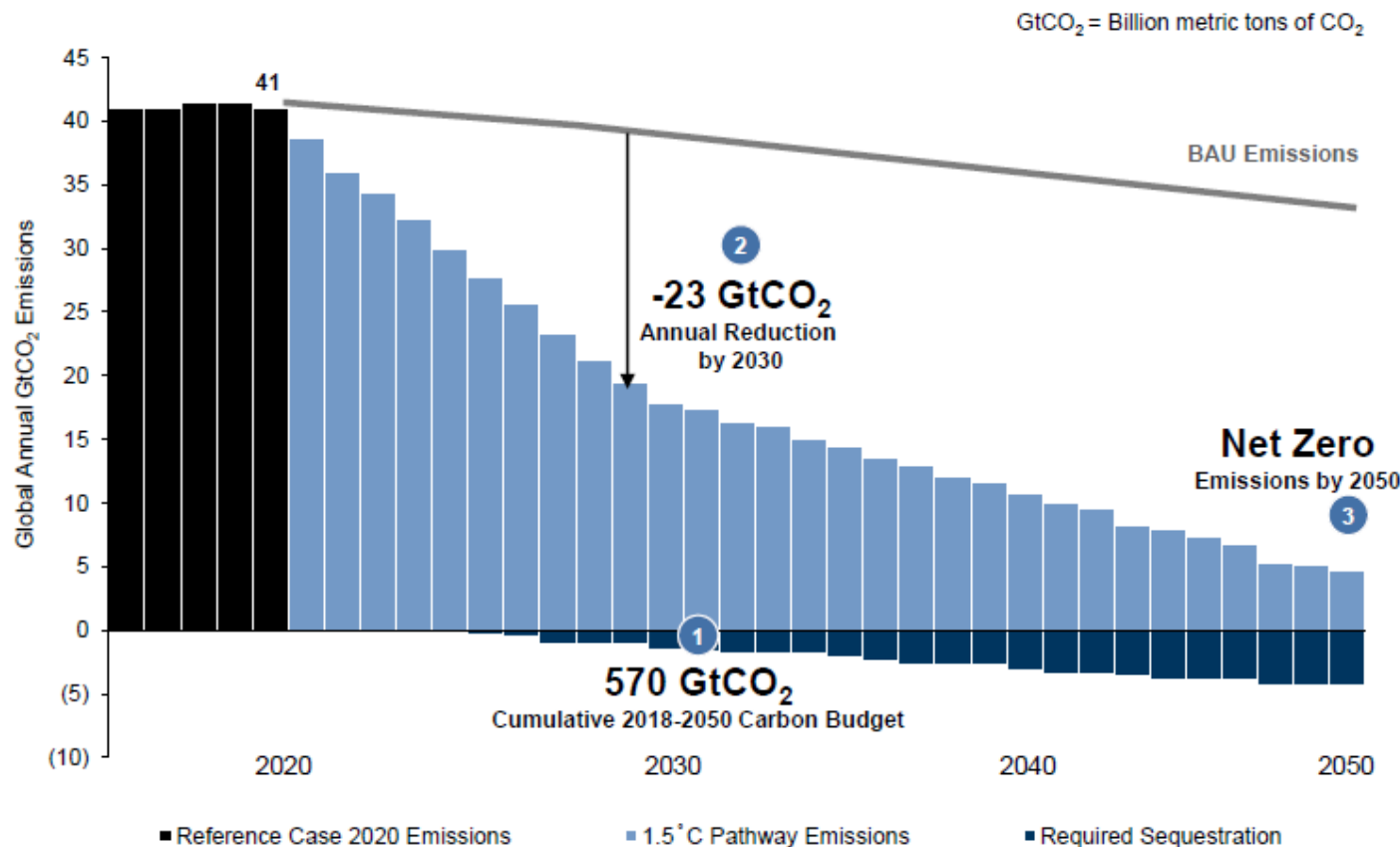
Sustainability – Behind the words

Risks and Challenges

Towards responsible value creation: 6 steps

Need for Management

The Global Emissions Challenge



Decarbonisation Targets

- 1 To reach the 1.5°C goal, in the next three decades we must remain within the **570 GtCO₂ cumulative carbon budget**
- 2 To set us on this path we must reduce net emissions by **23 GtCO₂ by 2030**
- 3 By 2050 all remaining emissions need to be fully offset by sequestration (net zero)

Human activity has warmed the world by about 1°C since pre-industrial times. The Paris Agreement has set a goal of limiting global warming to 1.5°C above pre-industrial levels to avoid irreversible climate effects.

To reach this goal, the world needs to reduce net annual emissions by ~23 GtCO₂ by 2030.

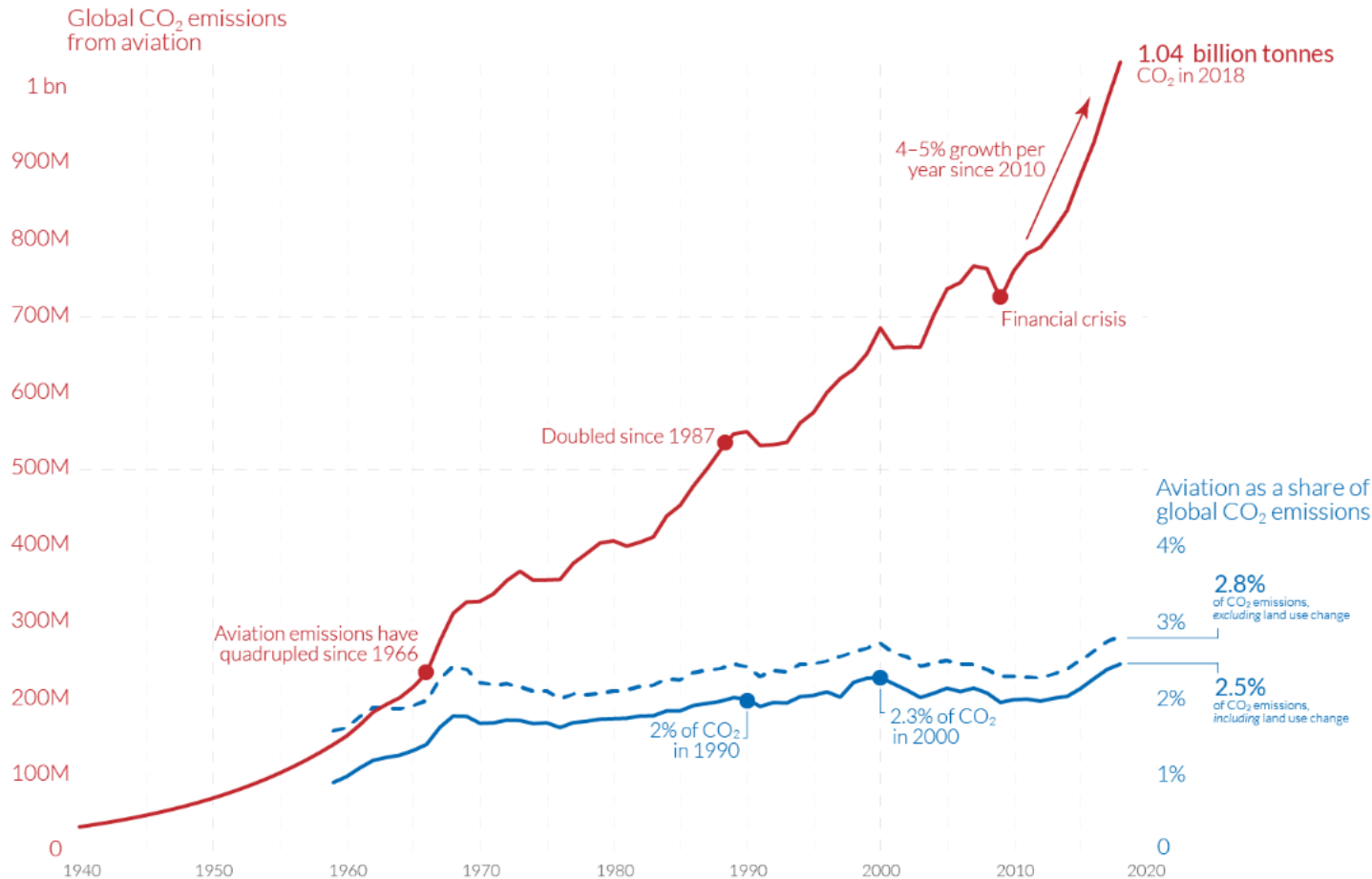
Source: Goldman Sachs Global Markets Division. McKinsey. IPCC. Le Quereet al. 2018.

Aviation share in global CO₂ emissions is comparably low...

Global carbon dioxide emissions from aviation

Aviation emissions includes passenger air travel, freight and military operations. It does not include non-CO₂ climate forcings, or a multiplier for warming effects at altitude.

Our World
in Data



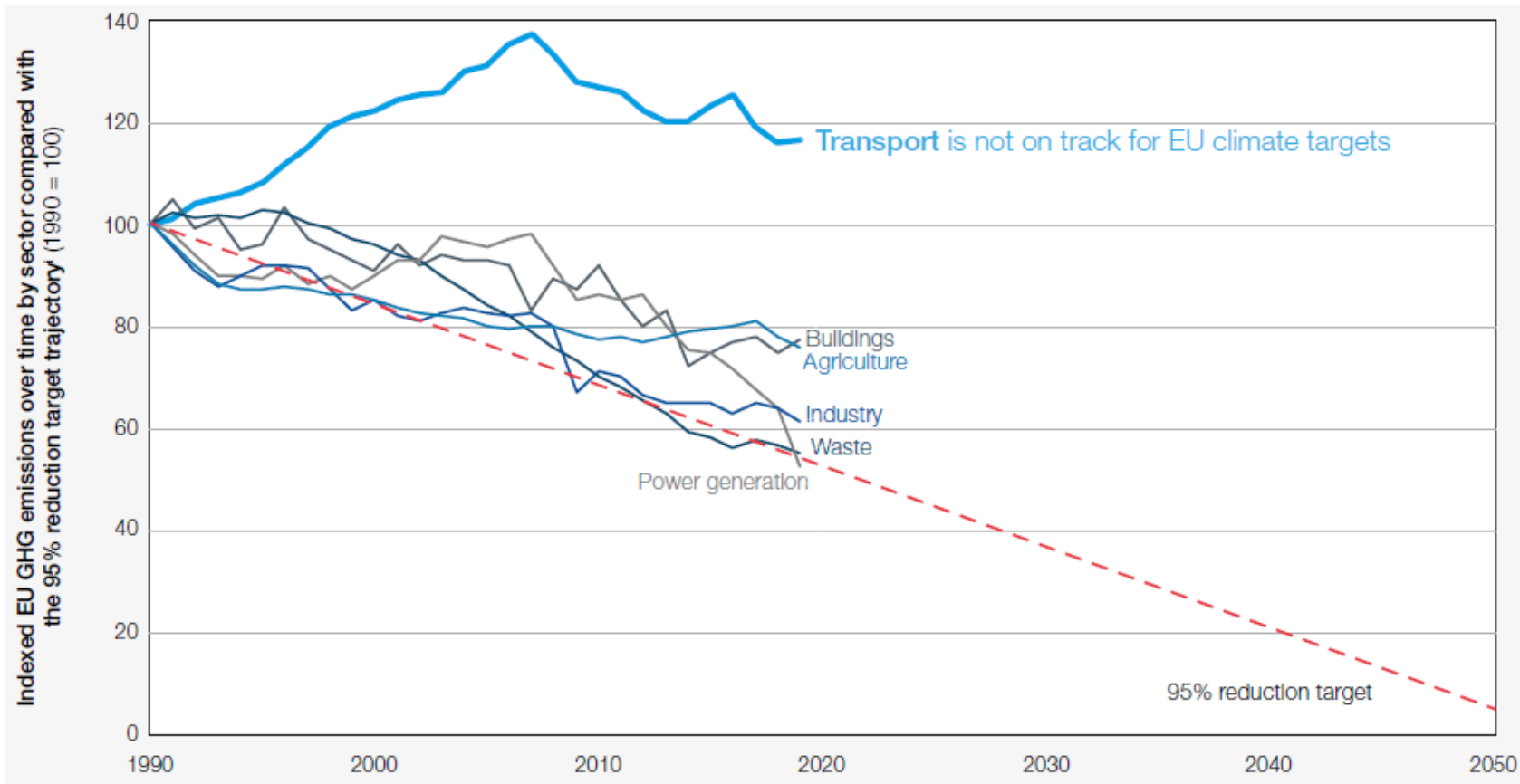
OurWorldinData.org – Research and data to make progress against the world's largest problems.

Source: Lee et al. (2020). The contribution of global aviation to anthropogenic climate forcing for 2000 to 2018; based on Sausen and Schumann (2000) & IEA.

Share of global emissions calculated based on total CO₂ data from the Global Carbon Project.

Licensed under CC-BY by the author Hannah Ritchie.

After other sectors successfully started decarbonizing, attention is shifting to aviation – example EU

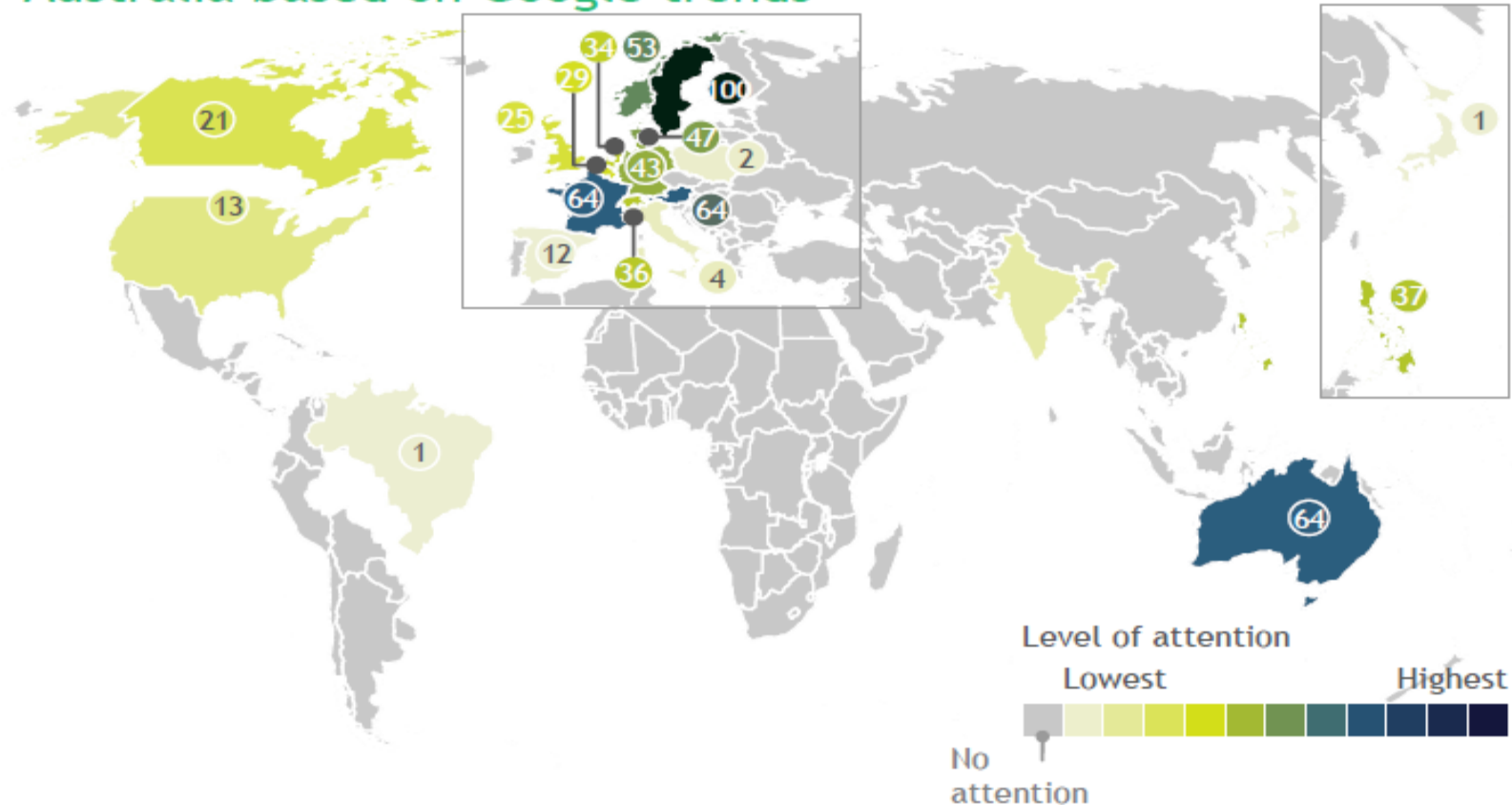


i. 2017-2019 data extrapolated based on German greenhouse gas emission

Source: European Federation for Transport and Environment; adapted from EEA, approximated EU greenhouse gas inventory 2016; Transport & Environment from Member States' reporting to the UNFCCC (1990-2015 data) and EEA's approximated EU greenhouse gas inventory (2016 data)

Flight shaming has strongest traction in Europe in 2020, with no significant impact in other regions

"Flight shaming" movement most popular in Europe & Australia based on Google trends

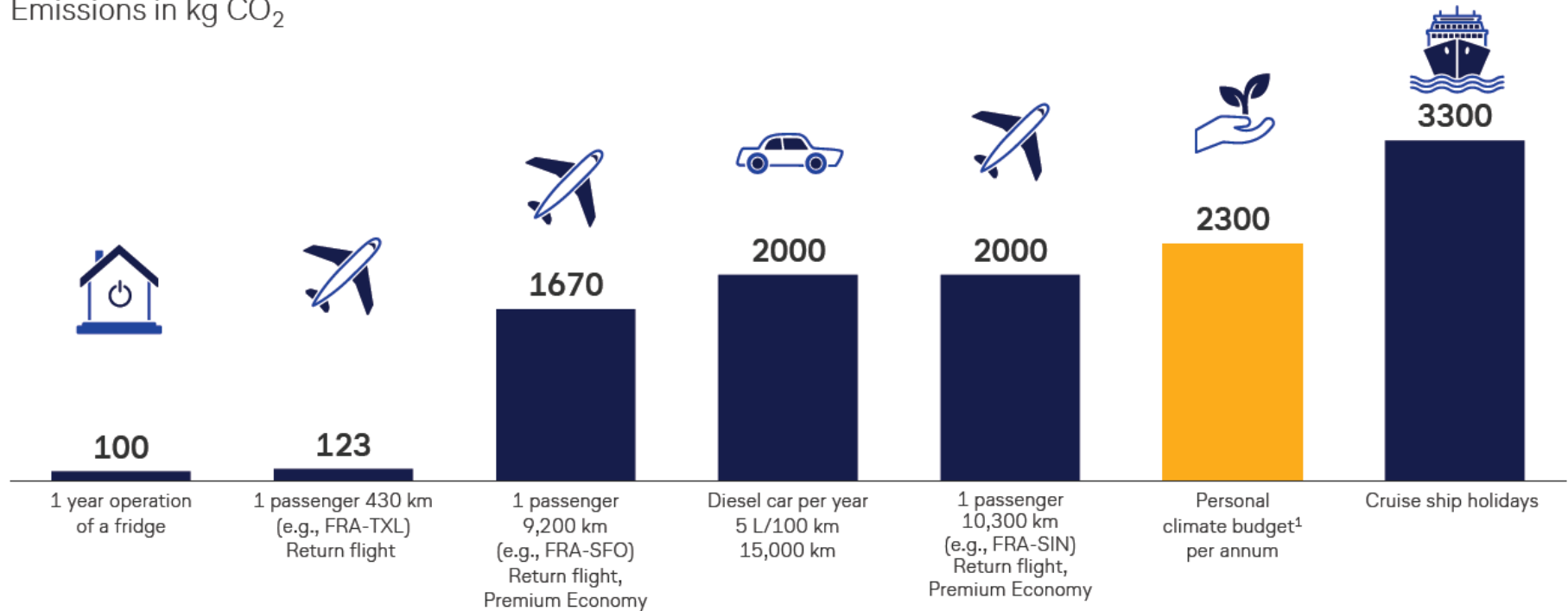


Note: Numbers for each region reflect the frequency of the topic "flight shame" and terms "flight shaming" & "flygskam" in Google searches in the last 12 months. The frequencies are normalized with 100 denoting the country with the highest frequency, while numbers below 100 indicate the frequency as a fraction of the highest frequency

Source: Open search; Expert interviews; BCG analysis

Each flight eats quickly into the personal CO2 budget

Emissions in kg CO₂



¹In order not to exceed the 2 degree limit temperature increase

Source: Lufthansa Group Sustainability Department, own research

Multiple corporate claims involving offsetting exist, the most important are Carbon Neutral and Net Zero

— 1.5°C aligned reduction pathway ■ Gross GHG emissions ■ Removal / sequestration offsets ■ Avoidance / reduction offsets

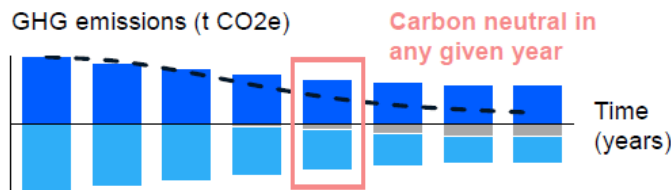
Carbon Neutral

Description

Offset unavoidable emissions within a given year with any credit type

Some claim providers require a substantive commitment to reduction to claim carbon neutral (although not necessarily in line with 1.5°C)

Illustration



(Expected) standard setter

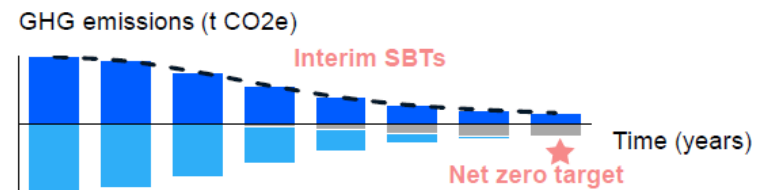


Offsets allowed Removal / sequestration Avoidance / reduction

Net Zero

Commitment to reach a state of no impact on the climate from greenhouse gas (GHG) emissions within a timeframe aligned with the Paris ambition.

- Abate¹ emissions following interim Science Based Targets (SBT)
- Neutralize² unabated emissions by permanent removal / sequestration
- Optional compensation³ of emissions with offsets (all types) along the way.



Offsets allowed Removal / sequestration only for residual emissions

**Avoidance / reduction offsets encouraged, but not leading to a claim*

1.Abatement includes measures that companies take to prevent, reduce or eliminate sources of GHG emissions within its value chain, incl. internal decarbonization and attribute certificates

2.Neutralization includes measures that companies take to remove carbon from the atmosphere in order to counterbalance the impact of a source of emissions that remains unabated, i.e. removal / sequestration credits

3.Compensation includes measures that companies take to prevent, reduce or eliminate sources of GHG emissions outside of their value-chain, i.e. avoidance / reduction credits

What does it mean to reach net-zero emissions at the corporate level?

Guiding principle 1: Reaching net-zero emissions for a company involves achieving a state in which its value chain results in no net accumulation of carbon dioxide in the atmosphere and in no net-impact from other greenhouse gas emissions.



Guiding principle 2: In accordance with the best available science, the Paris Agreement and Sustainable Development Goals, companies should transition towards net-zero in line with mitigation pathways that are consistent with limiting warming to 1.5°C with no or limited overshoot.

Guiding principle 3: The mitigation strategy followed by the company should inform long-term strategies and investments that mitigate exposure to climate-related transition risks, ensuring that the business model of the company will continue to be viable in a net-zero economy.

Source: Science Based Targets

Section 1:

Sustainability - Introduction and Background

Sustainability - Introduction and strategic implications

Sustainability – Behind the words

Risks and Challenges

Towards responsible value creation: 6 steps

Need for Management

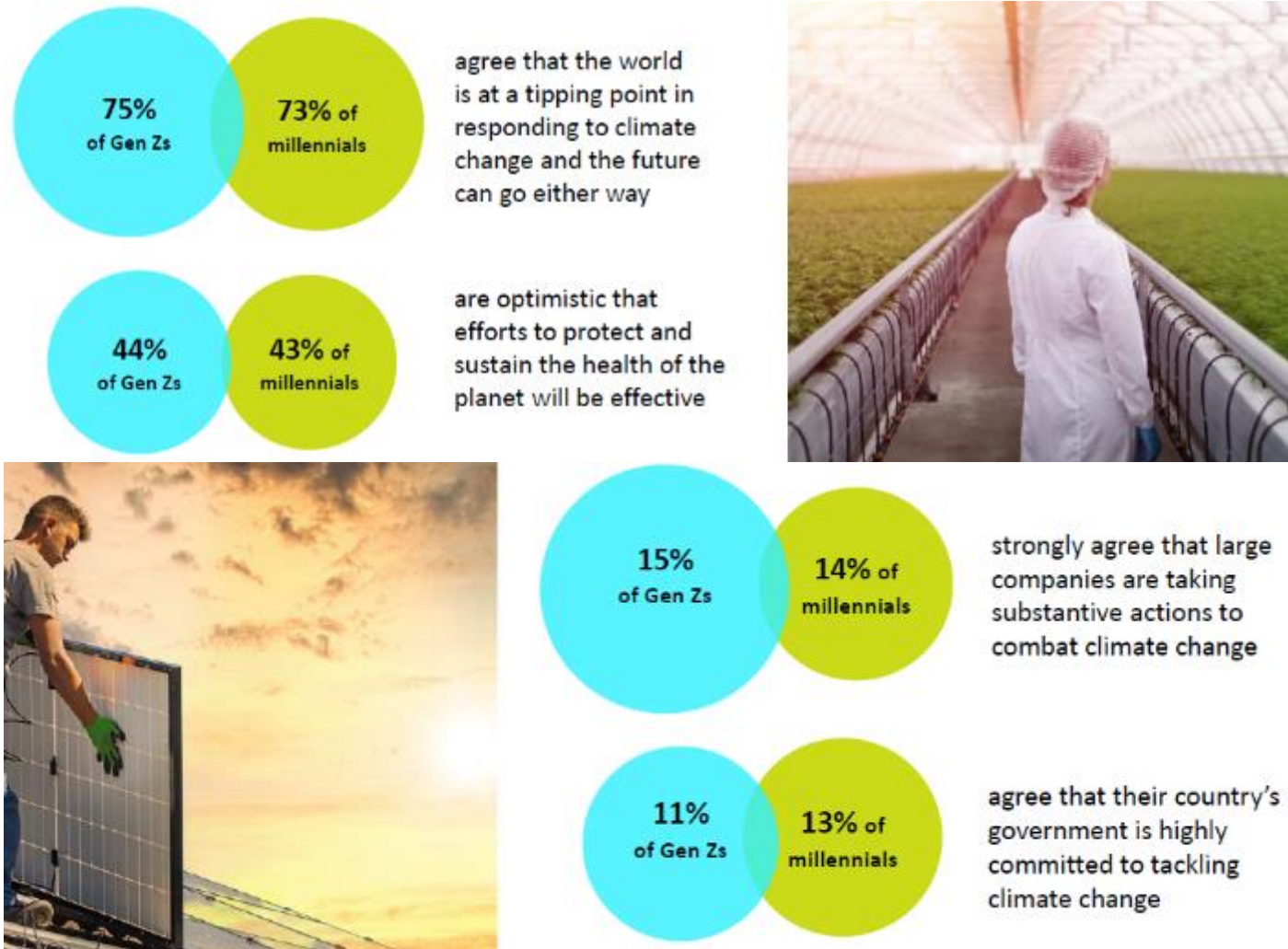
Towards responsible value creation: 6 steps



Source: Christelle Bitouzet, HEC, 2021

Confidence: Climate is on top of personal concerns for Millennials like Gen Z

THE DELOITTE GLOBAL 2022 GEN Z & MILLENNIAL SURVEY



Source: The Deloitte Global 2022 Gen Z and Millennial Survey

Beyond compliance: Consumers and employees want business to do more on ESG

PWC 2021 Consumer Intelligence Series survey on ESG

83%

of consumers think companies should be actively shaping ESG best practices

91%

of business leaders believe their company has a responsibility to act on ESG issues

86%

of employees prefer to support or work for companies that care about the same issues they do

Defining characteristics of ESG Trendsetter executives:

Very aware of and interested in ESG issues; **ESG has a strong impact on personal career choices**

Believe companies are **having a strong impact on social issues today** - and want them to be doing even more

Think commitment to a **better future is the top motivator of corporate ESG** action and believe companies' ESG stance impacts consumers

Source: <https://www.pwc.com/us/en/services/consulting/library/consumer-intelligence-series/consumer-and-employee-esg-expectations.html>

New consumer expectations: business societal role will stay and consumers hold businesses accountable

The latest Edelman Survey (2022)

**BUSINESS IS NOT DOING
ENOUGH TO ADDRESS
SOCIETAL PROBLEMS.**

52%

Climate Change

49%

Economic Inequality

46%

Workforce Reskilling

58%

Will buy or advocate for brands based on their beliefs and values

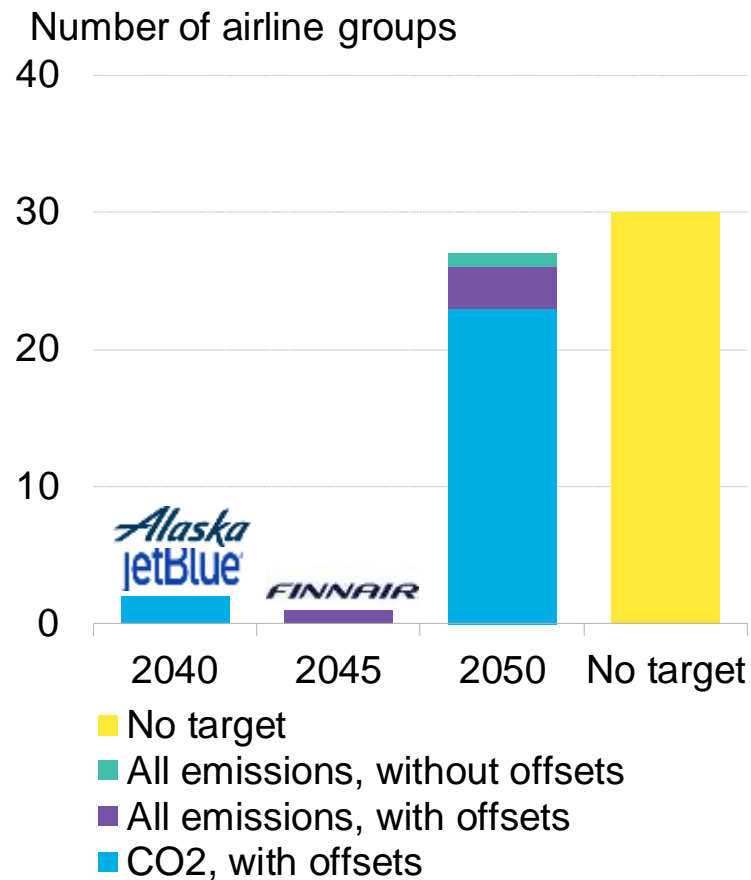
60%

Will choose a place to work based on their beliefs and values

64%

Will invest based on their beliefs and values

Business pledges: Growing number of airlines with net-zero targets



Source: BloombergNEF, airline press releases.

Investor demand: increased value through purpose, ethics and sustainability...

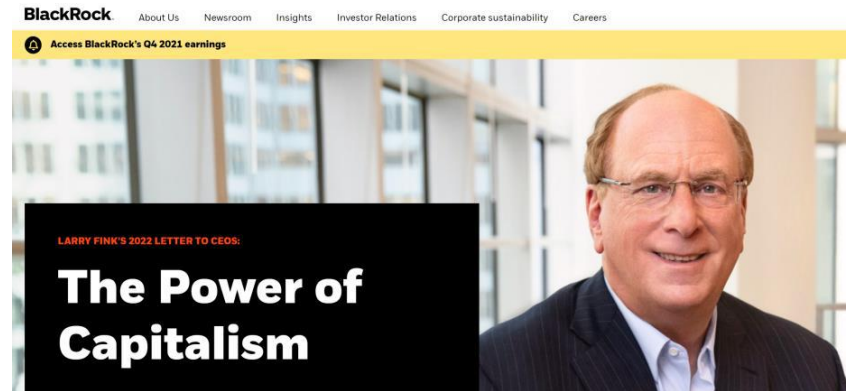


Blackrock's Jan 2018 letter:

Purpose and ethics, in 2020 adding a call for climate

“society is demanding that **companies ...serve a social purpose**,” and that without such purpose, “no company ...can achieve its full potential.”

“**Climate change is driving a profound reassessment of risk** and we anticipate a significant reallocation of capital.”



Blackrock's Jan 2022 letter:

positioning corporate purpose at foundation of relationships with stakeholders

“It’s never been more essential for CEOs to have a consistent voice, a clear purpose, a coherent strategy, and a long-term view. **Your company’s purpose is its north star in this tumultuous environment**”

Investor demand: ...is not only hot air!

RISE OF RESPONSIBLE INVESTING



The term 'ESG' was first coined in 2005 in a landmark study called 'Who Cares Wins'



In 2018, over 80% of the world's largest corporations use GRI standards



ESG investing is estimated at over \$20 trillion in AUM

“ESG investing is estimated at... around a quarter of all professionally managed assets around the world.”
(2018)

GRI = Global Reporting Initiative
AUM = Assets Under Management

Source: <https://www.forbes.com/sites/georgkell/2018/07/11/the-remarkable-rise-of-esg>

Measuring the carbon footprint as often very complex task



carbon footprint,

amount of carbon dioxide (CO₂) emissions associated with all the activities of a person or other entity (e.g., building, corporation, country, etc.).

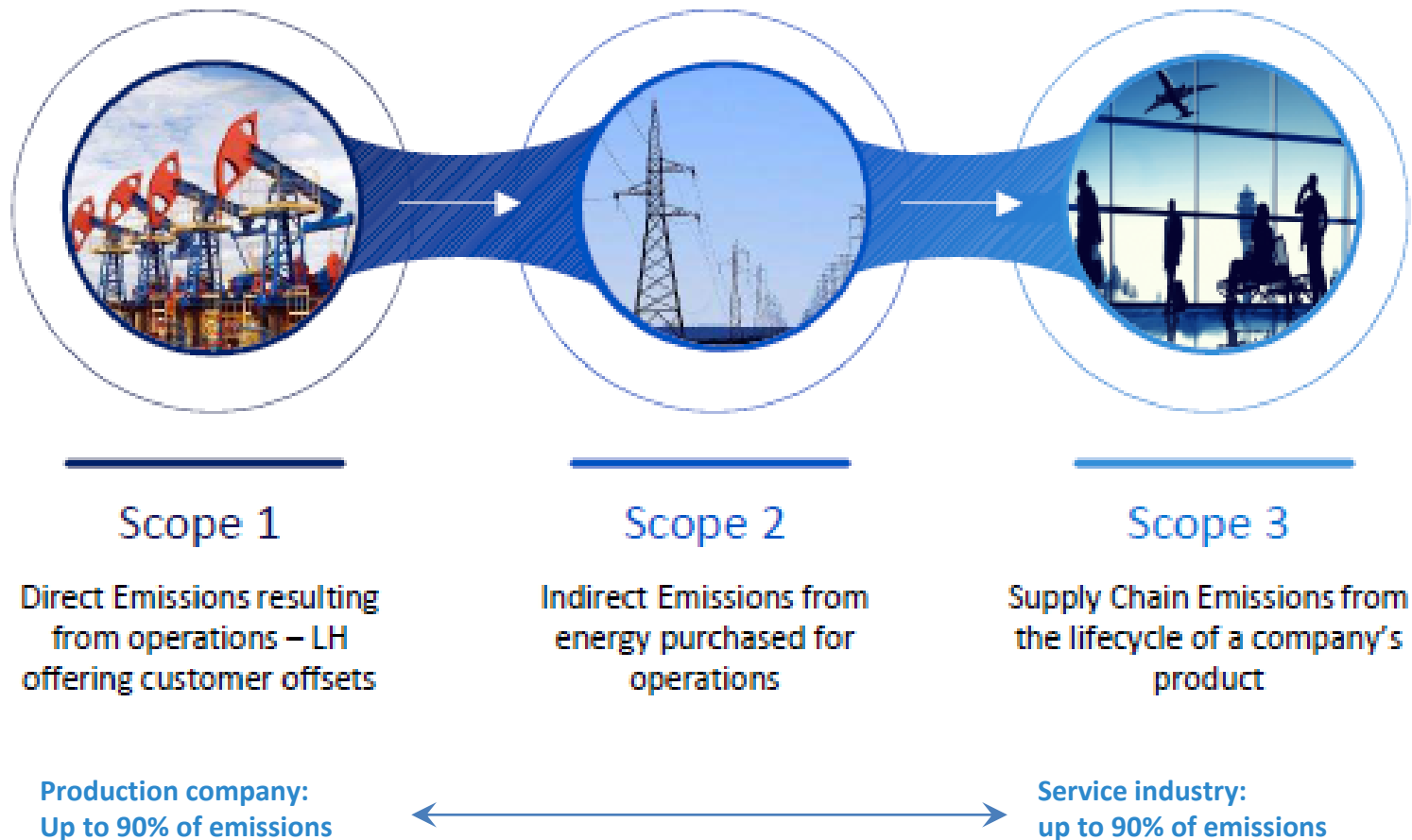
It includes direct emissions, such as those that result from fossil-fuel combustion in manufacturing, heating, and transportation, as well as emissions required to produce the electricity associated with goods and services consumed.

In addition, the carbon footprint concept also often includes the emissions of other greenhouse gases, such as methane, nitrous oxide, or chlorofluorocarbons (CFCs).

Classification of greenhouse gas emissions

Corporate Carbon Footprint

According to the leading GHG Protocol corporate standard



Source: GHG Protocol, BofA Securities

17 Sustainable Development Goal of United Nations



The UNs **2030 Agenda for Sustainable Development**, adopted in 2015, provides a shared blueprint for peace and prosperity for people and the planet. At its heart are the **17 Sustainable Development Goals (SDGs)**, which are an urgent call for action by all countries - developed and developing - in a global partnership

Source: <https://sdgs.un.org/goals>

- Goal 1** End poverty in all its forms everywhere
- Goal 2** End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goal 3** Ensure healthy lives and promote well-being for all at all ages
- Goal 4** Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goal 5** Achieve gender equality and empower all women and girls
- Goal 6** Ensure availability and sustainable management of water and sanitation for all
- Goal 7** Ensure access to affordable, reliable, sustainable and modern energy for all
- Goal 8** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goal 9** Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- Goal 10** Reduce inequality within and among countries
- Goal 11** Make cities and human settlements inclusive, safe, resilient and sustainable
- Goal 12** Ensure sustainable consumption and production patterns
- Goal 13** Take urgent action to combat climate change and its impacts
- Goal 14** Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- Goal 15** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- Goal 16** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- Goal 17** Strengthen the means of implementation and revitalize the global partnership for sustainable development

How to convert the SDG in a strategic action plan
<https://www.icao.int/about-icao/aviation-development/pages/sdg.aspx>

Towards Responsible value creation: 6 steps

2 - PURPOSE / RAISON D'ETRE

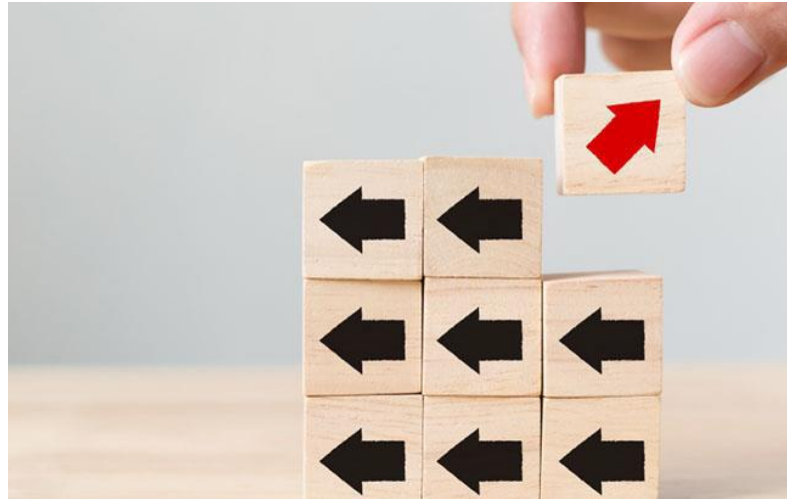


1 - THE WORK PLATFORM :
MEGATRENDS & MEASURE + SDGs
(+ negative externalities and risks)

CSR the visible part of a deeper change? – A strong move towards the «WHY»

From

Licence to operate



To

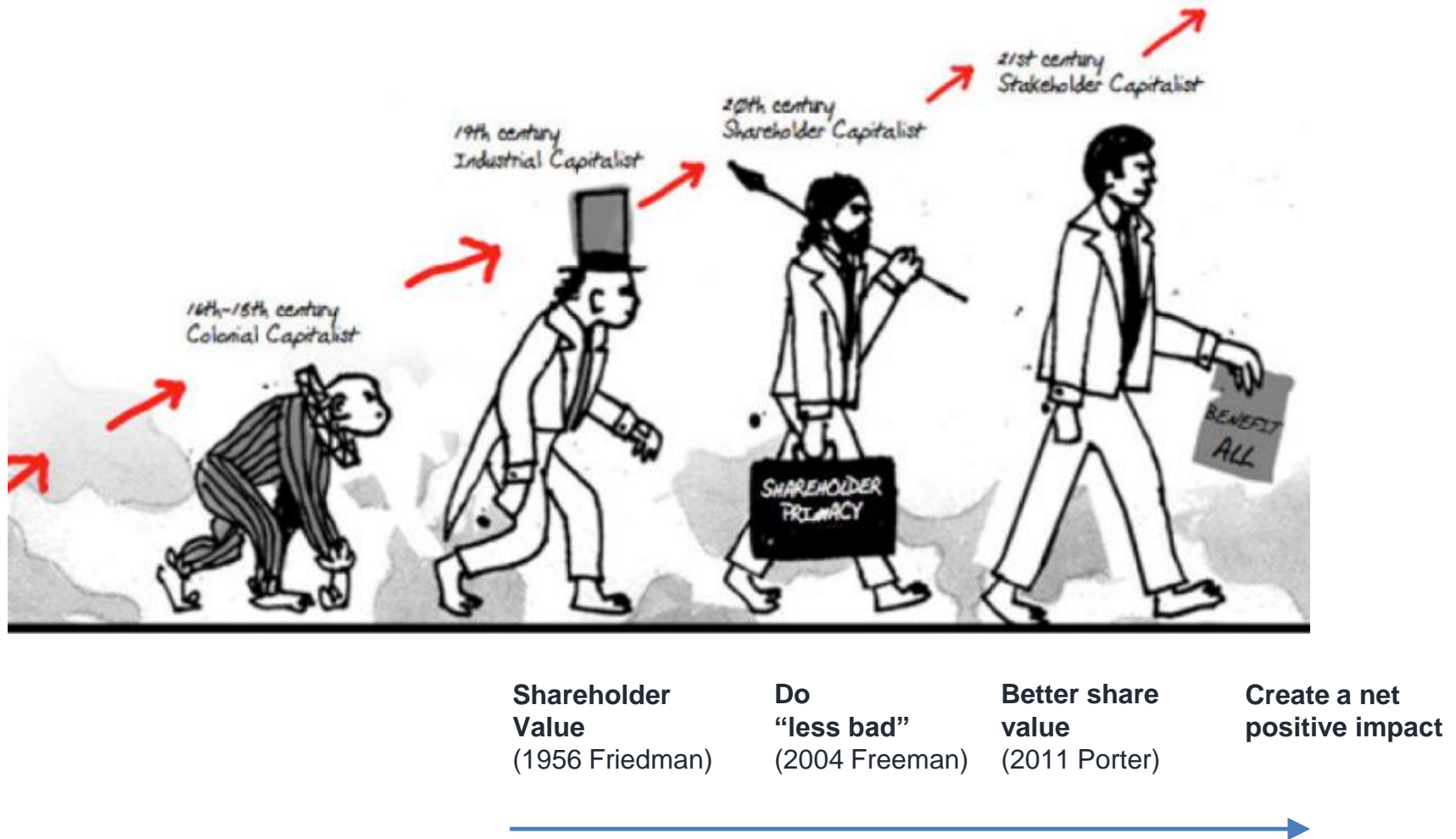
Why do we operate?

How can we better
share the value created ?

How can we do more
with less?

How can we create a
more positive impact?

CSR the visible part of a deeper change? – From “license to operate” to “positive impact”



Picture source: www.consciousventurelab.com

5 principles for a Meaningful Corporate Purpose (1/3)

Creating a Meaningful Corporate Purpose

by Hubert Joly

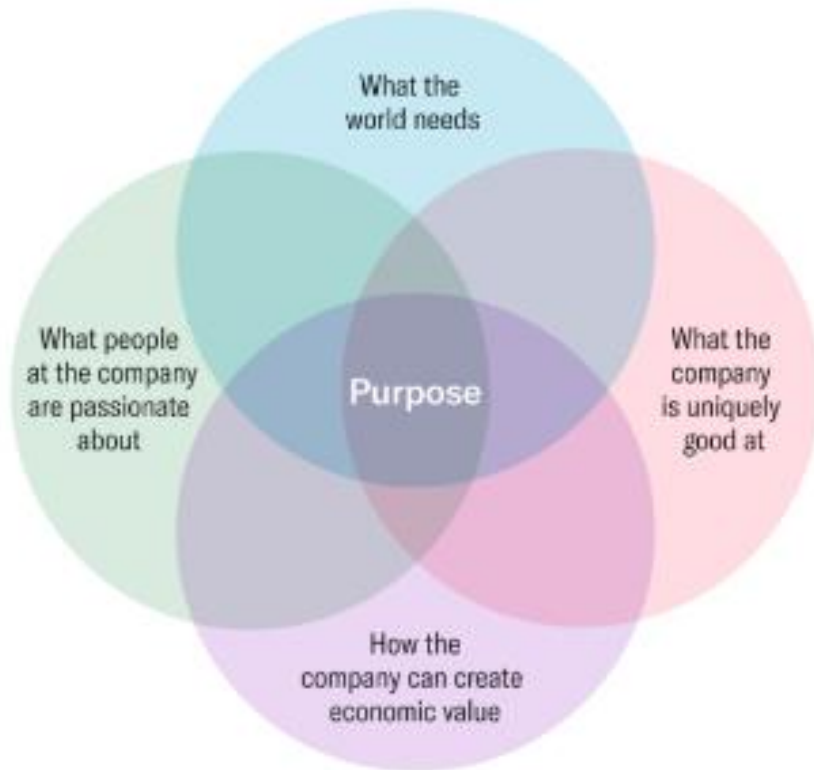
October 28, 2021



Today, most company leaders believe that their companies' larger purpose is to make a positive difference in the world - not just to maximize shareholder value.

Defining a corporate why and making sure it guides decisions and operations has therefore become a cornerstone of doing business.

5 principles for a Meaningful Corporate Purpose (2/3)



#1: Look for your company purpose at the intersection of four circles

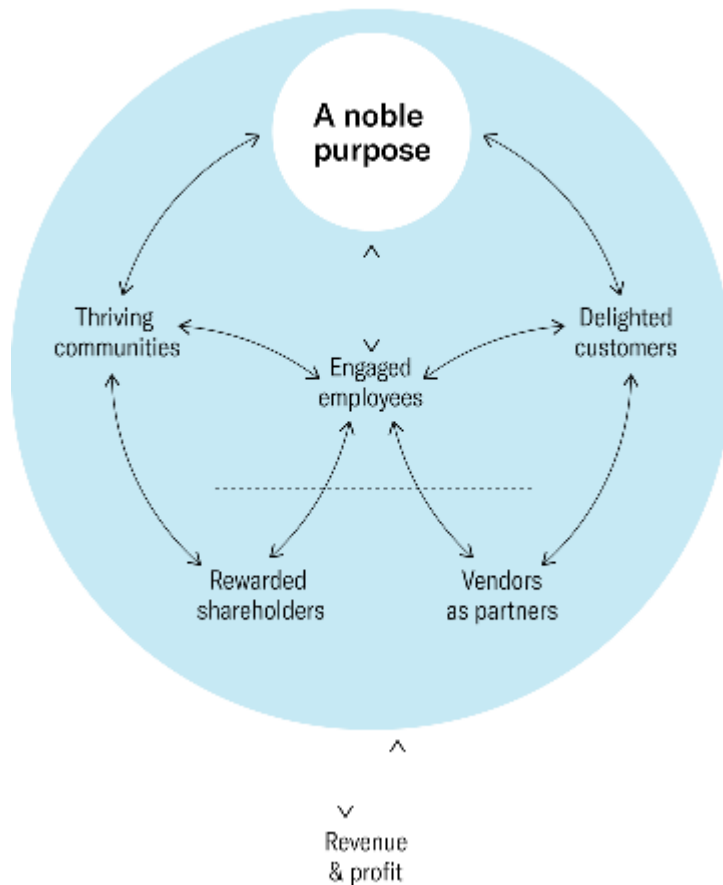
2: Anchor the company purpose in underlying human needs

3: Connect with what you and your team care deeply about

#4: Embrace all stakeholders in a declaration of Interdependence

5: Pick the right level of ambition

5 principles for a Meaningful Corporate Purpose (3/3)



#1: Look for your company purpose at the intersection of four circles

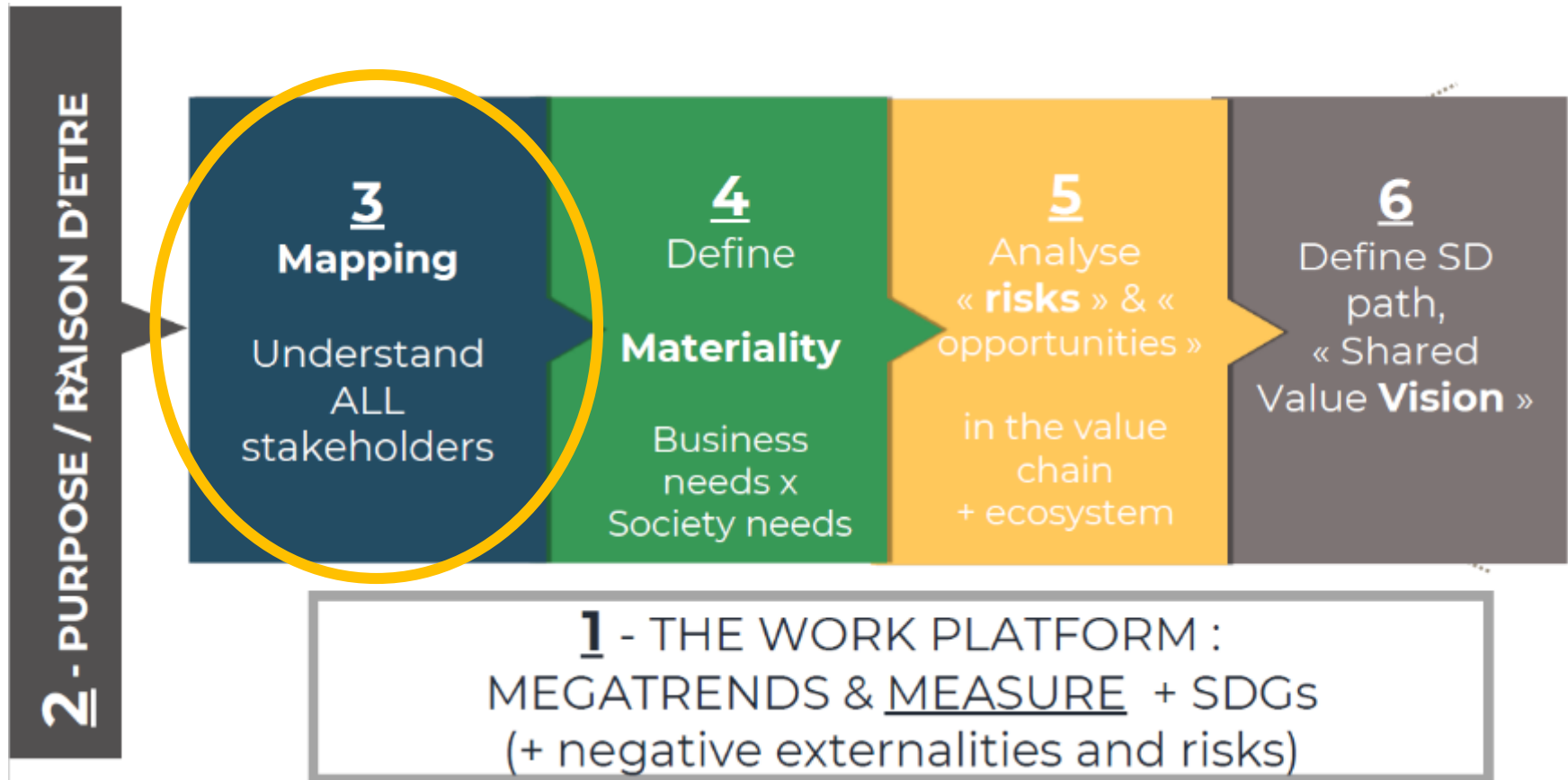
2: Anchor the company purpose in underlying human needs

3: Connect with what you and your team care deeply about

#4: Embrace all stakeholders in a declaration of Interdependence

5: Pick the right level of ambition

Towards Responsible value creation: 6 steps



Source: Christelle Bitouzet, HEC, 2021

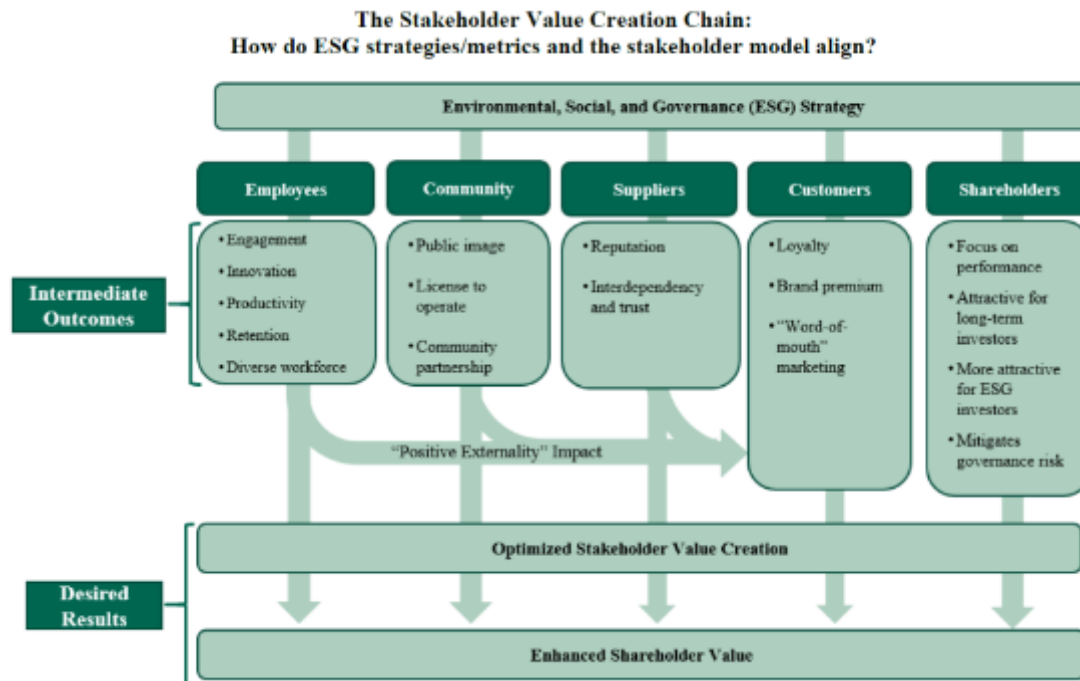
Know and understand all stakeholders stakes



Stakeholder mapping:

Starting point for the
materiality matrix

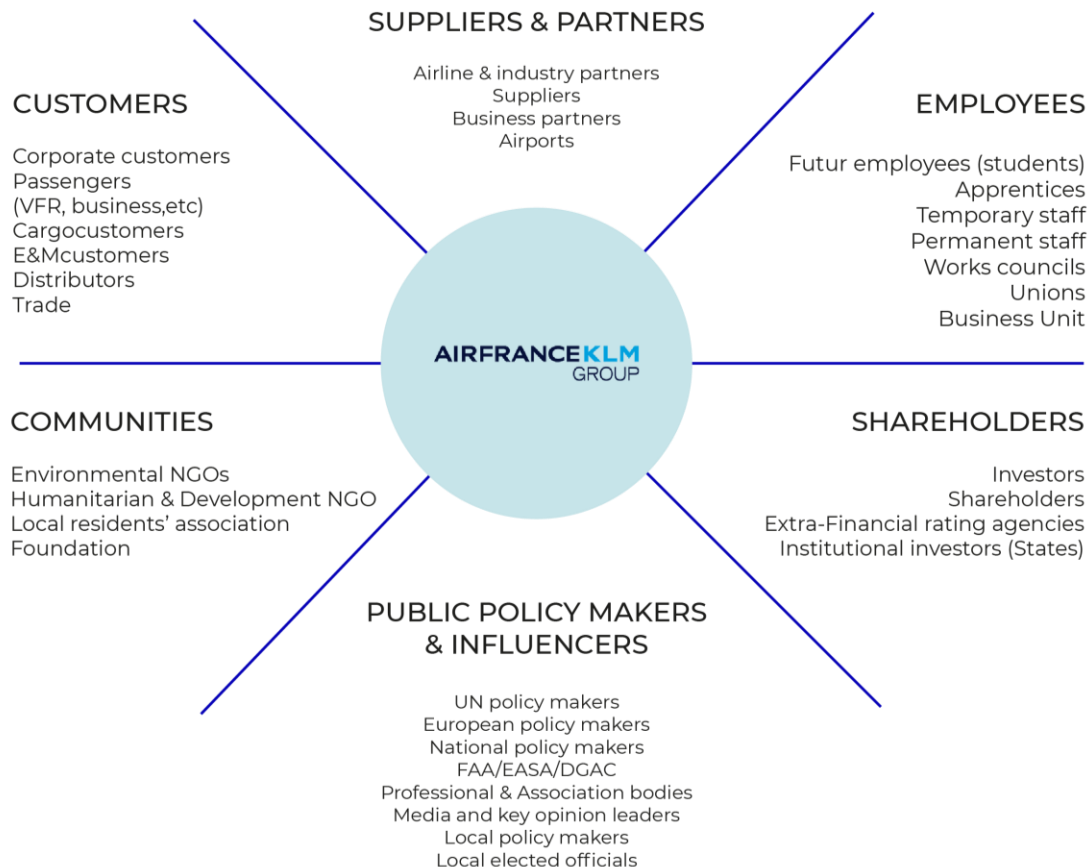
Structured analysis focusing on the individual nature of value for stakeholders



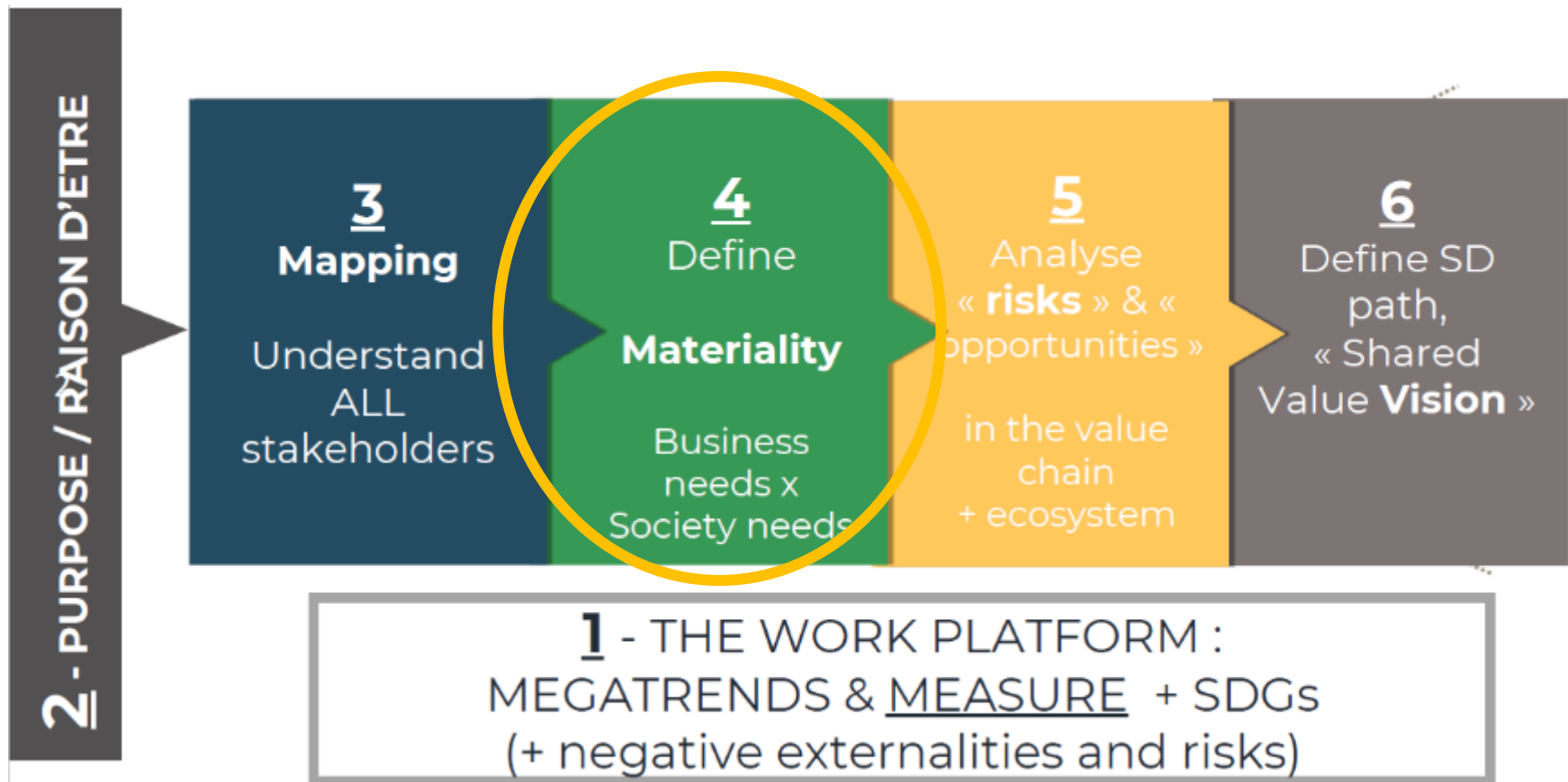
- The “Stakeholder Value Creation Chain” illustrates the intersection of ESG strategy, the stakeholder model, and the creation of firm value
- The model captures the reinforcing carryover effect of stakeholders’ contributions to the economic success of the company
- All companies need to balance their stakeholders’, including shareholders’, long-term interests

Materiality: a strategic exercise – an example from a major airline group

STAKEHOLDER MAP



Towards Responsible value creation: 6 steps

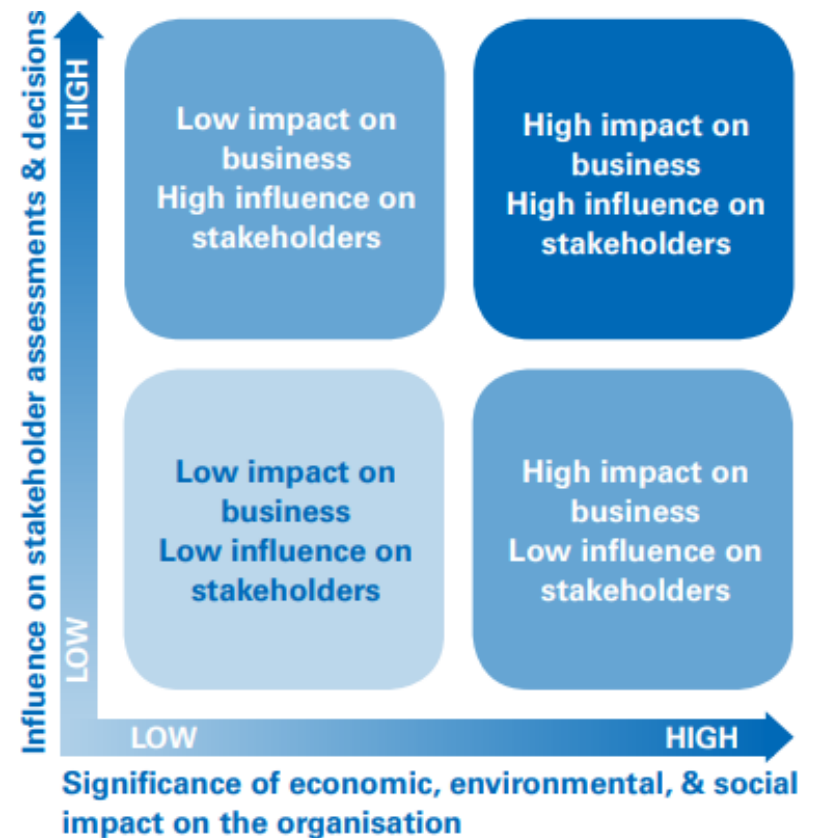


Materiality: complex task to determine the business, social and environmental topics that matter most

KPMG's guide to the materiality process



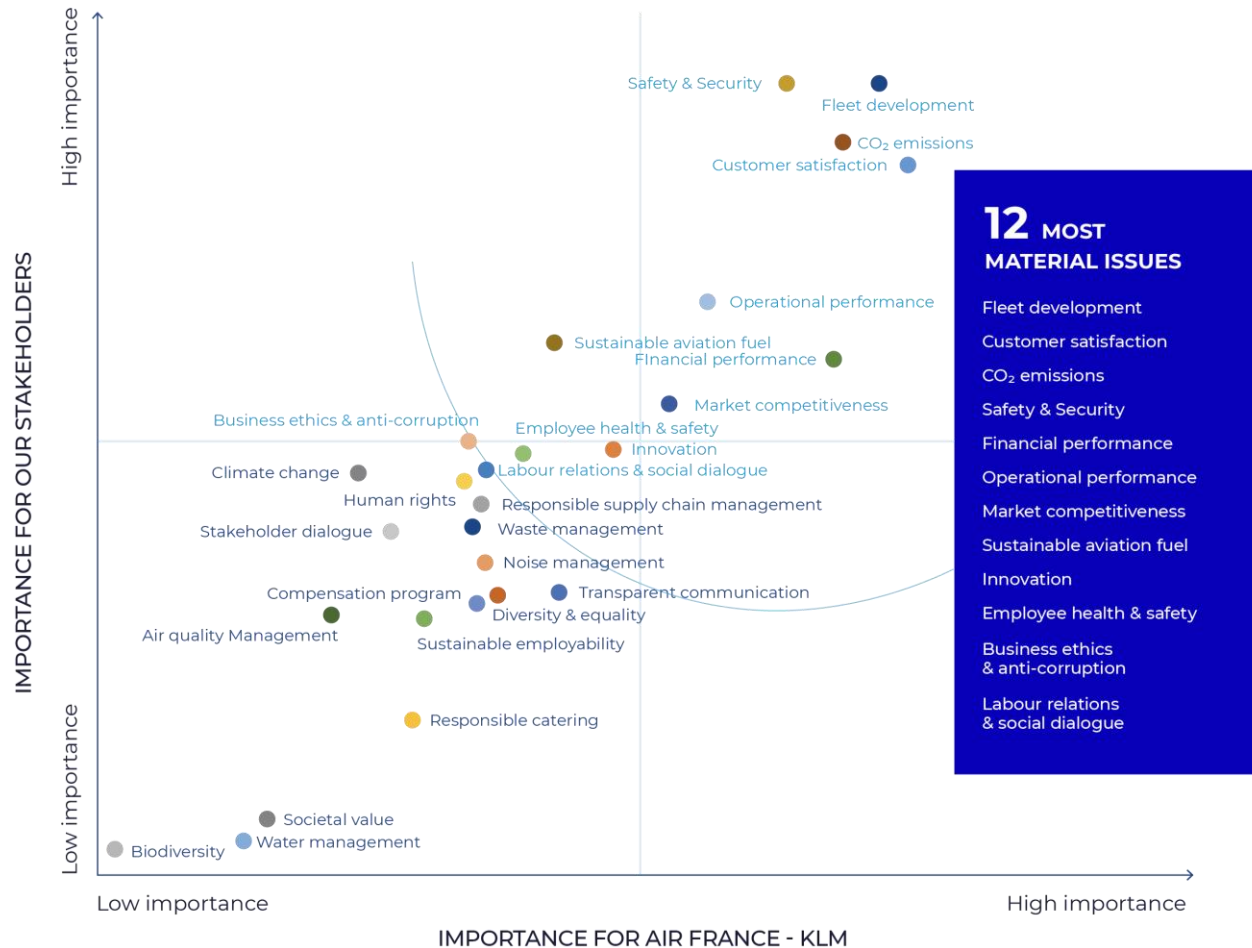
Materiality matrix sample



Source: KPMG (2014). Sustainable Insight: the essentials of materiality assessment; "GRI Standards", Global Reporting Initiative, 2016

Materiality: a strategic exercise – an example from a major airline group

MATERIALITY MATRIX

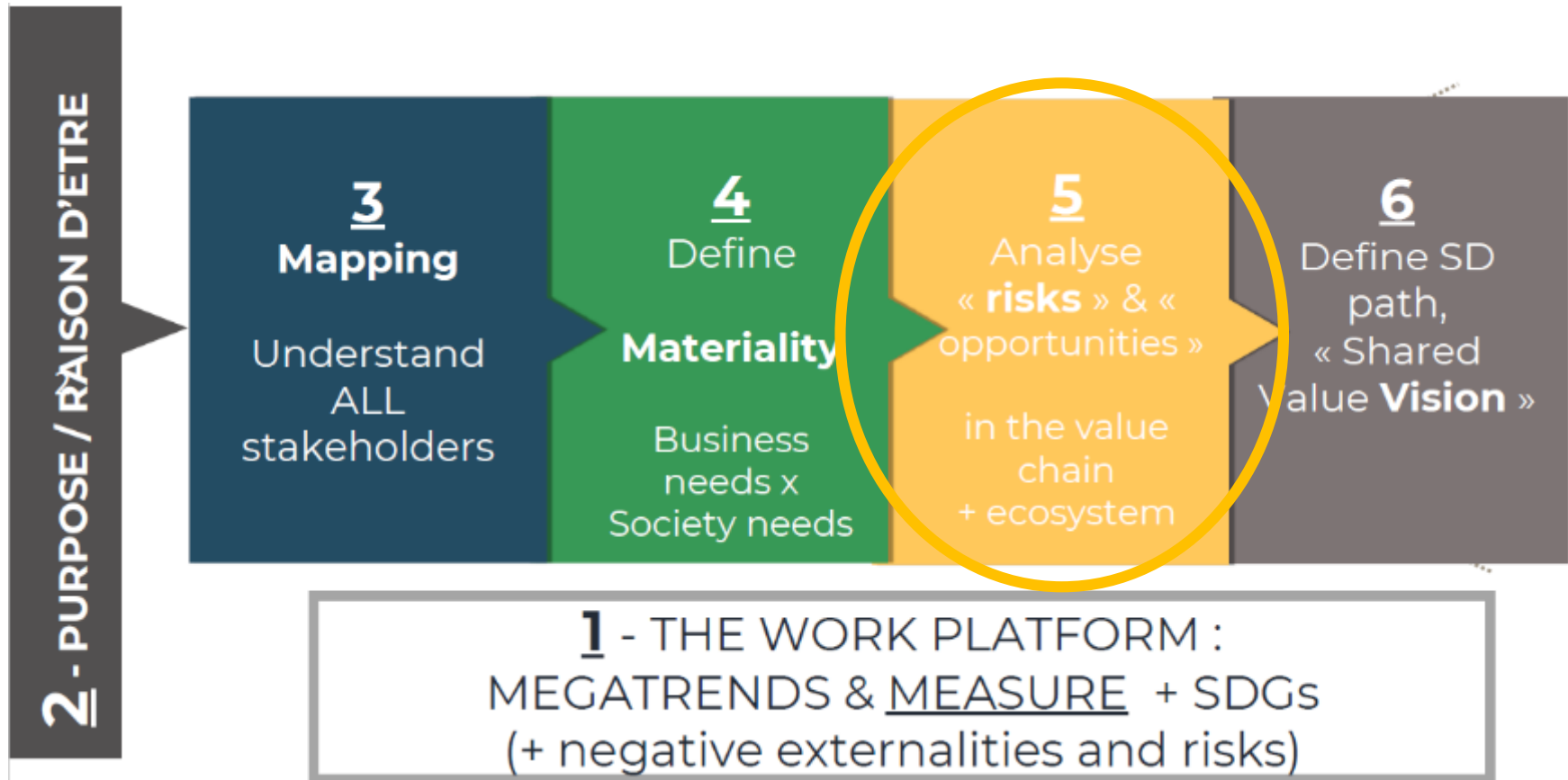


Materiality: a strategic exercise – example from the consumer industry



Source: <https://www.beiersdorf.com/sustainability/our-commitment/materiality-analysis>

Towards Responsible value creation: 6 steps



B B C

Environmentalists sue Dutch airline KLM for 'greenwashing'

By Merlyn Thomas

Climate disinformation reporter

🕒 6 July

Climate change



Two ways to look at Sustainability and Social Responsibility

Defensive



Mitigating the **risks** attached to :
weaknesses &
threats



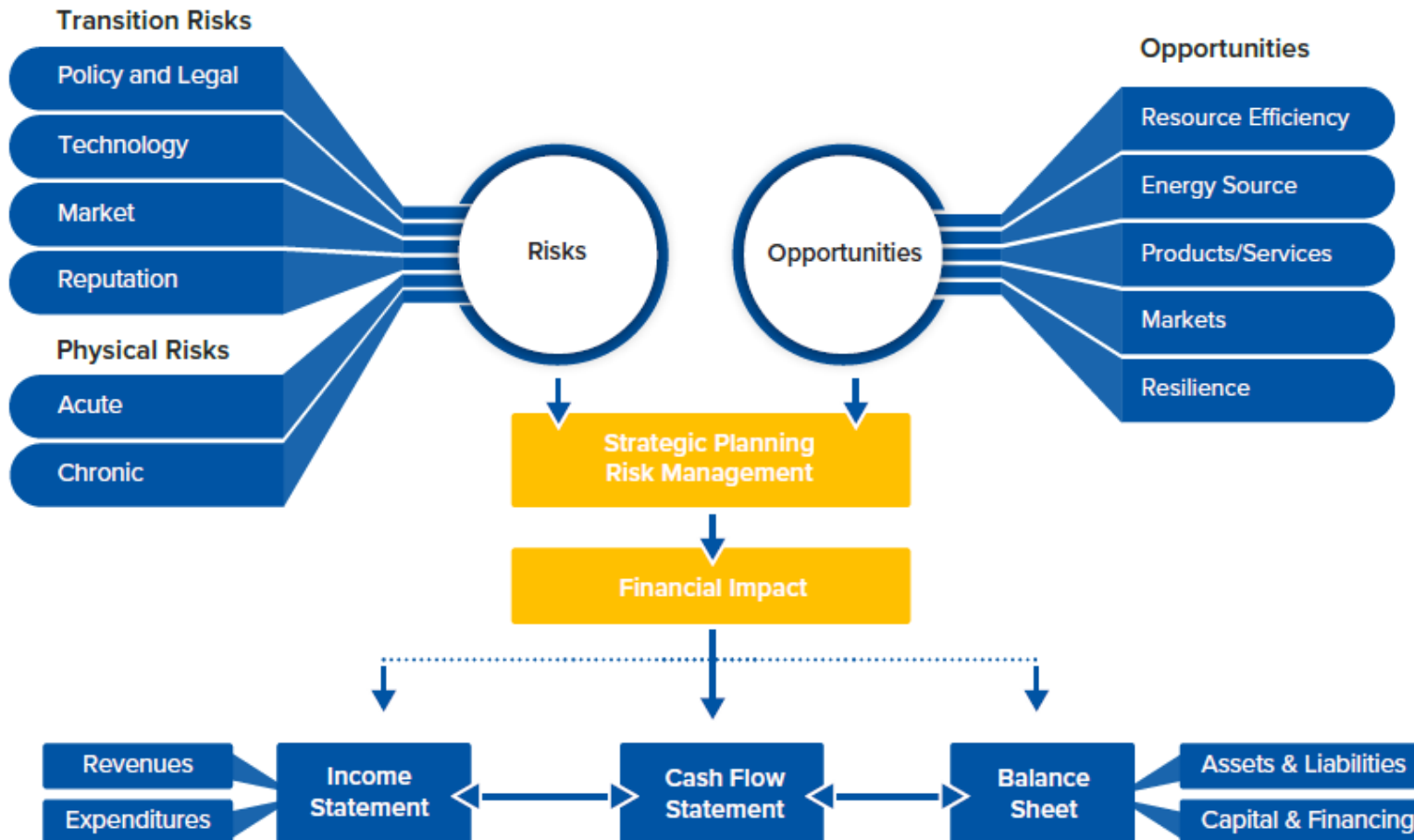
Proactive



Build on **strengths** and
opportunities to
develop

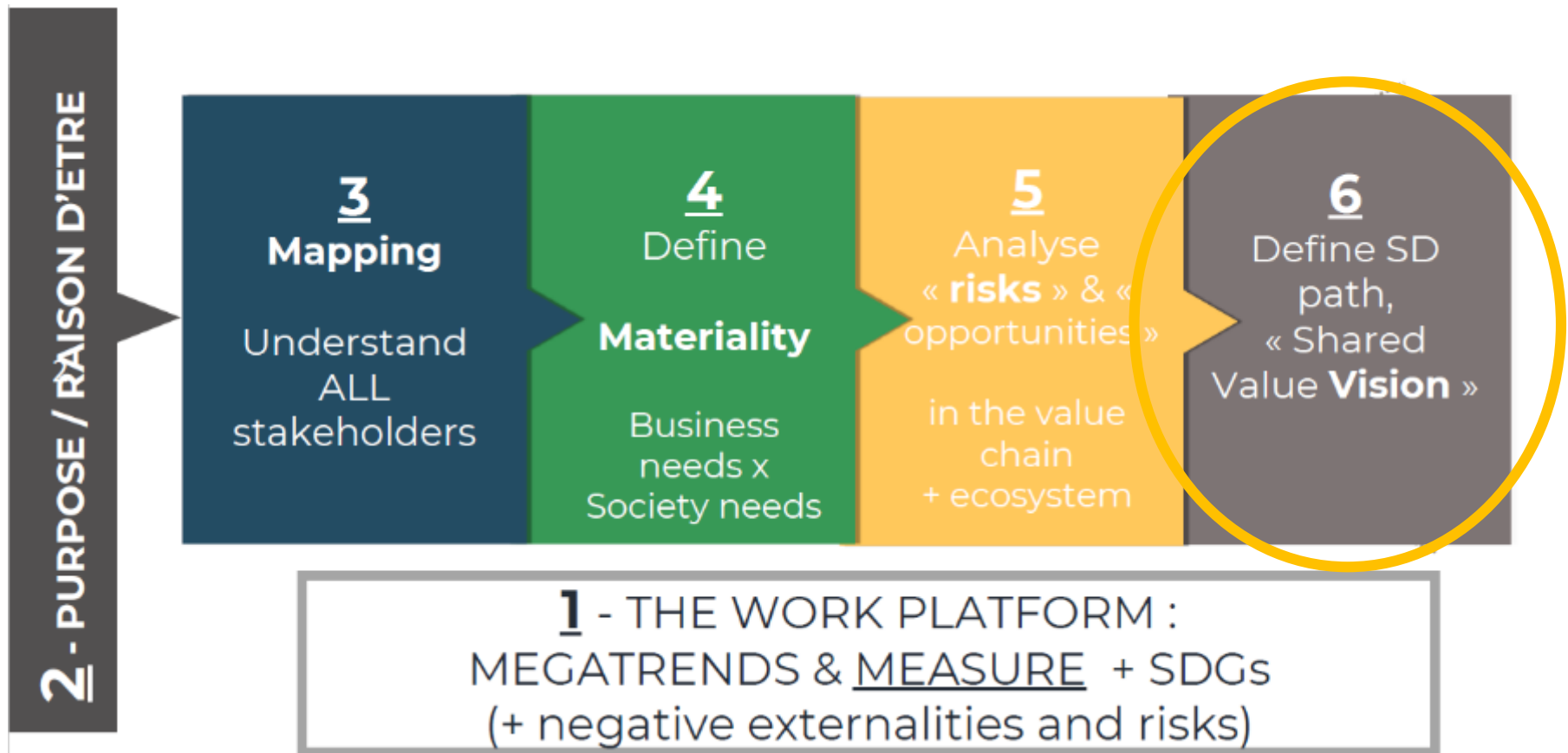
Strategic ESG planning to achieve business success

Climate Related Risks, Opportunities and Financial Impact

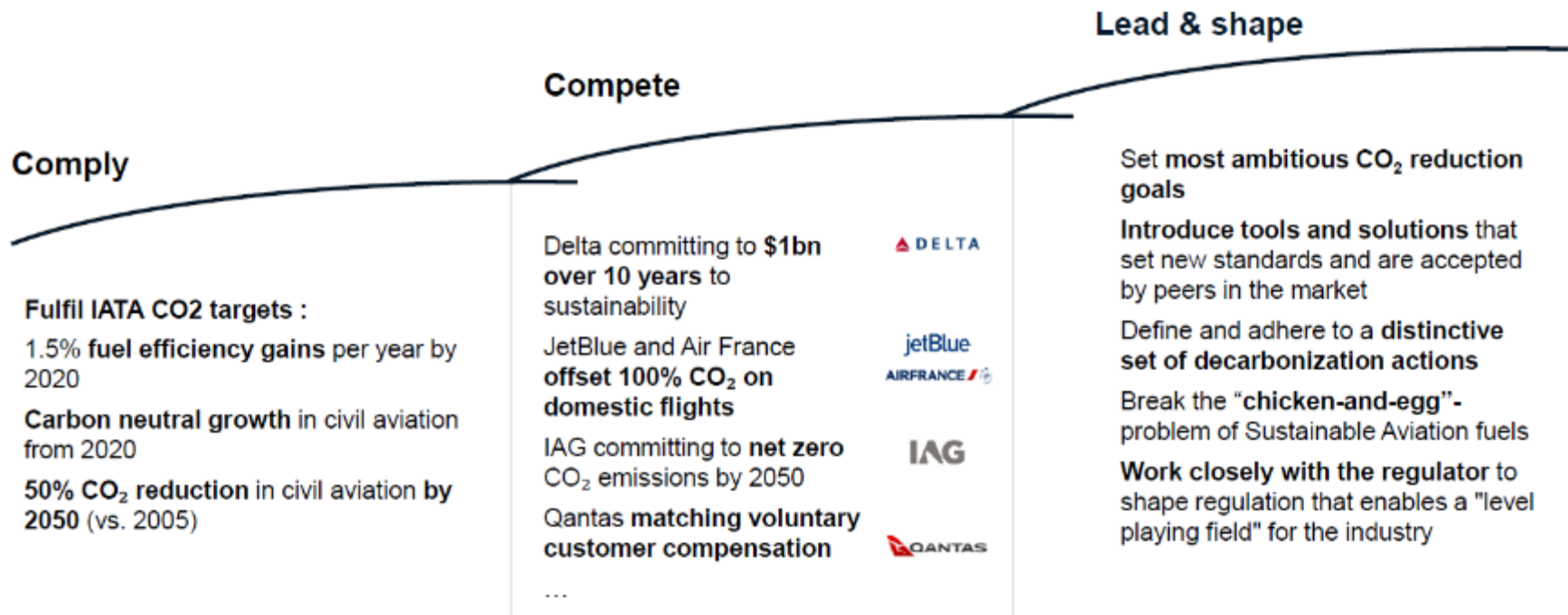


Source: PRINCIPLES FOR RESPONSIBLE INVESTMENT

Towards Responsible value creation: 6 steps



Airlines need to decide on the overall aspiration first



The strategy must be quality assured through comprehensive benchmarking

Granular benchmark example: McKinsey's ESG teardown

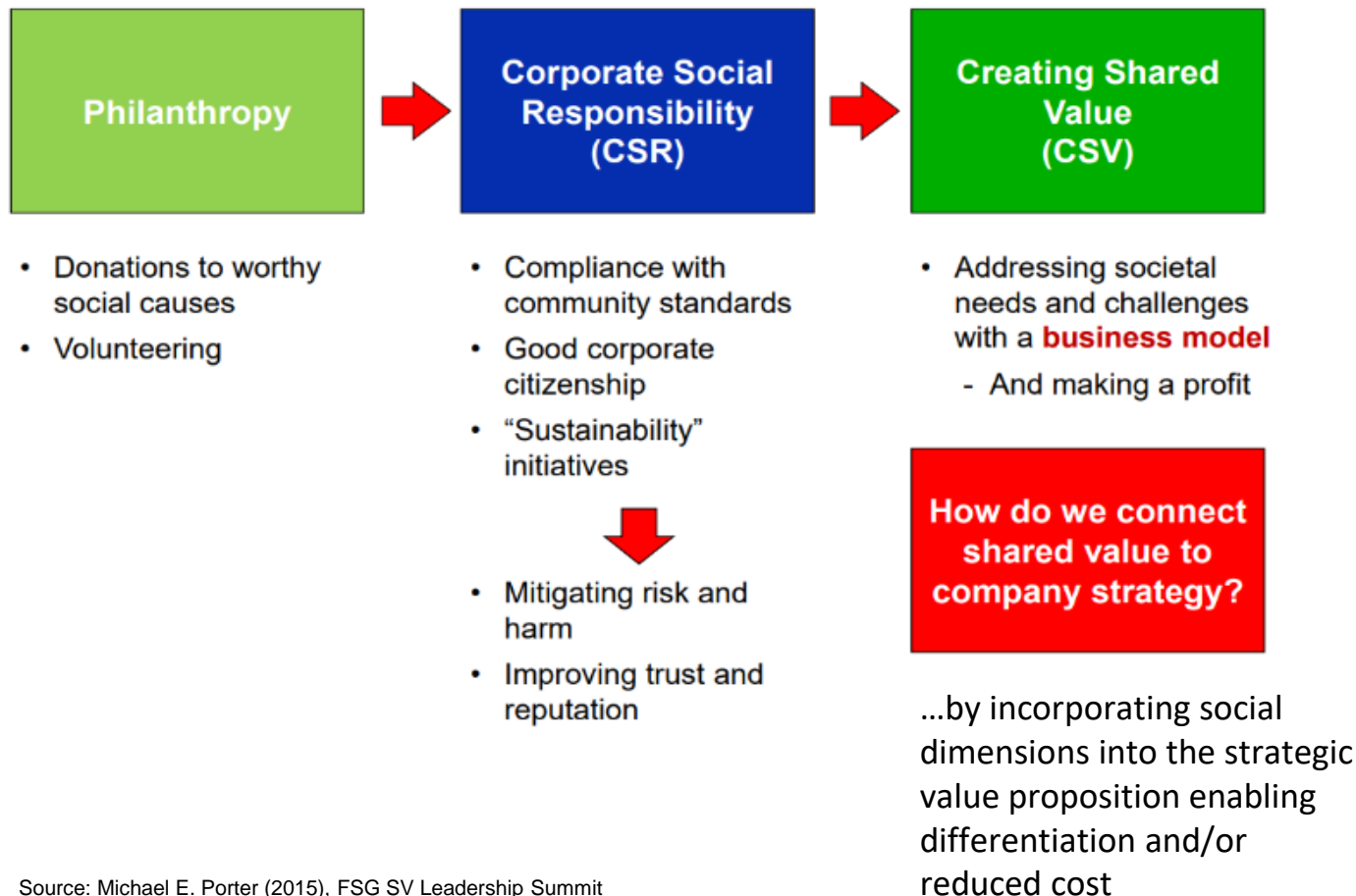
DISGUISED CLIENT EXAMPLE



Source: McKinsey, 2021

A shared value strategy can support the definition of a unique positioning for the company

Michael Porter and Mark Kramer 2011: “Shared Value is not social responsibility, philanthropy, or sustainability; but a new way for companies to achieve economic success.”



Source: Michael E. Porter (2015), FSG SV Leadership Summit

A shared value strategy can support the definition of a unique positioning for the company

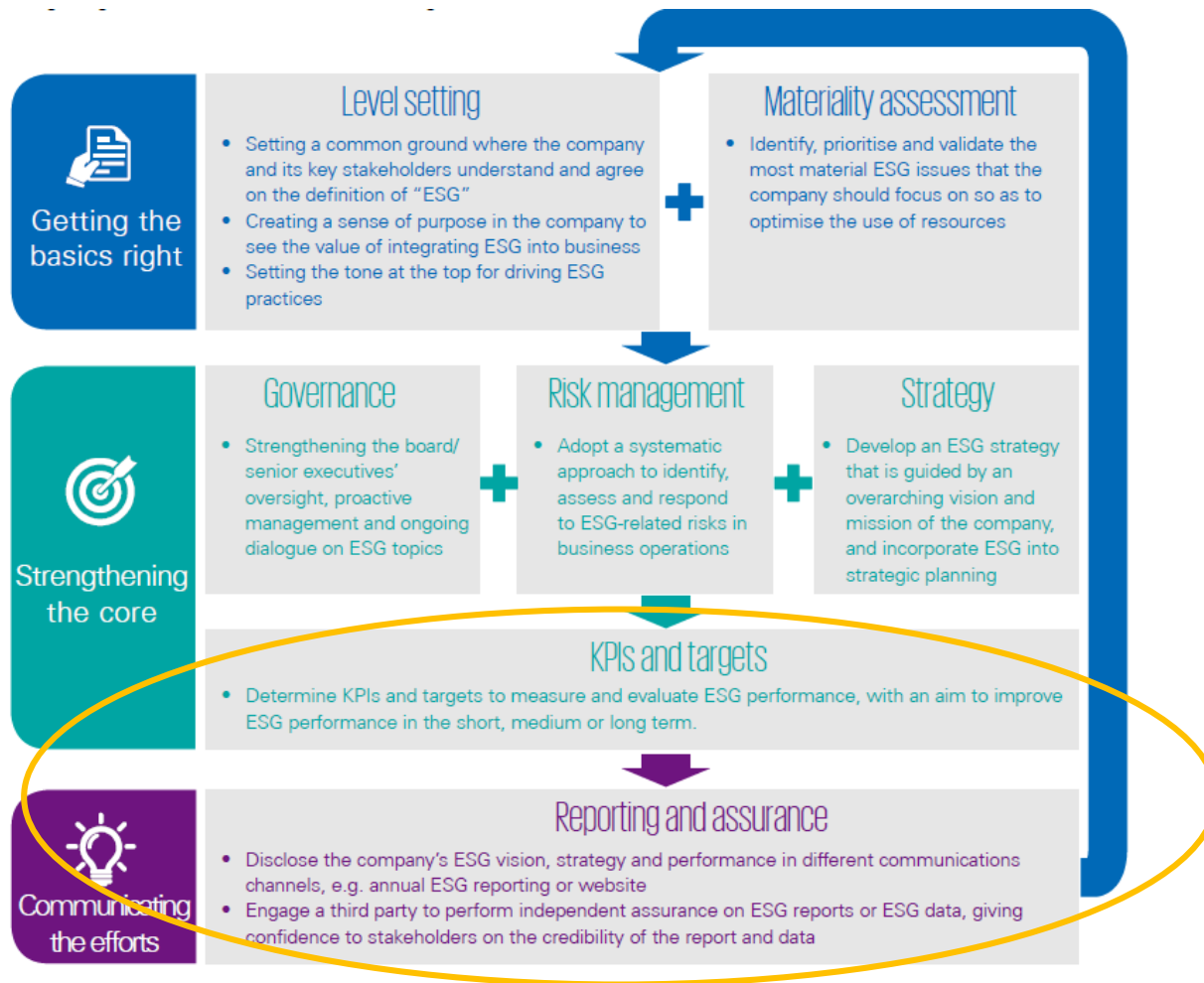
CSV shows that financial, societal and environmental benefits can be achieved simultaneously. In fact, at the core of the model are societal and environmental issues that serve as the drivers in propelling profitable shared-value business cases across a wide spectrum of companies and industries. In this regard, CSV is the ideal business model to support the realization of the **UN's Sustainable Development Goals (SDGs)**.

CORPORATE SOCIAL RESPONSIBILITY CSR	CREATING SHARED VALUE CSV
Addressing societal needs and challenges by giving back + doing no/less harm	Addressing societal needs and challenges with a business model
Doing good	Doing well by doing good
Discretionary or in response to external pressures, no relation with competitiveness	Integral to competing: propels competitive advantage in new, unlocked markets
Separate from profit maximizing, philanthropy	Integral to profit maximizing
Agenda determined by external factors and often personal or departments' preference	Agenda company, sector and market specific
No real influence on innovation, other than incremental	Initiates radical innovation and incremental innovation at scale
Operational and tactical issue	Strategical priority, at the heart of business
Scalable, but from cost perspective	Scalable, with profit increasing
Seen as costs and legitimization of operations for investors	Seen as commercial opportunities for investors

Source: <https://sustainablebrands.com/read/business-case/csr-v-csv-the-difference-and-why-it-matters>

A successful ESG strategy needs clear measurement and reporting as well as honest communication

PROCESS FOR DEVELOPING AN ESG PROGRAM



KPI, reporting + communication –
the keys to develop a vision shared by internal and external stakeholders

Section 1:

Sustainability - Introduction and Background

Sustainability - Introduction and strategic implications

Sustainability – Behind the words

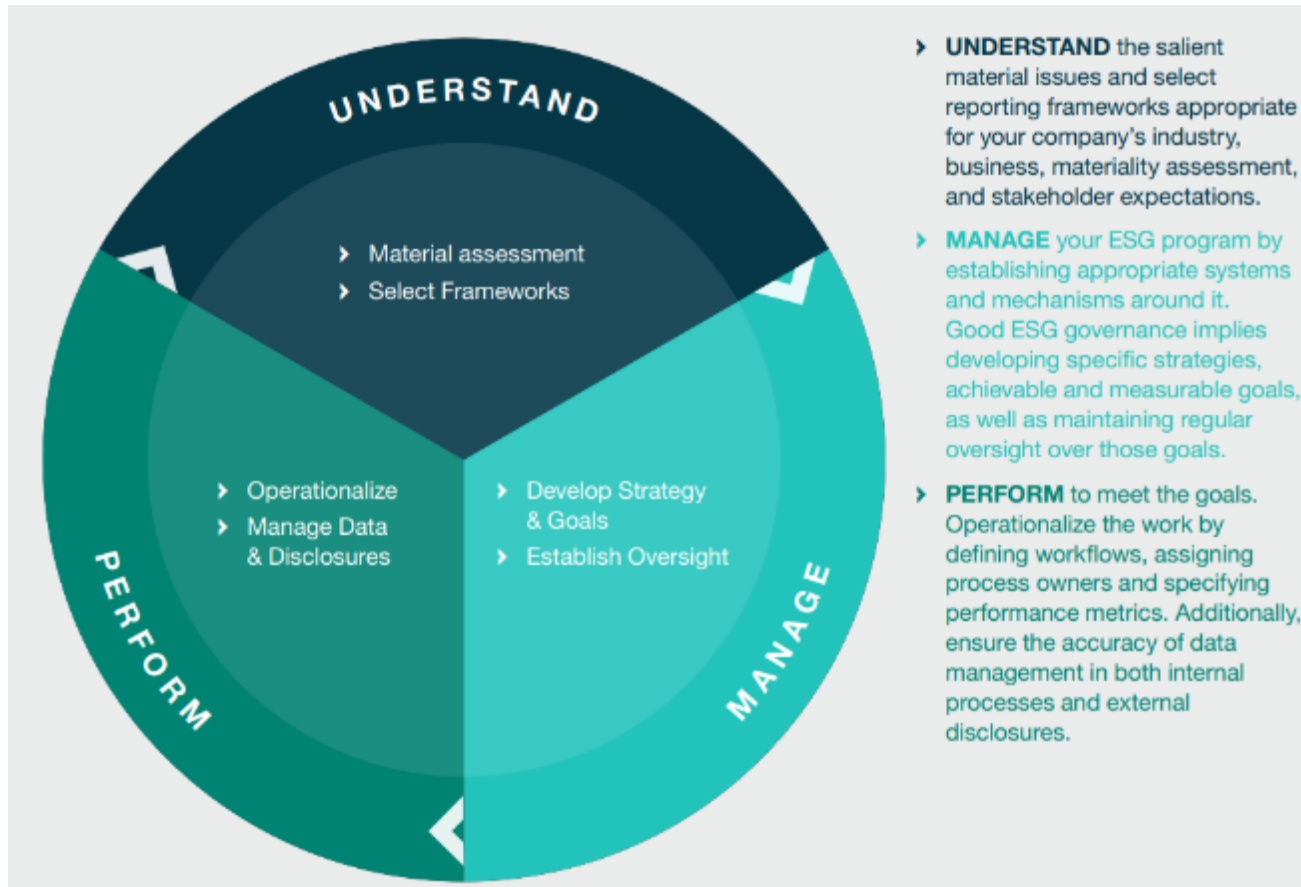
Risks and Challenges

Towards responsible value creation: 6 steps

Anchoring into organization

After assessing and strategy building ESG needs to be a part of the organization





PROCESS FOR DEVELOPING AN ESG PROGRAM



Source: Business Ethics Leadership Alliance (BELA) ESG Frameworks Working Group

ESG needs tailor made models for organizational integration to meet company goals

Four sample models for ESG integration

1	2	3	4
			
<p>Centralized command and control is an ESG governance model with single source of authority and decision-making power in the form of centralized ESG function. The centralized ESG function delegates responsibilities to regional/business function ESG heads and is responsible for setting consistent ESG targets throughout the organization.</p>	<p>In a C-suite model, the Chief ESG or Sustainability Officer acts as the “face” of ESG for the company and is the point person between the business and the board. They are in charge of co-ordinating and overseeing the implementation of ESG strategy but are not themselves a technical specialist in ESG matters.</p>	<p>In a pillar model there are three separate ESG leads appointed for E, S, and G pillars. The pillar leads are technical experts in their ESG focus area and are responsible for individually proposing strategies for their area to the board. They form their own project teams to execute their strategies.</p>	<p>The network or project-based model comprises a corporate ESG team, made up of sustainability experts and technical advisors who oversee implementing the ESG program. Project teams are formed as needed and dissolved after the goal is met.</p>

Selecting the right model

The working group identified four organizational structure models. Each model considers structure, roles, reporting lines and guidance on the challenges and benefits associated with each approach. Participants also recognized the benefits of blending models as appropriate for their organization

Source: Business Ethics Leadership Alliance (BELA) ESG Frameworks Working Group

Summary of Chapter 1

Key messages on sustainability strategy for companies in the aviation sector

1. ESG is not just a burden but an option to improve company performance
2. Aviation with overall low, but growing GHG footprint – aviation needs to do its homework
3. Megatrends from consumers, employees and investors are driving towards ESG
4. The deeper purpose of a company needs to be defined
5. Stakeholders needs and their influence on the company have to be well understood
6. A proactive approach including a Shared Value Strategy opens new commercial opportunities