



A vision of success: the net zero operating space for business



I want us to start in 2050, imagining what the world will look like if we do succeed in both limiting global warming to 1.5°C and protecting all peoples from climate change impacts.

— Simon Stiell, Executive Secretary, UN Framework Convention on Climate Change (UNFCCC)

Introduction

If no action is taken beyond current plans, the planet is projected to warm 2.7 C by the end of this century and to overshoot six of the nine planetary boundaries^{1, 2}. Breaching these science-defined safe limits will leave society exposed to catastrophic consequences of extreme rainfall and flooding, droughts and heatwaves, increased spread of pests and diseases, sea level rise and more³.

These physical climate risks are recognised as significant business risks, and are likely to lead to significant negative impacts on global gross domestic product⁴. Already, the world economy is set for an income reduction of 19% by 2050, regardless of future emission choices⁵. The more delayed and disorderly the transition is, the bigger the economic risk.

Chief executives in the real economy therefore have a business interest in radically reducing emissions to contribute to the global achieving of net zero emissions by 2050 and thereby limiting global warming as close as possible to 1.5°C. But reducing emissions in and of itself does not give executives a positive idea of what their company can and should do in a net zero world.

This thought piece takes its starting point in the future and develops an idea of what the operating space for business looks like in a world with net zero greenhouse gas emissions. It aims to provide business leaders with a vision of the future that is both inspiring and concrete, allowing them to steer their companies' transformations towards this future.

Planning a transition from the present point in time usually leads to incremental business-as-usual changes. This paper proposes another approach: to backcast from an envisioned future, to enable business leaders to plan more radical, truly transformational change. It offers key performance indicators (KPIs) for charting the envisioned transformation.

This piece's underlying assumption is that the operating space for business in the net zero world allows only for products and services that serve human needs.

Identifying human needs

The specification of a universal and complete set of human needs has been the subject of significant research and debate for at least four decades. For this paper we've drawn on theoretical logics from Doyal and Gough⁶, and Max-Neef⁷, as well as frameworks such as the Sustainable Development Goals⁸, Social Progress Index⁹, and Mission Innovation framework for climate leadership¹⁰.

The basic needs we identify can be grouped into two categories: basic needs for survival and needs to ensure a flourishing and desirable society. Both are essential and defy ranking. This seems obvious for the basic needs, but for the net zero world to be truly sustainable across the three pillars of the environment, society, and economy, that world must also be desirable. Thus the needs of a flourishing society are just as important as the needs for health and safety.

The needs are:

- Basic survival:
 - Space and safety
 - Health and nutrition
 - Mobility and access
- Societal flourishing:
 - Leisure
 - Culture
 - Comfort
 - Connection

Conditions for business delivery

For the delivery of products and services to satisfy these needs we propose four conditions that must be met: circular, optimised, regenerative, renewable. These are derived from net zero pathways laid out by climate science¹¹, and they set the parameters for net zero value chains to deliver on human needs. We acknowledge there may be some overlap between these conditions, but propose they are sufficient for ensuring a just and sustainable future.

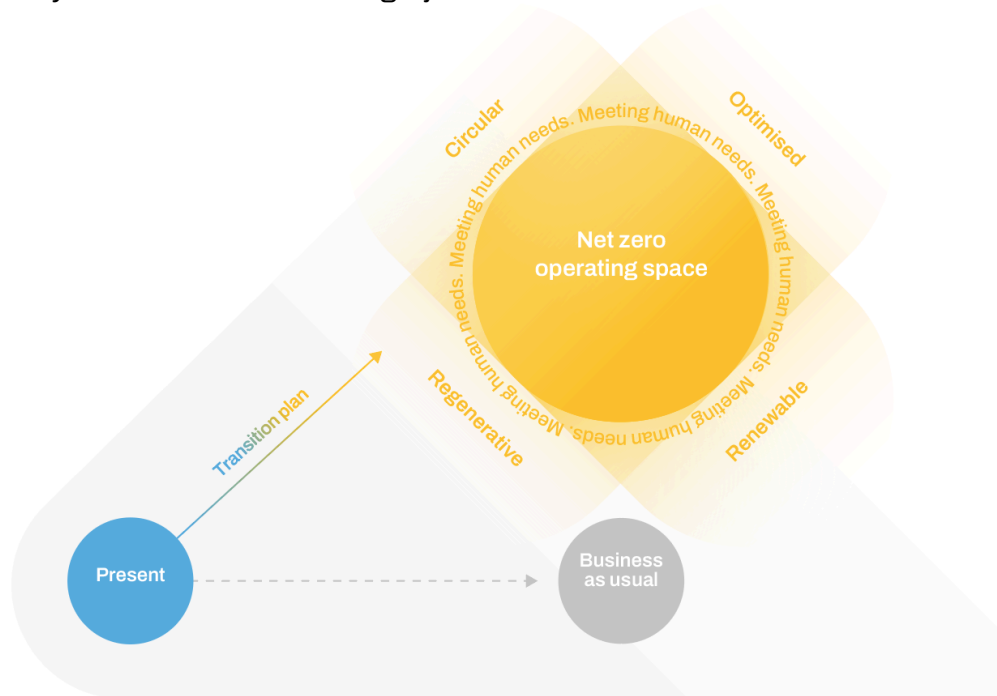


Fig 1. Transforming business for net zero.

Circular: The take–make–use–dispose linear system is incompatible with the net zero world. A circular economy minimises the footprint and use of virgin materials, uses few products for longer, circulates materials and components, and safely returns them to nature. Material use is unavoidable in meeting human needs, but the negative effects can be minimised when resources are given the value they deserve.

Example KPI for circularity	Example goal on circularity
% of sales revenue from products that fulfil circular design principles	75% of revenue by 2030
Number of meaningful uses (eg wears/hours/years) per product	100% increase for average uses of product portfolio by 2026 compared to baseline 2020

Optimised: A net zero world ends the inefficient and wasteful cultures and systems that underlie the economy in many of the world's geographies. This means zero waste in the conventional meaning of the term (eg ending waste in manufacturing, food waste and energy waste) which is partly addressed by achieving circularity. But it also means ending planned obsolescence; no longer designing daily goods for very rare use cases; and adopting new business models, such as mobility as a service, to cut down on wasted space and materials. Optimised business entails right-sizing flows and stocks, and maintaining a balanced and efficient level long term. It means creating the most efficient means possible of delivering on the core needs of society, in terms of their functional units.

Example KPI for optimisation	Example goal on optimisation
kg food waste per customer served	95% reduction by 2029 compared to baseline 2020
% of revenue from sales of products/services with significantly lower emissions per functional unit than the relevant market comparison	90% of revenue by 2030

Regenerative: In a net zero world, business practices must not break down environments or relationships. Regeneration will mean different things in different systems. For example, it may mean building up land systems instead of degrading them. But it will also mean regenerating relationships with farmers and local communities.

Example KPI for regeneration	Example goal on regeneration
% of total purchased agricultural commodity weight produced on farms implementing regenerative agriculture according to science-defined criteria ^{12, 13}	95% of total commodity weight by 2028
% of value chain partners, by spend/sales, engaged in collaborative sustainability or equity initiatives	75% of suppliers by spend engaged in sustainability or equity initiatives in collaboration with the company

Renewable: There is no space for energy or materials to come from polluting or finite sources. At the very least, 95% of energy will need to come from renewable sources, while materials must come from sources that can be maintained for 1,000 years. This requires businesses to recreate their supply chains and redesign their products and services to enable this rapid transformation.

Example KPI for renewables	Example goal on renewables
% of full value chain energy from renewable electricity	100% of all energy used in the company and its tier 1 and 2 suppliers comes from renewable sources by 2035
% of weight of products composed of renewable materials (can regenerate within 1,000 years)	85% of all total product weight is of renewable materials by 2035

Conclusion and outlook

This thought piece has drawn on climate science in general and net zero pathways in particular to present a picture of what the operating space for business looks like in a net zero world. It gives business leaders a vision of the future that is both inspiring and concrete, to help them steer their companies' transformations in the coming decades.

This piece seeks to add to the transition planning that many companies are embarking on as a result of regulation. However, transition plans are currently not widely used to chart the path towards the transformation a net zero world requires. Using the transition plan process to chart a radical transformation can gain companies a competitive advantage. The four conditions and associated KPIs presented in this piece provide a practical tool for achieving the transformation.

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