

How to prepare your business for climate-related risk

There is growing recognition and scientific understanding of the physical and transitional impacts that climate change will have on society and businesses. Rather than attempting to predict specific climate change effects, organisations can use scenario planning to increase strategic robustness and identify opportunities under a broad range of plausible climate change outcomes, an approach recommended by the Task Force on Climate-related Financial Disclosures (TCFD). Using a real-life case performed by strategists at Rolls-Royce, the article illustrates how this can be done surprisingly easily, quickly and effectively. By having conducted this case, Rolls-Royce is in a better position to respond to investor disclosure requests, to help shape external policy, and to strengthen its strategy.

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Summary

Many organisations recognise that the pace of change in areas such as technology, digitisation and geo-politics has outpaced our capability to predict the future. The use of scenario planning to strengthen traditional strategic planning processes is therefore becoming more widespread. Increasing corporate agility and resilience to changes in the external context is of paramount importance. No matter what the future brings organisations must ensure they survive and prosper.

Rolls-Royce plc started with scenario planning in 2016² and it has since become an integral part of the strategic investment prioritisation and decision-making processes. Rolls-Royce continues to work to further develop this capability. In 2018 Rolls-Royce enlisted the support of a strategy consulting firm (NormannPartners³) to consider the future implications of climate change.

This paper describes in a short case how Rolls-Royce adapted and tailored the process recommended by the TCFD.

Rationale

There is growing recognition of the potential impact of climate change on the longer-term success of organisations. This includes both the physical impacts of climate change (e.g. global temperature rise, rising sea levels, extreme weather events) as well as the impacts of the policy choices that are made to make a transition to a low carbon global economy possible (e.g. emissions regulations,

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² R Ramírez, S Churchhouse, A Palermo, J Hoffmann, “Using Scenario Planning to Reshape Strategy,” MIT Sloan Management Review, Vol. 58 No. 4, (Summer 2017), 31-37.

³ NormannPartners is a boutique strategy consultancy specialising in assisting organisations that face conditions of significant uncertainty and turbulence in their context

carbon pricing, technological developments). This is particularly relevant to the carbon intensive industry sectors in which Rolls-Royce currently operates.

In addition, industry players are facing increased pressure from external stakeholders (particularly investors and governmental policy makers) to disclose assessments of their vulnerability to climate change. This has become increasingly prevalent since the global climate commitments made in 2015 (‘the Paris goal’ – limiting global temperature rise to 2°C), and the subsequent work of the TCFD – an investor-led initiative focused on increasing companies’ disclosures on climate related risks and opportunities.

The purpose of the case was to improve understanding how the risks and opportunities associated with climate change may impact Rolls-Royce over the medium term, with a view to bringing context to Rolls-Royce’s business strategy and to enable more informed decision making. By having conducted this case, Rolls-Royce is in a better position to inform strategic decision making; respond to investor disclosure requests, and to help shape company policy.

Scenario planning

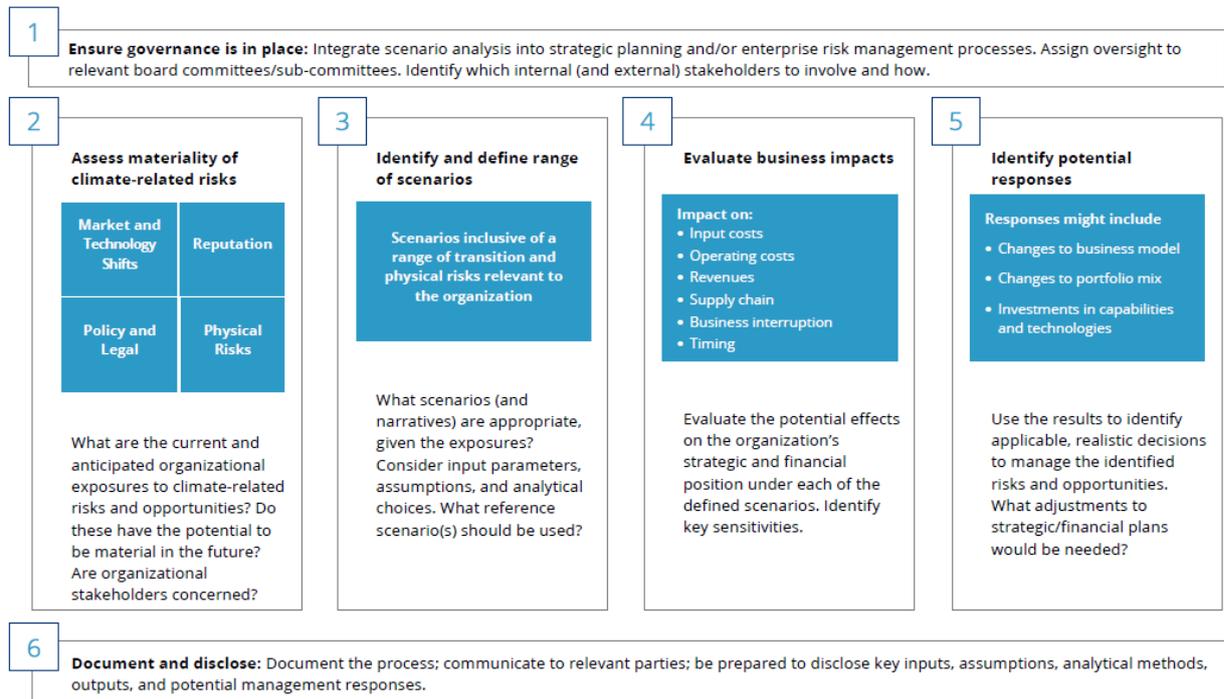
Scenario planning is about exploring alternative plausible future contexts. Scenarios are not forecasts or projections, but narrative explorations of alternative future states and descriptions on how we got there. It can help organisations better understand and prepare for future risks and opportunities. To be effective, scenarios should be plausible, distinctive, internally consistent, relevant, and challenging for the organisation for whom they are developed. For a climate-related impacts case one needs scenarios that combine established climate change science (such as the work of the Intergovernmental Panel on Climate Change) with uncertainties in the domains of politics, economics, technology, society and regulation to explore how alternative business contexts could evolve, and subsequently how a business model or strategy may be impacted or should be adjusted.

The Rolls-Royce company-level scenarios from 2016 did include a perspective on climate change but it was not dominant. For the 2018 case it was necessary to create a set of scenarios that would foreground climate-related uncertainty more explicitly. Note that the underlying (natural) science of climate change was not considered.

Tailoring the TCFD scenario analysis process

Although the TCFD recommends using scenarios, readers of the report ‘Recommendations of the Task Force on Climate-related Financial Disclosures’ and its Technical Supplement⁴ may be forgiven for not yet being able to perform this analysis. The report only describes a broad, high-level, process (see figure below), in which NormannPartners adjusted and tailored steps 3 and 4, for the purpose of Rolls-Royce. These steps were conducted by a small staff team from the Rolls-Royce Strategy and Sustainability teams guided by the Rolls-Royce Environmental Advisory Committee. Design of the process and workshop facilitation was provided by NormannPartners.

⁴ TCFD Technical Supplement *The Use of Scenario Analysis in Disclosure of Climate-Related Risks and Opportunities*, June 2017



Process for applying scenario analysis to climate related risks and opportunities, from the TCFD Technical Supplement

Step 3 – Identifying scenarios

Ideally, scenarios are developed specifically for an organisation, to ensure they talk to the concerns and challenges of that organisation. But sometimes it is acceptable to use an existing appropriate set of scenarios and tailor these for the specific theme to be researched and the specific organisation who will use them. After an extensive review of publicly available sets of scenarios one set was identified that was felt to be useful ('complete and relevant') for describing plausible future contexts for Rolls-Royce. This set had been developed by another client of NormannPartners and had been informed by and partly based on externally recognised and scientifically accepted climate scenarios, including those developed for CDP/WMB⁵. With permission from this client these scenarios were used, adjusted and tailored to Rolls-Royce's circumstances.

Scenario 1 – Alignment

In this world we see strong international alignment to limit global temperature rise in accordance with the Paris Agreement, whose central aim is to strengthen the global response to the threat of climate change by keeping a global temperature rise this century well below 2 degrees Celsius above pre-industrial levels, and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius, in an orderly manner. Governments around the world adopt strict product and behavioural standards, high carbon pricing and strategic investments in low carbon alternatives. Pressure from society is relentless and there is acceptance of the need to control carbon emissions and a willingness to pay for low carbon solutions.

⁵ [Carbon Pricing Pathways – Navigating the path to 2 degrees](#), CDP/WMB, September 2015

Scenario 2 – Fragmentation and Multi-level Response

Progress towards a low carbon economy is fragmented and inconsistent. There is a failure to agree common international policies and commitments. Some economies take a proactive stance with strict regulations, and increasingly regions, countries and even cities implement their own policies. National economic interests compete with climate commitments in unpredictable ways.

Scenario 3 – Volatility and Adaptation

Extreme rises in temperature and isolated catastrophic weather events result in stringent reactive emissions regulations and policies, although not globally co-ordinated. Extreme carbon pricing is applied, and the pressing need to adapt to violent climate change, especially in protecting infrastructure, dominates investment decisions.

Each of these scenarios present challenging alternative future contexts for the global aerospace and power sectors.

Step 4 – Evaluate business impacts

In scenario planning, in a process stage called ‘scenario windtunnelling’, the exposure of a business to external change can be assessed. This is done by evaluating, under each scenario, the resilience of the current strategy and business plan (including strategic and operational objectives) as well as other aspects of the ‘current business design’, such the current organisation, the company culture, location of factories, choice of ERP system, current technology development roadmap, portfolio of Intellectual Property, etc. So, to ensure testing and assessment of the Rolls-Royce business against different scenarios was possible the current Rolls-Royce business strategy was captured in a simple but explicit strategic framework. Thus, nine elements of the Rolls-Royce strategy and business model were identified:

1. **Brand value and reputation:** External perception of Rolls-Royce; relationships with external stakeholders;
2. **Customers and markets:** Changes in demands (requirements, market size, pricing);
3. **Access to capital:** Funding availability (investors and governments); relationships with investors and other external stakeholders;
4. **Services and aftermarket:** Risks or opportunities related to through-life management;
5. **Technology acquisition:** What technologies may become more relevant or obsolete;
6. **Supply chain:** Development and resilience; physical disruption; materials demand and availability;
7. **Operations:** Rolls-Royce’s own facilities and locations;
8. **People:** Ability to attract and retain talent; perception of Rolls-Royce as an employer in a low carbon economy;
9. **Global strategy:** Footprint choices; international relationships.

One ‘Implications workshop’

A diverse group of Rolls-Royce executives with experience across the nine strategy elements under consideration was selected and then gathered together for a day-long workshop. There were representatives from the business, strategy, technology, HR, investor relations and risk teams of Rolls-Royce. A short introduction to scenario planning was given to level-set the group in the methodology. The first of the three scenarios was described in plenary by a member of the staff team after which attendees split up into three sub-groups. Each sub-group first reflected upon the plausibility of the scenario that had just been described. This step helped build cohesion around the task amongst diverse attendees, some of whom were unfamiliar with scenario planning. Next, they explored in depth the impact of the scenario on three strategy elements that their sub-group had been asked to consider, first in general terms, and then with focus on specific implications for Rolls-Royce’s current strategic plan. Options to both manage risk and exploit any opportunities were also discussed. Each sub-group recorded their thoughts and conclusions and then returned to plenary to share their thoughts before repeating the process for the other two scenarios.

Review and next steps

The insights gained by Rolls-Royce are being used to stimulate further exploration of the company’s strategic options and better engage with external stakeholders. Over the coming months and years Rolls-Royce will work internally and externally to extract the maximum possible value from undertaking these and similar studies to ultimately ensure better outcomes for the company, the industry and the environment in general.

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Rolls-Royce pioneers cutting-edge technologies that deliver clean, safe and competitive solutions to meet our planet’s vital power needs.

NormannPartners is a strategy consultancy combining academic rigor in cutting-edge thinking with extensive practical experience in business.

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