**Carbon crossroads**

The Intergovernmental Panel on Climate Change (IPCC) explores four potential futures depending what policies governments adopt to cut emissions

<table>
<thead>
<tr>
<th>Business-as-usual</th>
<th>Some mitigation</th>
<th>Strong mitigation</th>
<th>Aggressive' mitigation</th>
</tr>
</thead>
</table>
| Emissions continue rising at current rates | Emissions rise to 2080 then fall | Emissions stabilize at half today's levels by 2080 | Emissions halved by 2050
RCP 8.5*  | RCP 6.0  | RCP 4.5  | RCP 2.6  |
| As likely as not to exceed 4°C  | Likely to exceed 2°C  | More likely than not to exceed 2°C  | Not likely to exceed 2°C  |

**Business impacted by climate change**

- More heatwaves, changed rainfall patterns and monsoon systems
- CO₂ concentration three to four times higher than pre-industrial levels
- Arctic summer sea ice almost gone
- Sea level rises by half to one metre
- More acidic oceans

**Our potential world in 2100**

- CO₂ concentration falling before end of century
- Climate impacts generally constrained but not avoided
- Reduced risk of ‘tipping points’ and irreversible change

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**The pathway to two degrees**

Meeting the internationally agreed target of 2°C means spending what remains of our carbon budget wisely*

**Start of Industrial Era**

- Our carbon budget for 2°C

**Now**

- Carbon budget we have left

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*To have a better than two-thirds chance of limiting warming to less than 2°C from pre-industrial levels, the total cumulative CO₂ emissions since the start of the industrial era would need to be limited to 1,000 gigatonnes of carbon. About half of this amount had already been emitted by 2011. The amount of carbon that can be released would be reduced if concentrations of non-CO₂ greenhouse gases continue to rise. Other factors (for example, the unexpected release of greenhouse gases from permafrost) could also tighten this ‘carbon budget’.

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*This material can be freely used to advance discussion on the implications of the IPCC’s Fifth Assessment Working Group I report and impacts for business. The report is made available via a creative commons licence.

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