

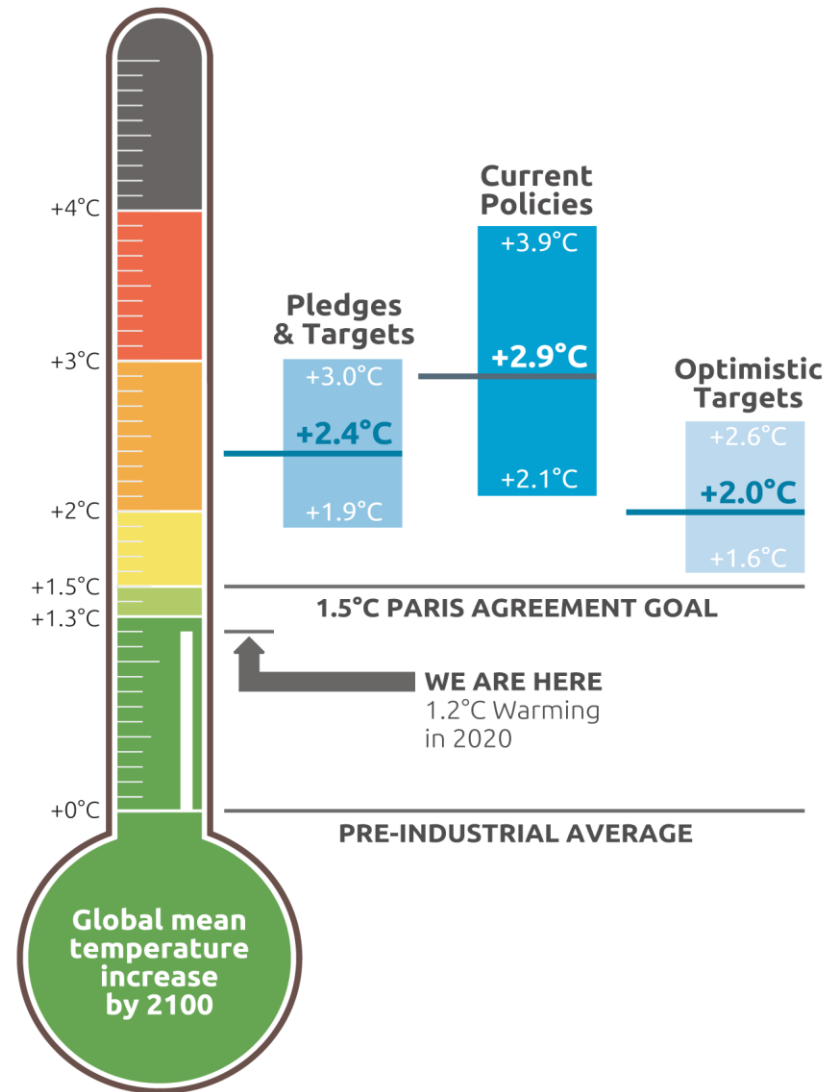
# The Economics of Climate Change - No Action is Not an Option

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## Three Set of Key Figures to Remember!

-18% | \$100trn |  $\geq$ \$75

# It's happening and we aren't moving fast enough

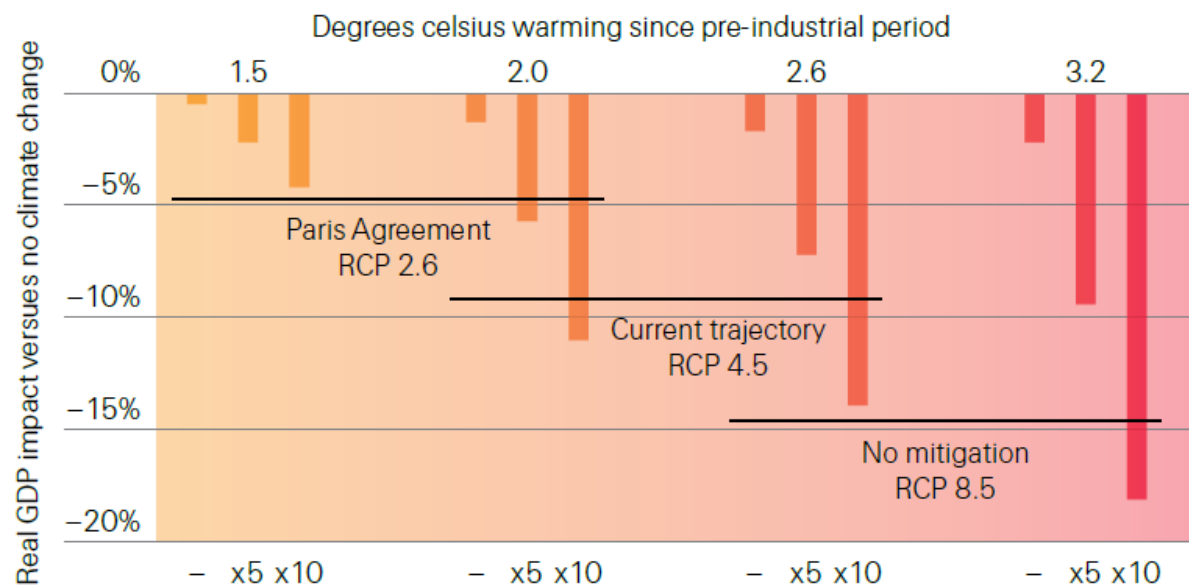


# Climate change impacts on the economy

# Our scenarios indicate a wide range of economic impacts – up to a fifth of global GDP in a tail event

- Focusing on the "mean" gives a false sense of security. The tails are what matters
- The current trajectory of policies and targets lead to a mid-century warming of 2.0-2.6°C - and up to 14% of output loss under severe assumptions

## Overview of climate change impacts on world real GDP by mid-century

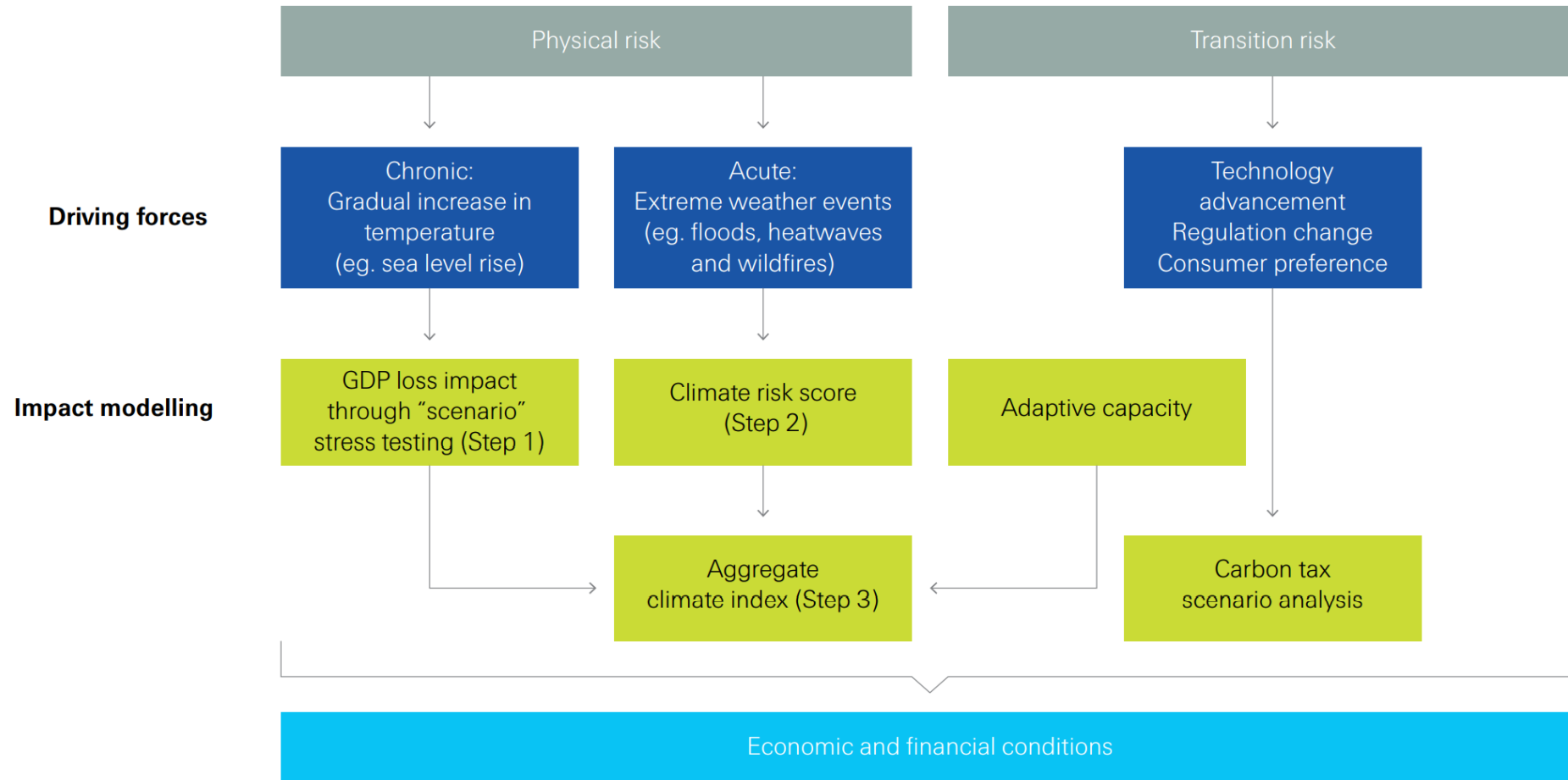


Note: – refers to no simulated parameter uncertainty. x5 and x10 represent the increasing severity of potential outcomes from (un)known unknowns.

Source: IPCC AR5, Swiss Re Institute

# Economic Risks and Uncertainties

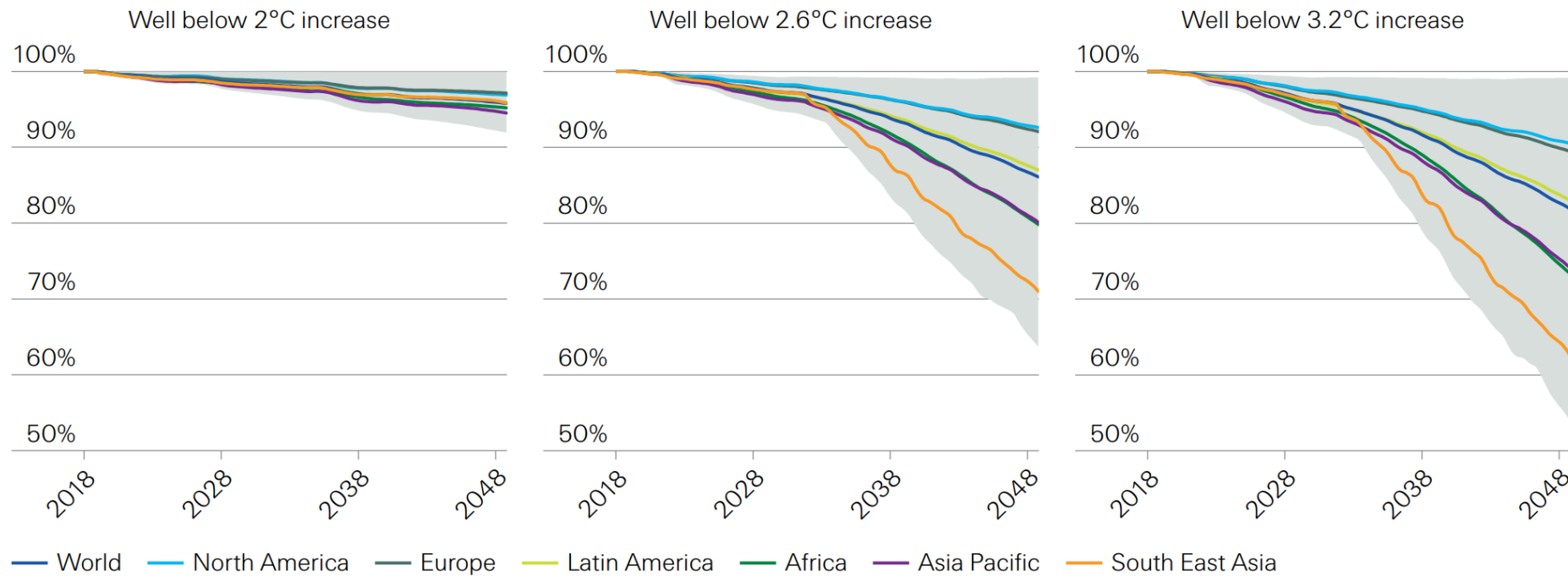
Assessing the Economic Impact of the physical and transition risks associated with climate change



## Regional disparities: The fast-growing markets are most at risk

- No country is immune. However northern Europe relatively better positioned to deal with climate risks
- Many countries in South and Southeast Asia are particularly vulnerable to adverse effects of climate change

### Deviations of scenarios versus no-climate change real GDP



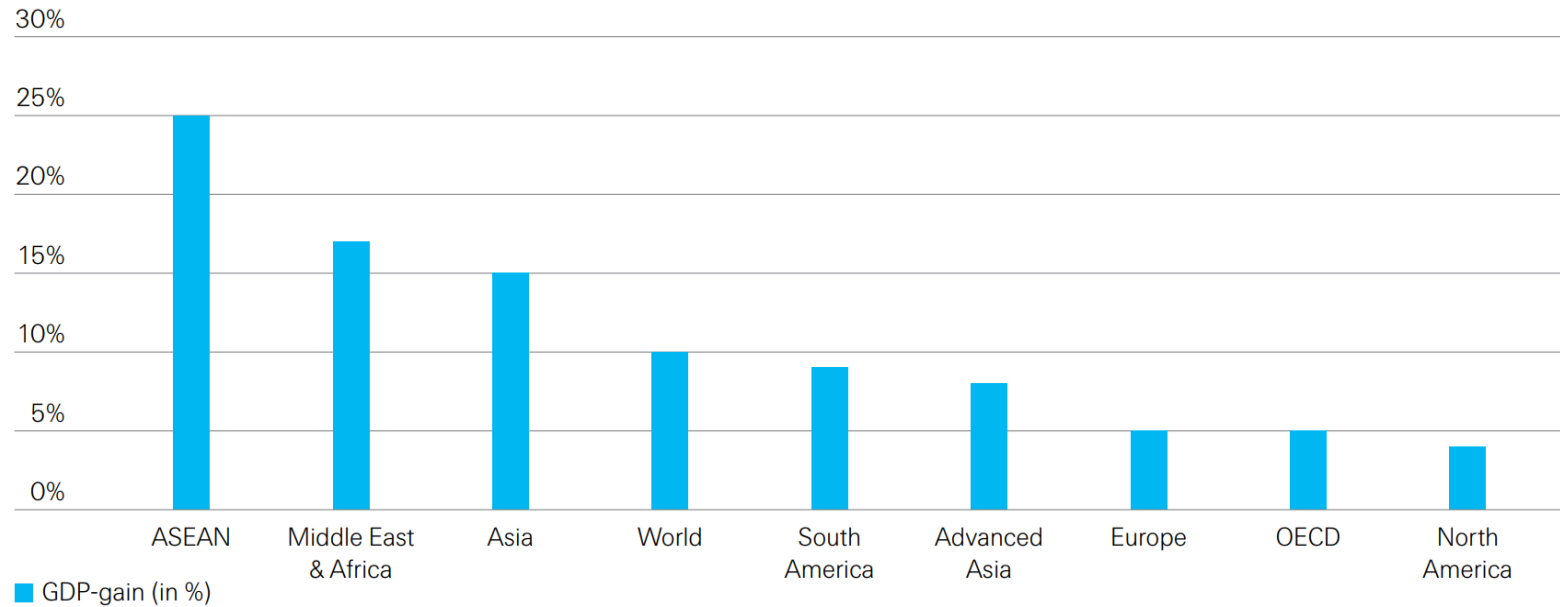
Note: Shown scenarios adjust for omitted channels. Economic elasticities are stressed by the factor of 10 to account for parameter uncertainty. Temperature rises are from pre-industrial times to mid-21st century. The grey shaded area represents the dispersion of cross-country results.

Source: Swiss Re Institute

## Reaching Paris: Global growth engines have most to gain

- If the Paris Agreement target is met, up to 10% of anticipated mid-century global economic output loss could be prevented
- In more exposed regions, the economic benefit could be the prevention of a more-than 25% loss of GDP.

Mitigated GDP loss by 2048 when Paris Agreement target of well below 2°C temperature rise is met, compared to the 2.6°C temperature rise scenario (x10 factor)

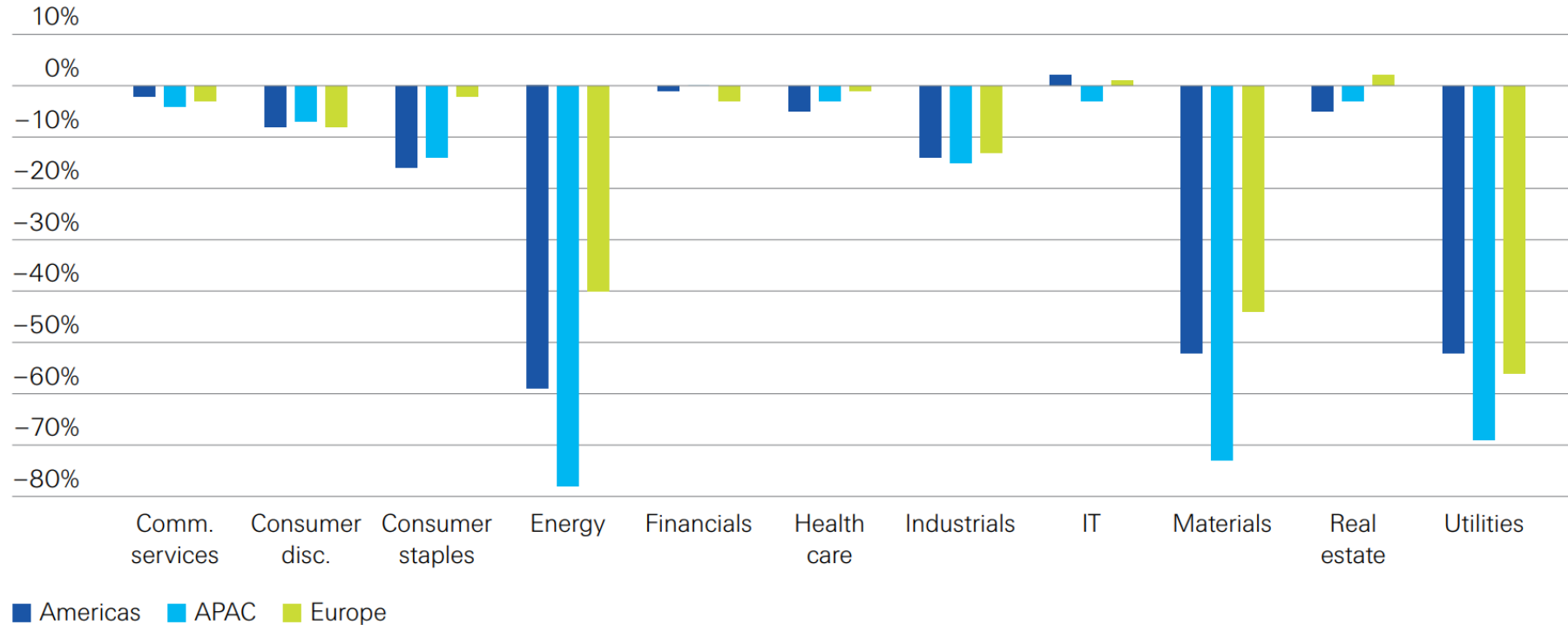


Source: Swiss Re Institute

## Significant asset implications when adjusting to low carbon

- Carbon tax approach: most impacted sectors are utilities, materials and energy. Regionally, Asia is most exposed
- Substantial investments needed to transform the economies can lead to wide intra-sector dispersion

Estimated impact of an immediate global USD 100 global carbon tax on company earnings by sector and region



Source: Blackrock Carbon Tax Impact Model, Swiss Re Institute

## Public and private sectors need to hasten climate policy action and collaborate



### **Carbon pricing**

to support net zero transition and promote transparent pricing of climate-related financial risks



### **Sharing of risk knowledge and expertise, and establishment of standardized risk sharing mechanisms**

through the private and public sector



### **Transparency and standardization around taxonomy, data, standards and metrics**

as a key for carbon price discovery and comparability of corporate reporting to avoid "greenwashing"



### **Fiscal incentives and lower investment barriers**

to encourage spending in carbon capture and reduction, and in climate resilient development



### **Regular roadmap disclosures**

by companies on how they intend to reach the Paris Agreement and 2050 net-zero emission targets



**Rating agencies need to assess climate change risks of corporates and governments need to internalize the costs through full sovereign balance sheet accounting**

## Key Takeaways

Reaching the Paris target would save the world close to 10% of total economic value by mid-century

Building resilience in climate change prone emerging countries is Imperative

Public-private partnership and supporting private market policies are key to facilitate the smooth transition to a low-carbon economy

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