

SUSTAINABLE FUTURES CONFERENCE

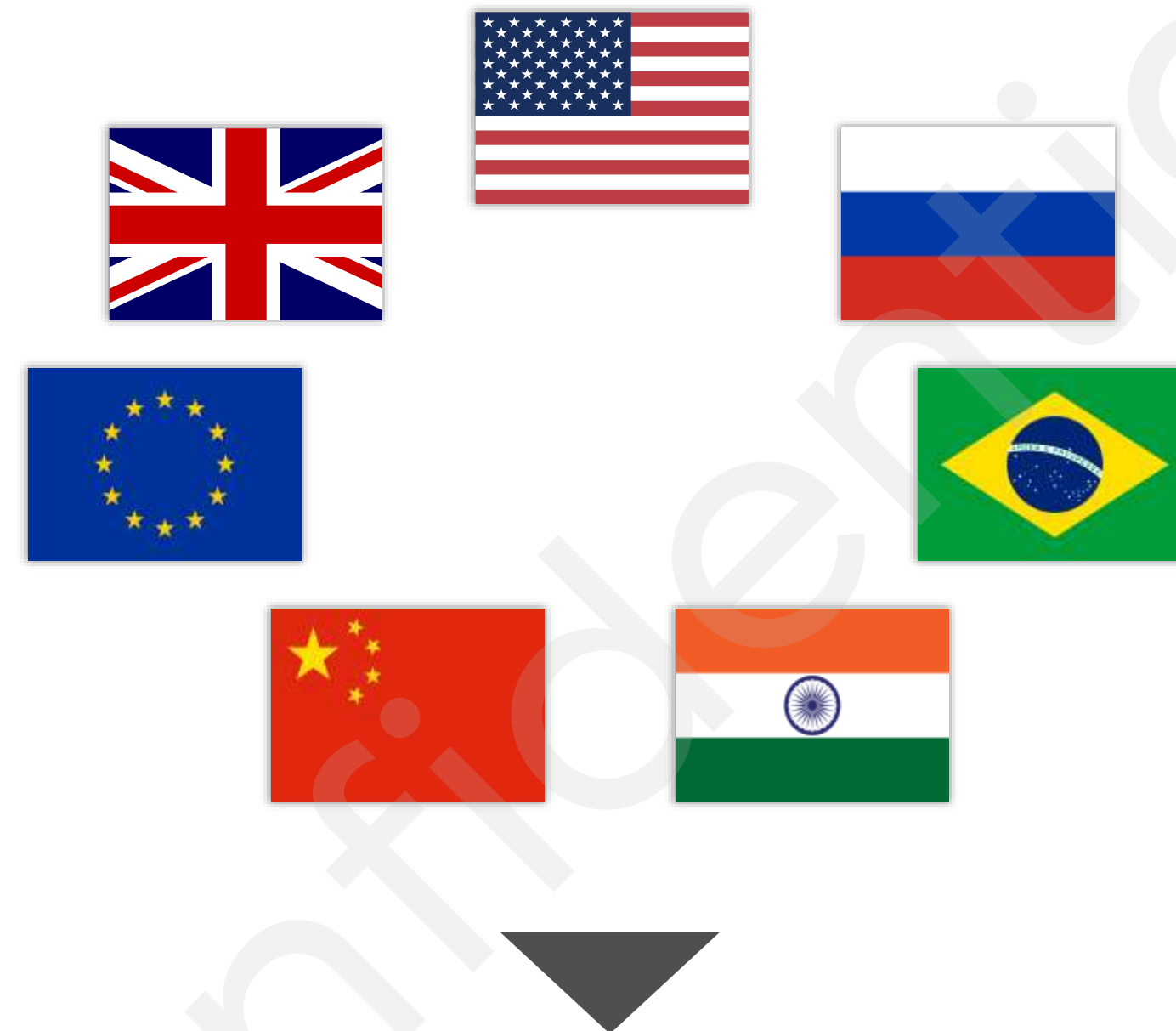
Business transformation for
the era of climate disruption

NET ZERO OR NOT?: How progress towards a green transition is shaping business futures

Oliver Carpenter

Director of Environmental Risk Analytics, **Risilience**

A delayed and disorderly transition is becoming increasingly likely



Divergence in policy
across jurisdictions



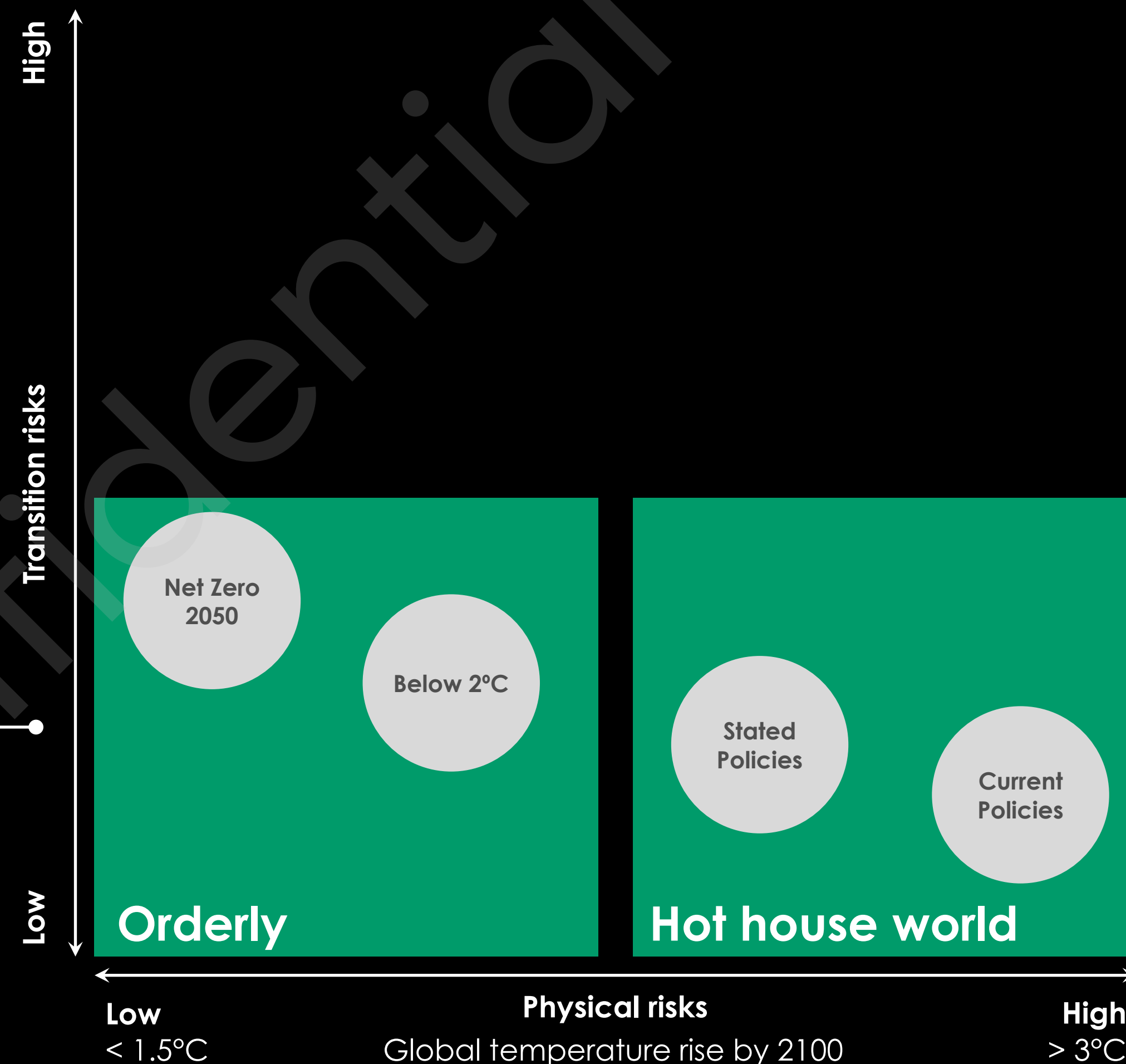
Delayed policy
implementation



Higher costs
of transition

A disorderly transition still represents a path to net zero but with greater transition risk

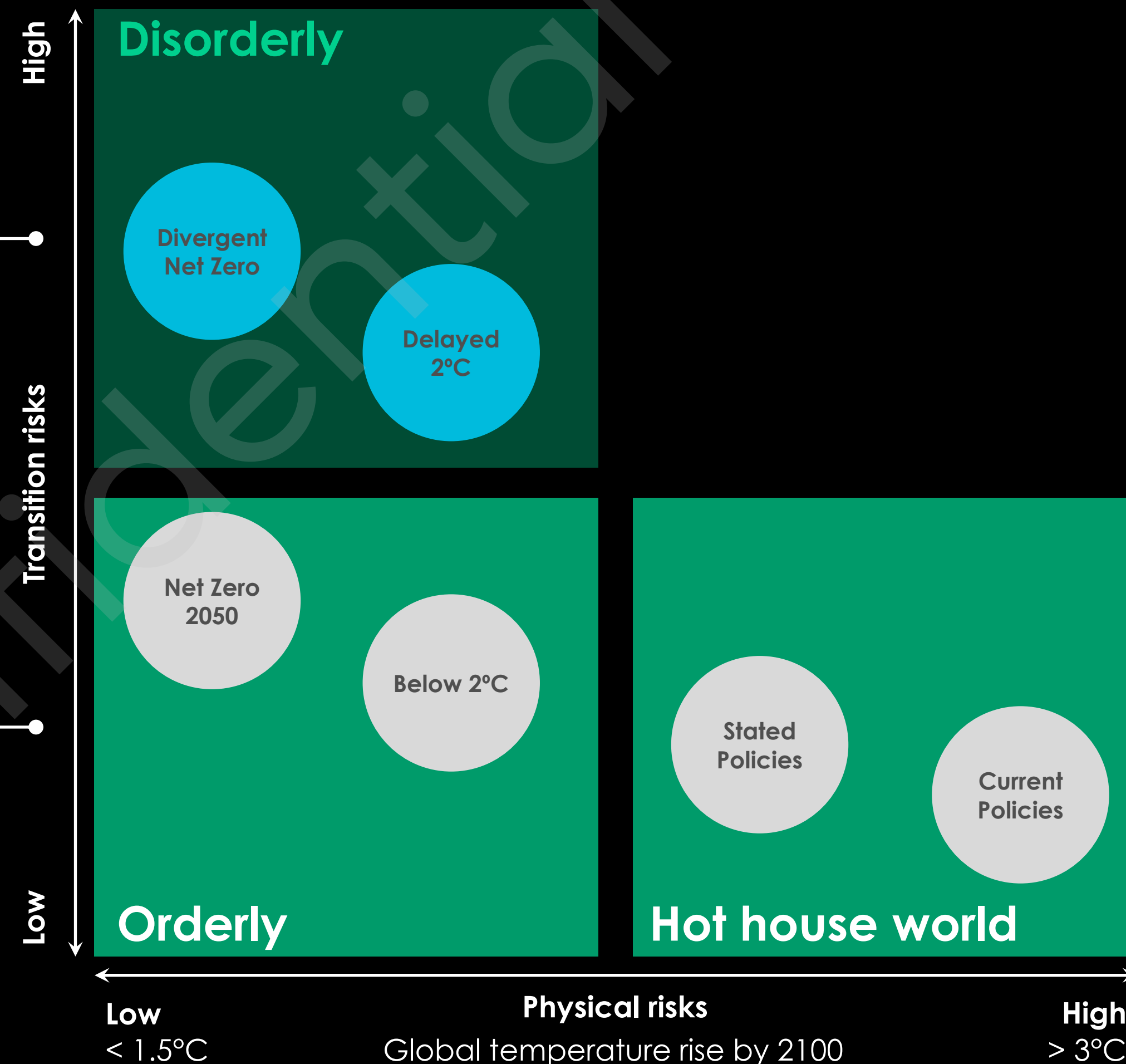
Most scenario analyses assume an orderly net-zero transition when assessing different levels of warming



A disorderly transition still represents a path to net zero but with greater transition risk

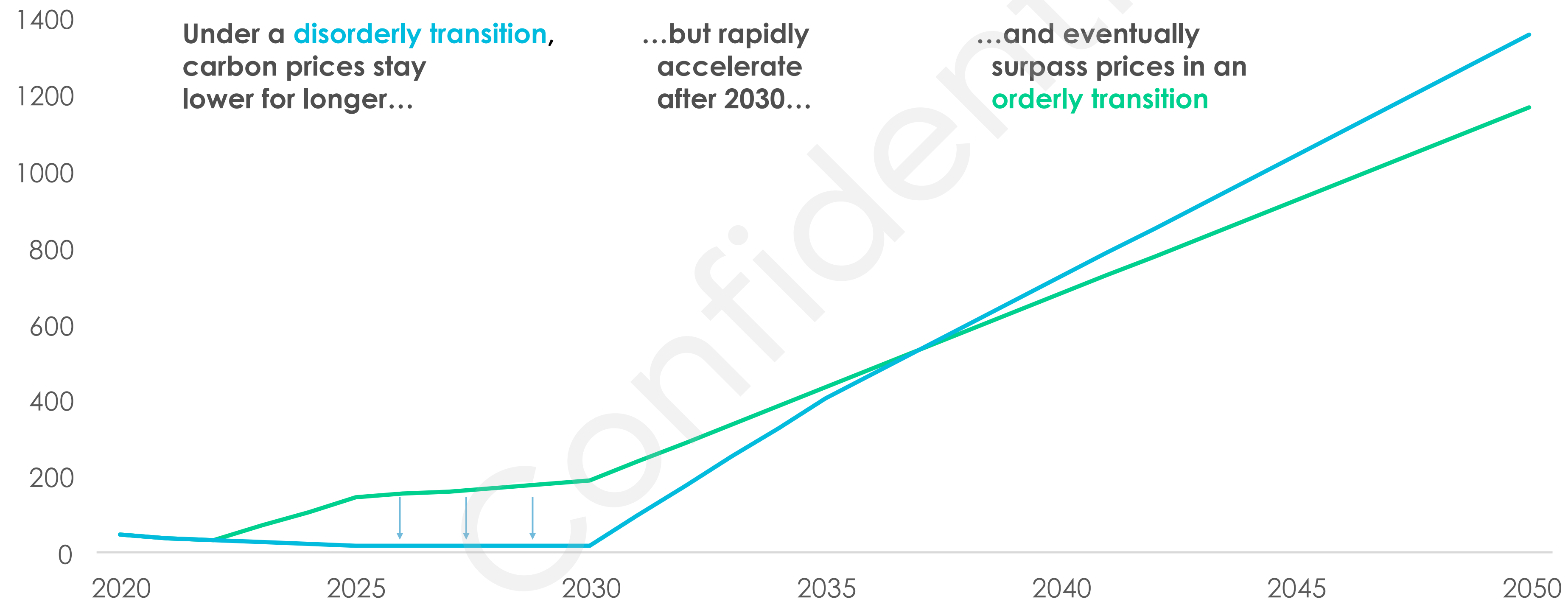
Disorderly scenarios have larger transition risks, but still limit warming and physical risks

Most scenario analyses assume an orderly net-zero transition when assessing different levels of warming



A disorderly transition has lower carbon prices in the near-term, which can create a false sense of security and hide vulnerability to a future price shock

Carbon prices in the EU, NGFS scenarios
\$/tCO₂e

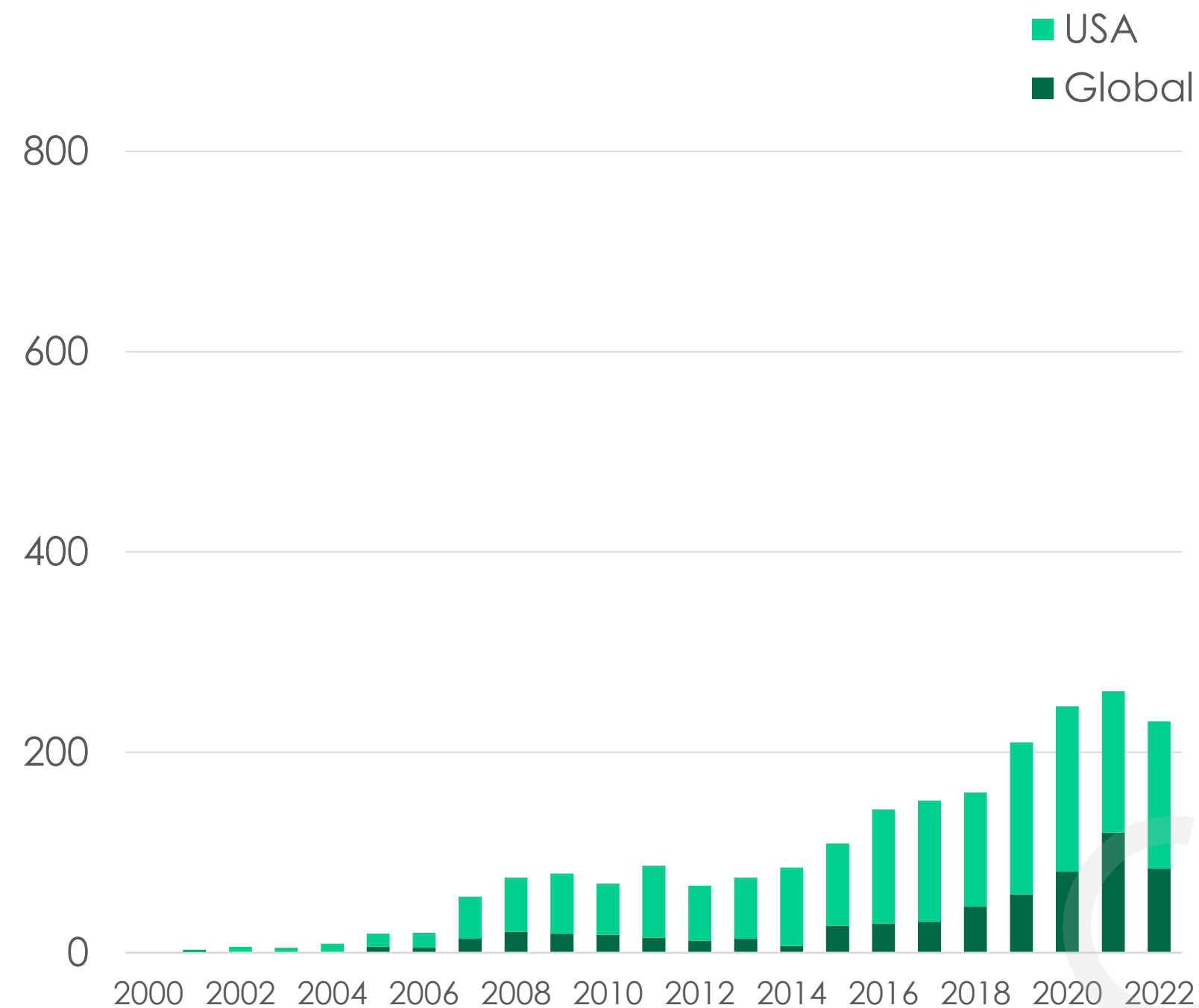


Source: Resilience analysis of NGFS Phase III scenarios. Disorderly transition represented by the Delayed Transition scenario from NGFS. Orderly transition represented by the Net Zero 2050 scenario from NGFS.

Delays in policy action encourages targeted litigation against firms who fail to respond to climate risks

Historical climate litigation cases (all types)

Annual climate litigation cases in the US and rest of world



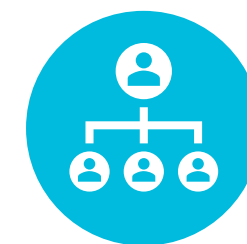
Future scenario anticipates wave of emerging climate litigation

Annual climate litigation cases for specified case types



Greenwashing Litigation

Brought under consumer protection laws against firms who overstate the 'green' credentials of their products or their progress towards net zero



Directors & Officers' Liabilities

Brought against company directors for:

- Failing to account for climate risks
- Misleading stakeholders with inaccurate risk disclosures
- Failing to deliver on climate commitments



Public Nuisance Litigation

Attributing a firm's historical emissions to the present and future damages faced by society due to climate change

Source: LSE & Sabin Center for Climate Change Law Global Climate Change Litigation database.

Source: Resilience scenario analysis based on historic legal precedents and transition pathways.

Companies must work harder in the near-term to achieve their decarbonisation targets

Change in global greenhouse gas emissions due to climate policy

Agriculture



Indexed (2022 = 1.00)



Source: Resilience analysis of NGFS Phase III scenarios. Disorderly transition represented by the Delayed Transition scenario from NGFS. Orderly transition represented by the Net Zero 2050 scenario from NGFS.

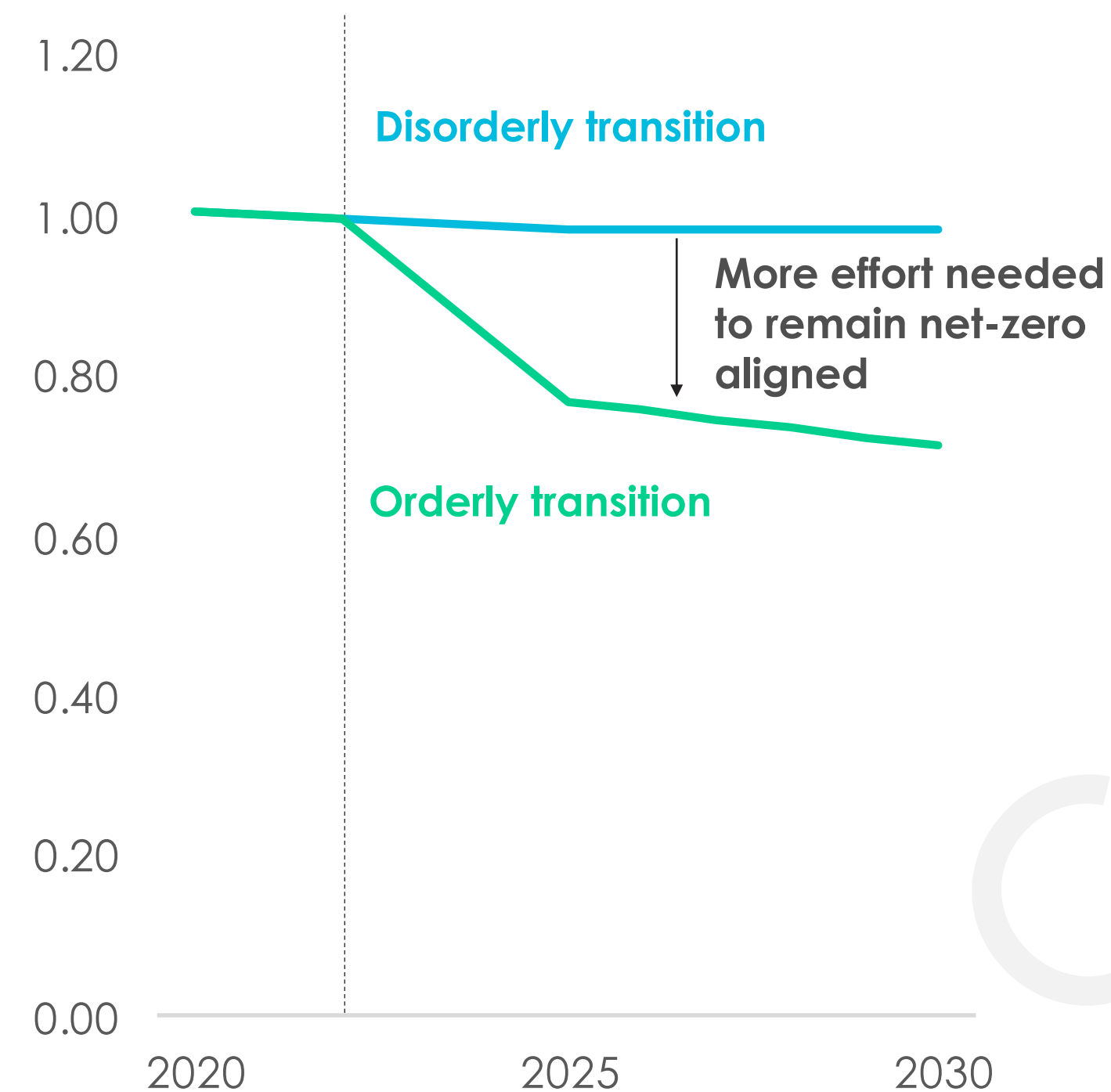
Companies must work harder in the near-term to achieve their decarbonisation targets

Change in global greenhouse gas emissions due to climate policy

Agriculture



Indexed (2022 = 1.00)



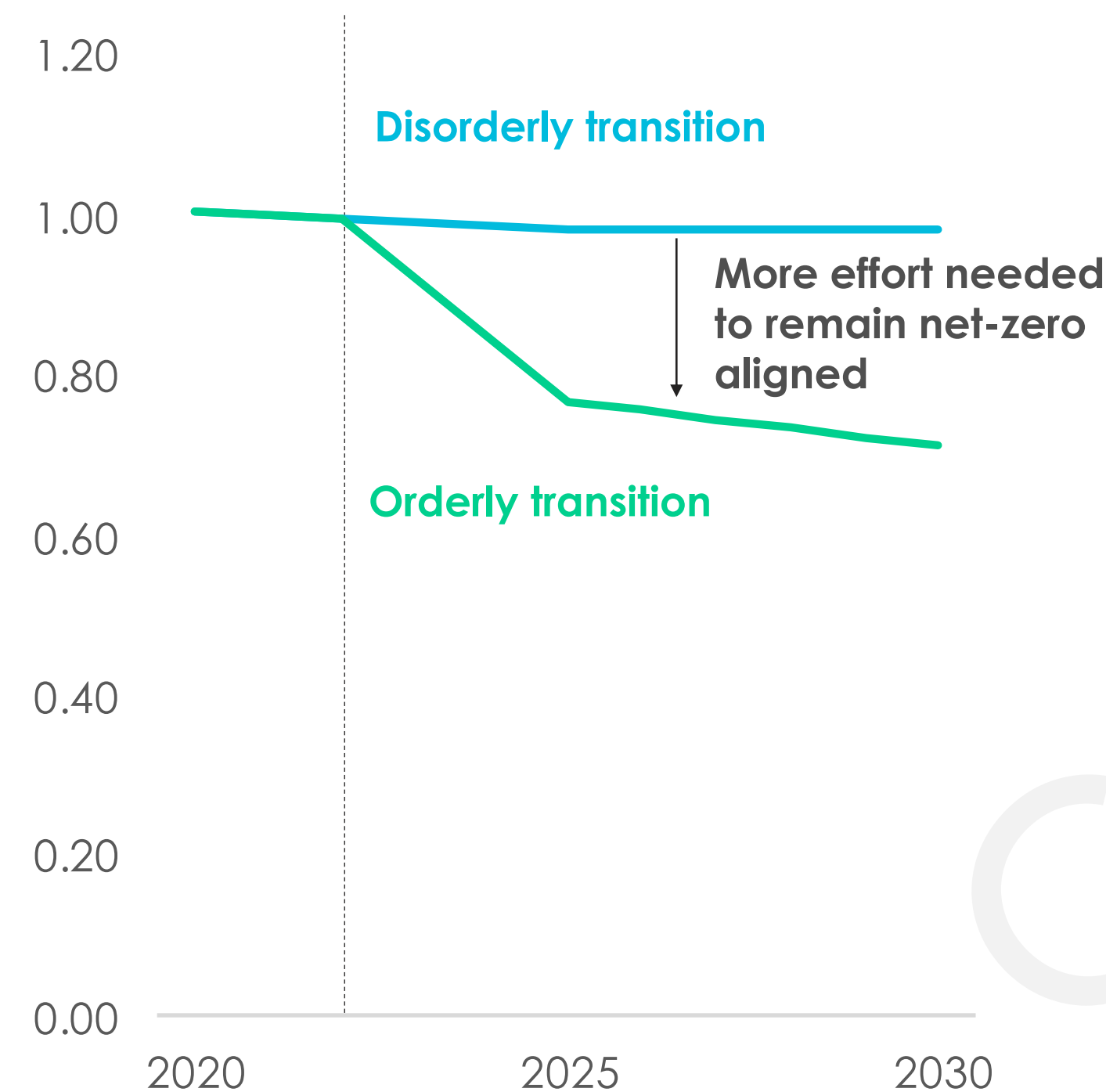
Source: Resilience analysis of NGFS Phase III scenarios. Disorderly transition represented by the Delayed Transition scenario from NGFS. Orderly transition represented by the Net Zero 2050 scenario from NGFS.

Companies must work harder in the near-term to achieve their decarbonisation targets

Change in global greenhouse gas emissions due to climate policy

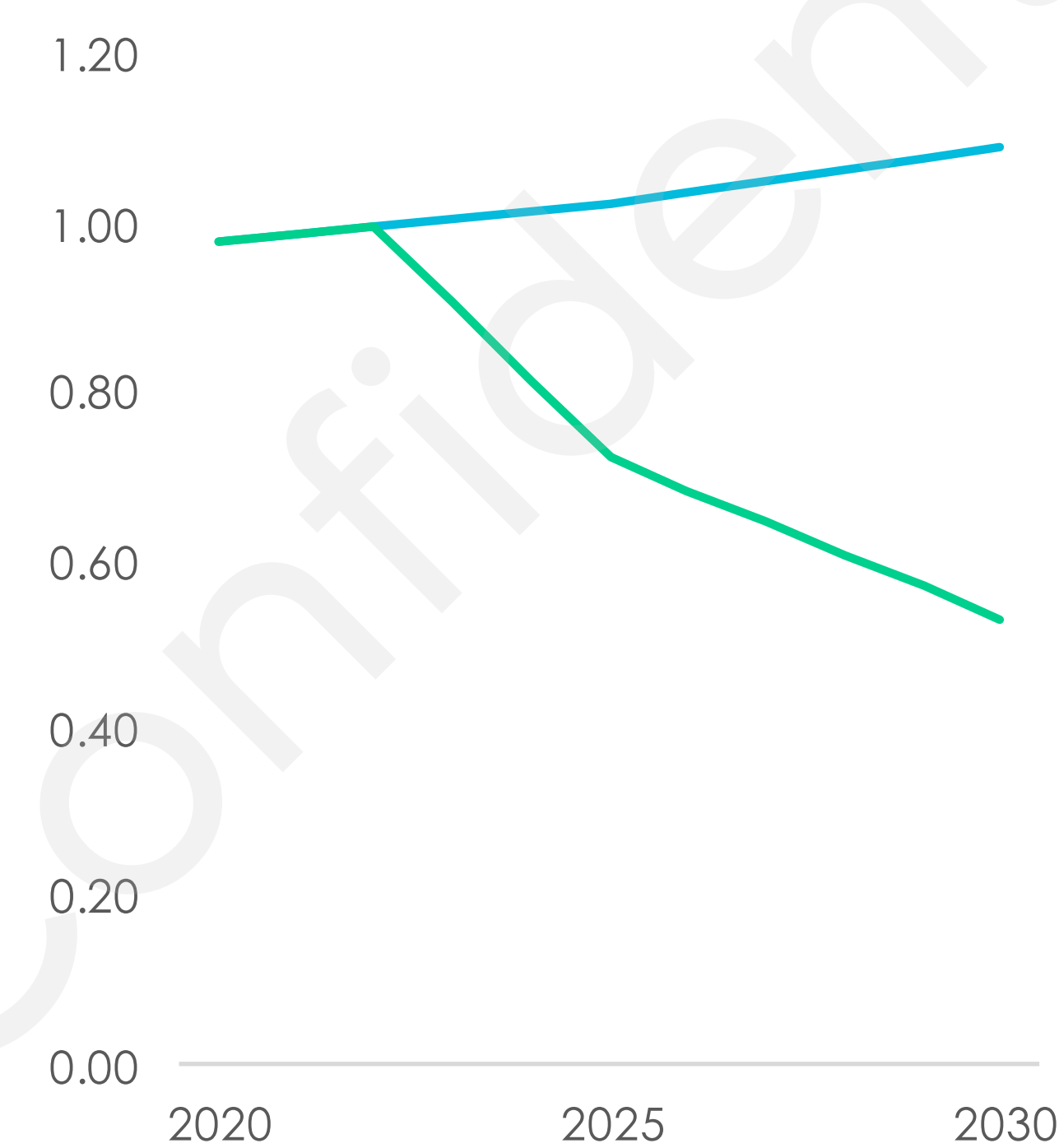
Agriculture

Indexed (2022 = 1.00)



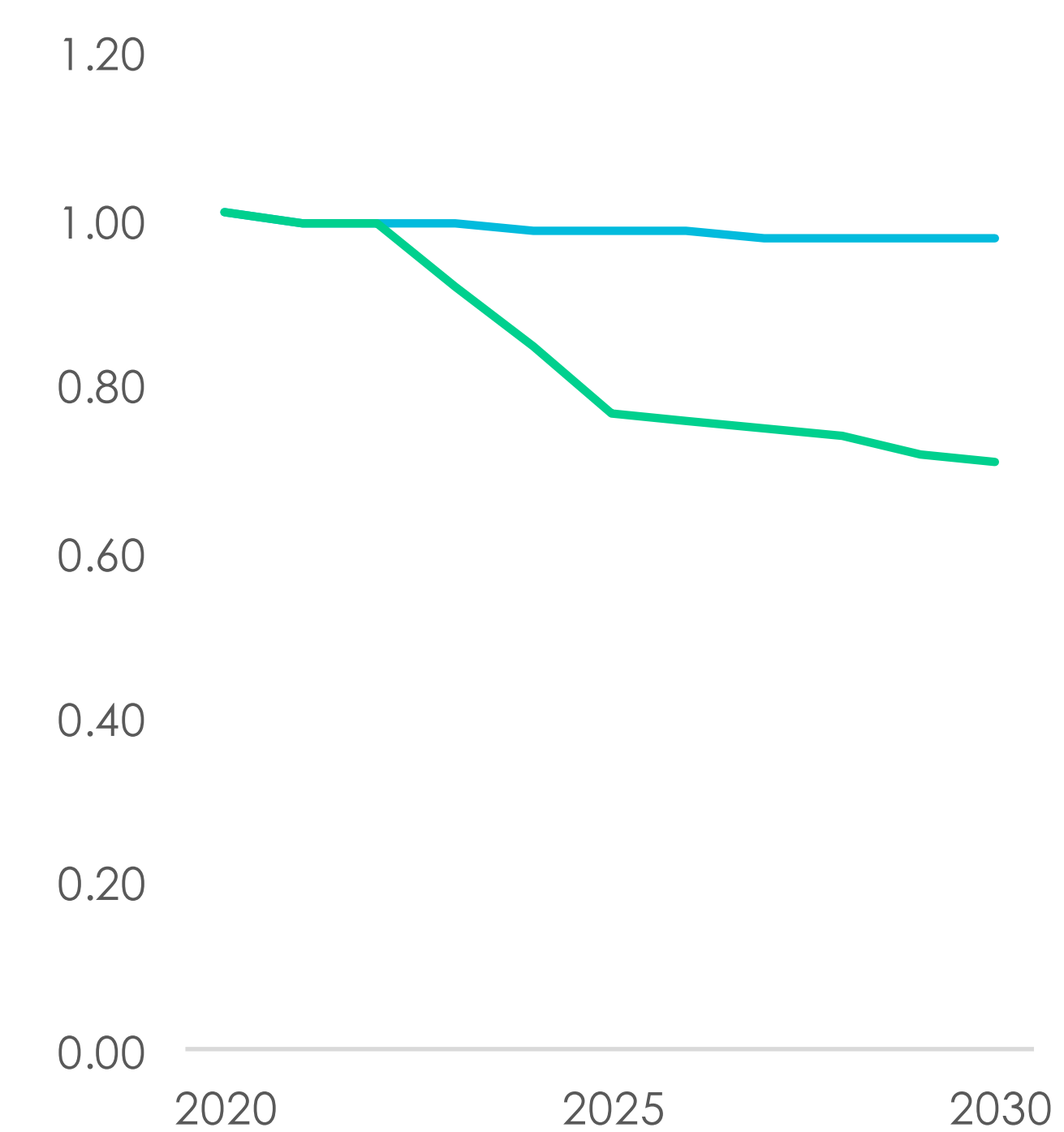
Industry

Indexed (2022 = 1.00)



Transport

Indexed (2022 = 1.00)



Source: Resilience analysis of NGFS Phase III scenarios. Disorderly transition represented by the Delayed Transition scenario from NGFS. Orderly transition represented by the Net Zero 2050 scenario from NGFS.

Companies can engage more deeply with suppliers to accelerate the decarbonisation of their supply chains

The challenge

Suppliers face less pressure to decarbonise

- Lower carbon prices erode suppliers' business case for investing in decarbonisation
- Delayed mandates signals possible weaker demand for green products



The response



Exchange data & expertise with suppliers

- Measure environmental impacts
- Set targets to achieve higher standards



Invest in supply chain innovation

- Partner on low-carbon alternatives
- Invest in the long-term



Switch to suppliers who align with your targets

- Find suppliers who offer the low-carbon option

Companies can go beyond climate benefits and make green products the default to promote consumer adoption

The challenge

Consumers get fewer incentives for adopting green products

- Smaller subsidies are insufficient to offset the cost premium of green products
- Slower phase-out of carbon intensive products allows consumers to resist switching

The response



Make the green choice compelling

- Leverage the co-benefits of green products
- Support product claims with transparent data



Nudge customers towards green products

- Educate consumers on the benefits
- Make sustainable the default choice



Recognise the market potential

- Consumer awareness and appetite is growing despite political/economic headwinds

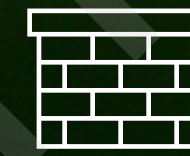
Companies can prioritise low-regret investments and stress-test their decarbonisation strategies to improve resilience to policy volatility

The challenge

Companies have less visibility on the timing and stringency of future climate policy

- Unpredictable policy landscape poses challenges for business strategy
- Return on investment takes longer to recognise
- Weaker near-term climate policies creates risk of locking-in carbon-intensive investments

The response



Prioritise low-regret investments that pay off regardless of policy outcomes

- Extend the business time horizon



Factor risk reduction into ROI calculations

- Account for the externalities that will impact the business



Stress-test decarbonisation strategy against different policy assumptions

- Plan for uncertainty

Companies should remain confident in their transition plans, as doing nothing would be even more expensive in a disorderly world



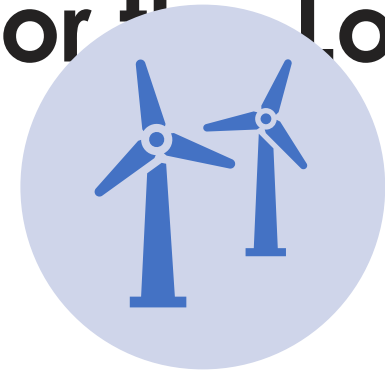
The increased cost of transitioning is balanced by the increased risk of doing nothing

THANK YOU

Confidential

Winners and losers in the low-carbon economy

Six Global Megatrends for the Low-Carbon Economy



Decarbonization of Electricity Generation

\$ Flows in Supply Chain 2050



Electrification of Economic Activity



Shifts in Transport Activity (modes and fuel sources)



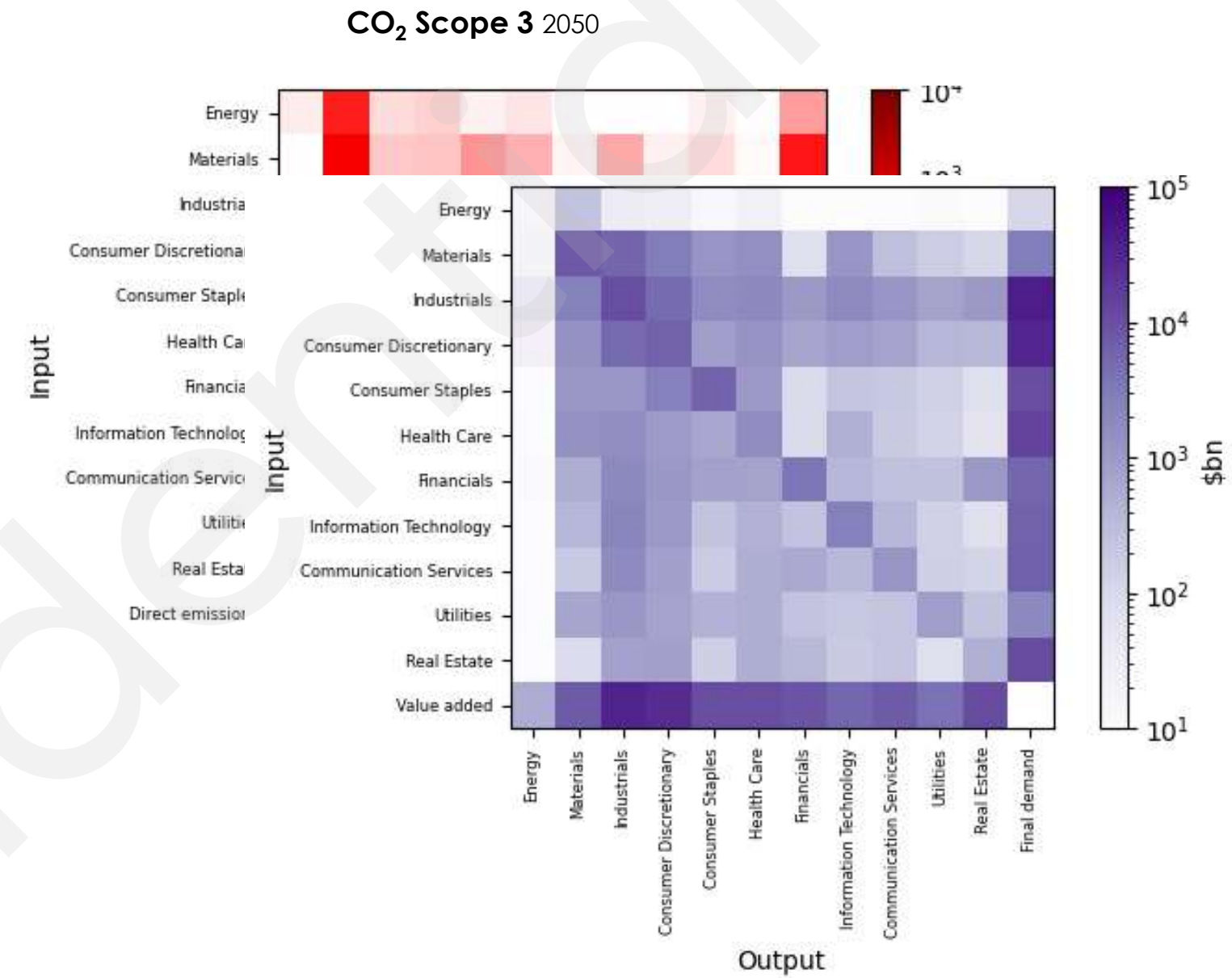
Phase Out of Fossil Fuels



Changes in Agriculture Demand Patterns



Curtailing Steel and Cement Production



Global Megatrends for the Low-Carbon Economy

Identifying Winners and Losers in the Future Economy



Decarbonization of Electricity Generation



Electrification of Economic Activity



Changes in Agriculture Demand



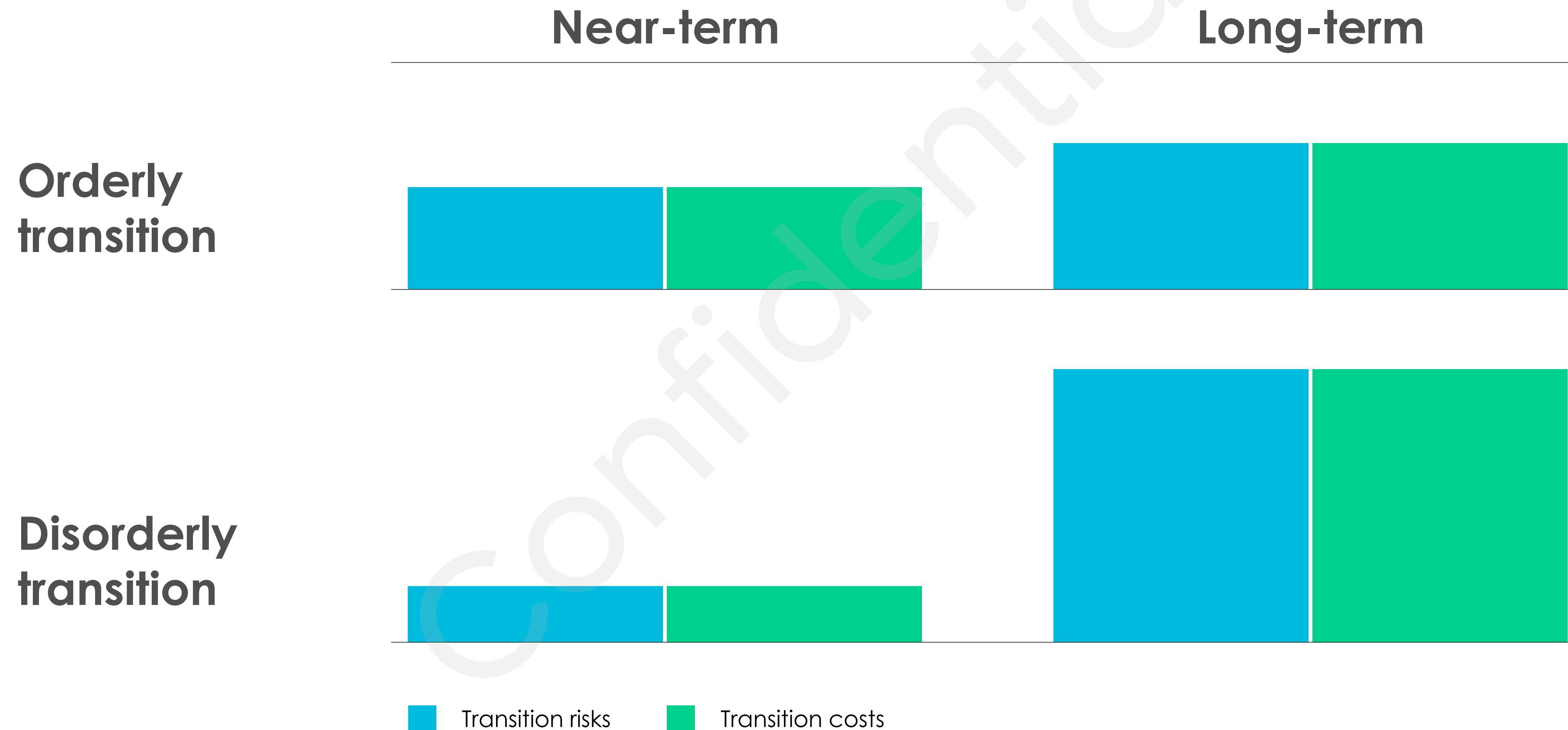
Phase Out of Fossil Fuels



Shifts in Transport Activity



Companies should remain confident in their transition plans, as doing nothing would be even more expensive in a disorderly world



Q4 Product Release: **Intelligent Futures**

■ In this release we are providing **Intelligent Futures** – an interface to our **Intelligent Futures Scenario Model** that underlies our emissions forecasting functionality

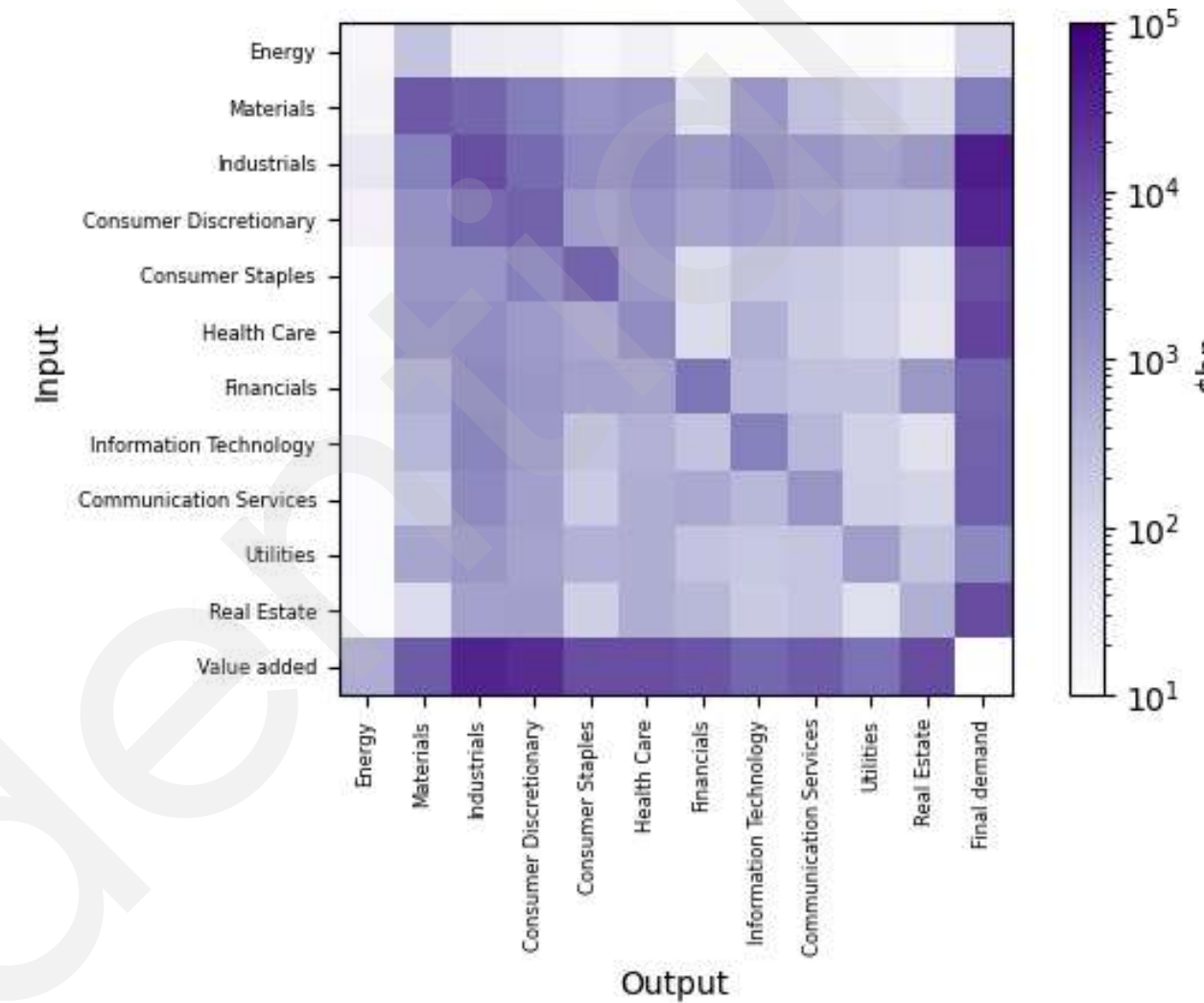
- This is our detailed macroeconomic model of how the global economy and its emissions will transform over time
- Based on UN trading data and underlying forecasts from IPCC and Network for Greening the Financial System (NGFS), combined with Resilience economics analytics

■ It shows how companies in different countries of the world and in different activity sectors will evolve their economic activity in response to macroeconomic megatrends

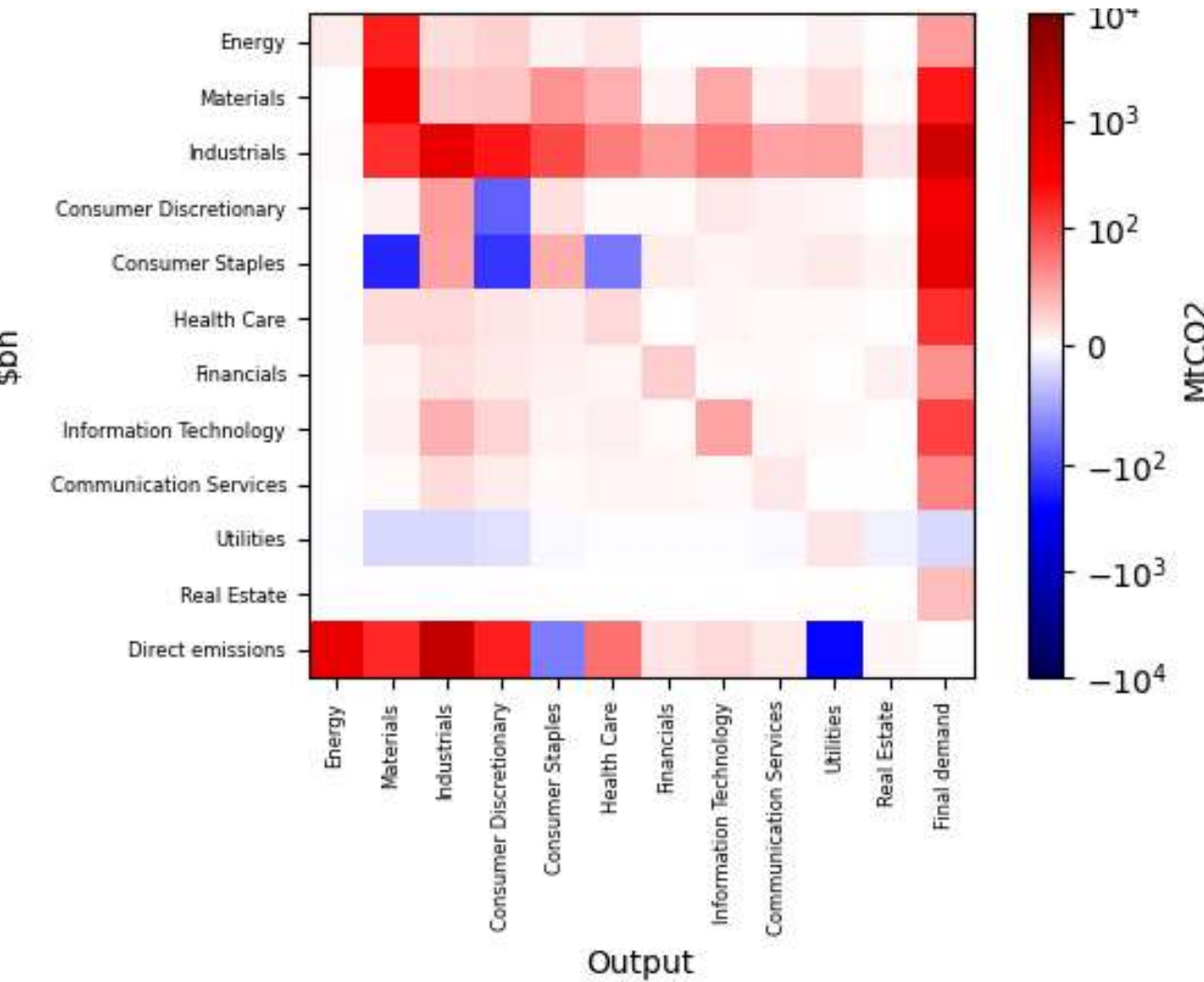
■ Clients can interrogate the underlying economic datasets of over 120 million datapoints.

- Forecasts of GDP, trading data projections and GHG emissions, out to 2050
- 160 sectors of the economy, in 44 key countries and 5 global regions
- 6 different emission pathway scenarios

\$ Flows in Supply Chain 2050

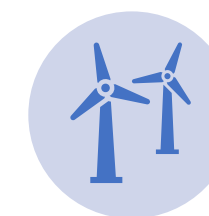


CO₂ Scope 3 2050



Global Megatrends for the Low-Carbon Economy

Identifying Winners and Losers in the Future Economy



Decarbonization of Electricity Generation



Electrification of Economic Activity



Changes in Agriculture Demand



Phase Out of Fossil Fuels



Shifts in Transport Activity



Curtailing Steel and Cement Production