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# Scenarios & Energy Transitions

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# Why use Scenarios?

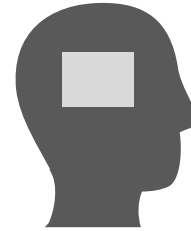
- Forecasts & sensitivities are insufficient
- Grapple with genuine breadth of possibilities
- Stretch mindsets for better-informed decisions
- Learn & prepare

## ■ Key Distinction:

- Context-exploring
- Decision-centred

**Scenarios improve judgment  
in the face of radical uncertainty**

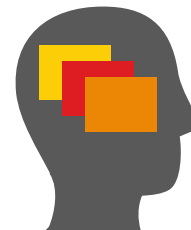
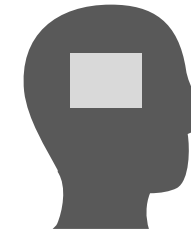
The Present



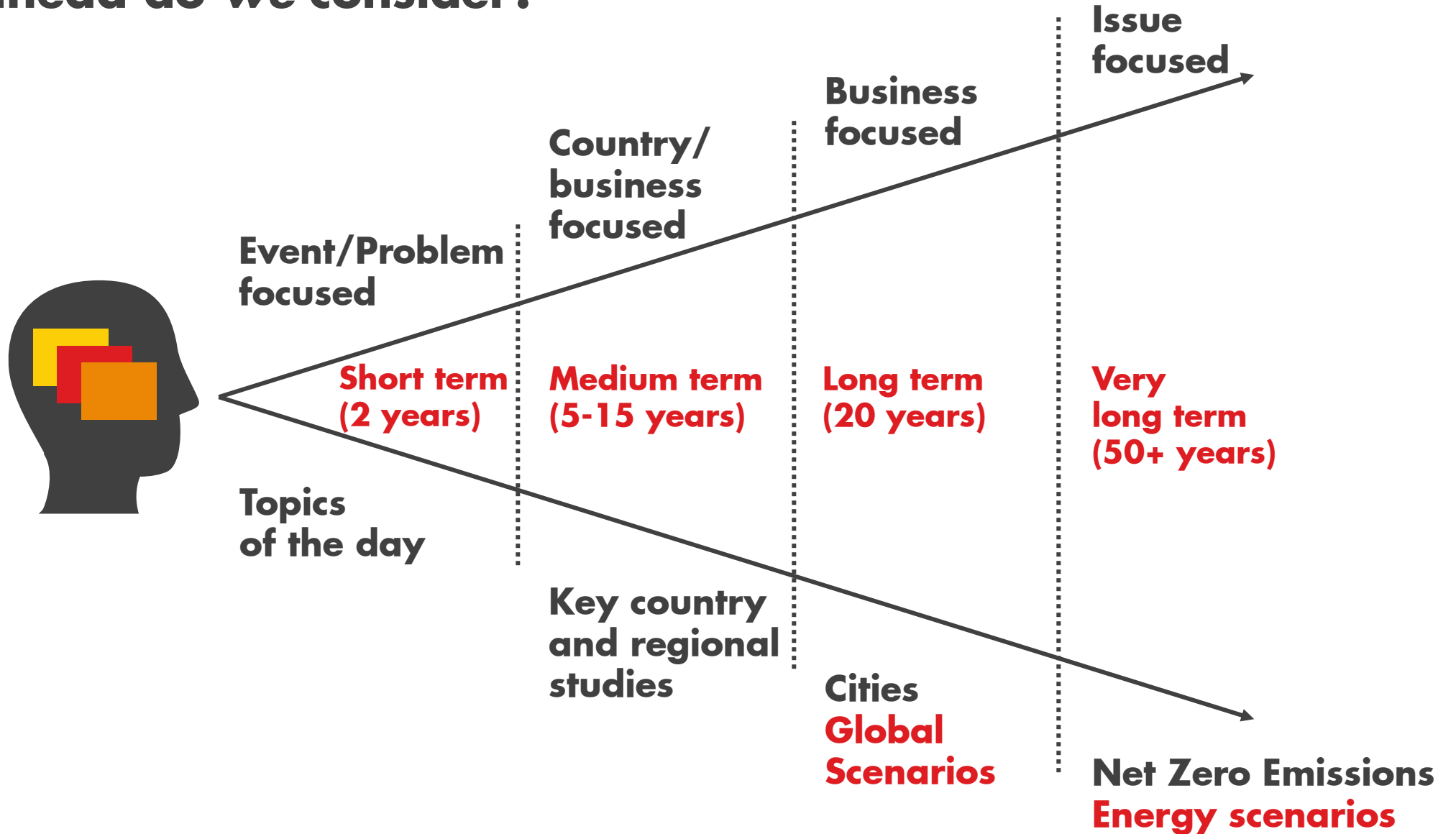
The Path



The Future



# How far ahead do we consider?



# Modelling is informed by, and informs, Scenarios

- Full range of Societal, Consumer, Economic, Political, Regulatory, & Technological Drivers
- Estimates demand for energy-related services holistically with granular detail
- Uses resource constraints, build-rates and prices to balance supply and demand
- Embodies efficiency and learning curves explicitly
- Outcomes like CO<sub>2</sub> emissions and Water use as well as Energy Demand/Supply

## Shell's World Energy Model (WEM):

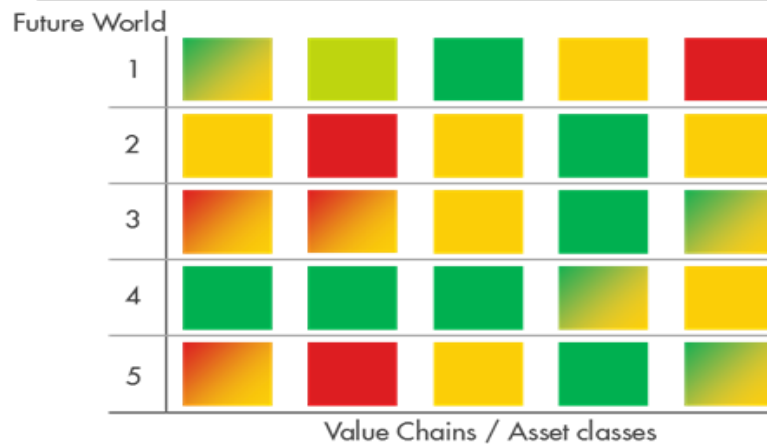


# Examples of Decision-centred & Long-term Portfolio-shaping Scenarios

Future worlds

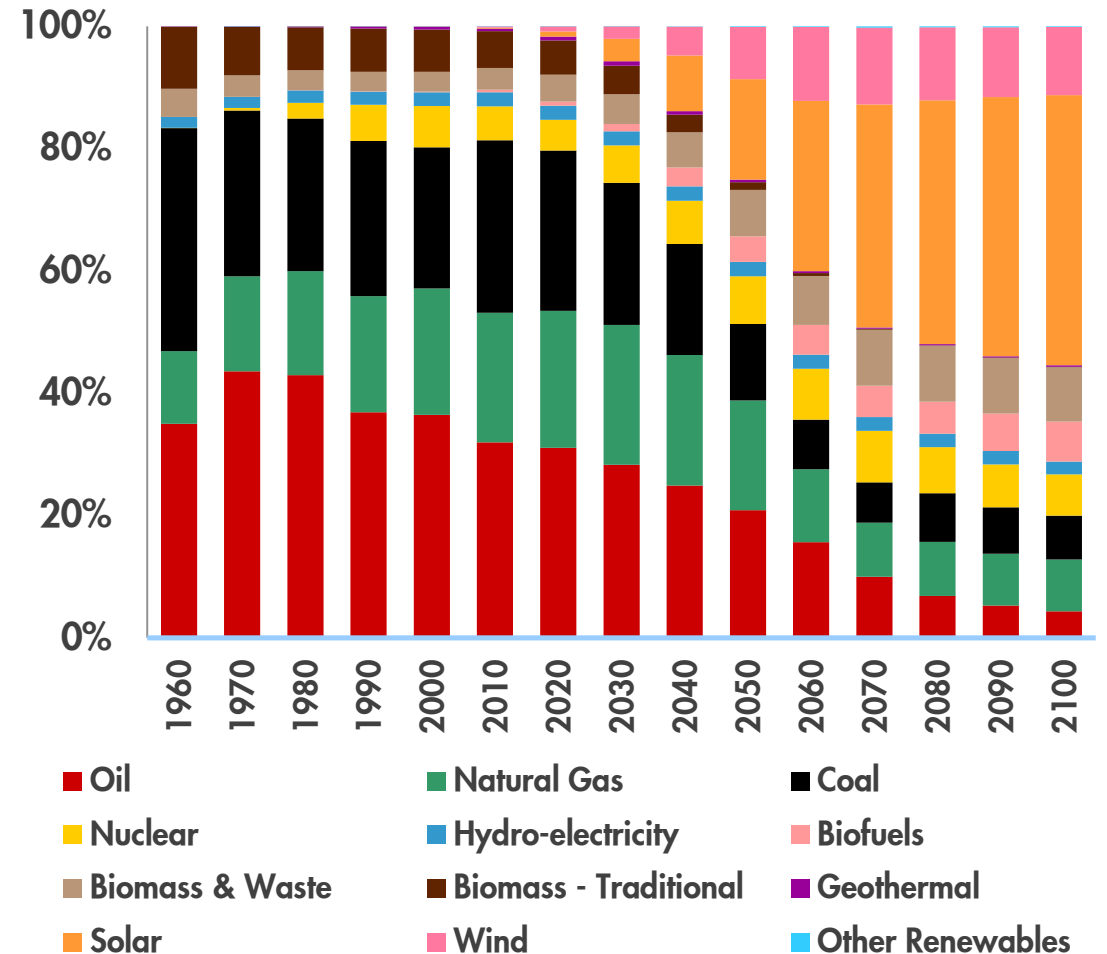


Value chain assessment\*



\*This is an example diagram of graphic representations that are considered by the Board. Not based on Shell's actual portfolio.

## NZE70 World - Primary Energy - By Source



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## Concluding remarks

- Recognise distinctions & value of:
  - Context-exploring, Decision-centred, & Shorter/longer-term... outlooks
- Recognise regulatory, societal, commercial & physical challenges
- Recognise challenges are economy-wide & sector-specific
- Recognise investment & asset flexibility
- Place focus on capacity to Learn & Prepare for full range of possibilities
- Encourage transparency while respecting commerciality

**Scenarios improve judgment in the face of radical uncertainty**



