

Stranded fossil fuel assets

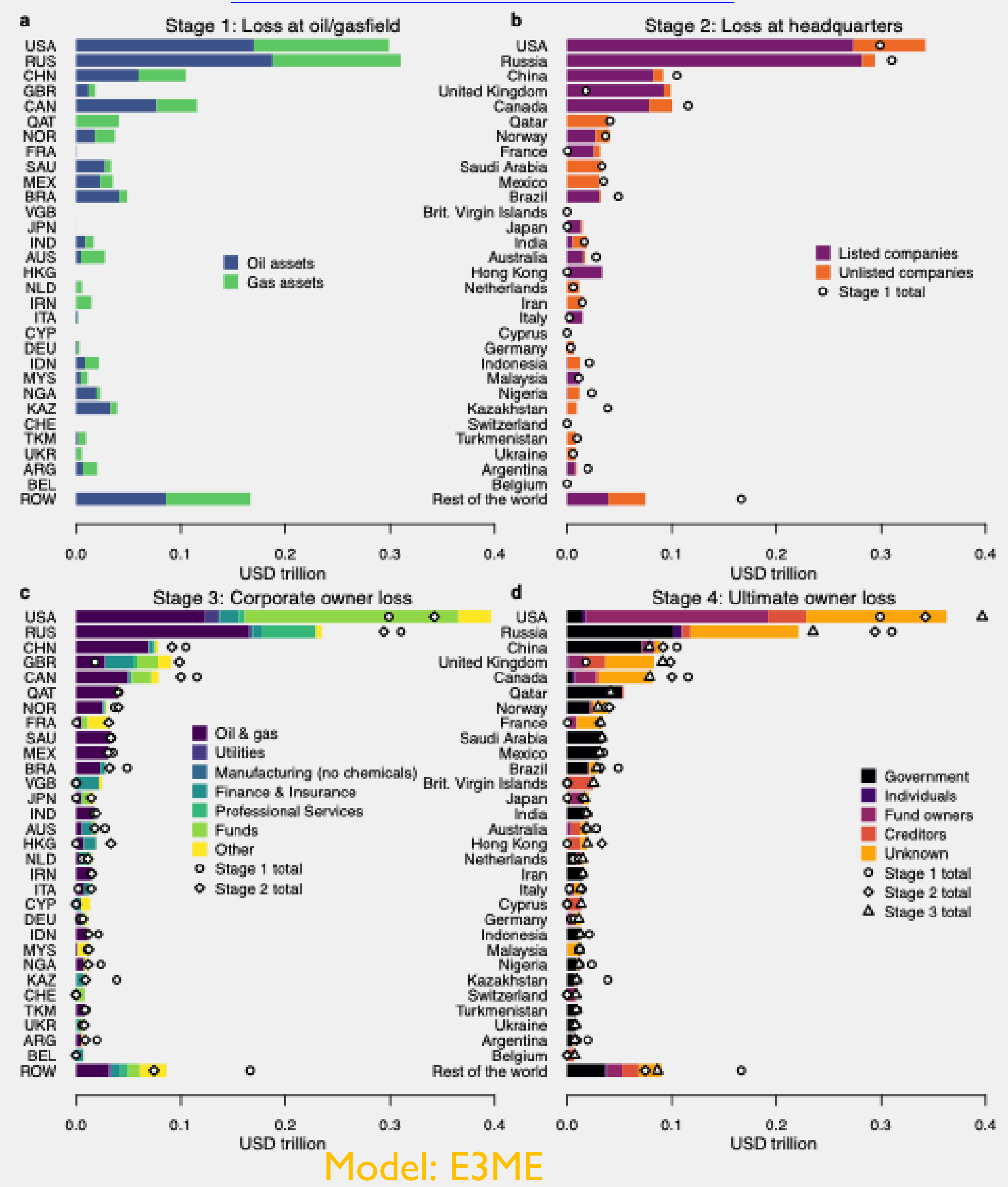
1. Introduction

Transition risks: investments in productive capacity in both brown and green causes risk of stranded assets. Risk ownership accumulates across the financial system.

Case study. oil and gas development in a context of rapidly diffusing electric vehicles and renewables. We explore the risk of excess capacity in oil and gas assets. Which oil and gas assets are at risk of stranding depends on their competitiveness in global oil and gas markets. We explore asset re-pricing events under different expectation scenarios.

Risk ownership: We track who ultimately owns risks of stranded assets, between funds, governments, individuals.

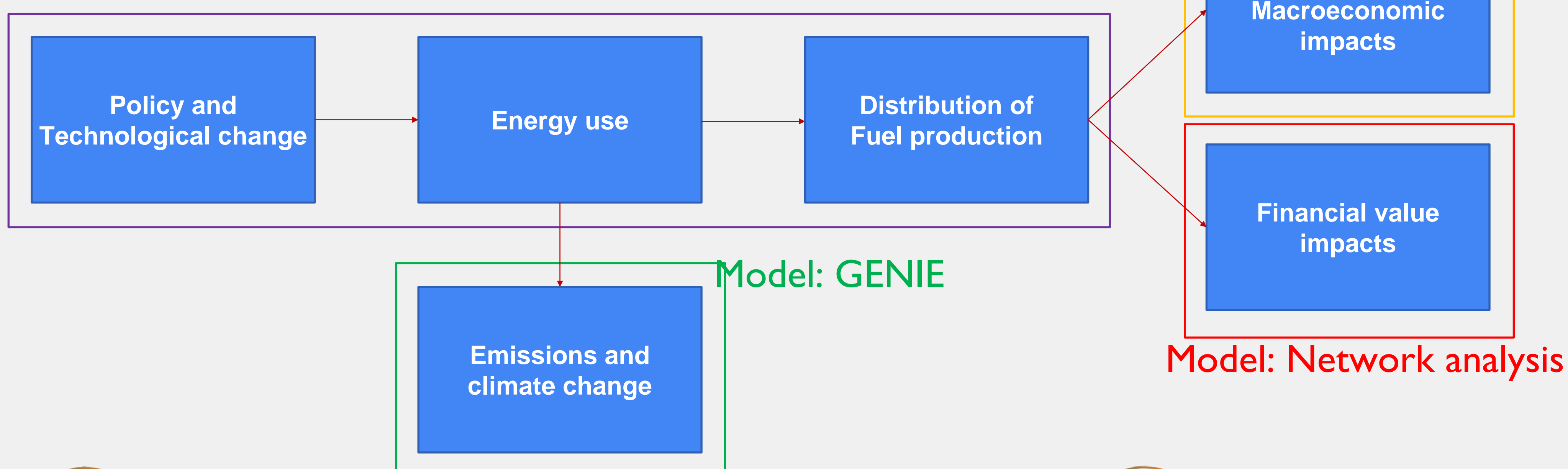
2. Key Result 1



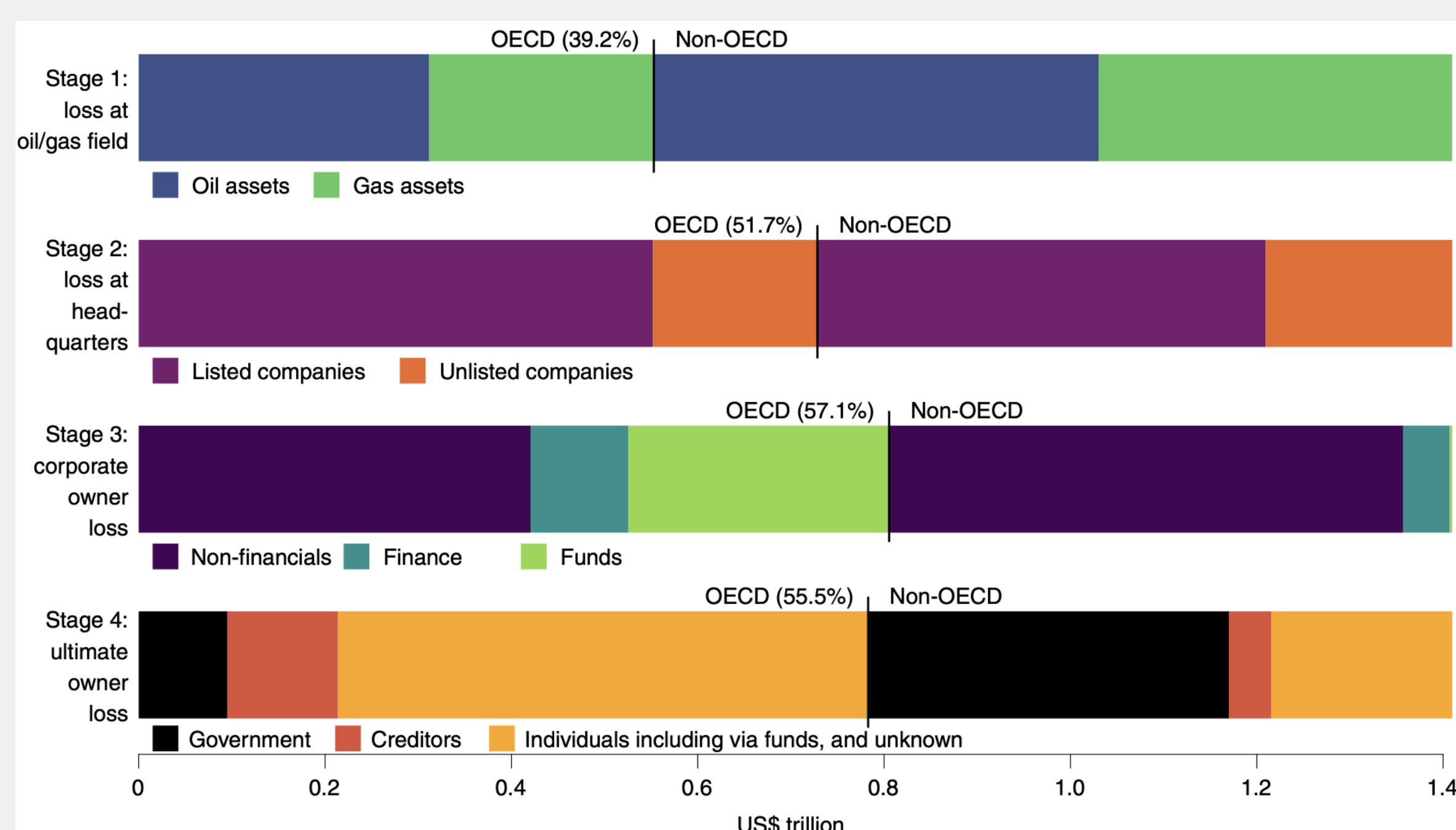
3. Modelling workflow

Oil & gas demand focus

Model: FTT



4. Key result 2



5. Key lessons learned

- Oil & gas transition risks affects not only companies but also governments and pension funds
- OECD: risk owned by funds incl. Pension plans, financial institutions and individuals
- Non-OECD: risks owned by governments
- OECD (e.g. UK, US) imports substantial risk from non-OECD (e.g. Russia)
- Up to 1.4tn in bankrupt equity
- Sufficient risk to trigger 2008 type financial instability



J-F Mercure / G Semieniuk

University of Exeter / University Massachusetts in Amherst

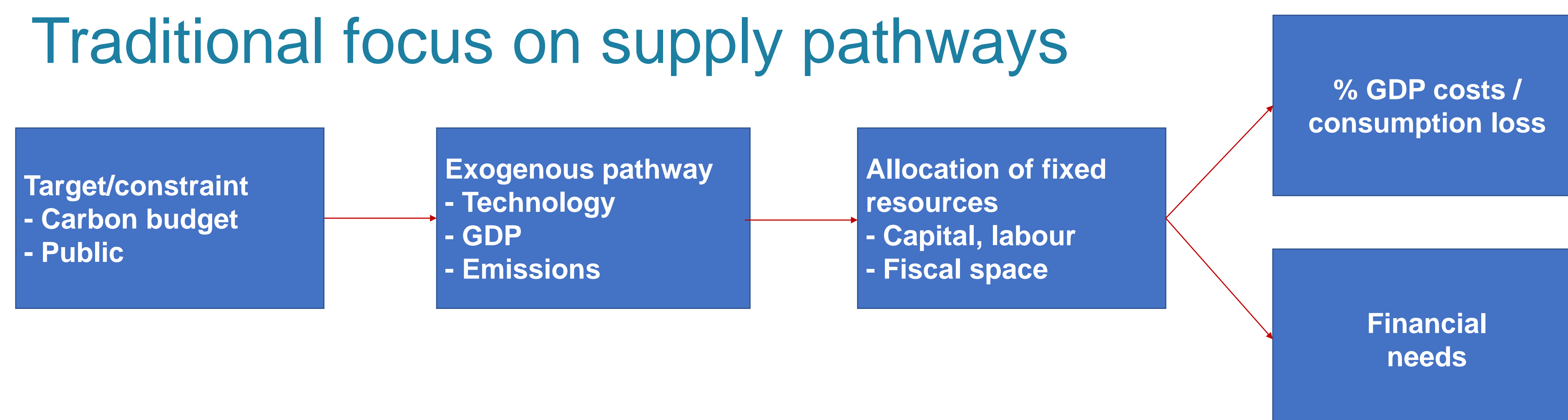


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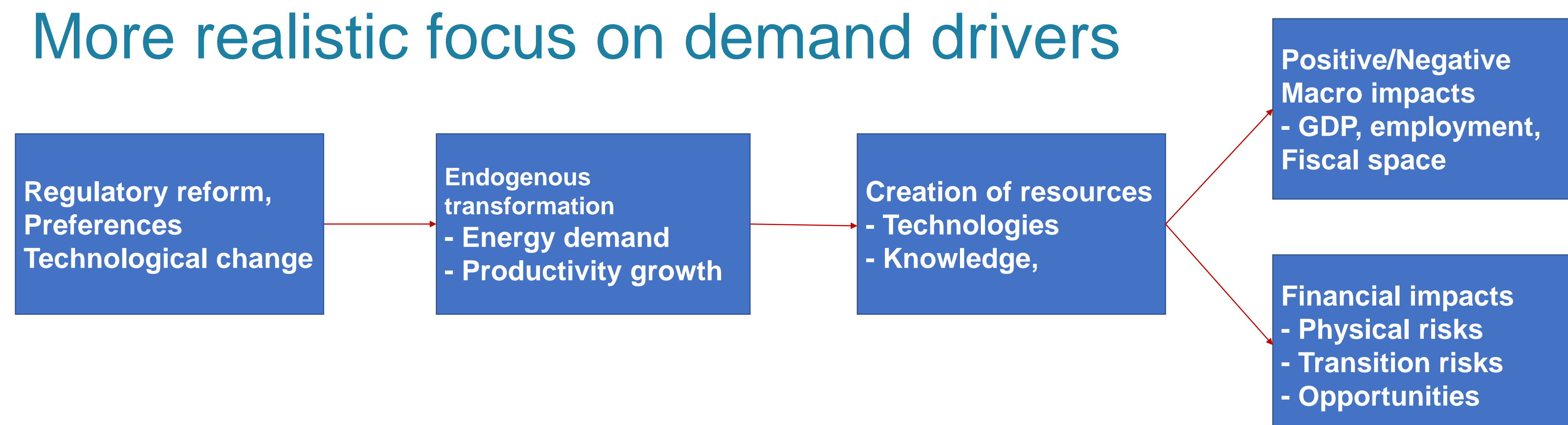
Global Systems Institute



Traditional focus on supply pathways

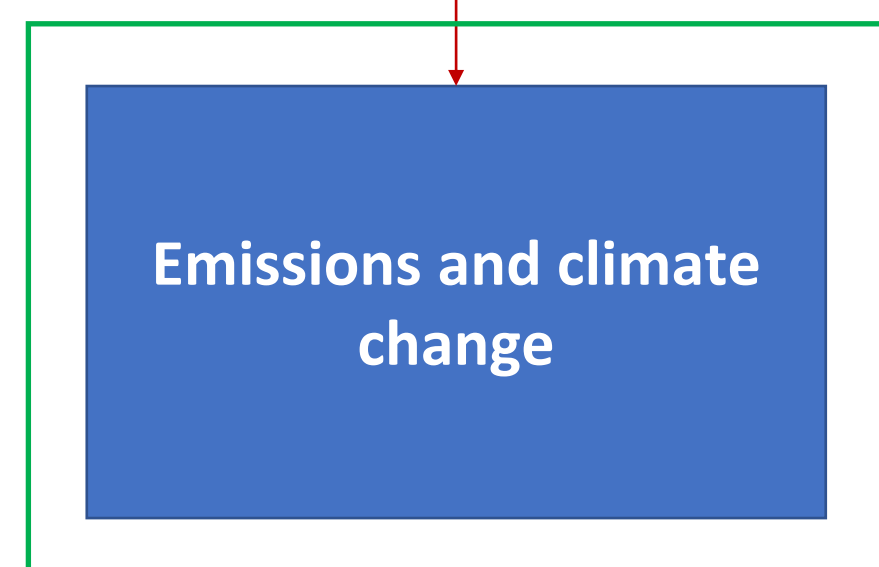
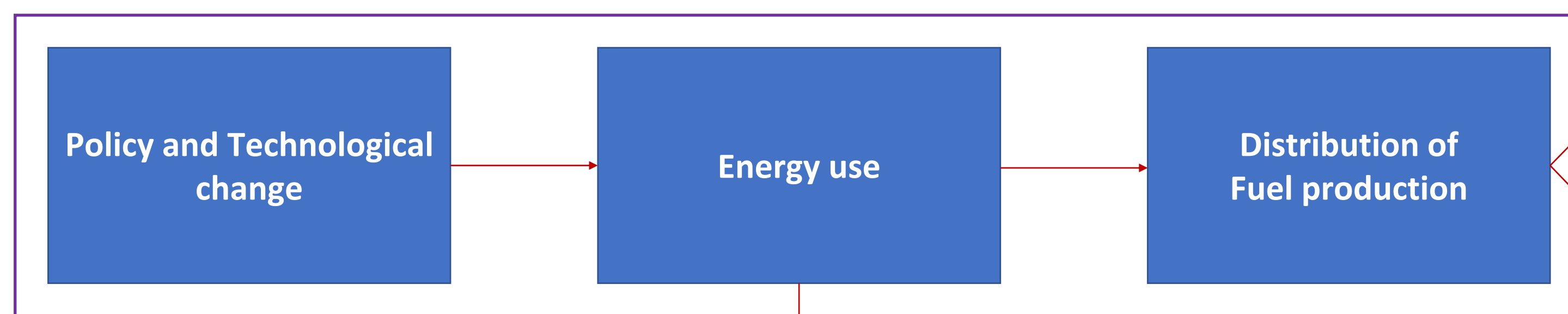


More realistic focus on demand drivers



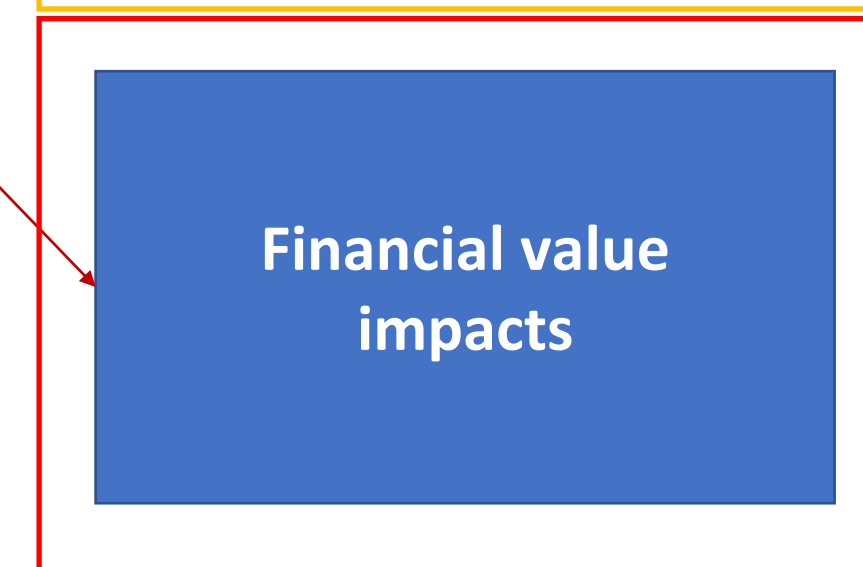
Oil & gas demand focus

Model: FTT



Model: GENIE

Model: E3ME



Model: Network analysis