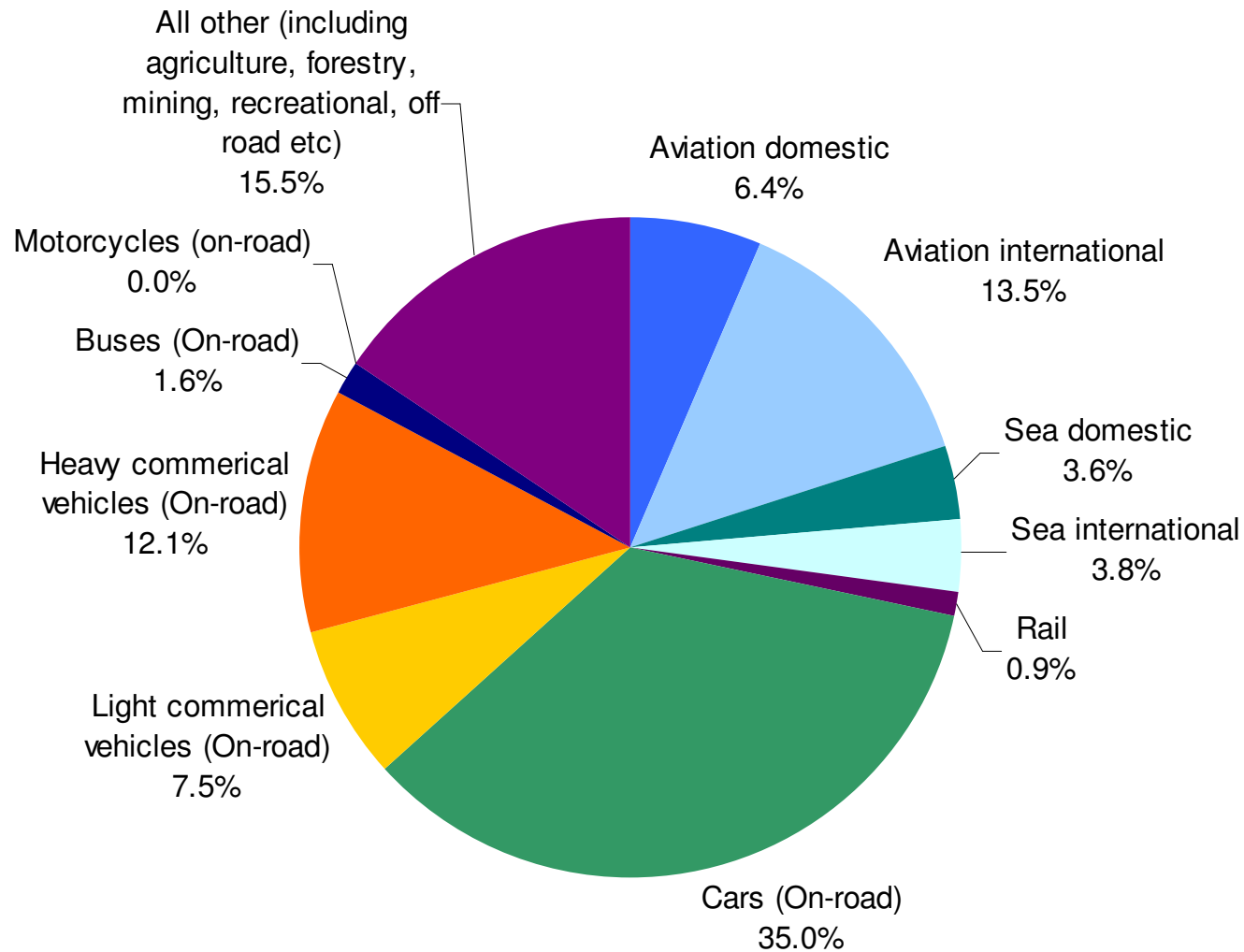

Transportation in a Sustainable Urban Form

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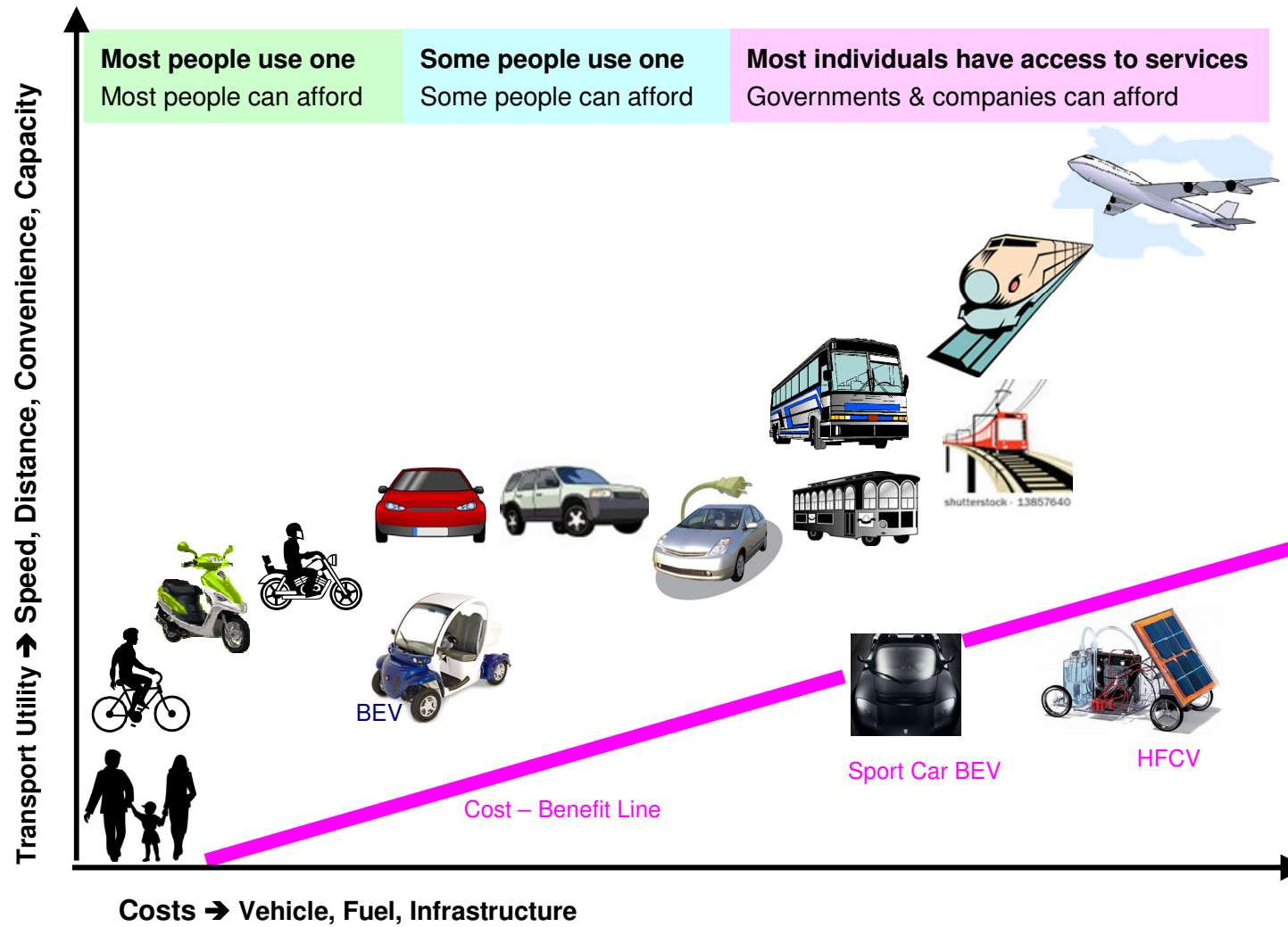
Transport Categories

- Personal Transport Demand – characterised by *travel behaviour* and quantified in terms of Passenger-Kilometres Travelled (PKT)
 - Freight Transport Demand – characterised by *freight logistics* and quantified in terms of tonne-kilometres (t-km)
-

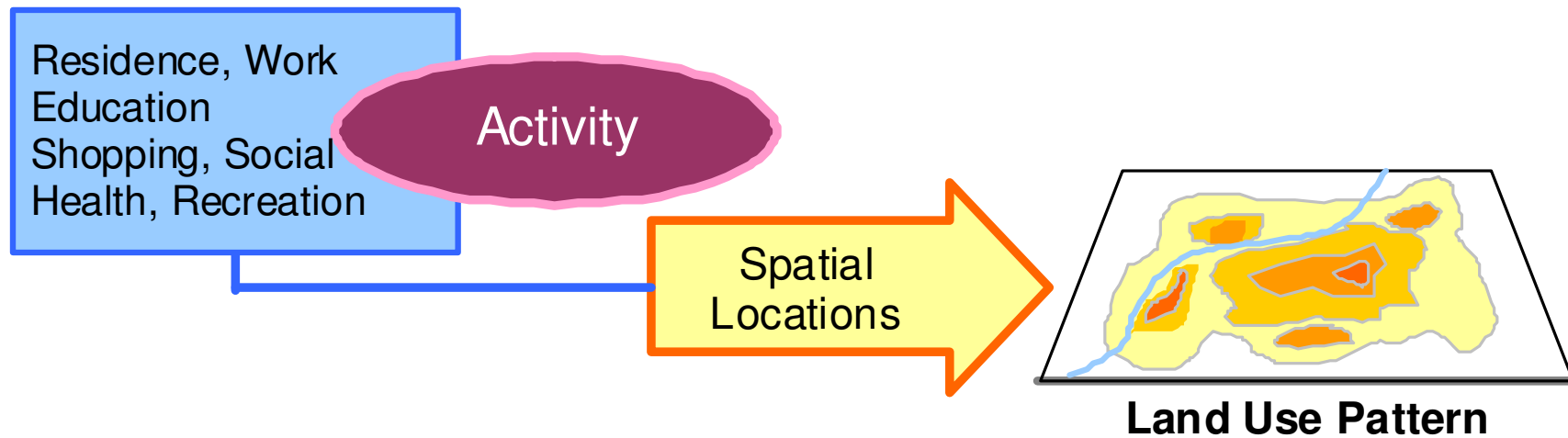
New Zealand Transport Energy



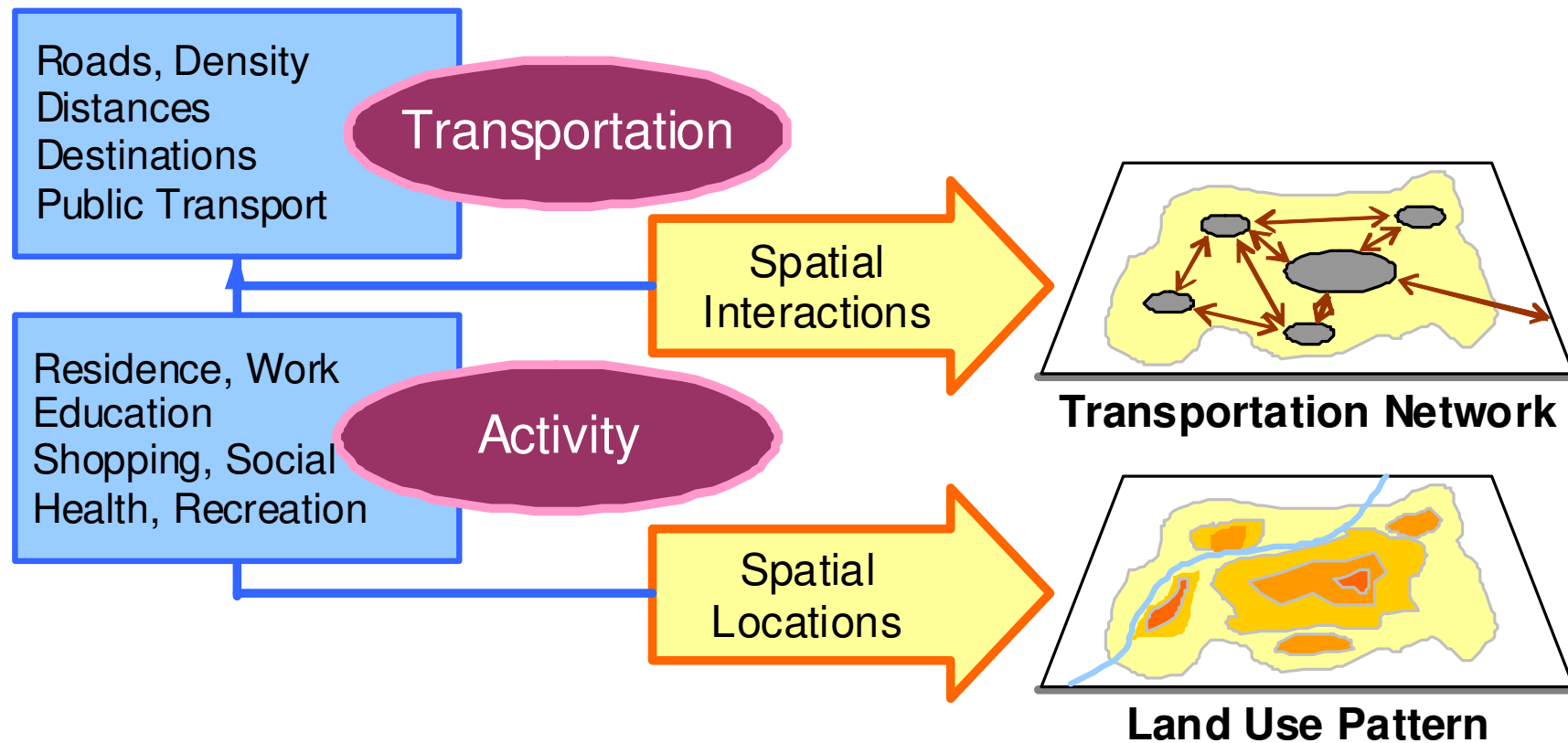
Transport Utility vs Costs



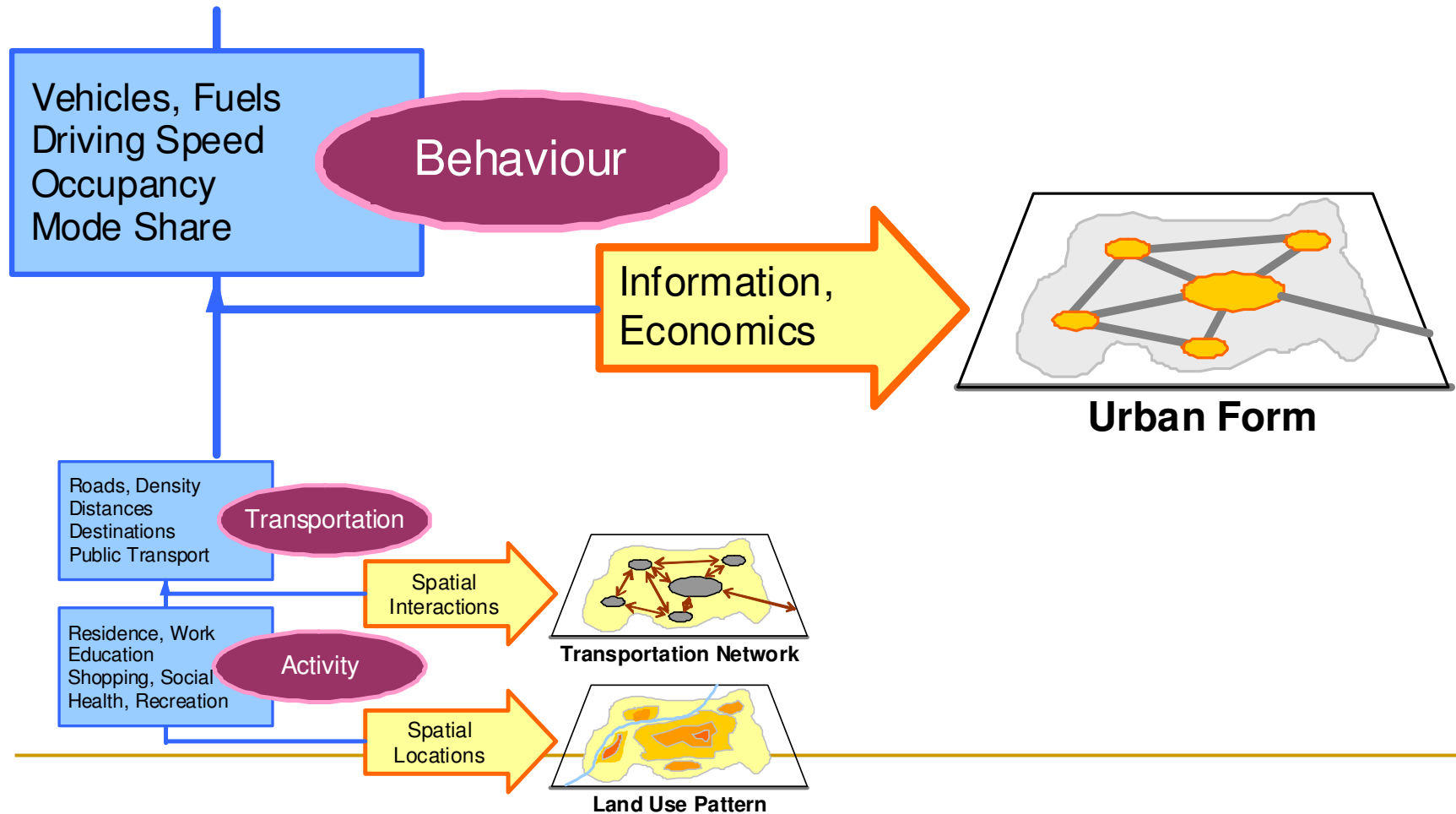
Land Use Pattern



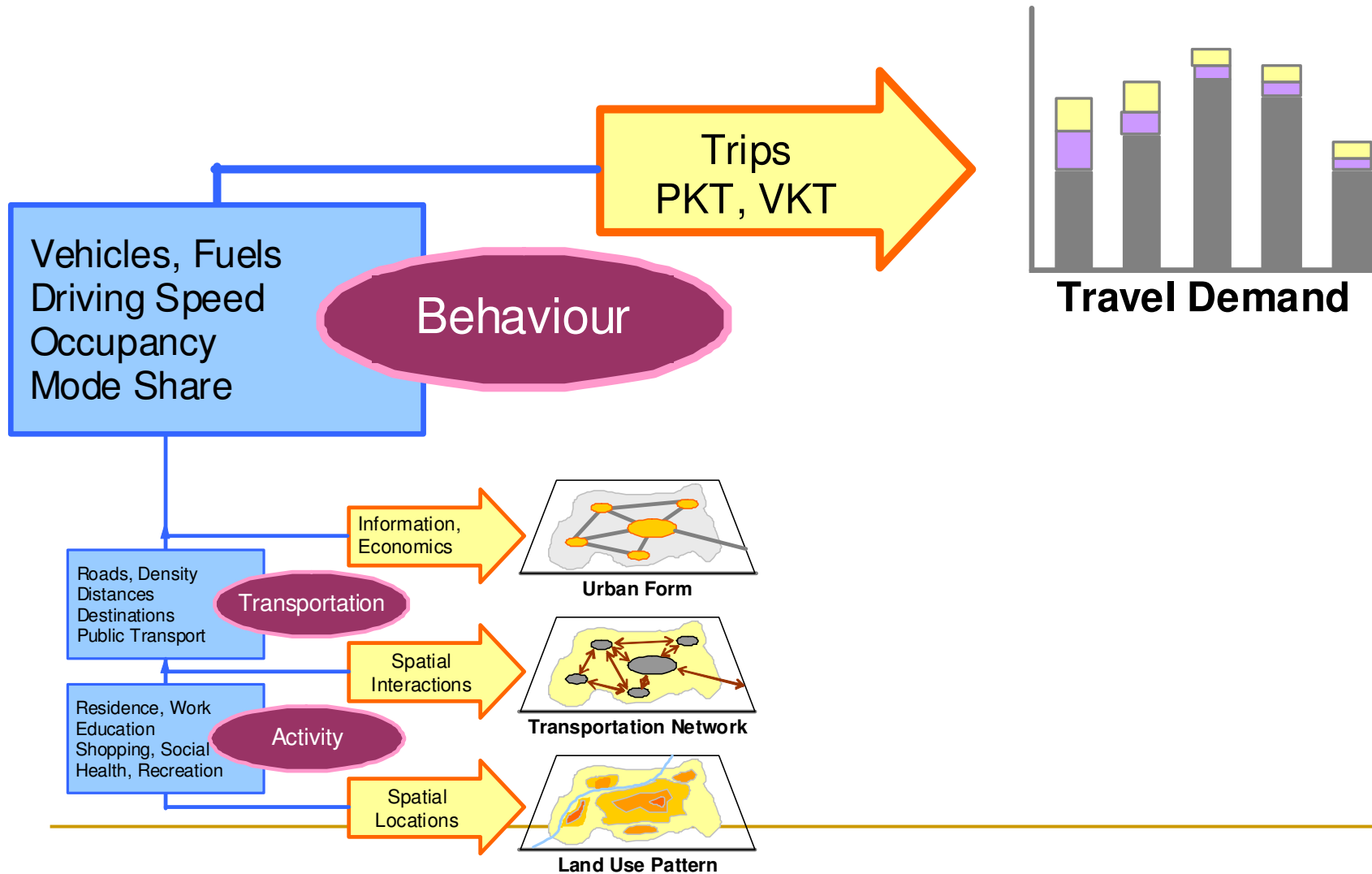
Transportation Network



Urban Form



Travel Demand



Energy Demand

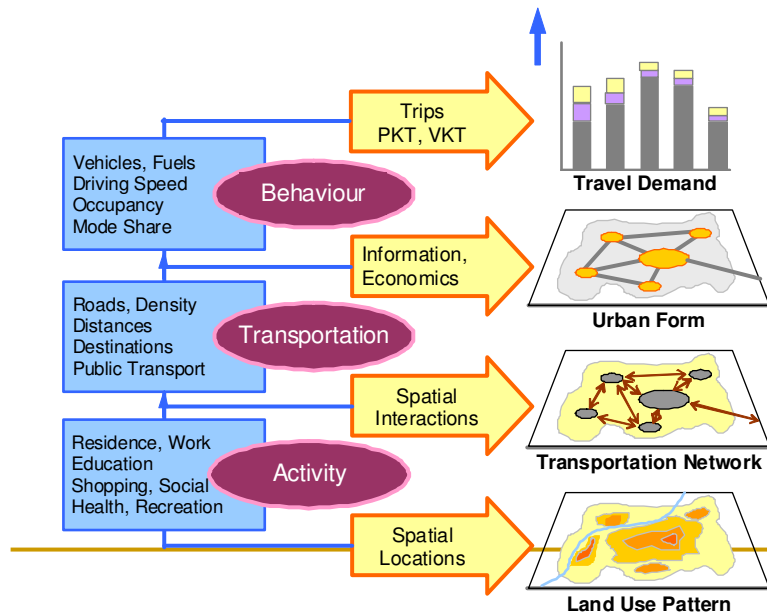
Energy Intensity
GHG Emissions
Costs
Risks

PJ total
MJ/GDP

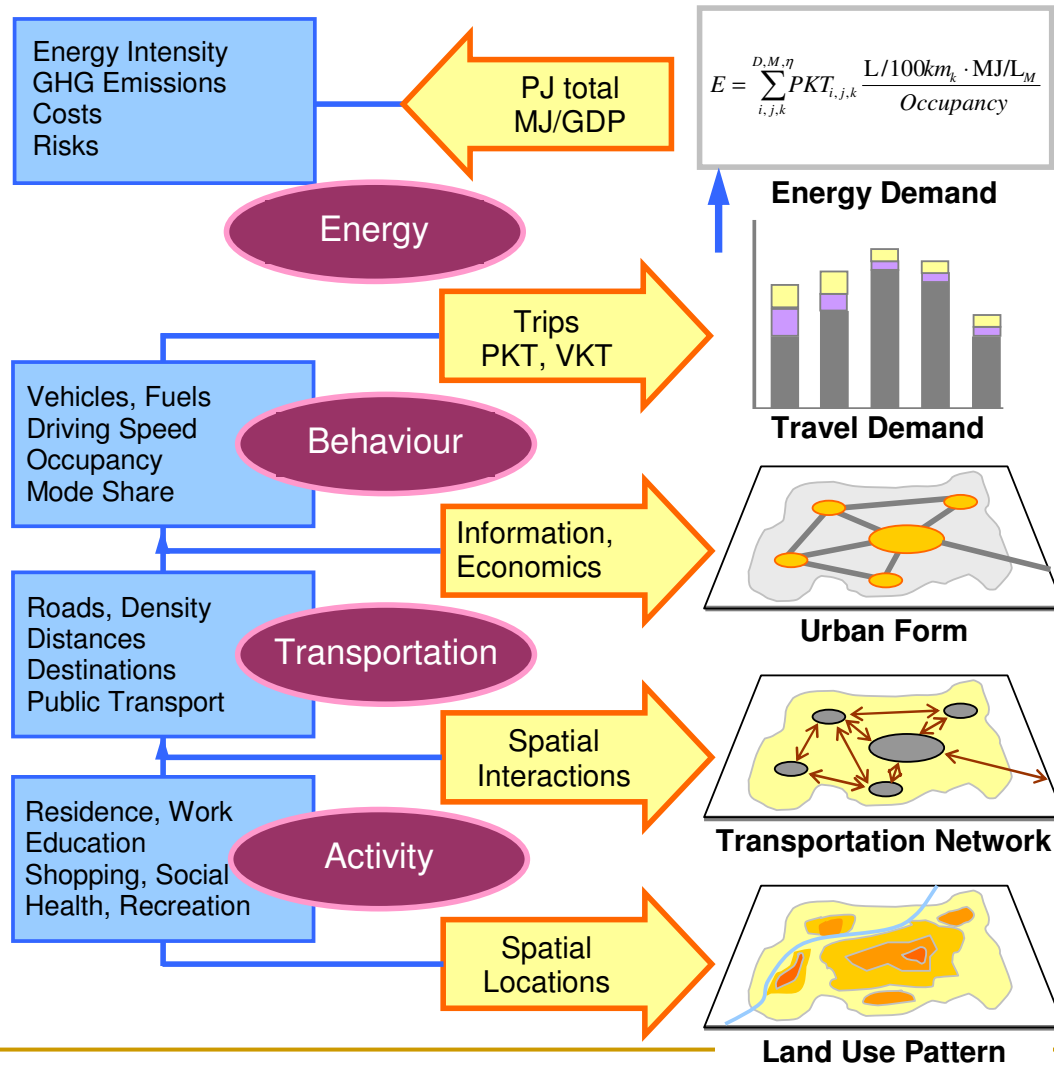
$$E = \sum_{i,j,k}^{D,M,\eta} PKT_{i,j,k} \frac{L/100km_k \cdot MJ/L_M}{Occupancy}$$

Energy Demand

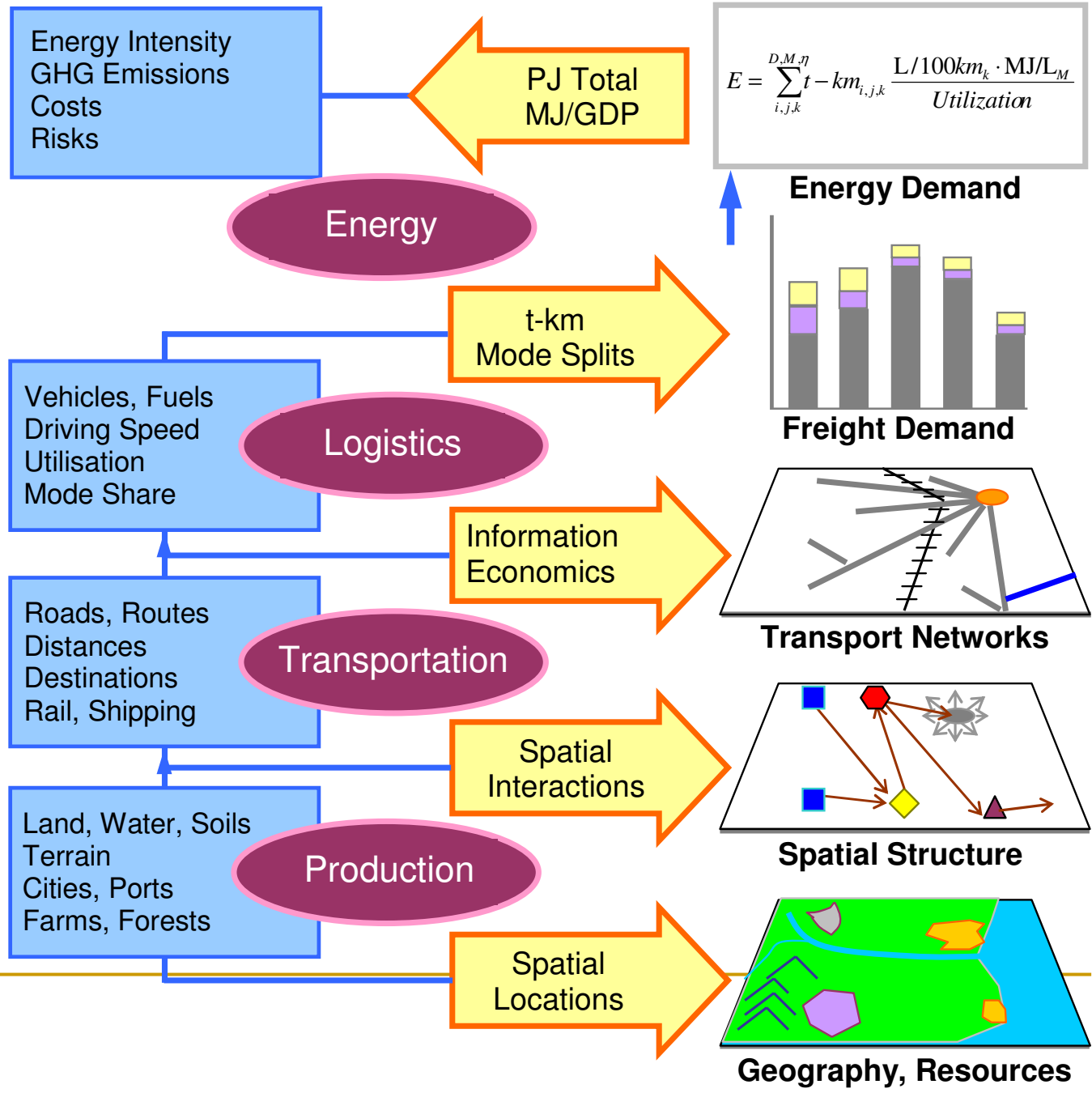
Energy



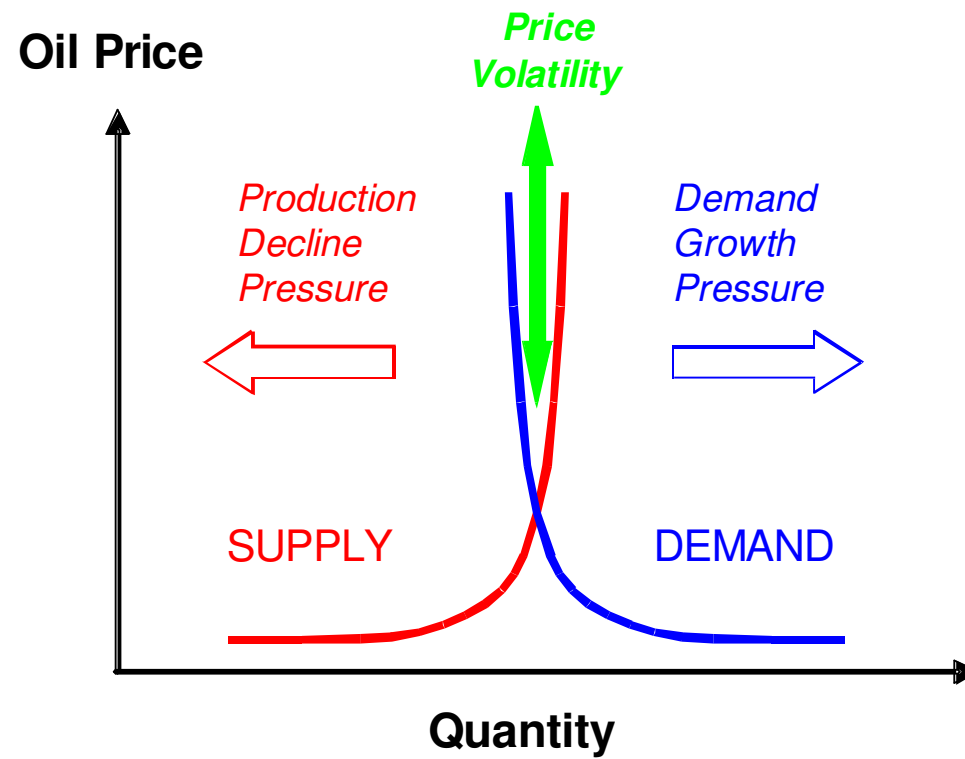
Strategic Systems Approach Required



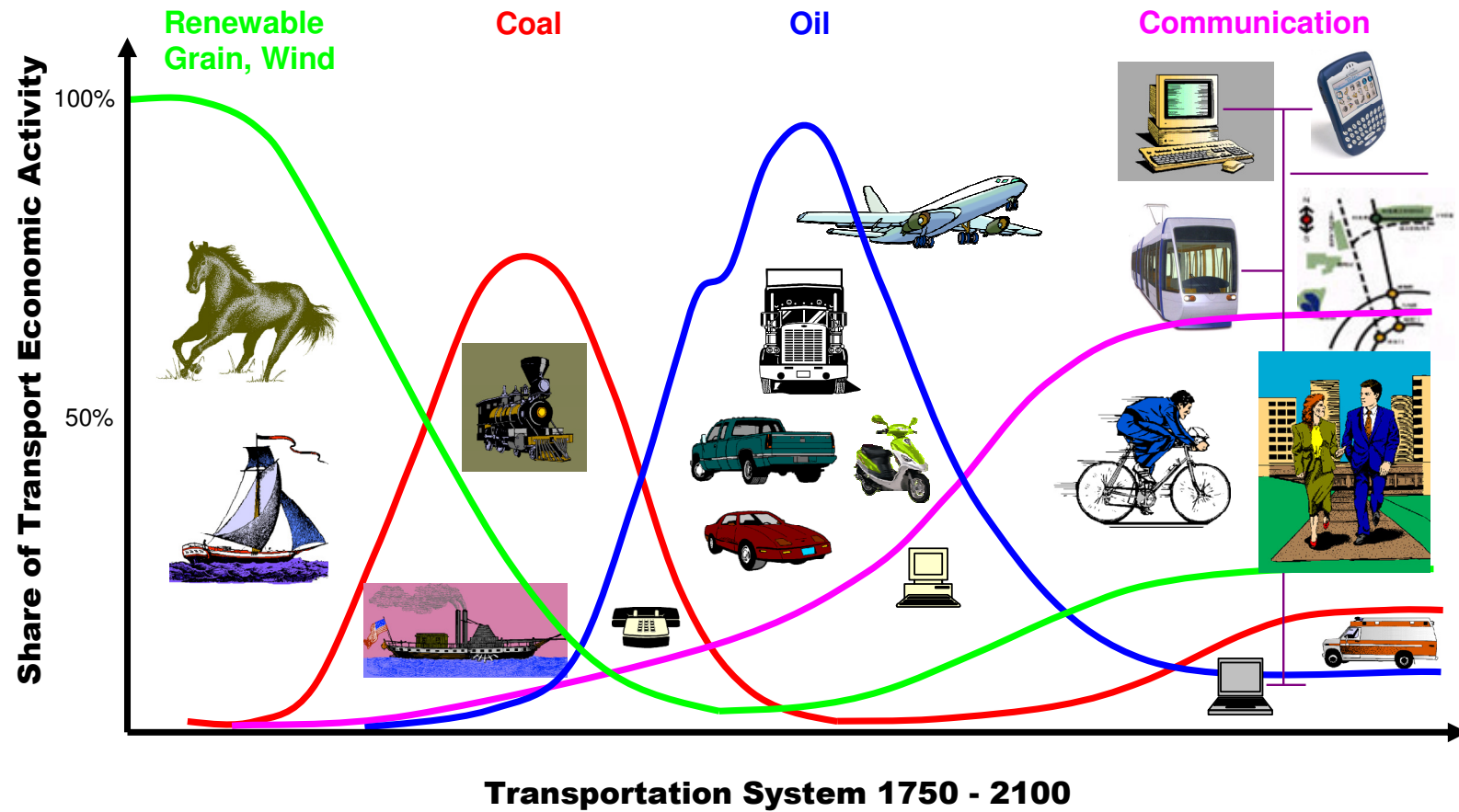
Freight



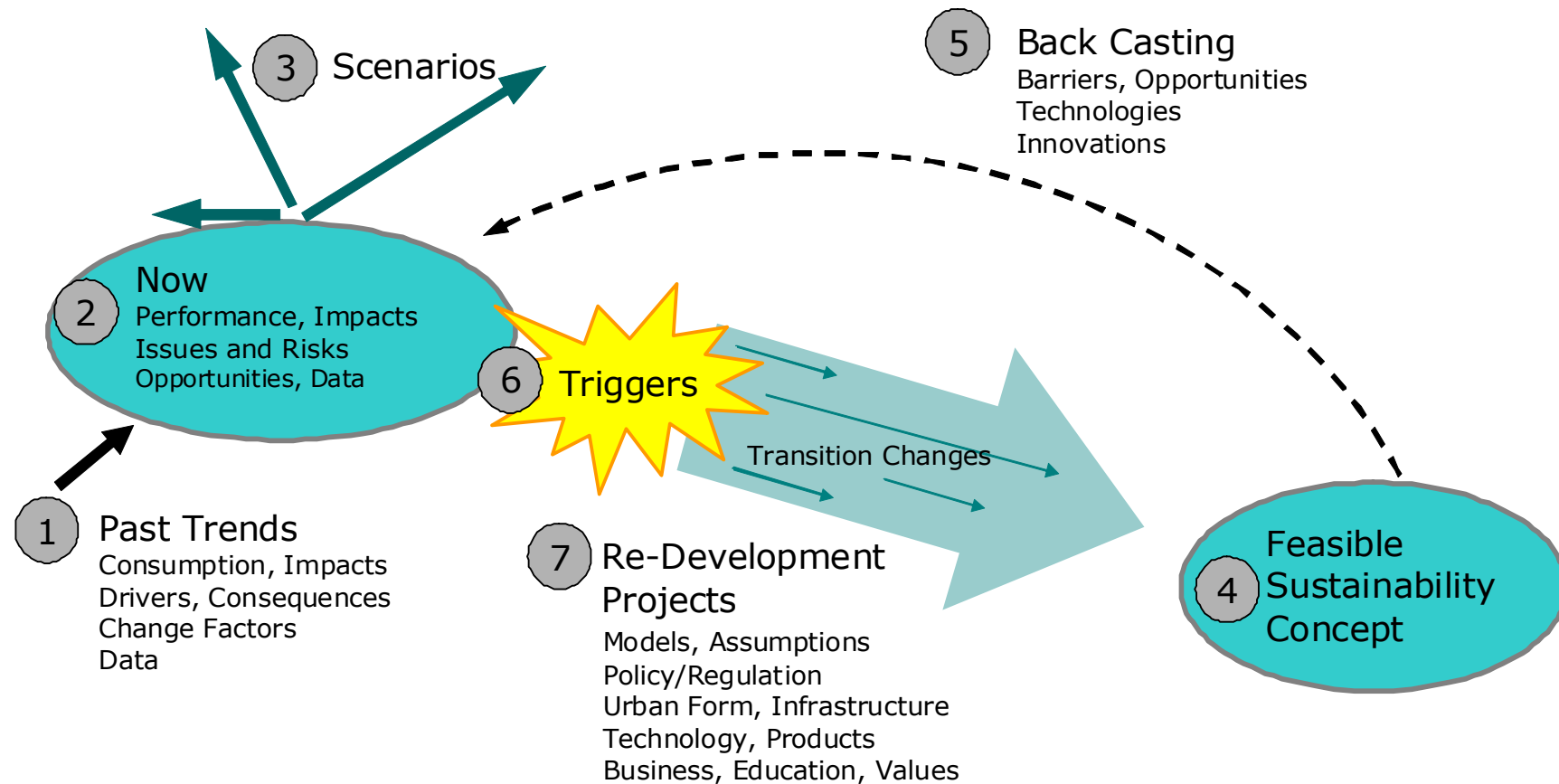
Fuel Supply Issues



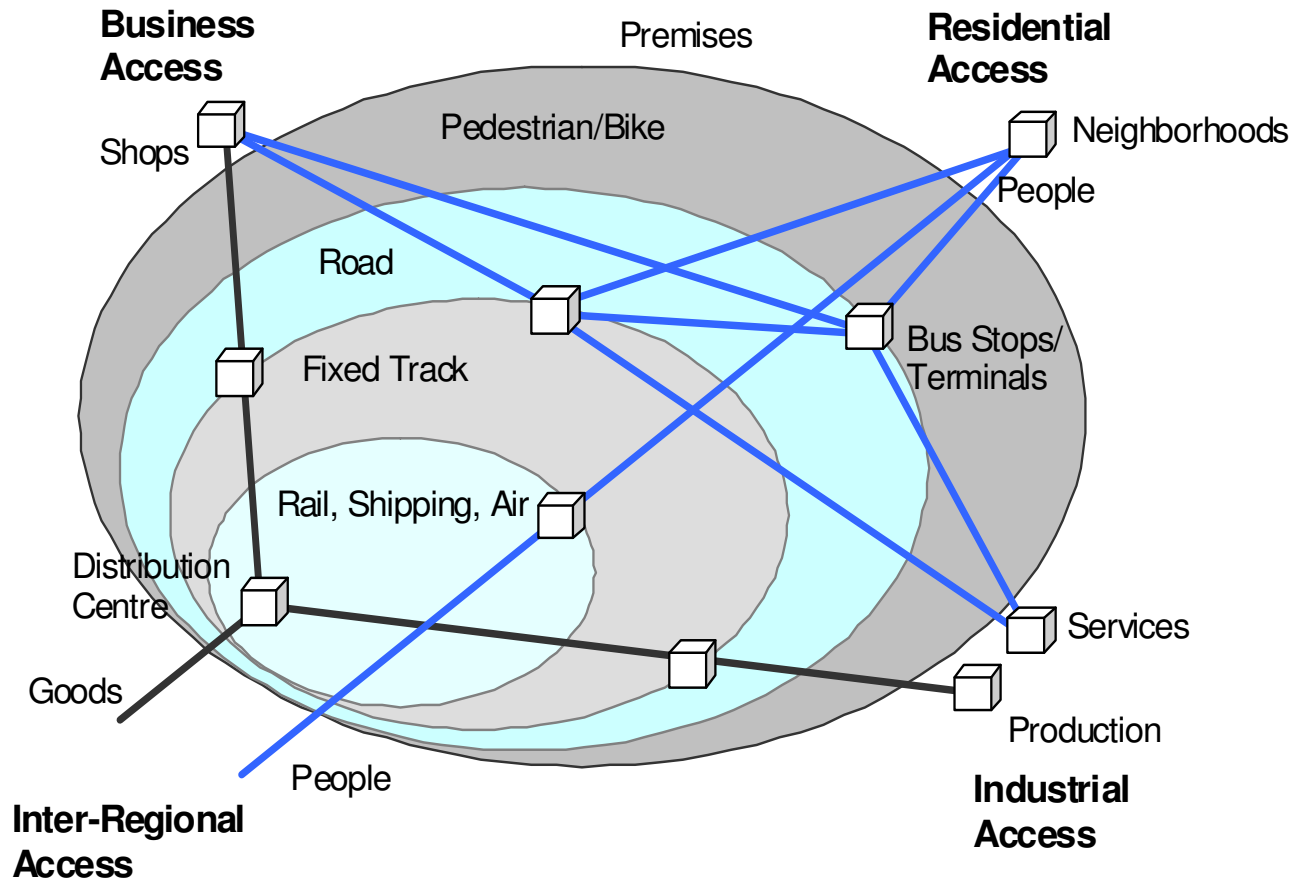
Opportunities



Transition Project Action Framework



Urban Transport System Integration



Conclusion
