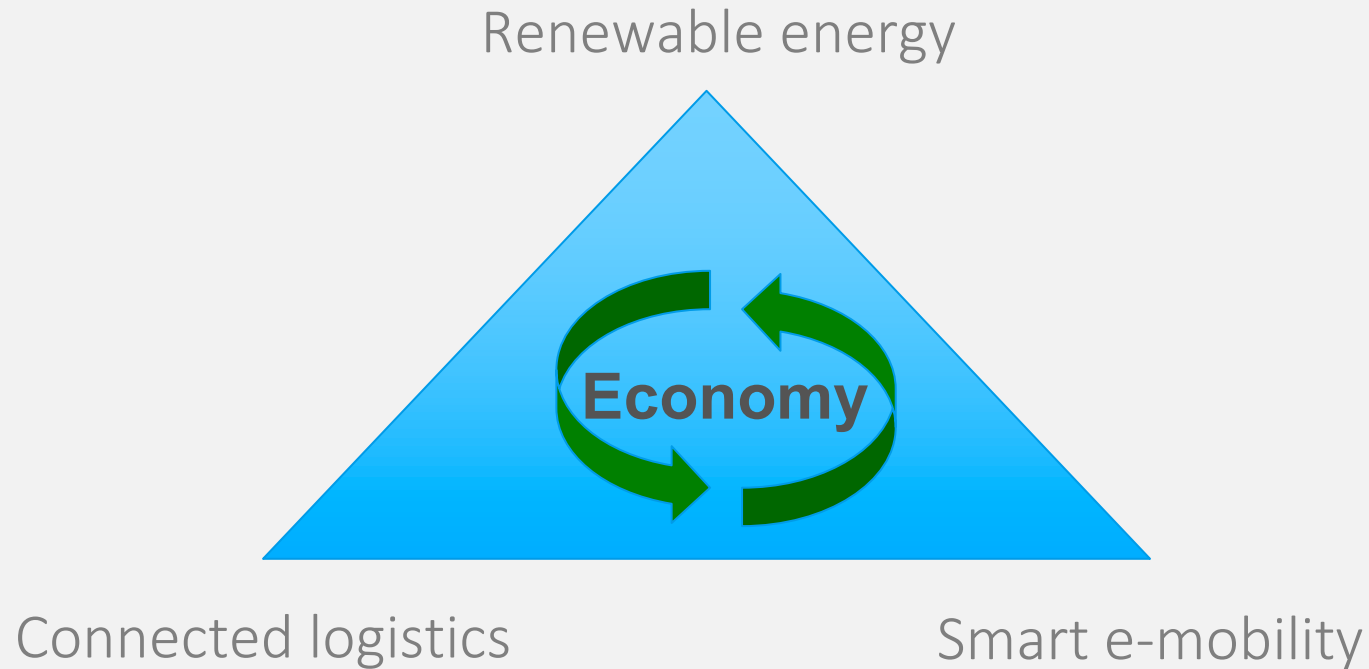


Role of EV business in the energy transition

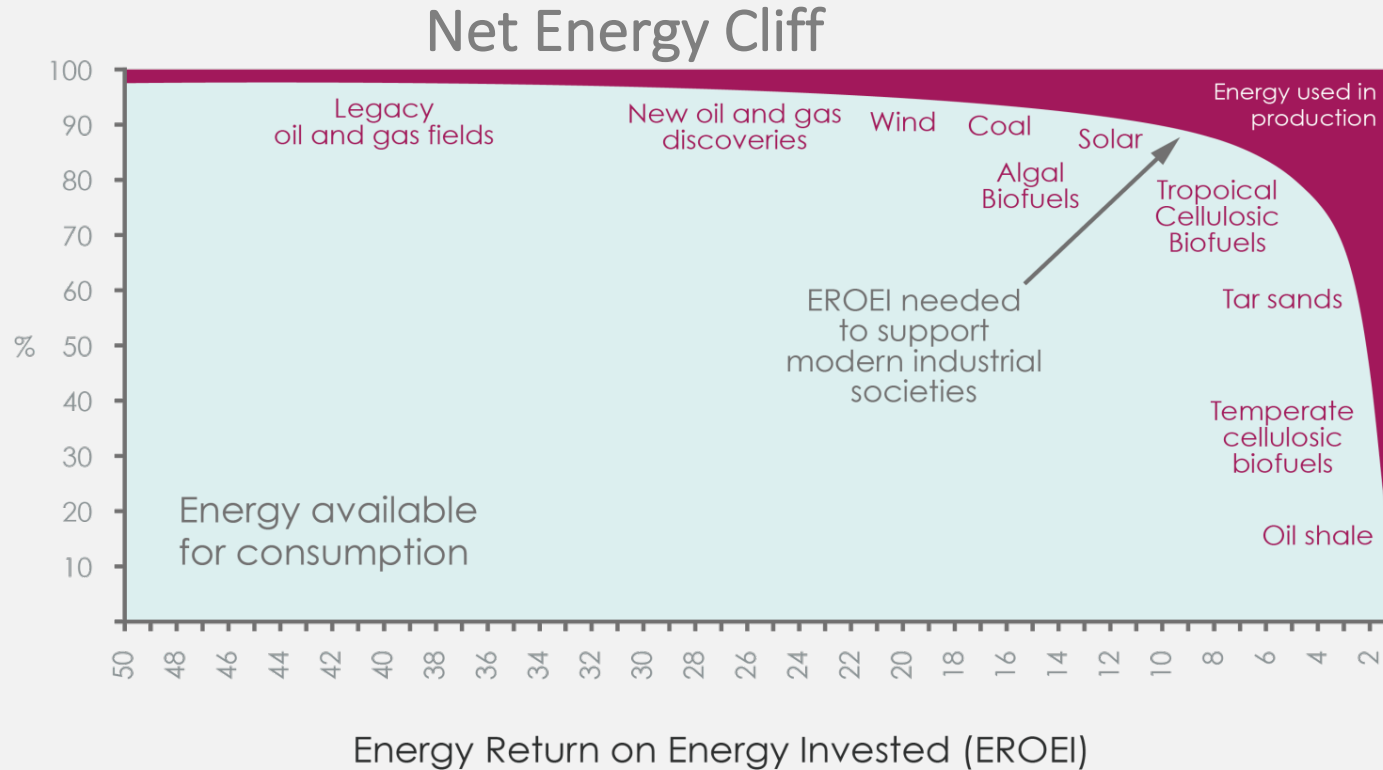
Frank G. Rieck MSc, Applied Research Professor, Future Mobility



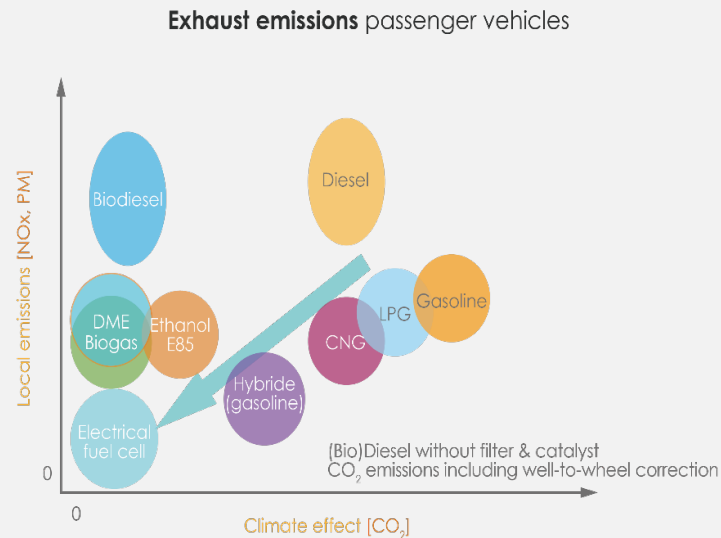
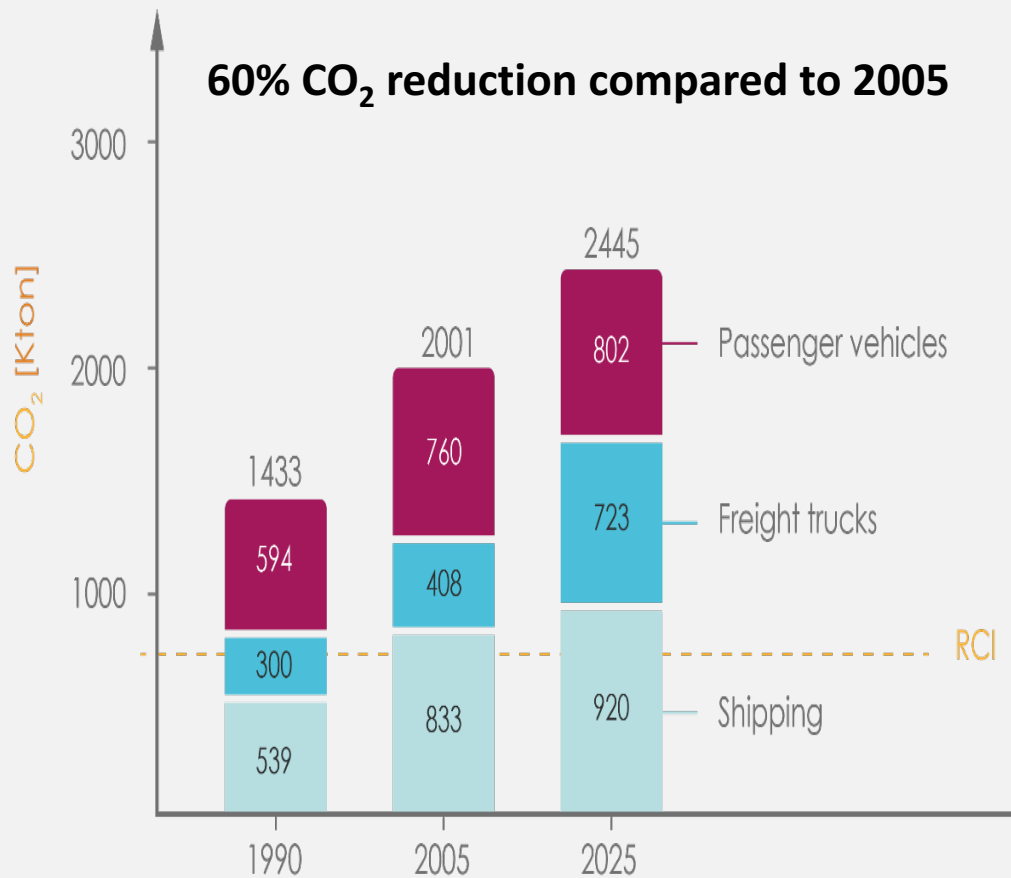
Economic triangle



Health and wealth is dependent on affordable clean energy



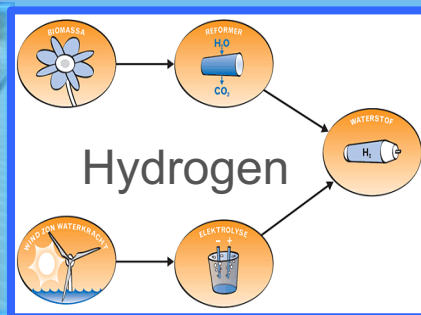
Energy transition - Rotterdam





The 21st century sustainable energy transition



From Fossil to Renewable

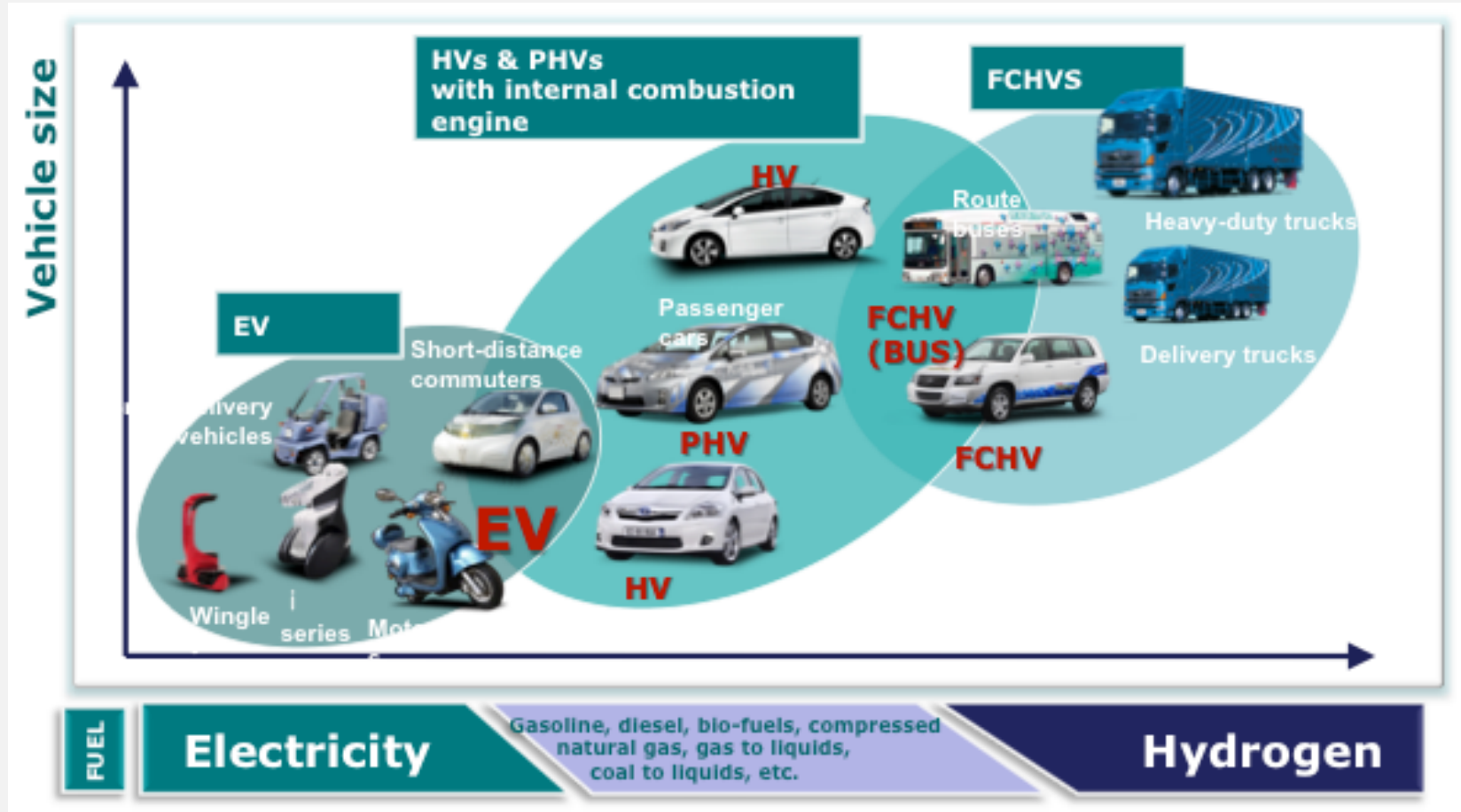


There is no single solution for electrification of road transport

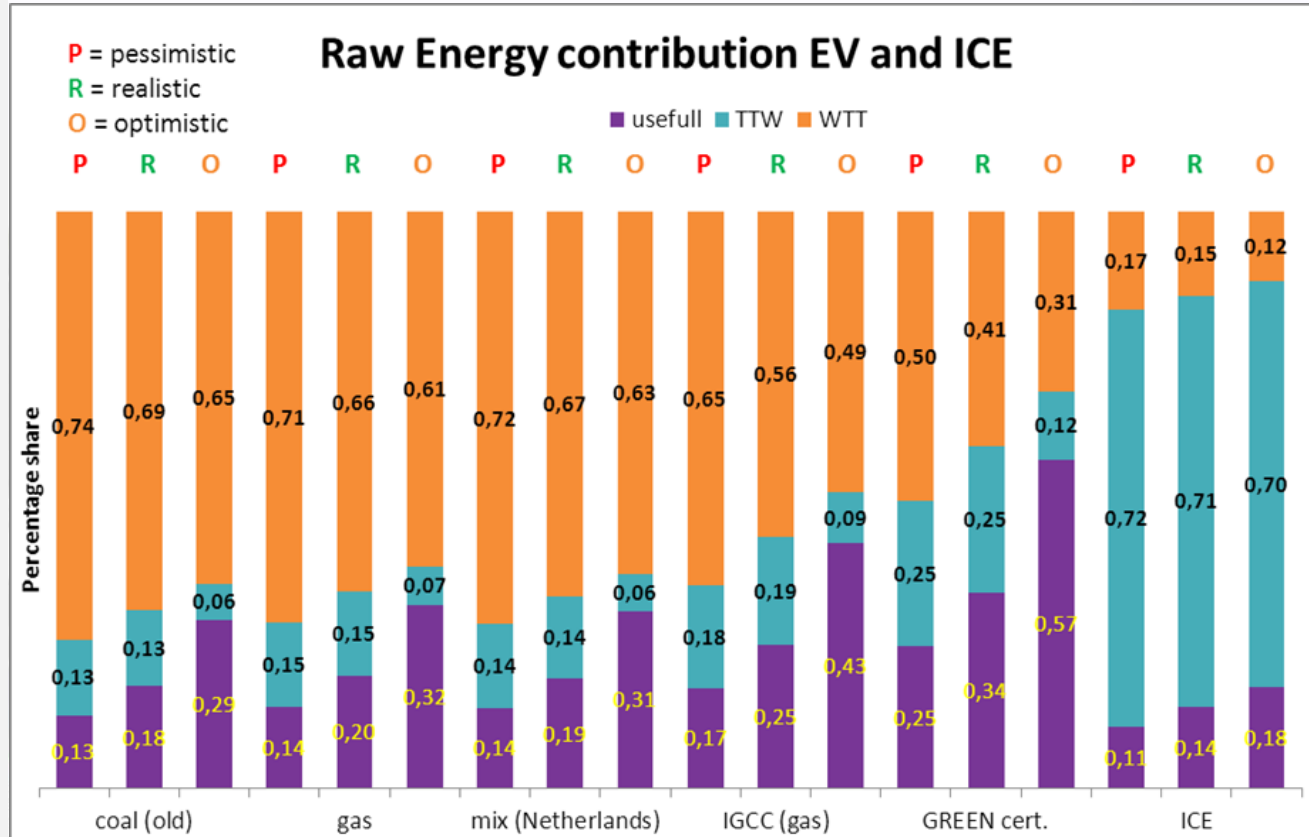
System	Range	Charge	Cost	Emissions	Human
Battery - Electric system	Fair  300 km	Bad  1 hour	Good	Good	Range anxiety
Electric with range extender	Good 900 km	Good 10 min.	Fair  cost	Fair	Fuel anxiety
Fuel cell - Electric system	Good 900 km	Good 10 min.	Bad  cost	Good	No anxiety

‘Horses for courses’

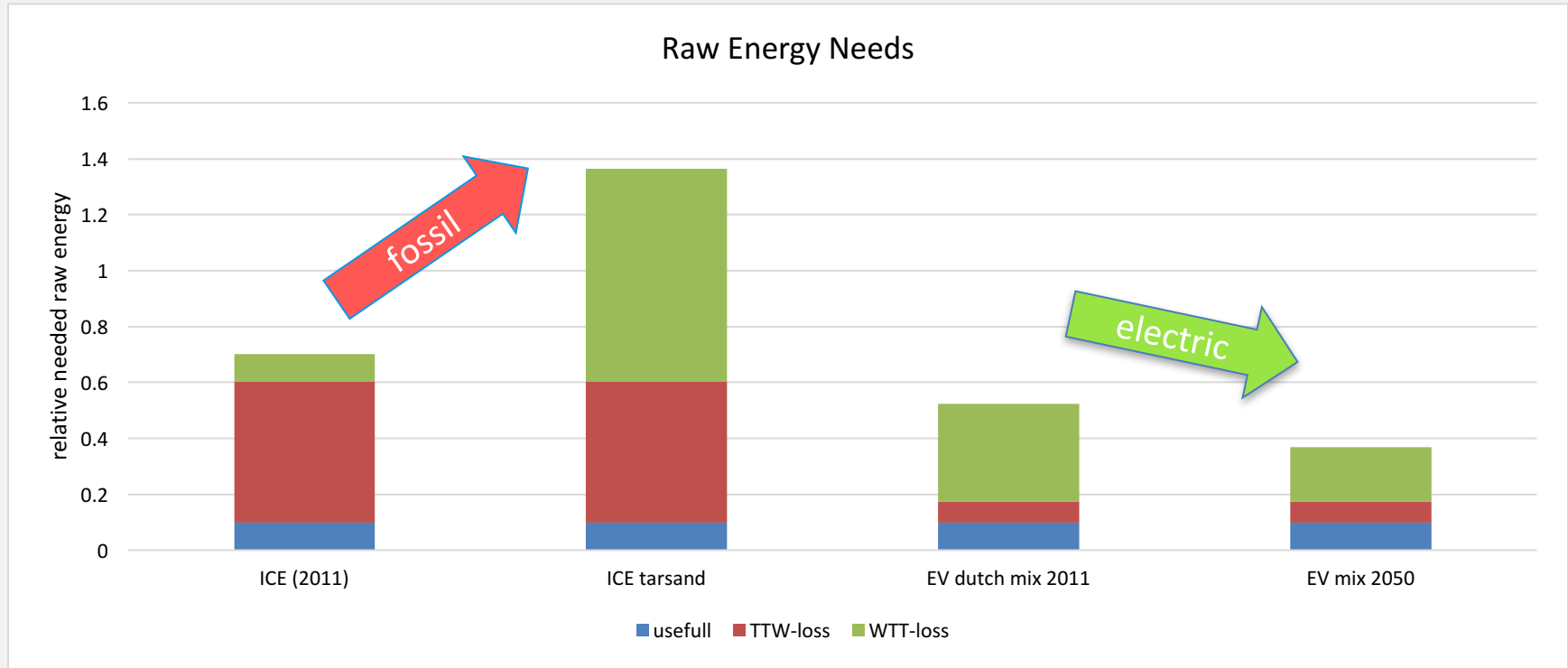
Powertrain roadmap of Toyota motor company



Well to wheel comparison of EV and ICV



The strategic energy gap of future mobility business





Thank you!