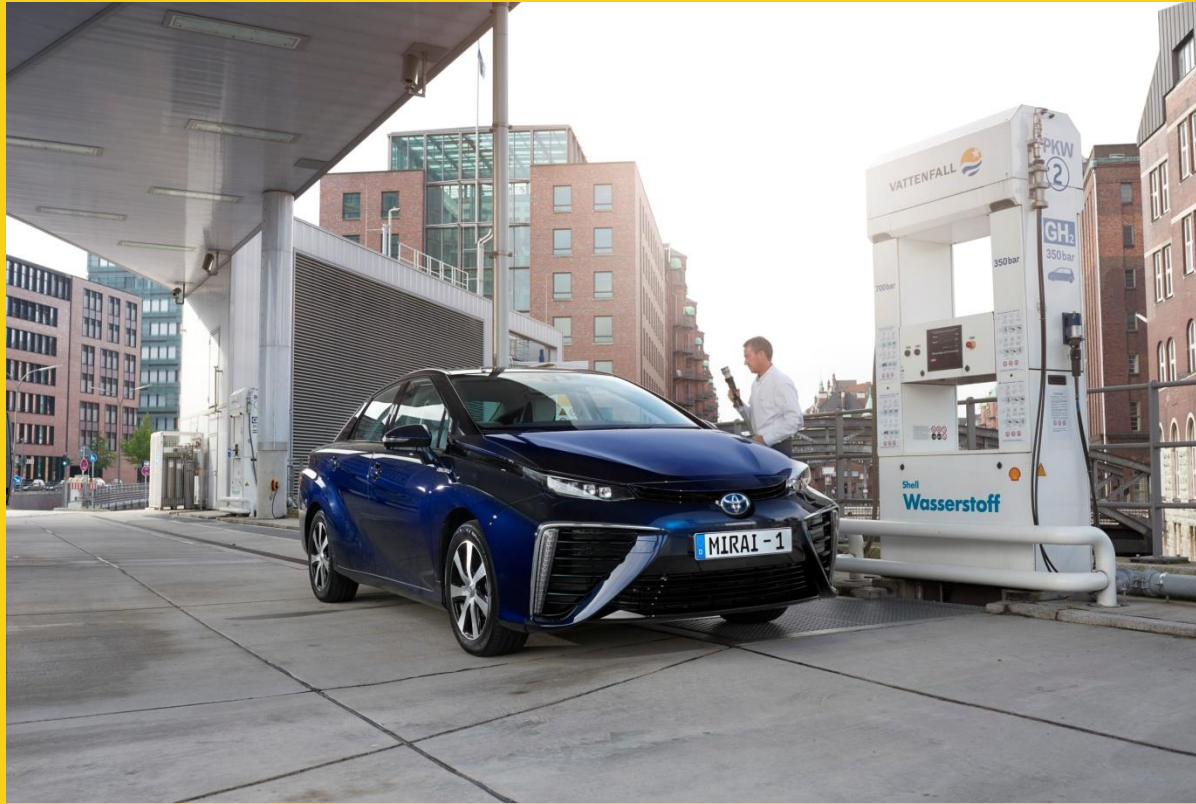


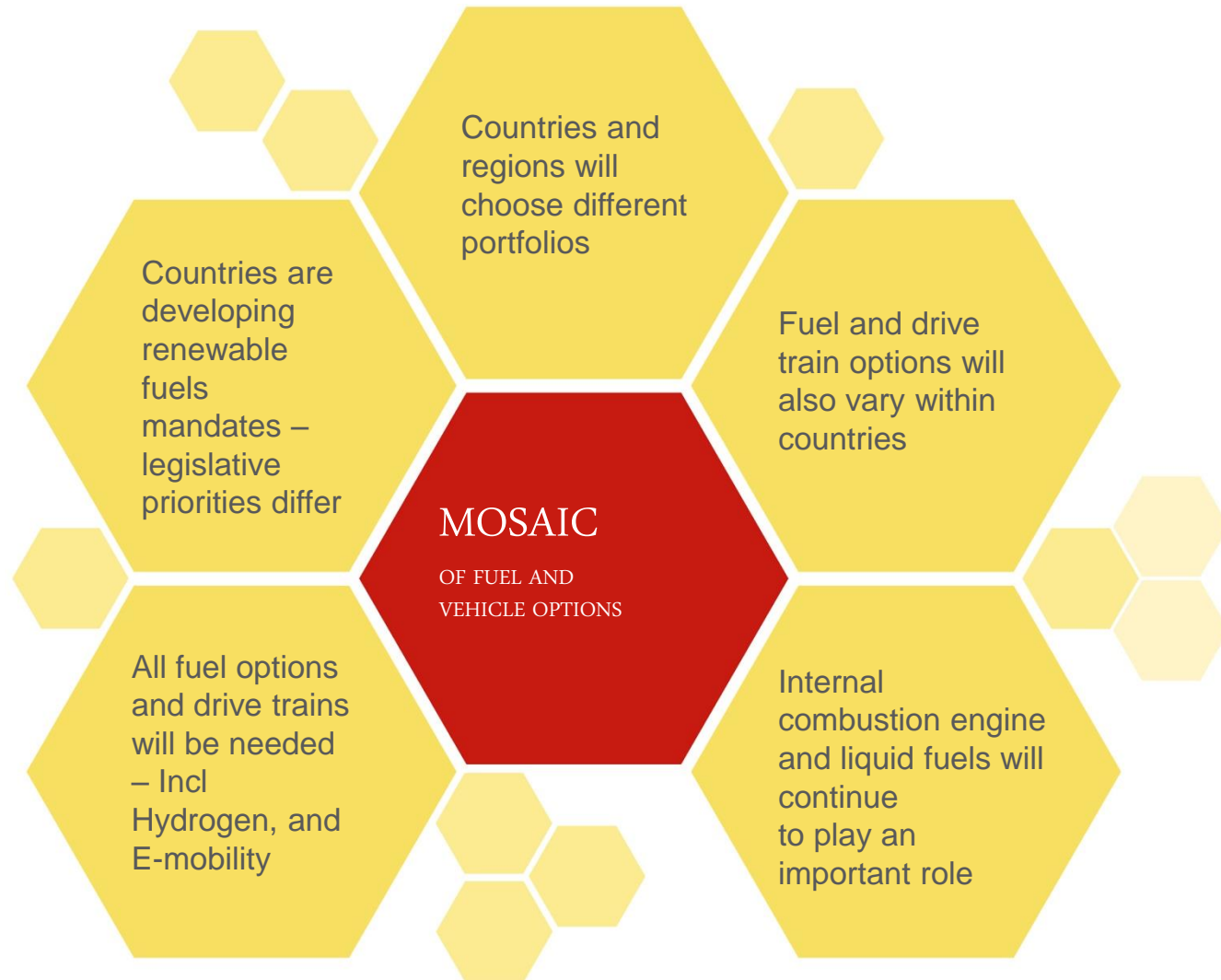


HYDROGEN AT SHELL RETAIL



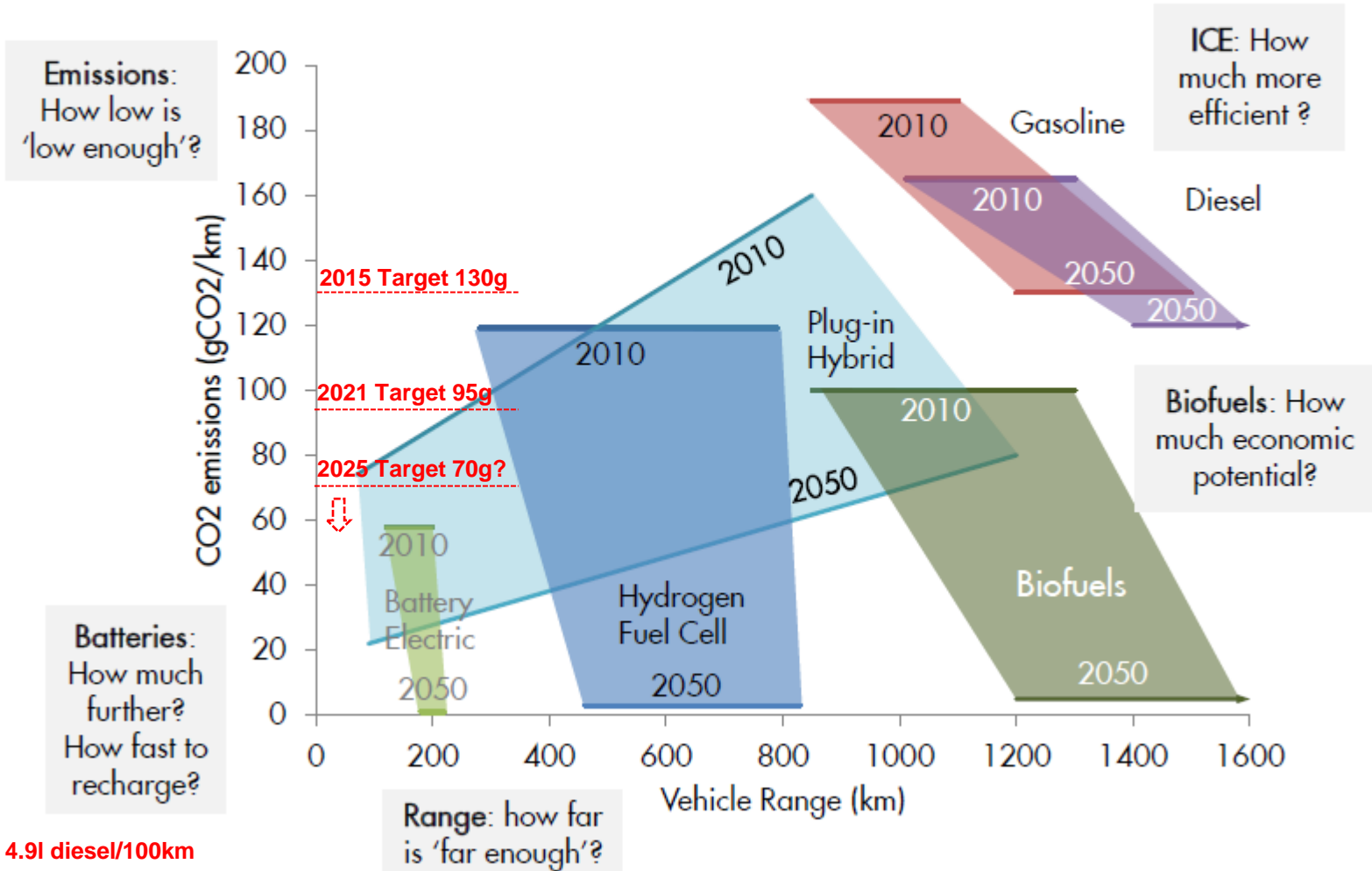
Ewald Breunese
Manager energie transitities

NO SINGLE ALTERNATIVE TO LIQUID FUELS



H2 OFFERS CO2 REDUCTION

Competing Fuel Technologies



Source for Targets: ec.europa.eu/clima/policies/transport/vehicles/cars

HYDROGEN: THE FUTURE IS COLLABORATION



COMMERCIAL PROGRESS
REQUIRES COOPERATION

SHELL IS INVOLVED IN A
NUMBER OF PRIVATE/PUBLIC
PARTNERSHIPS

POLICY AND FUNDING
MECHANISMS WILL ACCELERATE
DEVELOPMENT

H2 MOBILITY GERMANY

- Foundation of Joint Venture by the six partners in early 2015:
 - Air Liquide, Daimler, Linde, OMV, Shell and Total
 - **400 HRS** to be built by 2023
 - Overall investment of **€350mln**
- Government-supported risk-sharing industry partnership
- Associated partners include:



H₂ Mobility Initiative

Action plan for the construction of a hydrogen refuelling network in Germany by 2023

~400

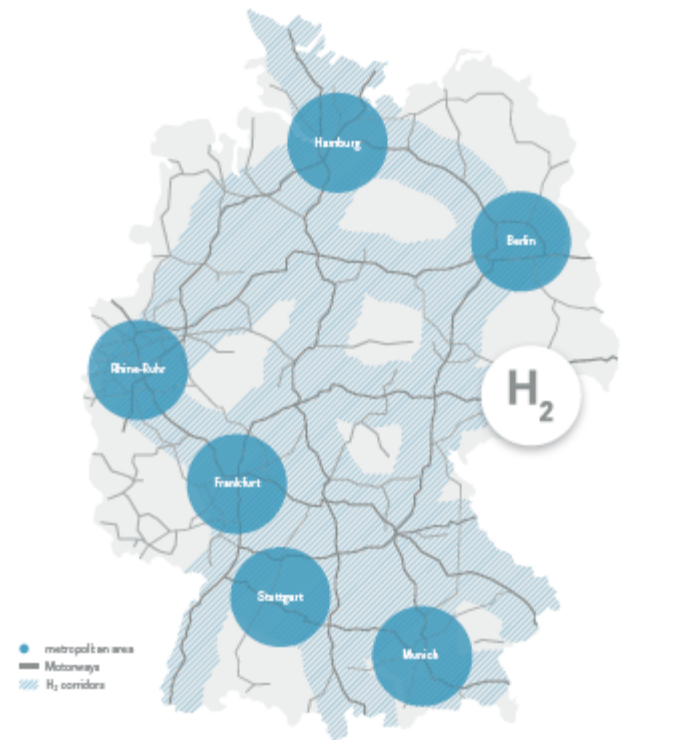
Stations will Germany's public hydrogen refuelling network cover by 2023.

~90

Kilometers lie between the H₂ filling stations on the motorways around the metropolitan areas by 2023

>10

H₂ filling stations will be available in each metropolitan area from 2023



ON-SITE H₂ PRODUCTION USING EXCESS ELECTRICITY

- Use of an electrolyser supplied with excess grid electricity (grid balancing)
- H₂ for FCEVs can be produced competitively on-site with potentially zero CO₂ emissions
- <https://www.youtube.com/watch?v=1DyYG>



