

PORT OF ROTTERDAM: A CARBON NEUTRAL PORT IN 3 STEPS

OPPORTUNITIES FOR RENEWABLE CHEMICALS & FUELS

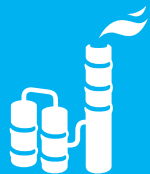


TODAY

CHEMICALS & FUELS



CRUDE OIL



FOSSIL FUELS



BIOMASS



VEGETABLE OIL



RENEWABLE FUEL



CHEMICALS

H₂

HYDROGEN



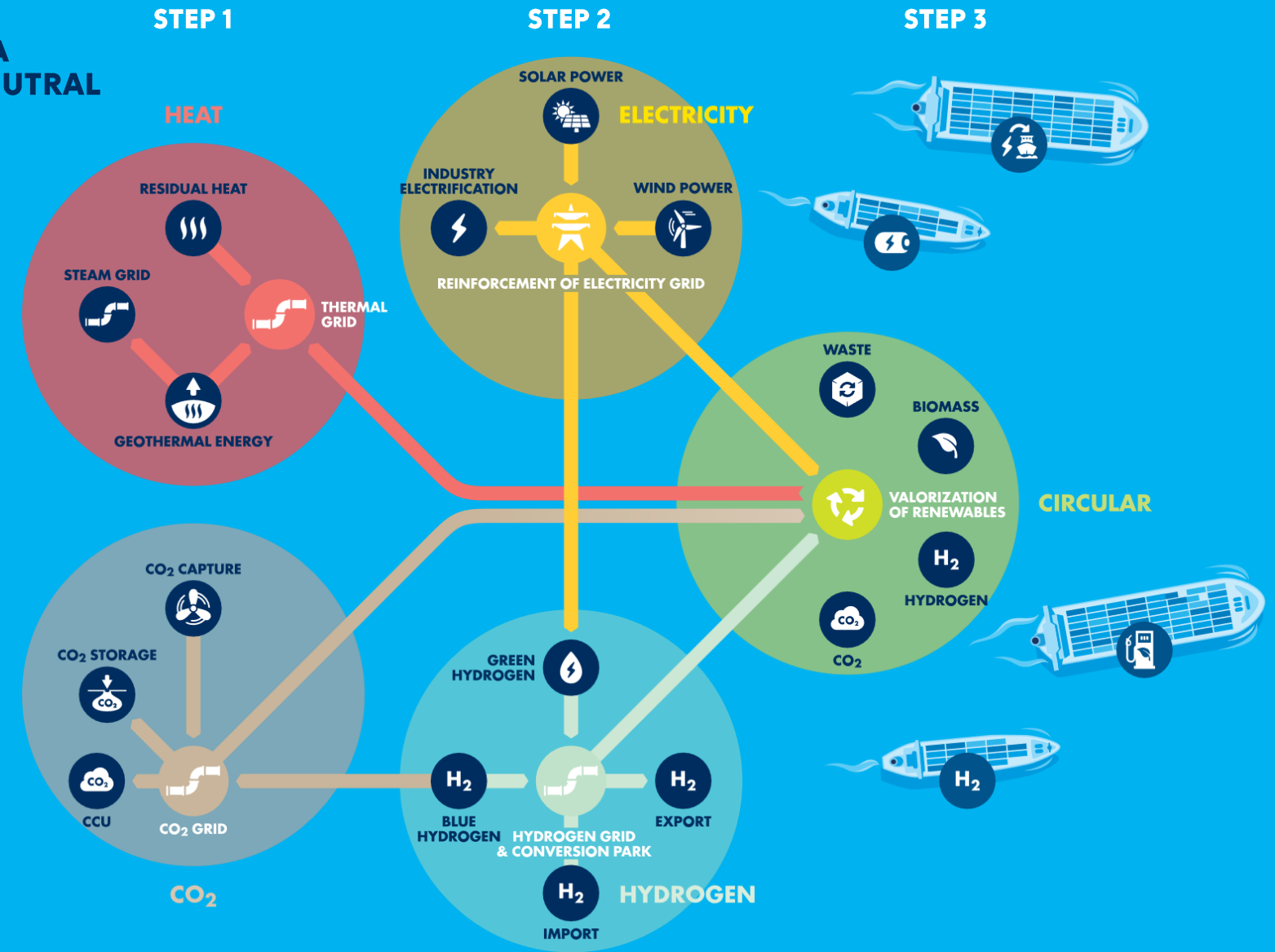
RENEWABLE CHEMICALS

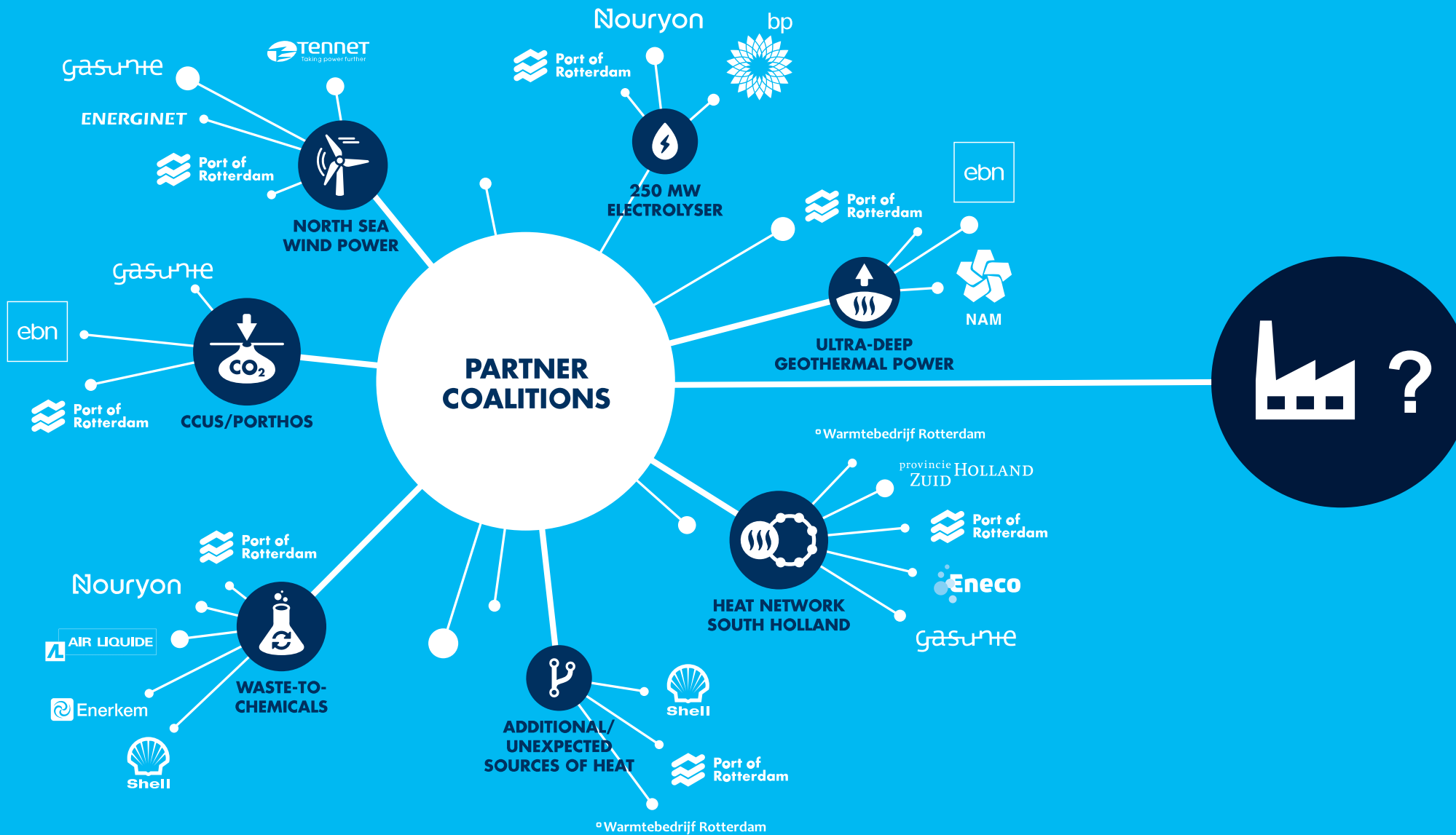
VISION 2050

CHEMICALS & FUELS



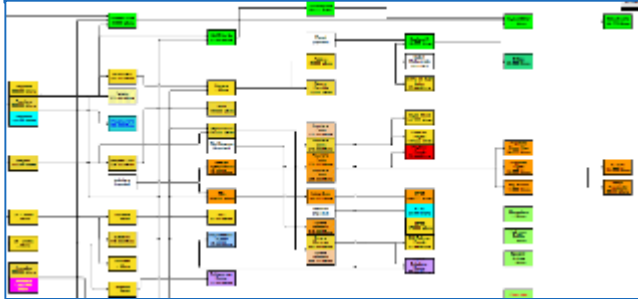
**A CO₂ NEUTRAL AND
CIRCULAR INDUSTRIAL PORT**





The Port Scan scouts the global renewable chemical developer landscape to identify priority targets for PoR

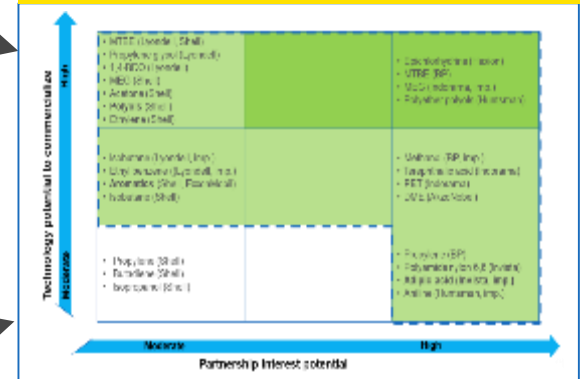
What fuels and chemicals are produced in the Port of Rotterdam cluster?



Which renewable drop-in alternatives exist?

Which are at or close to commercial scale?

What are priority business development targets for the PoR team?



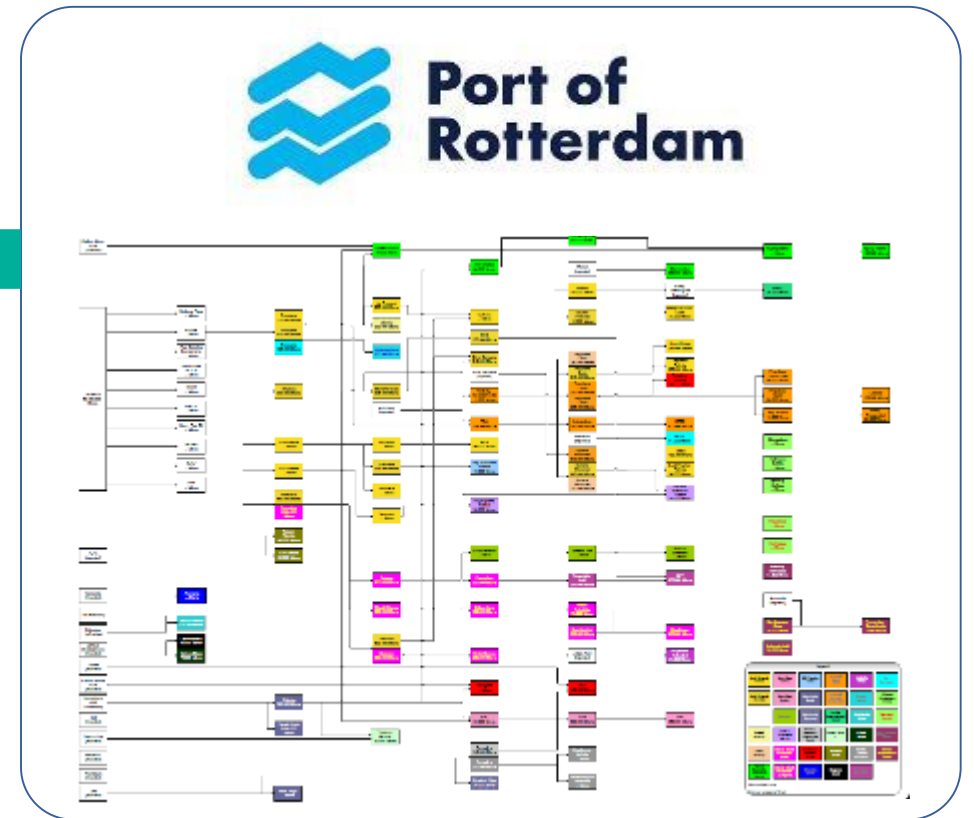
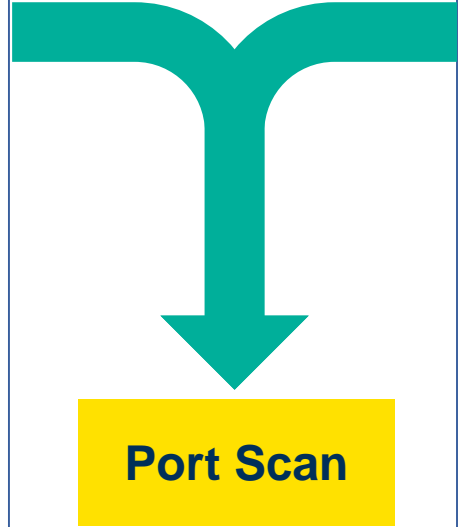
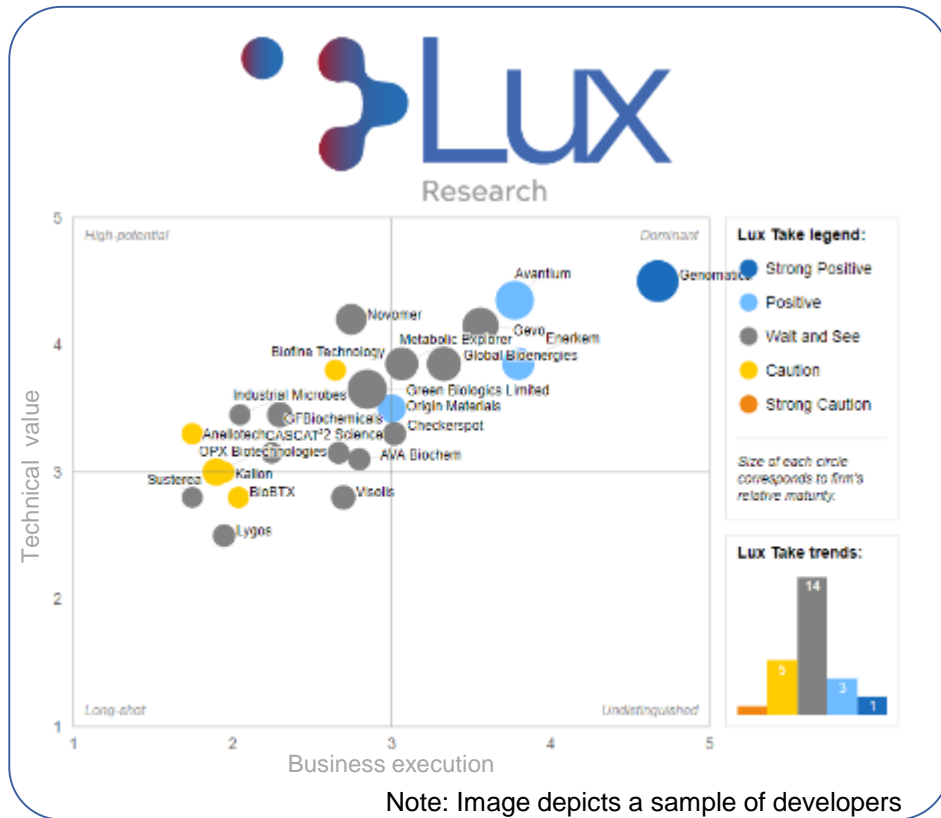
Who are the chemical producers in the Port of Rotterdam cluster?



Which companies promote sustainable business?

Which are actively pursuing renewable chemical projects?

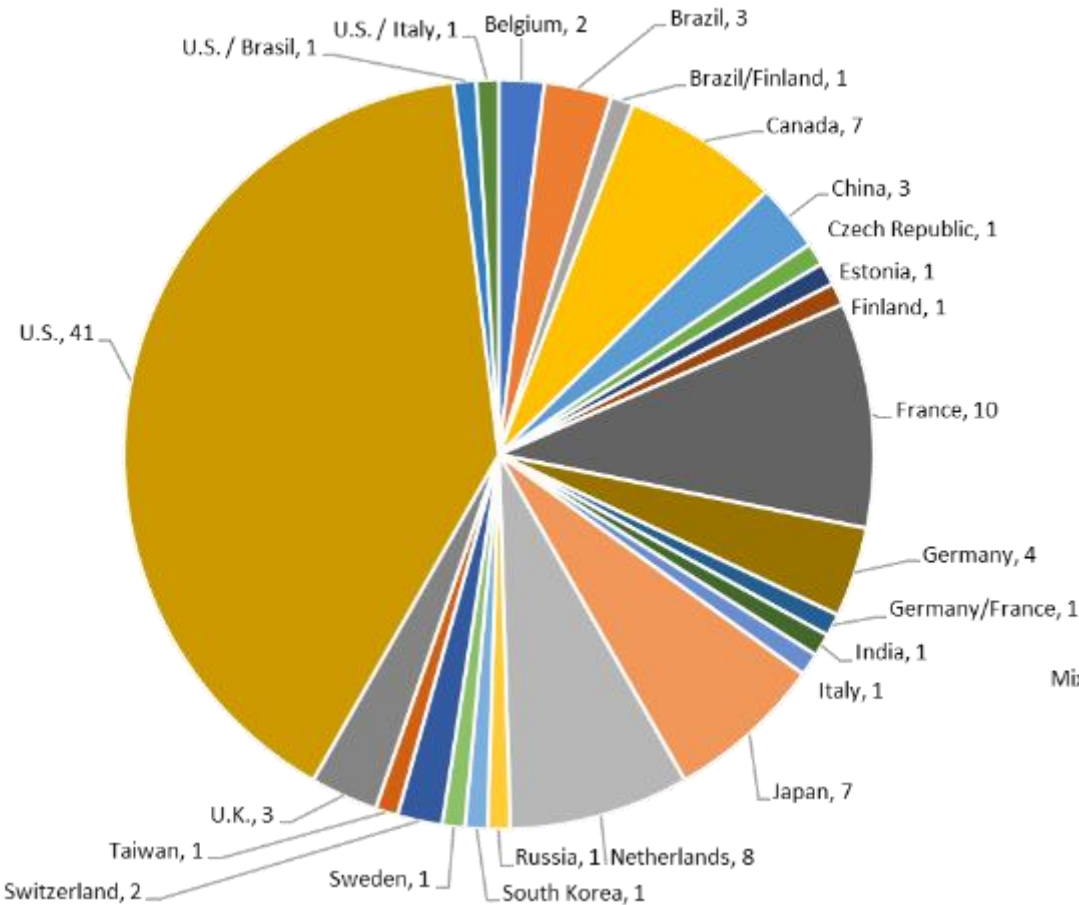
Lux started from the product flows in PoR, to globally scout for developers of renewable chemical drop-in options



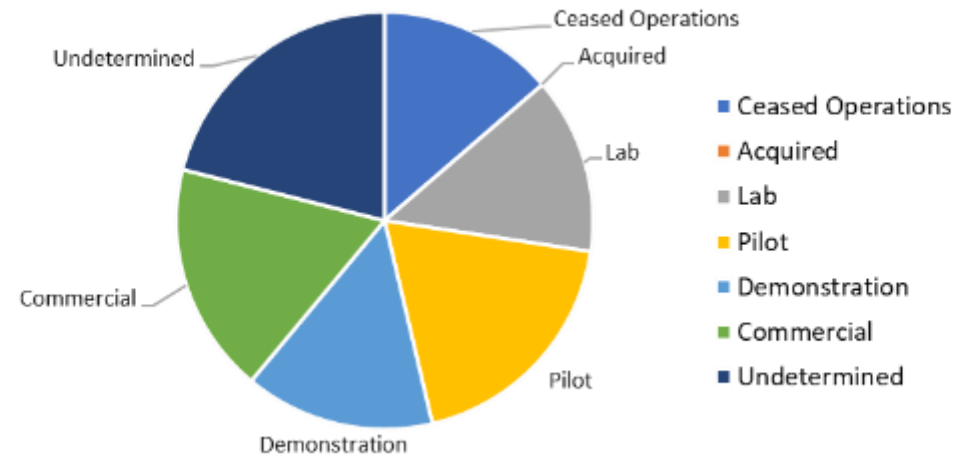
- The Lux teams built its scouting effort on an extensive database of technology developer profiles, continuously updated with secondary research and interviews with management of startups across the world, and supplemented with additional secondary research

Lux identified over 90 developers with 101 pathways at various TRLs, which are potential drop-in's for PoR

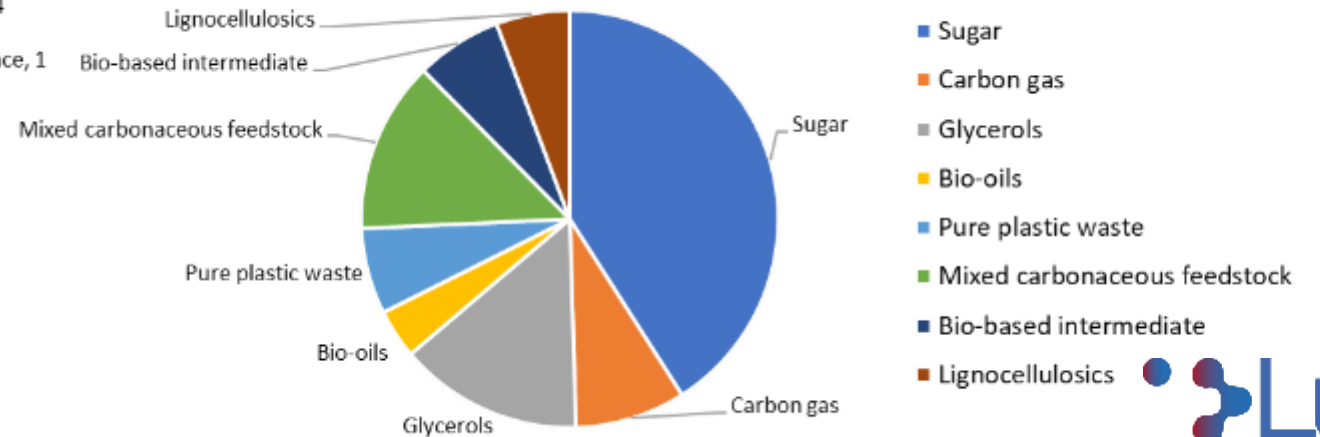
Geographical spread (101 pathways in total)



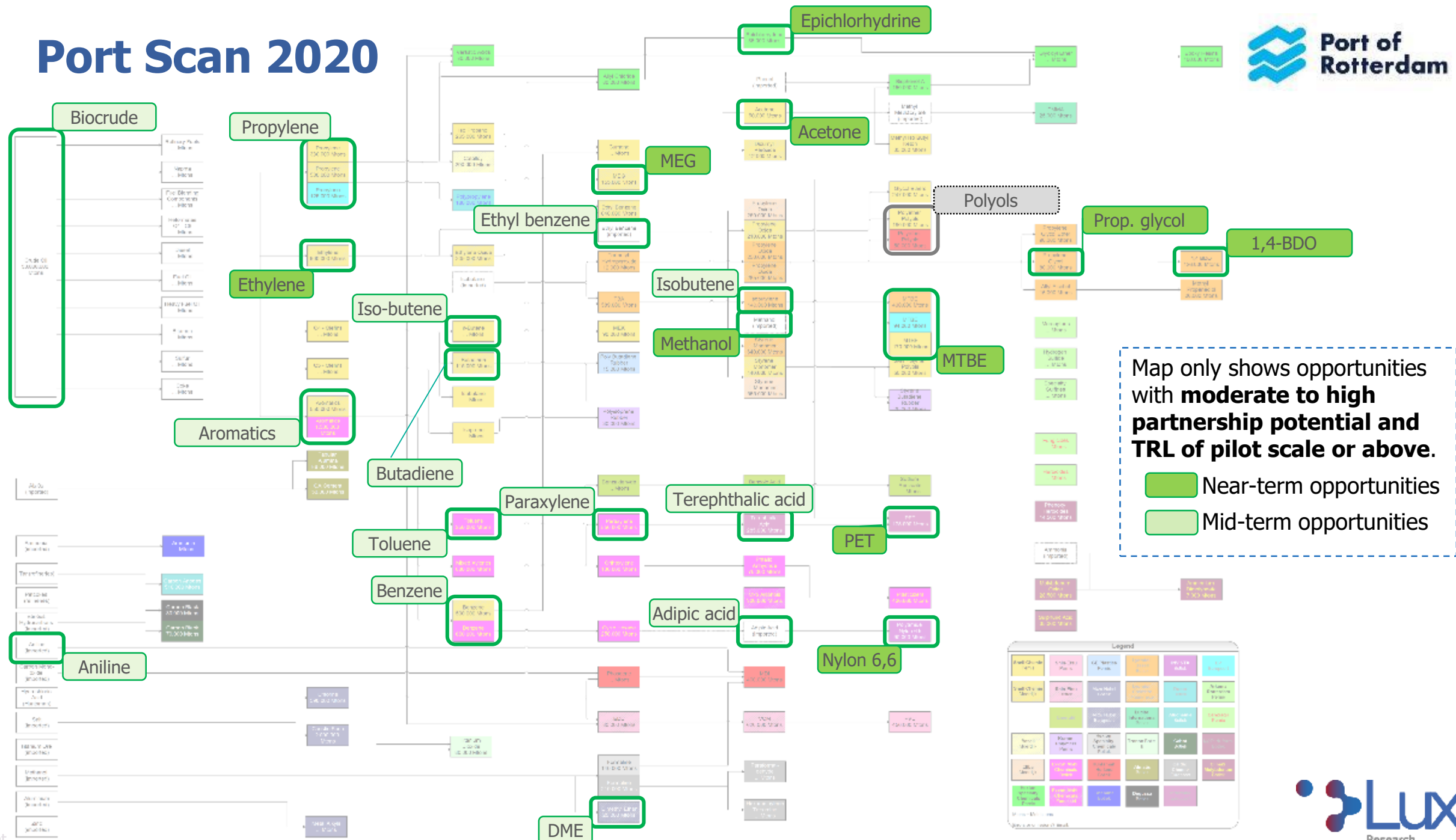
A fifth of pathways have reached commercial scale



Sugar remains the most dominant feedstock of choice



Port Scan 2020



Map only shows opportunities with **moderate to high partnership potential** and **TRL of pilot scale or above**.

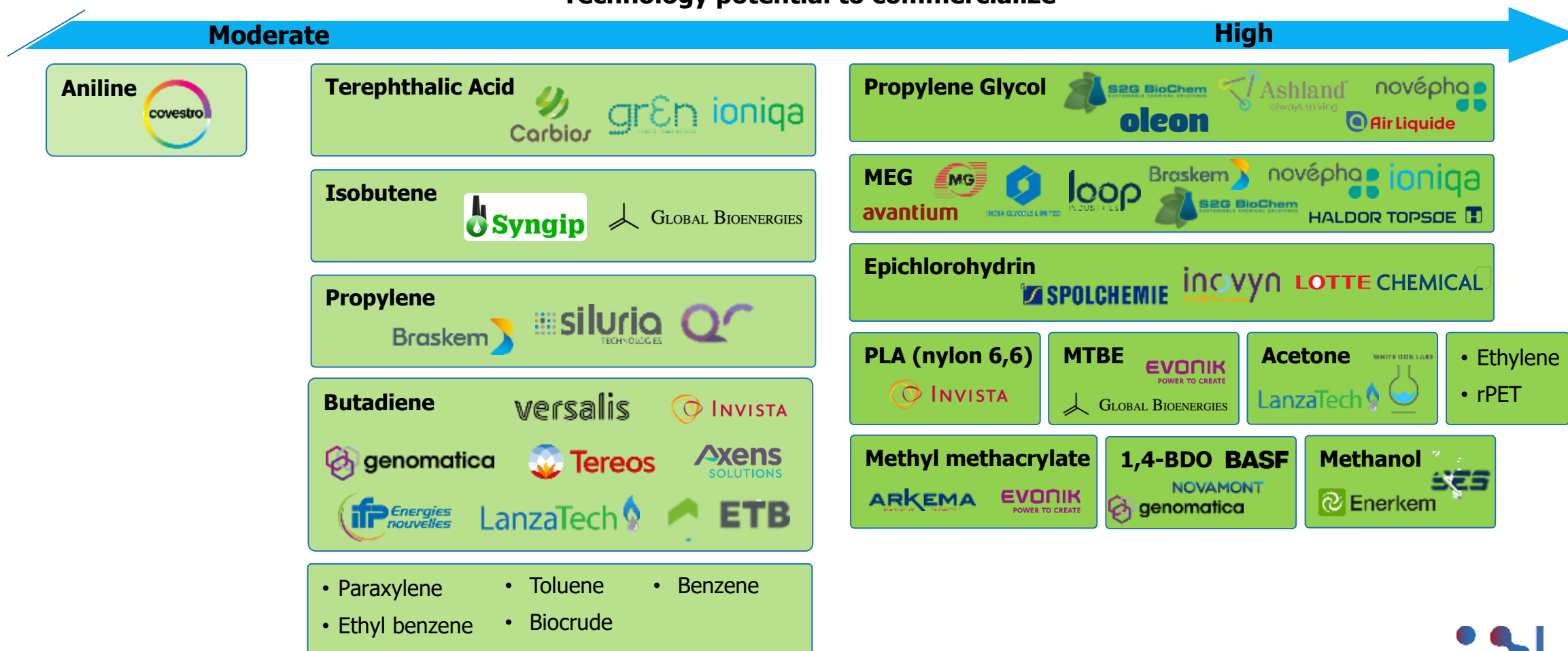
- Near-term opportunities
- Mid-term opportunities

Legend

Shell Chemicals	Indena	Ed. Kemper	Chemical Bank	PPG Industries	Eastman
Shell Chemicals	St. Gobain	Indena	Chemical Bank	PPG Industries	Eastman
Shell Chemicals	St. Gobain	Indena	Chemical Bank	PPG Industries	Eastman
Shell Chemicals	St. Gobain	Indena	Chemical Bank	PPG Industries	Eastman
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There are several renewable options that are promising drop-ins for existing chemicals

Technology potential to commercialize



UW RENWABLE PROJECT IN ROTTERDAM?

Let's connect

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Let's connect

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