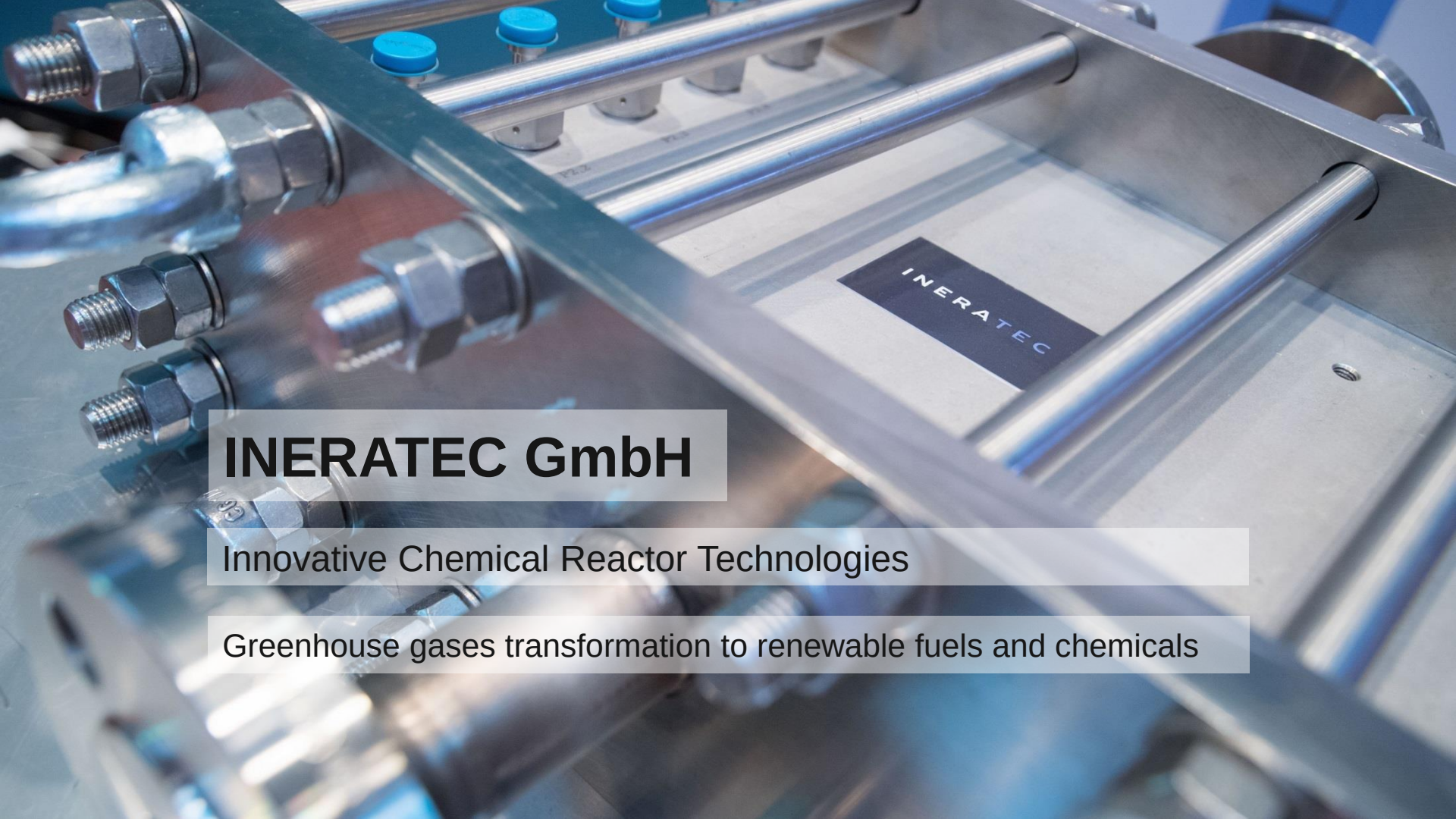


INERATEC GmbH

Innovative Chemical Reactor Technologies

Greenhouse gases transformation to renewable fuels and chemicals

Problem

We are depending on hydrocarbons made from oil and gas

Worldwide energy consumption 2035: >55% oil and gas[1]

Annual CO_2 emissions: >35,000,000,000 tons[1]

[1] Statista

Solutions

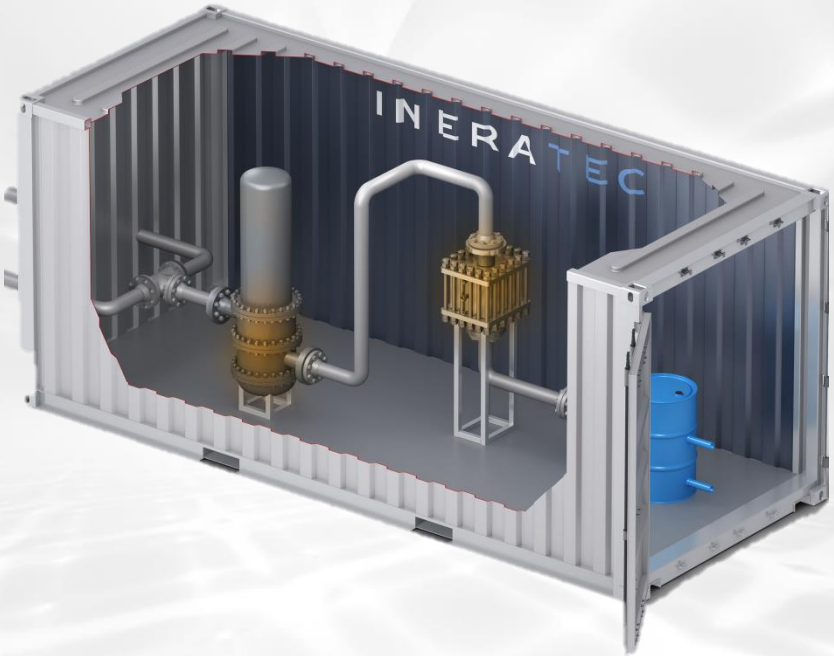
Compact chemical plants that produce renewable hydrocarbons

CO_2 + H_2

Power-to-X

CH_4

Gas-to-X

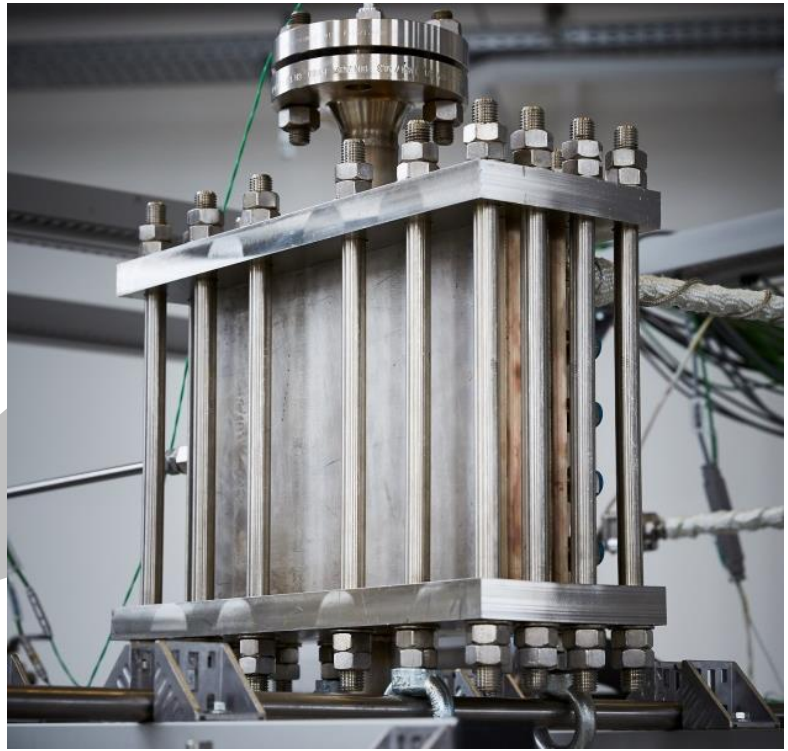


Renewable
Fuels and Materials

Greenhouse Gas Recycling by INERATEC®

Conventional The existing technology is not the perfect match for renewables

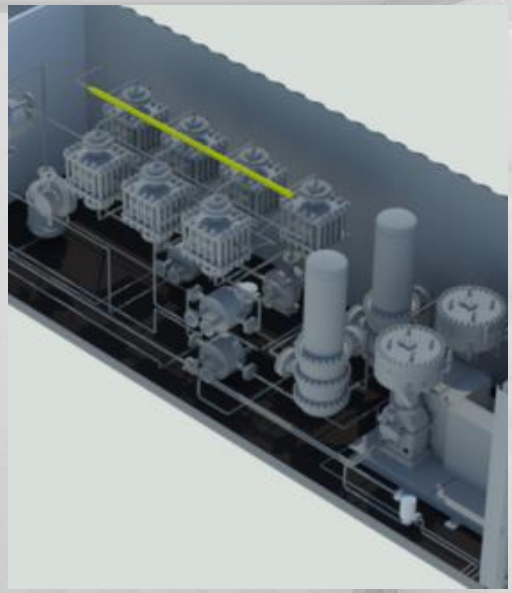
Innovation Most compact chemical reactor technology in the world



Picture source: ausairpower.net

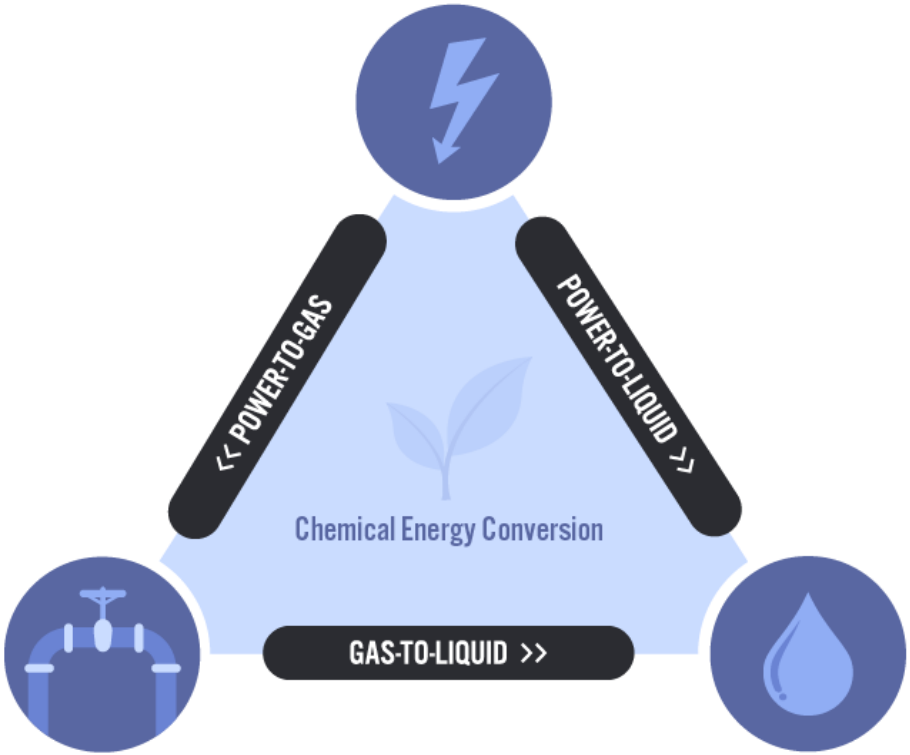
Products

Innovative compact chemical plants in containers



capacity

Processes Power-to-Gas, Power-to-Liquid and Gas-to-Liquid



Activities

Engineering, manufacturing and sale of turn-key chemical plants

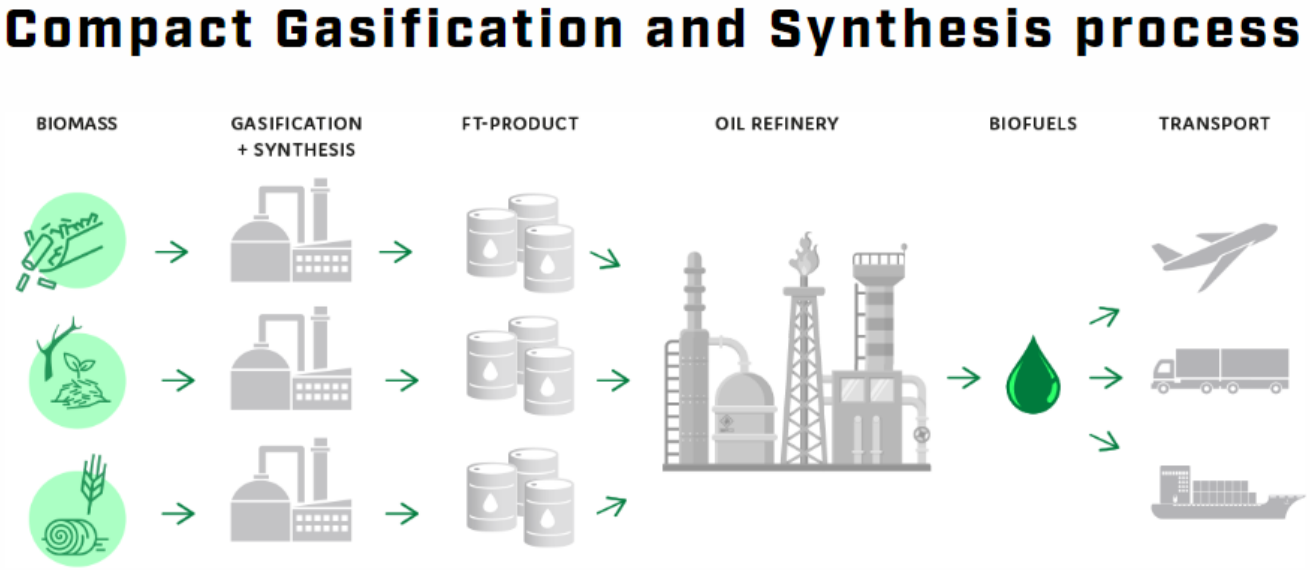
Engineering

Plant construction

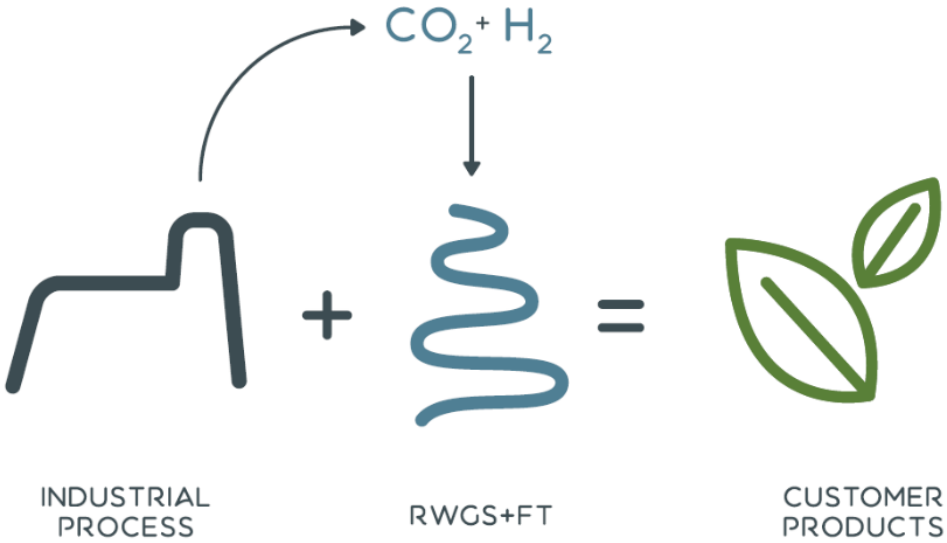
Commissioning & Services

+ Research

Various biogenic input feeds to refined biofuels



ICO2CHEM Industrial CO2 conversion into renewable customer products



Altana

INERATEC - Innovative Chemical Reactor Technologies

Infraserv Höchst

POLITO - Politecnico di Torino

Provadis Hochschule

VTT Technical Research Centre of Finland Ltd

PtL/PtG project Pilot plant installed in Finland in 2016

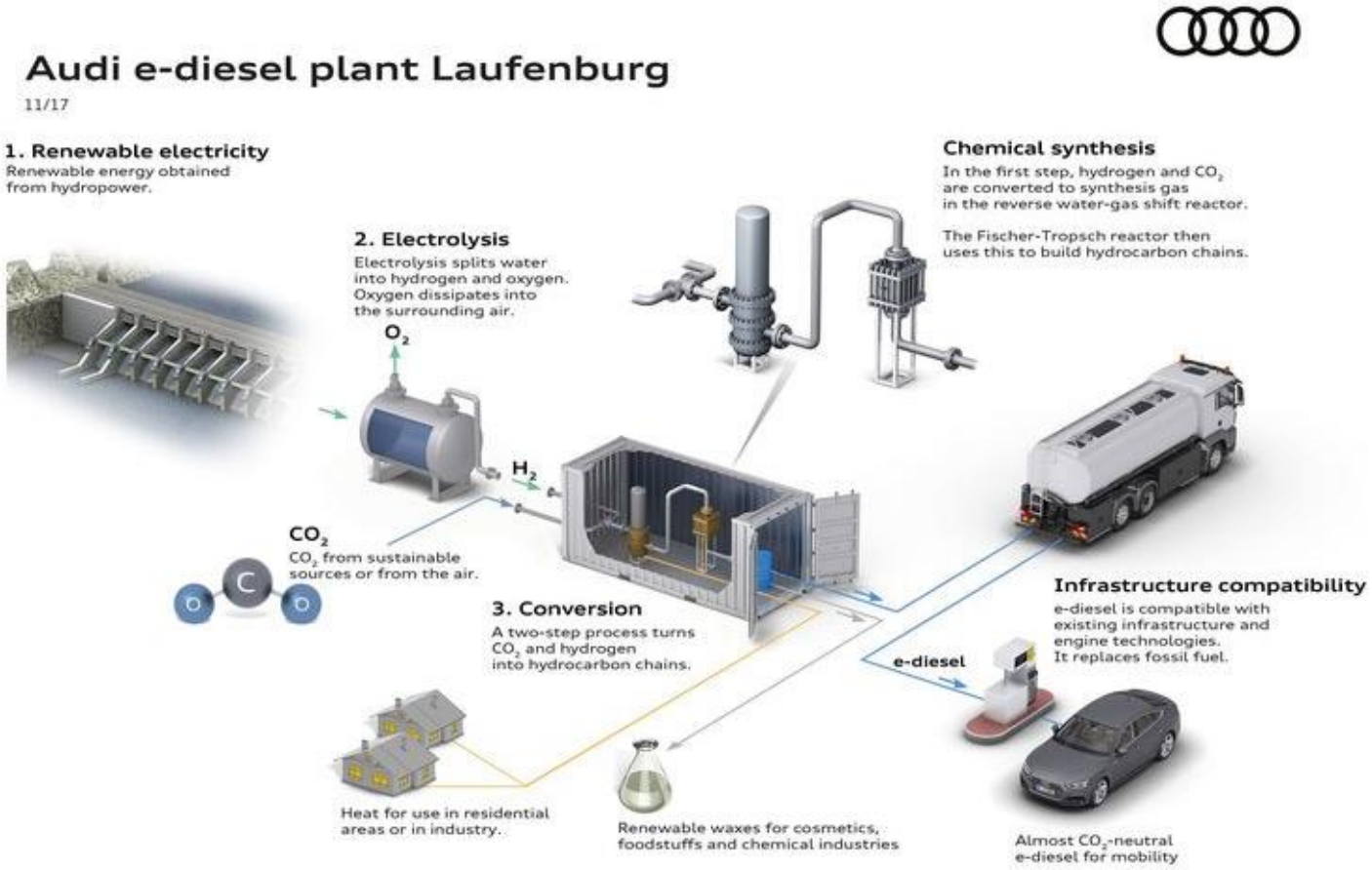
PtG project

Methanation pilot plant near Barcelona (2018)

Integrated PtX plant for kerosene production (2018)

PtKerosene Compact chemical pilot plant converts solar power and CO_2

Next Steps First industrial-scale Power-to-Liquid plant worldwide in 2018



INERATEC GmbH

Innovative Chemical Reactor Technologies

philipp.engelkamp@ineratec.de

Products

Characteristics of the synthetic hydrocarbons

CO_2-neutral production
Sulfur-free
0 Aromates
Increased burning efficiency

Wachs und Kraftstoffproben aus der INERATEC Pilotanlage

Erfolgreiche Spray-Verbrennungsversuche am DLR