

INERATEC
Scalable e-SAF production.

Unlocking value uplift of existing assets.

TECHNOLOGY

Any feedstock in – certified fuels out

Fischer-Tropsch and RWGS are the proven pathways to synthetic fuels and e-SAF

FEEDSTOCK / SYSTEM

POWER-TO-LIQUID

RWGS + Fischer-Tropsch
$CO_2 + H_2 \rightarrow$ e-Fuel

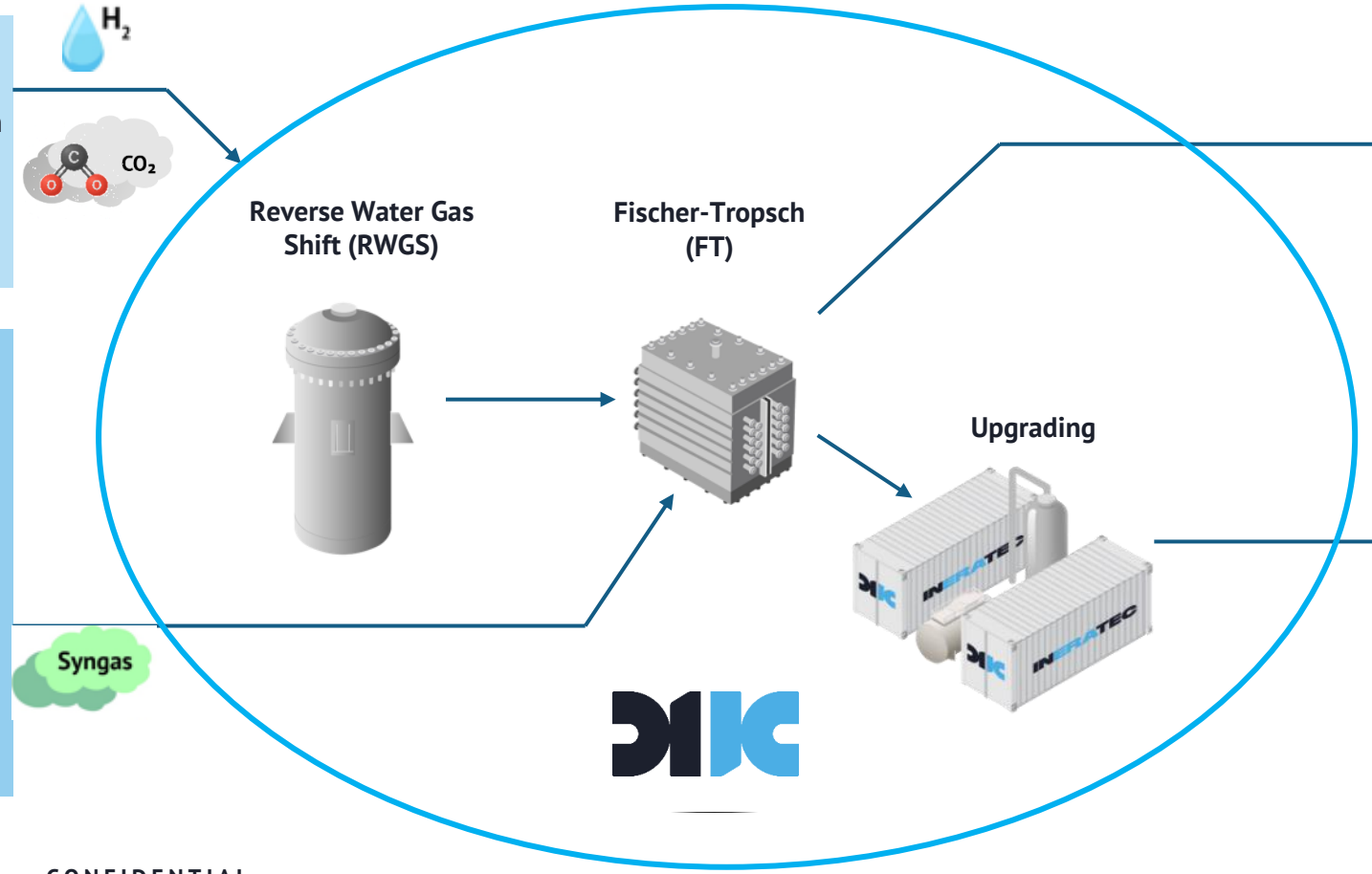
Source:
Electrolyzer

GAS-TO-LIQUID

Fischer-Tropsch
Syngas → e-Fuel

Source:
Gasification of Energy crops, biogenic or other waste

PROCESS STEPS



END PRODUCT OPTIONALITY

- Crude
- Wax
- **(e-)Diesel** EN 15940 compliant
- **(e-)SAF** ASTM compliant
- **Group IV Synthetic base oils**
- **(e-)Naphtha**

© INERATEC 2026

CONFIDENTIAL





We sell e-Fuels®

As a solution provider, we deliver norm-conform drop-in ready SAF (Sustainable Aviation Fuel), AvGas (Aviation Gasoline), e-diesel, e-marine diesel, e-gasoline and e-methanol.

We are technology provider for Power-to-X plants

As a technology provider, we offer modular chemical plants for Power-to-X and Gas-to-X applications.

© INERATEC 2025

OUR SKILLS

Six in-house capabilities. End-to-End.



06 **SALES**
Equipment sales, project co-development, offtakes

01 **DEVELOPMENT**
In the field of microstructured chemical reactors and process integration



USING THE SKILLS OF MORE THAN 150 EMPLOYEES

05 **MAINTENANCE AND OPERATION**
Handling the whole plant life cycle

02 **ENGINEERING**
of turnkey synthesis units and chemical plants



04 **EXECUTION**
of PtL and GtL projects together with project development partners

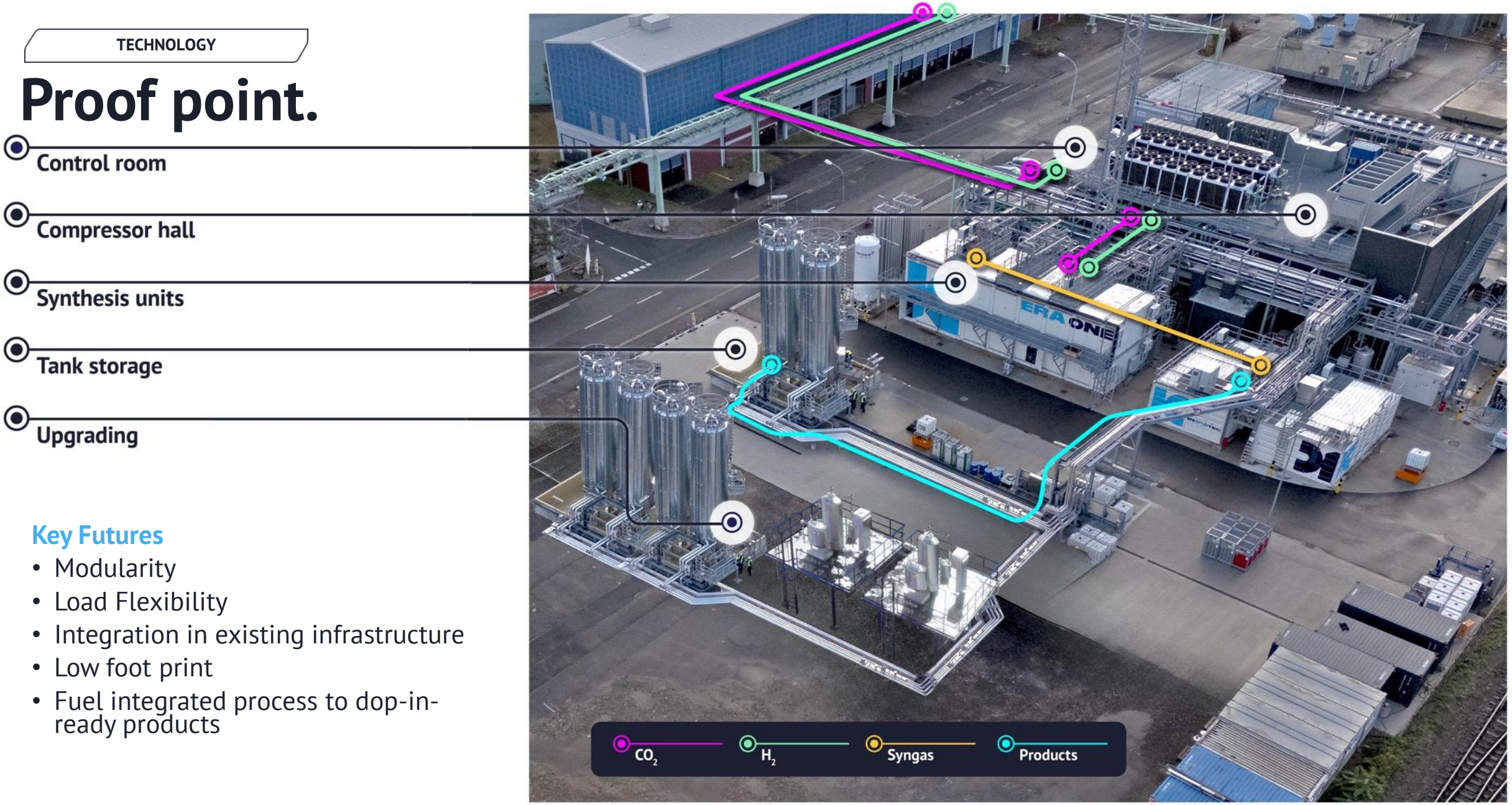
03 **MANUFACTURING**
of turnkey synthesis units with integrated microstructured reactors



© INERATEC 2026
CONFIDENTIAL

TECHNOLOGY

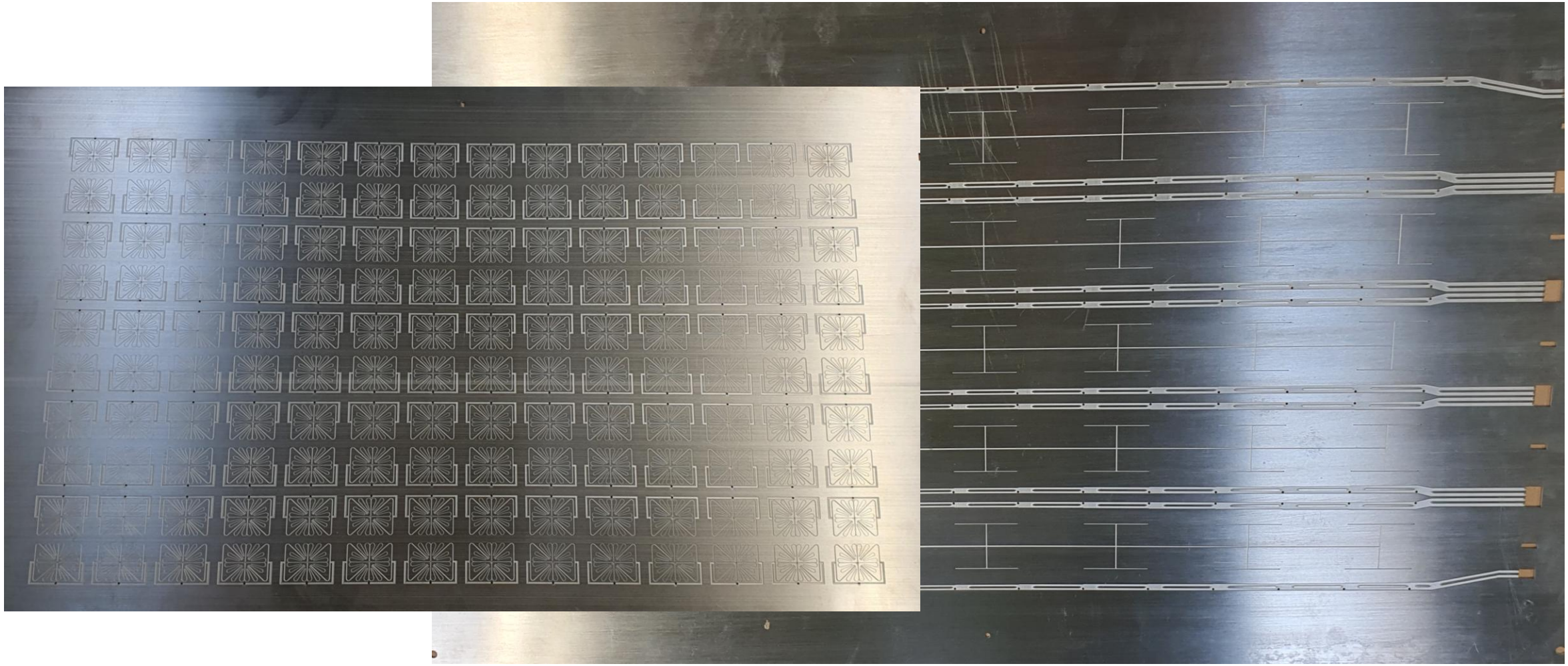
Proof point.



Key Futures

- Modularity
- Load Flexibility
- Integration in existing infrastructure
- Low foot print
- Fuel integrated process to dop-in-ready products

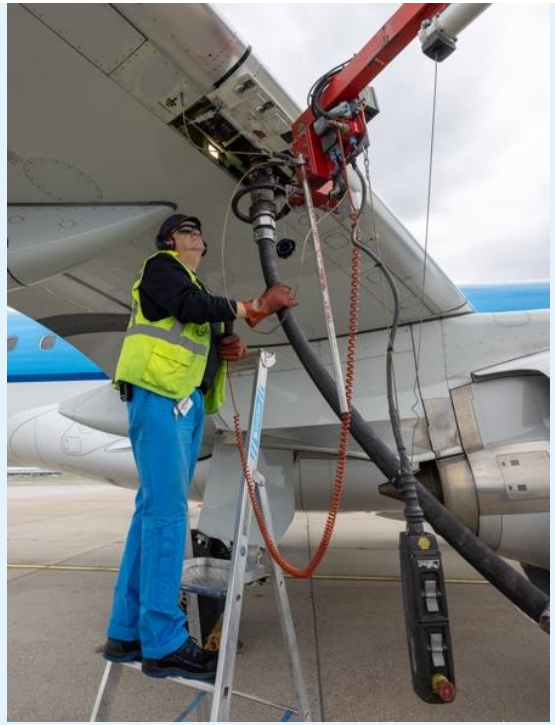
INERATEC Technology



© INERATEC 2026
CONFIDENTIAL

First e-SAF delivered to a commercial passenger flight







KLM MB Energy Hamburg Airport

© INERATEC 2026

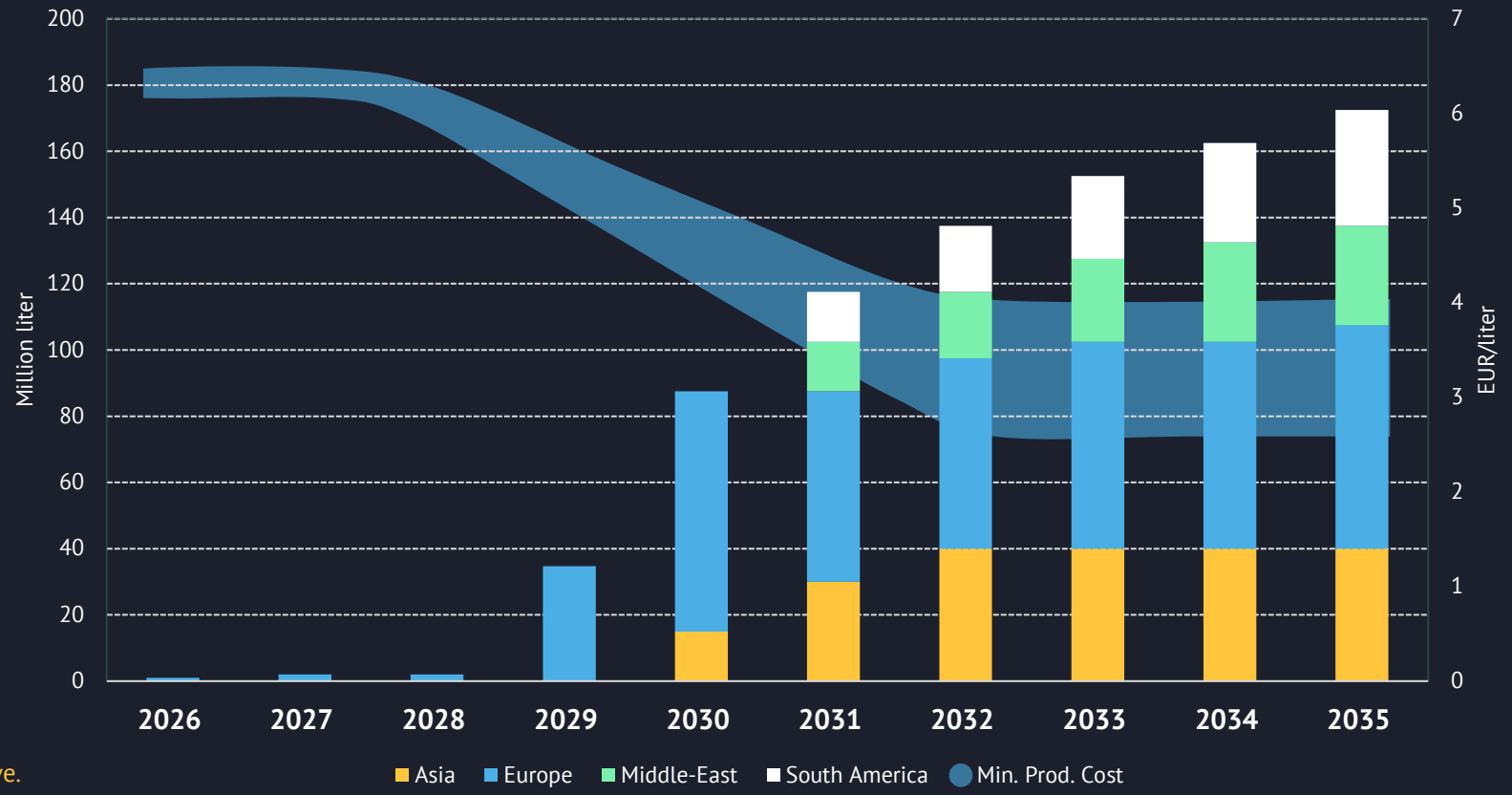
Production of e-Fuel to reach global scale

Project pipeline includes plants across the globe

INERATEC is expanding global project portfolio, launching new e-Fuel production facilities across key markets.

Projects will significantly scale up production volumes, supporting compliance with RefuelEU Aviation and other sustainable fuel mandates.

As capacity grows, economies of scale and technological optimization drive down cost significantly



All cost derived from EASA reference price. All numbers are indicative.

© INERATEC 2026

CONFIDENTIAL

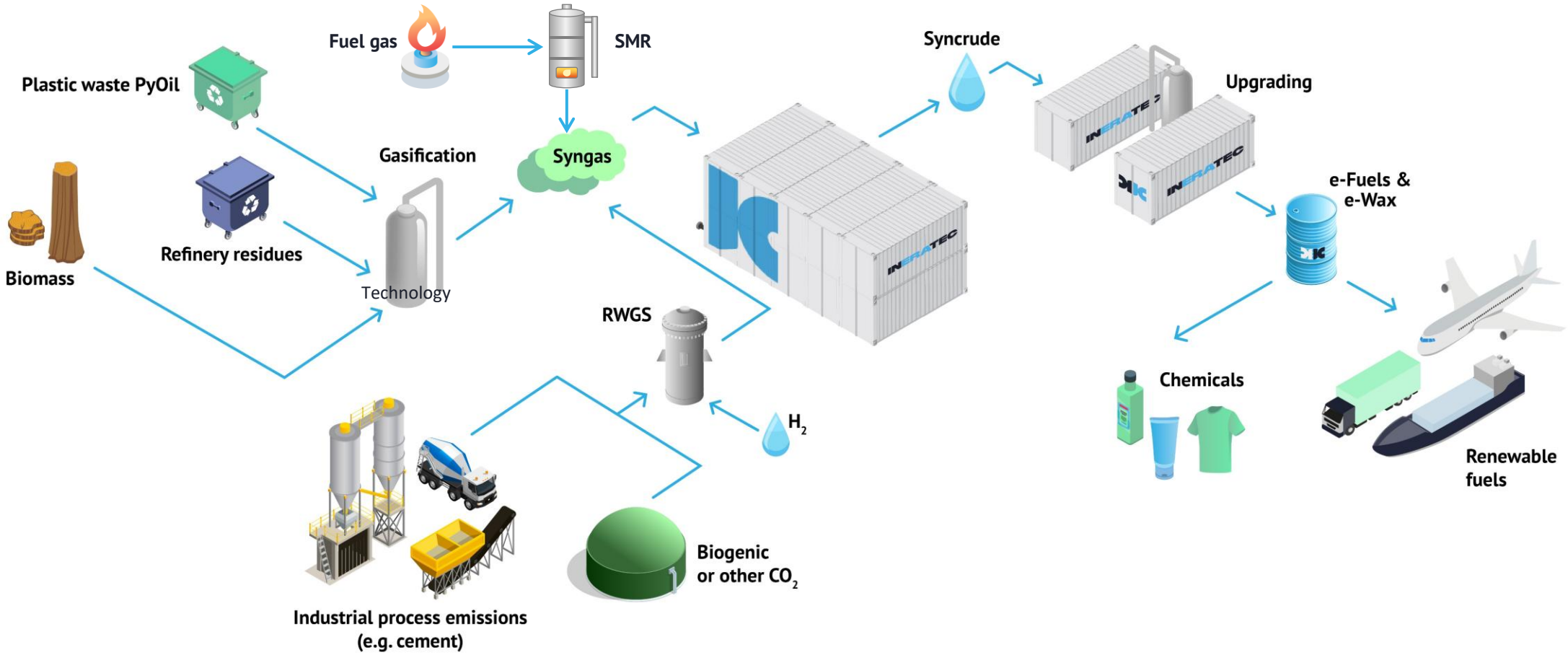


INERATEC

Scalable e-SAF production.

Unlocking value uplift of existing assets.

INERATEC technology integrates into existing infrastructure



Upstream & industrial project partners | Technology (RWGS & FT reactors, plants, upgrading) | Downstream & logistics partners

© INERATEC 2026 CONFIDENTIAL

From stranded streams to valuable products

1

CO_2

THE WHY

Cut CO_2 where it is emitted

Fuel-gas-fired heaters, boilers & SMRs cause most refinery CO_2 – ETS costs & RED III targets push them to green power

2



THE SHIFT

Electrification changes the refinery S&P and FG Balance

Replacing grey hydrogen with green hydrogen reduces fuel gas demand in SMR units. Heaters, boilers & H_2 production move from fuel gas to green electricity

3



THE SIDE STREAM

Fuel gas becomes stranded

Hydrogen- and carbon-rich streams become underutilized

4



THE OPPORTUNITY

Convert it into products

Modular Fischer-Tropsch turns side streams into value

STARTING POINT How is refinery fuel gas produced and used today?

© INERATEC 2026 CONFIDENTIAL

Refinery Fuel Gas – Potential in current setup

Crude-to-products flow: Fuel Gas is recovered in each unit, collected in the FG header and fired in the consumers.



Crude oil



CDU - VDU - stabilizers



HDT naphtha, distillates



Platformer & misc.



HCK



FCC



Refinery products



FG header

Will be electrified



H2 Plant – SMR

H2



Process heaters

Process heat



Steam boilers

Steam

Legend

Process stream

FG collection

FG injection

© INERATEC 2026

CONFIDENTIAL

Illustrative only – stream routing simplified.

Refinery Fuel Gas – current balance

Exemplary FG balance for a typical ~12 Mt.p.a (1500 t/h) refinery

FG generation [t/h]

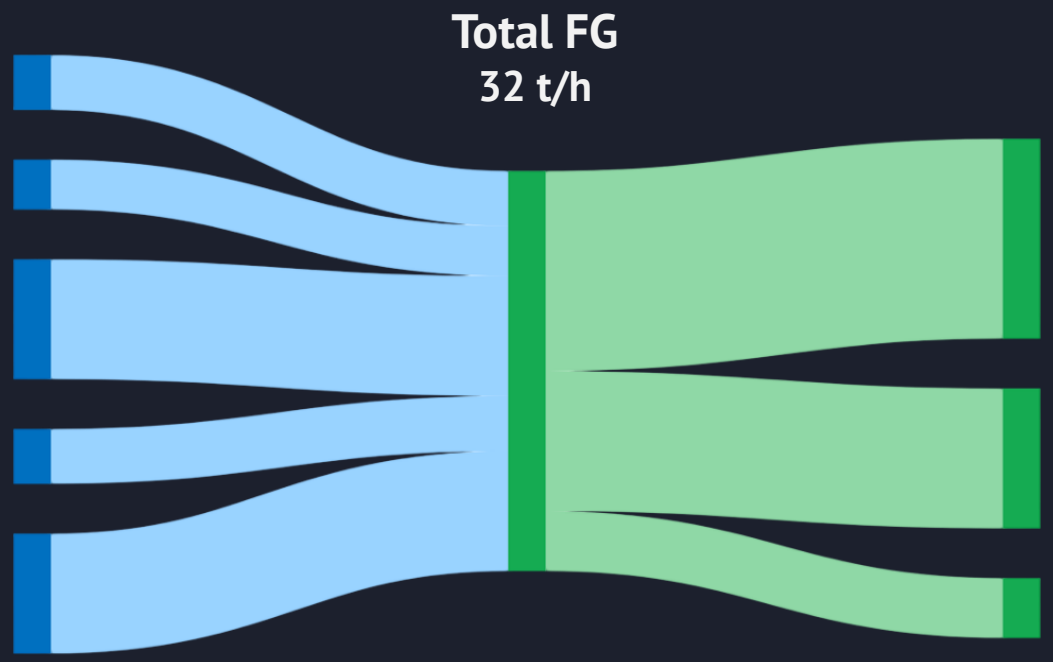
CDU - VDU - stabilizers
4.4 t/h

HDT naphtha, distillates
4.0 t/h

Platformer &misc.
9.6 t/h

HCK
4.4 t/h

FCC dry gas
9.6 t/h



FG consumption [t/h]

H2 Plant – SMR
16 t/h

Process heaters
11.2 t/h

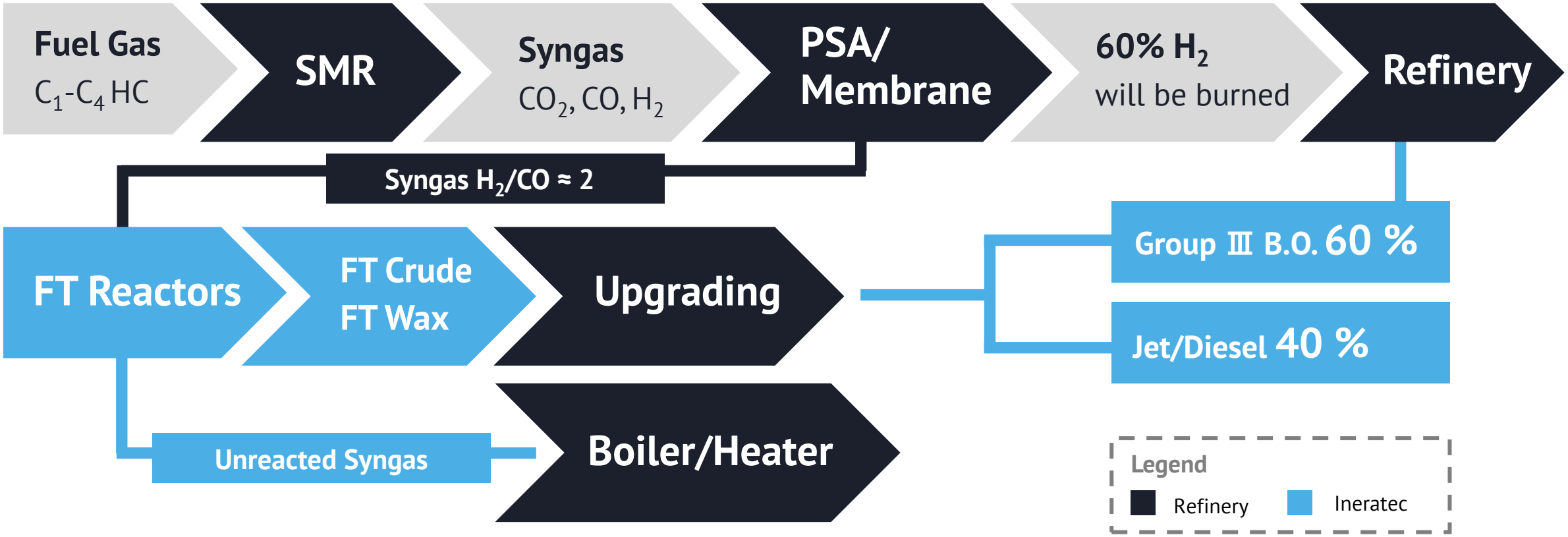
Steam boilers
4.8 t/h

*Will be electrified

© INERATEC 2026
CONFIDENTIAL

FT modules generate additional high value products

Replacing mechanical drives, process heating, steam generation, and SMR with electrified alternatives can release fuel gas, which can be converted into valuable products by INERATEC FT technology



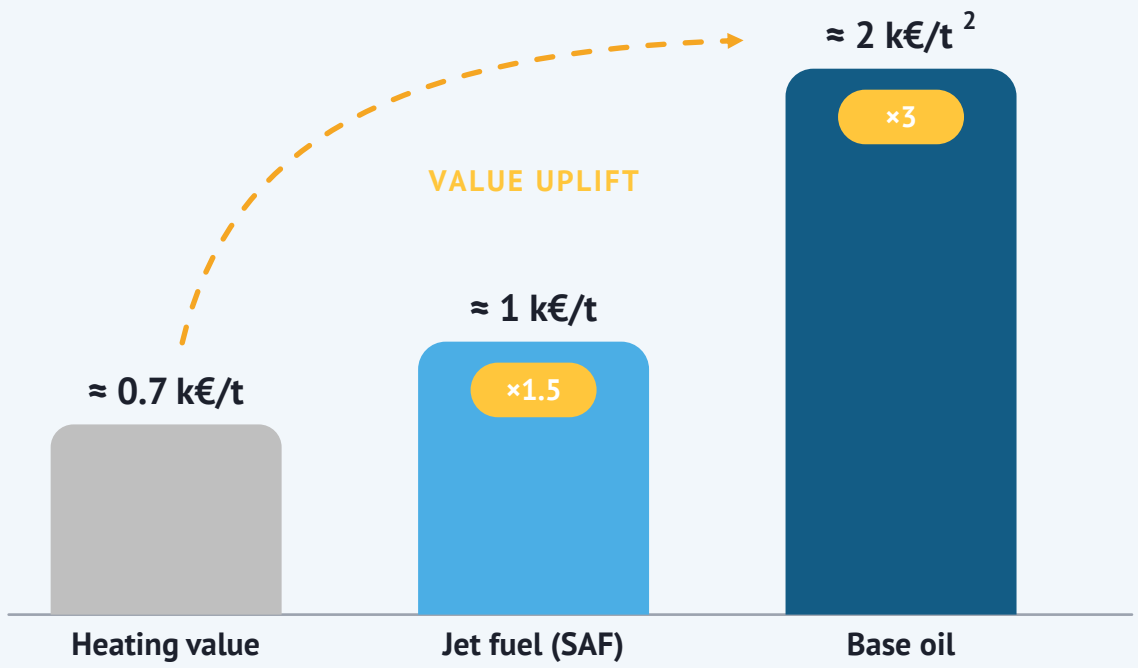
© INERATEC 2026
CONFIDENTIAL

REFINERY

Value uplift for fuel gas

Same fuel gas, higher value: from burner fuel to premium FT products

VALUE PER TONNE · INDICATIVE[1]



Today: burned, CO_2 emitted

INERATEC FT: carbon utilization generating premium

FT PRODUCT ADVANTAGES

- ✓ **Paraffinic** — near-zero sulphur and aromatics
- ✓ **High purity** — clean burning, low soot
- ✓ **Drop-in** — meets existing fuel and lube specs
- ✓ **Premium base oil** — high viscosity index

MODULAR PLANTS

- ✓ **Modular** — scalable to demand
- ✓ **Small footprint** — fits existing plot space
- ✓ **On site** — reuses site fuel gas

TAKEAWAY INERATEC offers a more valuable way to use fuel gas – premium products instead of heat. Utilizing carbon and energy.

[1] *Indicative: heat at 50 €/MWh × 45 MJ/kg ≈ 0.6 k€/t; base oil ≈ 2 €/kg. Outcomes vary by site*

[2] Base Oil Price Trend July 2026 | Latest Price & Forecast.

© INERATEC 2026 CONFIDENTIAL

Identifying opportunities to uplift the value

of stranded streams to maximize the use of utilities and OSBL, 4 questions qualify an opportunity.

THE SITE QUESTIONS

Questionnaire

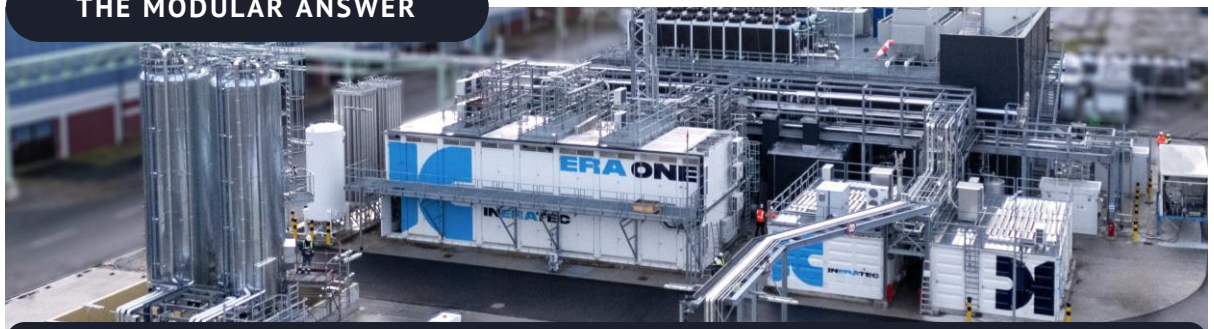
-C-H- **FUEL GAS**
Suitable stream available or planned?

CO_2 **CARBON & H2**
Additional sources available?

INFRASTRUCTURE
Utilities, storage and logistics?

FT **PRODUCT PATHWAY**
How can FT products add most value?

THE MODULAR ANSWER



01 Fit the capacity
to FG and site

02 Standardized FT modules
reuse proven design

03 Adapt the interfaces
site connections

04 Expand when justified
add trains later

TAKEAWAY The site defines the opportunity – the refinery is not redesigned, a defined conversion island is integrated.

THE PATH TO AN OPERATING ASSET

01 Opportunity screening · 02 Integration concept · 03 Feasibility study · 04 FEED · 5 Investment decision · 06 Delivery & integration

© INERATEC 2026
CONFIDENTIAL

Why is INERATEC the right partner?

- Modular solution with minimized food print
- Flexibility on product slate post FID
- High load flexibility
- High process efficiency
- Customers benefit from INERATEC's long operating experience
- INERATEC supports the client from idea to on side operation and maintenance
- High capability for integration in existing infrastructure using CO2, H2 or Syngas to produce CO, Wax and crude or drop-in-ready products

© INERATEC 2026 CONFIDENTIAL

Get in touch now.

Olaf von Bartenwerffer
olaf.vonbartenwerffer@ineratec.de

Christian Bersier
christian.bersier@ineratec.ch

INERATEC GmbH
Siemensallee 84
76187 Karlsruhe
www.ineratec.de

© INERATEC 2026 CONFIDENTIAL

Disclaimer This deck is intended solely for informational purposes and does not constitute a commercial offer, a guarantee of future performance, or a legally binding commitment. Please note that all information - including but not limited to product specifications, performance data, availability, and timelines - is preliminary and may be updated or modified without prior notice. The content is intended for informational purposes only.

The content may include references to regulatory or environmental performance targets. Such references are indicative only and subject to applicable legal and certification requirements.

This presentation is confidential and may not be reproduced, distributed, or disclosed to third parties without prior written consent from INERATEC.

© INERATEC 2026

CONFIDENTIAL