

SYNOVA

De-risking the scale-up of
chemical recycling technologies



March 2026



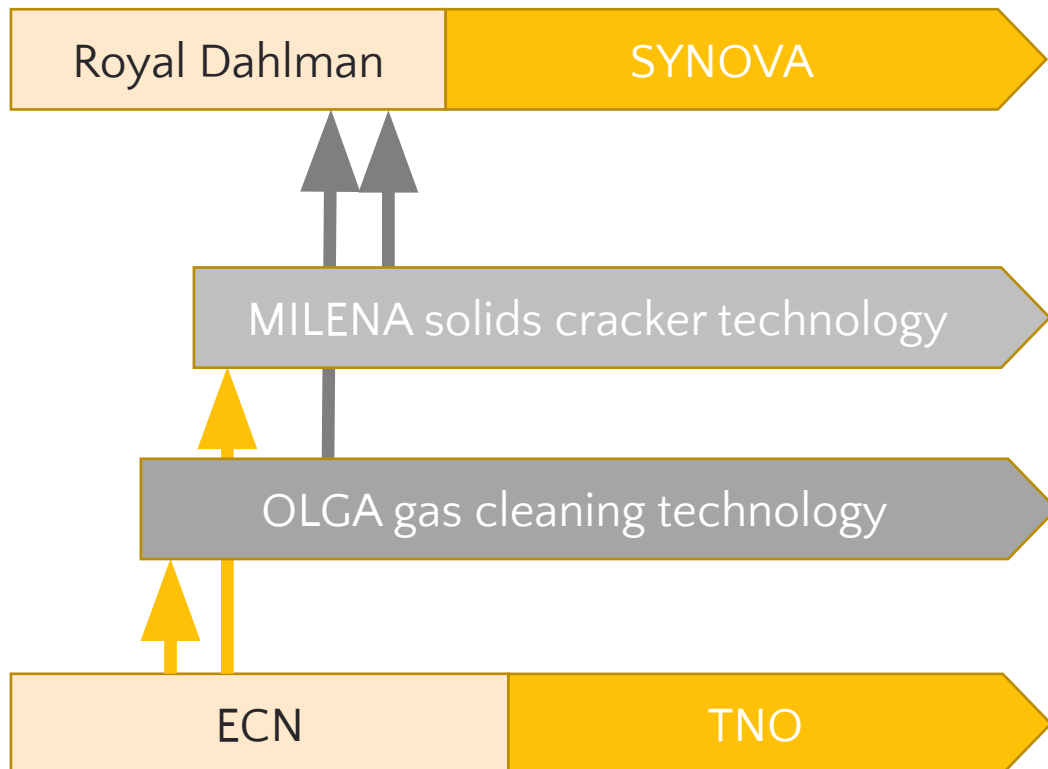


SYNOVA OVERVIEW

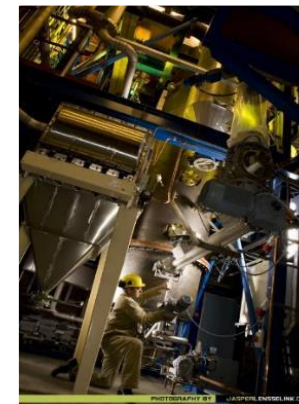
SYNOVA

WHO ARE WE

A strong team providing defossilisation solutions



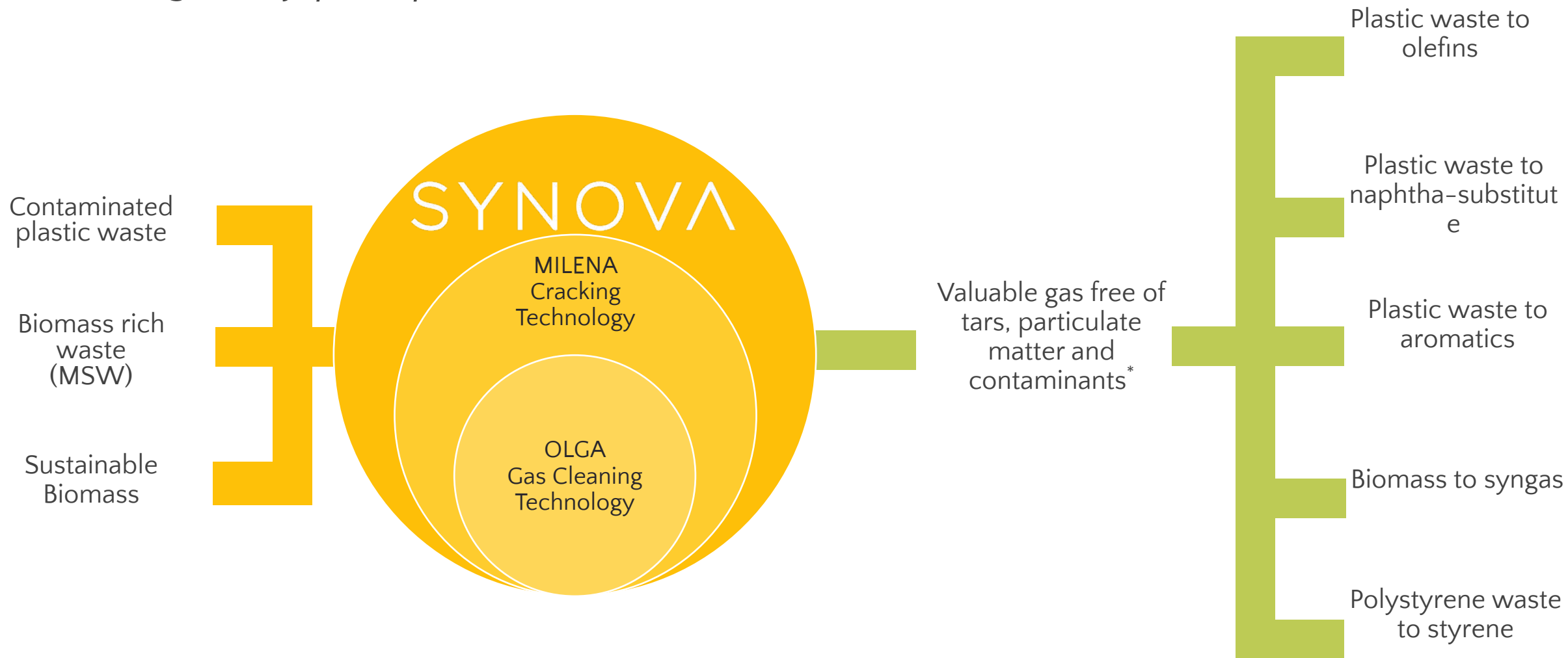
Technology and solutions development and commercialization



Research and development and feedstock testing

SYNOVA'S MISSION

Moving away from fossil carbon at scale

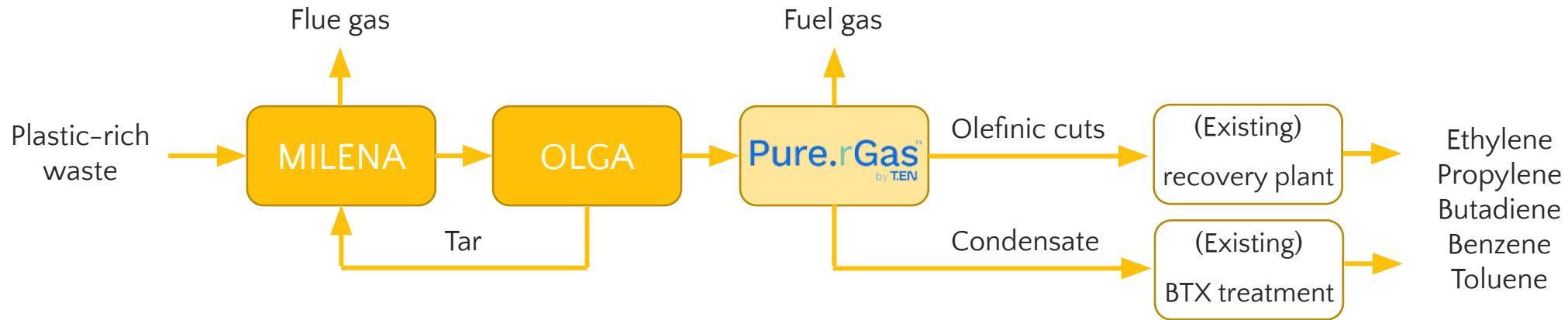


* Gas conditioning to achieve contaminant levels low enough for sensitive catalyst applications

SYNOVA SOLUTION

The waste to olefins process

SYNOVA



Designed for a large feedstock operating window

Fluidized bed steam cracker at 750°C

Energy from process residues

Cleaning, purification, and fractionation of the gases

High yield of High Value Chemicals



SYNOVA'S CORE TECHNOLOGIES

Scalable, robust and ready for commercial FOAK



MILENA cracker

- MILENA technology based on FCC technology coupled fluidized beds
- Heat transfer via circulating sand, no catalyst
- Temperature low enough to avoid agglomeration risk
- 100% carbon conversion
- Low reactor pressure

OLGA gas cleaning

- OLGA technology based on Coke Oven Gas cleaning: gas/liquid contactors and Electrostatic Precipitator (ESP)
- Removes 99.9% of Poly Aromatic Hydrocarbons (tar) and particles



DE-RISKING SCALE-UP

WHY THE TOPIC MATTERS NOW

*-1.8M tons/year chemically recycled plastic is required to comply with PPWR in 2030**

- Circular feedstock demand rising
- Tight capital markets
- High technical uncertainty, long development timelines, and large upfront capex in chemical recycling
- Need for faster, cash-efficient commercialization



Traditional scale-up path (Lab → Pilot → Demo → Commercial) is neither fast nor cash-efficient

* SYNONA estimate

WHY DEMO SCALE UNDERPERFORMS

Too small to make money – too large to be cheap

Demo scale pitfalls

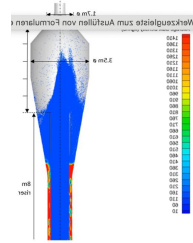
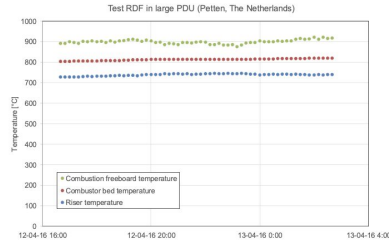
- High cost, little revenue
- Long timelines
- Poor scalability of data
- Stranded assets risk

Advantages of skipping demo scale

- Faster time-to-market
- Reduced capital spending
- Higher learning efficiency – Fewer redesign cycles
- Better investor alignment

... but structured de-risking process key to success

HOW TO DE-RISK COMMERCIAL SCALE FOAK WITHOUT DEMO



High-intensity pilot learning

- Long-duration 24/7 pilot runs with real feedstock
- Reliable yield, mass balance, energy balance
- Metallurgy & fouling studies
- Contaminant analyses and monitoring

Advanced modeling

- CFD
- Kinetic modeling
- Dynamic process simulation

Collaboration

- Leverage client and partner expertise
- Petrochemical companies, EPCs, waste suppliers

Modular design

- Treat first commercial plant at quasi demo that makes money
- Multiple trains built out in process steps benefiting from redundancies
- Leverage co-location with industrial assets

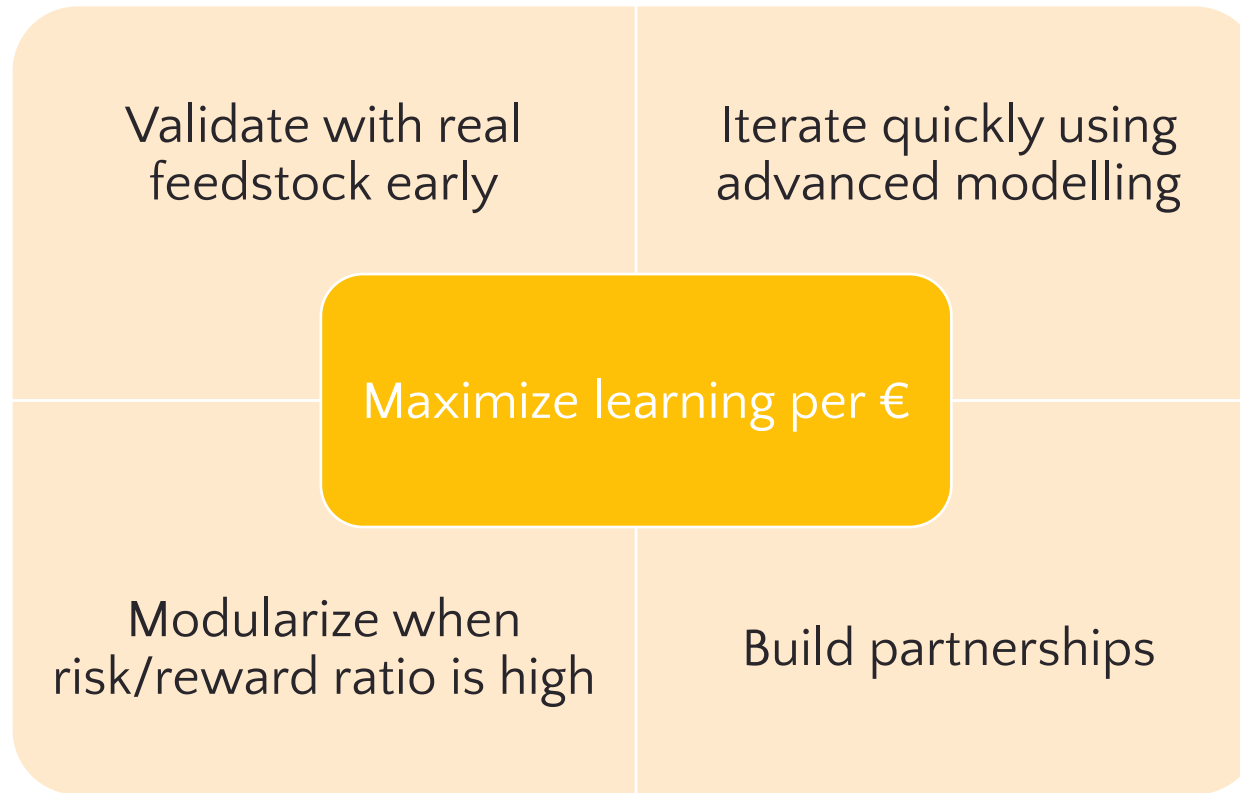
ADDITIONAL MILENA DE-RISKING

Non-reactive testing at scale



Full scale confirmatory test of reactor hydrodynamics in progress with Particulate Solid Research, Inc. (PSRI)

CASH EFFICIENT DE-RISKING PRINCIPLES



Disciplined learning rather than capital-heavy experimentation

KEY TAKEAWAYS

- Demo scale adds cost and time
- Demo scale has high risk to increase cash burn and become a stranded asset
- Modern tools + modularity enable safe commercial-first strategies
- Disciplined learning beats big spending
- Partnerships accelerate de-risking and commercialization

Multiple technical due diligences on the SYNOVA technologies completed with leading chemical companies – Unanimous conclusion: “It will work!”



SYNOVA



www.synovatech.com