

Optimizing SAF: Technology and Economics – More Options = More Decisions

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tcbiomass⁺2026

August 2026

Honeywell Technologies – Process Technology

Refining



Petrochemicals



Low Carbon Energy



Gas / LNG



Industrial Solutions



Over a century of experience shaping the refining, petrochemical and gas processing industries through invention and innovation

Technology capabilities that help reduce industrial emissions

Process technology and equipment to enable the optimization of LNG production facilities

Separation, purification, and industrial process solutions across Oil, Gas, and Industrial end use applications

Honeywell Technologies UOP + Catalyst Technologies

Honeywell Technologies Sundyne & LNG

Honeywell Technologies Industrial Solutions + Catalyst Technologies

Process Technology powers the world's critical energy infrastructure

90%

of the world's biodegradable detergents

60%

of the world's paraxylene

70%

of the world's polyester

40%

of global LNG pre-treated

66%

Liquefaction of global LNG

15M

tons of captured CO₂ worldwide

60%

of the world's gasoline

95+

Renewable Fuels Licenses

33%

of the world's Sustainable Aviation Fuel

150+

Active low carbon energy projects in the pipeline

#1

In methanol synthesis technology

33%

of global methanol produced with our technology

6700+

active patents across a broad range of energy verticals

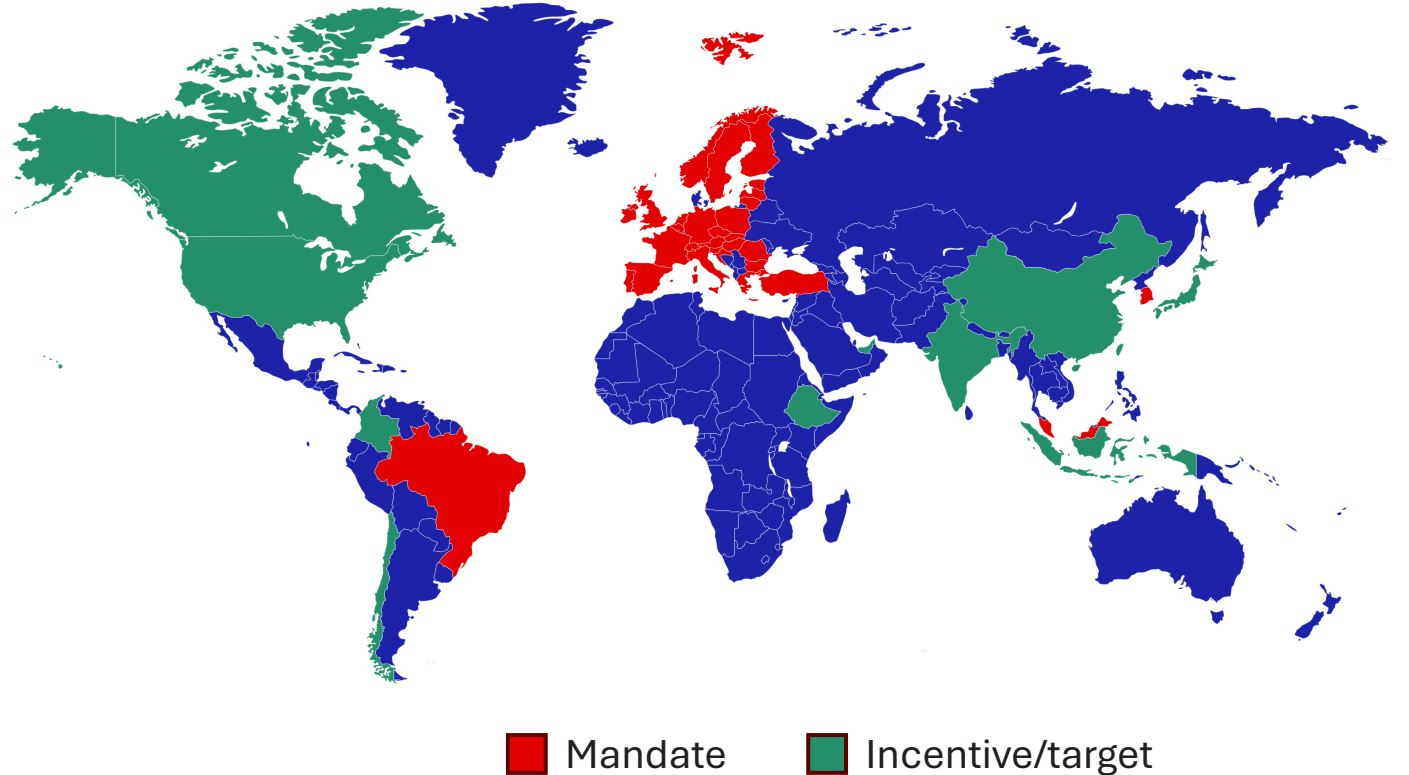
Catalyst Technologies Influenced

The Direction of Travel is Clear

The industry has won the demand argument

- ✈ SAF mandates in force since 2025 in EU/UK
- ✈ Production has doubled each year since 2018
- ✈ 2030 production expected to reach 22.5 billion litres (18 million tonnes)

The direction is clear - SAF will scale



Source: Honeywell analysis. Note: SAF mandates and targets shown are indicative only; regional and sub-regional requirements may differ from national ambitions and may change over time.

But the Problem has Changed

From proving SAF works ... to learning how to scale it

Phase 1: 2015-2025

- Prove SAF works
- Early deployment
- Single pathway (HEFA)
- Technology validation
- Develop pathways
- Achieve certification
- Demonstrate commercial viability

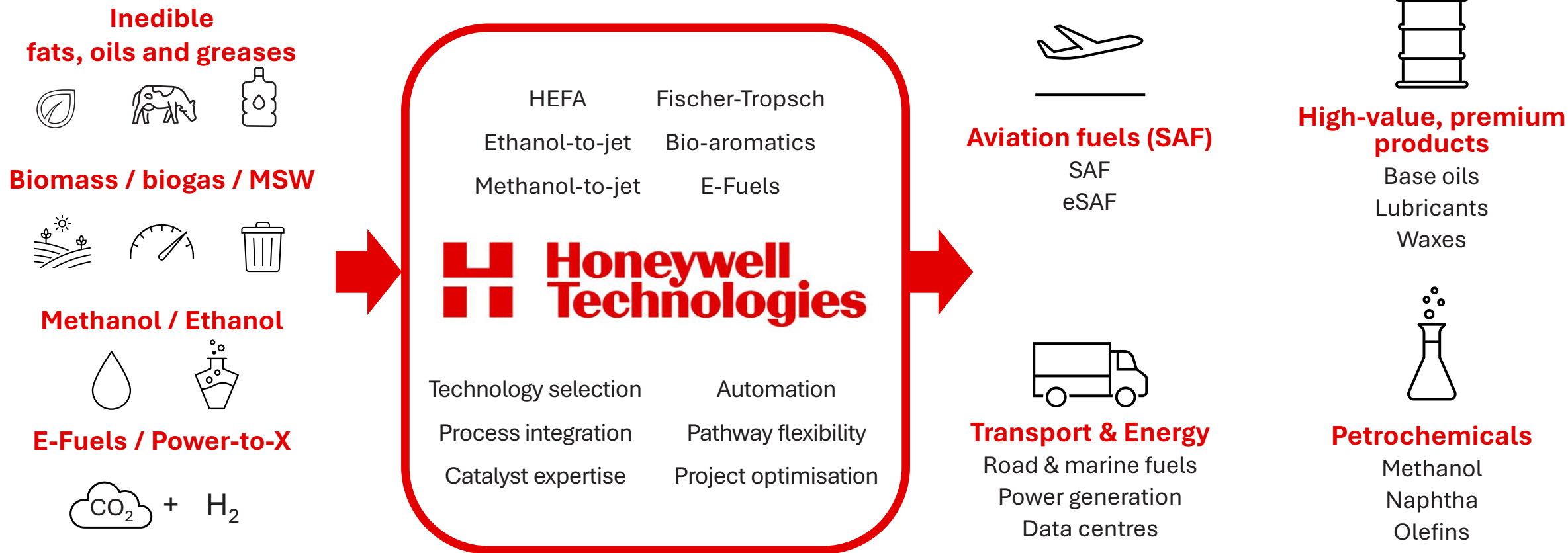
Phase 2: 2026-2035

- Scale SAF successfully
- Multiple pathways
- Increasing complexity
- Capital-intensive decisions
- Reduce cost through deployment
- Build supply chains
- Expand infrastructure
- Secure feedstocks and energy

We risk having a 2050 conversation while still facing a 2030 challenge

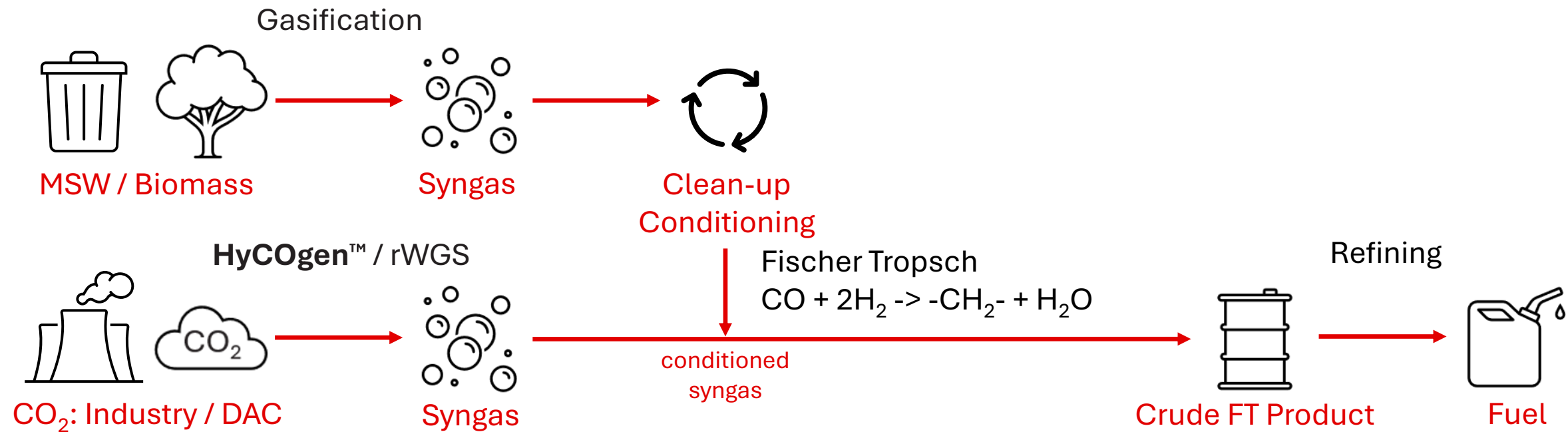
A Multi-Pathway Future: Honeywell a Partner for Energy Security

Navigating complexity requires more than a single SAF technology



Successful projects match the right resources to the right technologies and the right markets

Multiple Routes to Sustainable Fuels via FT Synthesis



Integration

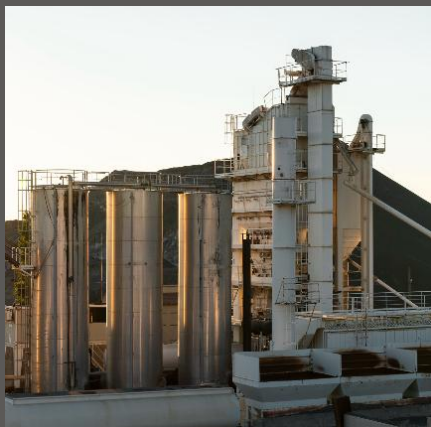
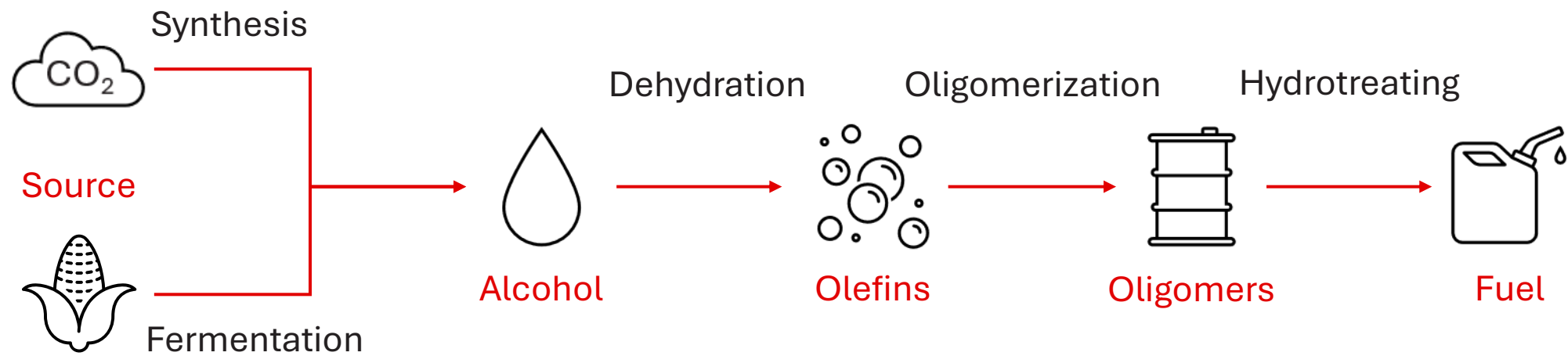


Simplicity



Feed Purity

Alcohol to Jet Process



Storage

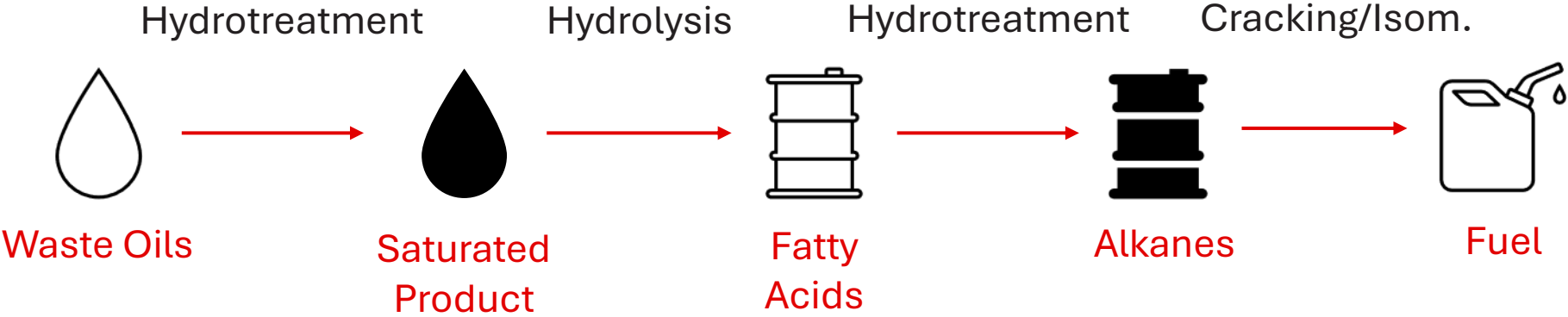


Transport



Commerce

HEFA Process



High TRL



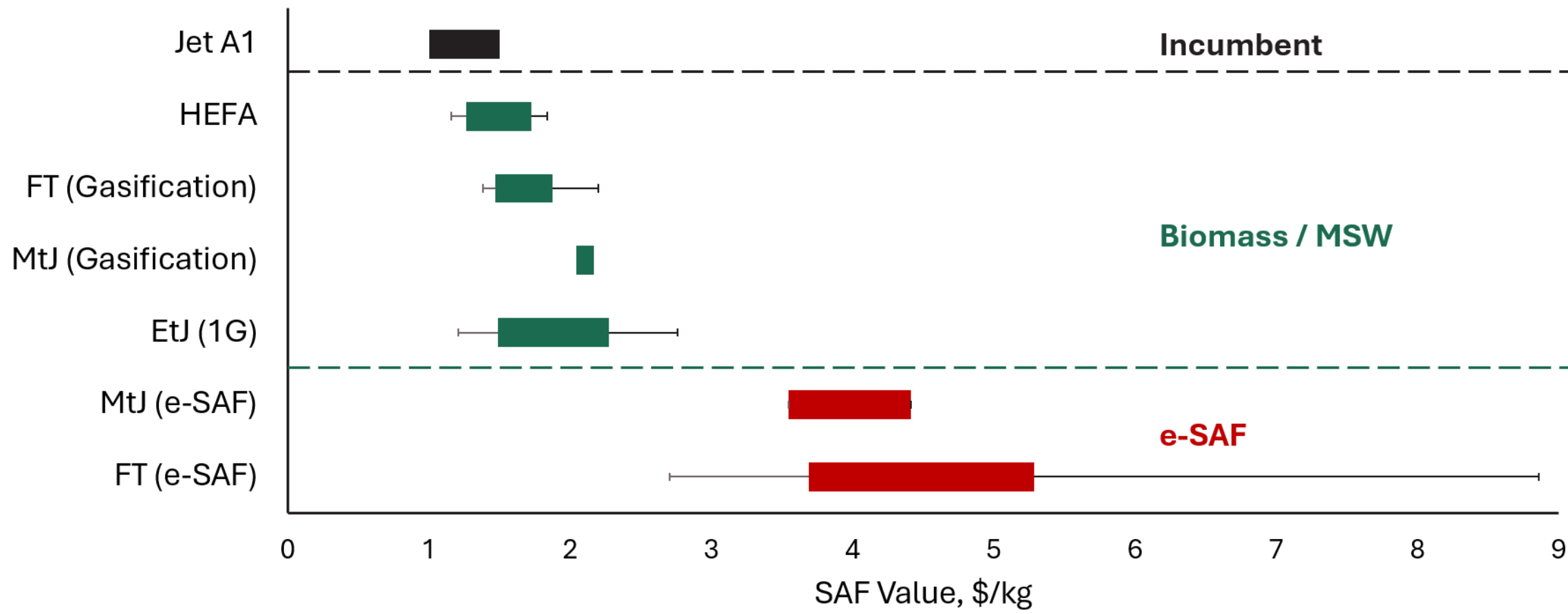
Strong Econ



Limited Feed

Benchmarking SAF

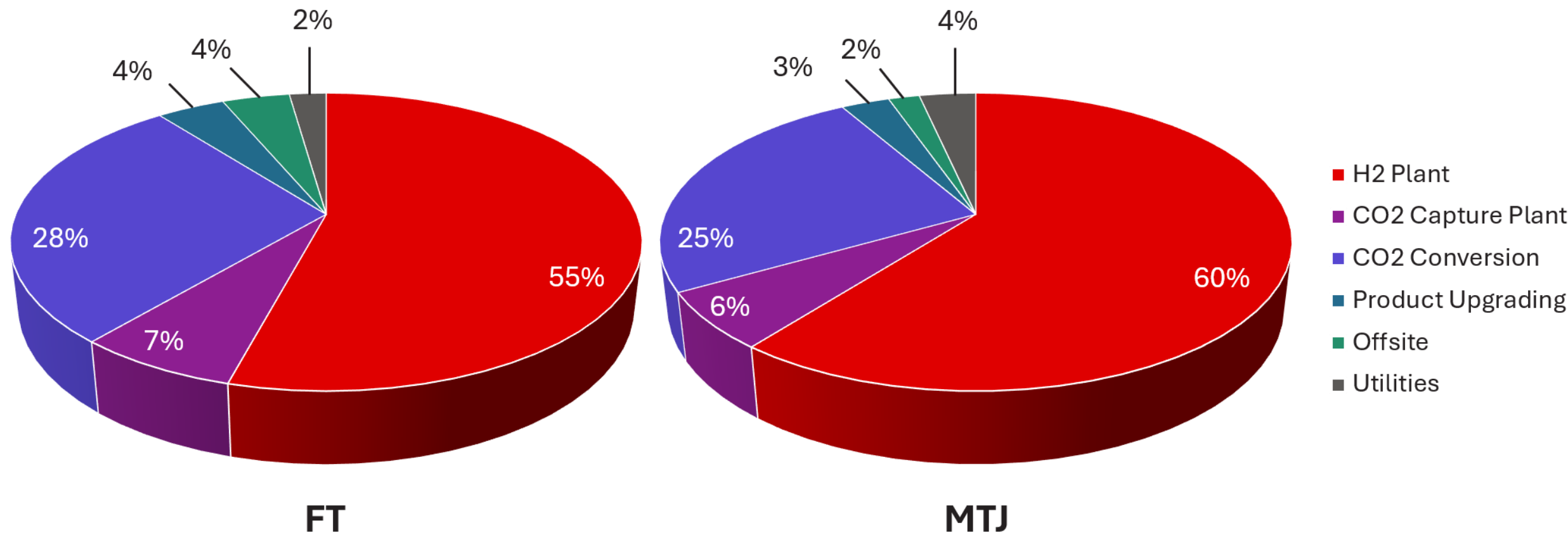
Technology or Feedstock?



Adapted from Alsulaiman et al. (2025), Drop-In Decarbonization
Adapted from Esposito et al. (2026), India's Aviation Opportunity.

Cost Breakdown for eSAF

A Comparison between Fischer-Tropsch and Methanol to Jet



~50% of eSAF CAPEX is for Green Hydrogen

In Summary

Not one technology is a solution for everyone, consider

SAF projects are shaped by four main variables

Resource Fit

- Feedstock availability
- Scale of supply
- Domestic vs imported

Energy Fit

- Power availability
- Hydrogen availability
- Carbon intensity

Policy Fit

- Mandates
- Incentives
- Certification frameworks

Economic Fit

- Capital investment
- Operating costs
- Investor returns



The right pathway emerges from the system. The system should not be forced to fit the pathway

In Summary

In a mandate-driven market, pathway choice become critical



- Policy misalignment
- Fails to align with mandates and incentives



- Feedstock misalignment
- Technology doesn't match available resources



- Economic misalignment
- Costs that don't compete at scale

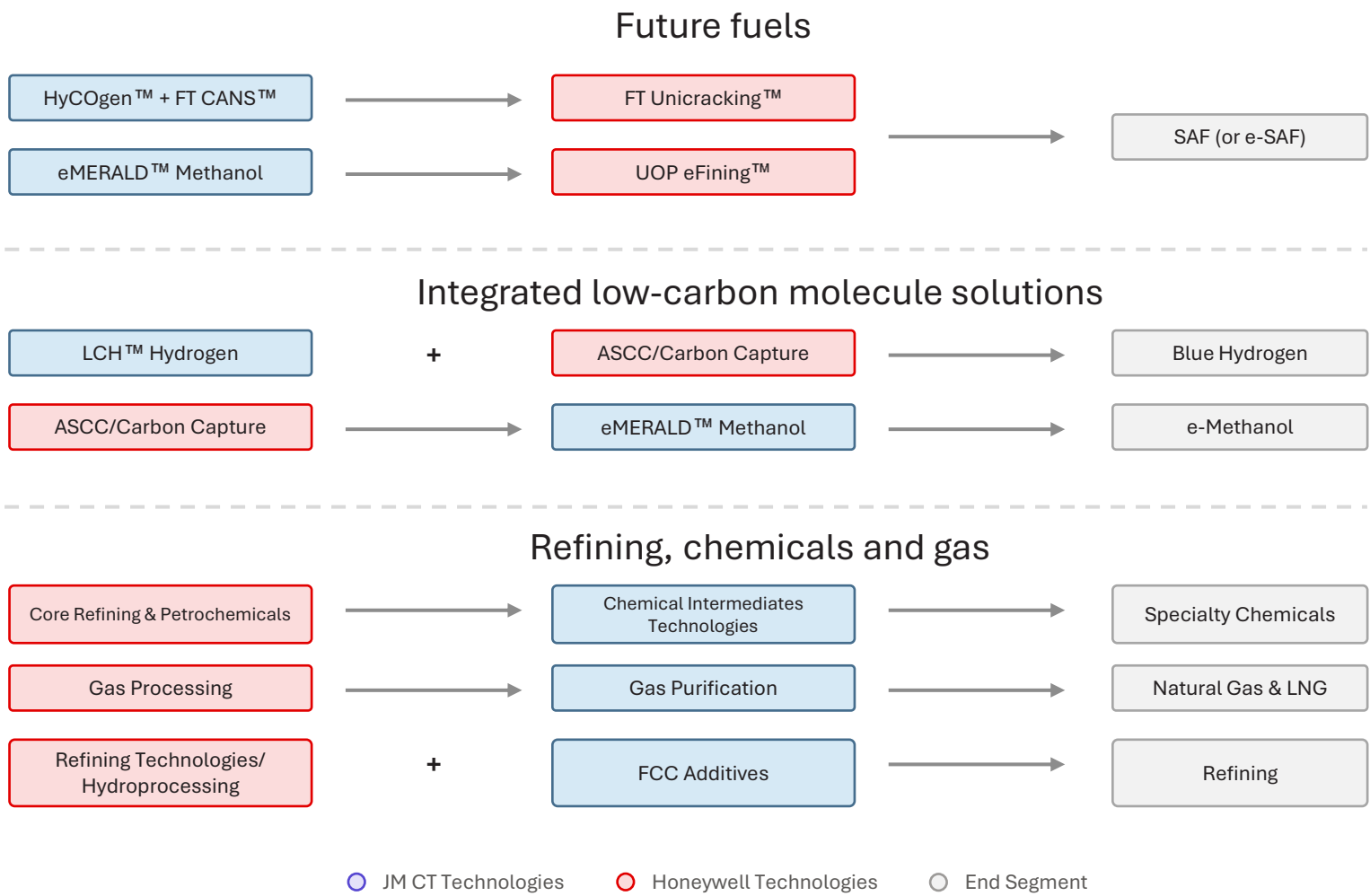


- Strategic misalignment
- Capital locked into the wrong pathway

Choosing a SAF pathway is not a technical risk. It is a strategic one

Thank You

Honeywell Technologies integrated solutions: The future of energy starts with us



Combining our expertise to create even greater value for our customers