

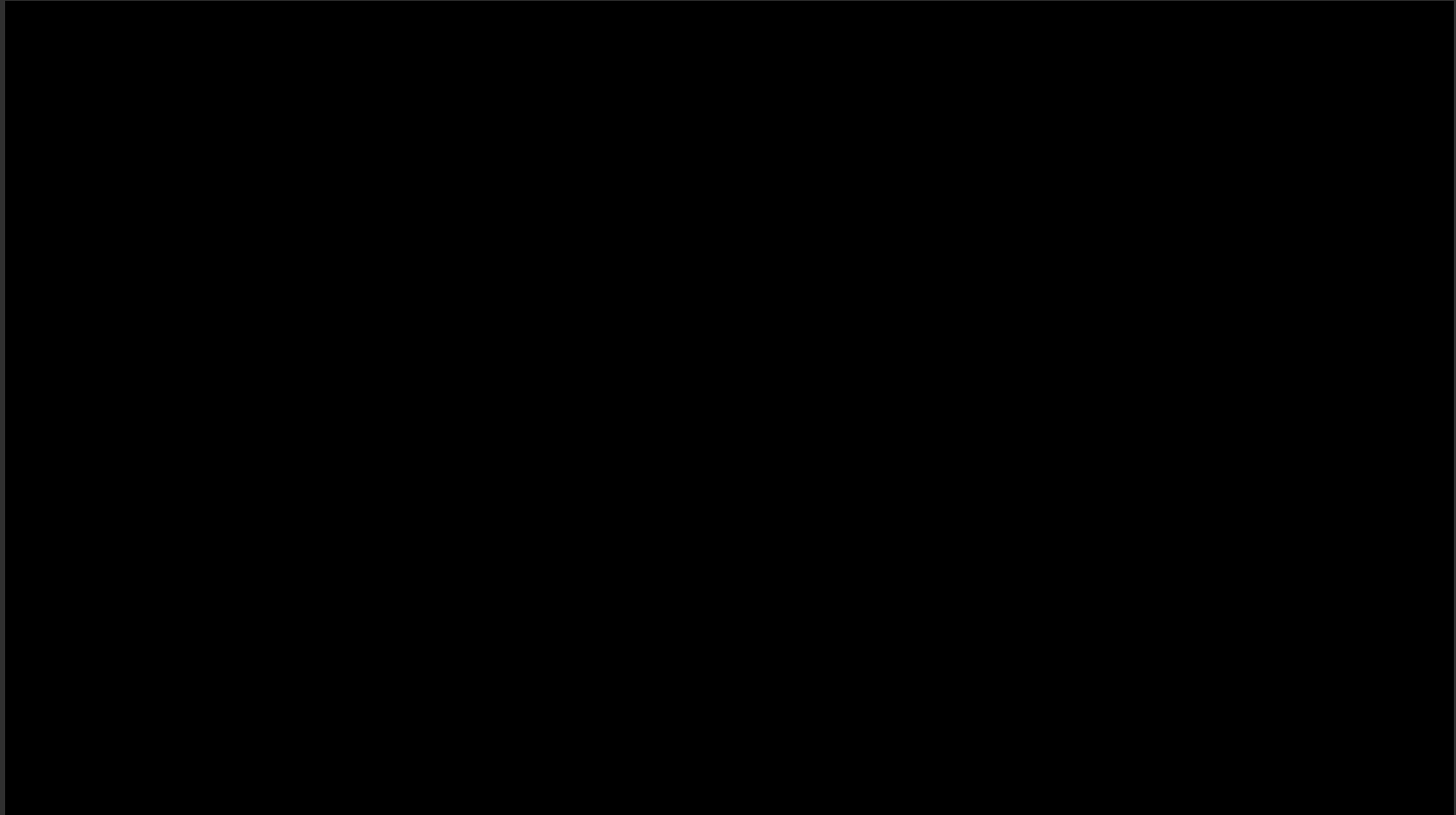
# LANZAJE

**Tcbiomass 2024**

Panel-Large Scale Demonstration and Commercial Plants

NON-CONFIDENTIAL

# FPF LanzaJet



# World's First Commercial Ethanol-to-SAF Plant



**Freedom Pines Fuels**

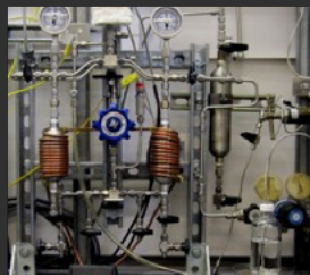
Soperton, GA



- The first and only SAF company to have funded and constructed a **commercial ethanol-to-SAF biorefinery**
- Located in Soperton, GA – 100 miles West of Savannah, GA
- Total SAF / RD production of **10M GPY** (90% SAF / 10% RD)
- Multiple ethanol feedstocks including sugarcane ethanol, cellulosic ethanol, and waste-based ethanol

# Georgia Plant Important to Global, Commercial Deployment

2010–2015



Lab Bench & Pilot

2016–2020



ASTM Approval &  
Commercial Flights

2025+



Global Technology  
Deployment

Lab Demo



2014–2016

Commercial Plant



2020–2024

WORLD'S FIRST

# LanzaJet Freedom Pines Fuels Construction Exceeded Industry Benchmark

September 2022



Grand Opening Ceremony

January 2024



# LanzaJet Freedom Pines Fuels and the Soperton community



Revitalizing rural America with **250** direct construction jobs at peak construction activity and **60-80** direct and indirect jobs during operation.

Outreach programs to improve **community awareness** and **engagements**



# Publicly Announced LanzaJet Projects

● LanzaJet Publicly Announced Project



# LANZAJET

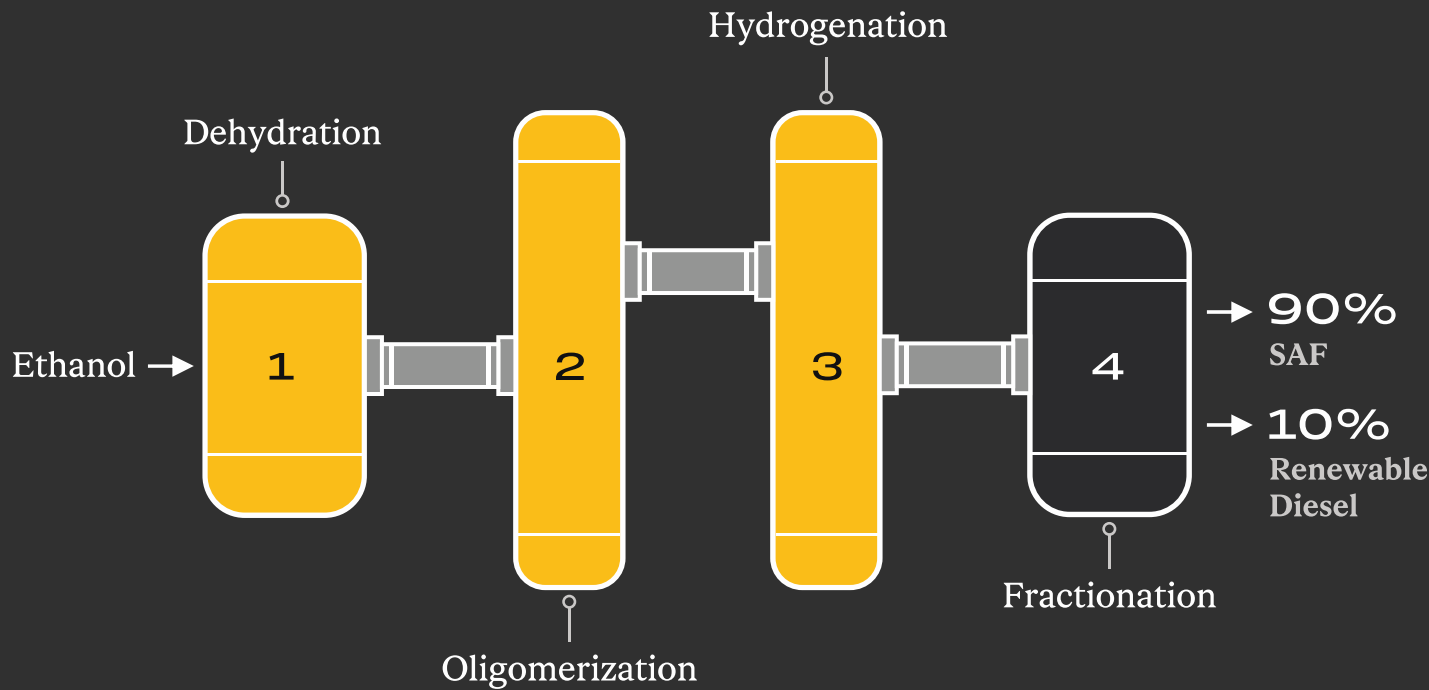
Someday is now.

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# Ethanol Alcohol-to-Jet (ATJ) Technology

High selectivity to SAF, high carbon conversion, abundant feedstock, and platform versatility



## 30B gallons of ethanol available today (140 million MTA)

Leveraging & transitioning existing ethanol supply

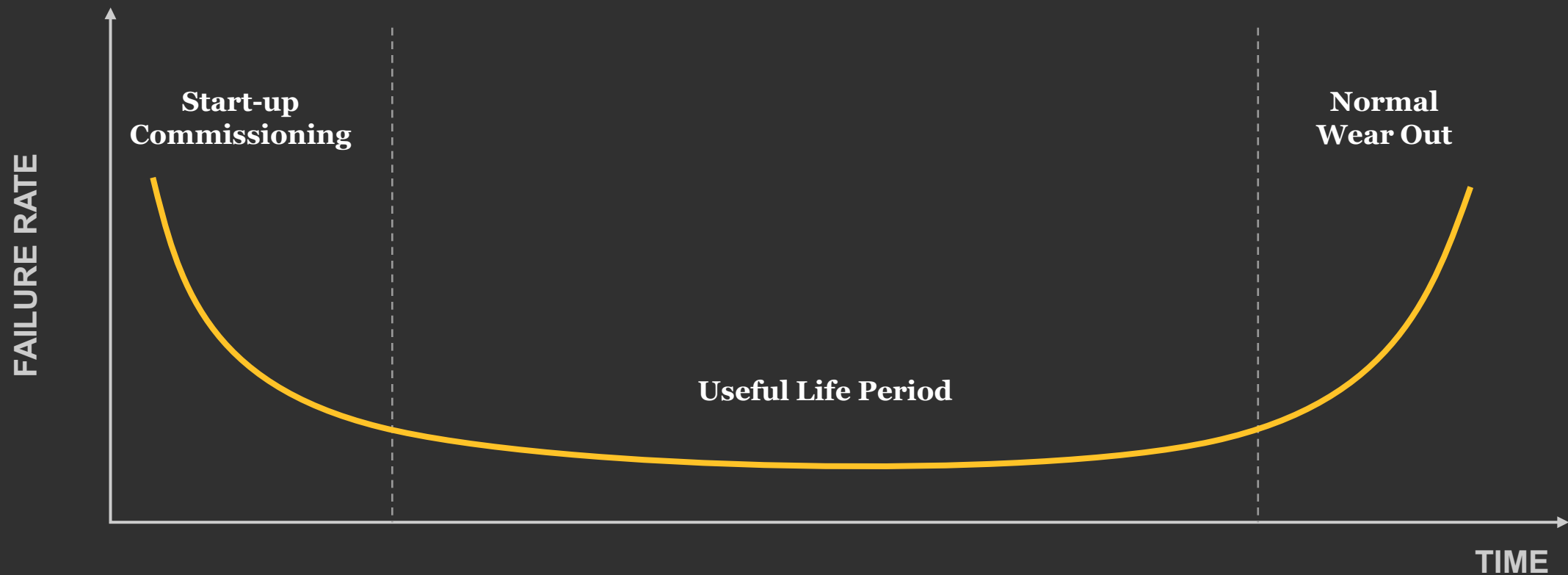
- Existing low-CI ethanol production
- Cellulosic ethanol
- Waste-based ethanol

## Unlimited potential

Building new waste-based ethanol supply

- Industrial / landfill off-gasses
- Agricultural waste and residues
- Municipal Solid Waste (MSW)
- Corn fiber cellulose / sugarcane bagasse
- Direct Air Capture (DAC) – CO<sub>2</sub> + H<sub>2</sub>

# FPF Commissioning

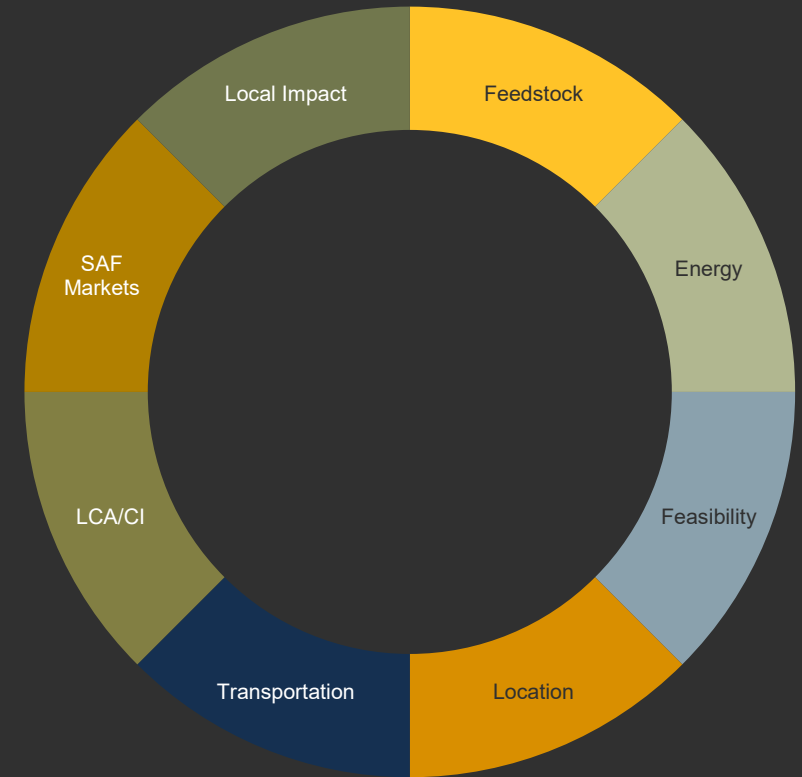


# Cost of Production



World's first commercial-scale production of ATJ at LanzaJet Freedom Pines Fuel

- Ethanol feedstock comprises of 60-70% of the COP
- Per IATA<sup>1</sup>, main cost drivers of SAF production are:
  - Feed composition
  - Capital Cost
  - Overall Yield Conversion
  - Quality and Composition of the Produced SAF
  - Operating Expenses
  - Financial Requirements
  - Logistics
  - Initial Resources



1 - <https://www.iata.org/en/publications/economics/reports/saf-handbook-section-5/>