UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

PURSUANT TO SECTION 13 OR 15(D) OF THE
SECURITIES EXCHANGE ACT OF 1934
Date of Report (Date of earliest event reported): March 6, 2023

LanzaTech Global, Inc.
(Exact name of registrant as specified in its charter)

Delaware	**001-40282**	**92-2018969**
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

8045 Lamon Avenue, Suite 400 Skokie, Illinois	60077
(Address of principal executive offices)	(Zip Code)

(847) 324-2400
(Registrant's telephone number, including area code)

Not Applicable
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

☐ Written communication pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencements communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	**Trading Symbols**	**Name of each exchange on which registered**
Common Stock, par value $0.0001 per share	**LNZA**	**The Nasdaq Stock Market LLC**
Redeemable Warrants, each whole warrant exercisable for one share of Common Stock at an exercise price of $11.50	**LNZAW**	**The Nasdaq Stock Market LLC**

☒ Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

☐ If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Item 7.01. Regulation FD Disclosure.

On March 6-7, 2023, Jennifer Holmgren, Chief Executive Officer of LanzaTech Global, Inc. (the "Company") will be speaking at CERAWeek in Houston, Texas. CERAWeek by S&P Global is the world's premier energy conference and features prominent speakers from energy, policy, technology, and financial industries. On March 6, Ms. Holmgren will present to guests attending the Innovation Agora Pod Program (the "Innovation Agora Program"). She will have 15 minutes to present her slides in a talk titled Carbon Recycling for a New Carbon Economy, followed by approx. 8 minutes of Q&A. On March 7, Ms. Holmgren will present during a 30-minute presentation to guests attending the Oxy/OLCV/1PointFive Agora House (the "Oxy Presentation"). A copy of Ms. Holmgren's Oxy Presentation, which incorporates the slides presented at the Innovation Agora Program, is furnished as Exhibit 99.1.

The information in this Item 7.01, including Exhibit 99.1, is being furnished and shall not be deemed "filed" for purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise be subject to liabilities under that section, and shall not be deemed to be incorporated by reference into any filings of the Company under the Securities Act of 1933, as amended, or the Exchange Act, regardless of any general incorporation language in such filings. This Current Report on Form 8-K shall not be deemed an admission as to the materiality of any information in this Item 7.01, including Exhibit 99.1.

Item 9.01. Financial Statements and Exhibits.

(d) Exhibits

Exhibit Number	Description
99.1	Oxy Presentation, on March 6-7, 2023
104	Cover Page Interactive Data File (embedded within the Inline XBRL document).

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: March 6, 2023

LANZATECH GLOBAL, INC.

By:	/s/ Joseph Blasko
Name:	Joseph Blasko
Title:	General Counsel and Corporate Secretary

Jennifer Holmgren

Limitless Potential: Creating a New Carbon Economy

LanzaTech

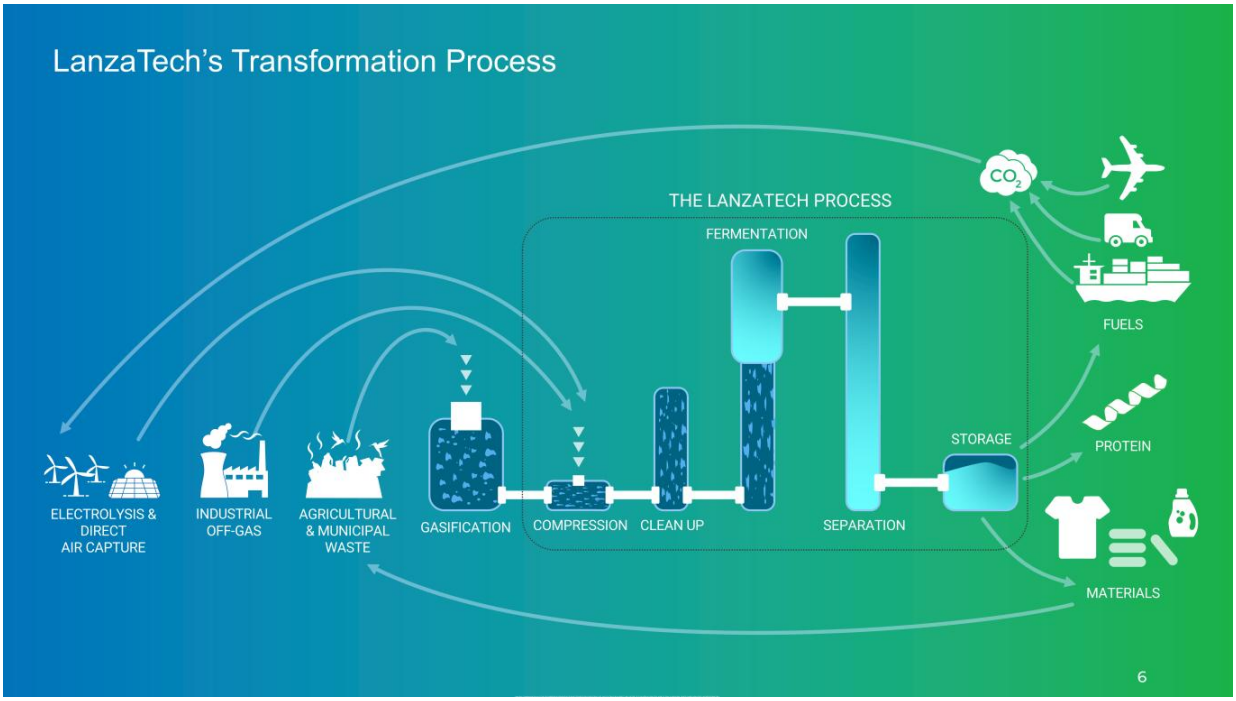
Disclaimers

Certain statements in this presentation (the "Presentation") may be considered forward-looking statements. Forward-looking statements generally relate to future events or LanzaTech Global, Inc.'s (the "Company") future financial or operating performance. For example, statements concerning the following include forward-looking statements: the potential success, cost and timing of the Company's technology platform development activities; the potential attributes and benefits of the Company's technology platform; the Company's ability to compete with other companies currently marketing or engaged in the development of similar technologies; the size and growth potential of the markets for the Company's technology and the Company's ability to serve those markets; the rate and degree of market acceptance of the Company's technology; and the Company's ability to expand its business. In some cases, you can identify forward-looking statements by terminology such as "may", "should", "expect", "intend", "will", "estimate", "anticipate", "believe", "predict", "potential" or "continue", or the negatives of these terms or variations of them, or similar terminology. Such forward-looking statements are subject to risks, uncertainties, and other factors which could cause actual results to differ materially from those expressed or implied by such forward-looking statements. These forward-looking statements are based upon estimates and assumptions that, while considered reasonable by the Company and its management, as the case may be, are inherently uncertain. New risks and uncertainties may emerge from time to time, and it is not possible to predict all risks and uncertainties. Factors that may cause actual results to differ materially from current expectations include, but are not limited to, various factors beyond management's control, including general economic conditions and other risks, uncertainties and factors associated with companies, such as the Company, that are engaged in developing proprietary carbon capture technology; changes to environmental laws and regulations; changes to ethanol regulation; and overall business and economic conditions affecting the global carbon capture, utilization and storage industry. Nothing in this Presentation should be regarded as a representation by any person that the forward-looking statements set forth herein will be achieved or that any of the contemplated results of such forward-looking statements will be achieved. You should not place undue reliance on forward-looking statements in this Presentation, which speak only as of the date they are made and are qualified in their entirety by reference to the cautionary statements herein. Except as required by law, the Company undertakes no duty to update these forward-looking statements.

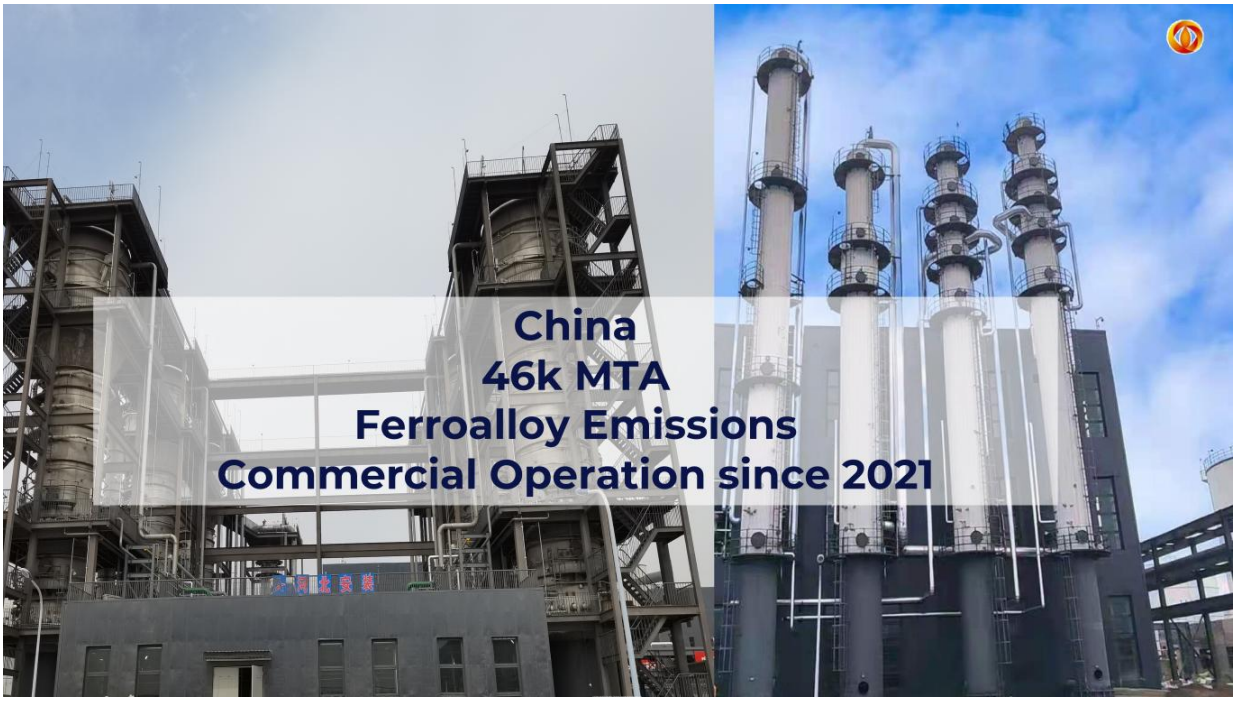

LanzaTech
Captures and
Transforms
carbon

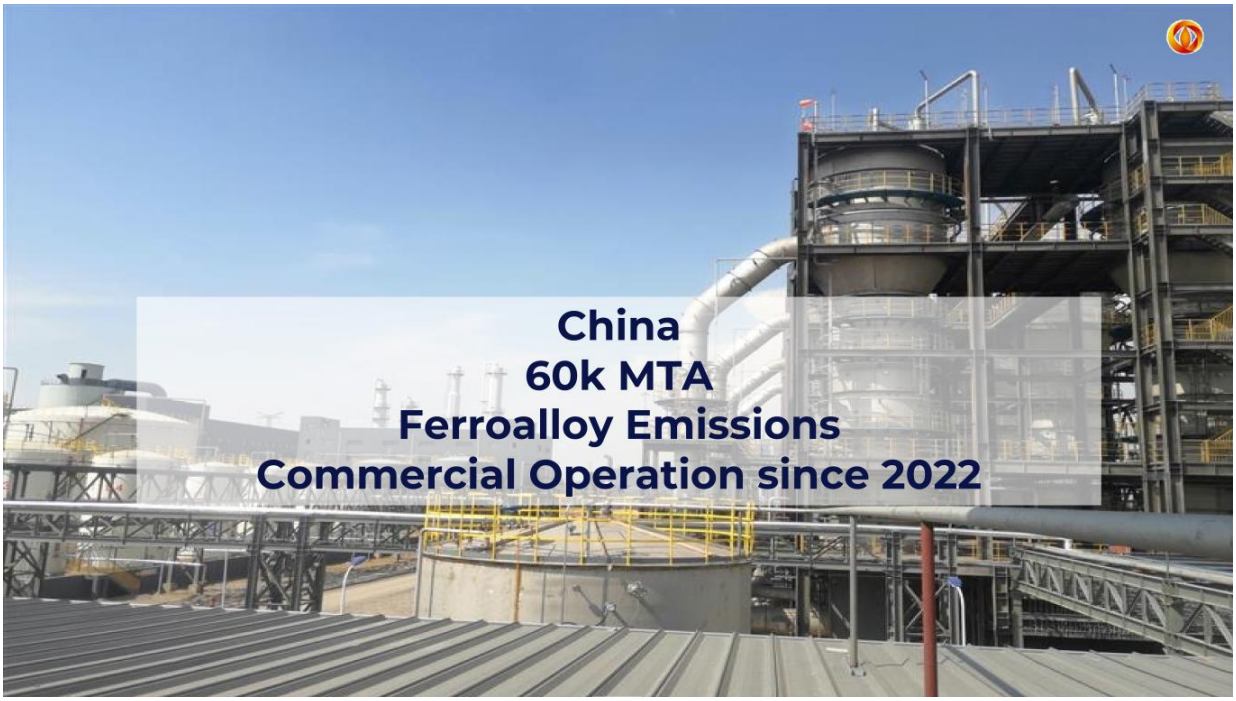

From waste . . .


Coral
. . . to products
LanzaTech


LanzaTech's Transformation Process
THE LANZATECH PROCESS
FERMENTATION
CO_2
FUELS
PROTEIN
STORAGE
MATERIALS
ELECTROLYSIS & DIRECT AIR CAPTURE
INDUSTRIAL OFF-GAS
AGRICULTURAL & MUNICIPAL WASTE
GASIFICATION
COMPRESSION
CLEAN UP
SEPARATION
6


RSB
China
46k MTA
Steel Mill Emissions
Commercial Operation since 2018
7


China
46k MTA
Ferroalloy Emissions
Commercial Operation since 2021


China
60k MTA
Ferroalloy Emissions
Commercial Operation since 2022

1st Refinery Gas to Ethanol Project in the World
1st Project in India
1st Project to use CO_2 as a Feedstock

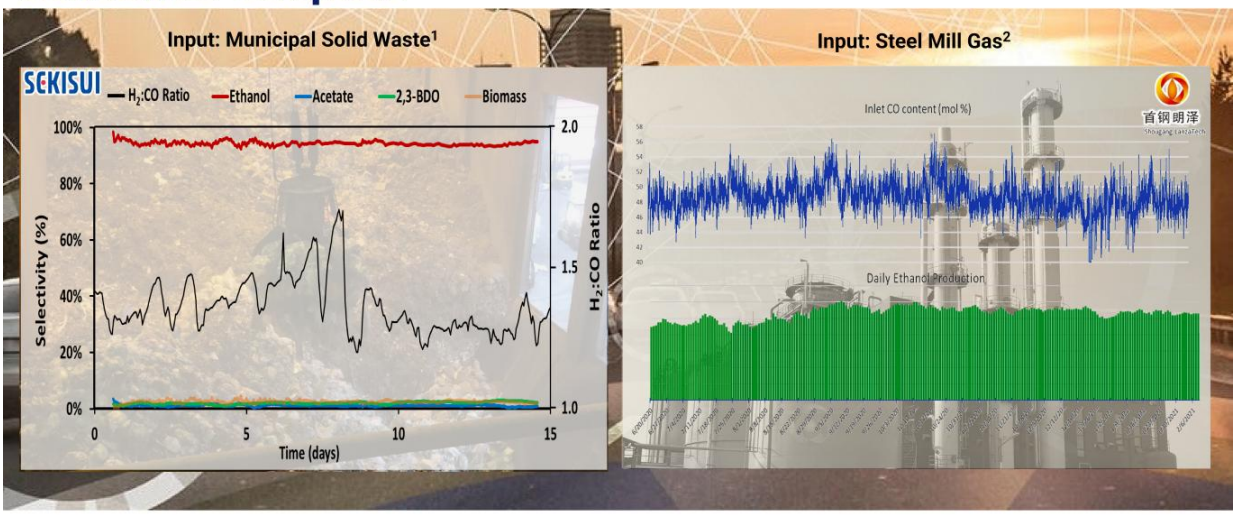
In Commissioning
1st Ethanol Produced


China
60k MTA
Ferroalloy Emissions
Commercial Operation Expected Q2 2023


First European Plant, Gent, Belgium
ArcelorMittal
Belgium
64k MTA
Steel Mill Emissions
Commercial Operation Expected 2H 2023
This project is co-funded by the European Union
CINEA
Steelano
Fueling a sustainable future


Biology Can Do Things No Other Human-made Technology Or Chemistry Can Do
Operates Across Multiple Scales…
Self Replicates & Evolves Complex Function…
14

Fermentation Transforms Chaotic Inputs into Selective Outputs



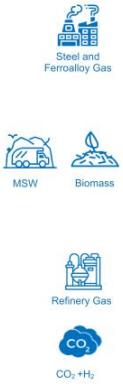
[1]Köpke & Simpson (2020) Curr Opin Biotechnol 65: 180-189; [2]Fackler, [...] Köpke (2021) Ann Rev Chem Biomol Eng 12: 439-470


SEKISUI
Japan
15 TPA
Syngas from MSW
Pilot Operations since 2013


SEKISUI
Japan
500 TPA
Syngas from MSW
Pre-Commercial Operations since 2022
17


SUNCOR
ENERGY
Canada
300 TPA
Syngas from Biomass
Pre-Commercial Operations since 2022

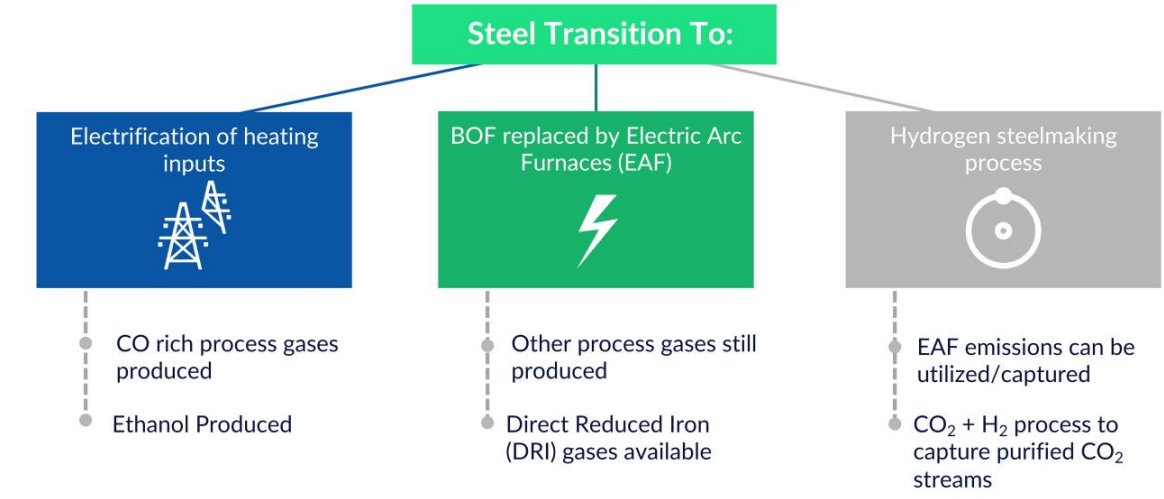
Feedstock Flexibility



		H_2:CO Ratio	Carbon Efficiency	Operating at Scale
CO	$6\ CO + 3\ H_2O \rightarrow C_2H_5OH + 4\ CO_2$	0:1	33.3%	✓
$CO + H_2$	$3\ H_2 + 3\ CO \rightarrow C_2H_5OH + CO_2$	1:1	66.7%	
$CO + H_2$	$4\ H_2 + 2\ CO \rightarrow C_2H_5OH + H_2O$	2:1	100%	✓
$CO + H_2 + CO_2$	$5\ H_2 + 1\ CO + 1\ CO_2 \rightarrow C_2H_5OH + 2\ H_2O$	5:1	100%	
$H_2 + CO_2$	$6\ H_2 + 2\ CO_2 \rightarrow C_2H_5OH + 3\ H_2O$	1:0	100%	

CO_2 to Ethanol Project with IndianOil

A Technology Today, Ready for the Future



Global Plant Deployment: Projects in Operation, Construction, and Engineering

Ethanol: A Starting Point for Multiple Products

Building Block of the Future

Sustainable Aviation Fuels Market Opportunity

"SAFs are the only viable near-term option to decrease emissions in the aviation sector, as they are compatible with current aircraft engines and fueling infrastructure and can power flights with no distance limits" (McKinsey & Company)[1]

Mandated Global Jet Fuel Demand (billion gallons per year)

In order to reach expected 2030 SAF demand, global SAF capacity must achieve an 87% CAGR

SAF Market Demand Drivers

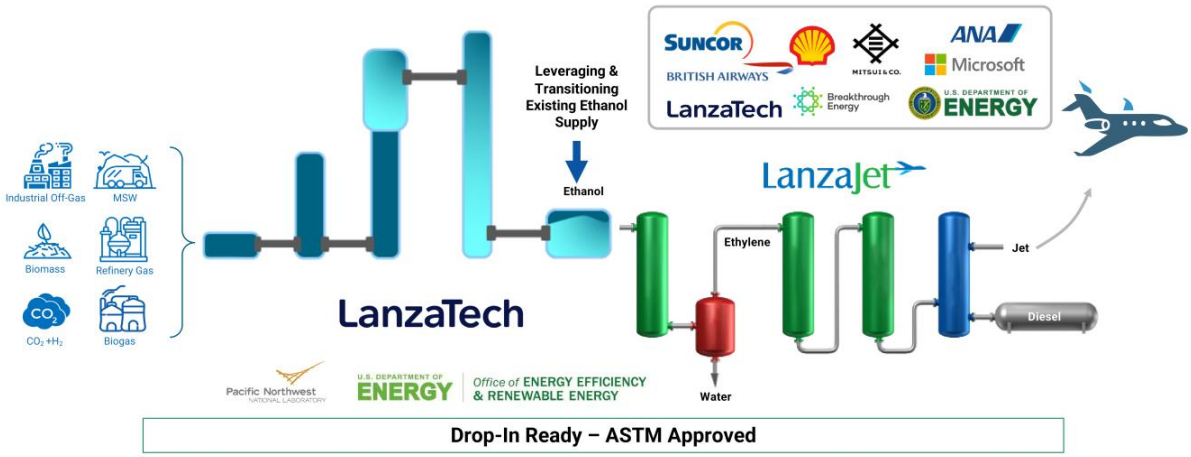
Coalition	BOARD NOW coalition for sustainable flying; SABA Sustainable Aviation Buyers Alliance; Eco Skies Alliance
Notable Companies Represented	Microsoft; pwc; BCG Boston Consulting Group; BOEING; DHL; SIEMENS

Select SAF Corporate Commitments

SAF Target	10% by 2030	30% by 2030	30% by 2035
Companies Committed	British Airways; Delta; jetBlue	FedEx	UPS

[1] McKinsey & Company, Critical insights on the path to a net-zero aviation sector. [2] 2020 and 2025 numbers from the International Air Transport Association. 2030, 2035 and 2040 numbers are assumed as 10%, 20% and 30% of global jet fuel demand, respectively. [3] World Economic Forum, Clean Skies for Tomorrow 2030 Ambition Statement [4] World Economic Forum, Clean Skies for Tomorrow Insight Report

LanzaJet Turns Carbon Waste to Sustainable Aviation Fuels



Drop-In Ready – ASTM Approved


USA
10M GPA
Alcohol to Jet
Pre-Commercial Operations Expected 2H 2023

Ethanol: A Starting Point for Multiple Pathways

Building Block of the Future

LanzaTech

Creating the Materials in our Daily Lives

Purified Ethanol

mibelle GROUP

COTY

PET Fibers

INDIA GLYCOLS LIMITED

lululemon

ZARA

遠東新世紀 FAR EASTERN NEW CENTURY

PET Resin

mibelle GROUP

MIGROS

dm

Polyethylene

L'ORÉAL

TotalEnergies

EVA Foams

TEN TECHNIP ENERGIES

BOREALIS

CleanCloud™

Sustainable Aviation Fuel

virgin atlantic

ANA

Glycols & Surfactants

Unilever

INDIA GLYCOLS LIMITED

CarbonSmart™ PET Fibres for Textiles

INDIA GLYCOLS LIMITED

遠東新世紀 FAR EASTERN NEW CENTURY

lululemon

ZARA

Commercially Available 2021-2022

CRAGHOPPERS

Commercially Available September 2023

LanzaTech


CarbonSmart™ EVA
Prototype Running Shoe
TEN
BOREALIS
MADE FROM CARBON EMISSIONS

Complements Existing Recycling Infrastructure

LanzaTech

DEUTSCHER VERPACKUNGSPREIS 2021 IN GOLD

IN DER KATEGORIE

NACHHALTIGKEIT

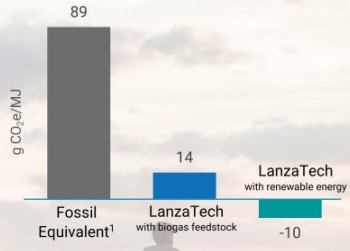
MIBELLE GROUP
LANZATECH
MIGROS

FÜR IHRE EINREICHUNG

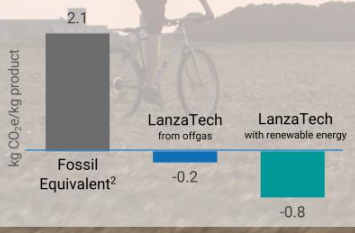
CO2 RECYCLING IN PET FLASCHEN

LanzaTech Offers Carbon Negative Products Today With Inevitable Improvement Over Time

Sustainable Aviation Fuel
With LanzaJet Process



Monoethylene glycol (MEG)
As a chemical intermediate



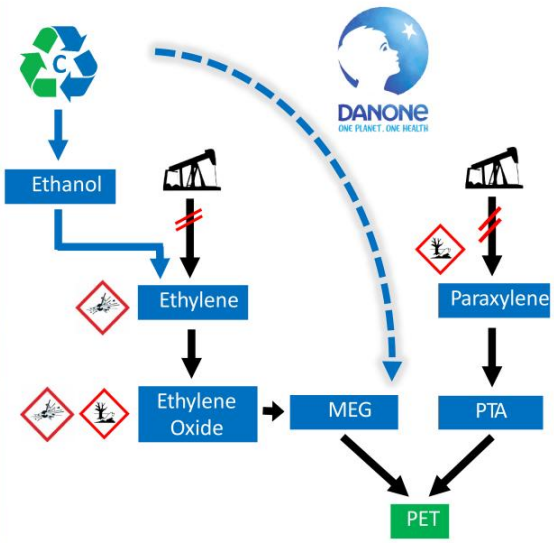
Renewable Energy
Further reduces carbon intensity of LanzaTech process and products

Carbon Negative Feedstocks
Enable increasingly negative product carbon intensity

Net Zero Economy
Enabled by LanzaTech products

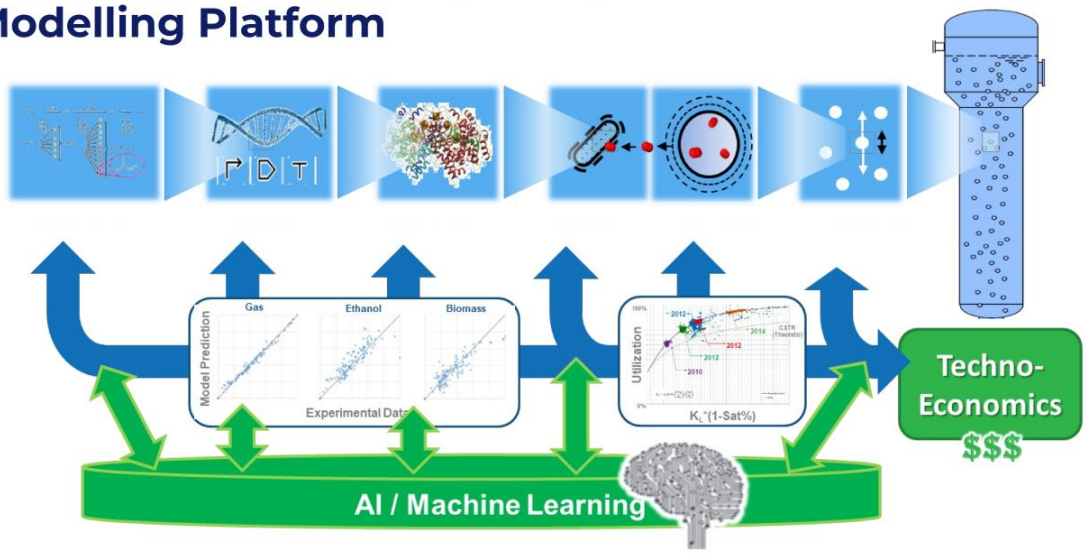
[1] ICAO Sustainable Aviation Fuels Guide, Version 2, December 2018, Page 6; [2] The ecoinvent database, version 3

CarbonSmart™ Pathways to MEG for PET Production

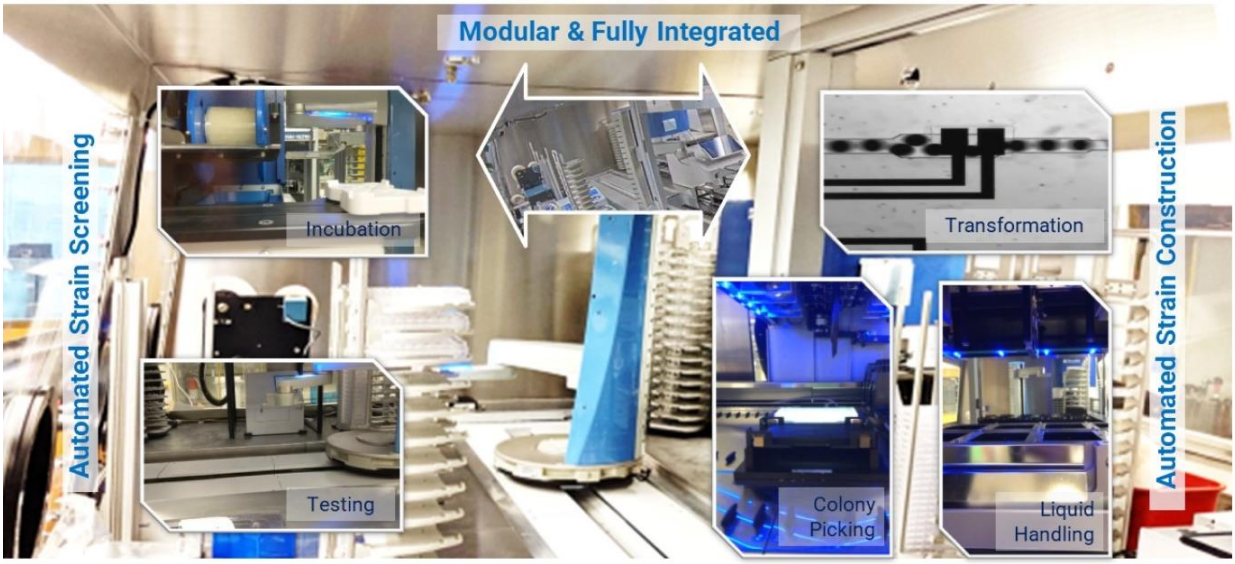



We harness biology

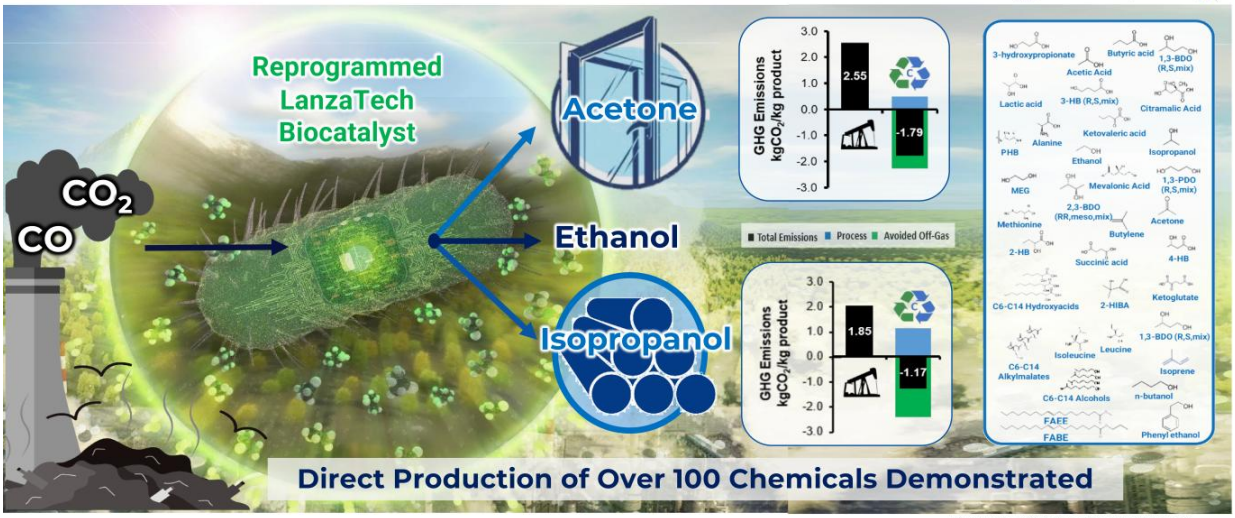
LanzaTech's Fully Integrated, Multi-Scale Modelling Platform



LanzaTech's World-First Anaerobic Biofoundry

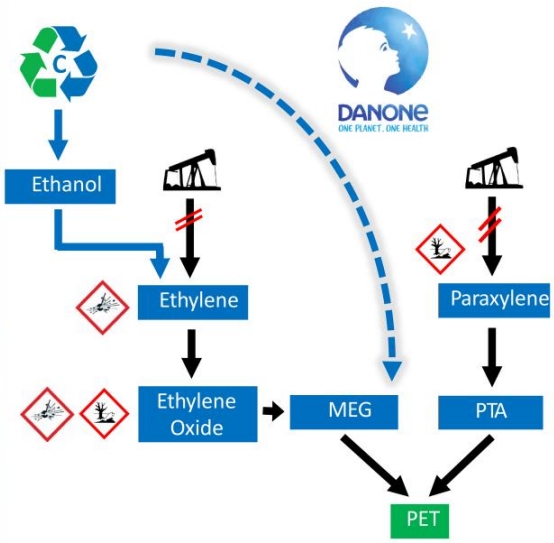


Enabling Carbon-Negative Chemical Production from Industrial Gases



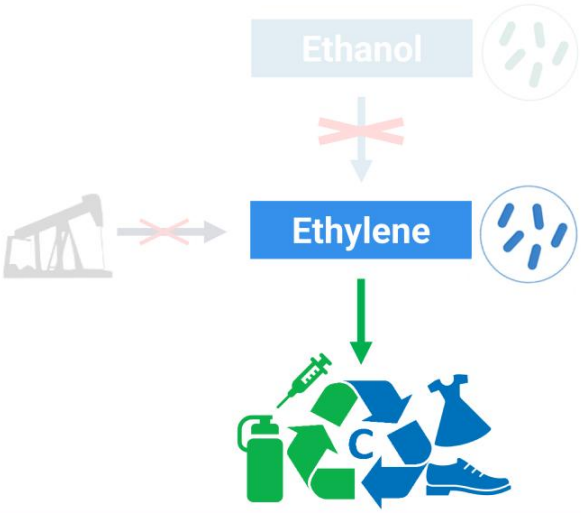
Source: Liew, et al (2022) Nature Biotechnology 40: 335–344
Cell image credit: Justin Muir.

CarbonSmart™ Pathways to MEG for PET Production



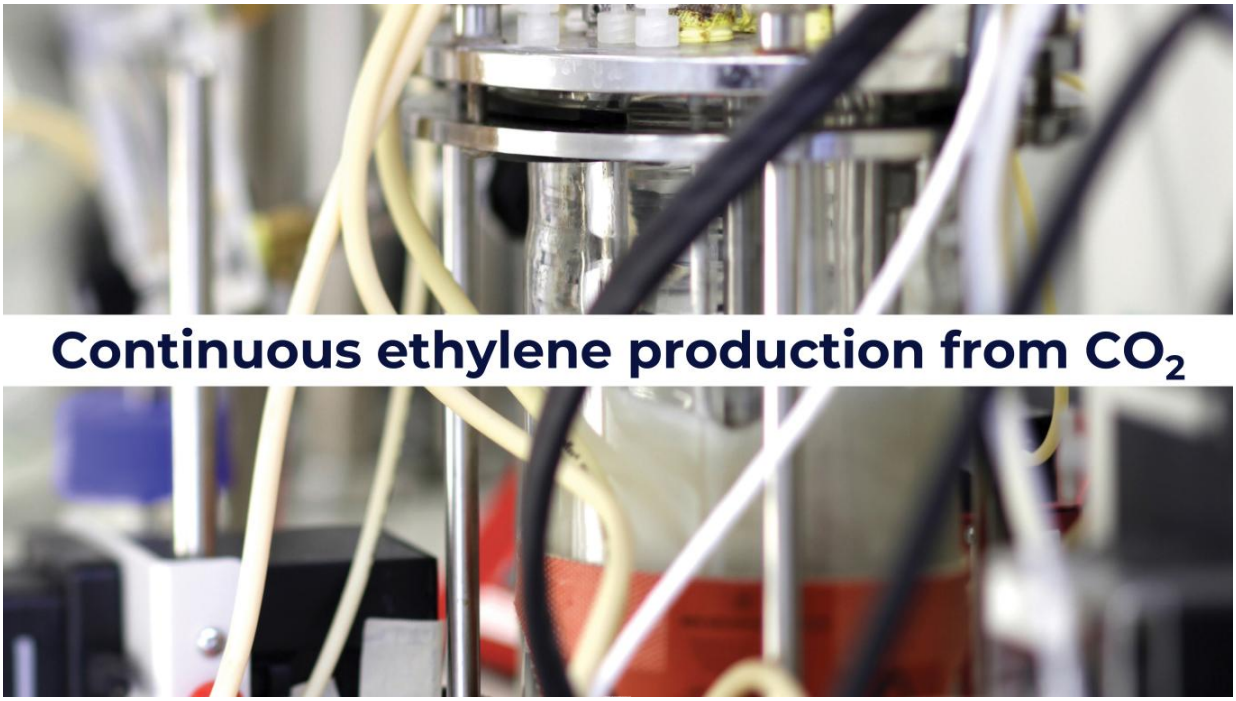
PET in the Circular Economy

Case Study: Ethylene via Ethanol Pathway



- Ethylene is a key building block for PE, MEG, EVA, and surfactants
- LanzaTech's CarbonSmart products are made via dehydration of ethanol to ethylene
- Direct production reduces process cost and energy
- Global ethylene market[1]:
  - 200 MTA in 2021
  - $170B market by 2030

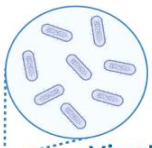
[1]https://www.marketresearchfuture.com/reports/ethylene-market-931; https://www.statista.com/statistics/1067372/global-ethylene-production-capacity/



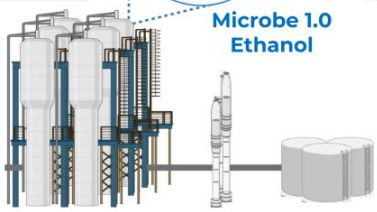
Continuous ethylene production from CO_2

What Do You Want To Make Today?

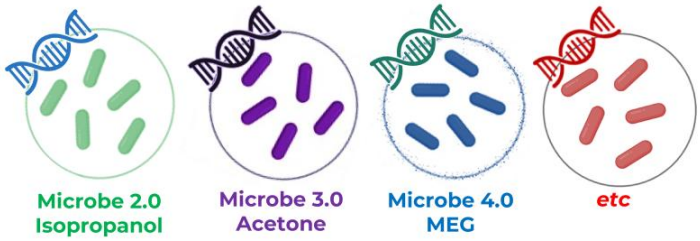
"Hardware"
Existing Commercial Plants



Microbe 1.0
Ethanol



"Software"
New Strains To Expand Product Portfolio & Efficiency



Microbe 2.0
Isopropanol

Microbe 3.0
Acetone

Microbe 4.0
MEG

etc

✓ Same reactor ✓ Same feedstock ✓ Same process

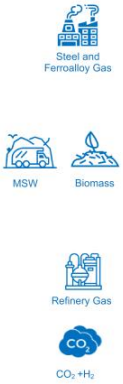
DISRUPTION =
1) Rapid Reaction to Market Fluctuations 2) Feedstock ≠ Commodity

Images generated with Biorender.com

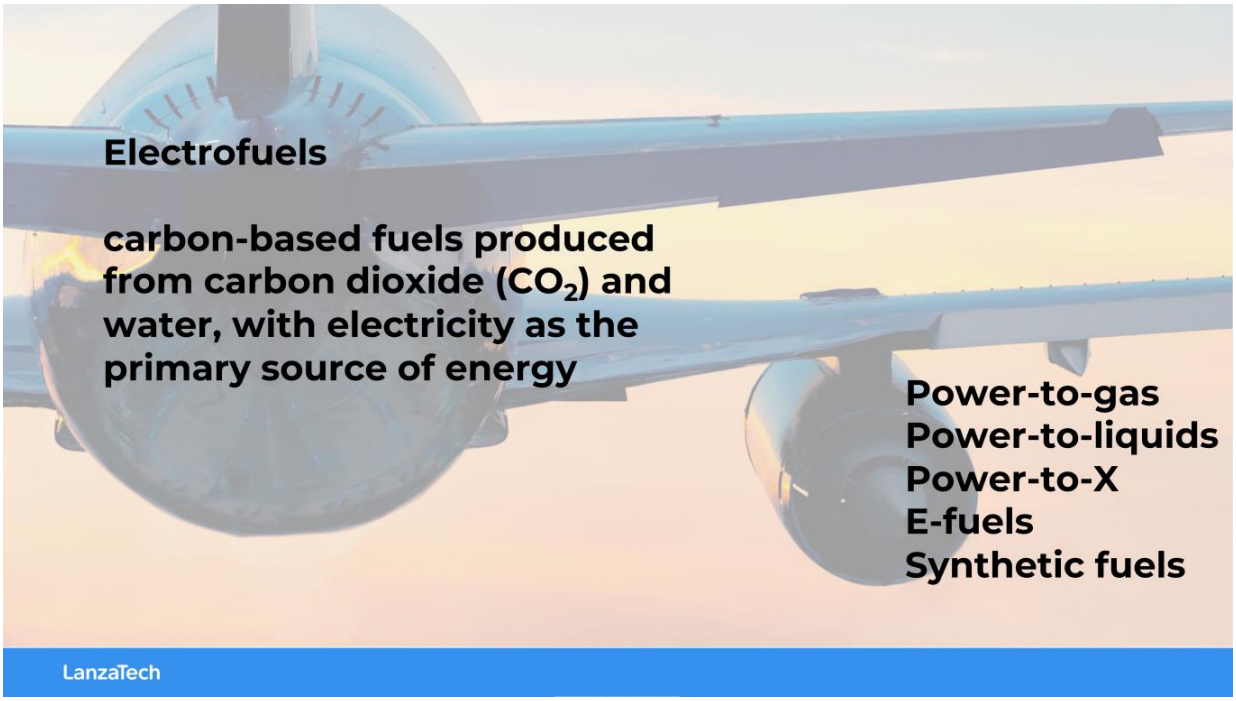
Providing Solutions To Industry Leaders Across Sectors

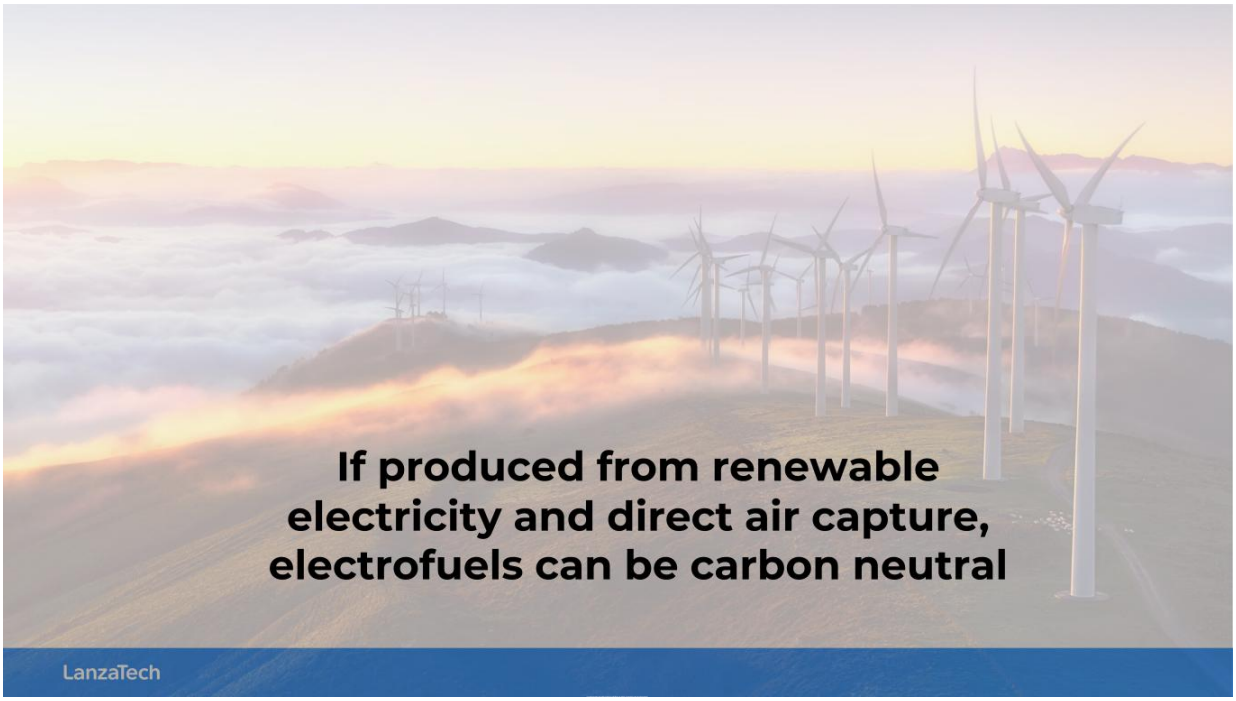
Images generated with Biorender.com

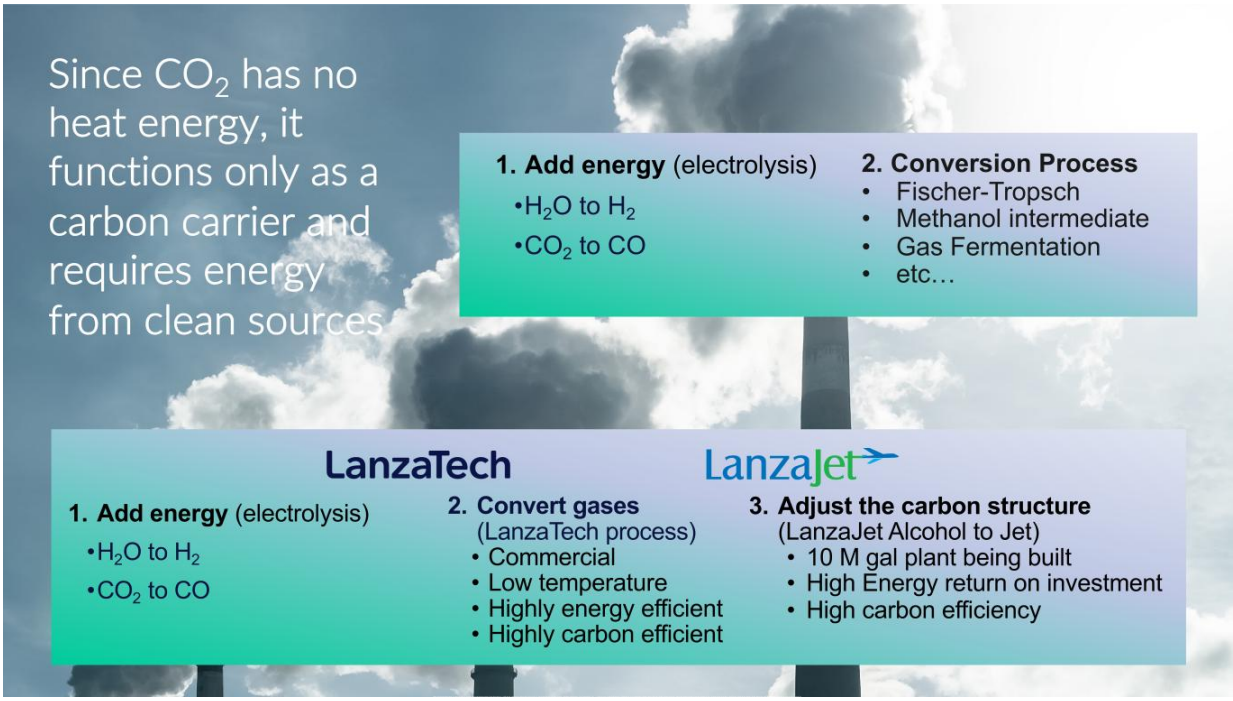
Feedstock Flexibility

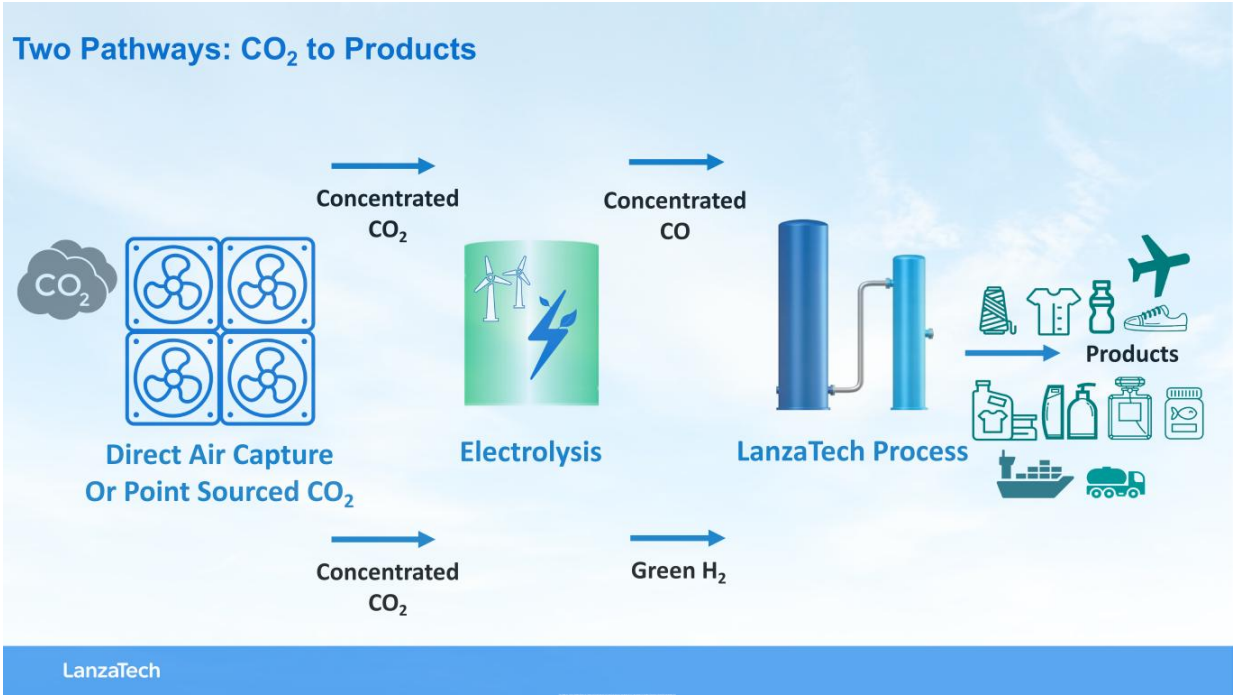


		H_2:CO Ratio	Carbon Efficiency	Operating at Scale
CO	$6\ CO + 3\ H_2O \rightarrow C_2H_5OH + 4\ CO_2$	0:1	33.3%	✓
$CO + H_2$	$3\ H_2 + 3\ CO \rightarrow C_2H_5OH + CO_2$	1:1	66.7%	
$CO + H_2$	$4\ H_2 + 2\ CO \rightarrow C_2H_5OH + H_2O$	2:1	100%	✓
$CO + H_2 + CO_2$	$5\ H_2 + 1\ CO + 1\ CO_2 \rightarrow C_2H_5OH + 2\ H_2O$	5:1	100%	
$H_2 + CO_2$	$6\ H_2 + 2\ CO_2 \rightarrow C_2H_5OH + 3\ H_2O$	1:0	100%	


Electrofuels
carbon-based fuels produced from carbon dioxide (CO_2) and water, with electricity as the primary source of energy
Power-to-gas
Power-to-liquids
Power-to-X
E-fuels
Synthetic fuels
LanzaTech


If produced from renewable electricity and direct air capture, electrofuels can be carbon neutral
LanzaTech

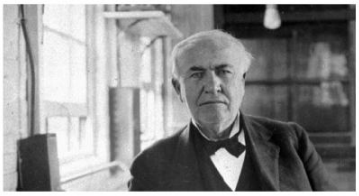

Since CO_2 has no heat energy, it functions only as a carbon carrier and requires energy from clean sources
1. **Add energy** (electrolysis)
•H_2O to H_2
•CO_2 to CO
2. **Conversion Process**
• Fischer-Tropsch
• Methanol intermediate
• Gas Fermentation
• etc…
LanzaTech
LanzaJet
1. **Add energy** (electrolysis)
•H_2O to H_2
•CO_2 to CO
2. **Convert gases**
(LanzaTech process)
• Commercial
• Low temperature
• Highly energy efficient
• Highly carbon efficient
3. **Adjust the carbon structure**
(LanzaJet Alcohol to Jet)
• 10 M gal plant being built
• High Energy return on investment
• High carbon efficiency


Two Pathways: CO_2 to Products
Concentrated CO_2
Concentrated CO
CO_2
Direct Air Capture
Or Point Sourced CO_2
Electrolysis
LanzaTech Process
Products
Concentrated CO_2
Green H_2
LanzaTech

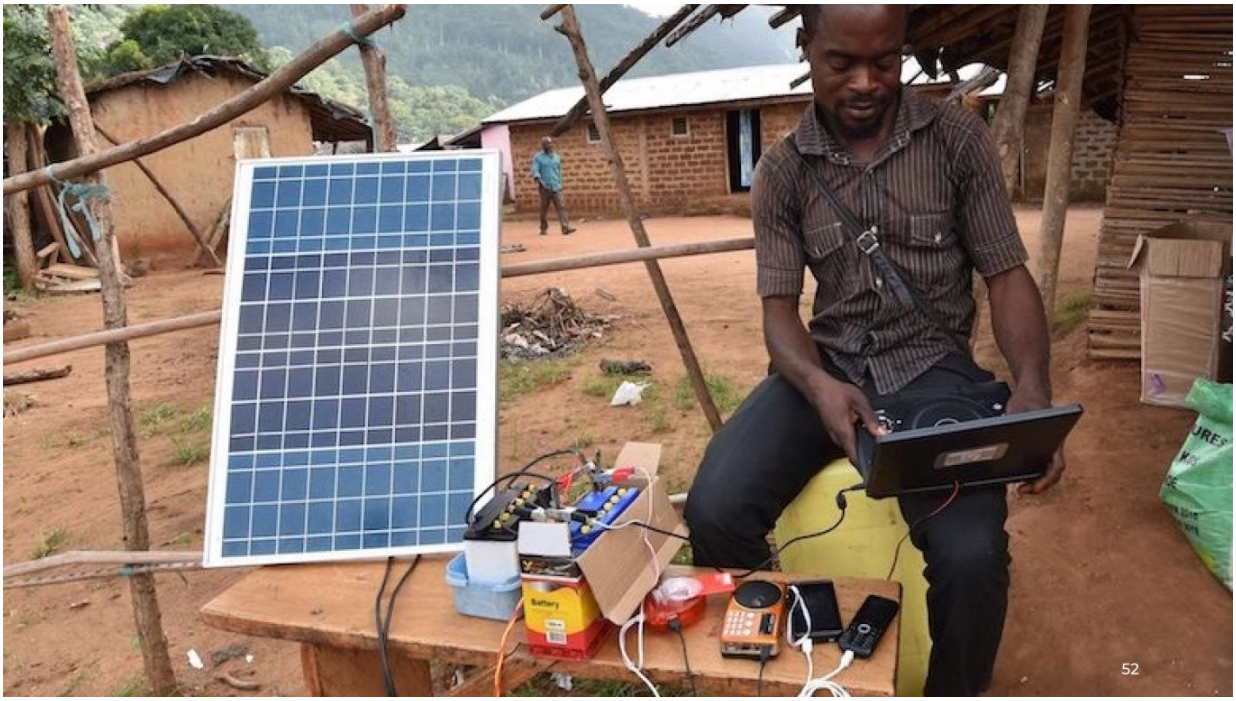

Department for Transport
Project
AtmosFUEL
Aviation Fuel from Atmospheric CO_2
Carbon Engineering
LanzaTech
virgin atlantic
BRITISH AIRWAYS

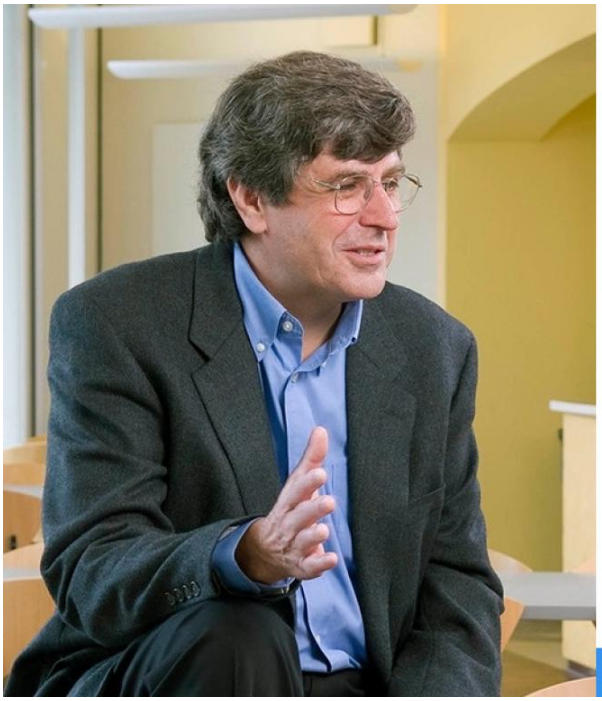
"We should not make our vision just different layers of climate tragedy."

Tom Chi



New technologies shape our belief of what's possible and drive rapid transformation

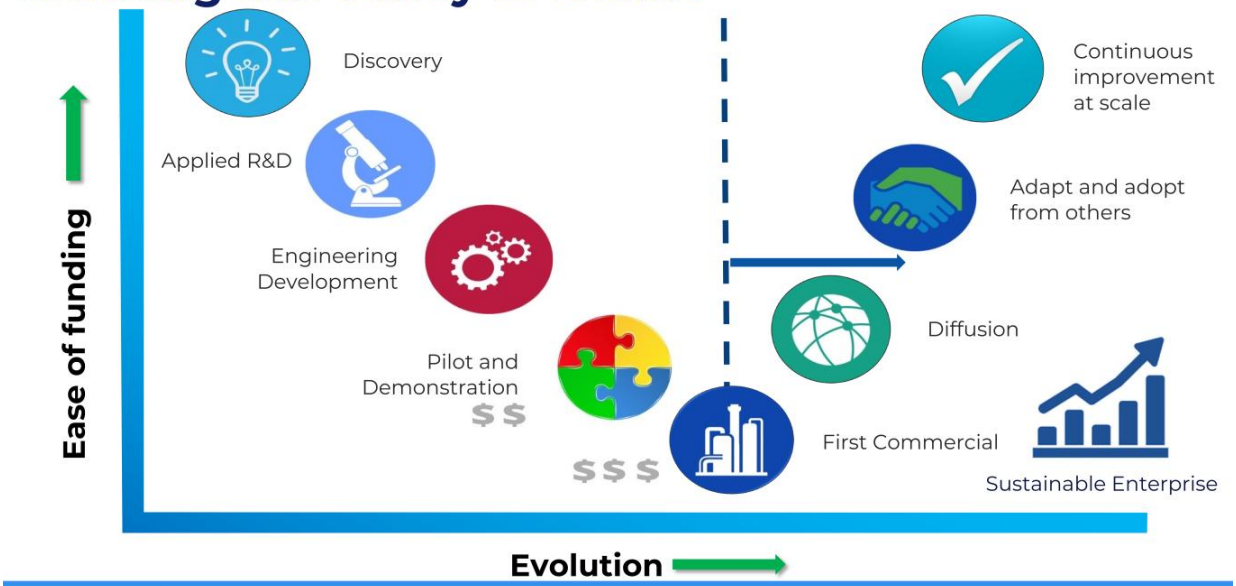

Battery

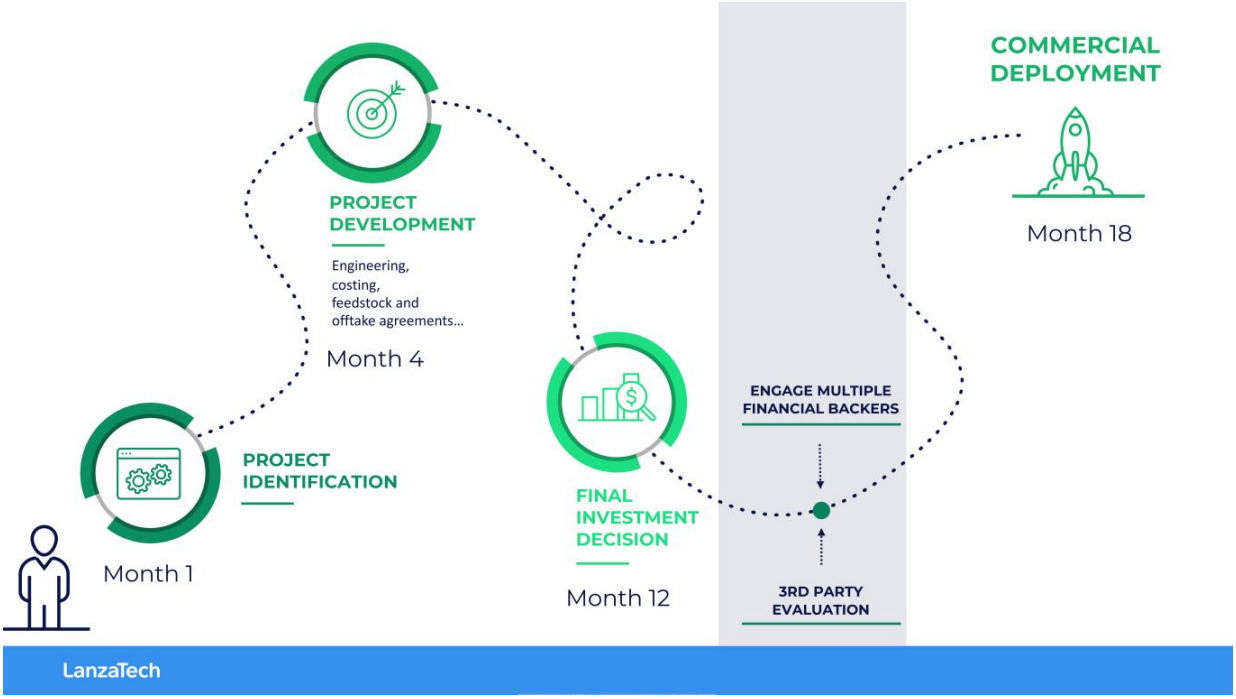


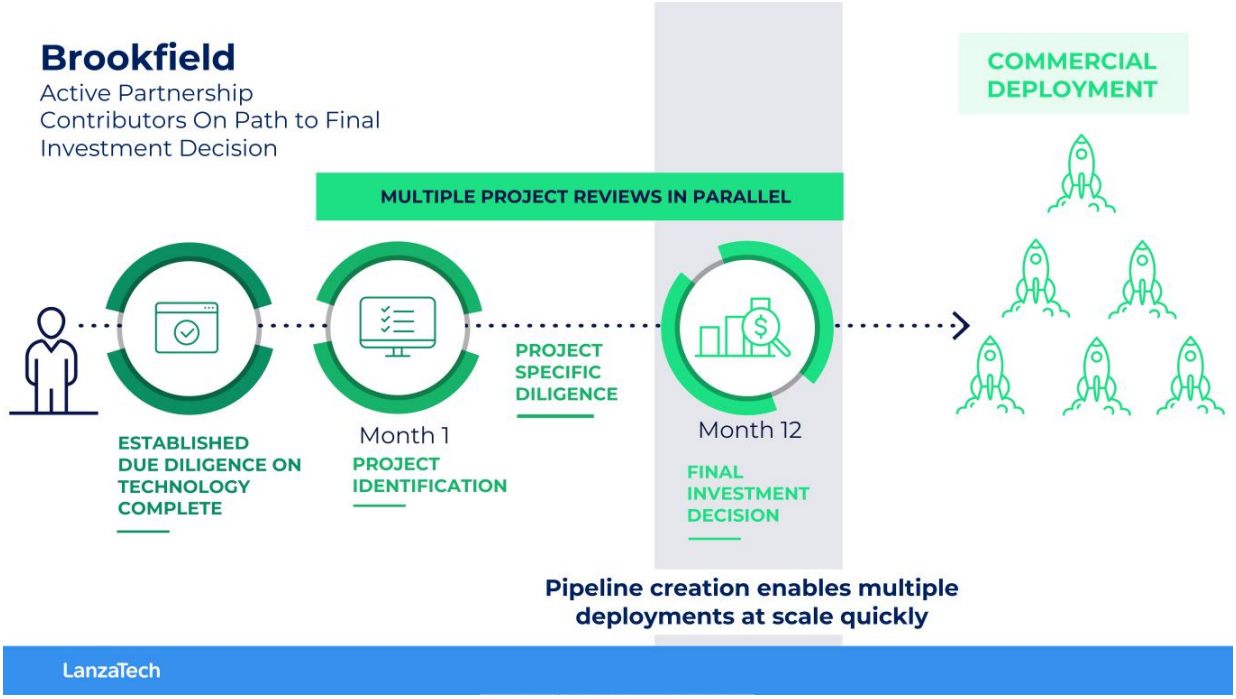
Scaling Up

Numbering Up

Crossing the Valley of Death




COMMERCIAL DEPLOYMENT
Month 18
PROJECT DEVELOPMENT
Engineering, costing, feedstock and offtake agreements...
Month 4
ENGAGE MULTIPLE FINANCIAL BACKERS
PROJECT IDENTIFICATION
Month 1
FINAL INVESTMENT DECISION
Month 12
3RD PARTY EVALUATION
LanzaTech


Brookfield
Active Partnership
Contributors On Path to Final
Investment Decision
COMMERCIAL DEPLOYMENT
MULTIPLE PROJECT REVIEWS IN PARALLEL
ESTABLISHED DUE DILIGENCE ON TECHNOLOGY COMPLETE
Month 1
PROJECT IDENTIFICATION
PROJECT SPECIFIC DILIGENCE
Month 12
FINAL INVESTMENT DECISION
Pipeline creation enables multiple deployments at scale quickly
LanzaTech

How long Until Computers Have the Same Power as a Human Brain?

Moore's Law: Computer processing power doubles every 18months.

LanzaTech

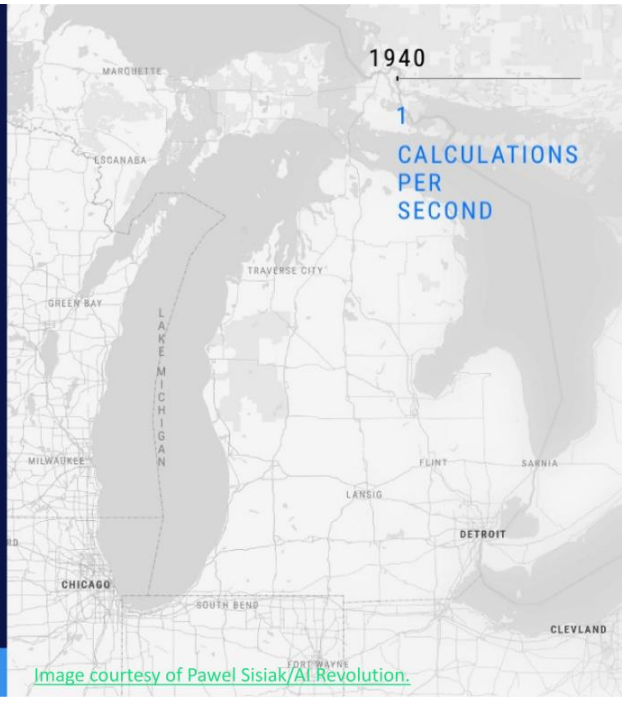
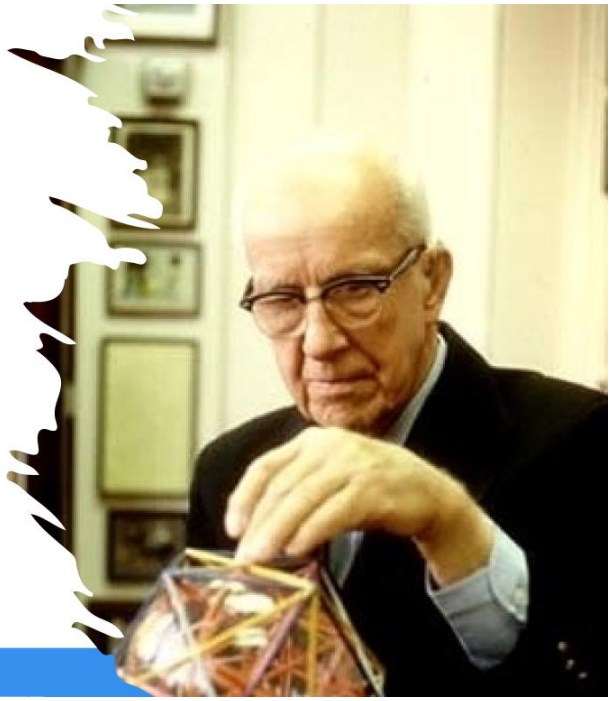


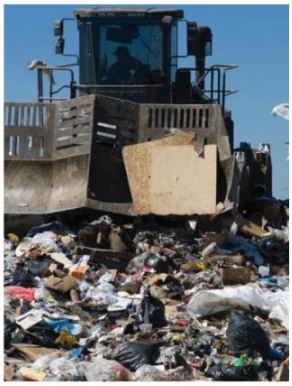
Image courtesy of Pawel Sisiak/AI Revolution.

"You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete."

Buckminster Fuller



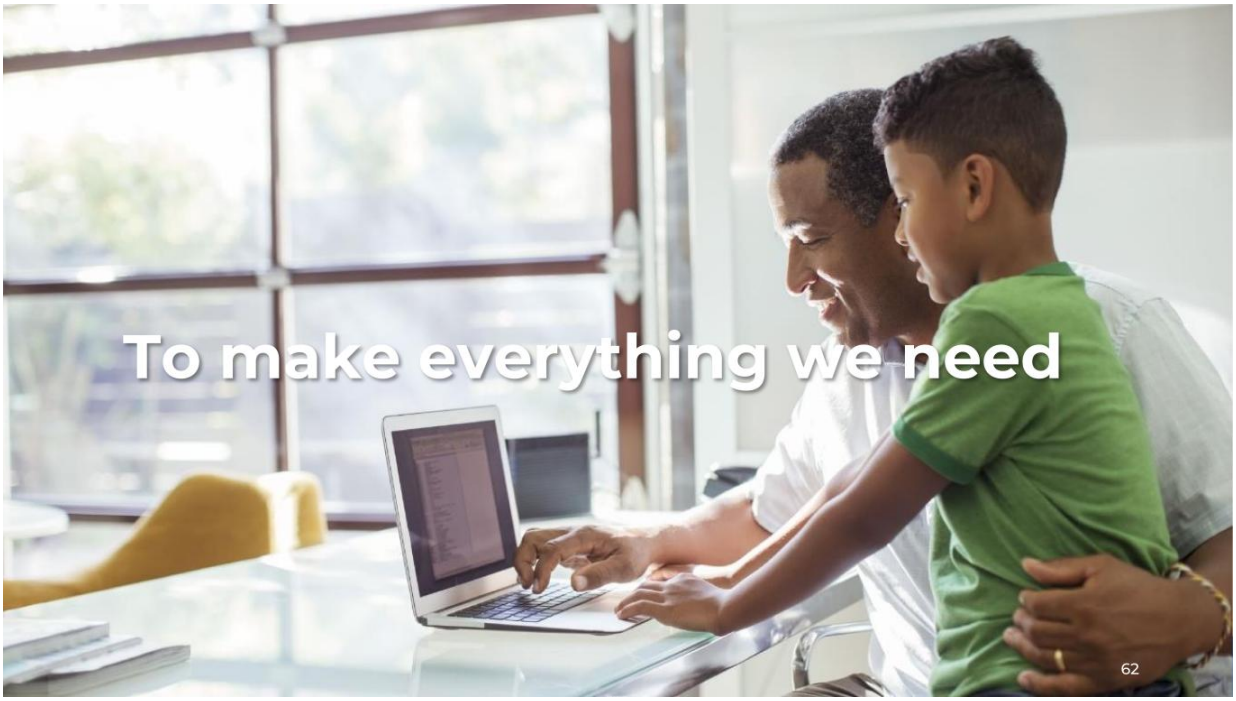


Every waste resource

Including CO_2

LanzaTech


To make everything we need


It’s time to rethink carbon


Rethink refining


Harness clean power


and biology


FUEL
To make everything we need
CLOTHES
BAGS
BUILDING
MATERIAL
SHOES


Where does your carbon come from?
68

Welcome to the Post Pollution Future

LanzaTech