













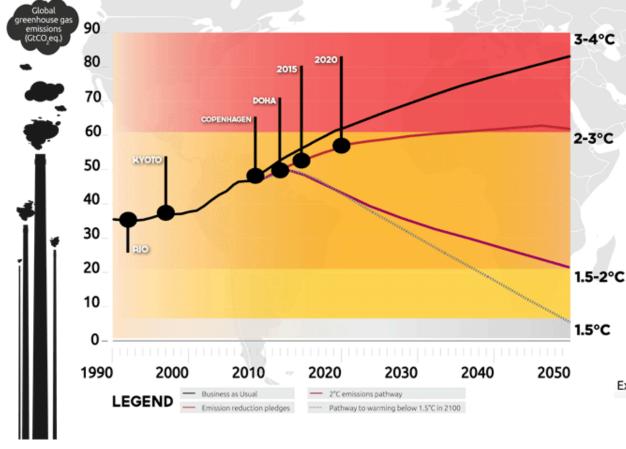






STAYING BELOW 2°C: THE CHOICES WE FACE

With current pledges on the table to cut emissions, we are heading to a 3.3° C warming future. No further action before 2020 will limit society's choices. As temperatures rise, so do the impacts.



Adaptation highly questionable

Unprecedented heat waves

20-30% increase extreme precipitation

Risk of global mass extinctions

Global crop decline

Significant Amazon dieback

Millions risk displacement by sea level rise

Tipping point for Greenland Ice Sheet

High risks for regional food security

Major risk to most coral reefs

Food production losses

Extreme heat waves with severe societal impacts

©www.climateactiontracker.org Ecofys | Climate Analytics | PIK















FOSSIL RESOURCES ARE IN MANY OF OUR DAY TO DAY PRODUCTS... EVEN THINGS WE DON'T REALIZE







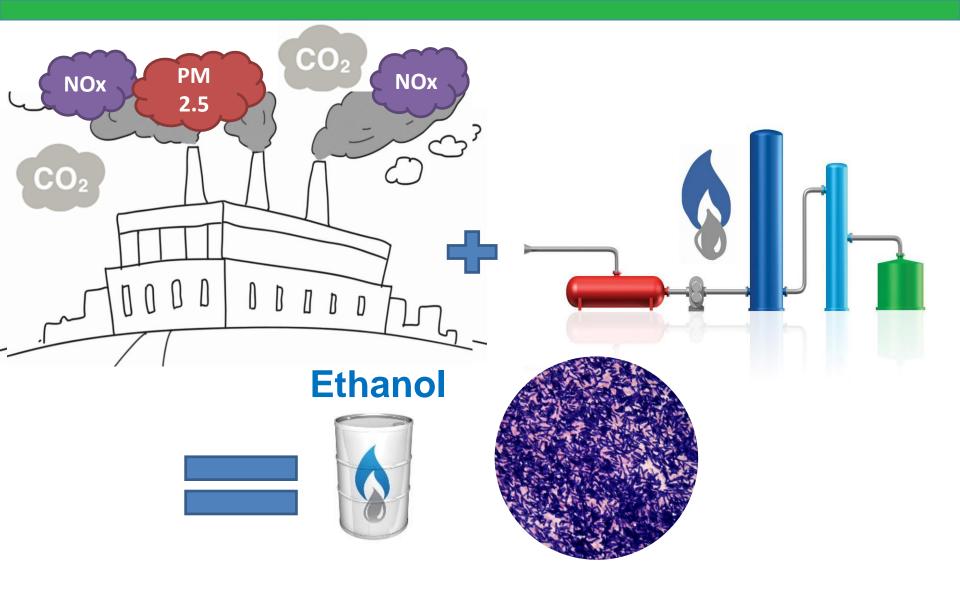












CLEAN FUEL, PLATFORM CHEMICAL















RECYCLING CARBON AROUND THE WORLD





Caofeidian, China
16M
gallons/year

















RECYCLING CARBON AROUND THE WORLD























Accelerating the Path to a Low Carbon World.















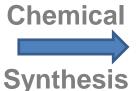








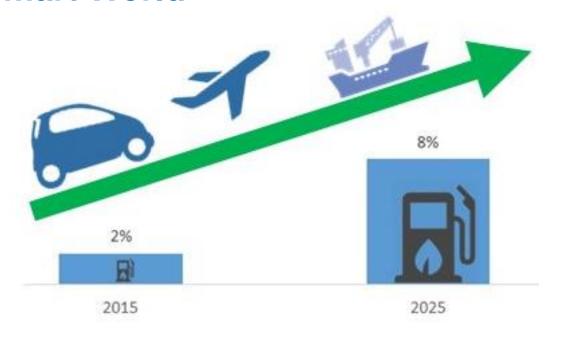






Diesel

A Carbon Smart World



9 years to:

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 - > 400-Ghesw 2000 gall of n> 500 stitles













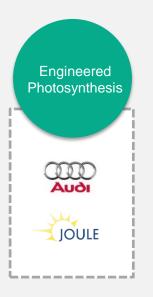


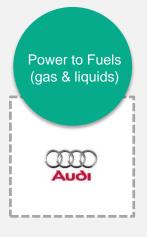
below50 Founding Companies

below50 is the beginning of a journey

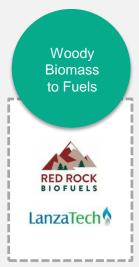


































FOSSIL RESOURCES ARE IN MANY OF OUR DAY TO DAY PRODUCTS... EVEN THINGS WE DON'T REALIZE









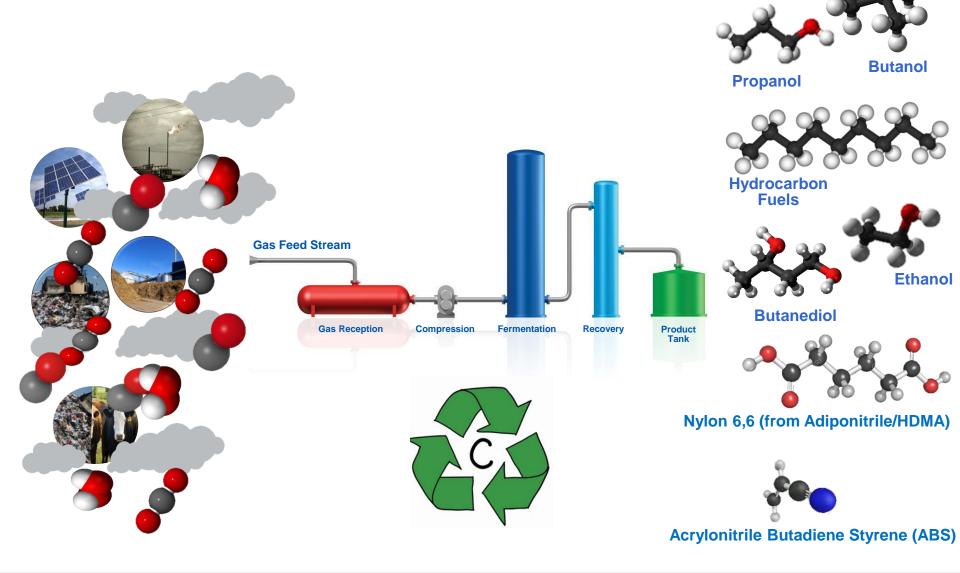








BUILDING A TECHNOLOGY PLATFORM

















Disrupting Market Cycles

- √ Same reactor
- ✓ Same operating conditions
- √ Same feedstock





"software"



Microbe 1.0

✓ Ethanol, 2,3butanediol



Microbe 1.1

 ✓ improved efficiency, tolerance, ethanol only



Microbe 2.0

√ new product molecule

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















Change the Way you Think about you Car...

