Future of the Bio-economy

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Global leader in industrial enzymes

- 6,300 employees
- 6,500 granted patents and pending patents
- 700+ products
- 13% reinvested in R&D
- 30+ different industries
- 1,950 sales (million EUR)
- 700+ products
- 140 countries
- 9 production sites globally

*Novozymes is a Danish Public Listed Company at NASDAQ OMX Nordic*
Innovations across Bioenergy

Bioenergy

- Starch-based ethanol (1G)
  - Corn fiber (1.5G)

- Cellulosic ethanol (2G)

- Biodiesel

- Biogas

- Corn
- Wheat
- Sugar cane
- Sugar beet
- Cassava
- Wheat straw
- Msw
- Corn stover
- Bagasse
- Energy crops
- Yellow grease
- Brown grease
- Sewage waste
- Animal fats
- Acid distillates
- Household waste and cellulosic sludge
The dream: the beautiful Bioeconomy
The reality: A portfolio of solutions and technologies across all sectors is needed to meet a 2 Degree climate target.
CO₂→Fuel synthesis

Solar power

Wind power

Biomass

CHP

Combustibles and/or biogas

Carbon storage

Biorefinery

Liquid and gaseous fuels

E-fuel synthesis

The grid

Materials and feed
EV is coming, but the internal combustion engine will dominate the global light-duty vehicle fleet for years to come.
Biorefining will develop and adapt over time

Production cost of barrel of sugar equivalent

Time

Fuels

Electricity

Carbon capture

Feed / food / chemicals / materials