



*A growing player of the
environmental transition*

October 2021



at a glance

- Founded in 2008 with the mission to use synthetic biology to build a new industrial world
- IPO in 2011 (« ALGBE ») on Euronext Growth
- BOLD (L'Oréal) largest shareholder (15%)
- ~50 employees in Paris and Evry (R&D offices)
- We manufacture the first and only renewable cosmetic-grade isododecane, a key ingredient for cosmetics
- Technology also has the perspective to deliver renewable & sustainable jet fuel



Global context

- **Global warming** is the world's number 1 issue: we are now in the worst case scenario (IPCC 6th Report* published in August 2021)
- More than ever, it is urgent and mandatory to act now
- Our process will allow to reduce CO₂ emissions by 3 folds at an increasing scale, potentially very large

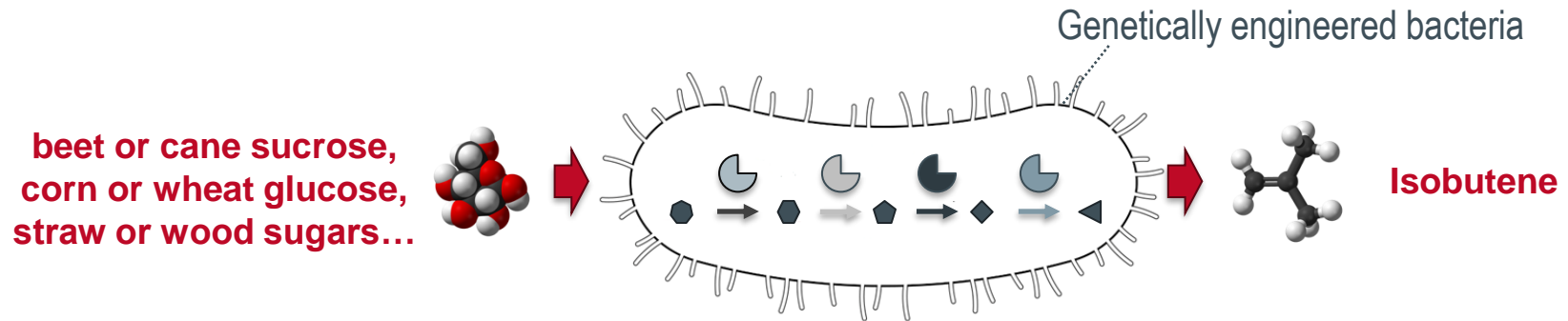
Global Bioenergies' purpose:

'To foster the environmental transition through biosciences'



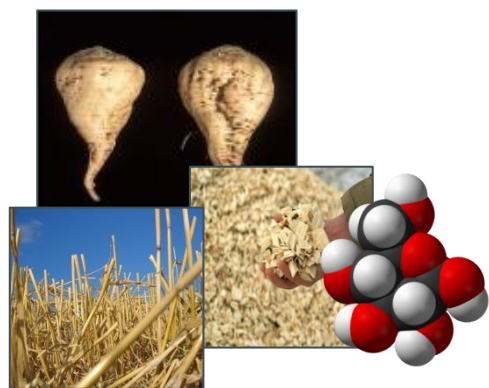
Unique science and strong Intellectual Property

- Engineering bacteria by implementation of a metabolic pathway to isobutene



- No biological starting point because Isobutene is not produced by Nature
→ We created a unique artificial metabolic pathway / huge technology barrier overcome
- Global Bioenergies developed the first ever fermentation process to a gas, allowing to bypass downstream processing efforts.
- Metabolic and chemical engineering breakthroughs covered by an IP fortress: 49 patent families under exclusive rights, gathering 193 granted patents and 91 pending applications.

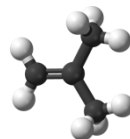
Converting biomass into isobutene and ready-to-use ingredients



Beet or cane sucrose,
Straw or wood sugars...



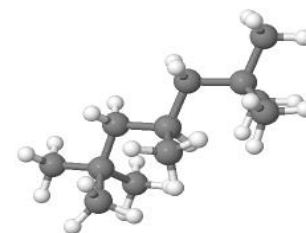
Biology



Isobutene



*Green
chemistry*



High purity IDD:
first and only
cosmetic-grade IDD

A 4-step roadmap

- Horizon 1: Launch of our own make-up brand LAST® - 2021
- Horizon 2: Ingredients for the make-up market - 2022/23
- Horizon 3: Ingredients in skin care and hair care markets - 2024/25
- Horizon 4: Jet fuel and commodities – starting in 2026

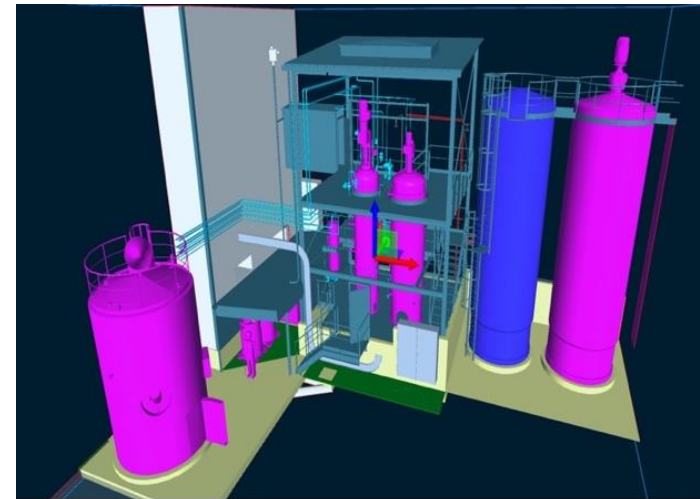
Horizon 1: Launching LAST[®]

- IDD is the first ingredient in longwear make-up
 - Moving up the value chain and developing our own longwear cosmetics brand named **LAST**
 - First brand combining naturalness and longwear performance
 - Based on innovative renewable isododecane produced on our Demo plant
 - Full renewable offer with green packs too
- Market *proof of concept*
- More on www.colors-that-last.com



Horizon 2: Selling renewable isododecane to make-up leaders

- Small manufacturing unit under construction in Pomacle, France
- Expected to start in February 2022
- Aim is to sell IDD in the high-premium make-up market



Horizon 3: Selling large volume ingredients in skin and hair care markets

- IDD and IHD: market of 25,000 tons/yr, growing to 100,000 tons/yr (substitution of D5 silicon)*
- Assuming a global cosmetics market of 2-3 million tons/year:
 - We could move the naturalness needle by $\geq 1\%$ by like-for-like substitution
 - Up to 4% if considering substitution of D5 silicon
- Industrial project in France to manufacture several thousand tons starting in late 2024

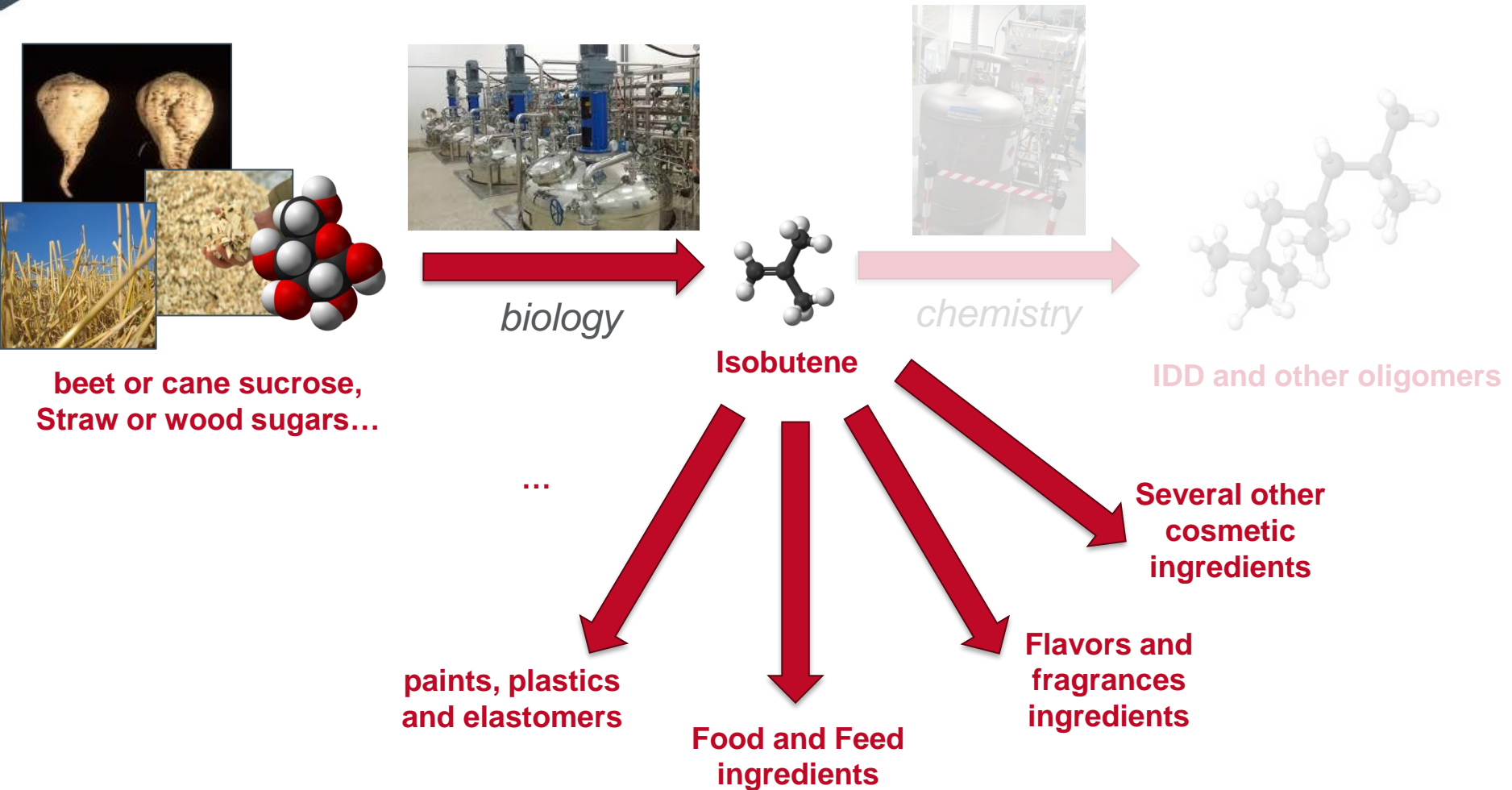


Horizon 4: Our promise for the decade: Sustainable jet fuel

- Further progress on R&D necessary to bring costs down
 - Work on second generation
 - Backed by EU grants
- Once technology and market ready, propagate the technology in jet fuel to **massively reduce CO₂ emissions of air transportation**



Many other opportunities...



... to be harnessed through industrial collaborations