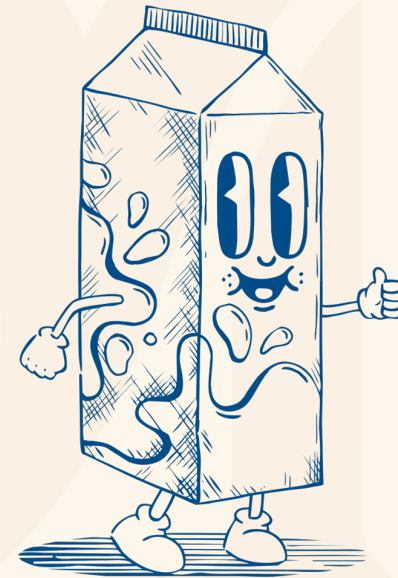
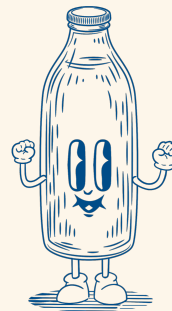


Bon Vivant

Animal-free dairy
proteins for industrials

FOOD & FEED for the FUTURE

1st September 23



Bon Vivant is combining biotechnology and European know-how to produce milk proteins that enable food industrials to create animal-free dairy products

The logo for i-Lab, featuring a red dot above the 'i' and the letters 'i-Lab' in a bold, sans-serif font.The logo for Génération Deep Tech, consisting of a yellow circle with the text 'GÉNÉRATION DEEP TECH' inside.The logo for FoodShaker, featuring the text 'FOODSHAKER' with a stylized 'v' in the 'K' and the tagline 'BY ISARA. L'INCUBATEUR QUI CULTIVE L'INNOVATION' below it.

AS A B2B COMPANY

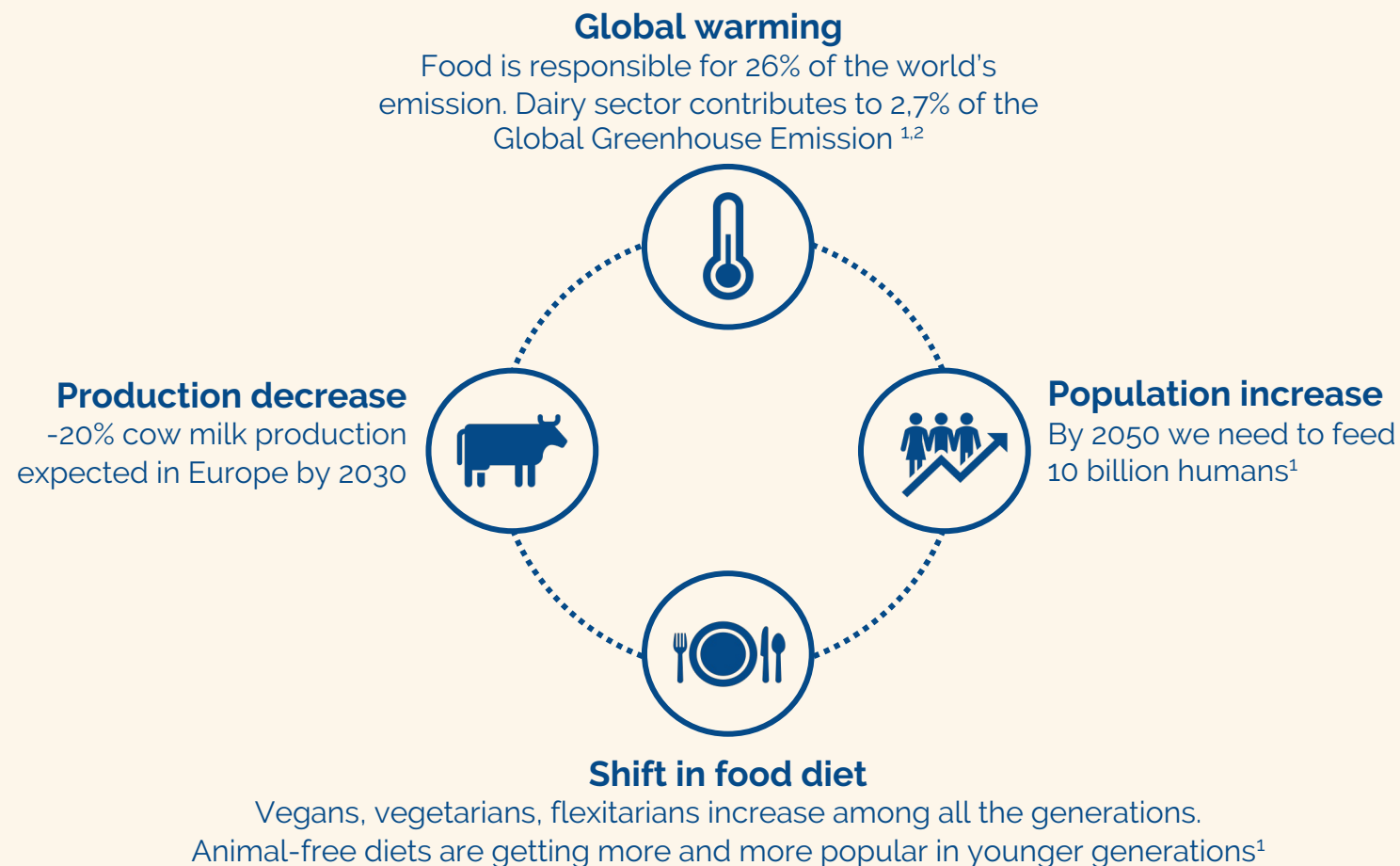
Our mission is to support the dairy industry to produce animal-free dairy products to feed the world while preserving the taste, our planet and cows

Agenda

- Why animal-free dairy?
- Precision fermentation
- Our technology
- Positive Impact
- Applications & markets
- Challenges & opportunities



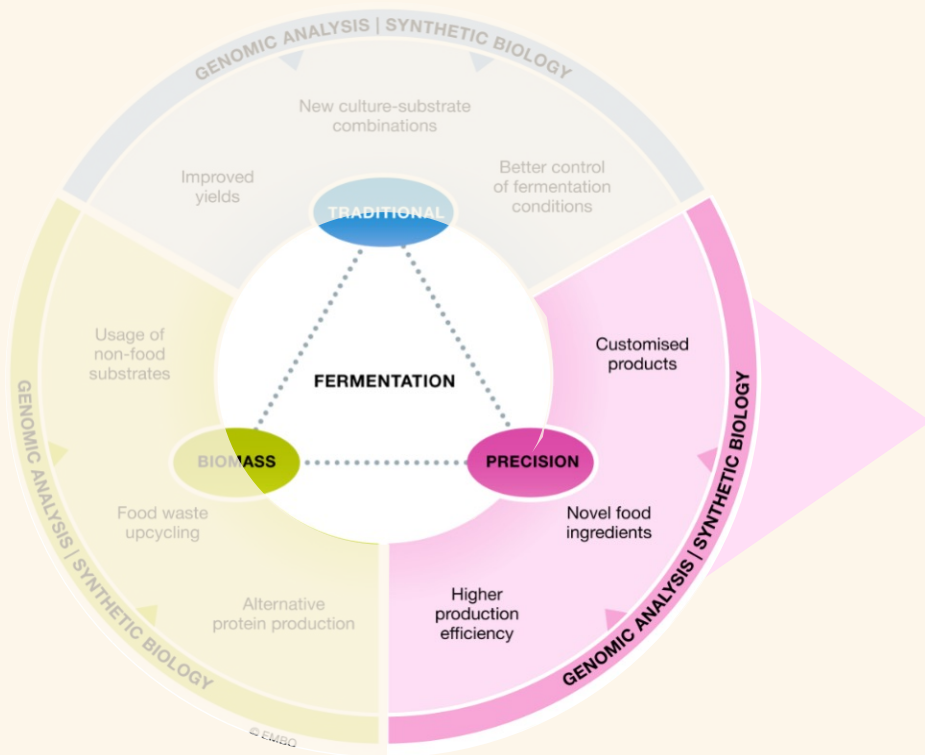
We believe we can propose a **complementary solution** to address today's current challenges



¹Environmental Impacts of Foods productions, Our World in Data, 2019

²Greenhouse Gas Emission from the dairy sector – A life cycle Assessments, FAO, 2010

Precision fermentation processes have been used for decades in pharma and food industry to produce added-value proteins. We focus on highly-nutritional and applicable milk proteins.



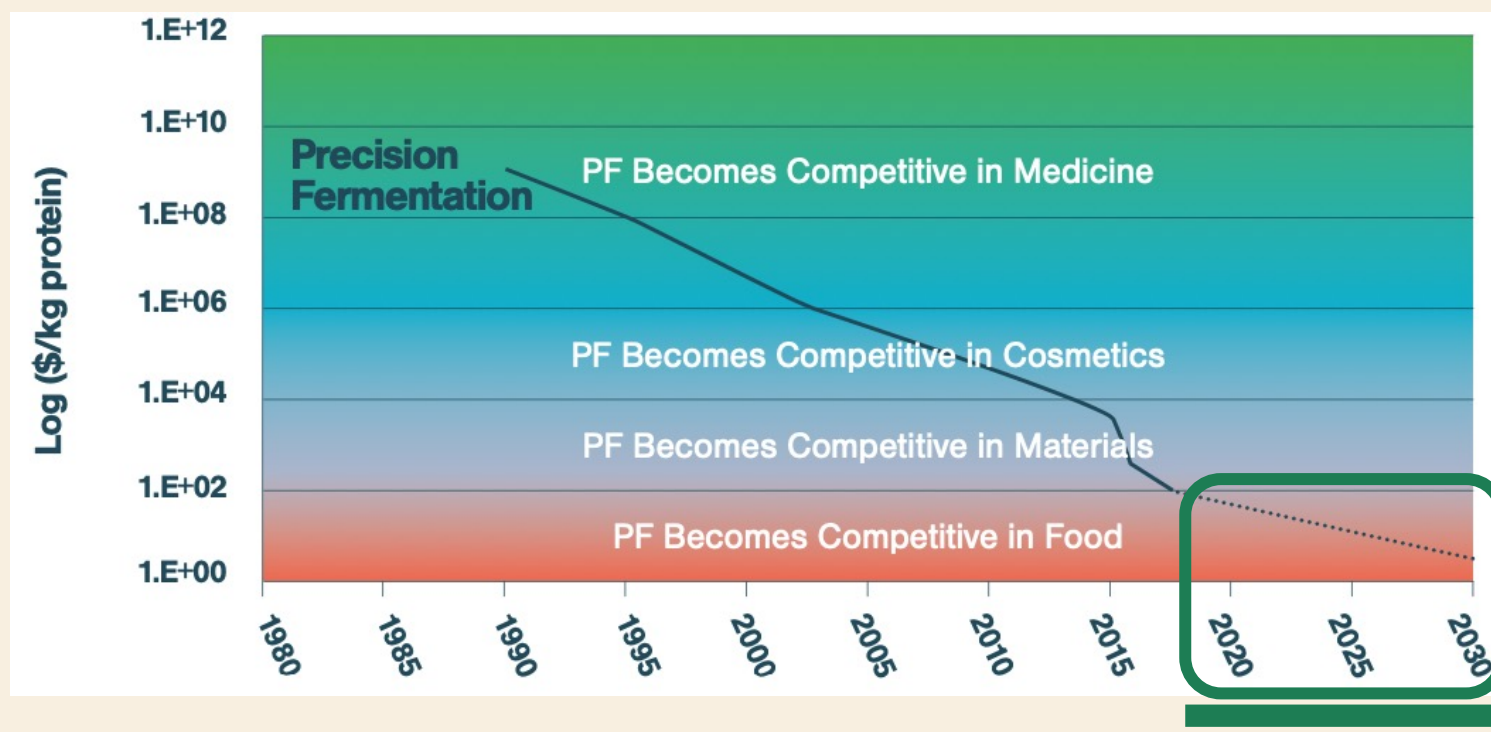
Products made with Precision Fermentation (Hover over to highlight)

- Cheese
- Processed Meat & Foods
- Medicines
- Baked Goods
- Detergents
- Supplements
- Beverages
- Dairy Products
- Candy
- Lotion
- Perfume
- Fuel
- Biologic Drugs

Cl-XXI Collagen Type 21	CI-III Collagen Type I	E Elastin	C Cannabigerol	Sp Spider Silk Protein	Sa Squalene	Hy Hyaluronic Acid	Sr Sphorolipid	He Hemisqualene	Bu Butylene glycol	Bs Bisabolol	CI-II Collagen Type I	W Whey	Ov Ovomucoid	My Myoglobin	Gt Glutamic acid	Is Insulin	S Somatotropin	X Xanthan Gum	P L-phenylalanine	CI-I Collagen Type I	De Deoxyribonuclease I	Ti Tissue Plasminogen Activator	Er Erythropoietin	Ar Artemisinin	Sh Shikimic Acid	N Natamycin	R Rasburicase	Re Rebaudioside	Mn Menthol	Gr Geraniol	Gc Glucosylase	Va Vanillin	Lc Lactones	A alpha-Amylase	Co Carotenoids	An Anthocyanin	Ch Chymosin	Cr Carmic Acid	Cp Capsaicin	Pe Pepsin	V Valencene	Nt Nootkatone	Li Lipase	Br Brazzein	Mt Menthone	Ma Manool	Ty Trypsin	Sc Sclareol	Ct Catalase	I alpha-Ionene	Sc Sclareol	Ct Catalase	Go Glucocerebrosidase	F Factor VIII	T Thaumatococin	Cn Cannabichromene	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor	Ha Hepatitis B Surface Antigen	Me Meningitis B antigens	Ge Genetically Inactivated Pertussis Toxin	L1 L1 VLP	Sq Squalene	Id alpha-L-furonidase	Ga Granulocyte Colony Stimulating Factor	In Insulin-like Growth Factor 1	Di Dihydroquercetin	Ce Catechin	Cu Curcuminoid	La Lactoferrin	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor	Ph Phenylalanine-Butyramide	L L-Leucine	Ag L-Arginine	Py Pyrroloquinoline quinone	Ml Melatonin	Vi Violacein	At Asthaxanthin	Il L-Isoleucine	Hi L-Histidine	Eg L-ergothioneine	Th Theobroma Oil	Ly D-lysergic acid	Hp Heparin	Th Theobroma Oil	Ml Melatonin	Vi Violacein	Hu Human Milk Oligosaccharide	At Asthaxanthin	Il L-Isoleucine	Hi L-Histidine	Eg L-ergothioneine	Py Pyrroloquinoline quinone	Cu Curcuminoid	La Lactoferrin	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor	As Ascorbic Acid	Rs Resveratrol	Ph Phenylalanine-Butyramide	L L-Leucine	Ag L-Arginine	Di Dihydroquercetin	Ce Catechin	Cn Cannabichromene	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor	As Ascorbic Acid	Rs Resveratrol	Ph Phenylalanine-Butyramide	L L-Leucine	Ag L-Arginine	Di Dihydroquercetin	Ce Catechin	Cn Cannabichromene	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor	Hu Human Milk Oligosaccharide	At Asthaxanthin	Il L-Isoleucine	Hi L-Histidine	Eg L-ergothioneine	Py Pyrroloquinoline quinone	Cu Curcuminoid	La Lactoferrin	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor	Bo Biotin	Hu Human Milk Oligosaccharide	At Asthaxanthin	Il L-Isoleucine	Hi L-Histidine	Eg L-ergothioneine	Py Pyrroloquinoline quinone	Cu Curcuminoid	La Lactoferrin	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor	Bo Biotin	Hu Human Milk Oligosaccharide	At Asthaxanthin	Il L-Isoleucine	Hi L-Histidine	Eg L-ergothioneine	Py Pyrroloquinoline quinone	Cu Curcuminoid	La Lactoferrin	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor	Bo Biotin	Hu Human Milk Oligosaccharide	At Asthaxanthin	Il L-Isoleucine	Hi L-Histidine	Eg L-ergothioneine	Py Pyrroloquinoline quinone	Cu Curcuminoid	La Lactoferrin	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor	Bo Biotin	Hu Human Milk Oligosaccharide	At Asthaxanthin	Il L-Isoleucine	Hi L-Histidine	Eg L-ergothioneine	Py Pyrroloquinoline quinone	Cu Curcuminoid	La Lactoferrin	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor	Bo Biotin	Hu Human Milk Oligosaccharide	At Asthaxanthin	Il L-Isoleucine	Hi L-Histidine	Eg L-ergothioneine	Py Pyrroloquinoline quinone	Cu Curcuminoid	La Lactoferrin	Sa Santalol	Pt Patchouliol	Fi Fibrinblast Growth Factor
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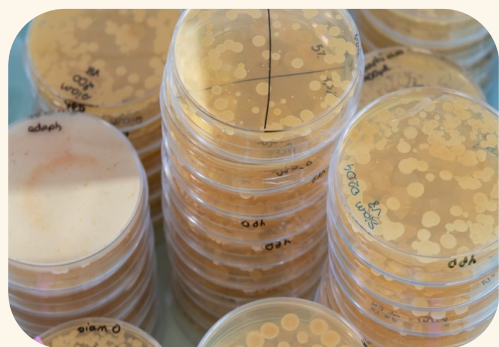
¹ Fermentation for future food systems: Precision fermentation can complement the scope and applications of traditional fermentation. EMBO reports, 22(5), 2021

The combination of precision biology together with a well-known fermentation process make this disruptive innovation **accessible** for food applications



The cost of Precision Fermentation is being driven ever lower by a steep decline in the cost of precision biology. As a result, the cost of producing a single molecule by PF has fallen from \$1m/kg in 2000 to about \$100/kg today. **We expect the cost to fall below \$10/kg by 2030.**

We produce **at scale** animal-free dairy proteins using precision fermentation for industrials



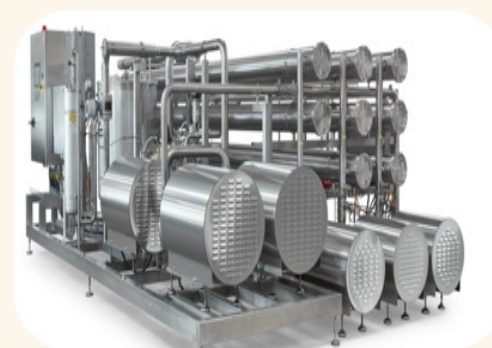
Metabolic engineering

- Target protein of interest : **whey proteins**
- Host is selected for target expression and strain functionality is optimized
- Feedstock selection (industrials side streams depending on host)



Multiplication by fermentation

- Submerged fermentation process in bioreactor tanks
- Production of animal-free dairy proteins by the host
- Process parameters optimization



Biomass separation

- Physical separation of the biomass and the proteins
- Concentration of the proteins
- Drying step



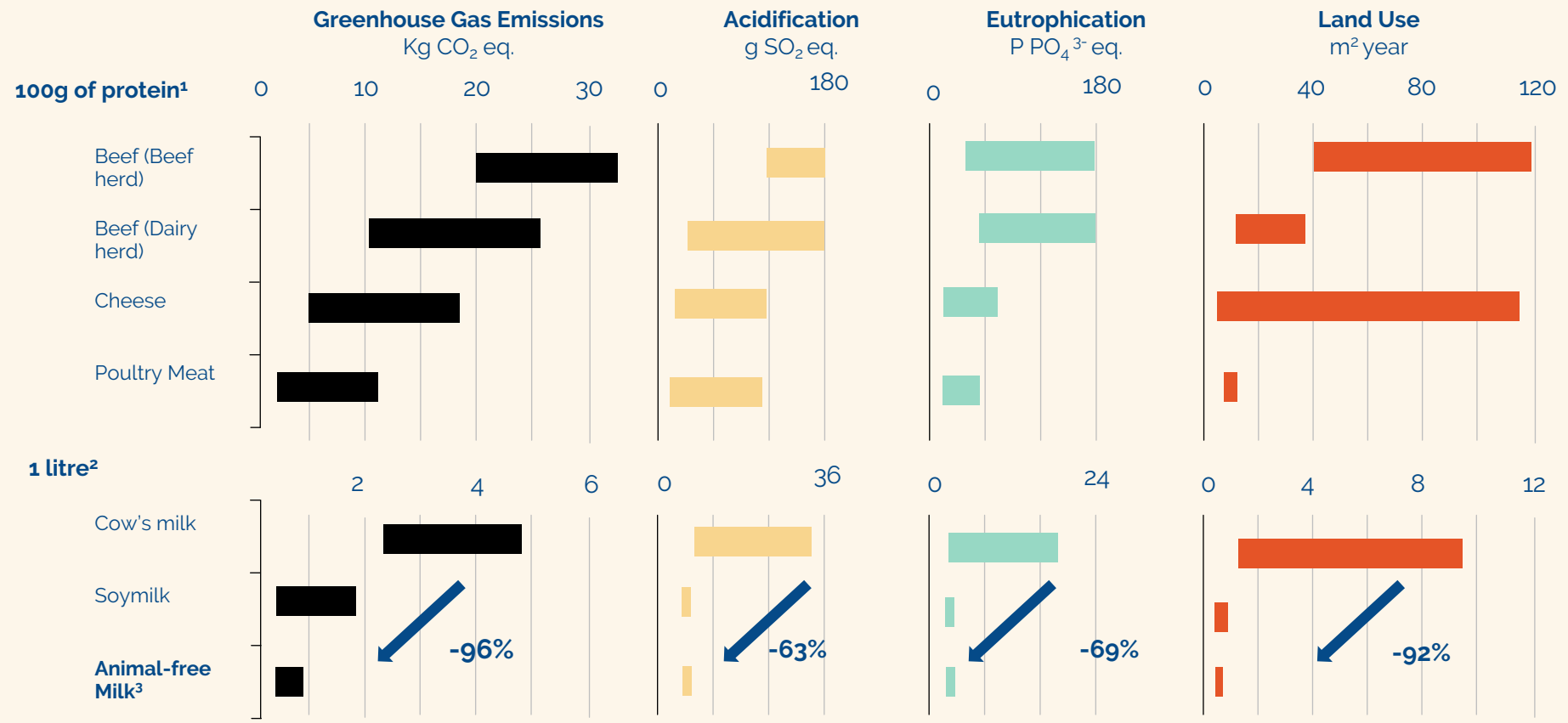
Proteins are ready to be transformed !

- The proteins are identical to animal's dairy proteins, **lactose-free and GMO-free**
- The proteins are then transformed to produce **animal-free** dairy products by industrials

POSITIVE IMPACT

Our LCA shows a significant positive impact of our process on 4 major environmental criteria

Bon Vivant



¹Reducing food's environmental impacts through producers and consumers, Science, 2018

²Dairy vs plant-based, what are the environmental impact, Our World Data, 2022

³Based on our own LCA complying with ISO 14040 and ISO 14044 standards

We work hand by hand with Industrials to formulate *dairy products* with no compromise on taste, nutrition and environment



Enrich Animal dairy
Animal-based X Precision Fermentation

- Enrich the nutritional values
- Preserve dairy product taste & identity
- Reduce the environmental footprint
- Ensure constant supply



100% Animal-free
Plant-based X Precision Fermentation

- Enrich the nutritional values
- Prevent lactose intolerances
- Mimic dairy product taste
- Unlock plant-based technical challenges
- Broad the applications
- Respecting the clean label

Several challenges remain to be met, but precision fermentation has already demonstrate its robustness and adoption

The scalability of the process

- Robustness of the microorganisms
- Optimization of the fermentation process
- Leanness of the downstream process
- Absence of hormones and antibiotics

Precision fermentation has been proven by several industries (Pharma, enzymes)

The cost reduction

- Strain productivity
- Size of bioreactors
- Availability of fermentation capacities
- Carbon source (by-products sugars)
- Valorization of biomass

Price has significantly decreased in the last 20 years

Consumers adoption

- Sustainable : Inform on the positive environmental impact
- Safety: non GMO and already used in food and commercialized in the US
- Clarify the health benefits (taste, nutrition, clean label, lactose-free)

Rennet is consumed by EU consumers in more than 80% of the cheese since 2000

Authorities

- Educate legislators regarding the technology
- Build robust data to drive decisions
- Accelerate approval process of GMO-free ingredient
- Gain in competitiveness in EU vs other continents

Animal-free dairy proteins approved in USA, Israel and Singapore in 2022

Bon Vivant

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