

Taste, Texture & Health

ESG expert investors event 2025
BU deep dive presentation



Taste, Texture & Health

**Healthier.
More delicious.
Better for people
and planet.**

Imagine a world where you don't have to choose between what tastes good, what feels good, and what is good for the planet.

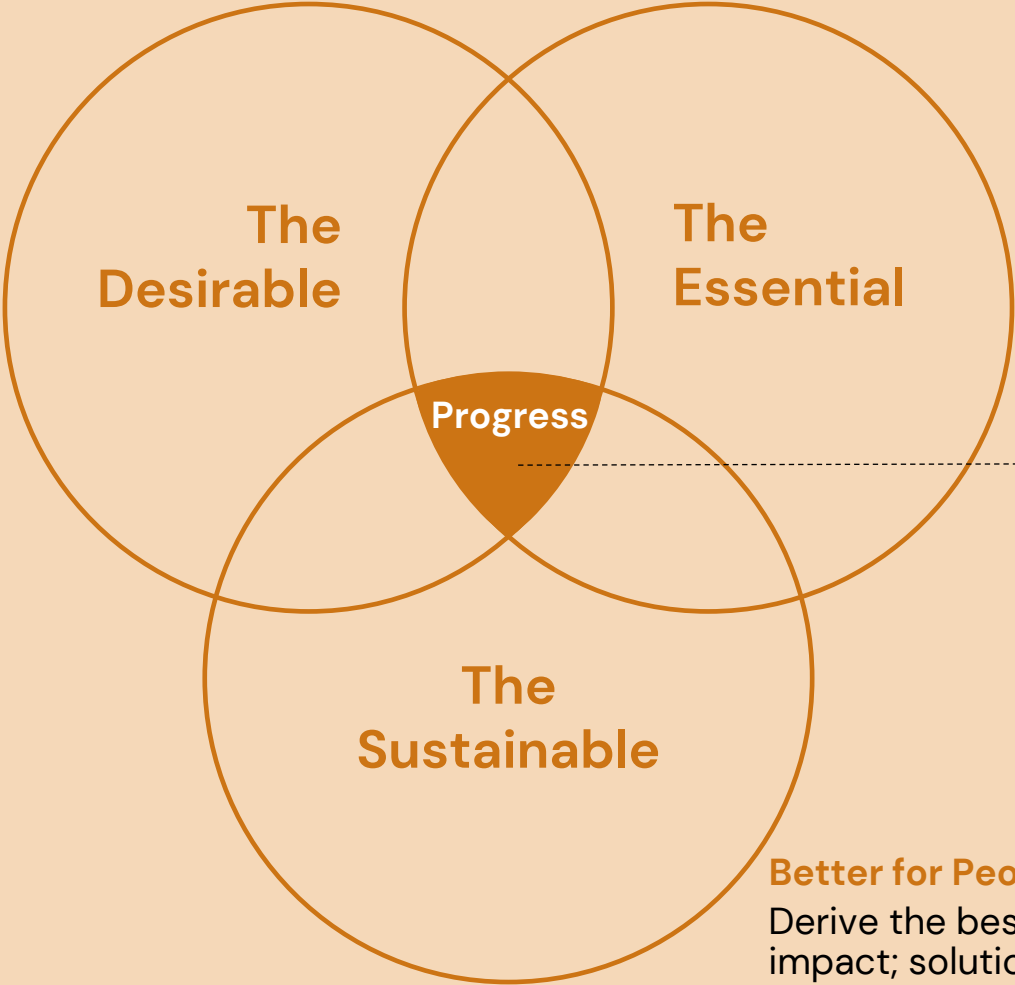
A world where the most desirable food products demand less from our planet. Where great tasting food and beverages use more nutritious ingredients that derive the best of nature, making every choice a better one.

We bring progress to life by co-creating with our customers to transform the way the world eats.

Taste, Texture & Health

Delicious

Create foods and drinks with authentic sensory experiences by improving flavor impact, texture, and mouthfeel



Nutritious

Bring consumers the vitamins, minerals, probiotics and proteins they need, without less-desirable sugars and salts

- Natural vanilla
- Brewers Clarex®
- CocoaCraze™
- Delvo® Fresh Pioneer
- Veramaris® Pets
- Delvo® Plant
- Vertis® CanolaPRO®
- ...and more

Better for People and Planet

Derive the best from nature for the most positive impact; solutions that boost efficient food production, meet the needs for natural ingredients, reduce waste and enhance health —all while continuously reducing our environmental footprint and sourcing ingredients responsibly

Healthier.
More delicious.
Better for people
And Planet

Our 2030 targets



Better for people and planet

42%



Reduce absolute scope 1 and 2 GHG emissions by 42% in 2030 (vs. 2021)

25%



Reduce absolute scope 3 GHG emissions by 25% in 2030 (vs. 2021)

100%



100% of our portfolio evaluated for environmental impact by 2025 to ensure transparency and drive constant improvement¹

100%



100% of key natural ingredients sustainably sourced by 2030

Our unique, first-of-its-kind enzyme for sustainable beer stabilization saves energy, emissions, and costs worldwide.

Market needs for transforming diets

Globally 2 billion hectolitres of beer is produced annually. Conventional beer stabilization methods are quite expensive, not sustainable (beer losses, non-biodegradable plastics) and complicate the beer production process.

Our impact with Brewers Clarex®

Simplifies the beer stabilization method with a liquid natural blend, ready to use without extra steps. No waste stream of solid particles (landfill) or in water.

Increases cellar capacity with >25% and energy savings up to 5%. Potential energy cost reduction of > 130 k€/yr for 1 Mio hl brewery*.

It is the most sustainable stabilization method, up to 500-ton CO2 eq./Mio hl reduction*.

1 in 5 beers around the world is stabilized using Brewers Clarex®. In 2024 we continued expanding the use of BC by top brewers in the main markets in Asia, Europe and North America



Accelerate climate action



Design sustainable products



Safeguard nature and biodiversity



Enhanced sustainability through cocoa powder optimization

Market needs for transforming diets

Cocoa powder is essential in bakery, bars, cereals, desserts, and dairy drinks, but is becoming scarce and costly¹.

Consumers see higher cocoa content as premium, but other key ingredients like dairy solids and sugar also impact taste and cost.

Our impact with CocoaCraze™

Flavoring balances taste and cost while easing supply chain challenges.

It reduces cocoa ingredient reliance by:

- Up to 50% in flavored milk
- Up to 40% in biscuits/cookies
- Up to 33% in fat filling.

It is an environmentally-friendly option² compared to traditional cocoa powder.

We achieved double digit sales growth and strong customer interest.



Safeguard nature and biodiversity



Accelerate climate action



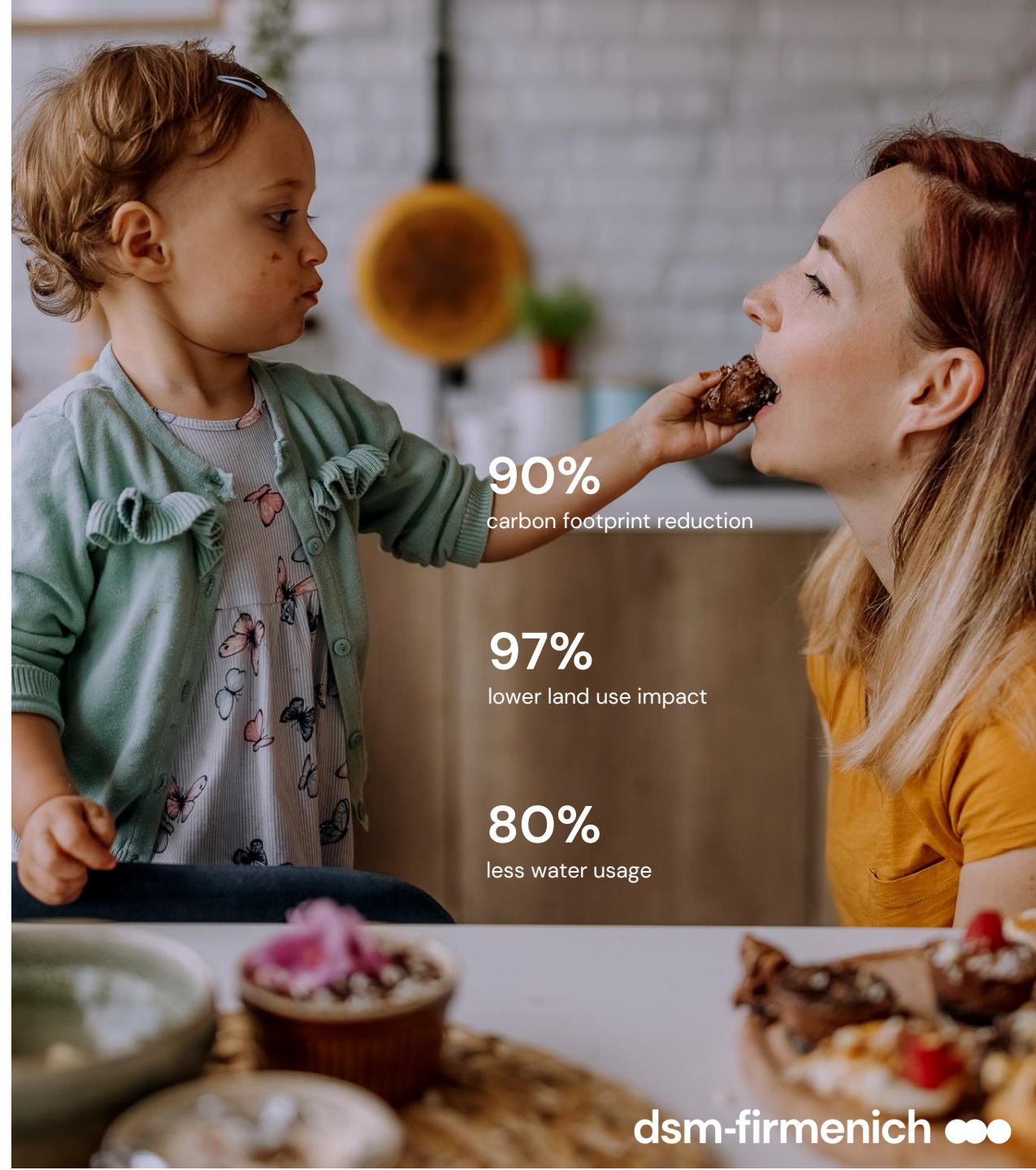
Design sustainable products



Secure fundamental rights and needs

¹ Sources: TradingEconomics, ICE, supplier information

² The environmental footprint calculations are based on dsm-firmenich Internal DB & the EcoFood Compass® tool



90%

carbon footprint reduction

97%

lower land use impact

80%

less water usage

Nutritional Premixes and great tasting flavors, for a growing category of hydration drinks

Market needs for transforming diets

Consumers are concerned about their health and looking for low sugar drinks that provide energy and nutrients.

Among global consumers who address their energy concern through diet / nutrition, 41% of them are doing it with drinks.

Globally 'energy drinks' is the largest segment, grew ~10% CAGR 2022-24, followed by sports drinks and functional water.

Our impact with nutritional premixes

Fueling healthy lives with electrolytes (magnesium, potassium, calcium, sodium) and vitamins (C, B3, B5, B6, B12).

Powder-products contribute to the reduced use of PET-bottles and lower CO₂-footprint for shipping drinks.

Taste challenges with electrolytes are addressed with our masking and modulation flavors.

This approach, combining nutrients with flavoring technologies, enabled us to win new business around the globe.



Fuel healthy lives



Design sustainable products



Nurture wellbeing



Accelerate climate action



An innovative solution that lowers dependency on citrus sources

Market needs for transforming diets

Global climate change and greening are having a detrimental effect on citrus groves around the world: affecting citrus oil & juice prices, quality and quantity

Citrus is the #1 beverage flavor category: clients need alternatives to keep up meet demand

Our impact: Citrus NextGen

Cost competitive extenders and replacers: flavors composed of molecules from non-citrus sources that match a traditional FTNF citrus oil

Procurement stability: reduce price volatility while offering natural solutions

Ongoing progress: an active innovation project is evaluating new molecules regularly to add to portfolio

Strong growth since launch & double-digit savings for clients



Safeguard nature and biodiversity



Design sustainable products



Supporting the scale-up of plant-based protein foods

Market needs for transforming diets

Consumers seek to increase their consumption of plant-based foods and beverages.

Customers aim to win consumers with plant-based alternatives, focusing on taste, texture, nutrition, low sugar, and efficient production.

Our impact with Vertis™ CanolaPRO®

A complete protein with all essential amino acids. It is a highly functional protein working well in various food and beverages.

Sourced from canola processing byproducts, this plant-based protein meets global needs without extra farmland.

The only complete protein commercially available and certified 'upcycled'.



Significant sales milestone achieved. Our new France-based factory is now producing at scale, ensuring we meet growing demand for plant-based protein with top quality and efficiency.



Design sustainable products



Fuel healthy lives



Conserve our planets resources



Enjoying food with the full delicious taste – but with less sugar

Market needs for transforming diets

With nearly three billion people overweight, reducing sugar is crucial to combating obesity and diabetes.

Sugar cultivation is resource-intensive, driving deforestation, biodiversity loss, and pollution.

Sugar is more than sweetness, and reducing it poses technical challenges that impact flavor, texture, and overall enjoyment.

Our impact with our sugar reduction platform

Flavors amplify low-sugar products, using advanced technology to improve taste and mask off-notes across various applications.

Taste optimization flavors help fine-tune sweetness, texture, and aftertaste, creating a more balanced flavor experience.

We created a new generations sweetening solutions that offer significant taste, cost, and sustainability benefits over conventional sugars and other stevia-based solutions – EverSweet®¹.

We hold the largest and rapidly growing portfolio of sweetening solutions, establishing us as a leader in the market.



Fuel healthy lives



Design sustainable products



Accelerate climate action



Safeguard nature and biodiversity

35 ¹ EverSweet™ is a product of Avansya, a joint venture between dsm-firmenich & Cargill
² Source: LCA The environmental footprint of EverSweet® 2024, conducted by dsm-firmenich, third-party panel reviewed in compliance with ISO 14000 & ISO 14040



Our impact with EverSweet®²

Lower carbon footprint

vs. Sugar
81%

Lower land use impact

vs. Sugar
97%

Lower water use impact

vs. Sugar
98%

vs. Bio-converted Stevia Reb M
76%

vs. Bio-converted Stevia Reb M
88%

vs. Bio-converted Stevia Reb M
92%

vs. Leaf-based Stevia Reb A
49%

vs. Leaf-based Stevia Reb A
75%

vs. Leaf-based Stevia Reb A
85%

A revolutionary coagulant enzyme for enhanced cheese texture, taste, yield, and functionality

Market needs for transforming diets

A coagulant is instrumental to cheese yield, texture as well as whey valorization. It has a direct effect on the cheese quality.

Cheese producers are challenged to produce more cheese with less milk while enhancing functionality of the texture and functionality.

Our impact with Maxiren®EVO

- Superior slicing and shredding performance due to high specificity of the enzyme.
- Reduces cheese loss by 16%².
- Improved cheese yield with up to 1.7%¹:
 - Increased water binding
 - Improved fat retention
- Reduction of carbon footprint up 1.6%³.
- Less and more uniform browning after melting and improved stretchability.

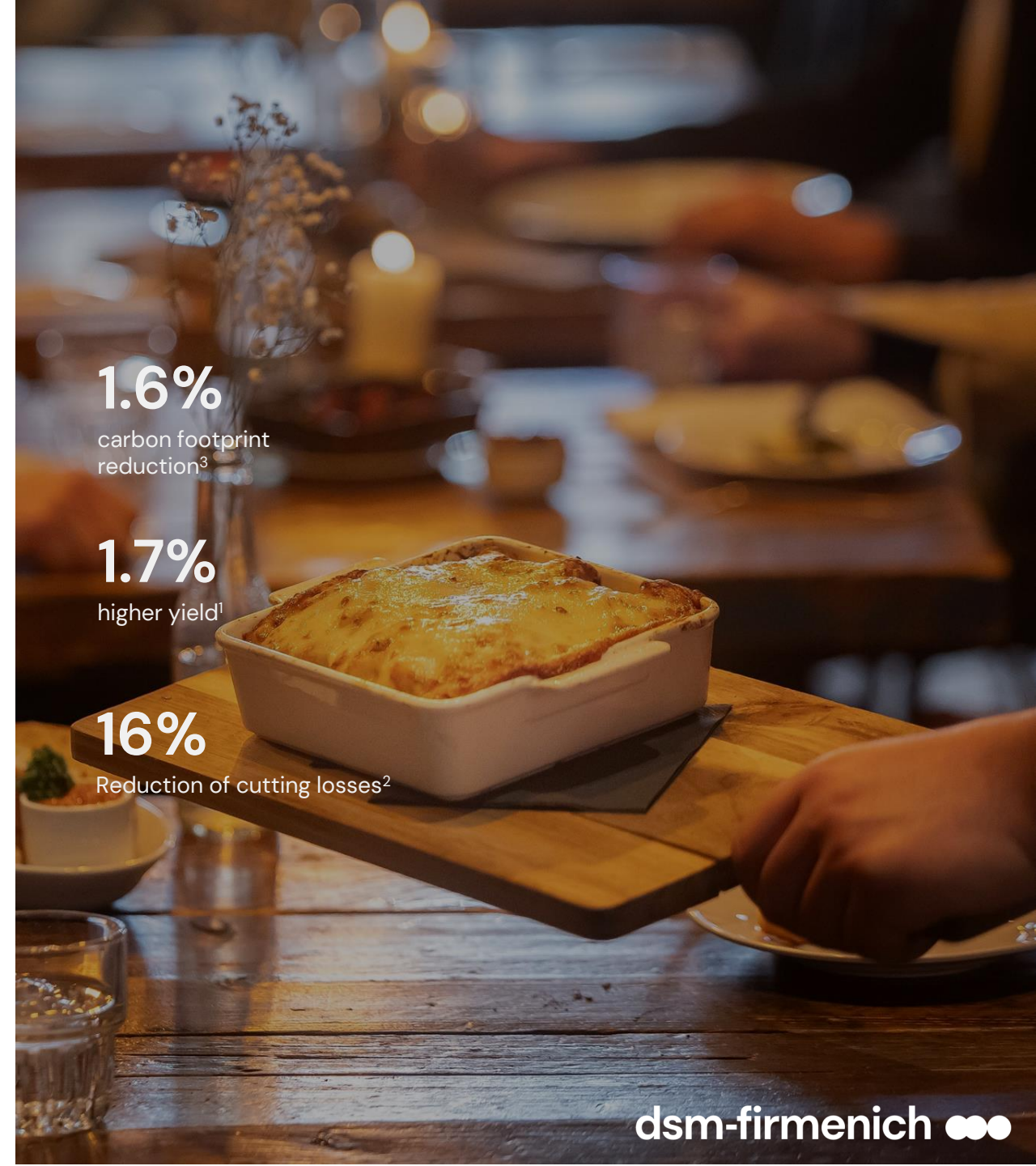
Market launch March 2025 and strong customer interest.

¹ Versus commercially available 1st generation fermentation based chymosins

² than the same cheese with other commercially available coagulants

³ GHG emissions are mainly reduced through the optimal milk to cheese conversion.

The results are based on LCA study performed internally by dsm-firmenich. The report was not subjected to a 3rd party review.



1.6%
carbon footprint
reduction³

1.7%
higher yield¹

16%
Reduction of cutting losses²

An innovative solution that optimizes and conserves natural vanilla resources

Market needs for transforming diets

Consumers put pressure on brands to offer natural products and eliminate synthetic ingredients.

The price of natural vanillin is high, limiting the switch from non-natural to natural.

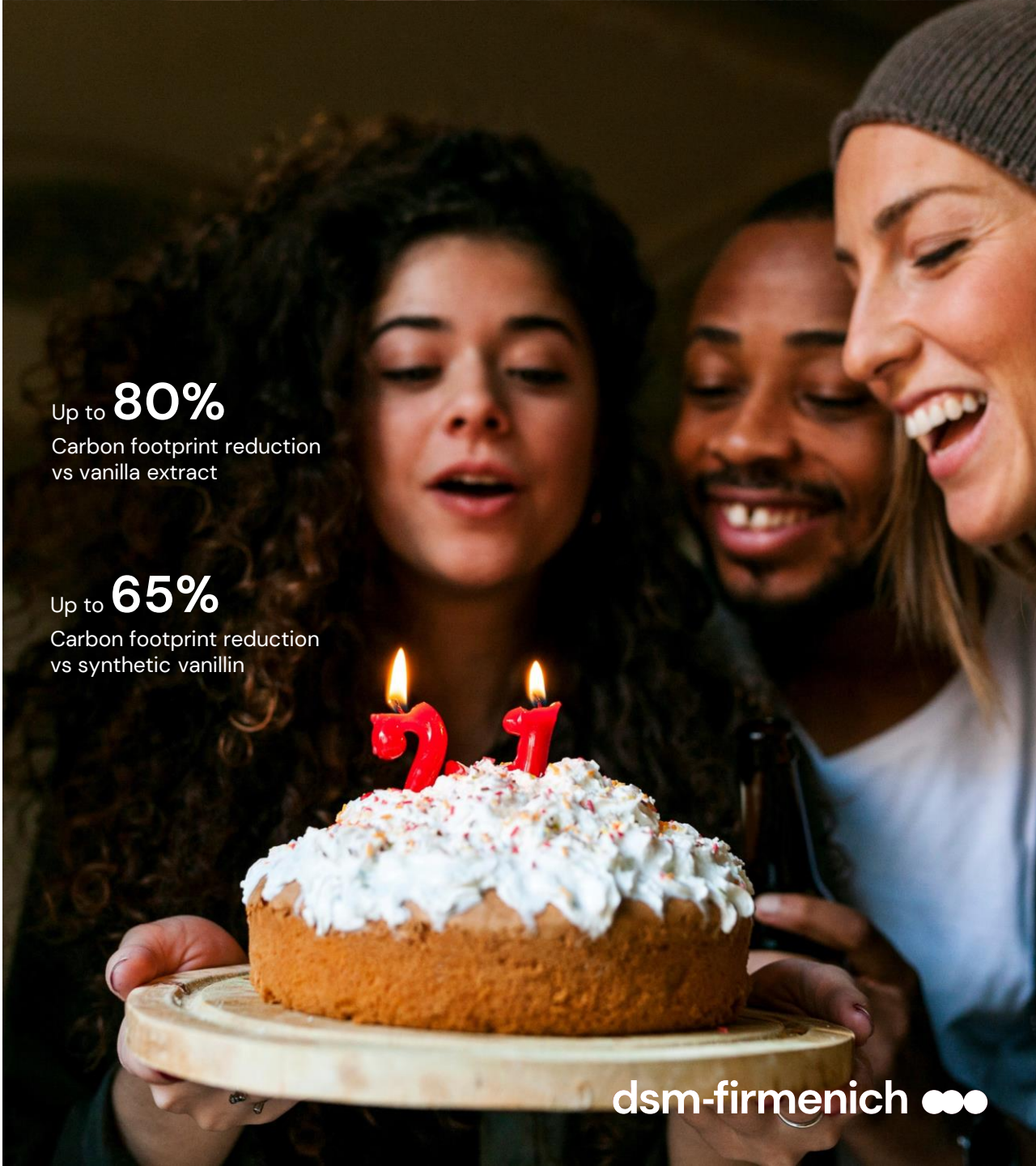
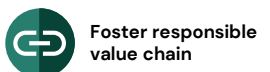
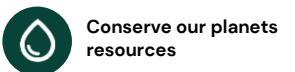
Our impact with Vanilift®

We help customers satisfy natural-conscious consumers with natural solutions that meet their cost-in-use expectations.

Our solutions are less impacted by raw materials market price volatility, import duties and offer an improved natural labelling.

Using the EcoFood Compass® tool, Vanilift® has a favorable environmental profile¹.

We achieved double digit sales growth since product launch.



Up to **80%**
Carbon footprint reduction vs vanilla extract

Up to **65%**
Carbon footprint reduction vs synthetic vanillin

Enhanced sustainability through lower milk–chocolate footprint

Market needs for transforming diets

Dairy solids and Cocoa are a key combination in many different products.

Dairy plays several critical roles in the production of chocolate and chocolate products. It affects flavor, texture, and even shelf life.

Our impact with Bovaer®

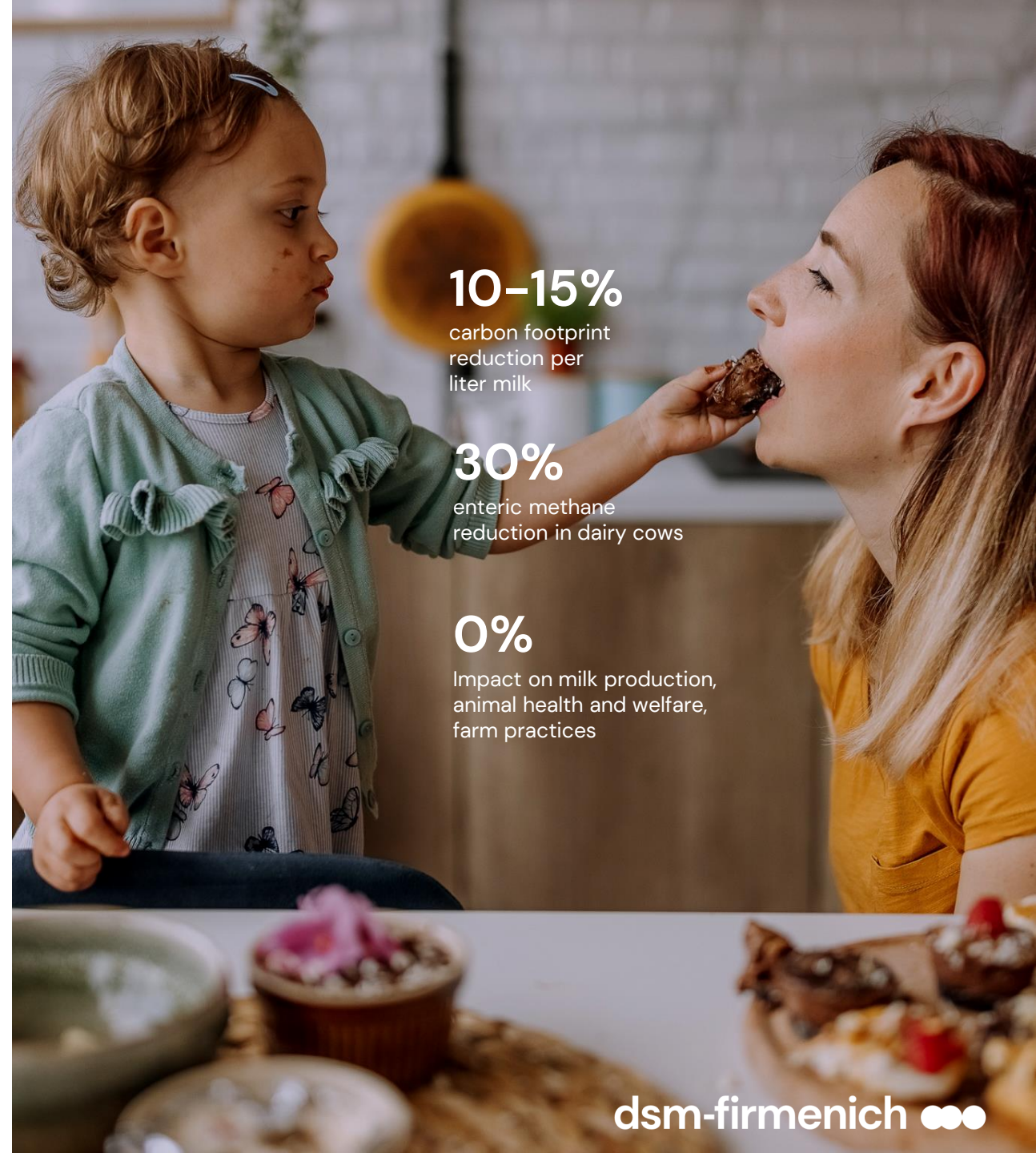
Bovaer® helps to reduce the carbon footprint of dairy ingredients by 10–15%.

Dairy solids are used in many products and often represent a large share of the product carbon footprint:

- 40–50% CO2e In Milk chocolate
- 50% CO2e in White chocolate

It is a feed supplement fed to cows reducing their enteric methane emissions by around 30% (enteric methane is a 50% share in the dairy carbon footprint).

Doubling sales for 2025 and strong customer interest.



10–15%
carbon footprint reduction per liter milk

30%
enteric methane reduction in dairy cows

0%
Impact on milk production, animal health and welfare, farm practices

Meeting the needs of modern yogurt producers, enabling flexible supply chains and reduce dairy waste

Market needs for transforming diets

Consumers seek fresh, smooth, thick, and creamy yogurt, while producers need consistent quality and lasting freshness.

Controlled cold chain transport is limited in developing regions, rural areas, and smaller cities, posing challenges even in developed areas.

Our impact with Delvo® Fresh Pioneer

A unique strong new generation of starter cultures to produce very mild yogurt with exceptional pH stability during processing and throughout shelf life.

It allows flexibility in operations and transport chain – less cold transport and storage. It also keeps product flavors and texture fresh reducing food waste at consumer's homes.

Delvo® Fresh Pioneer is gaining very strong acceptance in regions such as North Africa & Asia, where the cold chain is often challenged by power cuts and logistical challenges.



Fuel healthy lives



Design sustainable products



Accelerate climate action



A sustainable and infinite source of Omega-3's for Pets

Market needs for transforming diets

Omega-3 is an essential nutrient that plays a critical role in supporting overall health and wellbeing of pets.

Aquaculture accounts for most of the total global demand for fish oil and is rapidly growing whilst fish oil stocks are rapidly declining.

The pet food industry targets CO2 reduction, but biodiversity loss, driven by overfishing, is the greater planetary threat.

Our impact Veramaris® Pets

A natural marine algal oil and the world's most potent omega-3 solution with both EPA & DHA. Suitable for cats and dogs at all life stages.

It brings 60% EPA & DHA content, offering more than double the potency of equivalent fish-oil alternatives.

It delivers nutrition, scalability, and supply assurance in a sustainable way.



Design sustainable products



Fuel healthy lives



Conserve our planets resources



Accelerate climate action

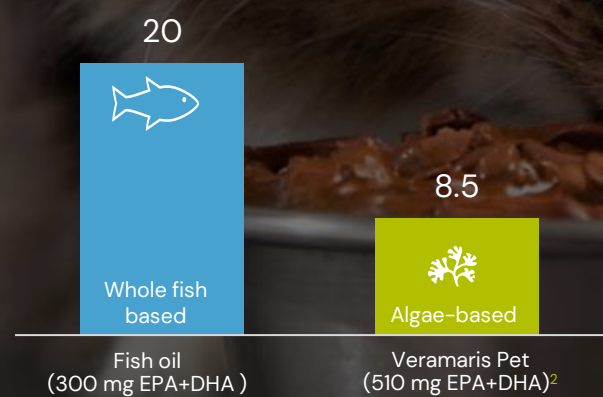
40 The environmental footprint calculations are based on dsm-firmenich's Life Cycle Assessment

Providing transparency and sustainability credentials



By using Veramaris® Pets, an avg pet food producer saves 200.000 MT of Wild Fish, equivalent to preserving 3.5 billion fish annually AND 47.000 MT of GHG emissions*

CARBON: calculated footprint (kg CO₂eq/kg oil)

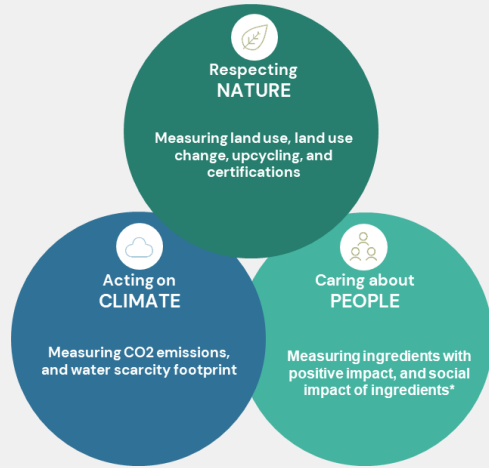


- ❖ GHG reduction of 58% per kg fish oil sourced.
- ❖ Based on EPA+DHA needs in pet diets a GHG reduction of >70% can be achieved.



* Based on the consumption of 3000 MT fish oil

EcoFood Compass®: Minimizing the sustainability impact of food and beverages



Measure Sustainability impact

Based on verified third party LCA data, aligned with global methodologies

Design Favorable impact solutions

Create responsibly by measuring & optimizing flavor design in food applications

Communicate Traceability and transparency

Automated process providing full visibility and science-based impact measures of our flavor solutions.

Custom Premix CO2 Calculators for human and pet food

The image shows two screenshots of the dsm-firmenich calculator interfaces:

- Solution Imp/Act Calculator:** A form for calculating sustainability performance. It includes sections for 'Customer and product information', 'Sustainability performance' (with a table for Carbon Footprint breakdowns), 'Calculation inputs', and 'Solution composition'.
- Premix Carbon Footprint Calculator (PCC):** A form for calculating the carbon footprint of a premix. It includes sections for 'Premix description and information', 'Premix Carbon Footprint Results' (with a donut chart showing CO2eq breakdown), and 'Alternative Premix'.

The carbon calculators bring transparency and credible data on the sustainability impact of our straight forms and premix solutions.

Online tool for brew masters to calculate sustainability benefits

The screenshot shows the 'Energy & CO2 Reduction with Brewers Clarex®' online tool. It features a form for 'Step 1 General input' with the following fields:

- Beer volume produce annually (hl): 1
- Final (sales) beer gravity (p): 11
- Cold wort gravity (high gravity brewing) (P): 17
- Cold block loss (%): 4
- Target alcohol content (%): 5
- Region: Europe
- Sheff life target (months): 12
- Bright beer stability target-forcing test (EBC): 3

A 'Take me to step 2' button is visible at the bottom right.

- Unique tool based on life cycle assessments (LCA) to **calculate and show cost, sustainability and capacity benefits** for individual brewers
- If all 2 billion HL of beer globally would be stabilized with Brewers Clarex®:
 - > 250 Mio Euro cost saving
 - > 750.000-ton CO2-eq. reduction

We bring progress to life