



SOLAR FOODS CAPITAL MARKETS DAY

A NEW HARVEST FOR HUMANKIND

STRATEGY 2025–2030

DECEMBER 10, 2024



Disclaimer

Solar Foods Plc and its business are exposed to various risks and uncertainties.

This presentation contains certain forward-looking statements which are not historical facts but are relating to the future, including future performance and other trend projections and long-term targets.

Such statements are forward-looking statements that reflect management's current views and best assumptions with respect to certain future events and potential financial performance. Such statements are based upon various assumptions, many of which are based, in turn, upon further assumptions.

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Solar Foods does not provide earnings guidance but describes its outlook and related risks more generally (general future outlook).

01

Today's Agenda

- 01 Welcome
- 02 A New Harvest for Humankind
- 03 Go-to-market in the United States
- 04 Customer and Consumer Validation
- 05 Innovation in Motion
- 06 Equity Lean Scaling for Profitable Production
- 07 Strong Financial Ambition
- 08 Q&A

01

Speaking today

02



Pasi Vainikka
Chief Executive Officer,
Co-founder

03



Troels Norgaard
Chief Strategy Officer

04



Juan M. Benitez-Garcia
Chief Commercial Officer

05



Petri Tervasmäki
Chief Technology Officer

06



Benoit Formesyn
Project Director

07



Ilkka Saura
Chief Financial Officer

02

A New Harvest for Humankind

02

Vision

By combining modern technologies, we begin a new era in feeding the world

Solar Foods is transforming how food is produced to nourish 10 billion people within planetary limits.

Our groundbreaking technology overcomes the constraints of land, weather, and climate,
enabling a new era of sustainable and nutritious harvests.

By democratizing access to high-quality nutrition, we are safeguarding global food security
and ensuring a sustainable future for generations.



02

Mission

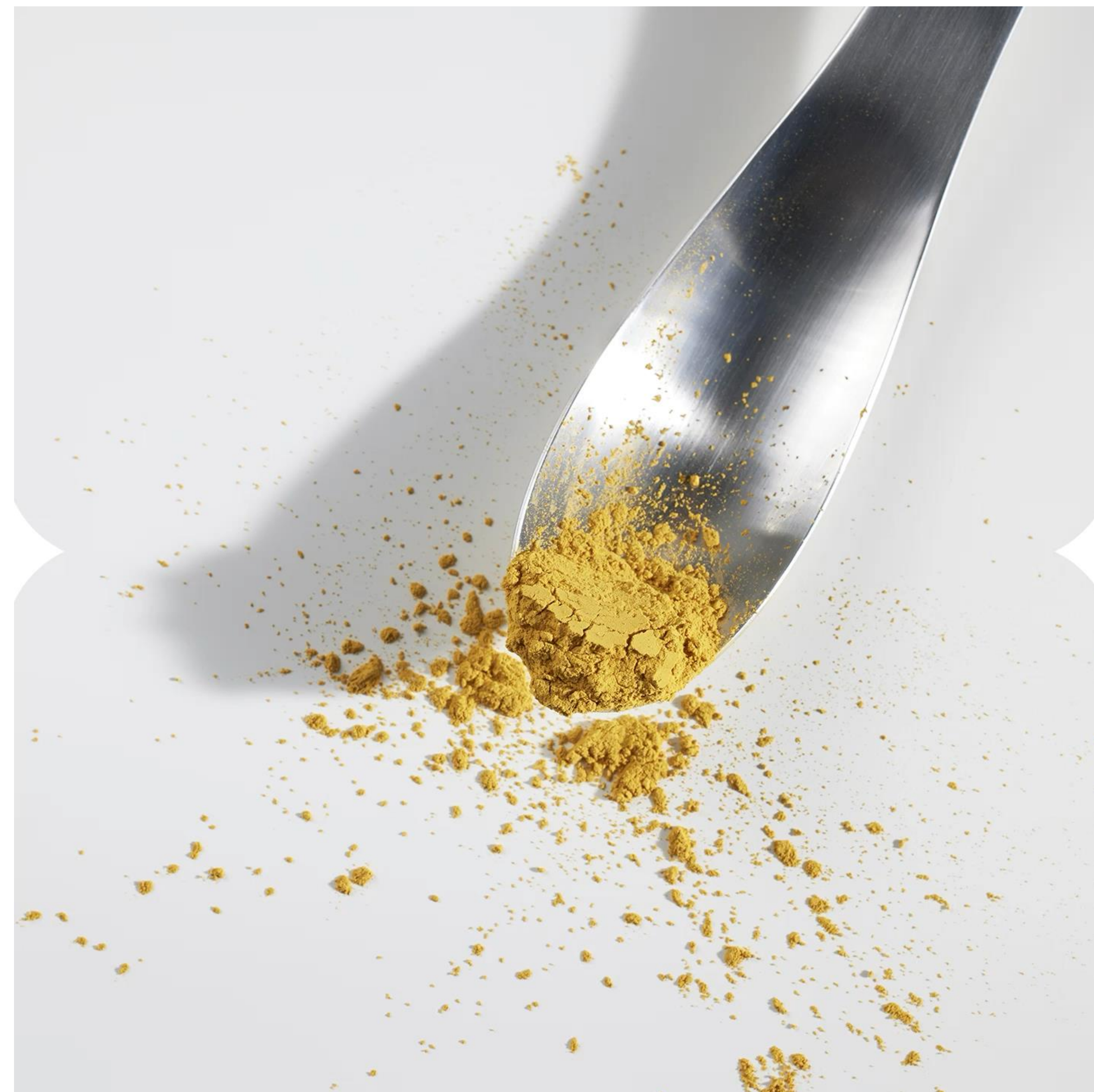
A New Harvest for Humankind

Solar Foods is revolutionising the global industry by providing a new food ingredient, Solein®, to humankind.

Solein establishes a completely new protein-rich ingredient category in the global food market.

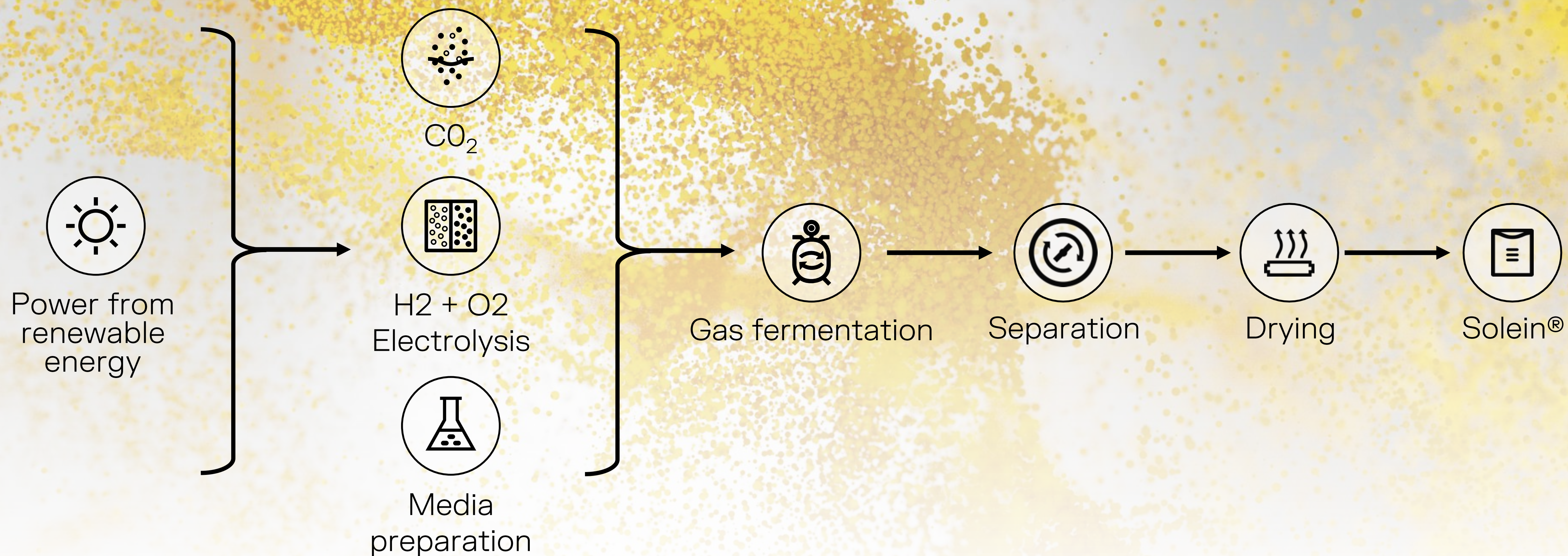
Due to its proprietary hydrogen fermentation platform Solein's impact on the ecosystem can be orders of magnitude less than today's foods.

We aim to make products that are more nutritious and taste better than what is available in the market.



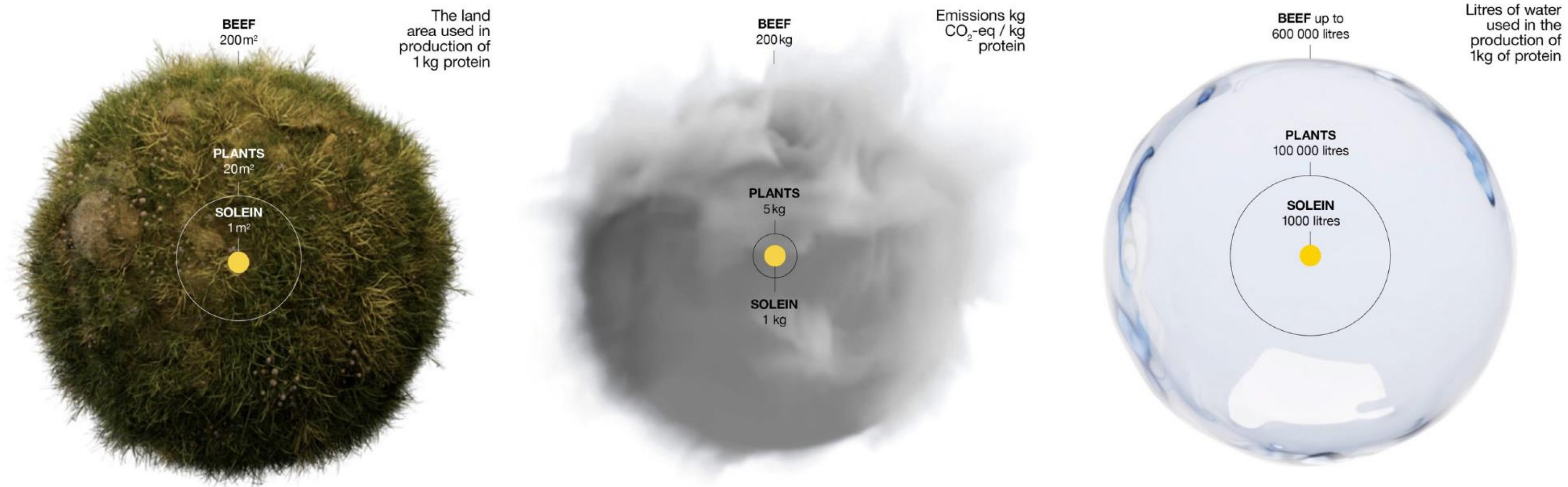
02

Disconnecting food from land use and agriculture



02

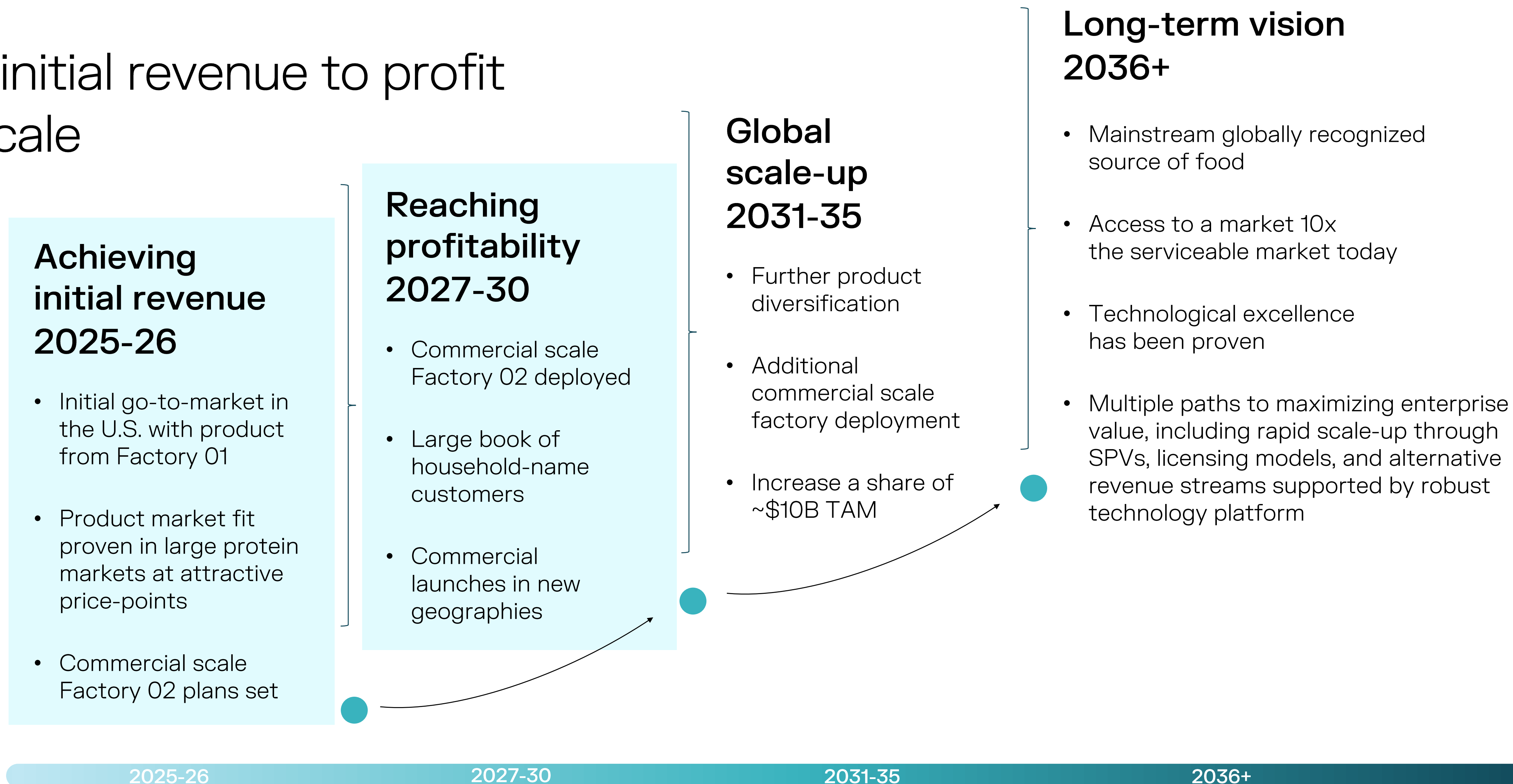
Solein® is the most sustainable protein on earth



Source: Järviö, N., Maljanen, N.-L., Kobayashi, Y., Rynänen, T., & Tuomisto, H. L. (2021). An attributional life cycle assessment of microbial protein production: A case study on using hydrogen-oxidizing bacteria. Science of The Total Environment, 776, 145764.

02

From initial revenue to profit and scale



02

Mission coming to life

2025-2026 From initial revenue towards profit

- Initial go-to-market in the US with product from Factory 01
- Proprietary demo plant can produce **230tpa**
- Product market fit proven in large protein markets at attractive price-points
- Commercial scale
Factory 02 plans set



02

Solar Foods' 5 pillars of excellence

1

Fermentation excellence

Driving efficient fermentation and yield at scale in fully owned and operated Factory 01 and beyond.

2

Cutting-edge Biology

Developing Hydrogen-oxidizing organisms and their application.

3

Empowering growth

Ensure a protected technology through Intellectual Property Rights. Efficient regulatory access to new markets.

4

Unique product-market fit

Creating value for customers and consumers through superior nutrition, functionality, taste, and texture.

5

Best-in-class CapEx delivery

Executing on capital-intensive projects to increase production capacity.

02

Management Team



Pasi Vainikka
Chief Executive Officer,
Co-founder



Tiia Kuusimäki
Chief Operative Officer



Juan M. Benitez-Garcia
Chief Commercial Officer



Petri Tervasmäki
Chief Technology Officer



Troels Norgaard
Chief Strategy Officer



Laura Sinisalo
Chief Experience Officer



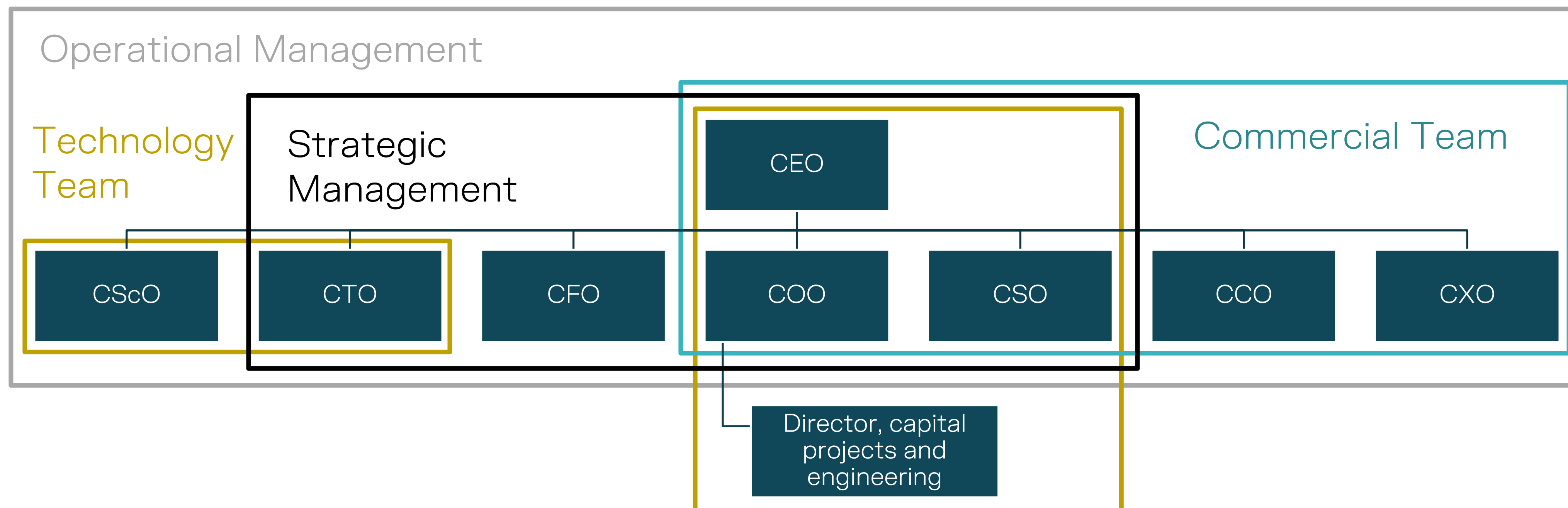
Ilkka Saura
Chief Financial Officer



Juha-Pekka Pitkänen
Chief Scientific Officer,
Co-founder

02

Management Team Structure



02

Building for growth:

New roles in the team



Troels Norgaard
Chief Strategy Officer



Juan M. Benitez-Garcia
Chief Commercial Officer



Petri Tervasmäki
Chief Technology Officer

03

Go-to-market in the United States

Strategic choices

03

The journey from a unique micro-organism to an ingredient company

Unique micro-organism discovered in nature in Finland

12 patent families protecting the technology

Solein: Unique nutrient dense ingredient with high quality protein, fiber, vitamin and minerals

Portfolio of unique ingredients



03

Solar Foods will initially focus on the market in the United States

- Solar Foods obtained self-affirmed Generally Recognized as Safe (GRAS) status in the United States in September 2024 and was able to take the first steps in commercializing Solein in U.S. market.
- The GRAS status means Solein can be used in all the strategically selected applications in the amounts we have defined in our regulatory documentation, considering particularly Solein's content of iron.
- Solar Foods have also registered production facility Factory 01 with the U.S. Food and Drug Administration (FDA) and fulfilled other applicable requirements. This will enable Solar Foods to start food export from Factory 01 to the United States and start commercial activities.
- After this, Solar Foods aims to obtain the so-called notified GRAS status, which means receiving the so-called No Questions Letter from FDA.



News!

SOLAR FOODS OBTAINS SELF-AFFIRMED GRAS STATUS
FOR SOLEIN® IN THE UNITED STATES

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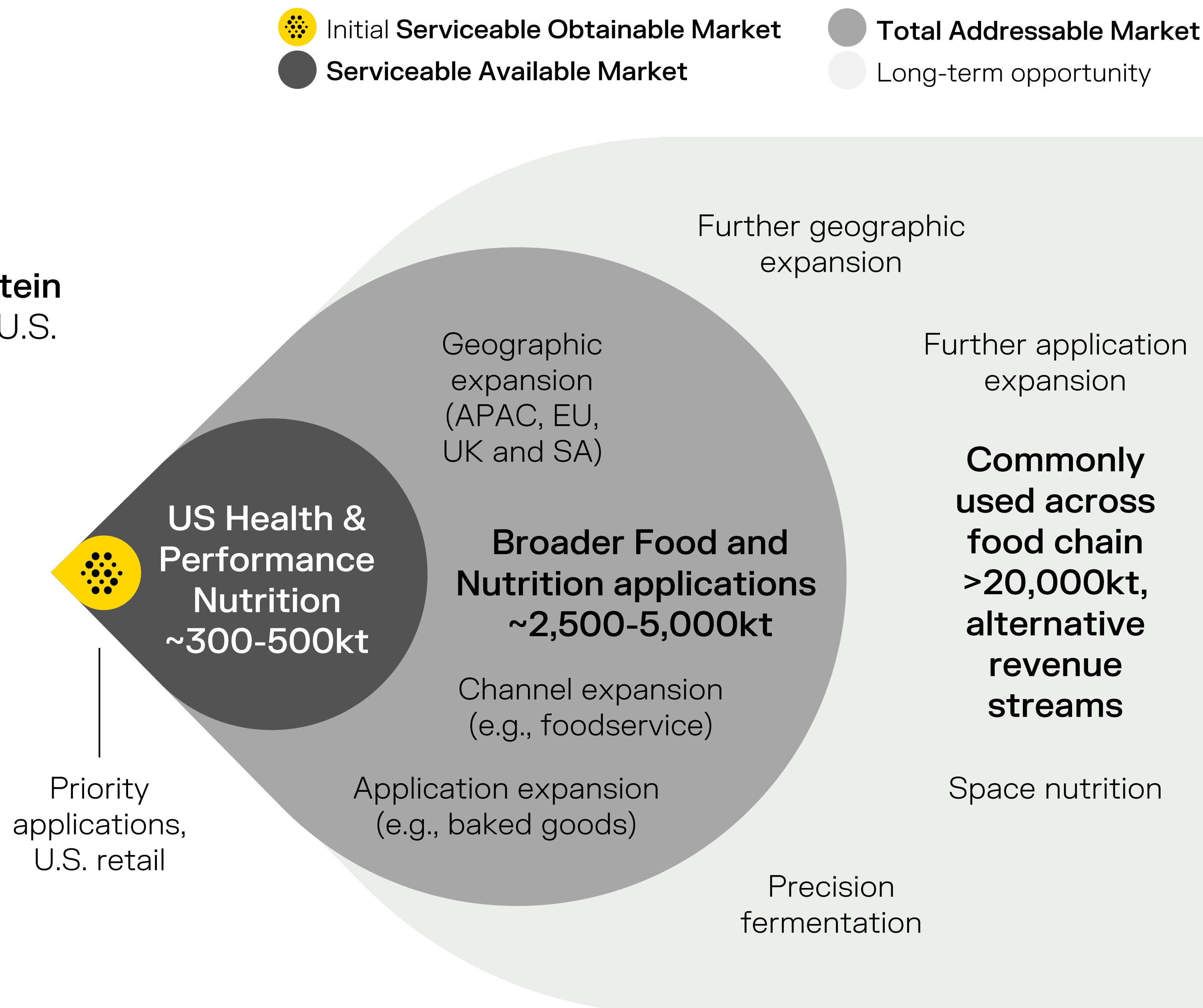
Solar Foods' addressable and obtainable market

Solar Foods has a path to >20,000kt protein market with commercialization starting in U.S. Health & Performance Nutrition

Capturing just ~1% of the market corresponds to a revenue potential:

- €50-100M
- €250-750M
- >€1B

Source: Euromonitor, SPINS, Statista, 3A publications database, Fortune Business Insights, Fortune Market Insights, press search, expert insights

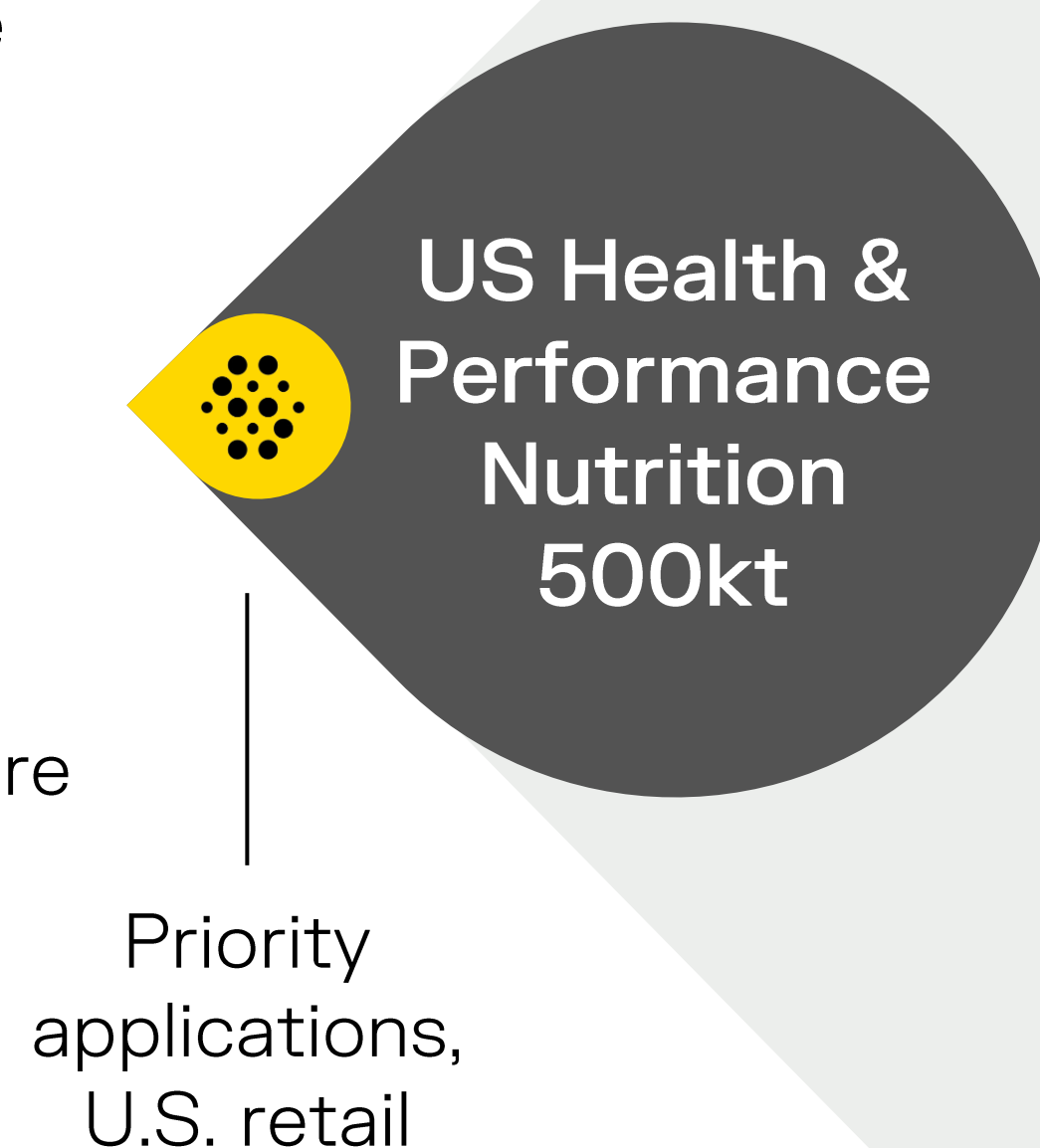


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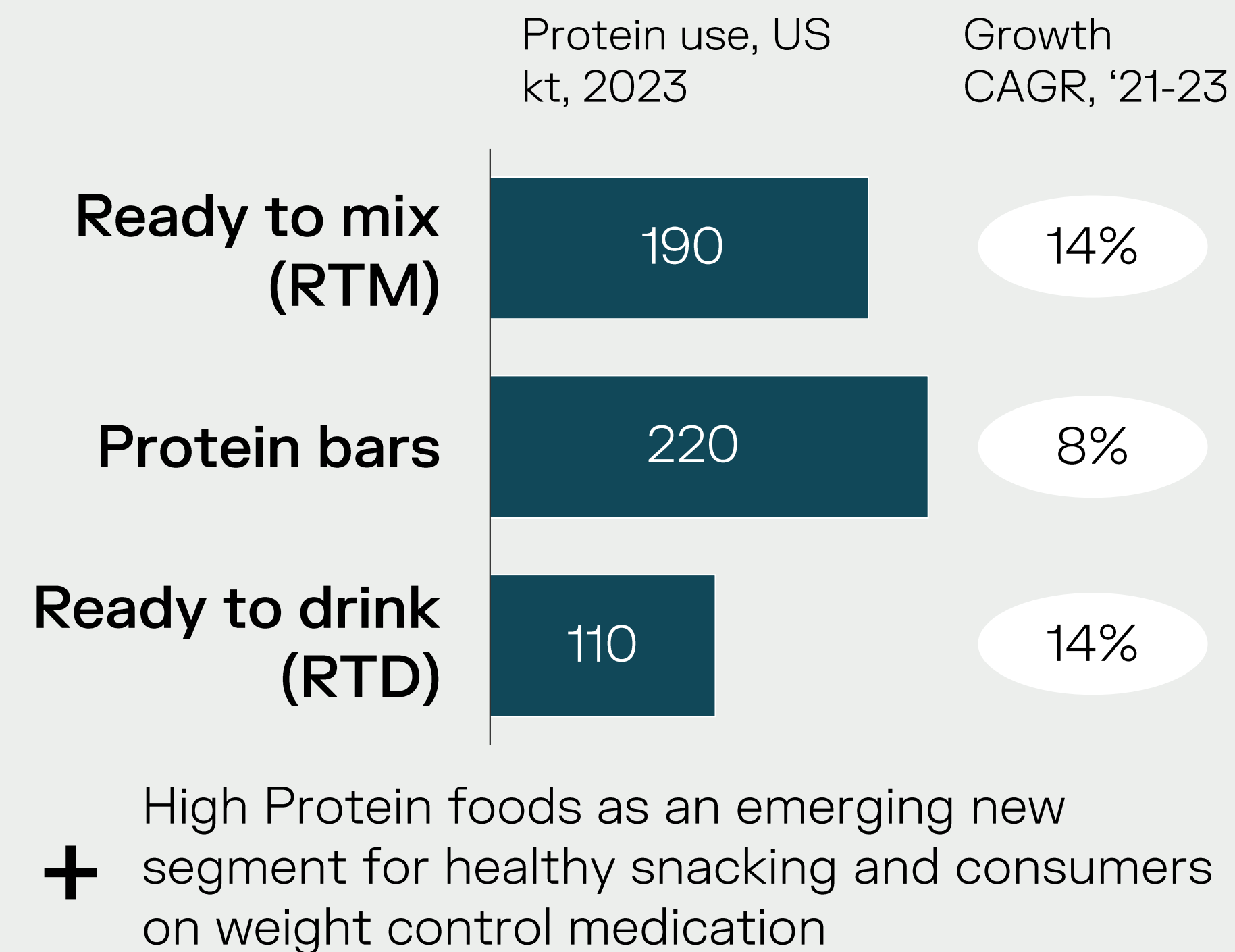
Solar Foods will focus on the Health & Performance Nutrition segment, initially in the United States, the world's biggest protein powder market

- The Health & Performance nutrition market has attractive size and growth rates
- Strong trends on health, wellness and fitness have been driving the category for the past decade
- The industry is dominated by Whey Protein Isolate at price of 18-20 \$/kg Q4 2024
- Industry is looking for sustainable alternatives that can match whey on nutrition, taste and texture
- Health & Performance industry does not require quality standard above food unlike medical nutrition and infant formula industries

Source: Euromonitor, SPINS, Statista, 3A publications database, Fortune Business Insights, Fortune Market Insights, press search, expert insights



● Initial Serviceable Obtainable Market
● Serviceable Available Market



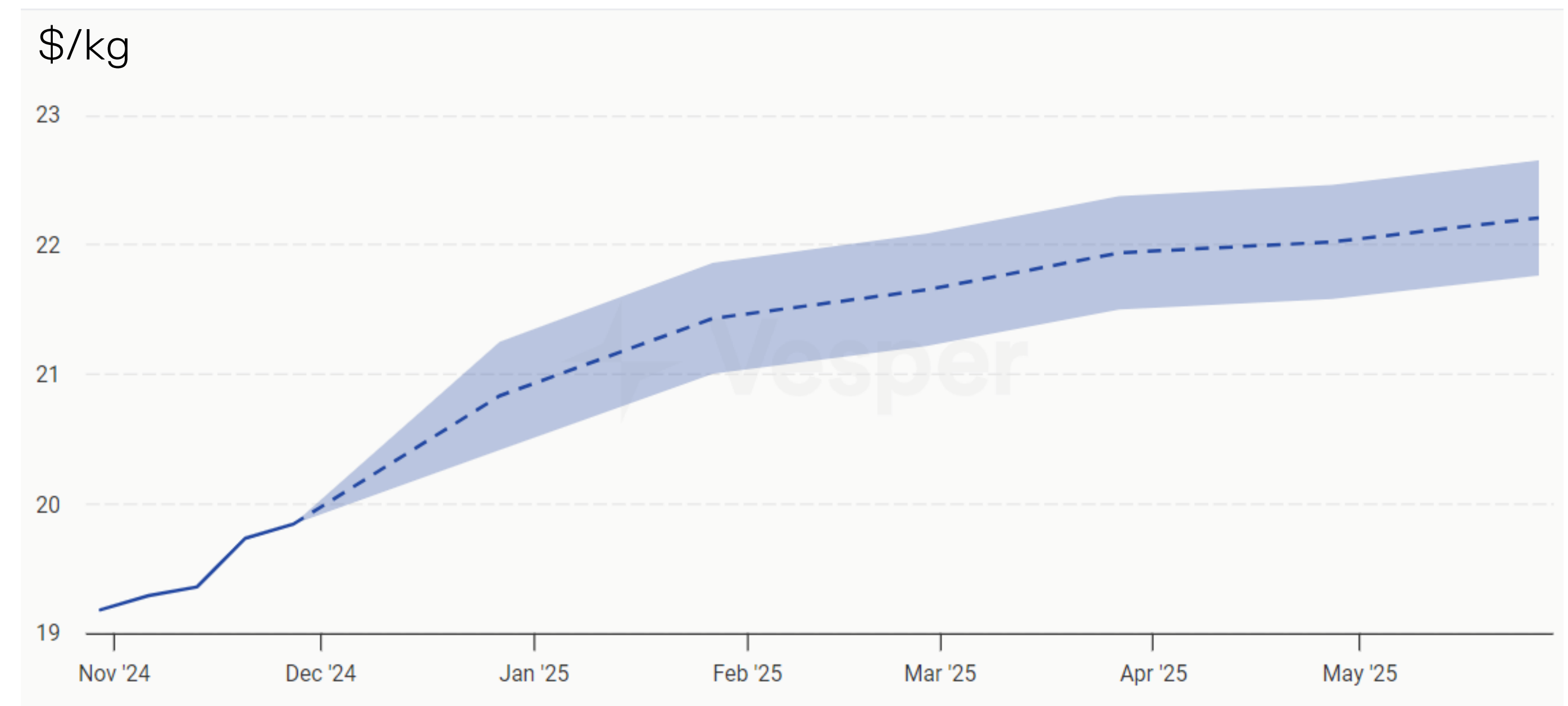
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Willingness to pay for nutritious and innovative ingredients in U.S. Health & Performance market

- Whey protein is the dominating ingredient in the Health & Performance industry
- Whey Protein Isolate is an ingredient driving a lot of innovation in the segments in recent years
- Whey Protein Isolate is a significant part of the volume in the Health & Performance segment in the U.S.
- Price points on Whey Protein Isolate is at a level of 20+ \$/kg and is expected to increase

Source: Euromonitor, SPINS, Statista, 3A publications database, Fortune Business Insights, Fortune Market Insights, press search, expert insights

Whey Protein Isolate prices in U.S. Health & Performance market



Reference: Vesper Price Index (VPI), December 2024

03

How to win through increased focus on application and concept development

Application focus:

Solein has a very strong nutritional profile well-suited for applications where **protein density & nutrition content** matters, and Solein has a value-added claim (e.g., “dairy-free,” “soy-free,” “sustainable”).

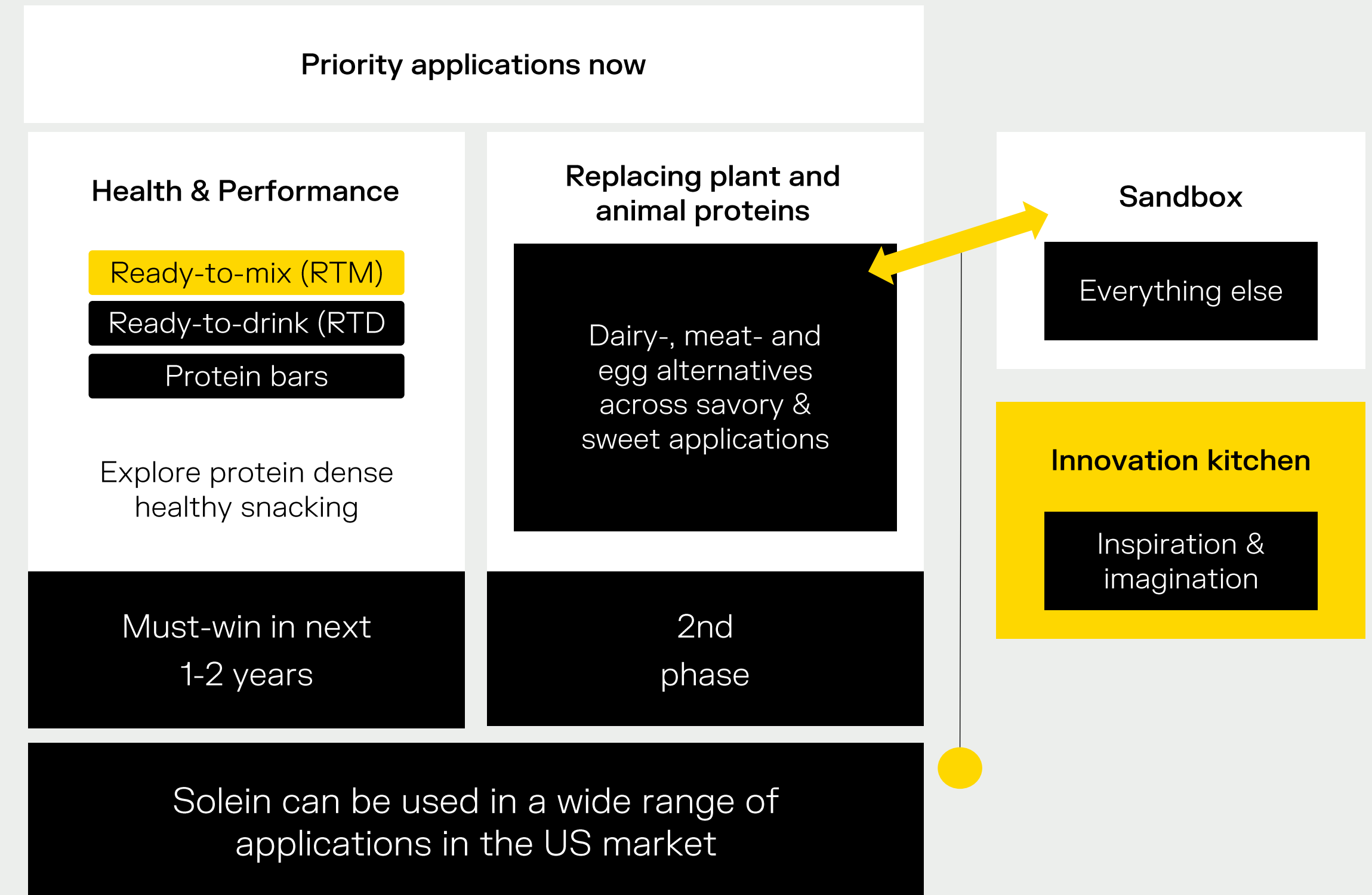
Nutrition Science:

We will start documenting the health benefits of Solein. The product contains all essential amino acids and has a high content of BCAA and Leucine, as well as a high level of minerals, vitamins and fibers, specifically beta-glucans.

Continuous focus on taste and functionality:

Solein has a very good emulsifying effect and a good creamy mouthfeel together with a subtle umami flavour.

Next steps on application development



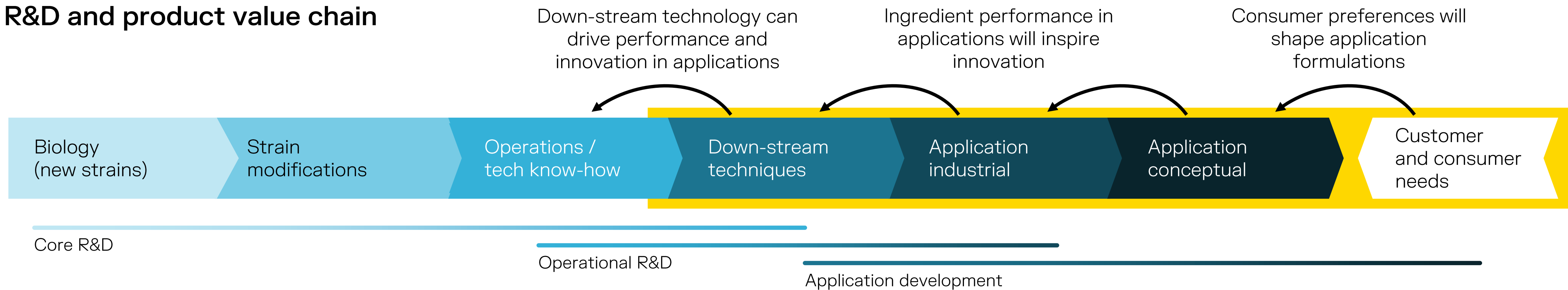
Systematic approach to application development and partnerships part of next step:

- Identify partners for co-developing concepts and applications.
- Develop in-house application capabilities.
- Develop ingredients with application specific functionality.
- Implement concept selling approach.

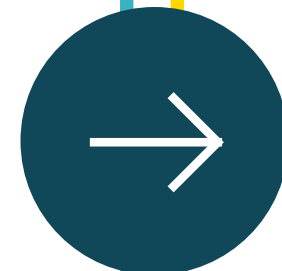
03

Customer feedback and application science will drive innovation on Solein's functionality

R&D and product value chain

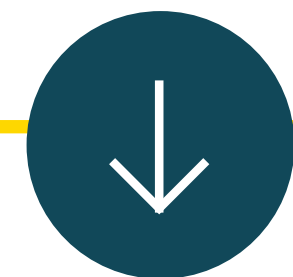


Establishing application development partnerships will accelerate the process to unique functionality



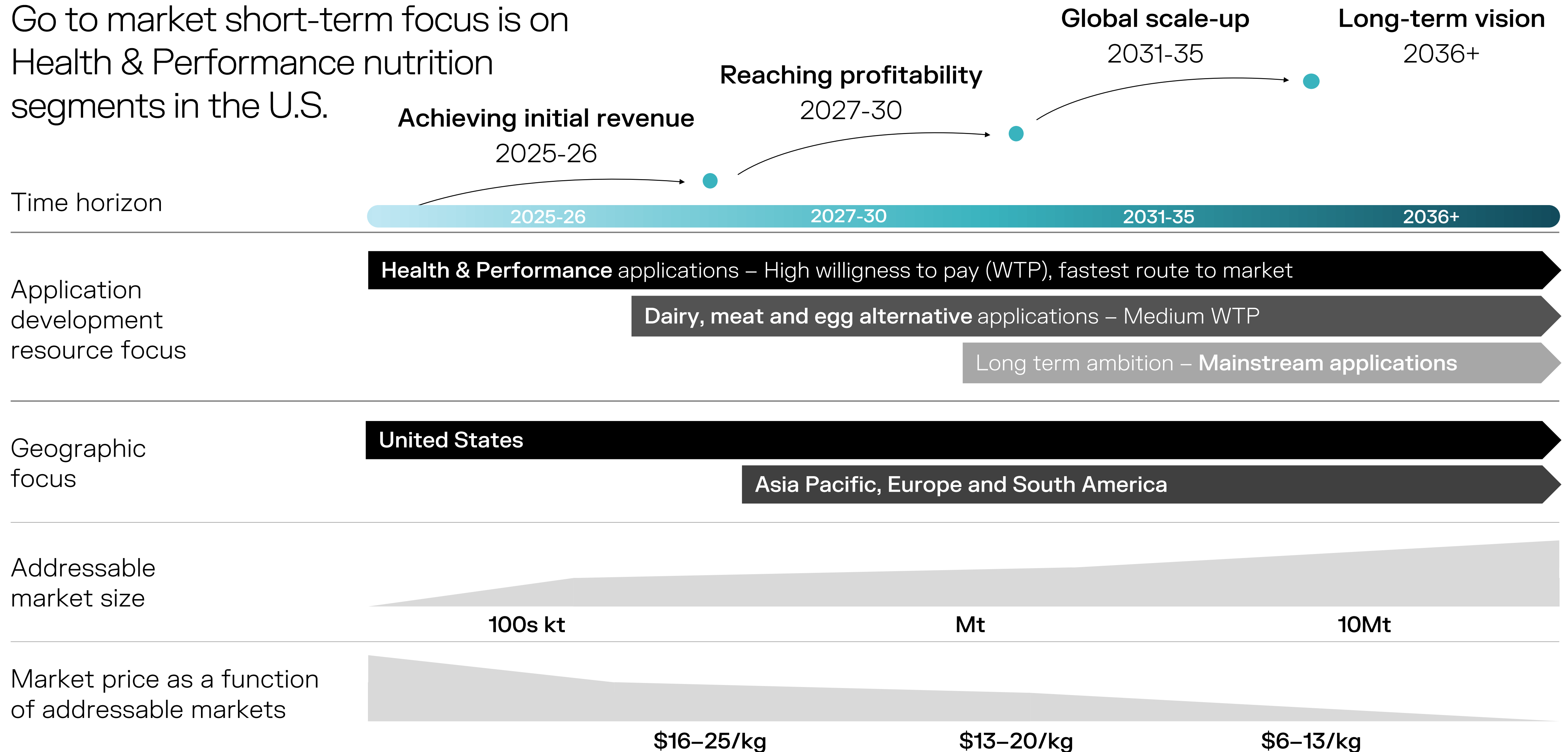
Data on application performance requirements will create innovative functionality

- **Agglomeration, homogenization, instantization, filtration techniques, microparticulation, and hydrolysis:** Different techniques can be used to develop application specific functionality.



03

Go to market short-term focus is on Health & Performance nutrition segments in the U.S.



04

Customer and Consumer Validation



04

Empowering Consumers in Health and Nutrition

Our priority consumers actively address their health and nutrition needs. They seek products that provide optimal nutrition and an exceptional experience.



04

Solein® is a protein source with unmatched value

NUTRITION

- Protein content: 75%
- All nine essential amino acids
- 20% BCAA out of protein
- 8% Leucine out of protein
- Contains B-vitamins
- Rich in iron and carotenoids
- Dietary fibers: 15%
- Fat: 5%
- Minerals: 5%

FUNCTIONALITY

- Outstanding emulsion forming properties
- Natural umami flavor
- Creamy mouthfeel

LABELLING

- Non-GMO
- No major food allergens
- Animal-free
- Soy-free
- Dairy-free

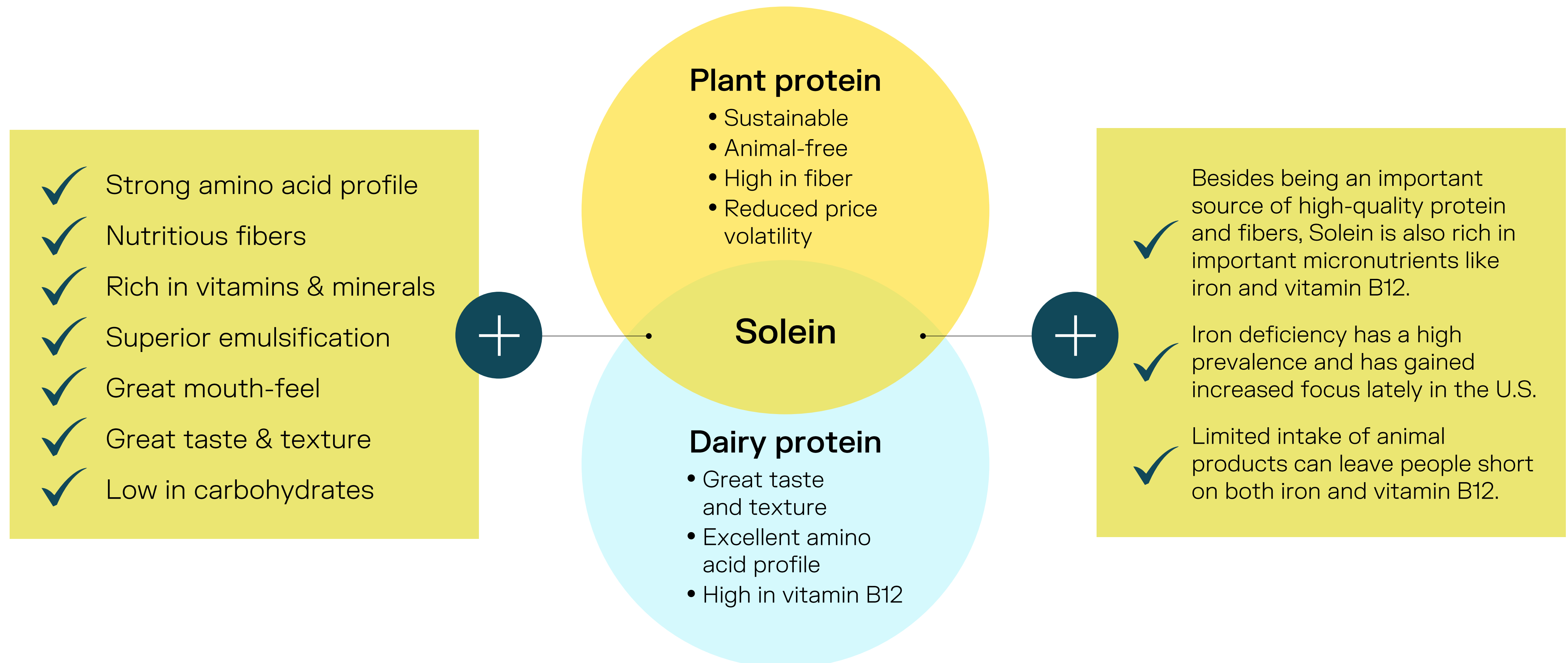
SUSTAINABILITY

- Non-agriculture dependent
- Low Greenhouse gas emission
- Low water- and land-usage



04

Food & beverage manufacturers must no longer compromise between plant and dairy proteins: **Solein offers the best of both worlds**



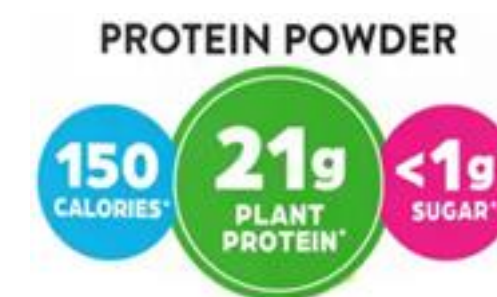
04

Customer Feedback and Sales Pipeline Insights

- **In the last 6 months we have doubled the amount of customers testing Solein® and under material transfer agreement (MTA)**
- Majority of new testing customers are in Health & Performance segment

A U.S. Meal Replacement Brand:

“GLP-1 users are driving the demand of nutrient dense products.”



A leading Functional Products Brand in the U.S. Retail Market (revenue 1-2 bn USD):

“We see novel protein prices significantly above whey protein isolates.”

A top 3 European Sports Nutrition Brand:

“We are looking for innovative proteins, different from plant-based, to replace whey.”

A Functional Products Brand in the U.S. Retail Market:

“Consumers are looking for healthier choices without compromising their eating habits.”

A U.S. Dairy alternative Nutrition Brand:

“We’ve tested Solein extensively in a protein RTD and found it easy to work with. This opens opportunities to integrate it into other products in our portfolio.”

04

Ajinomoto case study

Customers want more of our product

Japanese food manufacturer, the Ajinomoto Group launched two Solein-powered products: Traditional Flowering Mooncakes and Ice Cream Sandwiches. The products are the first to be launched under Ajinomoto's new conscious brand Atlr.72™.

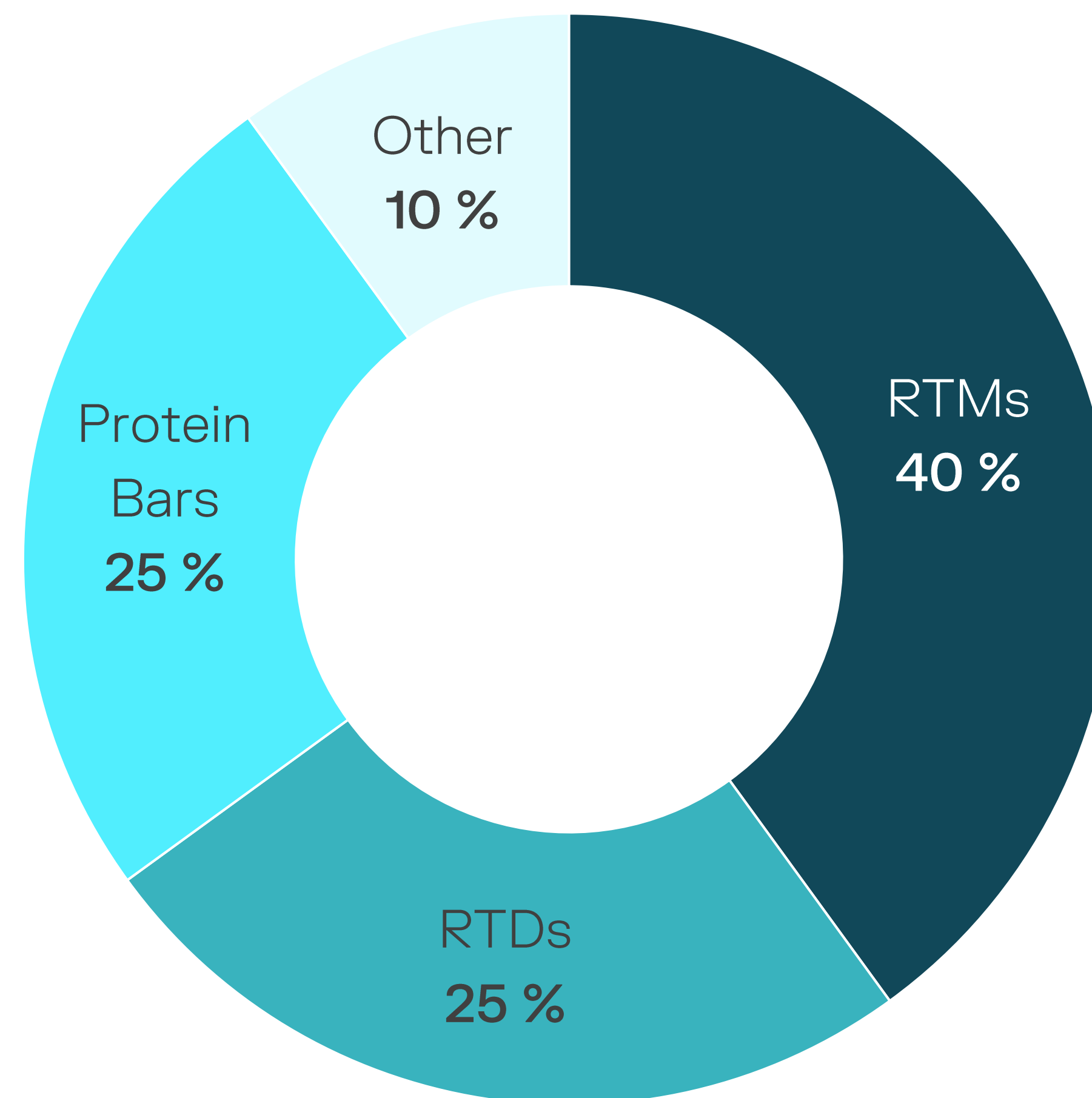
- “ • Ajinomoto sees potential in Solein® **AJINOMOTO** to be a key ingredient for new products.
- Many people commented positively for the beautiful handcraft of the Atelier 72 products, and for containing Solein as a nutritional and environmentally friendly ingredient.
 - According to consumers' request, we decided to continue our sales of the product again.
 - We recognize it's a great result of collaboration by Ajinomoto and Solar Foods.
- ”



04

Short-term sales targets
in the United States

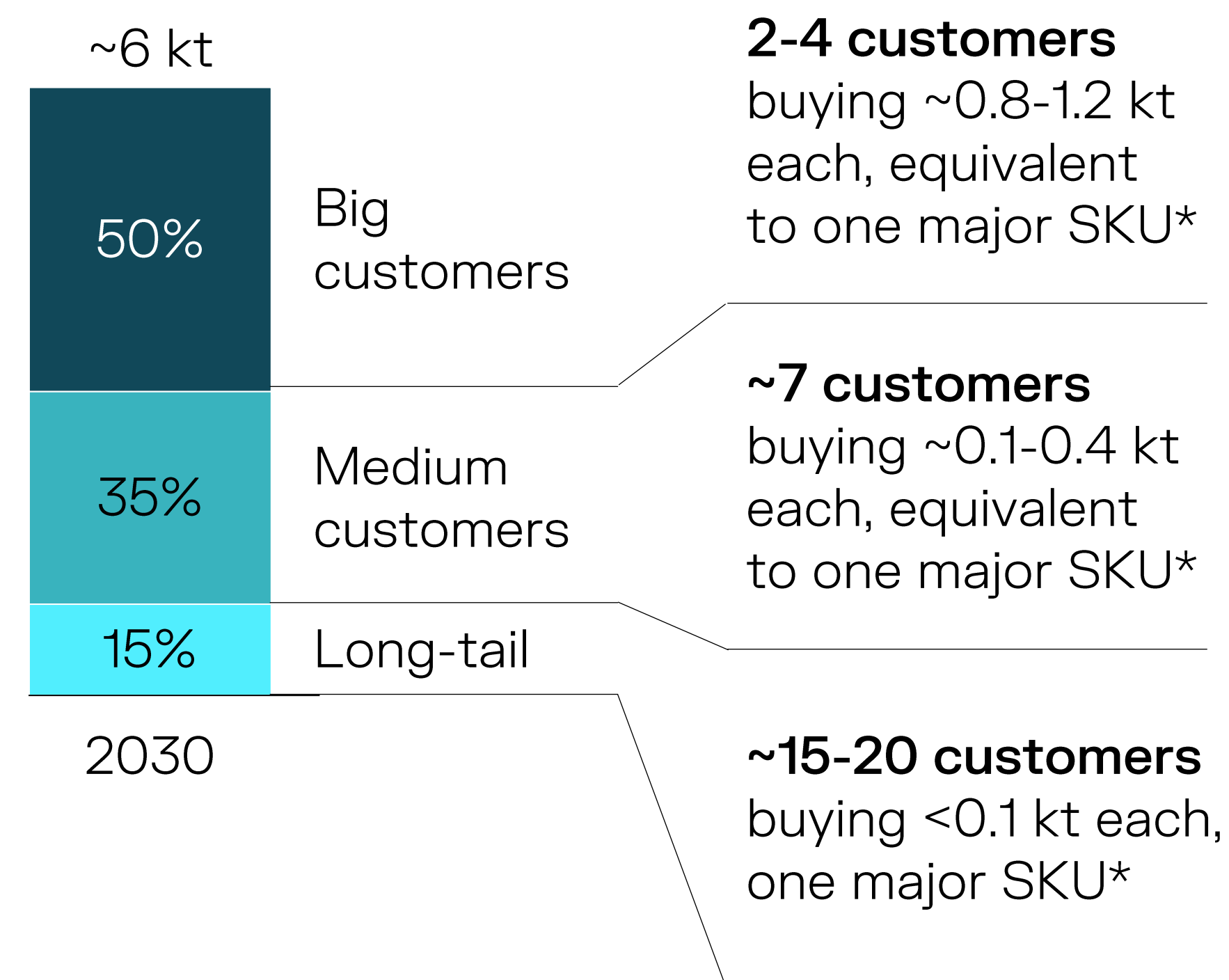
**Our aim is to allocate all
available volumes at our
validated price
expectations.**



04

Medium-term sales perspective

We need only few large-to-medium size customers to allocate 85% of a 6 kt production volume



Stock keeping unit (SKU), i.e. one product variation

04

Unveiling our first ready-to-drink prototype at a U.S. Industry event

A nutrient dense protein snack crafted for those who prioritize health, fitness, and sustainability.

Packed with premium protein (Solein®), essential vitamins, and minerals, this high-performance product powers your energy, recovery, and muscle health – all in one convenient, ready-to-snack package.

NO
ADDED
SUGAR

GMO
FREE

NO
ALLER-
GENS

- ◆ Unique, delicious taste
- ◆ Creamy texture
- ◆ Complete nutrition
- ◆ Convenience
- ◆ Responsible option



04

Solein® Products

Prototyping for customers

SOLEIN® PRODUCT

Coffee RTD

Applications & segments

- ◆ RTD's
- ◆ Sports nutrition
- ◆ Active lifestyle
- ◆ Animal-free dairy & hybrids
- ◆ Healthy snacks

Product features

- ◆ Unique, delicious taste
- ◆ Creamy texture
- ◆ Convenience
- ◆ Responsible option

Product information

INGREDIENTS

Water, Solein® protein powder, Fiber (soluble corn fibre), Oil (vegetable oil), Lecithin, Sweetener (Stevia), Natural flavors (coffee creme), Masking agents, Colour (caramel)

REGULATORY CLAIMS

Nutrient dense
High in iron, B12
High in protein
High in fiber
GMO-free

No Sugar Added
Animal-free
All nine amino acids

KEY FUNCTIONALITIES

Emulsification
Good blending
properties

IDEAL STORAGE

Shelf stable



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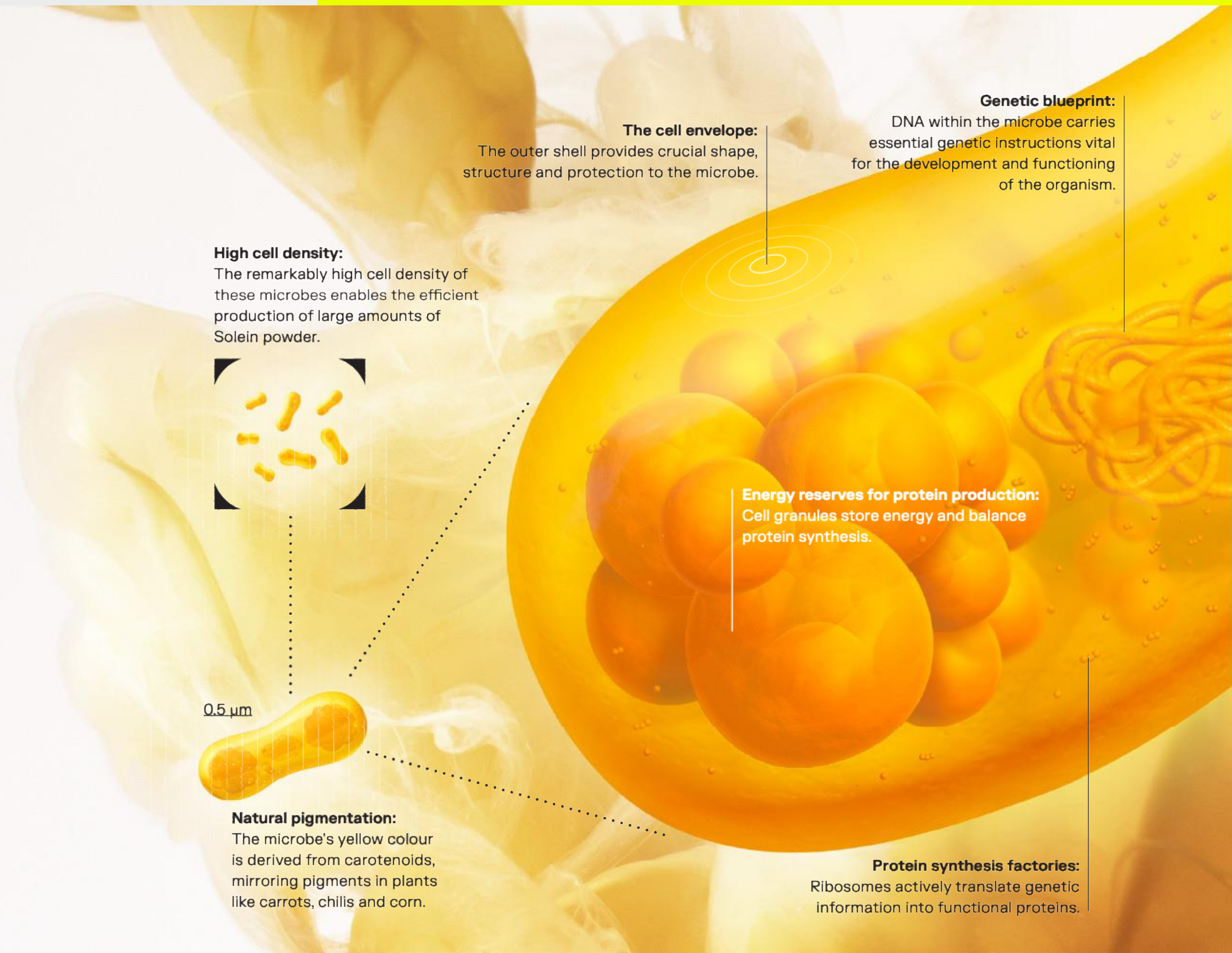
Innovation in Motion



05

Cell as a factory

- **Solein®** is a single-cell protein. Solein cells are very specific in a way they use hydrogen as the energy source, instead of sunlight or sugars.
- **Solein®** cells are natural, non-modified, microbes that produce all the proteins, fats, dietary fibres and vitamins like nature meant them to do.



Start of the
food revolution

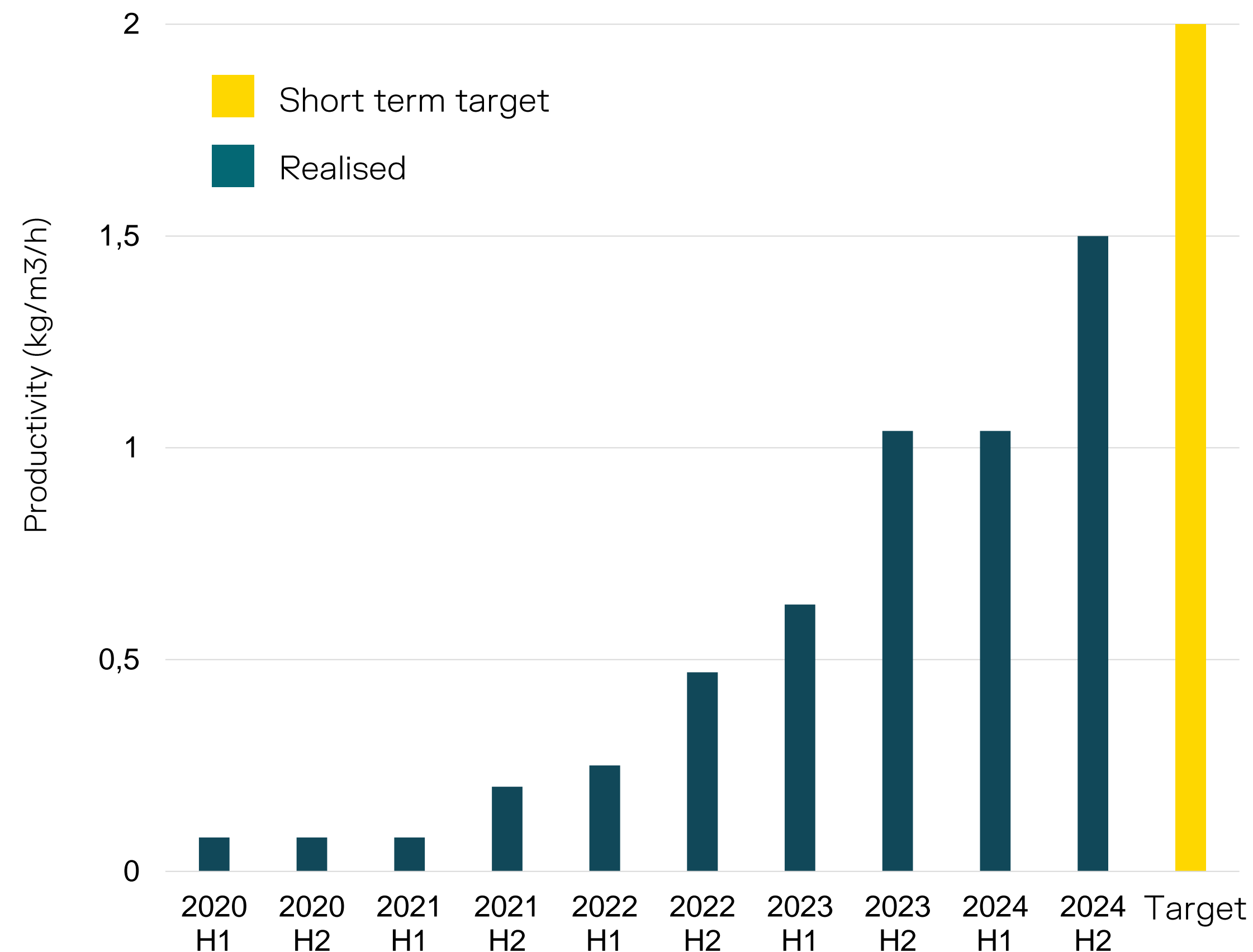
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05

Productivity enabling profitability

- R&D facilities and pilot scale process built in 2020 with several upgrades over the years
- Factory 01 was designed on the same unit operations
- Overall, more than five years of continuous operation of gas fermentation
- R&D capabilities to further improve the gas fermentation process and to develop new products
- Energy efficiency: O_2/CO_2 ratio of 3 achieved to date with the target ratio of 2.



05

Factory 01 scaling plan to increase capacity

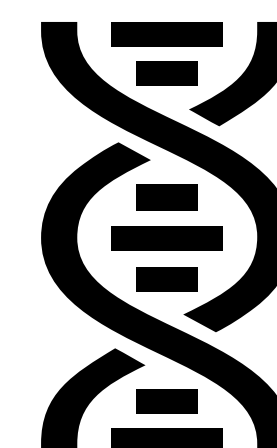
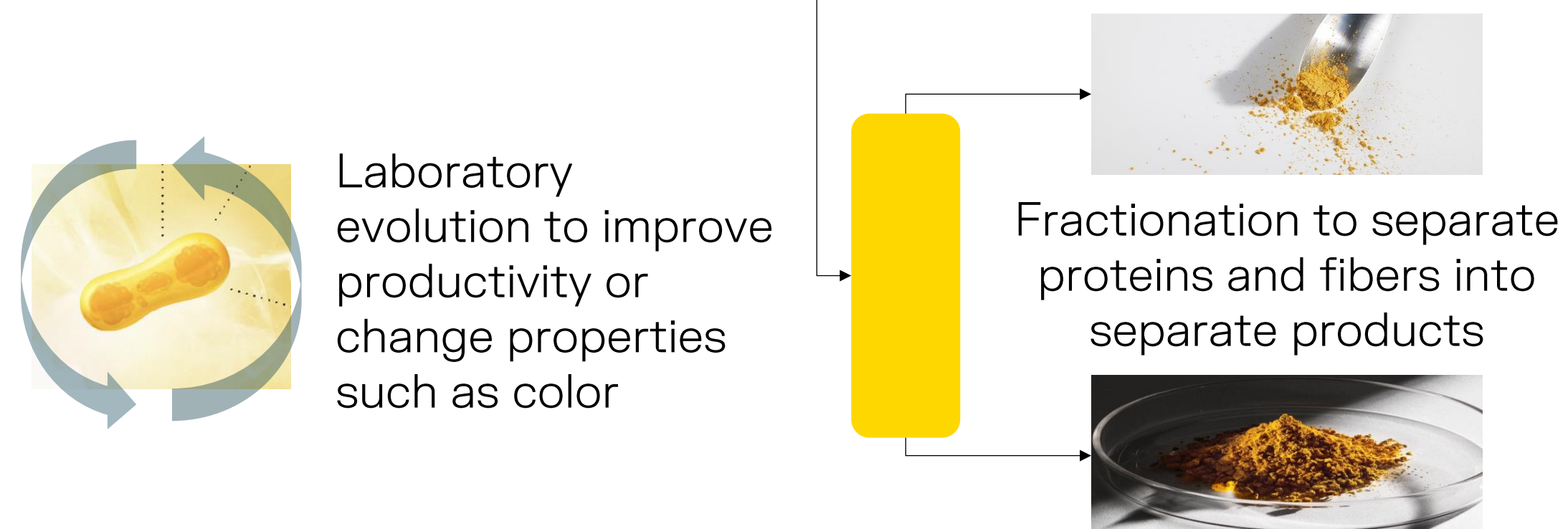
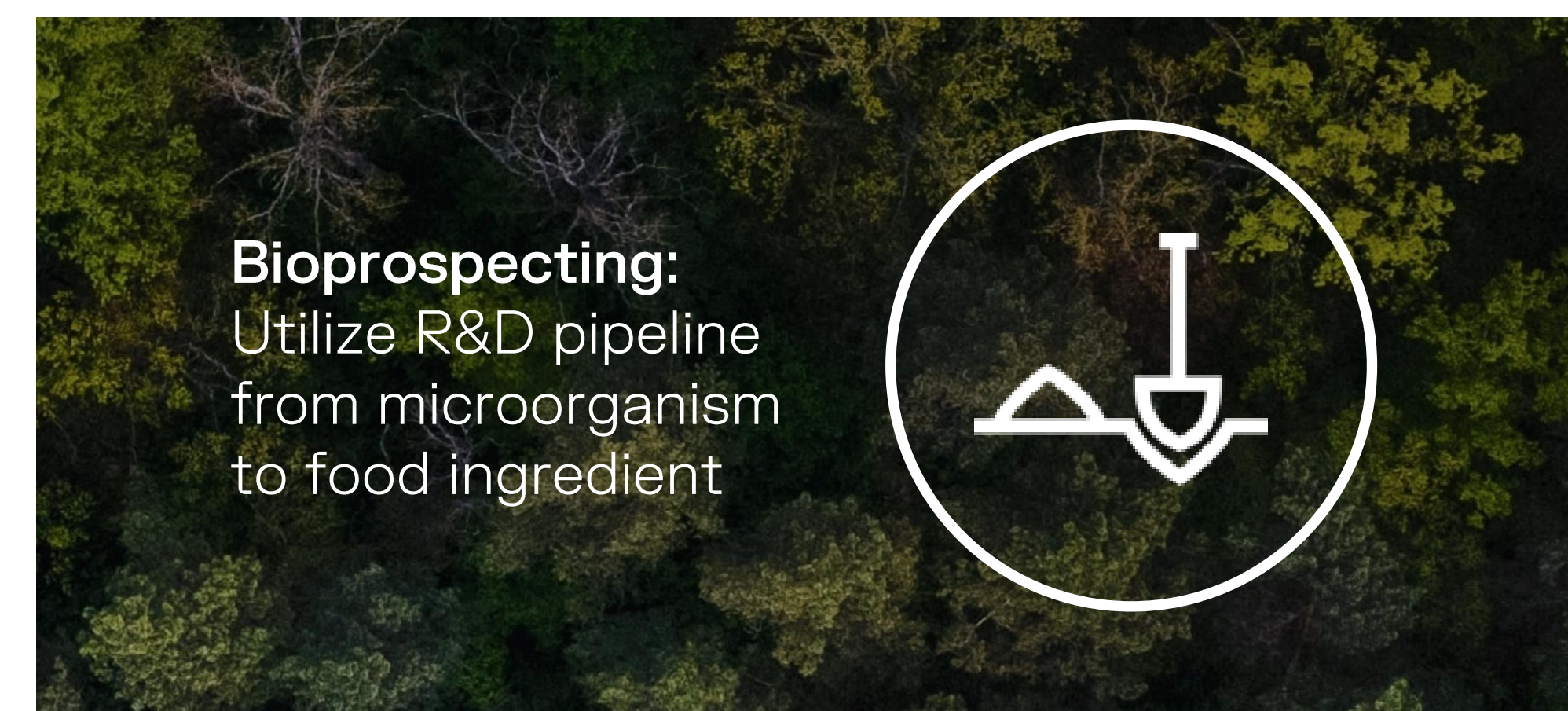
- Successful commissioning of F01 in H1/2024
- Food safety certification (FSSC22000) obtained H2/2024
- R&D projects have taken the productivity significantly beyond the original design capacity of F01
- We are planning to increase the annual design capacity from 160t to 230t in 2026
- Increased capacity responds to customer demand before F02 is operational



05

New opportunities and products

Cell factories producing proteins and other nutrients from minimal resources



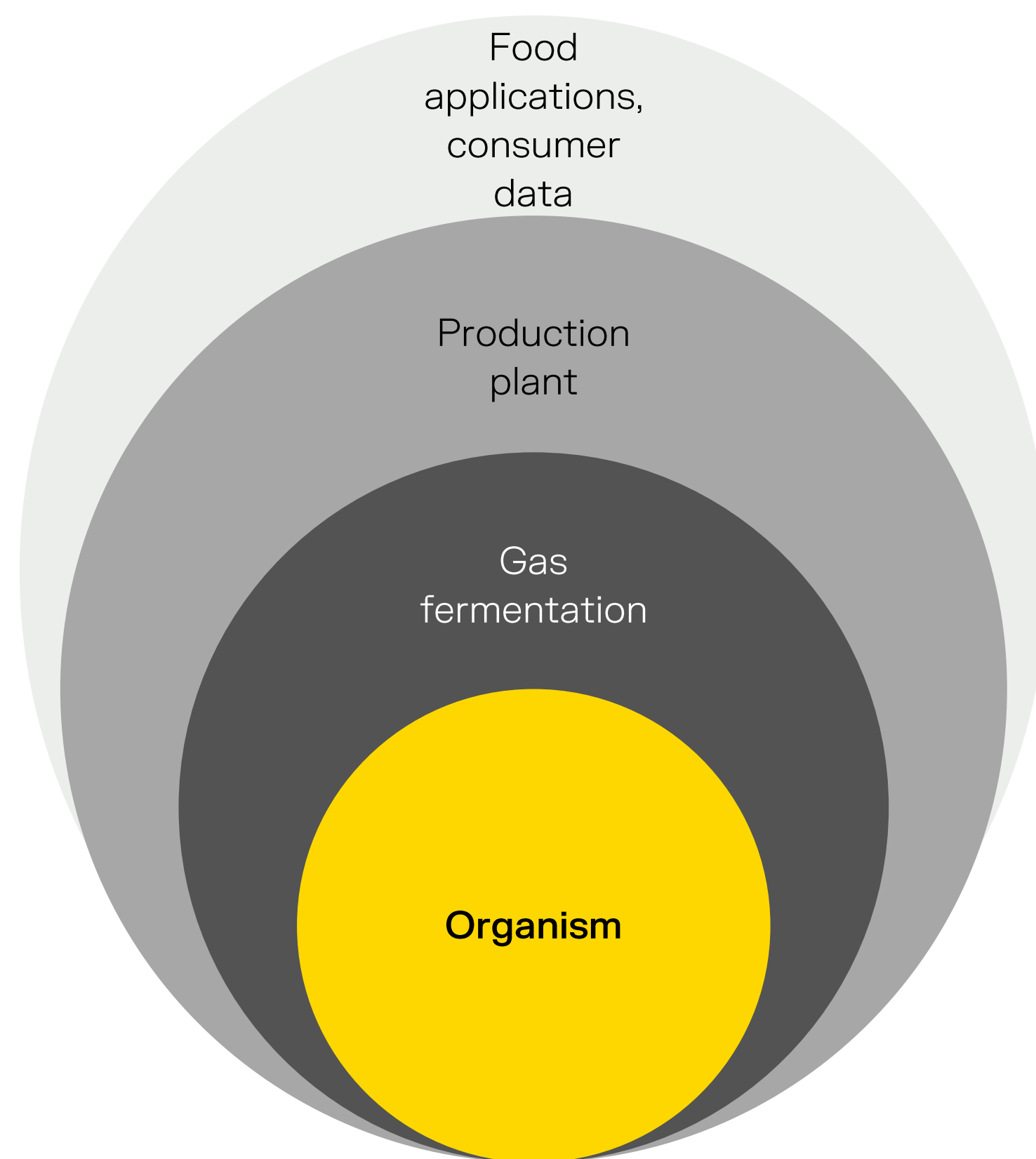
Future opportunities

Modification of current and new organisms
– hydrogen fermentation platform for precision fermentation to produce complex organic molecules, such as milk or egg proteins

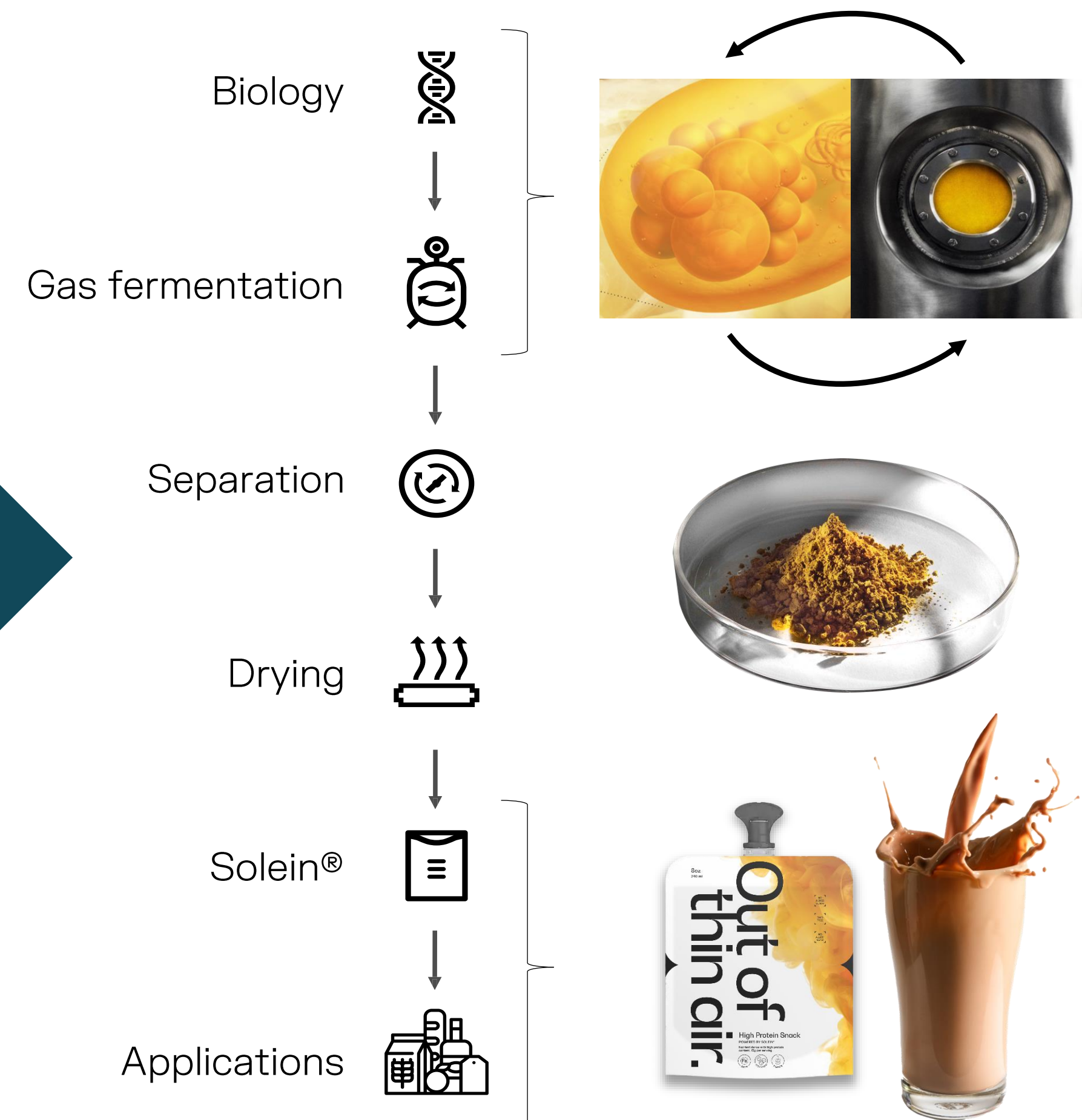
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Opportunities in artificial intelligence (AI) & machine learning (ML)

Speed up R&D and ensure smooth production



Layers of complexity and interactions



06

Equity Lean Scaling for Profitable Production



06

Design of Factory 02 is on-going enabling start-up 2028

Masterplan and Advanced Conceptual design completion through Engineering and Procurement partnership

- Complete alternative technology assessments and product requirements in alignment with our commercial strategy
- Advance process engineering whilst integrating latest learnings from F01 and factor R&D projections for productivity
- Develop a contracting strategy promoting culture of competitiveness between key original equipment manufacturer's in the market
- Land the concept on the short list of sites selected, choose the best one for Solar Foods!

Engage in a more 'classic' type of EPCM* agreement combined with Design-Bid and Built packages

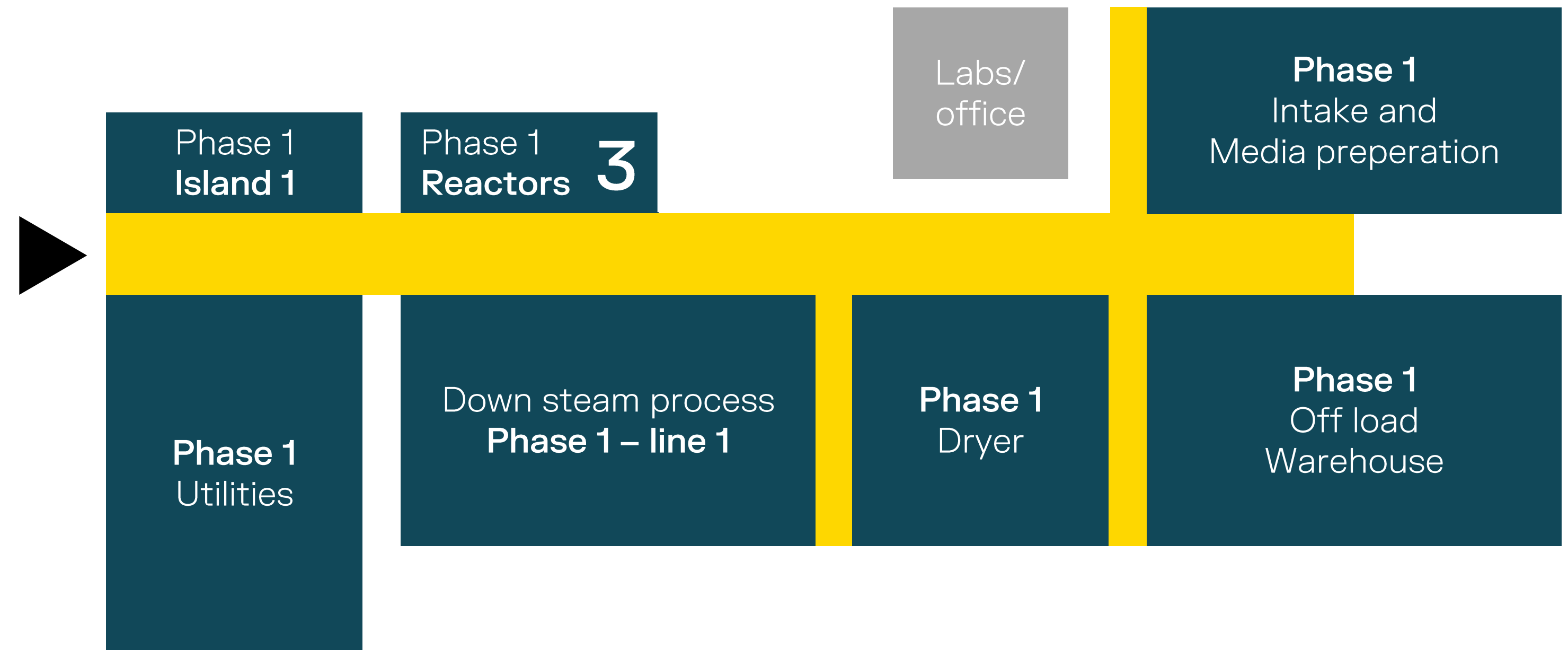
- Finalize basic design, Start procurement of the bid packages – process, utilities, buildings and infrastructure
- Start construction in 2026 and work towards Operational Readiness in 2027
- Construction according to a typical food facility quality standard

*Engineer Procurement Construction Management



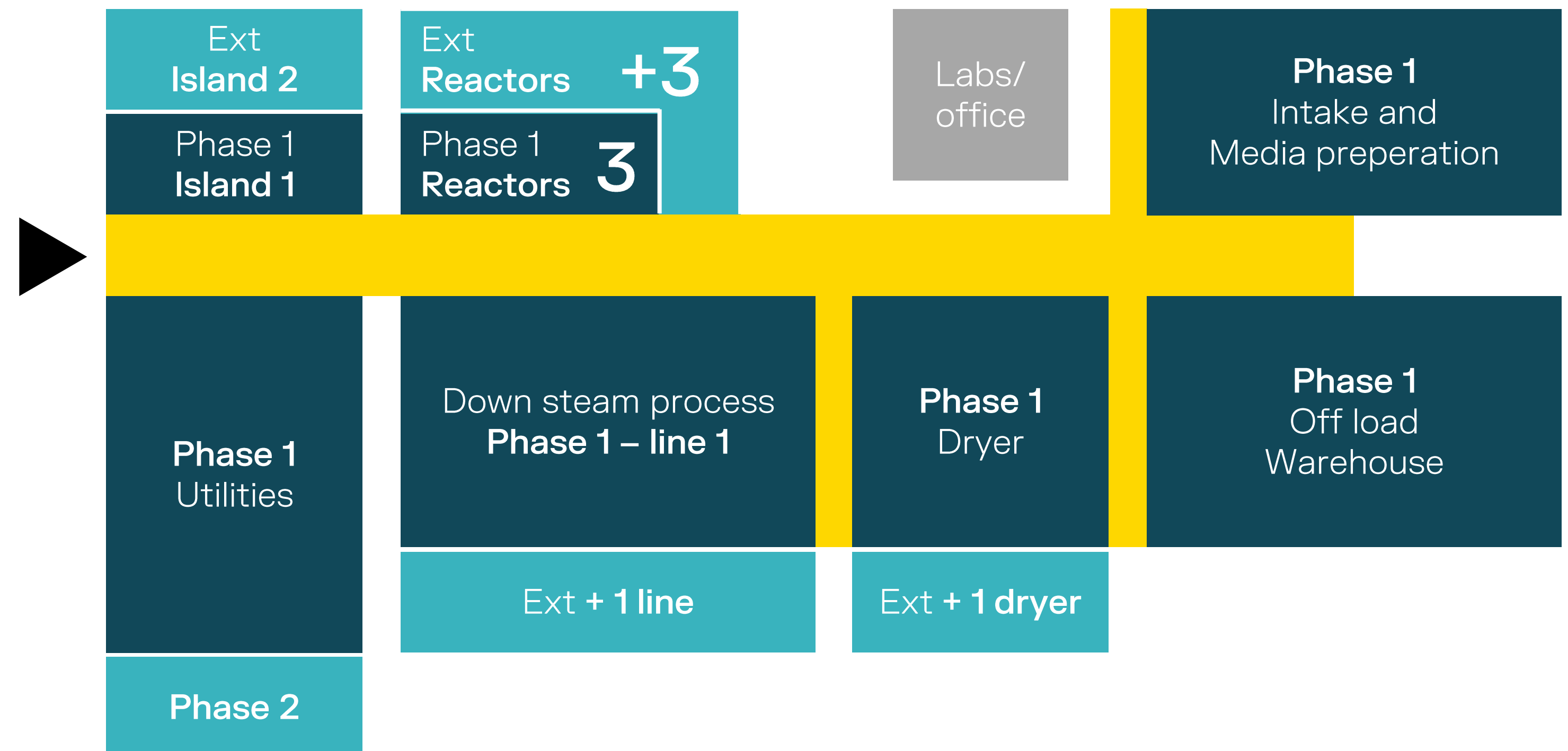
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Modular cross
layout approach
to manage
customer offtake
and minimize initial
CapEx for Phase 1



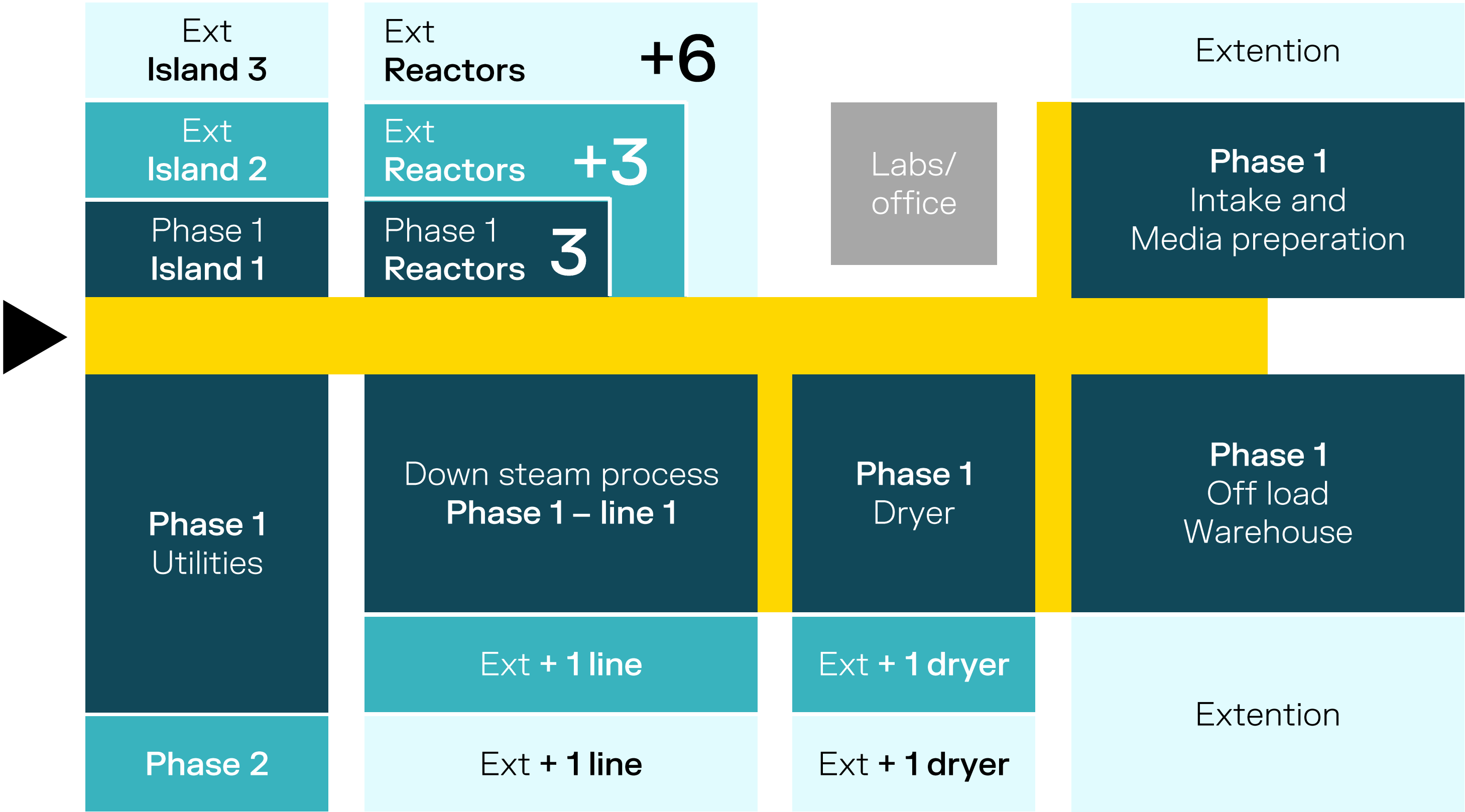
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Modular cross layout approach to manage customer offtake and minimize initial CapEx for Phase 1



06

Modular cross layout approach to manage customer offtake and minimize initial CapEx for Phase 1



06

Considerations for site selection (as of today 4 locations, 10 sites)

Assuming Factory 02 built in Nordics

Importance	Factor	Considerations
<div></div>	Access to electricity grid	Prerequisite for site selection, particularly for on-site/in-house H2 generation. Confirmed long lead item.
<div></div>	H2 availability	Requires on-site or proximity to H2 production
<div></div>	CO ₂ availability	Liquified transportation or co-location with another industrial player.
<div></div>	Brownfield/constructability	Targeting ~10-20% savings on total CapEx
<div></div>	Ability for demand side response	Access to suitable grid connection points, and costs associated with connecting to the grid should be economically viable.
<div></div>	Ability for heat integration	Proximity to existing district heating networks required.

High

Medium

ILLUSTRATIVE

07

Strong Financial Ambition



07

Scale-up plan for F02

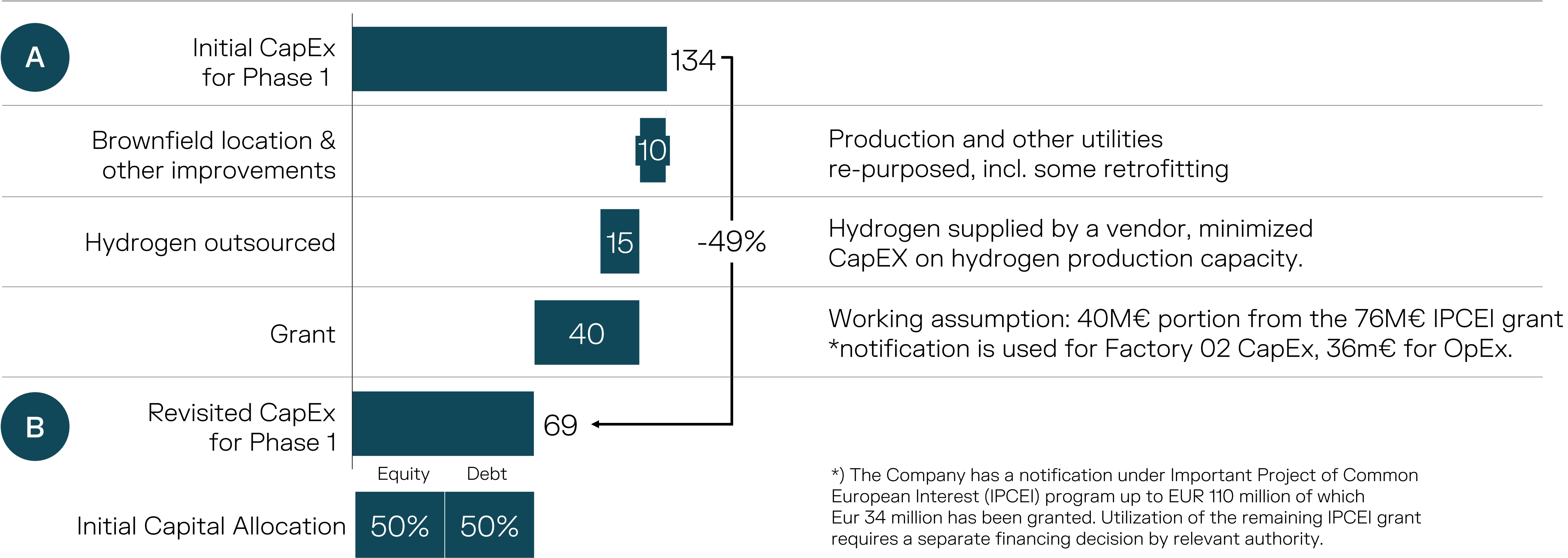
CapEx requirement for F02, Eur		Revenue, mEur	EBITDA, %	Production metrics	Overarching assumptions
Phase 1	<div> <div></div> <div>134</div> </div>	48-55	57-62	<ul style="list-style-type: none"> 3 x 100m³ reactors Production capacity ~3.2 kt/year Production start in 2028 Further downscaling of CapEX requirement detailed next	<ul style="list-style-type: none"> Master plan to build F02 in phases (3 + 3 + 6) at techno-economically viable scale. Cell productivity 1,5 g/l/h and O₂/CO₂ ratio of 3. In-house hydrogen capacity Liquid CO₂ evaporation Sales of excess heat to district heating grid Operational ramp-up of 2 years Electricity price 40 € / MWh Greenfield
Phase 2	<div> <div></div> <div>48</div> </div>	48-55	69-72	<ul style="list-style-type: none"> 3 x 100m³ reactors Production capacity ~3.2 kt/year Production start in 2029 	
Phase 3	<div> <div></div> <div>135</div> </div>	96-109	68-72	<ul style="list-style-type: none"> 6 x 100m³ reactors Production capacity ~6.4 kt/year Production start in 2030 	
Total	<div> <div></div> <div>317</div> </div>	192-219	65-69	<ul style="list-style-type: none"> Total production capacity ~12.8 kt/year 	

07

Plan for an equity lean Factory 02 project

Breakdown of CapEx requirement for an equity lean CapEx plan, mEur

Assumptions



07

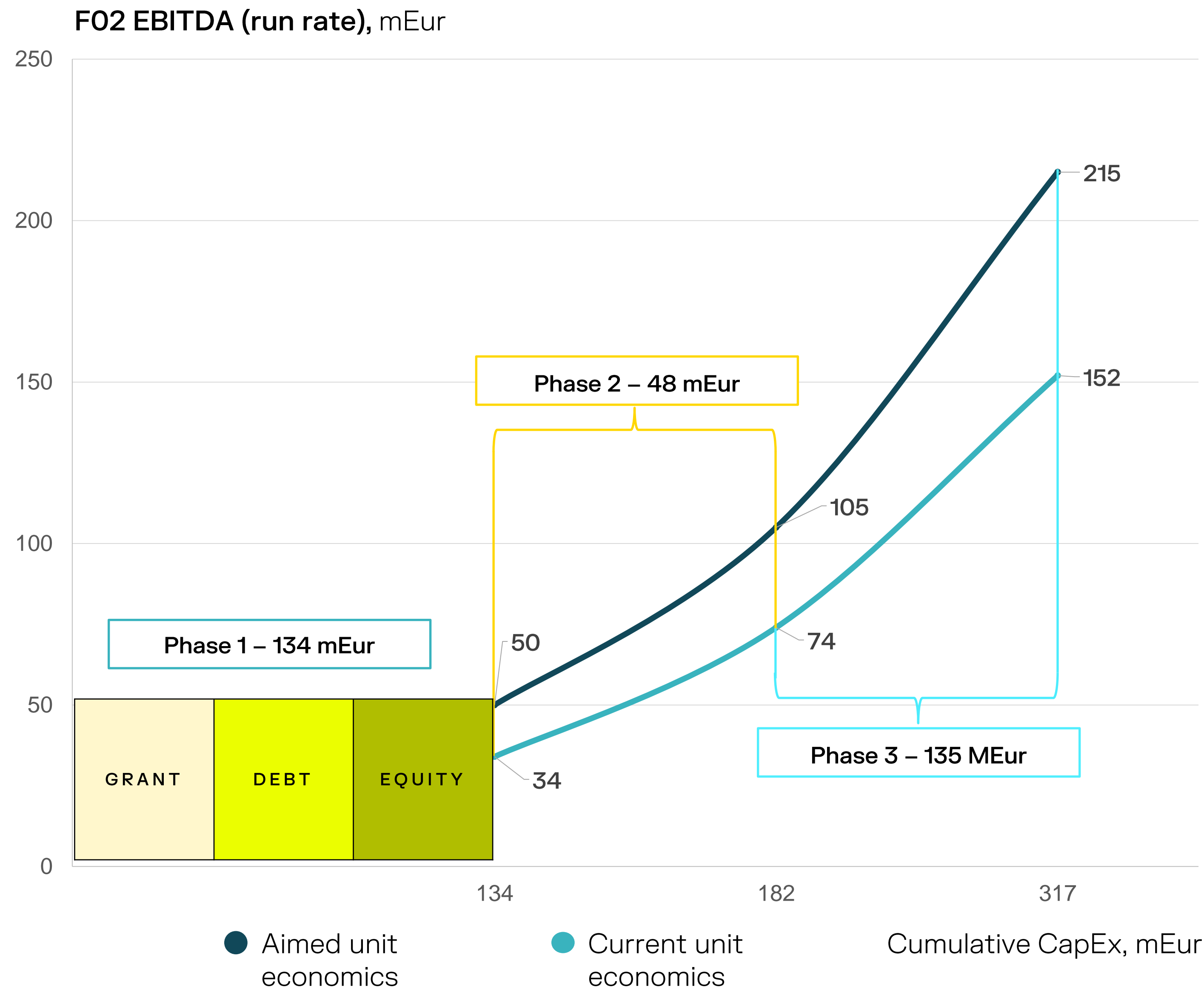
Attractive unit economics achieved in early stages of the Factory 02 project

Factory 02's EBITDA runrate attractive due to efficient OpEx cost structure.

With the achieved cell productivity (1,5 g/l/h) and energy efficiency ratio (O₂/CO₂: 3) in the Pilot facility, Factory 02 would turn profitable and start generate positive unlevered cash flow by 2030.

Significant upside potential at aimed productivity (2,0 g/l/h) and energy efficiency ratio (O₂/CO₂: 2)

Includes the CapEx scenario as presented previously "Scale-up plan for F02".

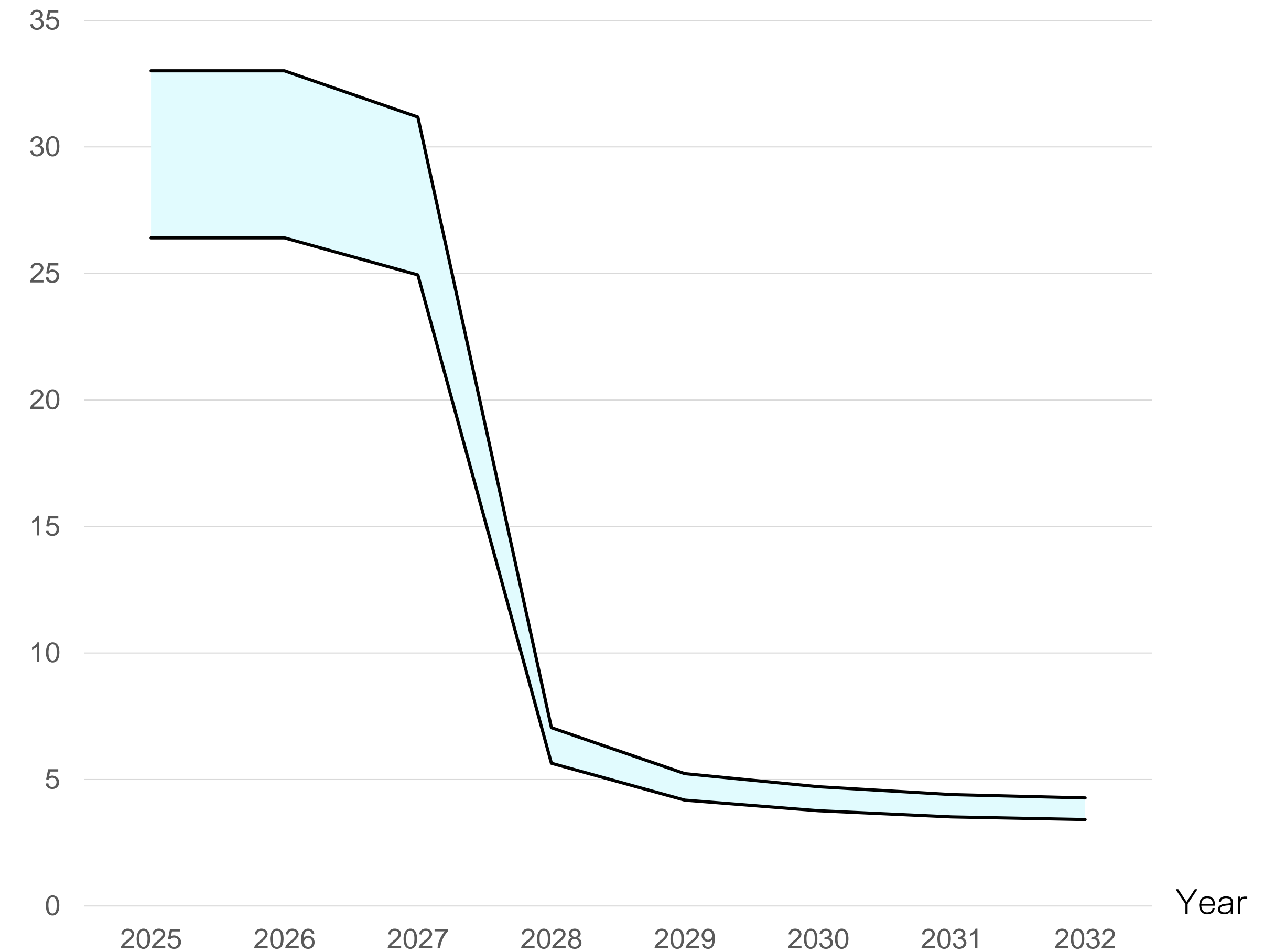


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Path to profitability

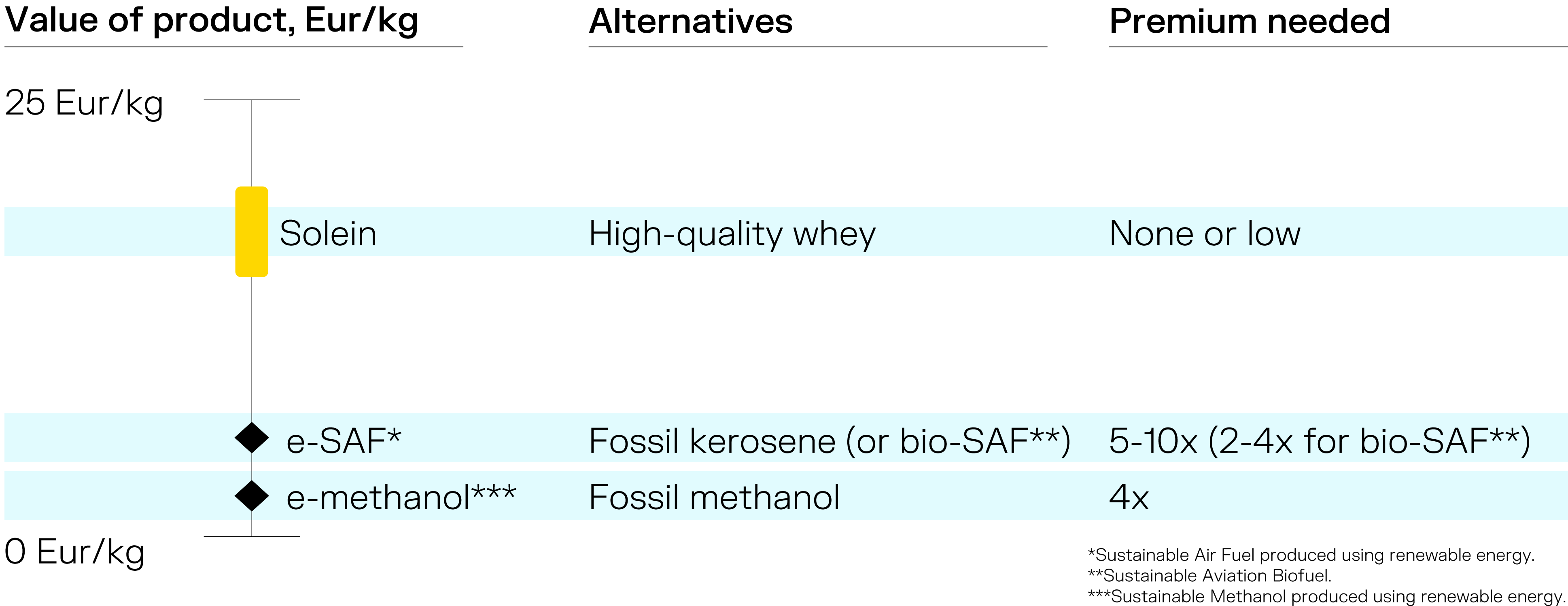
- Attractive unit costs to be achieved through techno-economic scaling (F02, cell productivity and energy efficiency) and go to market activities, especially in the U.S. market.
- The company aims to showcase the techno-economic competitiveness of its technological concept in F01.
- The Final Investment Decision targeted for F02 in 2026, with the first phase operational in 2028.

COGS/sold unit, Eur



07

Solein is more valuable than other high-volume green hydrogen products such as fuels or base chemicals



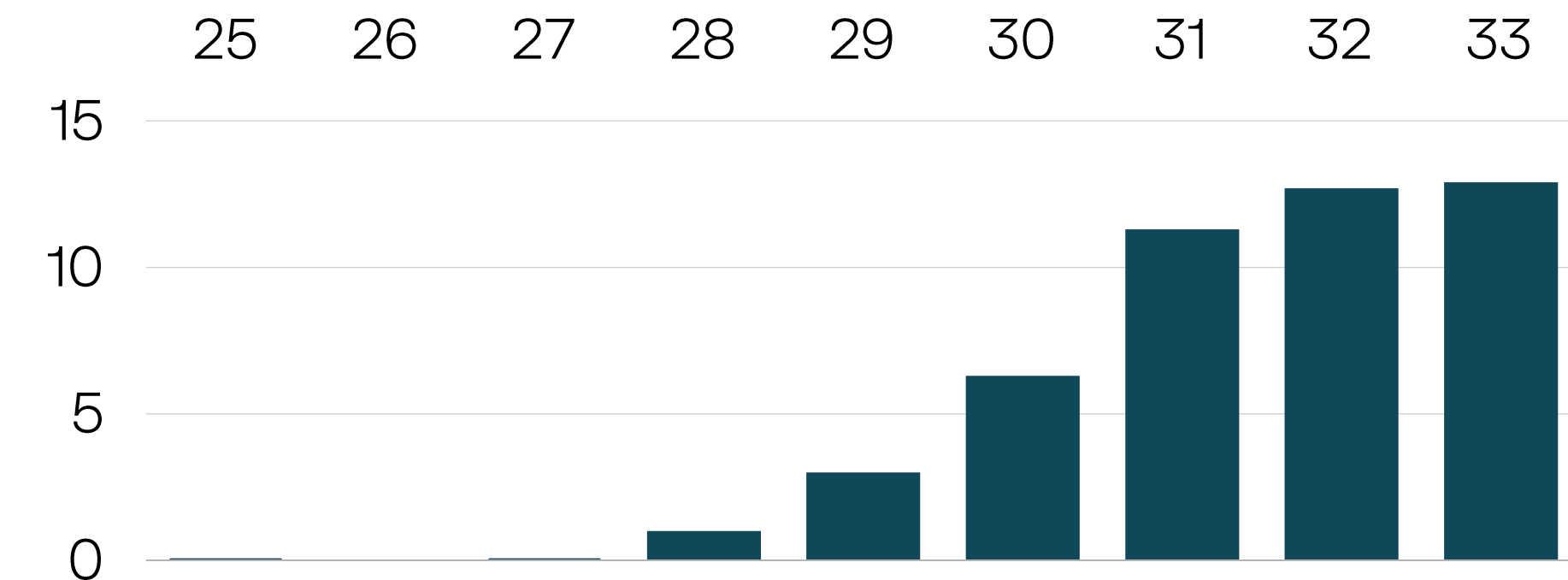
Source: Transport & Environment (briefing on e-SAF mandates, Oct 2024), S&P Global, press search, company information

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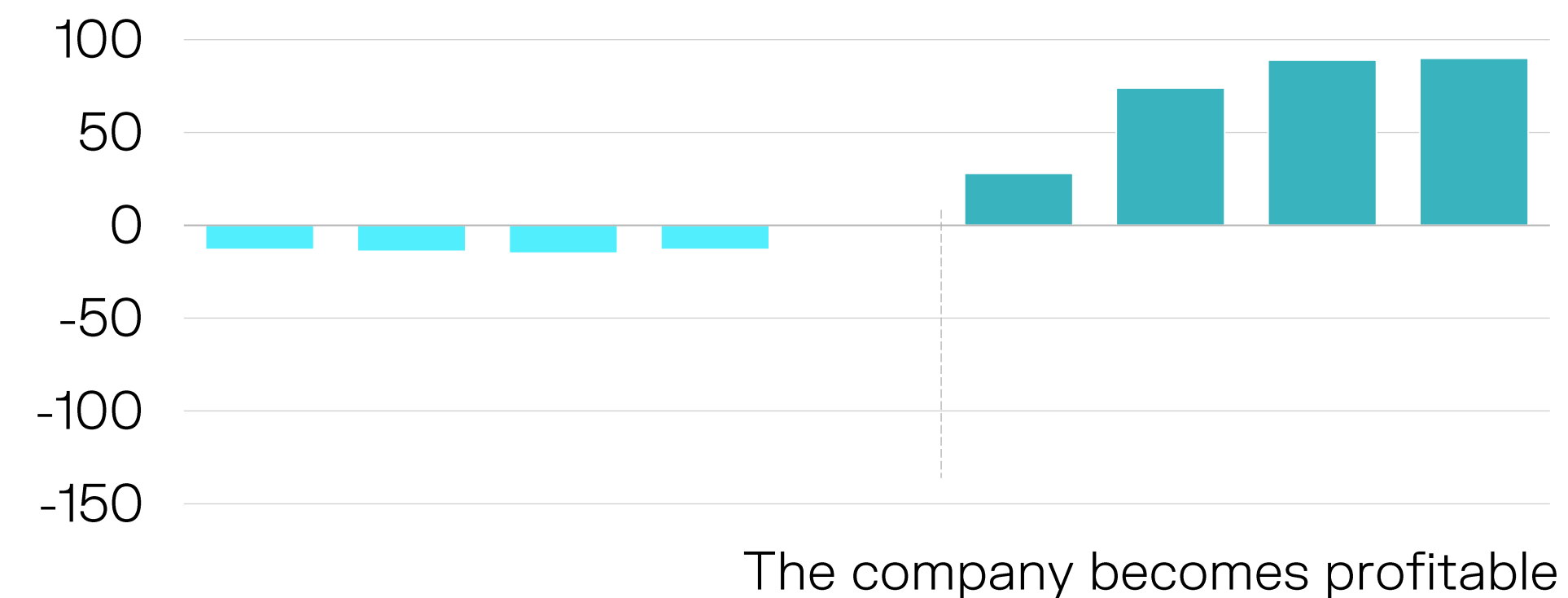
Path to profitability

- Solar Foods' business model:
 - Invest in Solein's production capacity and supply protein raw materials to food product manufacturers (B2B).
 - License hydrogen fermentation technology and production organisms to customers supplying raw materials to the food industry.
- M&A to accelerate growth and enhance product portfolio.
- Ambition to scale Solein production in phases and sales up to ~10-15 kt/year in line with the demand growth (1 % of the targeted product categories in the U.S.).
- In accordance with its Disclosure policy, the company does not provide separate short-term financial guidance.
- Profitability (positive EBITDA) expected to be reached in 2030 after successful deployment of F02 and US go to market.
- Possible IPCEI support of approximately EUR 110 million for the design and construction of F02 exists.
- The Company explores sources of finance available and has reasonable expectation that it will be able to secure sufficient funding in the foreseeable future.

Assumed volume sold from F02, kt/year



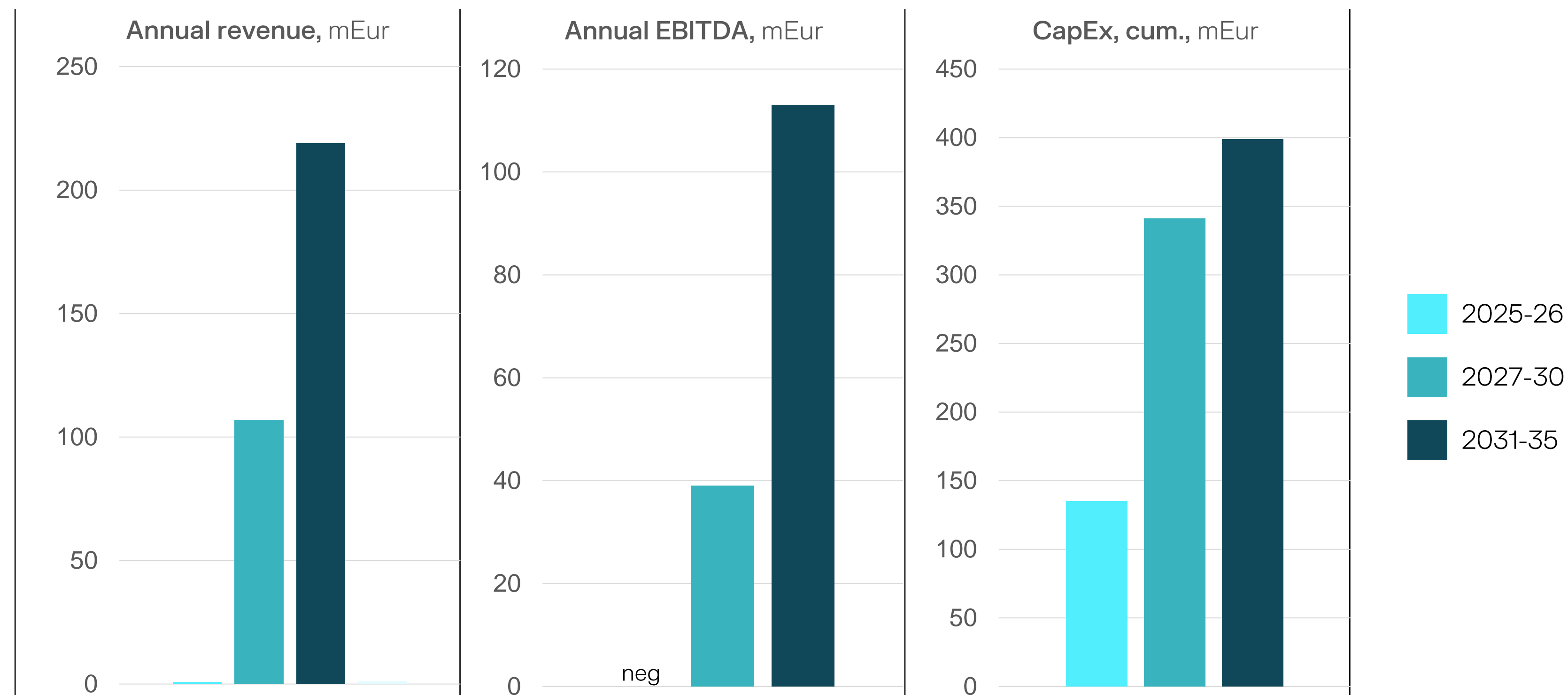
EBITDA, mEur



Includes the CapEx scenario as presented previously "Scale-up plan for F02". Additional factories, licensing business and space business planned for after 2030 not included. In accordance with its Disclosure policy, the company does not provide separate short-term financial guidance.

07

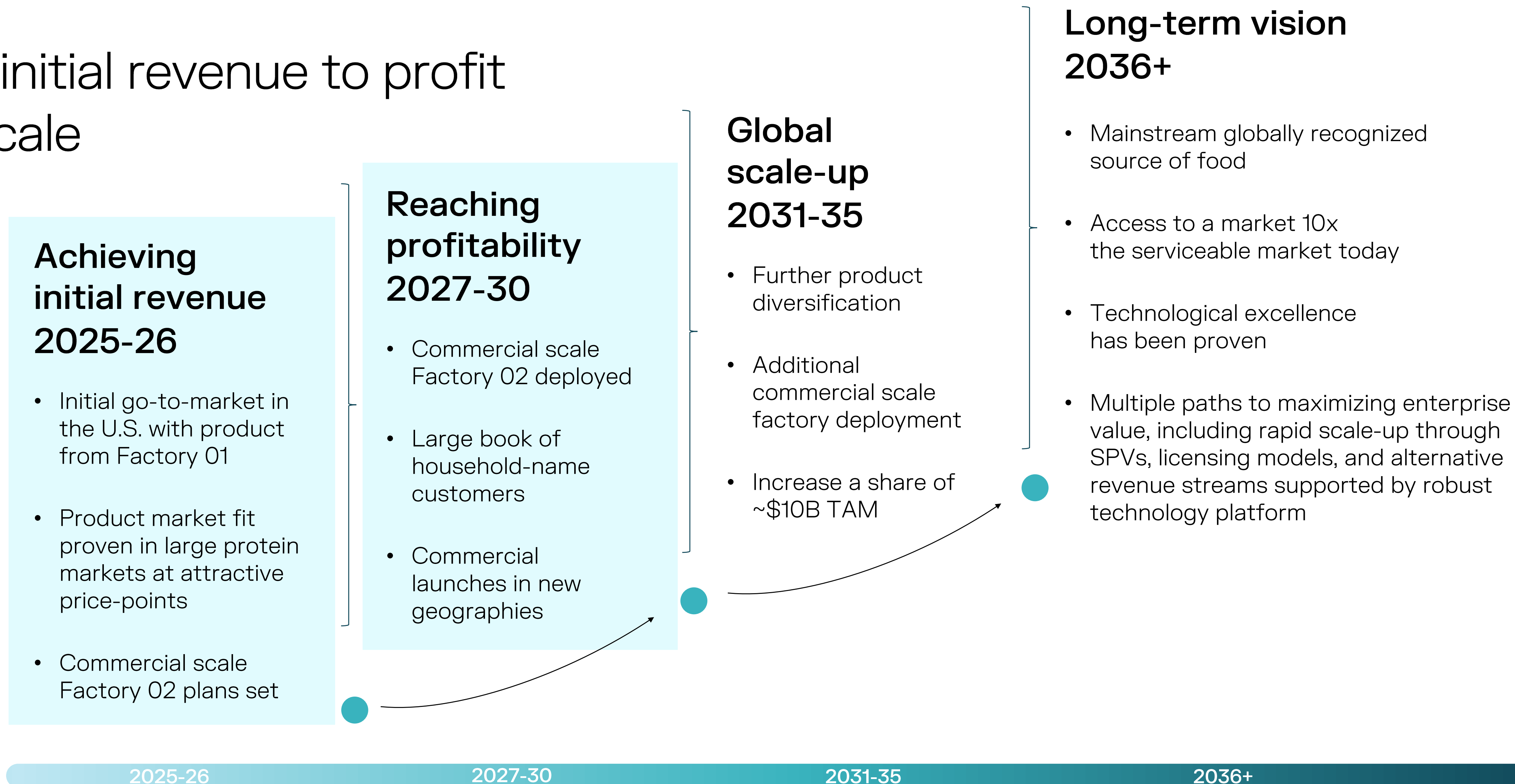
Solar Foods is on a path to deliver attractive returns even with already achieved unit economics



Includes the CapEx scenario as presented previously "Scale-up plan for F02".
 Additional factories, licensing business and space business planned for after 2030 not included.
 In accordance with its Disclosure policy, the company does not provide separate short-term financial guidance.

02

From initial revenue to profit and scale



08

Q&A





Statements made in this document relating to the future, including future performance and other trend projections, are forward-looking statements. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that will occur in the future. There can be no assurance that actual results will not differ materially from those expressed or implied by these forward-looking statements, due to many factors, many of which are outside of Solar Foods' control.