

A hand is shown moving a black chess piece on a dark board. The board is overlaid with a white network diagram consisting of interconnected nodes and lines. The scene is captured in a circular frame.

Noves oportunitats en proteïna alternativa

PROGRAMA

09:30h **Benvinguda i Presentació sobre l'ecosistema de proteïna alternativa a Catalunya**
Sr. Joan Martí, Director Unitat d'Estratègia Empresarial d'ACCIÓ

10:00h **Alternative Proteins in Europe and the World**
Mr. Alex Holst, The Good Food Institute

10:30h **Pitching: empreses catalanes en proteïna alternativa**

- **Zyrcular Foods**, Sra. Laia Vergés, Directora R+D
- **Nova Meat**, Sr. Giuseppe Scionti, CEO
- **Grup Teresa Carles Flax & Kale**, Sr. Jordi Barri, CEO
- **Iberinsect**, Sr. Jordi Calbet, CEO
- **Blauver Foods**, Sr. Joan Solé, CEO
- **Cultivate Foods**, Jordi Morales-Dalmau, CTO

11:00h **COFFEE-BREAK**

11:30h **How government support can catalyse cultivated meat**
Mr. Robert Jones, Cellular Agriculture Europe / Mosa Meat

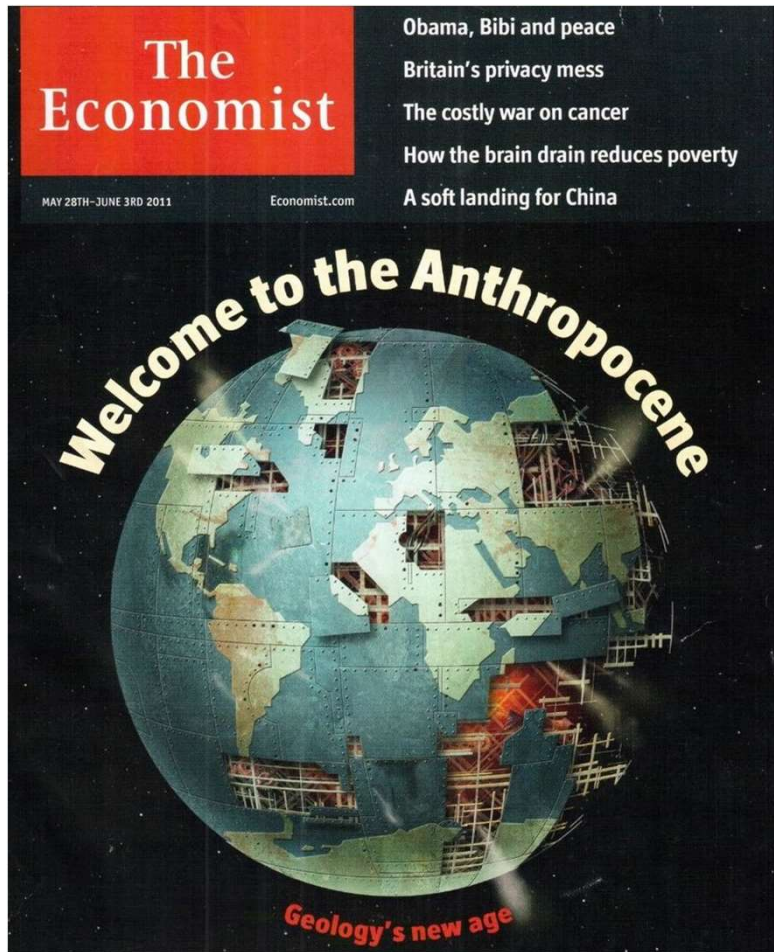
12:00h **Networking**

13:00h **Fi de l'acte**

L'ecosistema de proteïna alternativa a Catalunya

Sr. Joan Martí, Director Unitat d'Estratègia Empresarial d'ACCIÓ

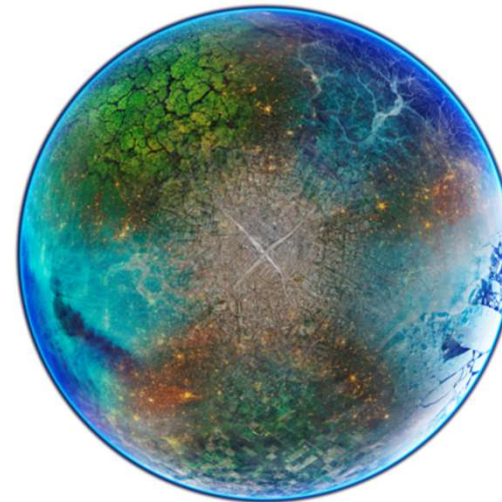
Reptes sistèmics



futurearth — LATEST — NEWS

Earth Commission Releases First Major Study Quantifying Earth System Boundaries

Humans are taking colossal risks with the future of civilization and everything that lives on Earth, a new study published in the journal *Nature* shows. Developed by an international science commission engaging more than 40 researchers from across the globe, the scientists deliver the first quantification of safe and just Earth system boundaries on a global and local level for several biophysical processes and systems that regulate the state of the Earth system.



Reptes sistèmics



Peace, dignity and equality
on a healthy planet

Day of Eight Billion

On 15 November 2022, the world's population reached 8 billion people, a milestone in human development. While it took the global population 12 years to grow from 7 to 8 billion, it will take approximately 15 years—until 2037— for it to reach 9 billion, a sign that the overall growth rate of the global population is slowing. Yet levels of fertility remain high in some countries. Countries with the highest fertility levels tend to be those with the lowest income per capita. Global population growth has therefore over time become increasingly concentrated among the world's poorest countries, most of which are in sub-Saharan Africa.



WORLD HUNGER FACTS



Health

Topics

Countries

Newsroom

Emergencies

Key facts

- Worldwide obesity has nearly tripled since 1975.
- In 2016, more than 1.9 billion adults, 18 years and older, were overweight. Of these over 650 million were obese.

There is more than enough
food produced in the world to
feed everyone on the planet.
Yet as many as 783 million
people still go hungry.

Fem avui l'empresa del demà

Proteïna alternativa: no només *trending topic*



← THE BEST INVENTIONS OF 2023

Meat Without the Footprint

Good Meat Cultivated Chicken



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Estratègia: Llegir l'entorn, entendre les capacitats i canviar

Forbes May 20, 2022



China Covid Lockdowns Threaten To Fuel U.S. Inflation As Economic Pessimism Grows

NRF NATIONAL RETAIL FEDERATION June 20, 2022



Supply chain—from disruption to inflation and back again

PBS July 24, 2022



Global climate crisis hits home in the U.S. amid record heat and pervasive wildfires

BARRON'S July 8, 2022



Russia's War in Ukraine Is Driving Global Inflation. Here's How Much

Bloomberg July 6, 2022



Labor unrest disrupts supply chains from sky to sea

THE WALL STREET JOURNAL July 26, 2022



IMF Again Cuts Global Growth Forecast Amid Inflation, War in Ukraine

FT ECONOMIC TIMES.COM July 27, 2022



Fed hikes 75 basis points second time, signals third is possible

The New York Times July 26, 2022



Is Recession Staring Us Down? Already Upon Us? Here's Why It's Hard to Say

The Guardian July 26, 2022



World economy may soon be on the cusp of recession—as it happened

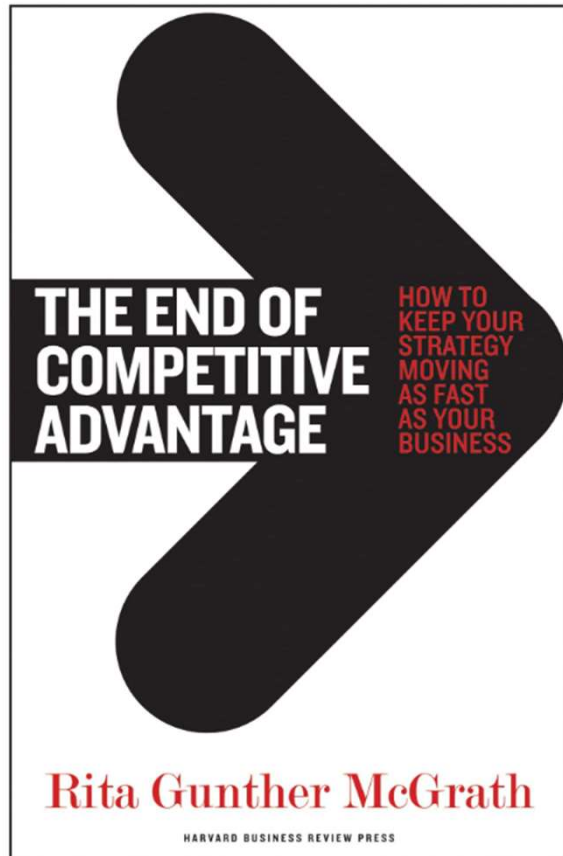
THE WORLD BANK January 11, 2022



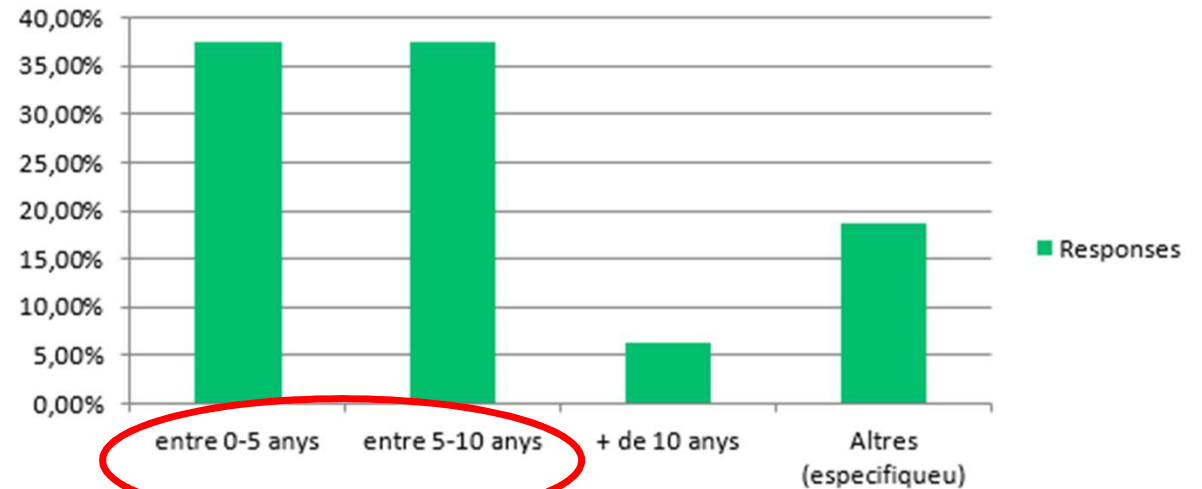
Global GDP Growth to Slow through 2023. Adding to Risk of 'Hard Landing' in **Developing Economies**

Sources: BCG, press search from Forbes, NRF, PBS, Barron's, Bloomberg, Wall Street Journal, Economic Times.com, New York Times, The Guardian, The World Bank

Avantatges competitius transitoris



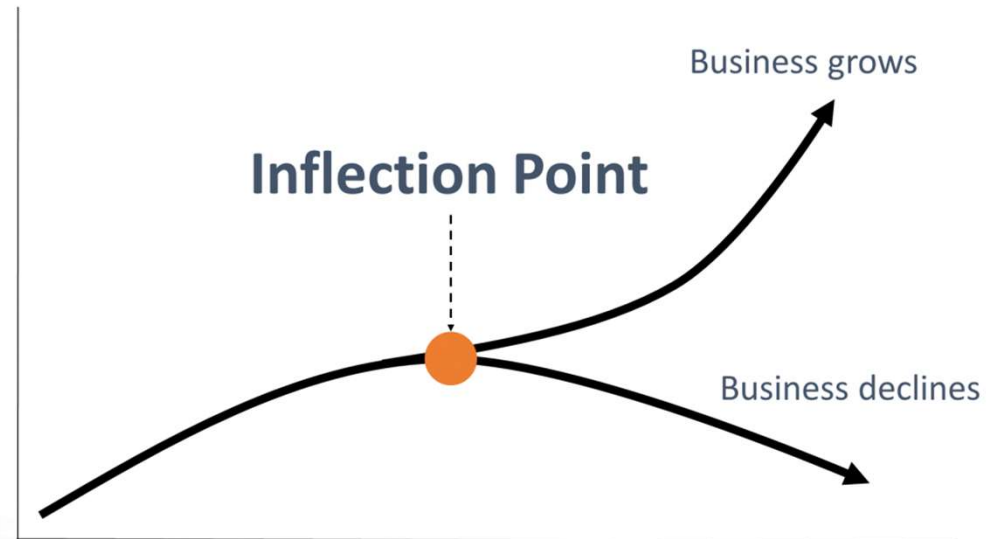
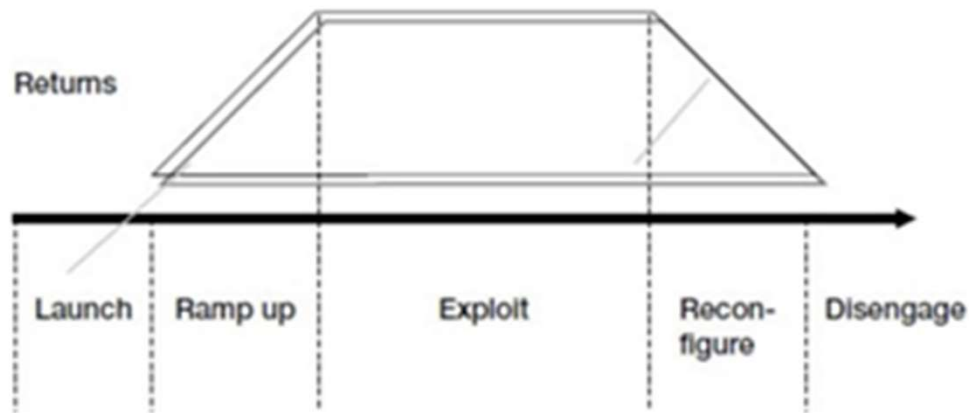
Cada quants anys realitzeu una modificació substancial del vostre model de negoci?



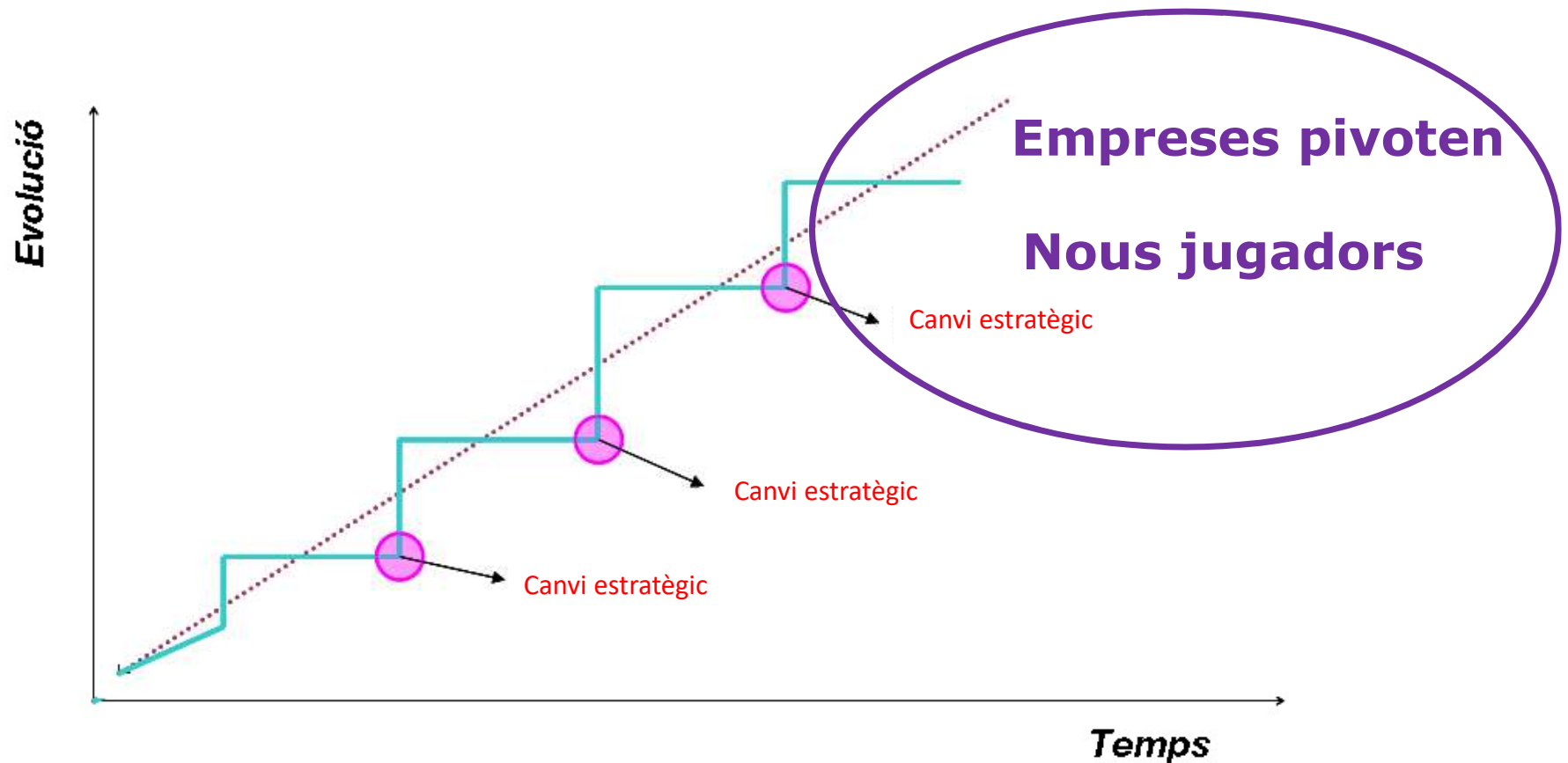
70% empreses

Impuls de canvi estratègic

How to compete: the wave of transient advantage



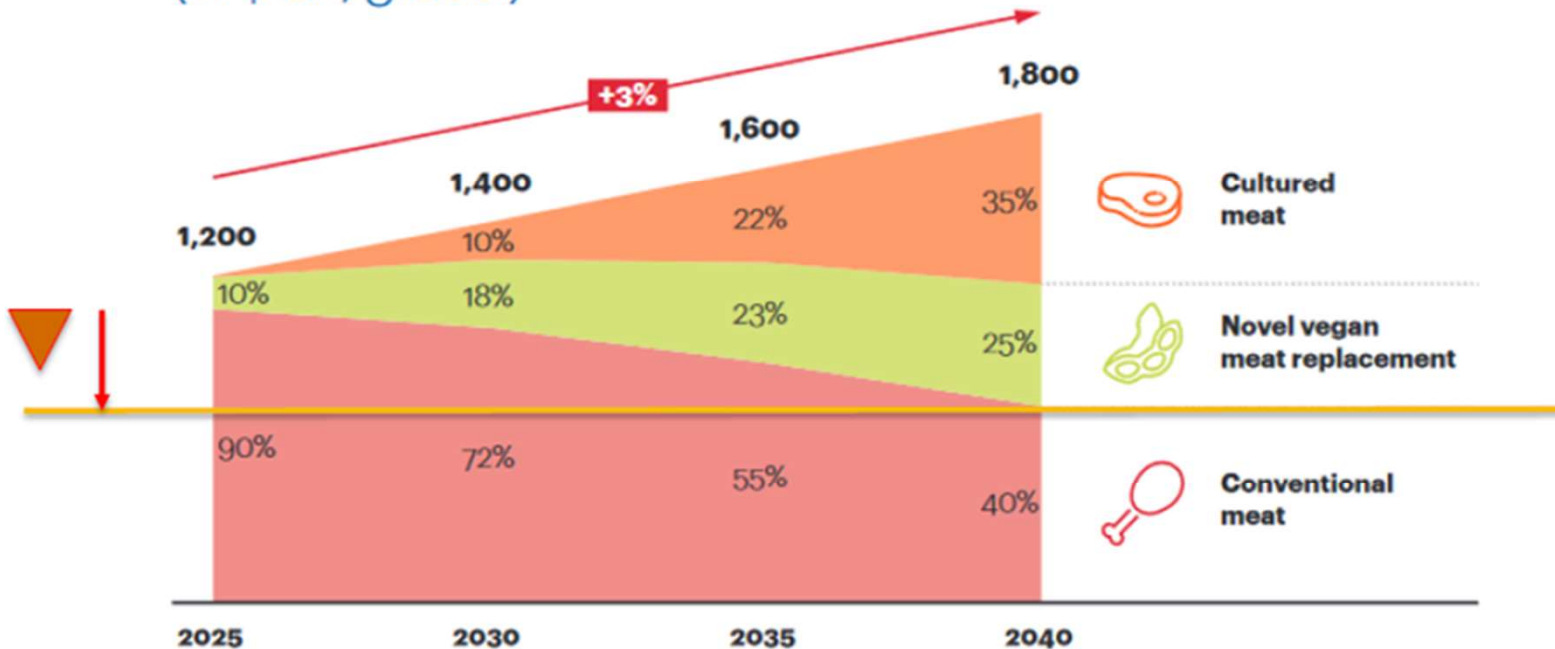
Canvi estratègic: proteïna alternativa



L'estratègia es construeix mirant al futur

Global meat market forecast

(in \$ bn, global)



S'estima que al 2040 el 60% de les "carns" que consumirem no seran d'origen animal

Font: ATKearney "How will the cultured meat and other meat alternatives disrupt the Agriculture and Food Industry" (2019)



BBC

Singapore approves lab-grown 'chicken' meat

2 December 2020

Singapore has given regulatory approval for the world's first "clean meat" from lab-grown animals.



The Good Food Institute APAC · 21 h

Front page of the @straitstimes this morning: Singapore startups begin selling plant-based meat to the world.

👉 Full story from @cheryltans: [straitstimes.com/singapore/more...](https://www.straitstimes.com/singapore/more...)

@enterprise_sg @GoodFoodEurope @TiNDLE_foods



San Francisco-based startup Eat Just to sell burgers, but the company hasn't said when its lab-grown meat has surged due to consumer demand and the environment. The market for meat alternatives could be worth \$1.4tn global

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Carn cultivada: no és ciència ficció

Cultivated Meat

Historic Moment as GOOD Meat & Chef José Andrés Serves Cultivated Chicken at China Chilcano Restaurant

July 6, 2023



Bookmark



Image courtesy of GOOD Meat

US cultivated-meat pioneers need retail. The time to move is now

Cultivated meat companies like Upside Foods and Good Meat have to create excitement for their products among grocery retailers.

Victor Martino | June 30, 2023



Upside Foods' cultivated meat. Credit: Upside Foods

In December, I [wrote](#) that cultivated meat would be approved for sale in the US this year, making it the second country in the world, along with Singapore where it's been approved for sale since 2020, to do so.

green queen



Home > Alt Protein >

The World's First 100% Cultivated Meat Butchery Is in the Works in Canada

ALT PROTEIN CELL-BASED NEWS FUTURE FOODS

By Anay Mridul — Published on Aug 23, 2023

— Last updated Aug 24, 2023



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Carn cultivada: no és ciència ficció



David Kay @_David_Kay · 7 h

So excited to announce that [@upsidefoods](#) has raised \$400M, the largest funding round to date for cultivated meat. We're a unicorn now!



wsj.com
Lab-Grown Meat Producer Upside Foods Raises \$400 Million



ENABLING & SUPPORT

ESA explores cultivated meat for space food

30/10/2023 1950 VIEWS 47 LIKES

Carn cultivada: no és ciència ficció

enAlimentos

JBS inverte en Biotech Food, companyia productora de carne cultivada

El País. La empresa brasilera es parte del capital de Biotech Food, productora de carne cultivada, al invertir

CIENCIA >

Biotech Foods invertirá 30 millones en la primera fábrica de carne cultivada de España

La 'biotec' abrirá el centro en San Sebastián y prevé ampliaciones. Se trata de una de las plantas pioneras en toda Europa



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What Is Cultivated Meat? @w... · 19 m ...

#News: World's Largest Meat Producer Breaks Ground on Cultivated Meat R&D Center in #Brazil. 🏗️ 🏢 This JBS endeavor is set to open in 2024. 🔬

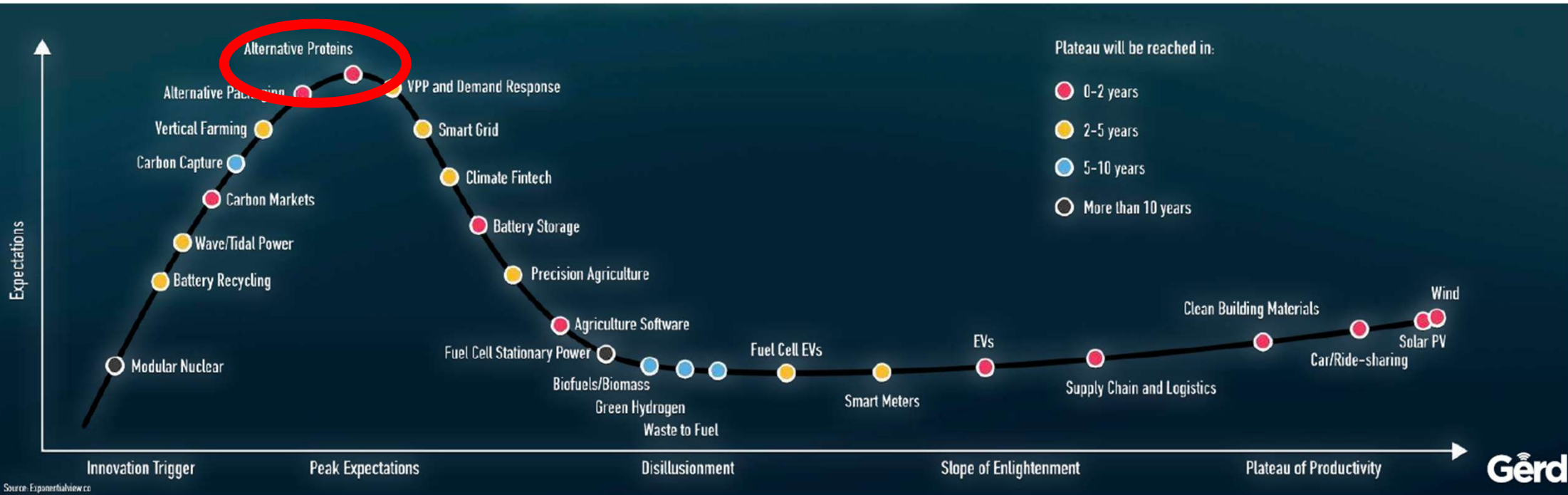


whatiscultivatedmeat.com

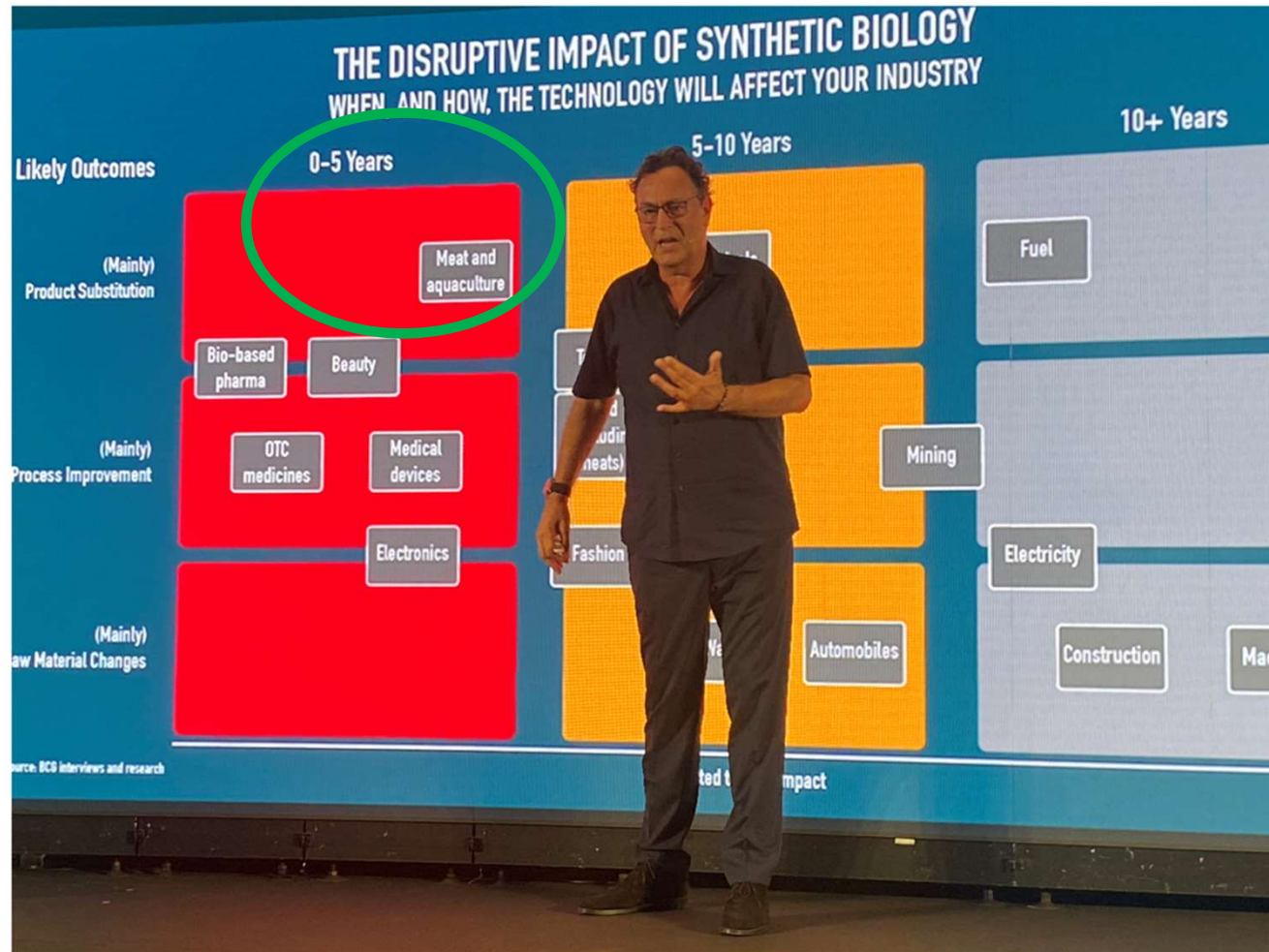
World's Largest Meat Producer Breaks Ground on Cultivated Meat R&D Center

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Carn cultivada: no és ciència ficció



Carn cultivada: no és ciència ficció



Una cursa per a la propietat intel·lectual

Batalla por el sabor de la carne vegetal

Expansión

Emiko Terazono, Financial Times
La batalla por la supremacía en el mercado de los alimentos veganos ha dado un nuevo giro con una disputa legal sobre una proteína que hace que productos vegetales sepan como hamburguesas de carne.

Los ejecutivos del sector alimentario están siguiendo de cerca la disputa sobre patentes entre dos empresas estadounidenses: Impossible Foods, uno de los primeros productores de carne a base de plantas, y Motif FoodWorks. Según la primera, Motif ha infringido su patente que protege un producto de imitación de carne de vaca que contiene heme, una molécula que contiene hierro.

Impossible presentó una demanda en un tribunal de Delaware en marzo, pero Motif impugnó esta patente hace dos semanas, presentó una petición ante la junta de apelación de patentes de EEUU y solicitó que la demanda se retrasara mientras se revisa la patente.

La disputa legal es la última de una batalla cada vez más intensa entre los productores de alimentos de origen vegetal, muchos de los cuales han recurrido a la biotecnología para crear hamburguesas vegetarianas y productos que pretenden imitar el sabor de la carne real.



Bloomberg News

presas estadounidenses The Better Meat Co y Meati también recurrieron a los tribunales para tratar de resolver una disputa sobre tecnología de fermentación.

“Las nuevas tecnologías te permiten diferenciarte y tener una ventaja competitiva. La tecnología fue fundamental para resolver los problemas de textura y sabor de los alimentos de origen vegetal, por lo que va a haber más dis-

Una gran cantidad de exejcutivos de Silicon Valley han entrado en el nuevo negocio

The Better Meat y Meati también se enfrentan en los tribunales por cuestiones parecidas

en 2016. Después de su ronda de financiación de 500 millones de dólares el año pasado, el grupo de datos corporativos PitchBook la valoró en 7.000 millones de dólares. Su rival Beyond Meat salió a bolsa a bombo y platillo en 2019, pero su capitalización de mercado se ha hundido a 2.500 millones de dólares desde un máximo de más de 14.000 millones. Uno de las principales ventajas de Im-

guestas y sus salchichas vegetarianas y que la diferencia de la competencia.

Motif fue lanzada por el grupo de biotecnología de Boston Ginkgo Bioworks en 2019 y utiliza biología sintética para crear productos para el sector de alimentos a base de plantas. Valorada en 726 millones de dólares por PitchBook, ha creado su propio producto heme llamado Hemami para mejorar el sabor y

Impossible Foods es uno de los primeros productores de carne a partir de plantas.

Motif ha declarado que confía en que la junta de apelación de patentes revoque la patente de Impossible: “Las afirmaciones de Impossible son un intento legal e infundado de socavar la innovación y limitar las opciones del consumidor para preservar sus beneficios”.

Impossible ha afirmado que la oficina de patentes ya había examinado la patente y se la había concedido y ha pedido que el caso judicial siga adelante: “El esfuerzo inútil de Motif para retrasar el caso es un intento deliberado y obvio de ganar tiempo mientras continúa infringiendo nuestra patente”.

Los casos de infracción de patentes no son el único campo de batalla para las nuevas empresas de alimentos a base de plantas. Las marcas registradas también han constituido una fuente de controversia: la sueca Oatly perdió el año pasado una demanda que presentó contra PureOatly, una marca de leche de avena propiedad de una granja familiar de Reino Unido. Y en 2020, Nestlé cambió el nombre de su hamburgue-

Noves oportunitats de negoci: insectes

Bloomberg

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Coming Soon: Faux-Meat Burgers Made From Maggots and Mealworms

Growing numbers of producers are exploring insects as a source of protein.



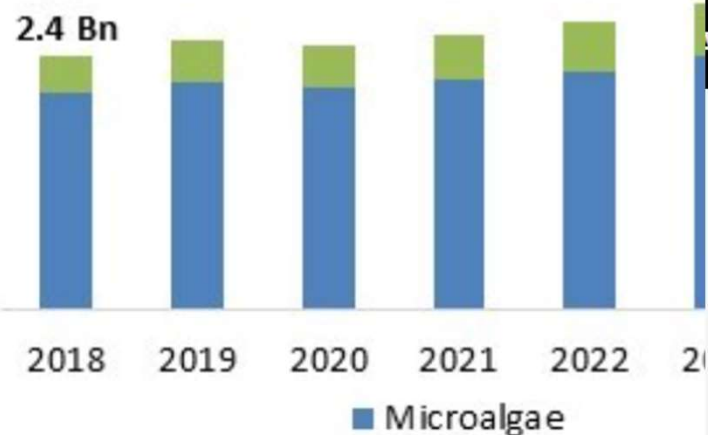
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Noves oportunitats de negoci: Algues

Algae Protein Market Size, By Type, 2018 - 2028



EL PUNT AVUI+

Identifica't



SECCIONS EDICIÓ IMPRESA MÉS

LOCAL SOCIETAT SUCCESSOS POLÍTICA ECONOMIA CULTURA INTERNACIONAL COMUNICACIÓ OPINIÓ ESPORTS

MEDI AMBIENT BARCELONA - 12 maig 2022 2.00 h



RECERCA ALIMENTACIÓ

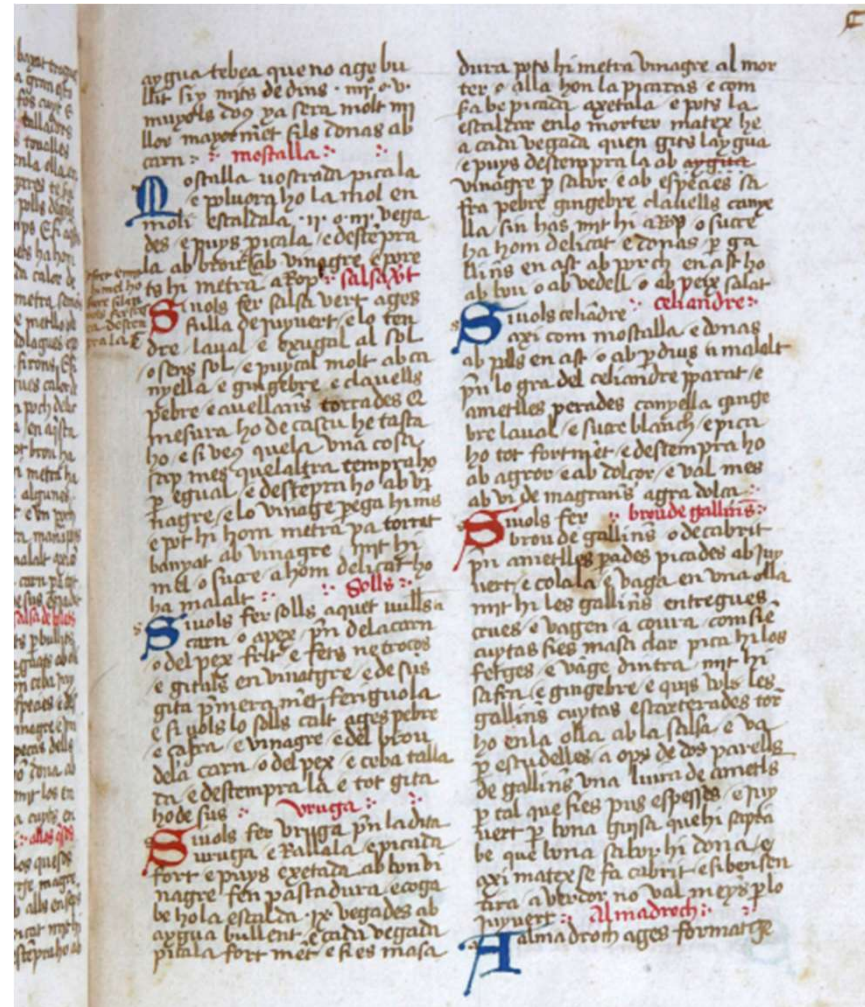
El Delta és el lloc òptim per al cultiu industrial d'algues

- Ho determina un estudi encarregat pel govern i la FAO per l'alt nivell de nutrients que proporcionen les muscleres
- També apunta a l'Ametlla de Mar i Roses per l'aqüicultura existent

Dieta mediterrània: insectes i algues

LIBRE DE SENT SOVÍ

(RECEPTARI DE CUINA)



Noves oportunitats de negoci: Mycelium / seafood

Chinese Startup CellX Enters the Mycelium World to Create Hybrid Proteins with Cultivated Meat

By Anay Mridul — Published on Nov 10, 2023 — Last updated Nov 10, 2023

ALT PROTEIN CELL-BASED NEWS FERMENTATION-BASED ALT PROTEIN

Shanghai-based cellular agriculture startup CellX, known for cultivated meat, has ventured into mycelium fermentation to expand its portfolio of sustainable proteins. The company plans to use fermented proteins in meat and dairy alternatives and combine them with cultured proteins to make more affordable hybrid meat, with regulatory filings planned for China and overseas.

CellX's mycelium venture comes three months after it [opened](#) China's first large-scale cultivated meat pilot factory. At the time, the company had stressed the importance of price parity with animal-derived meat, with production costs at well below \$100 per lb of cultured meat already (although it would [need to reach](#) \$2.92 to be price-competitive).

The new mycelium programme helps this cause. CellX says mycelium proteins have near-term advantages in both [cost and scale](#) and have differences in raw material performance. This will help supplement the company's mid-range protein product portfolio.



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'Our oceans face significant peril...' Alt seafood startups unite to create new trade association: Future Ocean Foods

November 13, 2023 Elaine Watson

36 [alt seafood](#) startups in 14 countries—spanning cultivated, plant-based, and fermentation-based technologies—have joined forces to create a new trade association: [Future Ocean Foods](#).

The association, which is partnering with [The Good Food Institute \(GFI\)](#), [ProVeg International](#), [The Global Organization for EPA & DHA Omega-3s \(GOED\)](#), will initially focus on knowledge-sharing and educating key stakeholders about the laundry list of problems linked to traditional seafood and the benefits of promoting alternatives.

Down the road, it is also planning a "global event that will unite alternative seafood startups, investors, government groups, trade associations, traditional seafood companies and organizations, as well as representatives from retail, foodservice and grocery."

'The need for creating and scaling sustainable protein sources has never been more urgent'

While most consumers tend to regard fish fairly positively as a source of protein and omega-3 fatty acids, problems linked to seafood—from [overfishing](#) to [mercury](#), [microplastics](#), [fraud](#), [mislabeling](#), [illegal labor practices](#), and [bycatch](#)—are driving interest in alternatives, claims Future Ocean Foods founder and

Fem avui l'**empresa** del demà

Noves oportunitats de negoci: pet food

Cultivated Pet Food Gains Steam as Czech Startup Says It Is Cleared For Sale After Listing On EU Feed Register

By Anay Mridul — Published on Nov 9, 2023 — Last updated Nov 13, 2023

ALT PROTEIN CELL-BASED NEWS FUTURE FOODS



There have been a host of developments in the cultivated pet food sector of late, headlined by Czech startup Bene Meat Technologies officially listing its feed on the EU feed register, which it says clears it for sale.

Prague-based Bene Meat has become the EU's first cultivated meat company to be cleared for sale in pet food after receiving approval from the European Feed Materials Register. The milestone is the latest development in the burgeoning cultured pet food sector, which has witnessed new tech, new brands, as well as rebrands.

Bene Meat announced in a press release sent to Green Queen that it had been "certified by the European Feed Materials Register to produce and sell cultured meat for pet food". Originally Reuters and others (including this publication) reported this statement as an official EU regulatory approval.

However, Dr Hannah Lester, CEO and Principal Consultant at Atova Regulatory Consulting, told industry publication CellAgri that while "Bene Meat has listed their cultivated cells of mammalian origin in the EU feed materials register...so it is true that cultivated meat could be classified as a feed material," it was important to clarify that this is "not the same as an EU regulatory approval or certification" as reported by Reuters in an article about the news. According to Dr Lester, "any feed business operator (FBO) can list a new feed material on the Feed Material Register if it is not already listed in the EU Catalogue of Feed Materials. The Feed Material Register does not grant approvals or certification." She added that "Feed materials that are safe and compliant with Regulation (EC) 767/2009 can be used in pet food. There is no separate approval process for pet foods, but there are different labeling requirements."

Robert E. Jones, President of Cellular Agriculture Europe, told Green Queen in a statement: "While it is exciting to see the potential of cultivated meat explored for multiple purposes in the food system, it is critical that accurate information is communicated about how new products are regulated. This was not an EU approval. The company in question has self-listed its cultivated cells in the EU feed materials register, which is managed by the industry-led EU Feed Chain Task Force, and they do not grant approvals or certificates. It is important to clarify that animal feed materials do not require pre-market approval and have nothing to do with the robust EU novel foods process our members will go through to bring delicious and sustainable cultivated meat and seafood to consumers."

Resum del sector de la proteïna alternativa a Catalunya



Font: ACCIÓ

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Catalonia Trade & Investment

 Generalitat de Catalunya




Dades clau del sector de la proteïna alternativa a Catalunya


103 empreses

- 
- El **68,0%** de les empreses són pimes (menys de 50 M€ de facturació).
 - El **63%** de les empreses es van establir fa més de 10 anys.
 - El **69,9%** de les empreses són exportadores i el **53,4%** són exportadores regulars.
 - El **14,6%** de les empreses són filials d'empreses estrangeres.
 - El **10,7%** de les empreses són startups.

Facturació: 269 M€

- 
- Representa el **0,6%** de la facturació del sector alimentari de Catalunya.
 - Les grans empreses (el **32,0%** del total d'empreses) facturen el **70,2%** del total de facturació del sector.

916 persones ocupades

- 
- El **77,7%** treballa en empreses consolidades (10 anys o més).
 - El **54,2%** treballa en grans empreses (més de 50 treballadors).

103 empreses proteïna alternativa a Catalunya

Carnis

Pure players

Línies de productes vegetals



Sabor, aroma i textura



SOLINA

Lucta



CARBUROS METALICOS

Insectes

IBERinsect

InsFeed

BROWN FOODS

Lactis

Pure players

DANONE

LECHE
Pascual
Dar lo mejor



fruselva
GROWING UP TOGETHER

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**REAL
DEAL
MILK**

VÄCKE

BORGES

Upfield™

Maquinària

coperion

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SYSTEMS**

m
NATURAL MACHINES



INMASA

ASTECH
FOOD MACHINERY

Algues

microalgae

**Algues
de Roses**

algabrava

Suplements i altres



LENG-D'OR

NUTRITape

MYVEGABOX



LABORATOIRES
**GRAND
FONTAINE**

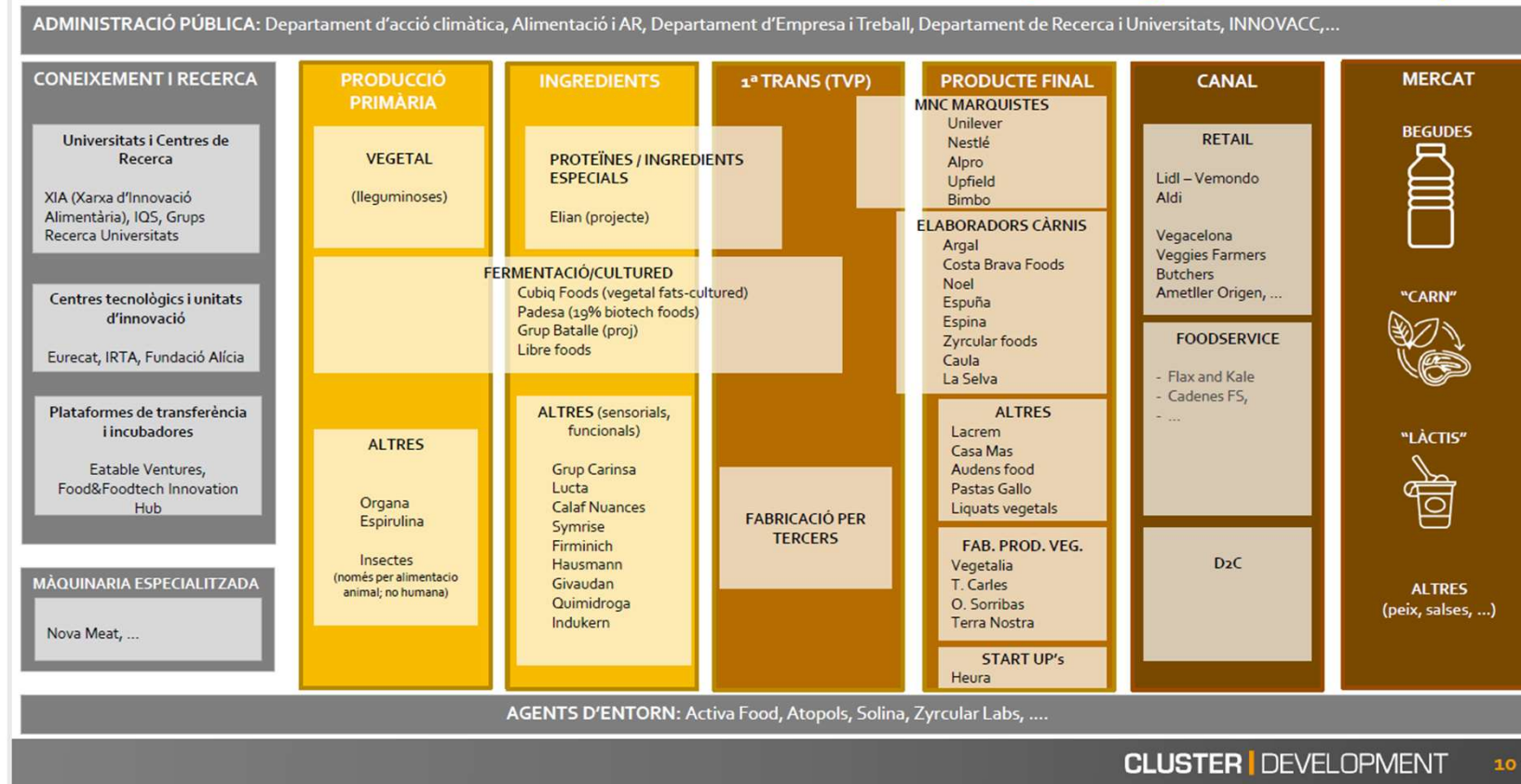
**kuh·
kaY**

NutriSpain

Font: ACCIÓ

Repte estratègic: estructurar cadena de valor sectorial

Mapa d'agents a Catalunya



Ajuts ACCIÓ: proteïna alternativa és una prioritat estratègica

Línia startup capital coinversió 2023

Subvencions a inversions empresarials d'alt impacte 2023

Subvencions a inversions empresarials d'alt impacte - Segones bases reguladores 2023

Subvencions als agents de suport a la internacionalització acreditats per ACCIÓ 2023

Subvencions per a cupons a la competitivitat empresarial

Subvencions per a iniciatives de reforç de la competitivitat 2023

Subvencions per a iniciatives de reforç de la competitivitat per agents dinamitzadors de clústers

Subvencions per a noves oportunitats de negoci 2023

Subvencions per a projectes d'innovació oberta i disruptiva 2023

Subvencions per a projectes de multilocalització 2023

Subvencions per a projectes de realització d'activitats de promoció internacional

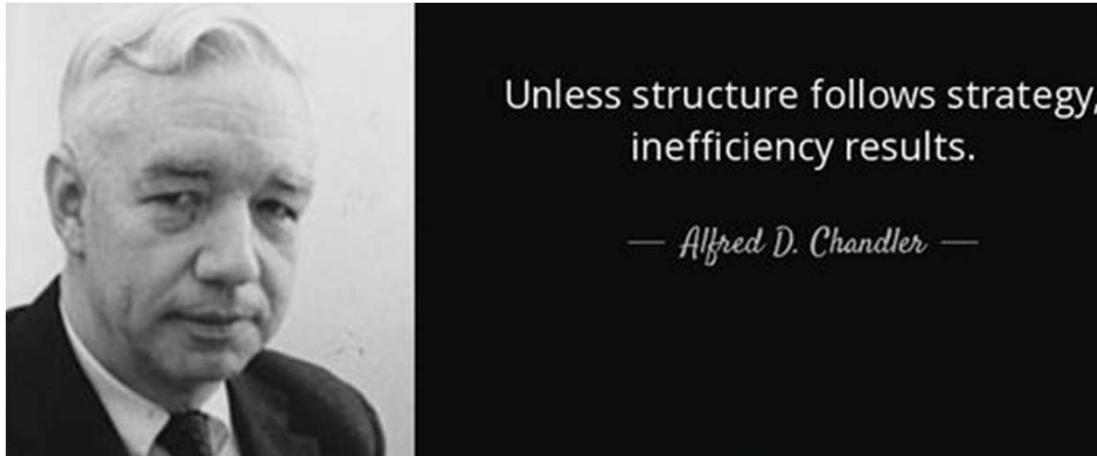
Subvencions per a nuclis R+D 2023

Subvencions nuclis R+D Green a projectes R+D en economia circular, en l'àmbit dels residus 2023

Subvencions nuclis R+D Green a projectes R+D en l'àmbit de canvi climàtic 2023

Subvencions start-up capital per a empreses tecnològiques emergents any 2023

Programa Noves Oportunitats de Negoci



CANVI ESTRATÈGIC

+

CANVI ESTRUCTURAL

120.000€ per a projectes de proteïna alternativa

Exemples: nova línia proteïna vegetal, obertura retail, integració entre empreses, nou negoci carn cultivada....



INNOVACC @innovacc_cat · 1 h



📡 Èxit de participació a l'Assemblea general extraordinària d'INNOVACC on es va aprovar el canvi de nom de l'entitat. A partir d'ara serem "INNOVACC. CLÚSTER CATALÀ DE LA CARN I LA PROTEÏNA ALTERNATIVA".

Apostem per estar al costat dels nostres socis innovant constantment 💪



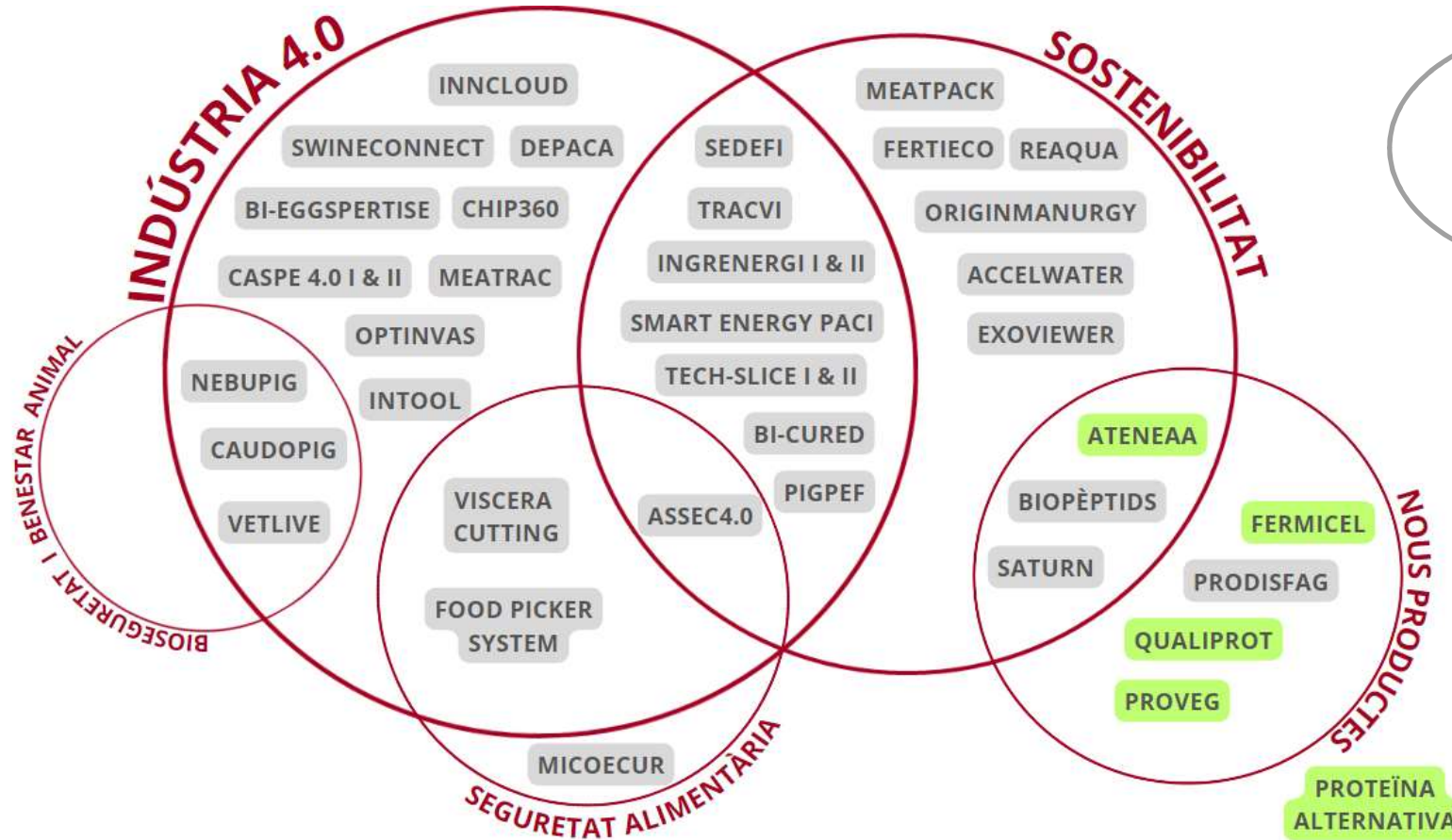
37 EMPRESES I INSTITUCIONS PROTEÏNA ALTERNATIVA

26%
dels socis



Fem avui l'empresa del demà

PROJECTES DE PROTEÏNA ALTERNATIVA INNOVACC 2023



11%
dels projectes vius (4 de 36)

Viatjant al futur: benchmarks



Netherlands, novembre 2022

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SINGAPORE

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Where can Singapore take the lead in alternative proteins?

24 Mar 2023 • 9 min read

[in](#) [f](#) [X](#)



Singapore, 2004?

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CLÚSTER CATALÀ DE LA CARN
I LA PROTEÍNA ALTERNATIVA

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Coneixement + Relacions



Sessió de treball: Discussió del cas “Beyond Meat: Changing Consumers’ meat preference”

DIVENDRES, 6 DE MAIG DEL 2022

🕒 De 10.00 a 13.00h.

📍 ACCIÓ, Passeig de Gràcia, 129. Barcelona

El 6 de maig treballarem conjuntament el cas Beyond Meat amb el professor Miquel Lladó, de l'IESE Business School i diversos directius, interessats a estudiar l'estratègia d'aquesta companyia. Beyond Meat (“Més enllà de la carn”) és una empresa americana fundada el 2009 especialitzada en productes a base vegetal. Darrera d'aquesta companyia hi ha grans fortunes com Bill Gates, Biz Stone (cofundador de Twitter) o Leonardo DiCaprio, entre d'altres.

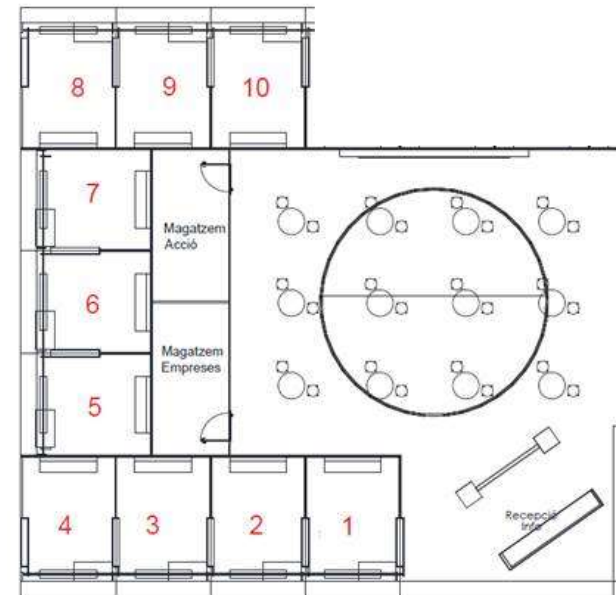
Aquesta sessió està **dirigida exclusivament a empreses participants en el pla d'activitats de la proteïna alternativa i a socis d'INNOVACC Clúster català de la carn i la proteïna alternativa.**

Fira Alimentària 18-21 març 2024

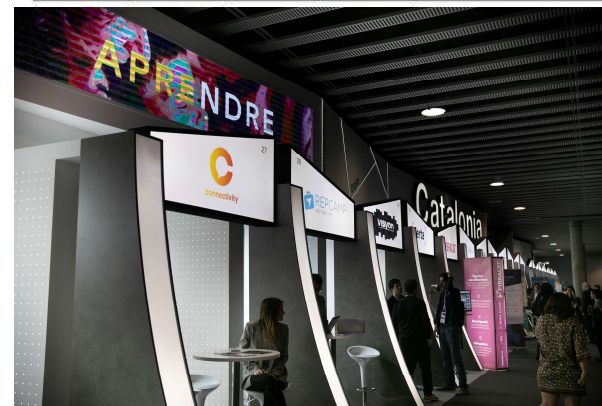
▪ Estand propi ACCIÓ a ALIMENTARIA TRENDS

Focus: proteïna alternativa/ Foodtech

- Polivalent:
 - Sessions
 - Reunions empresarials - Open Challenges
 - Empreses amb espai tipus booths.
 - Call (20 empreses. 2 dies: 10-10)
 - Demostracions de producte
 - Pitch Startups



Alimentaria



Infraestructures de suport



Science Policy

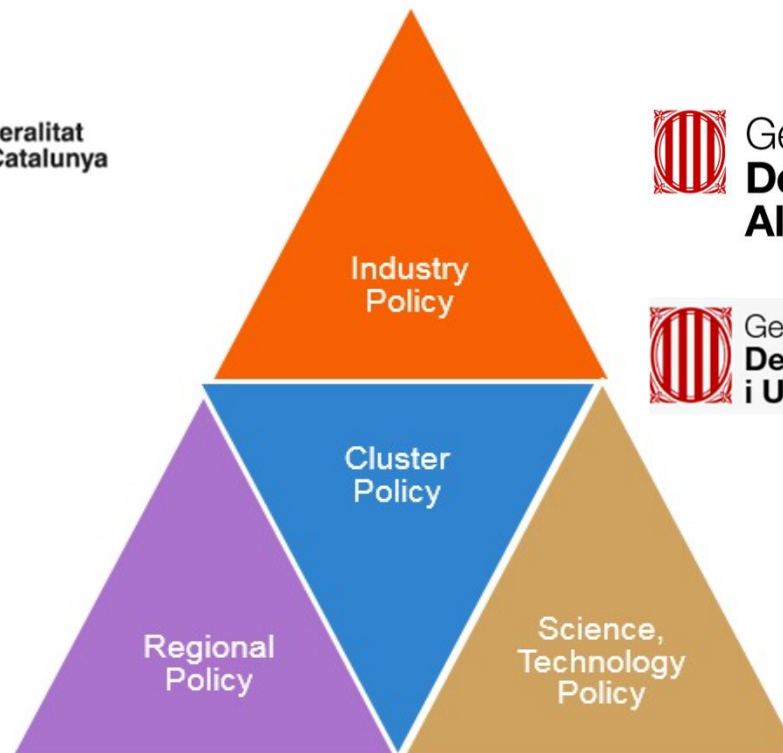
Catalonia invest €7 million in CiPA hub to lead alternative protein science in Southern Europe

The Center for Innovation in Alternative Proteins (CiPA), based across various sites throughout the region, has been funded by the Department of Climate Action, Food and Rural Agenda of the Generalitat of Catalonia and the Institute of Agri-Food Research and Technology (IRTA).

Article also available in [Catalan](#) and [Spanish](#).

9 October 2023

Intersecció de polítiques de competitivitat de suport a la proteïna alternativa



Fem avui l'**empresa** del demà

Coexistència



Moltes gràcies!

Joan Martí Estévez

Director Unitat d'Estratègia Empresarial

ACCIÓ

jomarti@gencat.cat

Twitter: @JMartiClusters

Alternative Proteins in Europe and the World

Mr. Alex Holst, The Good Food Institute



Alternative Proteins in Europe and the World

Alex Holst, Senior Policy Manager at the Good Food Institute Europe

Barcelona, November 2023

The Good Food Institute

GFI is an international nonprofit organisation helping to build a more sustainable, safe and just food system by transforming meat production. We focus on three areas of work:



Policy & Regulation

We advance government investment in open-access sustainable protein R&D and infrastructure, as well as fair regulation and legislation.



Science and Technology

We work with scientists to develop, fund and promote open-access research on plant-based and cultivated meat, eggs, dairy and seafood.



Corporate Engagement

We engage with the food industry to make delicious and affordable plant-based meat available across Europe, and prepare the sector for the arrival of cultivated meat.

GFI is entirely funded by philanthropy.



United States
Brazil
India

Europe
Asia Pacific
Israel

170+ staff in 6 regions

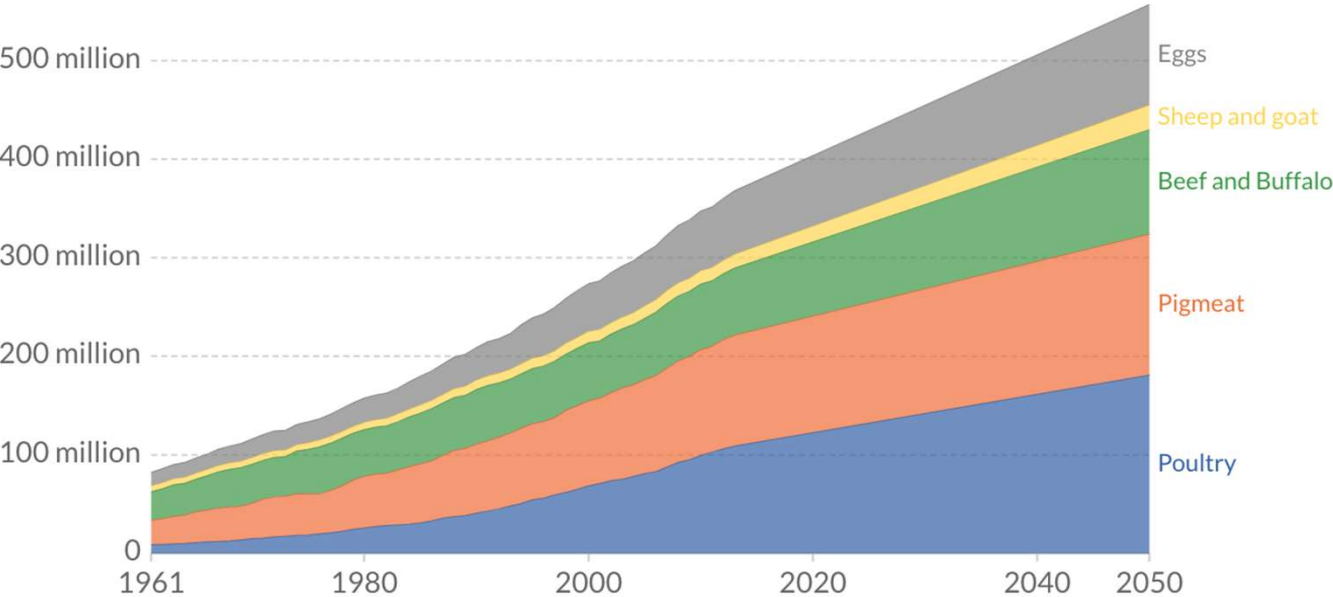
Global meat demand is growing

Global meat projections to 2050

Global meat production projections, as published by the UN Food and Agriculture Organization (FAO) based on future population projections and expected impacts of regional and national economic growth trends on meat consumption. Data from 1961-2013 is based on published FAO estimates; from 2013-2050 based on FAO projections.



Relative



Source: UN Food and Agriculture Organization (FAO)

CC BY

Consumers Motivations



Foundational drivers that fulfil immediate needs



Evolving drivers, mostly secondary to foundational drivers



GFI's approach



Accelerating Alternative proteins

We can create meat, eggs, and dairy more efficiently by making them from plants, cultivating them directly from cells, or producing them by fermentation.

Instead of asking consumers to give up the foods they love, GFI is accelerating the transition to alternative proteins by helping companies make products that are **delicious**, **affordable** and **accessible**.



Alternative protein categories

Plant-based



Photo courtesy of Beyond Meat

Fermentation

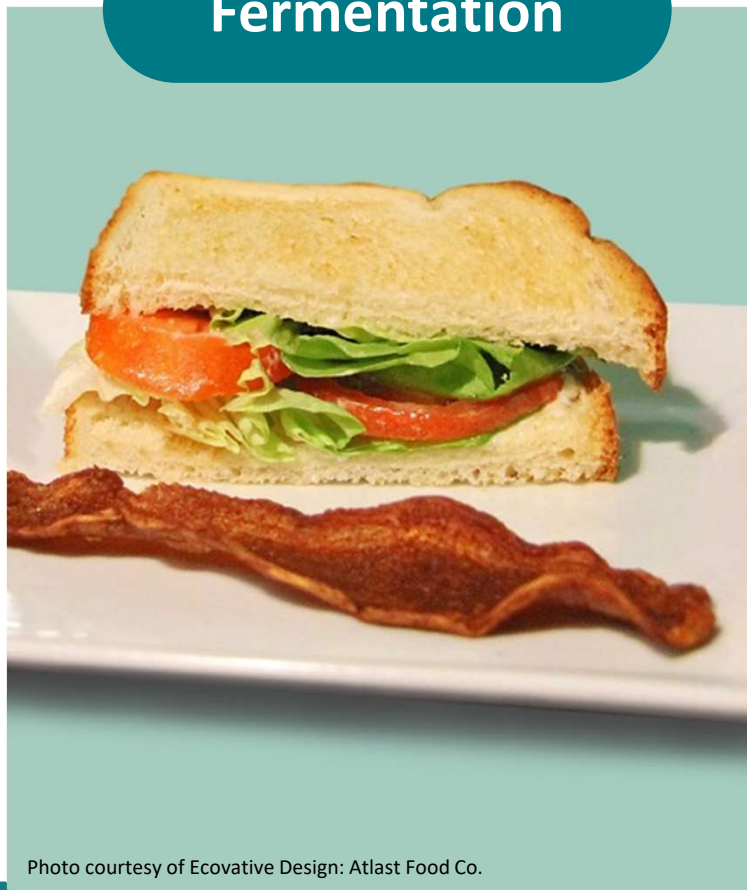


Photo courtesy of Ecovative Design: Atlast Food Co.

Cultivated



Photo courtesy of Memphis Meats

Plant-Based



Plant-based meat is produced entirely from plants.

It is produced using plant ingredients like protein, fats, and carbohydrates to mimic the full sensory experience consumers expect from meat.



Fermentation



Fermentation is an enabling technology for the alternative protein industry that allows the production of standalone protein sources or functional ingredients.

Microorganisms, such as filamentous fungi and bacteria, can be programmed to express specific proteins or fats, or their entire protein biomass can be harvested.

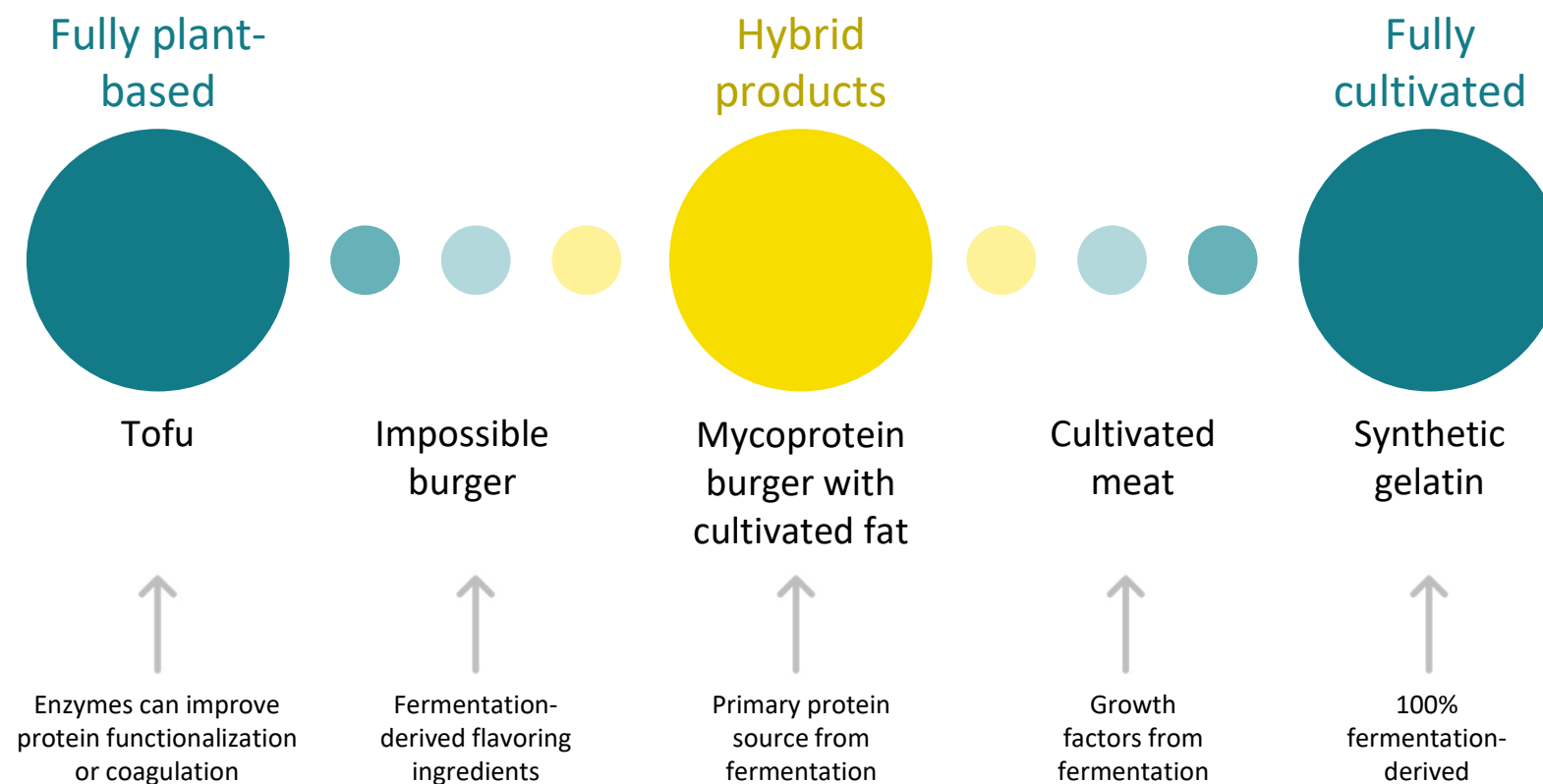
Cultivated



Cultivated meat is produced directly from animal cells.

Meat cultivation facilitates the same biological process that happens inside an animal by providing cells with the warmth and basic nutrients required to build muscle and fat.

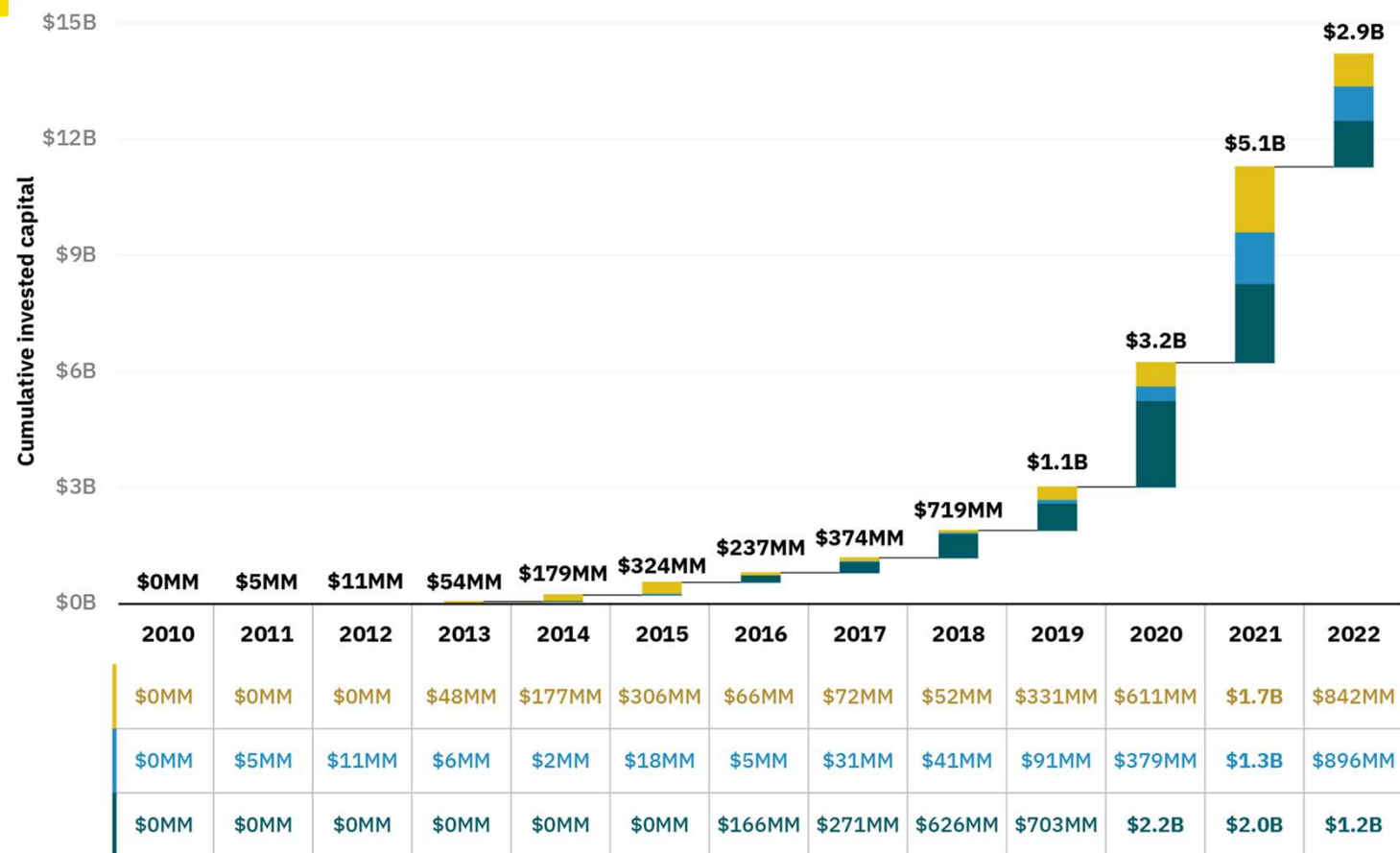
Animal product alternatives will occur along a spectrum





Investment & Growth Drivers

Global private investment



Source: GFI analysis of data from PitchBook Data, Inc.
 Note: Data has not been reviewed by PitchBook analysts.

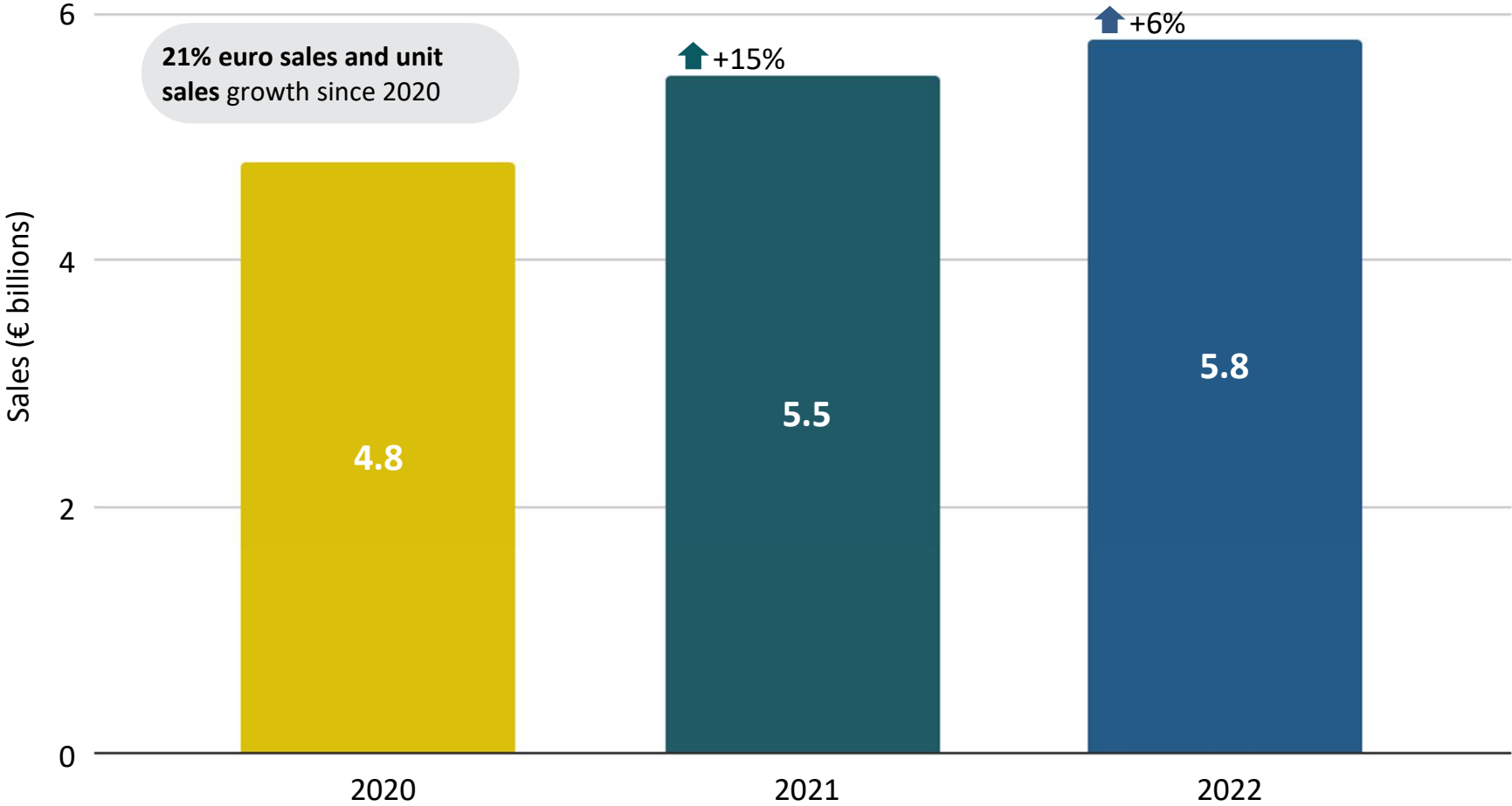
■ Plant-based

■ Cultivated

■ Fermentation

Total annual invested capital in **black**

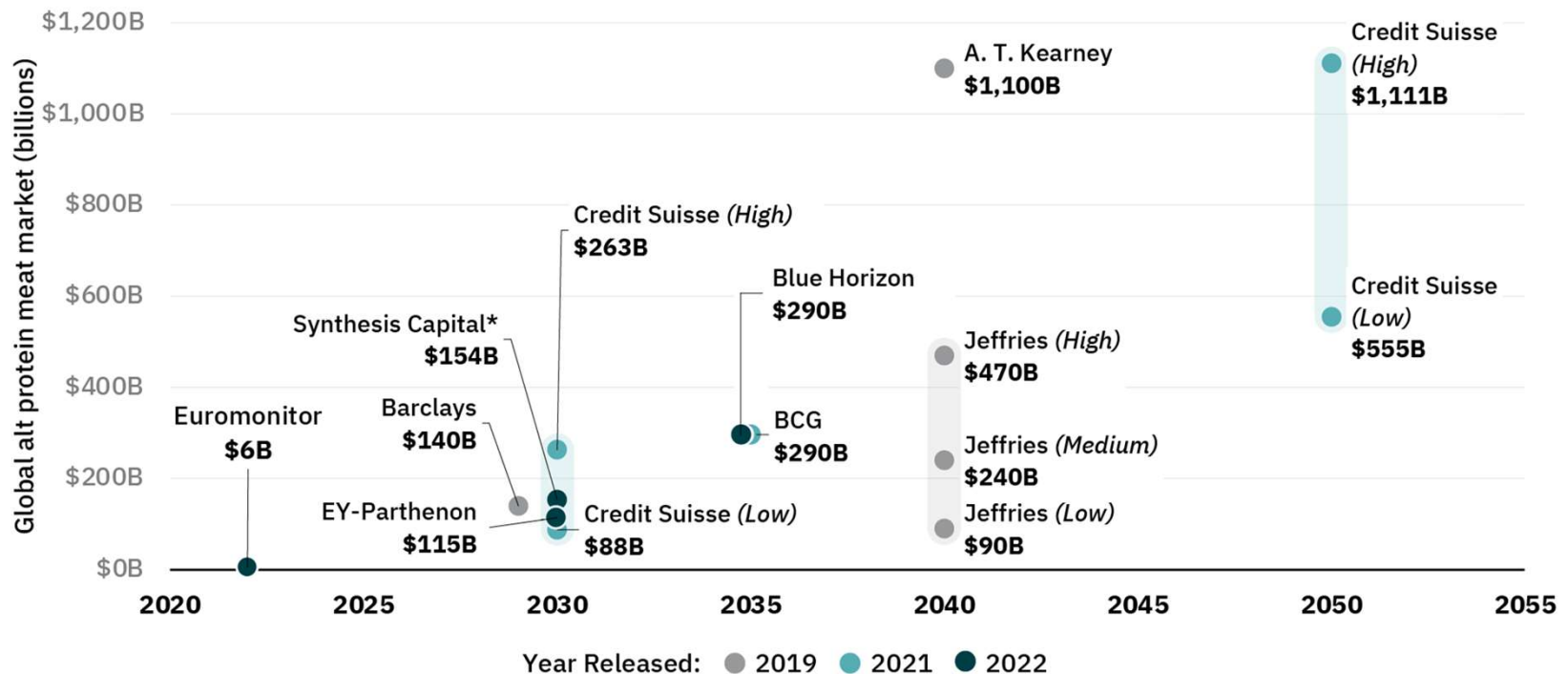
Plant-based foods in Europe are a €5.8 billion market



Source: Nielsen IQ

Analysts estimate an alt protein market of ~\$100 - \$150B by 2030

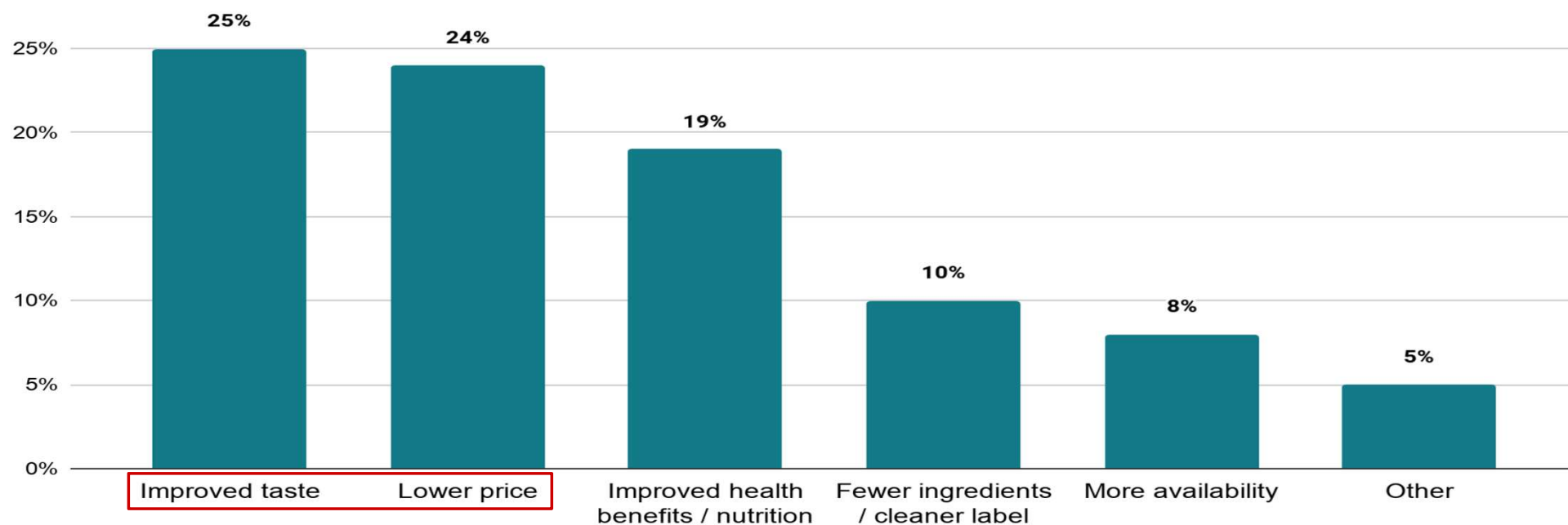
Total alternative protein industry forecasts by year released



*Some forecasts projected share of the total meat market rather than the industry size in dollars. For those forecasts, we estimated the dollar size of the alternative protein sector using EY's forecast for the total 2030 meat market.

Improved taste and lower price are the top factors that would convince consumers to try plant-based meat

U.S. and European consumer responses to “What might convince you to eventually be interested in trying plant-based meat”
August 2020



Note: only those who have not tried plant-based meat were asked this question

Source: UBS, “UBS Evidence Lab inside: Insights from Q3 Survey of 3,000+ U.S. & European Consumers” (October 2020)

Major meat and CPG companies are active in alternative proteins.

	CPG Companies							Meat Companies				
	PEPSICO	Nestlé	KraftHeinz	General Mills	DANONE	CONAGRA	Kellogg's	Tyson	JBS	Cargill	Smithfield	Hormel Foods
Investment	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
Acquisition		✓	✓		✓	✓	✓		✓	✓		
Partnership	✓	✓	✓							✓		✓
Manufacturing and R&D		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

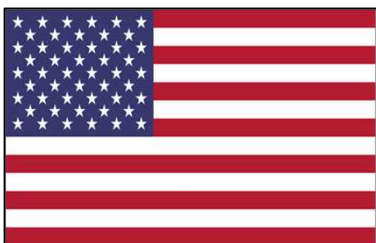
✓ Cultivated meat
 ✓ Fermentation
 ✓ Plant-based



Governments

Governments are increasing support

USA

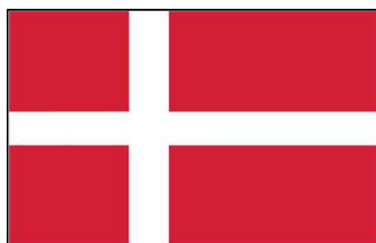


USDA awarded **\$10 M** for flagship **National Institute for Cellular Agriculture**.

APs are represented in the key **“Themes”** of both USDA’s and DOE’s portions of the **Biden Bold Goals Report** on Biotechnology and Biomanufacturing

California became the first U.S. state to invest in cultivated meat research with a \$5 million allocation in the state budget.

DENMARK



In October 2021 Danish government announced **\$177 M investment in plant-based foods**.

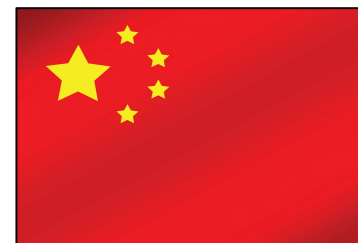
Minister of Food and Agriculture said he would like Denmark to become an **“absolute world leader”** in plant-based foods

QATAR



Eat Just partnering with Qatar state-run agencies to build a **\$200 M cultivated meat facility**. First in the Middle East.

CHINA



China’s Ministry of Agriculture and Rural Affairs included cultivated meat (CM) in its **official five-year agricultural plan**.

President Xi flagged plant-based in a talk about biotech & bioindustry.

Ministry of Science and Technology launched **\$93 M R&D program** that encompasses CM manufacturing.

SINGAPORE



The Singapore government has **invested heavily** in alternative proteins R&D and manufacturing as part of its 30x30 commitment.

Singapore is the **first nation to approve cultivated meat** products.

GFI estimates that governments invested **\$635 million** in the alternative protein ecosystem in 2022.

As a result, all-time public support for the alternative protein ecosystem has likely surpassed **\$1 billion**.



EU policy priorities

- Fund **open-access research** to improve taste and price
- Support **scale-up**, e.g. by de-risking infrastructure investments through
- Ensure a clear, robust and evidence-based **regulatory path-to-market**
- Create **level playing field** with conventional animal products, including fair rules on labelling and denominations



Protein diversification is part of a systemic solution

Alternative proteins are **complementary to regenerative agriculture / extensive farming**

They **free up land for carbon sequestration** and other uses, e.g. on-shore wind deployment

Alternative proteins **scale globally** and **don't require drastic behaviour change**



Q&A

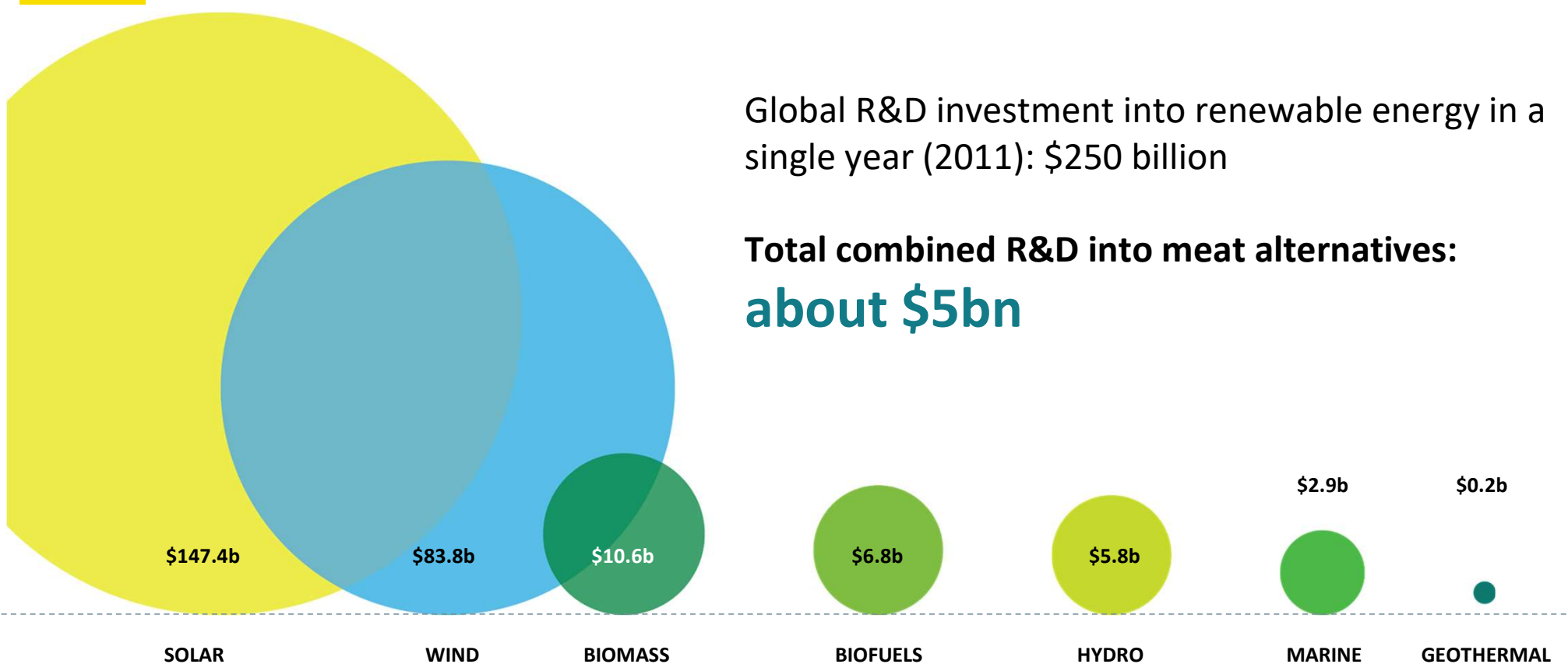


alexh@gfi.org

gfi / Good Food
Institute™



Alternative protein R&D is highly neglected



How sustainable are alternative proteins?

Plant-based

- Up to **90%** fewer GHG emissions
- Uses up to **99%** less land
- Uses up to **99%** less water

Source: [GFI Plant-based meat for a growing world](#)

Photo courtesy of Beyond Meat

Fermentation

- **90-96%** fewer GHG emissions
- Uses up to **98%** less water

Source: [Quorn 2018 comparison report](#)

Photo courtesy of Ecovative Design: Atlast Food Co.

Cultivated

Projected up to:

- **92%** fewer GHG emissions
- **95%** less land
- **93%** less air pollution

Source: [CE Delft 2021 LCA/TEA](#)

Photo courtesy of Memphis Meats

How will we feed 10 billion people by 2050?

Sustainably



Animal agriculture is responsible for **70% of the EU's agricultural GHG emissions.**



Intensive animal agriculture is in the top **2-3 most significant contributors** to the world's most pressing environmental issues such as water use, air pollution, and loss of biodiversity.

Source: [European Environmental Agency GHG Inventory](#); United Nations, [Livestock's Long Shadow](#)

Efficiently



It takes **nine calories** of food fed to a chicken to produce **one calorie** of meat.



In the EU, **63% of arable land** (excluding pasture) is used **to grow feed for animals.**

Sources: World Resources Institute (calorie formula); [Greenpeace, Feeding the Problem](#)

Safely



Giving antibiotics to animals contributes to **antimicrobial resistance (AMR).**



Increasing demand for animal protein is a major risk factor for **zoonotic diseases** emerging

Sources: [UK Review on AMR](#); [UN Environment Programme](#) (zoonotic disease risk)

Pitching: empreses catalanes en proteïna alternativa

- **Zyrcular Foods**, Sra. Laia Vergés, Directora R+D
- **Nova Meat**, Sr. Giuseppe Scionti, CEO
- **Grup Teresa Carles Flax & Kale**, Sr. Jordi Barri, CEO
- **Iberinsect**, Sr. Jordi Calbet, CEO
- **Blauver Foods**, Sr. Joan Solé, CEO
- **Cultimate Foods**, Jordi Morales-Dalmau, CTO

Que es Zyrcular Foods

Ready for
everything

Somos el spin-off de una empresa agroalimentaria líder en Europa: por eso nuestros orígenes y nuestro conocimiento están profundamente arraigados en la agricultura y la industria.

El punto de partida perfecto para perseguir nuestro propósito: un sistema alimentario integrador, saludable, sostenible y respetuoso, capaz de hacer mejor el mundo en el que viviremos mañana."



Que hacemos Zyrcular Foods

Desarrollamos.
Producimos.
Distribuimos.

En Zyrcular Foods trabajamos hoy en la alimentación de mañana. Creamos productos deliciosos y nutritivos a base de proteína alternativa, hechos en España con un modelo sostenible, integrado, completamente abierto y de alcance global.



Una estructura que se adapta a ti

Gracias a nuestra cadena de valor totalmente integrada, Zyrcular Foods ofrece la solución ideal a tus necesidades en cualquier momento, ya sea empezando desde cero o a partir de una idea, un producto o una marca. En el universo de Zyrcular Foods, tú decides por donde entras y por donde sales.

Zyrcular PROTEIN LABS

I+D+i y formulación propia



Zyrcular PLANT

Producción sostenible y asesoramiento



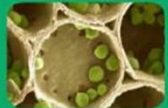
Zyrcular BRANDS

Scouting internacional y distribución



Impulsamos la proteína alternativa en todas sus formas

Avanzamos en producción y distribución de las dos principales proteínas alternativas

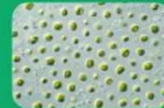


Proteína vegetal



Mico proteína

Colaboramos en el I+D+i de las opciones de futuro más prometedoras



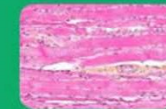
Algas y microalgas



Proteína de insectos



Fermentación



Cell meat

Proveedor global de soluciones sostenibles en proteína alternativa

Ready for everything

Zyrcular
FOODS



RETOS FUTURO DE PROTEÍNA ALTERNATIVA

- Línea de tiempo y volumen
- Cambios en la dieta
- Asequibilidad y disponibilidad de la cadena de suministro
- Aceptación del consumidor
- Regulación de la industria alimentaria
- Educación y trabajo en equipo
- Adopción de gastronomía y foodservice



Especialistas en tu sector

En Zyrcular Foods nos adaptamos perfectamente a las necesidades exactas de tu sector, para ofrecerte en cada situación la solución perfecta a tus retos.

01

Soluciones
retail



02

Soluciones
horeca



03

Soluciones
industriales





1a Jornada

Noves oportunitats de negoci en proteïna alternativa

Sessió en català i anglès

ACCIÓ, Passeig de Gràcia, 129 08008 Barcelona

Dimecres, 22 de novembre de 2023

MOLTES GRÀCIES
THANKS

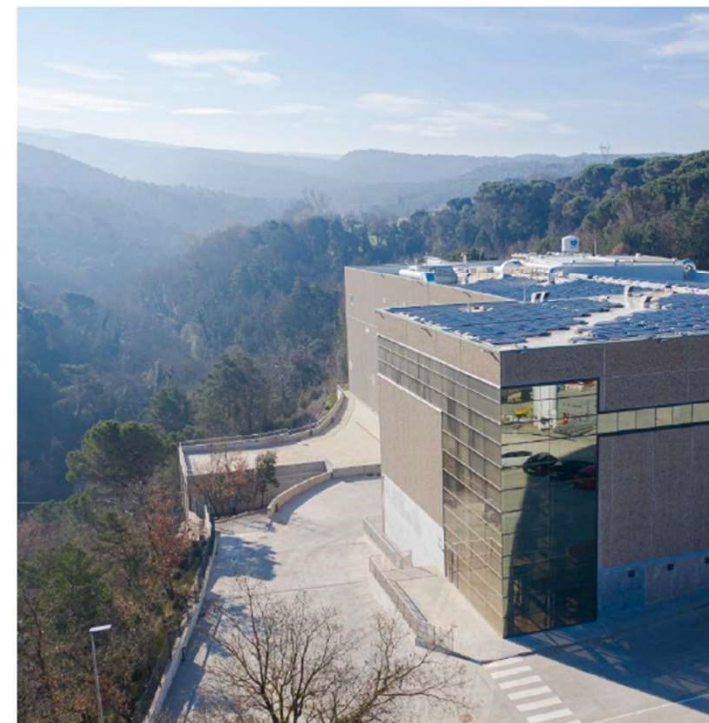
ACCIÓ
Catalonia
Trade & Investment

 **Generalitat
de Catalunya**

Fem avui l'**empresa** del demà

Laia Vergés, R&D

Zyrcular
FOODS





NOVA MEAT

November 2023

Barcelona, Spain
novameat.com



PRODUCTS

Simplifying plant-based meats, no allergens or complex ingredients needed...

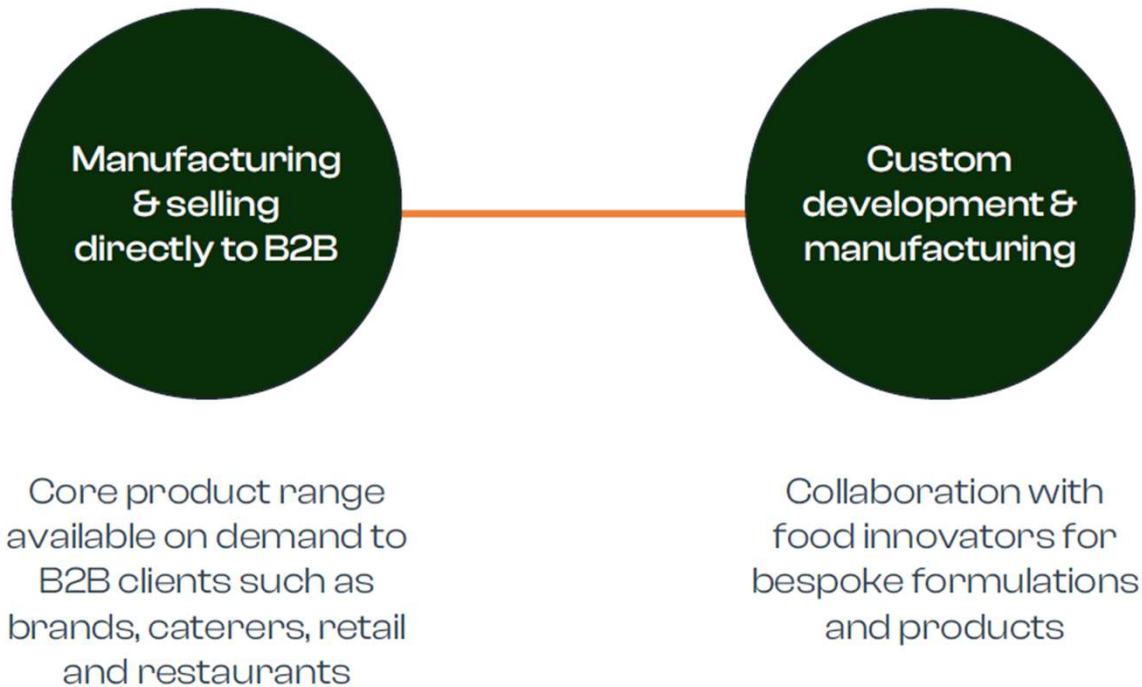
- Does not require methylcellulose or carrageenan to thicken or build texture.
- Ingredient flexibility to move away from allergens such as soy or gluten.



BUSINESS MODEL

Novameat's B2B business model makes high quality plant-based solutions accessible to food developers

- On a non branded basis leverage strong established brands to accelerate traction.
- Meeting the demand for high quality differentiated private label ingredients.



PRODUCTS

... but don't just take our word for it



"We can make a breaded chicken so good that when people eat it they say 'I want more'"

Chef from The World's Best Restaurants 2023



"This plant-based meat is in another league. The most similar to real chicken I have ever had or is available at the moment"

Josep Sanitjas
El Santuari, Barcelona
(Listed on 100 World's Best Steak Restaurants 2023)

"The textured pulled product is amazing"

Large UK food producer

"By far the best vegan meat I have seen"

Daisy Green Restaurant,
London



"This is a game changer in plant-based meats. Existing suppliers have stood still - this is the future"

Top UK retailer



"The texture and structure is the closest example to real meat that I have experienced"

Caroline Fey
Founder
The City Kitchenette, USA

THE PROBLEM FOR THE INDUSTRY

...and these products reduce food producer's potential to create exciting plant-based solutions

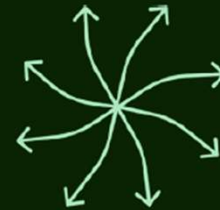
Current technology is limiting product development

In traditional extrusion, a complex mixture of ingredients is processed to create a thick paste which is formed into products lacking whole cut texture and broad appeal

RESULTING IN...



...no recurring purchases



...low product versatility



...high cost of production

TCFKTM

**teresa
carles**

**FLAX
&
KALE**

**F&K
KOMBUCHA**



PROBLEM TO SOLVE

Unhealthy diets and a lack of physical activity in the developed world for more than 50 years, have generated a society that is projected to have one billion people globally to be living with obesity by 2030*.

**<https://www.worldobesity.org/resources/resource-library/world-obesity-atlas-2022>*

VISION

Through healthy food innovation, we have the power to fight against world obesity to generate a big change to both our people and our planet.





MISSION

We are food & beverages pioneers driven by action to fight against junk food, soft sugary drinks and all kind of unhealthy diets to shape a better future together and generate a positive impact.

THE HEALTHY CHANGE.

TCFK GROUP EVOLUTION

1979



Ramon Barri & Teresa Carles opened one of the 1st vegetarian restaurants in Lleida (Spain)

2011



Jordi Barri & Mar Barri (2nd generation) join the business.

Opening of **Teresa Carles** in **Barcelona**. Cool concept of a vegetarian restaurant

2014



F+K Tallers in Barcelona. World's 1st healthy-flexitarian restaurant.

2015



TERESA'S

2017



F+K Passage



Flagship Store



F+K à Porter

2018



R&D center in Lleida (€8M CapEx) Manufacturing plant

2019



F+K LRV



F+K Azca (Madrid)

2022



Manufacturing plant in Fraga



F+K Trafalgar (Madrid)

3 BUSINESS UNITS



BEVERAGES

+



FOODS

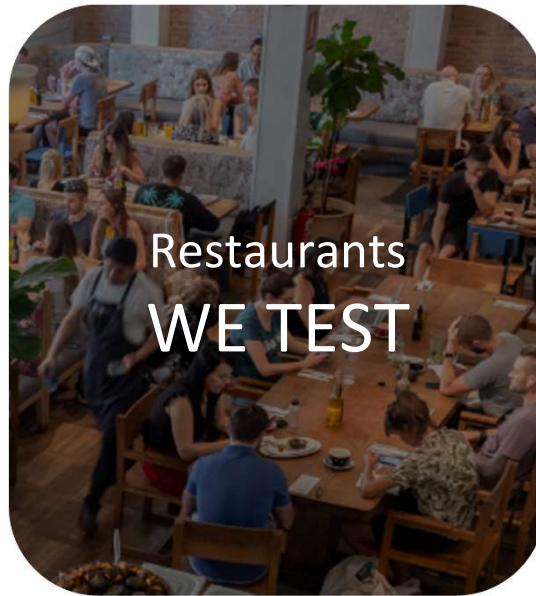
+



RESTAURANTS

BUSINESS MODEL

WE REACH THE ENTIRE VALUE CHAIN



FOOD BU

FOOD FACILITY HEALTHY FOOD SOLUTIONS Fraga, Huesca



FOOD BU

WE'RE ONE OF THE TOP SPECIALISED PLANT-BASED MANUFACTURERS IN SPAIN



FOOD BU

IN 2023 WE INVESTED IN OUR 2ND FACILITY TO SPEED UP THE FOOD BUSINESS GROWTH

By the end of 2023 our Food Facility in Fraga will be certified with both the IFS and BRC, unlocking new global projects that are already in the pipeline.





FOOD & BEVERAGES BU

WE AIM TO BECOME A SPECIALIZED HEALTHY F&Bs MANUFACTURER IN EUROPE

In less than 3 years, we're working with top tier 1 retailers all over Europe, becoming not only a relevant kombucha manufacturer but their key partner to develop any kind of avant-garde healthy food & beverages project.

With the funds that we'll be receiving from the *Perte Agroalimentario*, we'll have the chance to improve both our capacity and productivity in both factories to become a truly European leader.



IBERinsect
Sustainable and natural protein

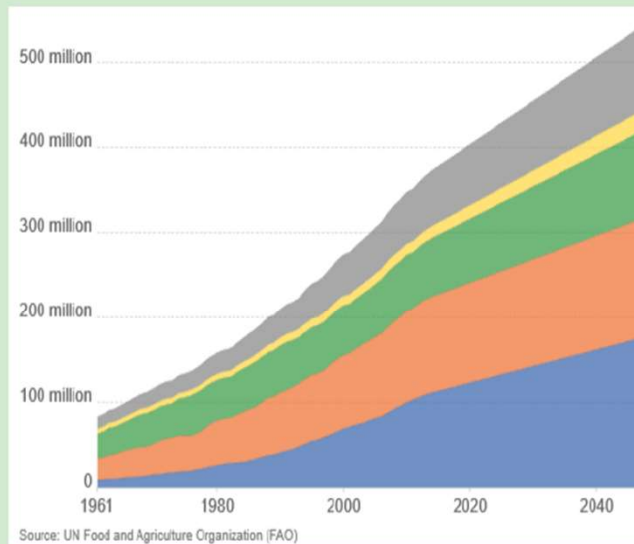
The missing link in the circular economy.

MAY 2023

1. Who are we?



IBERINSECT is a biotechnology startup, located in Reus with an **integrated vision**, specialized in the production of **Tenebrio Molitor and all its derivatives**, where we transform **local plant raw materials** into nutritional ingredients with **high added value for animal feed**.



En By **2050**, the need for protein consumption will **increase by 70%** with only **5%** more **arable land** available.

1.1. Who are we?

Agri-Food Challenges.



+1,5°C
(industrial era)

Climate
change



9,700 milion
(of people in 2050)

Population
growth



**European
dependence on
foreign proteins**

Food Sovereignty: Resources
and efficiency

Sustainability and resilience as a lever for change.

2. Why do we bet on insect protein?

IBERinsect 



1 kg of protein

Performance
Conversion



- 99,5 %

water

- 99 %

GEI

- 93 %

Feed

- 94 %

Surface



Circular
economy



Markets



3. What can we contribute in alternative proteins?



The feeding of our insects at **IBERINSECT** is subject to the current European regulations for the production of animal feed and is carried out in our own feed factory with more than 40 years of experience **guaranteeing its traceability.**

We do not feed insects with **antibiotic.**

Product functional characteristics:

- **HYPOALLERGENIC.** Source: Anti inflammatory properties of chitin and chitosan oligosacharits. Tottori University, 4-101 Koyaminami, Tottori 680-8553, Japan
- **ANTI-INFLAMMATORY.** Source: Effects of a Mealworm extract on metabolic syndrem-related pathologies. CIAL, Universidad Autónoma de Madrid, CSIC UAM, CIBERDEM
- **ANTIOXIDANT.** Source: Effects of a Mealworm extract on metabolic syndrem-related pathologies. CIAL, Universidad Autónoma de Madrid, CSIC UAM, CIBERDEM
- **LIPIDIC PROFILE.** Source: Technical sheet.
- **AMINO ACID PROFILE.** Source: Technical sheet.

4. Iberinsect Products:

IBERinsect 



Live larva
frozen
Dehydrated



Flour
protein as a
functional additive.



Frozen puree



Chitin



Lipids



Fertilizer



IBERinsect
Sustainable and natural protein

Contact: Jordi Calbet

Telf: 977 748 217

Mail: jordi@iberinsect.com

Web: www.iberinsect.com

The missing link in the
circular economy.




Blauver

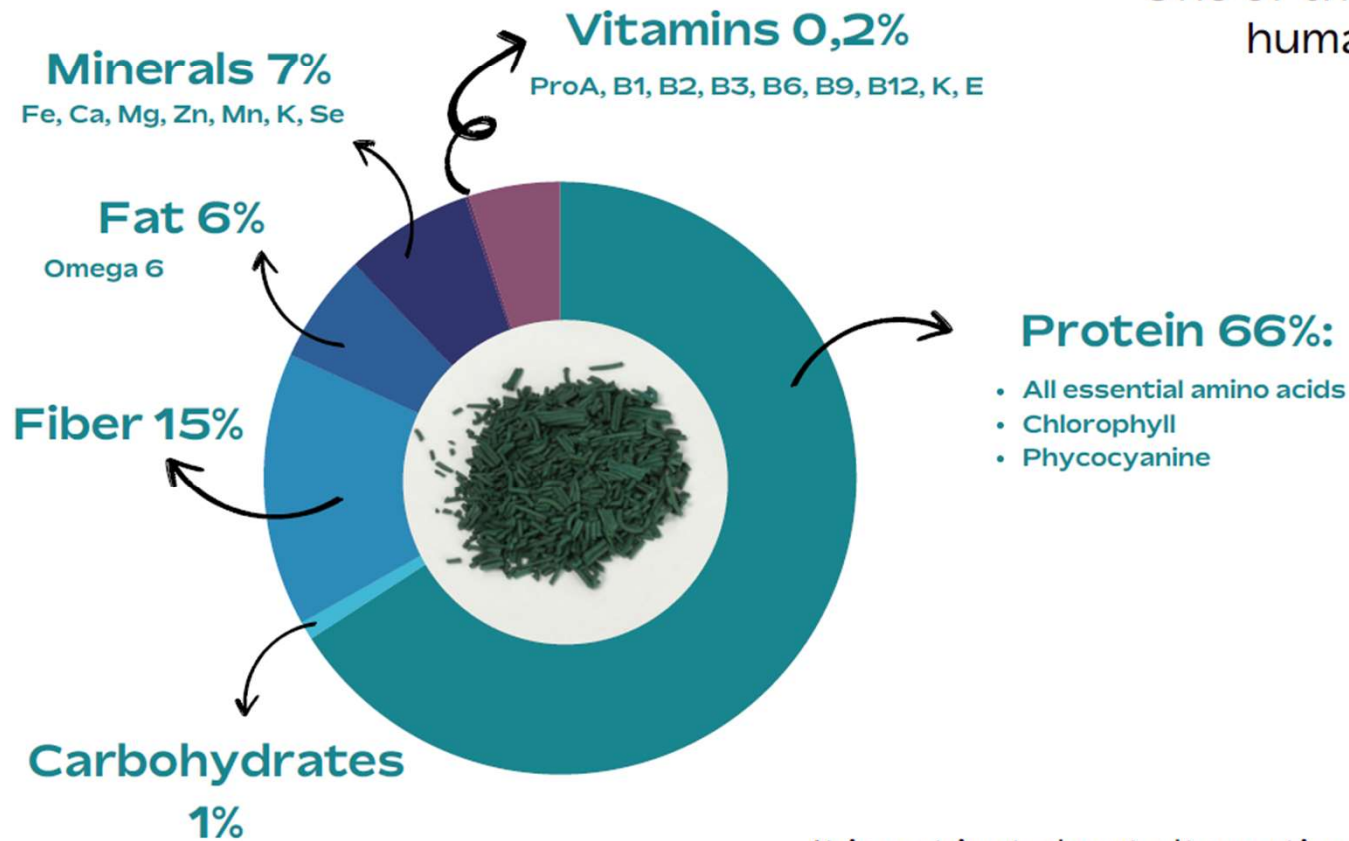
LOCALLY
GROWN

Growing for everyone's and
everything's health



REDISCOVERING NATURE'S SOLUTION

Spirulina: 



“One of the best food for humanity’s future”
OMS, 1974

It is not just about alternative protein sources...

TECHNOLOGY DEVELOPED



Pleasure, healthy,
sustainable foods

Fresh spirulina



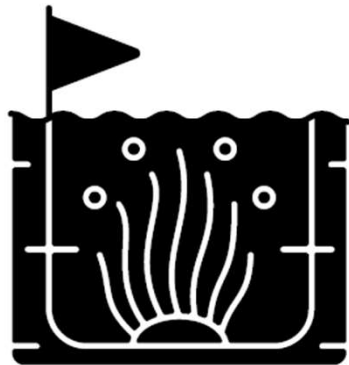
Growing systems

Business model

Selling products through



Franchising



Blauver

joan@blauver.com



Cultimate Foods UG | Berlin, Germany
hello@cultimatefoods.com



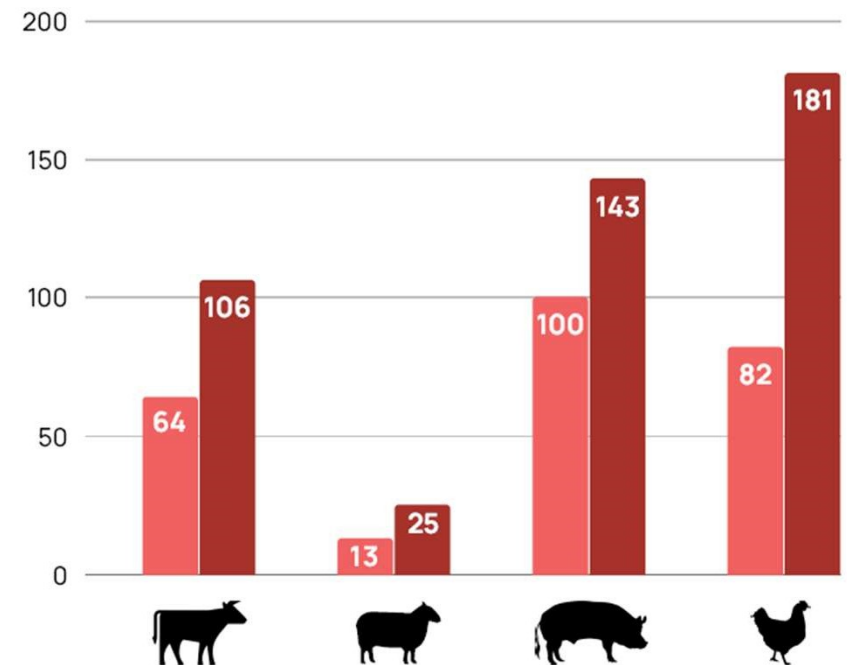
Cultimate

The Big Problem

Global meat consumption is growing steadily and is expected to double by 2050.

Factory farming is driving climate change.

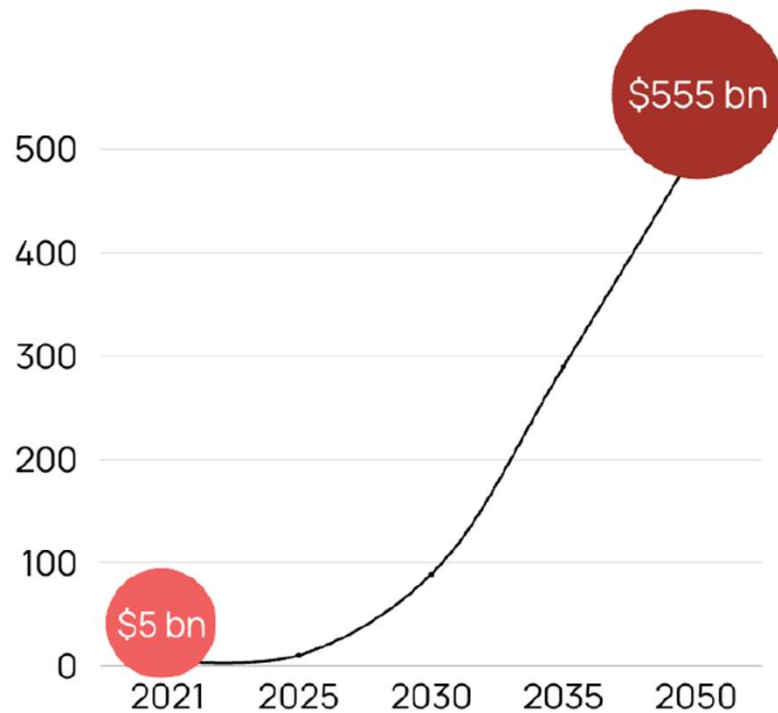
How are we doing to sustainably feed the world population by 2050?



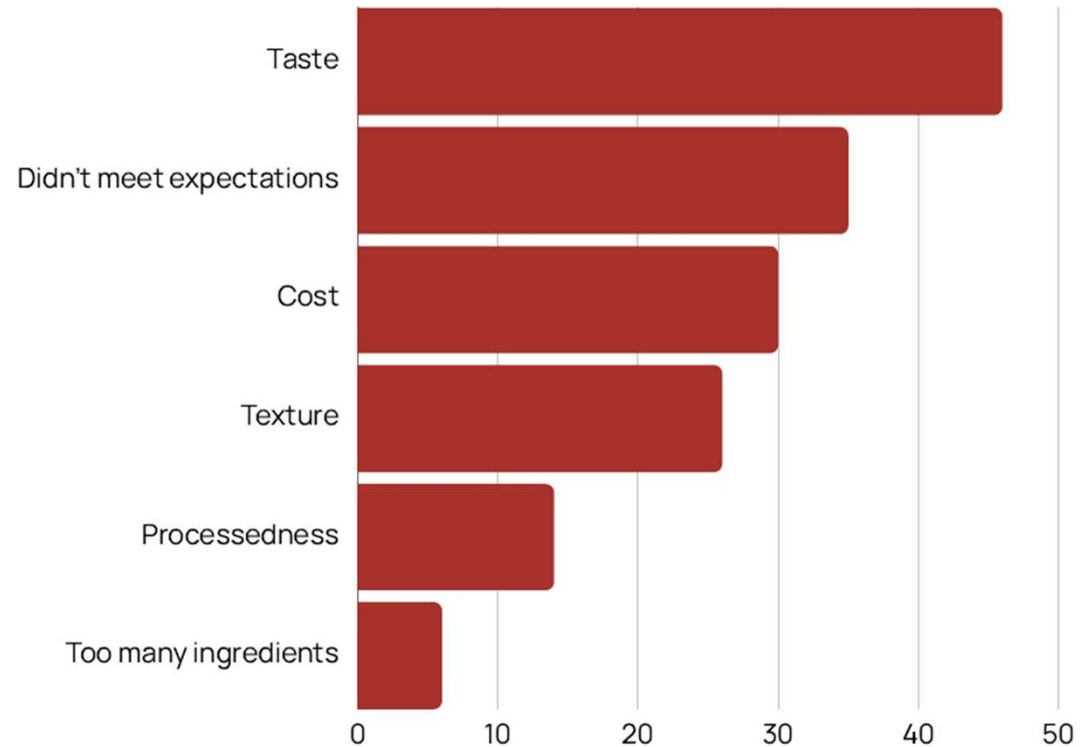
Global demand for meat, 2005 vs. 2050 in million tonnes
Source: FAO, ESA, GFI

ALTERNATIVE MEAT MARKET

The market opportunity is huge, but not unlocked yet



Source: GFI, Credit Suisse, BCG, data 2022



FAT IS KING

Fat is the most value-added part of meat that brings:

- ✓ Juiciness
- ✓ Mouthfeel
- ✓ Taste
- ✓ Texture



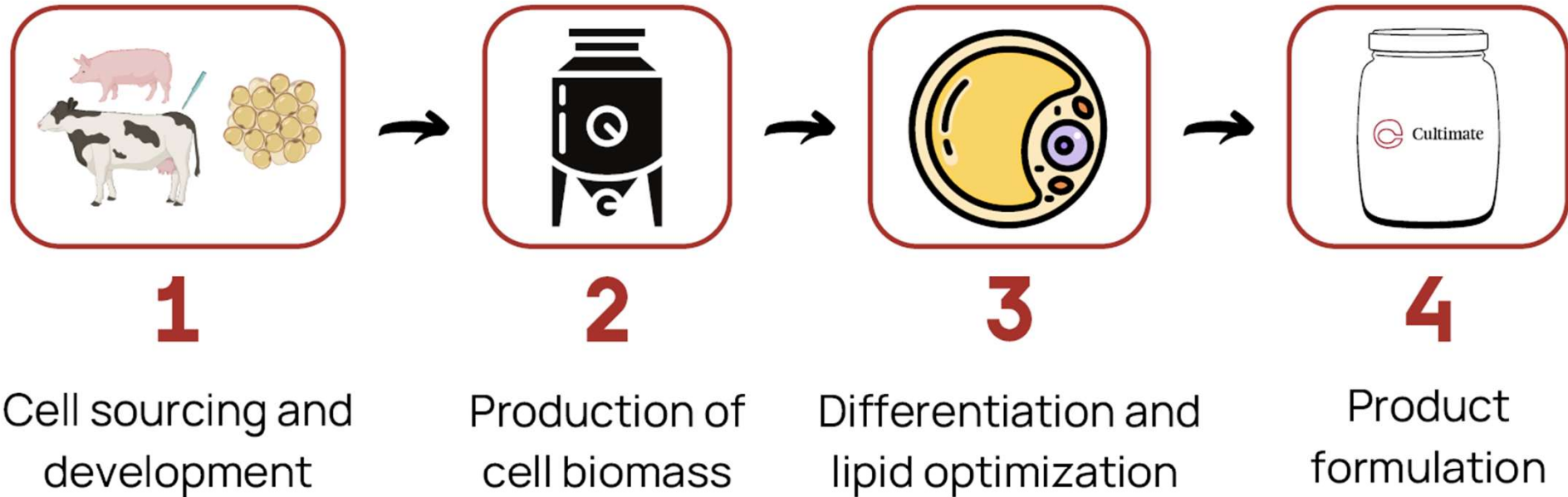
OUR PERFECT SOLUTION: CULTIFAT



Functional ingredient compositionally similar to intramuscular animal fat

Photo: Cultimate Foods UG

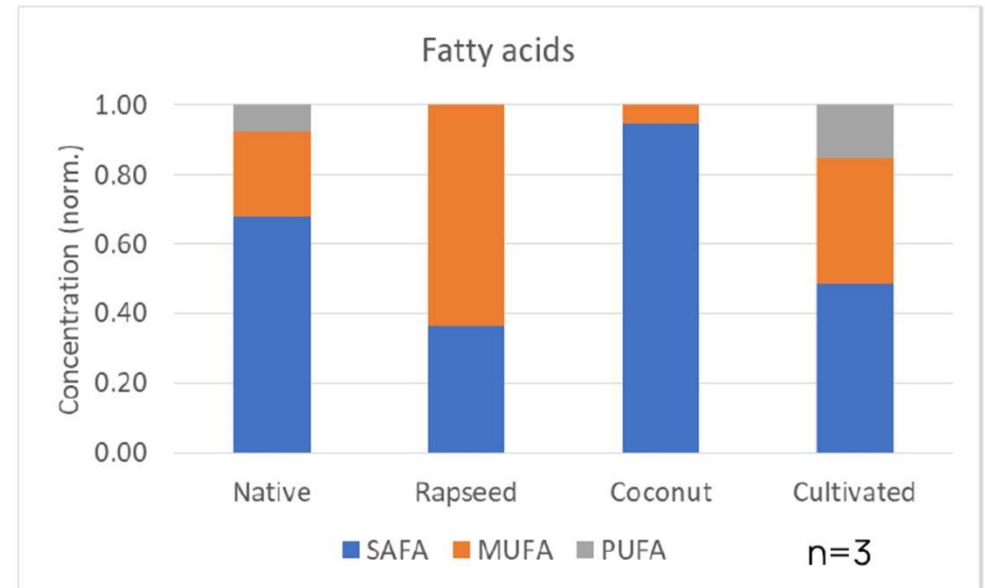
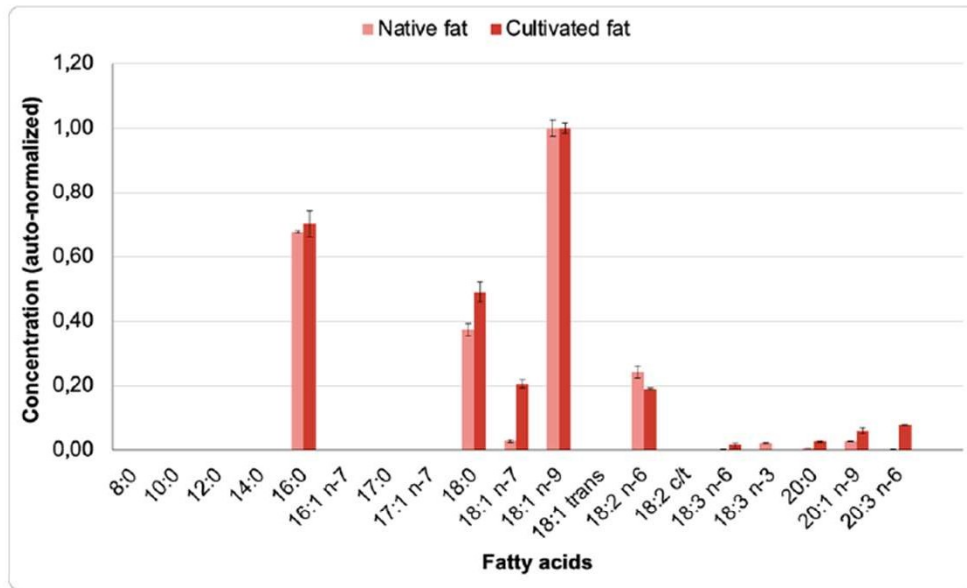
PRODUCTION PROCESS





SAME LIPIDS - HEALTHIER FAT

High content of PUFAs and lower SAFAs than Native fat



Healthier and tasteful fat!

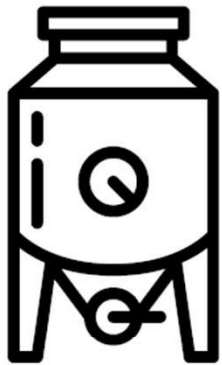
FUNCTIONALITY OF CULTIFAT

- Clean-label flavour augments
- Substitute coconut oil
- Reduce methylcellulose
- < 5% inclusion



Photo: CultiFat, Culminate Foods UG

BUSINESS MODEL



Customers










Nestlé



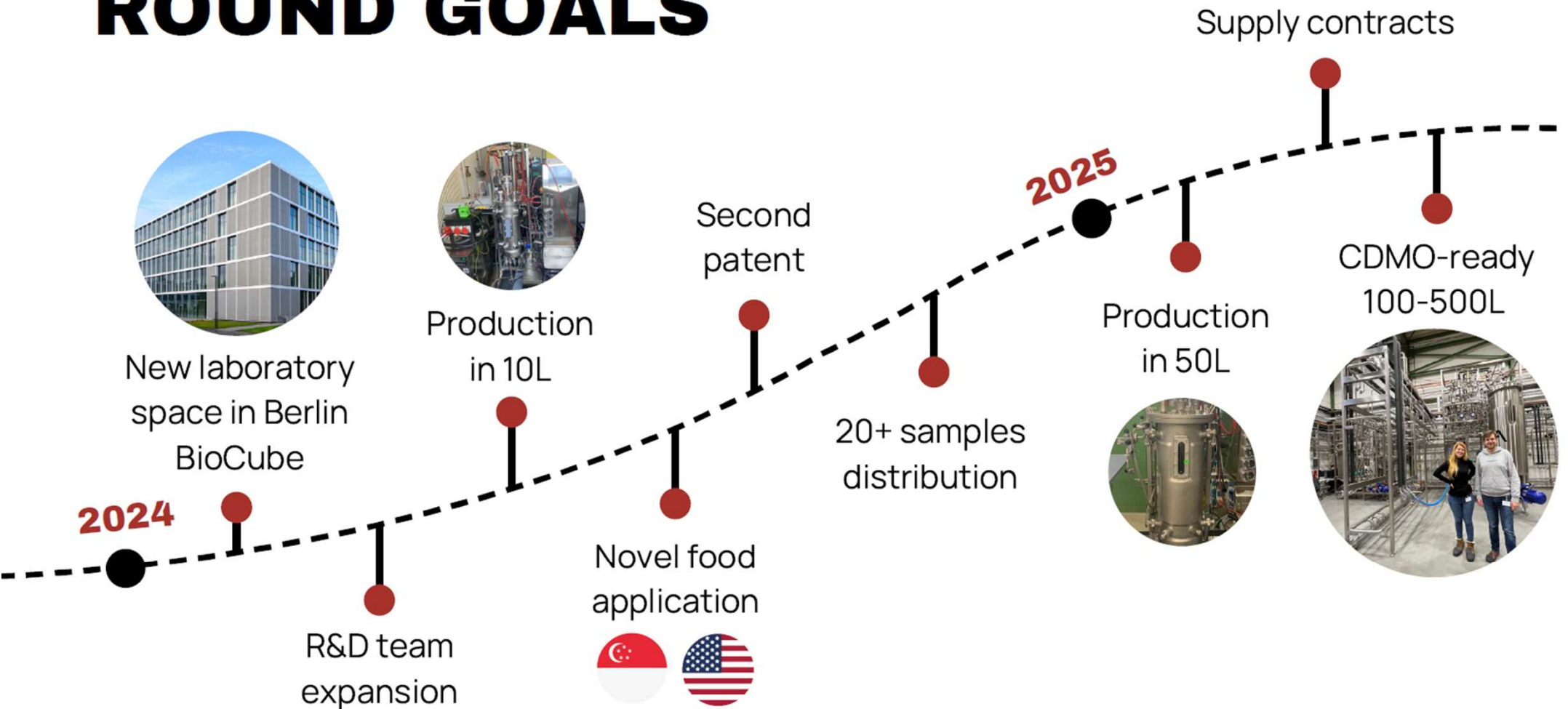
dsm-firmenich



FUNDRAISING

	PRE-SEED	SEED
	 <p>BIG IDEA  VENTURES proveg international  Realum.cloud</p>	 <p> High-Tech Gründerfonds BIG IDEA  VENTURES </p>
Size	EUR 700K	EUR 2.5M, incl. 1.8M committed
Timeline	Closed in 2022	January 2024
Goal	Pilot ready	Product ready by 2025

ROUND GOALS

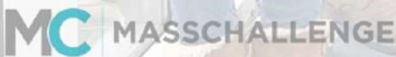




Cultimate



Leibniz
Universität
Hannover



hello@cultimatefoods.com

cultimatefoods.com

\$ 0.7M



3 pilots



4 Unis



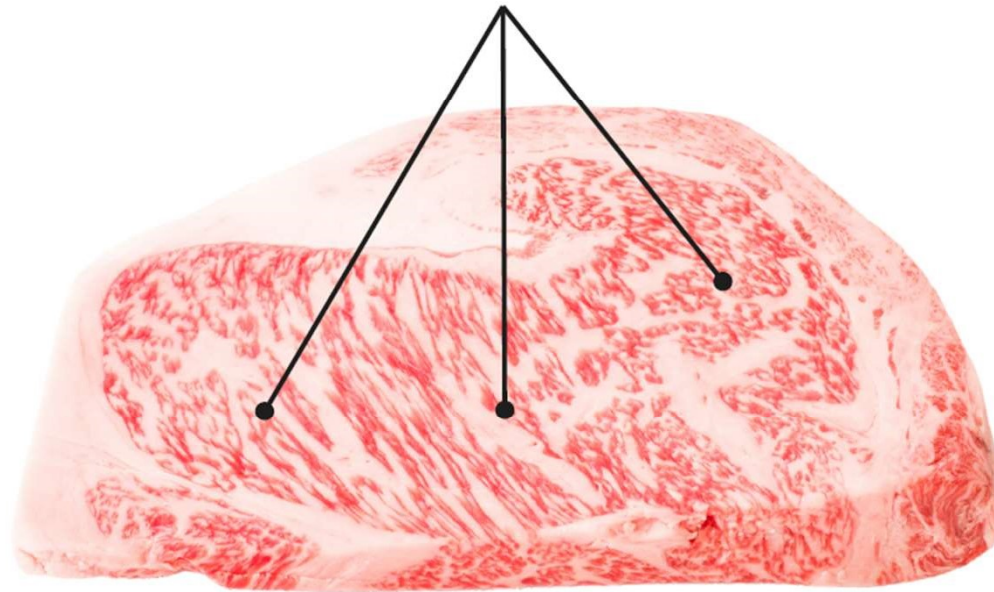
>20 sample requests

**2 tastings
2 prototypes**

**1 patent,
27 SOPs**

**Bioreactors
up to 50L**

Intramuscular Fat

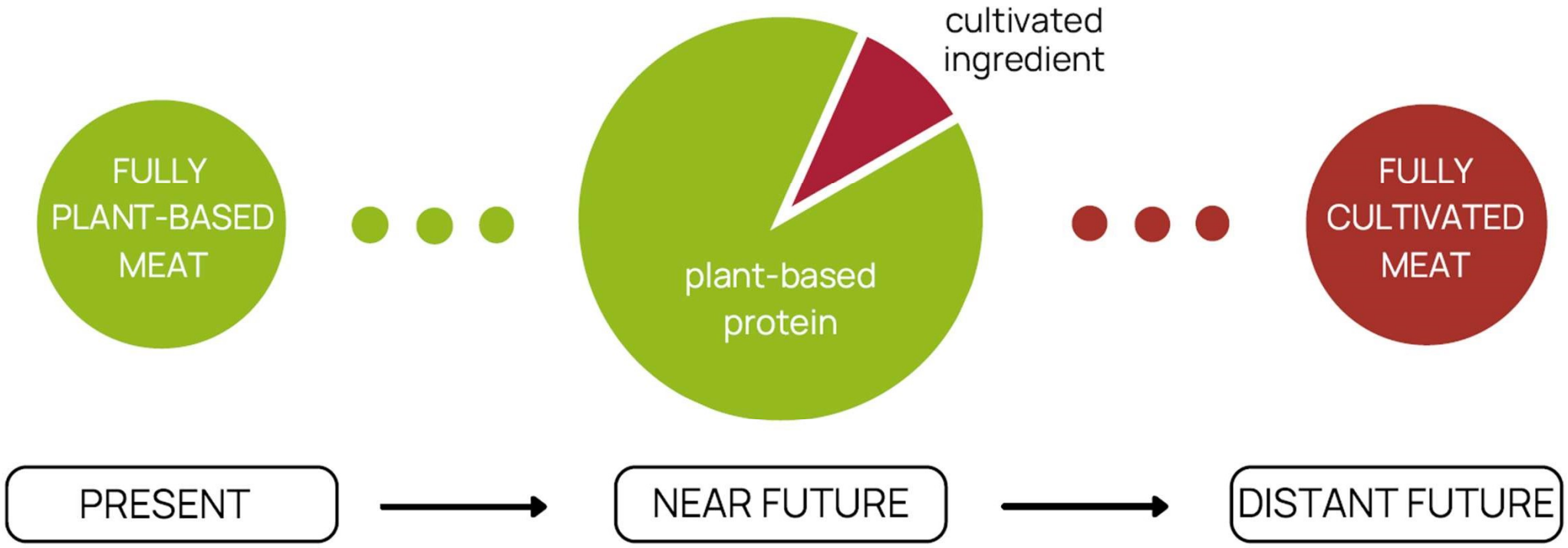


Determine the quality
of meat

Brings taste and aroma
to meat

Contains polyunsaturated
fatty acids

HYBRID MEAT = PLANT PROTEIN + CULTIVATED INGREDIENT



Source: GFI The State of the Industry: Plant-based meat, eggs, and dairy

CELL-CULTIVATED MEAT VS FAT



Tissue complexity	Structurally and functionally complex. Composed of various components, including fat	Simpler structural and functional properties
Cell type	Satellite cells are difficult to isolate and with low yields. SC are very sensitive to the environment	MSCs are isolated from adipose tissue (very accessible) and with high yields
Media composition and differentiation	More complex and specific requirements	MSCs need sufficient nutrients to accumulate fat (typically an excess of energy) and they have defined pathways
Maturation	Muscle maturation includes functional stimulation (electric and/or mechanical stimuli). This is a huge technological complication	Adipose tissue only requires chemical stimuli (mainly sugars and insulin). Fatty acid profile and aroma profile can be modulated

Photos: Steak - Mirai Foods Tend'r Steak, Fat - Cultivate Foods CultifFat

How government support can catalyse cultivated meat

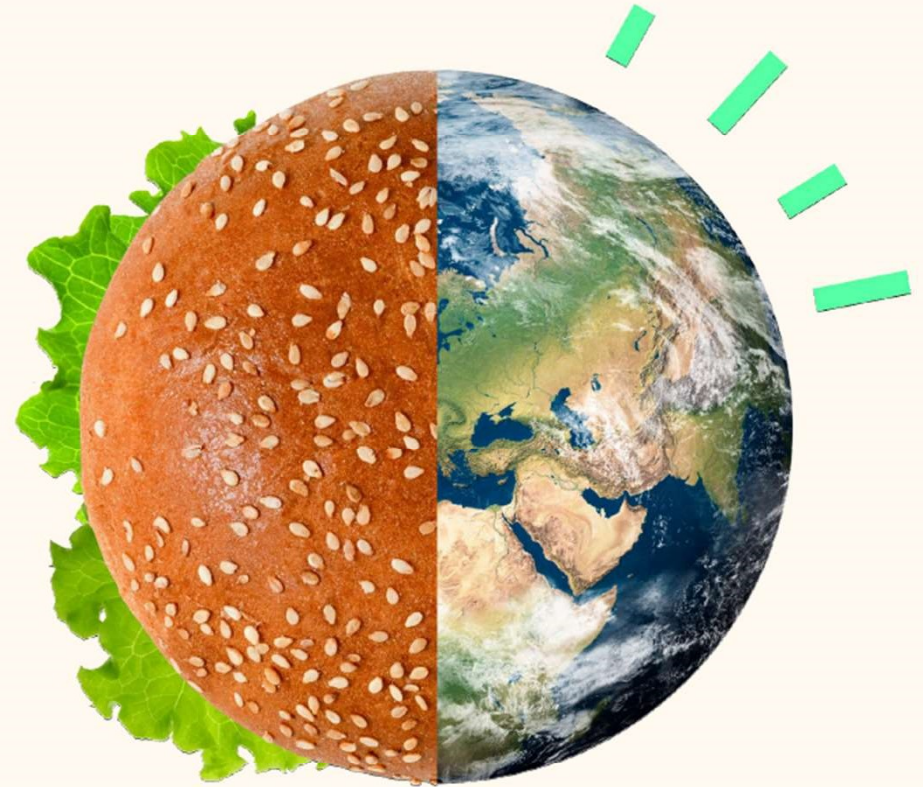
Mr. Robert Jones, Cellular Agriculture Europe / Mosa Meat



The Netherlands: *A case study for catalyzing cellular agriculture via public funding*



Robert E. Jones, VP, Global Public Affairs





National Growth Fund

Dutch Cabinet investing € 20 billion in projects that create long term economic growth for The Netherlands, as well as broader societal benefits. Key pillar is Research, Development and Innovation.

—
Independent committee was established to advise on suitability of proposals, specifically to reduce political influence in the process.

—
Approximately € 5B issued to dozens of proposals from 2021-2023



Ir. J.R.V.A. (Jeroen)
Dijsselbloem -
voorzitter



Drs. M.H.J. (Marieke)
Blom



Drs. L.B.J. (Laura) van
Geest



Prof.dr.mr. R.M.
(Rianne) Letschert



Drs. M.G. (Michiel)
Muller



C.C.F.A. (Constantijn)
van Oranje MBA MSc



Drs. R.J.H.M. (Robert-
Jan) Smits



mw. J.A. (Jacqueline)
Tammenoms Bakker



P.T.F.M. (Peter)
Wennink RA



National Growth Fund

We submitted in the 2nd round, where 35 projects were been submitted, of which funds for 28 projects have been awarded or reserved.

—

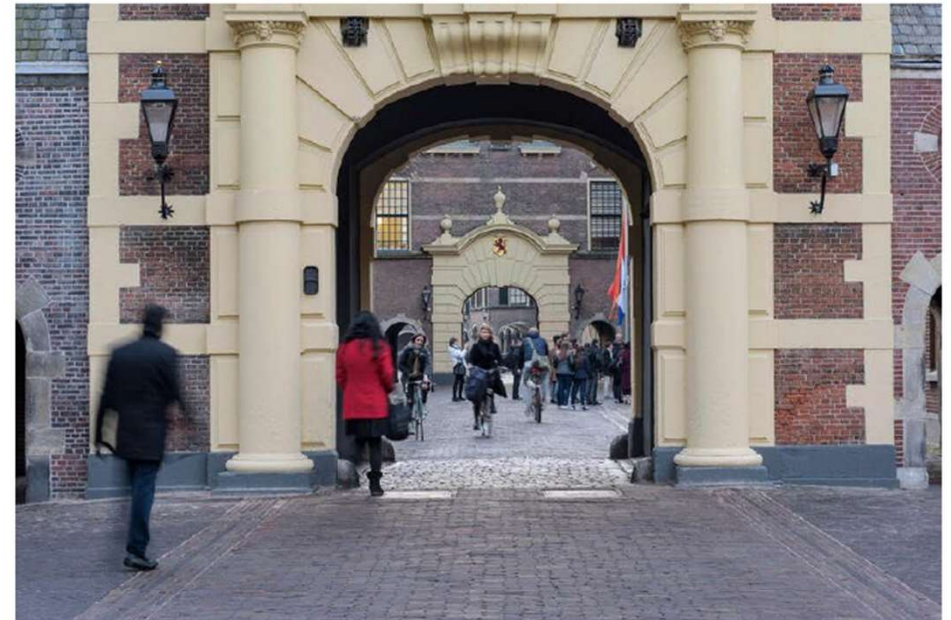
Criteria:

- Contribution to sustainable earning capacity;
- the strategic underpinning of the proposal;
- the quality of the plan;
- the quality of management/organization (governance) and cooperation.

—

Experts help the committee evaluate these criteria, e.g.

[Enterprise Agency](#), [Invest-NL](#), [TNO](#), [Dutch Research Council](#), [PWC](#), [Environmental Assessment Agency](#), [Dialogic](#).



Creation of Cellular Agriculture Netherlands

In 2022 our Dutch consortium of 14 organisations (~25 individuals) received a thumbs up from the Dutch National Growth Fund to create a strong cell ag ecosystem in NL.

Through the Minister of Agriculture, we proposed NGF invest € 250m. They granted € 60M in public funding to start and required + € 25M in co-financing to build Dutch cellular agriculture ecosystem over the next 15 years.

Estimated to generate €1.25 to 2.0 billion per year incremental earning power in 2050;





Cellular Agriculture Netherlands (CANS)

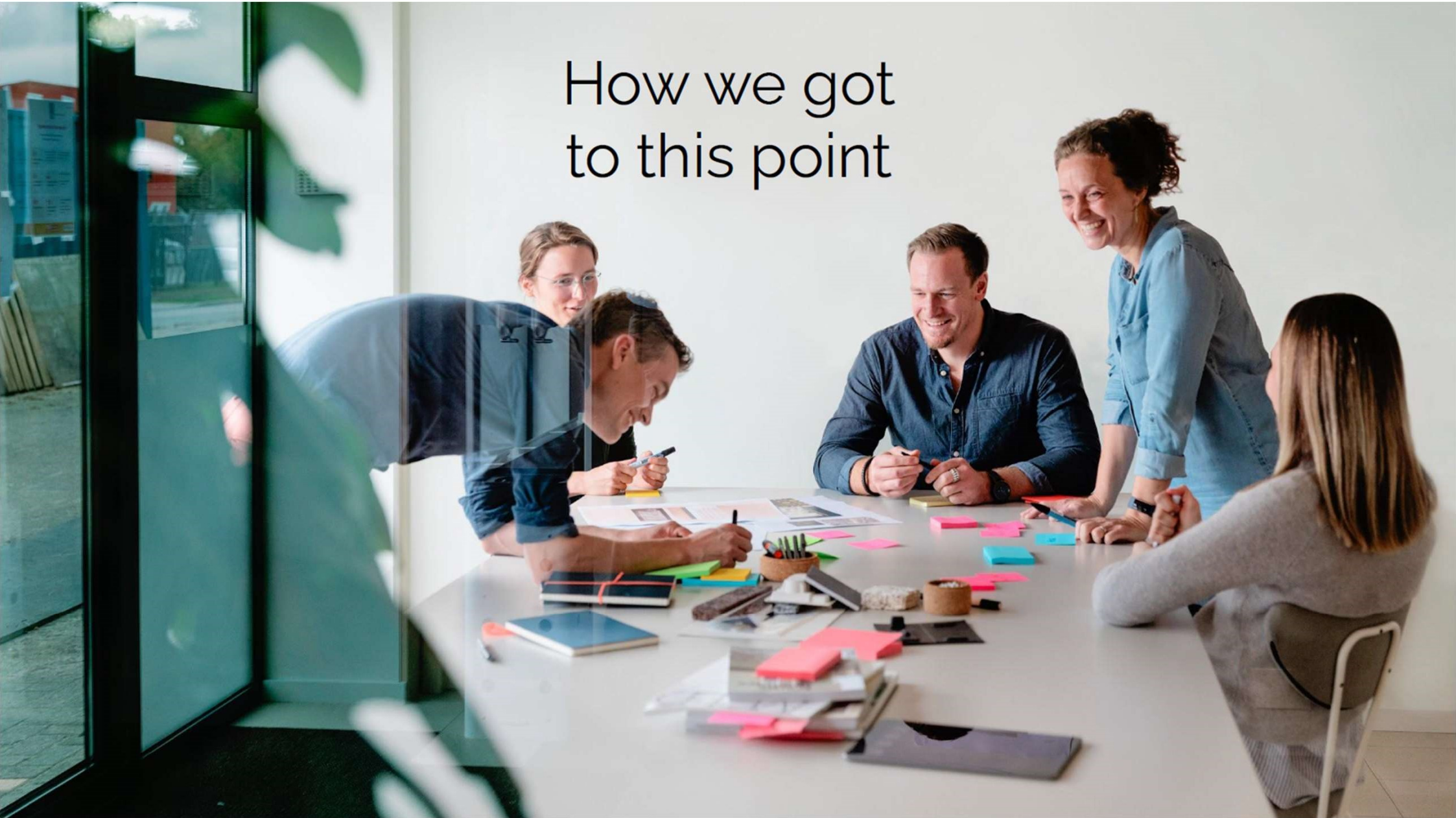
CANS is now a legal entity with a Board of Directors of 7 people responsible for creating an ecosystem that facilitates and accelerates development, commercialization, and societal acceptance of CA.

Five workstrands:

- Education of CA workforce
- Public research
- Open access scale-up facilities
- *Embedding CA broadly in society (incl. farmers & consumers)*
- *Stimulating valorisation and innovation (startups, investors)*



How we got
to this point





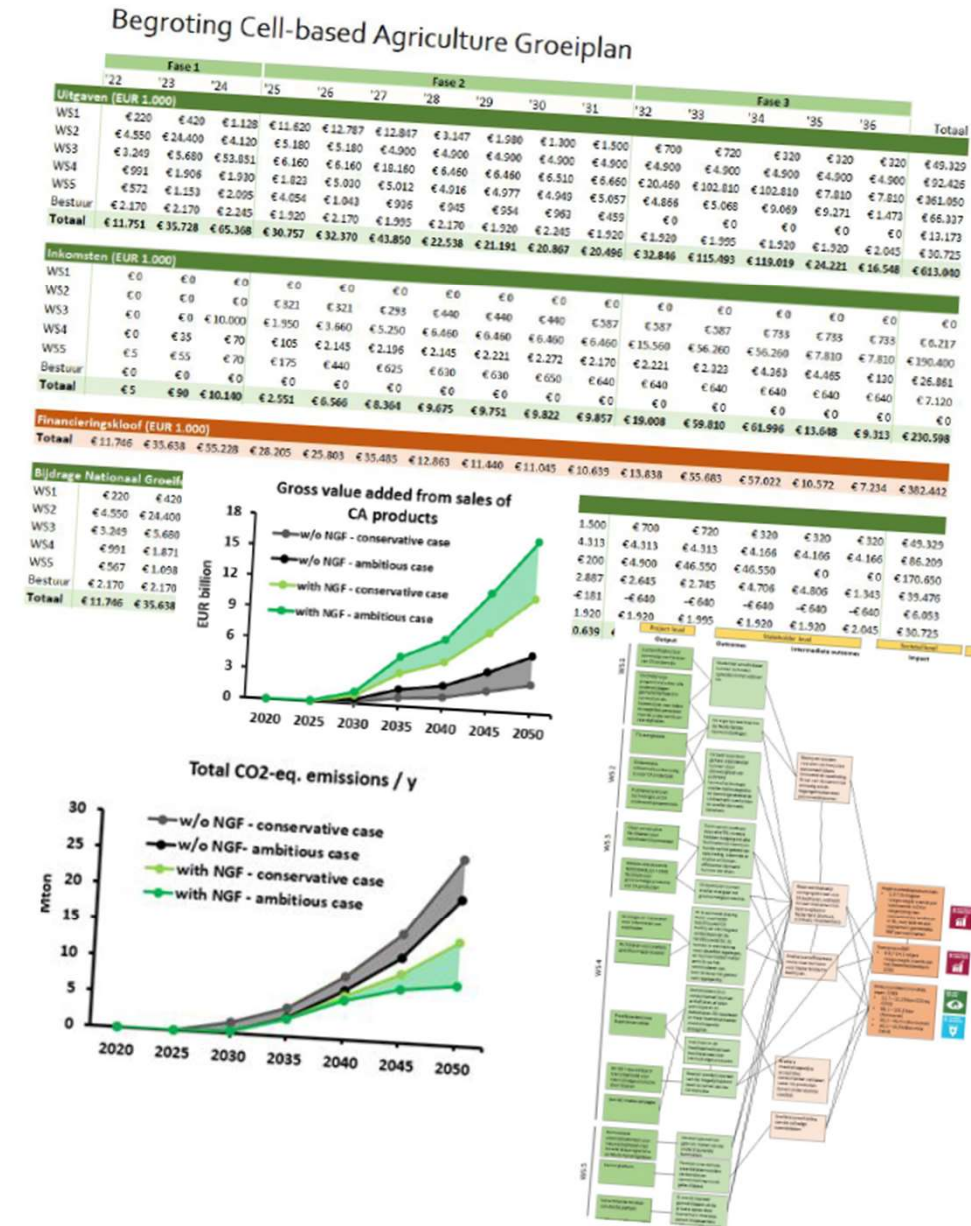
Idea phase

- Where is the money available to pitch for?
- Diverse consortium founders (3x) representing companies, NGOs and academia
- Dedication beyond just getting funds, as well as balanced skills (leadership, project management)
- With a dynamic fund process and brand new team, we needed time to find the right language, goals alignment, scope (bureaucrats, activists, entrepreneurs)
- Decide on tech scope (fermentation, cultured meat)
- Find the "inside sponsor" to help facilitate the process



Draft proposal

- Pressure cooker to get ~€160k and onboarded agency to help impact modeling and writing
- Keep recruiting people into 'steering group' to do the work and for later board positions
- Define owners per topic/work stream (e.g. research, education, scaling, societal integration, etc.)
- Find and address common misconceptions about cell ag
- Keep scanning for 'additionality' and co-financing opportunities
- We were going broad (160 pages), then cut back (80 pages) and landed on 110 pages with 11 appendices



Initial positive evaluations

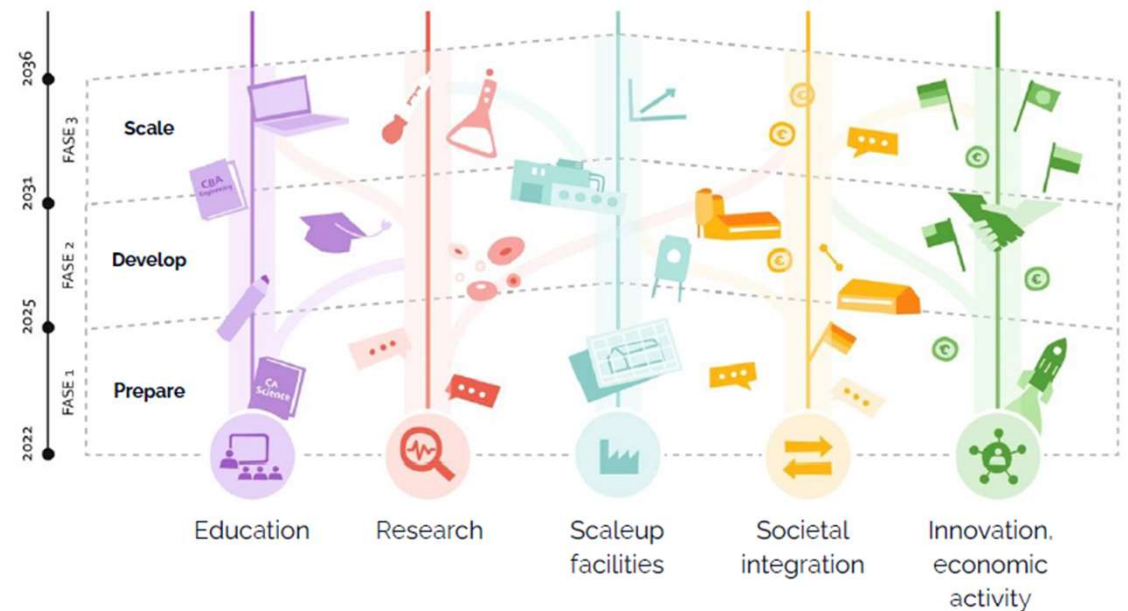
- Finalize total scope & monetary request (GDP, CO2 and ammonia benefits)
- Gather letters of support (+/- 40 for us)
- Multinationals and co-funding (intent letters)
- Connect with all potential "experts" or stakeholders that will likely be involved / consulted
- *"Repetition doesn't spoil the prayer"*
 - This is for the benefit of the country
 - Yes, consumers want this
 - Other regions are moving fast
- Keep it readable / simple many involved will only scan



First three years

First phase (3 years) is to prepare the ecosystem, followed by 7 years to develop the ecosystem and 5 years to scale out and go international. Goals for those first 3 years:

- Curricula developed and implemented to educate talent (€ 1.8 m)
- Results from public research and anchoring them in tenure tracks (€ 33 m)
- Start building scale-up facilities (€ 53 m)
- Societal integration and strategy for "level playing field" (€ 4.7 m)
- Hub for valorisation, innovation, financing for companies (€ 3.7 m)





Benefits for ecosystem and companies

- Formalized cell ag NL from an informal network to strong association with plans and funds
- Opportunity to collect most current information about the field and bring it to all stakeholders
- Formalized support from 40+ organizations, shifting sentiments in historically neutral/negative groups including multinational food producers and retailers
- More favorable environment for the companies: fundamental research, skilled workforce and societal acceptance
- Retaining more of the benefits of cellular agriculture in your own country vs. leaking abroad





Mosa

Tastings were not allowed prior to EFSA approval

Primary issue centered around the definition what it meant to **“enter the market”** and Dutch authorities did not have a mandate to reconsider the current interpretation:

In 2022 the Dutch House of Representatives (Tweede Kamer) passed a motion by 127 of 150 votes to ask the relevant Ministries to work with industry to find a way to conduct tastings.



Netherlands Food and Consumer
Product Safety Authority
*Ministry of Agriculture,
Nature and Food Quality*



Ministry of Health, Welfare and Sport



Tweede Kamer
DER STATEN-GENERAAL

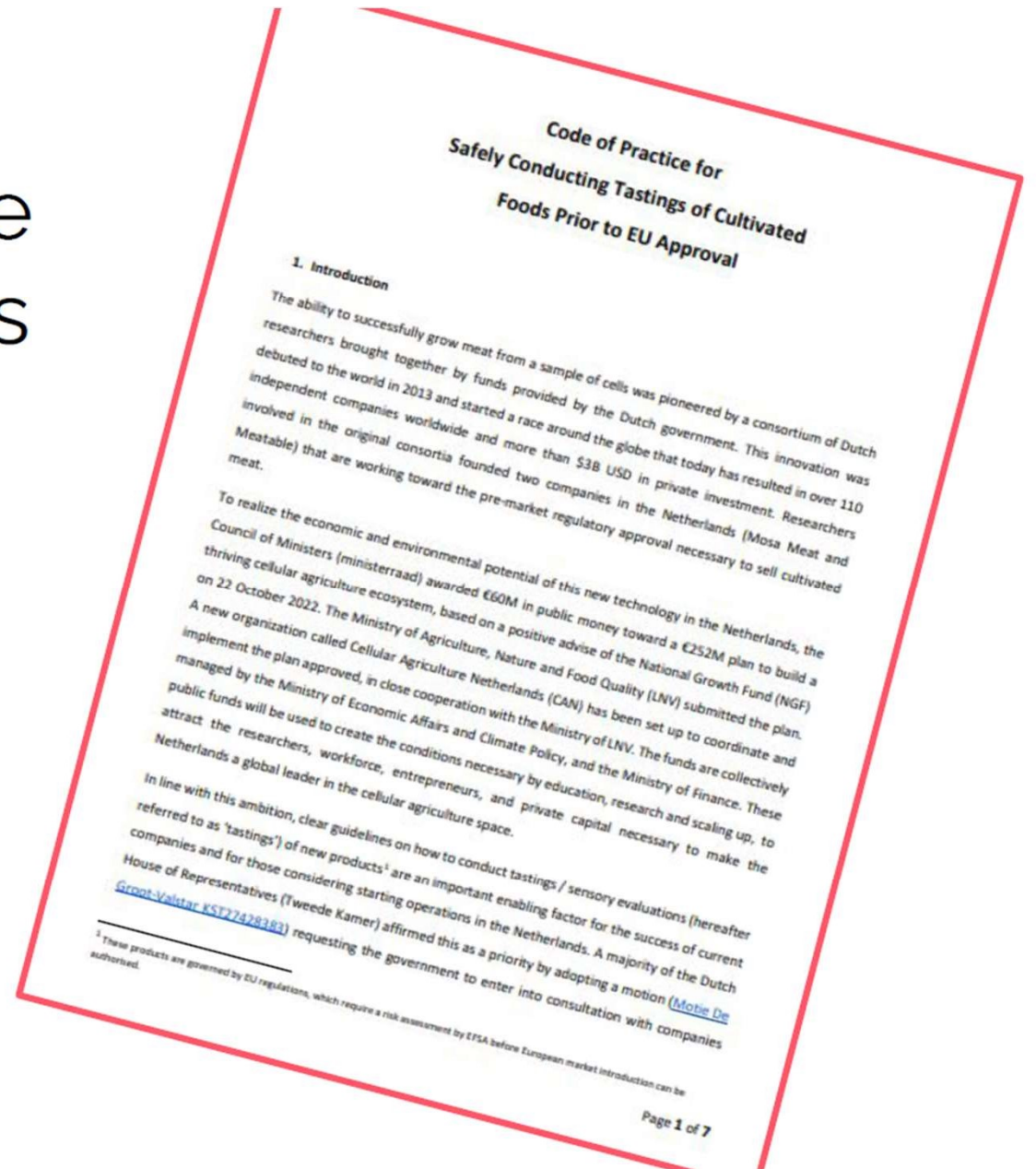


Agreement on a 'Code of Practice' for tastings

After months of dialogue, we landed on a clear framework for how companies could conduct tastings in a safe and controlled way.

Key Components:

- Managed by CANS
- Independent expert committee reviews tastings applications
- Risk assessment based on limited intake vs. lifetime exposure
- Information forms vs. liability waivers
- 1-year pilot to be reviewed by Wageningen University before made permanent





Mosa

Required procedures in conducting the event

Ultimately the companies are responsible for making sure the following procedures are followed

Criteria:

- Only to be held in a controlled setting that is owned, leased or rented by the applicant
- Only in environments suitable for food preparation
- Can not be accessible to general public during session.
- An emergency response officer (BHV) and medical hotline shall be accessible
- Registration of any adverse events occurring up to 2 weeks after the tasting event.
- Each participant signs an information sheet outlining any known risks





"The Netherlands has been a global front-runner in biotechnology for over 150 years. The Netherlands was also the first country to introduce cultured meat to the world in 2013. However, CA is still the subject of discussion in the Netherlands, instead of being part of a national growth strategy.

Now that the first tasty and affordable CA products are appearing on the shelves in Singapore and America, the Netherlands has a choice: materialize our powerful starting position into a concrete economic growth potential for CA, or wait and leave the leading position to other countries.

The National Growth Fund offers us the opportunity to make that choice."

Ira van Eelen, CANS Board Member, May 2022





Thank you and let's keep in touch.



Robert@mosameat.com





More detail on the proposal

[Confidential]

Find the full report in Dutch [here](#), English management summary [here](#) and the folder including all appendices [here](#).

All outdated as proposal, but as Cellular Agriculture NL we are still working towards those goals.



1 Abstract

De mondiale vraag naar dierlijke eiwitten (vooral vlees en zuivel) zal blijven stijgen (30-50% in 2050). Gezien de uitdagingen die uitbreiding van de huidige landbouw met zich meebrengt, is er veel aandacht voor alternatieve eiwitbronnen. Cellulaire Landbouw (CA) is een veelbelovende technologie waarbij door het kweken van cellen in plaats van dieren, hetzelfde vertrouwde vlees- of melkproduct gemaakt kan worden, maar dan op een dier- en planeetvriendelijke manier.

Nederland heeft een uitstekende technische en economische uitgangspositie in landbouw en biotechnologie om zich als wereldleider in deze groeiemarkt te ontwikkelen. Daarnaast is er een klein aantal CA startups in Nederland dat succesvol private investeringen aantrekt.

Maar we laten een grote kans voor Nederland liggen als we denken dat daarmee de race gelopen is. We zien grote ontwikkelingen in het buitenland en staan als Nederland voor een keuze; nu investeren en de vruchten plukken, of kennis en inkomsten laten wegvloeiën naar het buitenland.

Het Nationaal Groeifonds is de manier waarop Nederland deze verdienkans kan grijpen.

Dit voorstel beschrijft hoe Nederland wereldwijd koploper kan worden in CA. Met een totale eenmalige impuls van €252 - €382 miljoen van het NGF, kunnen we:

- de komende 15 jaar €4,7 miljard extra privaat kapitaal mobiliseren;
- in 2050 €9,7-14,1 miljard per jaar incrementeel verdienvermogen genereren;
- in 2050 11,7-12,2 Mton CO₂-eq. en 98,1-131,3 kton ammoniak per jaar voorkomen;

Mondiaal leiderschap behoeft een volwaardig publiek ecosysteem, dat met behulp van dit Groeiplan wordt gebouwd op 5 pilaren; onderwijs, onderzoek, opschaling, maatschappelijke integratie (inclusief boeren en consumenten) en innovatie.

Networking

Contacta'ns!

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Segueix-nos a les xarxes socials!



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@Catalonia_TI



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