



The workshop will start soon.

Importance of food waste reduction and valorising side streams

Workshop 8

11 May 2023



Organisers



Tjerna Ellenbroek
Project Manager
Foodvalley NL



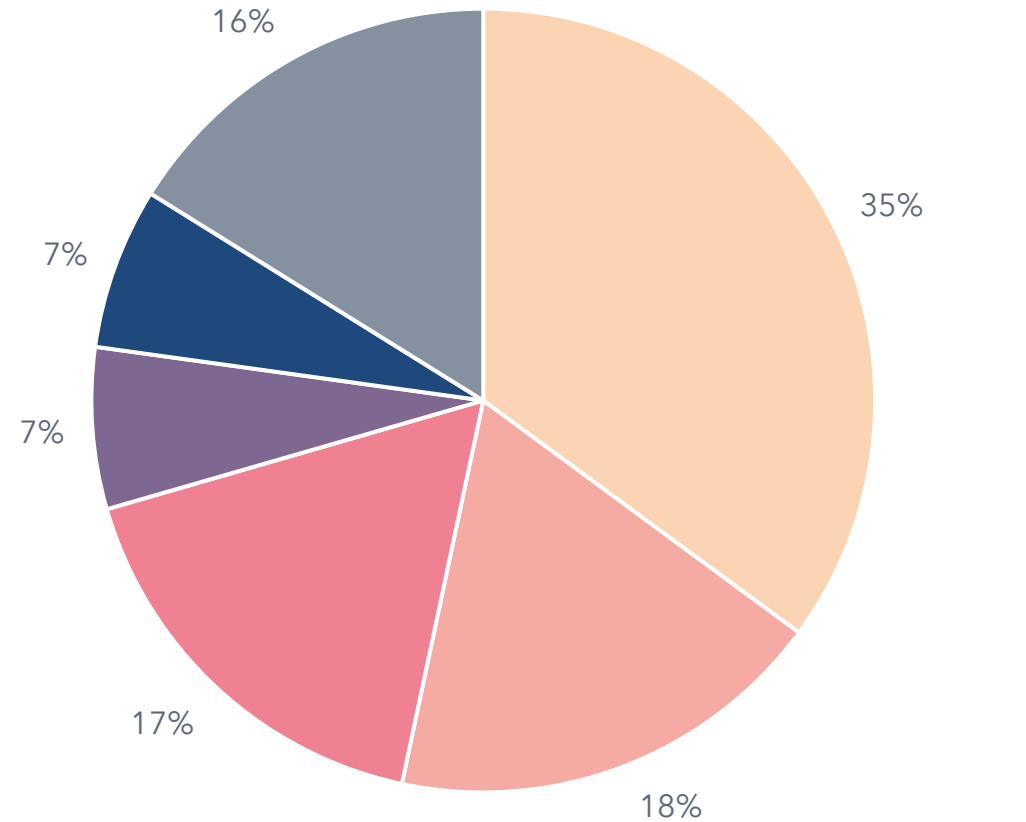
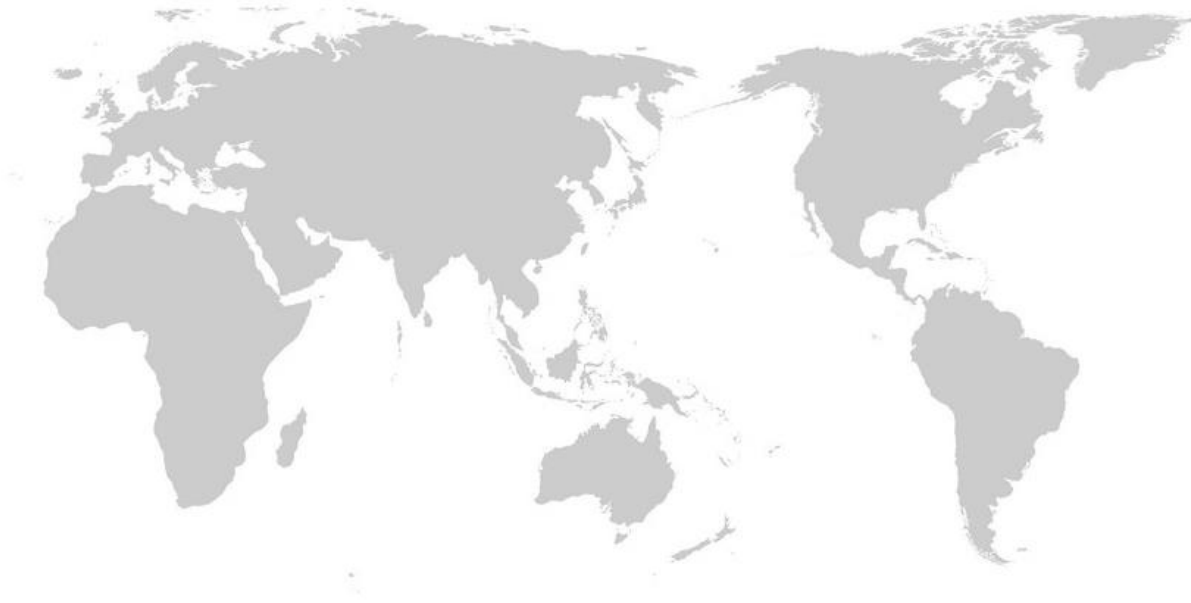
ITC

INOVACIJSKO TEHNOLOŠKI GROZD
INNOVATION TECHNOLOGY CLUSTER

Darja Kukovic
Project Manager
ITC



Welcome!



Over 280 participants

36 Countries

- Asia - 80 participants
- Europe - 190 participants
- Other regions - 15 participants

- SMEs
- Corporates
- Univerities & knowledge institutes
- Clusters
- Support organisations
- Other (government, associations)



Global Foodture project



European project, collaboration of 7 European Clusters

Aim: to boost the sustainable transition of the food system by innovation and collaboration between European SMEs and Asian organisations

Asian partners in Japan, Singapore, South-Korea, Thailand: Enterprise Singapore, Foodpolis, FoodInnopolis, TMA Thailand, Kobe University and NARO Japan.

Activities: matchmaking, training program, international missions and online workshops

Themes:

- Agriculture - cultivation & support solutions
- Alternative proteins
- Sustainable packaging
- **Solutions to reduce food waste**
- Health products, functional and personalised food



Programme

9.00	Welcome & Introduction by Tjerna Ellenbroek, Project Manager Foodvalley NL
9.05	Valorising side streams by Jolijn Zwart van Kessel, Innovation Lead Circular Agrifood Foodvalley NL
9.20	Company presentations: <ul style="list-style-type: none">- Allozymes - Deepak Raghothaman, Director & Business Development- Colipi - Maximilian Webers, Founder & CEO- Circular Food Solutions - Carsten Petry, CEO
9.50	End of Masterclass 1 & Start Masterclass 2
9.55	Introduction of Masterclass 2 'Reducing food waste' by Darja Kukovic, Project Manager ITC
10.00	Innovations for Zero Food Loss & Waste (ZEROW project) by Anna George, certified Senior Project manager INLECOM
10.15	Company presentations: <ul style="list-style-type: none">- VeeMee, Marko Kozjak, Founder- Alpinia Group, Jasna Dolžan Lesjak, Head of marketing- Robin Food, Shai Rilov, Founder
10.45	Wrap-up & Closing
11.00	Opportunity for matchmaking at the Global Foodture Community platform

Questions?



Do you have any questions to our speakers?
Please raise them in the Chat-box in Zoom and we will address them during the session.

Please include the following information in your question:

- Company name
- Name
- Speaker to address the question to
- Your question



Speakers I

Introduction to valorising side streams, including brewer spent grain

Jolijn Zwart-van Kessel, Innovation Lead Circular agrifood Foodvalley NL

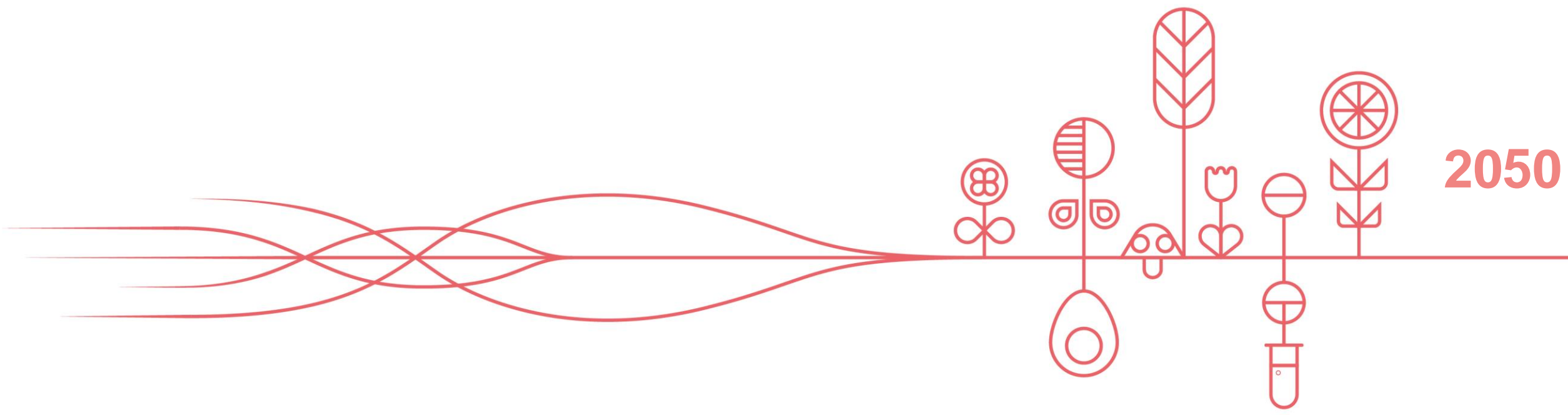
Company presentations:

Allozymes - Deepak Raghothaman, Director & Business Development

Colipi - Maximilian Webers, Founder & CEO

Circular Food Solutions - Carsten Petry, CEO





SHAPING THE FUTURE OF FOOD TOGETHER

Global ●●●
FOODTURE

TODAY

*Why do we
need
change?*

*How do we
shape the
future of
food?*

*Will you join
us?*



Jolijn Zwart-van Kessel

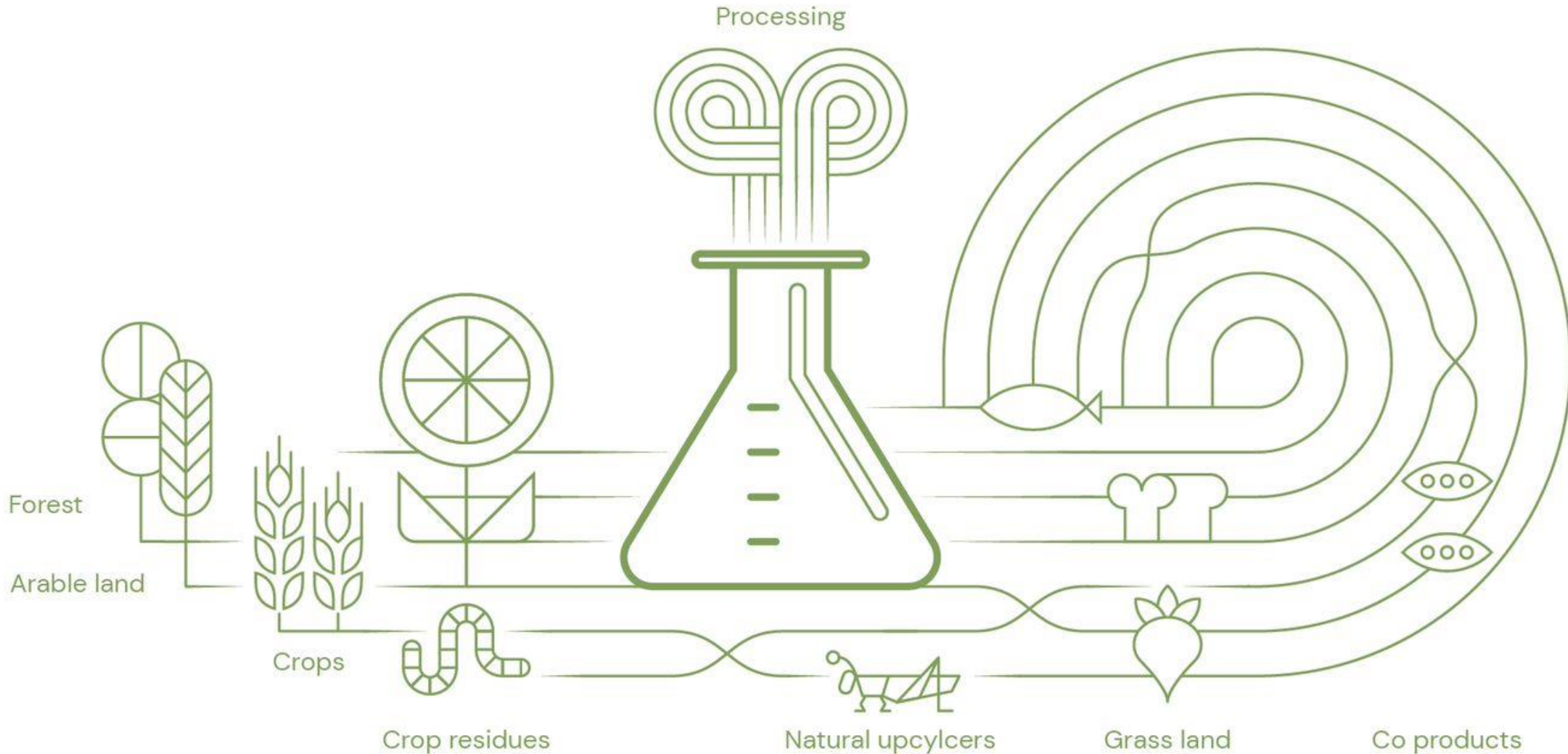
Innovation lead
Circulair Agrifood

MY JOURNEY



CIRCULAR AGRIFOOD

Regenerative sourcing | Insects as upcyclers | Upcycling sidestreams



WHY UPCYCLING COMMUNITY?

Overcome barriers together



Upcycling to the consumer

Create the right insights and conditions to get circular products in the shelves



Bridging food innovators

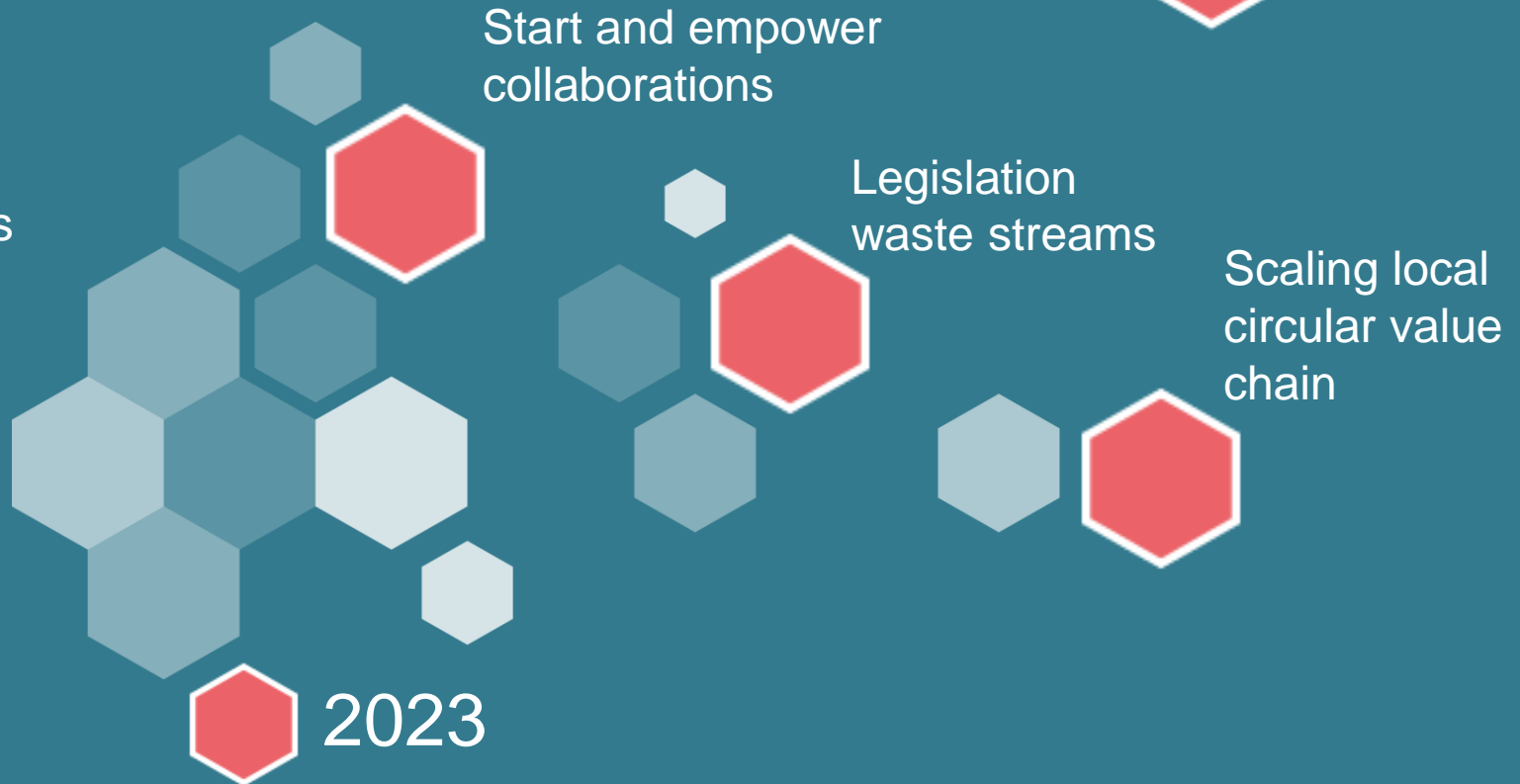
Create right conditions for purchasers/ product developers to replace virgin ingredients



Fact based decision making

Create the right insights – scenario studies for trade-offs effects (quality, environment & costs)– to inform suppliers of side streams or purchasers of circular ingredients

Significant volumes of side streams **optimally** valorized towards **food**



THE UPCYCLING COMMUNITY



Spread across value chain



- Service provider / Branche organisation / etc.
- Food producer
- Ingredient producer
- Technology provider
- Agricultural Cooperative / Feed manufacturer

International diversity



- | | | |
|---------------|-------------|----------------|
| ■ Netherlands | ■ France | ■ Sweden |
| ■ Spain | ■ UK | ■ South Africa |
| ■ Swiss | ■ Denmark | ■ Germany |
| ■ Hungary | ■ Indonesia | ■ Singapore |

UPCYCLING COMMUNITY PARTNERS



INSIGHTS EU MARKET PLAYERS

Upcycling barriers

Sept' 22 Madhura Rao, Maastricht University

TOPICS:

- Coping with uncertainty
- Ethical considerations
- Consumer perception



UPCYCLING COMMUNITY

meets The Protein Community Nov'22



Upcycled & Upcycling Plant Proteins

Closing the plant protein Circle



THE BIGGER Challenge

Running out of virgin raw materials

Maximum efficiency reached

Risking food poverty

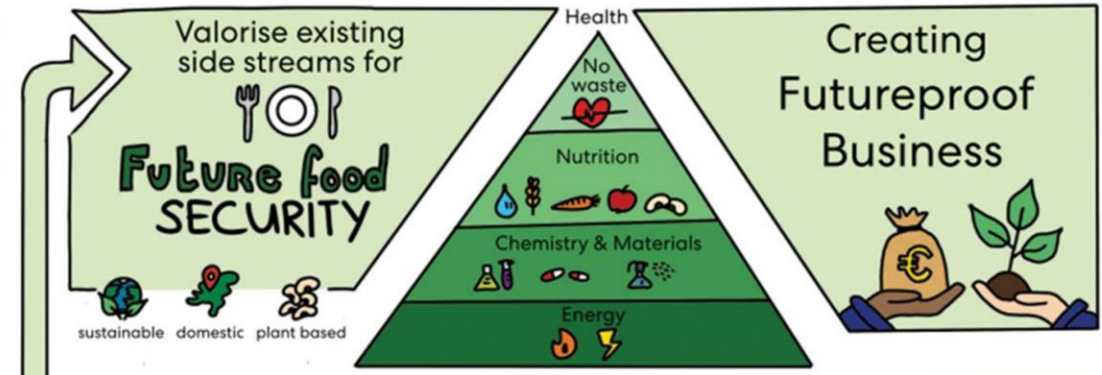
solutions:

Eat more pure food

Eat more plant based

Waste less

And if there still is waste



Sunflower presscake → Ice cream

Sugar beet leaves → Dairy

Okara → Spreads

Acetic acid → Banana flavour

Brewer spent grain → Meat analogues

Sugars → Protein production

Organic material → Soil improvement

Fibers → Bakery & Pastry

Starch → (Non) food

UPCYCLING with plant protein side streams

UPCYCLING for plant protein applications

UPCYCLING from plant protein production

UPCYCLING TO THE CONSUMER

Webinar Feb'23

With Upcycled Food Association, Innova Market Insights and the Ellen Mac Arthur Foundation



TOPICS:

- Consumer preferences & market development
- The potential value of certification

CHALLENGE SIDESTREAMS HORTICULTURE

April/May'23



**Wanted: market-ready refinery
for the upcycling of horticultural
side streams into valuable
protein or equivalent ingredients**



[Brief](#)

[Q&A](#)

[Updates](#)

[Follow challenge](#)

Foodvalley NL and Stichting Innovatie Glastuinbouw Nederland (SIGN, Foundation for Innovation in Greenhouse Horticulture Netherlands) are working together to support promising business cases in the field of upcycling horticultural plant-based side streams.

SHARED INSIGHTS ON FACT BASED DECISION MAKING

Acceleration session April'23

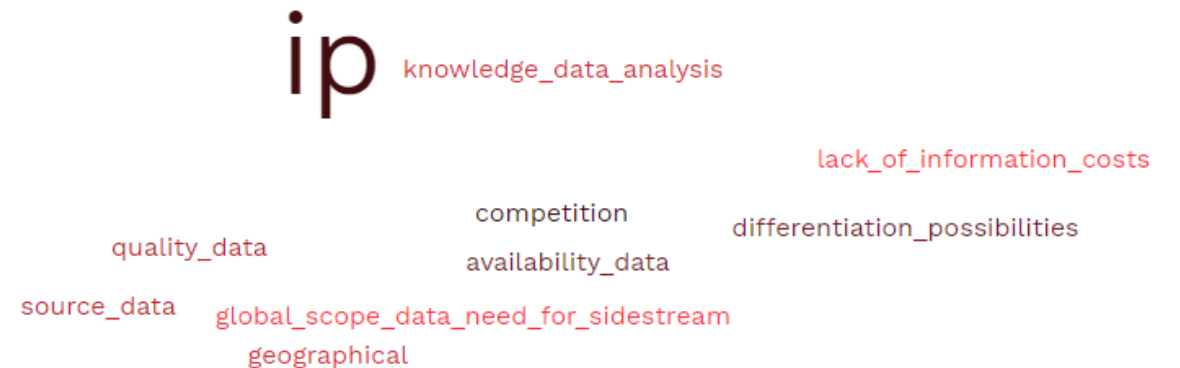
With WUR biobased research, Qing and Amsterdam Data Collective and debate within Upcycling Community partners

Need for Data sharing

Opportunities



Barriers



BREWERS SPENT GRAIN

Global Brewer's By-product Market

- Global Market Size: 46.02 MMT
- Market Growth Rate: 3 percent (2015–2020)

Major By-products of Brewing

- Spent Grains: 15–20 kg/hl
- Spent Yeast: 1.5–3 kg/hl
- Hot Trub: 0.2–0.4 kg/hl
- Diatomaceous Earth: 0.1–0.2 kg/hl

Global Brewer's By-product Share by Large Breweries (2017 E)

- AB InBev: 23 percent
- SABMiller: 13 percent
- Heineken: 10 percent
- Carlsberg: 6 percent

Major Countries Producing Brewing By-products

- China: 24 percent
- US: 12 percent
- Brazil: 7 percent
- Germany: 5 percent
- Russia: 4 percent

Utilization of Brewing By-products by Major Producers (2017 E)

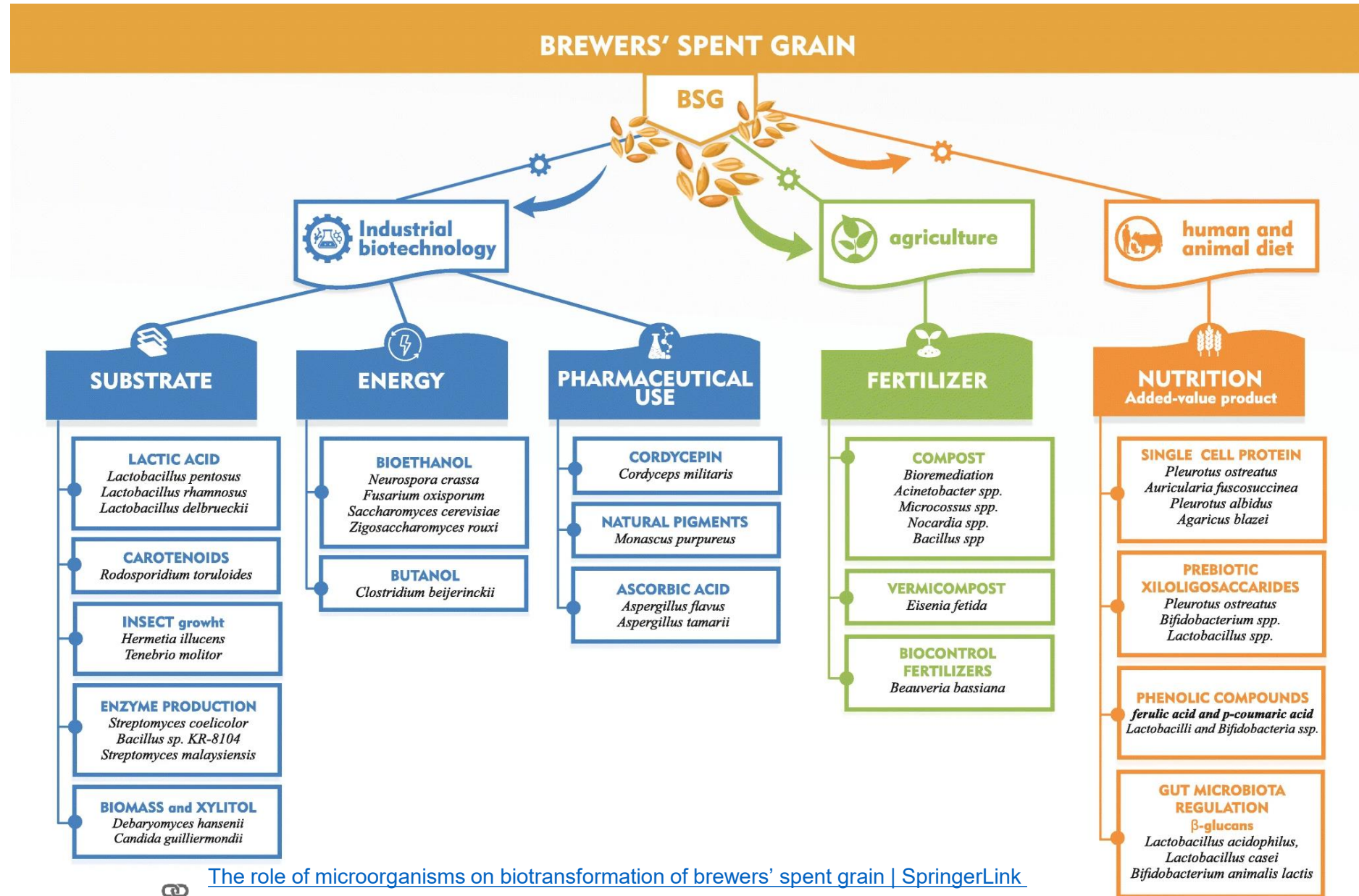
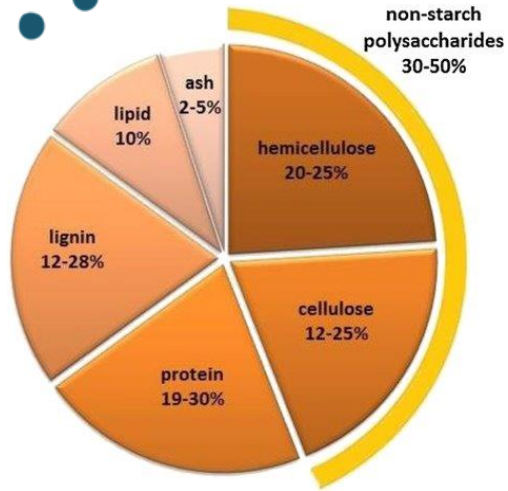
- AB InBev: 99 percent
- SABMiller: 89 percent
- Heineken: 96 percent
- Carlsberg: 94 percent

Zoom in





BSG POSSIBLE USE...



- **Fibre** constitutes about half of the BSG composition on a dry weight basis
- **Proteins** can constitute up to 30%
- **Essential amino acids** represent ~30% of the total protein content, with **lysine** being the most abundant (14.3%)



THE START-UP'S PERSPECTIVE



BRAVE NEW FOOD CHALLENGE BSG



[Open Calls](#) [Startups/Scale-ups](#) [Corporates/Investors](#) [Partners](#) [About](#) [Blog](#) [Contact](#)

[Brewer's spent grain \(BSG\) | Brave New Food](#)

**Wanted: solutions that can upcycle
brewer's spent grain (BSG) and the use of
it**



Challenge info

51 Days
0 Hours
9 Minutes

📅 22 March 2022 before 17:00

📁 Access to markets,
resources, experts and

[Brief](#) [Discussion \(1\)](#) [Updates](#)

[Upload your pitch!](#)

Foodvalley NL is the independent platform for innovation and transition of the global food system. Since 2004 Foodvalley NL has been developing and strengthening an international ecosystem of organizations that work together to realize this transition: the Foodvalley ecosystem. We work closely with corporates, SMEs and governments at every level, and with renowned educational and research institutions. [More information](#)

Innovation Need

It is estimated that about 39 million tons of brewer's spent grain (BSG) is produced annually worldwide. BSG is very high in protein and energy. Now it is mainly used in the feed sector, since it spoils within a day due to the very high water, sugar, and protein content. This makes it difficult to transport and further process into food within a short period of time. Until recently, there were preservation methods available but none of them combined food safety, efficiency and profitability in one process. There are methods available now. And various companies worldwide are experimenting with valorizing BSG.

Foodvalley NL is looking for additional solutions than can upcycle BSG and upscale BSG the use of this valuable source of fibers and protein.

CIRCULAR FOOD SOLUTIONS (SWISS)

When our resources become limited it's time to unleash our possibilities.

The food needs of the future are bigger than ever before. How will we meet this challenge? How exactly can we use our resources more efficiently than we did ever before? During the production of food, there are many plant-based so called by-products that have not been used for human nutrition. Not yet. But these by-products are a rich source of good proteins and valuable fibers. That's why we engineered a solution that enables to upcycle these by-products and to transform them into unique plant-based meat alternatives. You are looking for an innovative product to win over the plant-based market? Then get your license for our proprietary & IP-secured technology. Our services do not only include our end-to-end technology solution and wide range of product recipes, but also grant you access to our R&D expertise, market insights and new product developments. CFS will be your partner during the entire product lifetime. We welcome you.

SPOT THE DIFFERENCE



AGRAIN (DENMARK)



- [HOME](#)
- [PRODUCTS](#)
- [RECIPES](#)
- [SUSTAINABILITY](#)
- [RETAILERS](#)
- [NEWS](#)
- [ABOUT US](#) ▾



Agrain transforms byproducts from beer and whiskey production into food.

[READ MORE](#)

[WEBSHOP](#)

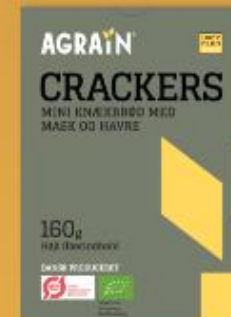
[Mask flour >](#)



[Granola >](#)



[Crackers >](#)



[Crisps >](#)



<https://en.agrainproducts.com/>



GREENSPOT TECH (FRANCE)



Ferment'Up Spent Grains flour

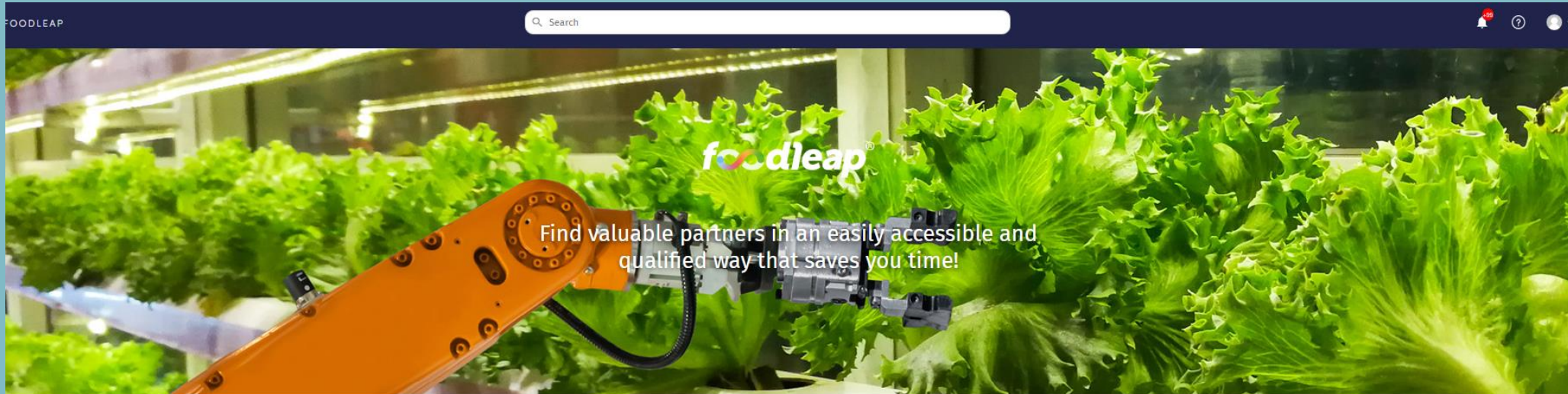
Ferment'Up Spent Grains are brewery leftovers, cereal grains saved thanks to Green Spot fermentation process.

This flour is balanced in composition with complete proteins, mix of soluble and insoluble fibres, and naturally concentrated minerals. Additionally Green Spot fermentation unlocks even more the nutritional potential by reducing the amount of antinutrient factors. Functionally, Ferment'Up Spent grains brings a thickening effect.

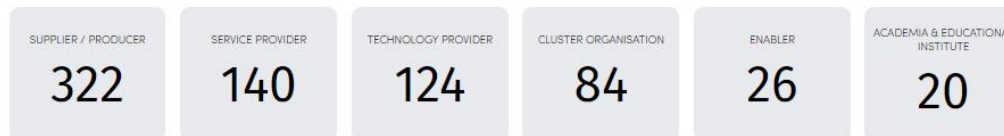


FOODLEAP

Easy access to valuable partners powered by Foodvalley



FOODLEAP IN NUMBERS



LATEST ANNOUNCEMENTS



EUROPEAN DIGITAL INNOVATION HUB (EDIH) BOOST ROBOTICS

Ondernemers in Oost-Nederland die stappen willen zetten in digitalisering kunnen bij het European Digital Innovation Hub (EDIH) BOOST Robotics terecht voor advies over digitalisering. Bedrijven worden hierbij geadviseerd en begeleid door innovatiemakelaars van onder andere Kennispoort Regio Zwolle, RCT Gelderland en Novel-T. Via deze makelaars...



MAY 4, 2023 2:00 PM - 3:00 PM WEBINAR ON MISSION TO BORDEAUX ...

Would you like to discover new trends in health nutrition, natural ingredients or clean labels applied to the food industry? Join a European delegation for a 3-day programme and discover Bordeaux and its ecosystem from 20-22 June 2023! During a Webinar on May 4 14:00, Agri Sud-Ouest Innovation will present the details of the programme, the possibilities of financing th...

User generated
Data

Experts knowledge
& Insights

AI gathered
Data

Your Benefits



Market Intelligence

The latest insights on market trends preselected from over **70,000 sources** globally.

Enrich your data about innovation and business faster and automatically.



Communities

Over **300 partners** gather together who are passionate about changing the food system.

Share your news and insights.
Connect and ask your questions to realise groundbreaking innovations.



Business opportunities

The latest **funding** programmes, open calls and **investment opportunities**.

Connect with potential partners and co-investors.
Explore funding, investment and collaboration opportunities.



Shared Facilities

Over **350 shared facilities** at your fingertips.

Find and share facilities to maximise productivity and accelerate innovation. It is fast, sustainable and cost effective.

Jump start **your Foodleap**



Create your FREE account
and
link your organisation

Take advantage of
all the benefits

GET IN TOUCH

With the Upcycling Community team



- **Thomas van der Lee**
Project manager

Thomas.vanderlee@foodvalley.nl

- **Jolijn Zwart-van Kessel**
Innovation lead Circular Agrifood

Jolijn.zwart-vankessel@foodvalley.nl

- **Caroline Duivenvoorden**
Programme manager Circular Agrifood

Caroline.duivenvoorden@foodvalley.nl

- **Register for Upcycling partner:**
<https://foodvalley.nl/en/partnership-registration/>



Foodvalley[®]
The Upcycling Community



**Powering
sustainable food
solutions with
custom enzymes**



Our Mission

Design & Develop

Diverse Custom Enzymes

for high-value food ingredients

1,000x

Faster variants screening

fast

10x

cost-effective

Negligible reagent consumption
Less manpower (2 months/project)
75% lower CAPEX

200x

reliable

Higher chance of success
with a larger library screening

Fastest experimental enzyme
engineering platform



Enables both GM & non-
GMO enzyme engineering

Allozymes Flexible and Success-based Business Models



service

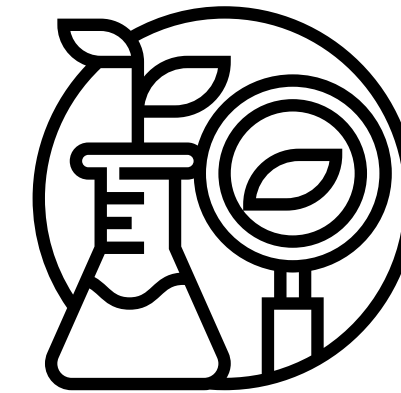
For
Biotech
R&D

Partnership

With enzyme developers/biotech departments and saving up to 50% of partners cost for enzyme engineering, IP free

Serve directly

End enzyme users with 10X faster enzyme engineering



product

For
Innovative
Companies

Partnership

Allozymes cover the R&D part of the biosynthetic natural compounds and produce them in joint venture with partners

Licensing

License agreement model, research agreement with interested parties for biosynthesis of high value chemicals/compounds

Challenge

Carbon capture through upcycling agriwaste

998 MT

of organic agricultural waste is produced yearly in farms

*Awarded S\$1M grant to build the POC of sweet-fiber



Hero Enzyme



Our Solution

Engineering A Hero enzyme



Clean-label sweet-fiber

80% lower GI

50% lower calories

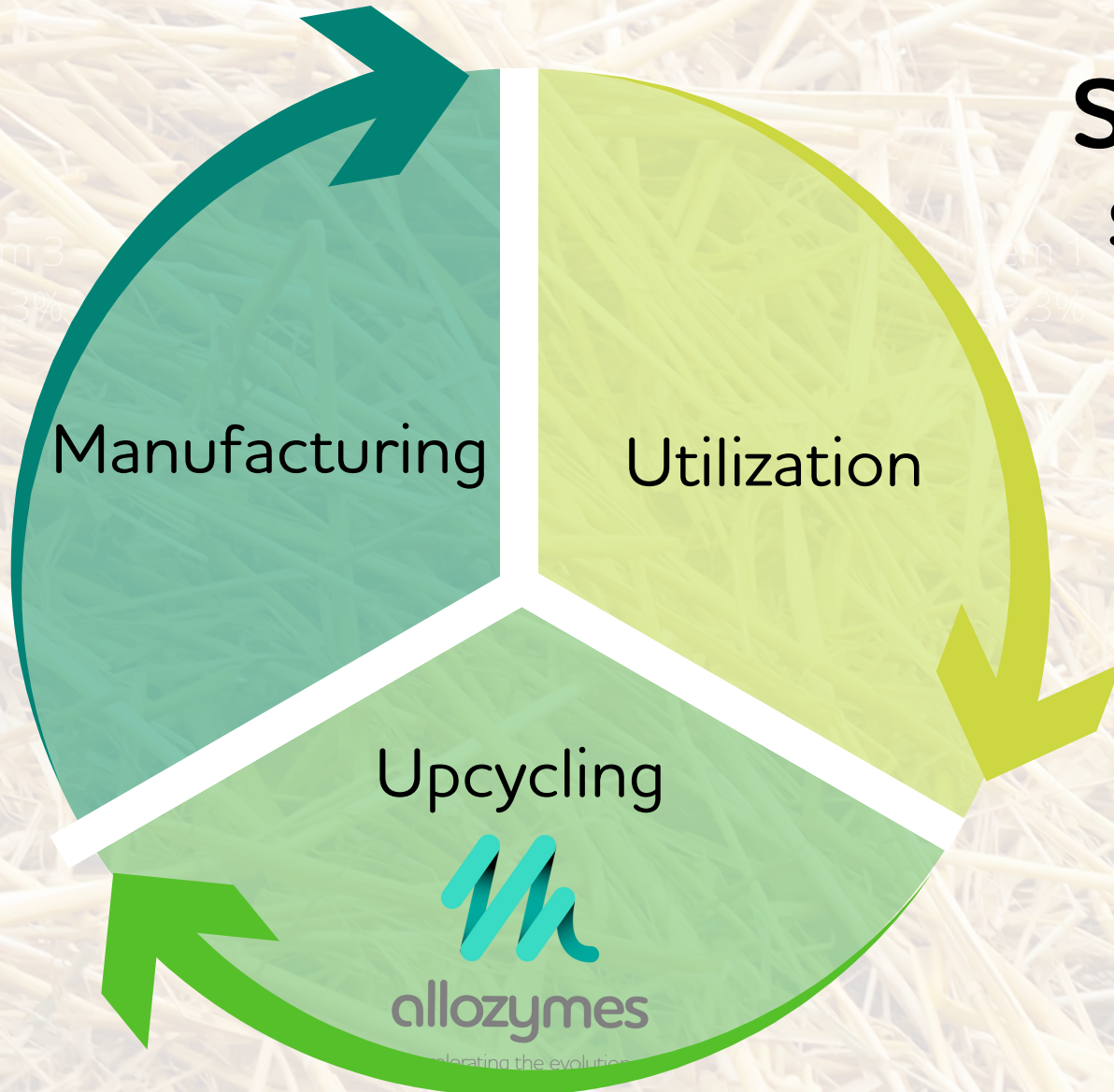


Reduces agricultural waste
Promotes a biocircular economy

Working towards a circular bioeconomy

Problem: Enormous global agriwaste leads to GHG emissions

- 800Mt** Wheat straw
- 114Mt** Banana waste
- 101Mt** Rice husk



Solution: Upcycle commodity side-stream to value-added



80% lower GI
50% lower calories

Hero Enzyme

Upcycle long chains of ligno-cellulose (polysaccharides) into edible, smaller polysaccharide (fibers)

Allozymes' Impact is beyond the lab

Avert

1,600 L
biohazard waste

1.6 tons
plastic waste

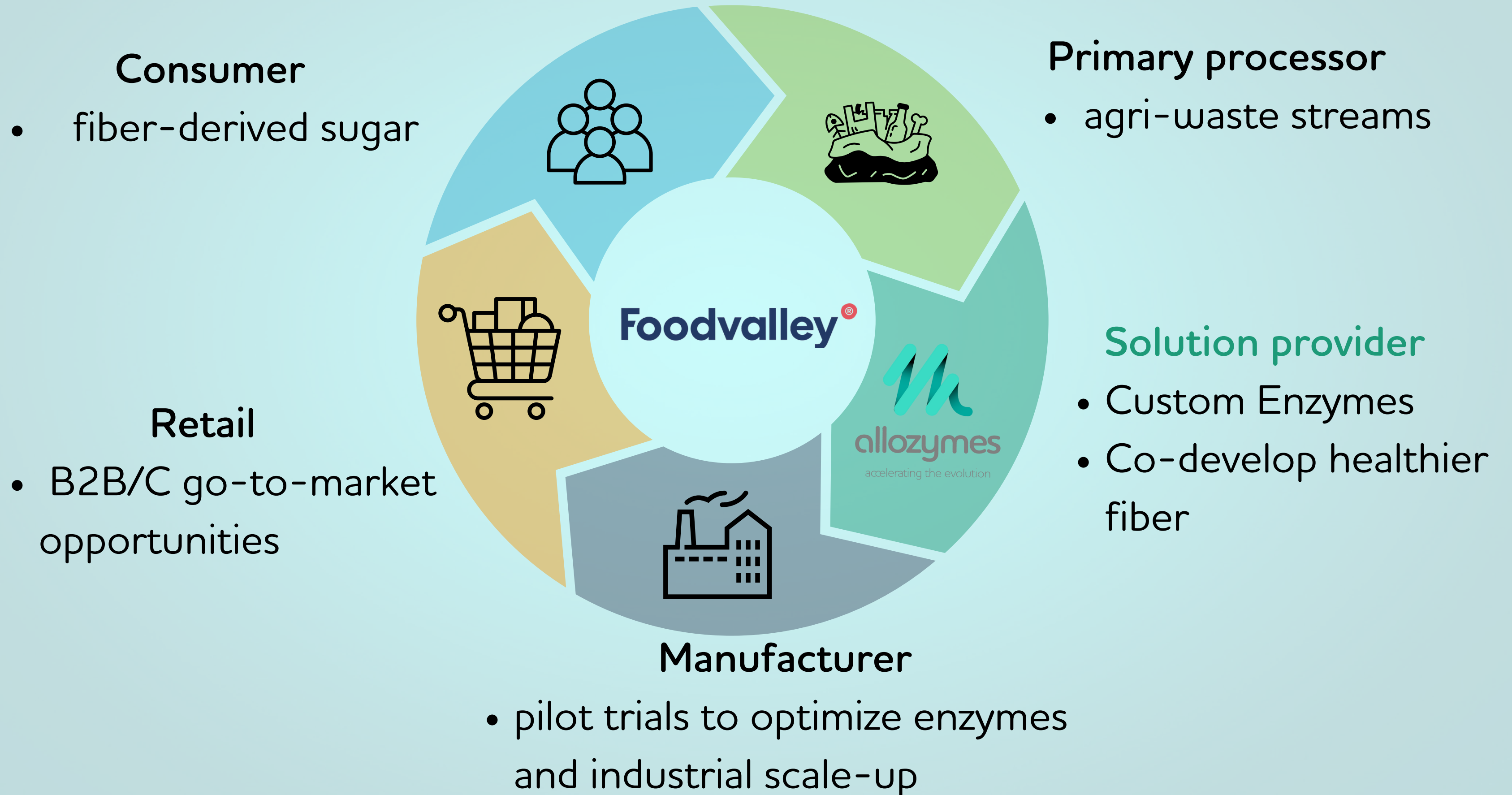


*The Hero Enzymes
prevent*

**7.5 M
tons**

*of anthropogenic
CO2
annually*

Exploring collaborations within the Upcycling Community



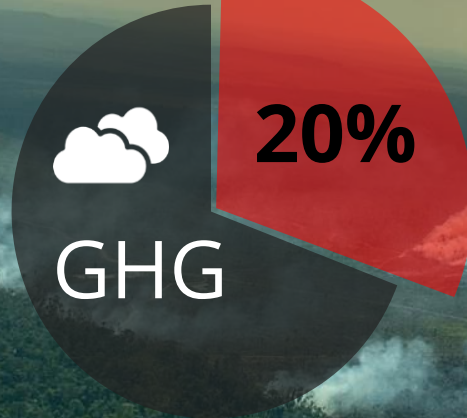
Stay connected and learn more here!



Reducing Corporate CO₂ Footprint With Carbon-Light Oils



Oil Plants Are Inefficient & Drive Deforestation



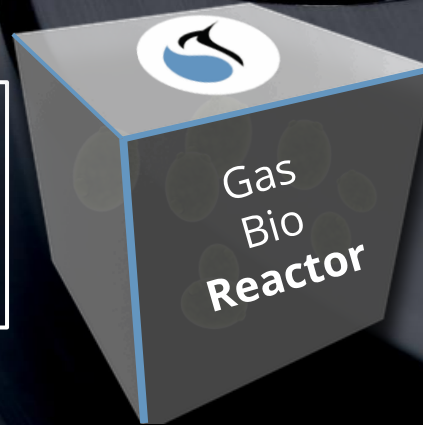
GHG Contribution by Tropical Deforestation



Farmland of Size of India Used for Oil Plants Worldwide

Gas-Fermentation Outcompetes Plants

**x100
Efficiency**

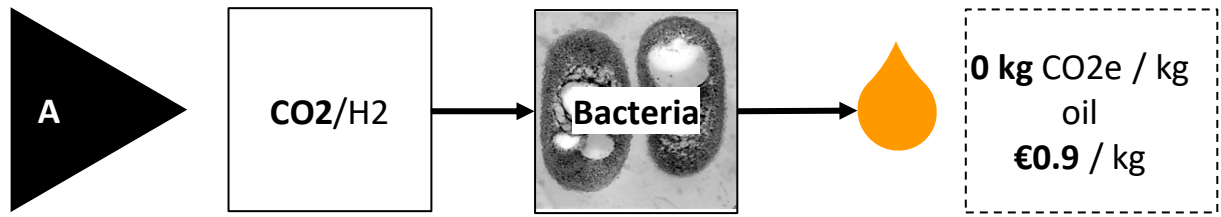


**x10
Less CO₂**

2 Distinct Technologies

We Valorize (\$) CO2 From Point Sources

Why us? **Patented gas bioreactor**



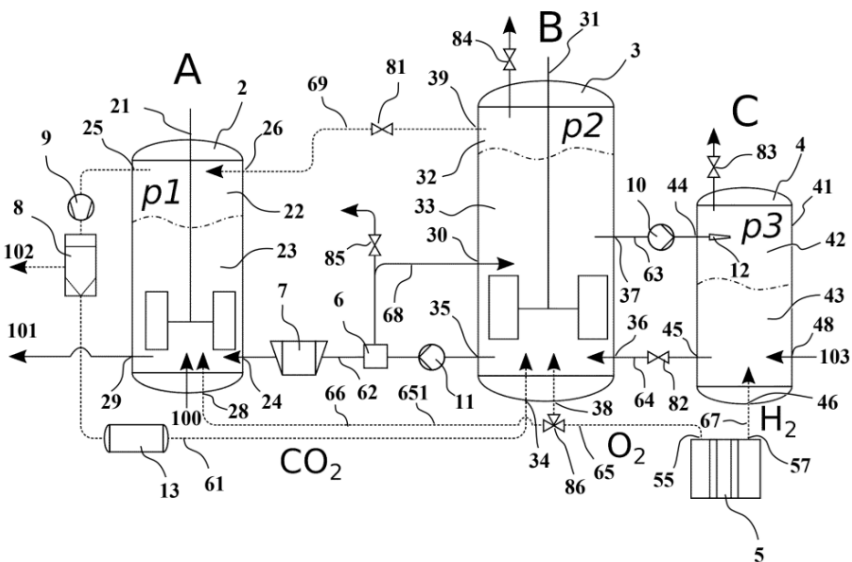
Patented !



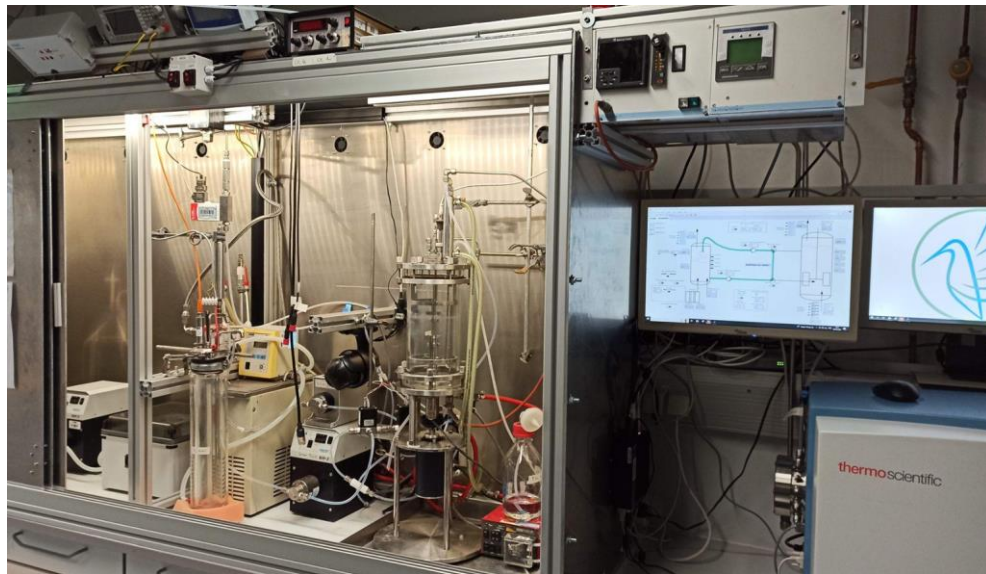
Potential partners (example, more possible)



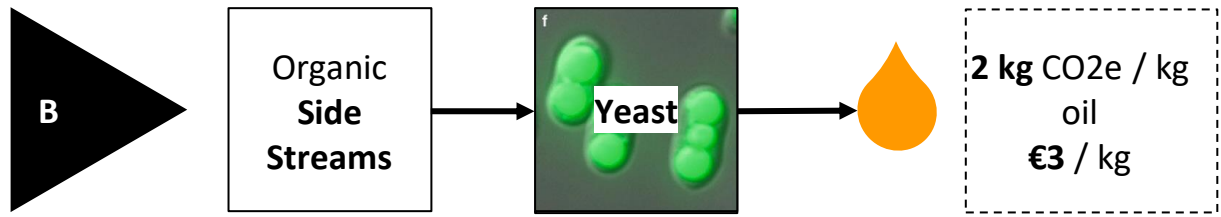
Patent theory



Patent implementation



Why us? 10 years of experience



We Valorize (\$) Organic Side Streams From Food Industry



Potential partners (example, more possible)



LOTTE

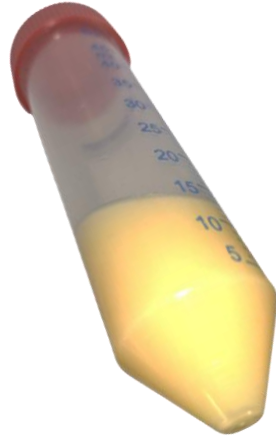


Product: *Climate Oil*™

Colipi Oil Prototypes



**Antioxidative
Solid Soap**



**Vegan
Butter**



**Palm Oil Free
Skin Lotion**

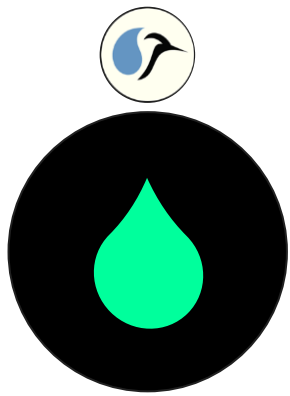


**Sustainable
Biofuel**

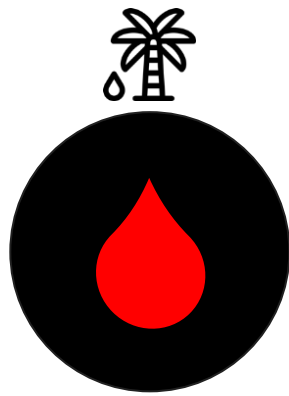
Our product:

Carbon-Light

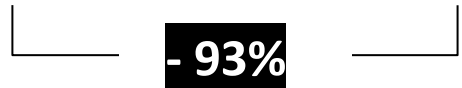
Oils



0 kg*
CO2



4 kg*
CO2



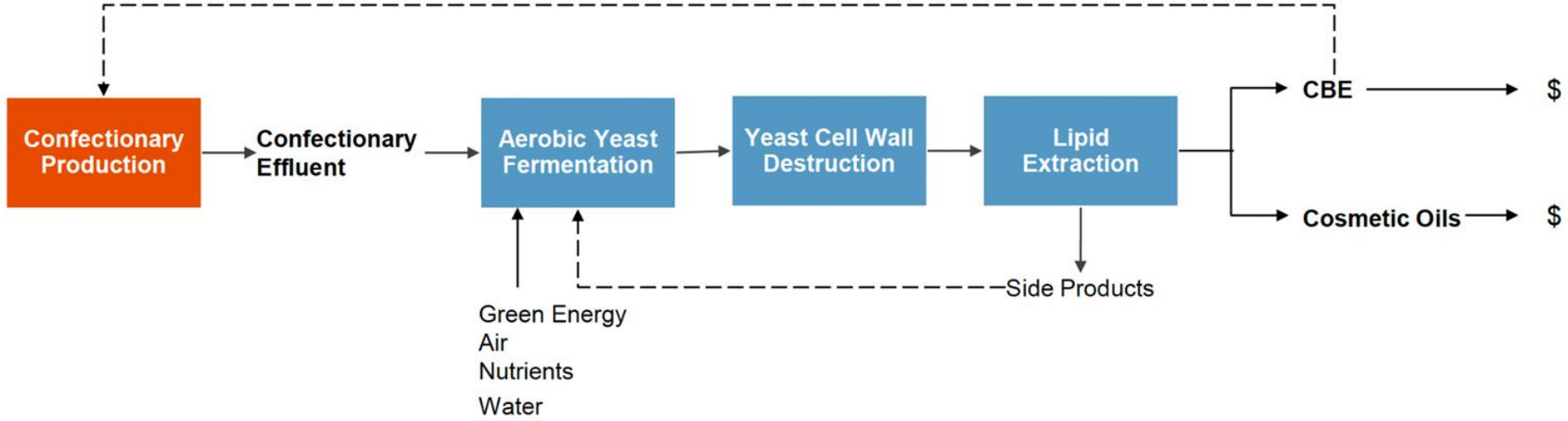
Cradle-to-Grave (incl. biogenic CO₂)

*PCF compares kg CO2e / kg oil of Colipi oil vs. Palm Oil

Project proposal

Food Side Streams Valorization





**Food
Partner**

Colipi


Assumptions for Business Case

Input	
Yield	g/g (oil/substrate)
STY*	g/L/h
DSP**	mechanical or chemical
Quantity of waste stream	tons/year
Footprint	CO₂e/kg substrate
Cost of substrate	€/kg substrate

*Space-Time-Yield

**Downstream Processing

Colipi Oil Business Case

Output	
Annual oil production	0.75 kt
Fermenter capacity	65 m ³
Required invest*	
Minimum selling price	
Anticipated selling price**	
IRR*** (after taxes)	
Payback time	
Footprint oil 	0.5-1.0 kg _{CO2-eq} /kg

Team

Berlin

2009 - 2013



Philipp, Max

Munich

2013 - 2016



Hamburg

2016 - 2020



Philipp, Tyll, Jonas



Beiersdorf
Nestlé
TESCO

Stefan De Loecker
(ex-CEO Beiersdorf)

Education

Colipi




Philipp, Tyll, Jonas,
Max

Job experience

New joiners

Arjun, Maëlle, Erich,
Jan*

The background of the slide is a high-resolution image of the Earth from space, showing the blue oceans and white clouds. A semi-transparent dark horizontal band is overlaid across the middle of the Earth. To the right of the Earth, there is a large, solid red teardrop shape pointing downwards.

Reducing Corporate CO₂ Footprint With Carbon-Light Oils

+49 172 38 6666 2
max@colipi.com
Co-Founder
CEO



Upcycled Planet Based Proteins

May 2023



CIRCULAR FOOD SOLUTIONS

**Sustainable Meat Alternatives made
with Upcycled Food Side Streams**



Who we are: *Circular Food Solutions* - a Bühler Spin-Off



Carsten Petry CEO

- Previously Product Manager Extrusion & Oil at Bühler
- 15 years' experience in business and product development in food industry

Carsten.Petry@legria.ch

+41 79 730 69 26



Friedrich Witschi Business Development Officer

- Previously CTO of Consumer Foods Division at Bühler
- 20 years' experience in business and product development in Nestlé

Friedrich.Witschi@legria.ch

+41 79 291 70 88



Upcycle food side-streams into profits.

Our Mission

We enable the production of healthy & truly sustainable food products by valorizing food waste & using upcycling as a technology.



Why we are doing this - Global challenges

Resources of
1.7 planets
needed

10 billion people to
feed by 2050

Heavily increasing
raw material prices

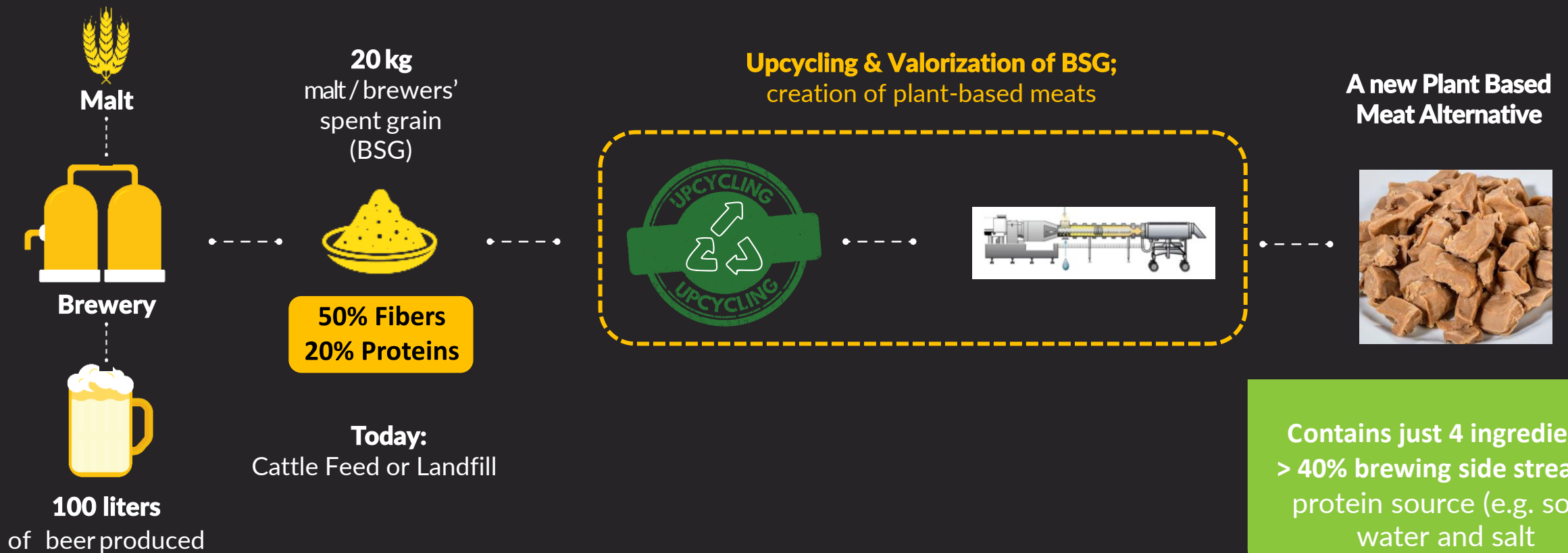
Closing the protein
gap & shortage of
protein sources

Bye Bye By-Product

Our solution: upcycling malt spent grain and create pleasant meat alternatives (patent pending)
Our offering: access to an IP-protected end-to-end technology & a wide range of product recipes

UPCYCLING PROCESS

PATENT APPLIED



Healthy. Tasty. Go!

Key Benefits of our solution:



Great **taste, texture**
& no added colors



A new, alternative
fiber & protein source naturally rich in fibers



Healthy because
naturally rich in fibers



Regionally sourced
and **globally** scalable



Reduced **food**
waste & water use

Plant-based Meat Alternative
Made with upcycled ingredients.



Our solutions made from 4 Ingredients can be easily transformed into a variety of local finished products

SEMI-FINISHED PRODUCTS



FINISHED PRODUCTS



Cut meat in Zürich style



Hungarian Gulash



Curry Stripes



Burgers

REGIONAL



UPCYCLED



VEGAN



HEALTHY

1st Swiss plant will start production in 2023



Overview ▾

Vision 2050

Imperatives ▾

Pathways ▾

Redefining Value

Bühler AG announces a joint venture to create Circular Food Solutions Switzerland AG



vegconomist
– Das vegane Wirtschaftsmagazin –

Fleisch- und Fischalternativen

**Circular Food Solutions: Neues
Fleischersatzprodukt aus Biertreber**

22. November 2022



We are open for investors and partners to expand globally!



CIRCULAR FOOD SOLUTIONS

Please contact us!



Carsten@legria.ch

+41 79 730 69 26



Friedrich@legria.ch

+41 79 291 70 88

Speakers II

Introduction to Reducing food waste

Anna George, certified Senior Project manager INLECOM

Company presentations:

VeeMee - Marko Kozjak, Founder

Alpinia Group, Jasna Dolžan Lesjak, Head of marketing

Robin Food, Shai Rilov, Founder



ZeroW

Systemic Innovations Towards a
Zero Food Waste Supply Chain

Global Footure

Importance of food waste reduction in the
supply chain and valorizing side streams

Anna George, Coordinator of ZeroW

11th May, 2023



ZeroW

Type of action: IA
Project period: 1 January 2022 – 31 December 2025
Total budget: € 12 932 881,25
Project consortium: 46 partners from 17 countries

Funded under:

SOCIETAL CHALLENGES - Food security, sustainable agriculture and forestry, marine, maritime and inland water research, and the bioeconomy

Grant agreement no. 101036388

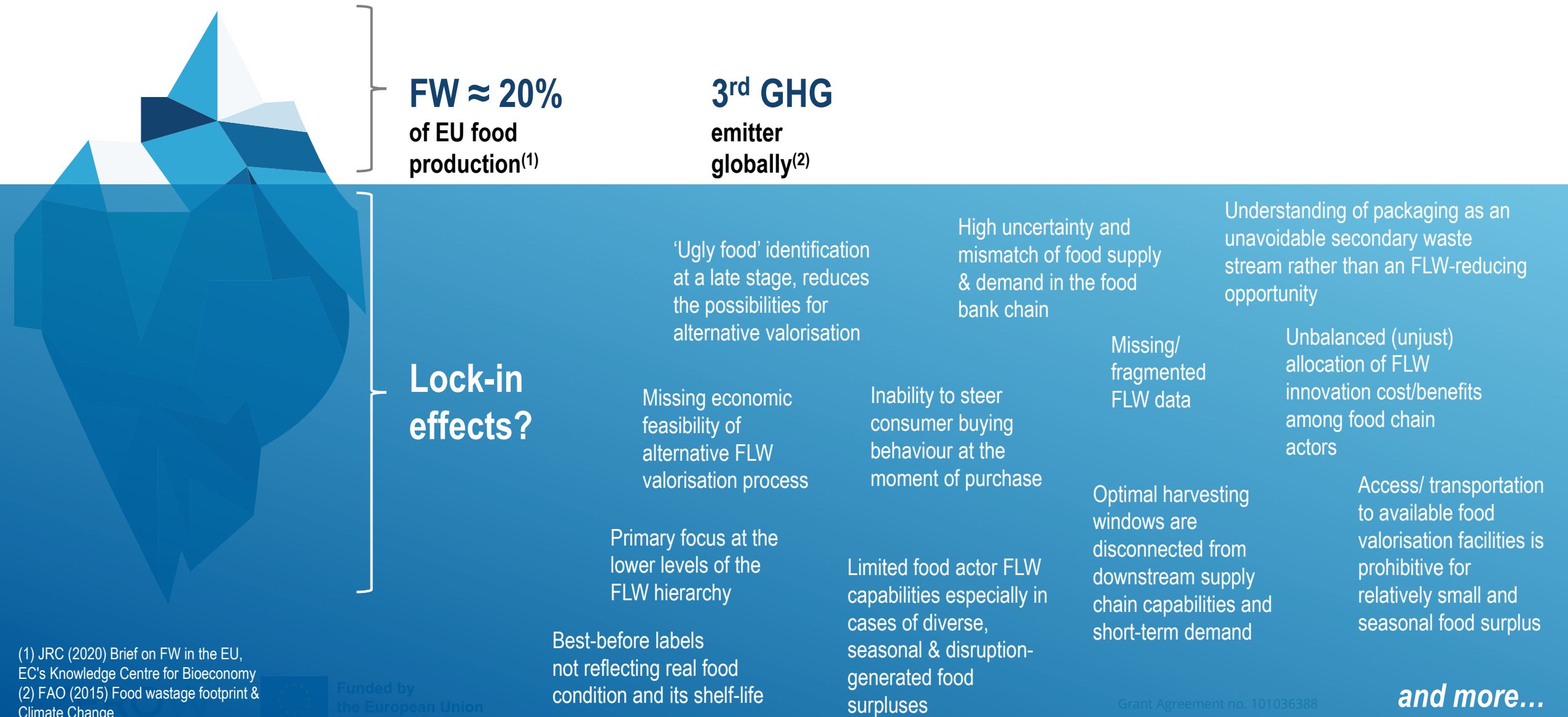


The problem



And the factors leading to it

The problem



(1) JRC (2020) Brief on FW in the EU, EC's Knowledge Centre for Bioeconomy
 (2) FAO (2015) Food wastage footprint & Climate Change

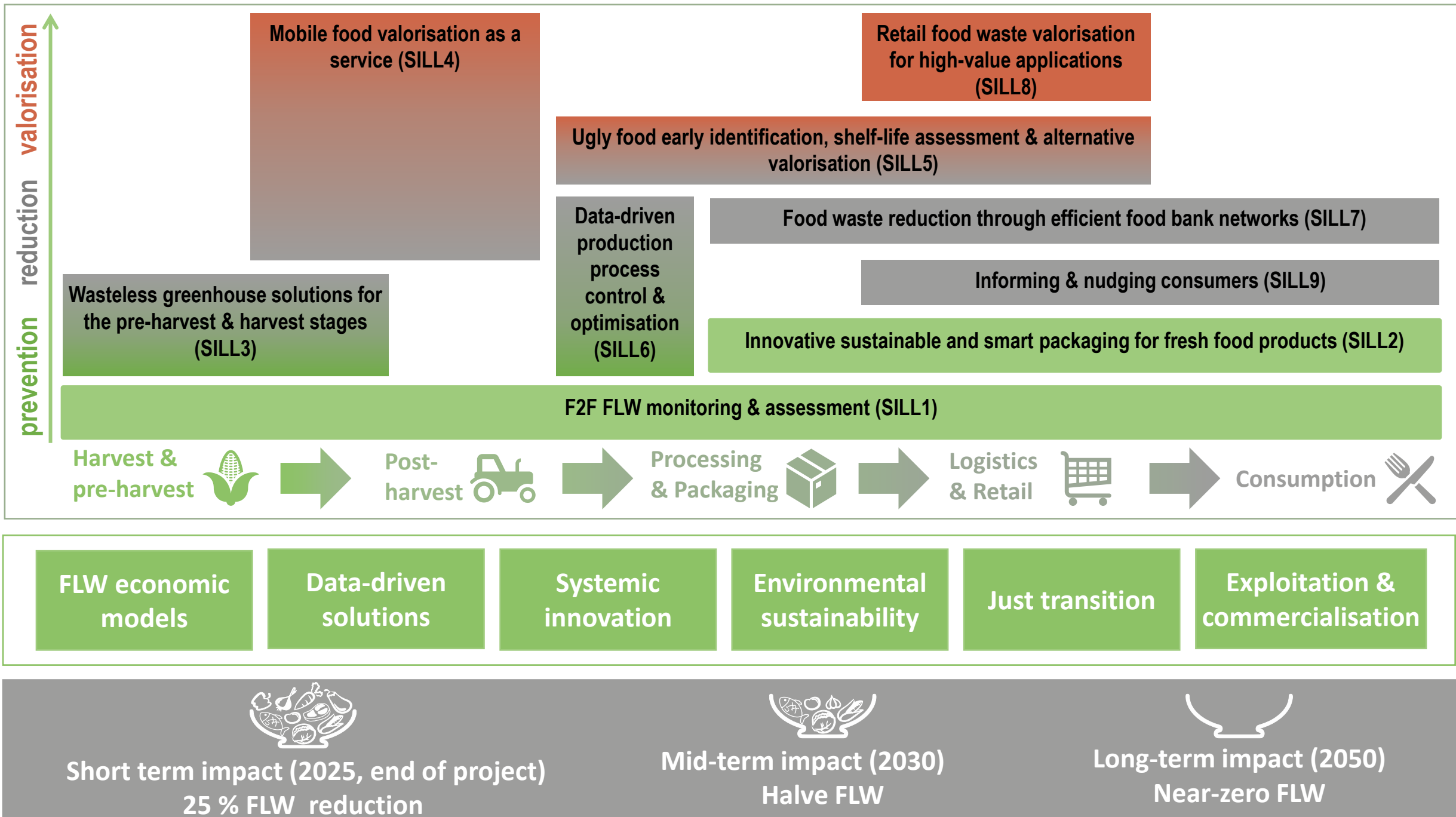
What does ZeroW project do about that?

Systemic innovations towards a Zero food waste supply chain



- Developing and evaluating innovations across the entire food supply chain
- Understanding and addressing the challenges for their adoption, including their successful future commercialisation
- Supporting the scaling up on regional and European level, and
- Identifying a clear and just transition pathway towards zero FLW through EU policy recommendations

Impact = Assessment + Demonstration along value chain



#4 Mobile food valorisation as a service

Demonstrate that innovative processing solutions exists which can be marketed as a service for optimizing the processing of edible FLW biomass

- Verify technological feasibility
- Prove economic viability of the business model
- Establish how the revenues can or need to be distributed throughout the new potential value chain(s)



#8 FLW valorisation through algae production

From retail surplus to micro-algae production

- Develop an optimal and feasible solution for in-store and in-warehouse FLW pre-treatment
- Characterise the pre-treated FLW and valorise it into the production of micro-algae
- Develop a reverse logistics process that takes into account safety regulations, business constraints, the complexity of FLW being decentralised in the retail context, and the use of innovative hermetic container for transportation



Allmicroalgae
natural products



Universidade do Minho

#5 Ugly food identification

Identify ugly food at early stage, guarantee the quality, and assess the shelf life of food by

- Applying non-destructive and multi-attribute analysis techniques by VIS-NIR to single fruits
- Evaluating the viability of the line identification of organic tomato
- Testing novel technology using mass spectrometry on a small sample for future full-scale implementation
- Combination of artificial intelligence (AI) and real-time data processing techniques with further hardware development for non-destructive ugly food identification



CTA



Instituto de Investigación
y Formación Agraria y Pesquera
Consejería de Agricultura, Ganadería,
Pesca y Desarrollo Sostenible



More information

www.zerow-project.eu

<https://www.linkedin.com/company/zerow-project>



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VEEMEE

creating sustainable food supply



VEE
MEE

Digital services:
Prevent/reduce problems in supply chain by making
available smart and efficient technology

●
Traceability platform

●
Food Waste

●
Smart logistics

Digital label

25.000
tons

On market - Neutral
Label of Origin

ASPIAG
Austria-SPAR-International

Kaufland

KONZUM

LIDL

METRO

SPAR 
HRVATSKA I SLOVENIJA

TOMMY 

PLUDINE

"Information about the origin of the food we eat is becoming one of the main factors in choosing when buying."

4.000 tons* of food

Prevented or saved from throwing

*„[4R] Re-select, Re-pack, Re-organize, Re-label – solution for
everyday problems - #0waste*

*Hight of 8 Cibona towers



**5.040
tons**

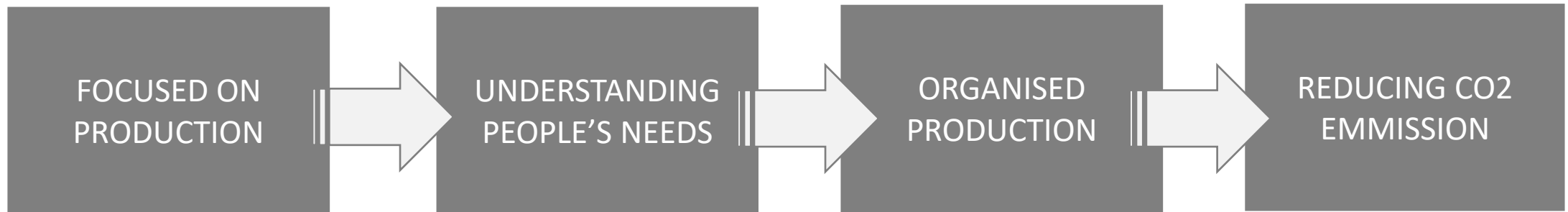
Reduced CO₂e

Smart logistic procedures

+

1 kg FW = 1,26 kg CO₂e

The largest marketplace in the production sector enabled with traceability



VeeMee Food for Less CO₂

Tofu, seitan, humus, tofuneza, vege burger, aronia juice, microgreens





VEEMEE PRODUCT – ORGANIZED PRODUCTION



Microgreens



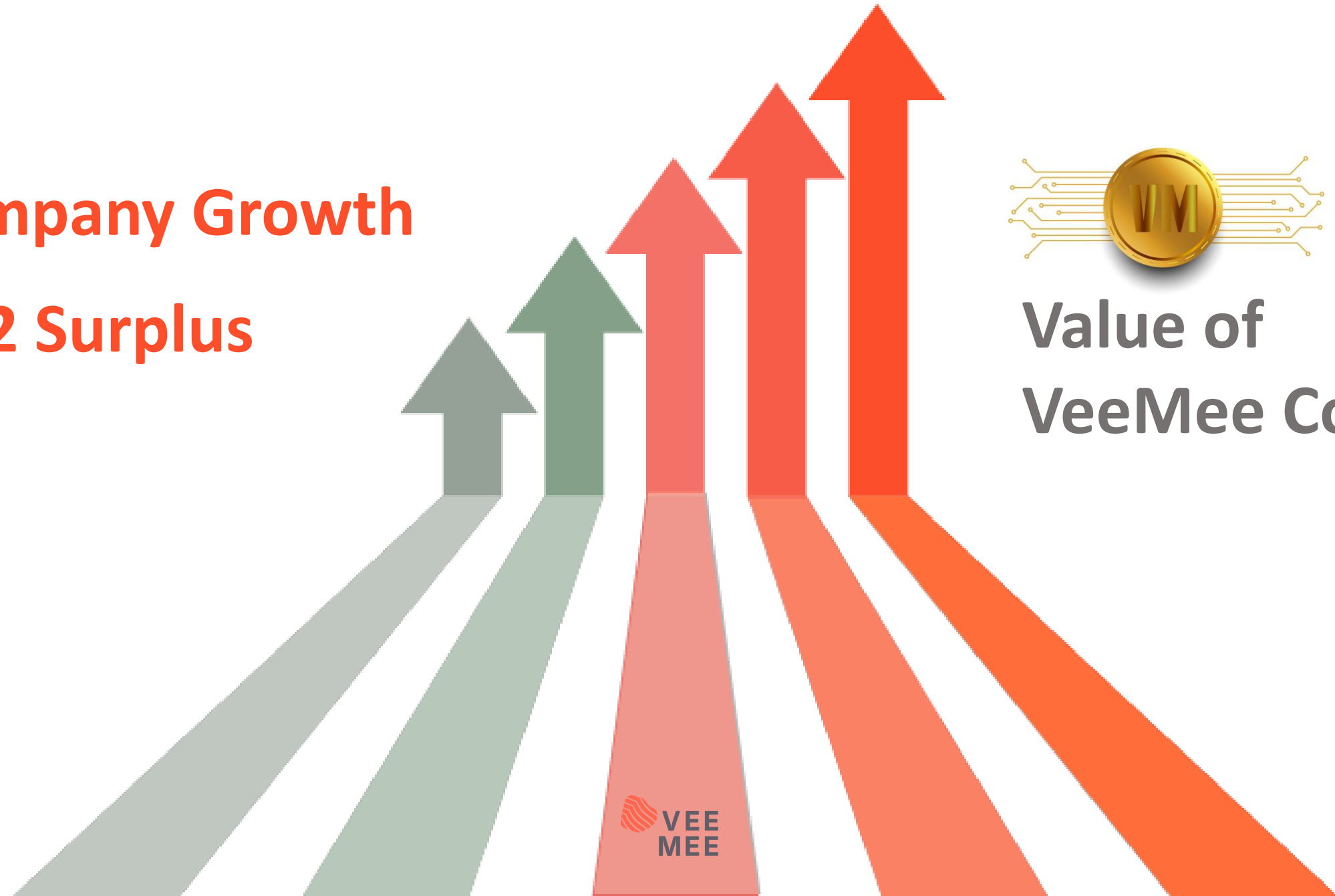
VeeMee Coin



1 VMC = XY KG/CO2



Company Growth
CO2 Surplus



**Value of
VeeMee Coin**

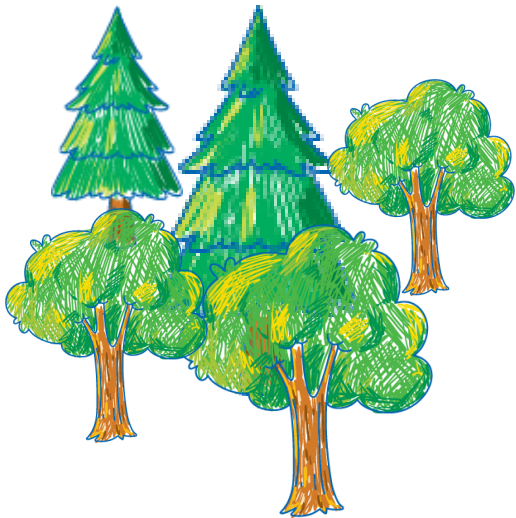




 VEE
MEE

Investing in the Future

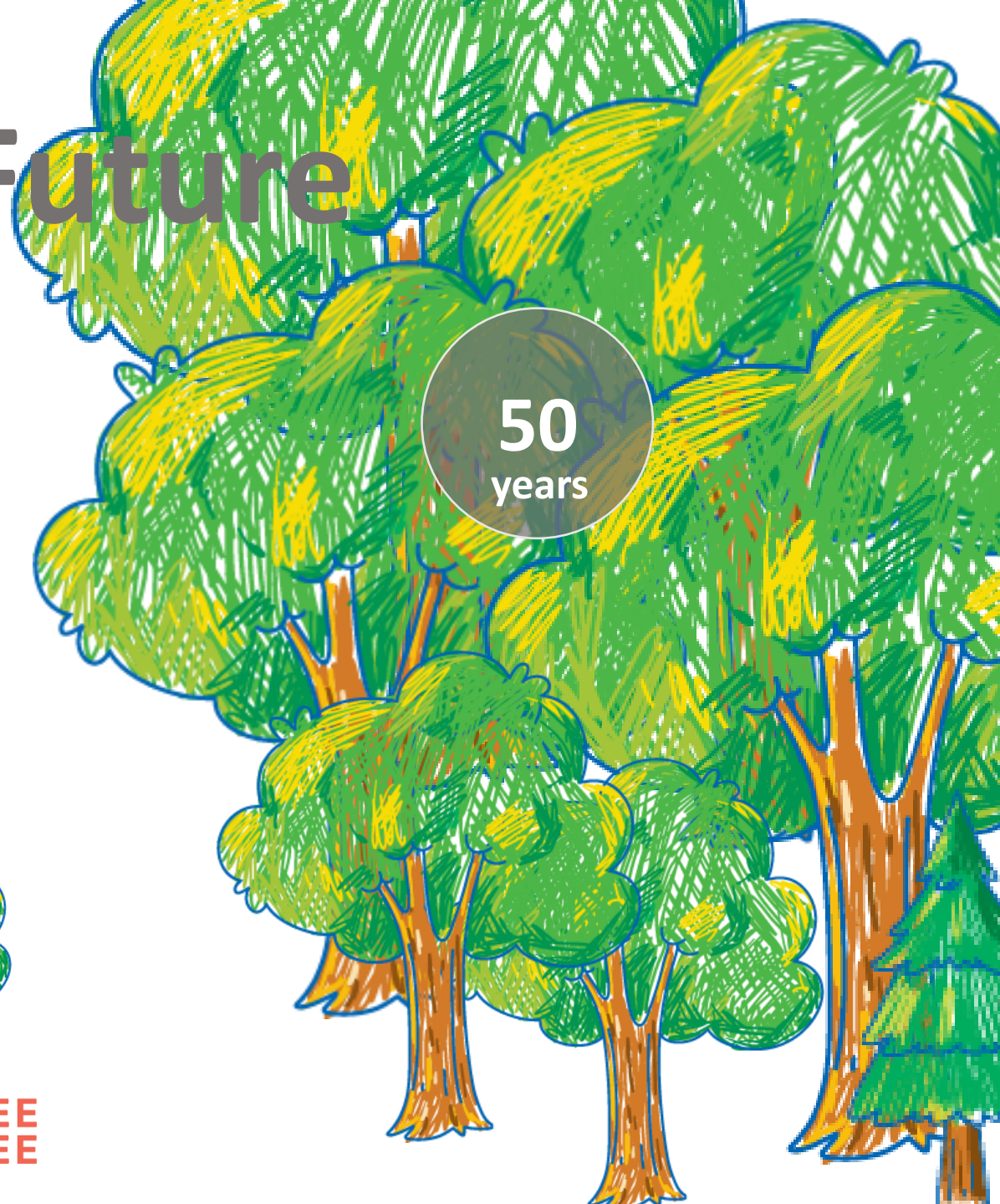
10
years



30
years



50
years



Experienced professionals from FMCG, agriculture, technology and finance



Marko Kozjak

CEO & FOUNDER

13 years experience in FMCG as Manager and Director of sales and procurement.



Nikola Vido

PARTNER &
LEGAL AFFAIRS

Senior Expert Advisor Social Work for Ministry of Justice.



Ilija Jurić

MARKETING &
OPERATIONS

Producer and explorer of new way of production: urban/vertical farming.



Jurica Čubrić

ANGEL INVESTOR

15 years experience in investment and company management



Tomislav Jakopović

TECHNOLOGY
DEVELOPMENT
ADVISOR

13 years of development and over 50 high-tech enterprise software products delivered.



Sandra Bortek

MARKETING ADVISOR

17 years of experience in marketing (branding), serial startup entrepreneur



Mihael Kvorka

PROJECT MANAGER

10 years experience – marketing and management

The Earth deserves to be taken care of



Marko Kozjak, CEO, VeeMee d.o.o.

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<https://www.linkedin.com/company/veemeeagro/>



<https://www.facebook.com/veemeehr>



<https://www.instagram.com/veemeehr/>

Alpinia

Hotels & apartments in Bohinj.

WWW.ALPINIA-GROUP.SI



- Triglav Apartments
- Hotel Bohinj
- Tuba Apartments
- Villa Muhr
- Hotel Zlatorog







A group of six women are sitting on white mats around a circular fire pit in a lush, green mountain landscape. The fire is burning brightly, and the women are engaged in conversation. The background features rolling green hills, dense evergreen trees, and distant mountains under a soft, hazy sky. The overall atmosphere is serene and inviting.

WELCOME TO OUR HOME



WELCOME TO HOTEL BOHINJ

62 ROOMS

A LA CARTE RESTAURANT

CLUB

WELLNESS

CONFERENCE ROOM

SPACIOUS GARDEN



OUR KEY SUSTAINABILITY FEATURES

*Located in Triglav National Park,
co-existing with the nature.*



OUR KEY SUSTAINABILITY FEATURES



In the process of renovation of the hotel (in 2021) we have used mostly natural materials, wood, stones, recyclable felt etc., cooperated with local & national producers

OUR KEY SUSTAINABILITY FEATURES

In the daily operation of the hotel this can be observed in:

- Heat recovery system for all ventilation systems
- Water conservation systems
- LED and energy saving lamps
- Lights control
- Usage of the recycled felt
- Cooperation with local suppliers: supporting local business and focusing on kilometer zero
- Charging station for electric vehicles in front of the hotel

...

AND

Waste sorting and focusing on food waste management

DID YOU KNOW ...

... that each of our guests gets a free pair of slippers from recycable felt, generated from 6 plastic bottles.

In 2021 approx. 41.700 plastic bottles were recycled into the annual quantity of slippers.

That's 1,4 Mount Everests.





FOOD WASTE MANAGEMENT

// key focuses

PREVENTION

RE-USE

RECYCLE

**DISPOSE AS LITTLE AS
POSSIBLE**

MANAGEMENT (EXAMPLE)

EMPLOYEES (EDUCATION)

GUESTS

PUBLIC

FOOD WASTE MANAGEMENT

// general info

Hotel Bohinj: on site restaurant

Breakfast included,
from 7:00 – 10:00 am

A la carte restaurant,
from 1:00 to 9:30 pm

Max capacity: 140 pax





FOOD WASTE MANAGEMENT // management perspective

BREAKFAST: quality over quantity

EFFECTIVE COMMUNICATION
(no. of guests)

TASTE OF LOCAL
(kilometer zero,
approx 1/3 of local delicacies)

RE-USE/CONSUME
(employees)

FOOD WASTE MANAGEMENT

// management perspective

RE-USE: SOME EXAMPLES

Various fresh fruit: apples, pears

- house compote (beverage),
Bohinjsko/From Bohinj

- daily desserts

- ...





FOOD WASTE MANAGEMENT // management perspective

A LA CARTE LUNCH & DINNER:
local & seasonal focus

**TASTE OF LOCAL / SUPPLIER
AGREEMENT & RELATIONSHIPS**

**SPECIAL TREATS / FOOD
PROVISIONING**

**ONGOING INVENTORY
MANAGEMENT AND CHECKS**

EXPECTED GUESTS' PREDICTION.

FOOD WASTE MANAGEMENT

// management perspective

RE-USE, TREATS: SOME EXAMPLES

- focus on the parts (i.e.) of the meat, which are often meant to go to waste, whereas our culinary team makes magic of it;
- using i.e. chick-peas water to make vegan desserts;
- making vegetables broth of not so common vegetables' parts ...





FOOD WASTE MANAGEMENT // guests perspective

A LA CARTE:

- mandatory reservations in advance.

EVENTS:

- mandatory selection of group menus, one week before the event.

ONGOING DAILY COMMUNICATION

AD-ONS

INSPIRE

Not just focus on food waste, should tackle the issue broader:

water,

energy consumption,

not using disposable plastics,

in general: focus on produce as little waste as possible.

CONNECT

Collaboration with locals

CREATE AWARENESS

Communication on all levels



In-house garden: started in 2023



DATA PERSPECTIVE

Average guest:

2 pounds waste daily (cca 1 kg)

Around 70% of hotel waste:
biodegradable (wet waste),
cca 0,70 kg

Hotel Bohinj data (year 2021):

Biodegradable waste/wet waste:
0,53/kg per guest/day

$0,17 \text{ kg} \times 12.265 =$

2.085,05 kg less than average



Robin Food

Connecting food and people -
saving money, food, and the planet.







IPCC 2019

**THE GLOBAL
FOOD SYSTEM IS
RESPONSIBLE FOR
UP TO 30% OF
TOTAL GHG
EMISSIONS.**



is wasted!

Estimated Food Waste in Israel* in 2020

Waste/ household NIS/month	Agriculture	Processing & Packaging	Industry	Retail & Distribution	Institutional Consumption	Household Consumption	Total
 Fruit & Vegetables	65	23	1	67	25	138	319
 Grains & Legumes	3	1	2	18	17	94	135
 Meat, Fish & Eggs	10	2	12	43	9	47	123
 Milk & Dairy	4	1	1	5	4	23	38
Total	81	26	17	133	56	302	615

49% by consumers!

PROJECT DRAWDOWN.

THE WORLD'S LEADING RESOURCE
FOR CLIMATE SOLUTIONS

TABLE OF SOLUTIONS

* Gigatons CO2 Equivalent Reduced / Sequestered (2020–2050)

	◆ SOLUTION		▼ SCENARIO 1*	◆ SCENARIO 2*
1	Reduced Food Waste	<S	90.70	101.71
2	Health and Education		85.42	85.42
3	Plant-Rich Diets	<S	65.01	91.72
	Refrigerant Management		57.75	57.75
	Tropical Forest Restoration		54.45	85.14



how we create change



workshops, lectures



catering



cooking contests



festivals



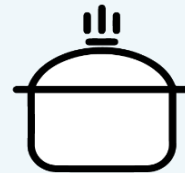
social restaurant



big events



food rescue



cook & serve



pay as you feel



direct and positive experience, giving tools





ZERO  W



Reducing food losses and waste at every stage of the food chain including **consumption**, while also avoiding unsustainable packaging

The Robin Food Challenge

- **The goal:** To create an effective, measurable and highly-scalable method to train and accompany households to change food waste habits, for life.
 - Using methods from behavioral science/economics –using ideal intervention points, integrating into existing routines, changing environment where possible
- 5-episode cooking show with recipes, tips and guiding principles
 - Daily HHFW measurement by participants with incentives for consistent measuring
 - Group of peers
 - Daily tips, weekly “activations”
 - “Wasteless Wednesday” - the weekly Robin Food challenge, the day before shopping
 - Chef hotline every day, and Wednesdays on Zoom







Thank you!

Wrap Up & Closing



Global Foodture is co-funded by the European Union's COSME Programme. The content of this document represents the views of the author only and is his/her sole responsibility; it cannot be considered to reflect the views of the European Commission and/or the European Innovation Council and SMEs Executive Agency (EISMEA) or any other body of the European Union. The European Commission and the Agency do not accept any responsibility for use that may be made of the information it contains.

Next activities

Global Foodture mission Singapore

Singapore International Agrifood Week (SIAW)

with company visits, matchmaking, networking, pitching opportunities, visiting the exhibition

Application travel voucher (1000 euros): 5 - 25 June via the Global Foodture Community platform



Online Activities

- 15 June
Workshop 9: Fermentation a cutting-edge technology?
- 6 July
Workshop 10: Packaged food. Food waste reduction solutions in food packaging for take-away and retail
- 21 September
Workshop 11: Bringing urban farming to new heights through breakthrough technologies and innovative business models

Foodpolis 13th International conference

- **Topic** The “Big Blur” Phenomenon and the Solutions for the Food industry
- **Date** : May 24th, 06:30AM~10:20 CET
(13:30~17:30 KST)
- **Location** : online(Youtube LIVE) & Offline(Foodpolis)
- **RSVP** : Please register through the website
https://en.fpics.co.kr/conference_regist
- **Do not miss the special tour for on-site attendants!**



Dan Solis
Assistant Commissioner of
FDA, USA



Kwon Ki Hyun
Head of Researchers,
Korea Food Research Institute



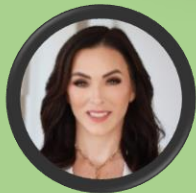
Yei So won
Director of Cognex, USA



Lee Hyun Jae
Director of Woowa Bros,
KOR



Jang Jin Ho
Founder & CEO of
Punta Company,
KOR



Christine Lewington
Founder & CEO of
PIP international, CAN



Jung Ji Won
R&D Master of
CJ Cheiljedang,
KOR



Lars Visbech Sørensen
CEO of Food and Bio Cluster,
DK



Youn Jong Pil
Project Manager
of
SK telecom,KOR

Time	Contents	Speaker
<Opening>		
06:30~06:33	• Opening address	Youngjae kim CEO of The Food industry Promotional Agency of Korea
06:33~06:36	• Welcoming address	Hwangkeun Chung Minister of Agriculture, Food and Rural Affairs
06:36~06:50	• Congratulatory message	Member of national Assembly, etc.
< Keynote speech >		
06:50~07:10	• FDA Artificial Intelligence Imported Seafood Pilot Program	Dan R. Solis FDA Assistant Commissioner
< Session 1 > FoodTech		
07:10~07:25	• Research and empirical case for digital factory transformation based on food tech in the food industry	Ki Hyun Kwon KFRI Research Head
07:25~07:40	• Technology of Machine Vision & DeepLearning in Food industry	Yie Navid Director of Cognex
07:40~07:50	• Q & A	
< Session 2 > On-demand		
07:50~08:05	• Future Prospects of Foodtech	Hyunjae Lee Woowa Bros Head Director
08:05~08:20	• The core value of online tasting, the Present and past of the “Sikhugyung”(taste before you buy)platform ecosystem	Jang Jin Ho Founder & CEO of Punta Company, KOR
08:20~08:30	• Q & A	-
08:30~08:50	Break time	-
< Session 3 > Food Engineering		
08:50~09:10	• Revolutionizing Agriculture and Agri-tech with Plant Proteins: PIP International's Innovation and Leadership in Alberta, Canada	Christine Lewington Founder & CEO of PIP international, CAN
09:10~09:25	• Development of raw materials for food processing	Jung Ji Won R&D Master of CJ Cheiljedang, KOR
09:25~09:35	• Q & A	-
< Session 4 > InfraTech		
09:35~09:50	• Food & Bio Cluster Denmark introduction of the Global Foodture Project	Lars Visbech Sørensen CEO of Food and Bio Cluster, DK
09:50~10:05	• Private 5G network-based services for food factories	Youn Jong Pil Project Manager of SK telecom,KOR
10:05~10:15	• Q & A	
10:15~10:20	• Closing	-

Matchmaking beyond events

Long term matchmaking

- You can book and have meetings beyond the dedicated events throughout the entire period from October 2022-October 2023.
- Over 650 participants has registered on the platform
- Eg. You e-meet a participant at one of the workshops or trainings, then you through your profile then request a meeting with the person. Wait for a reply and if positive, then book and have the meeting





Global 
FOODTURE

Thank you!

[Follow us](#) to stay up to date or reach out via email!

Register at www.globalfoodture.b2match.io

Tjerna Ellenbroek - Tjerna.ellenbroek@foodvalley.nl & Darja Kukovic - Darja.kukovic@itc-cluster.com