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# STRATEGIES TO REDUCE FOOD LOSSES IN THE AGRI-FOOD INDUSTRY

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Cofinanciado por:



# AGENDA:

COLAB4FOOD

INTRODUCTION (CIRCULAR ECONOMY TRANSITION AND  
GOOD PRACTICES IN THE AGRI-FOOD SECTOR)

CASE STUDIES

CONCLUSIONS

COLAB4FOOD



# MISSION

*Colab4Food*

*“Our purpose is to redefine the way we innovate collaboratively for a sustainable growth of our associates and higher resilience and competitiveness of the food sector.*

*At Colab4Food, we combine expertise and creativity to strengthen our R&I footprint.*

*Together we develop more sustainable food processes, novel nutritive foods and tailored solutions to our customers that will improve their consumers delight, health and well-being.”*

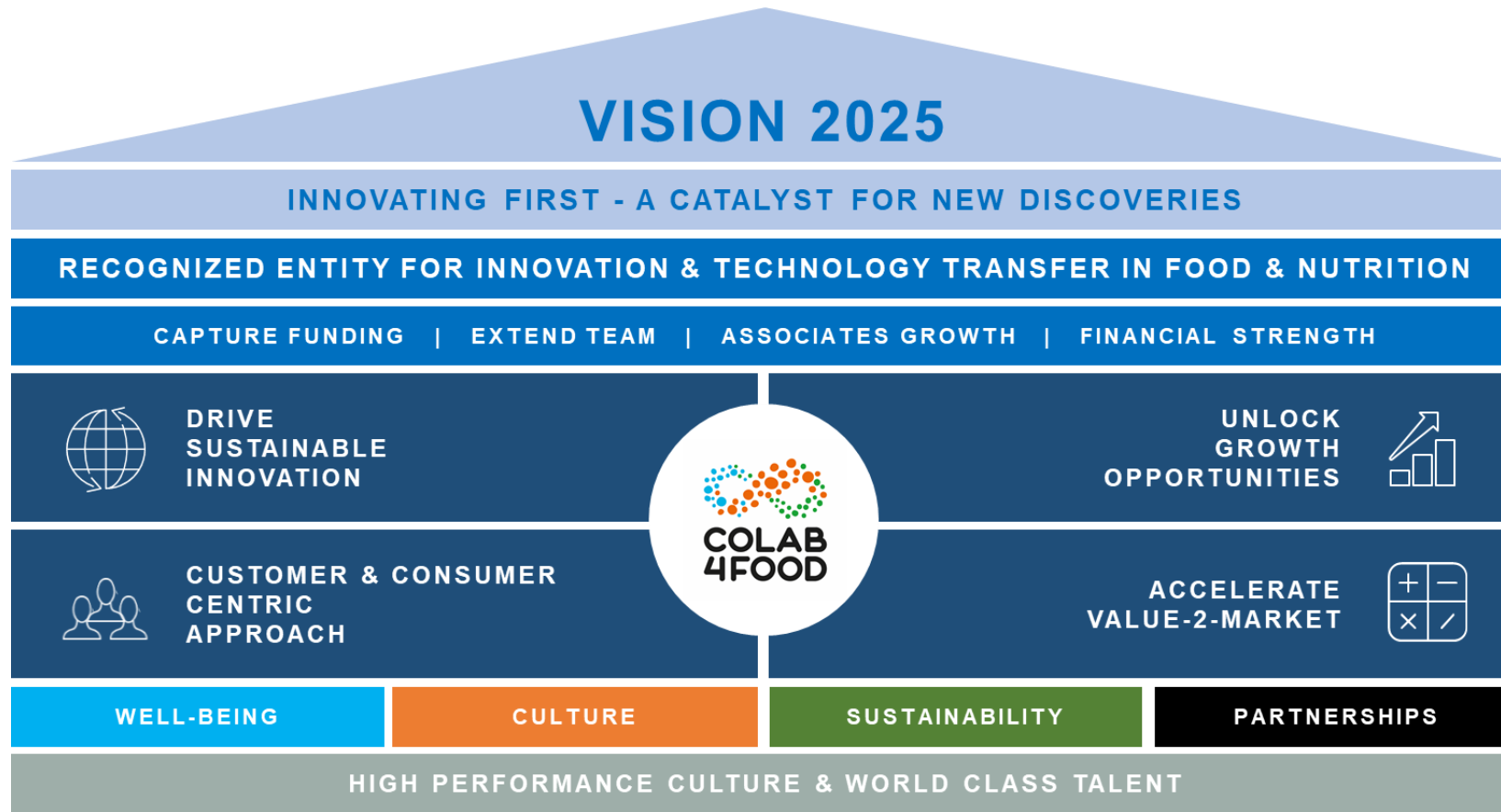
*Miguel Teixeira, Director Colab4Food*

# ASSOCIATES & STRATEGIC PARTNERS



# VISION

*Sustainable & Responsible growth in the Food Sector*



# SERVICES

## Associates, Strategic Partners & Clients

### SCIENCE & TECHNOLOGY

- |  |  |
|--|--|
|  State-of-the-art review                                  |  Troubleshooting & technical consultancy  |
|  Development & optimization of food formulations          |  Proof of concept for new technologies    |
|  Science4Food - access & review of articles & conferences |  Academy4Food - internships for students. |

### MARKET

- |   |  |
|---|--|
|  Business intelligence (ingredients, packaging & claims) |  Suppliers identification (incl. ingredients, formulations & food technologies) |
|  Market & consumer trends analysis                       |  Development of technical & scientific roadmaps                                 |

### R&D FUNDING

- |   |  |
|---|--|
|  Consultancy for R&D funding |  Support in the process of tax incentives SIFIDE & patent box |
|---|--|







### PRODUCT DESIGN & TRAINING

- |  |  |
|--|--|
|  Training4Food - specialized & personalized technical courses |  Product design & database structuring services in information technology |
|--|--|

### ADVANTAGES FOR ASSOCIATES

- |  |   |
|--|---|
|  Access to a network of contacts & services in the agri-food sector |  Innovative R&D projects with international & reference partners |
|  Discount on R&D services & SIFIDE reports                          |  Bank of hours exclusively dedicated to Associates               |

### SERVICES WITHIN THE BANK OF HOURS

- |   |  |
|---|--|
|  State-of-the-art review     |  Academy4Food - internships for students.                 |
|  Suppliers identification    |  Development of technical & scientific roadmaps           |
|  Consultancy for R&D funding |  Science4Food - access & review of articles & conferences |

### EXCLUSIVITY

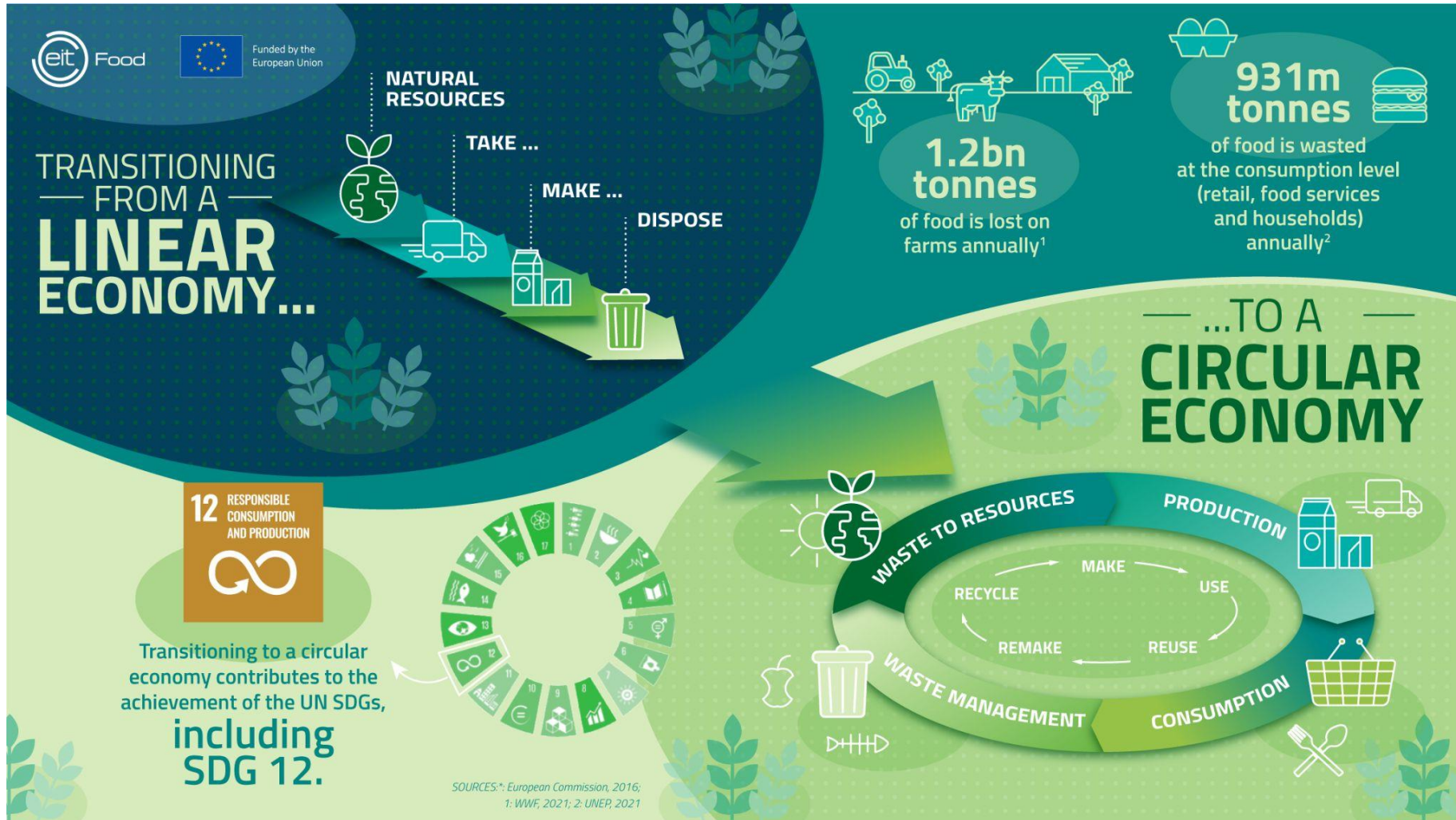
- |  |  |
|--|--|
|  Calendar4Food - newsletters with compiled information from reference events                    |  Info4Food - infographics with relevant information about ingredients, new products, technologies, market, & other related topics |
|  Connect4Food - workshops to promote collaborative innovation with associates                   |  Regulatory4Food - newsletter with the latest regulatory updates (PT & EU)  |
|  Funding4Food - newsletters with executive summaries of major funding opportunities (PT & EU) |  News4Food - newsletters with relevant national & international news  |
|  Ingredients4Food - database of food ingredients & suppliers.                                 |  |

*\*Associates & Strategic Partners benefit from preferential rates & conditions*

# INTRODUCTION



# CIRCULAR ECONOMY TRANSITION



[\(99+\) Publicação | LinkedIn](#)

# SUSTAINABLE DEVELOPMENT GOALS (SDGs)



The United Nations proposed the **SDGs** to achieve **sustainable development**, **reduce poverty** and **promote food and nutrition security** with specific goals and objectives.

The SDGs more related to food systems are :



# GOOD PRACTICES IN THE AGRI-FOOD SECTOR



**1. Sustainable and Regenerative Production:** Ensure the regeneration of systems, ensuring that production is carried out in harmony and symbiosis with natural systems, respecting their cycles.



**2. Circular Purchases:** Establish purchasing criteria that assess issues such as origin, certifications, commitment to sustainability/circularity, product safety and health, etc..



**3. Residues turn Resources:** Valorization of by-products, promoting the reuse and enhancement of raw materials that are already circulating in the economy, generating economic, environmental and social benefits.



**4. Packaging:** Eliminate packaging that does not generate value and promote increased reuse of packaging and circulation of materials, reducing dependence on virgin raw materials.



**5. Distribution and Retail:** Optimize distribution and logistics systems, promoting increased sustainability and sharing in the distribution chain, aligning processes towards circularity.



**6. Energy and Water Resources:** Ensuring the intelligent use of energy and water resources, promoting increasing efficiency in the use of these resources and innovation.



**7. Waste Management:** Properly route the solid waste generated and ensure that all employees know the correct procedures to be carried out in their management.



**8. People and Partnerships Management:** Invest in the training of teams in the key areas related to this topic and promote dialogue and synergies with various partners along the value chain.

## CASE STUDIES



# METHODOLOGY

5 Case studies of national and international products / companies



## 1. Identification of the Good Practices implemented

- 1. Sustainable Production
- 2. Circular Purchases
- 3. Residues turn Resources
- 4. Packaging
- 5. Distribution and Retail
- 6. Energy and Water Resources
- 7. Waste Management
- 8. People & partnership

&

## 2. Degree of implementation of each Good Practice

- High
- Medium
- Low

# FRUEAT: FRUIT



- ✓ Use of **fruit rejected** by the market, due to its size, irregular shape or marks on the skin, **contributing to the reduction of food waste**
- ✓ The peels and pits from the production are used for animal feed
- ✓ No chemicals are applied in production
- ✓ We only use water for washing and transport

## Impacts

10

**used fruit pieces**  
(millions)

7,5

**fruit enjoyed**  
(millions of kgs)

750

**peels and pits used in animal feed**  
(tons)

18,4

**avoided the emission into the atmosphere, which corresponds to less 141,520 km traveled by car**  
(tCO<sub>2</sub>)

### Good practices



Sustainable  
production



Residues turn  
resources



Energy  
and water



# SUMOL+COMPAL



sumol+compal



Beverages



Big Company



1,100  
Employees



228 M EUR

- ✓ Incorporation of **recycled** and **renewable materials** and also in **ecodesign** aimed at ↑ **packaging recyclability** and **circularity**
- ✓ **New 1L packs of Compal Tetra Stelo™ Aseptic** (86.5% material of plant origin → 20% less of CO<sub>2</sub> emissions)
- ✓ **Incorporation of recycled PET**
- ✓ **Returnable glass bottles**

## Impacts

98

**Recovered or recycled waste**  
(%)

3,2

**CO<sub>2</sub> emissions at PT industrial units**  
(kg/ hL VP)

22

**Incorporation of rPET in packaging**  
(%)

[S+C 2021 data]

100

**Electricity from renewable sources**  
(%) (from 2022)

### Good practices



Residues turn  
resources



Packaging



Energy  
and water



GNT GROUP B.V.

EXBERRY®



<https://sustainability2021.exberry.com/exberry-sustainability/summary>



Natural coloring foodstuff



Family-owned company  
Nederland, Germany and USA



421  
Employees in 11  
countries



11500 t EXBERRY® Coloring Foods / year  
+ 30 different raw materials  
+ 50% own crop's volumes from own seeds  
~80% crops are grown in fields <200 km from factories

- ✓ In 2021, carbon footprint was 16 000 t CO<sub>2</sub>-equivalent & water footprint was 653 454 m<sup>3</sup> water.

### Goals until 2030:

- ✓ 100% farmers in sustainable agriculture and processing training programs & implement 10 biodiversity projects (1 in place | 2022)
- ✓ Valorize 75% of side streams for human consumption
- ✓ Improve water efficiency in factories by 20%
- ✓ Reduce CO<sub>2</sub>-equivalent emissions in factories by 50% and intralogistics by 15%. Improve energy efficiency in factories by 30%
- ✓ Implement five social livelihood projects along supply chain
- ✓ Upcoming ISO 50001 energy certification

## Impacts

60

**Farmers with training in sustainable agriculture**  
(%)

16

**Reduction GHG carbon emission (2021 vs. 2020). Less 16% kg CO<sub>2</sub> / kg product**  
(%)

22

**Reduction water consumption t / product (2021 vs 2020)**  
(%)

2,7

**Number of accidents / year/ 200,000 working hours leading to absence (in 2020 was 5.3)**

### Good practices



Sustainable production



Residues turn resources



Distribution and retail



Energy and water



People & partnership



# SOVENA



Production of vegetable oils



Big Company



1,200 Employees



1,200 M EUR (in Portugal)

- ✓ In 2020, **94% of the waste produced at Sovena was subsequently reused**
- ✓ Committed to **reducing** its carbon emissions by **30% by 2023**
- ✓ **100% of the electricity** used comes from **renewable energy sources since 2020**
- ✓ Commitment to **reduce the use of virgin plastic by 31% by 2025**
- ✓ **More sustainable and easier to recycle packaging:** incorporation of **20% recycled PET** and **pigment reduction**

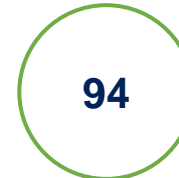
## Impacts\*



**The water supplied is captured by the olive trees**  
(%)



**CO<sub>2</sub> emissions**  
(tons)



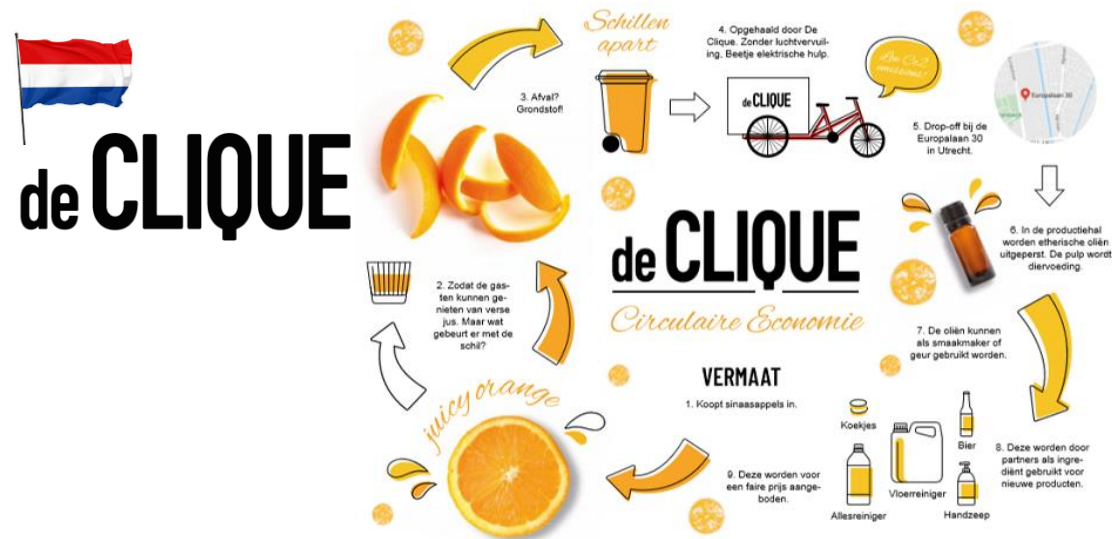
**Waste reused, transformed or recovered**  
(%)



**Incorporation of rPET in plastic bottles**  
(%) **of your brands**



# de CLIQUE



- ✓ Collects **by-products** like **coffee grounds**, **orange peels** and other waste using **bicycles** and **electric vehicles**
- ✓ **By-products** are sold to partners, who **transform them into new products**, such as **food ingredients**, **cosmetics** and **biomaterials**
- ✓ Companies “capture” the **value of organic waste streams** to produce **new products** and build a **local bioeconomy**

## Impacts

0.6

CO<sub>2</sub> emissions avoided / 1 kg of waste transformed into compost (Kg)

0.7

CO<sub>2</sub> emissions avoided / 1 kg of reused orange peel (Kg)

4.6

CO<sub>2</sub> emissions avoided / 1 kg of reused coffee grounds (Kg)

### Good practices



Distribution and retail



Waste management



People & partnership



# CONCLUSIONS





# THANK YOU!

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