

*3rd ReTraCE ESR Training School on “Innovative Bottom-up Circular Economy Business Models” 7th -11th December 2020*



**GALACTEUM**  
rediscovering the milky way

**Day 4 (10th December) – Meet the circular economy entrepreneurs & investors**

*Dr. Ángel Pereira, GALACTEUM Chief Innovation Officer*



*Every day Galacteum provides the highest quality ingredients to its customers, operating mainly in the food, infant and functional food sectors.*



## About us: values

GALACTEUM

**Engagement**  
Teamwork, commitment,  
respect and responsibility



### Integration

Honesty and responsibility  
with our shareholders and  
with the environment.

### Innovation

Differentiation,  
generation of added  
value, new processes  
and technologies



# About us: team

# GALACTEUM



Shareholders



MAJORITY



25%



Team

**43 people** with the mission of being a referent in the dairy and ingredients sector  
**43 people** with the same values: innovation, integration and integrity

JUAN CORDONIÉ

CHIEF EXECUTIVE OFFICER

Before: Industrial Dir.  
Leche Celis

JOSÉ CONDE

COMMERCIAL DIR

Before: Category Manager  
Schweppes Suntory

JAIME GARRIDO

INDUSTRIAL DIRECTOR

Before: European Plant Manager

ANGEL PEREIRA, Ph.D.

CHIEF INNOVATION OFFICER

Before: I+D+D Dir.  
Quecuar

MANUEL SALGUEIRO

FINANCIAL DIR.

Before: Consultant  
Deloitte España





# About us: milestones

# GALACTEUM



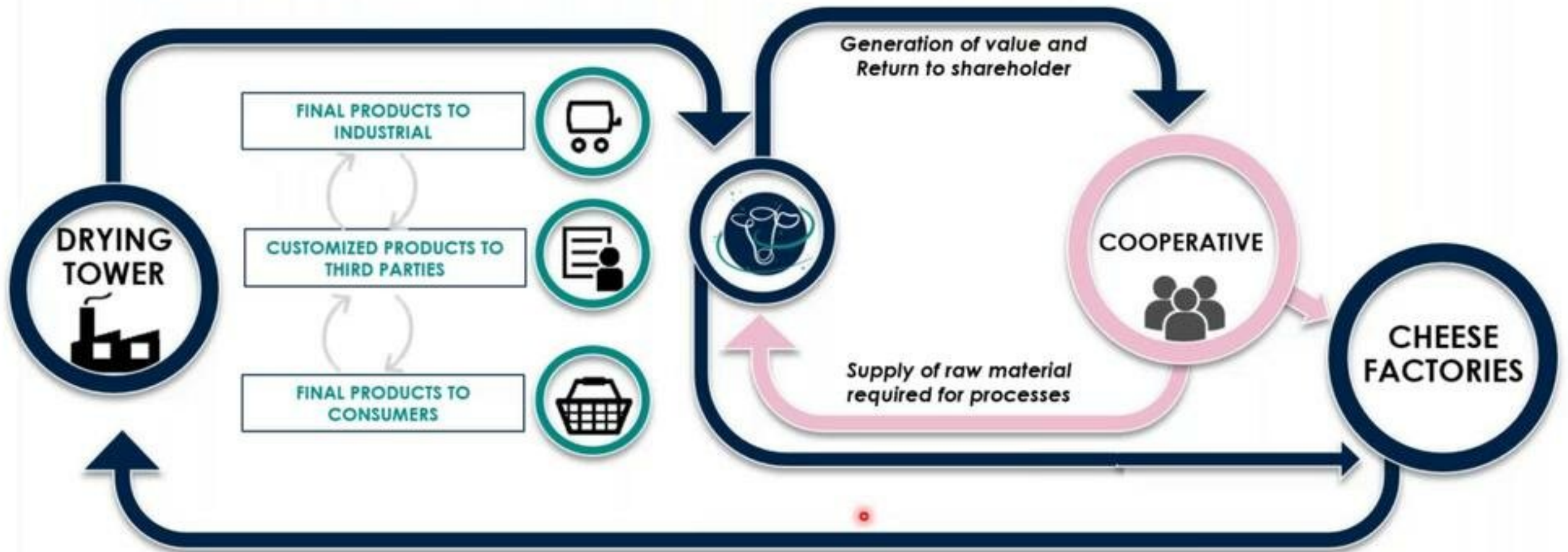
Turnover 2019: **18 M€**

Investment 2016-2020 > **20 M€**



About us: vertical integration and **circular economy** core business

**GALACTEUM**



## About us: facilities

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2001: Milk and whey treatment plant

### Reception, storage and treatment of milk and whey:

- Skim and pasteurized line
- Membrane conc. equipment (UF, NF, RO)
- CAPACITY: 250.000.000 l



2018: Drying facility

### Dry facility:

- Skimmed milk powder 1% fat
- Demineralized whey powder up to D90
- Customized dairy ingredients
- CAPACITY: 20-30.000 kg/day



2001: FMCG plant

### FMCG Plant:

- Pasteurized milk
- Pasteurized cream
- Clarified whey butter





## About us: product range

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01

### Milk Ingredients

Demineralized whey powder D90, D70 and D50  
Demineralized whey powder Feed Grade  
Butter milk powder

02

### Milk Powders

Skimmed milk powder Infant Formula & Food Grade  
Instant skimmed milk powder  
Organic skimmed milk powder Food Grade

03

### Dairy liquids

Raw/Pasteurized/Skimmed/Skimmed milk concentrate  
Cream  
Whey permeate  
Whey concentrate  
Organic milk

04

### Butter

Clarified Butter 99,8%fat  
Whey Butter

05

### Cheese

Edam, Gouda, Maasdam  
PDO Arzúa-Ulloa, PDO Tetilla





PowerPoint ribbon menu with categories: Nueva diapositiva, Tabla, Imágenes, Formas, SmartArt, Gráficos, Complementos, Vídeos, Comentarios, Cuadro de texto, Encabezado y pie de página, WordArt, Fecha y hora, Número de diapositiva, Ecuación, Símbolos, Vídeos, Audio, Multimedia.



Zoom meeting interface on the right side of the screen. It includes a video call window showing a participant, a chat window, and a settings panel titled 'Ajustes' (Settings) for the audio device. The settings panel shows 'Equipo' (Device) as 'Logitech QuickCam E3500' and 'Teléfono' (Phone) as 'El audio del equipo está activado'. There are volume controls for 'Auriculares con micrófono (Drept...)' and a red button to 'Desactivar audio del equipo' (Turn off device audio).



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rediscovering the milky way



2020-12-10 - RETRACE

Inicio Compartir Vista

Acción de Acceso rápido Copiar Pegar No Copiar nada de acceso Preparar acceso directo

Organizar

Acción

Seleccionar todo No seleccionar nada Iniciar selección Insertar selección

2020 - 2020-12-10 - RETRACE

Buscar en 2020-12-10 - RETRACE

Nombre	Fecha de modificación	Tipo	Tamaño
2020-10-13 presentacion Economia circular.pptx	20/11/2020 16:57	Presentación de Micro...	11,347 KB
2020-12-10 - GALACTEUM_RETRACE_AFR.pdf	09/12/2020 13:07	Informe Acrobat Docum...	1,821 KB
2020-12-10 - GALACTEUM_RETRACE_AFR.ppt	09/12/2020 13:47	Presentación de Micro...	30,171 KB
GALACTEUM_EN_AFR.ppt	09/12/2020 13:39	Presentación de Micro...	15,603 KB
RETRACE - 4th Training Thesaurus - Agenda - ONL	10/11/2020 13:39	Documento de Micro...	23 KB

Acceso rápido Escritorio Descargas Documentos Imágenes Google Drive File F 2020-09-24 - Videos BICPOL ANTIFICACIÓN 202 Servicios Tecnológicos Dropbox Archivos de Dropbox BICPOL\_DAREYLAC VIRAL\_DAREYLAC Material Alumnos Este equipo Descargas Documentos Escritorio Imágenes Música Objetos 3D Videos OS (C:) Google Drive File F Descargas (1,182 MB) Red

3 elementos 3 elementos seleccionados 20,4 MB

Galacteum  
Covering the milky way

10:48 18/12/2020

Taskbar icons: Acrobat II, Evernote, Spotify, Dropbox, Skype, Microsoft Teams, Star Zoom, Cisco Webex Meetings, Google Chat, WhatsApp, Signal, WeChat, Telegram, Google Keep, Minify MiniManag..., SmartPS, OEL Studio, MOSAIC FOS MANAGE, FossManager Life Europa02, FossManager Europa02 on v..., AnyDesk Live, TeamViewer, Paint, Calculadora, LibreOffice 6.2

Desktop icons: Toi Escaner, Danytel, Danytel, RADM Department, CD, CAU, Universidad Galacteum, PROYECTOS 1404, FICHAS TECNICAS, Acceso antiguo 50, Escaner común (192.168.1.50), LinkedIn, ECDH MP CSZ, Toi Access Server bit, Escaner 03, acceso, Server, Directorio Foss, Nuevo servidor rdp, FossClient VPN





Microsoft

# PowerPoint

Office 2019

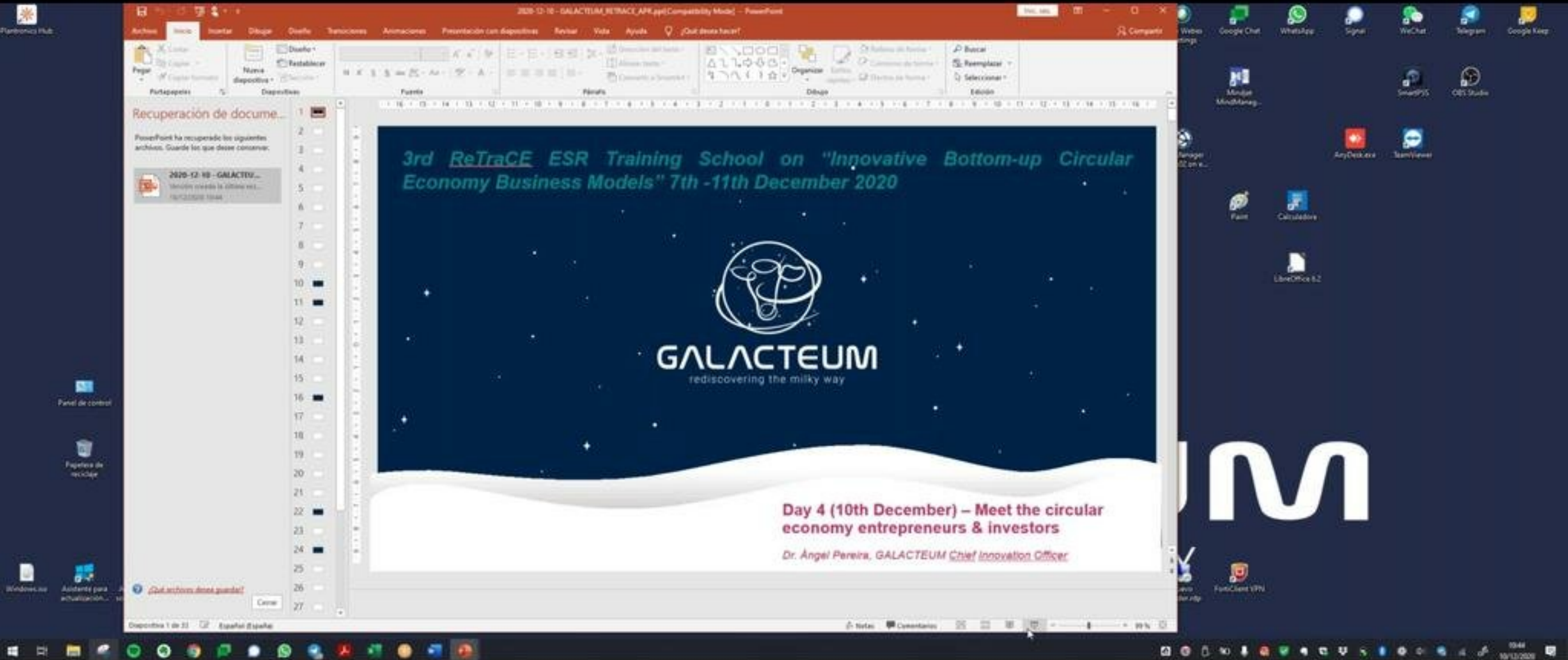
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## About us: product range

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### **INDUSTRIAL PRODUCT (B2B)**

- **LIQUID products for the food industry**
  - Type: raw, semi, skimmed, concentrated milk
  - Technologies: skimming, pasteurization, concentration (UF, NF, RO)
  - Sizes: tanks 25-15,000 L., BIB 1,000 L
- **POWDER products for the food industry and infant formula sector**
  - Milk powder 1% fat
  - D50 whey powder
  - D70 whey powder
  - D90 whey powder

### **FINAL PRODUCT (B2C)**

- **FMCG and Food Service products**



- Pasteurized milk
- Pasteurized cream
- Clarified butter
- Cheeses
- PDO cheeses





# R&D&I Projects

About us: R&D&I focused on increasing our circular economy business model

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# BIOPOL

- Obtaining BIOPOLymers from by-products of the dairy industry and application in sectors of interest
- Conectapeme 2018 (regional call) funded by GAIN (Galician Innovation Agency) and cofunded with ERDF (European Regional Development Fund)

INDUTec

  
GRUPO CARINSA

  
soelec

  
ENSO



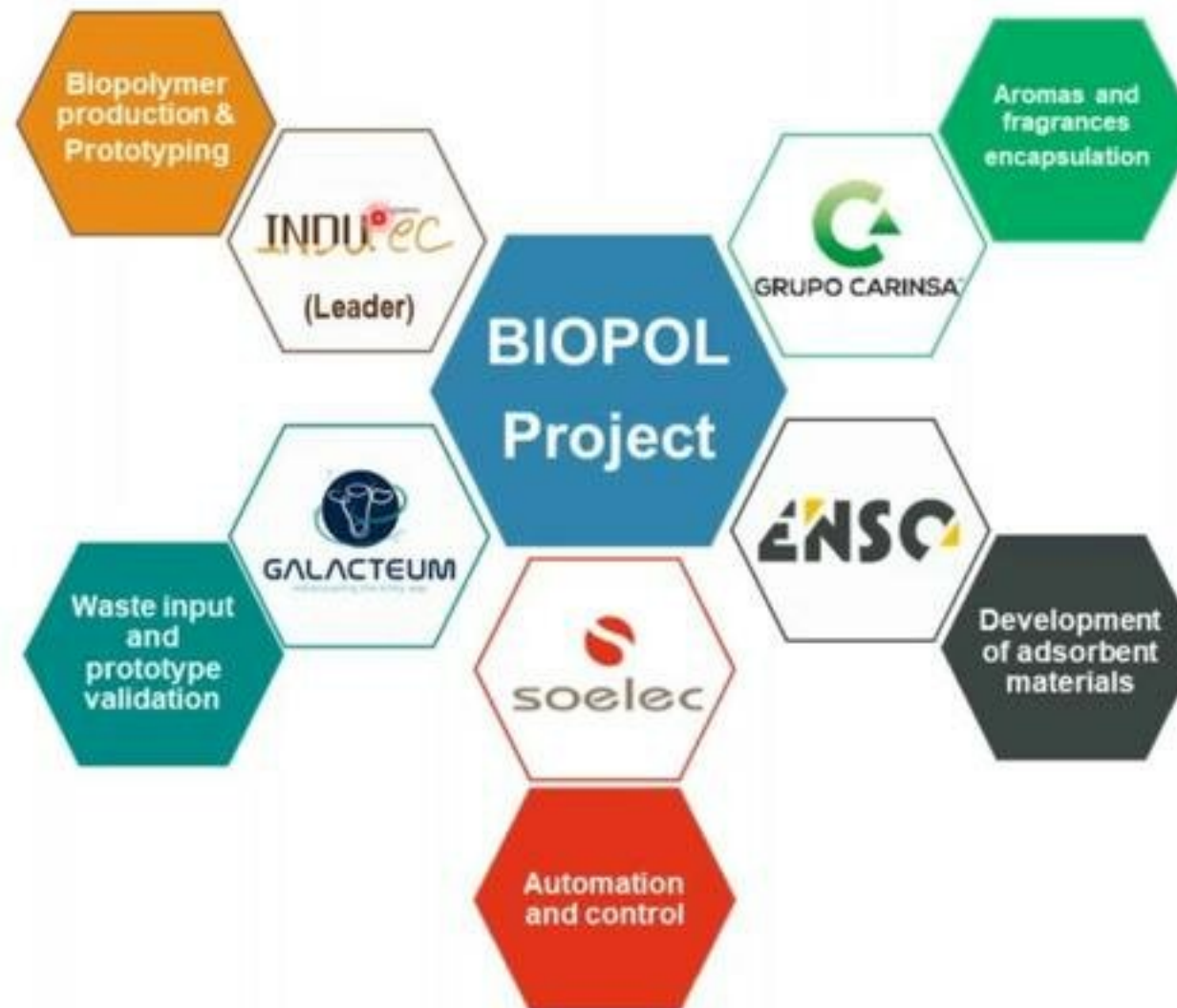
BIOPOL project is subsidized by the Axencia Galega de Innovación as part of the 2018 call for the CONNECT SME Programme. It has been supported by the Consellería de Economía, Empleo y Industria (Xunta de Galicia) and has co-financing of the European Regional Development Fund (ERDF) within the framework of the Operational Programme ERDF Galicia 2014-2020, Thematic Objective 1: "Promoting technological development, innovation and quality research"



About us: R&D&I focused on increasing our circular economy business model

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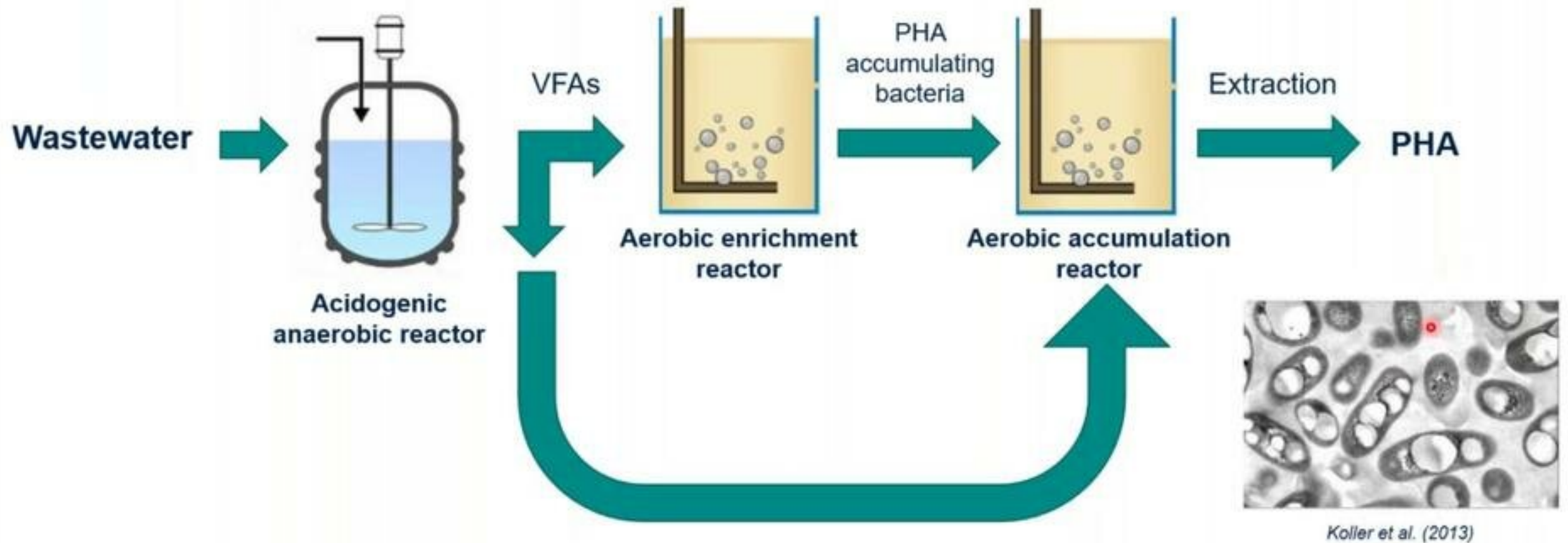
## Partnership



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## Biopolymers



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## Biopolymers

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## Biopolymers

Aerobic enrichment reactor

Aerobic accumulation reactor

Acidogenic anaerobic reactor





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## Biopolymers

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**VARAL**

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- **Comprehensive valorization of by-products and residual effluents in the dairy sector (VARAL)**
- Conectapeme 2018 (regional call) funded by GAIN (Galician Innovation Agency) and cofunded with ERDF (European Regional Development Fund)

**PRESTES**  
QUESERÍA

**INDUTec**



**Glaucor**



**aimen**  
CENTRO TECNOLÓGICO

VARAL project is subsidized by the Axencia Galega de Innovación within the framework of the 2018 call for the CONNECT SME Programme. It has been supported by the Consellería de Economía, Empleo y Industria (Xunta de Galicia) and has co-financing of the European Regional Development Fund (ERDF) within the framework of the Operational Programme ERDF Galicia 2014-2020, Thematic Objective 1: "Promoting technological development, innovation and quality research"



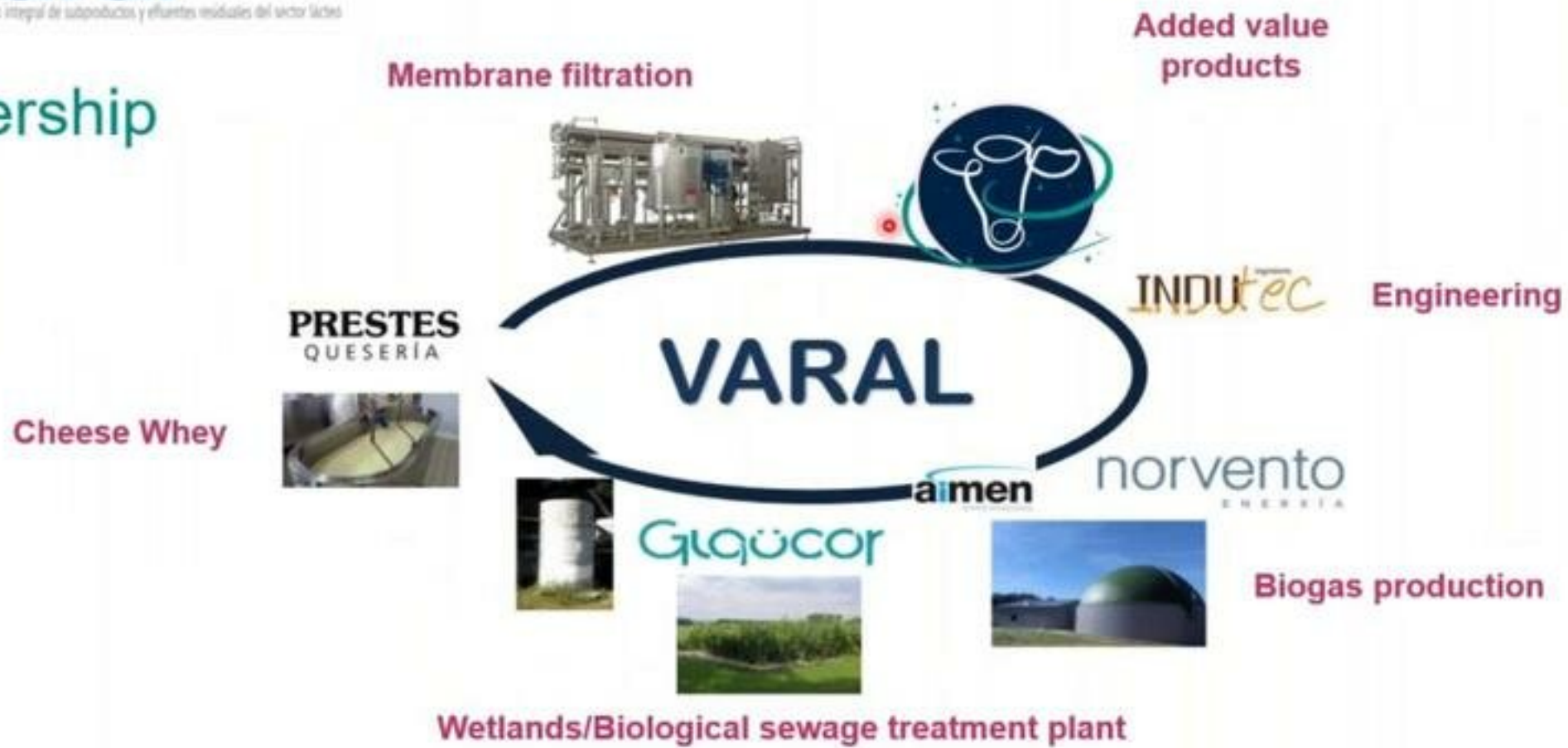


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Partnership



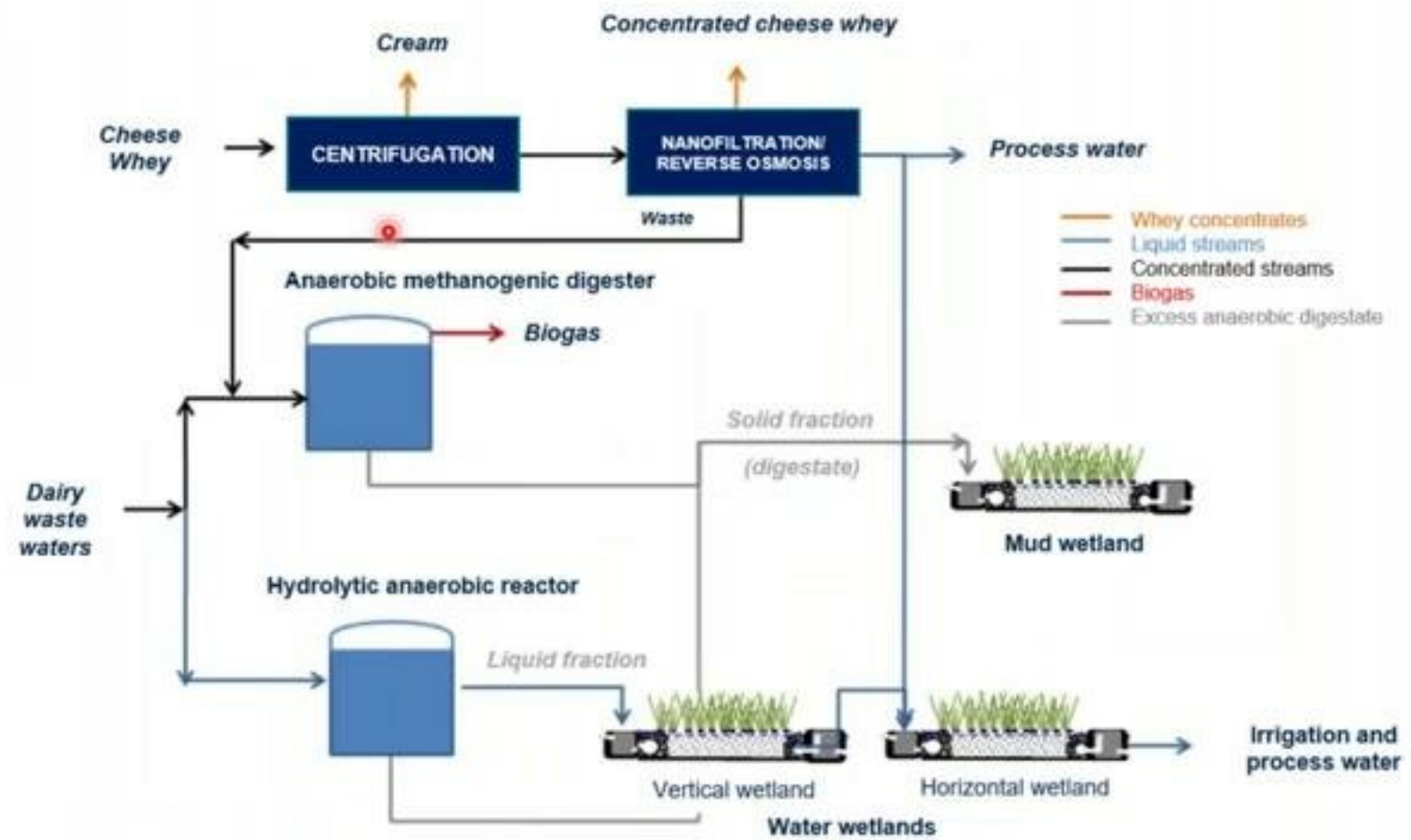


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# Process



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## Process

Hydrolytic anaerobic reactor

Anaerobic methanogenic digester



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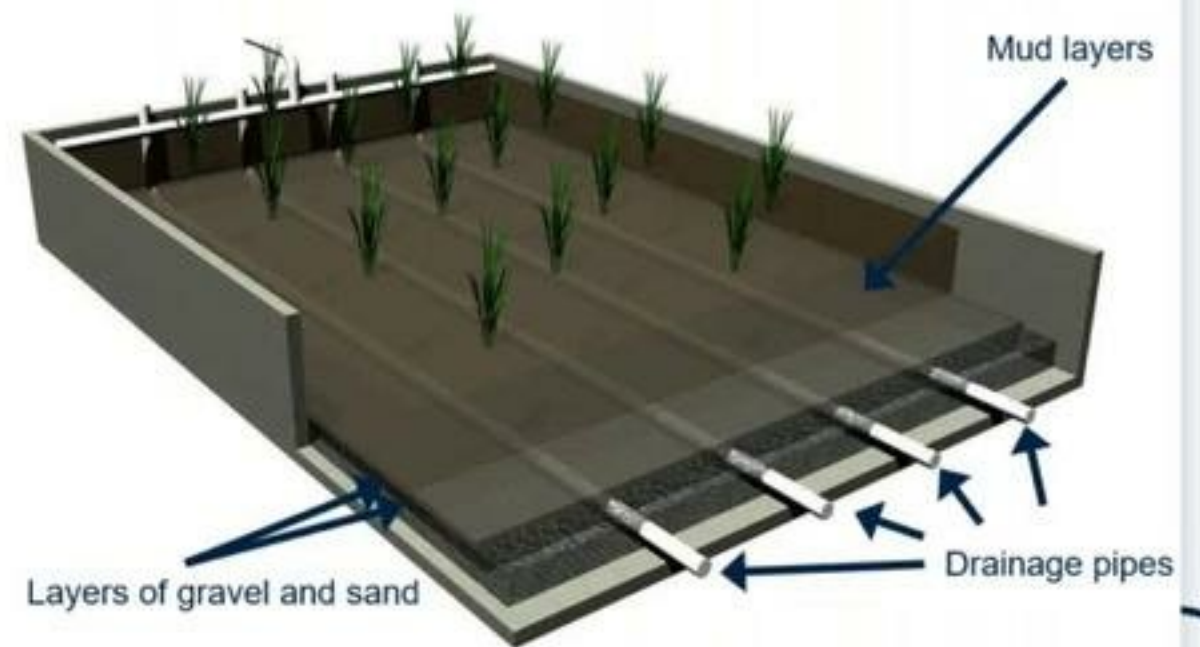


## Process

- Vertical wetland



- Mud wetland





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## Process





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Process



agencia galega de innovación



XUNTA DE GALICIA  
CONSELLERÍA DE  
ECONOMÍA E INDUSTRIA



FONDO EUROPEO DE DESENVOLVEMENTO  
REGIONAL  
"Unha maneira de facer Europa"

UNIÓN EUROPEA





**PACKAGING**



# PACKAGING



RENEWABLE



ZERO CO<sub>2</sub>



RESPONSIBLE



GALEGA 100%  
CERTIFICADO POR AENOR  
nº registro: 1504



## Tetra Rex Bio-Based

- 100% from renewable fonts
- 100% recyclable
- Cardboard and biopolymer from sugar cane
- Carbon neutral emissions



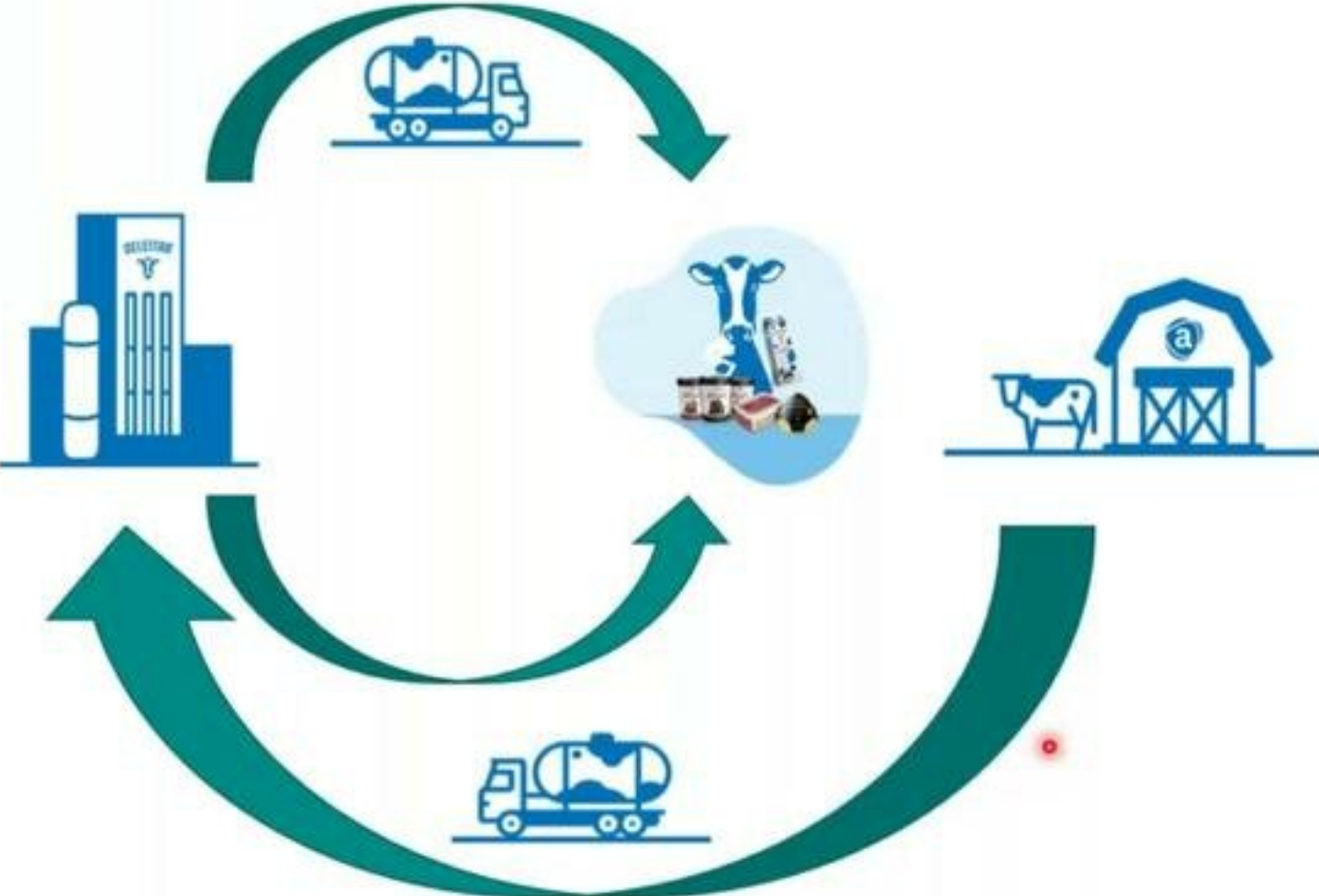
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# MUD VALORIZATION

# MUD VALORIZATION

# GALACTEUM





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# GALACTEUM

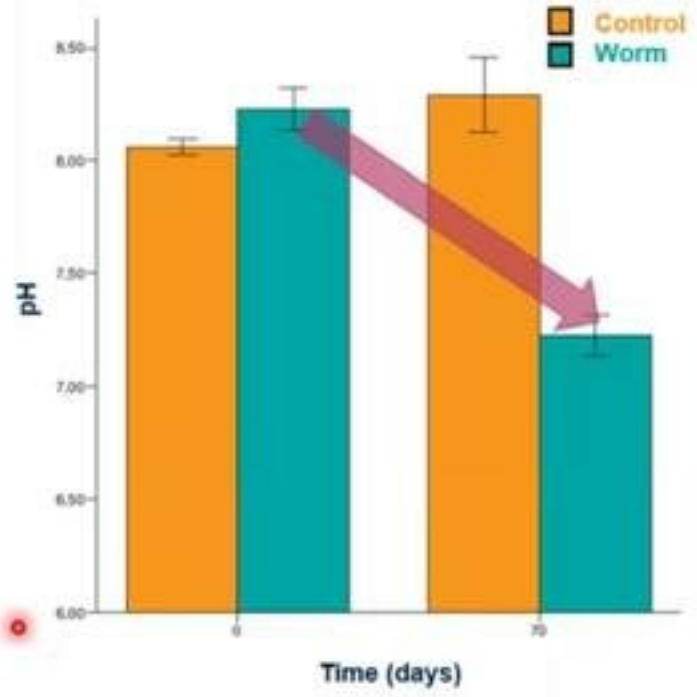
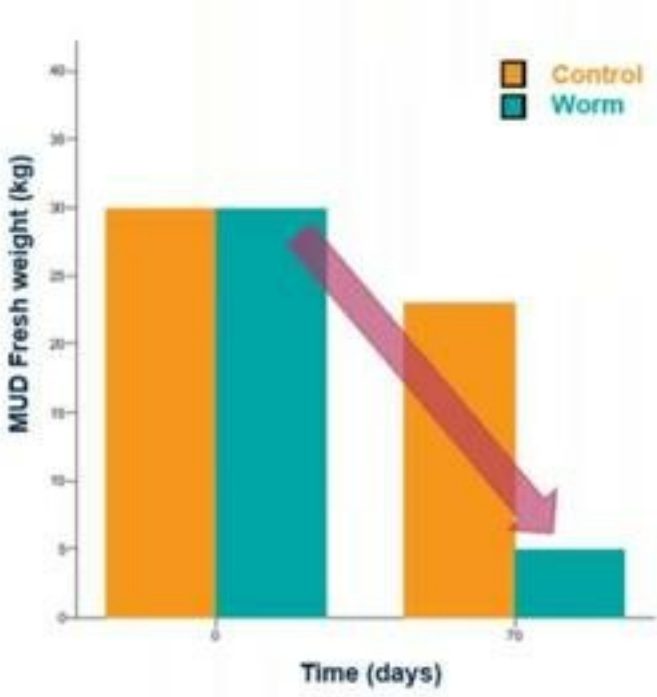
⌚ After 42 days



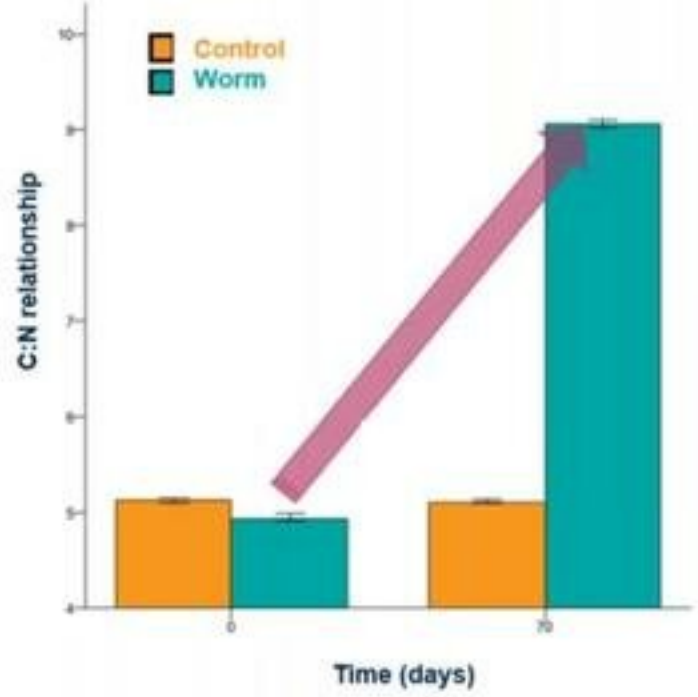
⌚ After 70 days



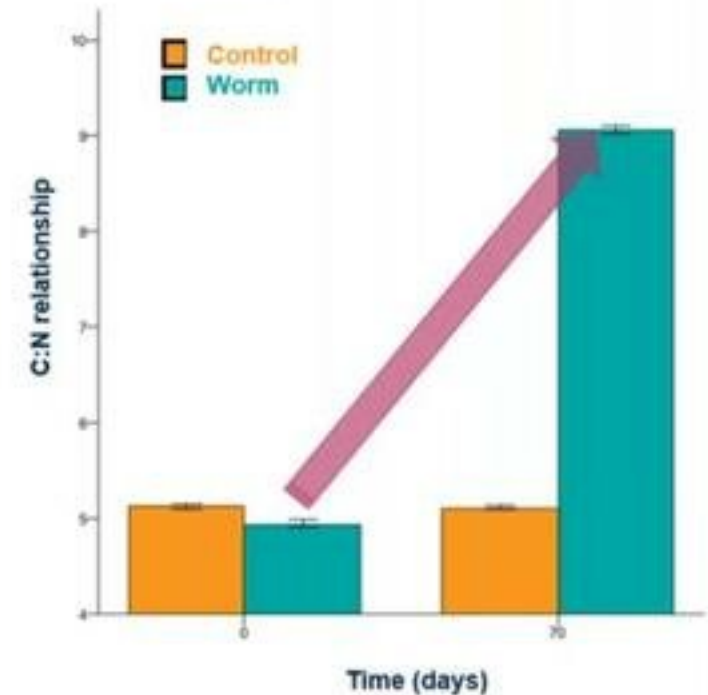
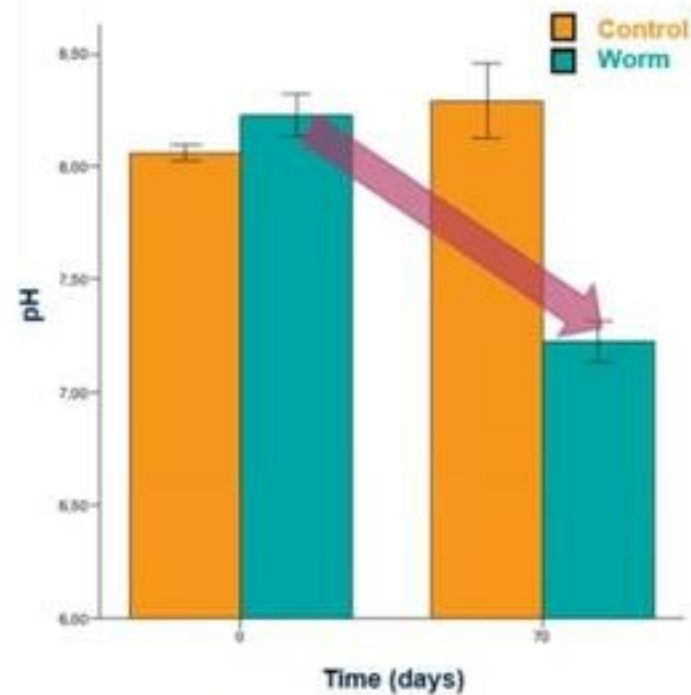
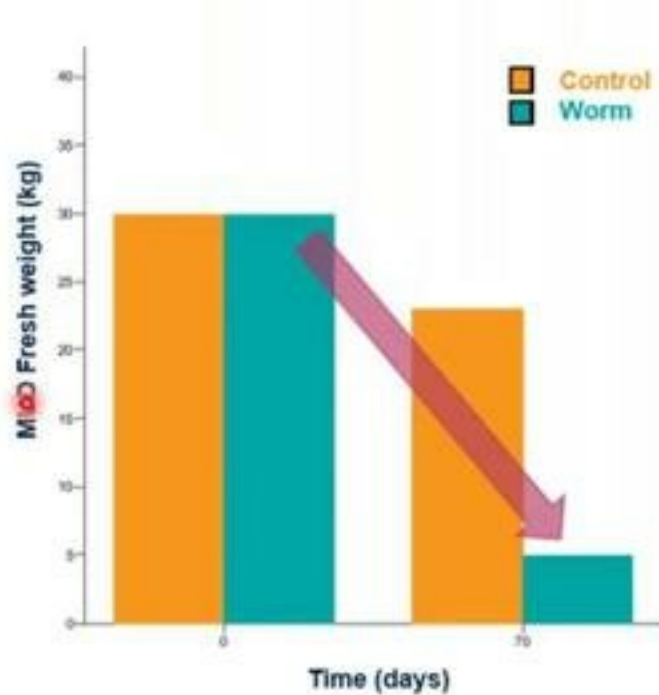
# MUD VALORIZATION



# GALACTEUM



## MUD VALORIZATION



Worms are able to grow and breed in our industrial muds, and they reduce the weight in more than 6 times, producing a neutral biofertilizer with a C:N relationship ideal for the recovery of soils and growth of crops in AIRA.

# Contacto



Ángel Pereira, Ph. D. – Chief Innovation Officer



PE A Madanela, 44-48 15800 Melide, A Coruña

(+34) 981 50 64 09 – (+34) 689 836 889



[apereira@galacteum.com](mailto:apereira@galacteum.com)



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