



# Organic energy worldwide

Biomethane: transfer of  
technologies, best practices  
from European experience

10.11.2021



- 01 Organic energy worldwide
- 02 Biomethane – the Allrounder
- 06 Conclusions



01

# Organic Energy Worldwide



## At a glance



**2001**

Founded in Vechta (Germany)

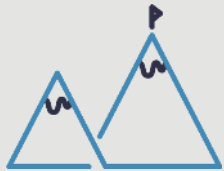


**110**

Employees



Plants in **25**  
countries



Leading producer  
of biogas plants  
made of stainless steel



**350+**  
realized projects



**12**  
Own biogas and  
biomethane plants

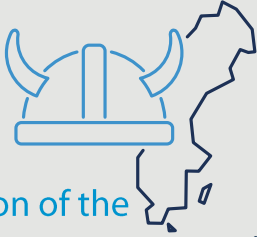


# Milestones



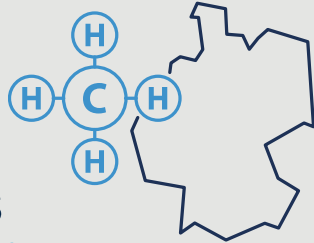
**2003**

Construction of the first international plant in Sweden



**2008**

Start of construction in Könnern



**2014**

First WELTEC BIOPOWER plant on the South American continent in Uruguay

**2016**

Development of a further business area with the construction of an anaerobic stage at a sewage treatment plant



**2001**

Founding of WELTEC BIOPOWER GmbH



**2006**

Groundbreaking UK entry: Construction of two of the country's first 15 AD plants



**2012**

MULTIMix launch at the Energy Decentral / Eurotier & commissioning of the first plant in South Korea



**2015**

With the plant in Australia, the fifth continent is entered



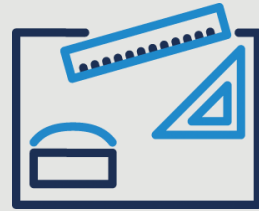
**2021**

20<sup>th</sup> company anniversary



We cover the entire value chain “Biogas”

## Plant construction



## Service



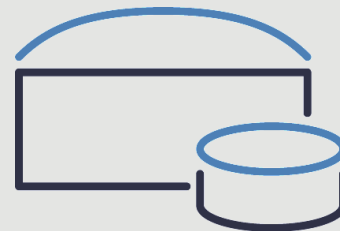
## Slurry and digestate processing



## Interim management (Germany)



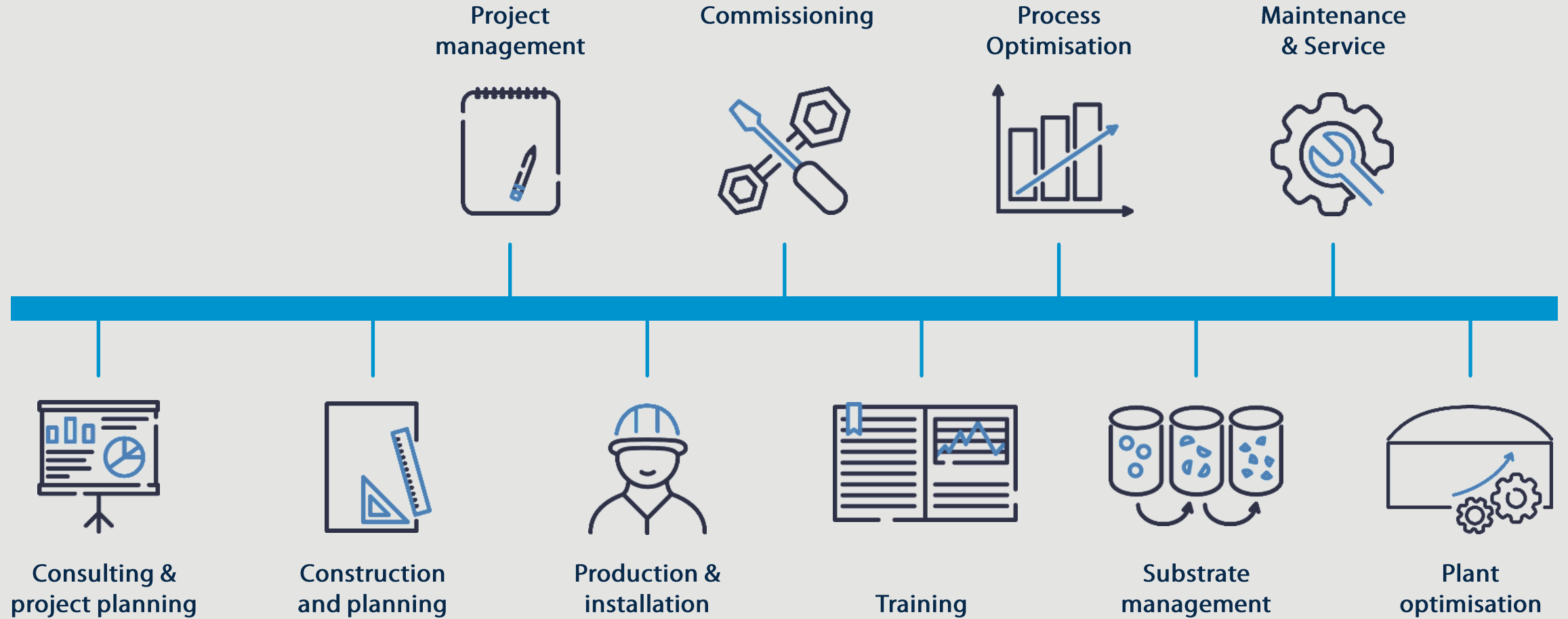
## Own operations (Germany)



## Heat contracting (Germany)



# Scope of Services for new Plants





02

## Biomethane – the Allrounder



# Structure of a Biomethane Plant



## Infrastructure

1. Office building
2. Substrate storage
3. Digester
4. Pre-storage
5. Gas upgrading
6. Storage tanks
7. Gas feed-in station



## Könnern, Germany



September 2009



3.600Nm<sup>3</sup>/h raw gas



Maize and whole crop silage, sugar beet pulp, cereals, chicken manure



4 Pre-storage of 535m<sup>3</sup>  
16 digester of 3,040 m<sup>3</sup>  
4 second stage digester of 4,516m<sup>3</sup>  
12 digestate storage of 4,516 m<sup>3</sup>



One of the world's largest plants of this kind.  
Corresponds to an electrical power of about 8 MW.  
The gas is upgraded by amine scrubbing.

# Reference Plant



## Jeppo, Finland



November 2013



750kW



Potato peels, vegetable remains, manure, grass and straw



3 Digester á 4,000m<sup>3</sup>



The biogas is partly converted into electricity with the CHP. The other part is processed to biomethane and is available in large gas tanks as vehicle fuel or for the industry.





## St. Gérard, France



January 2019



400Nm<sup>3</sup>/h Raw gas



Potato and starch residues and other production waste from the chip factory, sewage sludge



1 digester of 4,436m<sup>3</sup>  
1 second stage digester of 4,436m<sup>3</sup>  
Existing storage tanks  
**MULTIMix**



The plant belongs to the chip manufacturer Bret's, which attaches great importance to sustainability and further improves its ecological footprint with the biogas plant.



## Pontefract, England



December 2019



850Nm<sup>3</sup>/h Biomethane  
500kW CHP



Food leftovers, but also grass / green rye silage and cattle & chicken manure



5 pre-storage tanks made of stainless steel  
4 digester of 6,848m<sup>3</sup>  
2 push floor dosing feeder (110 & 200m<sup>3</sup>)  
2 **MULTIMix**



With the energy produced, about 9,600 households can be supplied. The gas upgrading works with membranes.



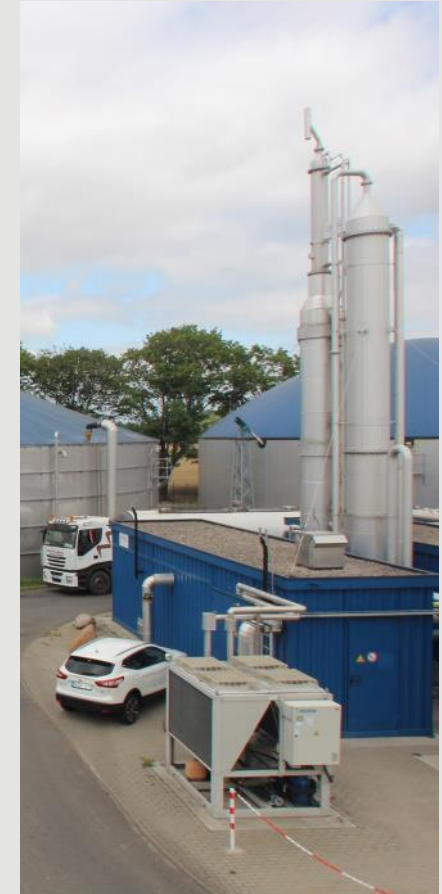
03

## Conclusions



## Why WELTEC BIOPOWER?

- Global market leader
- Experience with agriculture, food waste and municipal
- Turnkey solution, one contract, handed over at full output
- Flexible, modular, proven, high-uptime
- Fast construction, own manufacturing
- Low maintenance and repair requirements
- Service and support



# Thank you!



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