

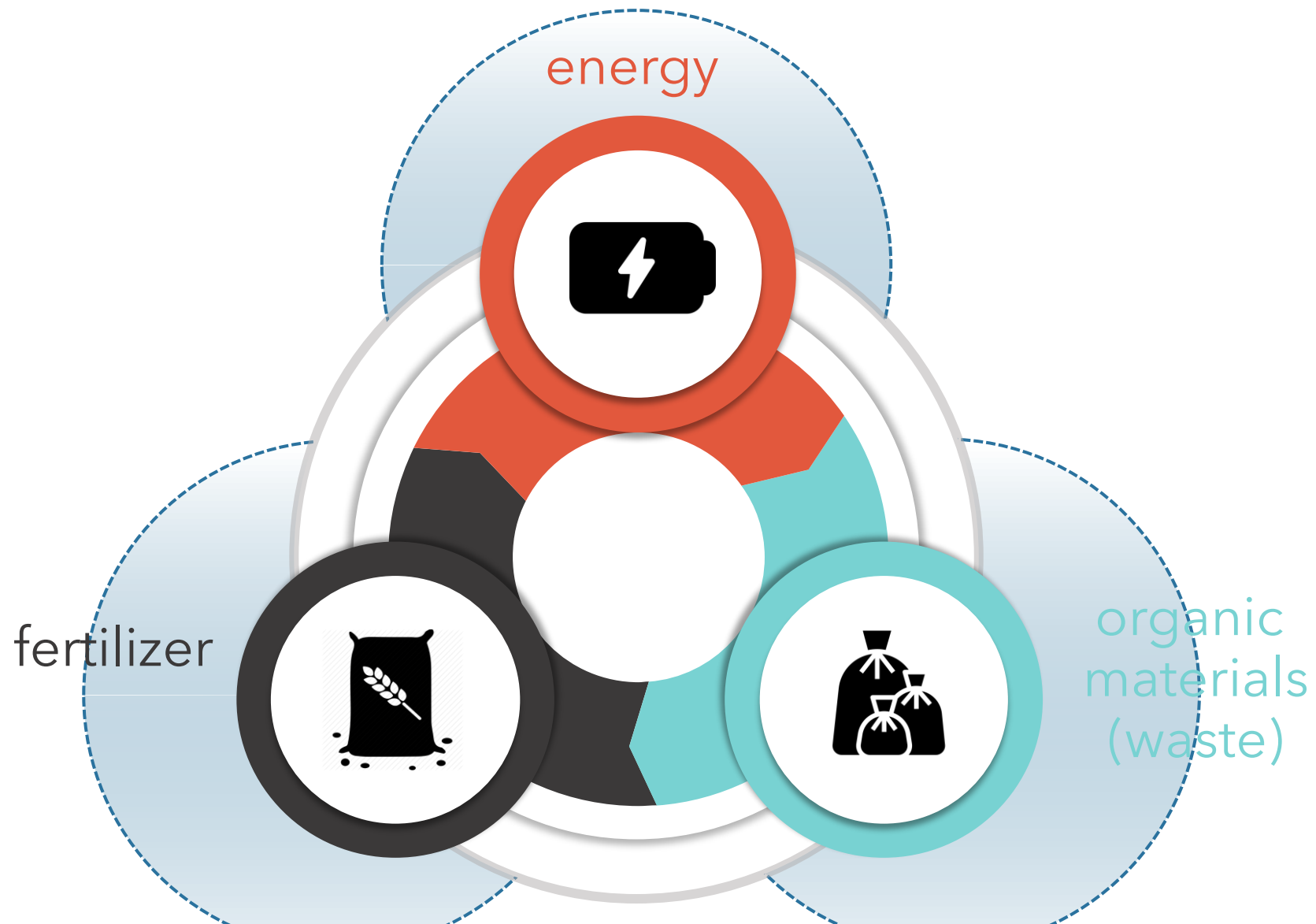


# **GRENOL "The Difference"**

**HYDROTHERMAL CARBONIZATION  
(HTC)**



## GRENOL "The Difference"



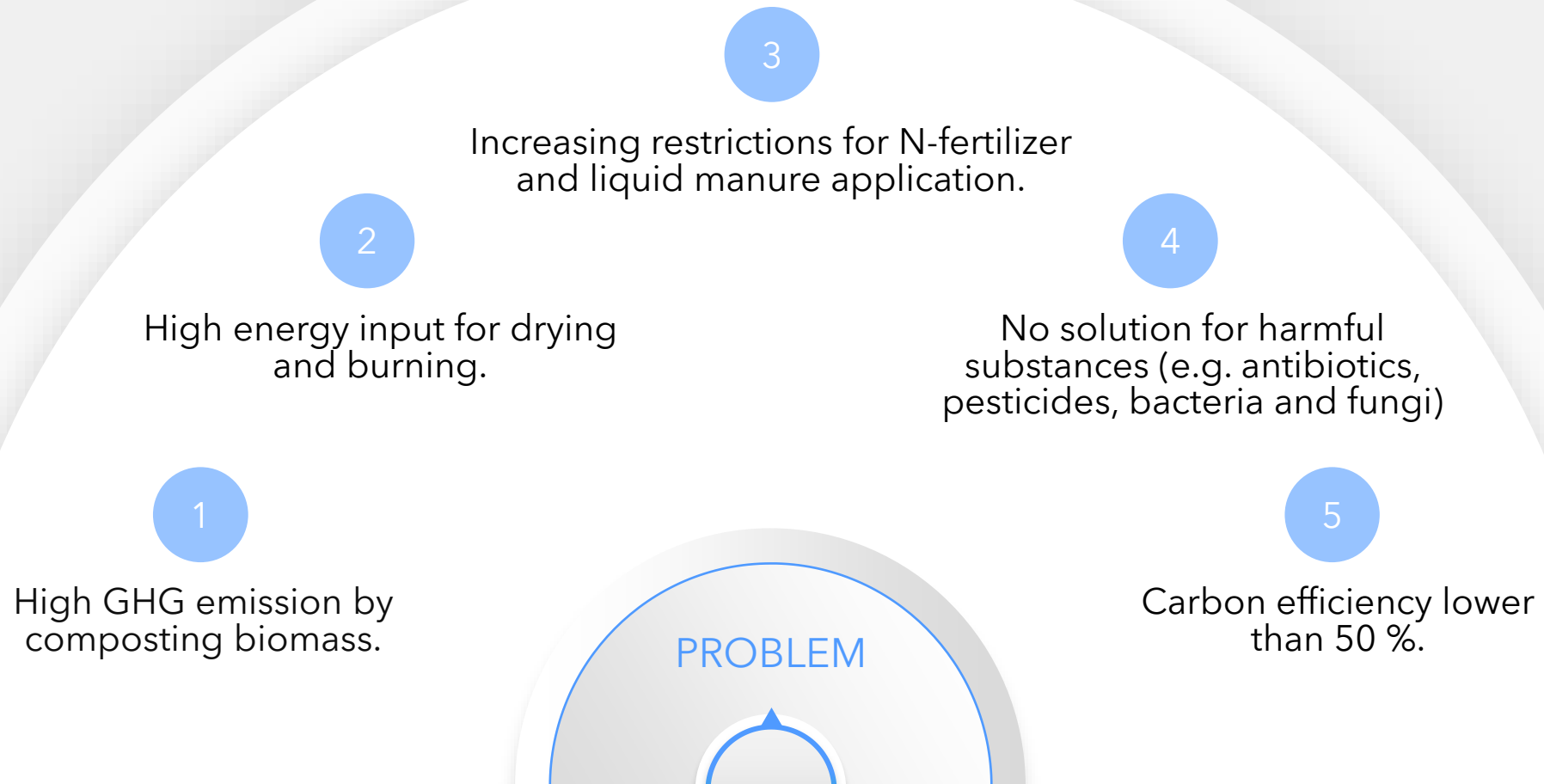


# The Problem

Unused wet biomass waste  
is waste of energy and resources.  
It happens in large scale - worldwide.

PROBLEM

# The Problem





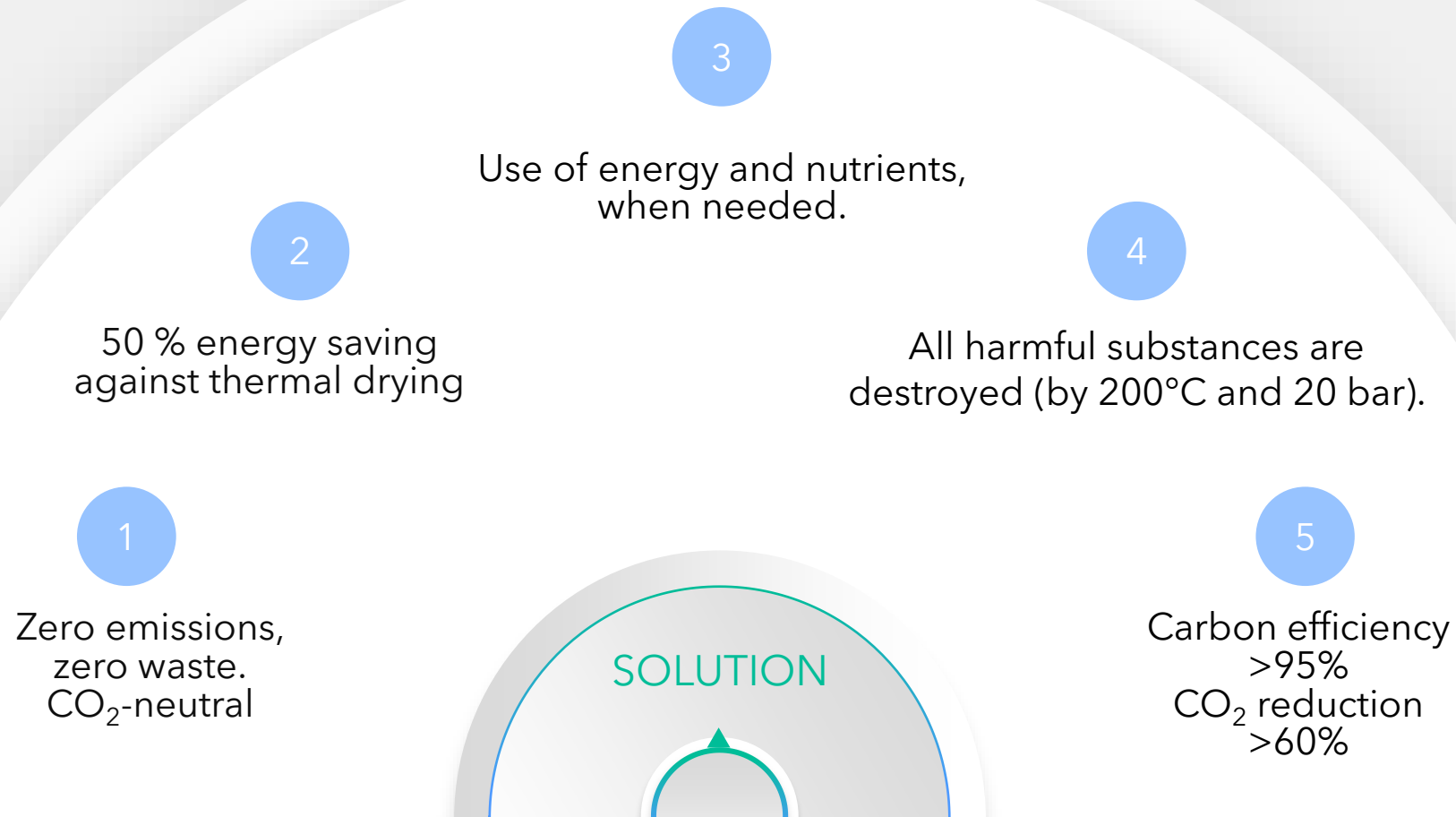
# Our Solution

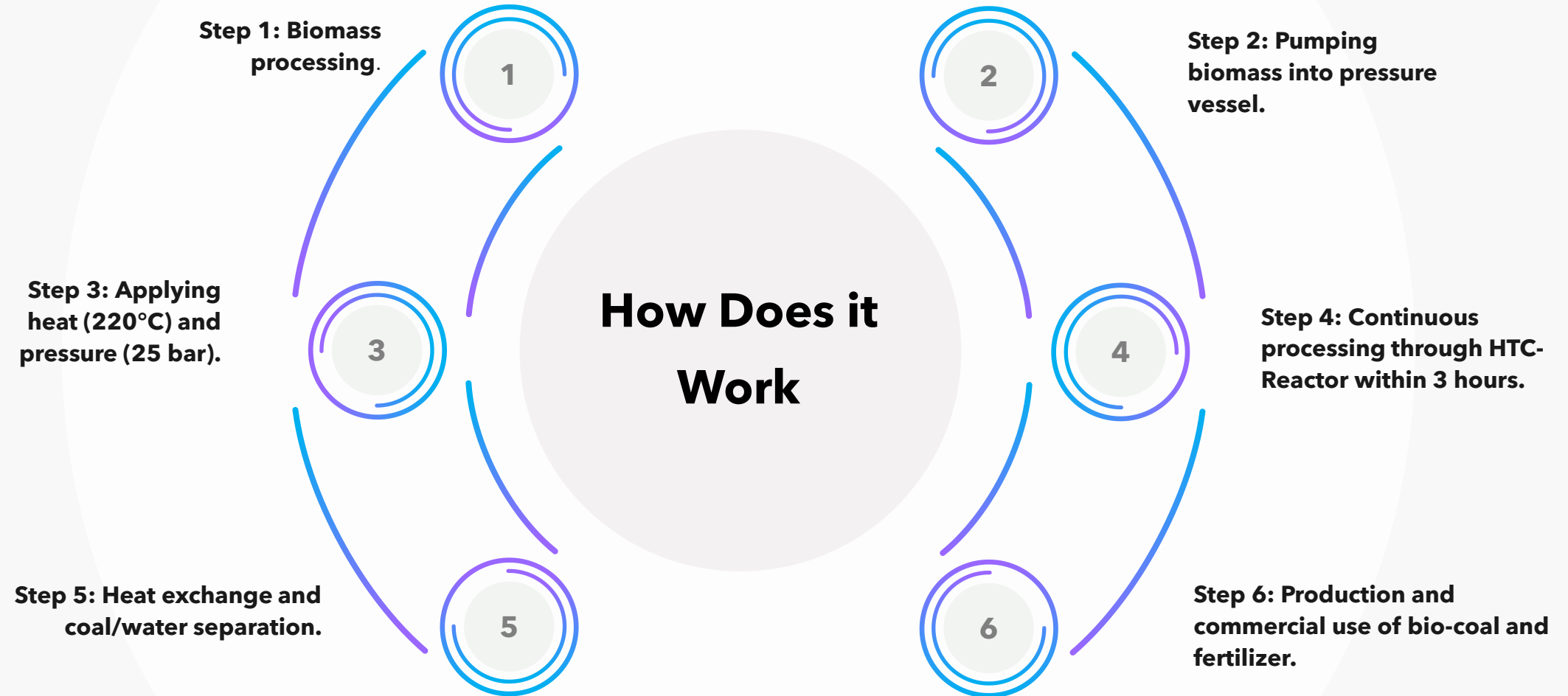
Our zero waste HTC technology  
turns waste into profit.  
Scalable, sustainable, and decentral.

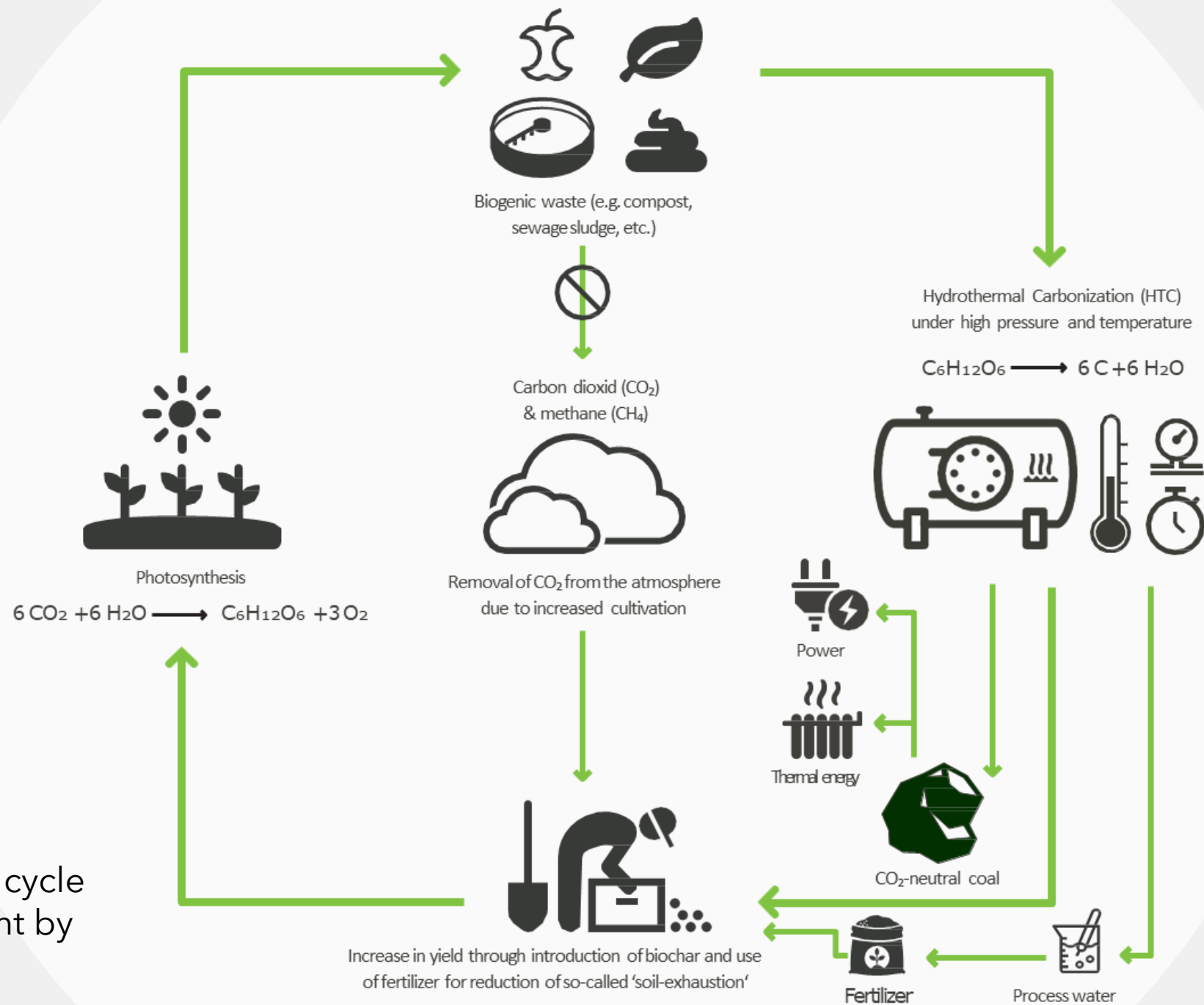
SOLUTION



# Our Solution



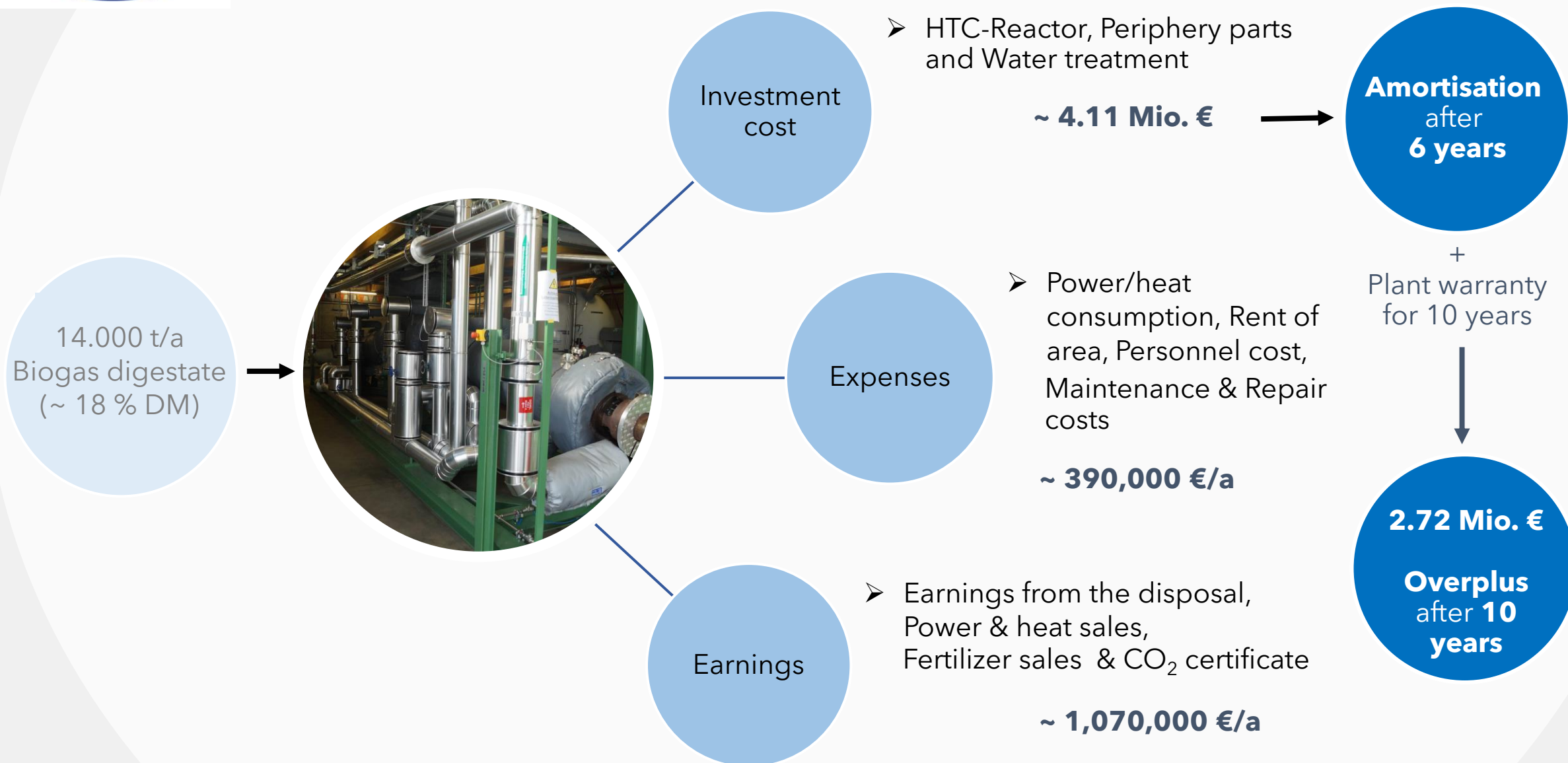




Closed substance cycle waste management by  
**GRENOL**



# Make money with biogas digester? – exemplary calculation



# GRENOL master plan

Organic  
waste

HTC-Technology

Resources

- ✓ A regionally closed substance cycle waste management
- ✓ Methodical combination of different system elements
- ✓ Key components: HTC plant, nutrient recovery, wood/coal gasifier with CHP to produce power/heat
- ✓ Different possibilities of process water treatment using a greenhouse solution, a fertilizer production or as methane booster in the anaerobic digester

A profitable end of organic  
waste with the master plan of

**GRENOL**





# Thank you for your attention!

For further detailed information, planning and calculation studies, please contact us via phone or E-mail at [info@GRENOL.de](mailto:info@GRENOL.de)



**Energy Globe**

The world award for sustainability

National Energy Globe  
Award Germany 2016  
1<sup>st</sup> place



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KYOCERA Umweltpreis



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