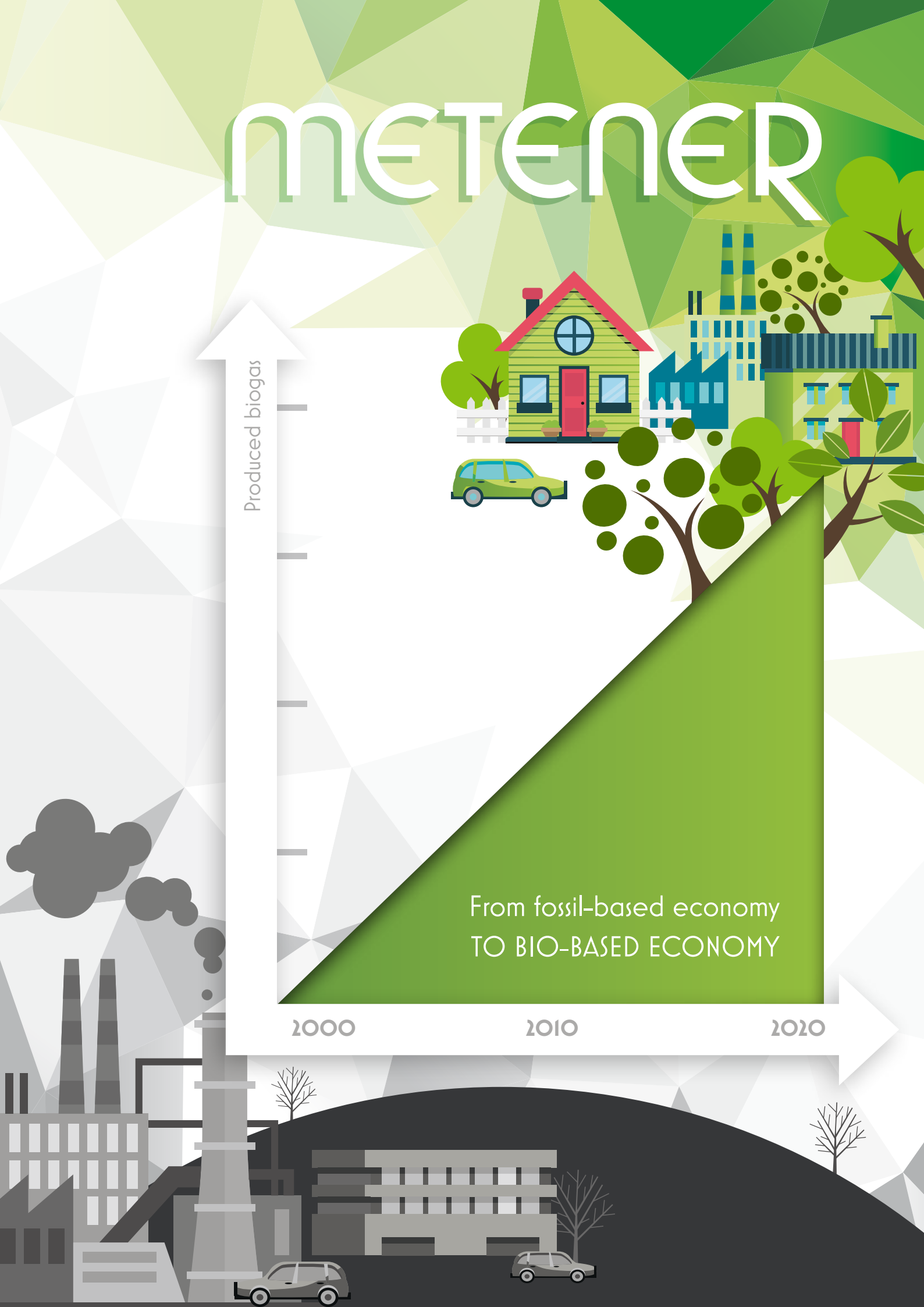
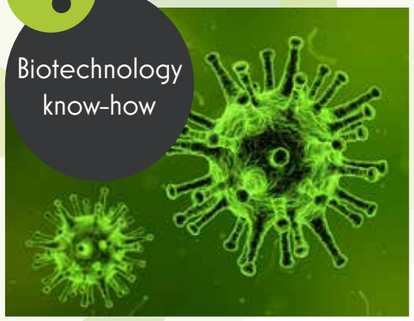
METENER


Produced biogas
From fossil-based economy
TO BIO-BASED ECONOMY
2000
2010
2020

Choose companionship. Choose Metener.

Biotechnology know-how



We invest heavily on R&D. We are co-operating with VTT(technical research center of Finland), Luke (Natural resources institute Finland): Metener is considered important and skilled partner in biogas technology area internationally.

Biogas plant commissioning and start up is quick and smooth due to our broad experience and know-how.

Technology know-how

We develop, manufacture and sell biogas plants (wet and dry fermentation technology), biogas plant components and auxiliary equipment e.g. biogas upgrading and pressurization units.

With our technology plant Operational and Maintenance costs are under control.

Project know-how

We manage the whole chain of events from initial planning and permitting to commissioning and post project monitoring.

We will guide your journey to begin benefiting from biotechnology.

Satisfied customers around the world

Commissioned in 2010 Juva Bioson biogas plant is treating annually around 19800 tons of biomass and produced biogas is utilized in greenhouse heat and electricity production. Bioson has support and maintenace plan contract with Metener.
Finland, Juva Bioson biogas plant 250 kW [e]

August 2017 we signed contract to deliver dry fermentation plant to China. Earlier we have already delivered one biogas plant treating pig manure.
China

Early 2017 we signed contract to deliver biogas upgrading unit for Griffith university in Australia. Size of the unit is 10 m3/h. Similar sized unit has been delivered to UK in 2013.
Australia, Griffith University, Brisbane

Locally produced energy

2-3 months

Our plants are in full production within three months

Microbes

Microbes are the hearth of our process and provide key functions allowing us to keep the process running smoothly.

Techique

Carefully chosen application allows patented dry fermentation plant to function without mixers or feeding equipment. Failures and mainenance needs are minimized.

Automation

Highly developed and mature control software guarantees fully autonomous biogas plant which need man work on site only during batch changes.

UTILIZE BIOGAS

- ☐ **Trafic**
- ☐ **Heating**
- ☐ **Electricity**

Reactors

In batch-type reactors the batches are changed one by one, alternating between reactors and in three month cycles. This ensures that the gas production is even at all times.

UTILIZE DRY FERTILIZER

- ☐ **Organic dry fertilizer**

Carbon and nutrient recycling

Annual harvest from ONE

Hectare of grassland provide 40 000 km driving range for passenger vehicle when biomethanized in our process.

Alternatively it could provide heating energy needs for one mid-sized private house in nordic countries.

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INCOMING DRY BIOMASS

- ☐ **Wood based material**
- ☐ **Straw (various)**
- ☐ **Dry manure**
- ☐ **Crops from the field**
- ☐ **Lake biomasses**

Would you be interested having your own biogas plant?

Here's how it's done.

1. Pre-design

Pre-design to accurate profitability and best possible concept.

2. Designing phase

Design documents from Metener to be detailed to local norms by customer.

3. Construction

Construction by customer/ partners under Metener supervision and consultation. Metener provides automation.

4. Start up and operation

Metener remote control and help desk is solution for fast start up and smooth operation.

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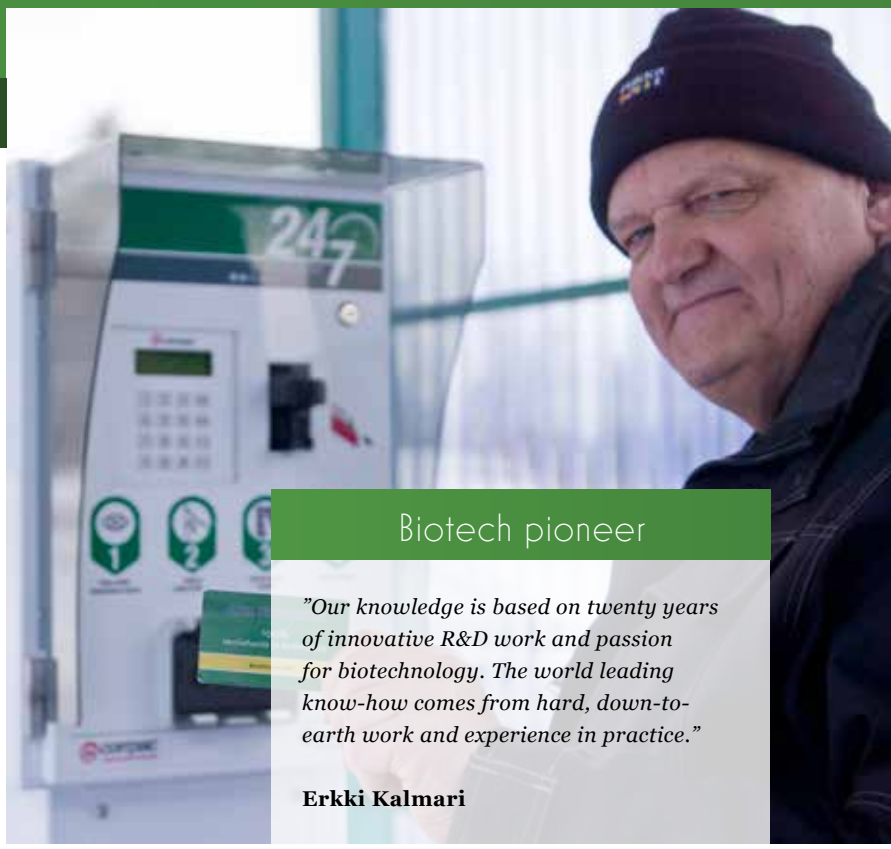

Biotech pioneer

"Our knowledge is based on twenty years of innovative R&D work and passion for biotechnology. The world leading know-how comes from hard, down-to-earth work and experience in practice."

Erkki Kalmari

over 10 fully functional biogas plants in production

100 production trials with 100 different biomass sources and continually searching for new ones

METENER

3 patents

over 50 thousand hours of research work carried out

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