## **INDTECH2018**Innovative industries for smart

growth

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Session 1.1

Use of alternatives for green growth

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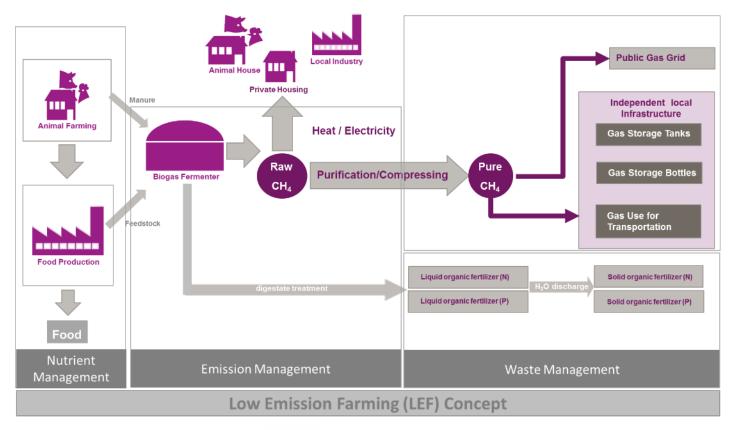








#### The 3 leverage elements of Evonik's Low Emission Farming concept (LEF)





= Federal Ministry

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and Technology



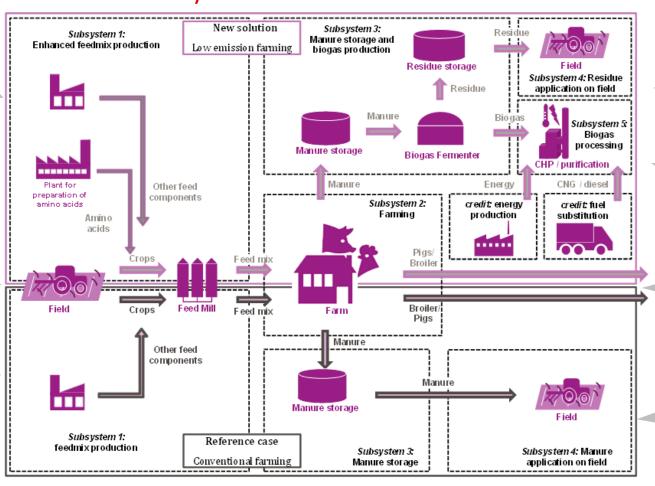


#### Case study LEF and fields of functional needs

Monitoring Nitrogen in Process

Monitoring local needs e.g. Nitrogen, P

Alternative raw materials e.g. Grass



Monitoring e.g.
Nitrogen in
Process

Storage of energy

Monitoring germs

Green fertilizer for catching Ammonia HNO<sub>3</sub>+NH<sub>3</sub>→NH<sub>4</sub>NO<sub>3</sub>

# What can other economical sectors provide for "green growth and circular economy"?

Energy management

Standards of chemical industry

Logistic concepts

Decentral production concepts



Low cost analytics

Sensors

Simulation and optimization of processes

Digital solutions











### One alternative for green growth: Decentralized fertilizer production based on wind/solar power





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