



*biogasmax*

A DRIVING FORCE

# The Biomethane Decision: Lessons Learned

Sanne MOHR  
Special Projects Manager  
European Natural Gas Vehicle Association (ENGVA)



# Intro & Presentation Outline

---

## WP7 Research carried out in the first project year:

- Biomethane production in Europe
- The start-up phase of a biomethane business
- The biomethane pathway
- Commercial implementation
- Market development
- Business development
- Vehicle user related aspect
- Government policy and social conditions

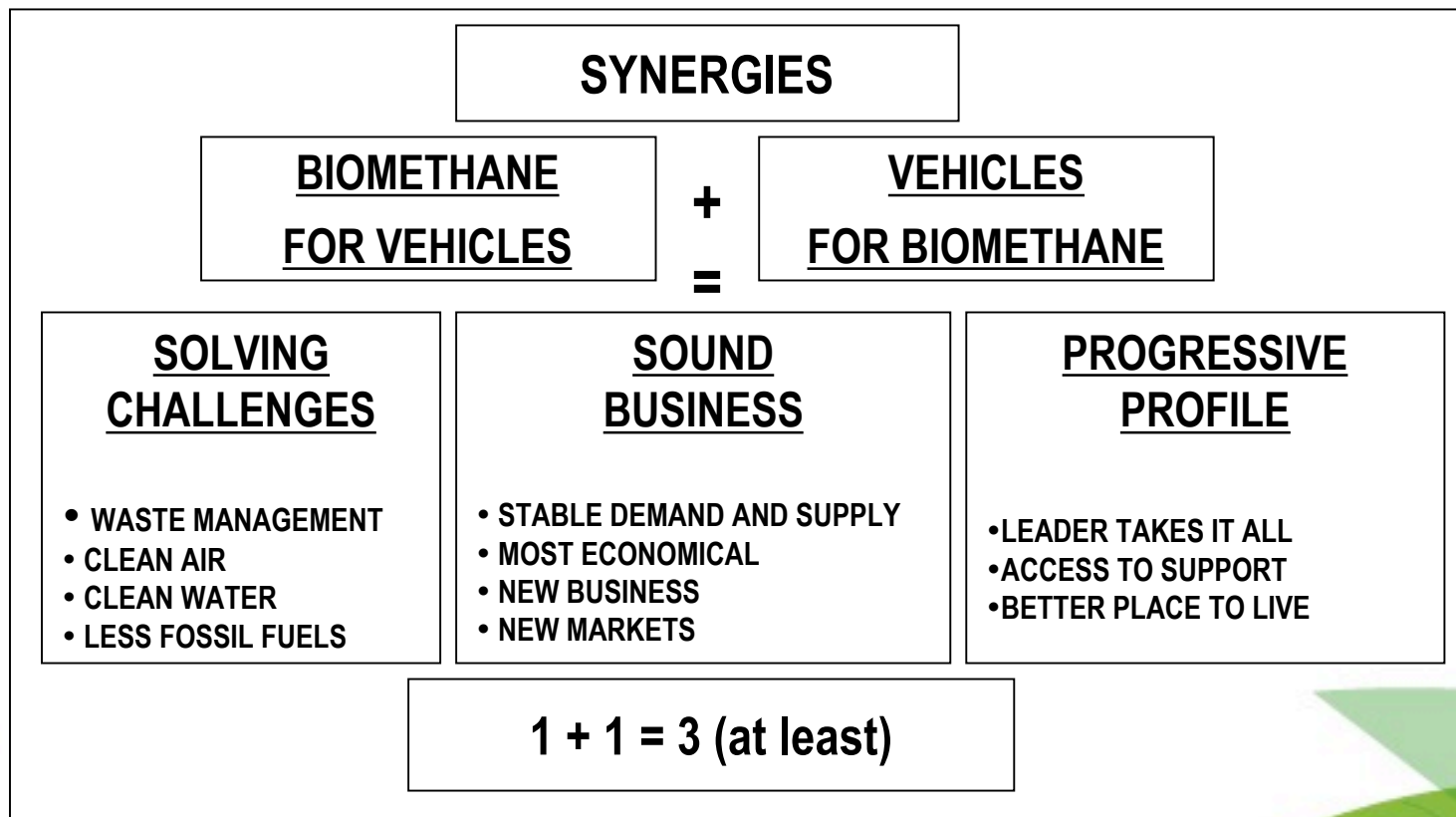
➔ **BIOGASMAX DECISION GUIDE for  
Urban & Municipal Policy Makers**



# The Decision Guide

## Summarized table of contents (1):

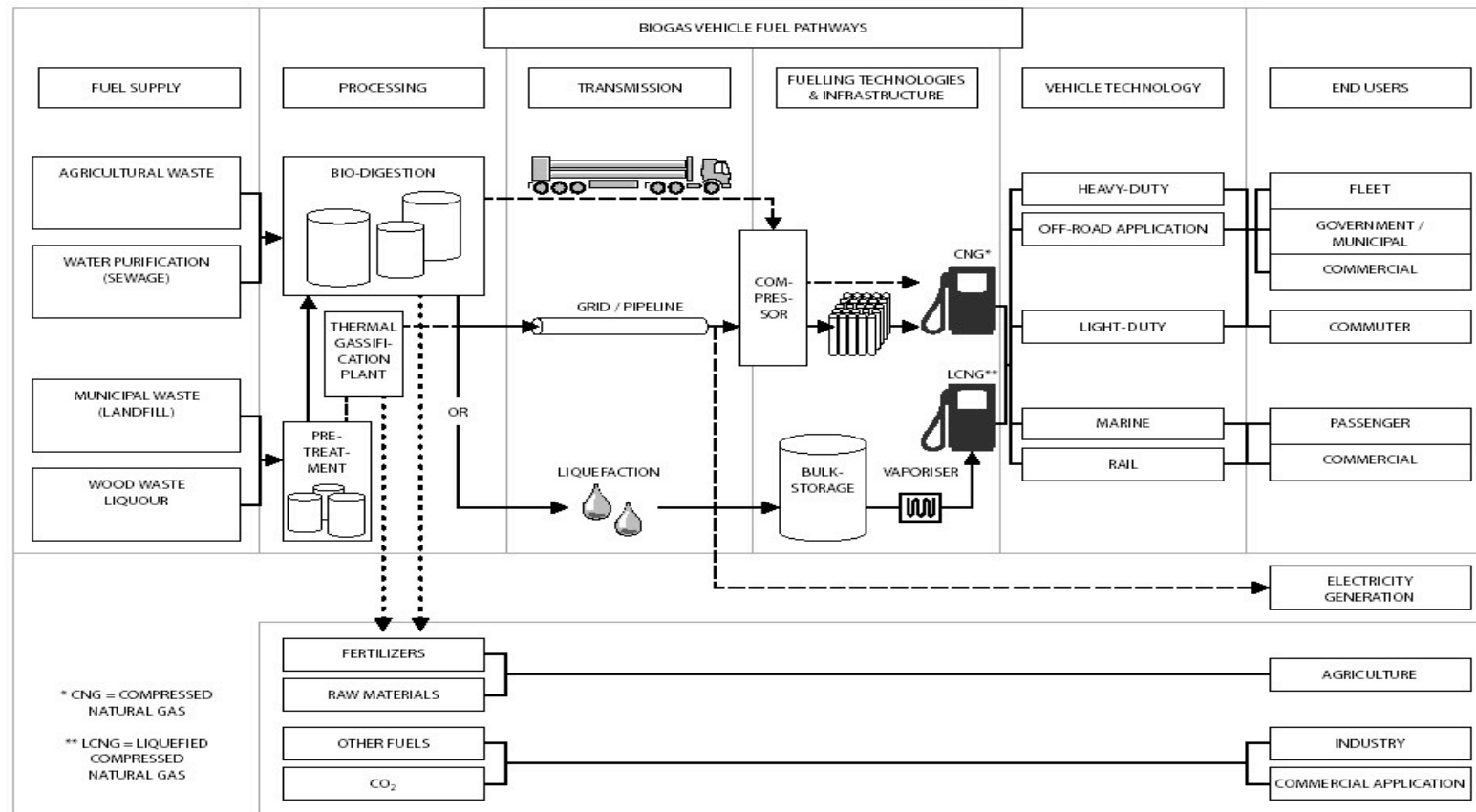
- Introduction on biomethane as a vehicle fuel
- The biomethane decision



# The Decision Guide

## Summarized table of contents (2):

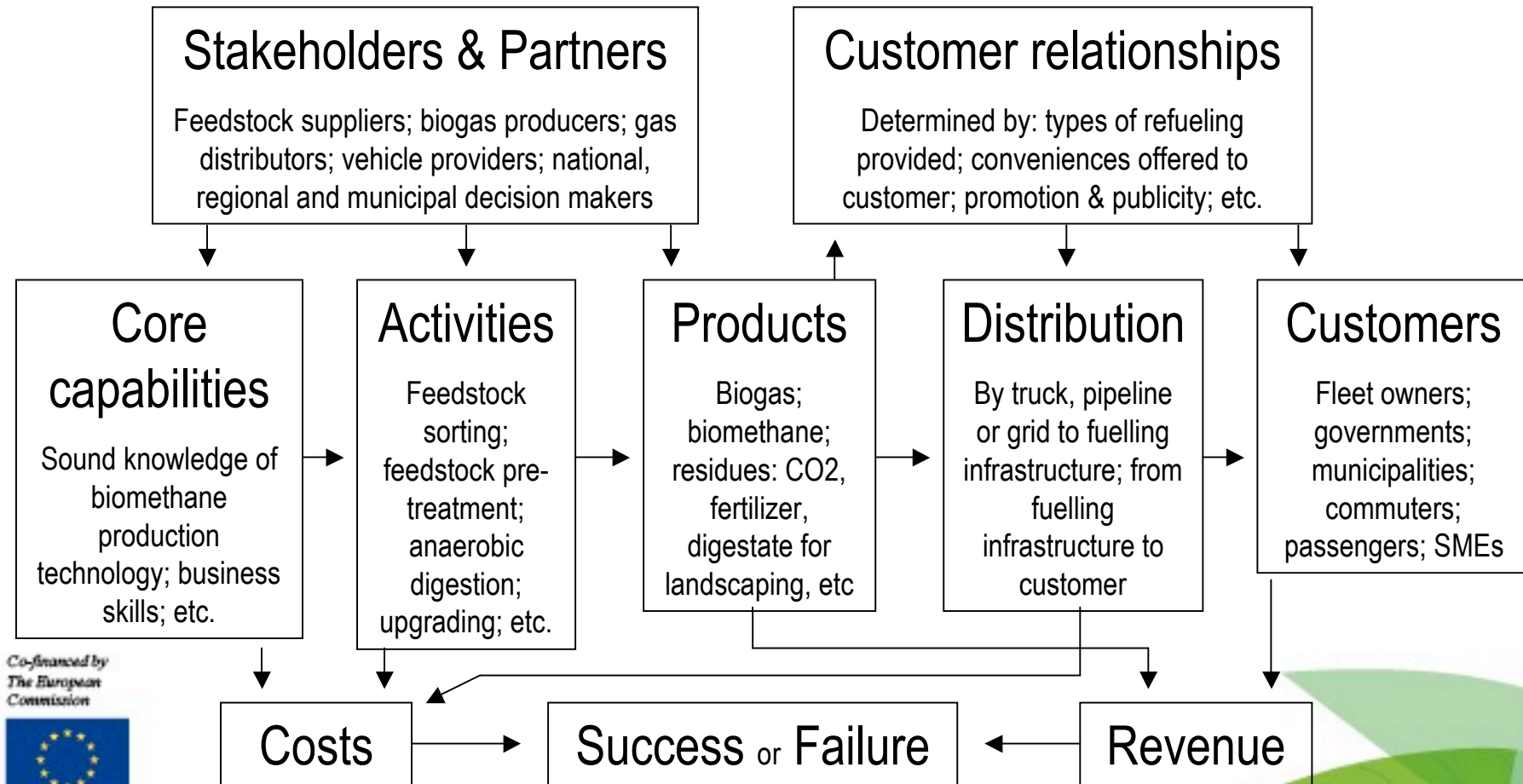
- The biomethane pathway & its considerations



# The Decision Guide

## Summarized table of contents (3):

- Biomethane in business



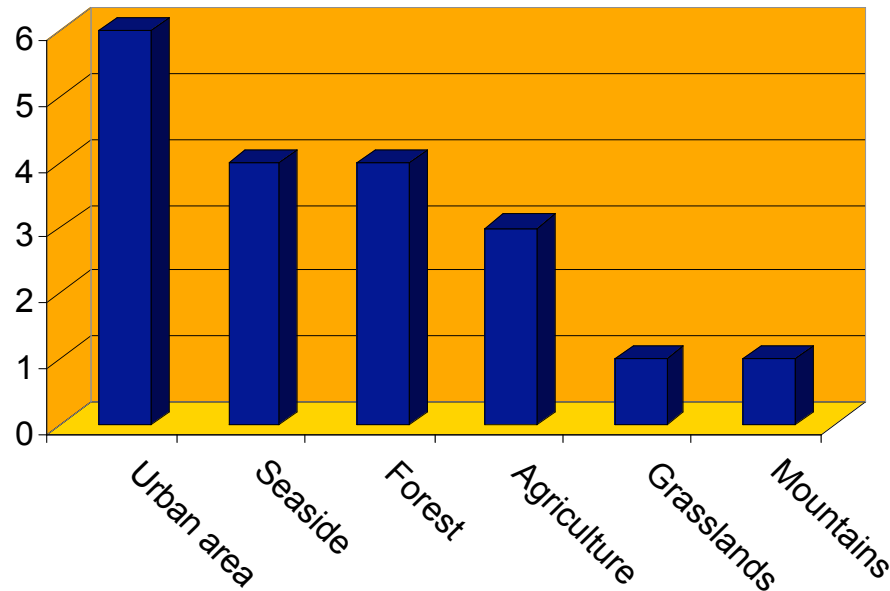
## Summarized table of contents (4):

- Biomethane implementation scenarios
  - Biomethane market breakthrough: Göteborg Region, Sweden
  - Towards 100% green public transport: Lille Metropolitan, France
  - A clean strategy in the make: Rome, Italy
  - Prepared for further expansion: Stockholm, Sweden
  - Biogas potentials: Regions of Zielona Góra & Toruń, Poland



## General Information:

- Biomethane production since about 13 years ago; biogas produced since much longer
- 72% produced biogas and biomethane in the same location
- Production plants' most common environments:



## The Start-up Phase (1):

- The 3 main motivations for biomethane use:
  - Need for clean city air
  - Reduction of CO2 emissions
  - Reduction of dependence of imported fuel(s)
- The two stakeholders initiating biomethane projects most often:
  - Municipal waste handling company
  - Municipal water works
- In 7% of the cases the stakeholders changed during the project; 72% went on without change



## The Start-up Phase (2):

- 3 main driving forces of the decision process:
  - A market study & business plan indicating a good business opportunity
  - Government subsidies
  - Support of big energy companies /  
Using biogas that is otherwise flared



## The Start-up Phase (3):

- Main additional benefits of biomethane production:

Benefit	Percentage (%)
Municipal waste disposal	17
Publicity for city/region	17
Improved image for local transport sector/fleet	17
Residuals sold/re-used	12
Multi-purpose closed loop solution	10
Creation of new jobs	10
Agricultural waste disposal	8
Clean water solution	8



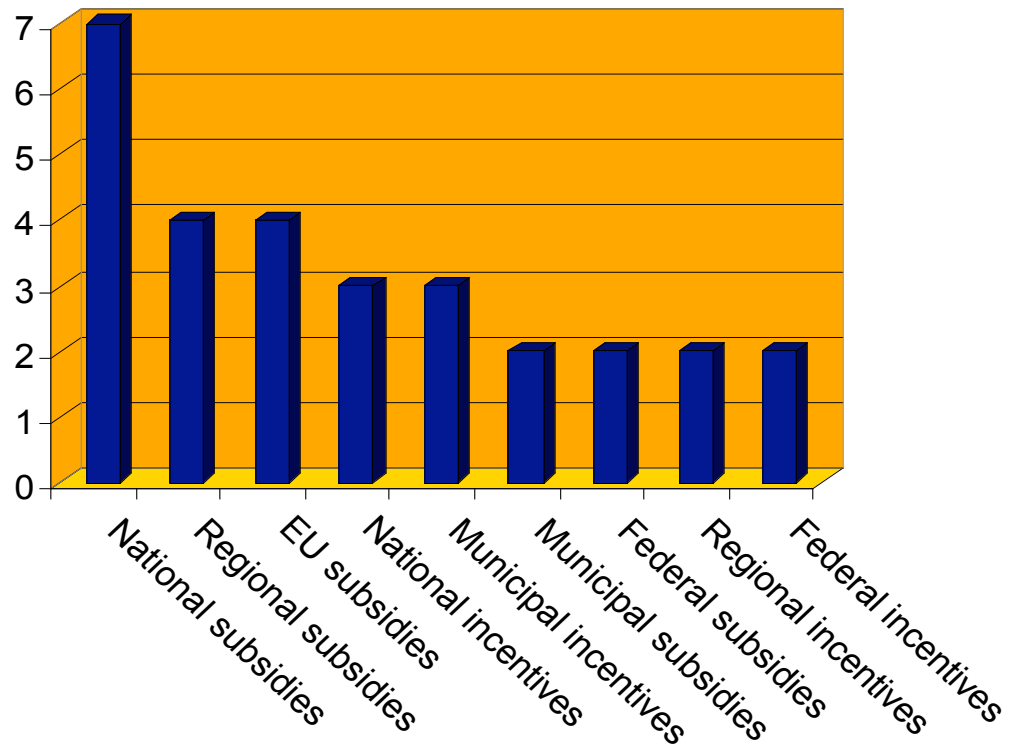
## Commercial Implementation (1):

- Is the project a public or private initiative?
  - 47% public
  - 38% private
  - 15% public-private
- Subsidies / incentives:
  - 56 % of plants receive subsidies or incentives
  - 44 % of plants do not
- Funding for production plants:
  - 55 % of plants funded mostly by the private sector
  - 27 % of plants funded entirely by the public sector
  - 9 % of plants funded mostly by the public sector
  - 9 % of plants funded entirely by the private sector



## Commercial Implementation (2):

- Financial support received through:



## Market development:

- Most helpful factors in market development:
  - Fleets run by major private or public operators
  - Municipal fleet (partly) switched to methane
- 75% experience competition with other alternative fuels:
  - 67 % of the competition comes from ethanol
  - 33% of the competition comes from natural gas



## Government Policy:

- Biomethane enterprise supported most enthusiastically by:
  - Municipality where the plant is located
  - National / federal authorities
  - Regional politicians



## Debate on:

- Challenges you meet
- Opportunities you see
- Best practice you know about
- Your lessons learned from failure and mistakes

- ➔ **Recommendation on optimal biomethane production, distribution & use as well as (new) research paths**
- ➔ **Decision Guide for Urban & Municipal Policy Makers**
- ➔ **Reported to the European Commission**

