

*Sanitation at the crossroad :  
foreseeable impacts on public private partnership  
of a new perspective based on territory  
and circular economy strategies.*

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# Introduction

- Water and sewage utilities used to be an oligopolistic market on a decline ...
  - Less consumption, no real growth of utilities
  - A tough competition (3 firms according to the theory of an oligopolistic market)
  
- ...but isn't something new happening ?

# Main issues

1. New technologies for water and sanitation and energy utilities
2. A new value chain and consequences
3. What incidences on the strategies of firms and public governance ?

## Debate

# New technologies

- These technologies deal with water, sludge and energy recovery :
  - Water recycling
  - Hydropower recovery
  - Heat recuperation from sewage waters, in plants and also directly in networks
  - Sludge valorisation (biochemicals, methanisation)
  - Biogaz to be used as an energy or a fuel source
- Still at an experimental stage for most of them, therefore some are already on use

# Let's have a look...



- ❑ Heat recuperation directly from the sewage network
  - For example, an 80 meters network part for the tube heat exchanger for a swimming pool
  - You also need a heat pump inside the building, of course

Source : LDE

# Let's have a look...

□ Agricultural  
methanisation comes  
from :

- Animal effluents
- Farming waste
- But also cosubstrate  
such as urban sludge



Source : IRSTEA

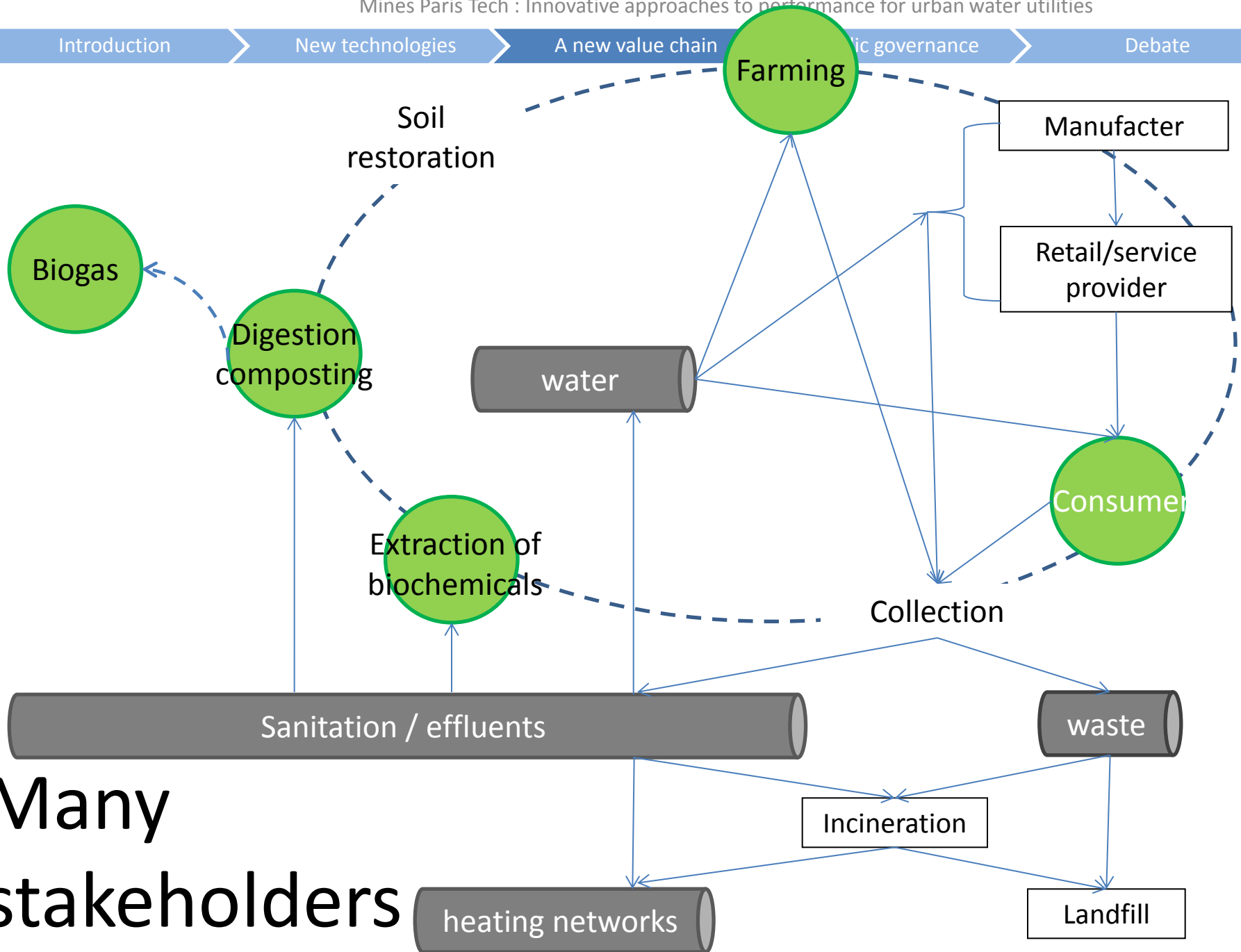
Introduction

New technologies

A new value chain

Public governance

Debate



Many stakeholders

# Development of new techniques

## □ What about the promotion of innovations ?

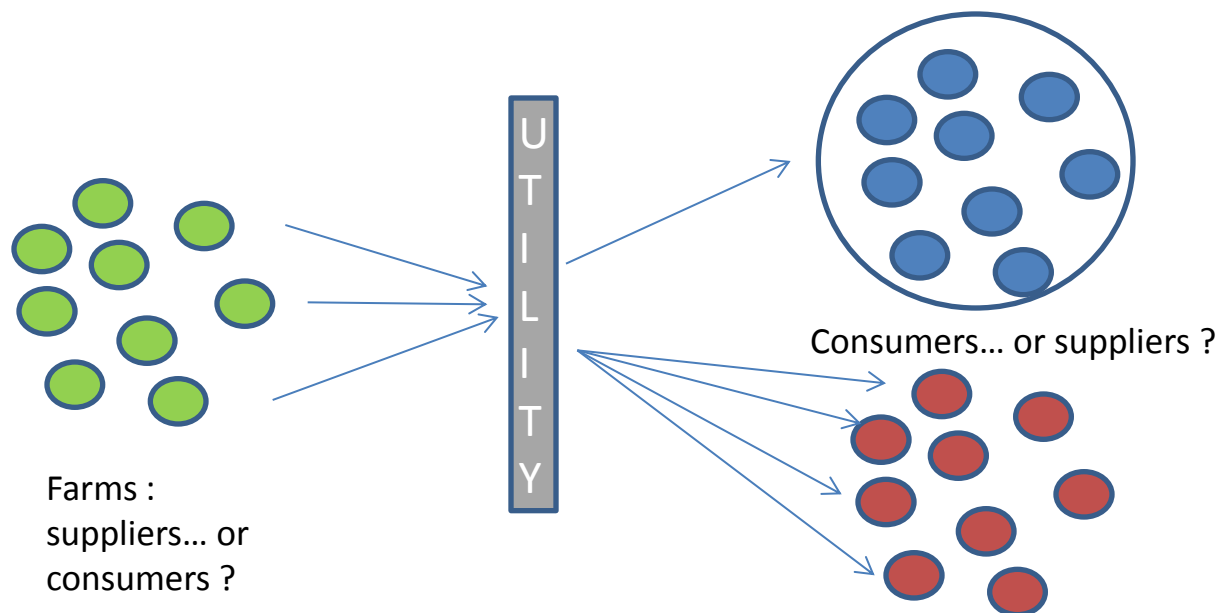
- Best allocation of property rights
- Investment, risk and expected gain : back to the original ppp ?

Technologies	Specific and dependant investment	Workforce	Transfert	Risk /uncertainty
Methanisation and biogaz	Public (plants) <u>or</u> private domain (farms and firms with public subsidies)	?	Sludge Biogaz, fuel	High
Heat recovery	Public <u>and</u> private domains	Firm / private	Heat	Low
Hydropower	Public domain	Firm	Energy	?



# Private and public strategies

- What if sludge/water has a new added value ?
  - Impact on strategies of firms in utilities ?
  - What about the bargaining power ?
  - How to allocate the rent ?



# Debate

- ❑ Should utilities build a territorial vision including many utilities and/or stakeholders ?
- ❑ Which tools for these new utilities ?

- **Sources :**

- ✓ <http://www.irstea.fr>
- ✓ <http://www.ademe.fr>
- ✓ <http://www.aermc.fr>
- ✓ *LDE cahiers eau service n°39*