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The energy potential of the wastewater sector: the REEF 2W approach
6th of June, 2019, Brussels, Belgium



Policies recommendations for improving the legal framework for
fostering “wastewater-to-energy” solutions in Europe



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Objective of this presentation

Present **policy recommendations** for creating an enabling environment that supports the uptake of waste-to-energy solutions.



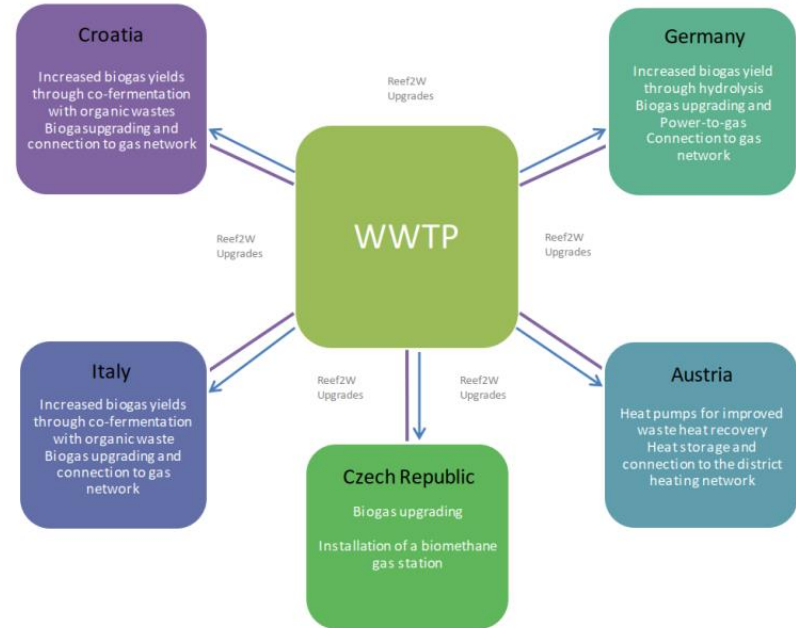
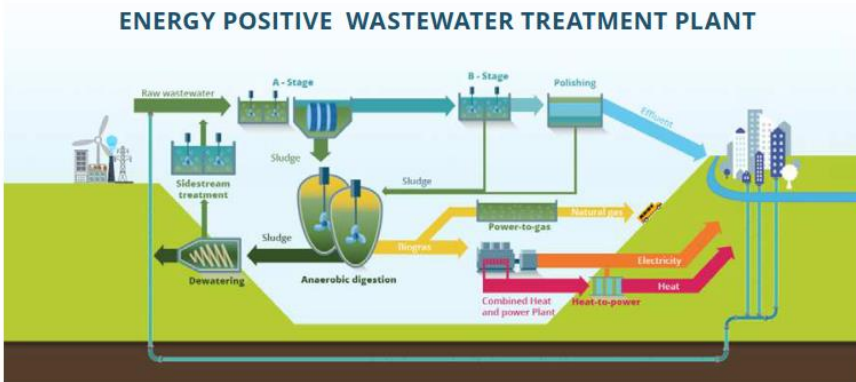
Content of today's presentation

1. Background and approach (5 min)
2. Policy barriers and recommendations (10 min)
3. Conclusion + Q&A (5 min)



BACKGROUND

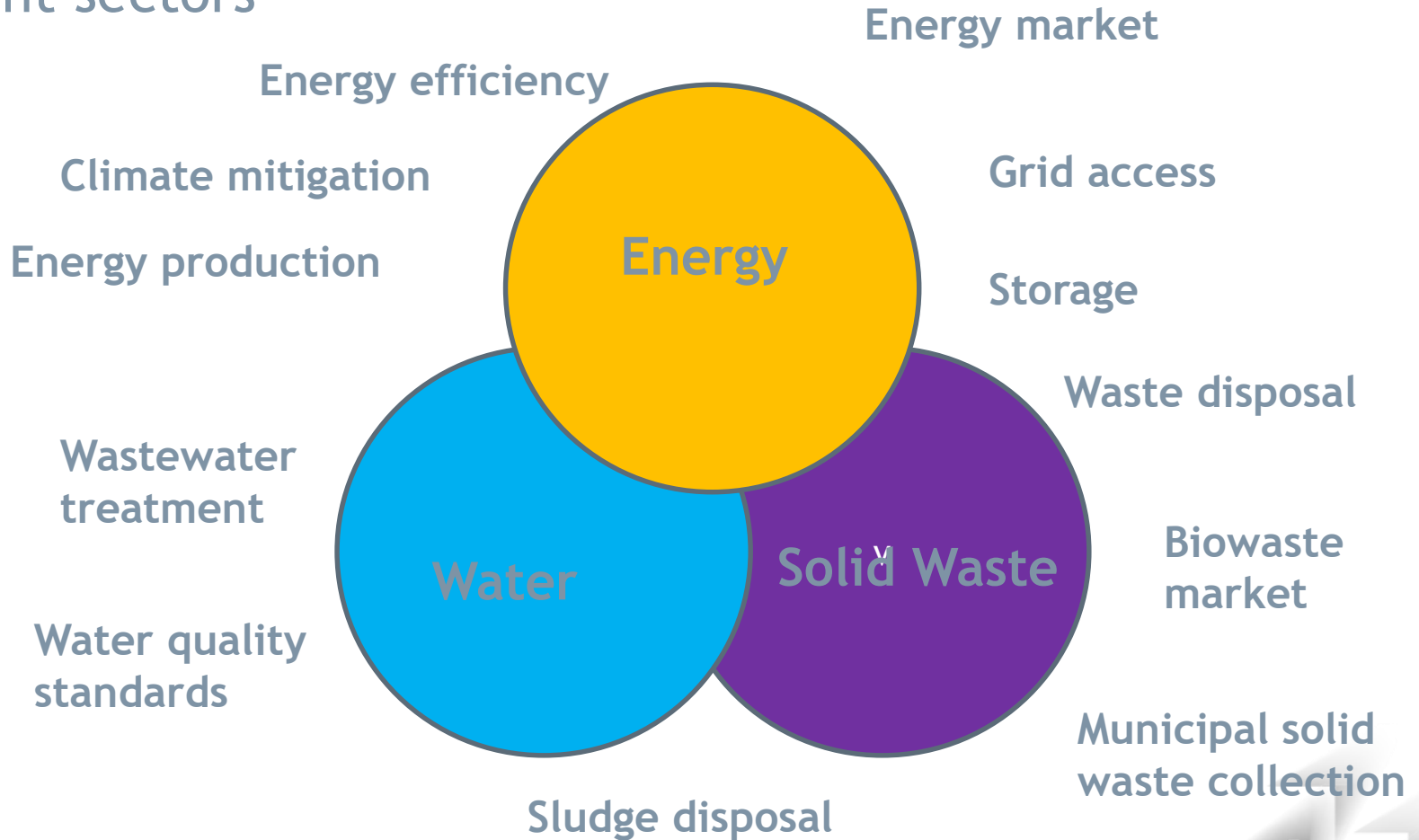
A complex integrated systems



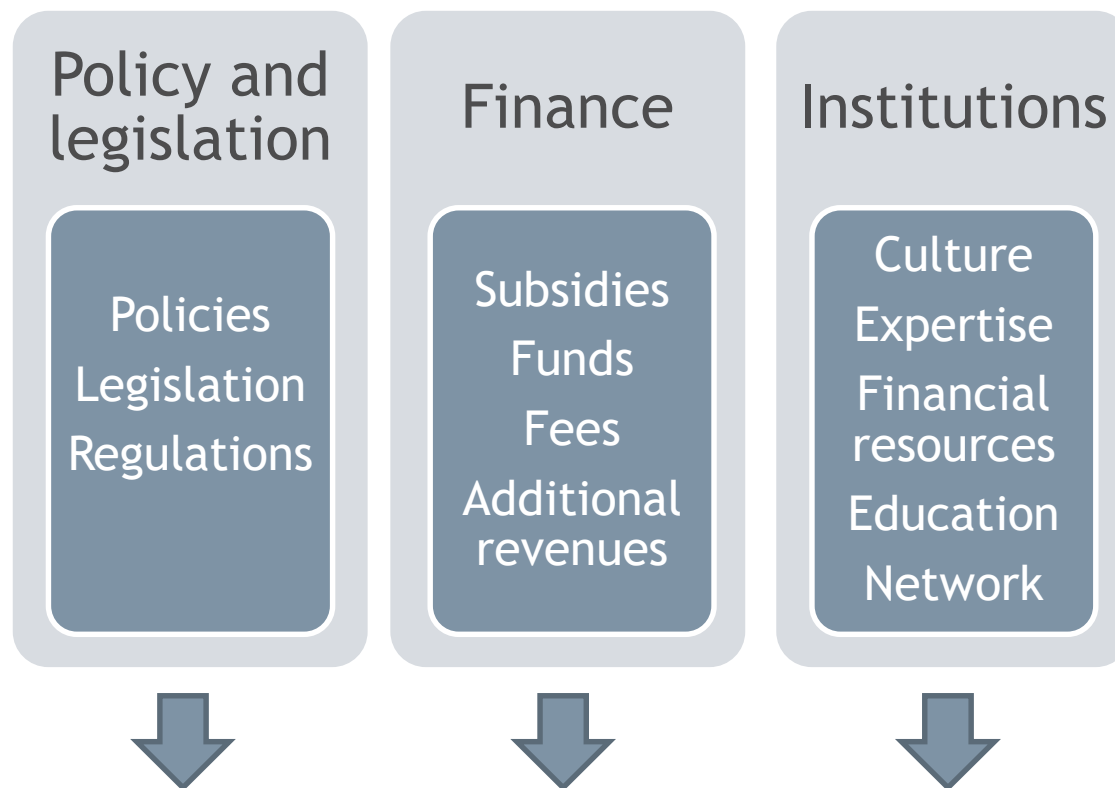
Focus: Co-digestion with biowaste, biogas upgrading, heat capture, power-to-gas
 → No nutrient recycling
 → No water reuse
 → No water efficiency



Different sectors

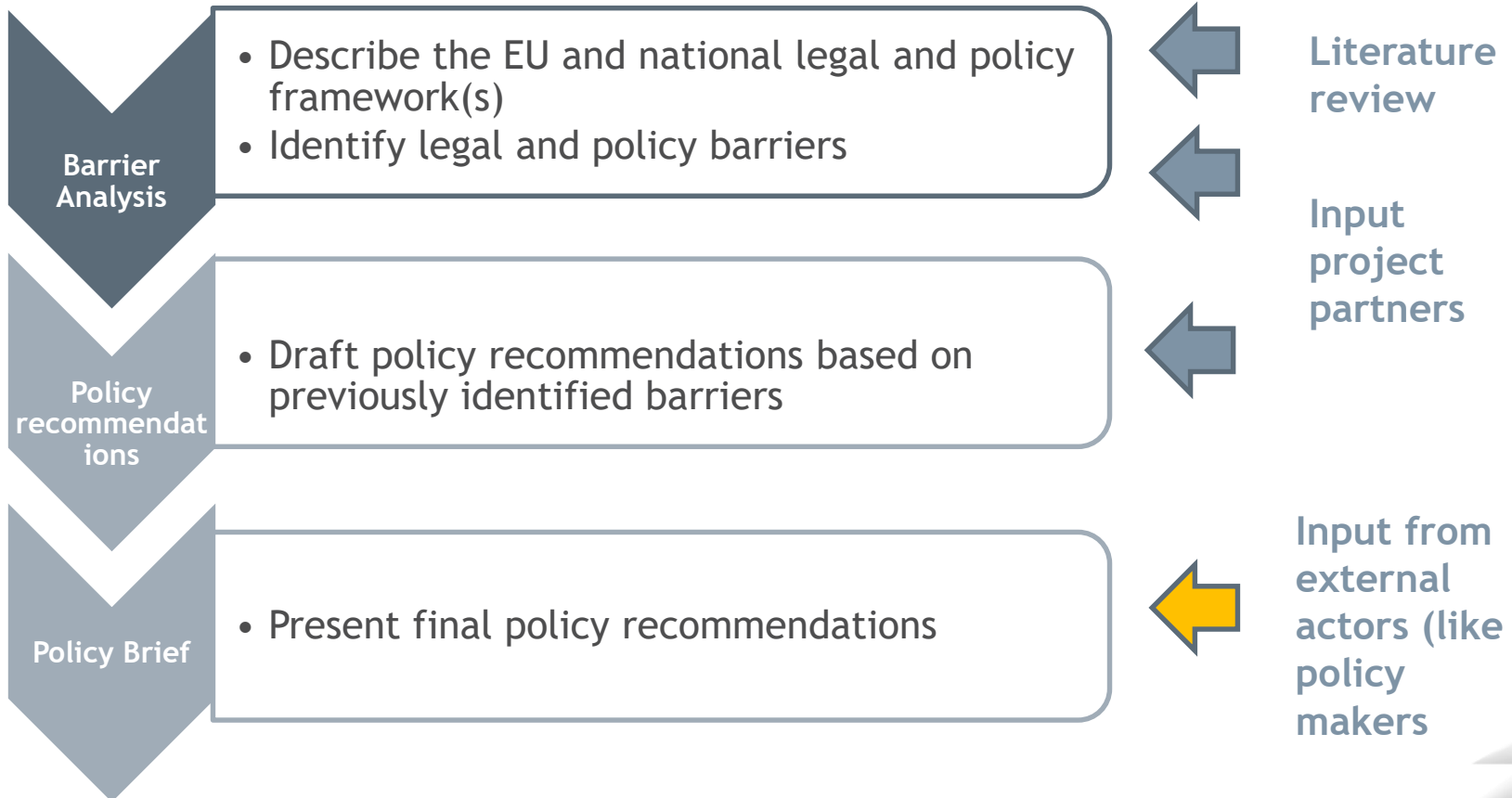






Enabling environment for supporting the uptake of waste-to-water solutions

Methodological Approach



Overview

- There are **multiple relevant barriers**; we present a key ones
- The barriers are **not unique to REEF 2W solutions**. They can be observed for other water innovations as well
- Barriers/policies recommendations are **generic** to suit different country + EU context
- There are **multiple actions** that can be undertaken to implement them, again depending on the national and local context



POLICY BARRIERS & POLICY RECOMMENDATIONS

I: Establish and adopt policies and legislation that integrate critical interlinkages between the energy, water and solid waste systems innate to wastewater-to-energy solutions so as to maximise their synergies and avoid overlaps and conflicts;

Barriers:

- Utilities have little need to adopt waste-to-energy solutions
- Various policy and regulatory barriers compound implementation

Required changes:

- Increase regulatory pressure or incentives to stimulate uptake
- Design policies and regulations so WTTs can fulfil multiple purposes



II: Foster a waste regime that drives up the production of biowaste and consequently stimulates co-digestion in wastewater treatment plants

Barriers:

- High competition and prices for scarce biowaste
- Regulatory waste regime is not strict enough or has not been implemented as of yet

Required changes:

- Enforce the phase-out of landfilling
- Increase organic waste recycling



III: Provide sufficient, predictable and long-term financial support for renewables and specifically promote electricity, gas and heat produced from wastewater

Barriers:

- Waste-to-energy solutions cause high upfront and operational costs
- Subsidies are largely insufficient

Required changes:

- As the single most important driver, subsidies need to be increased, offered long-term and be predictable
- Subsidies need to be extended to all waste-to-energy solutions



VI: Enable utilities to exploit multiple revenue streams beyond treating wastewater to improve the business case of WWTPs

Barriers:

There are various hurdles concerning

- Accounting for investments into waste-to-energy solutions in fees
- Captilising on the by-products of co-digestion
- Selling energy to the grid

Required changes:

- Improve regulatory basis for utilities to invest in waste-to-energy solutions
- Eliminate various existing hurdles, starting with most critical revenue streams



POLICY BARRIERS & POLICY RECOMMENDATIONS

V: Increase multi-sectoral information transfer, education, knowledge and capacity building and establish a national platform in charge of promoting energetic use of wastewater beyond the premises of wastewater utilities.

Barriers:

- Time resources are a key constraint, especially for smaller utilities
- Limited know-how on making use of WWTP energy potential

Required changes:

- Raise awareness
- Provide information
- Improve capacity
- Foster collaboration



Conclusion

- **Demands on policies and regulations grow** if WWTPs are to recycle biowaste and produce energy in addition to treating sewage
- **To create an enabling environment for waste-to-energy solutions is a complex endeavour** that takes many years or a few decades
- Required policies and regulations are, if at all, **only in the making, with many barriers to be tackled**
- **“Good will” largely drives project currently, not systematic support**
- **Large differences exist across EU countries** regarding progress to establish an enabling environment
- Barriers and solutions differ between technologies and energy forms, **with no panaceas being available**



POLICY BARRIERS & POLICY RECOMMENDATIONS

Questions? Any points to make?





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