

(Social) drivers and barriers for technology implementation

MAR, Sant Vicenç dels Horts

Miranda Pieron (KWR) – Work Area 5





It's about the socio-technological system!



Objective:

- Identifying socio-technological drivers and barriers related to the DEMEAU technologies in WA 1 – 4.
(WA5: Unique selling propositions, overcoming market barriers)

Methodology:

- Surveys → stakeholders involved in six cases
(technology developers, researchers, regulators, end users)

CASE	1A (ES) CETAqua	1B (NL) Dunea	2A (CH) Birsfelden	2B (DE) WAG	3 (CH) Neugut	4 (NL) BDS
RESPONDENTS	7	4	2	3	6	6

Model: Systematic way to investigate SOCIAL IMPLEMENTATION DRIVERS AND BARRIERS...

... in various stages of the innovation cycle

FULL-SCALE IMPLEMENTATION

MARKET DEMAND

IDEA GENERATION

Knowledge, skills, motivation, etc...

PILOT PROJECTS AND OPTIMIZATION

RESEARCH AND EXPERIMENTATION

Organization culture, financial means, compatibility, etc...

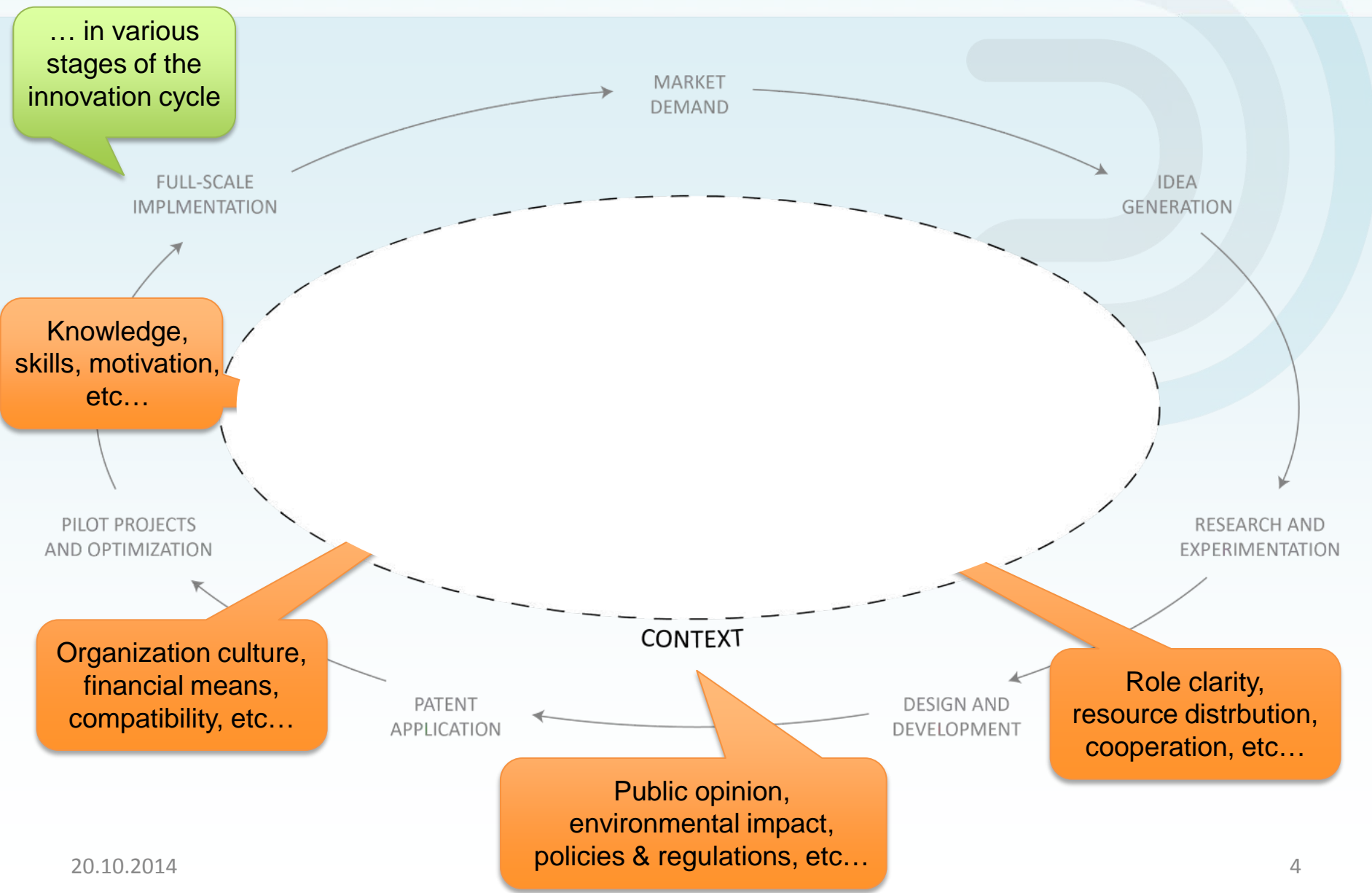
PATENT APPLICATION

DESIGN AND DEVELOPMENT

Role clarity, resource distribution, cooperation, etc...

CONTEXT

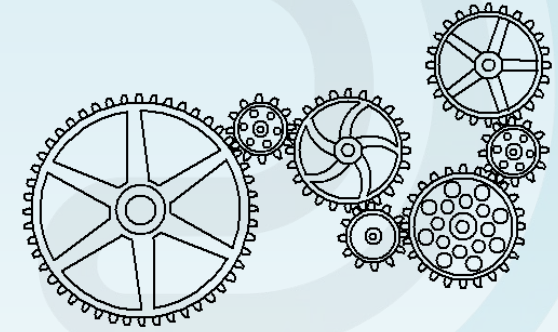
Public opinion, environmental impact, policies & regulations, etc...



Innovation stages



	Water users ass.	Loc. water auth.	Municipality	Nat. government	Research inst.	Consultant
Identifying market needs						
Idea generation						
Research and experimentation						
Design						
Patent application						
Pilot projects and tests						
Technology optimization						
Up-scaling to full scale operation						
Policy & guideline development						
Authorization, legal regulation, etc.						
Full-scale implementation						



Various types of stakeholders have various roles with regards to development and implementation of innovations.

→ Complex patterns of cooperation


Big challenges!

The results!

I'd like to know: do you recognize this?

A green rectangular sign with a white border, tilted slightly to the right, containing the text 'YES!' in bold black capital letters.

YES!

A red rectangular sign with a white border, tilted slightly to the right, containing the text 'NO...' in bold black capital letters.

NO...

Use of reclaimed water is not yet fully socially accepted by the general public; people are easily scared by potential negative impacts for environment and health.

Strict and inflexible regulations
– especially with regard to reclaimed water –
pose very high (unnecessary) requirements
that are very difficult/expensive to meet.

Communication about financials is relatively challenging: when it comes to the question 'who will pay?' resources seem difficult to allocate.

We lack a (European) directive
to regulate recharge and
facilitate the implementation of MAR systems.

Lack of experience and knowledge on best practices on micropollutant removal/degradation in MAR systems (due to their context specificity) results in much uncertainty and high risks.

Regulators and policy makers (as organizations) lack the knowledge and/or capacity to adapt the current regulations to a more MAR-friendly framework (especially regarding the use of reused water).

Thank you for sharing!

Next question:

- Which recommendations can be derived with regards to the role of each involved stakeholder group in the innovation cycle for an enhanced implementation process?

Subject of the next activity!

	Contextual	Inter-organizational	Intra-organizational	Individual
DRIVERS				
BARRIERS				

Identifying challenges and joint recommendations

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In groups:

1. Brainstorm
2. Prioritize
3. Elaborate

Plenary:

4. Explore perspectives
5. Formulate recommendations



Brainstorm

Identify barriers that need to be overcome for successful MAR implementation from your perspective.

Consider the different 'levels' that were just introduced (individual, organizational, inter-organizational, contextual)



Prioritize & Elaborate

Select the 5 most urgent barriers that require action from multiple stakeholders and write those in the first column of the table.

Elaborate by filling out the other columns with the required behaviour from each stakeholder group to overcome the barrier.



Explore perspectives

Each group representative presents their group's results (max 8 mins per group)

- Which barriers did you identify?
- Which ones require the most attention of these stakeholder groups?
- What is required from various stakeholders to overcome them?

Formulate recommendations

Compare, confront and combine perspectives into valuable recommendations for successful MAR implementation



obrigado

Dank U

Merci

mahalo

Köszí

спасибо

Grazie

Thank
you

mauruuru

Takk

Gracias

Dziękuję

Děkuju

danke

Kiitos