A digital marketplace to boost solutions uptake for water-smart circular economy

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Water Europe

IWA the international water association

European Commission

ULTIMATE

ZerOPM

PROMISCES

Development context

Long-term, high-value Marketplace for the CE (Water, Energy, Material) that is not dependent on external funding cycles

nextGen

Towards a next generation of water systems and services for the circular economy (2018-2022)

B-WaterSmart

Accelerating Water Smartness in Coastal Europe (2020-2024)

Water Europe Marketplace

CIRSEAU
Building a water-smart economy and society

B-WaterSmart, WIDER UPTAKE, REWAISE, ULTIMATE WATER-MINING

Other projects may contribute with content

ULTIMATE

Industry water-utility symbiosis for a smarter water society (2020-2024)

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Key Stakeholders

- **Problem owners**
  - Utilities, or industries, seeking to find solutions to turn their linear processes into circular ones
  - Potential buyers of a product with specific characteristics (price, quantity, quality, etc.)
- **Solution providers**
  - Entities (companies, SMEs, institutes etc) that provide a technology or a service as part of a *CE enabling* portfolio
  - Sellers of reusable resources, that under certain conditions can be used in the circular economy
- **Investors**, seeking opportunities to maximize investment revenues
- **Others**: Regulatory bodies, NGOs, Academics etc.

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Goals of the Marketplace

Explore available technologies, tools, products and services and use targeted search capabilities

Showcase success: Case studies with successful CE projects

- Conditions, lessons learnt, limitations, transferrable technologies, georeferencing, etc.

Boost networking

- Bring together potential partners with common interests
- Supporting face-to-face or online meetings
- Supporting the organisation of events

Provide personalised and to the point **information**

- Provide recommendations based on user preferences and interests
- Machine learning capabilities tracking user behaviour within the MP

Encourage and **fund innovation**

- Support promotional activities, support funding of startups etc.

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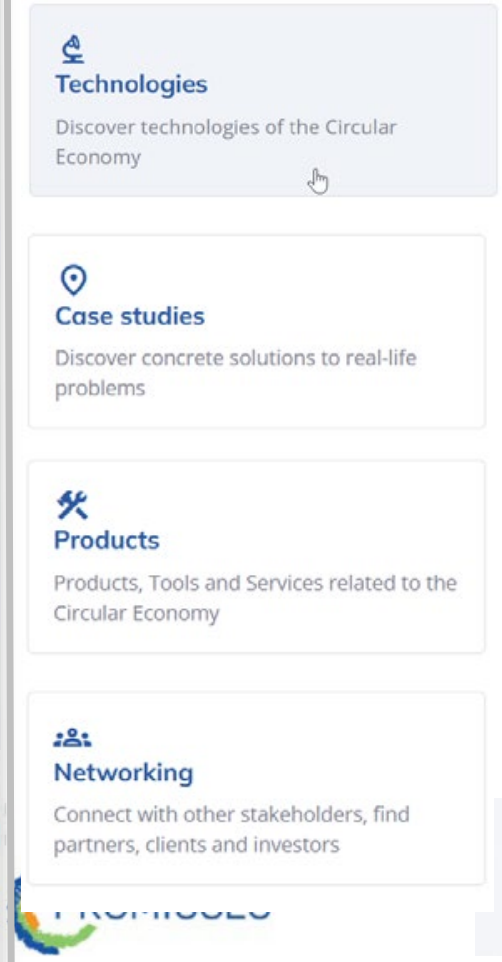
Technologies (1/3)

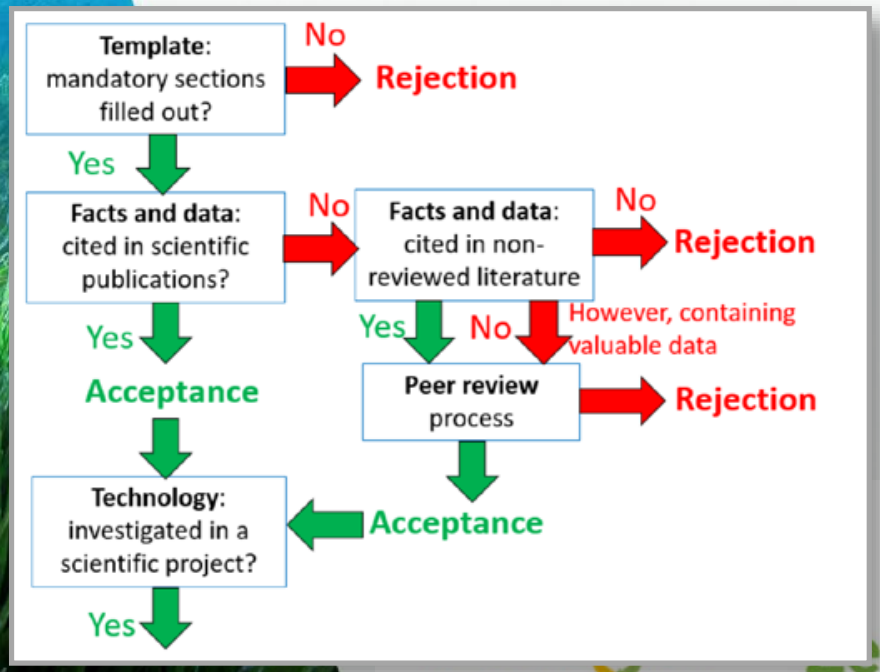
- Classification system of innovative technologies supporting the Circular Economy in the domains **Water**, **Energy** and **Nutrients/Materials**
- Taxonomy of technologies

- Resource for Circular Economy (3)
  - Water recovery technologies for water reuse (5)
    - Wastewater treatment technologies for water reuse (4)
      - Biological systems (3)
        - Membrane Bioreactor (MBR)
        - Metabolic Network Reactor (MNR)
        - Anaerobic Membrane Bioreactor (AnMBR)
      - Membrane systems (9)
        - Membrane aerated biofilm reactor (MABR)
        - Metabolic Network Reactor (MNR) coupled to MELiSSA advanced separation systems
        - Nutrient removal and recovery via ion exchange and HFMC
        - Membrane Bioreactor (MBR)
        - Anaerobic Membrane Bioreactor (AnMBR)
        - Membrane distillation
        - Ultrafiltration or nanofiltration with RO regenerated membranes
        - MELiSSA advanced separation systems
        - Electrodialysis
      - Adsorption systems (1)
        - Nutrient removal and recovery via ion exchange and HFMC
      - Advanced oxidation processes (AOP) (3)
        - Activated carbon treatment coupled to an AOP
        - Hydrogen peroxide photolysis (UV/Hydrogen peroxide)
        - UV/Ozone
    - Rainwater harvesting systems (4)
      - Bioswale systems
      - Urban Waterbuffer
      - Automatic floodgates
      - Natural ponds and artificial surface dams
    - Surface water and infiltration systems (4)
      - Bioswale systems
      - Automatic floodgates
      - Large scale Aquifer Storage & Recovery (ASR) Systems



Technologies (2/3)

- Classification system of innovative technologies supporting the Circular Economy in the domains **Water**, **Energy** and **Nutrients/Materials**
- Taxonomy of technologies
- Methodology for approving new technologies



Technologies

Discover technologies of the Circular Economy

Case studies

Discover concrete solutions to real-life problems

Products

Products, Tools and Services related to the Circular Economy

Networking

Connect with other stakeholders, find partners, clients and investors

Technologies (3/3)

- Classification system of innovative technologies supporting the Circular Economy in the domains **Water**, **Energy** and **Nutrients/Materials**
- Taxonomy of technologies
- Methodology for approving new technologies
- Detailed technology factsheets

Technologies

Discover technologies of the Circular Economy

Case studies

Discover concrete solutions to real-life problems

Products

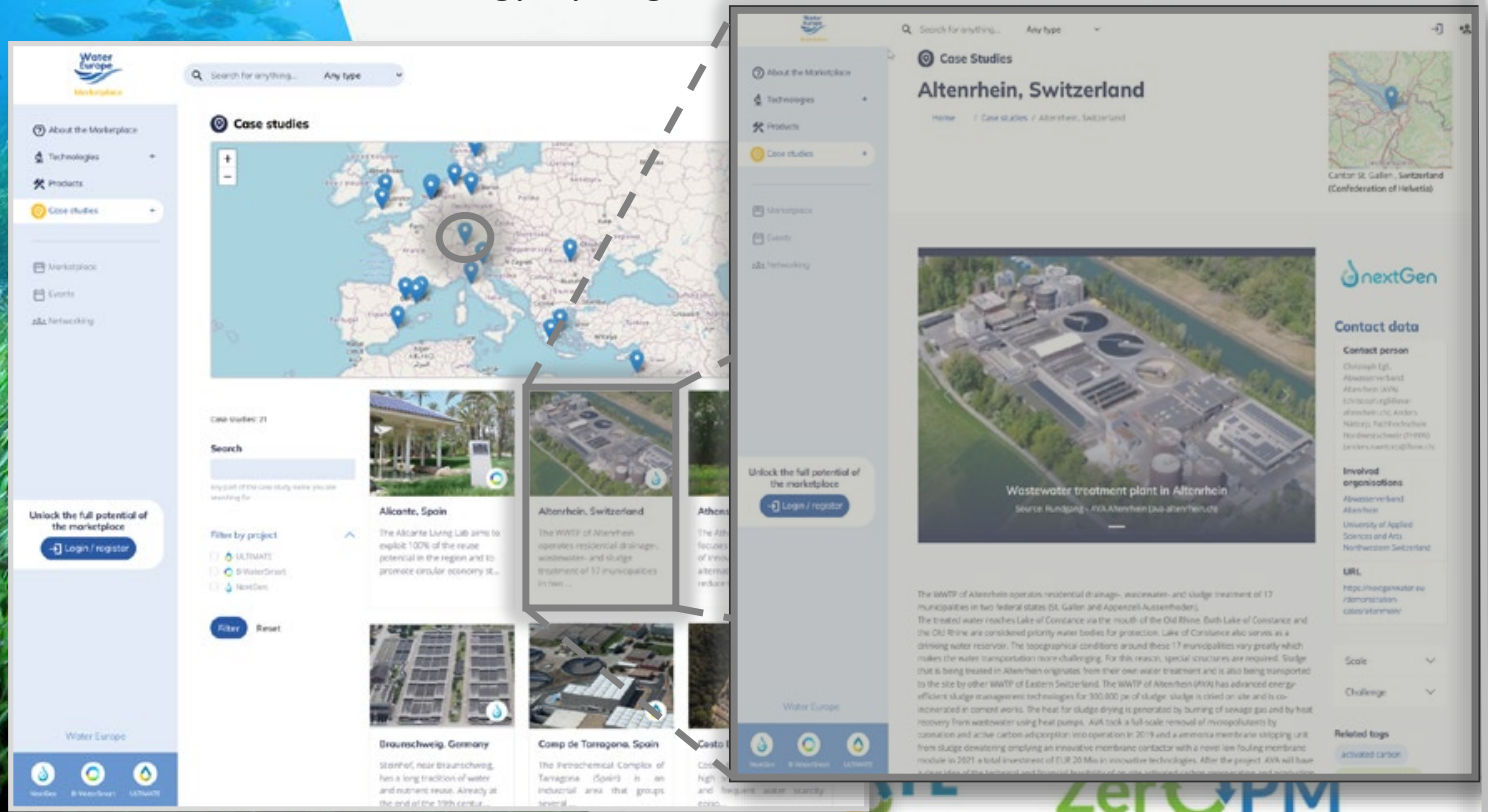
Products, Tools and Services related to the Circular Economy

Networking

Connect with other stakeholders, find partners, clients and investors

Case studies

- Best practices, application of technologies, requirements and conditions, transferable methodology, synergistic benefits, costs, etc.



Technologies

Discover technologies of the Circular Economy

Case studies

Discover concrete solutions to real-life problems

Products

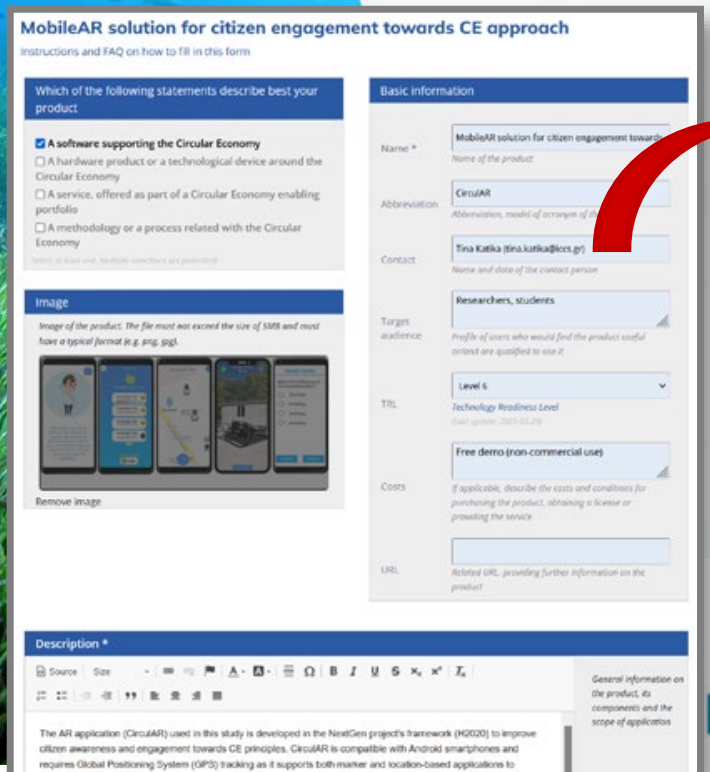
Products, Tools and Services related to the Circular Economy

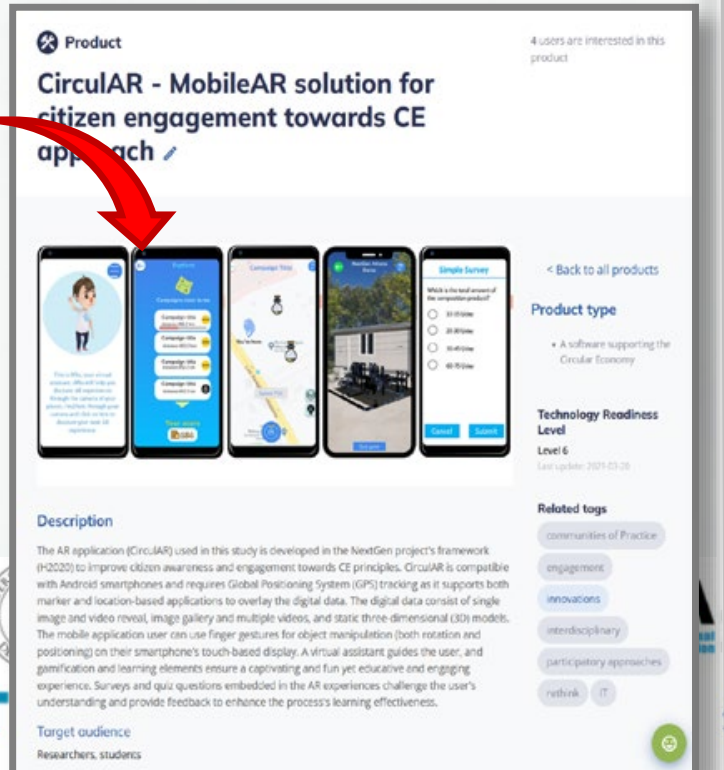
Networking

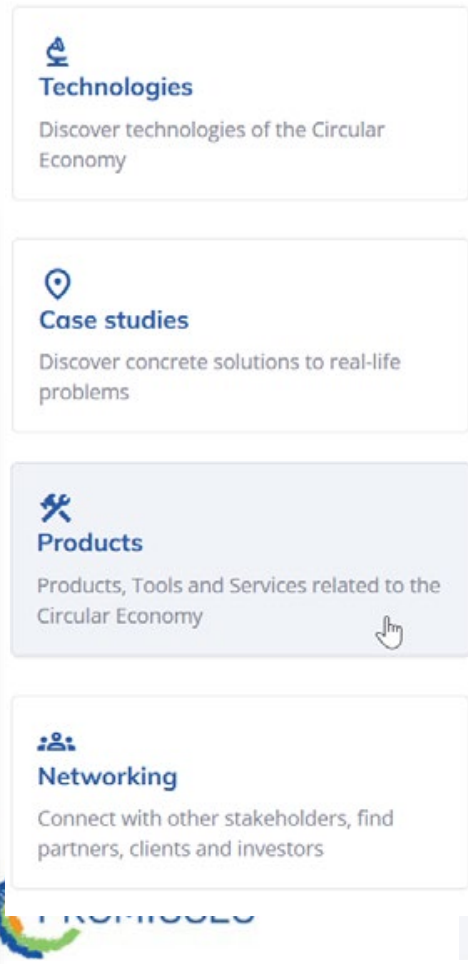
Connect with other stakeholders, find partners, clients and investors

Products (1/2)

- Registered users can promote their products (tools, services) on the Marketplace
- A small annual fee will be requested ensuring the viability of the Marketplace
- Early adopters can upload their products for free
- Users are responsible for the content of their product



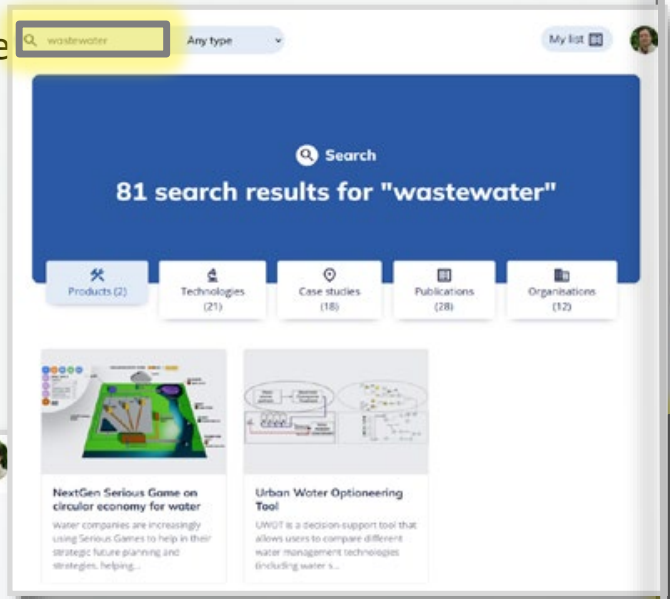


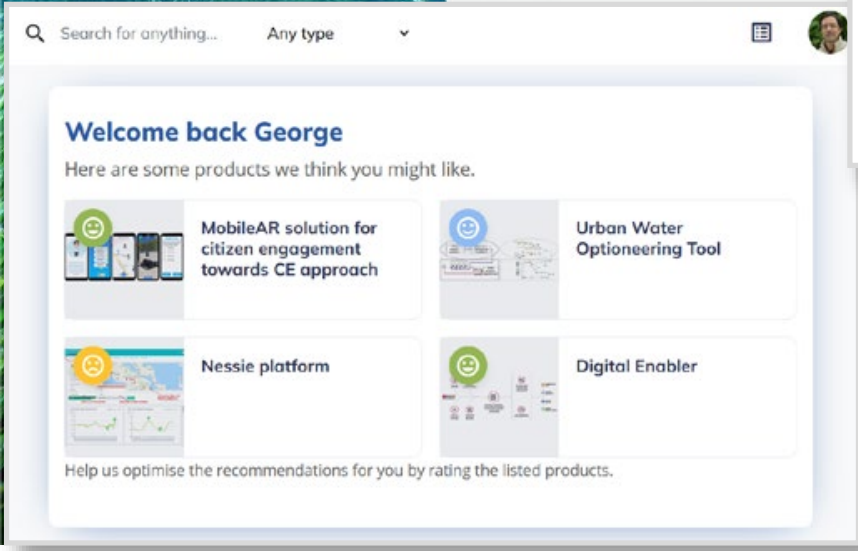


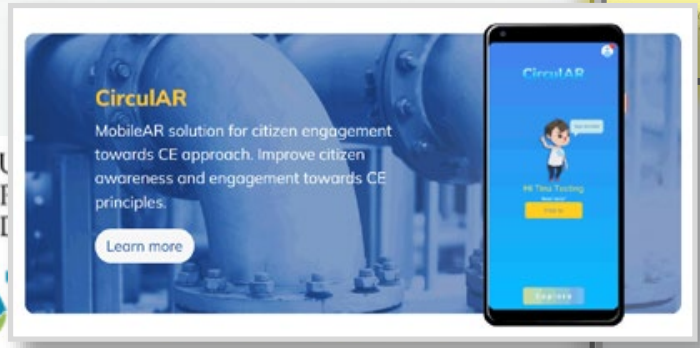
Products (2/2)

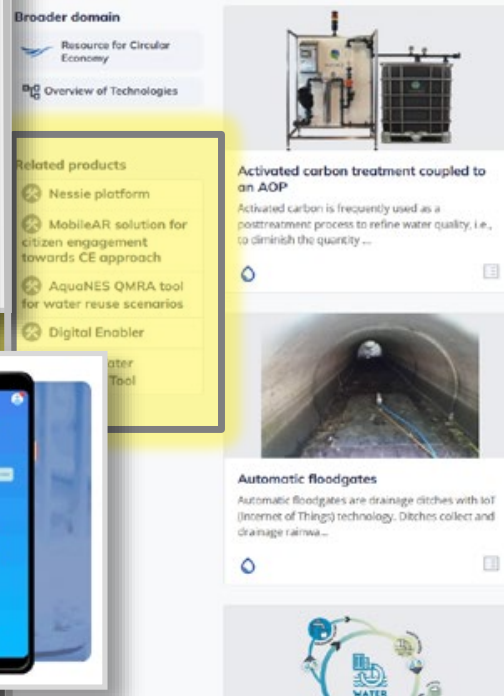
Promotion of products through the Marketplace

- Through associations with other items (technologies, tags, organisations etc.)
- Through search possibilities
- On the dashboard of users
- Product of the month
- Other promotional means (newsletters, emails, etc.)



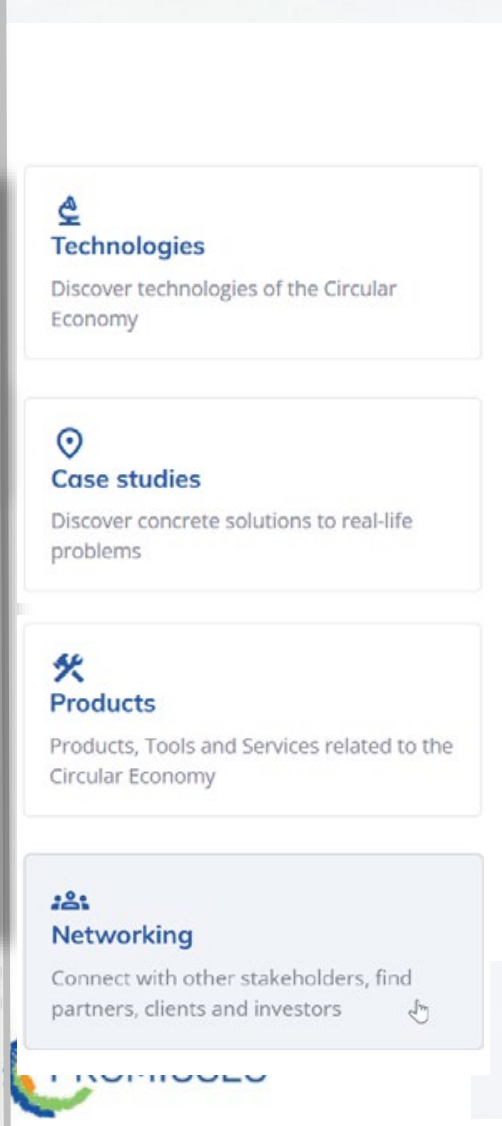






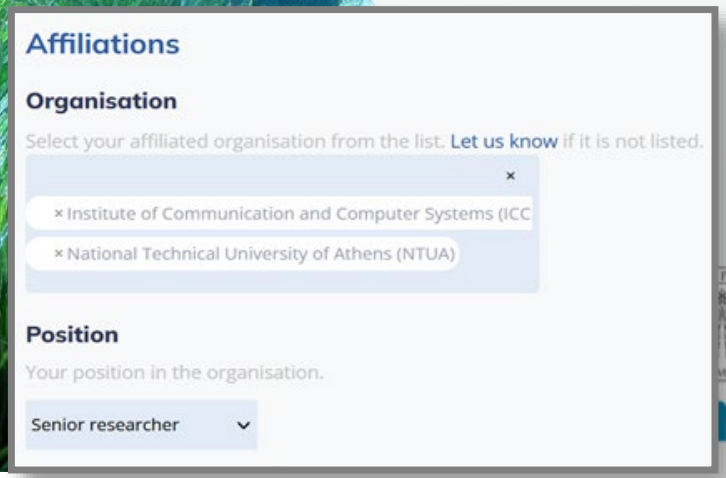
N rking (1/2)

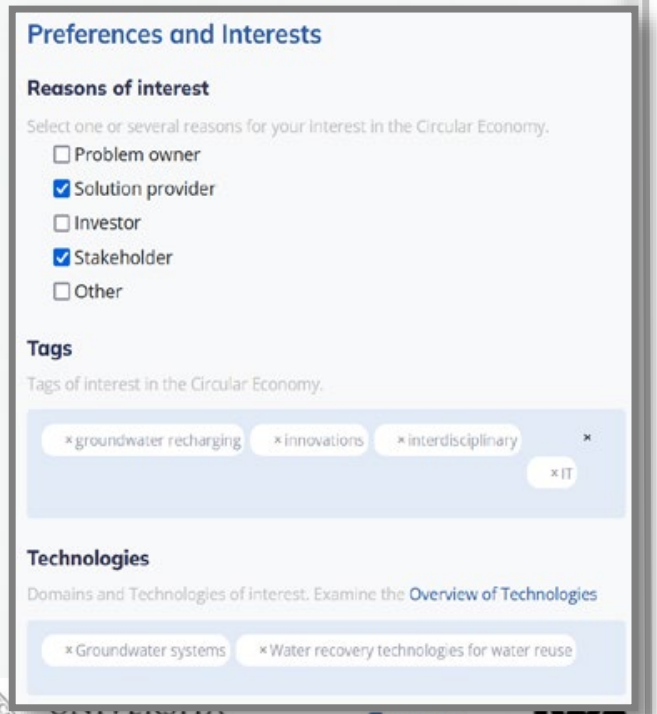
- Search
  - Get informed
- Connect
  - Follow - Send message

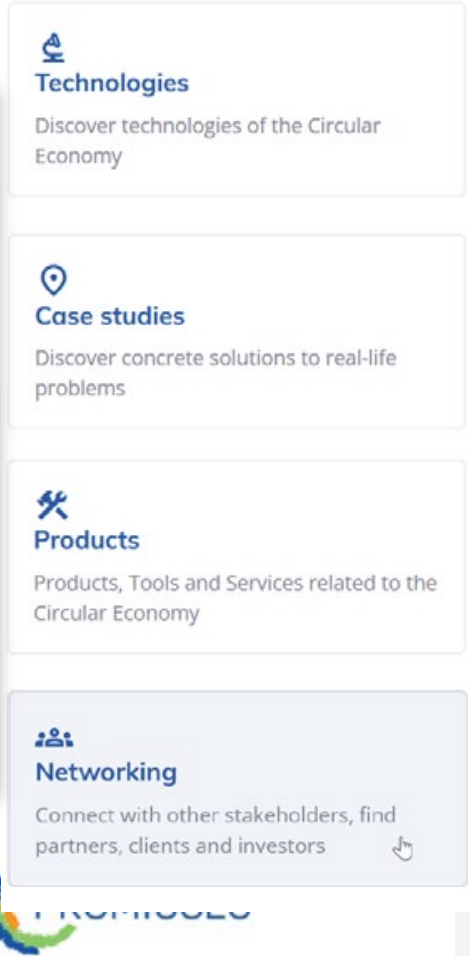


Networking (2/2)

- Search
  - Get informed
- Connect
  - Follow - Send message
- Be visible
  - Declare your affiliations and preferences
  - Update your profile and products
- Stay informed
  - Receive newsletters - Login regularly



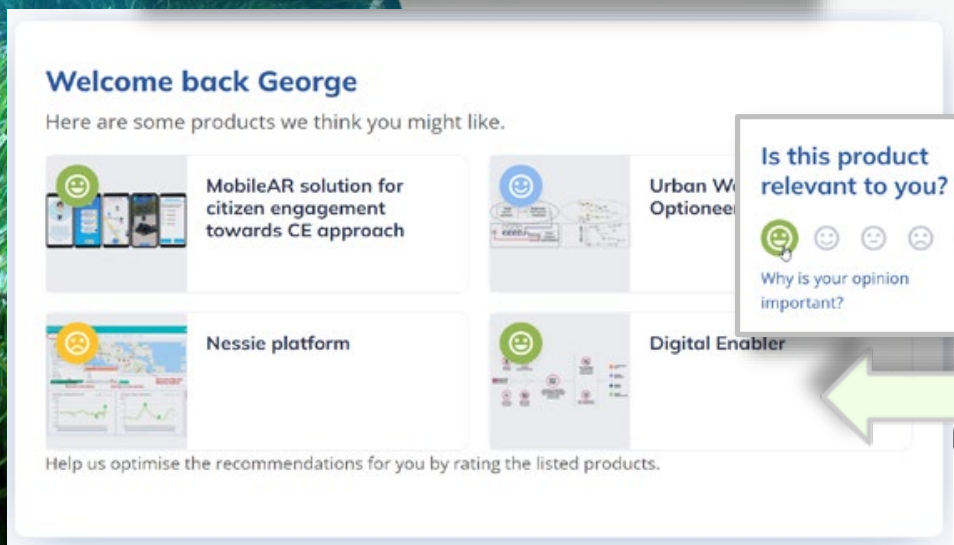


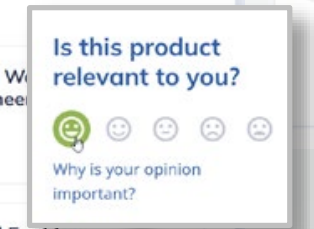


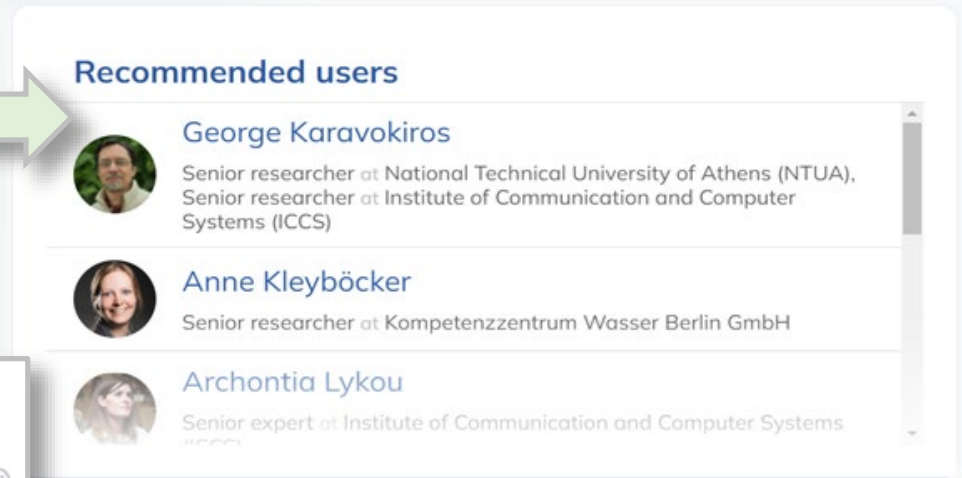
Recommender System

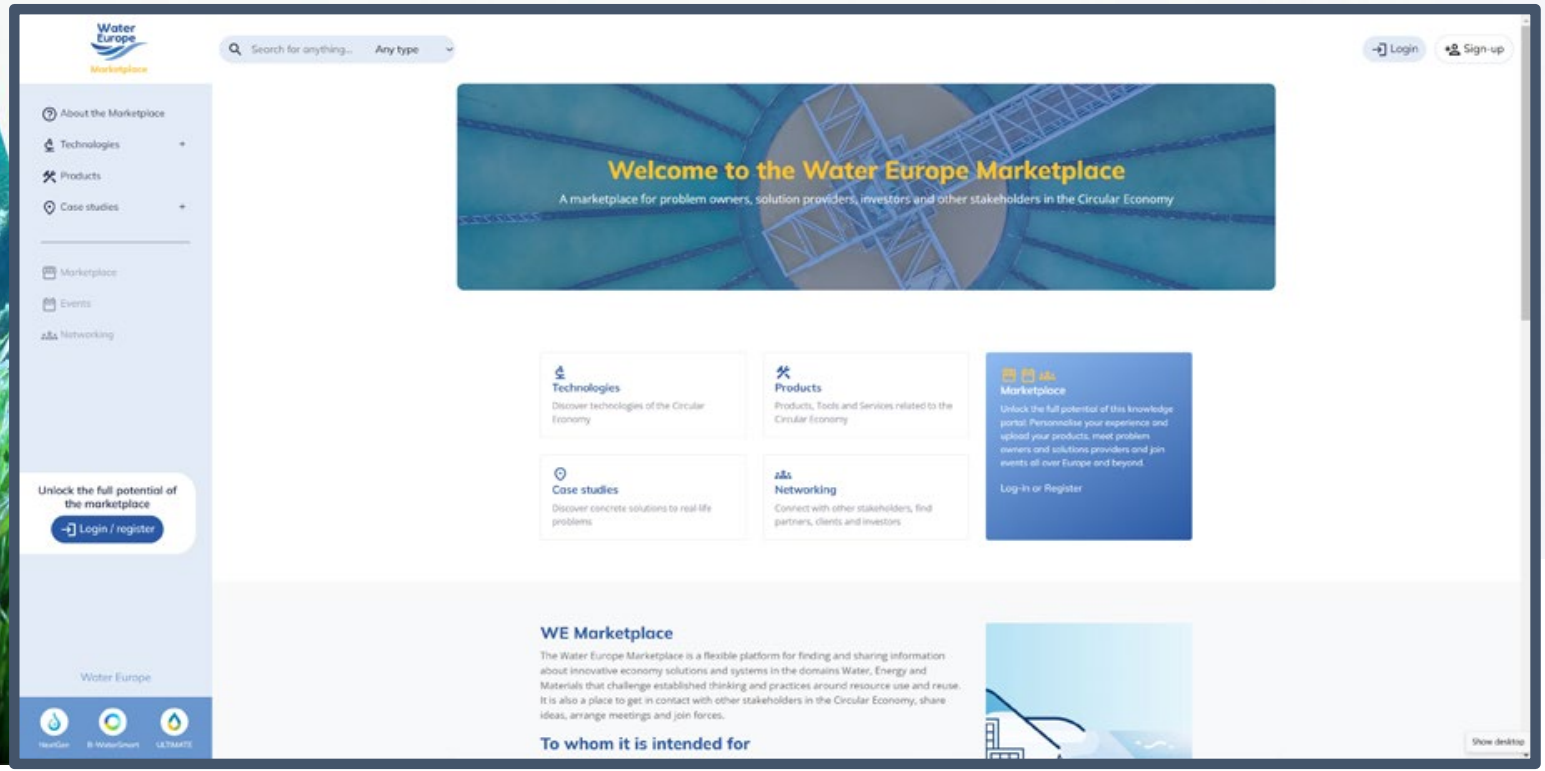
Advanced algorithm which determines when and where you and your products are shown on the dashboard of a specific user

Criteria:
- Stakeholder category
- Common interests in technologies, products and keywords
- Browsing behaviour







Criteria:
- Direct declared interest in a product
- Indirect expression of interests
- Browsing behaviour

The marketplace is live: https://mp.watereurope.eu/