



Increased Water Efficiency with Ceramic membrane technology

CIP Eco-Innovation Program (ECO/11/304469)

SME infomiddag

CIP Eco-Innovation en andere Europese instrumenten

Utrecht, 15 mei 2013



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WHEN BUSINESS MEETS THE ENVIRONMENT





RWB Water Services B.V.

- Professionals in water (drinking, process and waste water)
- Founded in 2001 with 21 employees
- In 2013 about 70 employees
- Growth by globalization (EU Focus)
- Investments in joined application research
- Hands-on engineering skills



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Pilot test for backwash water reuse



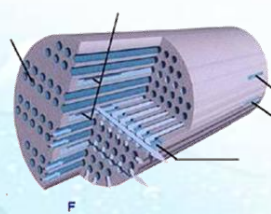
Re-use of backwash water
Comparative study of 6 MF/ UF
membranes



C



D



F



A



B



E



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Why backwash water reuse?

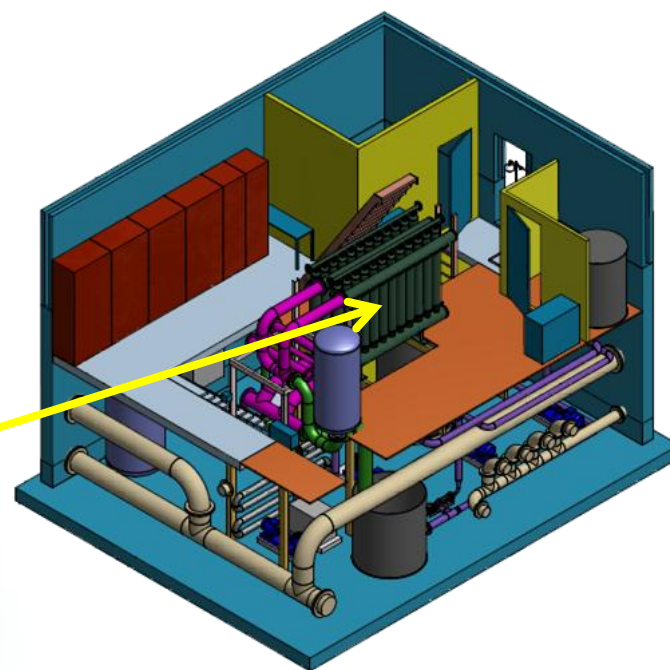
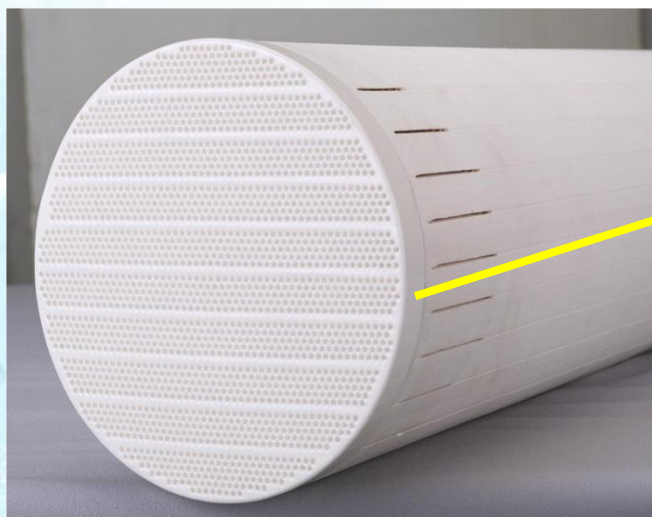
- Sweet water is getting scarce
- Discharging is waste of sources



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BAT: Ceramic Membrane Filtration

- Less energy usage
- High reliability
- Small footprint



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BAT: Ceramic Membrane Filtration

Technology	 
Launching customer	
Grant provider	 
Grant advisor	

Grant: € 847.075
Start: July 2012



Goals

- Building first application (*Full scale demonstration plant Wierden*)
- Commercial exploitation across EU
- Validate calculated savings:

	Project	Europe
Water reuse (m ³)	1.000.000	1.000.000.000
Energy savings	30%	30 – 80%
Reduction chemical usage	50%	

- Spread the word: **“Reuse is viable!”**



- Fits into the program
 - Sustainable innovation
 - Building first application (*Full scale demonstration plant Wierden*)
 - Commercial exploitation across EU

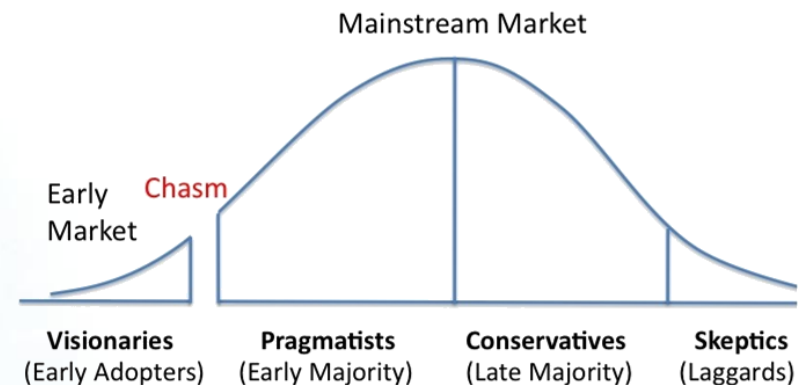


Is it worth the effort?

- Helps to persuade the “launching customer” (*Closing the CHASM*)
- Enforces structure in commercial exploitation
- Validated payback period
- High involvement of partners
- Learn from SME's in EU



Technology Adoption Life Cycle Model



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What did we encounter?

- Dutch groundwater tax was aborted. (*Rethink the initial investment*)
- EU policies and legislation on water (re)use are not uniform (yet).
- State-of-the-art technology turns out to be unstable.



Living well, within
the limits of our planet

Proposal for a general Union Environment Action Programme



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WHEN BUSINESS MEETS THE ENVIRONMENT

Start from application with a professional team!



Stay up to date: www.iwec-water-reuse.eu



The screenshot shows the homepage of the IWE water reuse 3.0 website. At the top, there is a navigation bar with links: About IWE, Our partners, History, Downloads, and Contact. Below this is a large blue banner featuring an aerial photograph of a water treatment facility. To the right of the photo, the text reads: 'IWE water reuse. Reuse of filter backwash water means that less groundwater is necessary to provide the same amount of water. With ceramic membranes backwash is filtered to high quality drinking water. The membranes ensure low costs because: • of their long period of use • low energy cost. For this project this installation will be build and tested in an existing drinking water treatment location.'

Below the banner, there are two columns of text. The left column is titled 'IWE: whats new?' and contains the text: 'This first full scale system for reuse of filter backwash water with ceramic membranes (IWE) will be build as a demonstration plant at drinking water treatment location Vlieden (Vliens) in the Netherlands. The demonstration plant will validate the systems reliability, costs and savings at a operational drinking water treatment plant. Through this website information about the progress and developments will be available.'

The right column is titled 'Latest Updates' and contains a list of updates:

- [comparative study of 6 membranesystems](#)
- RWB presents the IWE project during the [Aqua Nederland trade show](#)
- The Netherlands is host country for the international celebration of [World Water Day](#)
- Vliens and partners develop [new membrane cleaning technology](#)

At the bottom of the page, there is a footer section. It includes the text 'A collaboration between:' followed by logos for Rwb, Vliens, and EUROSTEEL. To the right, it says 'Supported by:' followed by the ECO-innovation logo and the European Union flag. Below this, a small disclaimer reads: '* This information does not necessarily reflect the official position of the EACI, the European Commission or other European institution.' At the very bottom, it says 'Design and hosting by BIT Agency'.

