Water Research to Market

To speed-up the transfer of water related research outputs to better implement the Water Directives.
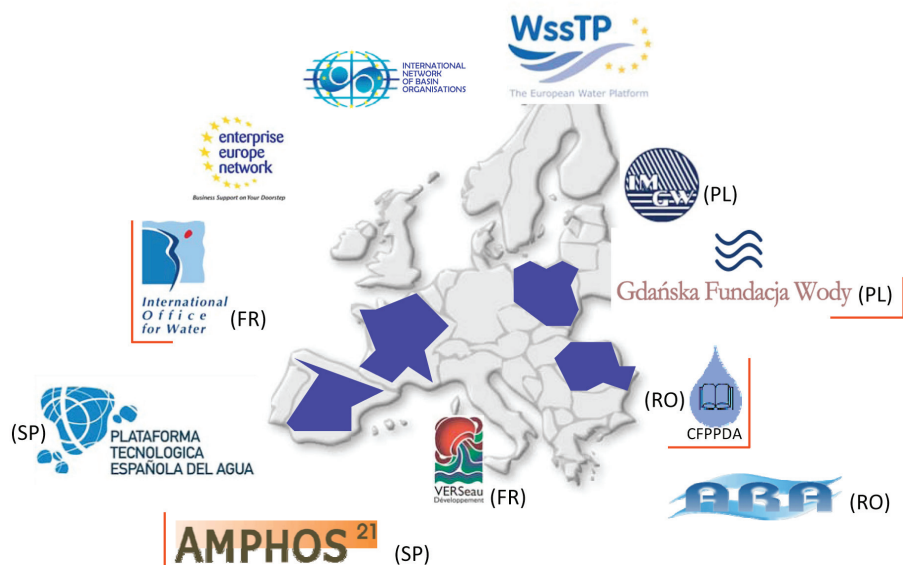
Layman's Report

2010

www.waterrtom.eu

2013

Water Research to Market

The Water RtoM LIFE+ project (2010-2013) has developed a strategy to speed up the transfer of water related research outputs to the market. During the three years of the project, the "Research to Market Assessment Strategy" was designed and tested in order to have a set of tools to reduce the time for knowledge transfer from water related research outputs.

The strategy comprises: a watching brief of the innovative research in the water domain as the raw material; a set of tools for the assessment of what is required for the research to be ready to use; communication tools for their promotion and an open access database.

A liaison committee provided support to the Water Research to Market consortium in order to bridge activities with the needs of different stakeholders to be sure that the project develops a set of tools close to the real-life context. They represented a large panel of stakeholders, SMEs, researchers, knowledge brokers and public water management bodies. Thanks to the strategy developed for analysis, dissemination and promotion of research outputs into the market, Water RtoM improved the speed of Knowledge Transfer for 12 research outputs. From this experience, Water RtoM proposes a "service" based on the developed tools and strategy.

4 Partners
And 7 Liaison committee, associated partners

Content

3

List of acronyms

BC ....Business Case (Water RtoM tool)
CIS-SPI ....Common Implementation Strategy group on Science-Policy Interface
EEN ....Enterprise Europe Network
EU ....European Union
EIP...........................European Innovation Partnership
F..............................Funding organisations (research programmes)
INBO ....International Network of Basin Organisations
IPR ....Intellectual Property Rights
KB...........................Knowledge brokers (research transfer offices, technological platforms, innovation departments at enterprises, Water RtoM dissemination experts)
KU...........................Knowledge users (mainly SME's, industries, water administrations, water utilities, etc.)
LC...........................Liaison Committee
PEL..........................Limousin Environnent Cluster (Pole Environnement du Limousin)
R ....Knowledge makers, mainly they are researchers and the scientific community
ReMAS ....Research to Market Assessment Strategy (Water RtoM tool)
SMEs......................Small and Medium Enterprises
SWTP ....Spanish Water Technology Platform
Water RtoM ....Water Research to Market
WFD.......................Water Framework Directive
WssTP....................Water supply and sanitation Technology Platform

1. Context and background

The Water Research to Market (WRtoM) project is an initiative of four partners: International Office for Water (France), Amphos 21 (Spain), Gdansk Water Foundation (Poland), Fundatia Centrul de Formare si perfectionare Profesionala in Domeniul Apei (Romania). The project has been running for 3 years, starting in September 2010 and ending in August 2013.

The project refers to the necessity of **speeding up the transfer of water-related research to the market**, which should improve the effectiveness of the water directives implementation. To achieve the good status of water bodies and prepare the second round of river basin management plans, water managers need to innovate and use new knowledge effectively. Water RtoM aims to help in this process.

2. The idea: to add a step in the existing transfer schemes

> **Water Research to Market** idea is to provide a service that adds a step in the existing transfer schemes by supporting the uptake of the innovative research results by the water sector.

There is inefficient communication between researchers and target users of research outputs. The proposed service facilitates the "marketing" of research outputs to practitioners, with a strategy for analysis, dissemination and promotion of research outputs into the market, speeding up knowledge transfer into the market.

Water RtoM targeted practitioners from river basin organizations, water users, and suppliers of technologies, along with researchers, knowledge transfer institutions and research funding bodies.

3. The activities

The activities performed during the project focused on the identification and selection of existing research projects (LIFE, INTERREG, national programmes databases, etc.) in the water domain in order to select the most promising outputs.

The second activity developed tools to provide a distance-to-market assessment questionnaire taking into account the risks for the end-users and necessary steps ahead. Those tools have been tested using 82 innovative outputs, with 30 selected as close to the market. For these 30 outputs, a business case was provided that delivered clear information for uptake by the potential users.

The third activity took the business cases and developed a promotion strategy to build relation between researchers and users to engage in the making of the product operational. The strategy identified and implemented different means and channels for dissemination: from face-to-face events (brokerage events, national events) to virtual channels thanks to the dedicated E-infrastructure (e-fair, e-seminars, e-newsletters, European Water Community[1]) and networking.

The fourth activity created "Guidelines" from the lessons learnt during the LIFE+ project duration in order to promote the use and re-use of the results at EU level. This document is available online and has been disseminated via the networks, websites, e-seminars and the final seminar in Barcelona in June 2013.

The fifth activity developed the future of Water RtoM and the sustainability of the service offered. The Water RtoM activities were developed through out the course of the project with a commercially viable service. The service is described in chap 8.

---

[1] European Water Community, is a communication platform aiming to connect science with policy to improve water management in Europe –Through the platform you can contact peers community and exchange ideas on dedicated working groups.http://europeanwatercommunity.eu/

A **Liaison Committee** was set at the beginning of the project, comprising of 4 national organisations, 2 European clusters and 1 international network. The aim was to link the project with the real-life needs (researchers, end-users, etc.). Additionally, the committee provided advice on the tools usage and the output selection during the project lifetime. Their experience and available networks assisted the partners participation in brokerage events and the dissemination of the innovative research outputs to a wider audience.

Liaison committee of Water RtoM and the steering committee, at EXPOAPA Fair, Bucharest June 2011.

4. The "outputs"

During the 3 years of existence, Water RtoM produced the following outputs:

Box 1: Criteria for selection **of research outputs "ready-to-use"**

• The outputs should give an answer to the existing problems providing a clear benefit to their potential users (regarding the regulations, the needs, etc).

• **Common application** (the output does not solve specific local problems)

• **Stage** of implementation and development (between research stage to implementation stage)

• **The statu**s of the outputs: patent, prototype. Same here I do not understand which one is the criteria

• **The transferability** (to national, international scale, to other targets, to other contexts).

• **A list of 200 preselected research projects** (EU, PL, ES, RO, FR) identified from existing databases, projects websites, ministries and other relevant bodies (for the national projects), external events and direct contacts. The basic information is described for a preliminary characterisation of the outputs.

• For those which fulfil the criteria defined with the support of the Liaison Committee members (see box right), **82** have been assessed in-depth in terms of distance to the market,

• **30 business cases have been provided** for the most "ready to use".

• **A set of Tools for the Research to Market Assessment Strategy** (described in Section 5 and in the Guidelines[2]): the tools were developed during the project to facilitate market analysis. These tools are not publicly available as they are internal tools and form a property of Water RtoM project. Output profile is the dissemination stage of the in-depth analysis of the 82 outputs. Promotion and dissemination strategy that includes the communication plan, leaflets, e-newsletters and published papers are described in section 5.

• **10 Best practices** to facilitate the transfer of research outputs (described in section 6 and in the Guidelines[1])

• **13 success stories** as a demonstration of the possible decrease of the distance between researchers and users (section 7).

• **A business plan for a service** Water RtoM after the LIFE project (described in section 8)

The products are available on the website **www.waterrtom.eu**, except the list of preselected projects and the business cases (internal data).

[1] Free availability on the website http://www.waterrtom.eu/waterrtom guidelines

Outputs

5. The tools

This knowledge brokerage toolbox starts with the identification of a research output and finishes with its uptake.
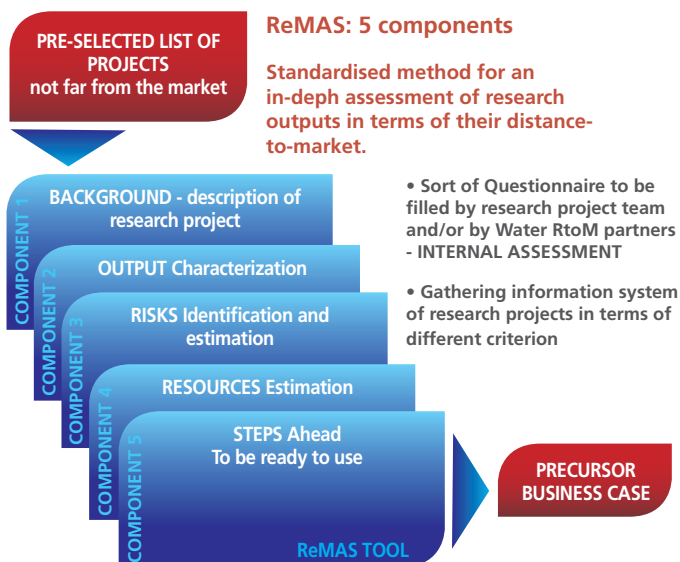
5.1. Watching brief strategy

The watching brief is the first step in the REMAS process where the continual search for interesting projects leads to the selection based on their ability to assist in achieving good ecological status of water bodies. Then the outputs are evaluated for their distance to the market. It is important to select outputs close to the market for the efficiency of the following activities.

The database contains all chosen projects which are related to water sector and are ranked according to criteria of "selection of research outputs" (box 1) and their distance to the market.

5.2. Assessment tool

Some of the research outputs are not ready to be used, requesting more research activities to further develop them. Research to Market Assessment Strategy **(named ReMAS)** developed during project lifetime, is a standardised method for the in-depth assessment of research outputs in terms of their distance-to-market, i.e. whether they are transferable onto different geographical conditions at a reasonable cost, and reasonable risk.

6

PRE-SELECTED LIST OF PROJECTS
not far from the market

ReMAS: 5 components

Standardised method for an in-deph assessment of research outputs in terms of their distance-to-market.

COMPONENT 1 — **BACKGROUND - description of research project**

COMPONENT 2 — **OUTPUT Characterization**

COMPONENT 3 — **RISKS Identification and estimation**

COMPONENT 4 — **RESOURCES Estimation**

COMPONENT 5 — **STEPS Ahead To be ready to use**

ReMAS TOOL

PRECURSOR BUSINESS CASE

• Sort of Questionnaire to be filled by research project team and/or by Water RtoM partners - INTERNAL ASSESSMENT

• Gathering information system of research projects in terms of different criterion

The evaluation of risk is a key aspect of the tool that allows the identification of potential risks coming from the market, social, technical and economical viewpoints. This evaluation sets out the next steps to be performed and is designed in such a way to facilitate the extensive use by the layperson. It is recommended the testing/trialling process be applied by a knowledge broker with a objective point of view of the situation. Based on the ReMas, the Output profile information sheet is publishable (available in the E-fair **www.waterrtom.eu/efair**) and its precision depends on the researchers provision of information.

The next development should be to link each output profile with market need profiles.

The next step for further promotion of the promising output is the creation of a **Business Case (BC)**. The BC gathers information from ReMAS and other sources (interviews in depth of the esearcher) to be further analyzed and completed according to the section in box 2.

The BC is available for dissemination on request. It offers to the researchers a support to identify further steps to make the output "ready to use". In order to complete the BC the **full help from the researchers is required.**

BOX 2

The BC is composed of three tasks as follows:

1. Detailed description on the output in 10 sections: information resulting from ReMAS

   1- Project details and description of Output (from ReMAS), 2- Functioning details, 3- Availability of the output, 4- Market, legal situation details, 5, 6 & 7- Activities to achieve the status "ready for use" (legal, market, social, technical), 8- Economic analysis approach, 9- Estimation time for the achievement of the "implemented" status, 10- Monitoring indicators

2. A publishable and synoptic description of the output as a output profile sheet.

3. Action plan of the identified activities. List activities with timing and objective. This is a dynamic section that needs to be monitored.

5.3. Promotion tools

THE PROMOTION STRATEGY sets up the dissemination of the innovative outputs based on the needs of each and all projects providing flexible tools to efficiently deliver information.

The following communication plan was developed and implemented during the project:

• **16 Brokerage events:** back to back with a larger regular event or conferences organized by the partners and associated partners, about wide spectrum of precursors.

• **15 Seminars:** organized at local (national or regional) level, focused sharply on one topic, with direct audience.

• **9 E-Seminars:** typically a series of 2 hour web based conferences, focused sharply on one topic, usually one seminar refers to one output presentation.

• **Continual E-Fair:** a permanent virtual area on a open access basis (82 Profiles of research outputs available).

• 10 Newsletters

• 15 Papers in magazines.

Newsletters and papers are available on **www.waterrtom.eu** / section Results.

EURO INBO (Istanbul, TR), Nov 2012

THE E-FAIR is the online database gathering the research output assessments in terms of distance to the market. It has a full text search engine along with searches by water topic or output type. The E fair is fed with research products or outputs not yet on the market, but specifically selected because of the short distance to the market. Detailed information on the selected and assessed outputs is on the E-fair: http://www.waterrtom.eu/efair.

Next developments will integrate into this E infrastructure a market needs approach, creating connections with each of the output listed.

Water RtoM Final seminar, Barcelona (SP), June 2013 (working group)

E-SEMINARS: In between the brokerage events, national seminars and permanent exchanges through the e-fair, the project offered a possibility for practitioners to have active discussions during a series of 2 hour **web based conferences**, focused sharply on one topic or output. E Seminars are electronic seminars delivered over the Internet using full motion video, audio and graphics and are available anytime and anywhere where the internet connection and a computer is accessible. Researchers have the possibility to connectdirectly with the potential users for an interactive discussion.

From 2011 to 2013, the project organised 9 e-seminars that included the following thematic: river restoration Innovative techniques, energy saving in waste water treatments, Recultivation of Jelonek and Winiary lakes in Gniezno, Ecohydrological rehabilitation of recreational reservoirs (EHREK), methodology and a modelling tool (Water Change Modelling System – WCMS), Automated Meter Reading solution for nonenergized meters in urban areas, (ADEMETER), cities and urban water (SMART), Water RtoM's Guidelines.

More information is on the website (section Events).

➕ **: technically sophisticated tool**

➖ **: still challenges efficacy in gathering attendants**

KIELCE (PL), March 2012

SMAGUA (SP), March 2012

Expoapa, Bucharest (RO), June 2011

6. Good practices and recommendations

The recommendations are based on our experience and structured according to the uptake life cycle of a water research output. The output life cycle starts with the identification of the users' needs followed by the identification of the research outputs on offer, and ends with the uptake of selected outputs by prospective users. To improve the uptake of innovative outputs, Water RtoM developed 10 recommendations:

The "recommendations" are addressed to the knowledge users, knowledge makers, funding organizations and knowledge brokers alike. The Service offered by Water RtoM will integrate these principles and good practices in its functioning and development.

➡ For more details on the recommendations, visit:
http://www.waterrtom.eu/waterrtom guidelines

Life cycle for an innovation need	How to achieve the step
IDENTIFYING USER NEEDS from research and enhancing their visibilty	**1 -** Encouraging networking and clutering of researchers, end-users, SMEs (facilitating innovation needs expression and answering market needs) **2 -** Identifying future needs, according to changes in the regulation, social changes, environmental factors, economical considerations, changes in attitudes, etc...

ANSWERS TO
THE NEEDS

IDENTIFYING and COLLECTING RESEARCH	**3 -** Enhancing the identification and gathering of innovative results **4 -** Enhancing visibility of information about research
ASSESSING RESEARCH OUTPUTS IN TERMS OF DISTANCE TO THE MARKET	**5 -** Using a framework for analysis to assess the distance to market of research outputs **6 -** Facilitating reuse and implementation of research outputs (IPR) **7 -** Creating users' committees (how do we know if the innovation offer has been relevant according to the addressed needs?) **8 -** Developing a tool matching needs and offer
PROMOTING RESEARCH OUTPUTS TO THE USERS	**9 -** Developing effective communication activities in research projects **10 -** Reinforcing attractiveness of research outputs (linked to universities and their development structures...)

For more details on the recommendations, visit:
http://www.waterrtom.eu/waterrtom guidelines

7. Success stories

During the life of Water RtoM, 200 research outputs were identified, 82 assessed in term of distance to the market, 30 business cases developed and 13 products could be considered as success stories. The three levels of sucess stories below describe how WaterRtoM reduced the distance between the research owner and the innovator (the potential user of the innovation):

3) **Uptake** of the innovative output

2) **Direct contact** Researcher /users

1) **Improvement of visibility** of the output

3) **GNIEZNO** After proving successful, the technology has been transferred to other lakes not only in Wielkopolski Voivodeship but also to Mazurskie lakes which are considered to be the cleanest lakes in Poland and are one of the national wonders of our country

2) SMAA 2 River Basin Organisations have expressed their interest to uptake the output. **EHREK and EKOROB and ZIZOZAP**, all 3 of them proved to be successful with transferable technologies. They are in cooperation with the local administration and water management units all over the Poland. Small Part of Genesis. Is now developed in cooperation with water authorities, mainly Regional Boards of Water Management or Local Health Control Institutions.

1) **WATERCHANGE** (global change management process), **RED SIM** (web based information system for scarcity regions), **ENSAT** (technology treatment to improve water quality), **MUSIASEM** (sustainability of water use), **ADEMETER** (Automated Meter Reading solution for non energized meters), **SCARCE, GREENLYSIS, APIFLOT…** All these projects benefited from an improved dissemination and interest using water RtoM tools to reach much wider audience.

Reducing the transfer time of knowledge to the market in three steps

More information on the outputs in the E-fair:
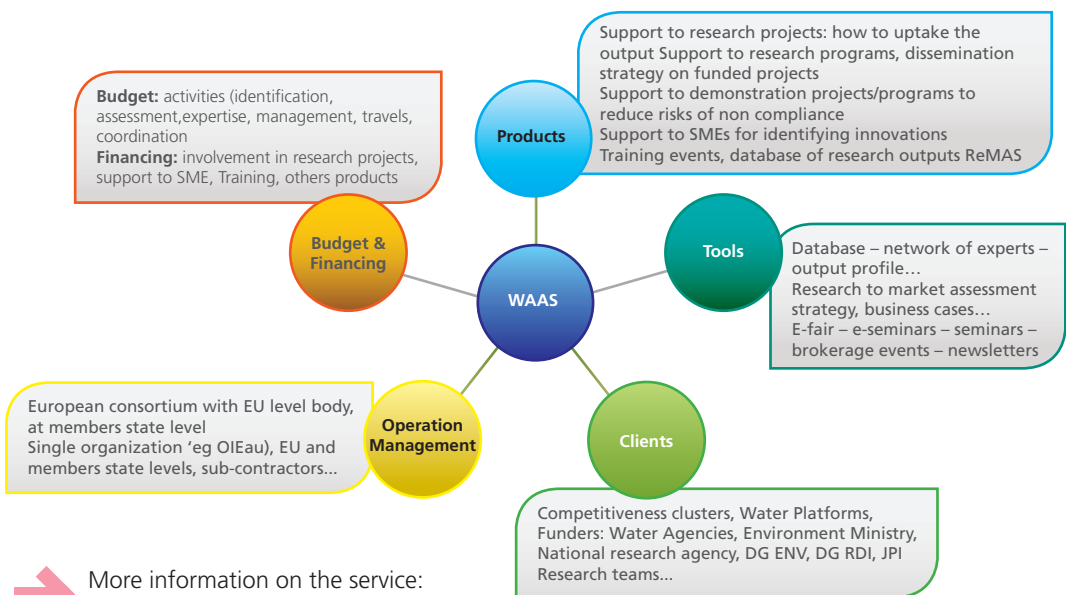**http://www.waterrtom.eu/efair_facility**

8. Water RtoM as a service

The objectives of "WaterRtoM as a Service" (WaaS) will be to provide: 1- A support to disseminate the research outputs at national and European levels, 2- tools and methods to speed up the transfer of research outputs in the water innovation ecosystem, 3- a dissemination strategy of innovations.

WaaS will link the authors of the outputs and the target group, and fill the gap between knowledge dissemination and knowledge use within the frame of existing procedures.

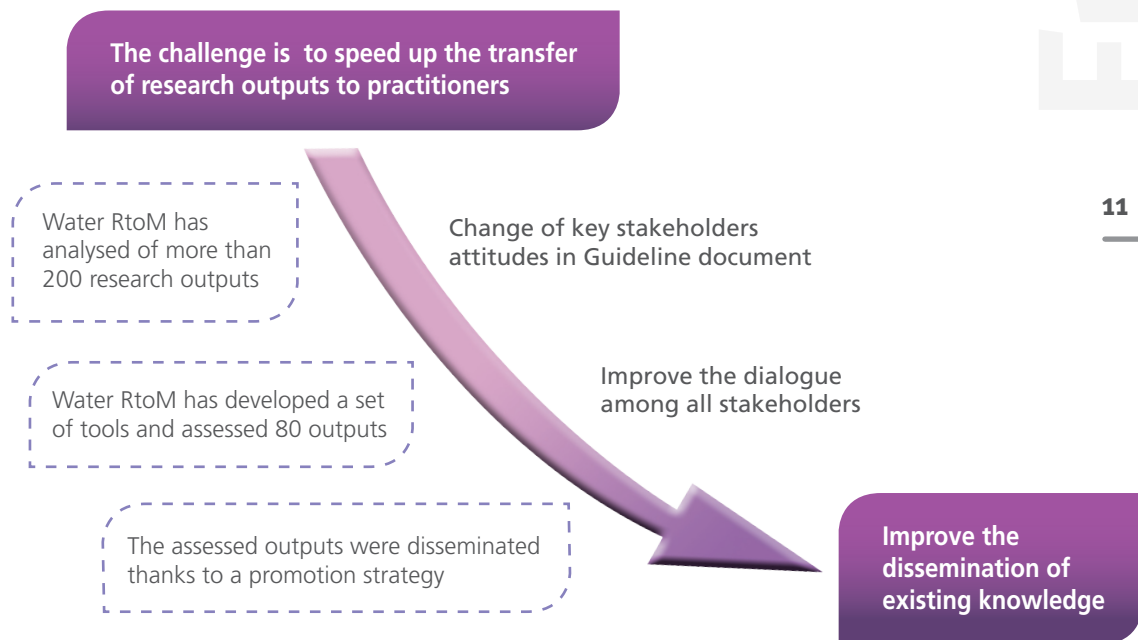The main products to be sold by WaaS are:

- **Support to individual research projects** to develop and implement an innovation oriented dissemination strategy (mid-term assessment of the transferability of the foreseen outputs, recommendations for improvement, evaluation in term of distance to the market of the outputs, elaboration and implementation of the transfer strategy, promotion activities). The idea is to convince researchers to elaborate "innovation uptake" activities.

- **Support to (national or regional) research programmes** to develop and implement an innovation-oriented dissemination strategy, targeted at the projects funded by the programmes; the idea is to convince the research programmers to introduce a specific deliverable in the financed research project as "Uptake of the product" and based on the ReMAS

- **Support to (national or regional) demonstration projects** or programmes to assess the demonstration and innovation dimensions of on going projects, in order to reduce risks of non compliance to the project or programme criteria

- **Support to SMEs** and groups of SMEs (clusters) for identifying innovation precursors, adapted to their needs, and for accompanying them during the innovation process.

- **Training events** on targeted innovations, a state of art of the innovations in the field of water, to help public and private procurers (demand side) to identify what is/will be available from the offer side,

10

Products

Support to research projects: how to uptake the output Support to research programs, dissemination strategy on funded projects
Support to demonstration projects/programs to reduce risks of non compliance
Support to SMEs for identifying innovations
Training events, database of research outputs ReMAS

Budget: activities (identification, assessment,expertise, management, travels, coordination
Financing: involvement in research projects, support to SME, Training, others products

Budget & Financing

Tools

Database – network of experts – output profile…
Research to market assessment strategy, business cases…
E-fair – e-seminars – seminars – brokerage events – newsletters

WAAS

European consortium with EU level body, at members state level
Single organization 'eg OIEau), EU and members state levels, sub-contractors…

Operation Management

Clients

Competitiveness clusters, Water Platforms, Funders: Water Agencies, Environment Ministry, National research agency, DG ENV, DG RDI, JPI Research teams…

More information on the service:
contact@waterrtom.eu

9. Conclusion and future challenges

Main challenges faced by this Water RtoM were on how to motivate exchange of existing new knowledge from the research side in a two way direction with the potential users. Determinant factors were the willingness of stakeholders to engage in this exchange process or for them to change their language in a common approach.

Further key challenges were how to analyse a research output coming from multi dimensional and multidisciplinary databases in a marketing oriented vision. The amount of information coming from research challenges the knowledge brokers in their efficiency to find key information useful for potential users.

The challenge is to speed up the transfer of research outputs to practitioners

Water RtoM has analysed of more than 200 research outputs

Change of key stakeholders attitudes in Guideline document

Water RtoM has developed a set of tools and assessed 80 outputs

Improve the dialogue among all stakeholders

The assessed outputs were disseminated thanks to a promotion strategy

Improve the dissemination of existing knowledge

The new paradigm on how to better transfer knowledge in the water Science Policy Industry gap should be addressed in accordance with the changes in the needs of the active social system of the stakeholders, adapting transfer strategies and fostering dialogue, thus leading to the "speed up of the transfer of the research results".

Water Research to Market

To speed-up the transfer of water related research outputs to better implement the Water Directives

L a y m a n ' s   R e p o r t

L i a i s o n   c o m m i t t e e ,   a s s o c i a t e d   p a r t n e r s

w w w . w a t e r r t o m . e u