

Water Research to Market

**Guidelines to speed-up the transfer
of water related research outputs
to better implement the Water Directives.**



2013

www.waterrtom.eu

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 service)
KU	Knowledge users (mainly SME's, industries, water administrations, water utilities, etc.)
LC	Liaison Committee
PEL	Limousin Environnement 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

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1 Introduction

1.1 Water RtoM outline

The Water Research to Market project is an initiative of four partners: International Office for Water (OIEau) 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, started up in September 2010 and ends in September 2013.

The project refers to the necessity of **speeding up the transfer of water related research to the market**, which eventually enables the implementation of the Water Framework Directive and its guiding principles in order to the reach of the Good Ecological Status in 2015.

The Water Research to Market idea is supported by the project target groups, who acknowledged the difficulty in the water sector taking up research outputs. There is inefficient communication between researchers and the target users of their research outputs. Water Research to Market aims at feeding this gap, by supporting the “marketing” of research outputs to practitioners. The project developed a set of tools and gathered experiences in this field of work while undertaking dissemination tactics.

The Water RtoM target groups are, as mentioned, practitioners whose most of them come from basin organizations of sub-basin authorities, water users, and suppliers of technologies, also researchers, knowledge transfer institutions and research funding bodies.

1.2 Guidelines for promoting and disseminating innovative products: How to use this handbook.

Based on the experience of Water RtoM activities, this document provides best practices and recommendations to enable a better understanding for readers on how to promote innovation and disseminate information about water related research outputs. This document also outlines the tools that have been developed and deployed for Water RtoM purposes. The presented tools have been accordingly established and updated with the observations and evidence gathered during the project, also in accordance with the differences of culture among the participating countries of the project partners.

The specific objectives of the documents are:

- To introduce a set of tools that support the dissemination and the promotion of the research outputs to the market, all of them developed during Water RtoM project,
- To provide 10 best practices for the water knowledge transfer coming from lessons learnt of Water RtoM project,
- To recommend on how to better achieve the water knowledge transfer.

1.3 Key concepts of Water Research to Market

Water RtoM attempts to become a service linking the authors' outputs (named researchers or knowledge makers) and the users of those outputs (practitioners or knowledge users). The service will provide a step between knowledge dissemination and knowledge use and link the authors' outputs and the users of those outputs. During the Water RtoM project, the consortium has established a fast and successful path to enable the knowledge flow from the research state to the application phase, in accordance with the particularities of their countries.

The project aims are on the first hand to identify promising research outputs and on the second hand, to find interested users by informing and disseminating the outputs.

The **'permanent watching'** action was dedicated to identify and rank promising research outputs. Water RtoM focused on research projects and actions funded mainly by national funding programmes and by European funds (Framework Programme funded projects were not considered). Thus, project partners needed to analyse the particularities of the national research schemes which differ from one country to another, even from one region to another. After this identification, Water RtoM analysed some of the outputs with the developed tools and worked together with the researchers "owners" of the outputs.

There are several strategies that can reach the target groups of an output, e.g. online information tool (www.waterrtom.eu → e-seminar, e-tool) or decide conference or event that brings more potential end-users (→ see www.waterrtom.eu → news, events).

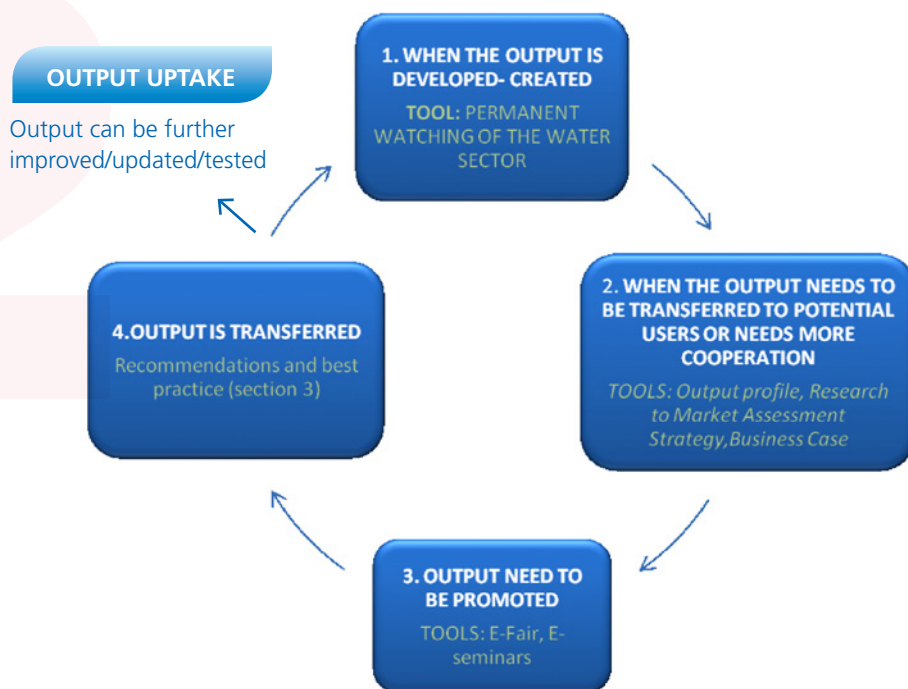
It was also proposed, in order to enhance the communication between end-user and the output owner, to create an exchangeable contact database allowing direct communication between mentioned parties. Steps for communication are shortened at the same time enabling the research owner to fully present their work to the potential end-user. This is, however, done by the simultaneous agreement from both parties and will be mentioned in further chapters.

2 Toolbox of Water Research to Market.

Toolbox of the project is a set of methods developed during Water RtoM life for facilitating market analysis, dissemination and promotion of research outputs into the market. These tools have been created during the project lifetime and regularly updated according with the gained evidence and observations resulting from experiences with events and conferences.

This knowledge brokerage toolbox starts with the development of a research output and finishes with its uptake. This process is represented by the figure below, which also summarizes the Water RtoM tools:

Figure 1: The set of tools is defined within the Research Output life-cycle



Following sections describe more detailed each of the Water RtoM tools.

2.1 Tool for permanent watching: Methods for listing the project.

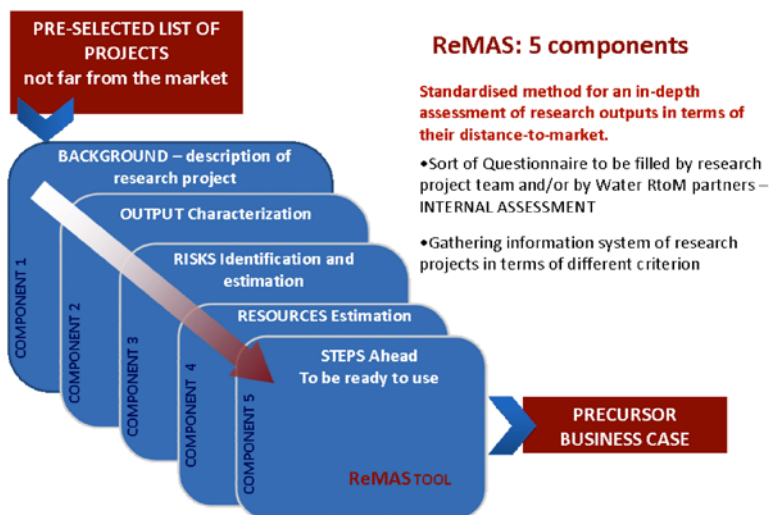
Tool name	Research to Market Assessment Strategy
Objective	Methodology to list water research projects and codify key information on research outputs
Description	Permanent watching is step one. After launching a search, a data-base with the addresses of important web- pages and programs is formed, and in some cases the first contact with the researchers. What is more, in the same data base, each of the partners put the major information about the output: its name, way of financing, basic subject and a short description with contact details in the excel file underneath.
Advantages	A logical and codified existing database is available to everyone who looks for specific outputs. Permanent watching is also the first evaluation tool to decide whether the product qualifies for further promotion or not. This common database allowed Water RtoM projects partners to homogenise the information from the different national realities.
Next Developments	Permanent watching of the sector has been mainly dedicated to look at the water research sector. The approach to identify market needs and keep them updated and connected with the research projects needs to be further developed. Water RtoM approach was done in accordance with the regularly intervention of the Liaison Committee partners (LC)

2.2 Tool for assessing: ReMAS and Output profile sheet

Tool name	Research to Market Assessment Strategy
Objective	The Research to Market Assessment Strategy (ReMAS) consists of a standardised method for an in-depth assessment of research outputs in terms of their distance-to-market, i.e. whether they can be re-used by somebody else than the research team, at a reasonable cost, and reasonable risk (the closest to the market will be known then as Innovation Precursors).
Description	<p>ReMAS has been developed and adapted during Water RtoM project lifetime. It represents a tool to be implemented at the second step of the output lifecycle: when the output is ready to be used or close to the market, but it needs to be assessed whether it is transferable or not. After ReMAS evaluation, chosen projects and their outputs are moved towards further promotion. ReMAS is a procedure with seven stages, each of them having a different purpose:</p> <p>(1)read first (on how to use the procedure), (2)research project characterisation, (3) output characterisation, (4) estimations of risks to implement the output, (5)resources needed to implement the output, (6) identification of next steps and (7) result of the assessment</p>

¹ **Precursor** stands in the frame of WATER RtoM project for practitioners interested in innovation. Innovation precursors during the project lifetime will be selected as potentially interesting outputs from a water research project. This project is previously analysed with ReMAS tool.

Fig 2: Research to Market Assessment Strategy (ReMAS)



The above mentioned components are fairly easy to be completed as they include the general information about the output. The information can either be gathered from the existing available information or establishing a contact with the responsible researcher. ReMAS gathers information about target groups, project background history, and contact details i.e. the first two components are an expanded version of the database created during the permanent watching. The crucial information for a potential user is about the risks of implementing the output. Therefore the component on the Risk Specification is one of the key analyses of this standardised method, and allows identifying all potential risks coming from the market, social, technical and economical point of view.

The identification of crucial risk components requires an experienced evaluation which takes under consideration the potential end-user characteristics- if its a rich company that has no customers because it has just started on a market, or a well know company that cannot invest more. Consequently, when there is a situation in which both outputs have equal points number (in the summary part of the table), it is better, for some companies to launch the expensive one than to invest in one that has no demand on the market, also, to some end-users the financial section might not be of any need, due to the fact that they have resources and are missing the technology itself. This way, the target group of the output can identify their needs and choose an output that answers their needs better.



Tool name

Research to Market Assessment Strategy

Description

Fig 3: Example of ReMAS risk sheet

Example of ReMAS risks sheet. Each version should be adaptable to the evaluated project.

		MARKS (no fractions)		
		1		
		problem will not	no expenses or	no risk of any delay
		0		
		problem does not	problem does not	problem does exist/ not
		-1		
		problem will	requires financial	risk of serious delay,
Risk1	Economic aspects			
1	Rating (if it is necessary to get loan)	0	0	0
2	Obtaining additional donations	1	1	1
3	Rates of exchange (EUR→???)	0	0	0
4	Relationship with partners	1	1	0
5	Personal costs (salary, trainings for employ	1	0	0
Risk2	Legal and political situation			
1	Political sympathy for the output	1	1	0
2	Current legal regulations	1	0	0
3	Upcoming legal regulations	1	0	0
4	Accomplishment of copyrights	1	0	0
5	Accomplishment of documents (licences,	1	0	0
6	Accomplishment of insurance	0	0	0
Risk3	Technical aspects			
1	Organisation of output distribution	1	0	0
2	Organisation of trainings for prospective	1	-1	-1
3	Organisation of service and helpdesk	1	-1	0
4	Organisation of equipment (any; for	1	-1	0
5	Organisation of offices, storage rooms, etc.	1	0	0
6	Researches, tests	1	0	0
7	Translation of documents	0	0	0
8	Improvement of the output	0	0	0
9	Maintenance of the output	0	0	0
Risk4	Market			
1	Market needs regarding the output (current	1	0	0
2	Changeability of market needs (in relation to	1	0	0
3	Understanding of the output usage	0	0	0
4	Expansion to a wider area (technical,	1	0	0
5	Advertisement of the output	1	0	0
6	Negotiations with end-users, partners, etc.	0	0	0
7	Environmental effect of output usage	1	0	0



Tool name

Research to Market Assessment Strategy

Description

Table A: Risk evaluation

Final Risk Evaluation (problems obtained "1")					
TABLE B1		Total number of evaluated problems (TABLE A)	GENERAL	EXPENSES	DURATION
Risk1	Economic aspects	5	3	2	1
Risk2	Legal and political situation	6	5	1	0
Risk3	Technical aspects	9	6	0	0
Risk4	Market	7	5	0	0
	TOTAL	27	19	3	1
Final Risk Evaluation (problems obtained "0")					
TABLE B2		Total number of evaluated	GENERAL	EXPENSES	DURATION
Risk1	Economic aspects	5	2	3	4
Risk2	Legal and political situation	6	1	5	6
Risk3	Technical aspects	9	3	6	8
Risk4	Market	7	2	7	7
	TOTAL	27	8	21	25
Final Risk Evaluation (problems obtained "-1")					
TABLE B3		Total number of evaluated problems (TABLE A)	GENERAL	EXPENSES	DURATION
Risk1	Economic aspects	5	0	0	0
Risk2	Legal and political situation	6	0	0	0
Risk3	Technical aspects	9	0	3	1
Risk4	Market	7	0	0	0
	TOTAL	27	0	3	1

At an operational level this section is based on the questionnaire that Water RtoM partners answered by themselves once they gathered sufficient information either from the websites, the researchers (interview) or the LC members.

Depending on the specification of the output, some of the questions might occur as inadequate. In such case, it is required to put 0 (neutral) for an appropriate mark assessment in the scale of grading (-1,0,1), with an additional comment on the site of the sheet. Final number of points in ReMAS evaluation is a personal estimation (done by the end-user) and thus depends on the subject orientation and decision making. While analyzing and/or comparing two products with the same or similar number of points one must not forget to take all of the partial risks into a separate consideration (Table A).

As some of the questions might occur as inadequate, an individual ReMAS risk sheet is suggested with a comment section. While having doubts with the evaluation, caused by any reason, it is good to provide a short and specific comment on the side of ReMAS sheet. This way, each person has a chance to understand the motive of a specific decision of others responsible for the evaluation.



Tool name	Research to Market Assessment Strategy
Description	<p>Also, by sharing and explaining the reasons for specific actions, one helps to show a different point of view, which might enrich the general knowledge about the output.</p> <p>After the risk component step, one can better estimate the following two components; (1) The check list to analyse the next steps regardless the output implementation by the potential users and (2) the related need of resources.</p> <p>The results of this evaluation are presented in a common factsheet to standardised methodologies and allow other Water RtoM partners to provide feedback and share experiences.</p>
Advantages	<p>As a tool ReMAS can evaluate examples of software, technologies or methodologies that are therefore graded with equal sets of questions.</p> <p>The uniqueness of the tool refers to its transferability to each end-user, according to their characteristics</p> <p>It is a remote tool and can be designed accordingly to the case. Some questions, which are not of importance might be omitted and the whole document might be enriched with other, individual questions</p>
Next Developments	ReMAS is an internal tool to be developed by the Knowledge brokers (e.g. Water RtoM as a service), it has been tested with more than 50 outputs, and now the next step comes into integrating it into the research transfer schemes.

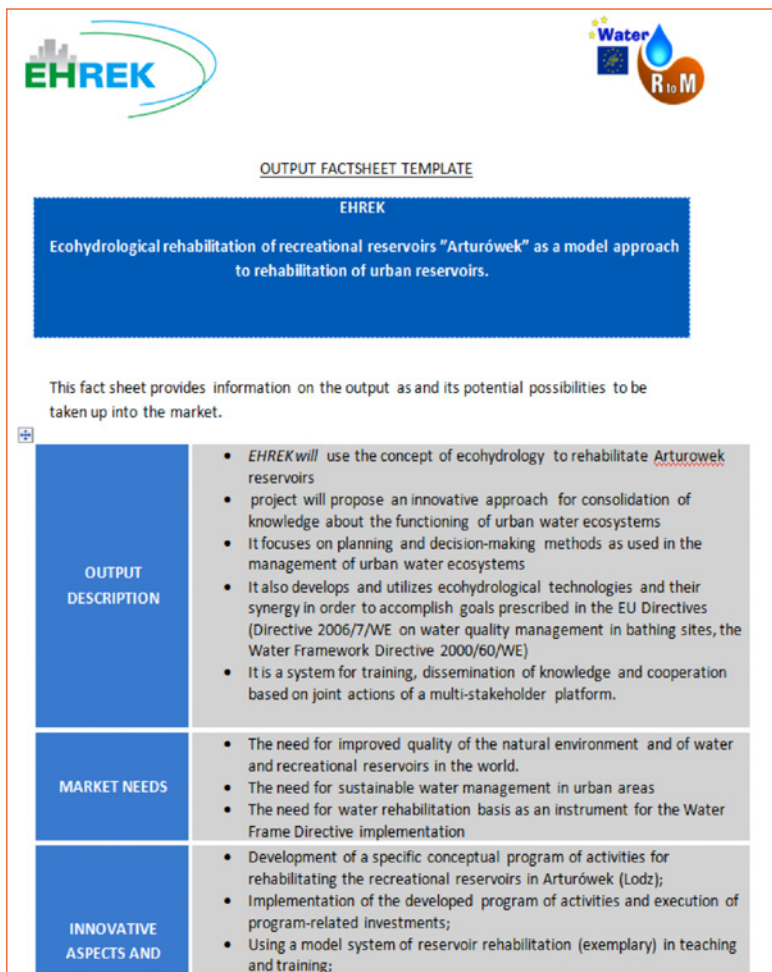
Tool name	Output profile
Objective	The aim is to have key information on the new output from the precursor's point of view.
Description	<p>This document is a template to be completed based on the results from the ReMAS .</p> <p>The document represents the most basic information about the output, which might be disseminated further. Output profile is completed with the help of project researchers, who are fully informed about the existence of this document. The authors have an opportunity to complete the document on their own and add additional comments or sections.</p>

Tool name

Output profile

Description

Figure 4: Extract from a Output profile template based on one of the outputs promoted by Water RtoM – EHREK



EHREK

Water RtoM

OUTPUT FACTSHEET TEMPLATE

EHREK

Ecohydrological rehabilitation of recreational reservoirs "Arturówek" as a model approach to rehabilitation of urban reservoirs.

This fact sheet provides information on the output as and its potential possibilities to be taken up into the market.

OUTPUT DESCRIPTION	<ul style="list-style-type: none"> EHREK will use the concept of ecohydrology to rehabilitate Arturówek reservoirs project will propose an innovative approach for consolidation of knowledge about the functioning of urban water ecosystems It focuses on planning and decision-making methods as used in the management of urban water ecosystems It also develops and utilizes ecohydrological technologies and their synergy in order to accomplish goals prescribed in the EU Directives (Directive 2006/7/WE on water quality management in bathing sites, the Water Framework Directive 2000/60/WE) It is a system for training, dissemination of knowledge and cooperation based on joint actions of a multi-stakeholder platform.
MARKET NEEDS	<ul style="list-style-type: none"> The need for improved quality of the natural environment and of water and recreational reservoirs in the world. The need for sustainable water management in urban areas The need for water rehabilitation basis as an instrument for the Water Frame Directive implementation
INNOVATIVE ASPECTS AND ADVANTAGES	<ul style="list-style-type: none"> Development of a specific conceptual program of activities for rehabilitating the recreational reservoirs in Arturówek (Łódź); Implementation of the developed program of activities and execution of program-related investments; Using a model system of reservoir rehabilitation (exemplary) in teaching and training;

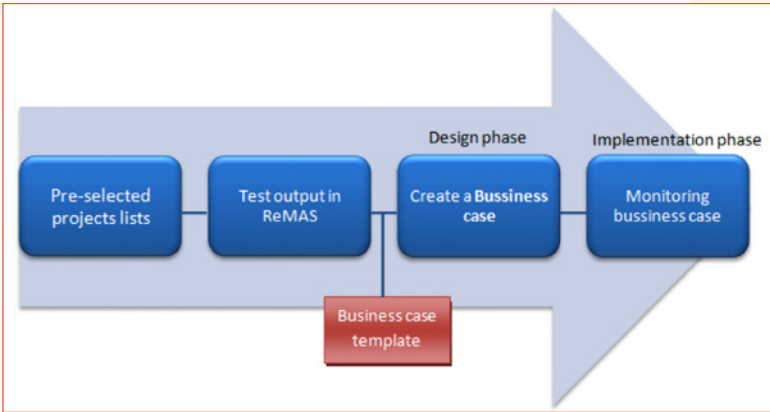
With their participation the document has a character of a written commercial of the output- and is later disseminated during brokerage events, seminars and other promotion activities. This document is updated in accordance with an agreement between Water RtoM partners and responsible researcher. The **Output profile** should be reviewed not only by the researcher but should also include information about its content coming from the receiver- in this case the potential user.

The collected **Output profiles** during Water RtoM project have been published in the E-Fair, and will be further explained below.



Tool name	Output profile
Advantages	The document is clear and short providing simple and transferable information. It focuses on the key information, which if needed, might be explained more deeply through the Business Case.
Next Developments	Output profiles need to be well connected with the market needs, so once a market need profile is created; there should be linkages to them. Therefore the next development would be to establish output profiles in connection with Market needs profile.

2.3 Tool for marketing: Business Case

Tool name	Business Case
Objective	<p>The main objectives to conduct a BC for the chosen outputs are the following:</p> <ul style="list-style-type: none"> - To analyze in depth the selected output in terms of its status and distance to market. - To describe what else has to be done to develop the innovation, creation of an Action Plan.
Description	<p>As observed on the output cycle, after primary, internal evaluation with ReMAS tool a joint evaluation with Output profile, next step for further promotion is Business Case step.</p>  <p>The BC entails three different steps in which gathered information from ReMAS is further analyzed and completed. The three steps are as follows:</p> <ol style="list-style-type: none"> 1. A general and publishable description of the Output profile. 2. Detailed description on the output. This gathers the main information resulting from ReMAS process, but further detailed. Information is structured in sections as follows:

Tool name	Business Case
<p>Description</p>	<ul style="list-style-type: none"> - SECTIONS 1 & 2: Project details and description of Output (information partly to be taken from ReMAS). - SECTION 3: Functioning details - SECTION 4: Availability of the output - SECTION 5: Market, legal situation details - SECTIONS 6, 7 & 8: Activities to achieve the status “ready for use” (legal, market, social, technical) - SECTION 9: Economic analysis approach - SECTION 10: Estimation time for the achievement of the “implemented” status. - SECTION 11: Monitoring indicators <p>3. Action plan of the identified activities. It entails a plan with a list of activities per Timing and objective, and also the whole action plan with a detailed description per activity. This is a dynamic section that needs to be monitored accordingly.</p> <p>Each BC will be adapted to the specificities of the output that is being analyzed, publishable information will be compared and validated by output “owner”.</p> <p>The completed BC can be disseminated to relevant target groups, which have confirmed their interest in the output previously, or used as an internal document between project partners and researchers to carefully plan accordingly the promotion activities. Due to the fact that the document is extended and contains a long description its recommended that it be used when a primary interest in the output has been already confirmed. BC is the last document created for the promotion of outputs.</p>
<p>Advantages</p>	<p>The advantageous character of BC lies in the information regarding risks identification, risk reduction solutions as well as in setting up the action plan for promotion.</p> <p>The process of developing the BC and implementing them is becoming an important task as a process that makes it possible to follow up the efforts Water RtoM for each output.</p> <p>The process of marketing a research output is a gap after research indeed, Water RtoM via BC’s is providing this service to the research “owner”, and supporting them to identify further steps to make the output “more-ready –to-be-used”.</p>
<p>Next Developments</p> <p>↓</p>	<p>Other challenge in the development of BCs is the economic analysis and financial risks to determine further uptake of a research output and be specific on this, as well as to monitor whether this is updated. The most important role of this analysis step is to create awareness on the need. Normally, no specific numbers can be provided to each item in which there is a potential financial risk, and the completion of this section has been dependant on the willingness of the researchers to develop this section.</p> <p>Setting up effective dissemination plan is one of the steps forward to Water RtoM project, as the project only considered its development, but not the deployment.</p>

Tool name

Business Case

Next developments

Figure 3: Extract of a Business sheet example

QUESTIONNAIRE – BUSINESS CASE	
OUTPUT EHREK	
1. Project details	
1.1. Project title:	"Ecohydrological rehabilitation of recreational reservoirs "Arturówek" (Łódź) as a model approach to rehabilitation of urban reservoirs."
1.2. Project website:	http://www.arturowek.pl/content/strona-glowna
1.3. Responsible Organization: (name, country, contact)	UNIVERSITY OF LODZ FACULTY OF BIOLOGY AND ENVIRONMENTAL PROTECTION Department of Applied Ecology Project coordinator: Prof. dr hab. Maciej Zalewski e-mail: mzal@biol.uni.lodz.pl Supervisor: dr Tomasz Jurczak e-mail: tjurczak@biol.uni.lodz.pl
1.4. Partners: (name, country, contact)	Name of the coordinating beneficiary: University of Lodz (1) Name of associated beneficiary: Miasto Łódź (2), Łódzka Spółka Infrastrukturalna (3) UNIVERSITY OF LODZ FACULTY OF BIOLOGY AND ENVIRONMENTAL PROTECTION
2.10 Summary of the risks identified in REMAS:	
Major risks connected to the financial part of the trainings, organization of helpdesk- and the duration of such process	
2.11. Solutions to reduce the risks:	
Solutions to reduce the risks are connected with financial support and a proper work organisation. This has influence on the duration of the project due to the fact that some of its aspects are planned for upcoming years: trainings, preparation of theme books, modelling programmes.	
III. ACTION PLAN	
Following are summarized the actions per typology	
1. Research actions to get output in the status "ready to use" 2. Marketing actions – promotion of the output: 3. Legal actions: licences, copyrights, etc. 4. Training and capacity building actions: 5. Actions post-implementation 6. Acciones post venta, activar número de teléfono, protocolo de actuación.	
Below are the tables entailing more detailed actions (now those are in time of validation among Project partners organisation)	
1. RESEARCH ACTIONS TO GET OUTPUT IN THE STATUS "READY TO USE"	
- OBJECTIVE: How to finalise the software interface?? ACTION 1.1 – looking for a potential user that can finance this.(public body). ACTION 1.2 – looking for own resources	

2.4 Tool for dissemination: e-fair facility

Tool name

E-Fair Facility

Objective

Permanent dissemination of the recent water research results with information coming from the Water RtoM assessment (**Output profile**)

Description

E–Fair is an online search engine created by the Water RtoM partners. It is fed by research products or outputs not yet on the market, but specifically selected because of the short distance to the market (very few development needed to be ready to use). Detailed information on the selected and assessed outputs is on the E-fair:

http://www.waterrtom.eu/efair_facility

The project has identified a wide set of projects and outputs, and the ones presented in the E-fair are only a selection thanks to the criteria define with the Liaison Committee of Water RtoM.

Figure 6: Criteria for selection of outputs

The output answers to an existing problem (regarding the regulations, the needs, etc).

The main criteria to select the outputs (raw material of Water RtoM) should take into account:

- **The common aspects** (the output does not solve specific local problems)
- **The stage of implementation** (between research stages to implementation stage): Usually the success criteria of the researchers are the number of publications and not the implementation. Water RtoM has to focus on the follow-up of the research outputs
- **The targets** of the outputs: water administration, private companies...
- **The status** of the outputs: patent, prototype
- **The transferability** (to national, international scale, to another targets)

If interested in water topics, or looking for a solution to an existing problem, do not hesitate to search the solution on this **E-FAIR**, or get in contact with Waterrtom partners to express your needs, and outputs/products that could solve your questions will be looked for. For this reason the tool has been designed to be as simple as possible. It has different key search possibilities, either following the key words or the water topic of interest. This way, if someone does not know what to look for there will be more chances to find out something interesting and useful later on.



Tool name

E-Fair Facility

Description

Figure 7: E.fair overview

Water topic : Output type : Country :

<Any>
 Quality of natural systems
 Consumption
 Urban pollution
 Industrial pollution
 Agricultural pollution
 Management process
 Bathing waters
 Scarcity and Droughts
 Floods
 Urban dewatering
 Groundwater

In water topic, it is possible to choose among a big list of topics of interest that serves another element to narrow down the solution search.

Output type :

<Any>
 idea/theory
 methodology
 guidelines
 procedure
 DSS
 e-tool
 conceptual model
 prototype
 utility patterns

Choosing the output type is another possibility for subject narrowing.

Advantages

- Eye-catching information on the outputs from the potential users' point of view.
- Permanent structure to see recent results from researchers that are looking for precursor.
- Vector of connection between knowledge users and knowledge makers.

Next Developments

To integrate into this E-infrastructure a market needs approach, creating connections with each of the output listed

2.5 Tool for promotion: E-seminars

Tool name

E-seminars

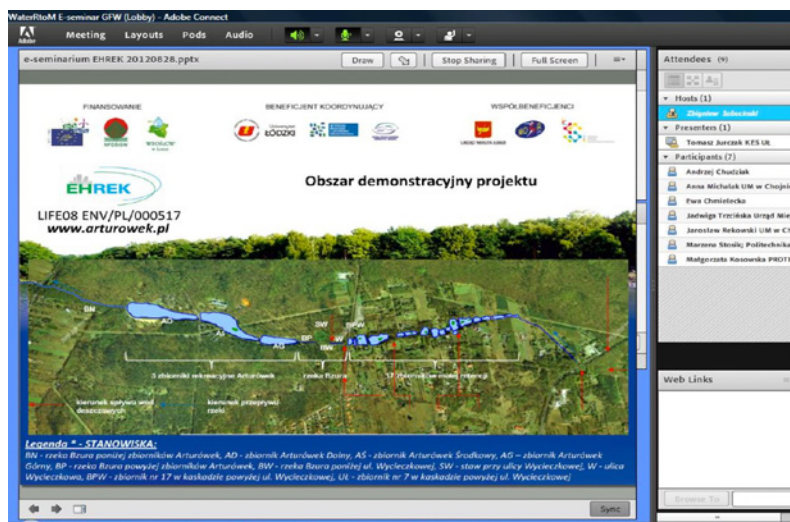
Objective

The aim of the e-seminar is to inform and to promote actively the innovations to attract potential practitioners ready to take over the innovations and to make them suitable for the end-users.

Description

E-seminar is a part of the Water RtoM Promotion Marketing Strategy to accelerate the transfer of the research outputs to practitioners. In between the brokerage events, national seminars and permanent exchanges through the **e-fair**, the project offers a possibility to the 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.

Figure 8: E-seminar: Promotion of EHREK Output



Advantages

Their huge advantage refers to easy access and attendance to the sessions. They are very easy to be installed and used.

Researchers have the possibility to connect directly with the potential users and show them all the crucial videos, documents and pictures, and holding an effective discussion at the same time.

Next Developments

Establishment of periodical e-seminars output service in accordance with Water RtoM as a service.

2.6 Tool facilitating re-usage: Intellectual property agreement

Tool name	Intellectual property agreement
Objective	Process to facilitate the output promotion via knowledge brokering
Description	<p>Due to the fact that actions undertaken by the partners of Water RtoM project include dissemination of information, logos, presentation as well as contact details, it has been proposed to come up with a form of agreement between the project partners and the researchers, including RtoM responsibilities and works as well as responsibilities of researchers are declared.</p> <p>The most important information regarding the Agreement sheet refers to the clause enabling the knowledge brokers to use the information on the output, contact details and marketing material (logos, figures, etc.). Without this, even though the project is public, it won't have the authority to disseminate all of the information. This document remains open to be modified and adapted to the specificities of the research group and the context.</p> <p>This document is a word file that has been prepared in universal version (in English) as well as personalized version (with 4 languages of the project partners) basing on the same version.</p>
Advantages	<p>This document facilitates the promotion activities to the knowledge brokers (Water RtoM as a service). This needs to be established from the beginning of the transfer activity.</p> <p>Even that the language of the agreement does not have to be "legal", it is signed between the partners of the project and the researchers, keeping this document simple and easy-to-proceed. The more complicated the document is, the less willing to sign it the parties are.</p>

Next Developments

Figure 9: Agreement sheet example

Water RtoM
Water Research to Market
To speed up the transfer of water related research outputs

DECLARATION

On the behalf of _____ placed in _____
Registered under _____ managed by _____
called further „The producer“, represented by: _____

1. I agree:

a) to include the product of the project under our legal status:

Called further „the product“ for Water Research to Market project, called „Water RtoM“, financed by LIFE + project, who has a partnership with Gdansk Water Foundation (Gdansk, Rybczka 9 street, registered in under the number: 0000021610 with the identification tax number : NIP 583-10-18-554, called further „GFW“

b) to disseminate materials and process the information about the product, for non-commercial basis, for the purpose of achieving the objectives of this project, through the use of tools developed within its framework (REMAS).

4. Declares itself to:

a) provide full, true, reliable data on the products and their regular updates according to the project objectives;
b) the presentation of data about the product its range, layout, form, or in accordance with the project objectives;
c) of the project "Water RtoM" in relation to the specific action undertaken by the project partners;
d) to provide clarification on the Product of the "WaterRtoM" project for the project partners;
e) to inform GFW about other activities aimed at promoting the product and its dissemination;
f) to provide contact details and product information to those who have expressed interest in the product and its dissemination activities undertaken while realization of "WaterRtoM" project."

5. I acknowledge that :

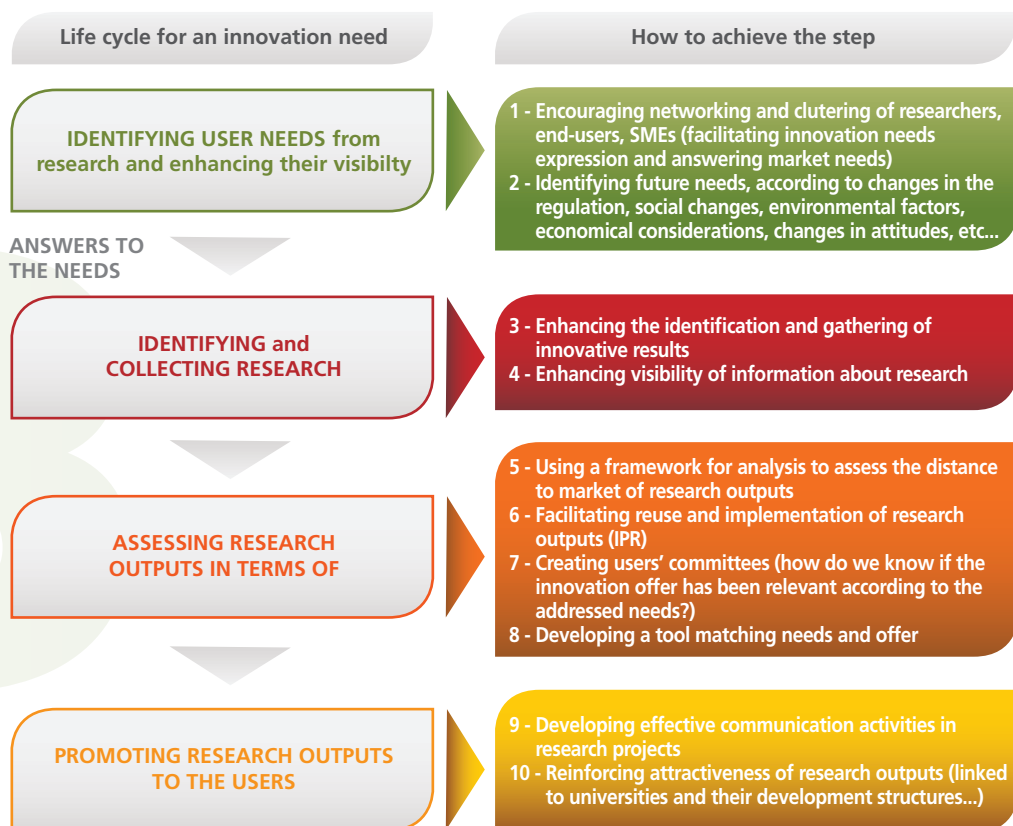
a) the participation of the Producer in the project "WaterRtoM" is not a basis for his claims against the GFW or other partners of the project and also to claim services connected with promotion, advertising or marketing.
b) The Producer right to inspect activities undertaken in the project "WaterRtoM", as well as to obtain , from the GFW, information about the progress on the implementation of the Project, including, in particular the Product itself.

Signed by person authorized to represent the producer
date: _____

3 Best Practice Description

This section provides an overview of main lessons learnt by the Water RtoM project and the related recommendations. It is 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 answer provided by the research activities (research outputs), and ends with the uptake of the output by prospective users.

All the information is also framed in 10 best practices as the following figure:



Recommendations are addressed to the following target groups:

- Knowledge users (KU): mainly SME's, industries, water administrations, water utilities, etc.
- Knowledge makers, mainly are researchers, scientific community (R),
- Funding organizations (F): research programmers,
- Knowledge brokers (KB): research transfer offices, technological platforms, innovation departments at enterprises, Water RtoM service.

3.1

Identifying user needs from research and enhancing their visibility.

Regulations change as well as the social environment, and obligations are regularly imposed to achieve a better status of water ecosystems. Thus, practitioners are frequently changing their needs and being innovative in order to become competitive at market level. This innovation by SME's requires products and technology to be brought to the market. Is it possible to better identify the users' demand for new solutions and the changes coming from the market?

This step is at the identification of the demand of new research results coming from the market. To improve this identification of the knowledge users' needs, two best practices are provided:

- 1) Encouraging networking and clustering of researchers, end-users, SMEs (facilitating innovation needs expression and answering market needs)
- 2) Identifying future needs, related to changes in the regulation, social changes, environmental factors, economical considerations, changes in attitudes.

Step 1 - Identifying SME's needs

Best practice 1- Encouraging networking and clustering of researchers, end-users, SMEs (facilitating innovation needs expression and answering market needs)

Lessons learnt:

- Difficulties to identify specific users' needs due to a lack of experience that could really reach them.
- Working with clusters and networks, makes easier this identification.
- The variety of target users do not have the same understanding of needs amongst them.
- Difficulties to match offer and need/demand (research not always answer to end-user's needs).
- Knowledge users cannot always easily identify their needs.

RECOMMENDATIONS

- To foster networking by means of participating in existing water platforms or networks.
- To encourage the use of exchange places or platforms that might foster the dialogue between researchers and end-users during research project lifetime and after.
- To develop virtual platforms displaying which needs have been answered and how (innovations in link with the European obligations).
- To set a strategy to assist end-users to better identify what are their needs. This will assist them to become more innovative and increase their competitiveness in the market.
- To foster the use of bilateral meetings at brokerage events where KB and KU can dialogue.

KU
KB

KB

KB

KU

EXAMPLES

WSSTP meetings (EU)
EEN (EU)
<http://www.wise-rtd.info/en> (EU)
SWTP market place
INBO

TOOLS AND MECHANISMS

- Participatory events type which might increase understanding between Researchers and end-users.
- Common factsheet to collect user's needs.
- A market place which links research outputs to demand (E-fair).

The Water RtoM project highlights a lack of common work frame between researchers and users. This best practice aims at encouraging researchers, end-users, SME's to better work together (networking or clustering) in order to facilitate the visibility of the innovation needs and thus, to provide proactive answers to those needs by the researchers.

Step 1

Step 1 - Identifying SME's needs

Best practice 2 - Identifying future needs, according to changes in the regulation, social changes, environmental factors, economical considerations, changes in attitudes, etc.

Lessons learnt:

- Most of the outputs identified during Water RtoM project focused on the improvement water management at river basin level, but a less number of them focused on technical specificities requiring for answers to the above mentioned changes.
- Many efforts and resources are needed to participate at end-users' events, and this complicates an efficient permanent watching of the water market.
- Not all research outputs are clearly linked to feed a problem or a need of the market.

RECOMMENDATIONS

- To anticipate changes by developing more market studies at all water sectors, thus enabling suitable research strategies.
- To create participatory events at all levels to better highlight forthcoming needs of the market
- To work at operational level to take over the CIS-SPI principles, so far market needs are only identified at high political level and less clear at local and private level.
- To work closely with existing networks, as well as work among those networks.

F

F, KB
F

KU, KB, R, F

EXAMPLES

LC
CIS-SPI group
EIP on Water

TOOLS AND MECHANISMS

- Experts committees with multidisciplinary approach (such as Liaison committee members in Water RtoM).

The action of permanent watching over the water sector highlights the difficulty in identifying the current and specific markets needs. This best practice aims to better forecast changes in the regulation, social changes, environmental factors, economical considerations, changes in attitudes that modify the identification of forthcoming needs.

Step 2

3.2 Identifying and collecting research outputs

European funding programmes have proven to be more effective in the collection of information about research projects, but they are still facing difficulties in collecting transferable outputs outside the scientific community. At the national level this situation becomes even more difficult with very limited research project databases showing research projects and rarely can one identify the market transferable outputs.

Two best practices to improve the identification and collection of research outputs are worth to be below detailed:

- 3. Enhancing the identification and gathering of innovative results.
- 4. Enhancing visibility for research outputs outside the scientific community.

Step 2 - Identifying and collecting research outputs

Best practice 3 - Enhancing the identification and gathering of innovative results

Lessons learnt:

- Many efforts to identify research outputs at national level are needed
- Lack of willingness of researchers to exchange information on the results from their research projects.
- Time and resources to contact researchers to gather more information on outputs are high.
- High diversity of information in the web.

RECOMMENDATIONS

- To homogenise existing outputs database (linking them with WFD research outputs) and to promote the use of them to the Researcher, so that they should always comply with it
- To develop agreements with database owners when needed (i.e. when it is not public funding programmes, or not free of access, see more in Best Practice 6).
- Project research manager might be available at least 5 years after the end of a research project in order to further provide information on the research outputs (like a mandatory statement from funding organizations).

KB / R

KB / R

F

EXAMPLES

<http://www.plataformaagua.org/index.php?id=976> (ES)
<http://www.wise-rtd.info/en> (EU)
[www.waterrtom.eu /e-fair](http://www.waterrtom.eu/e-fair)

TOOLS AND MECHANISMS

- Use of the same fields at the outputs database –Output profile
- Water RtoM E-fair

To match answers to needs the collection of information of research outputs needs to be more efficient. The level of information about a research output needs also to be in a non scientific language and the collection of this information should be done in a common framework for all existing databases in order to gather useful information for the users, this means to also provide information on advantages and disadvantages on taking them up.

Step 2 - Identifying and collecting research outputs

Best practice 4 - Enhancing the visibility for research outputs besides the scientific community

Lessons learnt:

- Lack of accessibility of essential information about the research outputs at national level: inexistence of project websites or chaotic and no updated information.
- Lack of accurate information on the final products in the research project websites
- When a database of research results exists, there is no homogenization with regards to other similar databases.

RECOMMENDATIONS

- To force the provision of information on the research outputs (the transferable and exploitable ones) in any case.
- To dedicate sufficient economic resources for researchers to guarantee their involvement in the dissemination (minimum requirement in developing a dedicated project website).
- To homogenize existing database of research outputs – common strategy.
- To analyse whether knowledge users can obtain the information they need from the outputs database, and update them accordingly.

R

F

F

KB, KU

EXAMPLES

<http://www.plataformaagua.org/index.php?id=976> (ES)
<http://www.wise-rtd.info/en> (EU)
 European Water Community (EU)
<http://ec.europa.eu/environment/life/toolkit/comtools/resources/index.htm>

TOOLS AND MECHANISMS

- E-Fair
- Supporting documents to help project communication (a set of communication tools)

Water RtoM faced difficulties in identifying relevant information about research outputs for the users; this best practice aims at providing more visibility on research outputs outside the scientific community.

3.3 Assessing research outputs in terms of distance to the market

After research activity takes place and outputs are developed effective dissemination and promotion of them to the users might at least happen at this stage (it might happen even earlier). Some of the research outputs will not be ready to be used, requesting more research activities to further develop them, thus it also requires promotion activities either to other researchers or to innovative users leading to questions such as; How to assess and to analyse the status of this outputs with regards to its uptake? How to establish what is needed to do after research? Who is in charge of their dissemination and to whom should this dissemination happen?

Four best practices are suggested to improve the assessment, knowledge, understanding and promotion of research outputs:

- 5 - Using a framework for analysis to assess the distance to market of research outputs
- 6 - Providing effective information facilitating reuse and implementation of research outputs (IPR)
- 7 - Creating users' committees (is the innovation offer relevant in comparison to demand?)
- 8 - Developing a tool matching needs and offer

Step 3 - Assessing research outputs in terms of distance to the market

Best practice 5 - Using a framework for analysis to assess the distance to market of research outputs

Lessons learnt:

- Distance to market can be calculated with the **ReMAS** tool by identifying the risks to put the output in the market and identifying the steps ahead.
- Available information on the outputs is normally in a scientific language, it needs "translation".
- Implementation of the outputs into the market not really explored by the researchers, they are not always the appropriate person to undertake this task.
- Researchers need support to think about the "after project" and to detail the next steps for implementing the output.
- The research outputs assessment has proven useful in order to better highlight what are the remarkable characteristics of the output to be taken up, or to clearly identify next steps to be further used by the KU.

RECOMMENDATIONS

- To encourage research teams to fill a common database (WFD research outputs) on practical information on how to use the outputs.
- To assess the output in terms of distance to the market, estimate and identify the risks to implement it.
- To create and detail an action plan to implement the output into the market.
- To improve the dialogue between the "stakeholders" (R, KU, KB) to better characterise how to implement innovative outputs.
- To involve KU in the definition of "next steps" (component of ReMAS tool and the action plan of BC).

KB, R

KB, R
KB, KU
KB

K, R

EXAMPLES

www.waterrtom.eu/e-fair

TOOLS AND MECHANISMS

- Use of outputs database e-fair
- Provide an assessment framework (Research to market assessment strategy, ReMAS) and a support
- Use of Business Case (BC) template and support by KB

To facilitate an effective promotion of innovative research outputs, the assessment of those outputs in term of distance to the market needs to follow some criteria. This is the reason why it is recommended to use an analysis framework such as those developed during Water RtoM project: output profile, ReMAS, BC.

Step 3 - Assessing research outputs in terms of distance to the market

Best practice 6 - Facilitating reuse and implementation of research outputs (IPR)

Lessons learnt:

- Outputs coming from private research funds lack transferability due to stricter limits in the intellectual/industrial property rights.
- Outputs coming from public research are not always clear with the owner of the IPR
- At national and regional research programmes level there is a high diversity of problems regarding the property rights, either because the research output becomes unavailable due to a lack of decision on the rights of use, or because researchers do not know how to proceed.

RECOMMENDATIONS

- Preparation of an agreement document showing that KB is allowed to transfer the information on the output in cases where IPR exist – agreement sheet is needed. Agreement sheet needs to carefully explain all steps to be completed not only by the output owner, but also by the KB. It should contain information about the legal status of the output, logo, presentation and information dissemination as well as general cooperation conditions.
- Carefully choosing and performing a background check on the output – crucial to make sure that it is possible to create a line of cooperation between the end-user- Water RtoM service-output owner.

KU, KB

KB

EXAMPLES

ZIZOZAP output: Difficulties in information completion. First phase of the project was very cooperative; Factsheet and ReMAS documents were completed without difficulties. In Business Case document, output owner had problems to provide the information about state of the project development, hence Water RtoM had to refer to the signed document (Agreement sheet) and enforce completion of the missing information, later the output could be promoted

TOOLS AND MECHANISMS

- Agreements between KB and R and Dialogue between them
- Assessment of the output by ReMAS

Agreements between the “output owners” and the ones who are going to promote it are needed. Those agreements can carefully explain steps of promotion, enabling to use information and project logos, pictures and presentations – is crucial. One should also remember to put a stress on the output type and its source- to avoid future cooperation problems.

Step 3 - Assessing research outputs in terms of distance to the market

Best practice 7 - Creating users' committees (how do we know if the innovation offer has been relevant according to the addressed need?)

Lessons learnt:

- Tools for the promotion of outputs in Water RtoM are developed with the support of the LC gathering together 7 representatives of researchers, knowledge broker and end-users networks.
- The LC supported Water RtoM by giving advice on the tools, selecting products and facilitating the promotion in brokerage events, which resulted in a realistic approach integrating the different visions.

RECOMMENDATIONS

- The output assessment should happen integrating the knowledge researchers and the comments of the potential users to better know its relevance for the market needs compliance.

KB, KU

EXAMPLES

Liaison Committee action during Water RtoM

TOOLS AND MECHANISMS

- Service Water RtoM
- End-users' committees, or multi stakeholders committees.

To ensure that outputs are properly assessed in terms of distance the opinions from the different stakeholders need to be also integrated. In here, it is recommended to create users' committees; so that their duration can be for a limited time depending on the expected support.

Step 3

3

Step 3 - Assessing research outputs in terms of distance to the market

Best practice 8 - Developing a tool matching needs and offer

Lessons learnt:

- Water RtoM has identified more than 200 outputs, in the project duration and only three have been taken up by users during the project lifetime. This fact shows the needs of more efforts to raise awareness on the existence of those 200 outputs.
- The output E-fair aimed at offering this best practice by providing key information on the outputs. The information came from the assessment developed by Water RtoM through ReMAS. However a further step is needed in order to match those outputs with existing market needs.
- The identification of market needs has taken many efforts as this information is not always easily available. It might be visible at EU level, but many difficulties arose when trying to identify them at national or regional level.

RECOMMENDATIONS

- To work more closely with end-users to define the criteria for assessing the output
- To develop a connection system to identify and link the research outputs with user's needs.

KU, K
B, KB

EXAMPLES

TOOLS AND MECHANISMS

- E-fair
- Need profile sheet for the end-users
- A permanent dedicated service Water RtoM

During Water RtoM, we have identified more than 200 results; in parallel it has been difficult to identify end-users needs. The E-fair gathered the innovative outputs, but to finalise the cycle it is recommended to develop a tool matching needs and offer to facilitate the transfer, in close cooperation with the end-users.

Step 4

3.4 Promoting research outputs to the users

Once outputs are ready to be implemented there are a variety of mechanisms to promote and communicate them to the potential users. Water RtoM has experienced different dissemination activities (seminars, brokerage events, e-seminars, online tools, etc.). The gathered experience results in the following two best practices:

- 9) Developing communication activities in research projects
- 10) Reinforcing attractiveness of research outputs.

Step 3 - Promoting and disseminating research outputs to the users

Best practice 9 - Developing effective communication activities in research projects

Lessons learnt:

- Water RtoM has identified a high number of new research outputs targeting water utilities, planners, basin organizations. However they remain unknown to their target audiences; water managers are not aware of the availability of innovative results.
- Dissemination is normally happening at scientific level, but this way is not effective enough for practitioners and potential users.
- Research teams do not normally plan a dissemination strategy of their results (only done by some funding programmes, LIFE+, CONSOLIDER, etc.) because they do not focus on transferring their outputs.
- Research projects are not dedicating enough financial resources for promotion activities during and after the project ended (except in LIFE+ projects). What they normally do is to promote the research project as a whole.
- There is a lack of promotion activities at output level and to transfer knowledge across countries.
- Not enough involvement of “multipliers” actors of the information (water clusters, platforms, etc.) in the research output promotion, they are more dedicated to provide services for their members for submitting new project proposals or to promote the entire research project without special focus on the results.

RECOMMENDATIONS

- To plan effective and adapted dissemination activities for all research projects within the initial proposal, but focusing on the period when transferable outputs are available.
- To foresee enough economical resources for dissemination and promotion activities.
- To encourage networking among users and knowledge makers.
- To participate to existing events, to gain effectiveness in the promotion of outputs.

R, F, KB

KB, R
KB, R, KU
R

EXAMPLES

Set of tools developed by Life+: advices to develop website, communication plan, leaflets.
Use the E-fair in sending all the useful information to fill the output profile
WaterDiss2.0, Individual Dissemination Strategy tool for research projects, www.waterdiss2.0.eu

TOOLS AND MECHANISMS

- At the beginning of a research project: “Output Profile” with name/expected outputs/ dissemination strategy
- At the end of a research project: to update the “profile”, name/ real outputs/ dissemination strategy/ name owner for 5 years after the project
- Dissemination plan: plan and organize thematic seminars combining the technology state of arts / state of innovations
 - Promote E-seminars as a communication tool. Attend thematic e-seminars and promote them through the SME, End-users networks (WSSTP, INBO).
- To develop Water RtoM as a service to support the researchers in their communication strategy

Besides the projects financed by EC (LIFE+ funded projects, INTERREG, etc.), national research projects neither have a communication strategy nor a website, to facilitate the implementation of their outputs on the market. It is necessary to improve the communication activities from the beginning of the project and to focus more efforts on promoting the research outputs. It is strongly recommended to develop such strategy at the beginning of a project. In parallel it is recommended to the funders to encourage these activities whenever they finance a research project.

Step 4 - Promoting and disseminating research outputs to the users

Best practice 10 - Reinforcing attractiveness of research outputs (linked to universities and their development structures)

Lessons learnt:

- Innovation activity is providing to the KU competitiveness and differentiation in the market sector. Therefore, innovative research outputs need to be in line with those requirements.
- There is a language gap between researchers and users. The information regarding research outputs is not easily understandable by their users, and researchers do not always catch what are the user's requirements.
- Additionally, research outputs, when available, are not attractive in terms of marketing. They need a promotion approach to reach the interest of the potential users, in terms of language and layout.

RECOMMENDATIONS

- To use a common framework to publish the outputs (Output Profile in the e-fair), beyond scientific dissemination through publications.
- To adjust the language approach in the information of the promotion materials, and to adapt it to the targeted public (users).
- To get support from the communication skills of the knowledge brokers in order to promote research outputs
- To "package" the outputs as transferable products,
- To reinforce the output promotion in the research programmes as a final stage action

KB, R

KB
KB, R
R, KB
F

EXAMPLES

Output Profiles in the E-Fair
(www.waterrtom.eu/e-fair)
After Life+ communication plan
(EU LIFE+ programme)

TOOLS AND MECHANISMS

- Communication plan to promote the research Output
- A service (like Water RtoM) to translate results in a common and marketing language

Today, there are a huge number of recent research outputs. Water RtoM experience can highlight that most of them are not fully implemented and their uptake are not complete. The main reasons are as follows - potential users do not know about their existence, or when they know, the information about the output raised no interest. As researchers and users (practitioners) do not speak the same language and do not have same objectives there is lack of connectivity among them. To reinforce this connectivity, it is also crucial to care about the attractiveness of research outputs by the KU (linked to universities and their development structure).

Conclusion

Water RtoM project has designed the Guidelines to speed-up the transfer of research outputs into the Market in order to enhance the water innovation market with the exchange of information. These guidelines are based on the project experiences consisting of working with more than 200 existing research outputs mainly from Romania, Poland, Spain and France. Resulting from this proactive experience the project designed, tested and analysed knowledge transfer tools and provided 10 key recommendations.

This document targets water practitioners from river basin agencies, local and regional authorities, water utilities, suppliers of the technologies, as well as researchers, research funding bodies and knowledge transfer institutions who are all involved in the water management process.

The guidelines introduce a set of tools developed during Water RtoM project that supports the process of dissemination and promotion of the research outputs.

The main challenge faced by Water RtoM has been how to enhance the exchange of existing information from the research side. Issues such as the willingness of stakeholders to engage in this exchange process or for them to change their language in a common approach have been highlighted. Another challenge was regarding the analysis of research output coming from multi-dimensional and multi-disciplinary databases. The amount of information from research challenges the efficiency of the knowledge brokers in finding the key information for the potential users.

However, during the project duration, success stories raised the importance of having a knowledge transfer boost for a better understanding and to achieve a complete transfer of knowledge into the market.

The partnership activity coming from work with the Liaison Committee highlights the importance of “working together” to assess if a research output is ready to be taken up, to better find the ways to promote it and find potential users, and to identify and update market needs. This partnership can take place either at European level but is especially needed at regional and national level.

Tools, best practices and recommendations are based on the “output life cycle”: Identifying the needs of the water sector in research → Identifying and collecting research outputs → Assessing research outputs in terms of their distance to the market → Promoting research outputs to the users for the re-use → market uptake.

The WaterRtoM project partners understand that an appropriate change of the current paradigm on how to better achieve the knowledge transfer from science to the market should be translated in accordance with changes from practitioners and stakeholders, thus leading to the “speed up of the transfer of the research results”. These guidelines aim at introducing changes on the key stakeholders’ attitudes in the innovation, as well as researchers, knowledge brokers, and in the research funding programmes. The main focus is fostering the proactive and effective dialogue among all the stakeholders among the existing transfer scheme.

These guidelines have received the financial support from European Community in the frame of the LIFE+ programme.

Water Research to Market

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

www.waterrtom.eu



AMPHOS²¹

Gdańska Fundacja Wod



Liaison committee, associated partners

