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EU Framework Program for Research and Innovation (WATER-4a-2014 - H2020)

Project Nr: 641821

Applying European market leadership to river basin networks and spreading of innovation on water ICT models, tools and data.

Deliverable D1.2
Draft Data Management Plan

Version 1.5

Due date of deliverable: 31/05/2015
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Description	The purpose of the Draft Data Management Plan is to provide an initial analysis of the main elements of the data management policy that will be used with regard to all the datasets that will be generated in the project. It reflects the current status of reflection within the consortium about the data that will be produced.
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		for approval of the WP leader
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Requested deadline	

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1. Inventory of data sources, companies and solutions for the marketplace

1.1. Data set reference and name

Inventory of data sources, companies and solutions for the marketplace

1.2. Data set description

In the initial steps of the project, a database with an inventory of data sources, companies and solutions to be integrated into the marketplace will be created. The inventory will be created based on the information found in specialised websites. The data sources and solutions will come from European research projects funded by the EU Commission and so will be collected from official portals, primarily those from the EC and from the project websites themselves. Another source of data, especially for the companies' inventory, will be some Trade Associations and other 'multiplier' organisations. The following list details the main websites to be consulted:

- CORDIS
- INSPIRE Geoportal
- EIP Water
- WISE-RTD
- EEA Water Data Centre
- EIONET
- EU Open Data Portal
- Eurostat Open Data Portal
- European Floods Portal
- Aquaknow
- EWC (European Water Community)
- SWITCH-ON
- Datahub
- GEOSS
- CUAHSI-HIS (USA)

All the information contained in these sites is publicly available, so no permission or restriction is needed to get access to the data. The initiatives recorded will be from the European area.

This database will be used in the creation and maintenance of the offerings of the marketplace. The most similar existing initiative or database is the EIP Water market place, with which we are talking about the integration and reuse of their work and information.

1.3. Standards and metadata

There are no standards to be applied to this kind of data. It is only a simple database that collects the information that can be useful for the marketplace.

The metadata that could be relevant is detailed below:

- Name of the project
- Origin of the partners (registered following the ISO 3166-1-alpha-2 codes)

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- Location of the action of the project
- Administrative aggregation level
- Hydrological aggregation level
- End date
- Availability of background information (report, raw data, metadata)
- Concrete tools / data / guidelines published
- Keywords
- Approach
- Comments

This metadata will be obtained from the same original sources commented in the previous section.

1.4. Data sharing

As mentioned in the previous section, the data collected in the inventory of data sources, companies and solutions will be integrated into the WaterInnEU marketplace. This database will inform the offerings included in the marketplace: projects, solutions and companies.

The access to this information will be public in the marketplace portal and also will be linked to the main registries and directories of research data repositories (OpenAIRE, Re3Data, DataBib, etc.). No registration will be required to access the databases.

1.5. Archiving and preservation (including storage and backup)

The long-term preservation of this dataset is strongly related to the long-term preservation of the marketplace. In this sense, as the expectation is to link our marketplace with the EIP Water market place, the sustainability of the platform will be guaranteed by the continuity of the EIP platform. In the case the integration with the EIP marketplace does not succeed, the long-term preservation will need to be defined in the Task 4.4 Exploitation plan for beyond the life of the project.

The preservation period for this dataset will be the same as the one for the marketplace. While the marketplace is running, the data needs to be available. So it will depend on the previous point about the sustainability of the platform. The end volume of the database is unpredictable, as it is expected to continue to grow over time with updates from new sources.

Also the associated costs for the preservation of the dataset will depend on the final decision about the EIP water platform. If the information collected is finally integrated in the EIP databases, the preservation costs will be transferred to the EIP water initiative. If an independent marketplace is developed, the preservation costs will need to be defined in the Task 4.4 Exploitation plan for beyond the life of the project.

2. Feedback from the end users

2.1. Data set reference and name

Feedback from the end users.

2.2. Data set description

In the initial steps of the project and also during the development of case studies and the e-learning processes, feedback from identified potential end users of the marketplace will be collected. This information will be used to design and adapt the offerings and the services of the marketplace.

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The information will come directly from potential end users. At the beginning of the project, information will be collected through a survey and interviews, especially with relevant stakeholders from the case study basins who will have a chance to test the platform in a second stage. When the platform is live, information will further be gathered from online data capture sheets and from online consultations.

The survey and interviews in the first stage of the project concern the identification of requirements for tools and information platforms related to river basin management by actors involved in implementing the EU Water Framework Directive in different EU member states. The questions will be addressed mainly to European river basin managers.

The ultimate marketplace platform will contain a section to host online data capture sheets to collect expressions of interest both from the suppliers of tools or products and from the end users. This information will be used in the matchmaking in the marketplace to enable the brokering of supply chain opportunities and the provision of support services to interested parties.

During the competitions and youth involvement foreseen in WP7, ideas about innovative use of the tools and solutions available at the virtual marketplace will be sought. This information will come from the participant students and will be collected through the social e-learning platform developed in the project.

At the end of the project, online consultations will be organized to collect feedback on the use of the marketplace. This information will come from the key stakeholders addressed in this project in order to validate the usability and interest of the marketplace developed.

There is no available information for this kind of data before the consultation process, as it is about qualitative opinions and feelings of the stakeholders identified as potential end users.

2.3. Standards and metadata

This kind of information is not covered by any suitable standards, as it is not structured information. Also we will not create any metadata about it. The data itself will be analysed and turned into guidance reports or experiment reports for the development of the marketplace platform.

2.4. Data sharing

This dataset contains information directly useful for the development of the project. This is not information aimed to be shared but to serve in the design of the platform and the services created within the project. Data collected for this dataset will remain confidential and will not be transferred to third parties as it is personal related information.

2.5. Archiving and preservation (including storage and backup)

The data directly collected from the stakeholders or the end users will be preserved during the lifetime of the project in the partners' archives. After the project, its continuity is not essential and, given that it will contain some personal identification data, its destruction is something to value, even for reasons of maintenance costs.

The end volume is unpredictable, giving that it will depend on the number of answers obtained in each consultation process.

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3. Compendium of available standards

3.1. Data set reference and name

Compendium of available standards.

3.2. Data set description

This dataset will contain an analysis of the status in standardization at different levels in the water sector. It will use the data collected in the WP2 relating to the projects' results and tools to analyse them in the terms of standardization and interoperability. So it will include the results of the European projects selected for the marketplace.

The data collected will serve to design a strategy to promote the interoperability within the marketplace. It will enable assessment of the degree of standardization of the existing tools in the water sector and then selection of the best candidates for interoperability experiments.

As standardization has not been an important characteristic in the existing tools and developments to date, there is no similar work or initiative that could be integrated or reused.

3.3. Standards and metadata

The compendium of available standards will be a simple database that will collect the standardization status of certain tools and solutions, so there are no standards to be applied to this kind of data. When we make the dataset public, we will use the Dublin Core metadata model to document and cite the dataset.

Some metadata that could be relevant for this dataset will be:

- Name of the tool/solution
- Provider project/institution/company
- Type of tool
- Purpose of the tool
- Area of application
- Standards applied

This metadata will be created manually from the previous information collected in the inventory of data sources, companies and solutions and from the projects' own websites or documents. In some cases, it could be necessary to contact the providers of the solutions to get more information about the standards applied.

3.4. Data sharing

The results of the standards assessment will be published in the virtual marketplace and in the website of the project. It can be included also in a data repository such as the OpenAIRE, the UAB Digital Repository of Documents (http://ddd.uab.cat/?ln=en) or the TU Delft Repository, all with open access. As mentioned above, the virtual marketplace and the project website are also open access.

3.5. Archiving and preservation (including storage and backup)

The inclusion of the dataset in a data repository will ensure its long-term preservation, as this is one of the objectives of these repositories.

There is no expiration period for the dataset, but it will become outdated with time. The end volume is unpredictable, as it will depend on the number of solutions identified as appropriate to be analysed.

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During the creation period, the costs of maintenance of the dataset will be non-existent, as it will probably be an Excel spreadsheet that can be hosted in any personal computer. In the preservation period, the hosting in an open access data repository will also involve no costs.

4. Tools for the business strategies services

4.1. Data set reference and name

Tools for the business strategies services.

4.2. Data set description

This dataset will include the materials and procedures developed within WP4 to provide support services to the companies interested in implementing the solutions of the marketplace. In WP4, these companies will be guided by experienced innovation brokers towards successful application and marketing of the identified innovation solutions. This support will involve the development of roadmaps and business strategies for every case, as well as the writing of short procedures and checklists to be followed during these processes.

The data created will therefore be specific for each company and will include a set of documents to guide the development and market implementation of the solutions. The data could be useful for other commercial strategies, but only in general terms, as the roadmaps will be designed specifically for each solution.

Adelphi, which is the main responsible partner for this task, has a broad experience in developing marketing strategies, so they will know and surely integrate and reuse some similar data, depending on the solutions to be supported.

4.3. Standards and metadata

Although there are a lot of procedures to develop business strategies, some of them following similar rules, there is not a standardized way to do them. During the process of development of the business support tools, deep research will be conducted to find the most applied and interoperable method to generate such strategies.

The business strategies are likely to be defined by a SWOT analysis, outlining the weaknesses, the opportunities, the threats and the strengths of the initiative, and by an analysis of the macro-environmental conditions, the competitive edge and the sales strategy, the marketing strategy (pricing and promotion), and the strategic alliances.

4.4. Data sharing

This information contains the strategic plans for the companies in order to bring a product or a solution to the market. These support tools and data generated in the development of the companies' market strategies constitute private commercial information concerning only the companies involved and their business, so they will not be shared and will remain in the hands of the companies.

4.5. Archiving and preservation (including storage and backup)

The data generated in the process of provision of support services to the interested parties will be useful during the process of developing the market strategy and bringing the product to the market. After this period, the data will be transferred to the corresponding companies, which will decide what to do with the data. Given that the information generated will not be of public interest, the preservation of the dataset will fall to the companies themselves.

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5. Technical and support documentation about the use of the marketplace

5.1.   Data set reference and name

Technical and support documentation about the use of the marketplace.

5.2.   Data set description

This dataset will be generated in WP6 and 7 and will include the technical documentation about the virtual marketplace and also the materials to support the use of the platform by the end users, developed in the e-learning work package.

The development of the virtual marketplace platform will be accompanied by proper technical documentation to allow third parties to use parts of the prototype or to mirror the complete system.

WP7, concerning the e-learning processes, will include the generation of participative e-learning courses and multimedia products, implemented in an e-learning platform. The multimedia products will consist of a set of visually appealing presentations, videos and images that will be used to enrich the content of the e-learning courses and to support the tutorials and the dissemination of the platform.

This dataset consists of a set of training materials aimed at being used in the e-learning courses. The tutorials will seek to teach by examples and supply the information to complete the tasks that will be fundamental to exploit the functionalities of the marketplace. They will be developed as demonstration processes, using examples to show how a workflow or process for the marketplace users is completed, and will be organized into several modules or sections.

5.3.   Standards and metadata

In the development of the graphical materials such as presentations, videos and images, the recognised multimedia standards will be adopted, as for example the JPEG standard for the images and the MPEG standards for the videos. In the case of the tutorials or the technical documentation of the platform, the standard HTML will be used to let the maximum interoperability of the data.

5.4.   Data sharing

Both the technical documentation and the e-learning platform will be hosted in the marketplace platform. The technical documentation on marketplace design, as well as the tutorials and training materials will be deposited in an open access repository, for example the publicly accessible institutional UAB Digital Repository of Documents or the TU Delft Repository, as their purpose is to serve as support material of the platform and thus to be publicly accessible. There will be no restriction to access for any group or kind of people.

The materials will be developed in open access software, such as the OpenOffice suite for the technical documentation and the tutorials, and some accessible software to reproduce the presentations, videos and images. In the case it is not possible, indications about the technical requirements and the necessary software to reuse the data will be given.

5.5.   Archiving and preservation (including storage and backup)

The deposit in an institutional repository will ensure the long-term preservation of the dataset. The data would be preserved at least until the marketplace is running, so it will depend on the future maintenance of the virtual platform.

The end volume of the dataset will depend on the characteristics of the products developed in the marketplace, yielding it can be large in case these will be videos. Despite this, the hosting of the materials in the own marketplace or in the institutional repository will have no associated costs.

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6. Marketplace platform internal code

6.1. Data set reference and name

Marketplace platform internal code.

6.2. Data set description

The marketplace platform is the core of the WaterInnEU project. It will be a web based platform that will connect the outcomes developed in previous EU funded activities (currently collected by the EIP Water marketplace or the WISE-RTD portal) with the already existing data available at European level (INSPIRE directive, Eurostat Open Data Portal, etc.) and also to the SMEs and companies that are able to deploy products and offer services to the users from these tools and data. The platform will also offer an independent marketplace supported by technical and commercial expertise as a service for users (river basin district managers) that will allow them to access products and services best fitting their priorities, capabilities and procurement processes (based on the previous products).

To develop these features, the virtual platform will include some technical components: a companies & SMEs pool, a water data inventory, interoperability experiments, a standardization label, a user feedback component, an e-learning platform and specialist commercialisation support services. Other minor developments will also be included as multimodal search, registration of new products or a spatial component.

As mentioned in other parts of the document, similar initiatives exist like the EIP Water marketplace or the WISE-RTD portal. From its origin, the intentions of the project have been to not duplicate efforts. The marketplace platform intends to reuse existing software for online platforms as much as possible. The collaboration with the EIP Water to manage the integration with this platform and the reuse of the existing developments is an open debate in these initial steps of the project.

6.3. Standards and metadata

For the sake of (current and future) maintainability and extensibility, open source solutions will be used. The platform shall further provide open APIs for user authentication (e.g. OAuth) as well as content (e.g. linked open data, or GeoViQua feedback model) to allow integration with other components.

6.4. Data sharing

The development of the platform will be accompanied by proper technical documentation to allow third parties to use parts of the prototype or to mirror the complete system (see the section above on the technical and support documentation for use of the marketplace).

At the end of the project, the internal code of the virtual marketplace will be deposited in an open data repository such as the institutional UAB Digital Repository of Documents or the TU Delft Repository, both linked also to the European OpenAIRE repository, along with the technical documentation, with no restriction access and with indications on the technical requirements needed to properly understand the data.

The platform data itself should be published (and therefore contributed) under an open license that encourages reuse, for example the Open Database License (ODbl) and can be integrated in the Open Research Data Pilot.

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6.5. Archiving and preservation (including storage and backup)

Most of the interactions, information and links created in the marketplace as a service are expected to be done by the companies and the users of the marketplace instead of by the project participants. The idea is to engage all the key stakeholders that are able to influence, inform and participate in the sector from the very beginning of the design of each component.

During the project, concepts on how the virtual platform can be sustained beyond the project duration will be developed with respect to several relevant areas: (i) content (required user groups and levels, moderation needs, guidelines for contributors, linking to other relevant websites), (ii) maintenance and finance (estimation of costs, potential sources to finance a virtual platform), (iii) long term strategy (having demonstrated the features of a marketplace, what use cases are most likely to continue to matter), and (iv) organisational structures (what forms of management are viable). Recommendations for each of these areas will be formulated and published. To make development beyond the project duration possible, all software used for the virtual marketplace shall be made available as open source under a permissive license.

These considerations will be influenced mainly by the actual negotiations with the EIP Water marketplace, as in case of agreement in the integration of the developments, the preservation of the initiative will be linked with the preservation of that platform.

Apart from this, the internal code of the virtual marketplace will be deposited in an open data repository such as the UAB Digital Repository of Documents or the TU Delft Repository, what will guarantee the archiving and preservation of the dataset without any costs associated.