FIRST DISSEMINATION REPORT

SmartH2O

Project FP7-ICT-619172

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Author(s):	Andrea Rizzoli, Andrea Castelletti, Matteo Giuliani, Andrea Cominola, Simona Denaro, Maja Novak, Isabel Micheel, Jasminko Novak, Julien Harou, Luigi Caldararu, Mark Holt, Marco Bertocchi, Fausto Dassenno.
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Executive Summary

This deliverable D9.2 contains the first dissemination report of the SmartH2O project. It represents the second achievement of the Communication and Dissemination work package (WP9). WP9 aims at designing an effective communication strategy for the project and at disseminating the project results at the local, national, and international level.

The present document describes the SmartH2O project dissemination strategy, communication tools and materials (e.g., documents, flyers, website, social media channels, newsletter), as well as of all the dissemination actions performed during the first year of the project, including scientific publications, networking activities at conferences and workshops, as well as the dissemination through the SmartH2O social media channels.

For this reason, this document takes up from where D9.1 has stopped: it presents an updated version of the information contained in D9.1 and it reports on the first quantitative impacts of dissemination activities.

The analytics on the usage of the main communication channels are reported to verify the achievements of the specific targets defined in the Deliverable D9.1 – Dissemination Tools and Materials. Finally, the document assesses the overall WP9 activities with respect to the five goals of the project dissemination and communication strategy:

1. Effective communication strategy.
2. Dissemination at the local level.
3. Dissemination at the national level.
4. Dissemination at the international level.
5. Major dissemination events.

1. Introduction

This deliverable describes the SmartH2O project dissemination strategy and communication tools (e.g., website, social media channels, newsletter) and reports the dissemination actions performed during the first year of the project. The deliverable is part of the activity of WP9.

The document includes the results of the active tasks of WP9:

- T9.1 Communication strategy and planning, for the initial definition of the project communication strategy and the continuous monitoring of the communication and dissemination activities' effectiveness.
- T9.2 Dissemination material and tools, for the construction of the project's visual identity and the dissemination material
- T9.3 Dissemination events, for the promotion of the project's results during the project lifetime, both at the local level and at the international level.

The deliverable is organized as follows: Section 2 describes the updated SmartH2O project Visual Identity, particularly with an improved graphics for the project logo; Section 3 illustrates the main communication and dissemination channels activated during the first year and reports some analytics on their use to assess their effectiveness with respect to the targets defined in Deliverable D9.1; the list of scientific publications and dissemination actions performed during the first year of the project is reported in Section 4 and Section 5; Section 6 reports an assessment of the WP9 achievements towards the dissemination and communication strategy.

2. Coordinated image and dissemination materials

2.1 SmartH2O identity and brand

All the material used for the dissemination activities reflects a common visual identity, which is associated to the project logos (see Section 2.2), banners (see Section 0), and documents templates (see Section 2.4).

2.2 Logos

The SmartH2O project logo has been graphically refined with respect to the version in D9.1. Both versions of the project logo are reported below:

Figure 1: SmartH2O project logo Version 1 (left) and Version 2 (right).

The technical characteristics of the colors employed in the new logo are the following:

- Light blue
  - RGB = R(1), G(167), B(225)
  - Four color reproduction = C(73), M(16), Y(0), K(0)
- Black
  - RGB = R(29), G(29), B(27)
  - Four color reproduction = C(75), M(69), Y(69), K(80)
- Grey
  - RGB = R(88), G(86), B(87)
  - Four color reproduction = C(65), M(57), Y(52), K(30)

2.3 Banners

The new SmartH2O project logo (see the previous section) is embedded in the project banner, which is employed in the SmartH2O project website (see Section 3.1) as well as in the document templates (see Section 2.4).

The SmartH2O project banner is reported below:

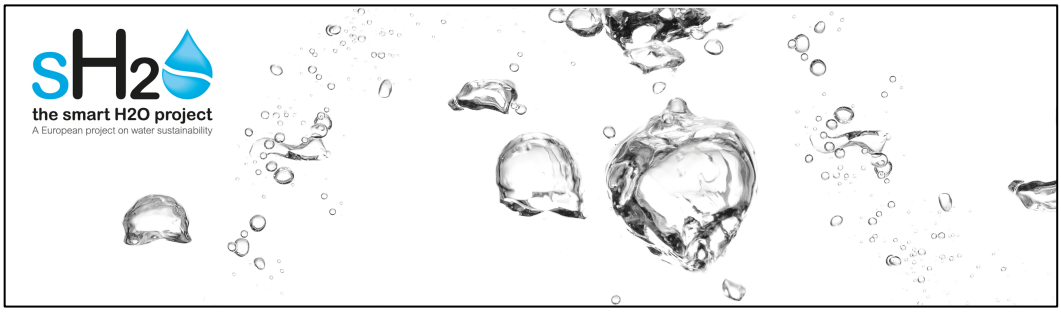


Figure 2: SmartH2O project banner.

2.4 Templates

A set of templates for presentation, text documents, and leaflet was made available to all the partners in the consortium in order to ensure a common and distinctive visual identity in all the dissemination events.

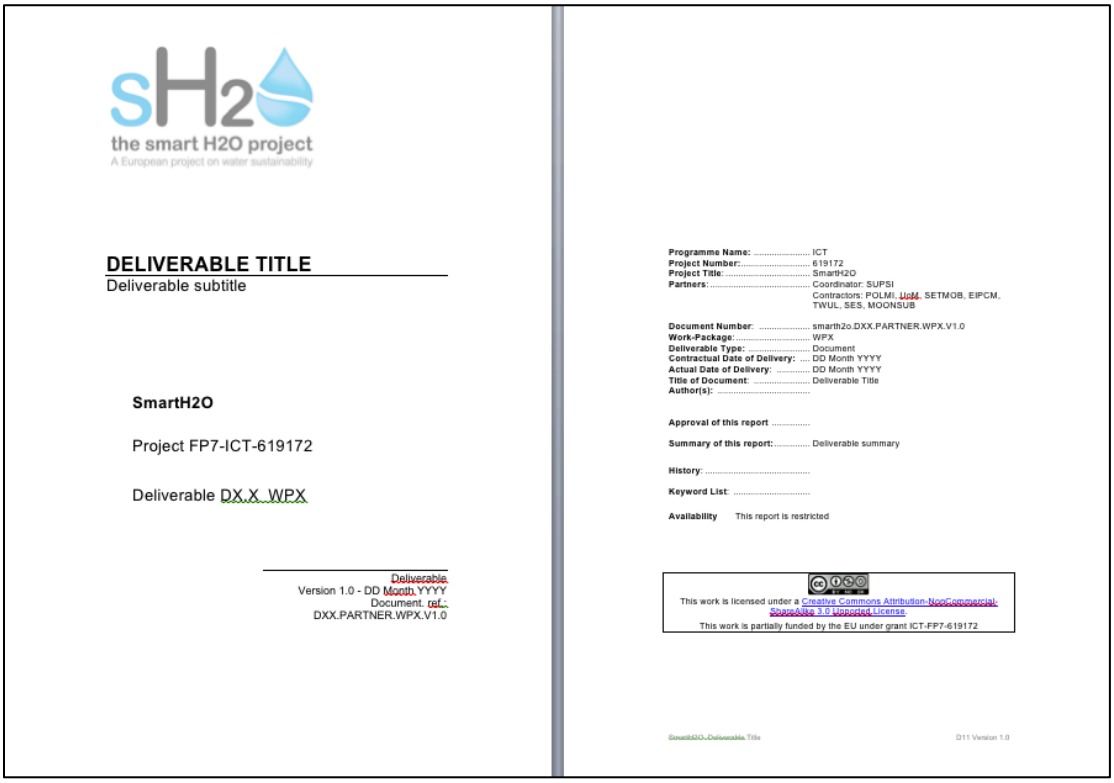
2.4.1 SmartH2O presentations

The SmartH2O Microsoft Power Point template for project-related presentations is reported on the following page.

Figure 3: SmartH2O project presentations template.

2.4.2 SmartH2O text documents

The SmartH2O Microsoft Word template for text document is reported below:



the smart H2O project
A European project on water sustainability

DELIVERABLE TITLE
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SmartH2O

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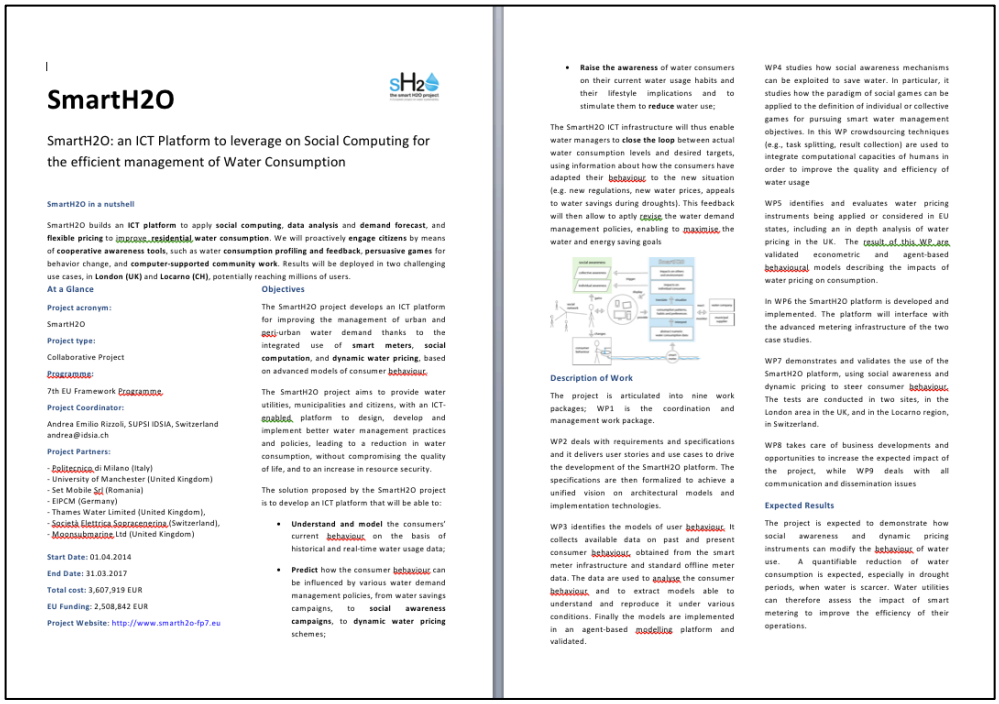
SmartH2O_Deliverable Title D11 Version 1.0

Figure 4: SmartH2O project text documents template.

2.4.3 SmartH2O factsheet

A 2-page factsheet (see Figure 5) was prepared to provide a concise and effective summary of the SmartH2O project, including information about the consortium, the main objectives, the description of work and the expected results.



SmartH2O

SmartH2O: an ICT Platform to leverage on Social Computing for the efficient management of Water Consumption

SmartH2O in a nutshell

SmartH2O builds an **ICT platform** to apply **social computing**, **data analysis** and **demand forecast**, and **flexible pricing** to improve residential **water consumption**. We will proactively **engage citizens** by means of **cooperative awareness tools**, such as water **consumption profiling and feedback**, **persuasive games** for behavior change, and **computer-supported community work**. Results will be deployed in two challenging use cases, in **London (UK)** and **Locarno (CH)**, potentially reaching millions of users.

At a Glance

Project acronym:

SmartH2O

Project type:

Collaborative Project

Programme:

7th EU Framework Programme

Project Coordinator:

Andrea Emilio Rizzoli, SUPSI IDSIA, Switzerland
andrea@idsia.ch

Project Partners:

- Politecnico di Milano (Italy)
- University of Manchester (United Kingdom)
- Set Mobile Srl (Romania)
- EIPCM (Germany)
- Thames Water Limited (United Kingdom),
- Società Elettrica Sopracenerina (Switzerland),
- Moonsubmarine Ltd (United Kingdom)

Start Date: 01.04.2014

End Date: 31.03.2017

Total cost: 3,607,919 EUR

EU Funding: 2,508,842 EUR

Project Website: http://www.smarth2o-fp7.eu

Objectives

The SmartH2O project develops an ICT platform for improving the management of urban and agri-urban water demand thanks to the integrated use of **smart meters**, **social computation**, and **dynamic water pricing**, based on advanced models of consumer behaviour.

The SmartH2O project aims to provide water utilities, municipalities and citizens, with an ICT-enabled platform to design, develop and implement better water management practices and policies, leading to a reduction in water consumption, without compromising the quality of life, and to an increase in resource security.

The solution proposed by the SmartH2O project is to develop an ICT platform that will be able to:

- **Understand and model** the consumers' current behaviour on the basis of historical and real-time water usage data;
- **Predict** how the consumer behaviour can be influenced by various water demand management policies, from water savings campaigns, to **social awareness campaigns**, to **dynamic water pricing** schemes;
- **Raise the awareness** of water consumers on their current water usage habits and their lifestyle implications and to stimulate them to **reduce** water use;

The SmartH2O ICT infrastructure will thus enable water managers to **close the loop** between actual water consumption levels and desired targets, using information about how the consumers have adapted their behaviour to the new situation (e.g. new regulations, new water prices, appeals to water savings during droughts). This feedback will then allow to aptly revise the water demand management policies, enabling to maximise the water and energy saving goals

Description of Work

The project is articulated into nine work packages; WP1 is the coordination and management work package.

WP2 deals with requirements and specifications and it delivers user stories and use cases to drive the development of the SmartH2O platform. The specifications are then formalized to achieve a unified vision on architectural models and implementation technologies.

WP3 identifies the models of user behaviour. It collects available data on past and present consumer behaviour obtained from the smart meter infrastructure and standard offline meter data. The data are used to analyse the consumer behaviour and to extract models able to understand and reproduce it under various conditions. Finally the models are implemented in an agent-based modelling platform and validated.

WP4 studies how social awareness mechanisms can be exploited to save water. In particular, it studies how the paradigm of social games can be applied to the definition of individual or collective games for pursuing smart water management objectives. In this WP crowdsourcing techniques (e.g., task splitting, result collection) are used to integrate computational capacities of humans in order to improve the quality and efficiency of water usage

WP5 identifies and evaluates water pricing instruments being applied or considered in EU states, including an in depth analysis of water pricing in the UK. The result of this WP are validated econometric and agent-based behavioural models describing the impacts of water pricing on consumption.

In WP6 the SmartH2O platform is developed and implemented. The platform will interface with the advanced metering infrastructure of the two case studies.

WP7 demonstrates and validates the use of the SmartH2O platform, using social awareness and dynamic pricing to steer consumer behaviour. The tests are conducted in two sites, in the London area in the UK, and in the Locarno region, in Switzerland.

WP8 takes care of business developments and opportunities to increase the expected impact of the project, while WP9 deals with all communication and dissemination issues

Expected Results

The project is expected to demonstrate how social awareness and dynamic pricing instruments can modify the behaviour of water use. A quantifiable reduction of water consumption is expected, especially in drought periods, when water is scarcer. Water utilities can therefore assess the impact of smart metering to improve the efficiency of their operations.

Figure 5: SmartH2O project factsheet.

2.4.4 SmartH2O leaflet

A 3-page folded brochure (see Figure 6 and Figure 7) was produced to promote the visibility of the project, illustrating the SmartH2O project motivations and objectives. A first set of flyers was prepared after the project kickoff and they were distributed at the EWRI 2014 Annual Conference and at iEMSs 2014, the International Conference on Environmental Modelling and Software. The flyers were then used to support the other following events that were attended.

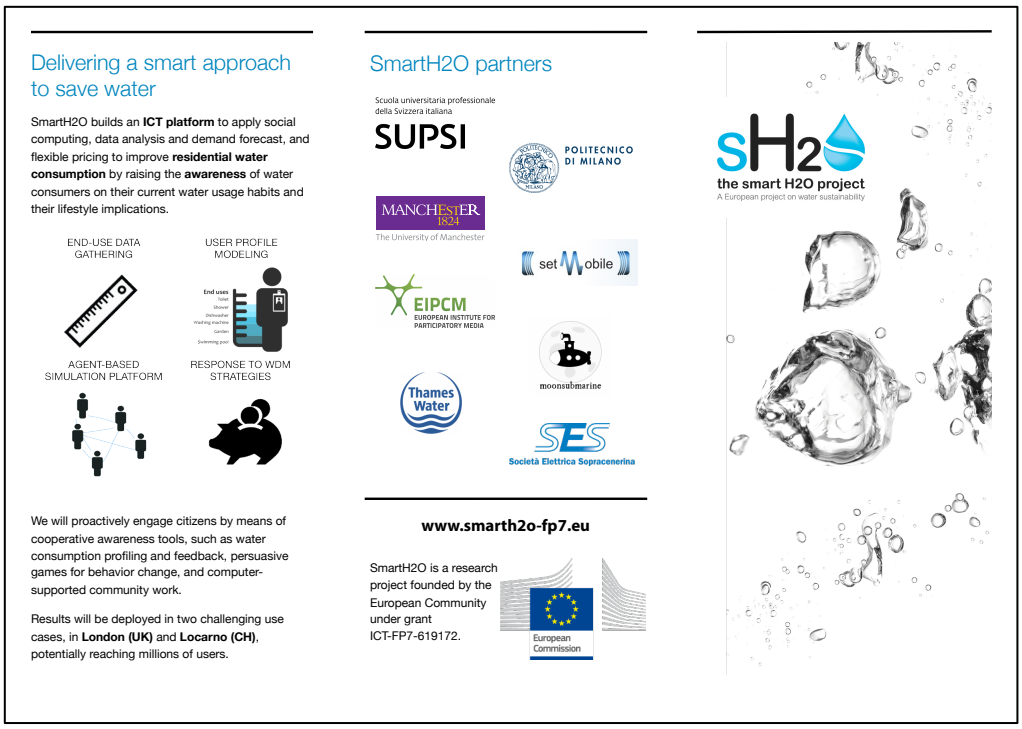


Figure 6: SmartH2O Leaflet (outside).

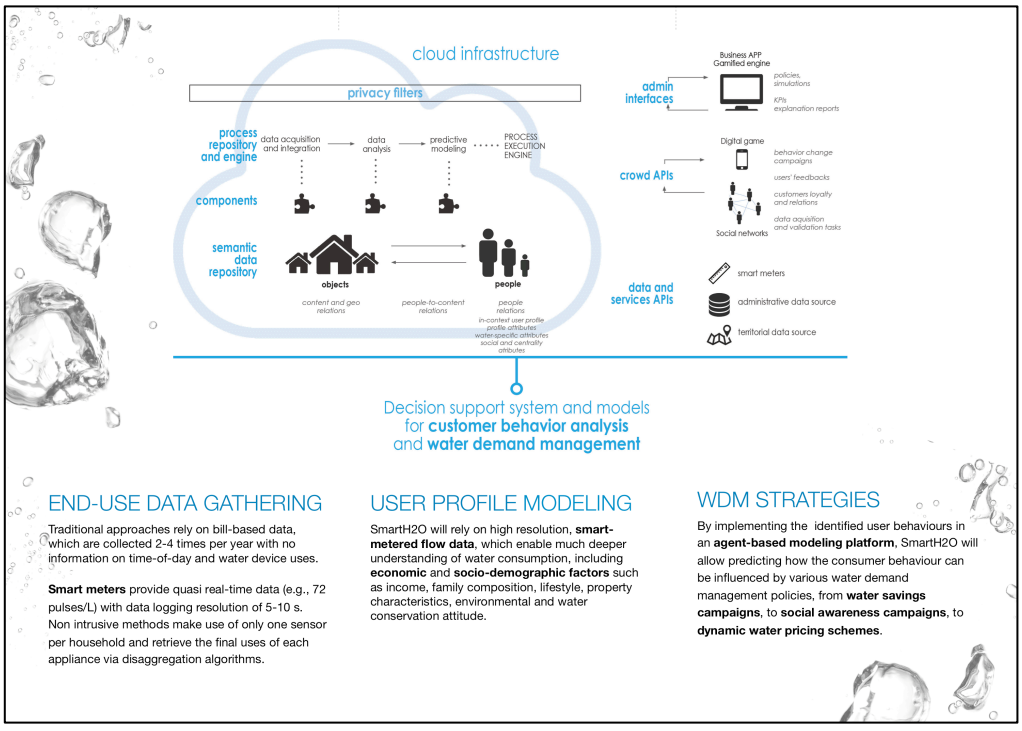


Figure 7: SmartH2O Leaflet (inside).

3. Dissemination and communication channels

3.1 SmartH2O website

The SmartH2O project website (http://www.smarth2o-fp7.eu) is online since April 2014 and has been constantly maintained and updated to communicate the project progress. It has been implemented using Wordpress and is organized in 6 pages plus contact details. The website has been instrumental for multiple objectives, such as disseminating a "brand identity" of the SmartH2O project, informing the main project objectives and research questions, sharing the project outcomes, involving and engaging the stakeholders, broadcasting and sharing news through social networks (see, for example, the tweet roll shown in the homepage of the website in Figure 8).

The website provides a summary of the SmartH2O project in terms of concept, objectives, technical architectures and use cases, a description of the consortium, the project results (i.e., deliverables, publications, software, datasets), a list of the main events organized/attended as well as a collection of media and project presentations (see Section 3.3.3).

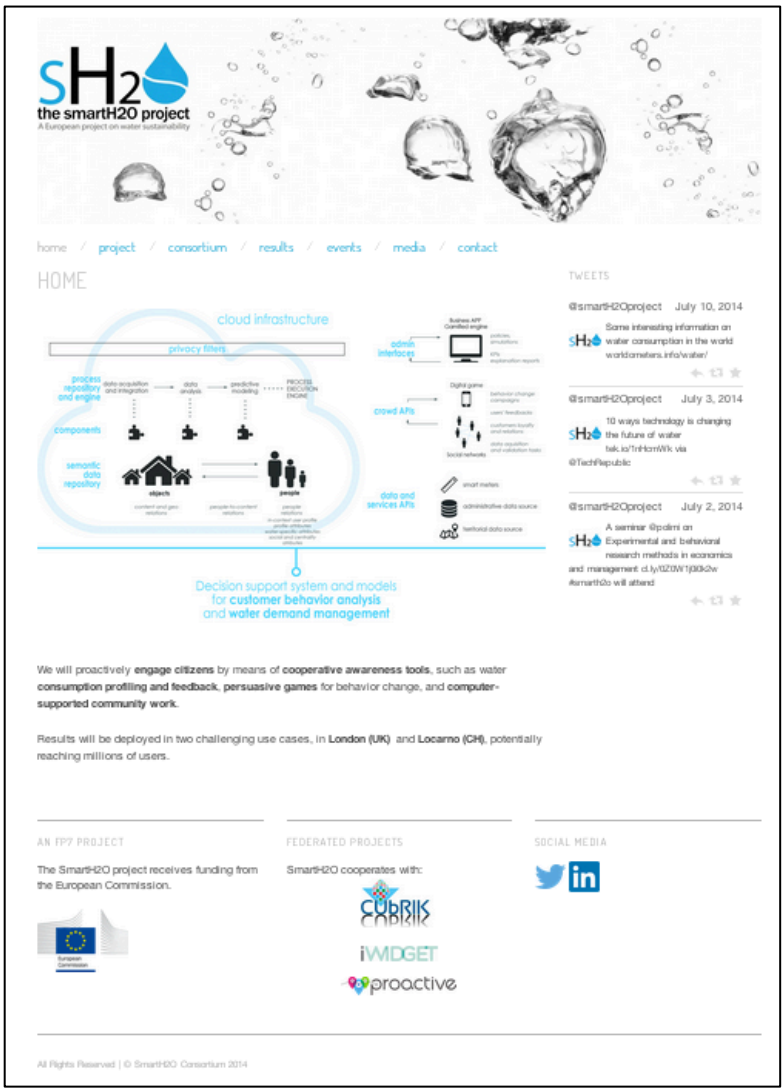


Figure 8: SmartH2O project website.

After a first warm-up period, we have been continuously monitoring the access to the SmartH2O project website (see Figure 9), in terms of the total number of visualizations, the percentage of new or returning visitors, and the locations of the visitors. The analytics on the website usage are reported in Table 1. Figure 10 shows a map of the geographical distribution of visitors, which is covering most of Europe, North America, Australia, and many other countries, showing a world-wide interest in the SmartH2O project.

Table 1: Analytics on the SmartH2O website.

Statistics	Y1 results
Number of sessions	1,631
Number of users	961
New visitor	58.6%
Returning visitor	41.4%

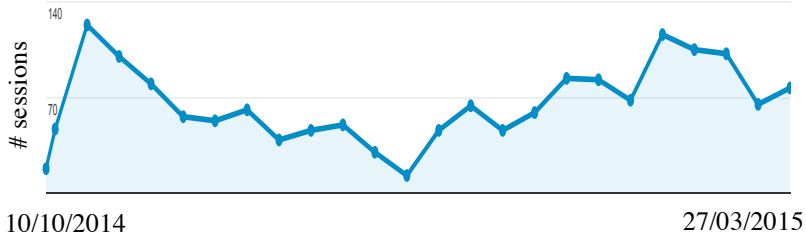


Figure 9: Number of sessions registered on the SmartH2O website from 10/10/2014 to 27/03/2015.

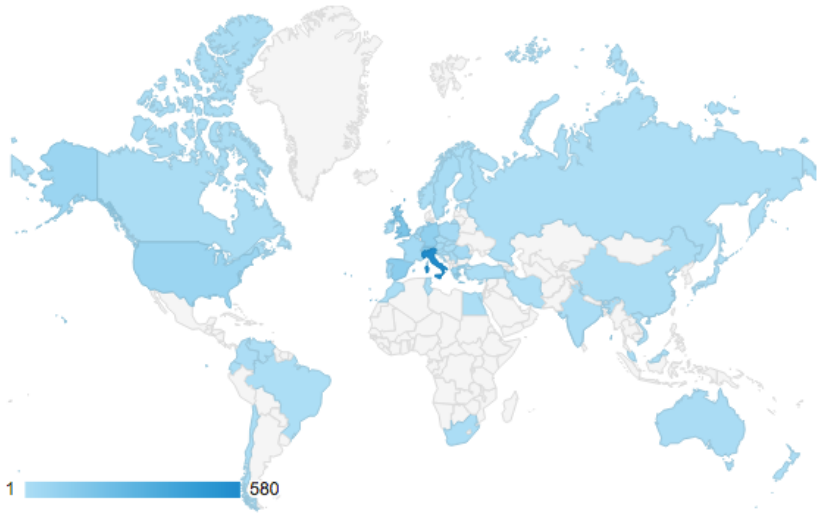


Figure 10: Geographical distribution of the sessions registered on the SmartH2O website from 10/10/2014 to 27/03/2015.

3.2 SmartH2O newsletters

The first issue of the SmartH2O project newsletter was published in February 2015[1], and was distributed in HTML-format to be easily visualized online as well as on smartphones. It was spread through a number of contacts including, among others, mailing lists the SmartH2O project has access to (e.g. iEMSs, ASCE-EWRI, IFAC). In addition, the newsletter was promoted on the project website, via the Twitter and LinkedIn accounts of the SmartH2O project and via the professional networks of individual project partners, including but not limited to their social media channels. The newsletter complements additional dissemination material for distribution at events and conferences (brochures, flyers, promotional videos and project presentations).

The underlying idea of the newsletter is to make readers familiar with SmartH2O topics, introducing some of them in-depth, providing flash news about major achievements in the reported period and informing about on-going initiatives in the SmartH2O social community. The target is to reach a wide audience, not necessarily belonging only to the scientific community. The first issue of the SmartH2O newsletter contained the following contributions:

- Introduction to the project by the project coordinator
- Update from Drop! The SmartH2O Boardgame
- Sneak-peek of the SmartH2O application concept & mockups
- SmartH2O end-use disaggregation algorithms
- Past & upcoming events
- Selected related news

Given the SmartH2O project involvement in the publication of the ICT4Water Cluster newsletter (two issues per year, see Issue1 and Issue2), the project Editorial Team led by the Communication Director agreed in publishing one issue of the SmartH2O Newsletter per year. This ensures a total of three newsletter issues that report SmartH2O activities to a broader audience per year, both in detail (SmartH2O newsletter) and with a focus on specific project outcomes (ICT4Water newsletter contributions).

The SmartH2O newsletter was distributed through a number of channels (including Email, LinkedIn, Xing, Twitter), reaching more than 2000 first-level recipients.

3.3 SmartH2O social media channels

In addition to the official project website, social media channels have been set up on **Twitter, LinkedIn** and **Slideshare**. They aim to facilitate the communication of the project-related activities to a wide external audience and promote the visibility of the project on the most widely used social media channels.

3.3.1 SmartH2O Twitter activity

The SmartH2O Twitter account (see Figure 11) and the associated hashtag (#SmartH2O) have been created and disseminated to facilitate a direct, easy, immediate communication about the main project activities and results, as well as to share news or initiatives related to the general SmartH2O mission.

[1] SmartH2O Newsletter: http://us10.campaign-archive1.com/?u=f1aec1420b477940372ec8b43&id=5b3c3cd91c&e=5a6e0736d6

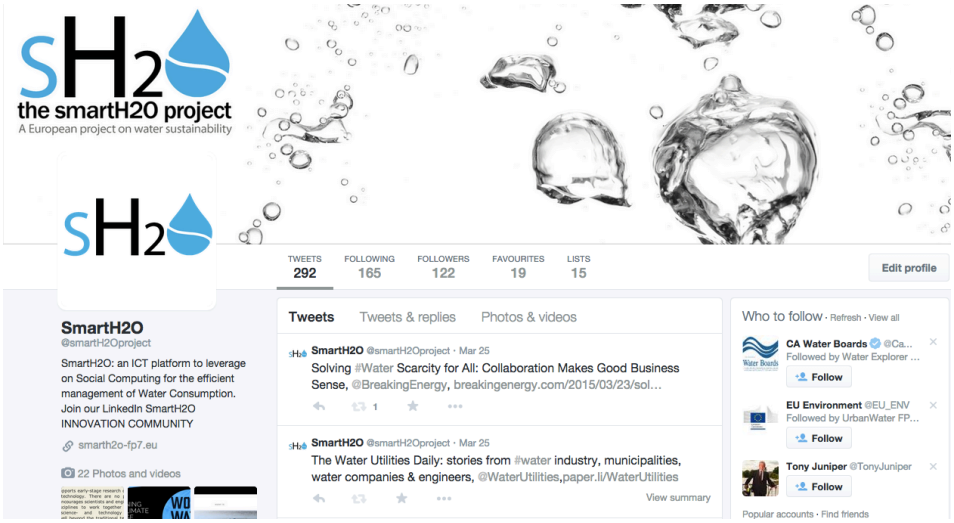


Figure 11: SmartH2O project Twitter account.

At the project kick-off, the consortium agreed on a publishing plan involving all partners (i.e., the plan specified for each week the responsible technical partners and persons for publishing relevant tweets, as common practice in professional communication departments). During the First General Meeting, the consortium decided to intensify the use of social media channels by including a broader range of topics related to the project. Topics from which content and news were disseminated include water saving technologies, approaches and best practices, water management, dynamic pricing, social awareness in resource management (water & energy), visualization and related news from the area of water and sustainability in general. In this way, a communication channel was created that provided direct informational value to a relevant audience in the project's areas of impact and interest.

The Twitter strategy also aimed at identifying accounts with a broad reach in their existing social networks, in order to exploit network effects. This was reflected in the editorial choice of content published, as well as in the establishment of references and direct interactions with existing Twitter multipliers in the area of water management and related sustainability areas. This strategy was effectively implemented, as acquired Twitter followers include both individual influencers with a high number of followers (e.g. tens of thousands direct followers) as well as institutional Twitter accounts of renown institutions (e.g. MIT Water, EAWAG, Blue Economy Initiative) and of other projects or water-related initiatives in Europe and worldwide (e.g. We Are Water, Sustain, Silicon Valley). The project followers come from a range of water related areas: businesses, NGOs, research institutes, global and local news publishers in the areas of water, environment and sustainability, environmental and water activists and opinion makers, scientific and educational resources. Accordingly, the project's tweets are meant to inform with content interesting for our consortium and to all those users. With this strategy, we are able to communicate the progress of the project and project-related activities to both the audience directly related to our research, as well as to a wide external audience. In this manner, we can also reach a wider range of potential exploitation users for the SmartH2O platform and applications. At the end of the first year, the SmartH2O Twitter account has reached 122 followers and 297 tweets (status 26 March 2014), meeting the target defined in D9.1 (see Table 2).

Table 2: Analytics on the SmartH2O Twitter account.

	Y1 results	Target - Y1	Target - Y2	Target - Y3
Number of followers	122 (297 tweets)	80✓	150	300+

In addition, a separate Twitter aggregator page is planned, that will collect the tweets from related European projects in the area of water management. This page will automatically collect tweets on a precompiled list of topical hashtags and display them in an overview form. In this way, a collective repository of social activity and news from water-related European projects will be generated and made available to the target groups. The editorial team of the project will also use this page for identifying interesting tweets to be disseminated further also through the SmartH2O Twitter account.

3.3.2 SmartH2O LinkedIn Innovation Community

The SmartH2O Innovation Community has been set up in form of a LinkedIn group[2] and framed as an open innovation platform (see Figure 12).

The goal of the innovation community is to provide a means to involve individuals and research communities from outside the project in the innovation process of the SmartH2O project. The target audience of the LinkedIn Innovation Community are professionals and researchers working in the wider area of interest related to the project, from water management, environmental and sustainability issues, to economics, user-centred design and innovation research communities, as well as the general public that is interested in project ideas and outcomes.

Community members are invited to collaboratively build on the current project vision, to give their feedback on the project's concept, application mockups and outcomes, to discuss broader issues of sustainable water and resource management and build synergies for existing and future projects. As an additional participation incentive, we offer an innovation and design-thinking workshop for the most active contributors, in which we will take some of the most promising ideas and develop them further in a hands-on session.

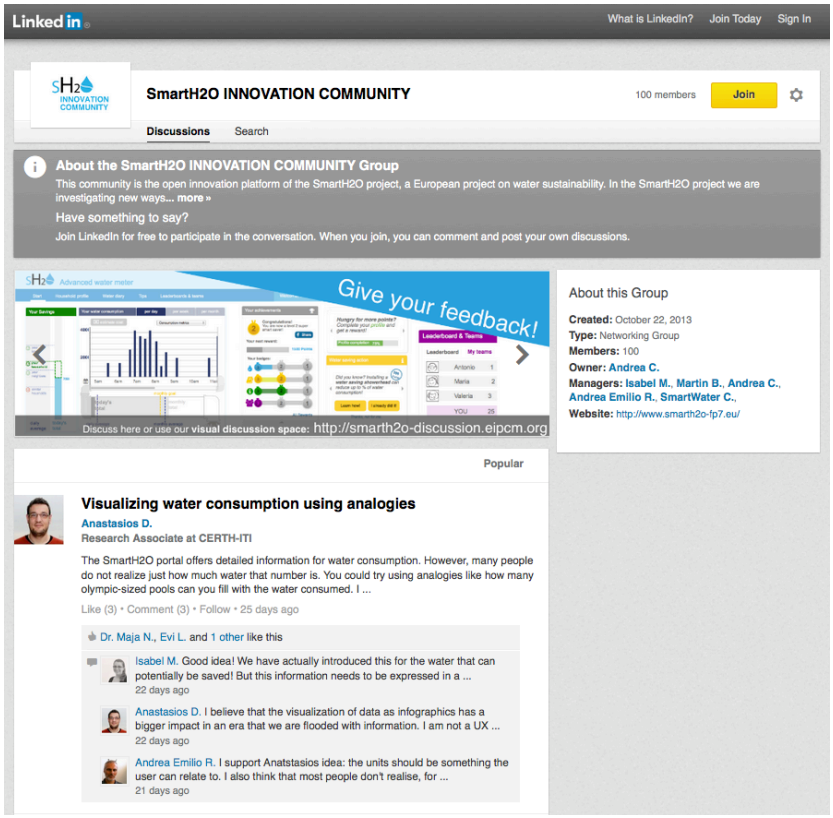


Figure 12: LinkedIn Innovation Community.

[2] SmartH2O Innovation Community: https://www.linkedin.com/groups/SmartH2O-INNOVATION-COMMUNITY-6531529

To initiate the discussion, and to benefit from generated ideas and feedback as part of the requirements elicitation process, we have first presented a sneak preview of our concept designs and mockups of water metering and awareness applications for citizens (basic and advanced customer portal).

To provide a fruitful and effective discussion context that enables group members to have a close look at the mockups, a novel visual discussion space has been connected to the LinkedIn group[3] using the LinkedIn API (see Figure 13).

Posts and comments that are written and listed in the main LinkedIn group discussion are also shown and updated regularly in the visual discussion space, and vice versa. In the discussion space, a short introduction to the project concept, the user stories, and main mock-up elements of the customer portal are presented in a presentation slider above the actual discussion space. A visual tool enables participants to refer to specific mock-up excerpts in their discussion posts and comments (see Figure 13, right).

Figure 13: Introduction to concept and mock-ups in the visual discussion space (left) and visual discussion space post referring to mock-up excerpt (right).

[3] Visual discussion space of SmartH2O innovation community: http://smarth2o-discussion.eipcm.org

The initial posts in the discussion were posted by the group managers to introduce new group members to the concept behind the innovation community, provide some more concrete community guidelines, e.g. how to use the visual discussion space, and a call for participation in the community. These posts are also featured in the group slider to always be visible at the top of the discussion (see Figure 14).

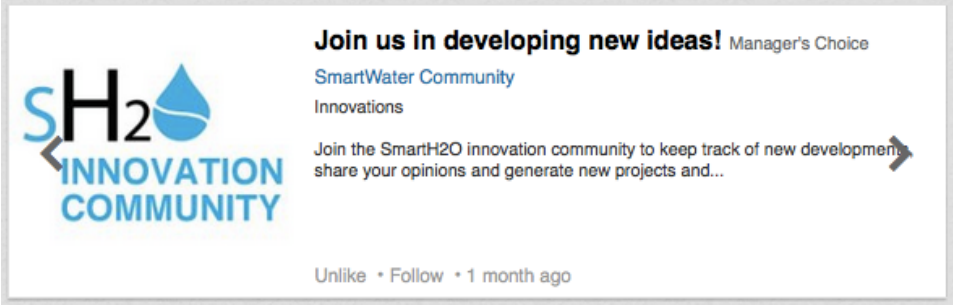


Figure 14: Group slider featuring a call for participation post.

Secondly, a set of question was prepared to start the discussion:

- What do you want to know about your water consumption?

What are you most interested in – as a water consumer? Are you interested in knowing how much water do you use for each appliance or device, e.g. for a shower vs. a bath vs. a toilet flush? Would you like to know specific actions you can take to reduce your consumption? Do you want to receive notifications about possible leaks? Information on how much money you can save? What kind of an impact your water consumption has on the environment?

- How can we motivate people to consume less water?

Which do you find the most promising approaches to reducing water consumption in private households? In SmartH2O, we are making use of e.g. smart meters & consumption visualization to increase people's awareness, and gamification of water saving actions, persuasive games and community features to combine water saving with fun and social levers.

Which means do you find most effective? Are you working on similar challenges by applying similar or different solutions?

- What kind of rewards would you like to get for your water saving efforts?

How would you like to be rewarded for your water saving? Are you simply OK knowing you helped the environment? Do you like to build up a community reputation by collecting badges (e.g. to become the "super water saver") and show off your success in your social networks? Or would you only save water if you got something "real" out of it, like vouchers or actual gifts, e.g. a watersaving showerhead?

- With whom would you like to compare your water consumption?

The SmartH2O portal will support different social features. E.g. there will be a leaderboard where users can compare themselves with other users, a neighbourhood map where they can see how their neighbours are doing, users can form teams to work towards a common water saving goal, users will be able to invite their friends from and share achievements on other social networks. Which of these features appeal to you the most and which the least?

Some of the most promising ideas from this initial discussion round are presented in D2.2 and used as input for the user-centred requirements.

The SmartH2O innovation community will be continuously updated with new project results to continue the open innovation process as a core element of the SmartH2O dissemination activities.

Table 3 lists the current member status of the Smart2O LinkedIn Innovation Community, showing that the year 1 target was successfully reached.

Table 3: Analytics on the SmartH2O LinkedIn innovation community.

	Y1 results	Target - Y1	Target - Y2	Target - Y3
Number of members	100	30✓	70	120+

3.3.3 SmartH2O Slideshare activity

The presentations produced during the project (some also before the official start date of the project) are shared on the SmartH2O Slideshare channel[4] and are linked in the Media section of the SmartH2O website (see Figure 16). Their publication on Slideshare is also communicated through the Twitter account of the project.

During the first year, 6 presentations have been uploaded, meeting the target defined in D9.1 (see Table 4). The total number of views of the SmartH2O presentations is 2,305 (status 27 March 2015).

Table 4: Analytics of the SmartH2O Slideshare channel.

	Y1 results	Target - Y1	Target - Y2	Target - Y3
Presentations published	6	5✓	10	20

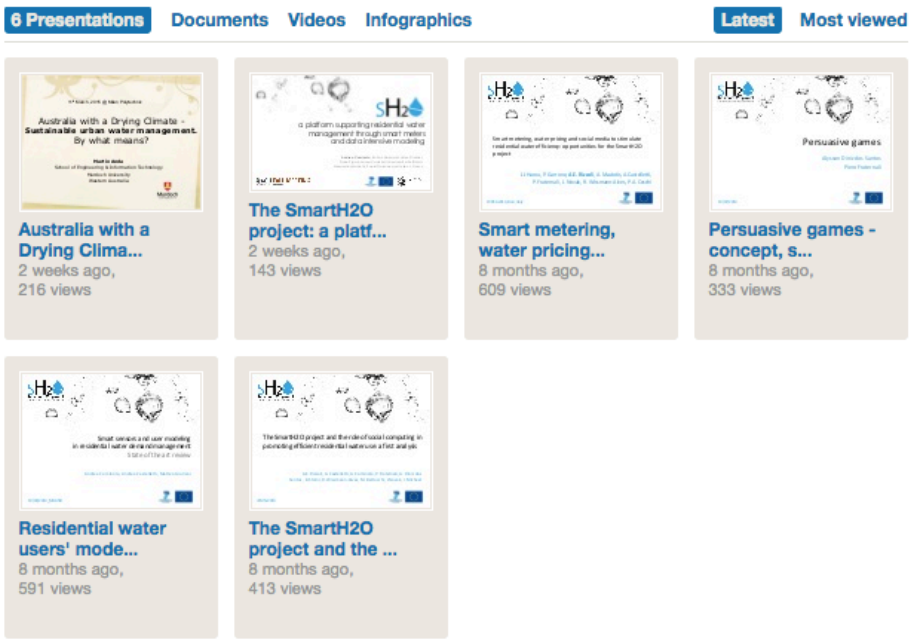


Figure 15: SmartH2O Slideshare channel.

[4] SmartH2O Slideshare channel: http://de.slideshare.net/SmartH2O

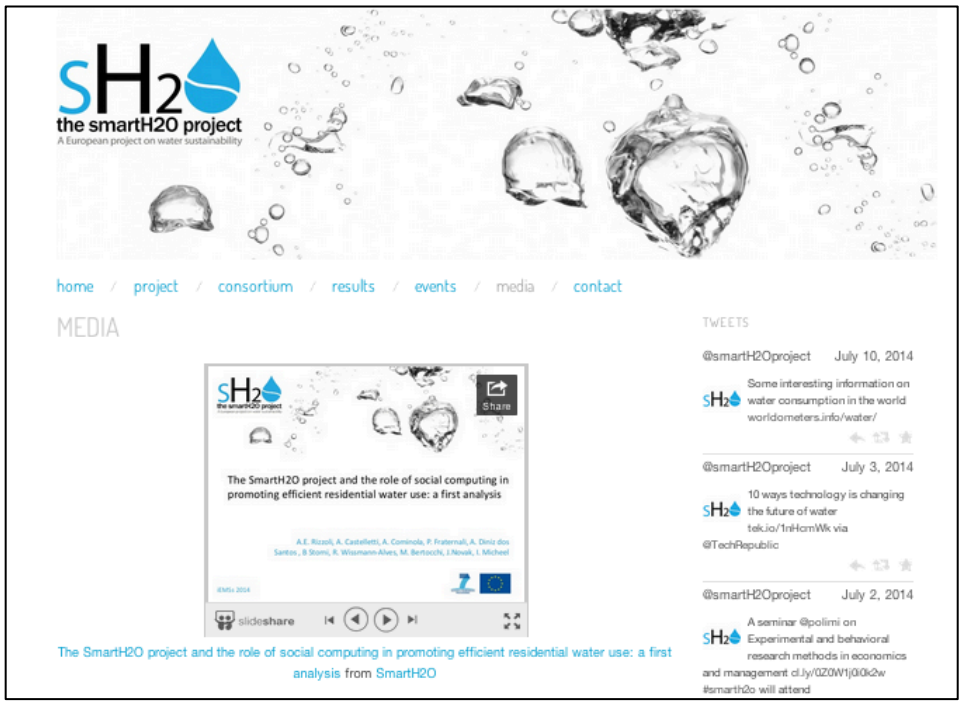


Figure 16: SmartH2O media webpage listing the SmartH2O-related presentations shared on Slideshare.

3.4 Press and radio

The project regularly issues press releases coordinated by the Communications Director. The press releases are issued both by the consortium as a whole as well as by the individual partners. A basic press kit is provided as part of the developed dissemination materials (described in Section 2) and is periodically updated as the project proceeds.

During the first year, the consortium as a whole and the partners individually advertised the project kickoff as well as the participation at major events by issuing press releases. A list of the press releases and radio interviews is reported in Table 5.

Table 5: List of press releases and radio interviews.

Partner	Press/Radio	Date
SUPSI	Press release in *La Regione Ticino*	May 2014
Politecnico di Milano	Press release in *Assolombarda*	June 2014
University of Manchester	Press release in UoM Research Newsletter	Autumn 2014
SUPSI	Press release in *Azione*	December 2014
SUPSI	Radio announcement "News about SmartH2O" on *RSI ReteUno*	June 2014
SUPSI	Radio interview on *RSI ReteTre*	June 2014
SUPSI	Radio interview on *RSI ReteUno*	September 2014

3.5 SmartH2O communication team

A SmartH2O communication team dedicated to the implementation of the established dissemination strategy has been designated (see Table 6). The team, which is led by Andrea Castelletti (POLIMI) as the Communication Director of the project, consists of at least one representative from each partner and is responsible for effective dissemination of project results through the defined channels. Specific functions associated to the SmartH2O communication team include:

- Suggest and contribute to new dissemination materials and needs;
- Contribute to the population of the public website (new content, relevant events, news, links, …);
- Coordinate the production and distribution of press releases;
- Coordinate the production and distribution of the SmartH2O newsletter;
- Contribute to the population and dissemination of the SmartH2O social media channels Twitter, LinkedIn and Slideshare;
- Promote the organisation of focused SmartH2O-related events, e.g. by publishing them on the project website;
- Organise opportunities for the involvement of external actors in the activities of the project.

Table 6: SmartH2O Communication Team.

Person	Organisation
Andrea Rizzoli	SUPSI
Andrea Castelletti (Communication Director), Matteo Giuliani	POLIMI
Maja Novak, Isabel Micheel	EIPCM
Silvia Padula	UOM
Luigi Caldararu	SETMOB
Mark Holt	TWUL
Marco Bertocchi	SES

4. Dissemination activities

4.1 Networking activities

To maximize the impact of the SmartH2O project, networking activities for presenting project results to potential stakeholders are planned for the entire project lifetime, targeting an identifiable presence at important international meetings and exhibitions (e.g. the American Geophysical Union Fall Meeting organized every year and the ICT Conference organized every two years).

4.1.1 Conferences

The scientific conferences attended by members of the consortium are reported in Table 7, along with the ones that have already accepted SmartH2O contributions. Further details on the associated publications are reported in Section 5.2.

Table 7: List of conferences attended by project members.

Conference	Place and Date	SmartH2O publications
IAHR World Congress	Delft (NL), 28 June – 3 July, 2015	Piga et al. (2015b) Cominola et al. (2015b) Galli et al. (2015)
EWRI Congress 2015	Austin (TX), May 17-21, 2015	Cominola et al. (2015c)
AGU Fall Meeting 2014	San Francisco (CA), December 15-19, 2014	Cominola et al. (2014)
Gamifying Water 2014	Oxford, UK September 14-15, 2014	
Water IDEAS 2014	Bologna (Italy), October 22-24, 2014	
International Conference on Water Distribution Systems Analysis (WDSA 2014)	Bari (Italy), July 14-17, 2014	Harou et al. (2014)
International Conference on Environmental Modeling and Software (iEMSs 2014)	San Diego (California), June 15-19, 2014	Rizzoli et al. (2014).
SocInfo 2014 – International Conference on Social Informatics	Barcelona (Spain), November 10-13, 2014	Planned presentation at the SoHuman Workshop

The list of conferences and planned publications will be extended according to progressing project results; an updated table will be presented in the dissemination report D9.3.

4.1.2 Workshops

Members of the consortium co-organized the following workshops:

- SoHuman 2014 – 3rd International Workshop on Social Media for Crowdsourcing and Human Computation[5] at SocInfo 2014, 6th Int. Conf. on Social Informatics, Barcelona, 10/11/2014.

[5] SoHuman 2014: http://sohuman2014.eipcm.org/, last seen 3/3/2015

4.2 Spreading the knowledge to users

To disseminate and discuss the project concepts and mockups, and to promote water saving by increasing consumers' awareness already early in the project, two main events were organized in the first year. They were targeted to the general public of case study residents and potential users of the customer portal and games platform. The two events have been planned and conducted as interactive water consumer workshops in the two case study areas (CH, UK), in close collaboration with the local partners (SUPSI and UoM), utilities (SES and Thames Water respectively) and municipality representatives (Tegna). A main objective of both workshops was to gain consumer feedback on the project ideas and mockups as part of the requirements elicitation process. The workshop outcomes and ideas have been presented in detail in D2.1.

The Swiss consumer workshop was organized in Tegna on September 15, 2014, as part of a public forum informing participants about the SmartH2O project and the new smart metering initiative in general. About 30 local residents attended the workshop, which was a great success (see Figure 17).

Figure 17: Impressions from workshop and dissemination event in Tegna, CH.

To obtain feedback from UK residents, we conducted a workshop at the premises of the University of Manchester on October 13, 2014, as we can safely assume water characteristics, attitudes towards water efficiency and water consumption per capita in Manchester to be comparable to the case study area of Reading near London (see D2.1 Section 2.3.1 for comparison between North and South England); 11 local residents attended the workshop, which was very lively and sparked many interesting discussions.

5. Scientific publications

5.1 Journal papers

Major project results are presented in journal papers at highest scientific standards, and disseminated to the scientific audience. As they typically involve long time-to-publish periods, these publications aim at substantial, matured and empirically verified project results and are more likely to appear towards the end of the project. No journal papers have been published so far, but two journal submissions presenting first results of the SmartH2O project are currently under review:

- Dario Piga, Andrea Cominola, Matteo Giuliani, Andrea Castelletti, and Andrea Emilio Rizzoli (2015). Sparse optimization for automated energy end use disaggregation. *IEEE Transactions on Control Systems Technology* (under review).

Abstract: Retrieving the household electricity consumption at individual appliance level is an essential requirement to assess the contribution of different end uses to the total household consumption, and thus to design energy saving policies and user-tailored feedback for reducing household electricity usage. This has led to the development of Nonintrusive Appliance Load Monitoring (NIALM), or energy disaggregation, algorithms, which aim to decompose the aggregate energy consumption data collected from a single measurement point into device-level consumption estimations. Existing NIALM algorithms are able to provide accurate estimate of the fraction of energy consumed by each appliance. Yet, to the authors' experience, they provide poor performance in reconstructing the power consumption trajectories over the time. In this work, a new NIALM algorithm is presented, which, beside providing very accurate estimate of the aggregated consumption by appliance, also accurately characterises the appliance power consumption behaviour over time. The proposed algorithm is based on the assumption that the unknown appliance power consumption profiles are piecewise constant over time (as it is typical for power use patterns of household appliances) and it exploits the information on the time- of-day probability in which a specific appliance might be used. The disaggregation problem is formulated as a least-square error minimization problem, with an additional (convex) penalty term aiming at enforcing the disaggregate signals to be piecewise constant over the time. Testing on household electricity data available in the literature is reported.

- Andrea Cominola, Matteo Giuliani, Dario Piga, Andrea Castelletti, and Andrea Emilio Rizzoli (2015). Benefits and challenges of using smart meters for advancing residential water demand modeling and management: a review. *Environmental Modeling & Software* (submitted).

Abstract: Over the last two decades, water smart metering programs have been launched in a number of medium to large cities worldwide to nearly continuously monitor water consumption at the single household level. The availability of data at such very high spatial and temporal resolution advanced our ability in characterizing, modeling, and, ultimately, designing user-oriented residential water demand management strategies. Research to date has been focusing on one or more of these aspects but with limited integration between the specialized methodologies developed so far. This manuscript is the first comprehensive review of the literature in this quickly evolving water research domain. The paper contributes a general framework for the classification of residential water demand modeling studies, which allows revising consolidated approaches, describing emerging trends, and identifying potential future developments. In particular, the future challenges posed by growing population demands, constrained sources of water supply and climate change impacts are expected to require more and more integrated procedures for effectively supporting residential water demand modeling and management in several countries across the world.

Relevant target journals for future publications include:

- Water Resources Research (link)
- Environmental Modeling and Software (link)
- Journal of Water Resources Planning and Management (link)
- Water Research (link)
- Journal of Hydrology (link)
- Water Resources Management (link)
- Environmental Science and Policy (link)
- Water Policy (link)
- Journal of Industrial Economics (link)
- Journal of Regulatory Economics (link)
- Review of Industrial Organization (link)
- Journal of Environmental Management (link)
- Water Resources & Economics (link)
- Water and Environment Journal (link)
- Environmental & Resources Economics (link)
- International Journal of Human-Computer Studies (link)
- Human Computation (link)

5.2 Conference papers

Conference papers aim at presenting fresh interim project results of appropriate scientific quality in a timely manner in order to disseminate them as quickly as possible in the scientific community. The following conference papers by members of the consortium presenting the most recent project results have been accepted and/or published,:

- Galli, L., Fraternali, P., Pasini, C., Baroffio, G., Diniz dos Santos, A., Acerbis, R., Riva, V., 2015. A gamification framework for customer engagement and sustainable water usage promotion. Accepted at IAHR World Congress, 28 June-3 July, The Hague, NL.

Abstract: The recent advent of smart meters to increase the effectiveness of urban Water Demand Management Strategies (WDM) has allowed water utilities to gather quasi real-time consumption data to monitor the network status and load and useful to develop models of consumers' behavior. At the same time, the consumption information can warn users about their habits in a fine-grained way.

In principle, the feedback alone could stimulate increased awareness on water usage, but the motivations and individual attitudes of consumers are mostly hidden. Moreover, the same sustainable behavior should be incentivized also for households in which smart metering solutions are not present, but for which data gathering becomes a challenge. Modifying users' behavior by means of software is a tough task, due to the difficulty in designing an effective application able to maintain the behavioral changes in the long term. Gamification, the use of game design techniques and game mechanics to enhance traditional applications and drive behaviors of its users, has been proven successful in tackling with the problem. In this work, we propose a gamified application to enhance users' participation and data gathering in a real WDM scenario, by describing the designing principles and the architecture of the envisioned solution. An integrated approach exploiting both board and digital games to incentivize users to submit meaningful data for water utilities and change their long-term behavior is also detailed. The work is part of the SmartH2O project, which aims at creating an ICT platform to raise customers' awareness about their consumption and pursue water savings in the residential sector.

- Cominola, A., Giuliani, M., Piga, D., Castelletti, A., Rizzoli, A.E., 2015. Modeling residential water consumers' behaviors by feature selection and feature weighting. Accepted at IAHR World Congress, 28 June-3 July, The Hague, NL.

Abstract: Identifying the most relevant determinants of water consuming or saving behaviors at the household level is key to building mathematical models that predict urban water demand variability in space and time and to explore the effects of different Water Demand Management Strategies for the residential sector. This work contributes a novel approach based on feature selection and feature weighting to model the single-user consumption behavior at the household level. A two-step procedure consisting of the extraction of the most relevant determinants of users' consumption and the identification of a predictive model of water consumers' profile is proposed and tested on a real case study. Results show the effectiveness of the proposed method in capturing the influence of candidate determinants on residential water consumption, as well as in attaining sufficiently accurate predictions of users' consumption profiles, which constitutes essential information to support residential water demand management.

- Piga, D., Cominola, A., Giuliani, M., Castelletti, A., Rizzoli, A.E., 2015. A convex optimization approach for automated water and energy end use disaggregation. Accepted at IAHR World Congress, 28 June-3 July, The Hague, NL.

Abstract: A detailed knowledge of water consumption at an end-use level is an essential requirement to design and evaluate the efficiency of water saving policies. In the last years, this has led to the development of automated tools to disaggregate high resolution water consumption data at the household level into end use categories. In this work, a new disaggregation algorithm is presented. The proposed algorithm is based on the assumption that the disaggregated signals to be identified are piecewise constant over the time and it exploits the information on the time-of-day probability in which a specific water use event might occur. The disaggregation problem is formulated as a convex optimization problem, whose solution can be efficiently computed through numerical solvers. Specifically, the disaggregation problem is treated as a least-square error minimization problem, with an additional (convex) penalty term aiming at enforcing the disaggregate signals to be piece-wise constant over the time. The proposed disaggregation algorithm has been initially tested against household electricity data available in the literature. The obtained results look promising and similar results are expected to be obtained for water data.

- Cominola, A., Giuliani, M., Piga, D., Castelletti, A., Rizzoli, A.E., 2015. The SmartH2O platform: advancing residential water management by smart metering and data intensive modeling of consumers' behaviors. Accepted at the EWRI World Congress, May 17-21, Austin (TX).

Abstract: The effectiveness of urban Water Demand Management Strategies (WDMS) at the household level does rely on the level of understanding we have about the determinants pushing users' attitudes to consume or save water. Low-resolution data on residential water consumption, as traditionally metered, can only be exploited to model consumers' behavior at an aggregate spatial and temporal scale, whereas the allocation among final uses and the motivations behind users' behavior remain hidden. The recent advent of smart meters allows gathering high frequency, quasi real-time consumption data that can be used both to provide instantaneous information to water utilities on the network load and status and continuously inform the users on their consumption and savings. Hence, smart metered data allow developing models of consumers' behavior, which are essential for the design of WDMS: the high-frequency consumption information, matched with users' psychographic variables, constitutes the knowledge basis for developing such individual and multi users models, through which water utilities can test the impact of different WDMS. This study contributes single-user behavioral models, which are derived from fully automated algorithms, characterizing the single-point measured household water consumption into its end uses breakdown, and users' consumption profiles, assessing the influence of users' attributes and exogenous drivers on their consumption/saving attitudes. The work is part of the SmartH2O project, which aims at creating an ICT platform to raise customers' awareness about their consumption and pursue water savings in the residential sector.

- Cominola, A., Nanda, R., Giuliani, M., Piga, D., Castelletti, A., Rizzoli, A.E., Maziotis, A., Garrone, P., Harou, J.J., 2014. The SmartH2O project: a platform supporting residential water management through smart meters and data intensive modelling. Submitted to AGU Fall Meeting 2014, December 15-19, San Francisco, CA.

Abstract: Designing effective urban water demand management strategies at the household level does require a deep understanding of the determinants of users' consumption. Low resolution data on residential water consumption, as traditionally metered, can only be used to model consumers' behavior at an aggregate level whereas end uses breakdown and the motivations and individual attitudes of consumers are hidden. The recent advent of smart meters allows gathering high frequency consumption data that can be used both to provide instantaneous information to water utilities on the state of the network and continuously inform the users on their consumption and savings. Smart metered data also allow for the characterization of water end uses: this information, coupled with users' psychographic variables, constitutes the knowledge basis for developing individual and multi users models, through which water utilities can test the impact of different management strategies. SmartH2O is an EU funded project which aims at creating an ICT platform able to (i) capture and store quasi real time, high resolution residential water usage data measured with smart meters, (ii) infer the main determinants of residential water end uses and build customers' behavioral models and (iii) predict how the customer behavior can be influenced by various water demand management strategies, spanning from dynamic water pricing schemes to social awareness campaigns. The project exploits a social computing approach for raising users' awareness about water consumption and pursuing water savings in the residential sector. In this work, we first present the SmartH2O platform and data collection, storage and analysis components. We then introduce some preliminary models and results on total water consumption disaggregation into end uses and single user behaviors using innovative fully automated algorithms and overcoming the need of invasive diary collection campaigns.

- Harou, J.J., Garrone, P., Rizzoli, A.E., Maziotis, A., Castelletti, A., Fraternali, P., Novak, J., Wissmann-Alves, R., Ceschi, P.A., 2014. Smart metering, water pricing and social media to stimulate residential water efficiency: opportunities for the SmartH2O project. In Proceedings of International Conference on Water Distribution Systems Analysis (WDSA 2014), July 14-17, Bari, Italy.

Abstract: Traditionally new supplies are deployed to address increasing public water demands leading to increasing environmental and financial costs. Information and communication technologies (ICT) can contribute to transitioning to more sustainable exploitation of water reserves by decreasing demands. Although technological solutions cannot work by themselves in complex socio-technical systems such as public water supply systems where consumer behaviors depend on a variety of factors and motivations, smart meters and social media offer new opportunities. The SmartH2O project aims to provide water utilities, municipalities and citizens with an ICT enabled platform to design, develop and implement better water management policies using innovative metering, social media and pricing mechanisms. This project has as a working hypothesis that high data quality obtained from smart meters and communicable through social media and other forms of interaction could be used to design and implement innovative and effective water pricing policies. Planned case studies in the UK and Switzerland are introduced. We anticipate that SmartH20 research outcomes will be of use to those interested in linking smart metering, social media and smart pricing approaches to achieve more sustainable water management outcomes.

- Rizzoli, A.E., Castelletti, A., Cominola, A., Fraternali, P., Diniz dos Santos, A., Storni, B., Wissmann-Alves, R., Bertocchi, M., Novak, J., Micheel, I. , 2014. The SmartH2O project and the role of social computing in promoting efficient residential water use: a first analysis. In Proceedings of the 7th International Congress on Environmental Modelling and Software, June 15-19, San Diego, California, USA. ISBN: 978-88-9035-744-2.

Abstract: SmartH2O is an EU funded project which aims at creating a virtuous feed- back cycle between water users and the utilities, providing users information on their consumption in quasi real time, and thus enabling water utilities to plan and implement strategies to reduce/reallocate water consumption. Traditional metering data, usually gathered twice a year, can be used to model consumers' behaviour at an aggregate level, but the motivations and individual attitudes of consumers are hidden. The advent of smart water meters allows gathering high frequency consumption data that can be used to provide instantaneous information to water utilities on the state of the network. At the same time, the consumption information can be fed back to the user to stimulate increased awareness on water use. The SmartH2O project aims at developing methodologies to involve consumers and promote water savings by increasing their awareness, using a social computing approach, and also exploring their sensitivity to water prices, e.g., to penalise water waste during droughts. In this paper, first we review similar experi- ences that exploit consumer awareness to reduce consumption, then we review the role of persuasive games for sustainability, and finally we present the SmartH2O approach, sketching the architecture of its modelling and social computing components.

5.3 Workshop papers

Workshop papers aim at sharing interim project results, which may not be yet substantial enough for a full conference publication but present a promising basis for timely dissemination and for being developed further through interaction with workshop attendees. In that way, they also represent a valuable feedback loop from the scientific and professional community back into the project.

No workshop papers have been published so far.

6. Assessment of the communication strategy

In this section we evaluate how our dissemination actions have a real impact outside the project and if our strategy is efficient, effective and coherent. We will repeat this assessment at periodic time instants, each time we release a new dissemination report.

6.1 SmartH2O dissemination and communication strategy

SmartH2O is a project centred on the human and social role in water management and, therefore, dissemination is a key component. The communication strategy sets the targets for the message to be communicated and it also takes care of both effectiveness and the right balance of technical/general purpose information to be disseminated, depending on the target audience. An overview of the communication strategy is shown in Table 8.

Table 8: Overview of the SmartH2O communication strategy.

Target audience	Dissemination message	Dissemination channel	Value for target audience
The public	New knowledge is provided in an organized way	• The web • Articles and interviews with mass media • Social media channels (Twitter, Slideshare) • Consumer workshops • Press departments of project partners • Customer relationship departments of business partners (TWUL, SES)	• Benefits for the citizen and the environment • Openness to social interaction
Stakeholders (public administrations)	Quantifiable approaches of SmartH2O in water savings	• Technical reports • Demonstration at validation sites • SmartH2O summer school	• Measurable benefits in resource management
The industry (water utilities)	A scalable solution that can be easily adopted to save on infrastructure by a better water management	• Technical reports • Demonstration at validation sites • Technology transfer events • SmartH2O summer school	• Partnerships can be established with the consortium to adopt/test the project innovation • Sustainability of investment: the SmartH2O

			solution can generate benefits along the value chain (SW vendors, utilities, PA)
The H2020 community and the scientific community	Scientific activities within a collaborative space where formal and informal teams and networks promote sharing of best practices and experiences	• Scientific papers documenting the research made in the project • Participation to international conferences and ICT4Water[6] Cluster Meeting • Social media channels (Twitter, Slideshare, LinkedIn)	• Synergy and cooperation cross projects provide advance of the state of the art

The dissemination activities first focussed on building a strong SmartH2O project visual identity (i.e., logo, stylesheets) to harmonise communication both internally among the consortium, and externally to the general public and the scientific community. The SmartH2O website (see Section 3.1) acts as an attractive showroom providing insights, documenting project progress and promoting events that provide the opportunity to get in touch with the SmartH2O community. The website dynamically reflects the progress made and the project achievements, hosting different information by thematic section: insights about the work being carried out, access to technology, project deliverables, promotional material for download (tutorials and other documentation), news and guidelines in research and industrial projects.

A key component for the success of the SmartH2O project is a thriving social community of users, including citizens, public administration bodies, public utilities, water utilities and SMEs. These stakeholders, who are external to the project, are reached by means of existing social network platforms (e.g., Twitter and LinkedIn). The social communities ensure effective spreading of project news, providing information on the vision and on opportunities for adoption, ultimately reinforcing the water saving message of SmartH2O.

Another major role in the creation of an active community of interest will be provided by the SmartH2O customer portal and app, the latter of which will be downloadable for the major mobile operating systems (iPhone and Android) and which will be usable not only by users from the two case studies, but by any user who might want to manually enter water consumption to get recommendations on how to save water. To further engage the stakeholders and reach out to a younger and family-oriented target group, a SmartH2O game will be developed which combines a digital mobile game with a traditional card game (Drop!), and which may be connected to the SmartH2O customer portal and app.

As additional communication material, screencasts and videos about the SmartH2O prototypes and applications and their resonance among users and stakeholders will be provided.

[6] http://wwwict4water.eu

6.2 Assessment of dissemination goals

The main dissemination objectives are the following:

1. To design and implement an effective communication strategy for the SmartH2O project.
2. To disseminate the project outputs at local level, including strengthening end user participation, expanding to other local and regional water authorities and businesses.
3. To disseminate at national level, increasing the knowledge on ICT-supported water resource management.
4. To disseminate at the international level, exploiting the various scientific and business networks of the project partners.
5. To organise the major dissemination events of the project.

6.2.1 GOAL1: effective communication strategy

We have reached this goal in Year 1 by constructing a solid communication strategy based on:

- **The SmartH2O website:** This is the main point of reference where static and permanent information is being published. This includes copies of the scientific papers, of the public deliverables, and a general description of the project objectives and the case studies.
- **The SmartH2O Twitter feed:** Dynamic information, newsflashes, links to other interesting news taking place in the general area of "Smart water" are being published using our Twitter feed: This communication channel allows SmartH2O to be prepared for the communication challenges to be faced in Year 2, when the SmartH2O platform and the SmartH2O game will be distributed to the wider public.
- **The SmartH2O LinkedIn innovation community:** This channel is aimed at professionals in fields related to SmartH2O, and a wider community of water consumers and innovators. The innovation community organises discussions on specific topics and project outcomes, enabling interaction among the community members in an open innovation manner.
- **The SmartH2O newsletter:** It is a traditional means of communication that is used to summarise a number of events and news, which happened over a specific time period. It provides a channel to redirect the readers to the three above communication channels.
- **Traditional media:** Newspapers, radio and TV are also used to reach out to the wider public. Access to this media is more limited, and it is reserved to major SmartH2O events.
- **Scientific papers and conferences:** this is the traditional communication channel for scientists. It is essential to provide the necessary credibility to support all other communication channels, even if the number of reachable individuals is much smaller in theory.
- **SmartH2O events:** SmartH2O also organises specific events to maximise its impact. Such event include the presence with dissemination materials and demos at conferences, the organisation of a Summer School, and the organisation of a special dissemination event in occasion of the World Water Week.

In summary, the SmartH2O communication strategy is based on the following instruments with the related attributes:

- Internet media:
  - Website: broadcast communication, static, a point of reference, pull approach;
  - Twitter: broadcast, interactive, highly dynamic, shallow;
  - Linkedin innovation community: multi-directional communication, open to interaction and in depth discussions in an open innovation manner;
  - Newsletter: broadcast, static, push approach.
- Traditional media:
  - TV/Radio/Newspapers: broadcast, static.
  - Scientific communication: broadcast, static.

We evaluate this goal as reached.

6.2.2 GOAL2: dissemination at the local level

Dissemination at the local level has been performed mostly using traditional media. This type of dissemination has been mostly used in Switzerland, to raise the awareness on the ongoing deployment of the smart meters in Tegna.

We evaluate this goal as reached.

6.2.3 GOAL3: dissemination at the national level

Dissemination at the national level has not been in the focus of the first year dissemination activity. The national-wide news release to the media is currently carefully being planned for year 2 to maximise the impact of the release and diffusion of the SmartH2O customer portal and games platform.

We evaluate this goal as not applicable for year 1.

6.2.4 GOAL4: dissemination at the international level

Dissemination at the international level has taken place mostly through the online channels, including the SmartH2O website, newsletter, Twitter, LinkedIn and Slideshare accounts, through the publication of scientific papers and the attendance of international conferences by members of the project.

We evaluate this goal as reached.

6.2.5 GOAL5: major dissemination events

No dissemination events were planned for this year.

We evaluate this goal as not applicable for year 1.

7. Conclusions and future plan

In this deliverable we have reported the dissemination activities we have rolled out during the first year of the project. Such activities have been organised along the following directions:

- Set up of a coherent and structured visual identity.
- Deployment of a website for the project to provide a “safe harbour” where all the relevant project info can be easily searched, accessed and retrieved.
- Management of various social media outlets, with different targets and different communication styles: from the broadcast, terse and compact style of “tweets” on Twitter to more articulated discussions on the LinkedIn portal.
- Dissemination on traditional media, from local press, to radio interviews.
- Scientific dissemination, delivering a set of contributions to international conferences and also to scientific journals, including the dissemination of the slide presentations on the social media SlideShare.

This report provides the basis for our future activities, A list of the dissemination events planned for the SmartH2O project lifetime is shown below (see Figure 18). Some activities are organized in occurrence of specific events, both at the local level, and at the international level, during conferences such as AGU (American Geophysical Union), EGU (European Geophysical Union), IWA (International Water Association), iEMSs (biennial congress of the International Environmental Modelling and Software Society), CIWEM (Chartered Institution of Water and Environmental Management), UNESCO sponsored conference, World Water Forum, EAERE (European Association of Environmental and Resource Economists), SocInfo (international conference on Social Informatics), INTERACT (International Conference on Human-Computer Interaction). A major dissemination event will be organized during the World Water Day 2016. The event has originally been planned to be held in London, but the actual location depends on a number of variables, including the collaboration with the ICT4Water Cluster.

Starting from the second year, workshops on Water and ICT tools will be proposed to conference organisations, in co-operation with other ICT for water management funded projects through the ICT4Water cluster.

A Summer School offered to target audiences (early adopters, software developers, students, etc.) is currently being organized for the summer of 2016. A first draft of the schedule of presentations and sessions has been prepared and a request for co-funding has been submitted to Congressi Stefano Franscini, a congress centre managed by ETH Zürich, located in Ascona, over Lake Maggiore. Alternatively, the Summer School will be held in Como, Italy, Villa Grumello.

As for the dissemination directed towards the general public, additional activities are planned. Selected social media channels (Twitter, SlideShare, LinkedIn) will continuously be used to update about project news and outcomes, and to aggregate and share a broad scope of information about different topics that relate to the challenges of sustainable resource management. For the latter, Twitter is the key channel, with communication representatives of all technical partners regularly tweeting about relevant content. Details about the SmartH2O social media channels can be found in Section 4.2.

Information for water consumers of various household types in the case study areas is directly disseminated through user workshops, also in cooperation with local public administrations and the business partners (TWUL, SES). Specific events to inform the population of the deployment of the SmartH2O platform will be organised in the test sites.

Additionally, press releases and communication of project results to the target user audience are disseminated through the customer relationship departments of TWUL and SES.

Further details of the dissemination plan and associated communication activities for individual communication channels are presented in Section 4 and 5.

	2014	2015	2016
JAN			
FEB			
MAR		World Water-Tech Investment Summit	world water day
APR	SH2O kick off	EGU general assembly CIWEM annual conference World Water Forum	EGU general assembly
MAY			
JUN	iEMSs international congress	International conference on sustainable water resources management EWRA world congress EAERE annual conference	SmartH2O summer school
JUL			SmartH2O summer school iEMSs international congress
AUG	DAPA Event		SmartH2O summer school
SEP		IWA World Water Congress Stockholm World Water Week INTERACT 2015 Conference on Sustainable Development and Energy	SmartH2O summer school Stockholm World Water Week
OCT			
NOV	SocInfo international conference		
DEC	AGU fall meeting Winter Simulation Conference	AGU fall meeting Winter Simulation Conference MODSIM biennial congress	AGU fall meeting Winter Simulation Conference

Figure 18: Planned SmartH2O dissemination events.