SECOND DISSEMINATION REPORT

SmartH2O

Project FP7-ICT-619172

Deliverable D9.3 WP9

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Disclaimer

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Executive Summary - SUPSI

This deliverable D9.3 contains the second dissemination report of the SmartH2O project.
WP9 aims at designing an effective communication strategy for the project and at disseminating the project results at the local, national, and international level.

In the second year of activity, SmartH2O further developed the coordinated image concept introduced in D9.1 when the project website was created. The coordinated image concept has been put to work to produce leaflets to disseminate the project and the project assets (the platform, the game, and the mobile app) and to create roll ups which were exhibited at EXPO 2015 in Milan, the ICT4Water open day in Lisbon, and the European Utility Week in Vienna.

SmartH2O has been particularly active on Twitter with more than 500 followers and producing more than 1000 tweets in Year 2. At the same time the previously launched SmartH2O Innovation Community on LinkedIn, has been gathering more than 200 members.

SmartH2O has also been active in traditional communication channels, ranging from radio and newspapers interviews, and by attending 9 scientific conferences in order to disseminate the early project results. Three scientific papers on peer-reviewed journals have been published. A special mention needs to be made to the participation of the SmartH2O project at the international world fair EXPO 2015, where SmartH2O was presented at the Swiss Pavillion.

The SmartH2O project has also started the operational planning of the Summer School which will be held in Ascona, Switzerland, in August 2016.

The strategy for the next year of the project will be to exploit the communication infrastructure which has been set up so far in order to reach a larger number of users, also taking advantage of the expected large impact of the Valencia case study, where more than 400’000 users will be exposed to the SmartH2O project ideas.

1. Introduction – SUPSI

This deliverable D9.3 contains the second dissemination report of the SmartH2O project, reporting on the dissemination actions performed during the second year of the project. The deliverable is part of the activity of 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 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.
- T9.4 The SMartH2O Summer School, planned to take place in August 2016.

The is structured as follows: in Section 2 it first introduces the updated coordinate image, which the SmartH2O project has conveyed to the external world in a number of public events. In Section 3 it reports on the performance of the various communication channels which are being curated: the project website, the Twitter channel, the LinkedIn innovation community.

In Section 4 it reports on dissemination events, aimed at the general public, and on the different networking activities, which has been undertaken. In Section 5 in reports on the outputs aimed at the scientific community. Finally, in Section 6 an assessment of the present communication strategy is made, and in Section 7 the plans for the communication activities for the third project year are presented.

2. Coordinated image and dissemination materials

All the material used for the dissemination activities reflects a common visual identity, which is associated to the project, banners, and documents templates (see Deliverables D9.1 and D9.2). During the second year, additional dissemination materials have been produced reflecting the main characteristics of the smartH2O project development and the first results achieved.

A **new project leaflet** was designed and produced in multiple languages, namely English, Italian, Spanish, Catalan, and Portuguese. The English version is reported below.

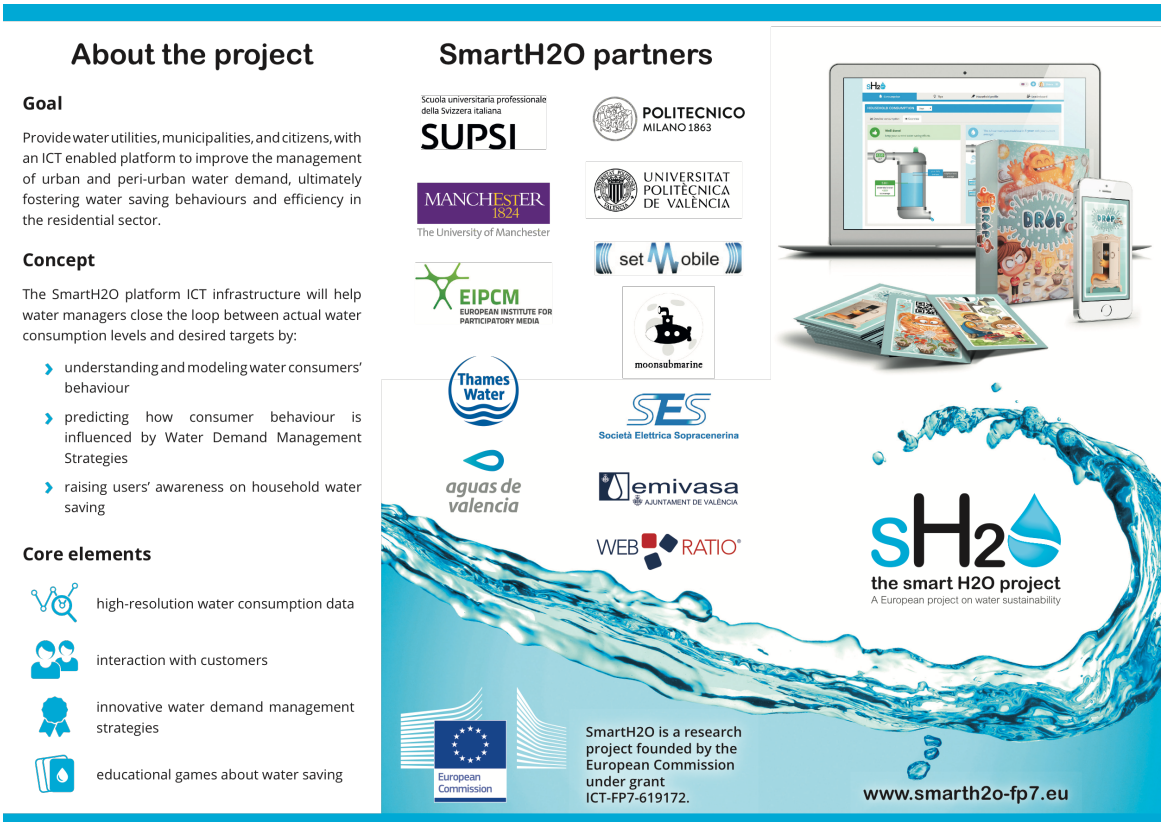


Figure 1. SmartH2O Leaflet (outside).

Figure 2. SmartH2O Leaflet (inside).

In addition, **rollups** were produced for supporting the promotion of the SmartH2O project during important events, such as EXPO2015, ICT4Water open day, and the European Utility Week. A picture of one of this rollups is reported below.

Figure 3. Picture of Drop-monster rollup.

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 and the video of SmartH2O platform's demo in the homepage of the website in Figure 4).

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). During the second year of the project lifetime, all the public deliverables produced and approved so far has been published online (see Figure 5 or http://smarth2o.deib.polimi.it/results/deliverables/).

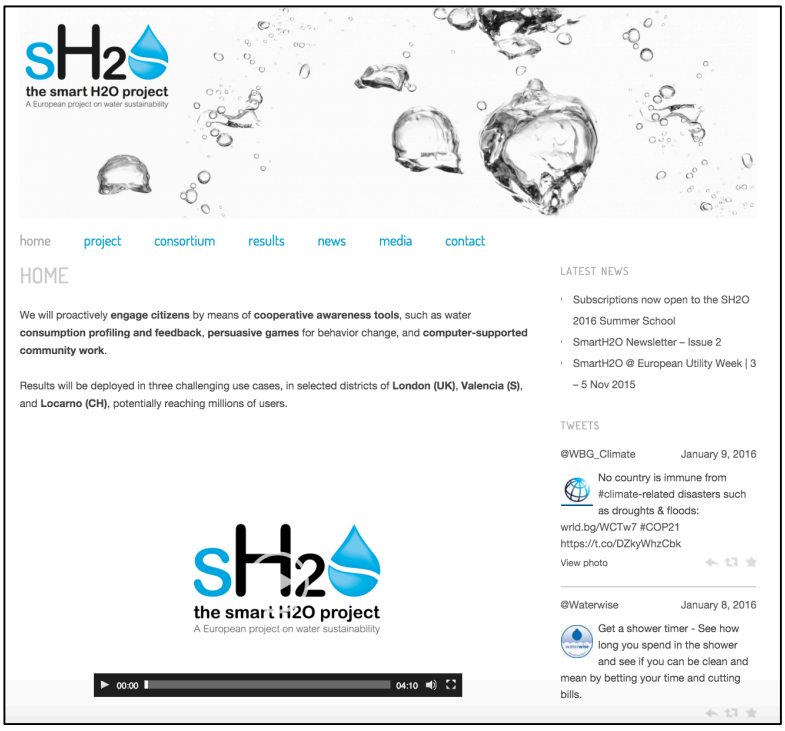


Figure 4. SmartH2O project website (homepage).

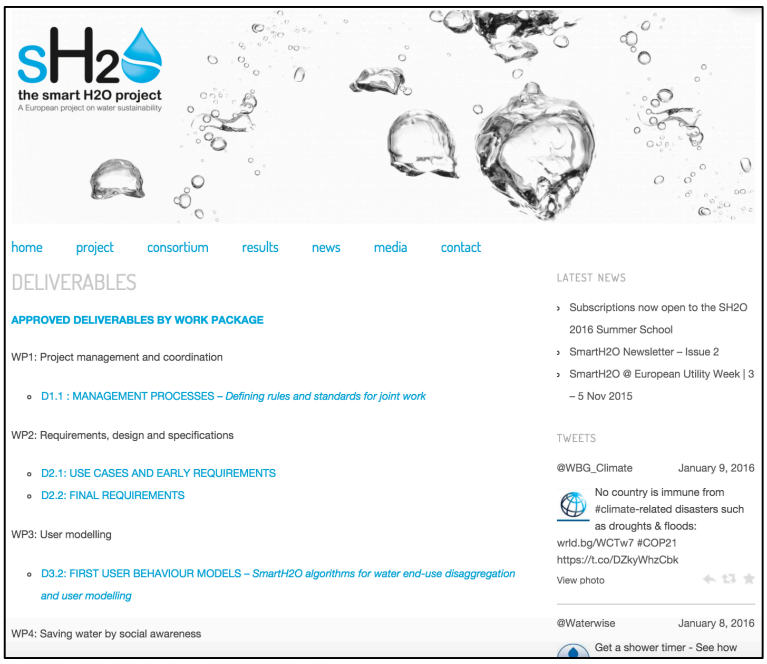


Figure 5. SmartH2O project website (deliverable page).

During the second year, we continued monitoring the access to the SmartH2O project website (see Figure 6), 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 7 shows a map of the geographical distribution of visitors, which shows a wide diffusion of the contacts to our website, now covering most of Europe, North and South America, Asia, and Oceania.

Table 1: Analytics on the SmartH2O website.

Statistics	Y2 results
Number of sessions	5,001
Number of users	2,983
New visitor	59.6%
Returning visitor	40.4%

Figure 6. Number of sessions registered on the SmartH2O website from 10/10/2014 to 15/03/2016.

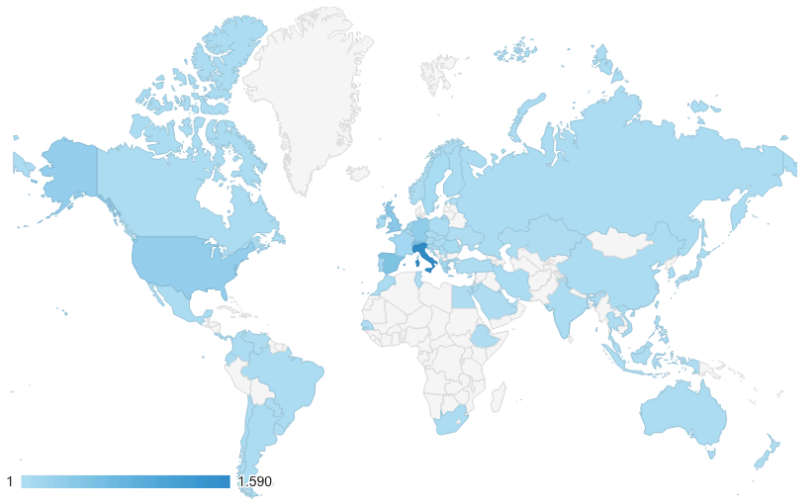


Figure 7. Geographical distribution of the sessions registered on the SmartH2O website from 10/10/2014 to 15/03/2016.

3.2 SmartH2O newsletters

Two issues of the SmartH2O project newsletter were published, the first one in February 2015[1] and the second one in December 2015[2](see excerpt in Figure 8). They were 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 second issue of the SmartH2O newsletter contained the following contributions:

- Advanced SmartH2O web portal launched
- SES customers survey launched
- Report from ICT2015 event and European Utility Week
- Registrations open for SmartH2O Summer School
- SmartH2O events, deliverables, and publications
- Selected news and events

[1] SmartH2O Newsletter Issue1: http://us10.campaign-archive1.com/?u=f1aec1420b477940372ec8b43&id=5b3c3cd91c&e=5a6e0736d6
[2] SmartH2O Newsletter Issue2: http://us10.campaign-archive1.com/?u=f1aec1420b477940372ec8b43&id=5fc9f1ad2c&e=6f3edabd2a

SmartH2O Newsletter - Issue 2 View this email in your browser

sH2O Website sH2O Twitter sH2O Innovation Community

SmartH2O Newsletter

Dear Colleagues,

this is the second issue of our SmartH2O newsletter, which gives us the opportunity of informing you on the recent developments and progress made in the SmartH2O project. Our aim is to investigate how can we stimulate sustainable water consumption by providing users with timely feedback on their behaviour and with incentives to drive their motivation.

[...]

Sincerely,
Andrea Rizzoli,
SmartH2O Project Director

In this issue:

- **Advanced SmartH2O** web portal launch
- **SES customer** survey launch
- **Report from** ICT2015 event and Utility Week
- **Registrations open for** SmartH2O Summer School
- **SmartH2O** events, deliverables **and** publications
- **Selected** news and events

Join the SmartH2O innovation community **to keep track of new developments, give your feedback on our application concept and generate new ideas & projects!**

Figure 8. Excerpt of SmartH2O newsletter, 2nd issue.

3.3 SmartH2O social media channels

The social media channels set up in year 1 on **Twitter, LinkedIn** and **Slideshare** were used intensively also in year 2 to disseminate the project activities and results. 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 9) and the associated hashtag (#SmartH2O) have been used 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.

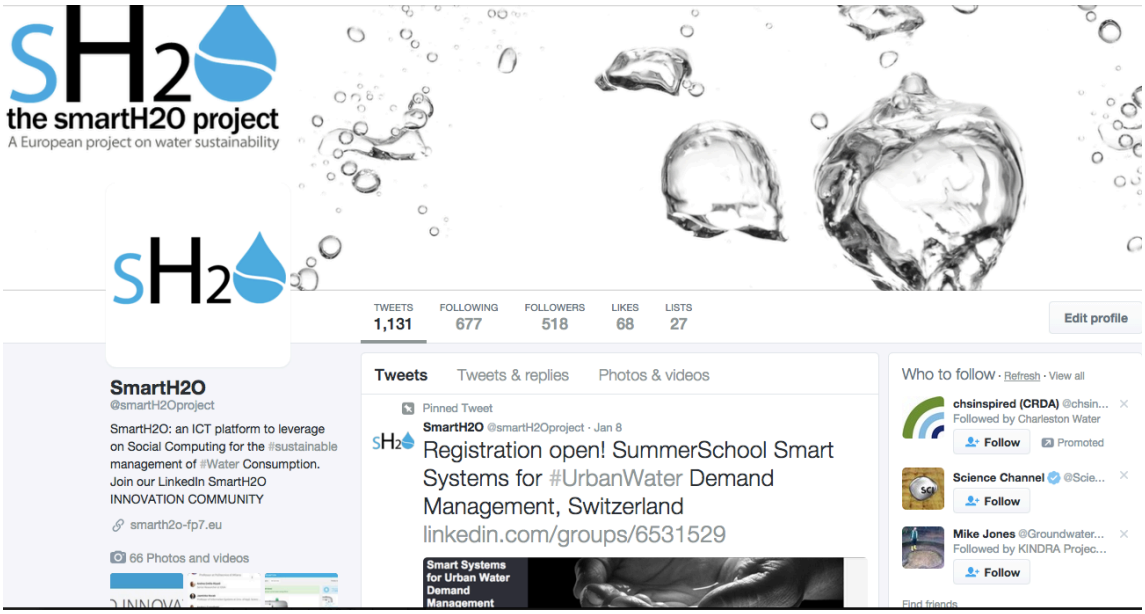


Figure 9. SmartH2O project Twitter account.

The publishing plan and the editorial strategy defined in year 1 were implemented successfully (see also D9.1). The use of social media channels was greatly expanded and intensified in year 2, including a broader range of topics related to the project and increasing the dissemination of project results and activities on an on-going basis (as they became available). 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, environmental games and related news, also from the area of water and sustainability in general. In this way, the project social media channels provided direct informational value to a relevant audience in the project's areas of impact and interest. The Twitter strategy also aimed at identifying well established accounts (Twitter "influencers"), and 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 pursued and led to a major increase in the number of followers out the SmartH2O Twitter account. More than four times more tweets were produced than in year 1 that resulted in more than quadrupling the number of followers. This shows the effectiveness of the developed Twitter communication strategy and the performed intensive efforts in its implementation.

The project followers come from a range of water related areas: businesses, NGOs, research institutes, student organisations (from the innovation in water business field), global and local news publishers in the areas of water, environment and sustainability, global and local

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 the implemented strategy, we were 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 way, the project has also reached a wider range of potential exploitation users for the SmartH2O platform and applications.

Table 2. Analytics on the SmartH2O Twitter account (15/03/2016).

	Y1 results	Y2 results	Target - Y2	Target - Y3
Number of followers	122 (297 tweets)	540✔ (1174 tweets)	150✔	300+

At the end of the second year, the SmartH2O Twitter account has reached 540 followers and 1.174 tweets (status March 21, 2016), not only meeting but going greatly beyond the target defined in D9.1 (see Table 2). Our Twitter account itself is following 685 relevant other Twitter accounts and we have categorized the most interesting of these accounts for our project into 27 lists, providing easy access to most important information for the editorial team and for the project partners. Most of our tweets get a reaction by our followers: either a like, a retweet or adding as a follower: e.g. we have received over 7.000 tweet impressions per month in the last few months, with the highest number of 12.8K tweet impressions (during the ICT4 Water meeting in Brussels). Our media tweet for the announcement of the Registration for our Summer School on Smart Systems for UrbanWater Demand Management, Switzerland has earned 660 impressions.

Figure 10. Number of tweet impressions received for the tweet announcing the SmartH2O Summer School.

In addition, a separate Twitter aggregator page that collects tweets in the areas of water research and water business has been implemented. This page automatically collects tweets on two precompiled lists of influencing Twitter accounts in both areas, and displays them in an overview form on the SmartH2O website under Twitter water news (see Figure 11 and Figure 12). In this way, a collective repository of social activity and news from water-related topics has been also made available on the project website (serving target groups that may not be using Twitter). The editorial team of the project also uses this page for identifying interesting tweets to be disseminated further also through the SmartH2O Twitter account.

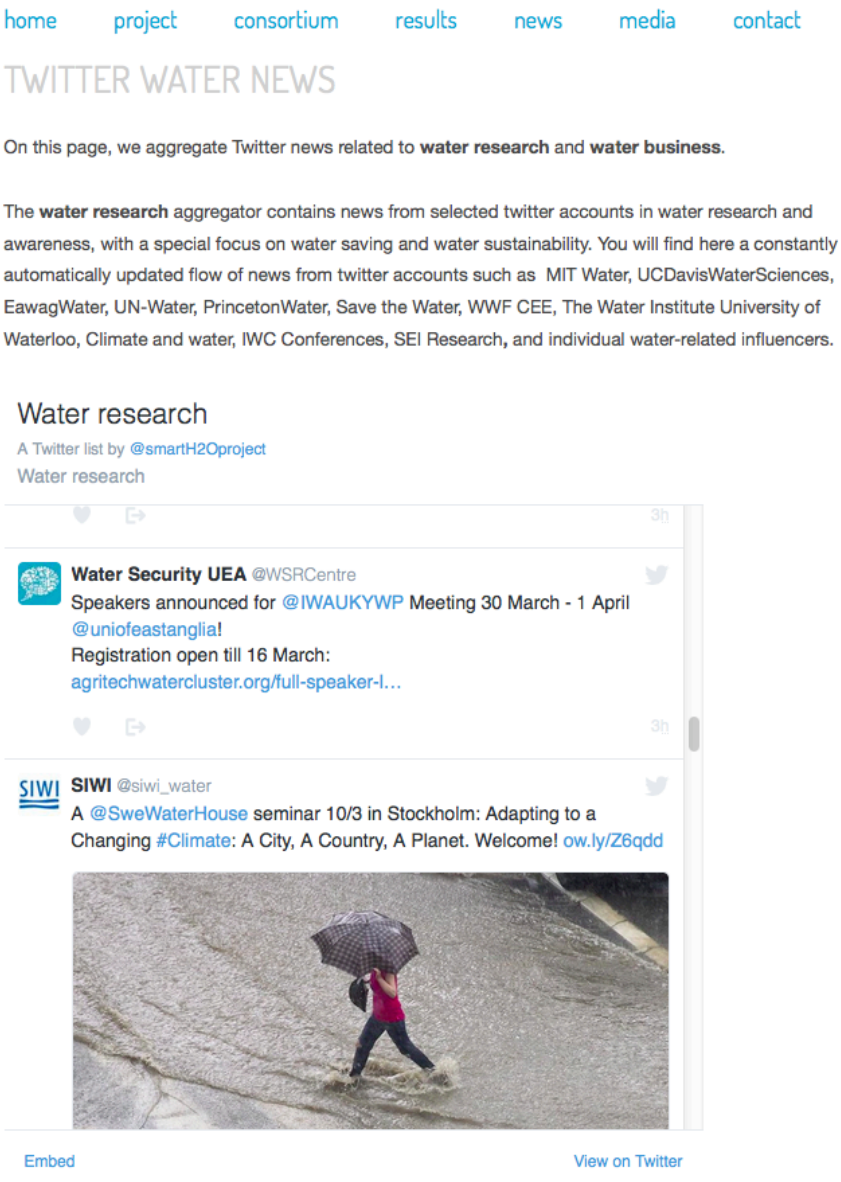


Figure 11. Twitter water news page: water research aggregator.

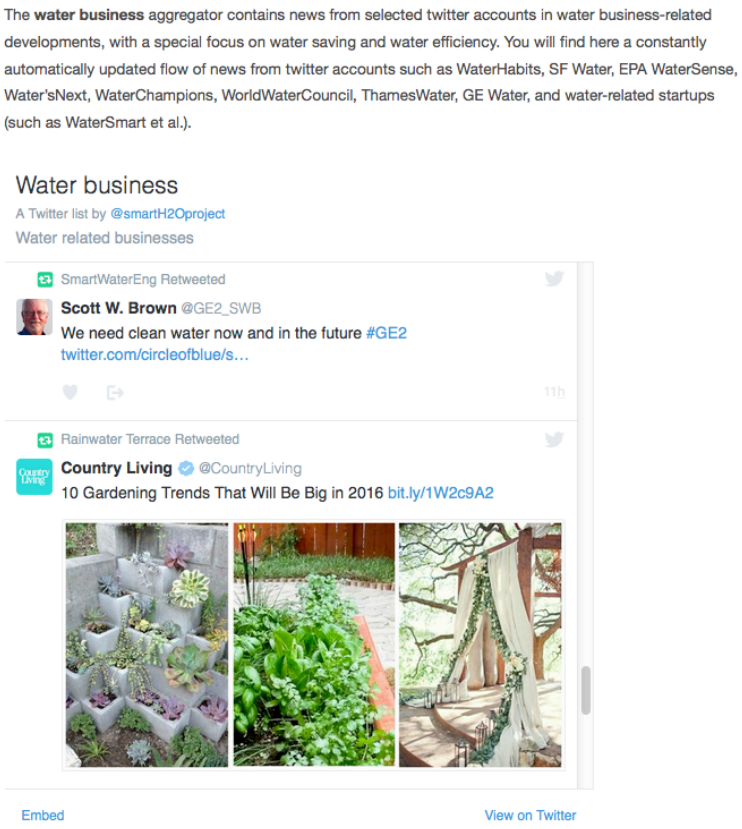
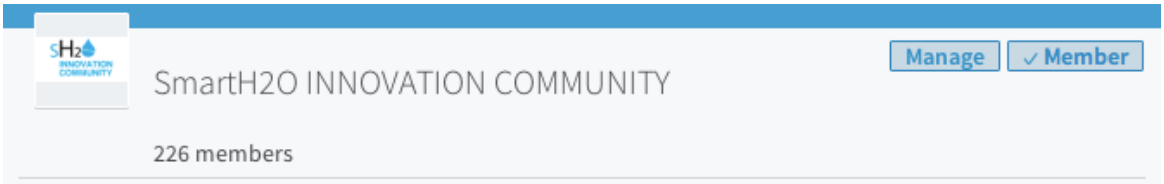


Figure 12. Twitter water news page: water business aggregator.

3.3.2 SmartH2O LinkedIn Innovation Community

The SmartH2O Innovation Community set up in form of a LinkedIn group[3] and framed as an open innovation platform in year 1(see Figure 13) has been used in year 2 to continuously report on project activities and results, and to elicit feedback from the community members. 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.



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

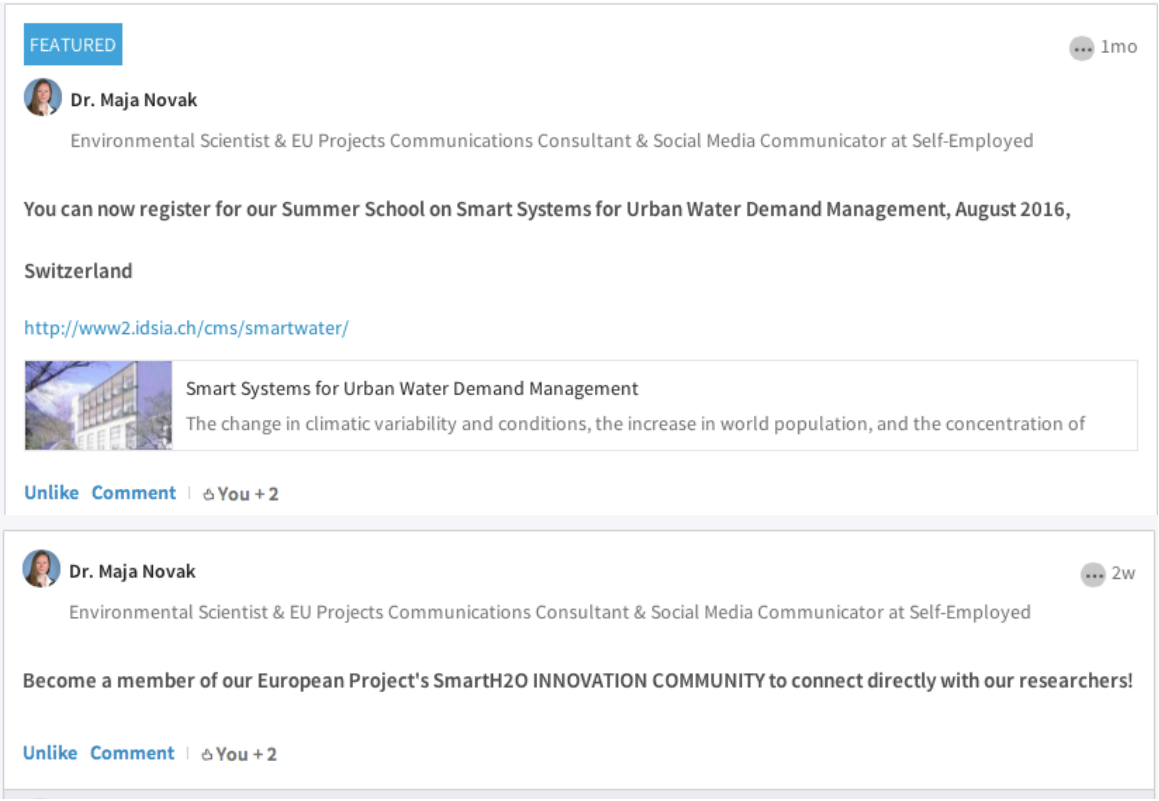


Figure 13. LinkedIn Innovation Community.

Table 3 lists the current member status of the Smart2O LinkedIn Innovation Community, showing that the year 1 target was not only successfully reached, but, greatly overcome and more than doubled the results from year 1 (226 group members reached).

Table 3. Analytics on the SmartH2O LinkedIn innovation community.

	Y1 results	Y2 results	Target - Y2	Target - Y3
Number of members	100	226✔	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. Their publication on Slideshare is also communicated through the Twitter account of the project.

In Y2, seven more presentations have been uploaded, adding to a total of 13 published presentations and therefore meeting the target defined in D9.1 (see Table 4). The total number of views of the SmartH2O presentations is **42,996** (status March 15, 2016).

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

Table 4. Analytics of the SmartH2O Slideshare channel.

	Y1 results	Y2 results	Target - Y2	Target - Y3
Presentations published	6 (2,305 views)	13✔ (41,312 views)	10✔	20

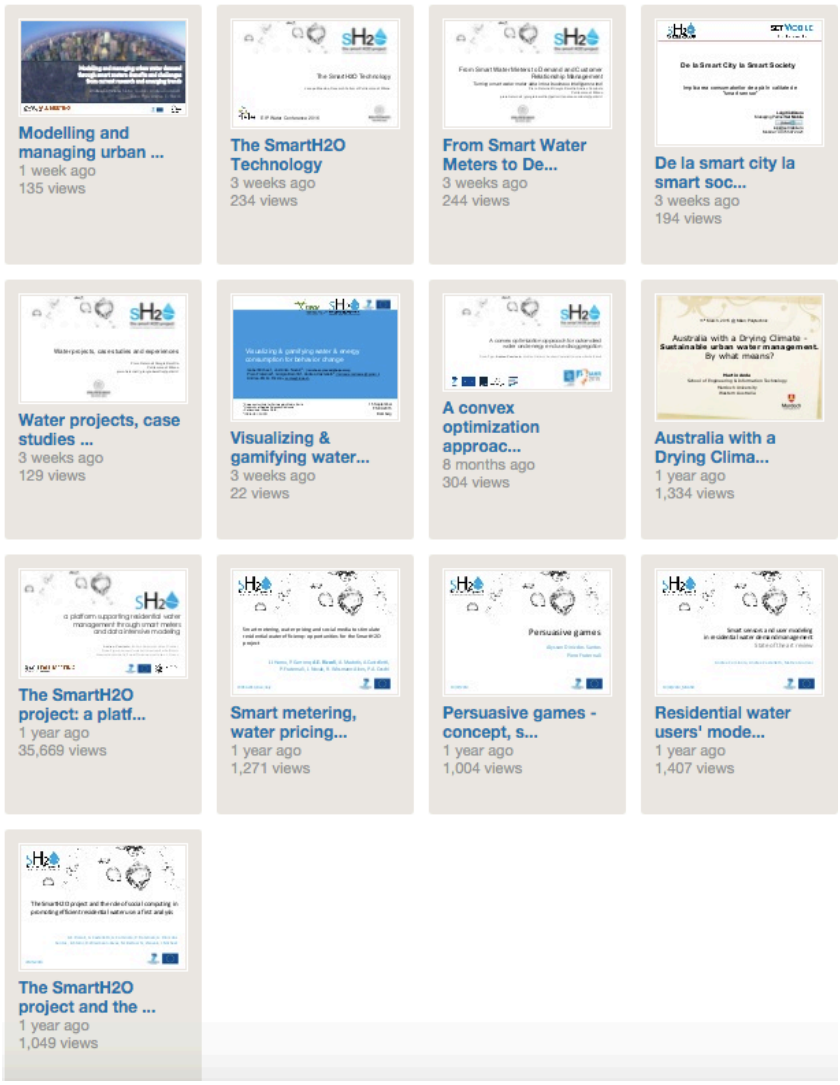


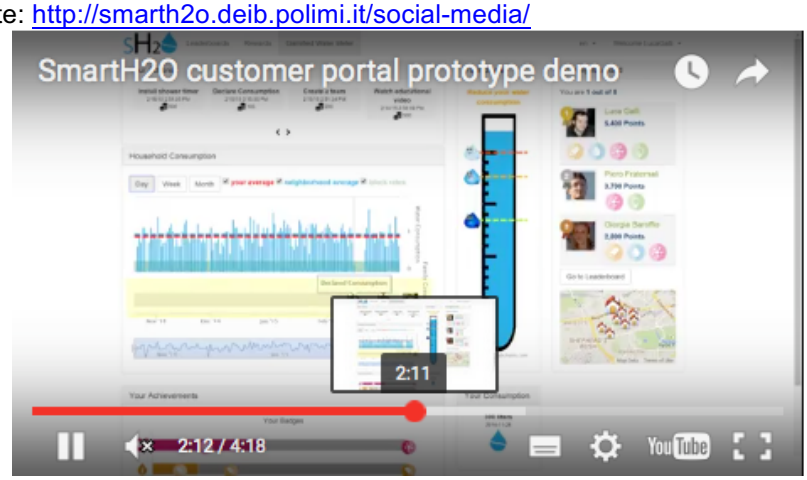
Figure 14. SmartH2O Slideshare channel.

3.4 Screencasts

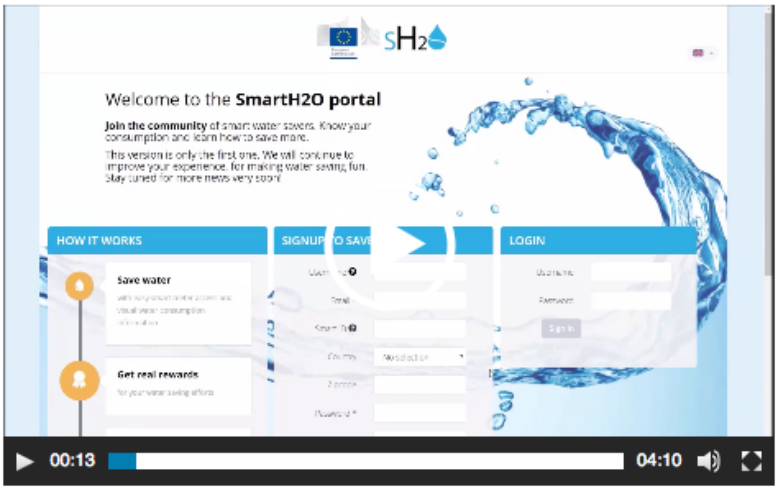
Two screencasts have been made, edited and published in 2015 to demo the current status of the SmartH2O portal. Project members have been using the screencasts at various dissemination events to showcase the latest SmartH2O features to potential users and stakeholders. The screencasts are also embedded in the SmartH2O project website.

Both screencasts are available with English voiceover explaining the main features of the showcased portal version.

- Early SmartH2O prototype demo (published in April 2015). Available on the project website: http://smarth2o.deib.polimi.it/social-media/



- Advanced SmartH2O portal demo (published in November 2015). Available on the project website: http://www.smarth2o-fp7.eu/



Additional videos are planned for 2016, e.g. to showcase the Drop!TheQuestion mobile app, the SmarH2O mobile app and new features to be released in 2016.

3.5 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 kick-off 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

Partner	Press/Radio	Date
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

As the new partner EMIVASA joined the project a number of press releases have been issued, gathering a measurable impact on Spanish media, as documented in Table 6.

Table 6. Press releases following EMIVASA's addition to the SmartH2O project.

Partner	Press release	Date
Emivasa	Valencia, ciudad elegida para participar en el proyecto europeo "Smart H2O" iagua	29/04/2015
	El Grupo Aguas de Valencia participará en el programa europeo 'Smart H2O' *Levante EMV P.45*	03/07/2015
	Aguas de Valencia conciencia sobre el consumo responsable *La Razón Valencia P.5*	03/07/2015
	AGUAS DE VALENCIA Programa europeo SmartH2O *Levante EMV P.36*	03/07/2015
	Aguas de Valencia participa en el programa europeo Smart H2O, para concienciar sobre consumo de agua *http://www.eleconomista.es*	02/07/2015
	Aguas de Valencia participa en el programa europeo SmartH2O *http://www.valenciaplaza.com/*	02/07/2015
	El Grupo Aguas participará en el programa europeo SMARTH2O *http://www.elperiodic.com/*	02/07/2015
	Aguas de Valencia participa en el programa europeo SmartH2O *http://www.lavanguardia.com*	02/07/2015
	Aguas de Valencia participa en el proyecto europeo para concienciar sobre el buen uso de agua *http://www.economia3.com*	02/07/2015
	Aguas de Valencia participa en el programa europeo SmartH2O *http://www.abc.es/*	02/07/2015
	Aguas de Valencia participa en el programa europeo SmartH2O *http://www.lasprovincias.es/valencia/*	02/07/2015
	Aguas de Valencia participa en el programa europeo SmartH2O *http://www.finanzas.com/*	02/07/2015
	El Grupo Aguas participará en el programa Europeo SmartH2o para potenciar la gestión de la demanda en el servicio del agua en Valencia *http://aguasresiduales.info*	02/07/2015
	AGUAS DE VALENCIA Programa europeo SmartH2O *Levante EMV P.36*	03/07/2015

3.6 SmartH2O communication team – UPV&EMIVASA

A SmartH2O communication team dedicated to the implementation of the established dissemination strategy has been designated (see Table 7). 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 7. SmartH2O Communication Team.

Person	Organisation
Andrea Rizzoli	SUPSI
Andrea Castelletti (Communication Director), Matteo Giuliani	POLIMI
Maja Novak, Isabel Micheel	EIPCM
Charles Rouge	UOM
Luigi Caldararu	SETMOB
Manuel Pulido Velazquez	UPV
Mark Holt	TWUL
Marco Bertocchi	SES
Joan Carles Guardiola, Gonzalo Belenguer	EMIVASA

3.7 Partner's channels – UPV&EMIVASA

In addition to the channels of the project partners reported in D9.2, with the addition of new partners EMIVASA and UPV joining the project, additional communication channels from these partners have also been included in the project.

3.7.1 EMIVASA

In Emivasa, two departments will be in charge of Communication and Dissemination activities concerning the SmartH2O project.

- The R&D Departement (Joan-Carles Guardiola as representative) is responsible for scientific publishing and dissemination in conferences, workshops, etc. (see section 5)
- The Marketing and Communication department (Gonzalo Belenguer as representative) will be responsible for communication actions. The following Table 8 is a summary of the communication channels used by Emivasa.

Table 8. Communication Channels of Emivasa and Aguas de Valencia.

Channel	Description
Press	Press releases will be periodically issued coinciding with relevant items of the project (entry in the consortium, release of the SmartH2O portal, final gala, etc.). Targeted press can be regional (or national but in the regional section) and local, distributed within the Valencian region (c5 million inhabitants), and includes newspapers and magazines such as: • Levante-EMV (Regional) • Las Provincias (Regional) • El País (National) • El Mundo (National) • La Razón (National) • La Vanguardia (National) • ABC (National) • El Economista (Business) • Finanzas (• ValenciaPlaza (local) • El Periódico de Aquí (local) • Etc.
Specialised Magazines and Blogs	• iAgua (www.iagua.es) • Aguas Residuales (www.aguasresiduales.info) • RETEMA (Revista técnica de Medio Ambiente) (www.retema.es) • Blog del Agua (www.blogdelagua.com) • FuturEnviro (www.futurenviro.es) • Global Water Intelligence (www.globalwaterintel.com) • Water21 (IWA Publishing) • Etc.
Radio	In the same way as for the press, relevant items will be present in radio news and magazines at local/regional level. The following are potential radio stations where transmit the information: • Cadena SER Valencia • Cadena COPE Valencia • Onda Cero Valencia
Website	www.aguasdevalencia.es SmartH2O has a prominent position among projects of the Aguas de Valencia Group (see http://www.aguasdevalencia.es/Grupo/Innovaci%C3%B3n/Proyectos/)
Linkedin	Grupo Aguas de Valencia https://www.linkedin.com/company/aguas-de-valencia?trk=company_logo
Facebook	Grupo Aguas de Valencia https://es-es.facebook.com/aguasdevalencia
Revista Aguas (corporative magazine)	http://www.revistaaguas.es/

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 9, along with the ones that have already accepted SmartH2O contributions. Further details on the associated publications are reported in Section 5.2.

Table 9. List of conferences attended by project members in Y2.

Conference	Place and Date	SmartH2O publications
AGU Fall Meeting 2015	San Francisco (CA), December 12-16, 2015	Cominola et al. (2015) – winner of Outstanding Student Presentation Award
UCC 2015	Cyprus, 7-10 December 2015	Fraternali et al. (2015)
SWM2015	Murdoch University (WA), 29 November – 3 December, 2015	Cominola et al. (2015)
ECSA-2 online conference	Online, 15-30 November 2015	Cominola (2015)
Interact 2015 (Fostering Smart Energy Applications workshop)	Bamberg, Germany September 15-18, 2015	Workshop paper Micheel et al. (2015)
IAHR World Congress	Delft, NL 28 June – 3 July, 2015	Piga et al. (2015b) Cominola et al. (2015b) Galli et al. (2015)
ExpoApa 2015 conference	Bucharest (Ro), 17 June 2015	
EWRI Congress 2015	Austin (TX), May 17-21, 2015	Cominola et al. (2015c)

In addition, a session on **ICT for energy and water demand management** has been proposed for the 8th International Congress on Environmental Modelling and Software in Toulouse, France, on July 10-14, 2016.

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 D9.4.

4.1.2 Collaborations with other projects

The SmartH2O project is an active participant of the ICT4Water cluster (http://ict4water.eu) and it attends the periodic meeting organised by the cluster in order to maximise the exchange of information and collaboration opportunities.

The cluster collaboration has created the opportunity to create the basis for a collaboration with the WATERNOMICS project (http://waternomics.eu). It is foreseen that 10 households in Themi

(GR), part of the Waternomics case study, will have access to a dedicated version of the SmartH2O platform. Work is in progress and it will continue in Y3 of SmartH2O.

The DAIAD project (http://daiad.eu) has favoured the establishment of a contact between Amphiro AG, partner of the Daiad project, and SmartH2O for the purchase at a special condition of the new Amphiro b1 devices, which have been developed in the context of the Daiad project. The devices are being offered as incentives for the best water savers in the Swis case study of the SmartH2O project.

Finally, ISS-EWATUS, iWidget, DAIAD and EFFINET will contribute to the organisation of the Summer School by providing lecturers for the workshops.

4.1.3 Collaborations with other projects

Links are also being established with the POWER project (Political and sOcial awareness on WaterEnviRonmental challenges) where EIPCM is involved. The SmartH2O approach (with particular focus on the gamification aspects) has been presented to the POWER consortium and possibilities for reciprocal project synergies and knowledge sharing are being identified. The POWER project is also linked to EIP Water activities and EIPCM has participated at the EIP Water Conference 2016 in Leeuwarden to suport the SmartH2O project networking and connection with the EIP Water platform.

4.1.4 Collaborations with institutions and companies

During the first two years of the project lifetime, a number of presentations, demos, and meetings have been held in order to get in contacts and, possibly, establish collaborations with institutions and companies active in the broad field of residential water demand modelling and management.

University of California Davis
The University of California Davis (https://www.ucdavis.edu/), founded in 1905 in Davis (California), is one of the world's leading cross-disciplinary research and teaching institutions, worldwide know for high-level education and research on topics related to food, health, the environment and society. The SmartH2O project has been presented during a Water Management Workshop organised at the Watershed Science Center, both in 2014 and 2015. Following that, Andrea Cominola from Politecnico di Milano is spending a visiting PhD semester (December 2015 - May 2016) at the Watershed Sciences Center. He is currently working with Prof. Jay R. Lund, aiming to refine the behavioural models developed within the SmartH2O project and exploring the feasibility to validate these techniques on some Californian case studies.

Center for Water-Energy Efficiency
The Center for Water-Energy Efficiency (CWEE -http://cwee.ucdavis.edu/) at UC Davis seeks to improve the ability to measure, monitor and jointly manage water-energy systems this gap and advance resource use efficiency through integrated water–energy management.
A collaboration with the CWEE has been informally started in order to explore the suitability of the user modelling algorithms developed within the SmartH2O project to manage joint water-energy high-resolution data and provide meaningful users profiles for targeted WDMS.

Environmental Defense Fund
The Environmental Defense Fund (https://www.edf.org/about) is one of the world's largest non-profit environmental organizations, with more than one million members and a staff of 500 scientists, economists, policy experts, and other professionals around the world. The SmartH2O project has been presented to a data scientists and managers from EDF in San Francisco and discussions are currently in place, in order to explore potential synergies with the programs run at EDF (some of them include high-resolution data collection and gamification) and possible

follow-up of the SmartH2O project. A possible visit to the EDF center in Austin is currently being planned, for the prosecution of the collaboration.

WaterSmart
WaterSmart (www.watersmart.com) is a software company founded in 2009 by Peter Yolles and Rob Steiner in San Francisco. They identified an opportunity to develop a unique combination of behavioural psychology, big data analytics, and cloud computing to improve global water-use efficiency and are currently working with several water utilities across the Unites States. After some informal meetings, a more formal collaboration between SmartH2O and WaterSmart is currently being set up to explore opportunities for data and algorithms exchange. Also, WaterSmart is contributing with an invited speaker to the SmartH2O Summer School (August 2016).

Aquarimat
Aqua Rimat (http://aquarimat.com/) is an Israeli hi-tech company established in 2011 and owned by Dr. Moshe Ravid. The company specializes in developing advanced solutions for smart water management and control, for the private and business sectors. A formal collaboration between SmartH2O and Aquarimat is currently being set up to explore opportunities for data and algorithms exchange, which represent as a first step towards a possible collaboration on a common case study.

Singapore Public Utility Board
The Public Utility Board (PUB - http://www.pub.gov.sg/) is the Singapore's national water agency. PUB is responsible for the collection, production, distribution and reclamation of water in Singapore. The SmartH2O project was presented during an invited seminar at the Singapore University of Technology and Design on March 4th, 2016. After the seminar, we discussed about the project with some people from the Water Supply Network Department – Water Demand Management & Inspectorate from PUB, who are currently running the Automated Meter Reading Project, which includes smart meters' data analytics for identifying consumption patterns and trends as well as customers' engagement to encourage behavioural changes. Beside a first exchange of information, we are exploring the possibility for establishing a more formal collaboration with PUB.

European Utility Week
The SmartH2O project was also presented to a number of companies and institutions during the European Utility Week in Vienna on 3-5 November 2015. During this event, over 10,000 professionals from around the world presented, exhibited and shared insights on how the utilities sector and market can move forward. In particular, we discussed the project with the following companies: Oracle Corporation UK, Intelen Inc, Atmel Italia SRL, Enstra Consulting, m2ocity, Energomonitor, Enersis Suisse AG, Environmental Defense Fund, R2M Solution SRL, OPOWER, Maddalena SPA, VP Sales & Marketing, Infor Solution, GWF MessSysteme AG, Majone & Partners Engineering, DHI Italia, Avnet EMG Italy SRL, D'appolonia SPA, MeteRSist SRL, SOGESCA SRL, CTRL+Swan, Knowledge Environment Security SRL, S&G Partners SRL.

4.2 Spreading knowledge to the users

At a series of locally and globally oriented events, SmartH2O presented itself to potential users of the portal, targeting both water consumers and utilities.

4.2.1 Swiss pavilion at Expo 2015

On the 26th of September 2015, SmartH2O demoed a preview of the advanced platform at the Swiss pavilion at Expo 2015, the international world fair, which was held in Milan. A Special event, organised by SUPSI, allowed to raise the interest of many visitors to the most recent developments in our project. A short survey was distributed to get "hands on" impressions from

attendees. The replies (6 respondents from Switzerland and 2 from Italy) and further oral feedback from passers-by gave us further confidence that we are on the right track in the project.

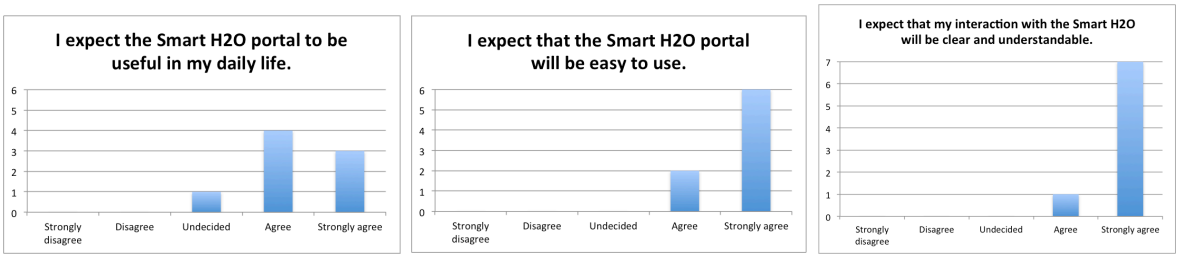


Figure 15. Feedback at Expo pavilion to question "You have seen a brief demonstration of the Smart H2O portal. Please tell us your first impression by means of the following questions."

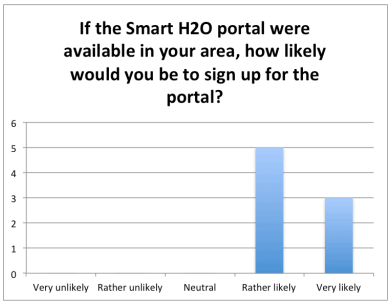


Figure 16. Feedback at Expo pavilion on interest in future portal signup

4.2.2 Swiss SmartH2O portal launch event in Terre di Pedemonte

On 11th of October 2015, SmartH2O attended the event "Terre d'autunno" organised by the Terre di Pedemonte Municipality. The event was a country fair attended by more than 300 people. Smart2O set up a booth with samples of smart meters, live demos, and distribution of gadgets to raise awareness. Many citizens came to the booth to learn more about SmartH2O and how they could take advantage of the project results.

Figure 17. SmartH2O promotional event in Terre di Pedemonte.

4.2.3 ICT 2015 Exhibition pavilion Lisbon

From October 18 to October 22, the city of Lisbon hosted ICT2015, the largest ICT event organized by the European Commission. Ict4water was selected as one of the five flagship initiatives invited to present their work at the off-site pavilion, located at the Praça do Comércio. SmartH2O, as a member of the Ict4water cluster, had the opportunity of meeting a mix of students, tourists, local citizens, conference attendees and high profile guests. Visitors got an insight in the current research on smart water systems and the problems SmartH2O project is addressing, discovering the SmartH2O web portal and playing the Drop! game.

Figure 18. SmartH2O at ICT 2015 Exhibition pavilion Lisbon.

4.2.4 European Utility Week

SmartH2O participated in the European Utility Week, held in Vienna on 3-5 November 2015. During this event, over 10,000 professionals from around the world presented, exhibited and shared insights on how the utilities sector and market can move forward. Smart technologies, Big Data, ICT, supply solutions and customer relationship represent key opportunities for the utility sector. The European Utility week was a great means for SmartH2O to connect with potential future utility users of the SmartH2O portal.

Figure 19. SmartH2O at the European Utility Week.

4.3 The SmartH2O final dissemination event

At the time of the writing of the project proposal, World Water Day 2016 was targeted as the event within which the SmartH2O consortium would organize the final dissemination event. This is no longer possible for the following reasons because World Water Day 2016 is on 22 March 2016, which is still in the project's second year, while the event was scheduled for the project's third and final year.

Therefore, we are now looking at alternative solutions for the final dissemination event. Instead, we are looking at water efficiency events taking place in early 2017. Since the final dissemination event was initially supposed to take place in London, this is also where we are looking. The choice of this city is relevant for dissemination since it is a major European capital.

Among these events is the WaterWise Annual Effiency Conference, which brings together all major players in the water efficiency business in England and Wales. WaterWise is an independent non-profit and non-governmental organisation promoting water efficiency and conservation. It was founded in 2005 and is based in London. The conference is held annually at the Royal Society of Arts, a prestigious venue in the very centre of London. It is considered the premier event in the UK order to reach out to water professionals, especially water utilities, the target market of the SmartH2O platform.

In order to gauge the potential of having our dissemination event within the WaterWise Annual Efficiency Conference in March 2017, Charles Rougé (UoM) attended the 2016 conference on March 2. There are around 120 to 150 attendees, representing all water utilities in England and Wales, the British water sector regulator (Ofwat), and water efficiency-related business. Attendees also include some academics, and researchers in environmental or consumer services think tanks.

The event is organised around various presentations and panel sessions, between which several breaks enable attendees to network and visit the exhibits. All presentations and panel sessions take place in the same rooms, and coffee and lunch are served in another rooms where the exhibits are. There are three to seven exhibits each year, and at the 2016 conference there were four, none of which offered any kind of interactive presentation, even though this year's theme was "Engaging people". Yet, people presenting the exhibits reported to be happy with the attention given by the attendees, and judged that a majority of them presented at least some interest in what they presented.

This means that with a compelling, interactive presentation, the SmartH2O platform can have an impactful showing at WaterWise, in a context where most business utilities are looking at solutions to influence their customers' behaviour. Additionally, we are going to engage with WaterWise with the objective that at least one member of the project can be present at one of next year's panel sessions. These sessions start with five-minute speeches in which panellists take turn to present themselves and the organisation they belong to, and that would be an ideal way to introduce the platform to all major players in the UK water efficiency sector.

4.4 The SmartH2O Summer School

The SmartH2O Summer School on **Smart Systems for Urban Water Demand Management** will be held on August 22-25 at Monte Verità, Switzerland. The school will focus on managing household water demand using **ICT and smart economics**: from monitoring consumption with innovative smart meters, to profiling users' behaviour, to understanding how different stimuli can nudge behavioural change, and, finally, how integrated ICT solutions can be adopted by water utilities.

More specifically, the following topics will be central to the conference:

- Profiling user water consumption, end use disaggregation of consumption;

- Innovative smart meter technologies for water usage monitoring and control;
- Modelling user behaviour: improved user awareness for behavioural change;
- Modelling user behaviour: the impact of innovative water pricing policies;
- Modelling user behaviour: the role of gamification in behavioural change in the water domain;
- The water and energy nexus in urban context;
- Open data and standards for smart water systems;
- Software platforms and tools for smart water management.

The conference is particularly aimed at young researchers and PhD students willing to focus their work on solving compelling real world problems with relevant impact on the society, by bringing in innovative ideas.

The program of the school is the following:

Monday – The drivers of water user behaviour: social norms and economic reasons
- Water resource economics and finance – Greg Characklis, University of North Carolina at Chapel Hill, USA
- Water pricing policies and consumer behaviour – Julien Harou, University of Manchester, UK
- Integrated modelling of demand and supply. The role of hydroeconomic models – Manuel Pulido Velasquez, Universitat Politecnica de Valencia, Spain
- Smart Nudges: Behavioral interventions to induce changes in water consumption – Verena Tiefenbeck, ETH Zurich, CH
- Workshop & Posters

Tuesday – Understanding and modelling the behaviour of water users
- Synergistic water and energy demand modeling, management, and conservation – David Rosenberg, Utah State University, USA
- Economic and energy analysis of household water conservation – Jay Lund, UC Davis, USA
- Forecasting urban water demand – Wojciech Froelich & Ewa Magiera, University of Silesia, Poland
- Modelling water user behaviour: from smart metered data to agent based modelling – Andrea Castelletti, Politecnico di Milano, Italy & Andrea E.Rizzoli, SUPSI, CH
- Workshop & Posters

Wednesday – Innovation in ICT for water management
- High Performance Computing in Water Resources Modeling & Analysis – Patrick M. Reed, Cornell University USA
- ICT solutions for real time smart water management – Dragan Savic & Lydia Vamvakeridou, University of Exeter, UK
- Gamification for water utilities – Piero Fraternali, Politecnico di Milano, Italy
- Standardization Activities and Gaps for Smart Sustainable Cities – Gabriel Anzaldi, EURECAT, Spain
- New control techniques for smart water systems – Pantelis Sopasakis, IMT Lucca, Italy
- Workshop & Posters

Thursday
Plenary session: the future challenges of urban water management
Panel discussion with Jay Lund, Dragan Savic, Patrick Reed, Greg Characklis, and David Rosenberg. Moderated by Andrea E. Rizzoli.

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. Two journal papers have been published so far, and another manuscript is currently under review:

- Andrea Cominola, Matteo Giuliani, Dario Piga, Andrea Castelletti, and Andrea Emilio Rizzoli (2015). A Hybrid Signature-based Iterative Disaggregation algorithm for Non-Intrusive Load Monitoring. *Applied Energy (under review).*

  Abstract: Information on residential power consumption patterns disaggregated at the single-appliance level is key to design customized energy demand management strategies. Non-Intrusive Load Monitoring (NILM) techniques provide this information by decomposing the aggregated electric load measured at the household level by a single-point high-frequency smart meter into the individual contribution of each end-use. The large-scale application of NILM methods is still challenged by the intrusiveness of the data sampling process to train NILM algorithms, the limited accuracy in reproducing the end-uses consumption patterns and their trajectories in time, and the scarce performance when multiple appliances are simultaneously operated. We contribute a hybrid, computationally efficient, algorithm for NILM, called Signature-based Iterative Disaggregation (HSID) algorithm, based on the combination of Factorial Hidden Markov Models and Iterative Subsequence Dynamic Time Warping. The application of HSID onto a real-world power consumption dataset comprising five different appliances potentially operated simultaneously shows that it outperforms a state-of-the-art benchmark algorithm in terms of on/off event detection, precision in the power assignment to the different end-uses, and accuracy in the disaggregated end-uses trajectories. Numerical results also show that HSID is robust with respect to noisy training signals and can be extended to unsupervised problems, ultimately opening up new opportunities to foster the deployment of large-scale smart metering networks and the design of personalized demand management strategies.

- 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*, doi:10.1109/TCST.2015.2476777

  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,* vol. 72, pp. 198-214, doi:10.1016/j.envsoft.2015.07.012

  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.

- Joan-Carles Guardiola-Herrero (2015). SmartH2O: Plataforma TIC basada en la computación social que promueve la gestión eficiente del consumo de agua (SmartH2O: ICT platform based on social computing that promotes sustainable water consumption).Revista Técnica de Medio Ambiente (RETEMA), vol. 186, pp. 42-48, ISSN 1130-9881

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 journal (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 published in Y2:

- Paraskevi Lazaridou, Athanasia Ntalla, Jasminko Novak, Behavioural role analysis for multi-faceted communication campaigns in Twitter, to appear in Proceedings of ACM Web Science ´16, Extended Abstracts, 22-25 May, Hannover (Germany)
- Cominola, A., Giuliani, M., Castelletti, A., Piga, D., and Rizzoli, A.E. (2015). Modeling and managing urban water demand through smart meters: Benefits and challenges from current research and emerging trends. In *AGU Fall Meeting*, 12-16 December, San Francisco (California).
- 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. In Proceedings of IAHR World Congress, 28 June-3 July, The Hague, NL.
- Cominola, A., Giuliani, M., Piga, D., Castelletti, A., Rizzoli, A.E., 2015. Modeling residential water consumers' behaviors by feature selection and feature weighting. In Proceedings of IAHR World Congress, 28 June-3 July, The Hague, NL.
- Piga, D., Cominola, A., Giuliani, M., Castelletti, A., Rizzoli, A.E., 2015. A convex optimization approach for automated water and energy end use disaggregation. In Proceedings of IAHR World Congress, 28 June-3 July, The Hague, NL.
- Guardiola-Herrero, J.C., Castillo-Soria, J., Barba-Sevillano, J., González-Carbonell, V.,Pérez-Palomar J.J., 2015. Management of water supply services through integral operation based on advanced Smart Metering schemes. In Proceedings of The 13th IWA Leading Edge Conference on Water and Wastewater Technologies, June 13 -16, Jerez de la Frontera, Spain.
- 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. In EWRI World Congress, May 17-21, Austin (TX).

5.3 Workshop and demo papers

Workshop and demo 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 or demo session attendees. In that way, they also represent a valuable feedback loop from the scientific and professional community back into the project.

The following workshop papers have been published in Y2:

- Fraternali, P., Baroffio, G., Galli, L., Micheel, I., Novak, J., Rizzoli, A.E., 2015. Integrating real and digital games with data analytics for water consumption behavioral change: a demo, Proc. of IEEE Utility and Cloud Computing 2015 (UCC 2015), Limassol, Cyprus; 12/2015
- Micheel, I., Novak, J., Fraternali, P., Baroffio, G., Castelletti, A., Rizzoli, A.E., 2015. Visualizing & Gamifying Water & Energy Consumption for Behavior Change. Workshop on Fostering Smart Energy Applications (FSEA) 2015 at Interact 2015, Bamberg, Germany.

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 10.

Table 10. 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[5] 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.

[5] 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 second year dissemination activity. The national-wide news release to the media is currently carefully being planned for year 3 to maximise the impact of the results of the SmartH2O project.

We evaluate this goal as still not applicable for year 2.

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

SmartH2O has attended a number of major dissemination event, both at the local (Tre Terre d'Autunno in Tegna) and the international level (European Utility week, ICT 2015 Lisbon, Swiss Pavillion at EXPO 2015).

We evaluate this goal as reached.

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. Some activities will be 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 have been proposed to conference organisations, in co-operation with other ICT for water management funded projects through the ICT4Water cluster and this activity will continue in the third year.

A Summer School offered to target audiences (early adopters, software developers, students, etc.) is currently being organized for the summer of 2016.

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 EMIVASA and SES.