

SUCCESS
D6.10 v1.0
Report on Events, V2

The research leading to these results has received funding from the European Union's Horizon 2020 Research and Innovation Programme, under Grant Agreement no 700416.

Project Name	SUCCESS
Contractual Delivery Date:	31 October 2017
Actual Delivery Date:	31 October 2017
Contributors:	P3C
Workpackage:	WP6 – Creating impact with SUCCESS
Security:	PU
Nature:	R
Version:	1.0
Total number of pages:	21

Abstract:

The strategic goal of the SUCCESS interactive dissemination activities such as events is to trigger open discussions, to facilitate collaborations and to spark innovation in the overlapping domains of ICT, Security and Energy. SUCCESS has a three-way concept for events, which is oriented towards its multi-faceted target audience. This approach results in three types of events: Innovation events; Trial Site Open Days; third-party events, including exhibition stands and special sessions in scientific conferences. Within the scope of this deliverable, one innovation event, several exhibition booths and two special sessions at scientific conferences have been successfully organized and have been attended by sizeable numbers of participants generating considerable visibility of and impact for project work and initial results.

Keyword list:

Events, Dissemination, Innovation event, Scientific conference, communication, Impact

Disclaimer:

All information provided reflects the status of the SUCCESS project at the time of writing and may be subject to change.

Executive Summary

SUCCESS has a three-way concept for interactive dissemination activities. The concept is oriented towards the multi-faceted audience that the SUCCESS project aspires to have an impact on. Innovation events address the short-term innovation drivers and the local community by stimulating involvement in the project. Trial Site Open Days will address the entire community by showcasing the validation of the SUCCESS Security Monitoring Solution in a real context. Exhibitions and special sessions address the specialized industrial and scientific audience, respectively, by showing targeted results and achievements and collecting useful critical feedback.

An innovation event took place in Terni, Italy, followed by a launch event during the European Utility Week 2016 in Barcelona, Spain. Special sessions in scientific conferences have been organized and chaired successfully in Krakow, Poland and in Torino, Italy. The dissemination activities include also participation of SUCCESS in exhibitions and third-party events. In some exhibitions - European Utility Week (EUW) 2016 in Barcelona, Spain, EUW 2017 in Amsterdam, the Netherlands and European Sustainable Energy Week 2017 in Brussels, Belgium -, SUCCESS had its own or a shared booth, which facilitated the dissemination of the project results and the communication with the people attending the exhibitions.

The tentative plan for the upcoming Trial Site Open Days foresees one open Trial Day at each of the three SUCCESS Trial Sites. The aim of the Trial Site Open Days, which will take place throughout 2018, is to validate the SUCCESS Security Monitoring Solution under the examined use cases.

The tentative plan for upcoming exhibitions and special sessions foresees regular active participation in the major relevant exhibitions such as E-world 2018, European Sustainable Energy Week 2018 as well as a further special session. An event that will include authorities – such as institutions that could influence the operation of the ESMC, ministries etc. – is also planned.

The tentative plan for the coming innovation events foresees either presentations at an externally planned event or a SUCCESS organised event in the pulsating IT start-up capital, Berlin, Germany. This innovation event is planned for the end of the project. A further innovation event, at which the projects final results will also be presented, is tentatively planned to be held together with the Trial Site open Day of the Irish ESB trial site. This event will be co-located with the project final review at the ESB trial site in Ireland implementing a request from the 1st Periodic Review that the project final review be held at a project trial site.

Authors

Partner	Name	e-mail
P3 COMMUNICATIONS GMBH (P3C)		
	Panagiotis Paschalidis	panagiotis.paschalidis@p3-group.com
ISTITUTO SUPERIORE MARIO BOELLA SULLE TECNOLOGIE DELL'INFORMAZIONE E DELLE TELECOMUNICAZIONI (ISMB)		
	Mikhail Simonov	simonov@ismb.it
ASM TERNI SPA (ASM)		
	Massimo Cresta	massimo.cresta@asmterni.it
ENGINEERING – INGEGNERIA INFORMATICA SPA (ENG)		
	Antonello Corsi	antonello.corsi@eng.it

Table of Contents

1. Introduction	5
2. Innovation events.....	6
2.1 Innovation event in Terni, Italy	6
2.1.1 Concept and agenda	6
2.1.2 Press activities and participants	6
2.1.3 Evaluation and results	8
2.2 Launch event in Barcelona, Spain, during European Utility Week 2016	9
2.3 Final event in Ireland.....	10
3. Trial Site Open Days	11
3.1 Italian Trial Site	11
3.2 Romanian Trial Site	11
3.3 Irish Trial Site	11
4. Exhibitions, special sessions & third-party events.....	12
4.1 Exhibition stands	12
4.1.1 European Sustainable Energy Week in Brussels, Belgium	12
4.1.2 European Utility Week in Amsterdam, the Netherlands	13
4.1.3 Partner stands	14
4.2 Special sessions	14
4.2.1 Event-Based Control, Communication and Signal Processing 2016	14
4.2.2 Event-Based Control, Communication and Signal Processing 2017	15
4.2.3 Innovative Smart Grid Technologies	15
4.3 Third-party events	16
5. Tentative plan for future events.....	17
5.1 Innovation events	17
5.2 Trial Site Open Days	17
5.3 Exhibitions and special sessions	17
6. References.....	18
7. List of Abbreviations	21

1. Introduction

This deliverable provides information on the events organized by SUCCESS in order to increase the awareness of the SUCCESS results in the relevant community and to hopefully involve them in the upcoming SUCCESS events. The strategic goal of the SUCCESS events is to trigger open discussions, to facilitate collaborations and to spark innovation in the overlapping domains of ICT, security and energy.

The SUCCESS events are integrated within the general communication concept of SUCCESS, aiming to promote our vision of an open and secure Smart Grid.

A series of events, adjusted to the respective target audience, will bring together a wide spectrum of market players such as energy companies, grid and infrastructure owners, equipment/smart meter manufacturers, energy aggregators, ICT operators and IT suppliers, technology providers, user associations, automotive OEMs and venture capital and investment banks.

There are three types of events with SUCCESS presence.

- Innovation events
Main Audience: Innovation drivers, such as small and medium-sized enterprises (SMEs), academics focused on applied research, and industrial researchers.
- Trial Site Open Days
Main Audience: SUCCESS community which would be interested in experiencing the results of SUCCESS. More specifically, from the energy industry: energy providers and distribution grid owners, cyber security professionals, smart meter manufacturers.
- Exhibition stands and special sessions
Main Audience: Industry professionals, strong market players on the one side and academia and research on the other side.

During the first 18 months of the project, SUCCESS focused on the third type of events: exhibitions and special sessions, in order to increase awareness about the project to the relevant industry and academia professionals at event types they regularly visit. SUCCESS partners joined several exhibitions and hosted also their own stands on behalf of SUCCESS, of course always within the set budget constraints. Through the participation in exhibitions, SUCCESS partners were able to:

- Meet established industry professionals,
- Come in contact with innovation drivers,
- Have a platform that facilitated the communication and exchange of information with other attendees of the exhibitions,
- Receive feedback, which was mostly positive and indicated that the project is going in the right direction, and to
- Encounter authorities, as there is an increasing participation of authorities in such events.

2. Innovation events

Innovation events aim to introduce the SUCCESS concepts to innovation drivers at selected sites, so as to establish and feed a creative ecosystem around SUCCESS that can enrich and validate the ideas of SUCCESS. Furthermore, these events attempt to trigger the community with the SUCCESS concepts and provide a platform for the related innovation drivers to present relevant ideas and receive feedback.

The SUCCESS project has proposed to organize at least two innovation events. The current planning foresees one further innovation event taking place during the final event in Ireland.. Each innovation event, apart from its general framework which aims at addressing an innovative audience, will also have a specific focus.

2.1 Innovation event in Terni, Italy

Within the scope of this deliverable, lies the first innovation event which has taken place on September 22nd 2016 in Terni, Italy at the premises of the SUCCESS partner ASM.

2.1.1 Concept and agenda

The distinguishing concept of the first innovation event was to build bridges with other ongoing or upcoming relevant European projects and to build upon the experience from finalized projects. Most notable among these projects are the ongoing SPARKS [1] and NOBELGRID project [2], but also PRECYSE [3] and the upcoming WISEGRID project [4]. SUCCESS was eager to connect as early as possible with these projects and therefore set up the innovation event as early as the necessary dissemination and promotion material could be produced.

A further significant aim for the first innovation event was to give a lively signal regarding the beginning of the project and to trigger an early build-up of the SUCCESS community with effective media activity.

The final ingredient, common to all innovation events, was the involvement of innovators and young audience into the SUCCESS concepts but also the increase of awareness on the general guidelines around the work topic, namely cyber security in the critical context of energy and smart metering.

The agenda of the meeting thus included four components:

- Invited presentations on the projects SPARKS, PRECYSE, NOBELGRID and WISEGRID;
- Presentations from SUCCESS regarding the concepts and work plans as well as the preliminary work undertaken by the project;
- Invited presentations by local, regional and intraregional authorities increasing the sensitivity and the awareness on cyber security in the energy domain;
- A company pitch and networking session, which was organized and run successfully in the session after the lunch break.

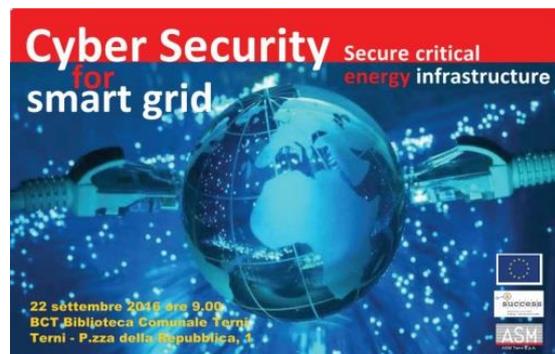


Figure 1: Poster for the Innovation event in Terni

2.1.2 Press activities and participants

In order to attract a sizeable amount of local participation, a poster about the event was created and distributed to the media (Figure 1) and a targeted and broad press coverage took place in the days preceding the event.



Figure 2: SUCCESS is welcomed by the mayor of the city at the city town hall

More specifically, two days preceding the event, the SUCCESS project was welcomed by the mayor of the city of Terni, Mr. Leopoldo Di Girolamo, at the city town hall (Figure 2). Mr. Di Girolamo emphasized the significance of such projects for the city and the acute relevance of the topic of cyber security in today's society and more specifically in the context of secure smart utilities networks. The event was covered by a significant amount of print media (Table 1) and was also broadcasted on the regional TV channel Tele Galileo (Table 2).

In the following Table, all articles about our Innovation event published in print media are listed.

Table 1: Print media about the Terni Innovation event

Name of media	Title of article	Date of publication
Il Messaggero	Cyber security, coinvolta anche l' Asm	23.09.2016
Il Messaggero	Cyber security, esperti in arrivo da tutta Europa	21.09.2016
Corriere dell' Umbria	Cyber security: come difendersi dai web terroristi	22.09.2016
Corriere dell' Umbria	Entra nel vivo il programma Success	22.09.2016
Corriere dell' Umbria	Coinvolti nel progetto 16 partner provenienti da 10 differenti Paesi	23.09.2016
Umbria 24	Asm Terni, 'Success' per Horizon 2020: al lavoro 16 partner per la sicurezza dei sistemi digitali	21.09.2016
Cronache 24	Asm in campo per la cyber security	22.09.2016

Furthermore, in the following Table, all related links on articles published online regarding the Innovation event can be found (all links checked on availability on the 30.09.2016).

Table 2: Online articles about the Terni Innovation event

Site title	Type	Title	link
Tele Galileo	TV coverage including live stream on youtube™	Presentazione convegno Asm su "Cyber security for smart grid"	https://www.youtube.com/watch?v=lgQ4CGO1wf4&feature=youtu.be
Radio Galileo	Web press	COMUNE TERNI, PRESENTATO IL CONVEGNO ASM SU	http://www.radiogalileo.it/economia/2016/09/21/25777-comune-terni-

		“CYBER SECURITY FOR SMART GRID” (VIDEO)	presentato-il-convegno-asm-su-cyber-security-for-smart-grid-video
	Web press	ASM: CONVEGNO SU “CYBER SECURITY FOR SMART GRID”	http://www.radiogalileo.it/economia/2016/09/20/25746-asm-convegno-su-cyber-security-for-smart-grid
Terni in rete	Web press	ASM: CONVEGNO SU “CYBER SECURITY FOR SMART GRID”	http://www.terninrete.it/Notizie-di-Terni/asm-convegno-su-cyber-security-for-smart-grid-362369
UmbriaOn	Web press	Cyber security: «Terni sperimenta il futuro»	http://www.umbriaon.it/2015/cyber-security-terni-sperimenta-il-futuro/
	Web press	Terni, ‘Cyber Security’: Asm è protagonista	http://www.umbriaon.it/2015/terni-cyber-security-asm-e-protagonista/
	Web press	Cyber security, Terni protagonista in Europa	http://www.umbriaon.it/2015/cyber-security-terni-protagonista-in-europa/
Umbria domani	Web press	“Cyber Security for Smart Grid”: come proteggere le informazioni dagli attacchi della Rete	http://www.umbriadomani.it/politica-umbria/cyber-security-for-smart-grid-come-proteggere-le-informazioni-dagli-attacchi-della-rete-108285/

The event attracted a sizeable participation of more than 150 attendees (Figure 3). Particularly successful was the outreach to the younger audience (such as students) which amounted to approximately 20% of the audience. The Civil Authorities, company/SME representatives and project partners made up approximately equal proportions of the audience (10-13%). Of the remaining participants, approximately 45%, were citizens (who registered no specific affiliation). In order to enable a wide outreach and increase the awareness on the topics in the local society, simultaneous translation (English – Italian) was offered by means of headphones to the audience. This feature was broadly welcomed, and helped towards overcoming the language barrier.



Figure 3: Attendees of the Innovation event in Terni

2.1.3 Evaluation and results

The evaluation of the event in Terni can be summed up by stating that it was very successful. The main goals were achieved. More specifically:

In the domain of building bridges with related projects, the presentations (Figure 4) and the subsequent discussions identified several areas of common interest and the intention of following up with further exchange both technical and non-technical, as well as potentially joint activities were explicitly asserted. For example, SUCCESS partners were invited to attend the workshop by the project SPARKS on Security Requirements for Smart Grids and their Economic, Legal and Societal Aspects with representatives of the EC in Brussels (October 2016). Furthermore, thoughts were discussed of organizing a joint event with other projects which concluded in SPARKS inviting SUCCESS contributions (one technical presentation and one panel discussion) to the Symposium on Innovative Smart Grid Cybersecurity Solutions in Vienna (March 2017). Both invitations were used to further foster relationships among the respective project partners – leading research and industry institutions in the area – and of course the respective participants of the events.

In the domain of setting up a lively signal on the start of SUCCESS, the presence of more than 150 attendants, the strong media coverage and the participation of top level authorities, notably Mr. Gianperro Bocci (Permanent Under-Secretary of State of Home Office), Dr. Ivano Gabrielli (National Center Anticrime for the Protection of Critical Infrastructure) and Mr. Leopoldo Di Girolamo (Mayor of Terni) have given a strong signal on the considerable significance that the aspects treated by SUCCESS have in the political agenda. For example, Twitter™ [5] and LinkedIn™ [6] posts by the SUCCESS account regarding the event have created immediate feedback from the interested community regarding further updates and/or possible cooperation.

In the domain of promoting and involving innovative audience in the goals of SUCCESS, a number of statements from top level participants, for example, regarding privacy and the importance of cyber security, were met with noticeable audience consensus. Furthermore, the explicit reference to the current increasing demand on human resources in the domain of security by the industry and research institutions triggered a number of follow up inquiries. The involvement of the interested audience into the presented topics was topped off with a light lunch and a vivid networking session as well as the presentation of related E-vehicle charging technologies by one of the participating SMEs.



Figure 4: Presentation during the Innovation event in Terni

2.2 Launch event in Barcelona, Spain, during European Utility Week 2016

The launch event of SUCCESS took place during the EUW 2016 [7] in Barcelona, Spain, at the Ericsson booth (Figure 5). The event was organized jointly with RESERVE [8]. During the event, top executive level representatives of the partners Ericsson, RWTH, ESB and ASM have spoken and introduced SUCCESS and RESERVE to the audience.



Figure 5: Launch event during the EUW 2016 in Barcelona Spain

The agenda of the approximately two-hour long core of the event started with a general introduction of the projects focusing on the importance of cyber security in the case of SUCCESS by the coordinator of SUCCESS, Dr. Williams and proceeded with the technical coordinator, RWTH-Aachen Prof. Monti, going into deeper details. Then the representatives of the utilities as well as high-ranking representatives of Ericsson explained the context of the projects and the importance of the undertakings for the future energy grids. The event was closed with discussion with the audience and a Q&A section. As a result of the strong manning of

the presentations and the statements, the event was a strong engagement pole and was well visited by the participants of the exhibition (estimated approx. 40-50 people). In addition, the event

was published in social media partly through live streaming and posts, as well as reported in PR-reports increasing the visibility of the project and the awareness on its scope.

2.3 Final event in Ireland

There will be one further SUCCESS organised event held at the end of the project, in October or early November ,2018. It is tentatively planned to be held at the ESB trial site in Ireland co-located with the Trial site Open Day.

As one of the most promising locations for a final event is considered to be Berlin, as Berlin is the IT start-up capital and will probably attract many innovation drivers that will promote the project results after the completion of the project, SUCCESS intends to either organise presentations of our final results at a security event in Berlin at the end of the project. SUCCESS will leverage other security events planned for quarter 4 in Berlin if possible, presenting its results as part of these events. Alternatively, SUCCSES may organise an event in Berlin, together with local organisations based in Berlin to present its final results.

3. Trial Site Open Days

Each Trial Site will organize an Open Day focused on related industry participation. Thus, there will be three Trial Site Open Day events. During the Open Days, the SUCCESS Security Monitoring Solution will be demonstrated in various use cases, different in each Trial Site. Thanks to the participation of industry stakeholders, a wide industry input to the SUCCESS results is expected.

In the following sub-sections, the tentative dates and Open Days and a short description of the demonstrated use cases are given. More details about the trials are provided in Deliverable D5.1 [9].

3.1 Italian Trial Site

The Italian Trial Site Open Day will be organised in spring 2018, possibly in April.

Two use cases will be demonstrated in the Italian Trial Site. Both intend to showcase the resilience of the SUCCESS Security Monitoring Solution under cyber attacks. In the first use case, the Demand Response (DR) property of the Smart Grid will be targeted and malicious DR disconnect commands will be sent so as to cause an abrupt load drop and destabilize the grid. The second use case regards a cyber attack against the DSO's electrical storage system. NORMs should be able to detect malicious disconnect commands and also send information regarding the attack to DE-SMIS and E-SMIS.

3.2 Romanian Trial Site

The Romanian Trial Site Open Day will be organised in summer 2018, possibly in June or early in July.

The use case that will be demonstrated is the monitoring of two electrical distribution networks with distributed energy resources. This trial will indicate the efficiency of the SUCCESS Security Monitoring Solution in a very common scenario, as control operations will be largely automated in the Smart Grid. The NORMs included in the trials will send voltage and frequency measurements to the DSO, which will subsequently analyse the data in order to detect attacks. The trials will be conducted with one as well as several NORMs, so that attacks on a single NORM, detected by a single DSO, and attacks on multiple NORMs, detected by DE-SMIS and E-SMIS, can be simulated.

3.3 Irish Trial Site

The Irish Trial Site Open Day will be organised in autumn 2018, possibly in late October or early November to coincide with the project final review.

The use case that will be demonstrated regards the command sent by the TSO to the DSO to disconnect charging EVs from the electrical grid. The accurate and regular PMU measurements performed within the NORM will act as a second source of measuring the instability of the grid and will facilitate the control of the integrity of the disconnect command. This trial intends to address an important security feature that needs to be incorporated in the Smart Grid, given the fluctuation of the power generated by renewable energy sources. Although EVs are considered an interruptible load and add flexibility in the power consumption, it is more than desirable that malicious disconnect commands are detected and blocked.

4. Exhibitions, special sessions & third-party events

SUCCESS aims to develop a significant exchange with participants at exhibitions and scientific conferences. For this, SUCCESS partners are attending third-party events where the industrial and scientific community gathers to discuss cutting edge technology in the sector. Through participating in such events, SUCCESS uses the feedback from the respective communities to confirm the relevance of its results and adjust work where deemed suitable and needed.

4.1 Exhibition stands

The SUCCESS partners have already participated in several exhibitions, which create the most suitable environment for the dissemination of the project results to Smart Grid professionals, as already mentioned in Section 1. The maximum impact towards this direction was achieved during the European Sustainable Energy Week 2017 [10] in Brussels and the European Utility Week 2017 [11] in Amsterdam, where SUCCESS hosted own exhibition booths.

4.1.1 European Sustainable Energy Week in Brussels, Belgium

SUCCESS has teamed up with RESERVE [8] with a shared booth during European Sustainable



Figure 6: Opening Plenary for the European policy conference in Brussels.

Energy Week 2017. Under the banner of the topic, DSO 2050, SUCCESS participated at the major European policy conference for sustainable energy in Brussels from 20th-22nd of June, organized by the European Commission (Figure 6). In this regard, the European Sustainable Energy Week helps to reinforce Europe's role as a leader in the global clean energy transition by addressing the challenges on the way towards 100% renewable energy.

SUCCESS was part of the Networking Village, to spread innovation and foster cooperation.

The event included other European projects in order to increase both the reach and the impact of the project work, but also in order to provide the audience with a comprehensive view of the ongoing works of SUCCESS and the further participating projects in the domain of security for critical infrastructures. The Networking Village featured several sessions, during which different projects and undertakings could host a stand and present content to or discuss with the participants. At its dedicated stand, SUCCESS provided an overview of the concepts developed and set a specific focus on how cyber security is paramount for a harmonious grid-sustainable operation of energy grids. Numerous participants engaged in the EU-policy on sustainable energy ecosystem expressed their interest in receiving more information on the project by enrolling to the SUCCESS newsletter.

Furthermore, during the conference, SUCCESS partners could address EC-officials in terms of increasing awareness of the project and its scope to officers from different directorates. A further specific goal reached during the participation to the BRIDGE initiative session at the EUSEW2017 aimed at engaging with the BRIDGE initiative, and more specifically with the data management group, which shares common scope topics on cyber security and privacy (Figure 7). Indeed, both during the Networking Village as well as during the BRIDGE initiative session, the content and



Figure 7: Session on BRIDGE initiative - Data Management group.

scope exchange with participating instances and managing officials was at all times converging to increased interaction with the initiative.

4.1.2 European Utility Week in Amsterdam, the Netherlands

SUCCESS has teamed up with ongoing Horizon 2020 Smart Grid projects to contribute to a common view on cross-cutting issues that may be obstacles to European innovation. SUCCESS generally does this by fostering the exchange of information, experience and knowledge to produce coordinated, balanced and coherent recommendations to utilities, as the main end users, for removing barriers to innovation deployment. The participation of SUCCESS at the European Utility Week 2017 in Amsterdam reflected this concept and approach, since many Smart Grid stakeholders gathered and exchanged information and ideas.



Figure 8: SUCCESS stand at the walk-around H2020 project zone at the EUW 2017 in Amsterdam

In the so called H2020 project zone, beside the SUCCESS project, the work of AnyPlace [12], Elsa [13], Empower [14], Flex4Grid [15], Flexiciency [16], FutureFlow [17], GoFlex [18], Integrid [19], InteGridy [20], IntEnsys4EU, Interflex, Invade [21], NobelGrid [2], P2P-Smartest [22], RealValue [23], RESERVE [8], SmarterEMC2 [24], SmartNet [25], Store&Go [26], UpGrid [27] and WiseGrid [4] were showcased to emphasize that innovation is a European investment in our common future. The majority of the projects are part of the BRIDGE initiative to unite H2020 Smart Grid and Energy Storage projects. Participating at the project zone confirmed the strong relevance of the cybersecurity topic for a secure Smart Grid.

SUCCESS offered a good overview of the layered security concepts for the future energy infrastructures at its walk-around stand of the H2020 project zone (Figure 8). At the stand, the overview video was used to provide context in the words of several high-ranking representatives of the partners and an ad-hoc overview presentation was offered to participants who showed interest in the project's content. Furthermore, a deeper technical presentation of specific issues was offered to the respective interested audience. Finally, an easy opportunity for newsletter subscription was offered.

That stand format attracted several exhibition participants to have a peek into projects with complementary scope, giving a congruent vision of the EU-funded research projects. Furthermore, the secluded location of these projects, encouraged the interaction of the projects themselves – and of the partners participating and presenting the projects – during times when fewer participants were at the project zone. The participants, mostly utilities, showed strong interest in enrolling for the SUCCESS newsletter, and especially in receiving invitations to the Trial Site Open Days and to the planned webinars.

A highlight of the SUCCESS outreach during the EUW 2017 was achieved during the presentation of the project concept at the discussion forum on running H2020 Smart Grid and Energy Storage projects (Figure 9). A short and concise overview of the added value of the SUCCESS security concepts triggered a significant number of participants – mainly cybersecurity professionals and utilities' representatives – to seek exchange and visit also the project stand for further information possibilities.



Figure 9: Presentation of the SUCCESS Security Solution added value at the EUW 2017 in Amsterdam

4.1.3 Partner stands

SUCCESS has pursued the organization of well-targeted and placed exhibitions to entrench SUCCESS in the research landscape by pursuing personal contacts, achieving the personification of SUCCESS contributions through the partners and conveying a message of immediate feedback integration into the innovation loop of the project. The strategic goal of the SUCCESS exhibition stands is to trigger open discussions, to facilitate collaborations and to spark innovation in the overlapping domains of energy, security and ICT. The concept has been adjusted to a multi-faceted target audience. Hereby SUCCESS was presented at the following exhibitions:

- a dedicated partner booth during European Utility Week 2016 in Barcelona, Spain;
- the Professional Mobile Radio 2016 in Cologne, Germany;
- the Digital Innovation Forum in Amsterdam, Netherlands which enabled the participants to engage in discussions about the ongoing work.

4.2 Special sessions

Within the scope of the current deliverable, three special sessions were organized.

4.2.1 Event-Based Control, Communication and Signal Processing 2016

The first special session took place at the Second International Conference on Event-Based Control, Communication and Signal Processing, abbreviated as EBCCSP 2016, in Kraków, Poland [28]. The conference concerns recent advances and developments in the event-based (Lebesgue-based) systems and architectures applied in disciplines including control, communication and signal processing. Because of its relevance, SUCCESS partners proposed the special session focused on inertia-less energy scenario that requires real time smart metering functionality in order to enable new control modalities.

The event for 2016 was the 2nd edition (sponsored by the IEEE) that attracted 59 articles in the work program and about 70 attendees mainly from Europe, USA, Japan, and Canada.

The special session was entitled “Event-based observations and control of renewable energy flows in inertia-less scenario” and focused on event-based sensing in general, event-based real-time observations of energy, frequency and phasors, attributes of power quality, and the control of inertia-less smart grid. In that context, next generation event-based energy monitors supplying the data to AMI and the SCADA were presented first time during the EBCCSP-2015. The viable commercial introduction of renewable energy sources, which are largely incompatible with massive and centralized coal and nuclear power generation have given rise to the paradigm of decentralized grids. The new paradigm creates new requirement on real-time metering and controlling, setting the context for the special session [29].

During the special session, 5 papers were presented, 3 of which with SUCCESS content [30] [31] [32]. Table 3 depicts the relevant statistics on the special session.

Table 3: Number of papers and attendants in EBCCSP 2016

	Conference	Special session	SUCCESS
Papers	59	5 (8% ¹)	3
Attendants	Approx. 70	>15 (21% ²)	2 partners

The session enjoyed significant interest in the context of the conference. The specific audience belongs mainly in the community revolving around home/building automation, and energy

¹ Percentage of the papers presented during the special session out of the total number of papers presented in the conference.

² Percentage of the attendants of the special session out of the total number of the attendants of the conference.

management. Based on the above-mentioned numbers, our self-assessment about the impacts generated by this event is positive.

4.2.2 Event-Based Control, Communication and Signal Processing 2017

The event for 2017 was the 3rd edition (sponsored by the IEEE) that attracted more than 50 articles in the work program and about 80 attendees worldwide.

The dedicated session was entitled “Event-Based Communication and Smart Metering” focused on different aspects of event-based sensing. During the session, SUCCESS was represented by 2 papers, a regular paper “Secured Event-based Smart Meter” by Mikhail Simonov and Gianluca Zanetto and a Work in Progress paper “Haar Wavelet and Global Sensitivity Criteria in Smart Grid Metering Model” by Mikhail Simonov.

Table 4: Number of papers and attendants in EBCCSP 2017

	Conference	Special session	SUCCESS
Papers	50+	6 (12%)	2
Attendants	Approx. 80	>15 (19%)	2 partners

4.2.3 Innovative Smart Grid Technologies

At the IEEE PES Innovative Smart Grid Technologies conference [33] held in Torino, Italy, from 26th to 29th of September 2017, SUCCESS organized the Workshop entitled “Securing the electrical network of the future” (Figure 10), during which the SUCCESS project approach to threat and countermeasure analysis was presented, with special focus on the vulnerabilities that could be introduced by Smart Meters.



Figure 10: SUCCESS Workshop within ISGT Conference

The six speakers, Antonello Monti (RWTH) who was also the organizer of the Workshop, Ganesh Sauba (DNV GL), György Dan (KTH), Manuel Allhoff (P3), Massimo Cresta (ASM Terni) and Mikhail Simonov (ISMB) guided the participants through selected aspects treated in SUCCESS, starting off with a brief overview of the conceptual approach of the project, and then proceeded to the threat analysis that provides the starting point for the

countermeasure derivation proposed in SUCCESS. During the Workshop, they provided deeper technical insights into the challenges of specific attacks regarding PMUs and time synchronization and present aspects of the pan-European Security Monitoring Solution. There was also a presentation about the Trial Sites of the European energy operators (DSO) in three different countries. Finally, the last presentation gave an outlook on specific socio-economic impacts related with real time smart metering systems such as the system developed in SUCCESS.

The Special Session entitled “Smart Metering” was organized by TeamWare and chaired by Gianluca Zanetto (TeamWare). During this session, the paper “Agent-based Protection of Event-based Smart Meters” was presented.

Table 4 depicts relevant statistics on the workshop and the special session.

Table 4: Number of papers, presentations and attendants in ISGT

	Conference	Workshop	Special sessions	SUCCESS
Papers			1	1
Presentations		6	1	7
Attendants	Approx. 90	>20	>30	8 partners

4.3 Third-party events

Finally, SUCCESS partners attended several third-party events and congresses where the industrial and scientific community gathered to discuss cutting edge technology in the sector and confirm the relevance of its results. SUCCESS partners took part in:

- the AEIT conference 2016 [34],
- the Smart Energy Workshop organized by the CoSSMiC project [35],
- the VIMSEN industrial workshop [36],
- the Kongress EnergieEffizienzBauen 2017 [37],
- the Power Summit Dublin 2017 [38],
- the Smart Grid Cyber-Security Symposium [39],
- the Fraunhofer IoT Innovation and Networking Day [40],
- the EBCCSP-2017 [41],
- the Wireless World Research Forum Meeting 39 [42], as well as
- the IEEE SmartGridComm 2017 [43].

5. Tentative plan for future events

SUCCESS's plan for the rest of the project includes events of all three types, as they are described in Section 1. As the project approaches its end, the dissemination of the project results through the planned events will have a large impact and will foster further innovation in the Smart Grid security sector.

5.1 Innovation events

One further innovation event is currently foreseen over the duration of the project.

The tentative plan for the coming innovation events foresees either presentations at an externally planned event or a SUCCESS organised event in the pulsating IT start-up capital, Berlin, Germany. This innovation event is planned for the end of the project. A further innovation event, at which the projects final results will also be presented, is tentatively planned to be held together with the Trial Site open Day of the Irish ESB trial site. This event will be co-located with the project final review at the ESB trial site in Ireland implementing a request from the 1st Periodic Review that the project final review be held at a project trial site.

By also co-locating the final event – where the final SUCCESS results will be presented – with the innovation event, SUCCESS may present the final results to the most innovative audience to take up and to potentially spark new ideas both for follow-up projects but also most importantly towards maturation from a commercial point of view.

5.2 Trial Site Open Days

The plans for the Trial Site Open Days foresee three events at the three Trial Sites respectively, as it is already mentioned in Section 3.

5.3 Exhibitions and special sessions

SUCCESS partners intend to participate actively and also to promote SUCCESS content in major exhibitions in the relative field. Notably the following exhibitions within 2017 and 2018, where SUCCESS participation is expected, are:

- PMR Expo 2017 in Cologne, Germany [44]
- CPDP 2018 in Brussels, Belgium [45]
- E-world 2018 in Essen, Germany [46]
- Hannover Messe 2018 in Hannover, Germany [47]
- European Sustainable Energy Week 2018 in Brussels, Belgium [10].

SUCCESS also intends to organize an event, possibly in Dublin, Ireland, where authorities will be invited to join. This event will give SUCCESS the opportunity to disseminate the project results to decision makers, promote the implementation of the SUCCESS architecture in the real world and receive feedback from the attendees regarding legal, financial and technical aspects. This event will address the suggestion of the reviewers during the project review that was conducted in May 2017, as they suggested that SUCCESS be more involved with authorities.

6. References

- [1] SPARKS, "SPARKS project website," [Online]. Available: <http://www.sparksproject.eu/>. [Accessed 30 September 2016].
- [2] NOBELGRID, "NOBELGRID project website," [Online]. Available: <http://nobelgrid.eu/>. [Accessed 30 September 2016].
- [3] PRECYSE, "PRECYSE project website," [Online]. Available: <http://precyse.eu/>. [Accessed 30 September 2016].
- [4] WISEGRID, "WISEGRID project website," [Online]. Available: <https://www.wisegrid.eu/>. [Accessed 30 September 2017].
- [5] SUCCESS, "SUCCESS Twitter Account," [Online]. Available: <https://twitter.com/successenergy1>. [Accessed 30 September 2016].
- [6] SUCCESS, "SUCCESS LinkedIn group," [Online]. Available: <https://www.linkedin.com/groups/12010276/profile>. [Accessed 30 September 2016].
- [7] European Utility Week, "European Utility Week 2016 website," [Online]. Available: <http://2016.european-utility-week.com/>. [Accessed 26 October 2017].
- [8] RESERVE, "RESERVE project website," [Online]. Available: <http://re-serve.eu/>. [Accessed 30 September 2017].
- [9] SUCCESS, "Deliverable D5.1 : Trial Sites Planning," 2017.
- [10] Sustainable Energy Week, "Sustainable Energy Week website," [Online]. Available: <http://www.eusew.eu/>. [Accessed 26 October 2017].
- [11] European Utility Week, "European Utility Week website," [Online]. Available: <http://www.european-utility-week.com/>. [Accessed 26 October 2017].
- [12] AnyPlace, "AnyPlace project website," [Online]. Available: <http://www.anyplace2020.org/>. [Accessed 30 September 2017].
- [13] Elsa, "Elsa project website," [Online]. Available: <http://elsa-h2020.eu/>. [Accessed 30 September 2017].
- [14] Empower, "Empower project website," [Online]. Available: <http://empowerh2020.eu/>. [Accessed 30 September 2017].
- [15] Flex4Grid, "Flex4Grid project website," [Online]. Available: <https://www.flex4grid.eu/>. [Accessed 30 September 2017].
- [16] Flexiciency, "Flexiciency project website," [Online]. Available: <http://www.flexiciency-h2020.eu/>. [Accessed 30 September 2017].
- [17] FutureFlow, "FutureFlow project website," [Online]. Available: <http://www.futureflow.eu/>. [Accessed 30 September 2017].
- [18] GoFlex, "GoFlex project website," [Online]. Available: <http://www.goflex-community.eu/>. [Accessed 30 September 2017].
- [19] InteGrid, "InteGrid project website," [Online]. Available: <https://integrid-h2020.eu/>. [Accessed 30 September 2017].
- [20] Integridy, "Integridy project website," [Online]. Available: <http://www.integridy.eu/>. [Accessed 30 September 2017].
- [21] Invade, "Invade project website," [Online]. Available: <http://h2020invade.eu/>. [Accessed 30 September 2017].

- [22] P. Smartest, "P2P Smartest project website," [Online]. Available: <http://www.p2psmartest-h2020.eu/>. [Accessed 30 September 2017].
- [23] RealValue. [Online]. Available: <http://www.realvalueproject.com/>. [Accessed 30 September 2017].
- [24] SmarterEMC2, "SmarterEMC2 project website," [Online]. Available: <http://www.smarteremc2.eu/>. [Accessed 30 September 2017].
- [25] SmartNet. [Online]. Available: <http://smartnet-project.eu/>. [Accessed 30 September 2017].
- [26] S. & Go, "Store & Go project website," [Online]. Available: <https://www.storeandgo.info/>. [Accessed 30 September 2017].
- [27] UpGrid, "UpGrid project website," [Online]. Available: <http://upgrid.eu/>. [Accessed 30 September 2017].
- [28] EBCCSP2016, "Second International Conference on Event-Based Control, Communication and Signal Processing Homepage," [Online]. Available: <http://home.agh.edu.pl/~ebccsp16ct>. [Accessed 30 September 2016].
- [29] EBCCSP2016, "Call for Papers, Special Session 06, "Event-based observations and control of renewable energy flows in inertia-less scenario"," [Online]. Available: <http://home.agh.edu.pl/~ebccsp16/special-sessions-call-for-proposals/>. [Accessed 30 September 2016].
- [30] M. -. I. Simonov, Compressive Sensing with Sparse Reporting for Energy, Krakow, Poland : IEEE Society , 2016.
- [31] M. -. I. Simonov, Data Protection Aspects in Lebesgue-based Meters, Krakow, Poland: IEEE Society, 2016.
- [32] M. -. I. Simonov, Handling Load Aggregations with Event-Driven Energy Metering, Krakow, Poland : IEEE Society , 2016.
- [33] IEEE International Conference on Innovative Smart Grid Technologies , "ISGT Europe 2017 — Enabling the Transition to a More Electric World," [Online]. Available: <http://sites.ieee.org/isgt-europe-2017/>. [Accessed 27 October 2017].
- [34] AEIT 2016 , "AEIT 2016 website," [Online]. Available: <http://www.aeit.it/man/CA2016/ENG/>. [Accessed 26 October 2017].
- [35] CoSSMiC, "Smart Energy Workshop in Caserta," [Online]. Available: <http://cossmic.eu/smart-energy-workshop-in-caserta/>. [Accessed 26 October 2017].
- [36] VIMSEN, "VIMSEN project website," [Online]. Available: <http://www.ict-vimsen.eu/>. [Accessed 27 September 2017].
- [37] Bundesministerium für Wirtschaft und Energie, "Kongress 2017: EnergieEffizienzBauen," [Online]. Available: https://www.forschungsnetzwerke-energie.de/lw_resource/datapool/_items/item_133/programm_kongresseeb.pdf. [Accessed 26 October 2017].
- [38] National Power Summit, "National Power Summit website," [Online]. Available: <https://www.powersummit.ie/>. [Accessed 26 October 2017].
- [39] Symposium on Innovative Smart Grid Cybersecurity Solutions, "Symposium on Innovative Smart Grid Cybersecurity Solutions website," [Online]. Available: <http://smartgrid-cybersecurity.events/>. [Accessed 26 October 2017].
- [40] Fraunhofer Institute for Applied Information Technology, "Fraunhofer IoT Innovation and Networking Days," [Online]. Available: <https://www.fit.fraunhofer.de/en/events/fraunhofer-iot-innovation-and-networking-days.html>. [Accessed 26 October 2017].

- [41] Event-Based Control, Communication and Signal Processing, “Event-Based Control, Communication and Signal Processing website,” [Online]. Available: <https://ebccsp2017.org/>. [Accessed 26 October 2017].
- [42] Wireless World Research Forum Meeting 39, “Wireless World Research Forum Meeting 39 website,” [Online]. Available: <http://www.wwr39.ch/WWRF.html>. [Accessed 26 October 2017].
- [43] IEEE SmartGridComm, “IEEE SmartGridComm website,” [Online]. Available: <http://sgc2017.ieee-smartgridcomm.org/>. [Accessed 26 October 2017].
- [44] PMR Expo, “PMR Expo website,” [Online]. Available: <https://www.pmrexpo.de/>. [Accessed 26 October 2017].
- [45] Computers, Privacy & Data Protection 2018, “Computers, Privacy & Data Protection 2018 website,” [Online]. Available: <http://www.cpdconferences.org/>. [Accessed 26 October 2017].
- [46] E-world, “E-world website,” [Online]. Available: <https://www.e-world-essen.com/de/aktuelles/>. [Accessed 26 October 2017].
- [47] Hannover Messe 2018, “Hannover Messe 2018 website,” [Online]. Available: <http://www.hannovermesse.de/home>. [Accessed 26 October 2017].

7. List of Abbreviations

AMI	Advanced Metering Infrastructure
CPDP	Computers, Privacy and Data Protection
DE-SMIS	Decentralised Instance of pan-European Security Monitoring Information System
DR	Demand Response
DSO	Distribution System Operator
EBCCSP	Event-Based Control, Communication and Signal Processing
EC	European Commission
EIT	European Institute of Innovation and Technology
E-SMIS	Pan-European Security Monitoring Information System
EUSEW	European Sustainable Energy Week
EUW	European Utility Week
EV	Electric Vehicle
H2020	Horizon 2020
ICT	Information and Communications Technology
IEEE	Institute of Electrical and Electronics Engineers
IoT	Internet of Things
IT	Information Technology
NORM	Next Generation Open Real Time Smart Meter
OEM	Original Equipment Manufacturer
PES	Power and Energy Society
PMR	Professional Mobile Radio and Control Rooms
PMU	Phase Measurement Unit
PR	Public Relations
Q&A	Questions and Answers
SCADA	Supervisory Control and Data Acquisition
SME	Small and Medium-sized Enterprises
TSO	Transmission System Operator
VIMSEN	Virtual Microgrids for Smart Energy Networks