

CROSS FERTILISATION THROUGH ALIGNMENT, SYNCHRONISATION AND EXCHANGES FOR IoT

H2020 – CREATE-IoT Project

Deliverable 07.05

IoT FA dissemination and collaboration activities report year 3

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DoW	This deliverable describes the events that have been carried out in Year 3, the synergies in the LSPs and the impact these events have had on the communities affected, web site and event statistics.		
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1. EXECUTIVE SUMMARY

1.1. Publishable summary

The present deliverable D07.05 IoT FA dissemination and collaboration activities report Year 3 summarises the dissemination activities performed by the CREATE-IoT project from January 2019 (M25) to March 2020 (M39) following the previous resumes of activities detailed in the D07.03 and D07.04.

The current deliverable reports about the following activities:

- Collaboration activities within the IoT LSPs Programme, including the work carried out in the framework of the Activity Groups.
- Development and implementation of the online dissemination tools, including the project website and social media, as well as the IoT LSPs Programme newsletter.
- Design and implementation of the offline dissemination tools, event organisation and networking opportunities.

1.2. Non-publishable information

The document is public.

2. INTRODUCTION

2.1. Purpose and target group

The current deliverable D07.05 presents all the communication and dissemination activities carried out by the CREATE-IoT project in the January 2019 - March 2020 timeframe. The document reports on the activities developed and implemented in the framework of WP7, whose main goal is to ensure the effective implementation of the collaborative communication strategy coordinated by CREATE-IoT and U4IoT for the IoT European Large-Scale Pilots (LSPs) Programme.

The deliverable is structured along two main sections:

- **Collaboration activities:** it reports on all the collaboration activities organised or supported by CREATE-IoT across the IoT LSPs Programme, including the activities implemented through participation to the Activity Groups.
- **Dissemination:** it reports on all the dissemination activities carried out by CREATE-IoT partners during the period under consideration.

2.2. Contributions of partners

All CREATE-IoT partners contributed to the deliverable by providing the dissemination reports of each activity they executed in the January 2019 - March 2020 timeframe. More specifically, the following partners contributed to various sections of the report as detailed below.

IDC: As deliverable lead, IDC worked on the initial structure of the document, and on the review and integration of all contributions into a final report. In the framework of WP7, IDC participated to several events and actively contributed to the project and Programme's dissemination. In terms of collaboration activities, IDC was deeply involved in the AG08 activities and coordinated the development and collection of contributions to the periodical Programme's newsletters from all the IoT LSPs. In addition, IDC was the lead author of the IoT LSPs e-book as reported in Section 4.3

SINTEF: As the project coordinator, SINTEF closely monitored the activities implemented in the framework of WP7 ensuring their complete reporting in the current deliverable. SINTEF participated to most of the events and actively contributed to the project and Programme's dissemination and promotion via different channels. SINTEF was involved in the AG08 activities and coordinated the development and collection of contributions to the Programme's brochures from all the IoT LSPs and supported the production of the material online and printed. It reviewed the contributions from the partners and highlighted the project main achievements in the period under consideration.

ANYSOL: As WP7 leader, ANYSOL supported IDC in drafting the dissemination report. Throughout the period ANYSOL attended several events representing and disseminating CREATE-IoT. During the events, ANYSOL produced several video interviews on relevant topics involving partners and stakeholders and took pictures to foster dissemination through the project website and social media. ANYSOL also supported all partners in their dissemination activities, especially when they were organising events/conferences, and it also supported the IoT LSPs projects, increasing the impact of their dissemination activities. In this framework, ANYSOL actively participated in the AG08 meetings to coordinate effort with the dissemination and communication managers of all IoT LSPs projects.

MI: Mandat International actively contributed to the 2019 IoT Week related activities, including sessions, exhibition area for the LSPs, IoT Security and Privacy Booth and GIOTS. It also worked on the IoT Training and IoT Handbook, which disseminate best practices and challenges faced by

the LSPs projects. Collaboration with U4IoT and contribution to events are also outlined in the current deliverable.

ETSI: ETSI contributed to the description of the coordination activities undertaken by CREATE-IoT in the framework of AG02. Participation to events and networking activities was also outlined in Section 4.2.

UNP: As main organiser, Unparallel provided information regarding the “CREATE the Next Generation IoT eXperience for the Future” event held in Lisbon in February 2019. It also provided more details regarding the IoT Week 2019, where it assumed an important role in disseminating not only CREATE-IoT as a CSA, but the IoT LSPs Programme as a whole.

ARTS: ARTS promoted the integration of artistic practices in the LSPs programme and supported the engagement of SMEs aiming at the creation of innovative new small businesses at the intersections of the areas of competence of the five Pilots. As Consortium member, ARTS provided information concerning events and networking sessions focused on IoT and arts, which are reported in Section 4.2 of the current deliverable.

IDATE: IDATE contributed to Section 4.2 of the current deliverable by providing information concerning events it co-organised or attended during the period under consideration.

AL: Arthur’s Legal provided an overview of its dissemination and collaboration activities in the form of webinars on IoT privacy, security and trust in Section 4.1.4 of this deliverable. Additionally, participation in networking activities and events where Arthur’s Legal was involved has also been highlighted in Section 4.2.

BLU: As Consortium member, BluSpecs worked as an ecosystem developer for European start-ups and SMEs through the IoT Next Club, whose activities are presented in Section 3.4 of the current deliverable.

FE: As Consortium member, FE contributed to the current deliverable by providing information on their two roundtables held at the IoT Week 2019 / GIOTS in Aarhus. Additionally, FE provided information around their exhibition of a high-profile IoT-led artwork at the prestigious international festival SXSW, reported in Section 4.2.

ATOS: ATOS provided inputs to Section 4.2 regarding participation to numerous events (both as attendees and speakers). Additionally, as a key element of the Business and Sustainability Models Task, ATOS co-organised the “Workshop on Exploitation Strategy” held during IoT Week 2019, whose results are highlighted in Section 4.2.

AS: AS contributed to the coordination activities with U4IoT project by co-chairing AG05. It also contributed to the drafting of the collective paper ‘Personal Data Protection for Internet of Things Deployments: Lessons Learned from the European Large-Scale Pilots of the Internet of Things’. These activities are reported in the present deliverable in Sections 3.1 and 4.3. Participation to key events is also highlighted in Section 4.2.

2.3. Relations to other activities in the project

This document reports on all the collaboration and dissemination activities carried out by CREATE-IoT partners, thus relating to the work performed in all the other tasks active throughout the third year of the project.

A detailed description of each activity, including their relations to other activities in the project, is provided in the individual reports presented in the following sections of the current deliverable.

3. COLLABORATION ACTIVITIES WITHIN THE EUROPEAN IOT LSP PROGRAMME

3.1. Collaboration with U4IoT

CREATE-IoT has worked in collaboration and coordination with U4IoT on several items. Beyond regular conference calls of coordination between the two projects, CREATE-IoT and U4IoT closely collaborated on the communication strategy through AG08. In this framework, CREATE-IoT and U4IoT co-organised the LSPs booth at the IoT Week 2019 in Aarhus (Denmark), where the booth enabled to present the IoT LSPs programme as a whole and showcase its achievements. During the period, the two projects also co-led the organisation of the IoT Security and Privacy booth activities, both at the IoT Week and other events.

Furthermore, CREATE-IoT and U4IoT co-chaired the AG05, which organised regular meetings and activities on data protection, end-user engagement and data ethics. The AG dealt with the problems and issues raised by the different Pilots, which led to the elaboration and drafting of the collective paper ‘Personal Data Protection for Internet of Things Deployments: Lessons Learned from the European Large-Scale Pilots of the Internet of Things’.

CREATE-IoT and U4IoT organised periodic coordination meetings and held common Telcos every 3 weeks.

3.2. AG01 Activities

During the period under consideration, CREATE-IoT contributed to the coordination of the activities undertaken in the framework of Activity Group 01, focused on “IoT Focus Area sustainability”. Throughout the period AG01 focused on issues related to how to achieve sustainability beyond the IoT pilot duration, and to the viability of IoT infrastructure in the future. The challenges were addressed by fostering links between communities of IoT users and providers, as well as with Member States' initiatives and take advantage of the experience of others in order to demonstrate, grow and support stakeholders to replicate the IoT pilots.

Important aspects that were considered are i) sustainability of the deployed infrastructure; ii) viability of the business model; iii) how to make the ecosystem sustainable; iv) KPIs for evaluation.

During this period the AG01 finalised the IoT LSPs e-book as reported in Section 4.3, worked on the development of a common methodology and the design of horizontal KPIs to measure the LSPs impact on the overall Programme, and was involved in the evaluation of business modelling, sustainability activities for all LSPs. In order to articulate this collaboration, CREATE-IoT organizes the events described in D02.06. workshop on sustainability, D02.06 workshop on exploitation strategy with the results gathered through this collaborative process on business modelling and sustainability activities being recorded on delivery D02.05 Business and sustainability models for large scale IoT scenarios.

3.3. AG02 Activities

During the period under consideration, CREATE-IoT contributed to the coordination of the activities undertaken in the framework of Activity Group 02, focused on “IoT Standardisation, Architecture and Interoperability”. Throughout the period AG02 has continued its work on the definition of the Interoperability Framework, in particular on the progression of the definition of the 3D Reference Architecture Model.

Progress has been reported in regular workshops organised by AG02, in continuation of those held in the previous reporting period. A total of seven workshops have been organised by AG02, including three in the period under consideration. An overview of the workshops and meetings held by AG02 is provided in the Table below.

Table 1 AG02 Workshops and Meetings

Meeting	Date & Time	Type	Purpose
AG 02 Workshop on “LSPs use cases: integration and standardisation alignment”	22 nd March 2019	Face to Face Meeting, Brussels	Discuss the progress of the definition of the IoT Interoperability Framework; the linkage of AG02 with the MSP/DEI Work Group; a refinement of the KPIs associated to standards within the LSPs; and the dissemination in standardisation.
AGs Meeting @ IoT European LSPs Programme Workshop on Focus Area Internet of Things	3 rd May 2019	Face to Face Meeting, Brussels	Updates on the work in the different AGs: main activities, priorities for the next 3 months and main deliverables/outcomes.
AG02 Workshop on “IoT Standardisation	18 th - 20 th June 2019	Face to Face Meeting, Aarhus	Several sessions dedicated to IoT standardisation in which the IoT LSPs, the CREATE-IoT CSA and the IoT LSPs AG02 contributed and discussed recent progress regarding IoT Standardisation, Privacy, Semantic Interoperability and the LSP 3D Reference Architecture model.
AG02 Workshop on “IoT Standardisation	22 nd February 2020	Face to Face Meeting, Brussels	Present recent progress in the definition of IoT architectures and standards, in particular the contribution of the IoT LSPs and the work done in the associated CSAs.

3.4. Activity Group 08 Activities

During the period under consideration, CREATE-IoT effectively continued to support and promote the activities organised in the framework of AG08. CREATE-IoT, in collaboration with U4IoT, fostered cooperation with the partners of each project and actively engaged with the LSPs to support their communication activities.

In particular, CREATE-IoT:

- Provided inputs and feedback to the AG08 Communication Strategy implemented in 2019.
- Managed the continuous update and maintenance of the Programme’s website.
- Managed the collection of inputs for the European IoT LSPs Programme Newsletter through direct engagement with the LSPs and U4IoT.
- Managed the design and distribution of the quarterly releases of the European IoT LSP Programme Newsletter.
- Distributed the Programme’s marketing materials at the following events: Connected Smart Cities Conference 2019 (Brussels, 17/01/2019), CREATE the Next Generation IoT eXperience for the Future - Workshop series (Lisbon, 27-28/2/19), European Industry Partnerships Collaborative Event (Amsterdam, 17/4/19), IoT Week (Aarhus, June 2019), European Industry Partnership event (Brussels, 12/09/19), European Industry Partnerships Lighthouses to thrive in the New Digital Age event (Brussels, 5/11/20), Digitising European Industry Stakeholder Forum (Madrid, 13/11/2019), Policies to Support Open Data Marketplaces (The Hague, 29/01/2020), Navigating IoT Architectures and Standards Days (Brussels, 19-20/02/2020).
- Produced the IoT LSPs e-book launched at IoT Week 2019.

- Produced a set of video interviews to promote the LSPs at the CREATE the Next Generation IoT eXperience for the Future – Workshop Series (Lisbon, 26-28/02/2019), IoT Week 2019 (Aarhus, June 2019) and European Industry Partnerships for New Digital Age event (Brussels, 12/09/2019);
- Supported the dissemination of the content shared by the Programme’s social media channels through cross-publication on the project social media channels.
- Supported the dissemination of the content shared by the LSPs’ social media channels through cross-publication on the project social media channels.
- Supported the organisation of the AGs meeting at the IoT European LSPs Programme Workshop on Focus Area Internet of Things.
- The project participated in every periodical meeting and provided contributions and inputs to the ongoing collaboration activities, as follows:

Table 2 AG08 Meetings

Meeting	Date & Time	Type	Agenda
AG08 Meeting	11 th January 2019, h. 11.00-12.00 CET	Conf call	<ul style="list-style-type: none"> • Status on preparation for the CSCC 2019 • Organization of the booth in CSCC 2019 • Planning of projects for IoT Week - demos • Discussion with the IoT week organisers
AG08 Meeting	19 th February 2019, h. 11.00-12.00 CET	Conf call	<ul style="list-style-type: none"> • IoT Week organisation • IEEE IoT World Forum • Other events planned from the projects • AG08 communication plan and collection of reporting information • White paper • IoT Handbook
AG08 Meeting	3 rd April 2019, h. 10.00-11.00 CET	Conf call	<ul style="list-style-type: none"> • AG08 regular meetings • European Industry Partnerships Collaborative Event: participation and support • IoT Week: preparation and status • IEEE IoT World Forum • LSPs Coordinators meeting & AG08 meeting • Other events planned from the projects • White paper • IoT Handbook
AG08 Meeting	24 th April 2019, h. 10.00-11.00 CET	Conf call	<ul style="list-style-type: none"> • IoT Week: preparation and status • AG08 f2f meeting • Other events planned from the projects • European IoT LSP Programme Newsletter • White paper • IoT Handbook
AGs Meeting @ IoT European LSP Programme Workshop on Focus Area Internet of Things	3 rd May 2019	Face to Face Meeting, Brussels	<ul style="list-style-type: none"> • Updates on the work in the different AGs: main activities, priorities for the next 3 months and main deliverables/outcomes

Meeting	Date & Time	Type	Agenda
AG08 Meeting	26 th June 2019, h. 10.00-11.00 CET	Conf call	<ul style="list-style-type: none"> • Feedback from the IoT Week and impressions • European IoT LSP Programme Newsletter • News to share and other activities and events to support up to the end of the year • LSPs f2f meeting • Impact of LSP projects and advancements • Brochure with main achievements of the projects
AG08 Meeting	24 th July 2019, h. 10.00-11.00 CET	Conf call	<ul style="list-style-type: none"> • European IoT LSP Programme Newsletter • News to share and other activities and events to support up to the end of the year • LSPs f2f meeting • Brochure with main achievements of the projects - status, next steps
AG08 Meeting	27 th August 2019, h. 10.00-11.00 CET	Conf call	<ul style="list-style-type: none"> • European IoT LSP Programme Newsletter • News to share and other activities and events to support up to the end of the year • LSPs f2f meeting
AG08 Meeting	25 th September 2019, h. 10.00-11.00 CET	Conf call	<ul style="list-style-type: none"> • European IoT LSP Programme Newsletter • News to share and other activities and events to support up to the end of the year • Other activities • Compiling the results of the projects
AG08 Meeting	23 rd October 2019, h. 10.00-11.00 CET	Conf call	<ul style="list-style-type: none"> • News to share and other activities and events to support up to the end of the year • Other activities • Compiling the results of the projects
AG08 Meeting	27 th November 2019, h. 10.00-11.00 CET	Conf call	<ul style="list-style-type: none"> • European IoT LSP Programme Newsletter • News to share and other activities and events to support up to the end of the year • Other activities • Compiling the results of the projects

3.5. IoT Next Club

The IoT Next Club represents the next stage in developing the IoT ecosystem in Europe, which will bring together smaller companies and start-ups on an early stage of development. The club embraces SMEs from different sectors and verticals, such as Energy, Healthcare, Smart Cities, Transportation, Education and Agriculture. The IoT Next Club currently registers over 220 members, showing a growth of 300% in the last 6 months of 2019, and aims to connect all IoT programmes and activities in Europe with the SME and start-up community. In the second half of the year, IoT Next Club started to support specific activities to address key SME challenges. The club was able to organise a set of webinars alongside with strategic partners to provide high-quality content to its members, with a specific focus on Privacy & GDPR, Data Security, Cloud and IoT Security and Smart Cities. Apart from these webinars, the Club started to showcase some of the most interesting SMEs from its portfolio.

The main focus of the club is to leverage the strong and strategic synergies that can be created through cross-sector activities by the members of the club, due to the heterogenous character of the companies and sectors in which they operate. In this way, the club intends to continue its

disruptive path in Europe, attracting more start-ups and scale-ups to its universe, benefiting from an increasingly wider and diversified ecosystem and a totally free fee.

Regarding the main relations with the other LSPs, it should be noted that the IoT Next Club works together with these projects, not only from a communication point of view but also from a content point of view. By way of example, MONICA project and ACTIVAGE project have provided the members of IoT Next Club with a set of interesting learning cases on technological implementation gathered from their hackathons and open calls. At the same time, the IoF2020 project has already made itself available to support the club in creating very specific webinars in the smart farming area and, throughout 2019, IoT Next Club has been working with the Synchronicity project, having been invited to hold a workshop in Milan on October 2nd/3rd presenting the club, its impact on members and its relation to the future challenges of Smart Cities.

4. DISSEMINATION

4.1. Online Dissemination

4.1.1. Project Website and Programme's Web Portal

The CREATE-IoT project website (available at the following URL: <https://european-iot-pilots.eu/create-iot/>) is linked to the IoT LSPs Programme portal (<https://european-iot-pilots.eu/>) and provides access to key information and outputs from the project. The website was used throughout the project duration as the main informative dissemination tool, providing the audience with updates on all the developments of the project.

In terms of structure, the website includes an Events section featuring a calendar of events which are considered relevant with respect to the topics and issues addressed by the project. A specific section titled “CREATE-IoT Events” is dedicated to project’s events. A News page including more information about events and latest developments is available to all interested users. Public Deliverables and the IoT LSPs Handbook are also published on the website.



CREATE-IoT

Cross Fertilisation through Alignment, Synchronisation and Exchanges for IoT

• IoT FA strategy and coordination plan	eDeliverable
• Evolution of IoT FA	eDeliverable
• IoT FA Year 1 coordination conference	eDeliverable
• Common methodology and KPIs for design, testing and validation	eDeliverable
• IoT LSP handbook	eDeliverable
• Methodology for integrating ICT and Art	eDeliverable
• Workshops on User Acceptance	eDeliverable
• IoT as a key pillar of the EU digital economy	eDeliverable
• EU research and innovation activities overall plan	eDeliverable
• IoT Policy Framework	eDeliverable
• IoT Data Value Chain Model	eDeliverable
• Legal IoT Framework (Initial)	eDeliverable
• Strategy and coordination plan for IoT interoperability and standard approaches	eDeliverable
• Recommendations for commonalities and interoperability profiles of IoT platforms	eDeliverable
• IoT pre-normative activities	eDeliverable
• Initial report on IoT standardisation activities	eDeliverable
• Communication Plan	eDeliverable
• IoT FA and Project Web-Portal	eDeliverable
• IoT FA dissemination and collaboration activities report year 1	eDeliverable

Figure 1 CREATE-IoT Website – Deliverables page

Throughout the whole period the website has run analytics in order to measure traffic. The statistics were monitored through Google Analytics, which provides key information concerning performance including the number of page views and the most visited pages.

An overview of the statistics available for the period from January 1, 2019 to March 19, 2020 is depicted in the Figures below.

In the timeframe considered the project website registered 2 043-page views.

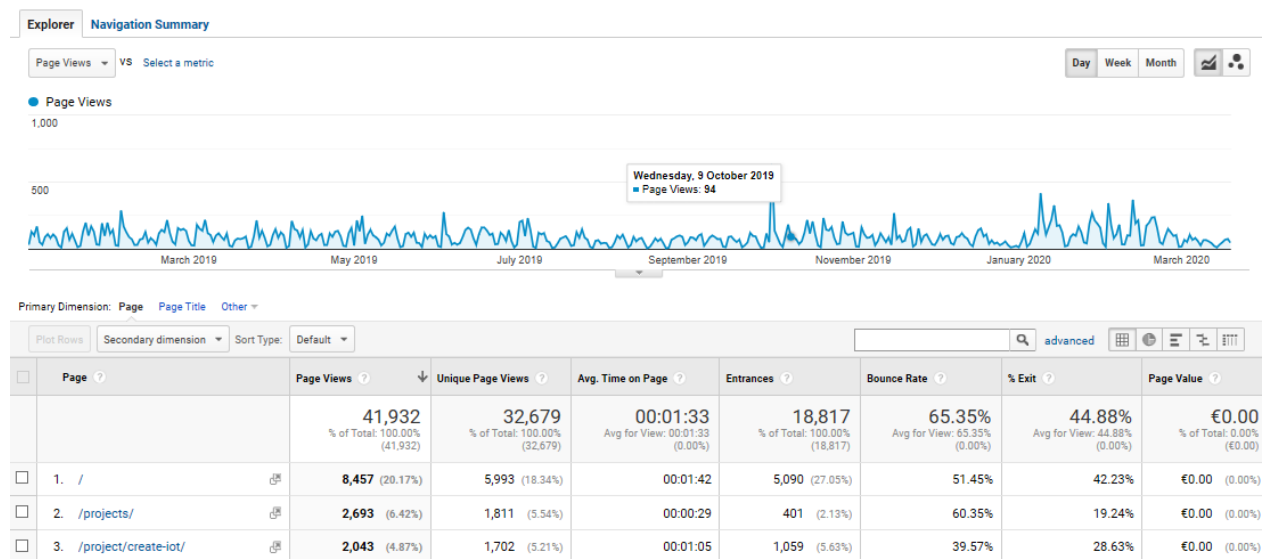


Figure 2 CREATE-IoT website and IoT LSPs Programme's portal - Analytics

Overall, the Programme's portal, which has been maintained and updated by CREATE-IoT since its implementation, registered 41 932-page views.

The highest number of visits were registered by the homepage, the projects section, the CREATE-IoT website and the open calls section.

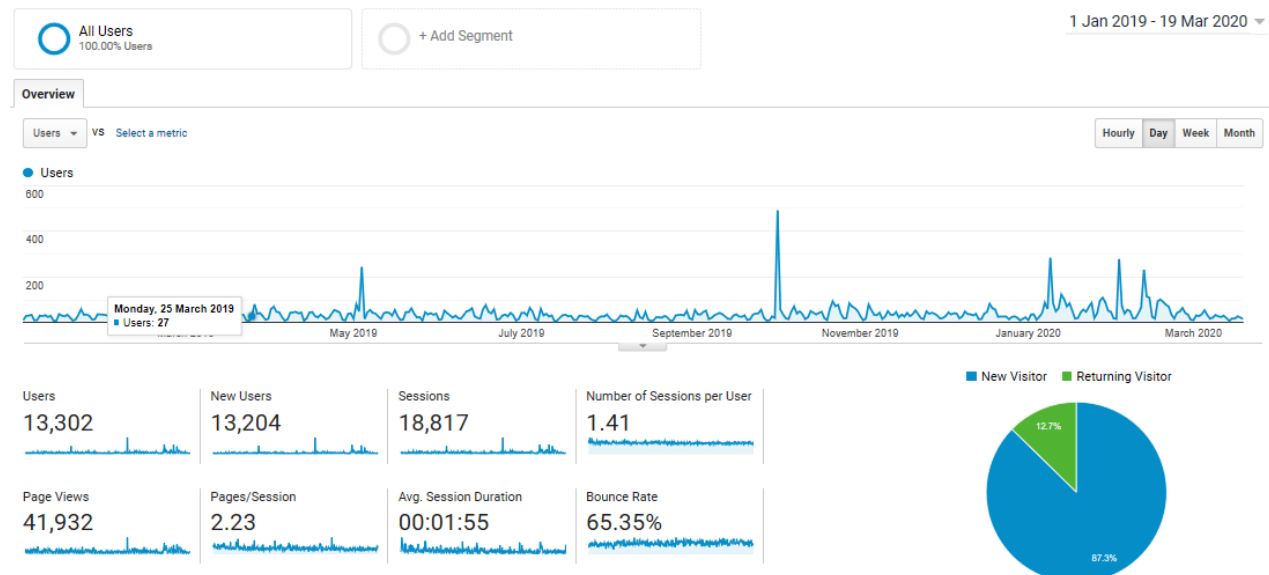


Figure 3 IoT LSPs Programme's portal – Page views analytics

Page ?	Page Views ?	Unique Page Views ?	Avg. Time on Page ?	Entrances ?	Bounce Rate ?	% Exit ?
	41,932 % of Total: 100.00% (41,932)	32,679 % of Total: 100.00% (32,679)	00:01:33 Avg for View: 00:01:33 (0.00%)	18,817 % of Total: 100.00% (18,817)	65.35% Avg for View: 65.35% (0.00%)	44.88% Avg for View: 44.88% (0.00%)
1. /	8,457 (20.17%)	5,993 (18.34%)	00:01:42	5,090 (27.05%)	51.45%	42.23%
2. /projects/	2,693 (6.42%)	1,811 (5.54%)	00:00:29	401 (2.13%)	60.35%	19.24%
3. /project/create-iot/	2,043 (4.87%)	1,702 (5.21%)	00:01:05	1,059 (5.63%)	39.57%	28.63%
4. /create-iot/	2,041 (4.87%)	1,552 (4.75%)	00:00:59	942 (5.01%)	44.37%	41.16%
5. /opencalls/	1,511 (3.60%)	1,188 (3.64%)	00:02:00	401 (2.13%)	73.57%	52.68%
6. /project/synchronicity/	1,137 (2.71%)	941 (2.88%)	00:01:48	452 (2.40%)	67.26%	46.79%
7. /project/iof2020-2/	1,082 (2.58%)	900 (2.75%)	00:01:52	456 (2.42%)	66.67%	47.32%
8. /project/actvage/	1,041 (2.48%)	883 (2.70%)	00:01:49	320 (1.70%)	58.44%	37.66%
9. /project/autopilot/	973 (2.32%)	828 (2.53%)	00:01:30	312 (1.66%)	71.47%	42.14%
10. /iot-events/	915 (2.18%)	730 (2.23%)	00:01:07	167 (0.89%)	83.83%	37.70%

Figure 4 IoT LSPs Programme's portal – Most visited pages

An assessment of the achievements related to the Programme's portal against the KPIs set is provided in the Table below.

Table 3 IoT LSPs Programme's portal KPIs and achievements

Programme's Portal KPIs	Target KPIs Y3	Achievements (Jan 2019 – March 2020)
Number of visitors – cumulative total	12,500	13,204
Number of pages visited - cumulative total	20,000	41,932

4.1.2. Social Media

Social media channels were used throughout the duration of the project in order to keep the audience up to date with the CREATE-IoT activities and allow for effective interaction with the stakeholders' community.



Figure 5 CREATE-IoT Twitter Account

Frequent updates were published to redirect visitors to the project's website and the Programme's portal, with the aim to promote and give access to the content published and the upcoming events.

During this timeframe, the project social media channels were also exploited to increase the interaction with the IoT LSPs projects through cross-publishing of content, which allowed to mutually leverage on the results produced and create further opportunities for engagement. Content published by the project social media channels was also cross published via the consortium partners' accounts.

The project Twitter account ([@CreateIoT_eu](https://twitter.com/CreateIoT_eu)) was mainly used to increase the visibility of the contents published on the project and Programme website, including information concerning past and upcoming events, news and public resources. Furthermore, news and information coming from external sources in line with the scope of the project were re-tweeted and further disseminated.

The project LinkedIn page (available at <https://www.linkedin.com/company/create-iot/>) was used to share with the LinkedIn community the latest news and resources published on the website with the aim to foster opportunities for discussion. News concerning relevant upcoming events were also shared in order to attract potential attendees.

The CREATE-IoT LinkedIn profile currently accounts for 1,294 contacts.

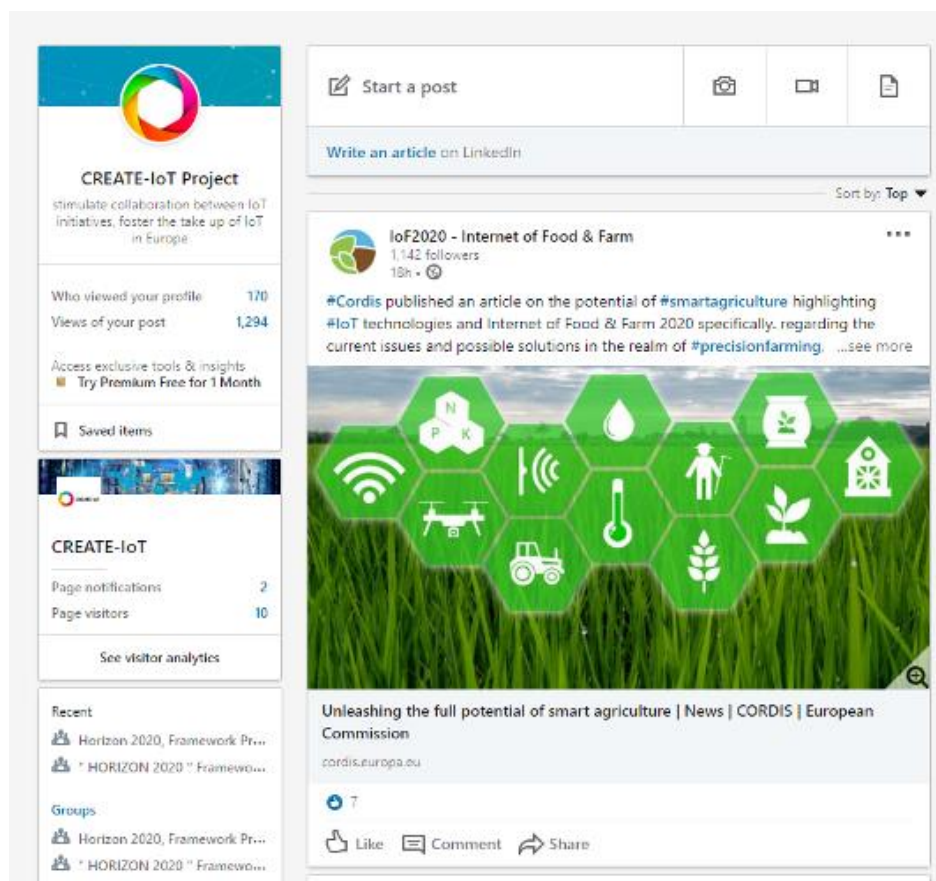


Figure 6 CREATE-IoT LinkedIn Profile

The project Facebook page ([@CREATEIoT](https://www.facebook.com/CREATEIoT)) continued to be exploited in order to share relevant IoT-related news and content with a larger community.

Information, photos and videos taken during the events organised or attended by the project representatives were also frequently shared with the audience to allow for further engagement.

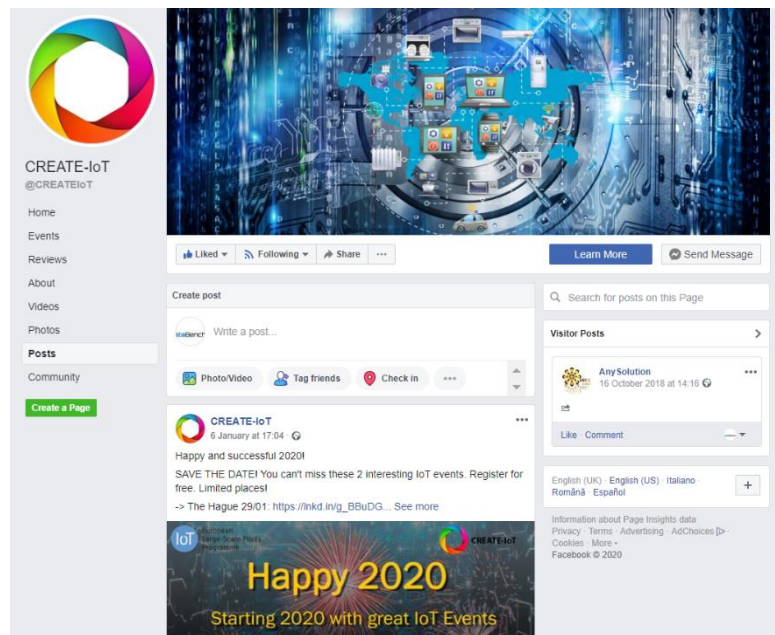


Figure 7 CREATE-IoT Facebook Page

Social media KPIs and achievements

The Table below provides information regarding the Target KPIs set for CREATE-IoT social media, which are periodically measured against the actual performance of the social media channels in order to assess the success of the project communication efforts. The Table also reports the achievements registered during the period.

Table 4 CREATE-IoT Social media KPIs and achievements

CREATE-IoT social media channels		Target KPIs	Achievements (Jan 2019 – Mar 2020)
Twitter	Number of followers (Y3)	200	419 (908 followers in total by 20/03/2020)
	Number of tweets	At least 4 tweets per week	Total number: 2,611 (1,850 in 2019 and 67 from 1/01/2020 to 20/03/2020)
	Total impressions (Y3)	50,000	544,643 (85543 from 1/01/2020 to 20/03/2020)
	Total engagements (Y3)	1000	4,043 (1,578 from 1/01/2020 to 20/03/2020)
	Av. Engagement rate (Y3)	2%	3.61%
LinkedIn	Number of followers (Y3)	50	1,063
	Number of posts	At least 4 posts per week	229
	Total impressions (Y3)	5,000	17,034
Facebook	Number of followers (Y3)	50	294 in total
	Number of posts	At least 4 posts per week	64 in 2019 (most dissemination has been done on Twitter)
	Page views (Y3)	300	573
	Post Engagements	400	573 in 2019 and 71 in 2020

4.1.3. Programme's Newsletter

The European IoT LSPs Programme newsletter was launched by CREATE-IoT at the end of October 2018 in the context of the collaboration with the LSPs through the AG08.

The aim of the newsletter was to promote the European IoT LSPs Programme outside its community of stakeholders in order to increase the visibility of the initiative and attract more players. The collection of inputs from the LSPs and the design of the quarterly releases were coordinated by CREATE-IoT, through the involvement of a professional graphic designer.

The newsletter distribution leveraged first of all IDC's network of contacts in the overall ICT industry and other interested users who subscribed to the newsletter through the Programme website. An overview of the current structure of the IDC contact database is provided below.

- 2,166 overall contacts.
- 55 countries (EU28 + 27 others).
- Sectors:
 - 45% industry.
 - 26% research & academia.
 - 17% government.
 - 12% Industry associations/ Foundations / Union.

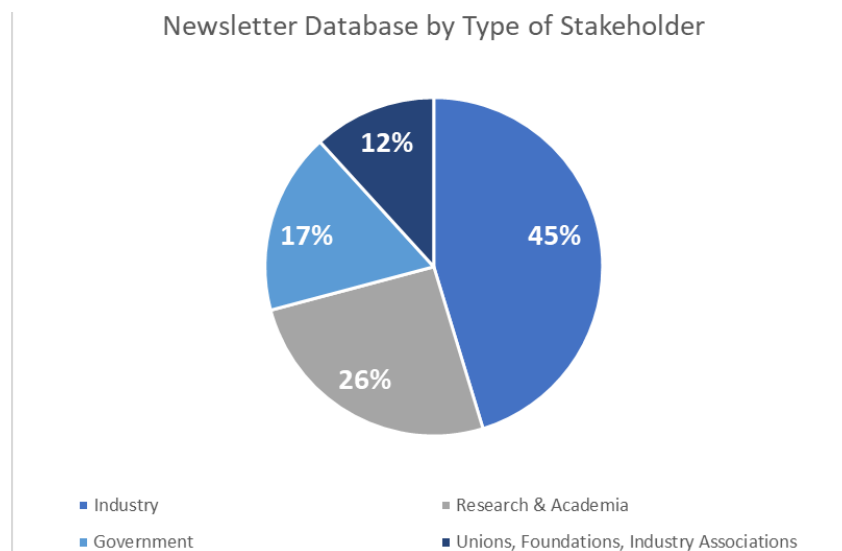


Figure 8 Programme's Newsletter Database by type of stakeholder

In close collaboration with the AG08, which supported the identification of relevant topics to be addressed and contributed to the newsletter dissemination, CREATE-IoT carried out periodical subscription campaigns as well as ongoing promotion on the social media to maximise the newsletter reach. An overview of the releases produced and distributed during the period under consideration, available also from the Programme's portal, is provided in the Table below.

Table 5 Programme's newsletter releases (2019-2020)

Newsletter release	Date
IoT European LSP Programme Newsflash #2	04/02/2019
IoT European LSP Programme Newsflash #3	02/05/2019
IoT European LSP Programme Newsflash #4	04/07/2019
IoT Week release	

IoT European LSP Programme Newsflash #5	02/10/2019
IoT European LSP Programme Newsflash #6	03/02/2020

Statistics

The following Tables and Figures report the Programme's newsletter statistics related to the releases distributed throughout 2019 and at the beginning of 2020. The last row in the Table below presents the average statistics registered by periodical newsletters according to the *DMA's Email benchmarking report 2019¹*, which was considered as a reference point to assess the results of this communication activity. As can be seen, the Programme's newsletter always registered satisfactory results above the standard average indicated.

Table 6 Programme's Newsletter statistics- Open rate and CTR

Newsletter release	Open Rate	Click-Through Rate (CTR)
IoT European LSP Programme Newsflash #2	31%	14.5%
IoT European LSP Programme Newsflash #3	30.2%	15.6%
IoT European LSP Programme Newsflash #4 IoT Week release	31.9%	10.3%
IoT European LSP Programme Newsflash #5	29.9%	16.4%
IoT European LSP Programme Newsflash #6	30.8%	11.6%
Average statistics (Source: DMA's Email benchmarking report 2019)	15.1%	3.2%

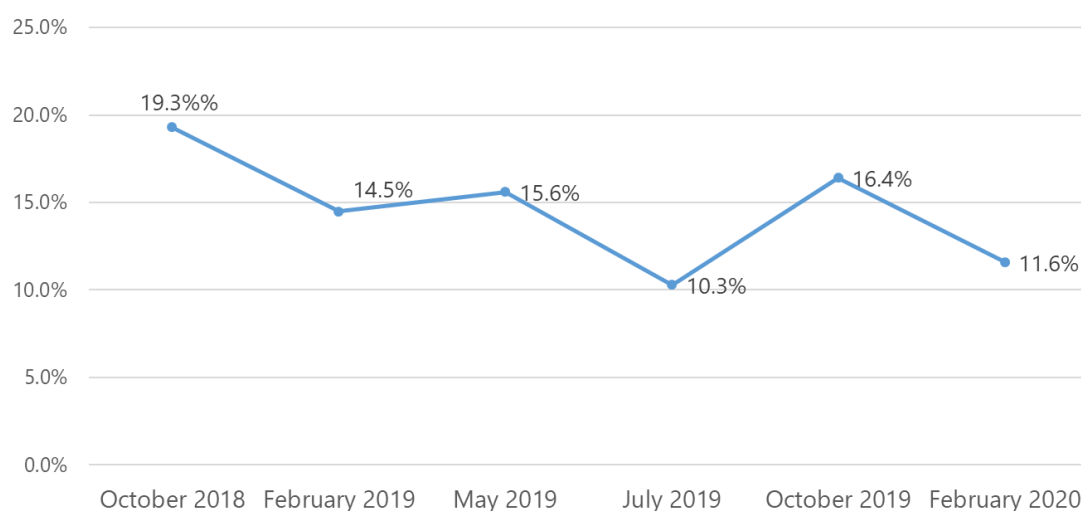


Figure 9 Programme's Newsletter Click-Through Rate

4.1.4. Webinars

Following the successful Series of IoT Webinars centred on GDPR held in 2018, the webinars listed in the following Table and described below were delivered by CREATE-IoT project representatives during the third year of the project.

¹ https://dma.org.uk/uploads/misc/final_email-benchmarking-report-2019.pdf

Table 7 CREATE-IoT Webinars

Webinar Name	Date & Time	Partner	Number of attendees
Personal Wearables (H2x): Health, Living, Public Space, and other verticals	9 th January 2019, h. 10-11 CET	AL	32
Webinar on Data Privacy and GDPR	17 th July 2019, h. 10-11 CET	BLU, AL	12
Webinar on Smart Cities by Vicinity	26 th July 2019, h. 12-13 CET	BLU	15
Webinar on IoT and Cloud Security	27 th September 2019, h. 12-13 CET	BLU	25

Webinar on ‘Personal Wearables (H2x): Health, Living, Public Space, and other verticals’:

The webinar provided an overview of the IoT Ecosystem, by pointing at the different parts of the supply chain (Upstream, Midstream& Downstream) and by identifying the different actors and stakeholders involved (e.g. manufacturers, consumer associations, authorities).

The webinar also discussed personal wearables in the context of the rule of law, elaborating, essentially, on the necessity for state of art security and privacy and on the role of trust and trustworthiness, especially, with respect to the uptake of personal wearables by the end-users.

Webinar on Data Privacy and GDPR: The session focused on GDPR principles and the main reasons for having a strong and efficient data privacy policy. During this webinar, Arthur's Legal, in line with the scope of Work Package 05 on IoT Policy Framework - Trusted, Safe and Legal Environment for IoT, explained to the participants the consequences of underestimating a strong data privacy knowledge in the companies as well as the impact of data leaks to the sustainability of the companies.

The webinar was addressed to the members of the IoT Next Club community and allowed for an open discussion regarding the topics tackled, including data management, personal data protection and security.

Webinar on Smart Cities: In this session, carried out by Vicinity project members, the aim was to provide accurate information about the current challenges for SMEs operating in smart cities sector and how can the Vicinity smart cities platform help to address specific issues. Vicinity presented their use cases and the impact it had in the local communities as well as the critical steps to bring the business abroad and scale it up.

Webinar on IoT and Cloud Security: This webinar focused on the importance of a strong cloud and IoT security system in order to avoid the continuous hacker attacks that decrease the value of the companies every day. Gemserv was the company responsible for supporting IoT Next Club in the delivery of this webinar.

4.2. Events and Networking Activities

This section is dedicated to the consortium participation in conferences, events and workshops organised both by the project and external parties.

The Table below shows all the events organised by CREATE-IoT or in which partners participated between January 2019 and March 2020.

These events are detailed in the following subsections with their respective date, place and summary description.

Table 8 CREATE-IoT Events and Networking Activities

Event Name	Date	Venue	Partner
Connected Smart Cities Conference 2019	17 th January 2019	Brussels, Belgium	ANYSOL, BLU, NUIG
Presentation at STOA panel meeting “Historical analysis of artistic activities and their relationship with the development of technologies”	17 th January 2019	European Parliament, Strasbourg, France	ARTS
SynchroniCity Bootcamp	6 th February 2019	London, UK	BLU
IoT and Arts Meeting	7 th February 2019	Berlin, Germany	SINTEF
STARTS Talk “Is the Internet of Things (IoT) Ready for the Human Kind? Introducing the Experience Readiness Level Protocol (ERL)”	26 th February 2019	Lisbon, Portugal	ARTS, SINTEF, ANYSOL, UNP, ATOS
CREATE the Next Generation IoT eXperience for the Future – Workshop Series	26 th –28 th February 2019	Lisbon, Portugal	SINTEF, GRAD, UNP, ANYSOL, IDC, ATOS, BLU, IDATE
Texas Future Everything - EU at SXSW	8 th - 17 th March 2019	Texas, USA	FE
Startup Europe Summit 2019	21 st - 22 nd March 2019	Cluj, Romania	BLU
Workshop on “LSPs use cases: integration and standardisation alignment”	22 nd March 2019	Brussels, Belgium	ETSI, SINTEF
Stakeholder Workshop on the Strategic Value Chain on IIoT	5 th April 2019	Brussels, Belgium	SINTEF, NUIG
Large-Scale IoT & Data Marketplaces	8 th April 2019	Brussels, Belgium	BLU, ATOS
European Industry Partnerships Collaborative Event	17 th April 2019	Amsterdam, The Netherlands	SINTEF, ATOS, LINKS, ANYSOL, GRAD,
IoT LSP Coordinators' meeting	3 rd May 2019	Brussels, Belgium	SINTEF
CREATE your IoT Series - The Connected Hennery Workshop	7 th May 2019	Estarreja, Portugal	ARTS
Strategic Value Chain Workshop on IIoT	16 th May 2019	Brussels, Belgium	SINTEF, NUIG
ETP4HPC - SRA Technical Workshop	17 th May 2019	Poznan, Poland	SINTEF
IoT Week 2019	17 th -21 st June 2019	Aarhus, Denmark	ANYSOL, SINTEF, BLU, ARTS, AL, IDC, ETSI, FE, MI, AS, ATOS, IDATE, GRAD, UNP, ERCIM
EuroDIG 2019	18 th -20 th June 2019	The Hague, Netherlands	AL
Smart Networks and Services Partnership - Stakeholder workshop	4 th July 2019	Brussels, Belgium	SINTEF, GRAD
CREATE the Next Generation IoT eXperience for the Future - IoT & the Rule of Law	19 th July 2019	Brussels, Belgium	AS, AL
European Industry Partnerships for New Digital Age Event	12 th September 2019	Brussels, Belgium	SINTEF, ANYSOL, LINKS, GRAD, IDATE
ICT Info Day 2019	18 th -19 th September 2019	Helsinki, Finland	ANYSOL, SINTEF, GRAD
European Research and Innovation Days	24 th -26 th September 2019	Brussels, Belgium	SINTEF

Event Name	Date	Venue	Partner
Synchronicity Scale-Up Workshop	2 nd -3 rd October 2019	Milan, Italy	BLU
CEATEC	13 th -18 th October 2019	Chiba, Japan	MI, AS
Workshop on research priorities for the Next Generation of Internet of Things	16 th October 2019	Brussels, Belgium	SINTEF, NUIG
ETSI IoT Week	21 st -25 th October 2019	Sophia Antipolis, France	ETSI, SINTEF
European Industry Partnerships – Lighthouses to thrive in the New Digital Age	5 th November 2019	Brussels, Belgium	SINTEF, GRAD, IDATE, ANYSOL
Digitising European Industry Stakeholder Forum	13 th -15 th November 2019	Madrid, Spain	SINTEF, ANYSOL, ATOS
IAPP Europe Data Protection Congress 2020	20 th – 21 st November 2019	Brussels, Belgium	MI, AS
2 nd Visions for Future Communications Summit Technologies and Services Towards 6G	26 th – 28 th November 2019	Lisbon, Portugal	SINTEF, ATOS
MONICA Smart Cities Showcase	12 th December 2019	Leeds, UK	BLU
Next Smart Networks and Services Workshop	9 th January 2020	Brussels, Belgium	SINTEF
CPDP Computers, Privacy and Data Protection Conference	22 nd – 24 th January 2020	Brussels, Belgium	MI, AS
Policies to Support Open Data Marketplaces Workshop	29 th January 2020	The Hague, The Netherlands	IDATE, SINTEF, AL, TL, GRAD, UNP
Navigating IoT Architectures and Standards Days	19 th - 20 th February 2020	Brussels, Belgium	All Partners
Workshop on research contribution to global standardization	3 rd March 2020	Geneva, Switzerland	MI, AS

Description of selected events.

4.2.1. Connected Smart Cities Conference (CSSC) 2019

- **Date:** 17th January 2019
- **Venue:** Brussels, Belgium
- **Partner:** ANYSOL, BLU, NUIG
- **Summary:** CREATE-IoT was present at the event with a dedicated booth to support the dissemination activities of the IoT LSPs Programme, distribute the promotional materials from the project, the Programme and U4IoT to interested attendees, as well as provide further information concerning the work performed.

The dissemination of the event was also actively supported through frequent posting on social media.

During the event, some CREATE-IoT partners participated as speakers to different sessions:

- Martin Serrano (NUIG): speaker of the GREEN TRACK - BUILDING SUSTAINABLE ENVIRONMENTS.
- Tanya Suárez (BLU): chair of the FUTURE TRACK - NEXT GENERATION CITY OF THINGS.



Figure 10 CREATE-IoT Booth at CSSC 2019

- **Relevance of the event for the IoT LSPs Programme:** The event was closely linked to SynchroniCity. The LSP projects MONICA, SynchroniCity and AUTOPILOT were present at the event with a booth.



Figure 11 CREATE-IoT and the LSPs representatives at CSSC 2019

4.2.2. Presentation at STOA panel meeting “Historical analysis of artistic activities and their relationship with the development of technologies”

- **Date:** 17th January 2019
- **Venue:** European Parliament, Strasbourg, France
- **Partner:** ARTS
- **Summary:** Understanding the intertwining between art and technology historically helps us understand that relationship now and how it will continue in the future. Modern technology impacts significantly on art. Artists have always invented new technologies and created innovative technological applications. They tend to humanize technology by engaging with it from a human perspective. The arts have a crucial role in the current phase of this historical cycle of art and technology intertwining. The EU have created STARTS; the US nurtures STEAM; and China invests heavily in creativity. This study aims at contributing to a better understanding of the cyclical nature of the intertwining of technology and art. The study focuses on the history of that intertwining up till the transition between the 19th and 20th century. It seeks to show the current visibility of the intertwining of art and technology is not another example of hype in the policy making world. It is grounded in a long-standing historical cycle, like threads of a rope being constantly braided.



Figure 12 CREATE-IoT presentation at the STOA panel meeting at the European Parliament

- **Relevance of the event for the IoT LSPs Programme:** The study supports the engagement of the IoT LSPs Programme with the arts from an historical perspective. The LSPs were referred in the session of the STOA Panel in Strasbourg as an exemplary model of how the arts can be integrated in innovation activities related with industry. Furthermore, the concept of Experience Readiness Level (ERL) was presented and an update on its development was provided to the members of the STOA Panel.

4.2.3. SynchroniCity Bootcamp

- **Date:** 6th February 2019
- **Venue:** London, UK
- **Partner:** BLU
- **Summary:** CREATE-IoT was invited to participate to the SynchroniCity bootcamp for onboarding the successful SMEs in their Open Calls process. The main focus of this activity was to perform a soft launch of the IoT Next Club and to highlight the value it can provide to SMEs across the LSPs.
- **Relevance of the event for the IoT LSPs Programme:** The event was extremely relevant for the IoT LSPs Programme as it is related to the launch of IoT Next Club, which is intrinsically related to the European IoT landscape and the continuous goal of searching for disruptive technologies.



Figure 13 Launch of IoT Next Club at SynchroniCity Bootcamp

The event was also a great opportunity to collaborate with different European projects: CREATE-IoT, represented by BluSpecs, was invited to another event from SynchroniCity, thus getting the opportunity to increase its presence in European markets and embrace new stakeholder networks.

4.2.4. IoT and Arts Meeting

- **Date:** 7th February 2019
- **Venue:** Berlin, Germany
- **Partner:** SINTEF
- **Summary:** During the meeting Ovidiu Vermesan (SINTEF & CREATE-IoT project coordinator) gave a presentation providing an overview of the activities carried out by CREATE-IoT and the main results achieved by the project, with a particular focus on WP3 activities.
- **Relevance of the event for the IoT LSPs Programme:** The presentation included an overview of the IoT LSPs Programme, its main objectives and expected impact.

4.2.5. STARTS Talk “Is the Internet of Things (IoT) Ready for the Human Kind? Introducing the Experience Readiness Level Protocol (ERL)”

- **Date:** 26th February 2019
- **Venue:** Museum for Art, Architecture and Technology (MAAT), EDP Foundation, Lisbon, Portugal
- **Partner:** ARTS, SINTEF, ANYSOL, UNP, ATOS
- **Summary:** This STARTS Talks edition took place in Lisbon and included presentations and contributions by relevant players in the global creation of IoT. The Talk was moderated by Peter Wintlev-Jensen (European Commission - DG CONNECT) and involved as speakers Luís Miguel Girão (Artshare & CREATE-IoT), Ovidiu Vermesan (SINTEF & CREATE-IoT coordinator), Leonel Moura (Artist) and Luís Lamela (Altice Labs). The round-table discussion developed around a case study artwork named “The Connected Hennerly” created within the IoT LSPs Programme. The Connected Hennerly is a provocative artwork applying technologies made available by the LSPs in an avant-garde post agricultural context. In addition, the Experience Readiness Level (ERL), an emergent innovative protocol of matching technologies with human needs, was introduced.
- **Relevance of the event for the IoT LSPs Programme:** “STARTS Talks” is a series of presentations and discussions, bringing together prominent practitioners and speakers to present their work and vision on highly relevant subject from the perspective of the interactions between Science, Technology and the ARTS. This STARTS Talk was organised through direct interaction between STARTS and the European IoT LSPs Programme.



Figure 14 CREATE-IoT at the STARTS Talk at MAAT

4.2.6. CREATE the Next Generation IoT eXperience for the Future – Workshop Series

- **Date:** 26th-28th February 2019
- **Venue:** Lisbon, Portugal
- **Partner:** GRAD, UNP, ANYSOL, SINTEF, IDC, ATOS, BLU, IDATE
- **Summary:** The event, had the purpose of bringing external SMEs and developers into the activities of the European IoT LSPs Programme by presenting the relevant activities and outputs with which they can engage. The workshop also explored some of the challenges facing SMEs which may want to engage with the LSPs, and how the IoT LSPs Programme can take these into account.
- **Relevance of the event for the IoT LSPs Programme:**
 - Open calls promotion and support to the engagement of the SMEs in the second round of ACTIVAGE activities.
 - Presentation of tools and methods developed within the context of the IoT LSPs that are relevant for SMEs.
 - Identification of the benefits the IoT LSPs Programme can provide to SMEs.
 - Community engagement in understanding the differences and opportunities that exist within SME/Corporate relationships.
 - Networking opportunity for external and internal participants as well as across projects.

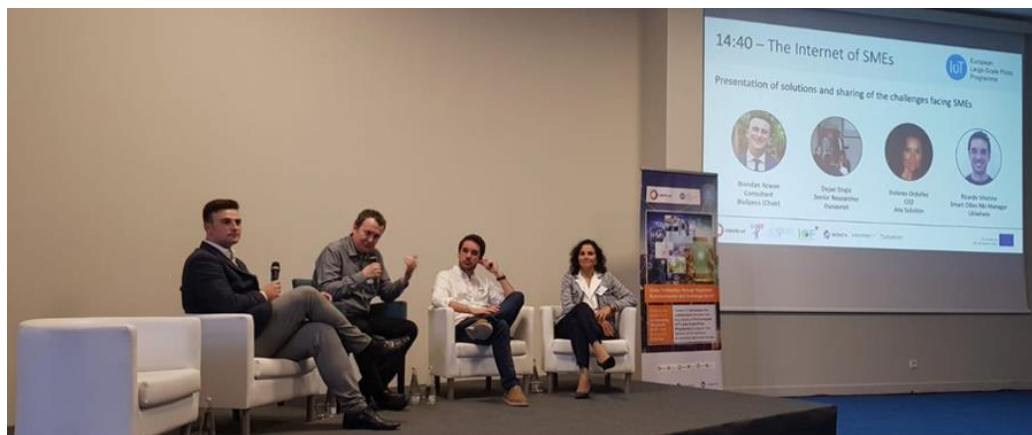


Figure 15 CREATE the Next Generation IoT eXperience for the Future – Panel session



Figure 16 CREATE the Next Generation IoT eXperience for the Future – Participants

4.2.7. Texas Future Everything – EU at SXSW

- **Date:** 8th - 17th March 2019
- **Venue:** Texas, USA
- **Partner:** Future Everything

- **Summary:** The 2019 SXSW Conference & Festivals featured inspiring sessions, film screenings, meet ups, showcases, exhibitions, competitions, and ample opportunities for networking across the event. During the entire run of the festival the artwork EVERY THING EVERY TIME was exhibited, harnessing public art to explore the ‘Smart City’. Through careful curation of the data that describes festival-wide events, from the mundane to the marvellous EVERYTHING EVERY TIME broadcasts poetry on a large, mechanical display, urging deeper reflection on the role of data in our lives.



Figure 17 CREATE-IoT at the Texas Future Everything event

- **Relevance of the event for the IoT LSPs Programme:** SXSW is a world class event in the areas of technology, entertainment and culture. Having Naho Matsuda’s EVERY THING EVERY TIME artwork on prominent display throughout the festival, with its focus on data collected and collated by IoT devices and systems, raised awareness on IoT systems in general, and the creative applications of such systems in particular.

4.2.8. Startup Europe Summit 2019

- **Date:** 21st -22nd March 2019
- **Venue:** Cluj, Romania
- **Partner:** BLU
- **Summary:** The event was a great opportunity to discover more about the current use cases of successful scale-ups and the strategies they used to grow their business abroad. For two days, experts had the chance to provide their insights about ways to grow business. The networking events represented a relevant occasion for start-ups to increase their opportunities by meeting new corporates and investors.



Figure 18 CREATE-IoT at the Startup Europe Summit 2019

- **Relevance of the event for the IoT LSPs Programme:** In this event, BluSpecs acted as the coordinator of the IoT Next Club, supporting the ongoing activities carried out by the club in order to engage the SMEs and the start-ups into a single marketplace, share synergies and find ways to collaborate.

4.2.9. Large-Scale IoT & Data Marketplaces

- **Date:** 8th April 2019
- **Venue:** Brussels, Belgium
- **Partner:** BLU, ATOS
- **Summary:** During this event BluSpecs was involved in Session 3: “The road towards sustainable scale-up IoT & Data Marketplace”, moderated by Nuria de Lama Sanchez (ATOS and member of BDVA Board of Directors). The entire workshop focused on three different topics:
 - Value Proposition of an ecosystem-based approach to transaction management related to IoT and data.
 - Learning from existing cases and implementations of IoT and Data Marketplaces.
 - Identification of the most promising paths to a sustainable scale-up of IoT & Data Marketplaces.

Relevance of the event for the IoT LSPs Programme: The workshop represented a relevant opportunity to bring together different partners from the project to discuss critical factors around the sustainability of IoT marketplaces and the consequences of having a strong ecosystem network from the existing use cases in IoT implementation. This session also involved representatives active in other LSPs, who brought their insights and learning cases into the discussion.

4.2.10. European Industry Partnerships Collaborative Event

- **Date:** 17th April 2019
- **Venue:** Amsterdam, The Netherlands
- **Partner:** SINTEF, ANYSOL, GRAD, LINKS, ATOS
- **Summary:** The aim of this workshop organised by CREATE-IoT was to:
 - Present the state-of-play and developments of European research and the innovation landscape related to IoT/IIoT.
 - Present the IoT Large-Scale Pilots Programme projects’ outcomes, value proposition and gaps identified, and highlight the next steps for sustainability and the scaling up of results.
 - Discuss and provide recommendations for future strategic directions for EU Research and Innovation from across the different European partnerships.
 - Explore the role of European partnerships with industry in the future and analyse the concept for future European partnerships under the “Horizon Europe” EU Framework Programme for Research and Innovation (2021-2027).
 - Focus on European industry-driven priorities for converging technologies such as IoT/IIoT, 5G, AI, DLTs, edge computing in manufacturing, processing, construction, ICT and automotive.



Figure 19 European Industry Partnerships Collaborative Event

CREATE-IoT managed the event promotion on the Programme's website, the project website and social media before, during and after the event. Furthermore, the project produced an ad-hoc roll-up to be displayed at the event.

- **Relevance of the event for the IoT LSPs Programme:**

The event was organised by CREATE-IoT as part of the IoT Large-Scale Pilots Programme in collaboration with different European partnerships and DG connect. The occasion was particularly relevant in order to highlight the Programme's outcomes and discuss future plans.

4.2.11. CREATE your IoT Series - The Connected Hennery Workshop

- **Date:** 7th May 2019
- **Venue:** Municipal Market of Estarreja, Portugal
- **Partner:** ARTS
- **Summary:** In this instance of the CREATE Your IoT Series, The Connected Hennery, participants were presented with an application of basic Artificial Intelligence in the field of Internet of Things analysing and predicting the movement of chicken and moving along with them in the field. During the workshop, Luis Miguel Girao from ARTS moderated a panel session on IoT and Food Production Chain Management involving the Mayor of Estarreja and representatives from Lusiaves Group, SONAE and Altice Labs.
- **Relevance of the event for the IoT LSPs Programme:** This workshop was organised in the framework of the cooperation between the IoT LSPs Programme and the Science Technology and Arts Initiative of the Digital Single Market of the European Union (STARTS) and national authorities. The effective engagement of structural Portuguese internationalised companies was very relevant. This workshop highlighted the importance of artistic approach on a do-it-yourself technological oriented experience, known as The Connected Hennery.



Figure 20 CREATE your IoT Series - Connected Hennery Workshop – Promotional material

4.2.12. IoT Week 2019

- **Date:** 17th – 21st June 2019
- **Venue:** Aarhus, Denmark
- **Partner:** ANYSOL, SINTEF, BLU, ARTS, AL, IDC, FE, ETSI, MI, AS, ATOS, IDATE, GRAD, UNP, ERCIM

CREATE-IoT partners were deeply involved in the 2019 edition of IoT Week, the annual event organised by the IoT Forum since 2011. IoT Week is a one-of-a-kind conference bringing together eminent IoT representatives from the worlds of business, tech and science and attracting more than 1600 attendees from all over the world. Among the activities developed by the project in the context of the IoT Week, we shall mention the coordination and organisation of a collaborative

LSP exhibition area presenting the five LSPs and the supporting CSAs. This joint exhibition area contributed to promote and give high visibility to the LSPs and CREATE-IoT activities. In parallel, a thematic booth and exhibition area were set up to present the IoT Security and Privacy related developments in the context of the LSPs. Create-IoT partners also participated in several sessions of the conference. A detailed overview of partners' involvement in the different sessions and activities held during the event is provided in this section.



Figure 21 IoT Week 2019 - Promotional material

- **Conference objectives:**
 - Learn about the art of IoT by participating in more than 180 sessions and events within 5 days.
 - Network with key researchers, visionaries, entrepreneurs and representatives of international bodies.
 - Expand business by meeting and interacting with new business partners among top corporations and industry players.
 - Get to know the latest IoT innovations by visiting the Exhibition Area with more than 50 companies and institutions.
 - Discover the most outstanding Large-Scale Pilots Projects funded by the EC on the IOT.
 - Scout the most promising projects from entrepreneurs and developers at the Hackathon and the IoT Week 2019 Startup competition.
 - Visit the first Public Expo on IoT projects open to all schools and citizens of Aarhus.
- **Conference key figures:** This edition proved to be an outstanding success thanks to the local host, it-forum, which was able to mobilize all the IoT ecosystem in Denmark. This event gathered more than 1600 members of the Internet of Things Community from 48 countries within a wider Exhibition Area including 90 stands. Featuring a catalogue of 180 sessions, demos and activities, participants, including for the first-time citizens and primary and secondary school students of Aarhus, could enjoy IoT demonstration within the free Public Exhibition. This year, 360 speakers debated on 15 tracks or main thematic areas, which is a new record compared to previous editions. This IoT Week welcomed a new edition of the Global IoT Summit (endorsed by the IEEE), with 76 academic papers presented by worldwide researchers, as well as the publication of recent global innovations in IoT. With so many activities and intense sessions in parallel (Startup Competition, Exhibition Area, Workshops, Site Visits, Art residency, Private Meetings, etc.), these 5 days had been a great platform for intense contents exchange. As a lot of people could not attend all the sessions, speakers kindly published their presentations on the conference [website](#). The conference received once again full support from the European Commission and cooperated actively with the five IoT European Large-Scale Pilots. Each year the growing level of cooperation with other IoT networks and organisations such as the ITU, AIOTI, BDVA, ECSO, TM Forum, and OASC, to name just a few, demonstrates the interest of the community and contributes to knowledge dissemination.



Figure 22 IoT WEEK 2019 - Partners

Relevance of the event for the IoT LSPs Programme: IoT Week 2019 cooperated closely with the European IoT Large-Scale Pilots. By promoting debate and giving floor to their representatives, IoT Week actively supported the dissemination of the projects and their applications.



Figure 23 IoT Week 2019 – CREATE-IoT Booth

The LSPs were featured and involved in the discussion in 25 sessions of IoT Week from 6 thematic tracks. All the LSPs projects were present in the best location of the Exhibition Area and also took part to the Public Expo open to all citizens and schools of Aarhus. Finally, this event was the opportunity for involved partners including IDATE, GRAD, SINTEF and ATOS to organise a parallel session "Workshop on Exploitation Strategy", with the purpose to meet with other LSPs for identification of the common issues on business and sustainability models for large-scale IoT scenarios (see the D2.7). This activity aimed to support the LSPs in their approach of exploitation from pilots' results which will be included in the final report.

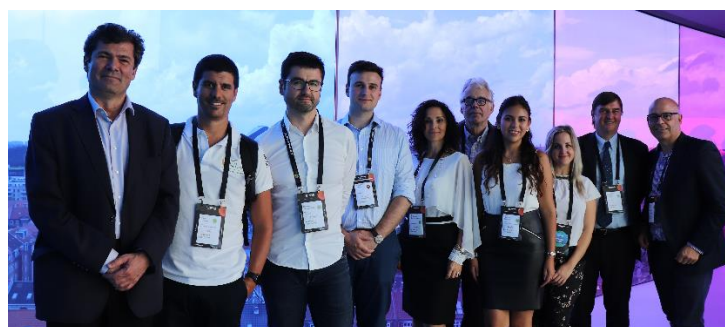


Figure 24 IoT Week 2019 – CREATE-IoT Team




IoT Standardisation

The IoT landscape is a very complex and the IoT standardisation is not different. However, standards are paying an increased role in the set-up, design and development of the IoT systems. IoT Standardisation is following the evolution of IoT and the technical issues that have to be addressed and resolved.

- The Web of Things - and the Future of Business with Smart Data
- Data Models and Semantic Interoperability
- IoT Systems: Architectures, Models, Guidelines

Supported by:

CREATE IoT, AIIOTI and the European IoT Large-Scale Pilots Programme.

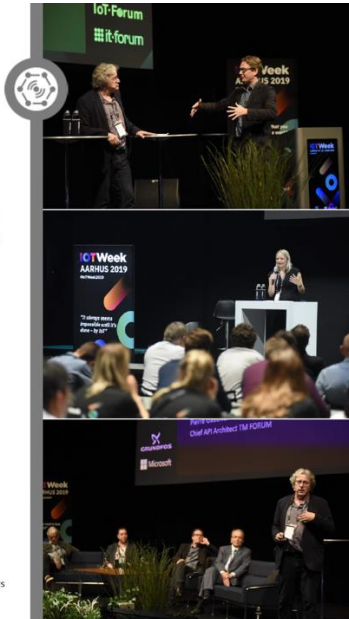


Figure 25 IoT WEEK 2019 – CREATE-IOT, AIIOTI and the European IoT LSP Programme

Smart Living & eHealth

By bringing smartness to our daily environment, IoT is changing the way we will live and interact. It constitutes an unprecedented opportunity to rethink and improve the way our elders can live with a caring environment. At Smart Living & eHealth track presented, among other things, the results of @ACTIVAGE project, the largest European pilot in this domain.

- IoT in Modern Healthcare
- ACTIVAGE Project: Technology breakthrough for IoT for Smart Living Environments (SLE)
- Interoperability Challenges for Implementation of Sustainable IoT for Smart Living Environments for Healthy Ageing and Market Scale Up
- Security and Privacy Compliance with GDPR in IoT for Smart Living Environments for Healthy Ageing
- Smart Homes, Smart Living and Tracking-IoT Inside and Out

Supported by:

Activage Project.





Figure 26 IoT Week 2019 – ACTIVAGE



Figure 27 IoT Week 2019 – EC Participation



Figure 28 IoT Week 2019 – IoF2020

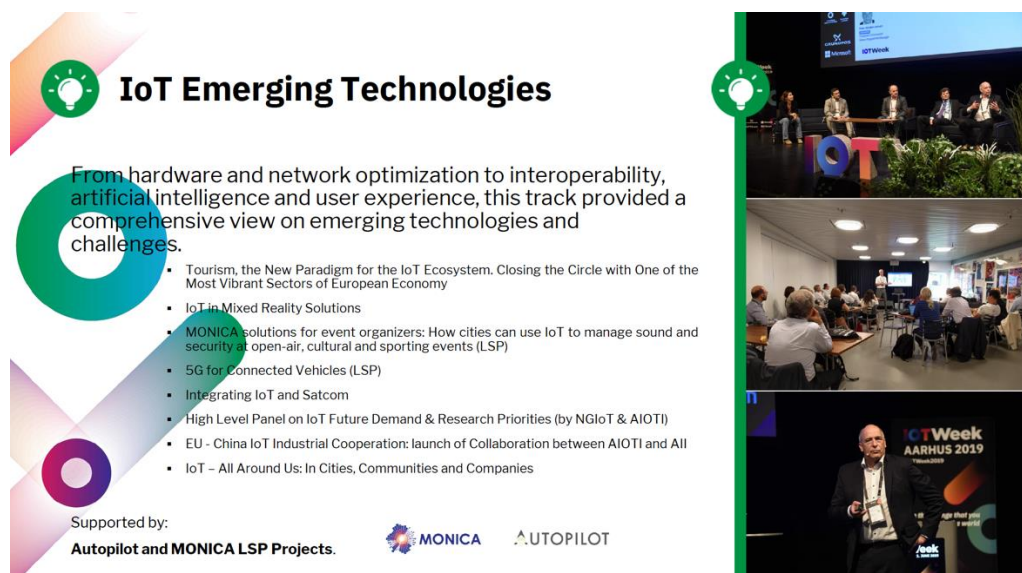


Figure 29 IoT Week 2019 – AUTOPILOT & MONICA

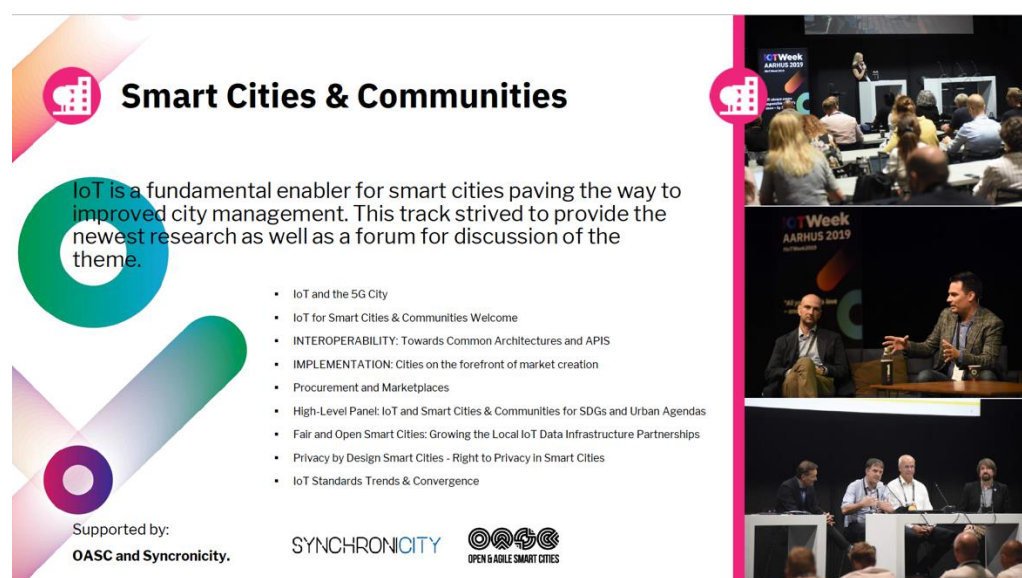


Figure 30 IoT Week 2019 – OASC & SYNCHRONICITY



Figure 31 IoT Week 2019 – European Cyber Security Organisation (ECSCO)

STARTS Talk on Human Touch AI (17th June 2019)

- Summary:** Human Touch AI is a new approach towards Artificial Intelligence from a societal and artistic perspective. It focuses less on functionality but pays more attention to a hybrid systems conception whereby humans co-operate and co-exist with smart machines. Human Touch AI understands Artificial Intelligence as a complex structure, including Big Data, Emotional Intelligence, and bio-connectivity. The STARTS Talk presented a wide set of participants from business, research, art and design, namely Peter Beyls (artist and researcher, University College Ghent), Thomas Bjørnsten (researcher, Aarhus University), Luis Miguel Girao (CEO, Artshare), Bjørn Karmann (artist and designer, Tellart), Tore Knudsen (artist and designer, Topp Design & Innovation), Mads Rydahl (CPO, UNSILO.ai), Berit Skjernaa (researcher, Alexandra Instituttet), Michael Smyth (artist and researcher, Edinburgh Napier University), and Dimitra Stefanatou (lawyer, Arthur's Legal). Participants confirmed a positive opinion on Artificial Intelligence for advancing human capabilities. The potential of AI technologies emphasizing the digital divide was concluded as unlikely. AI should be developed from a pragmatic perspective and be driven by its usefulness. On the other hand, AI should be seen as of a nature different from the human nature. The development of AI is an opportunity for the creation of novel paradigms complementary to human paradigms. The privilege of the Human Touch is in the interface between AI and humans – a sort of a membrane. Important principles, such as non-discrimination of users, preservation of privacy or further recommendations from the AI Ethical Guidelines should be built in from the beginning.



Figure 32 IoT Week 2019 - Human Touch AI session

- Relevance of the event for the IoT LSPs Programme:** This STARTS Talk took place in the major event “IoT Week 2019” and was organised through direct interaction between STARTS and the European IoT Large-Scale Pilots Programme.

Trust in the IoT (17th June 2019)

- **Summary:** FutureEverything organised this roundtable discussion focused on the use of artistic methods to engage with issues of trust, transparency and bias in algorithmic and data systems in the IoT. Each panellist delivered a short talk regarding their particular area of expertise, and how this was relevant to the topic at hand. Following on from introductions, there was a curated conversation around how artistic intervention and practice can effectively address practical issues of trust in the IoT. During the last part of the session, the panel was opened up to questions from the audience. The roundtable attracted an audience of 25-30 participants, consisting of a wide variety of interested stakeholders: academics from a number of universities and Erasmus programme, researchers, delegates from private business and from regulatory offices (such as Ofcom, Switzerland), as well as representatives of the EU Commission. Most of the attendees were from Europe, but also conference delegates from India, Korea and Brazil participated to the workshop.



Figure 33 IoT Week 2019 - “Trust in the IoT – Roundtable discussion”

- **Relevance of the event for the IoT LSPs Programme:** The workshop touched upon issues of horizontal relevance for all projects participating in the IoT LSPs Programme, such as transparency, stakeholder engagement and accountability that are, also, addressed under Work Package 5 of CREATE-IoT project.

Trust in Invisible Agents (18th June 2019)

- **Summary:** FutureEverything organised this workshop focused on the use of artistic methods to engage with issues of trust, transparency and bias in algorithmic and data systems in the IoT. Artists have always been at the forefront of the critical debate around new technological developments. Artists use technology in ways that re-contextualise and re-purpose components and systems, discover new connections, and push the boundaries of the interaction between humans and machines. The workshop aimed to demonstrate artistic intervention as a wider methodology to critically interrogate new technologies, and in particular their societal and cultural impacts. This workshop demonstrated strategies which use art and creative practice to ensure vital human factors feed into the development of innovative IoT systems. Representatives from AL, BLU and U4IoT consortium members IMAC and Luleå University were also involved in the workshop.
- **Relevance of the event for the IoT LSPs Programme:** This workshop was organised in the framework of CREATE-IoT collaboration with U4IoT. The workshop touched upon issues of horizontal relevance for all projects participating in the IoT LSPs Programme, such as transparency and accountability that are, also, addressed under Work Package 5 of CREATE-IoT project.

IoT Ecosystems and Partnerships (18th June 2019)

- **Summary:** Giorgio Micheletti, Consulting Director at IDC, was involved as a speaker in this session focused on IoT ecosystems and partnerships. During the session, IDC data on IoT in Government was presented to the audience.

- **Relevance of the event for the IoT LSPs Programme:** The session gave the opportunity to present the IoT LSPs e-book to the audience by providing an overview of its main contents.

5G for Connected Vehicles (LSP) (20th June 2019)

- **Summary:** The LSP AUTOPILOT is leading innovative projects in Europe to develop the connected vehicles of tomorrow. Mobility is one of the key challenges in our societies where urbanization is growing everywhere. With the 5G deployment and the new IoT solutions the new developments and innovations regarding the connected vehicles are advancing the deployments. During the session, CREATE-IoT and AUTOPILOT presented the latest trends and challenges (O. Vermesan, SINTEF).

Relevance of the event for the IoT LSPs Programme: The session gave the opportunity to present the AUTOPILOT IoT LSP project to the audience by providing an overview of the main challenges and the policy issues identified and aligned with CREATE-IoT.



Figure 34 IoT Week 2019 - “5G for Connected Vehicles (LSP)”

IoT Systems: Architectures, Models, Guidelines (20th June 2019)

- **Summary:** Standards are playing an increased role in the set-up, design and development of the IoT systems. IoT Standardisation is following the evolution of IoT and the technical issues that have to be addressed and resolved. IoT standards are not just providing various communications solutions but address more globally all the issues of interoperability, in particular those related to the handling of massive quantities of data and the coexistence of complex and fragmented data models. Representatives of CREATE-IoT, Emmanuel Darmois (ETSI), Antonio Kung (TL), Ovidiu Vermesan (SINTEF) presented the IoT standardisation activities and best practices.

Relevance of the event for the IoT LSPs Programme: The session gave the opportunity to present and address, in a pragmatic manner, the main issues currently addressed in the field of IoT standardisation by the IoT community and the IoT European Large-Scale Pilots Programme.

High Level Panel on IoT Future Demand & Research Priorities (20th June 2019)

- **Summary:** The session provided the audience with the EU’s vision and strategy for IoT Research and Innovation, moving into the Horizon Europe timeframe. AIOTI and CREATE-IoT provided the overview of the activities and future research challenges. Ovidiu Vermesan (SINTEF) presented the research view and future trends.

Relevance of the event for the IoT LSPs Programme: The session gave the opportunity to present upcoming research opportunities in the fields of industry, smart cities, energy efficiency, big data, applications for health and care, agriculture and trusted IoT platforms, among others.

Towards a European Data Sharing Space: enabling Data Exchange and unlocking the AI potential (20th June 2019)

Summary: The potential of AI is now widely understood, not only in Europe but globally. As industry and corporations' race to make the most of the emerging opportunities, there remains one problem: the availability of data. Due to a lack of trust, standard frameworks and legal and ethical uncertainties, a lot of valuable data that is already being exchanged in established data value chains and automated networks, is not being exploited outside of its primary purpose. As a showstopper for both the public and private sector, this challenge can best be addressed through a single strategy amongst all stakeholders. To increase data availability and unlock the full potential of AI, trusted data sharing spaces need to be designed and developed. In this session, converging efforts to set up a Data Sharing Space, for and from a European perspective as a global leader, were discussed. Giorgio Micheletti (IDC), and Tanya Suarez (BLU), were involved as speakers in this session jointly organised by BDVA and AIOTI.

- **Relevance of the event for the IoT LSPs Programme:** The session was particularly useful in order to foster the discussion around data-driven AI. In addition, the session represented a great opportunity to discuss critical factors for success and upcoming challenges for SMEs and start-ups.

Fair and Open Smart Cities: Growing the local IoT Data Infrastructure Partnerships (20th June 2019)

- **Summary:** Tanya Suarez (BLU), was involved in this session as a speaker. The third edition of this workshop (held for the first time at IoT Week 2017) continued exploring how IoT platforms for smart cities can converge towards an ecosystem of interoperable resources. How smart cities and communities can increase their cooperation, serve as a catalyst for new services, and leverage on IoT technologies to achieve the UN Sustainable Development Goals was also discussed. The workshop encompassed the following aspects to support cities and communities:
 - IoT Reference Architecture for Smart Cities and interoperability enablers for multi-stakeholder ecosystems, including Open APIs.
 - Delivering IoT services and expertise to smart cities, including procurement and marketplaces.
 - Enabling privacy by design and GDPR compliant smart cities.
 - Addressing scalability and replicability with large smart city pilots.
 - Challenges and future directions for IoT-based smart city applications.
 - Standardization convergence to support IoT in smart cities and communities.
 - Role of smart cities & communities as catalyst for sustainable development and international cooperation: SDGs, UN-Habitat's New Urban Agenda, IoT Declaration for Sustainable Development, EU Urban Agenda etc.
- **Relevance of the event for the IoT LSPs Programme:** The session represented an opportunity to discuss key factors for success and upcoming challenges for SMEs and start-ups.



Figure 35 IoT Week 2019 - "Fair and Open Smart Cities: Growing the local IoT Data Infrastructure Partnerships"

Start-Up Competition

- **Summary:** BLU was in charge of the Start-up Competition carried out during the IoT Week 2019, being the communication strategy leader and the session coordinator during this week. This competition intended not only to get to know the companies that have recently presented their business models to address current problems, but also to support the engagement of external entities in the activities of the LSPs, with the aim to get to know new start-ups and their new solutions which, taking into account the type of product developed, could be perfectly integrated into one of the programmes.
- **Relevance of the event for the IoT LSPs Programme:** The activity involved different LSPs, especially in the communication strategy, as the competition had several start-ups from some of the European LSP projects.



Figure 36 IoT Week 2019 – Start-ups Competition

4.2.13. EuroDIG 2019

- **Date:** 18th-20th June 2019
- **Venue:** The Hague, Netherlands
- **Partner:** AL
- **Summary:** EuroDIG (European Dialogue on Internet Governance) is an annual event which was hosted by the Ministry of Economic Affairs and Climate Policy of the Netherlands in co-operation with Netherland's Platform for the Information Society (ECP), the Municipality of The Hague, and SIDN. EuroDIG is an open, multi-stakeholder platform to exchange views about the Internet and how it is governed.
- **Relevance of the event for the IoT LSPs Programme:** At the event, AL (CREATE-IoT Work Package 5 leader) gave a presentation on “Smart Cities and Governance” wherein it delved into the technical layers and dimensions of hyper-connected ecosystems and their interplay with relevant EU legislations, such as the General Data Protection Regulation (GDPR), that are pertinent to the scope of Work Package 5 of CREATE-IoT project.

4.2.14. CREATE the Next Generation IoT eXperience for the Future - IoT & the Rule of Law

- **Date:** 19th July 2019
- **Venue:** Brussels, Belgium
- **Partner:** AS, AL

- **Summary:** The IoT environment is built upon the continuous interactions between humans and machines. Humans in multiple capacities interact continuously with devices of multiple purposes. Within this complex web of interactions, the current and future policy instruments are expected to give answers to key questions for consumers, market players and society at large such as: “Who is responsible if something goes wrong with a use of an IoT device?”, “How to strengthen consumers’ privacy in the age of hyper-connectivity?”, “How to guarantee security of an IoT device?”. Considering recent developments, including the Cybersecurity Act and the GDPR, the event focused on the specific application domains covered by the IoT LSPs Programme and surfaced the related compliance challenges from diverse viewpoints. Through open dialogue, the event aimed at conveying ground knowledge, pointing at the business opportunities for the deployment of IoT in Europe. The target audience included companies of all sizes and representatives from the public sector.
- **Relevance of the event for the IoT LSPs Programme:** The event focused on the specific application domains covered by the IoT Large Scale Pilots Programme.

4.2.15. European Industry Partnerships for New Digital Age Event

- **Date:** 12th September 2019
- **Venue:** Brussels, Belgium
- **Partner:** ANYSOL, SINTEF, LINKS, GRAD, IDATE
- **Summary:** The event was organised by the IoT Large-Scale Pilots Programme in collaboration with several European partnerships and DG Connect. The aim of this workshop was to:
 - Discuss the strategic objectives and role of European partnerships from an industrial perspective.
 - Analyse the current European context, future concepts and perspectives of IIoT.
 - Refer to and identify potential synergies with national and regional programmes, address means to bring together a broad range of innovation actors to work towards a common goal and turn research into socio-economic results.
 - Discuss the links between partnership candidates, possible partnership composition and their role in future innovation and deployment support programmes like Cohesion Funds, Digital Europe Programme (DEP), InvestEU and CEF Digital priorities.



Figure 37 European Industry Partnerships for New Digital Age Event

Speakers from industry, research and academia representing different European partnership initiatives covering areas of Digital, Industry and Space, representatives from Member States and the EC analysed and discussed the strategic directions, aligned the research priorities, identified the gaps and presented their expectations for future research and innovation, and the impact of converging technologies such as IoT/IIoT, 5G, AI, robotics, DLTs, edge computing on

applications connected to the European IoT/IIoT, intelligent connectivity and data/knowledge ecosystem. The themes addressed included secure and trusted data spaces, European Industrial IIoT/edge infrastructures and the continuum to cloud and high-performance computing, intelligent connectivity and industrial 5G infrastructure for intelligent sensor/actuators and the development of HW/SW/platforms tools for IoT/IIoT, AI, digital twins applications across the industrial sectors. During the event IDATE animated a round table on the Smart Networks and Services future partnership and its link to IoT.

- **Relevance of the event for the IoT LSPs Programme:** The event was particularly relevant for the IoT LSPs Programme as it provided opportunities for driving forward the discussion around IIoT with European Industry Partnerships.

4.2.16. ICT Proposers' Day 2019

- **Date:** 19th-20th September 2019
- **Venue:** Helsinki, Finland
- **Partner:** ANYSOL, SINTEF, GRAD
- **Summary:** This event provided an excellent opportunity to present and discuss the main policy drivers of the digital transformation of European industry and society and how the EU research and innovation agenda can best contribute to these objectives. The event also presented the Horizon 2020 Work Programme and served as a unique networking platform for ICT enthusiasts and professionals.
- **Relevance of the event for the IoT LSPs Programme:** This event provided an opportunity for different actors involved in the digital value chain to share experiences, exchange best practices and discuss the future of EU digital industrial policy.



Figure 38 CREATE-IoT at ICT Proposers' Day 2019

4.2.17. Synchronicity Scale-Up Workshop

- **Date:** 2nd-3rd October 2019
- **Venue:** Milan, Italy
- **Partner:** BLU
- **Summary:** The workshop represented an opportunity to present the work carried out by the IoT Next Club and discuss how the club can mitigate and help address future Smart Cities

challenges. The session was divided into three different parts: 1) Presentation of IoT Next Club; 2) Panel Discussion on the future of Smart Cities; 3) Testimonials boosting the Smart City community in Bilbao and Edinburgh.

- **Relevance of the event for the IoT LSPs Programme:** The event brought together two different projects, SynchroniCity and CREATE-IoT, striving for the same goal: improve the technological disruptiveness in Europe. The workshop was critical to understand the needs and the current challenges the Smart Cities sector is facing and how a project like CREATE-IoT can help in addressing specific issues.



Figure 39 SynchroniCity Scale-Up Workshop

4.2.18. CEATEC 2019

- **Date:** 13th-18th October 2019
- **Venue:** Chiba, Japan
- **Partner:** MI, AS
- **Summary:** The CEATEC event gathers exhibitors and companies developing innovative technologies in the ICT domain, including those with a strong focus on the Internet of Things. The 2019 edition attracted 787 exhibitors and over 150,000 participants and visitors.
- **Relevance of the event for the IoT LSPs Programme:** MI setup a booth and made presentations related to the IoT LSPs programme with a focus on data protection tools and enablers developed by the LSPs and AG05, such as Privacy App (Synchronicity) and the serious game (U4IoT). The event also allowed to develop contacts with the Japanese research community active in IoT and data protection related innovations.

4.2.19. ETSI IoT Week

- **Date:** 21st-25th October 2019
- **Venue:** Sophia Antipolis, France
- **Partner:** ETSI, SINTEF
- **Summary:** The ETSI IoT Week, the evolution of ETSI's highly successful M2M/IoT Workshop series, is a must-attend event for anyone involved in IoT and who appreciates the value of standards-enabled technologies and deployments. The event is for those involved with ICT standards, technical planning and development, research and innovation or those who are simply IoT users.



Figure 40 ETSI IoT Week banner

- **Relevance of the event for the IoT LSPs Programme:** This event focuses on IoT and highlights the relevance of interoperability, scalability and interworking as key factors for the successful development of IoT. In particular, security and semantic interoperability that is provided by standards have the mission of "gluing together" the different technologies that compose the IoT ecosystem.

4.2.20. European industry partnerships - Lighthouses to thrive in the New Digital Age

- **Date:** 5th November 2019
- **Venue:** Brussels, Belgium
- **Partner:** ANYSOL, SINTEF, GRAD, IDATE
- **Summary:** Progress in Artificial Intelligence (AI), Internet of Things/Industrial Internet of Things (IoT/IIoT), 5G, robotics, automation, will bring about technology-led transformations across all European industries, creating new opportunities and benefits for key industrial sectors.

The event “European Industry Partnerships – Lighthouses to thrive in the New Digital Age” initiated a coordinated approach to clearly define the future technological and application areas to be addressed by a new partnership for Horizon Europe on IoT/IIoT, smart networks, edge computing, AI at the edge and cloud, considering the initial proposal of a partnership with the working title “Smart Networks and Services”.

The new partnership has the aim to bring new value added for European economy and society and not to be a continuation of a business-as-usual approach without being in line with the criteria set by the EC.

SINTEF, ANYSOL, GRAD, LINKS, ATOS were involved in the organisation of the event. During the event IDATE also presented the impact assessment study going on the future institutionalised partnership on Smart Networks and Services.



Figure 41 European Industry Partnerships-Lighthouses to thrive in the New Digital Age

- **Relevance of the event for the IoT LSPs Programme:** The event was organised by the IoT Large-Scale Pilots Programme with support from DG Connect and several European partnerships and industry associations.



Figure 42 European Industry Partnerships-Lighthouses to thrive in the New Digital Age Event

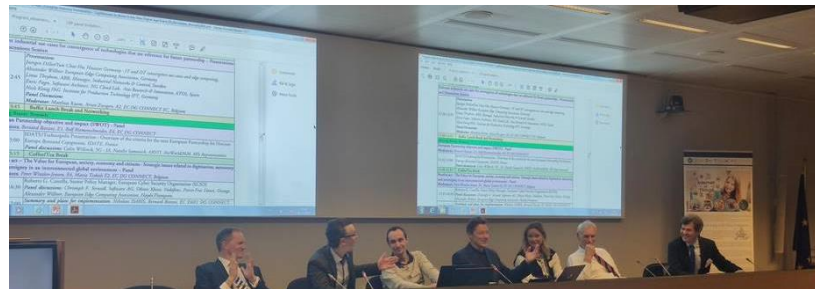


Figure 43 European Industry Partnerships-Lighthouses to thrive in the New Digital Age Panel

4.2.21. Digitising European Industry Stakeholder Forum

- **Date:** 15th November 2019
- **Venue:** Madrid, Spain
- **Partner:** ANYSOL, SINTEF, ATOS
- **Summary:** The Stakeholder Forum is a public event organised on a yearly basis by the European Commission and one Member State within the context of the Digitising European Industry initiative (DEI). In coordination with the Spanish Ministry of Industry, Trade and Tourism, this year's edition focused on "Artificial Intelligence and Digital Innovation Hubs - beyond 2020".
- **Relevance of the event for the IoT LSPs Programme:** The event provided an opportunity for different actors involved in the digital value chain to share experiences, exchange best practices and discuss the future of EU digital industrial policy. Among them were representatives from Member States and regions, national initiatives for digitalisation, industry, SMEs, academia, Digital Innovation Hubs and research and technology centres. Among keynote speeches and participatory discussions, the event offered the possibility for online feedback provision.



Figure 44 Digitising European Industry Stakeholder Forum

4.2.22. IAPP Europe Data Protection Congress 2020

- **Date:** 20th-21st November 2019
- **Venue:** Brussels, Belgium
- **Partner:** MI, AS
- **Summary:** This event gathers professionals and researchers in privacy and data protection and offers cutting-edge insights on the most recent legal developments and technologies. The conference celebrated the 20th anniversary of the IAPP. Speakers and participants gained exposure to an engaged audience of more than 2,000 data protection professionals.
- **Relevance of the event for the IoT LSPs Programme:** Given the visibility and the large participation, the conference offered the opportunity to showcase the results from LSPs research and engage relevant attendees.

4.2.23. MONICA Smart Cities Showcase

- **Date:** 12th December 2019
- **Venue:** Leeds, UK
- **Partner:** BLU
- **Summary:** This workshop was delivered to present the work carried out by the IoT Next Club and how the members could benefit from the activities developed and carried out over the year, especially the webinars, showcases and the continuous interactive communication among the members.
- **Relevance of the event for the IoT LSPs Programme:** The relevance of the event is related to the outputs of the workshop, especially in terms of the number of applicants to the IoT Next Club and established future collaborations between the participants, the club, CREATE-IoT and SynchroniCity.



Figure 45 MONICA Smart Cities Showcase

4.2.24. CPDP Computers, Privacy and Data Protection Conference

- **Date:** 22nd-24th January 2020
- **Venue:** Brussels, Belgium
- **Partner:** MI, AS
- **Summary:** CPDP gathers academics, lawyers, practitioners, policy-makers, industry and civil society from all over the world in Brussels, offering them an arena to exchange ideas and discuss the latest emerging issues and trends. This unique multidisciplinary formula has served to make CPDP one of the leading data protection and privacy conferences in Europe and around the world.

- **Relevance of the event for the IoT LSPs Programme:** The event offered the possibility to give visibility to the research done in the context of the different LSPs and to engage relevant audiences.

4.2.25. Policies to Support Open Data Marketplaces

- **Date:** 29th January 2020
- **Venue:** The Hague, The Netherlands
- **Partner:** IDATE, SINTEF, AL, TL, GRAD, UNP
- **Summary:** This workshop tackled opportunities for data-driven services in sectors like mobility, farming and energy. The event exploited use cases from the IoT LSPS with the aim of extracting key elements of a striving data economy in those sectors, most importantly to present the underlying architecture design and set the standards for fair level playing field, whilst supporting innovative business models.



Figure 46 Policies to Support Open Data Marketplaces Workshop

The discussions aimed at identifying the main challenges for IoT data value chains, regarding data-driven services, data flows including data classification, data sharing, data life cycle, digital rights management, personal data protection and present best practices from different IoT Large-Scale Pilot projects and sectors. Special attention was paid to building consensus among stakeholders in vertical and horizontal value chains on principles of data sharing, possibly paving the way for the establishment of a code of conduct applicable across all sectors. Regulatory issues across different domains (digital, energy, mobility) with links to national initiatives were also addressed.

- **Relevance of the event for the IoT LSPs Programme:** This workshop was part of a series of IoT events related to data marketplaces. The event, taking place back-to-back with the Data Sharing Days, was organised by CREATE-IoT as part of the IoT Large-Scale Pilots Programme with support from DG Connect and Alliance for IoT Innovation (AIOTI) as the co-hosts of this event.



Figure 47 Policies to Support Open Data Marketplaces Workshop - Discussions

4.2.26. Navigating IoT Architectures and Standards Days

- **Date:** 19th-21th February 2020
- **Venue:** Brussels, Belgium
- **Partner:** All Partners
- **Summary:** The purpose of this three days' workshop was to address the recent progress made in the definition of IoT architectures and standards, in particular with respect to the contribution of the IoT LSPs and the work done in the associated CSAs. Multi-dimensional IoT reference architectures are of great importance in the successful development and deployment of IoT solutions since they support a holistic view of IoT systems by addressing different functional layers, cross-cutting functions and system properties. This approach allows the largest possible expression of the requirements for data and device security, device discovery, provisioning and management, data normalization, analytics, and services.



Figure 48 Navigating IoT Architectures and Standards Days

In this perspective, IoT reference architectures are key for standardisation, as they define guidelines that can be used when planning the implementation of IoT systems in order to address the complexity of IoT solutions and ensure trustworthy, secure, scalable and interoperable IoT deployments. This workshop included keynotes, plenary and sessions giving answers to what has been achieved and what remains to be done by the IoT and DEI Large-Scale Pilots Programme funded under Horizon 2020, which are teaming up together to develop significant contributions to piloting European platforms, data ecosystems, standardisation and pre-normative activities. The first day of the workshop was centred around the outcomes of the STF 547 Task Force on IoT standardisation funded by the European Commission and supported by ETSI. The second day focused on the handover of common activities from the IoT LSPs cluster to the DEI LSPs cluster, while the third day was centred around AIOTI approaches to address the upcoming challenges to digitizing European industries.

- **Relevance of the event for the IoT LSPs Programme:** The event was co-organised by the European Commission and AIOTI, with the support of the CSAs CREATE-IoT, NGIoT and OPEN-DEI.



Figure 49 Navigating IoT Architectures and Standards Days – Panel Discussions

4.2.27. Workshop on research contribution to global standardisation

- **Date:** 3rd March 2020
- **Venue:** Geneva, Switzerland
- **Partner:** MI, AS
- **Summary:** This workshop aimed at discussing the potential to enhance dialogue and collaboration between the research community and global standards developments organisations, such as ITU, ISO and IEC. The main goal was to identify, discuss, and formalise practical ideas and actions to facilitate transfer of research results to global standardisation. The workshop started from the standardisation domain of the Internet of Things to explore solutions that can be extended to other standardisation domains.
- **Relevance of the event for the IoT LSPs Programme:** The workshop gave the possibility to showcase and analyse the contribution of different LSPs to standardisation initiatives and to focus on the best practices for future initiatives.

4.2.28. Upcoming Events & Networking Activities

IoT Training (MI)

Fruitful discussions took place at the IoT Week 2019 in Aarhus, Denmark, emphasising the need of disseminating the information created and experimented inside the LSPs projects. This fostered the idea of organising a short IoT training with cutting-edge experts from the European research and industry ecosystem. Professional trainings could be in fact a great opportunity for LSPs to disseminate the knowledge acquired during the projects and raise the interest about IoT in the private sector, by highlighting potential opportunities in various verticals and by sharing challenges and best practices drawn from the LSPs findings. A new proposal consists of co-locating an IoT training with the IoT Week 2020. This annual conference gathers leaders from the worlds of business, tech and science to shed light on the future of technology and its impact on business and life. It attracts many managers and experts who are eager to listen to the leaders and who are seeking to develop their skills and knowledge in IoT to be ahead of their peers in this fast-developing field. Therefore, a new curriculum will be designed to offer training prior to the conference, as well as a post-conference exam to validate the knowledge acquired by attending both the training and the conference tracks. A professional certificate will demonstrate the candidates have acquired specific IoT knowledge and will validate their skills. Achieving an industry-recognized certification is valuable in every profession. It gives employers confidence in the candidates' abilities and knowledge and increase their value on the market. It also allows to expand the network of experts who can then further develop the field and promote new business opportunities.

4.3. Publications

The table shown below presents all the CREATE-IoT publications produced and released in the January 2019 – March 2020 timeframe. Each publication is detailed in the following subsections.

Table 9 Publications

Title	Partner(s)	Date	Publisher
IoT LSPs e-book “The European Large-Scale Pilot Programme – Driving IoT Innovation at Scale in Europe”	All	June 2019	Online

IoT European Large-Scale Pilots Programme Brochure	All	July 2019	Online
IoT Factsheet 2019	IDC	September 2019	Online
IoT Handbook	MI	September 2020	Springer
Online IoT Handbook 2019	All	September 2019	Online
Personal Data Protection for Internet of Things Deployments: Lessons Learned from the European Large-Scale Pilots of the Internet of Things	MI, AS, AL, all LSPs	February 2020	MI
IoT Cluster Book	SINTEF, ETSI, NUIG, LINKS, ANYSOL	April 2020	River Publishers
A Vibrant IoT Research and Innovation Ecosystem across Europe	SINTEF, LINKS, U4IoT	July 2019	UIIN Magazine 2019 Issue 2 https://www.uiin.org/index/magazine)

4.3.1. IoT LSPs e-book “The European Large-Scale Pilot Programme – Driving IoT Innovation at Scale in Europe”

- **Partner(s):** IDC, IDATE and including inputs from the LSPs
- **Publisher:** IoT LSPs Programme
- **Date of publication:** June 2019
- **Place of publication:** Online
 - Flipbook version available at: <https://european-iot-pilots.eu/create-iot-e-book/>
 - PDF version available at: <https://european-iot-pilots.eu/wp-content/uploads/2019/06/IoT- European- Large-Scale Pilots Programme eBook CREATE-IoT V02.pdf>
- **Open access provided to this publication:** Yes



Figure 50 IoT LSPs e-book

4.3.2. IoT European Large-Scale Pilots Programme Brochure

- **Partner(s):** All partners
- **Publisher:** IoT European Large-Scale Pilots Programme

- **Date of publication:** July 2019
 - **Place of publication:** Online
 - PDF version available at:
https://european-iot-pilots.eu/wp-content/uploads/2018/03/220315_SD_IoT_Brochure_A4_LowRes_final-1.pdf
 - **Type of contribution:** Drafting of content and design of the publication, formatting, editing.
- Open access provided to this publication:** Yes

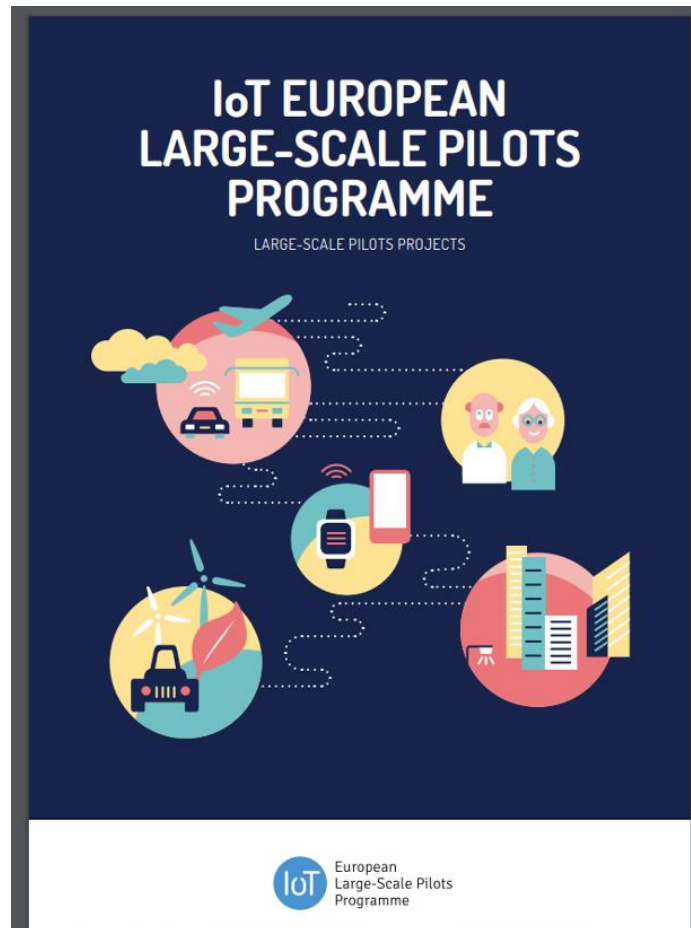


Figure 51 IoT European Large-Scale Pilots Programme Brochure

4.3.3. IoT Factsheet 2019

- **Partner(s):** IDC
- **Publisher:** European Commission
- **Date of publication:** September 2019
- **Place of publication:** Online
 - PDF version available at:
<https://ec.europa.eu/digital-single-market/en/news/internet-things>
- **Type of contribution:** IDC provided the data and graphs presented in the first page of the factsheet.
- **Open access provided to this publication:** Yes

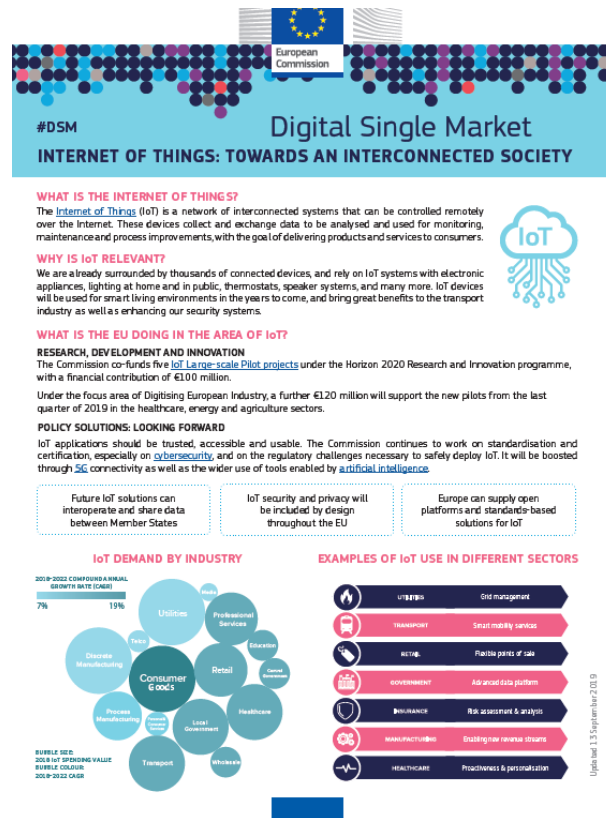


Figure 52 IoT Factsheet 2019

4.3.4. IoT European Large-Scale Pilots Programme AUTOPILOT Booklet and Roll-Up

- **Partner(s):** SINTEF, ANYSOL
 - **Publisher:** IoT European Large-Scale Pilots Programme
 - **Date of publication:** July 2019
 - **Place of publication:** Online
 - PDF version available at:
https://european-iot-pilots.eu/wp-content/uploads/2019/06/AUTOPILOT_Brochure_Web_E.pdf
 - **Type of contribution:** Drafting of content and design of the publication, formatting, editing.
- Open access provided to this publication:** Yes



Figure 53 AUTOPILOT Booklet 2019

4.3.5. CREATE-IoT and AUTOPILOT interviews

- **Partner(s):** ANYSOL, SINTEF, NUIG
- **Publisher:** CREATE-IoT
- **Date of publication:** 2019-2020
- **Place of publication:** Online
 - <https://european-iot-pilots.eu/resources/videos/>
 - <https://european-iot-pilots.eu/european-industry-partnerships-for-new-digital-age-event-brussels-2019-gallery/>



Figure 54 Interviews 2019-2020



Figure 55 Videos 2019-2020

4.3.6. Open Calls Results for LSPs in Europe

- **Partner(s):** NUIG, SINTEF, ANYSOL,
- **Publisher:** CREATE-IoT
- **Date of publication:** 2019-2020
- **Place of publication:** Online
 - <http://european-iot-pilots-opencalls-analytics.eu/>

4.3.7. CREATE-IoT USB

- **Partner(s):** ANYSOL, SINTEF, NUIG
- **Publisher:** CREATE-IoT
- **Date of publication:** 2019-2020
- **Place of publication:** USB



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European Identity IoT LSPs Programme Overview	LSP Booklets and Brochures: - Program Presentation - eBrochure - eBrochure Brief
Communication Newsletters, Events Conferences, Workshops and Webinars	KPIs Analysis: - KPIs Slides Report - IoT Impact on Society - LSPs collaboration and Engagement
Best Practices IoT Architectures IoT Platforms IoT Analytics	Standards & Privacy: - LSPs eBook Content - Standardization & 3D Reference Overview - Personal Data Protection
Technology & Road Mapping SRIA & Books 2017-2020	Books: - IERC Cluster Book 2017 - SRIA 2017 - IERC Cluster Book 2018 - SRIA 2018
Innovation & Ecosystem Open Calls and Experience Readiness Level (ERL)	LSPs Use Cases & Open Calls: - LSPs Use Cases Summary - Extending IoT Ecosystem - Open Calls Analytics - Experience Readiness Level (ERL)
Dissemination Social Media (Twitter, Facebook, Linked-In) Videos and Web Portals	IoT Large Scale Pilot Ecosystem: - ACTIVAGE Booklet - AUTOPILOT Booklet - IoT2020 Booklet - MONICA Booklet - SYNCHRONICITY Booklet
Additional Content Public Information and Architectures	Online Documentation: - Deliverables - LSPs Architectures
    	

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Figure 56 IoT European Large-Scale Pilots programme Information USB 2020

4.3.1. IoT Handbook

- **Partner:** MI
- **Publisher:** SPRINGER
- **Date of publication:** September 2020
- **Place of publication:** Online and printed copies
- **Type of contribution:** MI coordinates the handbook publication.
- **Open access provided to this publication:** Under negotiation

Springer has launched the “Internet of Things Handbook” project with Dr Sébastien Ziegler (MI) as the main editor. All LSPs projects have been invited to contribute to one or several chapters of the IoT Handbook. Many contributors of the LSPs projects demonstrate the right skills and expertise to disseminate the information gathered by the LSPs projects of the Horizon 2020 European program into this handbook.

Each chapter outline and contents must meet well-defined requirements to guarantee depth and accuracy of the research findings. There are 10 sections of 5 chapters in average, making this book a very comprehensive source of knowledge. The handbook features 45 chapters in total.

The Table of Contents below gives an overview of the scope and current structure. *LSPs related chapters are highlighted in Italic.*

Internet of Things Handbook (as of March 2020)

Forewords (I. Cha, S. Ziegler)

- A. IoT Basics (S. Ziegler, C. Charbonnier)
- B. IoT Hardware and Components (I. Chatziagiannakis)
- C. Architecture and Interoperability (S. Krco)
- D. IoT Networks (L. Ladid)
- E. IoT Security and Privacy (A. Skarmeta)
- F. From Data to Knowledge and Intelligence (G. Fortino, A. Jara, A. Liotta)
- G. IoT Standards (E. Darmois)
- H. Application Domains (S. Ziegler)
 - a. Smart cities (M. Brynskov, O. Elloumi)
 - b. Smart agriculture (J. Sagarna, Y. Barabanova, H. Sundmaeker)
 - c. Industrial IoT, smart factories and supply chains (A. Lentini)
 - d. Smart grid (S. Khalid, I. Ahmad)
 - e. IoT in Large Scale Events (S. Devasya, M. Jahn, M. Eisenhauer, C. Beecks, K. Haddad, P. Munoz, M. Maktab Dar Oghaz, H. Kerdegari, P. Remagnino, J. Foglietti, F. Sottile, G. Stavropoulos, D. Tzovaras, J. Beňadik, A. Schoneveld, P. Rosengren, P. Kool, M. Song)
 - f. Smart Homes and buildings (E. Fotopoulou, A. Zafeiropoulos)
 - g. Connected vehicles (G. Karagiannis, M. Djurica)
 - h. eHealth and Ageing well (G. Fico)
 - i. IoT for Sustainable Development (SDGs and Environmental monitoring) (I. Ahmad, S. Khalid, M. Abolhasan, I. Makhdoom, A. Brékine, S. Ziegler)
- I. Development, Testbeds and Deployment (E. Kim)
 - a. IoT Testbeds (S. Fdida)
 - b. Online testing tools (C. Viho)
 - c. IoT development and deployment guidelines and recommendations (S. Ziegler, C. Charbonnier)
- J. End-user engagement and validation (A. Stahlbröst, A. Quesada)
 - a. End-user engagement methodologies (A. Padyab, A. Habibipour, A. Stahlbröst)
 - b. Co-creation (N. Stembert)
 - c. Living labs (A. Stahlbröst)
 - d. Crowdsourcing tools and pervasive labs (S. Ziegler, S. Krco, D. Drajić)
 - e. IoT Business models (A. Aagaard, M. Presser, C. Souza, F. Rezac)

Foreword (I. Cha)

With 9 chapters including LSPs contributions, the section focusing on “Application Domains” is the largest section. The last section, focusing on “End-user engagement and user validation”, is also fully dedicated to findings elicited in the context of LSPs projects and features 5 additional chapters. With a couple of extra chapters leveraging on findings from the LSPs, more than a third of the handbook disseminates knowledge, best practices, findings and recommendations from the LSPs projects.

4.3.2. Personal Data Protection for Internet of Things Deployments: Lessons Learned from the European Large-Scale Pilots of the Internet of Things

- **Partner(s):** MI, AS, AL, all LSPs
- **Publisher:** MI

- **Date of publication:** February 2020
- **Place of publication:** Online
- **Type of contribution:** MI coordinated the development of the document with all five LSPs.
- **Open access provided to this publication:** Yes

The purpose of this document has been to present lessons learned and good practices necessary for enhanced personal data protection.



Figure 57 *Personal Data Protection for Internet of Things Deployments: Lessons Learned from the European Large-Scale Pilots of the Internet of Things*

Methodologies, strategies and the most relevant enablers developed by the five LSPs and their supporting CSAs provide an example on how to ensure the compliance of IoT technologies with the GDPR Regulation. This Guideline is intended for the international audience, including industry, the research community, public administration and standardisation bodies.

4.3.3. IoT Cluster Book

- **Partner:** SINTEF, NUIG, LINKS, ANYSOL, ETSI
- **Publisher:** River Publishers
- **Date of publication:** April 2020
- **Place of publication:** Online and printed copies
- **Type of contribution:** SINTEF coordinates the publication.
- **Open access provided to this publication:** Yes

Internet of Things Cluster Book Structure

- *The EU IoT Policy and Regulatory Strategy – the Way Forward*
- *Focus Area on Digitization Further Deployment of Digital Technologies in Industrial Sectors*
- *IoT Future Trends*
- *Real-time Management of Energy Consumption in Water Resource Recovery Facilities Using IoT Technologies*
- *IoT Solutions for Large Open-Air Events*
- *IoT Technologies for Connected and Automated Driving Applications*
- *IoT in Brazil: An Overview from the Edge Computing Perspective*
- *IoT Technologies and Applications in Tourism and Travel Industries*

5. CONCLUSIONS

The current deliverable D07.05 has outlined the collaboration and dissemination activities as well as the main achievements of the CREATE-IoT project in the period between January 2019 – March 2020. The dissemination and communication activities reported in the present deliverable are aligned with the plan of action of the project, as well as with the dissemination and communication strategy outlined in deliverable D07.06.

As the deliverable reports, the project has implemented a series of successful dissemination initiatives both online, through the project website and the social media, and offline, through the several events organised and attended by project representatives, which contributed to the engagement of the IoT LSPs and the IoT community at large.