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Deliverable D6.9
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(final version)

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Authors	Startup Colors: Maren Lesche
Editor	Maren Lesche (Startup Colors)
Reviewer	Anca Bucur (Philips), Wolfgang Hollerweger (AVL)
Approved by	PTC Members: (Vivek Kulkarni, Konstantinos Fysarakis, Sumudu Samarakoon, Beatriz Soret, Arne Bröring, Maren Lesche) PCC Members: (Vivek Kulkarni, Jérôme Härri, Beatriz Soret, Mehdi Bennis, Martijn Rooker, Sotiris Ioannidis, Anca Bucur, Georgios Spanoudakis, Simon Mayer, Alexander Werlberger, Holger Burkhardt, Maren Lesche, Georgios Kochiadakis)
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ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellioT

Table of Contents

Acronyms and Definitions

Acronym	Definition
CSA	Coordination and Support Action
EC	European Commission
GDPR	General Data Protection Regulation
IEEE	Institute of Electrical and Electronics Engineers
IoT	Internet of Things
KPI	Key Performance Indicator
NGIoT	Next Generation Internet of Things (NGIoT) initiative
OC	Open Call
RIA	Research and Innovation Action
SME	Small and medium-sized enterprises

31/01/2024

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

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EXECUTIVE SUMMARY

IntellIoT was launched in October 2020 as a new Research and Innovation Action. The brand, the ecosystem as well as all dissemination activities had to be established anew. Work Package 6 (WP6) especially Task 6.1. therefore, focussed on dissemination & ecosystem building. In this deliverable the work of WP6 and especially the subtasks of Task 6.1. are outlined.

Task 6.1 covered the planning, carrying out and monitoring of communication and dissemination activities with the aim to build an ecosystem around the IntellIoT framework. The strategic goal of this task has been to create a sustainable impact that will last beyond the end of the project by making the results of the research known to those who could benefit from them. To ensure this goal a communication and ecosystem strategy has been developed and implemented in the past 40 months of IntellIoT execution.

This final report shows that all planned activities were delivered despite restrictions due to COVID-19 in the first 18 months of IntellIoT. The global pandemic especially impacted the scheduled events and physical activities. However, the IntellIoT consortium quickly adapted the planned activities to online and hybrid formats so the defined goals could be achieved.

The following KPIs have been achieved:

Dissemination instrument	First Delivered	Success Indicators	Achieved Indicators (M01 - M18)
Project Website	M03	>1000 annually	12,000 users / 40,000 Impressions between M03 - M40
Social Networks	M01	> 100 announcements annually	450+ own posts and own retweets in M03 - M40 (240 Linkedin-Posts plus 225 Twitter plus shared content). Please note the negative development on Twitter
Regular Newsletters	M01	> 9 issues	18 issues published, >200 regular subscribers; > 480 Open Call subscribers
Flyer / Brochure	M05	> 2.000 hard copies distributed at >10 events	Flyer; 1,000 downloads, 800 printed versions distributed Business Cards: 100 Poster: 30, at 3 physical events Please note that we used Roll-ups

ICT–56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT

			at conferences e.g. IoT Tech Week, Bauma and Agritechnica instead of Posters
Online Magazine	M02	> 12 Stories, 1,200 impressions annually	12 stories, 2,500 impressions M02 - M40
Project Video	M05	>600 views > 10 events	1,300 impressions of 3-min-video plus >2,500 impressions of 15 additional videos published
Scientific Publications	M02	> 30 publications	40 publications
Special Issues	M18	> 3 organised special issues; > 8 selected papers per issue	3
Non-scientific Publications	M02	> 10 publications	> 200 online publications based on 2 press releases 2 special articles
Conferences	M18	> 1 event > 80 attendees	3
Workshops	M03	> 3 workshops > 20 attendees each	35 public trainings incl. OC Webinars on IntellIoT Framework >30 - 120 attendees 3 semi-public end-user-workshops <15 attendees
Summer Schools	M12	> 2 workshops > 20 attendees each	4 Summer Schools >40 attendees each
Hackathon	M12	> 2 hackathons > 20 attendees each	3 hackathons > 140 attendees in total
SME & Policy Events	M03	> 5 events > connecting to 20 influencers each	6 own Online Meetups with 13 expert speakers 10 SME conference /Workshop attendance <20 influencer
Exhibition Demonstrators	M24	> 1 demonstrator	3
EU Demonstrators	M24	> 2 demonstrators	3
Conference Demonstrators	M24	> 2 demonstrators	3

31/01/2024

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT

1. DISSEMINATION STRATEGY

To ensure a sustainable dissemination, in a first step a detailed dissemination and communications plan has been developed defining the following aspects:

- Mission & Corporate Identity
- Strategic & Operational Goals
- Strategic Approach
- Target Groups
- Dissemination Instruments
- Timeline
- Responsibilities & Processes

This plan has been developed between M01 and M03 by the communications experts of Startup Colors and has been introduced to the complete consortium in the first consortium meeting in November 2020. It was executed in M03 until M40.

1.1. Mission & Corporate Identity

As a mission and vision, the consortium agreed on the following statements:

- Vision: "POWERING THE FUTURE OF HUMANISED IOT AND AI ACROSS EUROPE"
- Mission: "IntellIoT is a Pan-European project focusing on developing integrated, distributed, human-centred and trustworthy Internet of Things (IoT) frameworks, applicable to agriculture, healthcare and manufacturing. Enabling technologies such as 5G, cybersecurity, distributed technology, Augmented Reality and tactile internet, IntellIoT champions end-user trust, adequate security and privacy by design."

Both statements are aligned with the overall objectives of the Next Generation Internet of Things (NGIoT) initiative run by the overarching Coordination and Support Action (CSA) and also define the purpose of the overall IntellIoT project as a Research and Innovation Action (RIA). The statements are the cornerstone of all communications and can be found on all communications channels, e.g., social media, print material and the website.

To give IntellIoT a public face, a corporate design process was initiated in M01. It included the design of a logo as well as visual elements and templates such as slide decks, flyer designs and social media elements. The simple but widely applicable logo and the visual elements represent IntellIoT's core principles: Human-centricity, trust, collaborativeness. While the colours suggest trust, the visual elements, e.g., the mesh elements, represent the human element. With its interacting elements the logo also symbolises the collaborative concept of IntellIoT.

ICT–56–2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

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Part of the corporate identity are also graphical elements that represent the industry sectors IntellIoT focuses on: Agriculture, Healthcare, Manufacturing,

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Figure 1: The IntellIoT logo

1.2. Strategic & Operational Goals

WP6 aims to maximise the exploitation and to generate societal, economic and scientific impact of the IntellIoT results by disseminating project results among the scientific, business and startup community in Europe and globally, as well as towards decision makers, relevant stakeholders and the interested public. It also has the objective to strengthen the research and knowledge base of all relevant stakeholders through presentation of the IntellIoT work and results.

Three strategic goals were defined:
1. Position the IntellIoT Consortium as thought leaders in intelligent, autonomous, human-centred solutions in healthcare, manufacturing and agriculture.
2. Spotlight the various and specific ways partners are trailblazing new technologies and enabling them for use among startups and small and medium-sized enterprises (SMEs)
3. Raise the understanding of "Next Generation IoT" powered by 5G and relevant subtopics across European society.
4. Present, ferment and expound on the potentials of Europe as a competitive ecosystem in this space.

In a next step the strategic goals were translated into concrete operational goals aligned with the dissemination channels.

1.3. Strategic Approach

IntellIoT's dissemination strategy is built on the following strategic elements: 1.) To Educate; 2.) To Activate, 3.) To Engage and 4.) To Foster Dialogue.

They were the key beacons for all activities executed in the project.

1.4. Target Groups

All dissemination activities of IntellIoT target at least one of the following stakeholder groups that have been identified as the most relevant groups. Please note that the order does not represent a ranking of importance.

- Relevant scientific communities
- European user groups/technology decision-makers with a vested interest in IntellIoT's mission

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellioT

- Startups and SMEs who could benefit from the technology available from our partners.
- Professional bodies and other types of stakeholders
- Individuals looking to be educated on IntellIoT's core areas of research and innovation.
- Employees at the Consortium Partners
- Journalists and media experts at relevant media outlets
- IoT Influencer / Experts

A special focus was also laid on the broader NGIoT ecosystem. The IntellIoT project contributed early on to the work that has been implemented by the CSA EU-IoT supporting the activities defined under "Horizontal Activities'" of the topic call text H2020 ICT56. Resources were allocated to contribute to clustering the results of horizontal nature, such as interoperability approach, reference architecture, standards, security and privacy approaches and contribution to a coordinated dissemination/portal implementation. This also includes the cooperation with the other retained RIA projects funding under this topic ICT56.

1.5. Dissemination Instruments

A detailed overview of the dissemination instruments can be found in section 2.
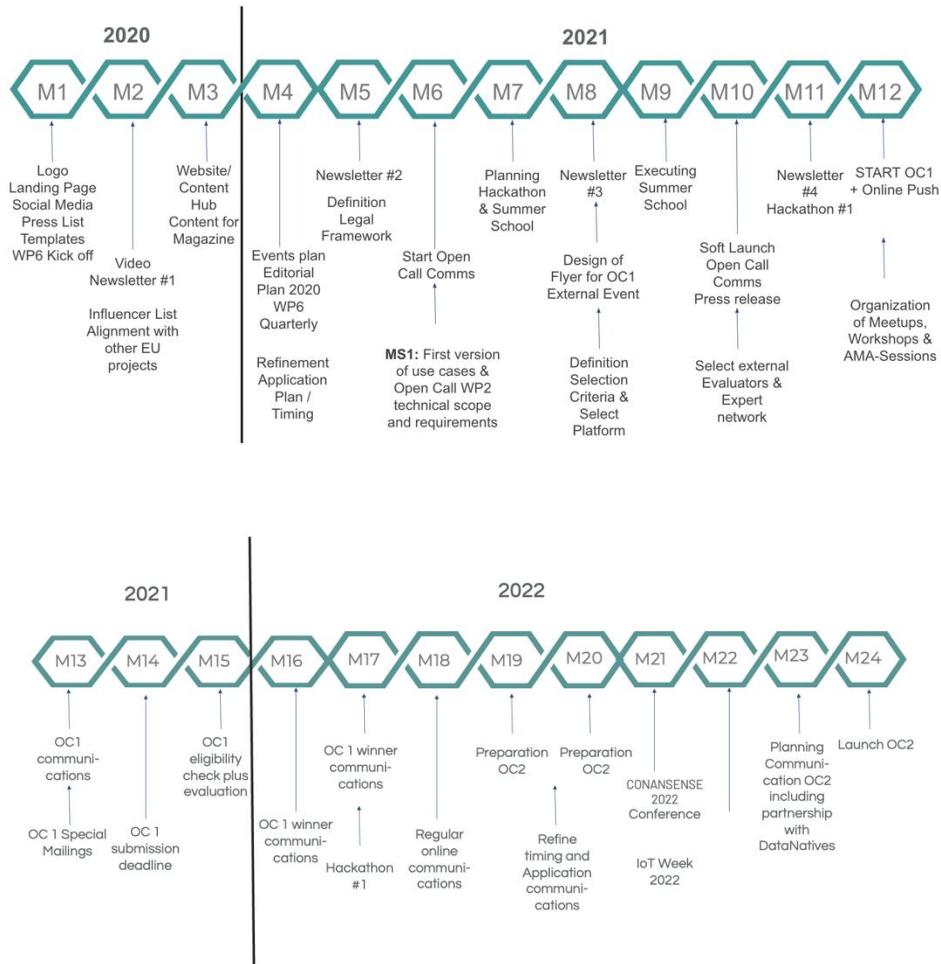
1.6. Timeline

A first timeline was established. However, it has been updated constantly to:
- Adjust to the COVID-19 situation.
- Align with the Open Call activities.
- Connect with the overall NGIoT activities.
- Reflect the learning from executed activities.

As a core principle to continuously improve the dissemination plan, feedback was collected after activities on a regular basis, e.g., from attendees of events to assess dissemination effectiveness.

In M18 the communications plan was reviewed and adapted. Especially the learnings from the communications campaigns of Open Call 1 (OC1) were integrated. During OC1 more than 200 SMEs could be activated due to the intense dissemination activities. However, only four SMEs could be selected to join IntellIoT. Especially online communication activities were therefore reduced after OC1 and during the pilot projects to avoid confusion within SMEs. The activities specifically aiming for SMEs were picked up again in preparation of OC2 and finally OC3. In the meantime, focus was given to academic publications, demonstrations and Special Issues.
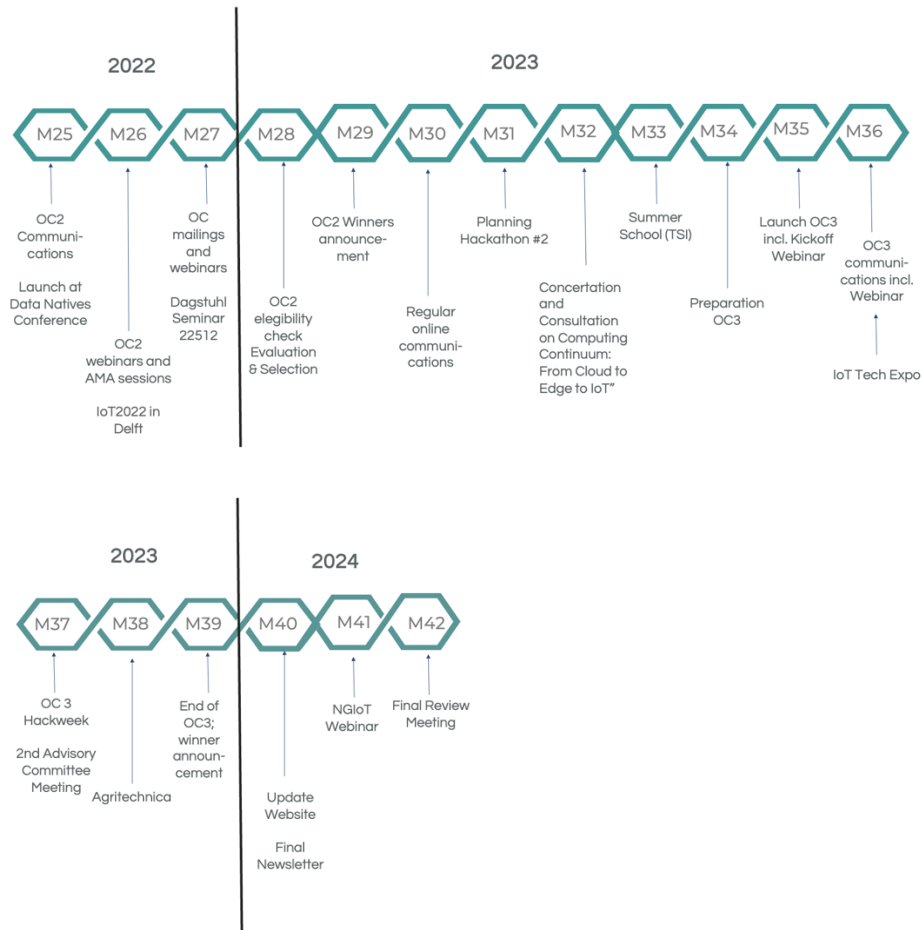
ICT–56–2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

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2020

M1 · M2 · M3 · M4 · M5 · M6 · M7 · M8 · M9 · M10 · M11 · M12

2021

- Logo
  Landing Page
  Social Media
  Press List
  Templates
  WP6 Kick off
- Video
  Newsletter #1
- Influencer List
  Alignment with
  other EU
  projects
- Website/
  Content
  Hub
  Content for
  Magazine
- Events plan
  Editorial
  Plan 2020
  WP6
  Quarterly
- Refinement
  Application
  Plan /
  Timing
- Newsletter #2
- Definition
  Legal
  Framework
- Start Open
  Call Comms
- **MS1:** First version
  of use cases &
  Open Call WP2
  technical scope
  and requirements
- Planning
  Hackathon
  & Summer
  School
- Newsletter
  #3
- Design of
  Flyer for OC1
  External Event
- Definition
  Selection
  Criteria &
  Select
  Platform
- Executing
  Summer
  School
- Soft Launch
  Open Call
  Comms
  Press release
- Select external
  Evaluators &
  Expert
  network
- Newsletter
  #4
  Hackathon #1
- START OC1
  + Online Push
- Organization
  of Meetups,
  Workshops &
  AMA-Sessions

2021

M13 · M14 · M15 · M16 · M17 · M18 · M19 · M20 · M21 · M22 · M23 · M24

2022

- OC1
  communi-
  cations
- OC 1 Special
  Mailings
- OC 1
  submission
  deadline
- OC1
  eligibility
  check plus
  evaluation
- OC 1 winner
  communi-
  cations
- OC 1 winner
  communi-
  cations
- Hackathon
  #1
- Regular
  online
  communi-
  cations
- Preparation
  OC2
- Refine
  timing and
  Application
  communi-
  cations
- Preparation
  OC2
- C0NANSENSE
  2022
  Conference
- IoT Week
  2022
- Planning
  Communi-
  cation OC2
  including
  partnership
  with
  DataNatives
- Launch OC2

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT

Figure 2: Timelines of dissemination activities

1.7. Responsibilities & Processes

To ensure an effective and efficient execution of the planned activities, responsibilities and processes were defined in M01 including the following steps:

- Identification of Communications Experts on the partner level to form an expert group within WP6.
- Scheduling of a monthly WP6 video call with operational focus with an appointed spokesperson per partner, led by the Startup Colors team.
- Set-up of a specific IntellIoT email managed by Startup Colors to which partners send in updates and information worth publishing (IntellIoT(at)startupcolors.com)
- Creation of a message board and content hub accessible to all Consortium members to peruse and contribute independently (via SharePoint)

Furthermore, all dissemination activities are proactively communicated across all consortium members. Press material is jointly approved. Event attendance or speaking engagements are discussed proactively in regular video calls to ensure that all consortium members can participate - or intervene. To leverage the strength of the respective partners responsibilities were also distributed as this example shows:

- Academic partners will disseminate in the scientific community the research achievements obtained within the project. They will target high profile publication venues. Academic partners will also incorporate the project results within their advanced educational activities.
- Industrial partners will present the project results at industrial fairs, exhibitions and gatherings of decision makers to engage in bilateral communication with key decision makers. Events will include major international forums for adopters of IoT technology, such as IOT Tech Expo or BAUMA
- All partners will support IntelIIoT's technical communication with the community through presence in social media, such as LinkedIn and Twitter
- All partners will further support broad communication on the use cases and the IntelIIoT solution in non- scientific publications as well as social media such as LinkedIn and Twitter

The processes ensure that IntelIIoT is living its core principles of trustworthy, collaborative and human-centred ecosystem in its dissemination activities as well.

ICT–56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellioT

2. DISSEMINATION INSTRUMENTS

On an operational level IntelloT's dissemination strategy is based on the PESO Model that is applied as a marketing strategy. It includes all instruments relevant to the current public activities and differentiates between PAID, EARNED, SHARED and OWNED activities.
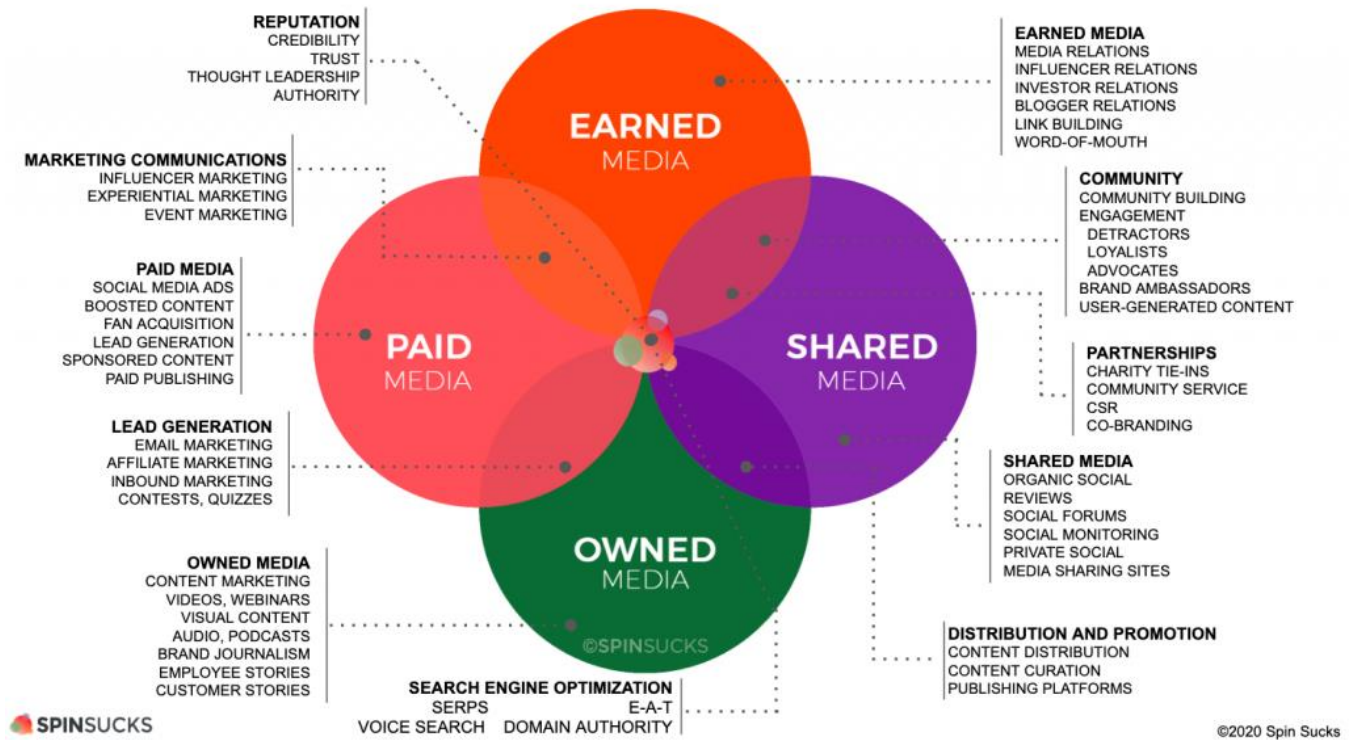
Source: Gini Dietrich's 2014 book Spin Sucks

Figure 3: Overview of the PESO Model by Gini Dietrich

The following sub-section details the most effective instruments identified by the dissemination experts of Startup Colors.

2.1. Online dissemination

Due to COVID-19, online dissemination activities became more relevant across the 40-months of programme timeframe. The planned activities were expanded. On-Premises activities were transferred into hybrid or online activities. The following activities were executed:

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellioT

2.1.1. PROJECT WEBSITE

The IntellioT consortium has set up a project website in M03 that acts as the central content hub of all publicly relevant consortium activities. It is planned to maintain the website for at least a period of one year after the project ends.
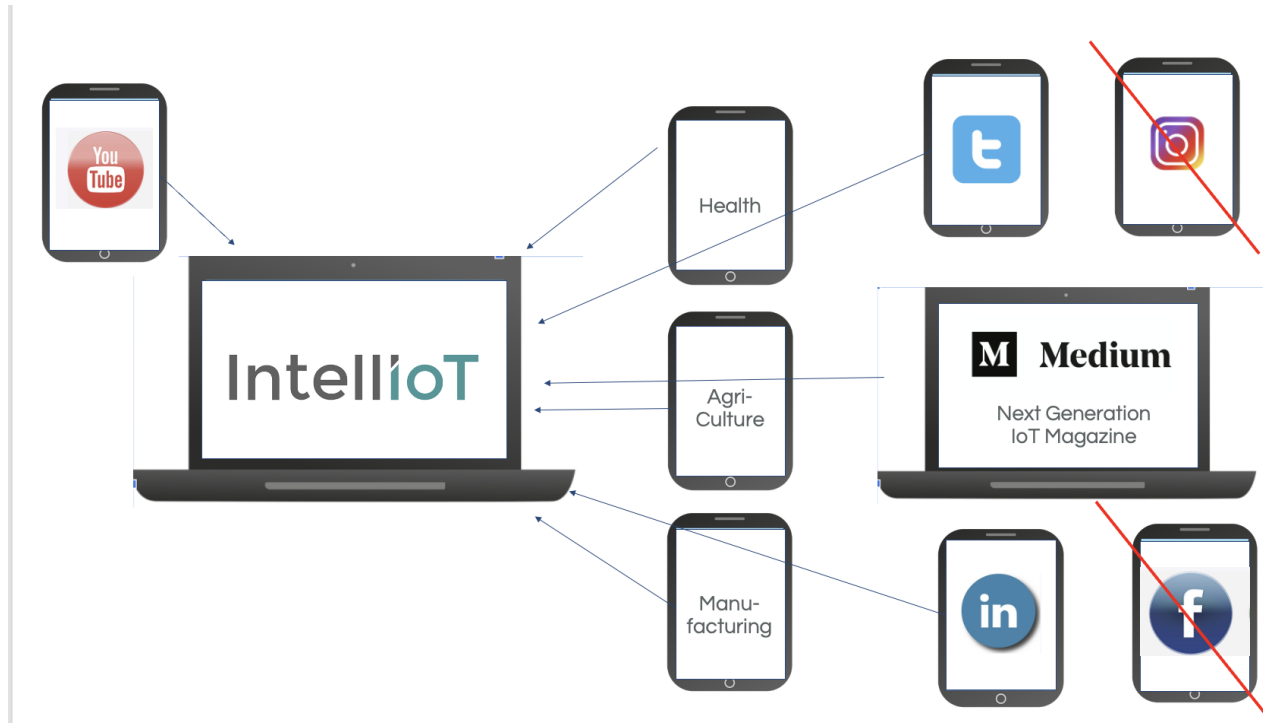
Figure 4: Overview Website plus Social Media

Early on, the following website structure has been developed. It includes a public area through which IntellioT information, objectives, results, partners and events information are disseminated, as well as other public information such as public deliverables, open access publications, news, etc. In M12 a special section for information on the Open Call#1 has been established focusing on short-term information relevant for SME specifically including Open Call press releases plus updates and information related to events and to application guidelines. On M24 and M35 similar subpages have been established for OC2 and OC3. All subpages are still available but not linked to the navigation since SMEs can't apply.

The website is also connected to other platforms such as YouTube (integration of project video), the social media channels Twitter and LinkedIn as well as the content platform Medium that hosts the "Next Generation IoT Magazine". This "shared" approach ensures that updates on other platforms will always

be displayed on the central project website as well. After M18, the original website was extended and enriched with further input.
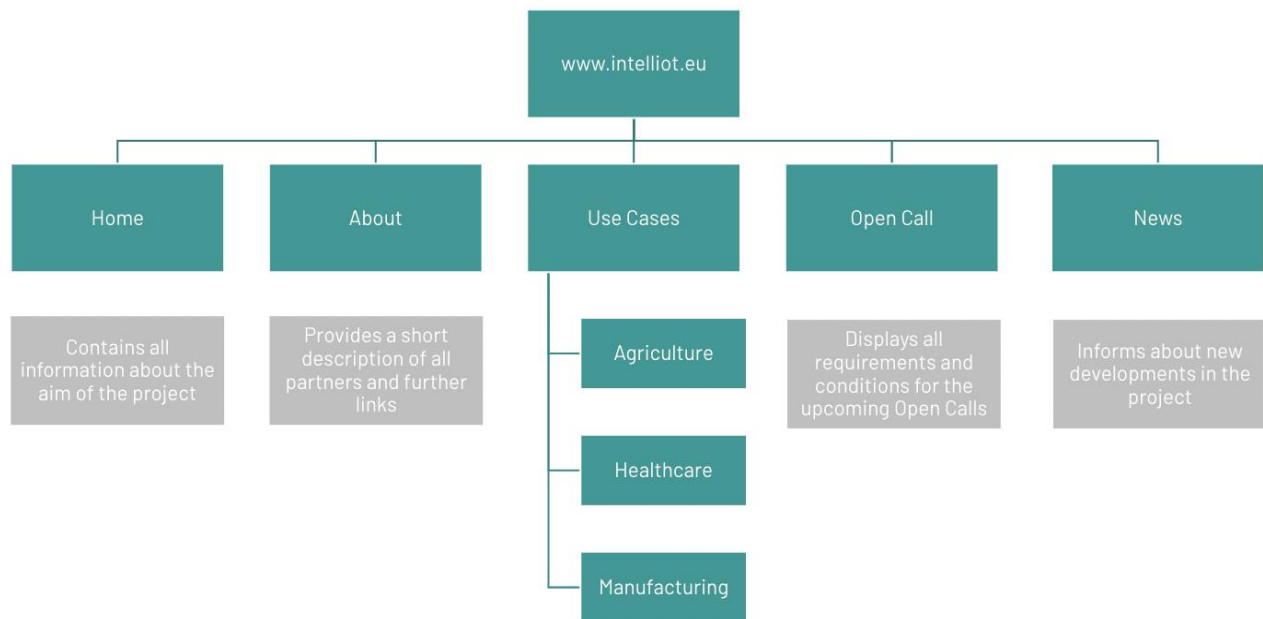
Figure 5: IntelIIoT website overview including subpages until M18
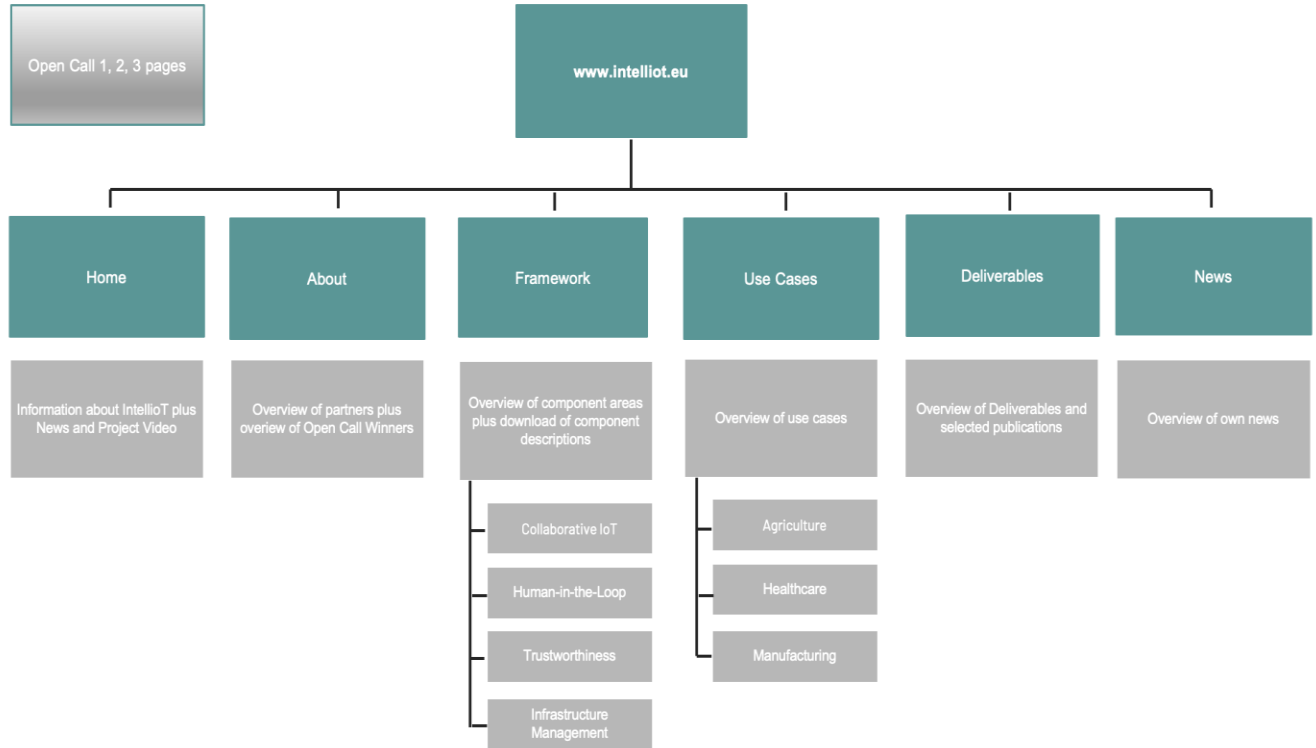
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Figure 5: Extended IntellIoT website overview including subpages until M40

Originally it was planned to set-up a private area with secure access in order to manage restricted information (e.g., confidential management documents) and the work to be undertaken. However, such a closed collaboration space could be established on a Microsoft SharePoint server by the consortium lead Siemens in a more secure and accessible environment.

The website counted a total of 12,300 users and more than 40,000 impressions between its launch in M03 and M40. The goal of 1,000 impressions annually has been exceeded.

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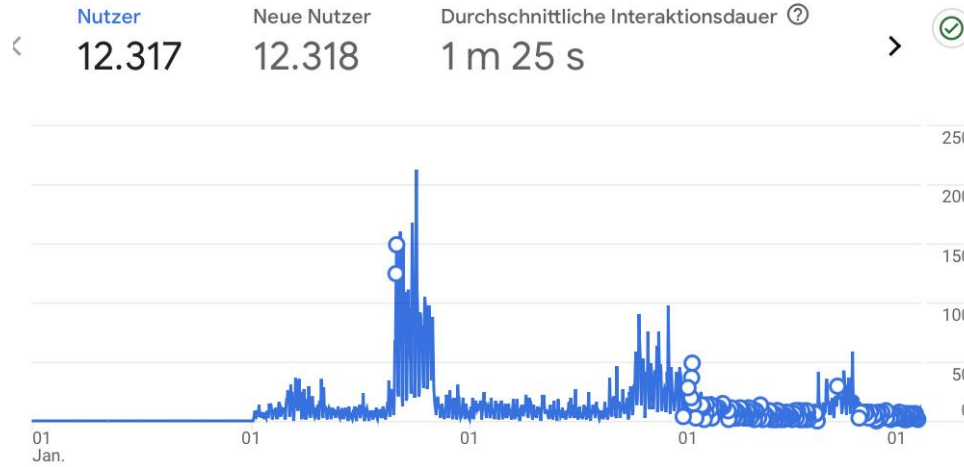
Figure 7: Overview of users visiting the IntellIoT website (M03 – M40)
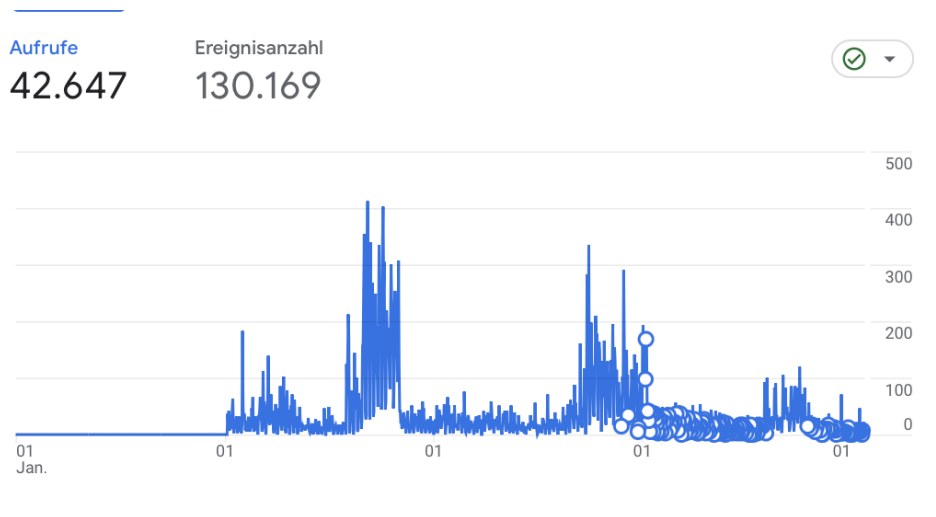
Figure 8: Overview of website impressions of the IntellIoT website (M03 – M40)

Clear peaks can be identified during the Open Call activities. Figure 8 also highlights the sources the users used to access the website. The majority of the users used direct links to access the website, e.g. Links in Mailings sent out by the consortium or presented via events and webinars.
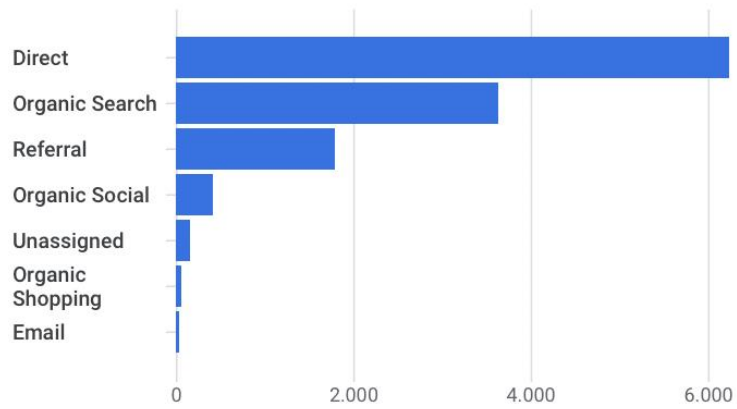
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Figure 9: Overview of access points / conversion sources to the IntelIIoT website (M03 – M40)

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

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2.1.2. PROJECT VIDEO & ADDITIONAL AUDIO-VISUAL CONTENT

In M04 the development of an official project video[1] was started. In a 3 min long animation all use cases as well as the framework approach of IntellIoT were highlighted. It focuses on the technical advancements of the IntellIoT approach, targeting the IoT technical and business community. This video is now an essential part of the project website and was integrated in all communications activities between M05 and M40 such as direct mailings to potential Open Call participants and as an introduction video for the public Online Webinars as well as the private End-User Workshops. It was also used for Advisory Board meetings and to engage with influencers as well as to train evaluators of the Open Calls. The project video has been watched on Youtube 1,300 times - considering its use at events where the video was embedded in presentations, the overall number of viewers can be at least estimated at up to 2,000 people. In addition to the overall project video four short 30 sec videos were created showcasing the individual use cases and the framework concept of IntellIoT. These short videos were generated from the 3-min project video.

Including the project video, a total of 17 videos have been created between M06 and M40. Most of these video clips document the online webinars and talks organised by IntellIoT. These 15 videos - excluding the project video - reached more than 2,500 impressions on YouTube[2].
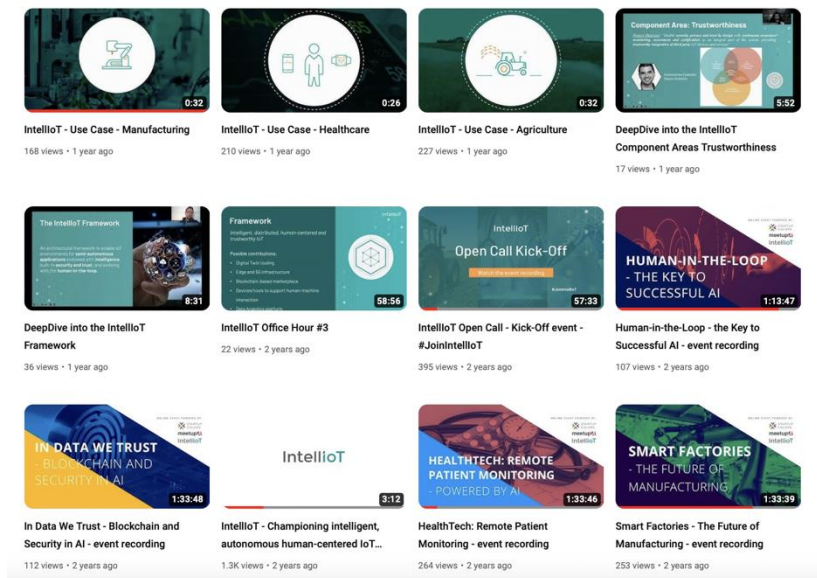
Figure 10: Selection of published videos (M03 - M40)

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[1] Link to project video: https://www.youtube.com/watch?v=30AWf0zaM7U
[2] Link to YouTube Channel: https://www.youtube.com/channel/UCyVLzG7RJTePl0SgDY1SRrg/videos

2.1.3. ONLINE MAGAZINE "NEXT GENERATION IOT MAGAZIN"

The international publishing platform Medium[3] enables organisations to coordinate and publish editorial content from multiple editors. It also serves as an external communications channel because – comparable to other online magazines – it already has an established readership. This shared and collaborative concept again goes hand in hand with the IntelIIoT principles of collaborative, human-centric and trustworthy dissemination. In total 4 different editors have been involved. It needs to be highlighted that the magazine is not replacing a corporate blog. The published content is based on storytelling and journalistic principles since a neutral and informative communication increases the engagement of the ecosystem around IntelIIoT.

Moreover, the Magazine is a channel that has been used to engage decision makers and influencers in the relevant sectors agriculture, healthcare and manufacturing. It also serves as an educational platform since many of the published articles share insights and best practices on the new technologies and concepts IntelIIoT is built on, e.g., HyperMAS and trustworthy IoT.

Between M01 and M40, a total of 12 articles were produced and published. These reached 2,500 readers.

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[3] Link to the Magazine: https://medium.com/next-generation-iot-magazine

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT
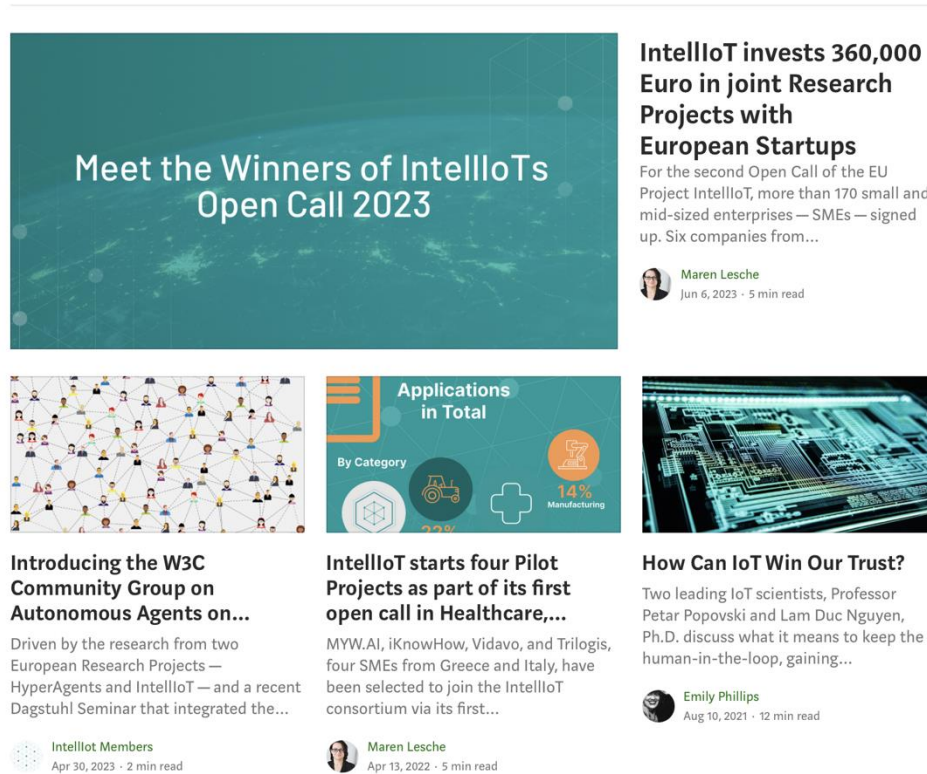
Figure 11: Impression from Medium Magazine (M03 - M40)

2.1.4. SOCIAL NETWORKS

A systematic use of social media is important for a continuous and early announcement of the project outcomes and for supporting the ecosystem building. The social networks Twitter (now X) and LinkedIn have been proven to be the most relevant channels for a broad dissemination of project outcomes but also to reach IntellIoT's target audience in a most efficient way. In addition to that Facebook /Meta as well as Instagram have been evaluated as potential channels. However, it was decided to save the channels but to not use them actively. YouTube is used to disseminate technical and promotional video material. It needs to be noted that during the project timeframe the network Twitter - now X - has lost users and reputation, especially in Europe. This loss of trust and the high number of decision makers that signed off Twitter led to low engagement rates. This channel has been therefore de-prioritised. The strongest social network remained LinkedIn.
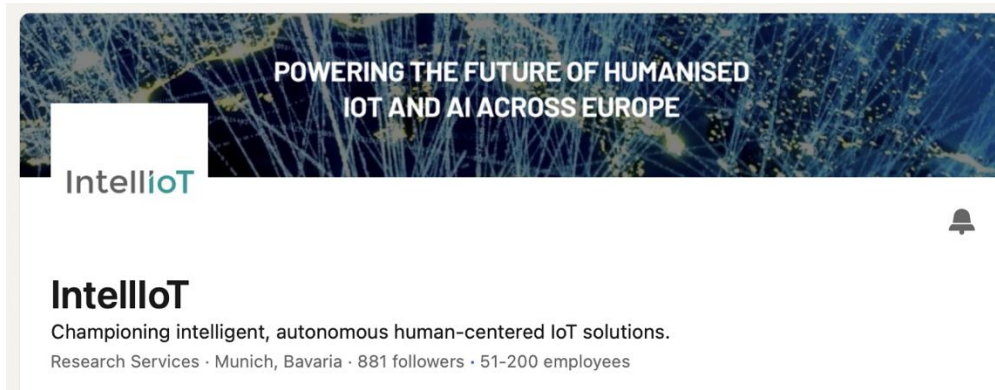
Figure 12: Screenshot of IntelIIoT project page on LinkedIn

More than 800 **LinkedIn** subscribers are actively following the project page[4]. On average 6 posts per month have been published on Linkedin - in total more than 250 posts between M01 and M40.
In addition to LinkedIn posts, LinkedIn also became an important tool to acquire event[5] attendees. In altogether 16 promoted events more than 600 LinkedIn users registered. The most popular topics have been healthtech and security / trust.
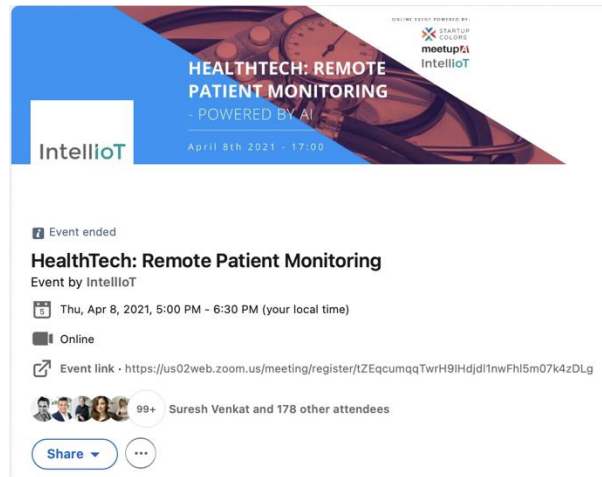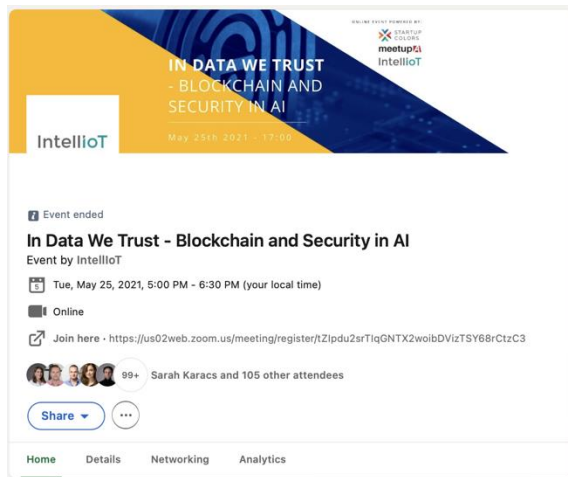
Figures 13: Screenshots of online event pages connected to the IntelIIoT project page on LinkedIn

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[4] Link to IntelIIoT project page on LinkedIn: https://www.linkedin.com/company/intellioteu
[5] Link to IntelIIoT event overview on LinkedIn: https://www.linkedin.com/company/intellioteu/events/

IntellIoT

Even after OC2 when OC3 was not announced yet, the interest on LinkedIn was strong. In 2023 (M28 - M39) more than 6000 unique impressions could be counted as the following figure 13 shows.
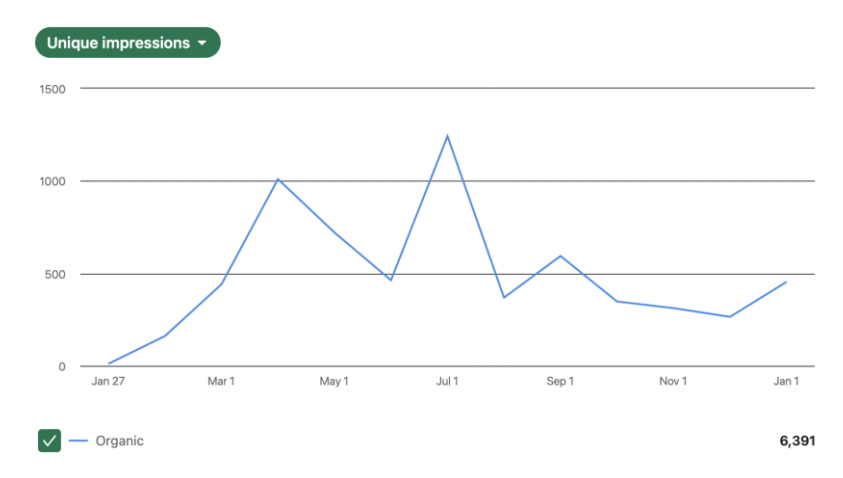
Figure 14: more than 6,000 unique impressions between M28 - M 39 (12 Month) on LinkedIn

The second used social media outlet is **X/ Twitter**[6] . With more than 200 followers that actively share and comment, this social network is mainly aiming to content and interact with selected editors and influencers. Between M01 and M40, 225 tweets have been posted. Moreover, Twitter (now X) also allowed partners - such as NG IoT -, media outlets and influencers to actively share IntellIoT content.

Figure 15: IntellIoT Twitter / X page

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[6] Link to IntellIoT Twitter page: https://twitter.com/Intelliot_eu

The X/ Twitter concept of IntelIIoT was also based on the PESO model. IntelIIoT aims for 1.) 60 % curated, IoT relevant content, e.g., Open Calls from NGIoT partners or trend reports, 2.) 40 % creation of own content plus sharing content from the IntelIIoT consortium partners. This shared approach can be seen in the following tweets:
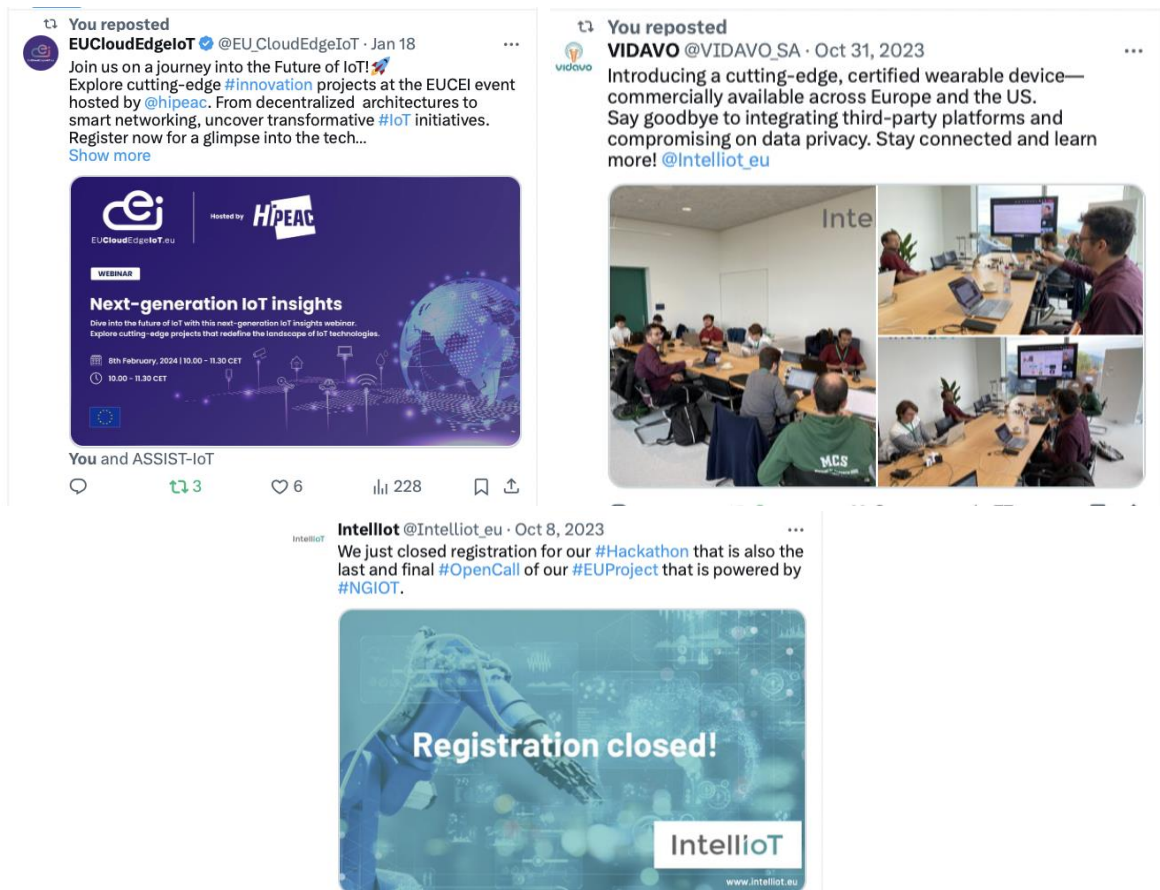
Figure 16: Example Tweets from IntelIIoT and dissemination partners

After M40 all networks will remain open. The W6 Lead Startup Colors will monitor the networks and will especially support follow-up projects from the EUCloudEdgeIot-Community.

31/01/2024

2.1.5. NEWSLETTERS & MAILINGS

Starting from M03, regular email newsletters[7] were sent out to interested parties outside the IntelIIoT consortium. Newsletters contained information on the progress of the project, recent events as well as information on the Open Calls. All consortium partners regularly contributed to it. The newsletters brought the IntelIIoT news into the home offices of the European IoT network during COVID-19. More than 200 selected IoT experts subscribed to it already. Additionally, a special group of more than 480 subscribers registered for specific information on the Open Call. Due to General Data Protection Regulation (GDPR), all contacts have signed via a double opt-in process.

Between M02 and M40 at total of 18 regular newsletters and special Open Call mailings have been published.
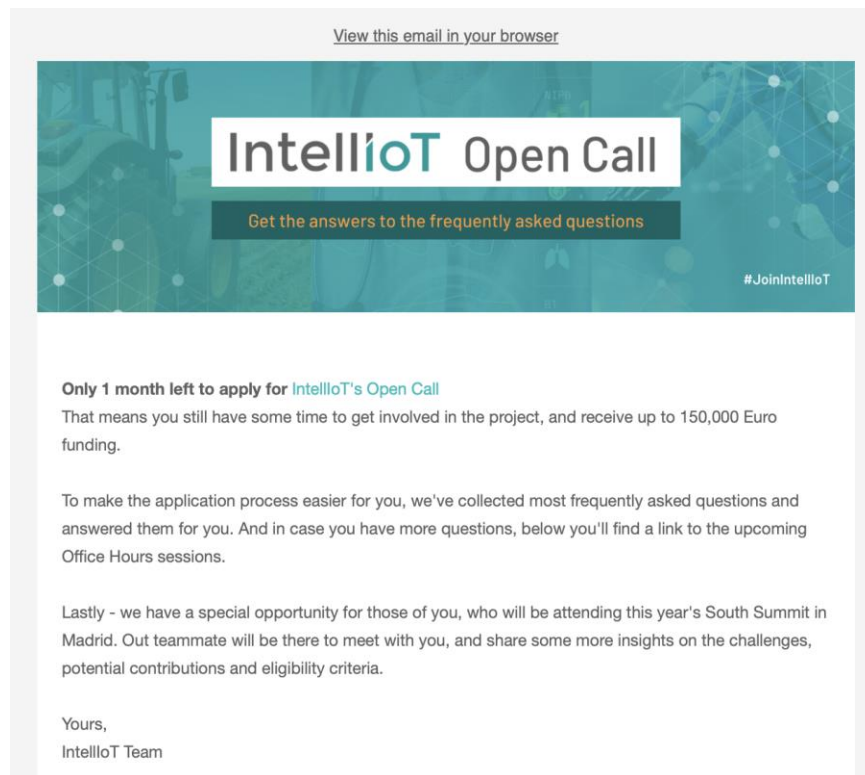
Figure 17: Example Newsletter

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2.2. Publications

At IntellIoT a special focus lies on publications. In general, scientific and non-scientific publications need to be differentiated. Moreover, online and offline publications are also considered in a different way. Due to COVID-19 and the lack of scientific offline events, online publications became even more relevant within the dissemination campaign.

2.2.1. SCIENTIFIC PUBLICATIONS AND CONFERENCE PUBLICATIONS

Between M01 and M40 a total number of 40 scientific publications have been published or are scheduled for publication in 2024 - exceeding the number out of 30 publications defined as a project KPI. Among them are papers in renowned publications such as the Institute of Electrical and Electronics Engineers (IEEE) Internet of Things Journal, IEEE TCOM and IEEE Transactions on Communications. Ten of these publications are based on accepted papers to (online) conferences.

Examples of successful scientific publications are:

- Abdel-Aziz, M.K., Perfecto, C., Samarakoon, S., Bennis, M. and Saad, W., 2020. Vehicular Cooperative Perception Through Action Branching and Federated Reinforcement Learning. IEEE TCOM. Nov. 2021. [8]
- Federico Chiariotti, Olga Vikhrova, Beatriz Soret, Petar Popovski, 2021. "Peak Age of Information Distribution for Edge Computing with Wireless Links". Preprint version of the paper accepted for publication in the Transactions on Communications.[9]
- C. BenIssaid, A. ElGabli, J. Park, M. Bennis and M. Debbah, "Communication Efficient Decentralized Learning Over Bipartite Graphs", IEEE TCOM, 2021.
- Lam Duc Nguyen, Amari N. Lewis, Israel Leyva-Mayorga, Amelia Regan, Petar Popovski, "B-ETS: A Trusted Blockchain-based Emissions Trading System for Vehicle-to-Vehicle Networks", In Proc. of the 7th International Conference on Vehicle Technology and Intelligent Transport Systems (VEHITS) 2021. [Best Paper Award]
- M. Krouka, A. Elgabli, C. b. Issaid and M. Bennis, (2021) "Communication-Efficient Split Learning Based on Analog Communication and Over the Air Aggregation," 2021 IEEE Global Communications Conference (GLOBECOM), 2021, pp. 1-6, doi: 10.1109/GLOBECOM46510.2021.9685045.
- Issaid CB, Elgabli A, Park J, Bennis M, Debbah M. (2021) "Communication efficient distributed learning with censored, quantized, and generalized group ADMM". WCNC 2021 (accepted)
- Soret, Beatriz, Lam D. Nguyen, Jan Seeger, Arne Bröring, Chaouki Ben Issaid, Sumudu Samarakoon, Anis El Gabli, Vivek Kulkarni, Mehdi Bennis, and Petar Popovski (2021). "Learning,

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[8] Link to paper: https://arxiv.org/abs/2012.03414
[9] Link to paper: https://arxiv.org/abs/2004.05088

Computing, and Trustworthiness in Intelligent IoT Environments: Performance-Energy Tradeoffs." IEEE Transactions on Green Communications and Networking.
- Alshammari T, Samarakoon S, Elgabli A and Bennis M (2021), "BayGo: Joint Bayesian Learning and Information-Aware Graph Optimization", In Proc. of IEEE International Conference on Communications (ICC). (accepted)
- Anis Elgabli, Chaouki Ben Issaid, Amrit Singh Bedi, Ketan Rajawat, Mehdi Bennis, Vaneet Aggarwal (2022) "FedNew: A Communication-Efficient and Privacy-Preserving Newton-Type Method for Federated Learning"Proceedings of the 39th International Conference on Machine Learning, PMLR 162:5861-5877[10]
- Ganesh Ramanathan, Danai Vachtsevanou, Kimberly García, Jérémy Lemée, Samuele Burattini, Kenan Bektaş, Simon Mayer (2022) "Semantic Knowledge for Autonomous Smart Farming"[11]
- Foteini Karetsi, Christos Liaskos, Sotiris Ioannidis, Evangelos Papapetrou (2023) "On the Impact of Coding Depth in Sliding Window Random Linear Network Coding Schemes"[12]
- Thomas Kyriakakis, Sotiris Ioannidis (2023) "A Moving Target Defense Security Solution for IoT Applications", 4th International Workshop on Information & Operational Technology (IT & OT) Security
- Vachtsevanou D., Lemee J., Mayer S., Ciortea A. (HSG) (2023): "HyperBrain: Human-inspired Hypermedia Guidance using a Large Language Model" HT '23: Proceedings of the 34th ACM Conference on Hypertext and Social Media [13]

Further final publications are expected to be published in M40 to M42.

2.2.2. SPECIAL ISSUES

IntelIIoT aimed for a minimum of 3 special papers including 8 selected issues per paper. The following three special issues were realised:

- Special Issue on "Next-Generation IoT Infrastructures for Real-world Applications (NGIoTI-2022) as part of IoT Delf Conference and published by Springer as a part of the Springer Lecture Notes in Computer Science (LNCS) series. (2022)
- Special Issue on "Distributed Intelligence on the Internet" to be published at ACM Transactions on Internet Technology (2024)
- Special issue on "Information & Operational Technology (IT & OT) Security" as part of the 4th International workshop on Information & Operational Technology (IT & OT) Security 2023 hosted

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[10] https://proceedings.mlr.press/v162/elgabli22a.html
[11] https://www.sciencedirect.com/science/article/pii/S2405896322027756?via%3Dihub
[12] https://ieeexplore.ieee.org/document/10195778
[13] https://dl.acm.org/doi/abs/10.1145/3603163.3609077

31/01/2024

by International workshop on Information & Operational Technology (IT & OT) Security to be published on IEEE Xplore (2024)

2.2.3. NON-SCIENTIFIC PUBLICATIONS

The goal of 10 non-scientific publications within the 40 months of project time had been exceeded at the end of M18 already. IntelIIoT counted more than 200 online publications focusing on use cases and storytelling as well as the Open Calls. To reach the broad public, IntelIIoT applied the following instruments.
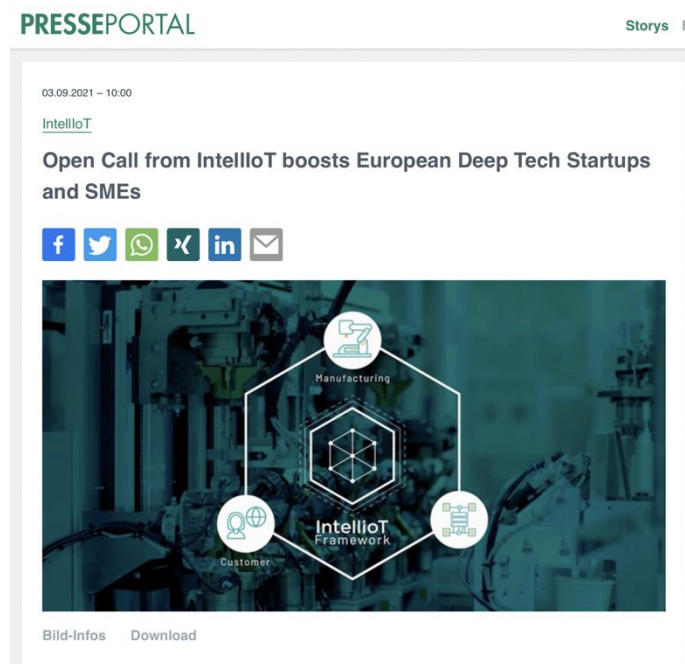
2.2.4. PRESS RELEASE

Figure 18: Screenshot of IntelIIoT's Open Call press release on Presseportal

In M01 and M12, IntelIIoT developed and distributed two press releases. To reach the maximum number of decision makers and SME, a news distribution service called News Aktuell was used. This platform is associated with the German news agency and delivered the press releases online to specialised EU based editors that are registered on the News Aktuell platform. The first press release[14] highlighting the

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[14] Link to Press Release #1: https://www.presseportal.de/pm/149954/4754175?langid=2

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D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellioT

need for healthtech solutions was also specifically shared with healthcare editors. The second press release[15] was geared towards potential applicants for the Open Call 1.

Both press releases were delivered to a minimum of 1,000 journalists across Europe and generated an average of 100 online articles each. For the much smaller OC3, no press release developed as the likelihood to reach that very specific audience of Micro-SME active in Metaverse and Manufacturing was low.

Release Views
Release Views Over Time
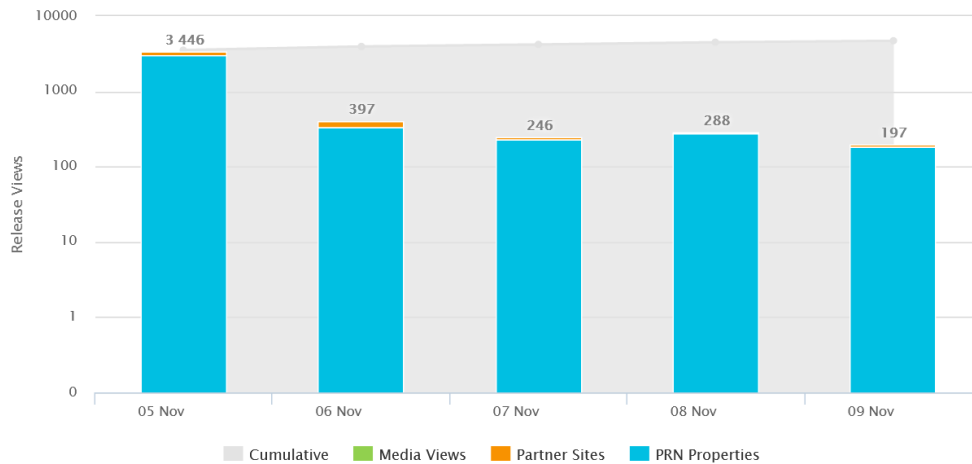
Figure 19: Weekly reach of Press Release #1, Nov 2019, Source: News Aktuell / Presseportal

In addition, both press releases were shared with the information officers of the European Commission to be published on the EU portals as well as with the Coordination and Support Actions (CSA) led by Martel Innovation.

Further highlight coverage includes: Forbes, Silicon Canals, Wallstreet Online, Business Insider:

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[15] Link to Press Release #2: https://www.presseportal.de/pm/149954/5010463?langid=2

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT
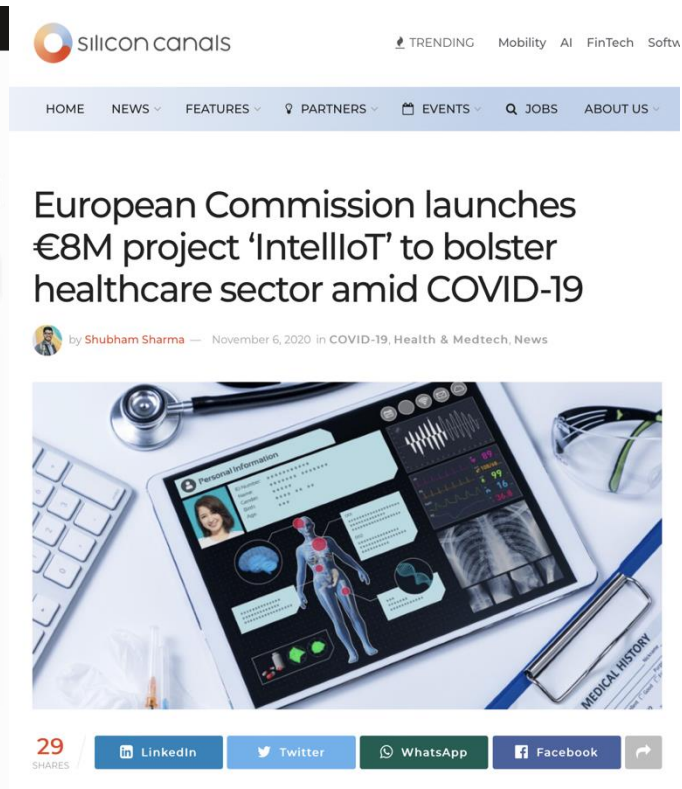
Figures 20: Screenshots of articles on Forbes[16] & on Silicon Canals[17]

2.2.5. MEDIA PARTNERSHIPS

Especially in M12 to support dissemination activities during the Open Call, three special media partnerships have been established to reach the group of developers, IoT decision makers and SME founders. After a careful evaluation of possible outlets two publications have been selected:

- IoT for All: In collaboration with the specialised platform gathering IoT experts from Europe the article "The Doctor Will See You Now: Standard of Care for Patients"[18] was published focusing on the Healthcare use case of IntellIoT.

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[16] Link to Forbes article: https://www.forbes.com/sites/simonchandler/2020/11/05/how-the-internet-of-things-can-help-hospitals-cope-with-coronavirus/?sh=4b91e6a91ac5
[17] Link to Silicon Canals article: https://siliconcanals.com/news/startups/health-medtech-startups/european-commission-intelliot/
[18] Link to IoT for all article: https://www.iotforall.com/the-doctor-will-see-you-now-standard-of-care-for-patients

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT
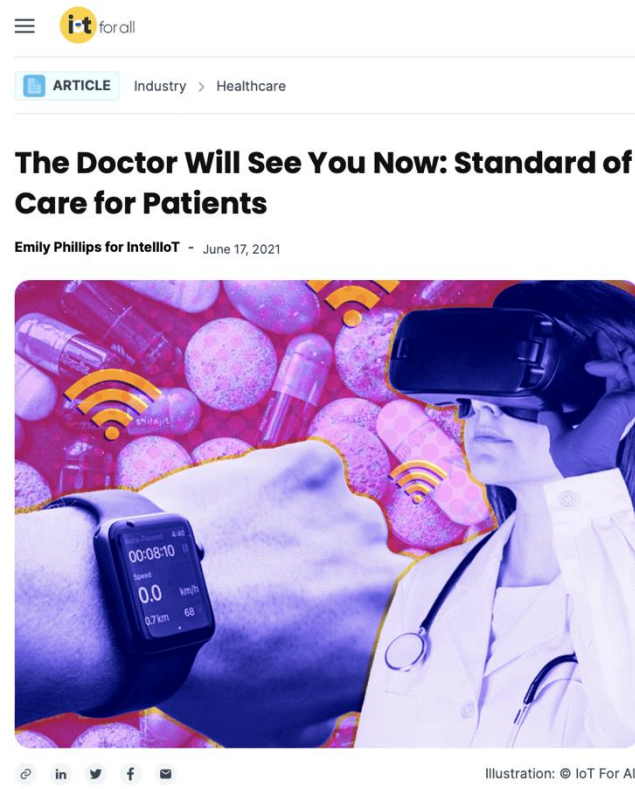
Figure 21: Screenshot of IntellIoT's Healthcare use case article on IoT for All

- EU Startups: The international online magazine and event company EU Startups has an active community of more than 50,000 SMEs from Europe. In a special (paid) media partnership, selected dissemination activities were executed, e.g., the publication of a sponsored article[19] highlighting the benefits of joining IntellIoT via the first Open Call. Moreover, this article was shared in a special newsletter and in dedicated social media posts with the EU Startup community leading to a significant increase in applications for the Open Call.

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[19] Link to EU-Startups article: https://www.eu-startups.com/2021/09/open-call-from-intelliot-boosts-european-deeptech-startups-and-smes-with-up-to-e150k-each-sponsored/

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Dissemination level: Public
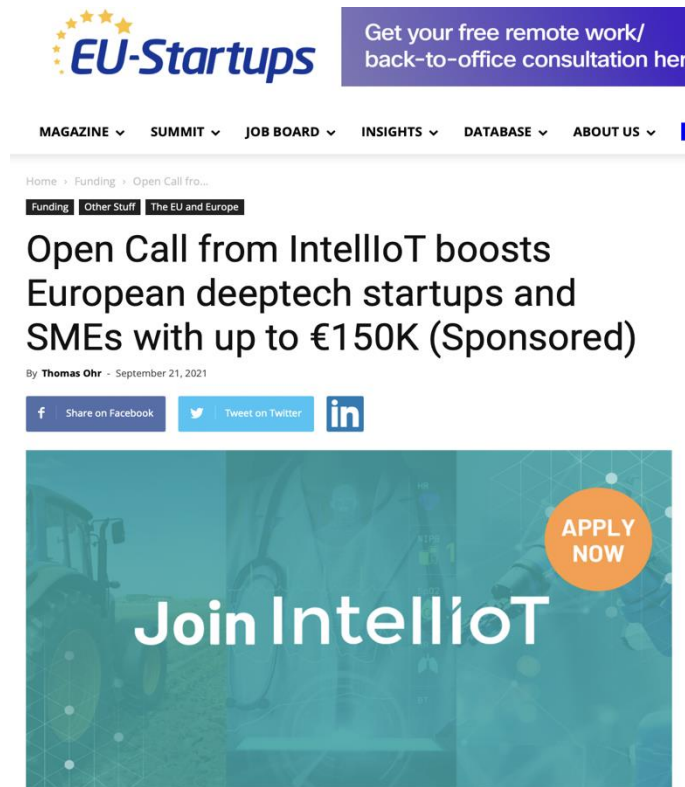
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Figure 22: Screenshot of IntellIoT's Open Call promotion article on EU-Startups

- In M22 in preparation for OC2 a new media and community partnership with the DataConomy Media platform and its flagship conference format DataNatives was established.
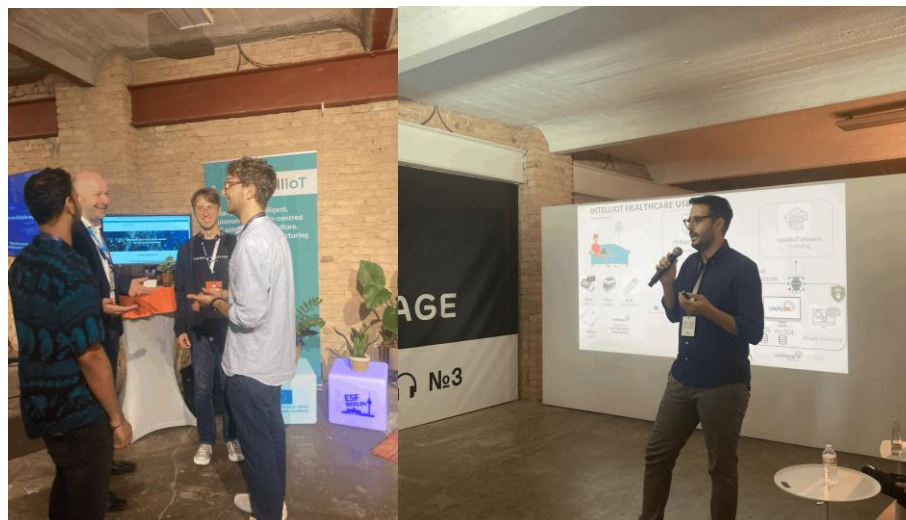
Figure 23: Kick off of Open Call 2 at DataNatives Conference 2022

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Dissemination level: Public

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2.2.6. MEDIA & INFORMATION KITS

To empower all consortium members and to enable influencers and multipliers to communicate actively, special information kits were developed containing social media posts and visuals ready to be used as well as additional visuals such as banners and a poster that could be applied immediately. The special Information Kit for multipliers[20] also contains a press release.
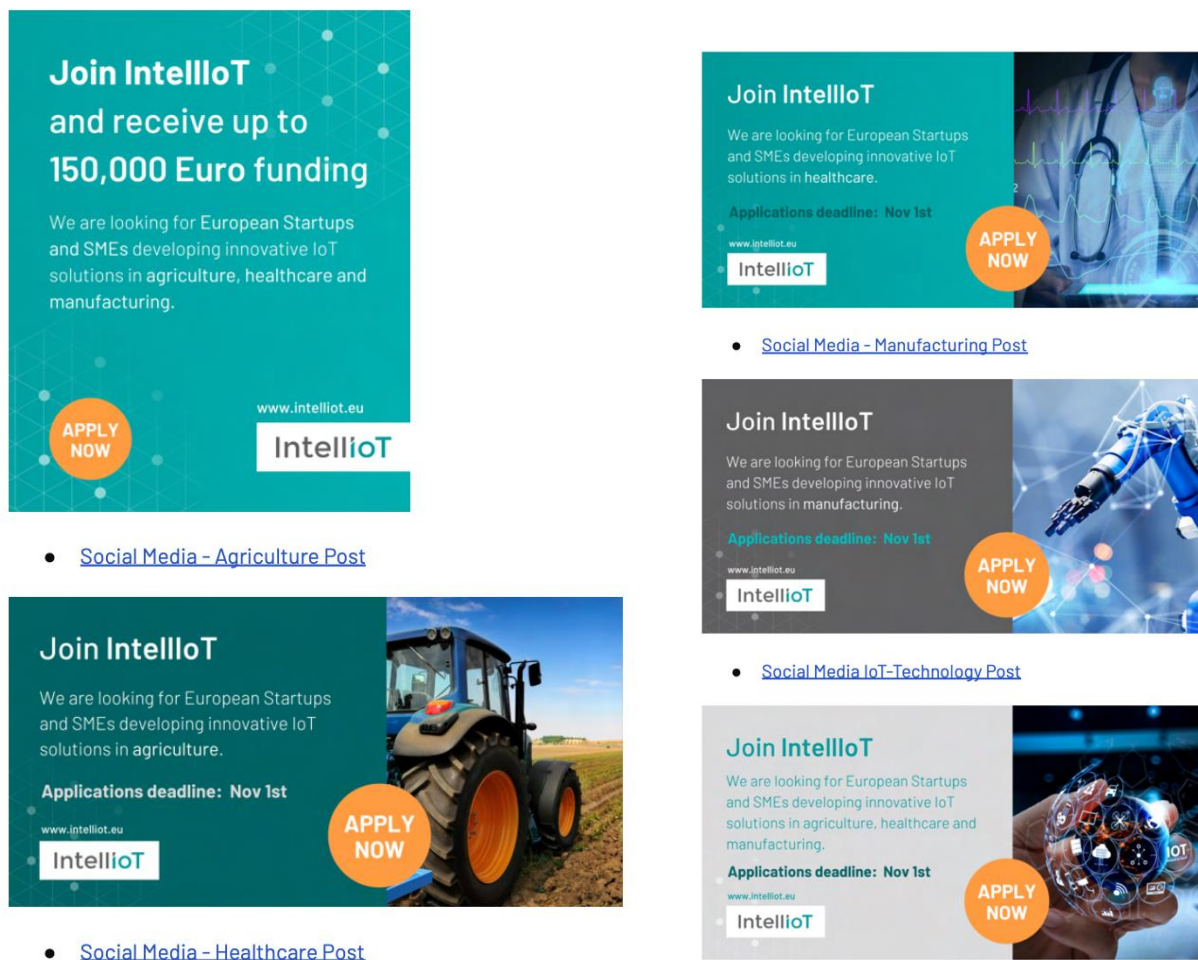
Figure 24: Example visuals for social media posts

[20] Link to information kit: https://intelliot.eu/wp-content/uploads/2022/05/IntellIoT_Information_Kit_Multipliers.pdf

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

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IoT-Technology Visual (link here)

#FundingOpportunity

IntellIoT — a pan-European project that we are a part of — is starting an Open Call to look for **European SMEs and Startups** to join the consortium for a six-month-long pilot. Four new partners will be invited to participate in further developing the project's framework and the three use cases — #agriculture, #healthcare and #manufacturing.
Joining organisations will receive up to 150,000 Euro in funding, become a part of a broad European #IoT Ecosystem, get the opportunity to implement their solution in an international setting and explore novel business opportunities.
Exemplary contributions include (but are not limited to):
→ Digital Twin tooling;
→ Edge and 5G Infrastructure;
→ Blockchain-based marketplaces;
→ Devices/tools to support human-machine interaction;
→ Data Analytics platforms;
→ Advanced sensing solutions.

The application phase will be open between September 1st 2021 and November 1st 2021.

For more details on the programme and its benefits, please visit IntellIoT's website: https://bit.ly/37Xu3lo

#JoinIntellIoT #IntellIoTOpenCall

Figure 25: Example texts for social media posts

All provided material allowed the consortia partners and community stakeholders such as media partners to create and publish their own content. However, the majority of content was used in online form on social media platforms or as part of special direct mailings.

Since we addressed different domains in OC2, we could not rely on the network of the consortia partners so no special media kit was developed. However, by M24, the brand IntellIoT was established across SMEs and community partners for special access to SMEs supported dissemination activities. The results of OC2 second this strategy.

2.3. Offline dissemination

2.3.1. BROCHURES, POSTERS & BUSINESS CARDS

In M04 and M05 IntellIoT created promotional material such as a brochure. In M08 business cards, a roll-up and a poster highlighting the Open Call completed the list of offline material. All instruments are updated regularly and are used for distribution at conferences, fairs, and other venues to raise awareness and attract applications for the Open Calls. Altogether 1,000 brochures have been printed till M18. Two hundred have been distributed already at the two Summer Schools that took place in M10 as well as the SME conference South Summit that took part in October 2021 in Madrid, Spain. Moreover, 20

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D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT

posters as well as 100 brochures have been placed in coworking places and at Universities in Berlin where the WP6 lead Startup Colors is located. In September 2022, approx. 200 flyers were distributed during the Data Natives Conference. Moreover, the material was also shared in Coworking Spaces across Germany during OC2, e.g., Drivery Berlin where a community of Smart City experts could be reached. In 2023, the print material was used at events such as Bauma, Agritechnica, IoT Tech Week and at the From IoT to Cloud-Edge-IoT Continuum taking place in May 2023.

In addition to the distribution of the printed brochure, the brochure[21] was uploaded to the website. 1,000+ website visitors downloaded the brochure on the website. Out of the 200 business cards, 100 could be distributed.

However, due to COVID-19 and the high number of cancellations of conferences and fairs as well as the growing number of employees working from home offices, the printed material could not be applied as planned and also did not provide the expected impact. Up to 200 flyers are left and will be recycled.

Figure 26: Example poster promoting the Open Call

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Dissemination level: Public

IntellIoT

Figure 27: IntellIoT promotional flyer[22] (page 1)

Figure 28: IntellIoT promotional flyer (page 2)

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[22] Link to flyer: https://intelliot.eu/wp-content/uploads/2021/03/IntellIoT-flyer-A4-WEB.pdf

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D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT

2.3.2. ORGANISATION OF & PRESENTATION AT FURTHER SCIENTIFIC DISSEMINATION EVENTS

Due to COVID-19, many scientific conferences and events had been cancelled or postponed long-term, e.g. originally, IntellIoT planned to co-organize a workshop at IoT Week 2021 in Dublin but due to COVID-19 this event was cancelled as well. In 2023, IoT Week 2023 was postponed too. IntellIoT, therefore actively supported existing scientific and training events, such as workshops organised by NGIoT or Eclipse Foundation. Here a short excerpt of the workshops and trainings attended or provided by the IntellIoT Consortium partners in 2022:

- 27.06.2022: Project Presentation Session on "Next Generation IoT" at CONANSENSE 2022 by Siemens (20 attendees)
- 26.- 29.11.2022: Lecture in "Advanced Software and Systems Engineering Course" at University of St.Gallen (70 attendees)
- 18.- 21.12.2022: Dagstuhl Seminar 22512 "Inter-Vehicular Communication – From Edge Support to Vulnerable Road Users II" by Eurecom (25 attendees)
- 11.- 15.09.2023: Workshops at the W3C TPAC as part of the W3C Community Group on "Autonomous Agents on the Web and the W3C WoT Working Group" by University of St.Gallen (70 attendees)
- 20.09.2023: Workshop: "Capitalising on Cloud-Edge-IoT: Building your next product, finding your next market opportunity" by Startup Colors (80 attendees)
- 21.- 22.09.2023: Workshop "5G Advanced for the Industry of the Future" by Siemens (200+ attendees)
- 21.10.2023: Conference "Nacht der Wissenschaften" in Erlangen by Siemens (100+ attendees)
- 21.11.2023: "NGIoT standardisation workshop" by Eurecom (30 Attendees)
- 17.01.2024: Standardisation Workshop on "Distributed Architectures in the EdgeCloudIoT Continuum" by TSI (20 attendees)

2.3.3. ORGANISATION OF & PRESENTATION AT SME AND POLICY EVENTS

Since COVID-19 tremendously reduced the number of conferences to present IntellIoT and exchange ideas on exploitation opportunities, in M04 IntellIoT decided to introduce a new own online event format: online meetups to especially educate interested SME and users about the potential of the IntellIoT framework and the importance of secure and trustworthy IoT solutions that keep the human in the loop.

In total six online events of 60 to 90 min have been planned and executed. In total 500 attendees could be counted. In the first meetups we focussed on sharing insights into the use case domains agriculture, health and manufacturing. We invited up to 2 external IoT experts to present new ideas or areas of applicability to the IntellIoT framework to the online guest. The online event on IoT solutions in the

ICT–56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT

agriculture domain attracted more than 100 guests. Since the IntellIoT framework has been in its early stages in early 2021, the overall IntellIoT concept of trustworthy, human centred and collaborative IoT instead of a demonstrator was presented. In 2022, online activities focussed on the Open Call since many SMEs had not applied to an OC before they decided to apply for IntellIoT, so more service-oriented meetups were scheduled to explain the process and provide best practices. In 2023 a special meetup was organized to deep dive into trustworthiness and transparency, especially aiming for the developer community and data scientists. More than 50 developers signed up, 30 attended. The early meetups in 2021, have been executed in collaboration with the international Meetup.Ai community since the brand IntellIoT was not well known. In all online webinars we either aimed to involve experts and IoT influencers or we fostered a special dialogue with the developer community or SMEs. Among the expert speakers were Influencers such as:

- Sandro Castronovo, Tech Lead at John Deere
- Max Schulman, Farmer and Advisor, Cereals Oilseeds at Central Union of Agricultural Producers and Forest Owners (MTK)
- Heiko Witte, Business Development Consultant Digital at Rolls-Royce (now: Managing Director of The Center for hybrid-electric systems Cottbus
- Jackson Bond, Co-Founder and Chief Industry Business Development relayr
- Jörn Watzke, Senior Director Global Business Development & Sales at Garmin
- John Soldatos, Internet of Things and AI Expert / NGIoT Expert
- Rob van Kranenburg, Founder of IoTCouncil and IoTDay
- Holger G. Weiss, Founder and CEO at German Autolabs

Figure 29: Example IntellIoT Agriculture use case online event cover visual

Altogether six online meetups targeting SME, developer and business decision makers in the domain fields of agriculture, healthcare and manufacturing as well as IoT were organised:

ICT–56–2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT

- 11.03.2021: From Farm to Code - AI meets Agritech (100 attendees)[23]
- 23.03.2021: Smart Factories - The Future of Manufacturing (60 attendees)[24]
- 08.04.2021: Healthtech: Remote Patient Monitoring (100 attendees)[25]
- 25.05.2021: In Data we Trust - Blockchain and Security in AI (50 attendees)[26]
- 15.06.2021: Human-in-the-Loop - the Key to successful AI (40 attendees)[27]
- 06.07.2023: The Power of Intelligent IoT Solutions: Trust & Security Edition (30 attendees)[28]

In addition, IntellIoT also contributed to the selected policy events such as

- 17. 02.2021 (In German): The Horizon Europe Kick-off Cluster 4 powered by Enterprise Europe Network (75 decision makers attended online)[29]
- 09.05.2023: Concertation and Consultation on Computing Continuum: From Cloud to Edge to IoT (100+ decision makers attended)[30]

During the Open Call 1 period (September - October 2021) we attended three special SME conferences in person and also virtually: South Summit[31] (October 2021, Madrid, Spain), InfoShare[32] (October 2021, Gdansk, Poland), the DigiHub DemoDay[33] (September 2021, Dusseldorf, Germany).

While promoting Open Call 2, we attended events focussing on the new domains Smart City, Manufacturing as well as Energy. Among the events attended were: DataNatives Conference (September 2022, Hybrid, Berlin, Germany), Smart Mobility Forum (October 2022, Berlin, Germany), deGUT (Deutsche Gründermesse, October 2022, Berlin, Germany), the Demo Day "MakeUp Hardtech Innovation" of MotionLab Berlin (October 2022, Berlin, Germany), The GovTech Summit 2022 (Online, November 2022), Falling Walls Conference (November 2022, Berlin, Germany). The main focus of the events in 2022 was screening & scouting of suitable SME for OC2.

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[23] Link to event page: https://www.linkedin.com/events/fromfarmtocode-aimeetsagritech6762824811409391617/
[24] Link to event page: https://www.linkedin.com/events/smartfactory-thefutureofmanufac6772584855306846208/
[25] Link to event page: https://www.linkedin.com/events/healthtech-remotepatientmonitor6772587131882782720/
[26] Link to event page: https://www.linkedin.com/events/indatawetrust-blockchainandsecu6791267507908026368/
[27] Link to event page: https://www.linkedin.com/events/human-in-the-loop-thekeytosucce6791272379734745089/
[28] https://www.linkedin.com/events/7074464370616889344/comments/
[29] Link to event page: https://een-bb.de/termine/detail/online-digitale-kick-off-veranstaltung-zu-horizont-europa/0b30488faf3a17c6c3ac5af88ebc0553.html
[30] https://eucloudedgeiot.eu/event/concertation-and-consultation-on-computing-continuum-from-cloud-to-edge-to-iot/
[31] https://www.southsummit.co/#/
[32] https://infoshare.pl
[33] https://www.digihub.de/events/digital-demo-day-2021

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
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Figure 30: Presentation of IntellIoT at DataNatives Conference by Gerald Fritz from TTTech

At the end of 2023, IntellIoT reduced conference attendance to SME-focussed events. Without an active Open Call, current IntellIoT can't offer active collaboration formats to SMEs. However, at conferences like Frontiers Health (November 2023, Rome, Italy) or SWÌTCH (November 2023, Singapore, Asia), the partner Startup Colors promoted IntellIoTs open-source activities and encouraged startups to also explore follow up Open Calls by EUCloudEdgeIoT-projects.

2.3.4. ORGANISATION OF WORKSHOPS

In the original proposal it was planned to organise a minimum of three international workshops, co-located with top-tier conferences - either for a scientific or a business audience.

Since many conferences and trade shows were cancelled due to COVID-19, IntellIoT decided to organise special end-user workshops between M01 and M18, using Microsoft Teams and the online Whiteboard tool Miro. In these workshops a dedicated Design Thinking expert guided selected stakeholders through an ideation process to explore specific problems in the fields of agriculture, healthcare and manufacturing. In a collaborative approach the stakeholders developed further ideas on how IntellIoT can contribute to their needs best. Three end-user workshops took place. The workshops were open to the public and promoted selectively via LinkedIn. Interested stakeholders could register via eventbrite:

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

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1. Healthcare: 16. April 2021[34], Manufacturing: 15. April 2021[35], Agriculture: 12. April 2021[36]. Fifteen experts attended the end-user workshops where information about the special needs of end-users were gathered. All online workshops were recorded with the consent of the attendees, transcribed and its content reviewed to align it with upcoming activities with the aim to apply the IntellIoT framework in the most user-centric way.

Starting in 2022, additional workshops were either co-organized with fellow ICT 56 RIAs or attached to conferences. The following workshops can be highlighted:

- 27.06.2022: Project Presentation Session on "Next Generation IoT" at CONANSENSE 2022 by Siemens (20 attendees)
- 18. – 21.12.2022: Dagstuhl Seminar 22512 "Inter-Vehicular Communication – From Edge Support to Vulnerable Road Users II" by Eurecom (25 attendees)
- 11.- 15.09.2023: Workshops at the W3C TPAC as part of the W3C Community Group on "Autonomous Agents on the Web and the W3C WoT Working Group" by University of St.Gallen (70 attendees)
- 21.- 22.09.2023: Workshop "5G Advanced for the Industry of the Future" by Siemens (200+ attendees)
- 21.11.2023: "NGIoT standardisation workshop" by Eurecom (30 Attendees)
- 17.01.2024: Standardisation Workshop on "Distributed Architectures in the EdgeCloudIoT Continuum" by TSI (20 attendees)

2.3.5. ORGANISATION OF AND CONTRIBUTION TO SUMMER SCHOOLS

IntellIoT planned to organise summer schools for delivering knowledge to students, researchers, and professionals on IoT specifically. The summer schools are supposed to be centred around the related topics such as IoT/edge, 5G, Distributed AI, Smart Contracts. To be cost effective the summer schools are co-organised with and on the premises of IntellIoT partners. In summer 2021, IntellIoT was involved in two Summer Schools: Initiated by the IntellIoT partner TSI the consortium actively participated in the CyberHOT Summer School[37] (27.09.2021-28.09.2021). Forty students attended the special "Cybersecurity Hands -On-Training" provided by Sotiris Ioannidis (TSI) and received further information on IntellIoT via provided brochures and posters highlighting the Open Call 1. In 2022 (29 - 30.9.2022) and 2023 (29.09.2023) the so called "CyberHOT Summer School"[38] organized by Sotiris Ioannidis (TSI) featured IntellIoT again. In 2022 it focussed on "Defensive Strategies & Offensive Techniques" while in 2023 it was linked to the NATO Maritime Interdiction Operational Training Centre (NMIOTC) and the 7th NMIOTC Cyber Security Conference in the Maritime Domain. Up to 40 students took part each year.

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[34] Link to event page: https://www.eventbrite.com/e/end-user-workshop-healthcare-registration-148775871637
[35] Link to event page: https://www.eventbrite.com/e/end-user-workshop-manufacturing-registration-148770447413
[36] Link to event page: https://www.eventbrite.com/e/end-user-workshop-agriculture-registration-148725785829
[37] https://www.cyberhot.eu
[38] https://sites.google.com/cyberhot.eu/cyberhot2023/home

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT

Moreover, IntellIoT partner University St. Gallen co-organized the Summer School on AI for Industry 4.0[39] (/27.07.-31.07.2022). The event had 62 participants from 7 countries, most of them online due to the pandemic.

Figure 31: Website if CyberHOT Summer School

2.3.6. ORGANISATION OF HACKATHONS

At the beginning of the project, IntellIoT planned to organise at least one hackathon per Open Call in collaboration with selected partners. However, due to two reasons, there was no own hackathon to address developers, students, researchers and young entrepreneurs or Micro- SMEs set-up:

- First, a joint NGIoT Hackathon was scheduled to kick off on August 30 during IoT Week 2021. IntellIoT decided to bundle resources and support the joint activity. However, this EU-IoT Hackathon was postponed to June 2022 due to COVID-19.
- Secondly, other online channels such as online meetups provided similar touch points to the target group of students, researchers and entrepreneurs.
- Thirdly, the complexity of the IntellIoT framework and the industry feedback led to the conclusion that more mature SME would better suit the requirements of the IntellIoT consortium and would be a stronger target group for the first Open Call.

Nevertheless, IntellIoT decided to get actively involved with two Hackathons and eventually also organize one own Hackathon completely independent as part of the newly established Open Call 3. The following Hackathon activities can be highlighted:

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[39] https://ai4industry.wp.imt.fr

ICT–56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT

- Contribution to the Applied Data Hackathon (March 2022, Berlin): IntellIoT contributed to one hackathon focusing on Applied Data in March 2022 to generate more visibility across developers, students, researchers and young entrepreneurs. The Applied Data Hackathon[40] powered by the IntellIoT partner Startup Colors gathered close to 100 hackers during a special hybrid hackweek. IntellIoT was presented by Prof. Simon Mayer from the University of St. Gallen, that was part of the Jury. The University St. Gallen also contributed to the special IntellIoT related challenge: "Object Classification in Real Environments in Manufacturing & Logistics". The online events of the Hackweek, especially the Pitch finale attracted another 500 guests online and onsite[41].
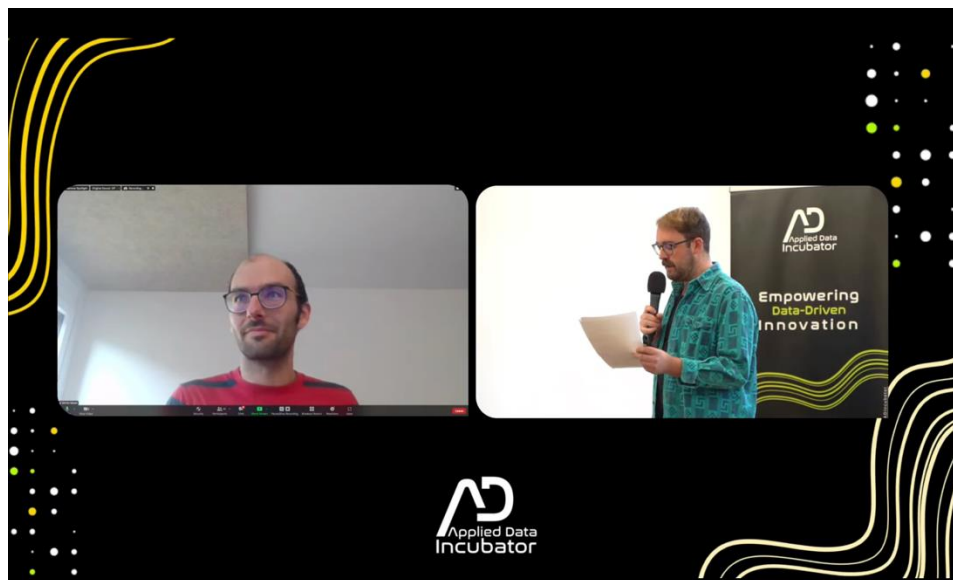
Figure 32: Screenshot of the Applied Data Hackathon

- EU–IoT Hackathon (June 2022): The EU–IoT Hackathon focused on "sustainable next generation IoT applications" and invited developers to work on solutions that address IoT skills training, IoT sustainable business models, IoT novel technical solutions in the context of 6 challenge domains: IoT interfaces, far Edge, near Edge, infrastructure, and also: a specific challenge domain of the European Factory Platform (EFPF), with focus on manufacturing. It took place between 27th-28th June 2022, in Munich (Germany) and was co-located with CONASENSE2022. Arne Bröring from IntellIoT partner Siemens joined a workshop and provided insights into Next Generation IoT by showcasing IntellIoT.

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[40] https://taikai.network/en/adatainc/hackathons/adi/overview

[41] Link to recording of the hackathon: https://www.youtube.com/watch?v=UIApTj5Ru5U

31/01/2024

- "Industrial Metaverse" Hackathon (October 2023): This online Hackweek organized 100% by IntellIoT focussed on the new area of Metaverse and specifically aimed for Micro-SMEs. More than 40 young SMEs applied, 11 SMEs were selected to participate and 9 SMEs presented their solutions. IntellIoT experts and fellow OC winners mentored and coached the Hackers. The Hackathon was managed with the Hackathon platform Taikai[42] and therefore gained additional visibility in the tech community of 60,000 Taikai followers and hackers.
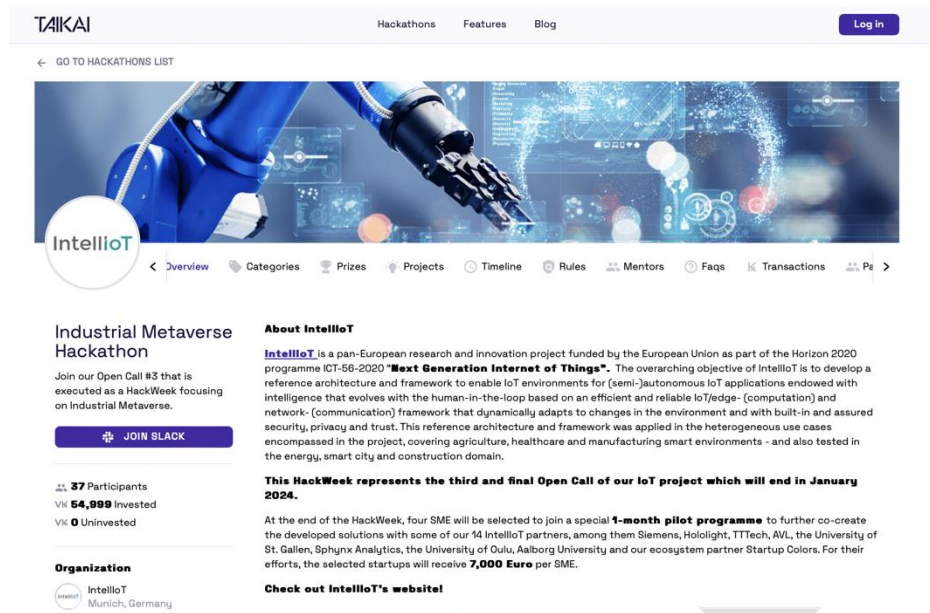
Figure 33: Screenshot of the "Industrial Metaverse" Hackathon Website

2.3.7. SCIENTIFIC CONFERENCES

IntellIoT co-organized the following international conferences in the core research areas of the project to enhance the visibility of our contributions at international level.

- 11th International Conference on the Internet of Things (08.11.2021-11.11.2021) by HSG
- Dagstuhl Seminar 21072 on "Autonomous Agents on the Web" (19.02.2023-24.02.2023) by HSG[43]
- 12th International Conference on the Internet of Things in Delft (07. - 10.11.2022) by Siemens[44]

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[42] https://taikai.network/intelliot/hackathons/intelliot
[43] https://www.dagstuhl.de/seminars/seminar-calendar/seminar-details/21072

44https://iot-conference.org/iot2022/keynote-speakers/

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellIoT

Moreover, it needs to be pointed out that in 2022, IntellIoT experts were involved in many conferences in a leading role, e.g. Mehdi Bennis from the partner UOULU. In January 2022, he gave a virtual keynote on "Edge Intelligence over Wireless: Present and Future" at the IEEE Consumer Communications & Networking Conference (Vegas, US).[45]

2.3.8. SYSTEM-LEVEL DEMONSTRATORS AT TRADE FAIRS, CONFERENCES AND EU EVENTS

Since the first demonstrators were only available after M18 and at the end of the pilot projects with the selected SME, system-level demonstrations needed to be postponed. However, after M24, video demonstrations and animations were available for showcases. IntellIots three core use cases - agriculture, healthcare and manufacturing - were demonstrated at the following events via Screens and clickable demos:

- Conference & Trade Show: IoT Tech Expo 2023 in Amsterdam, Netherlands: Presentation of the Agriculture Use Case (November 2023) by TTTech
- Trade Show: Agritechnica 2023, Hanover, Germany: Presentation of the Agriculture Use Case (November 2023) by TTTech
- Conference: "Concertation and Consultation on Computing Continuum: From Cloud to Edge to IoT" in Brussels, Belgium (May 2023): Presentation of the Healthcare Use Case by Vidavo

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45 https://ccnc2022.ieee-ccnc.org/program/keynotes

3. ECOSYSTEM & COMMUNITY BUILDING

In order to build a new extended IntelIIoT ecosystem around the technology and framework, to promote IntelIIoT's technology and the Open Calls, as well as to specifically engage non-scientific communities, IntelIIoT identified suitable international community partners to connect and collaborate with. Between M01 and M50 the following partnerships have been formed:

- Meetup.Ai: The German-based community of 4,000 AI experts from Berlin and Hamburg supported in M05 till M07 in setting up the Online Meetup series and introducing IntelIIoT to their developer network.
- Vision Health Pioneers Incubator: The Berlin based startup incubator has a network of 100 decision makers in healthcare and partnered with IntelIIoT early on via its management partner Startup Colors.
- Applied Data Incubator: The Berlin based startup incubator has a network of 100 decision makers in AI & Data with a focus on Smart City & Manufacturing and partnered with IntelIIoT early on via its management partner Startup Colors.
- F6S: For the Open Call, we decided to partner with the F6S[46] platform. After setting up a neutral organisation profile, the first Open Call was executed via F6S. This collaboration also gave access to more than 4 million company founders and their companies. A special mailing to selected SME provided additional visibility to IntelIIoT.
- DataConomy /DataNatives: The Berlin based media platform behind the DataNatives[47] community gives access to a pool of 75,000 data scientists and generates 160,000 pageviews per month. In addition to that DataConomy has 55,000 followers on all its social media channels and more than 20 meetup groups bringing together up to 50,000 developers and data scientists. The collaboration with DataConomy and DataNatives mainly focussed on direct outreach via specialised mailings to the meetup subscribers as well as social media promotion as the following example shows.
- Taikai: The Hackathon and Blockchain community counts 60,000 hackers from across the world and became a strong partner during the execution of Open Call 3.
- Drivery Berlin: The community of Smart City and Logistic experts supported the outreach activities during Open Call 2 by providing access to its 3000+ members across the world.
- Urban Innovation: The community of Smart City and Urban Innovation specialists promoted Open Call 2 and Open Call 3 in its network of 500+ members in Germany.

Contacts to the following 20+ IoT experts have been established:

- Sandro Castronovo, Tech Lead at John Deere (Germany)

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46 https://www.f6s.com
47 https://datanatives.io/about/

31/01/2024

ICT-56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellioT

- Max Schulman, Farmer and Advisor, Cereals Oilseeds at Central Union of Agricultural Producers and Forest Owners (MTK) (Finland)
- Heiko Witte, Business Development Consultant Digital at Rolls-Royce (now: Managing Director of The Center for hybrid-electric systems Cottbus (Germany)
- Jackson Bond, Co-Founder and Chief Industry Business Development relayr (Germany)
- Jörn Watzke, Senior Director Global Business Development & Sales at Garmin (Germany)
- John Soldatos, Internet of Things and AI Expert / NGIoT Expert (Greece)
- Rob van Kranenburg, Founder of IoTCouncil and IoTDay (Netherlands)
- Dr. Ulrich Ahle, CEO, Fiware Foundation (Germany)
- Srdjan Krco, Founder, IoT Forum (Serbia)
- Katarzyna Granja, Project Lead IoT & Network, Berlin Partner (Germany)
- Harald Zapf, CEO, Next Big Thing Company Builder (Germany)
- Elena Poughia, CEO DataNatives Conference, DataConomy Media (Greece, Germany)
- Andreas Richter, President and Managing Director at Honda Research Institute Europe GmbH
- Timon Rupp, CEO at Drivery Berlin (Germany)
- Veronika Brandt, Corporate Office Internet of Things and Digitization - Global IoT Innovation (C/IDI), Robert Bosch GmbH (Germany)
- Prof. Minna Lanz, Professor at Tampere University (Finland)
- Dimitris Mousadakos, PhD, CEO Big Blue Academy /American College Greece (Switzerland)
- Dr. Susan Wegner, Head of Global Data & AI, Allianz (Germany)
- John Calian, CEO at Riddle & Code (Germany)
- Alex Gluhak, CEO, Urban Data Collective (UK)
- Carla Penedo, Director of Offer Development & Innovation, Celfocus (Portugal)
- Peter Ummenhofer, Smart City & Mobility expert, CEO GoConsulting, Ex-Kapsch Traffic Com (Austria)
- Claudia Pohlink, Head of Data Intelligence Center, Deutsche Bahn (Germany)
- Michael Leyendecker, Board Member ITS Germany, Director Berlin, VITRONIC (Germany)
- Nicholas Borsotto Machado Monteiro (WW AI Business Dev. Manager – Partners & Solutions at Lenovo // Co-founder of Meetup.ai)
- Raffaele Giaffreda (Chief IoT Scientist at Fondazione Bruno Kessler – Create-Net)
- Frank Quinn (CEO of QIoT & QIoT Tech)
- Daniel Field (Director of Innovation at UST)
- Chris Decubber (General Consultant at EFFRA)
- Micha vor dem Berge (Head of R&D, christmann informationstechnik)

ICT–56-2020 "Next Generation Internet of Things"
D6.9: Dissemination & Ecosystem Building (final version)
Dissemination level: Public

IntellioT

4. KPIS

The following table provides a quantification of the project's dissemination activities as key performance indicators (KPIs) and sets a basis for verifying whether the project dissemination objectives have been met.

Dissemination instrument	First Delivered	Success Indicators	Achieved Indicators (M01 – M18)
Project Website	M03	>1000 annually	12,000 users / 40,000 Impressions between M03 – M40
Social Networks	M01	> 100 announcements annually	450+ own posts and own retweets in M03 – M40 (240 Linkedin-Posts plus 225 Twitter plus shared content). Please note the negative development on Twitter
Regular Newsletters	M01	> 9 issues	18 issues published, >200 regular subscribers; > 480 Open Call subscribers
Flyer / Brochure	M05	> 2.000 hard copies distributed at >10 events	Flyer; 1,000 downloads, 800 printed versions distributed Business Cards: 100 Poster: 30, at 3 physical events Please note that we used Roll-ups at conferences e.g. IoT Tech Week, Bauma and Agritechnica instead of Posters
Online Magazine	M02	> 12 Stories, 1,200 impressions annually	12 stories, 2,500 impressions M02 - M40
Project Video	M05	>600 views > 10 events	1,300 impressions of 3-min-video plus >2,500 impressions of 15 additional videos published
Scientific Publications	M02	> 30 publications	40 publications

Special Issues	M18	> 3 organised special issues; > 8 selected papers per issue	3
Non-scientific Publications	M02	> 10 publications	> 200 online publications based on 2 press releases 2 special articles
Conferences	M18	> 1 event > 80 attendees	3
Workshops	M03	> 3 workshops > 20 attendees each	35 public trainings incl. OC Webinars on IntellIoT Framework >30 - 120 attendees 3 semi-public end-user-workshops <15 attendees
Summer Schools	M12	> 2 workshops > 20 attendees each	4 Summer Schools >40 attendees each
Hackathon	M12	> 2 hackathons > 20 attendees each	3 hackathons > 140 attendees in total
SME & Policy Events	M03	> 5 events > connecting to 20 influencers each	6 own Online Meetups with 13 expert speakers 10 SME conference /Workshop attendance <20 influencer
Exhibition Demonstrators	M24	> 1 demonstrator	3
EU Demonstrators	M24	> 2 demonstrators	3
Conference Demonstrators	M24	> 2 demonstrators	3

Figure 34: Overview of achieved Dissemination KPIs

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5. OUTLOOK

As IntellIoT ends after M40, IntellIoT's dissemination activities will become reactive. The website will be maintained, and all public deliverables will be added, as well as open-source components that can be accessed upon request. The social media channels will be monitored and used to transfer the IntellIoT community to future Horizon Europe RIAs with similar targets. This will be done in close collaboration with TF6 of the EUCloudEdgeIot-Community.

31/01/2024