D7.6 Evaluation results of press appearances and social media repercussion

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Executive Summary

The deliverable reports the evaluation results of HOLDEN's communication and dissemination activities, focusing on (i) social media repercussion via LinkedIn performance analytics over an extended reporting window, and (ii) the technical and social repercussion of publicly released research datasets shared through Kaggle and open-access repositories. The objective is to provide a transparent, evidence-based assessment of visibility, engagement, audience composition, and early adoption signals, supporting continuous improvement of the project's dissemination and exploitation strategy.

The analysis consolidates LinkedIn Discovery, Engagement, Top Posts, Followers, and Demographics analytics for extended periods to assess both cumulative performance and recent dynamics. The collected indicators capture total visibility (impressions and reached members), interaction levels (engagements and engagement rate), follower base evolution, and audience distribution by sector, seniority, and job profiles. Overall, the social media channels demonstrate sustained reach within a technically relevant audience, with strong representation from telecommunications, research services, and higher education communities, as well as a substantial share of senior professionals, consistent with HOLDEN target stakeholders.

Complementing conventional social media metrics, the deliverable evaluates dissemination through open data releases, where repercussion is measured using adoption-oriented indicators such as dataset views, downloads, reuse in public notebooks, and external references. The publicly released datasets contribute to reproducibility, benchmarking, and wider uptake of RF sensing and holography methods by external researchers and practitioners. Observed download-to-view ratios indicate meaningful engagement from technically qualified users, suggesting practical reuse beyond exploratory access.

The evaluation also considers dissemination activities linked to international events and pilot demonstrations, including:

- Mobile World Congress 2025
- UBICOMP/ISWC workshops and IEEE ETFA technical workshops on RF sensing
- "This is Not a Camera" exhibitions in various locations
- pilot deployments in ADANT testhouse and palliative care environments.

These activities contribute to positioning HOLDEN at the intersection of wireless innovation, ethical sensing, and socially responsible AI, strengthening the project narrative across academic, industrial, and societal domains.

Overall, the collected indicators suggest that HOLDEN dissemination activities successfully reach a specialized and professionally relevant audience, while open datasets provide an additional measurable pathway for scientific impact through reuse and downstream innovation. Event-driven communication and application-oriented narratives, particularly in digital health and ethical sensing scenarios, show above-average engagement, indicating that contextualized use cases represent an effective lever for outreach.

Key takeaways include:

- the consistent visibility within research and innovation communities aligned with the HOLDEN project scope;
- measurable external uptake of datasets supporting reproducibility and benchmarking;
- positive engagement dynamics associated with milestone-driven communication and real-world pilot demonstrations;
- evidence that ethical and privacy-aware sensing technologies resonate with both technical and societal audiences.

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1. Social Media Repercussion

This section reports the updated evaluation results of the HOLDEN LinkedIn presence, Followers, and Demographics export covering 12/05/2025-11/05/2026, filtered to 01/05/2026. Following an additive treatment of the available analytics exports, the cumulative exposure volume over the extended assessment period reaches 13,889 impressions and 2,837 reached members. A total of 242 engagements were recorded, corresponding to a recomputed engagement rate of 1.74% calculated as total engagements divided by total impressions. The follower base reached 59 followers as of 01/05/2026.

Visibility remains concentrated around a limited number of high-performing updates. In the historical export, the best-performing post reached 1,174 impressions and 25 engagements, corresponding to the Special Session organization at the UBICOMP-ISWC workshop held at Aalto University. Application-oriented and public-facing posts were again among the strongest contributors: the palliative-care pilot communication of 09/01/2026 reached 763 impressions and 16 engagements, while the 10/04/2026 post reached 698 impressions and 16 engagements. The 27/01/2026 update also recorded 16 engagements, confirming renewed interaction after the January cut-off.

Engagement efficiency is strongest on posts combining project milestones, concrete use cases, published datasets, workshops, public exhibitions, and clear calls to action. In the latest annual window filtered to 01/05/2026, LinkedIn recorded 6,384 impressions and 127 engagements, corresponding to an engagement rate of 1.99%, which is higher than the overall cumulative engagement rate. This suggests that the most recent communication activities improved interaction quality, especially when technical RF sensing results were connected to accessible narratives such as healthcare, ethical monitoring, public exhibitions, and demonstrator-based outreach.

Audience demographics shown in the Table below indicate a primarily professional and research-oriented readership. The updated top industries remain well aligned with HOLDEN target stakeholders: Telecommunications (21.7%), Research Services (21.7%), and Higher Education (15.0%). The audience also remains strongly represented by senior and research-oriented profiles, with Senior roles accounting for 43.3% of the available demographic sample.

Category	Top 1	Top 2	Top 3
Industries	Telecommunications (21.7%)	Research Services (21.7%)	Higher Education (15.0%)
Seniority	Senior (43.3%)	Entry (20.0%)	Training (6.7%)
Job titles	Professor (10.0%)	Postdoctoral Researcher (5.0%)	System Software Engineer (3.3%)

In the Appendix we report the detailed key performance indicators and a list of top posts from the available exports. Monthly trends tracking impressions (Figure 1) and engagements (Figure 2) are based on the latest annual export and are used to characterize the recent dynamics added to the historical assessment. They show peaks in May-June 2025, renewed traction in January 2026 associated with the palliative-care pilot communication, and a further increase in April 2026 connected with public-facing exhibition and outreach activities.

Overall, the LinkedIn analytics shows that HOLDEN dissemination sustained visibility across the full project period while increasing engagement efficiency in the most recent communication window. These results support continuing a cadence of milestone-driven posts, partner amplification, event-based communication, and periodic thematic explainers. They also indicate that posts translating RF sensing and holography into concrete application contexts, particularly healthcare, public engagement, and ethical sensing, are especially effective for sustaining audience interaction.

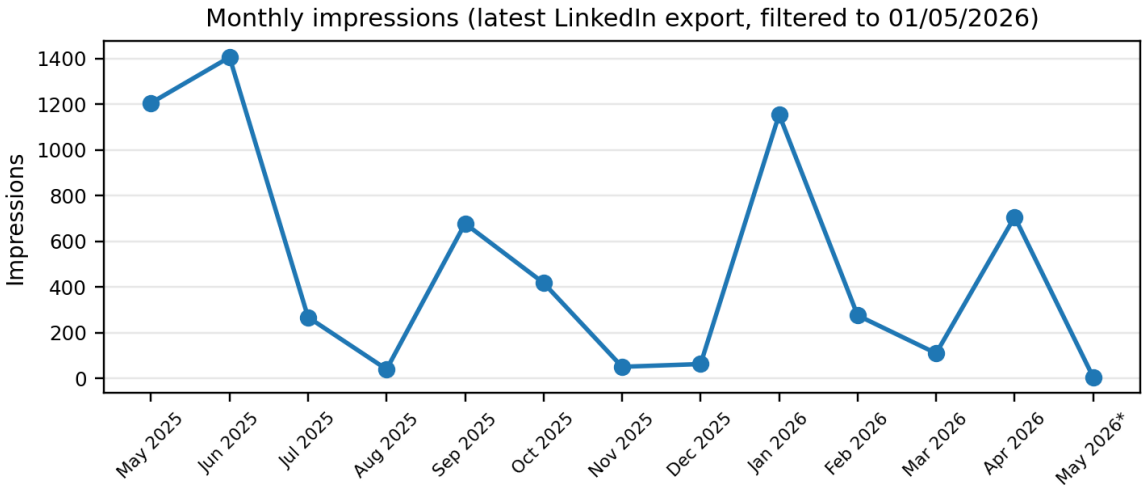


Figure 1. Monthly impressions from the latest LinkedIn annual export, filtered to 01/05/2026 and used to extend the cumulative assessment.

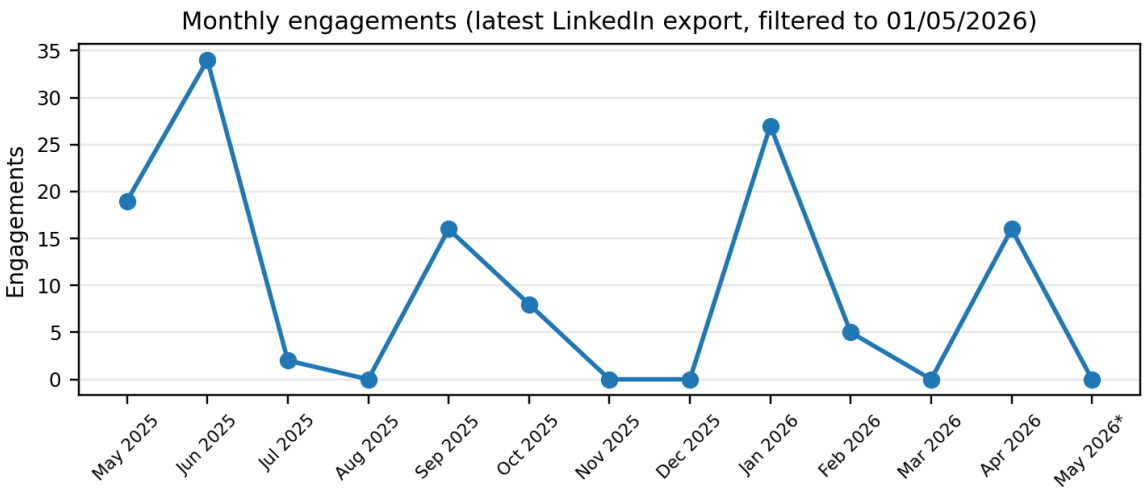


Figure 2. Monthly engagements from the latest LinkedIn annual export, filtered to 01/05/2026 and used to extend the cumulative assessment.

1.1. Mobile World Congress 2025 event

HOLDEN participated in the communication activities surrounding Mobile World Congress (MWC) 2025, one of the largest international events focused on mobile communications, connectivity, and digital technologies. The project's presence was communicated through a dedicated LinkedIn post accompanied by a short video, highlighting HOLDEN's relevance within the Horizon Europe ecosystem and its alignment with emerging trends in wireless sensing, dense networks, and ethical digital innovation.

The LinkedIn update emphasized HOLDEN's contribution to next-generation wireless technologies, positioning RF holography and privacy-aware sensing as enabling components for future mobile and connected systems. By leveraging the high visibility of MWC, the post targeted a broad yet technically relevant audience that includes industry professionals, researchers, and innovation stakeholders attending or following the event remotely.

From an analytics perspective, the MWC 2025 post ranks among the top-performing content items of the HOLDEN LinkedIn channel during the extended reporting period. As reported in the consolidated social media analytics, the post achieved 827 impressions and 19 engagements, corresponding to an engagement rate of 2.30%, which is above the project's overall average. This confirms the effectiveness of event-driven communication in increasing both visibility and interaction.

Beyond quantitative metrics, the MWC 2025 post contributed to reinforcing HOLDEN's positioning at the intersection of wireless innovation and ethical design. The combination of a major international event reference, concise messaging, and video content proved effective in attracting attention and fostering engagement, supporting the project's dissemination objectives. These results suggest that participation—direct or indirect—in flagship technology events represents a valuable lever for amplifying project outreach and strengthening connections with the wider mobile and connectivity community.

1.2. Press appearances

In addition to social media dissemination, the HOLDEN project achieved broader public visibility through press and press-style communication channels, addressing both general audiences and technology-aware readers. These appearances complement quantitative social media metrics by providing qualitative evidence of societal relevance, public engagement, and external validation of the project's objectives.

Link: https://tema21.cz/clanek/dustojnemu-umirani-doma-ma-pomoci-nova-technologie-vrati-nemocnym-samostatnost-testuje-se-v-cesku/

A first significant press appearance was published by Tema21.cz, a Czech online magazine focusing on innovation, technology, and social impact. The article discusses how new technologies can support dignified end-of-life care at home, with a focus on restoring autonomy and improving quality of life for patients in palliative settings. Within this narrative, HOLDEN research on privacy-preserving RF sensing and non-intrusive monitoring is presented as an enabling technology tested in the Czech Republic. Importantly, the coverage frames the technology in ethical and human-centric terms, emphasizing assistance rather than surveillance, and highlighting the role of responsible design in sensitive healthcare contexts. This contribution strengthens the project's societal positioning and supports public trust in RF-based sensing solutions.

Link: https://www.deutsches-museum.de/en/museum-island/programme/event/wi-fi-seeing-without-a-camera

A second press-style appearance was disseminated through the official LinkedIn channel of HOLDEN Project, featuring the post titled "Wi-Fi Seeing Without a Camera". This communication builds on a well-established public narrative, also showcased through exhibitions and demonstrations, illustrating how Wi-Fi and dense wireless networks can be repurposed for perception and sensing without relying on cameras. The post highlights HOLDEN contribution to advancing this paradigm by combining RF holography, ethical design principles, and privacy-aware sensing, making the concept accessible to a wider audience beyond the research community.

Together, these press and press-style appearances demonstrate HOLDEN ability to translate complex technical research into narratives that resonate with both societal and policy-relevant audiences. While direct readership statistics are not uniformly available, the thematic alignment with healthcare, ethics, and privacy indicates meaningful outreach beyond academic dissemination. We believe that these contributions reinforce the project's communication strategy by linking technological innovation to real-world impact, particularly in sensitive domains where ethical considerations are paramount.

2. Published datasets

The project disseminated reusable assets through open datasets, supporting reproducibility, benchmarking, and third-party uptake of WiFi/RF sensing methods. This section reports the technical scope and observable adoption signals for the datasets published on Kaggle and Zenodo repositories.

2.1. Kaggle repositories

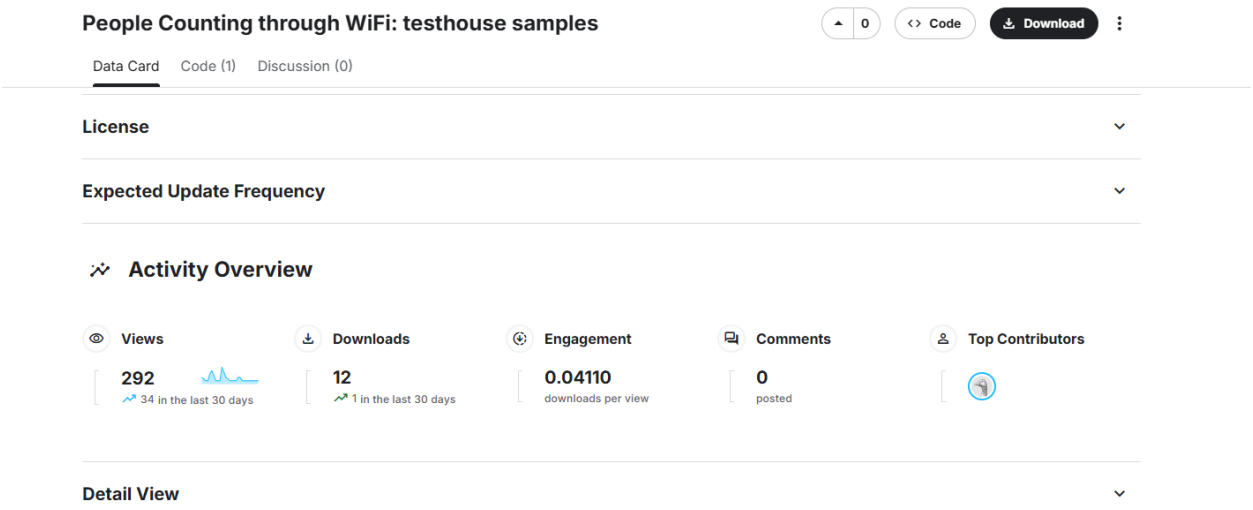
Dataset	Purpose / content (summary)	Platform & link	Repercussion indicators to track
WiFi frame datasets for body motion discrimination	WiFi frame/baseband measurements aimed at discriminating body motion/body blockage effects on WiFi channel quality information (CQI).	Kaggle dataset: wifi-frame-datasets-for-body-motion-discrimination	Views, downloads, votes; # notebooks using the dataset; external mentions/citations; GitHub/blog/course reuse
People Counting through WiFi: testhouse samples	Testhouse WiFi measurements supporting people counting studies (test-bed samples; includes example code notebooks).	Kaggle dataset: people-counting-through-wifi-testhouse-samples	Views, downloads, votes; # notebooks; external mentions/citations; replication of baseline results

Dataset "repercussion" is evaluated using adoption-oriented signals rather than impression-based social metrics. For Kaggle, the recommended indicators are: (i) dataset views and downloads; (ii) votes/upvotes; (iii) number of public notebooks that use the dataset and their engagement; and (iv) external references (papers, repositories, blogs). Where automatic exports are not available, screenshots of the dataset page counters and the list of public notebooks are used as auditable evidence.

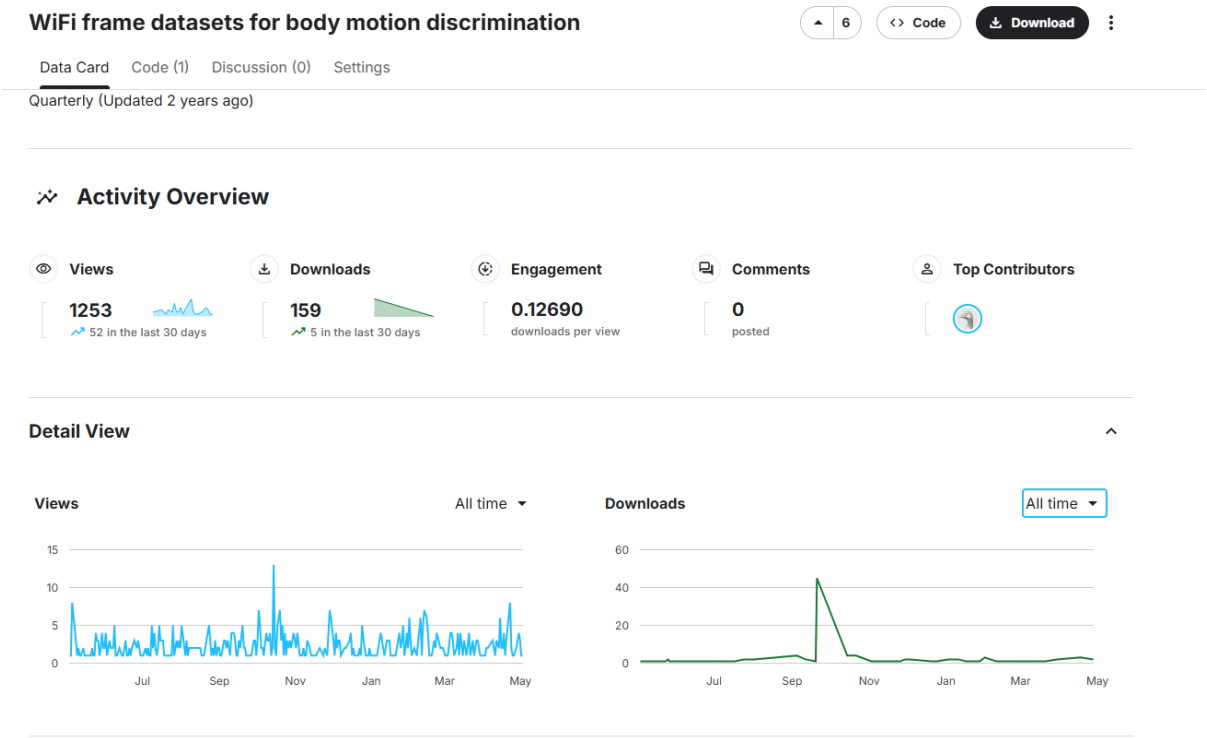
Both datasets target privacy-preserving WiFi sensing tasks aligned with the project's objectives: body motion discrimination via channel perturbations and indoor people counting. Publishing through Kaggle provides a low-barrier distribution channel for researchers, students, and practitioners, and facilitates comparability through shared baselines and community notebooks. In the following figures we highlight the Kaggle activity overview for both published datasets. Notably, the "WiFi frame datasets for body motion discrimination" dataset shows comparatively stronger traction in terms of cumulative views and downloads, indicating higher community uptake

and reuse potential, while the more recent people-counting dataset represents a complementary resource with early-stage visibility.

Kaggle activity overview — People Counting through WiFi: testhouse samples (all-time).



Kaggle activity overview — WiFi frame datasets for body motion discrimination (all-time).



2.2. Zenodo datasets

"RF Holography and Perception in Static Environments: Dataset" (Wang, Quanfeng; Paulus, Alexander H.; Na, Han; Saurer, Matthias M.; Eibert, Thomas F.) is a publicly released dataset supporting research on RF holography and RF-based perception in static indoor environments. The dataset is intended to enable reproducible experimentation, benchmarking, and comparative evaluation of algorithms for electromagnetic sensing and environment reconstruction under controlled (static) conditions.

Size and accessibility. The dataset has a total volume of 129.7 GB, and corresponds to a substantial collection of measurement data suitable for offline processing and model development.

Social/technical repercussion indicators (platform metrics). As of the reporting snapshot, Zenodo reports:

- 92 views
- 205 downloads
- Data volume: 129.7 GB

The relatively high number of downloads compared to views suggests high-intent uptake typical of technical datasets, where users often access the record via direct links/DOI and download content for immediate analysis rather than browsing extensively.

https://zenodo.org/records/13981780

"RF Holography and Perception in Dynamic Environments – Planar Office Scanner" (Creators: Alexander H. Paulus, Quanfeng Wang, Thomas F. Eibert) is a publicly released dataset supporting research on RF holography and RF-based perception in dynamic environments, using a planar office scanning measurement setup. The dataset is intended to enable reproducible experimentation and benchmarking for algorithms that must cope with time variation (e.g., changes in the scene, motion-related perturbations, or dynamic multipath conditions), complementing static-environment datasets.

Size and accessibility. The dataset has a total volume of 9.4 GB, making it comparatively lightweight and practical for rapid download and iteration during development and evaluation.

Social/technical repercussion indicators (platform metrics). As of the reporting snapshot, Zenodo reports:

- 92 views
- 70 downloads
- Data volume: 9.4 GB

These indicators suggest steady visibility and meaningful uptake: the view-to-download pattern is consistent with users inspecting the record page before downloading, as is common for research datasets where users assess suitability and documentation prior to reuse.

https://zenodo.org/records/14261322

"FULL-WAVE EM SIMULATION OF HUMAN BODY BLOCKAGE BY DENSE 2D ANTENNA ARRAYS" (Creators: Federica Fieramosca; Stefano Savazzi; Vittorio Rampa; Michele D'Amico) is a publicly released dataset providing full-wave electromagnetic (EM) simulation outputs that quantify human body blockage effects in systems employing dense 2D antenna arrays. The dataset is designed to support reproducible research and benchmarking for RF sensing/communications studies where blockage modeling is critical, i.e.., for array processing, channel characterization under occlusion, and EM-informed algorithm development.

Size and accessibility. The dataset is large-scale (177 GB), indicating extensive simulation content (e.g., multiple configurations/parameters and high-resolution outputs). This makes it valuable for systematic evaluation, while implying that download and processing typically target research teams with appropriate compute/storage resources.

Social/technical repercussion indicators (platform metrics). As of the reporting snapshot, Zenodo reports:

- 51 views
- 23 downloads
- Data volume: 177 GB

The view-to-download pattern is consistent with a specialized, high-volume technical dataset: users often review documentation carefully before committing to a large download, so downloads are a strong indicator of concrete intent to reuse for analysis and benchmarking.

https://zenodo.org/records/11243471

"On the impact of the antenna radiation patterns in passive radio sensing: dataset" (Creators: Stefano Savazzi; Federica Fieramosca; Michele D'Amico; Vittorio Rampa) is a publicly released dataset supporting research on passive radio sensing, with a specific focus on how antenna radiation patterns influence sensing performance and interpretation. The dataset is intended to enable reproducible evaluation and comparative benchmarking of models/algorithms that incorporate (or are sensitive to) antenna pattern effects in passive sensing pipelines.

Size and accessibility. The dataset is lightweight (21.7 MB), which makes it easy to download and reuse, lowering barriers for adoption in teaching, rapid prototyping, and method comparison studies.

Social/technical repercussion indicators (platform metrics). As of the reporting snapshot, Zenodo reports:

- 132 views
- 173 downloads
- Data volume: 21.7 MB

The fact that downloads exceed views suggests strong "high-intent" uptake: many users likely access the dataset via direct DOI/link sharing and proceed immediately to download for inspection or reuse. For small, well-scoped datasets, this pattern is a positive repercussion signal indicating practical usability and community interest.

https://zenodo.org/records/11243149

3. Main events organized by HOLDEN

3.1. IEEE Emerging Technologies for Factory Automation

https://2024.ieee-etfa.org/solicited-workshops/first_workshop_advanced_rf_sensing_tools/index.html

At **IEEE ETFA 2024**, the **WS02 – 1st Workshop on "Advanced RF sensing tools in industrial automation: robust, sustainable and ethical designs"** brought together research on RF-based sensing (e.g., radio-based vision/radar/holography) and its integration with distributed learning approaches (decentralized, federated, split learning), with explicit attention to robustness, privacy, and ethical constraints in Industry 5.0 settings.

The workshop was organized by Stefano Savazzi (CNR, Italy), Alessio Prini (CNR STIIMA, Italy), Daniele Piazza (Adant, Italy), and Stephan Sigg (Aalto University, Finland). It attracted ~40–50 participants and featured 5 papers accepted via open call, providing a focused forum for discussing algorithms, EM/physics-driven models, beamforming/antenna tools, and privacy-aware RF sensing applications in industrial environments.

Figure 3: Ethical workshop @Finland (UBICOMP-ISWCS)

3.2. Ethical workshops – Twente University, and IEEE ETFA workshop

On 22 November 2023, a Guidance Ethics Workshop was organised in Enschede, The Netherlands, involving HOLDEN representatives across the discussion groups together with members of the public. The workshop opened with an accessible introductory presentation, aimed at explaining the technology, its possible applications, and its broader implications to non-specialist participants. A total of 15 participants took part in the session.

Participants were divided into four groups, each invited to examine the technology from different stakeholder perspectives. Since no final use cases had yet been defined at that stage of the project, the workshop served as an exploratory activity to identify potential application contexts, assess their ethical acceptability, and reflect on possible design choices to make them more responsible and socially acceptable.

Overall, the workshop led to the identification of 17 potential contexts. Of these, eight were discussed in terms of their moral implications, while four were further examined with respect to how they could be designed in a more ethical manner. The study is reported in detail in Deliverables D2.1 and D2.2, and its outcomes also informed the selection of the final project contexts, as described in D6.1.

On 10 September 2024, a workshop based on techno-moral scenarios was held during the IEEE ETFA Conference in Padua, Italy (see previous section). The workshop involved 13 participants, including engineers working in fields related to HOLDEN technology as well as members of the HOLDEN team.

The activity invited participants to imagine technology as already embedded in society and to reflect on its potential implications in concrete future-oriented scenarios. In particular, the discussion focused on a system integrated into a drone and used to support the mapping of digital twins. Two contrasting scenarios were considered: the first involved an authoritarian city using technology to construct a digital twin, while the second involved an NGO using the same technology to better understand infrastructure conditions in informal settlements or slum areas.

The workshop showed that participants' ethical evaluations of the technology varied significantly depending on the context of deployment, the actor using the system, and the perceived purpose of the application. Overall, participants expressed a more favourable view of the NGO scenario, provided that the organisation was assumed to act in the best interests of the local community. The outcomes of this activity contributed to the work reported in Deliverable D3.4.

Figure 4: UBICOMP booth – gesture recognition in human-robot shared workplaces

3.3. Ubiquitous Computing (UBICOMP) workshop

https://holden-project.eu/ubicomp-iswc-2025-wokshop-call-for-papers-rf-sensing-and-holography-in-dense-wireless-networks-towards-privacy-scalable-and-ethical-design/

The UbiComp/ISWC 2025 workshop **"RF sensing and Holography in Dense Wireless Networks: towards privacy-scalable and ethical design"** focused on the use of dense wireless infrastructures, such as Wi-Fi and IoT networks, as virtual sensing systems for human-scale perception, including people counting, behaviour recognition, and environment mapping. The workshop explicitly addressed privacy, scalability, sustainability, and ethical design constraints, which are central to the HOLDEN approach to responsible RF sensing.

The programme included a keynote by Dr. Luca Barbieri from Bell Labs/Nokia on next-generation Wi-Fi and emerging sensing directions, together with a technical session of paper presentations covering mmWave radar robustness, passive RF people counting in dense IoT networks, beam-steerable antenna testbeds for counting, and value-sensitive and ethical design perspectives for sensitive application domains. The UBICOMP session also included a booth exposition, where a gesture recognition system was demonstrated and validated in human-robot shared workplaces, linking the dissemination activity to technical work carried out in WP4 and WP5.

Within the same conference context, HOLDEN also hosted a **Value Sensitive Design workshop** on 13 October 2025 in Espoo, Finland, aimed at better understanding technological needs and ethical requirements in the palliative care context. This workshop was geared towards engineers and involved six participants. Participants were invited to identify the most important values for an RF-based palliative care technology, assess whether those values were ethically appropriate, and then reflect on the design choices needed to ensure that the technology would uphold those values in practice.

This activity formed part of a broader set of palliative care Value Sensitive Design workshops conducted within HOLDEN. While the UBICOMP workshop targeted engineers, two further workshops focused on healthcare workers and people with direct palliative care experience, including friends and family members of palliative care patients. The first of these workshops was held on 21 November 2025, while the second took place on 21 April 2026. Together, these workshops supported the project's ethical-by-design methodology by comparing perspectives from technical experts, healthcare professionals, and individuals with lived or relational experience of palliative care.

Overall, the UBICOMP activities attracted approximately 30–40 participants and provided a focused forum for academic and industrial stakeholders to discuss RF sensing, holography methods, and their social implications in dense-network deployments. The associated Value Sensitive Design activities further strengthened the link between technical development and ethical reflection, particularly for sensitive healthcare scenarios where privacy, dignity, trust, autonomy, and acceptability are key requirements.

3.4. “This is not a Camera” exhibitions

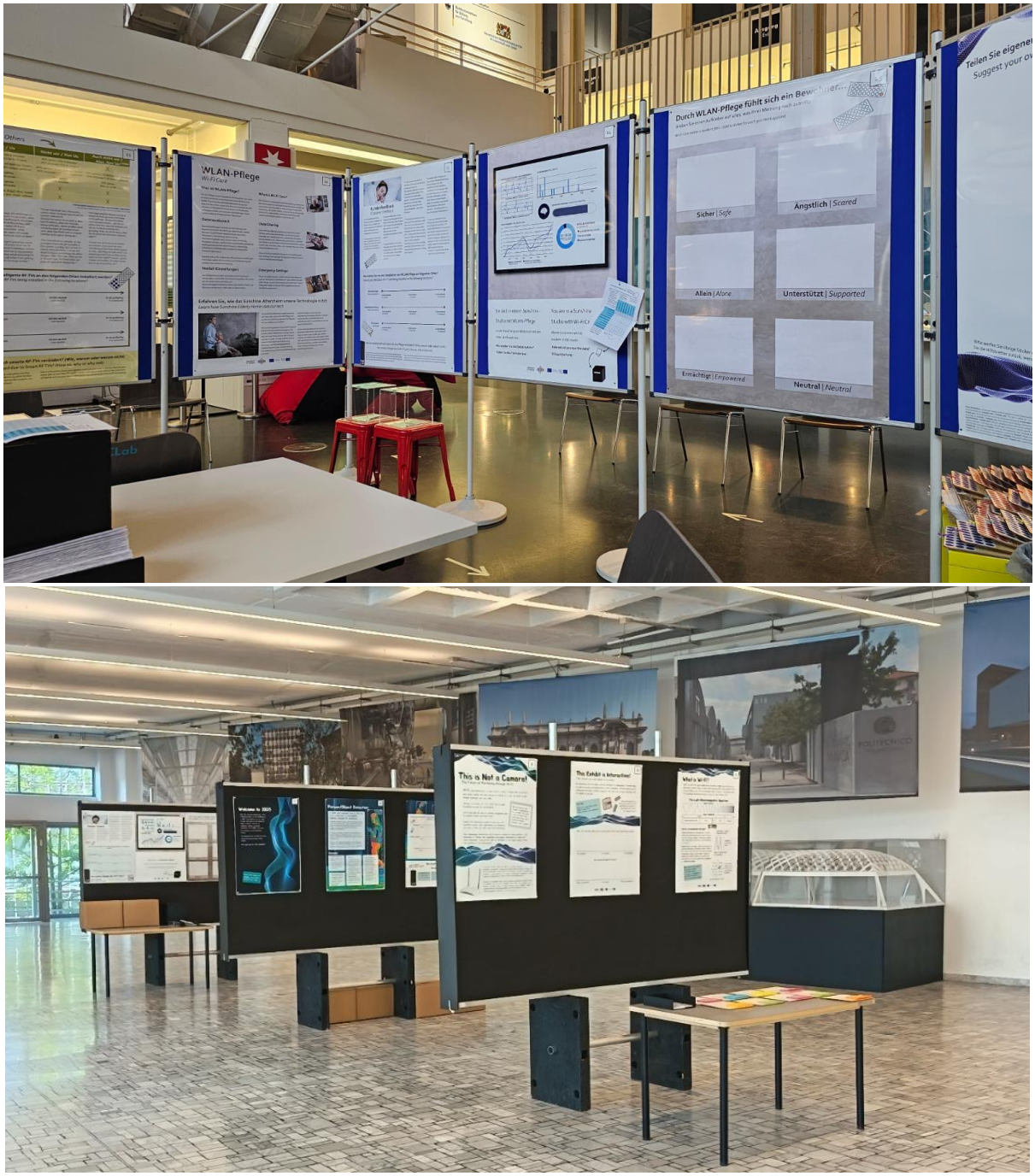


Figure 5 This is not a Camera exhibition at the Deutsches Museum in Munich (top) and Politecnico di Milano (bottom).

The “This is not a Camera – Wi-Fi Seeing Without a Camera” initiative, also referred to as the This is Not a Camera Exhibit (NACE), was organized as an interactive public engagement activity combining elements of scientific exhibition, workshop, and participatory research. The exhibit consisted of 16 interactive posters written to be intelligible to non-technical audiences and visitors without an academic background. Its aim was to communicate the principles, capabilities, and societal implications of RF sensing in an accessible format, while also collecting structured feedback from the public.

The exhibit was hosted in five locations from late March 2025 onward. Three early deployments took place in Enschede, The Netherlands, at Tetem, Tankstation, and the University of Twente Design Lab. The exhibit was later hosted at the Deutsches Museum in Munich, Germany, in February 2026, and at Politecnico di Milano in April 2026. The Deutsches Museum edition was held from 06.02 to 23.02, while the Politecnico di Milano edition was organized in a poster-based interactive format from 07.04 to 21.04, targeting both general audiences and academic communities.

Alongside the NACE deployment in Enschede, a dedicated workshop was also held at Tankstation Cultural Point. The goal of this workshop was to gather deeper qualitative insight into how participants made decisions while engaging with the "*This is Not a Camera"* exhibit. Six participants took part and were divided into two groups of three. Each group was observed by a researcher, who asked follow-up questions on how participants felt about each scenario, how they would rank data ownership, and why they classified specific scenarios as either "creepy" or "cool". The insights from this workshop contributed to the analysis reported in D2.3 and D6.8.

The workshops and exhibitions were designed to communicate the concept of RF sensing and radio-based perception in an accessible and experiential way, demonstrating how wireless signals, such as Wi-Fi, can be repurposed as sensing modalities capable of detecting presence, motion, posture, and environmental changes without relying on optical cameras. The initiative placed particular emphasis on the ethical dimension of privacy-preserving sensing technologies and stimulated reflection on the societal implications of pervasive wireless infrastructures.

From an organizational perspective, the events followed a highly interactive and participatory format. The poster stations presented scientific concepts in simplified visual form, explaining how radio signals propagate, interact with objects and the human body, and can be processed to infer contextual information about indoor environments. Hands-on demonstrations illustrated the basic principles of device-free sensing, allowing participants to observe how body movements influence wireless signal patterns. Participatory feedback collection was integrated directly into the exhibition design: visitors were invited to express opinions, concerns, and expectations regarding RF sensing technologies using stickers, annotations, and written comments on the posters. Facilitated discussions with researchers further encouraged dialogue on ethical, legal, and societal aspects of camera-free sensing, including privacy, trust, transparency, consent, and acceptable use scenarios.

In addition to its dissemination role, the exhibit gathered anonymous individual data on preferences regarding both the varying capabilities of RF sensing technology and three use cases selected for further examination by the HOLDEN consortium. The results from the exhibit have been used in Deliverables D2.3, D4.5, D5.5, and D6.8. Overall, the collected feedback confirmed that context plays a central role in shaping how comfortable people feel with RF sensing technologies. The exhibit also provided more specific insights into concerns associated with each innovation, helping the project better understand how perceptions change depending on the proposed application, the actor deploying the technology, and the expected social benefit.

For the exhibitions held before the Milan deployment, 144 participants completed the main poster interactions perfectly, meaning that they did not skip any of the main interactions and did not answer twice. When including imperfect participation with up to three errors, the total number of participants reached 241.

Overall, the NACE activities demonstrated an effective dissemination modality combining scientific communication, public engagement, and participatory ethics assessment. The exhibition format enabled bidirectional knowledge exchange: researchers communicated technical principles and potential applications, while visitors contributed qualitative and structured feedback that informed the ethical-by-design framework of the HOLDEN project and supported its objective of promoting responsible innovation in privacy-preserving sensing technologies.

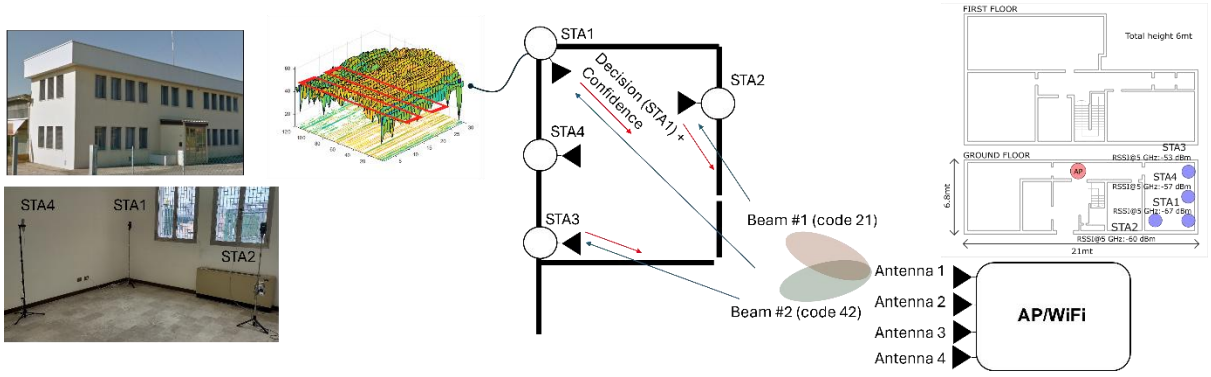


Figure 6 Pilot activity in ADANT testhouse

3.5. Pilot activity – ADANT testhouse

Pilot activity: **People Counting campaign at ADANT Testhouse (full-day measurement session)**

As part of HOLDEN's pilot-oriented validation activities, a dedicated People Counting measurement campaign was conducted at the ADANT Testhouse facility. The goal was to collect real-world WiFi sensing data suitable for benchmarking people-counting methods and for assessing practical constraints relevant to privacy-aware RF sensing (e.g., deployment feasibility in indoor environments, repeatability, and scalability considerations).

The activity involved ~15 participants present in the Testhouse (see Figure 5) across a full day of measurements, enabling controlled but realistic variations in occupancy and movement patterns. The resulting dataset was curated and released publicly as "People Counting through WiFi: testhouse samples" on Kaggle, supporting reproducibility and external reuse by the research community. Detailed results from this study are reported in Deliverables D6.4 and D4.3. Finally the experimental activities and the main results have been reported in a published paper authored by Adant and CNR researchers:

Riccardo Bersan, Anay Ajit Deshpande, Sanaz Kianoush, Daniele Piazza, and Stefano Savazzi. 2026. WiFi-Based People Counting Using Beam-Steerable Antennas: A Test-bed Study. In Companion of the 2025 ACM International Joint Conference on Pervasive and Ubiquitous Computing New York, NY, USA, 1112–1117. https://doi.org/10.1145/3714394.3756218

3.6. Pilot activity – Palliative Care

Link: https://www.linkedin.com/posts/holden-project_digitalhealth-healthcareai-ethicalcare-activity-7415380474266910720-Dxm3?utm_source=share&utm_medium=member_desktop&rcm=ACoAAAF1aTkBiebAlTICLVhNWRTonXXc4AOsNfY

As part of its pilot-oriented validation activities, HOLDEN explored the application of privacy-preserving RF sensing technologies within the context of home-based palliative care, addressing one of the most socially sensitive and ethically demanding use cases of digital health innovation. The pilot activity was communicated through the official LinkedIn channel of the HOLDEN Project, emphasizing the intersection between digital health, ethical AI, and non-intrusive sensing.

The palliative care pilot focused on scenarios where continuous monitoring can support patients and caregivers without relying on cameras or wearable devices, which are often perceived as invasive or impractical in end-of-life settings. HOLDEN's RF-based sensing approach leverages wireless infrastructure and radar-like sensing modalities to infer presence, movement, and activity patterns indirectly, thereby aiming to preserve dignity, privacy, and autonomy. This design philosophy is consistent with the project's ethical-by-design framework and with broader European priorities in responsible digital health.

Between October and December 2025, the IRLaB team conducted 14 phenomenological interviews with palliative care patients from the Vinohrady Faculty Hospital in Prague. The interviews were carried out after a period of 10 to 14 days during which RF-sensing monitoring technologies had been implemented in the patients' homes. The purpose of the interviews was to gain deeper insight into patients' lived experiences of sharing their domestic space with this type of technology. In particular, the interviews helped identify what palliative care patients value most when living in an environment where their movements are continuously monitored. Detailed results from this study are reported in Deliverables D9.3 and D9.8.

From a validation perspective, the pilot served as a real-world testbed for assessing both the technical feasibility and the societal acceptability of RF sensing solutions. While the activity was not aimed at clinical diagnosis, it demonstrated how ambient sensing can provide caregivers with supportive contextual information, such as indications of movement or prolonged inactivity, without introducing additional burden or intrusive instrumentation for vulnerable users.

The dissemination of this pilot through social media channels played a dual role. First, it documented the practical relevance of HOLDEN technologies beyond laboratory and industrial settings. Second, it contributed to public dialogue on the responsible use of AI and sensing technologies in healthcare, explicitly addressing concerns related to ethics, trust, and human-centered design. The engagement generated by the post confirms that palliative care represents a compelling and credible application domain for privacy-aware RF sensing, reinforcing the societal impact dimension of the project.

Overall, the palliative care pilot illustrates how HOLDEN's technical innovations can be translated into ethically grounded and socially meaningful applications. The combination of in-home technology deployment, phenomenological interviews, and public dissemination strengthened the

project's understanding of patient values and supported the broader HOLDEN narrative around trust, dignity, inclusivity, and responsible innovation.

4. Conclusions

This deliverable has evaluated the dissemination, communication, and societal engagement activities carried out within HOLDEN, with the objective of assessing both the visibility of the project and the broader repercussion of its scientific, technical, and ethical outputs. The analysis combined quantitative indicators, such as LinkedIn impressions, engagements, follower demographics, dataset views, and downloads, with qualitative evidence from public exhibitions, workshops, pilot activities, and press-style communication.

Overall, the results show that HOLDEN has reached a specialized and professionally relevant audience, particularly within telecommunications, research services, higher education, and innovation-oriented communities. The LinkedIn analytics confirm sustained visibility over the reporting period, with engagement peaks associated with milestone-driven communication, major events, published datasets, and application-oriented narratives. Posts linked to international dissemination events, public exhibitions, and healthcare-oriented pilots achieved above-average engagement, suggesting that concrete use cases and socially meaningful applications are particularly effective in communicating the relevance of RF sensing technologies.

The evaluation of open datasets confirms that public release of research data represents an important pathway for scientific and technical impact beyond conventional communication metrics. The Kaggle and Zenodo repositories provide reusable resources for benchmarking, reproducibility, and downstream experimentation in WiFi/RF sensing, RF holography, passive radio sensing, and EM-informed modelling. The observed download and view patterns indicate meaningful uptake by technically qualified users, supporting the role of open data as a measurable dissemination and exploitation channel.

The events organized by HOLDEN further demonstrate the project's capacity to connect technical innovation with ethical and societal reflection. The IEEE ETFA and UbiComp/ISWC workshops created focused forums for researchers, engineers, and industrial stakeholders to discuss RF sensing, holography, dense wireless networks, privacy, scalability, and responsible design. In parallel, the ethics-oriented workshops, techno-moral scenario activities, and Value Sensitive Design workshops helped investigate how different stakeholders assess the acceptability of RF sensing technologies depending on context, purpose, data ownership, and the actors deploying the system.

The "*This is not a Camera*" exhibitions and associated participatory activities provided a particularly effective model for public engagement. By translating RF sensing concepts into accessible poster-based interactions, demonstrations, and guided discussions, the exhibit enabled non-technical audiences to engage with the technology and express concerns, preferences, and expectations. The results confirmed that public comfort with RF sensing is strongly application/context-dependent and that perceptions of the same technical capability vary according to use case, perceived benefit, trust, transparency, and control over data.

The pilot activities complemented these dissemination and engagement actions by grounding the project's communication in concrete validation scenarios. The ADANT testhouse campaign

supported reproducibility and external reuse through the release of people-counting data, while the palliative care pilot highlighted the relevance of RF sensing in a socially sensitive domain. In particular, the in-home deployment and phenomenological interviews with palliative care patients provided valuable insight into lived experiences of continuous monitoring, reinforcing the importance of dignity, autonomy, privacy, and trust in the design of future RF-based care technologies.

Taken together, the evidence collected in this deliverable shows that HOLDEN's dissemination strategy successfully combined technical communication, open science, public engagement, and ethical reflection. The project was able to communicate complex RF sensing and holography concepts to both expert and non-expert audiences, while also using stakeholder feedback to inform the ethical-by-design framework developed across the project. These activities strengthened HOLDEN positioning at the intersection of wireless innovation, privacy-preserving sensing, responsible AI, and societal impact.

Based on the observed results, future dissemination and exploitation efforts should continue beyond the project end to build on the most effective elements identified in this evaluation: milestone-driven communication, partner amplification, event-based visibility, accessible public-facing narratives, and open datasets accompanied by clear documentation and baseline examples.

Particular attention should be given to application-oriented communication in domains where privacy-aware sensing can provide tangible social value, such as healthcare, care environments, and safe human–technology interaction. This combination of measurable outreach, reusable scientific outputs, and participatory ethical engagement provides a strong foundation for sustaining the impact of HOLDEN beyond the project duration.

Appendix A.

Key Performance Indicators (Holden)

The cumulative row combines consolidated LinkedIn analytics over three different periods. Engagement rate is computed as total engagements divided by total impressions.

Scope	Period	Impressions	Members reached	Engagements	Engagement rate	Followers (latest)
Assess.	11/05/2023 - 01/05/2026	13,889	2,837	242	1.74%	59
Last period	11/05/2023 - 01/01/2026	7,505	1,285	115	1.53%	56
Latest	12/05/2025 - 01/05/2026	6,384	1,552	127	1.99%	59

Top posts (Holden – linkedin)

Publish date	Impressions	Engagements	Engagement rate	Post URL
2025-05-12	1,820	16	0.88%	https://www.linkedin.com/feed/update/urn:li:activity:7327614796789395456
2025-06-13	1,812	50	2.76%	https://www.linkedin.com/feed/update/urn:li:activity:7339275403850665985
2025-04-22	1,378	27	1.96%	https://www.linkedin.com/feed/update/urn:li:activity:7320465182185381889
2026-01-09	1,372	28	2.04%	https://www.linkedin.com/feed/update/urn:li:activity:7415380474266910720

2025-09-10	1,232	24	1.95%	https://www.linkedin.com/feed/update/urn:li:activity:7371484590076604417
2025-05-29	1,031	12	1.16%	https://www.linkedin.com/feed/update/urn:li:activity:7333880962432339968
2025-09-29	723	12	1.66%	https://www.linkedin.com/feed/update/urn:li:activity:7378401924867555328
2026-04-10	698	16	2.29%	https://www.linkedin.com/feed/update/urn:li:activity:7448338316954963968
2025-10-08	566	12	2.12%	https://www.linkedin.com/feed/update/urn:li:activity:7381707882024648705
2026-01-27	547	16	2.93%	https://www.linkedin.com/feed/update/urn:li:activity:7421843913256267776