STARLIGHT

Sustainable Autonomy and Resilience for LEAs using AI against High Priority Threats

D11.3 Communication and Dissemination Plan – V2

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Executive Summary

This updated deliverable delineates the refined strategy for communication and dissemination within the STARLIGHT project, serving both as an update and a guide for consortium partners to enhance their outreach.

This document serves as the second iteration of the STARLIGHT project's dissemination and communication plan, following the initial framework outlined in the month 12 (M12) deliverable 11.2 (D 11.2) Communication and Dissemination Plan. Emphasising a targeted approach, the document articulates a detailed plan for engaging stakeholders across the EU, with a focus on those in artificial intelligence, security, and related sectors.

As a progression from the initial D11.2, this document builds upon the established branding and communication channels. It elaborates on active steps for broadcasting project developments and distributing findings, such as generating tailored content, leading awareness campaigns across multiple platforms and establishing connections with related initiatives. The strategy is crafted to ensure that STARLIGHT's reach is effective and impactful among law enforcement agencies, the broader public, civil society, and relevant EU institutions.

Now at the 30-month juncture, this deliverable not only revises engagement tactics and communication protocols across diverse media but also shares the project's achievements and ongoing results, ensuring clarity and ongoing dialogue with those invested in our research trajectory.

This document captures the communication and dissemination activities at this project phase, signalling progress as we approach the final 18 months. Further developments and outcomes will be presented in the next update, D11.4, which will coincide with the project's conclusion at month 48.

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List of Abbreviations

AI	Artificial Intelligence
CEA	Commissariat à l'Energie Atomique et aux Energies Alternatives
CERIS	Community for European Research and Innovation for Security
CORDIS	Community Research and Development Information Service
CRI	Cybercrime Research Institute
C&D	Communication & Dissemination
D	Deliverable
DG	Directorate General
DG CNECT	Directorate-General for Communications Networks, Content and Technology
DG ECHO	DG for European Civil Protection and Humanitarian Aid Operations
DG HOME	Directorate-General Migration and Home Affairs
EARTO	European Association of Research and Technology Organisations
EPBG	Estonian Police and Border Guard
EC	European Commission
ENFSI	European Network of Forensics Science Institute
ENISA	The European Union Agency for Cybersecurity
EU	European Union
EU-LISA	The European Union Agency for the Operational Management of Large-Scale IT Systems in the Area of Freedom, Security and Justice
EUCI	European Union Classified Information
EUROJUST	The European Union Agency for Criminal Justice Cooperation
EUROPOL	The European Union Agency for Law Enforcement Cooperation
FRA	European Union Agency for Fundamental Rights
FRONTEX	The European Border and Coast Guard Agency
GA	General Assembly
GAIA-X	Gaia-X Federations Services
GDPR	General Data Protection Regulation
H2020	Horizon 2020
IFSEC	International Fire and Security Exhibition and Conference
INTERPOL	The International Criminal Police Organization
IPR	Intellectual Property Rights
ISC	International Security Conference & Exposition
IT	Information Technologies
JHA	The Justice and Home Affairs
JRC	The Joint Research Centre
KPI	Key Performance Indicator
LE	Law Enforcement

LEA	Law Enforcement Agency
M	Month
MININT	French Ministry of Interior
MS	Member State
NDA	Non-Disclosure Agreement
NGO	Non-Governmental Organisation
PC	Project Coordinator
PMC	Project Management Committee
PO	Project Officer
RTO	Research and Technical Organisation
SAB	Security Advisory Board
SICUR	Salon Internacional de la Seguridad/International Safety, Security and Fire Exhibition
SINNOVA	Salone Dell' Innovazione in Sardegna
SME	Small and Medium-Sized Enterprises
SSH	Social Sciences and Humanities
STARLIGHT	Sustainable Autonomy and Resilience for LEAs using AI against High priority Threats
T	Task
UNICRI	United Nations Interregional Crime and Justice Research Institute
URL	Uniform Resource Locator
WP	Work Package

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1 Introduction

This document serves as the 30-month progress update to the STARLIGHT project's dissemination and communication plan. Building upon the initial strategy outlined in D11.2, this revision presents an evolved framework for enhancing visibility, stakeholder engagement, and the dissemination of research findings. We detail the achievements and outline the strategic direction for the remaining 18 months, ensuring our communication efforts continue to resonate with key audiences and stakeholders within the EU's artificial intelligence and security sectors.

1.1 About STARLIGHT

Amidst the rising intricacy of security challenges and the surging volume of digital data, the STARLIGHT project stands at the forefront of advancing artificial intelligence (AI) utilisation within Law Enforcement Agencies (LEAs). With a keen focus on cultivating a comprehensive understanding of AI, STARLIGHT empowers LEAs with the necessary tools, data, and ethical frameworks to bolster their operations in investigation and cybersecurity.

Recognising the urgent need to address the criminal misuse of AI, STARLIGHT is committed to equipping LEAs with robust capabilities to protect against and counteract AI-facilitated crime and terrorism. The project is dedicated to fostering a collaborative community of LEAs, researchers, industry experts, security practitioners, and other key stakeholders, all united in integrating AI into operational practice effectively and ethically.

Through STARLIGHT, LEAs are provided with opportunities to harness AI tools and solutions, ensuring the protection and enhancement of their systems. The project is set to deliver high-quality datasets, an interoperable and standardised AI framework, and an AI hub, all contributing to bolstering the EU's strategic autonomy in AI and supporting its legal, ethical, and societal values.

1.2 Purpose of the deliverable

As part of the H2020 framework, STARLIGHT stands out with its expansive consortium of 50 partners from 18 European countries, making it one of the largest security-focused AI initiatives. This update focuses on effectively utilising this vast network to maximise the project's visibility and impact.

This updated deliverable, D11.3, serves as the comprehensive guide for the STARLIGHT project's communication and dissemination activities over its course. Building on the foundational strategy outlined in D11.2, this document provides a detailed roadmap for effectively sharing the project's progress, achievements, and insights with a wide array of stakeholders.

The key objectives of this deliverable are to:

1. Enhance the communication and dissemination strategy - this involves adapting the project's communication goals, target audiences, and channels to reflect its evolving needs and achievements.

2. Details of online communication and dissemination activities - the plan encompasses a variety of digital platforms, including the project's website, newsletters, and social media channels like Twitter,

LinkedIn, and YouTube. It also covers the creation and distribution of presentation videos, showcasing the project's developments.

3. Outline collaboration and community building efforts - this section describes strategies for engaging with different actors within the security community and fostering a collaborative network for effective communication.

4. Summary of publications and conference participation - this includes documentation of research findings, publications in various formats, and the project's presence at conferences and stakeholder engagement activities.

5. Manage communication and dissemination activities - it outlines the management of online platforms and interactions with the press and media and includes strategies for monitoring and evaluating the impact of these activities using Key Performance Indicators (KPIs).

Situated within Work Package 11 (WP11) under Task 11.1 (T11.1), Development and realisation of the project dissemination strategy, this document works in tandem with the D11.1 Visibility Design Guide and Materials, issued at M6, which initially set the visual identity and branding for the STARLIGHT project and the D11.2 Communication and Dissemination Plan, issued at M12.

D11.3 is instrumental in guiding the consortium through the project's remaining phases, ensuring that communication and dissemination efforts remain dynamic, targeted, and impactful.

This deliverable is designed to ensure that all consortium members are aligned in their communication efforts, guaranteeing that the STARLIGHT project maintains a cohesive and impactful presence throughout its lifecycle and beyond.

D11.2 detailed the collaboration among project partners to raise awareness about the project's research and results, using clear and direct messaging aimed at both specific stakeholder groups and the wider public. D11.3 continues this approach, refining the communication strategy to keep it effective and aligned with the project's ongoing progress. It serves as a practical guide for the consortium to continue engaging audiences effectively as the project moves forward.

1.3 Relationship to other deliverables

The communication and dissemination (C&D) activities within STARLIGHT closely integrate with and relate to other project deliverables and tasks.

Table 1: Key links to other STARLIGHT tasks

Task	Lead Beneficiary	Relationship to the C&D Strategy
T3.1 Setup and governance of the Community	MININT	Setup and engagement of the AI Community of Expertise (AICoE) based on the circles of actors: (1) Project Group; (2) Partner Group; and (3) External Group. Aligned with the mandate of the EUROPOL Innovation Lab.
T3.2 Organise innovating workshops to identify and consolidate LEA needs	BMI	Innovating workshops directly engage the AICoE to understand LEA needs. The workshops represent a mechanism of C&D within STARLIGHT.
T3.4 Scouting activities and watch observatory function	EUROPOL	Engages with the solution provider communities (RTOs, academics, industry, SMEs).
T3.5 Customisation lab and training	EPBG	Supports customisation and uptake at the national level including awareness raising of relevant issues (technical, operational, organisational, policy) that inhibit uptake.
T4.1 Ethical and legal observatory	KUL	Platform for engagement with Ethics Advisory Board, ALIGNER, popAI and other relevant stakeholders on legal and ethical considerations.
T10.5 STARLIGHT tool fest	VICOM	Hands-on demonstrations of STARLIGHT results to different stakeholder communities (national, consortium, European).
T11.2 Multi-modal project awareness campaign for LEAs, public, civil society, and EC services	L3CE	Multiple campaigns demonstrating the opportunities afforded by AI to different stakeholder communities including joint campaigns with ALIGNER and popAI.
T11.4 Recommendations for facilitating the AI based digital transformation of EU LEAs	EUROPOL	Linked to the planned European AI hub in support of law enforcement.
T11.5 Recommendations for policy and legislative changes at MS and EU level	CRI	Support of the dissemination and impact of results at the national and EU levels on policy and legislative developments.
T11.6 Standardisation and convergence of best practices into effective practices	CENTRIC	Engagement with other EU AI clusters to monitor standardisation and place STARLIGHT within the EU AI ecosystem.

Moreover, each task will play a role in producing academic or other types of output, supporting the project's overall communication and dissemination activities.

2 Enhanced Communication and Dissemination Strategy

At the 30-month mark of the STARLIGHT project, this section presents our enhanced communication and dissemination strategy. This strategy plays a key role in spreading the word about our work and achievements. We have dedicated our efforts to developing and implementing a communication strategy that not only meets the project's goals but also effectively shares our results and innovations with a wider audience.

In this section, we'll outline our comprehensive approach, emphasising each contribution to our overall goal of effective communication and dissemination, providing a clear view of the achievements of our communication strategies, the challenges we have encountered, and the interconnection between these strategies and the core tasks and deliverables of the project.

This section is an opportunity to reflect on our journey to date, the steps we've taken in enhancing our communication approach, and how we've engaged with our audience and stakeholders through the STARLIGHT project.

2.1 Objectives and outcomes

In this updated phase of the STARLIGHT project, our objectives are tailored to enhance stakeholder engagement, utilise effective communication tools, and continuously evaluate our strategies for maximum impact. Firstly, we aim to actively engage with our identified key stakeholder groups. This involves developing tailored communication strategies for each group and ensuring that sensitive information is shared responsibly and in accordance with security requirements.

Our second objective is to use a variety of effective communication tools and methods. The focus here is on clearly conveying STARLIGHT's research findings to a broad audience, making sure the content is accessible and engaging. This will help maximise the reach and impact of our research.

Lastly, we are committed to implementing a system for regular assessment and refinement of our communication and dissemination strategies. This continuous evaluation will ensure that our approach remains effective and is adapted to the evolving needs of the project and its stakeholders.

The expected outcomes of these objectives include a significant increase in awareness about the STARLIGHT project among key stakeholders. This awareness is crucial for ensuring they are well-informed about the project's objectives and achievements. Additionally, we aim to foster collaborative relationships with LEAs, security professionals, and stakeholders in the cybersecurity and AI fields. These collaborations are expected to open future opportunities for the practical application of our research findings.

Furthermore, we plan to continue establishing and developing strong connections with other related EU and national projects and initiatives. This networking will not only enhance STARLIGHT's visibility but also its impact within the broader research and security community. Through these efforts, we anticipate that the STARLIGHT project will successfully convey its research outcomes to the intended stakeholders, leading to greater application and impact in the real world.

2.2 Adapting goals, target audiences, and communication channels

The STARLIGHT project recognises the importance of evolving its communication goals (see Table 2: Communication and dissemination goals and strategy) and strategies to align with the changing landscape of the project's progress and stakeholder's needs. The primary goal is to enhance awareness and understanding of STARLIGHT's innovative research and its outcomes. This involves not just disseminating information but also engaging in a dialogue with relevant audiences to foster a deeper comprehension of the project's impact and potential.

To achieve this, the project targets a range of audiences, each with unique needs and interests:

- Primary audiences include LEAs, policymakers, academic and research institutions, security practitioners, and industry experts. These groups are crucial, as they are directly involved in or can significantly benefit from the application of the project's findings.
- Secondary audiences, such as the general public, civil society organisations, media, and non-profit entities, are also important. Engaging with these broader groups ensures wider societal awareness and support, which is essential for the long-term success and impact of the project.

Table 2: Communication and dissemination goals and strategy

Goal Type	Description
Initial Awareness	Introduce the project's mission, vision, and potential impacts to a diverse audience.
Ongoing Engagement	Continuously engage with audiences, providing updates on progress, breakthroughs, and challenges.
Strategy Evolution	Regularly refine communication strategies based on project developments and audience interactions.

In terms of communication channels (see Table 3: Communication and dissemination channels), STARLIGHT employs a multi-faceted approach:

- Digital platforms like Twitter, LinkedIn, YouTube, and the project's website are pivotal for online engagement, allowing for real-time updates and interactions. However, the strategy goes beyond the digital realm.
- Offline channels, including conferences, workshops, and partner-led events, play a leading role in reaching diverse audiences, facilitating in-depth discussions, and fostering personal connections.
- Annual newsletters serve as a comprehensive update on the project's milestones and findings, keeping the audience informed and engaged.
- Additionally, collaborative channels, where partners share STARLIGHT content through their networks, amplify the project's reach and impact across various sectors and regions.

The STARLIGHT project is dedicated to a progressive and adaptable communication strategy, tailored to evolve with the project's trajectory and the nuanced needs of its stakeholders. The core aim is to elevate awareness and foster a nuanced understanding of STARLIGHT's pioneering research and its profound outcomes. This entails not just the distribution of information but also proactive engagement

with pertinent audiences to ensure a deep-rooted comprehension of the project's influence and possibilities.

Table 3: Communication and dissemination channels

Channel Type	Platforms/Methods	Purpose
Digital	Twitter, LinkedIn, YouTube, Website, Zenodo, ToolFests (with diploma recognition)	Facilitate real-time updates, immediate engagement, and comprehensive content archiving.
Offline	Conferences, Workshops, Partner-led Events, ToolFests (with diploma recognition)	Enable in-depth discussions, personal connections, professional networking, and tangible recognition of engagement.
Periodic Updates	Annual newsletters	Deliver extensive updates on project milestones and findings, keeping audiences informed and engaged.
Collaborative	Partner networks	Utilise partner reach to extend the project's influence and resonance across diverse sectors and regions.

The content and messaging strategy are meticulously crafted to resonate with diverse audience groups. We place a strong emphasis on customisation, ensuring that our content is not just informative but also engaging and impactful for different segments of our audience. Our approach is dynamic; we continually refresh our messaging to reflect the most current insights from the project, keeping our content fresh and engaging. Furthermore, we adopt an interaction-based strategy, leveraging regular feedback and engagement, especially on digital platforms. This approach allows us to fine-tune our content, ensuring it consistently meets the evolving needs and preferences of our audience.

Parallel to our content strategy, our interaction and adaptation mechanisms are robust. We utilise a variety of interaction channels, including social media, participant feedback during events, and analytics from our digital platforms. These channels offer valuable insights into the audience's reception of our content and its overall effectiveness. Based on these insights, we adopt an adaptive strategy, continuously reviewing and tweaking our communication approach. This ensures that our methods remain effective, relevant, and in line with our audience's changing dynamics and feedback, fostering a cycle of continuous improvement and engagement in the STARLIGHT project.

By embracing a flexible and audience-focused communication approach, the STARLIGHT project ensures not just the dissemination of information but the cultivation of a robust, engaged community around its innovative research and outcomes.

Table 4 below organises stakeholder segmentation and outlines tailored communication objectives and key messages to effectively engage each group:

Table 4: Stakeholder segmentation and key messages

Stakeholder	Communication Objectives	Examples of Key Messages
LEAs	Educate LEAs about the advantages of adopting AI technologies to enhance crime and terrorism combat capabilities. Encourage LEA participation in tool development and gain insights into LEA procurement practices, which are essential for STARLIGHT's exploitation and sustainability.	STARLIGHT is dedicated to developing technologies to expedite and refine investigations of criminal activities, bolstering the fight against terrorism. Collaborative efforts with LEAs are central to STARLIGHT, ensuring the solutions provided are finely tuned to their needs. STARLIGHT offers comprehensive training resources to seamlessly integrate its solutions into LEA operations.
General public and the media	Inform about the project's objectives and progress, illustrating the role of public contribution in combating crime. Highlight STARLIGHT's commitment to legal protections to foster public acceptance of the new technology. Leverage media support to raise awareness among other key stakeholders.	STARLIGHT supports LEAs with innovative, rapid-response tools for criminal investigation, backed by a diverse consortium from across Europe. Ethical considerations and data privacy are essential, with rigorous safeguards integrated into every aspect of the project.
Academic and research community	Disseminate research findings and promote advancements in AI research and application. Foster collaboration for research and development, resource development, and awareness-raising in various sectors.	STARLIGHT leverages advanced AI technologies to create a comprehensive toolkit, enhancing LEA investigation processes. The project pioneers the merging of AI applications in network analysis, visual analysis, speech, and natural language, setting new benchmarks in AI-driven investigations.
EU, National, Regional and Local Authorities (NRLA), Government, Policymakers, European Networks, Institutions, NGOs	Impart insights on STARLIGHT's potential impacts on criminal investigations and policy implications, focusing on cost-benefit analysis and strategic advancements.	The EU-funded STARLIGHT initiative is grounded in a robust legislative framework, offering a comprehensive toolkit to augment LEA capabilities against terrorism and organised crime. STARLIGHT's insights on AI's transformative role in crime investigation underscore the project's value and its potential to enhance current methodologies.

Practitioners, developers, and SMEs	Introduce STARLIGHT's outcomes and encourage integration into more complex products. Involve these groups in beta testing, and product development.	STARLIGHT is at the forefront of integrating novel AI technologies, providing LEAs with advanced tools for in-depth criminal network investigations.

In each category, the communication strategy is tailored to meet the stakeholders' specific interests and needs, ensuring effective dissemination and impactful engagement with the project's outcomes and advancements.

2.3 Communication and dissemination strategy

As we are passing the 30-month mark in the STARLIGHT project, it's time to take stock of where we are and plan our next steps.

So far in the current phase, the Participation Phase (from M13 to M30, 1st of October2022 to 31st of March 2024), we have made a concerted effort to not just talk about STARLIGHT, but to demonstrate its value and results. Through workshops, events, and a strong online presence, we've engaged our target audience and spread the word about what we're doing. We have wrapped up this phase with comprehensive reports (deliverables D11.5 and D11.6) that detail our activities and findings up to this point.

Looking ahead, the Action Phase (M31 to M48) is about turning our research and findings into tangible outcomes. Our goals for this phase are clear:

- Engagement and feedback: we plan to showcase our work through demonstrations and events, gathering feedback to refine and improve our results.
- Influencing policy: we aim to ensure our findings are considered in shaping future EU policies related to security and AI. This way, our work can have a broader impact beyond the project itself.
- Transforming LEA operations: we're focused on making our AI developments practical and useful for law enforcement agencies. Our success will be measured by how well these agencies can adopt and benefit from our work.

Moving forward, flexibility is key. We understand the fast-paced nature of security and technology, so our plans are designed to be adaptable. We'll keep documenting our progress and adjusting our strategy as needed, with detailed updates planned for M30 and M48.

In short, this updated strategy for the STARLIGHT project is about building on what we've achieved so far and ensuring that our work makes a real difference in the fields of AI and security. It's about staying engaged, being responsive to new developments, and ensuring that the project delivers practical and impactful results.

2.4 Leveraging the network of partners for greater impact

The strength of the STARLIGHT project lies in its vast and diverse network of partners, each bringing unique expertise and perspectives. Leveraging this network effectively is crucial for amplifying the project's impact. Coordinated campaigns, where partners come together to organise awareness and dissemination activities, ensure a unified message and a broader reach. These campaigns are designed to be inclusive, incorporating both online and offline mediums to cater to different audience preferences.

To maximise the project's visibility and increase traffic on its channels, all partners have also published information about STARLIGHT and its outputs on their organisations' websites. Some examples are provided below:

Commission services and national research bodies

- CORDIS: https://cordis.europa.eu/project/id/101021797
- Estonian Research Council: https://edukad.etag.ee/project/4595?i=IA&lang=en

Partner websites

- AIT: https://www.ait.ac.at/en/research-topics/data-science-artificial-intelligence/projects/starlight?no_cache=1
- CEA: https://list.cea.fr/en/october-25-2021-starlight/
- CENTRIC: https://research.shu.ac.uk/centric/project/starlight/
- CFLW : https://cflw.com/2021/10/25/launch-of-eu-funded-project-starlight/
- DFKI: https://www.dfki.de/web/news/start-des-eu-projekts-starlight
- ESMIR: https://www.interior.gob.es/opencms/es/detalle/articulo/Espana-se-posiciona-como-primer-pais-de-retorno-economico-en-el-Programa-de-Financiacion-Europeo-IDi-HORIZONTE2020-para-el-ambito-de-la-Seguridad/
- FOI: https://www.foi.se/en/foi/news-and-pressroom/news/2021-02-05-foi---a-strong-actor-in-successful-eu-consortia.html?openExpanderWith=STARLIGHT
- HELLENIC POLICE: https://www.astynomia.gr/i-elliniki-astynomia-symmetechei-sto-evropaiko-programma-horizon-2020/starlight/
- IANUS CONSULTING: https://ianus-consulting.com/starlight/
- INOV: https://www.inov.pt/en/project/starlight/index.html
- ITI: https://www.iti.gr/iti/en/project/starlight-en/
- KU LEUVEN: https://www.law.kuleuven.be/citip/en/research/projects/ongoing/starlight
- L3CE: https://www.l3ce.eu/en/project/starlight/
- M4D (CERTH): https://m4d.iti.gr/project/starlight/
- Ministry of the Interior – Police of the Czech Republic (PP CR): https://www.policie.cz/clanek/horizont-2020.aspx?q=Y2hudW09NQ%3d%3d
- Munich Innovation Labs: https://www.mi-labs.de/
- Netherlands Forensic Institute (NFI): https://www.forensischinstituut.nl/wetenschap-en-innovatie/internationale-onderzoeksprojecten-nfi/starlight-het-vergroten-van-ai-oplossingen-voor-opsporingsdiensten-om-ai-gerelateerde-criminaliteit-te-bestrijden
- Polícia Judiciária: https://www.policiajudiciaria.pt/projetos-financiados/starlight/
- PLURIBUS ONE : https://www.pluribus-one.it/research/r-d-projects/starlight
- PLUS ETHICS: https://www.plusethics.com/starlight-sustainable-autonomy-and-resilience-for-leas-using-ai-against-high-priority-threats/
- SHEFFIELD HALLAM UNIVERSITY: https://www.shu.ac.uk/news/all-articles/latest-news/law-enforcement-agencies-artificial-intelligence-high-priority-threats

- TILDE: https://www.tilde.com/research/projects
- VICOMTECH: https://www.vicomtech.org/en/news/detail/vicomtech-participates-in-the-security-research-event-2023-held-in-brussels-on-24th-and-25th-october-this-year-in-the-framework-of-the-spanish-presidency-of-the-european-council
- WEB-IQ: https://web-iq.com/news/launch-of-eu-funded-project-starlight

Other projects

- ALIGNER : https://aligner-h2020.eu/project-liaison-group/
- APPRAISE : https://appraise-h2020.eu/related-projects
- CC-DRIVER: https://www.ccdriver-h2020.com/cluster
- LAGO: https://lago-europe.eu/partners
- popAI: https://www.pop-ai.eu/sibling-projects/

Partners are encouraged to cross-promote the STARLIGHT content through their channels. This strategy not only extends the project's reach but also adds a layer of credibility, as information is shared through trusted and established networks. Furthermore, the specialised knowledge of partners, particularly those from academic and industry spheres, enriches the content, making it more robust and relevant.

Hosting and participating in collaborative events is another key strategy. By pooling resources and audiences, these events become larger and more impactful. They serve as platforms for showcasing the project's achievements, sharing knowledge, and fostering collaborative relationships.

Regular feedback from partners is integral to this approach. It ensures that communication strategies remain dynamic, adapting to new insights and changing stakeholder needs. Partners play a crucial role in identifying emerging trends and gaps in stakeholder engagement, enabling STARLIGHT to stay ahead of the curve and maintain its relevance in the ever-evolving fields of AI and security.

Through these concerted efforts in adapting communication goals, engaging diverse audiences, and leveraging the strength of its partner network, STARLIGHT is poised to make a significant and lasting impact, effectively communicating its innovative research and findings to a wide range of stakeholders.

3 Online communication and dissemination activities

In this section, we'll outline the online communication and dissemination channels that STARLIGHT uses to connect with its diverse audience. Recognising the importance of reaching stakeholders effectively at different stages of the project, we've strategically chosen each medium to maximise engagement and ensure our messages resonate clearly and impactfully.

3.1 Project website

The STARLIGHT project's website (https://www.starlight-h2020.eu/) continues to be the central hub for our online presence, evolving to reflect the dynamic progress of our work. The website not only encapsulates the project's objectives, partners, and updates but also serves as a vibrant platform showcasing our latest activities, achievements, and the rich tapestry of insights from our consortium.

It has been continuously enriched with fresh content, ensuring that visitors are met with the most current and relevant information. The 'Updates' section (see Figure 1: STARLIGHT website Updates page), a key part of the site, has been thriving with contributions from STARLIGHT partners as well as updates on events the consortium members have attended. A number of 39 updates have been published to date. These posts, coordinated by CENTRIC as the WP11 leader, offer a window into the diverse approaches and perspectives within our consortium. They are written to be engaging and accessible, inviting not just the specialised reader but also the broader public to delve into the world of STARLIGHT.

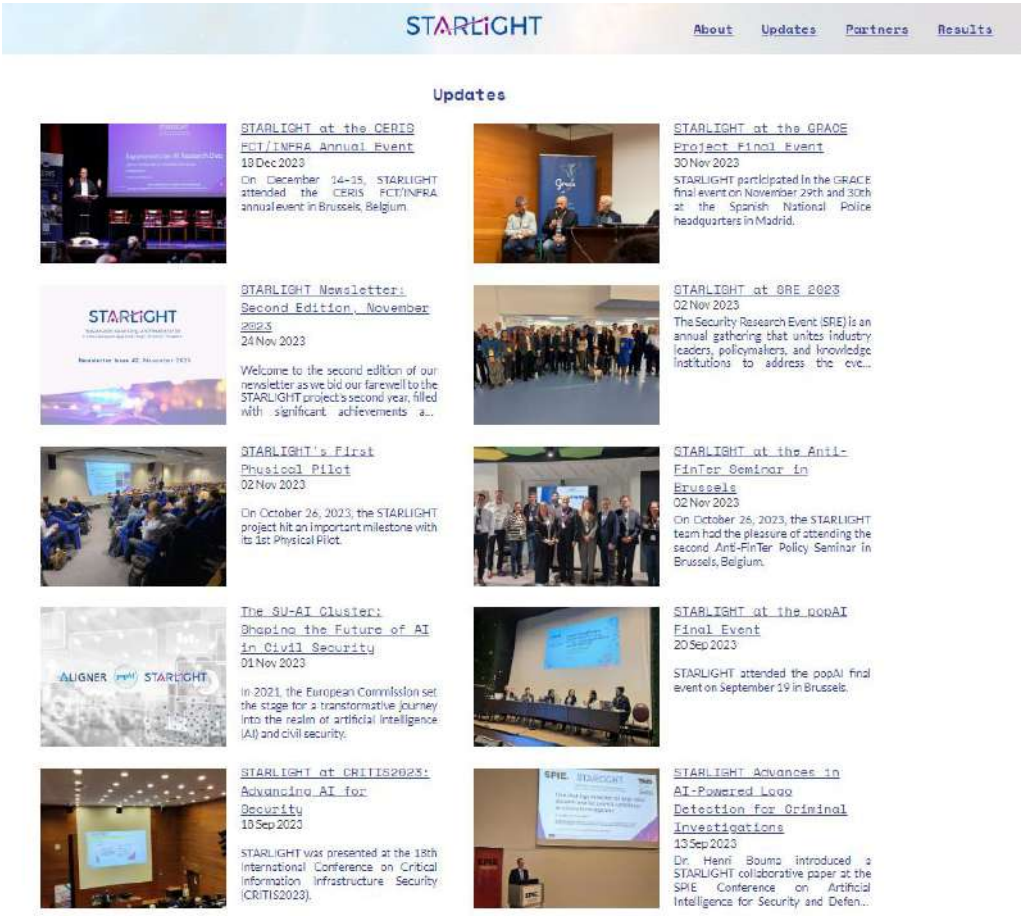

Figure 1: STARLIGHT website Updates page

In the last 12 months, the STARLIGHT website has experienced a significant uptick in user interest, as evidenced by our web analytics from March 1st, 2023, to February 29th, 2024. We observed a 65.52% increase in unique visitors, rising from 2,793 to 4,623 compared to the previous year, and a 36.14% increase in page views, from 8,002 to 10,894. This growth signifies not only an expansion of our audience but also a deeper level of engagement with the STARLIGHT project's content.

The increase in website traffic and engagement is a direct result of our consistent content strategy, which focuses on delivering timely and relevant updates on our project's progress. Additionally, our collaborative efforts with partners have significantly enhanced our reach. Notably, referral traffic for the STARLIGHT project jumped by 75%, from 80 to 140 referrals between the two periods, underscoring the impact of our cross-promotional activities through our partners' networks and projects.

As we move forward, we are dedicated to maintaining the momentum and ensuring the STARLIGHT website continues to be a dynamic, engaging platform for our stakeholders. With the ongoing support from our partners, the website will not only serve as a hub for disseminating information but also as a space for fostering community and collaboration.

In summary, the STARLIGHT website is a testament to our collective expertise, innovation, and teamwork and will continue to evolve, reflecting our project's progress and developments, and remain a cornerstone of our communication and dissemination strategy.

3.2 Newsletter

As we navigate through the 30-month mark of the STARLIGHT project, the newsletter has stood as an important channel for regular updates and information dissemination. To date, we have successfully released two editions of the newsletter, one at M12 (**Error! Reference source not found.**) and the latest at M24 (Figure 2: STARLIGHT Newsletter Issue #2), each serving as a comprehensive digest of the project's milestones, insights, and forward momentum (see Annex 4: Newsletters).

On LinkedIn, our second newsletter achieved very good traction, with 555 engagements, an engagement rate of 121.4%, and 512 clicks, translating to a click-through rate of 112.0%, along with 40 reactions and 3 reposts. These statistics not only reflect the high level of interest and interaction from our audience but also underscore the effectiveness of our content strategy in driving engagement and fostering a deeper connection with our project. In terms of our website, the first issue of the newsletter attracted 121 unique visitors and generated 157 page views, demonstrating its ability to draw attention to our work. The second issue, though more targeted, still garnered 40 unique visitors and 44 page views, indicating a consistent interest in our newsletters and the valuable content they provide.

By widely distributing the newsletters across all project partners and prominently featuring them across our social media platforms and website, we have significantly increased our reach. Making each edition available in PDF format with interactive live links has ensured easy access to our website, further fostering a connected community around STARLIGHT's advancements and shared goals.

Under the lead of CENTRIC and in collaboration with all partners, the newsletters have been meticulously put together to align with STARLIGHT's visual identity as delineated in the D11.1 Visibility Design Guide. The process, involving a collective effort from content determination to final distribution, ensures that each edition is a true reflection of our consortium's collaborative spirit and shared achievements.

Figure 2: STARLIGHT Newsletter Issue #2

The distribution strategy, encompassing direct email dissemination, social media engagement, and website availability, has ensured that the newsletters are not just informative but also accessible. Snippets shared on platforms such as Twitter and LinkedIn have sparked conversations and drawn more eyes to our content, reinforcing the project's presence and impact.

As we progress, the newsletter will remain an integral part of our communication strategy, ensuring our stakeholders stay informed and connected with the STARLIGHT project's ongoing developments. We anticipate sharing further updates, achievements, and significant developments. Each edition of the newsletter will aim to capture and convey these advancements, ensuring our community is well-informed and involved in every step of our journey. The focus will be on providing clear, comprehensive updates, fostering a sense of community, and fostering continuous growth.

3.3 Social media accounts

As the STARLIGHT project progresses, maintaining active and responsible engagement with our audience through social media continues to be an essential aspect of our communication and dissemination efforts. To provide an updated overview, we are utilising Twitter, LinkedIn, and YouTube to facilitate effective communication and broaden our outreach, in line with our initial dissemination and communication plan.

The project's social media channels feature a unified visual style and are directly linked to the project's website. These channels serve as platforms for sharing project outputs, updates, events, and other

relevant information while also connecting STARLIGHT to related initiatives and broadening our engagement with an extensive audience.

We actively encourage all partners to participate in amplifying STARLIGHT's digital presence. By liking, retweeting, and reposting our content, partners can significantly extend our reach to include their individual networks, thereby enhancing the project's visibility.

It is important for partners to navigate Twitter and LinkedIn engagement with mindfulness, steering clear of sharing any confidential or sensitive data or personal information, including images, without explicit permission.

By adhering to these guidelines, we can ensure the responsible, secure, and effective dissemination of information, engaging our audience while safeguarding the integrity of the STARLIGHT project and its stakeholders.

Reflecting on our social media engagement strategies, the metrics demonstrate a clear upward trajectory. Since the project's inception, we've seen a significant increase in our follower count across platforms such as Twitter (now X), where followers rose from 138 at the one-year mark to 379, and on LinkedIn, where followers rose from 155 to 447. Additionally, our newly launched YouTube channel has attracted 118 views and six subscribers in the last six months.

This increase in followers and engagement signals a continuing interest in the STARLIGHT project and its endeavours. The website, too, has shown good progress, with unique visitors increasing from 1,200 in the first year to 7,437 at the project's 30th month, and pageviews more than quadrupling from 4,100 to 18,896.

Such metrics confirm not only the impact of our content on engaging with our audience but also the important role of our partners in amplifying our digital presence. Their efforts in sharing and promoting our content have contributed to expanding our reach and enhancing the visibility of the STARLIGHT project.

3.3.1 Twitter: tactics and content strategies

@Starlight H2020 serves as STARLIGHT's primary Twitter handle, functioning as a key platform for timely communication. It allows us to promptly share updates, important outcomes, and key milestones of the project.

As shown in Figure 3: STARLIGHT's profile on Twitter, our Twitter profile represents our active commitment to keeping our followers informed and engaged.

Figure 3: STARLIGHT's profile on Twitter

Our approach includes:

- **Regular engagement**: by consistently posting content, we maintain a strong presence and keep our audience informed about the project's latest developments.
- **Strategic use of hashtags**: we utilise relevant hashtags such as #STARLIGHTproject, #H2020, #AI, and #EUSecurityResearch to reach a wider audience. These hashtags help categorise our content and make it more discoverable to interested audiences.
- **Analytics review**: we continuously monitor the performance of our tweets using Twitter Analytics to understand our audience better and refine our content strategy accordingly.
- Collaboration and retweeting: we collaborate with partners and industry-related accounts, retweeting relevant content to diversify our content and reach. This practice not only broadens our content scope but also helps us engage with a wider community on relevant topics.

Through these practical and straightforward measures on Twitter, we aim to ensure our audience stays well-informed about the STARLIGHT project, fostering a knowledgeable and connected online community.

3.3.2 LinkedIn: professional networking and outreach

STARLIGHT's LinkedIn profile (Figure 4: STARLIGHT's profile on LinkedIn), accessible at https://www.linkedin.com/company/starlight-h2020/, serves as a professional platform where we adopt a formal approach, recognising LinkedIn's significance in networking with professionals, industry experts, and potential collaborators.

On LinkedIn, our strategy is thoughtful and tailored to the platform's unique environment:

- **Content replication and expansion**: we replicate key content from Twitter on LinkedIn and expand on it, taking advantage of the platform's provision for more in-depth discussions and longer posts.
- **Networking and engagement**: regular updates and active participation help us grow our network, connecting with organisations and individuals whose goals and interests align with those of the STARLIGHT project, fostering potential collaborations and support.
- **Professional content presentation:** we ensure that our content is polished and professional, suitable for the business-oriented audience on LinkedIn. This includes sharing articles, brochures, and reports that reflect the project's progress and achievements.
- **Highlighting collaborations and achievements:** we use LinkedIn to highlight successful collaborations, major milestones, and significant achievements of the Starlight project. This not only showcases our project's progress but also acknowledges the contributions of our partners and team members.
- **Engaging with industry content:** we actively participate in conversations and share insights on relevant topics related to our industry. This helps position STARLIGHT as a knowledgeable and active participant in the industry dialogue.

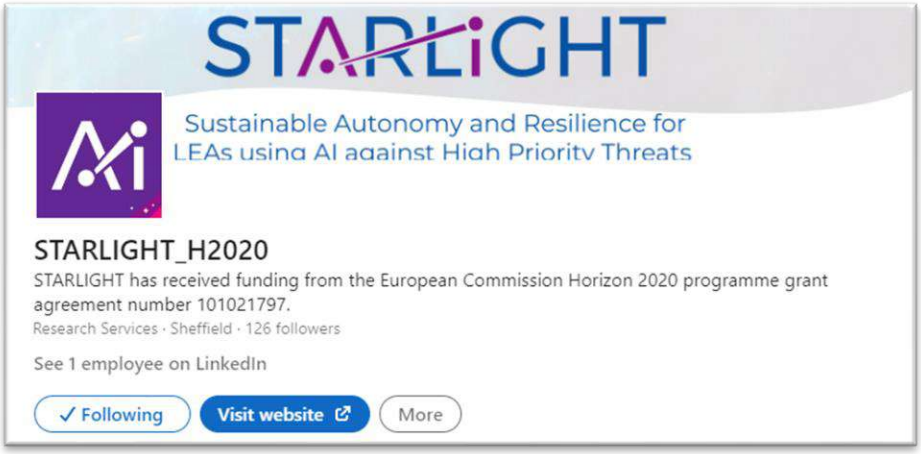

Figure 4: STARLIGHT's profile on LinkedIn

By utilising LinkedIn effectively, we aim to not only share the STARLIGHT project's progress and insights but also to build and nurture professional relationships that could be instrumental to the project's success.

3.3.3 YouTube: video content creation and distribution

Our YouTube channel, https://www.youtube.com/@STARLIGHT-H2020 (Figure 5: STARLIGHT's YouTube channel), serves as the primary platform for hosting and sharing video content related to the STARLIGHT project.

- **Content hosting**: the channel serves as a repository for all video-related content, including presentations, project updates, and the upcoming expert interview series. The visual and engaging format of videos helps in effectively showcasing the STARLIGHT project's progress, findings, and impacts to a diverse audience.
- **Social media integration**: we promote our YouTube content across Twitter and LinkedIn, ensuring that our videos reach a broad audience and drive traffic back to our channel for increased engagement. This integrated approach helps maximise the visibility and engagement of our video content.

To date we have produced of two project videos, which have been shared with our partners and their networks and disseminated through our social media channels.

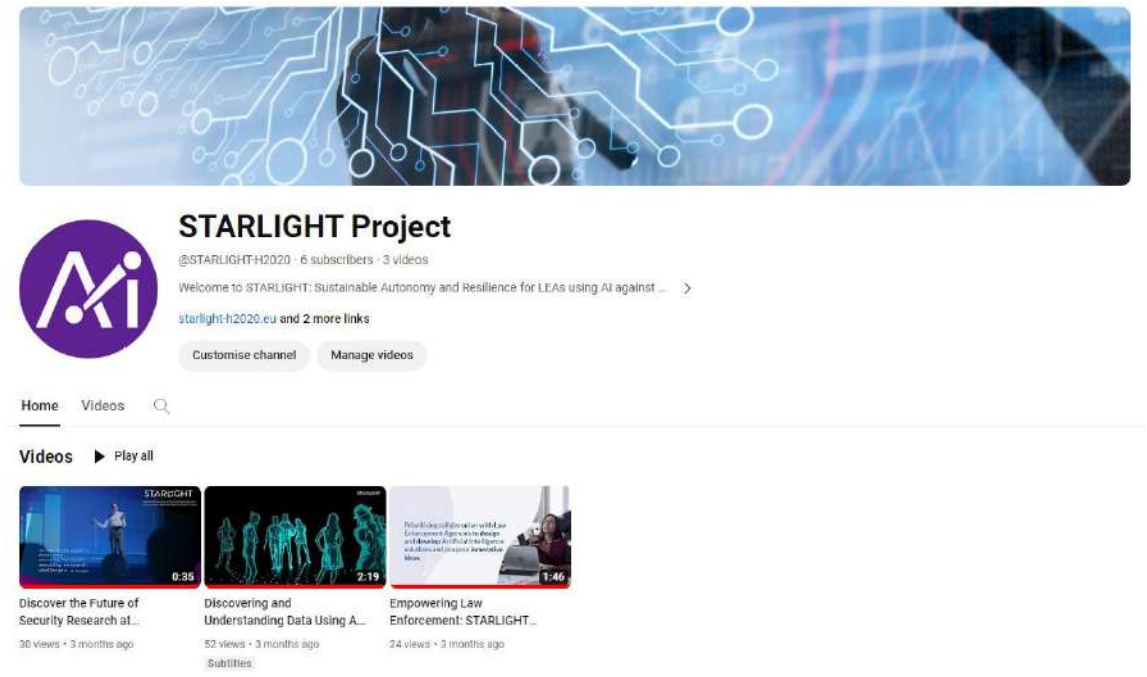

Figure 5: STARLIGHT's YouTube channel

The channel features project videos produced by the consortium and will soon host an expert interview series, providing insights from various consortium members.

These videos not only document our journey and achievements but also serve as an educational resource, highlighting the expertise and collaborative efforts within STARLIGHT.

3.4 Project videos

As the STARLIGHT project progresses, our commitment to clear and effective communication continues to guide our dissemination efforts. Understanding the complexity and uniqueness of STARLIGHT, we recognise the challenge of conveying its core concepts and objectives to a diverse audience. In line with this, we have also created video content to achieve wider reach and engagement:

- **General project presentation video**: we have produced and shared a general project presentation video (Figure 6: 1st Project video) that provides an overview of STARLIGHT, outlining its rationale, goals, and objectives. This video serves as a foundational piece, introducing the project's mission and scope to a broader audience. The video is available here for viewing and sharing.
- **AI tools application showcase**: a second video (Figure 7: 2nd Project video) has been created to demonstrate the practical applications of AI tools within the STARLIGHT project. The video provides a closer look at how law enforcement agencies are enhancing their capabilities by applying the project's outputs in real-world scenarios. This video has been embedded in the home page of the website. You can watch this video here.
- **Social media integration**: in line with our digital communication and dissemination strategy, these videos have been actively shared across our social media platforms, including Twitter and LinkedIn. Regular posts and updates help maintain engagement and ensure that our content reaches a wide audience.
- **Upcoming initiatives - video interview series**: adding to our visual content repository, we are in the process of creating a video interview series. This series will feature insights from experts, LEAs, SMEs, and academia within the consortium, offering diverse perspectives on the project's impact and advancements. This initiative aims to provide a deeper understanding of STARLIGHT's collaborative approach and the expertise driving its success.

Figure 6: 1st Project video

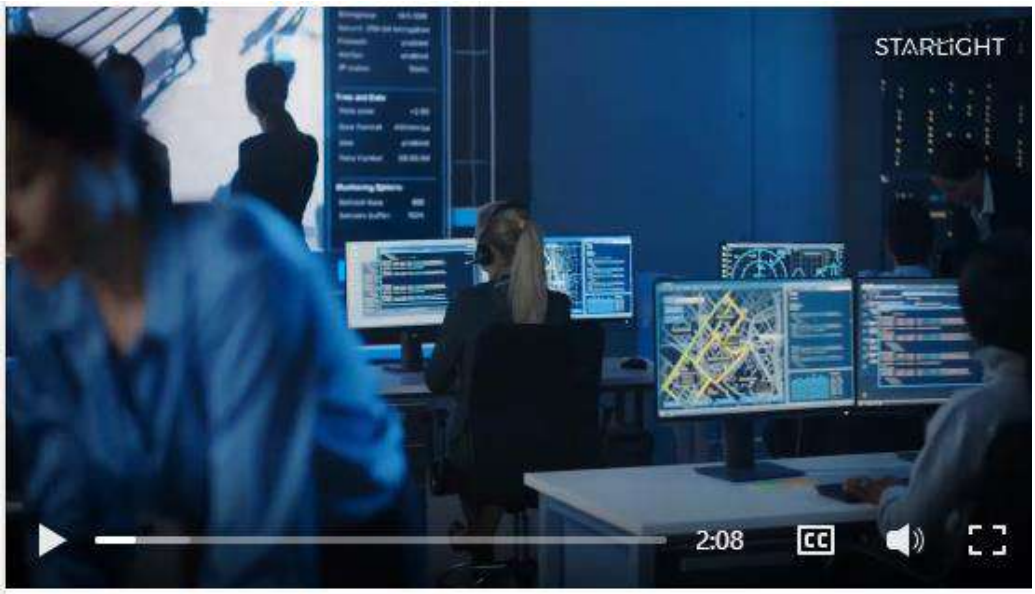

Figure 7: 2nd Project video

As we move forward, the production and sharing of these project videos, coupled with our continuous social media engagement, website timely update and newsletters, all play a crucial role in enhancing the visibility of STARLIGHT. These efforts not only highlight the project's achievements but also foster a deeper connection with our stakeholders, paving the way for continued collaboration and impact.

By leveraging these platforms cohesively, we aim to provide a comprehensive, multi-dimensional view of the STARLIGHT project, engaging our audience through informative content, professional insights, and compelling visual narratives.

3.5 Outreach activities

The STARLIGHT consortium has engaged in a series of multimedia dissemination activities to effectively communicate our research and findings to a diverse audience. These activities are integral to our strategy, enhancing the visibility and impact of the project through various platforms and formats. Notable activities include:

3.5.1 Video interview

In our dissemination efforts, we've taken strategic steps to ensure broad outreach and impactful engagement. One such initiative was our participation in the "Quand L'Europe se prépare à une sécurité unie—La Grande Interview" on the ANews Sécurité YouTube chanel (Figure 8: Quand L'Europe se prépare à une sécurité unie—La Grande Interview). With a substantial subscriber base of 31.7K, this platform offered an excellent opportunity for the STARLIGHT project to reach a wide and relevant audience. The significant number of subscribers indicates a broad and engaged viewer base, which likely enhanced the visibility and impact of our message. This wide-reaching platform not only amplified our project's visibility but also facilitated meaningful engagement with a diverse group interested in security and technological advancements in the EU.

"Quand L'Europe se prépare à une sécurité unie - La Grande Interview" (ANews Sécurité):

- Hosted by Michaël Lejard and Eric de Riedmatten, this interview featured Nizar Touleimat discussing the ambitious objectives of the STARLIGHT project and its role in shaping the future of AI-based security technologies in Europe.
- Views: 708 (as of February 2, 2024)
- Link: Quand L'Europe se prépare à une sécurité unie - La Grande Interview

Figure 8: Quand L'Europe se prépare à une sécurité unie—La Grande Interview

3.5.2 Podcast participation

Joining the "L'intelligence artificielle dans la sécurité" podcast (Figure 9: L'intelligence artificielle dans la sécurité) by ANews Sécurité provided a platform for the STARLIGHT project to discuss the practical aspects of artificial intelligence in security. It was an opportunity to share our project's perspectives, explore real-world challenges, and consider how AI is influencing the field of security today. The conversation contributed to the ongoing dialogue about the practical implications and future of AI in enhancing security measures.

"L'intelligence artificielle dans la sécurité" (ANews Sécurité):

- Aired on 20 Sept 2023, this episode, co-produced by ANews Sécurité and hosted by Michaël Lejard and Eric de Riedmatten, featured discussions with Thibault du Manoir and Dr. Nizar Touleimat on the legal and operational aspects of AI and cyber resilience in the context of European regulations.
- Link: L'intelligence artificielle dans la sécurité
- Views: 154 (as of February 2, 2024)

Figure 9: L'intelligence artificielle dans la sécurité

3.5.3 Webinars

In the ongoing development of the STARLIGHT project, participating in relevant webinars has been instrumental in enhancing our understanding and engagement with the wider AI and security community. These webinars provide a valuable opportunity for our team to gain insights, share our research, and engage in meaningful dialogue with experts and practitioners in the field.

This section will highlight the webinars we've participated in, focusing on their themes, the knowledge shared, and the collaborative discussions that took place, enriching the project's perspective and contributing to its objectives.

Webinar 1 - "Data Analytics and AI Bias in LEAs Decision-Making" (Figure 10: Data Analytics and AI bias in LEAs Decision-Making):

- Held on May 19, this online webinar was co-organised by NOTIONES, popAI, and ALLIES EU-Project, and hosted by SYNYO GmbH. It provided insights into the application of AI and algorithmic tools for policing, highlighting best practices, challenges, and innovation solutions.
- Link: Data Analytics and AI bias in LEAs Decision-Making

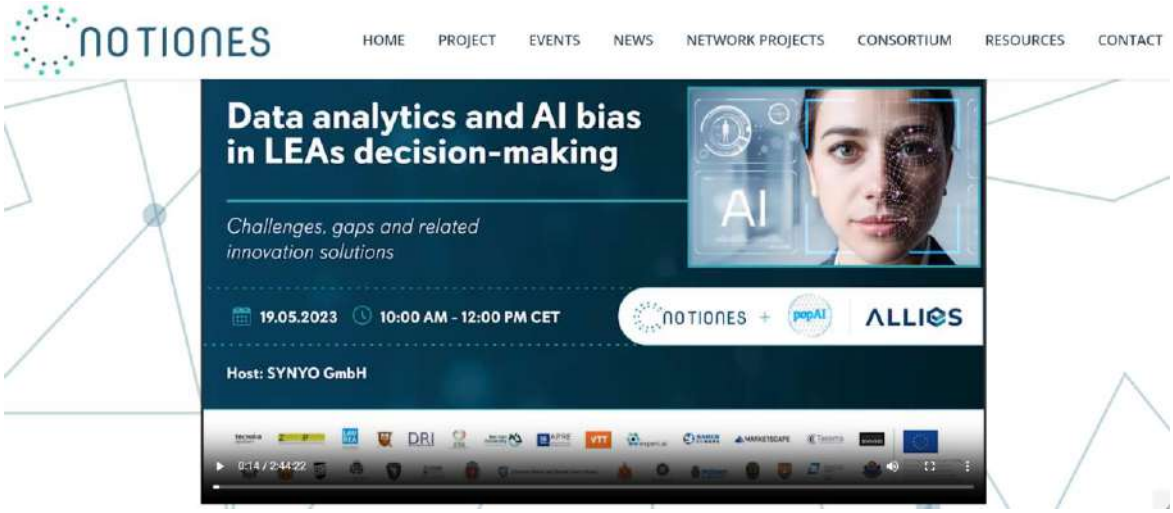

Figure 10: Data Analytics and AI bias in LEAs Decision-Making

Webinar 2 - "Cybersecurity of AI and AI for Cybersecurity" (CLAIRE AQuA, Figure 11: Cybersecurity of AI and AI for Cybersecurity):

- Conducted on July 7, 2023, this webinar, moderated by Ana Isabel Ayerbe Fernandes and featuring speakers from various organizations, explored the intersection of AI and cybersecurity, discussing current European initiatives and the future of these technologies.
- Link: Cybersecurity of AI and AI for Cybersecurity
- Views: 333 (as of February 2, 2024)

Figure 11: Cybersecurity of AI and AI for Cybersecurity

Each of these activities not only served to disseminate the findings and goals of the STARLIGHT project but also to engage with the community on critical discussions surrounding AI, security, and the future of technology in Europe.

4 Publications and Events

As our project heads towards the finish line, it's important to reflect on and provide a comprehensive update on our dissemination activities, particularly in the realms of publications, digital repository integration, and stakeholder engagement through conferences and events.

4.1 Publications: documenting research and findings

From the outset, the STARLIGHT project has been active in documenting and disseminating its research findings, reflecting our commitment to sharing knowledge and contributing to our field. As detailed in Annex 2: List of publications, our efforts have yielded significant output in various academic and professional forums.

To summarise our progress:

- We have recorded 22 publications in conference proceedings and workshops. Of these, three publications are accessible through Gold Open Access, and six are available through Green Open Access.
- Ten articles have been submitted to journals, with five already published.
- Our contributions also include two book chapters and one scientific publication classified as a "Thesis/Dissertation.

Building on our dissemination strategy outlined in month 12, STARLIGHT is focused on ensuring that all research outputs are shared through a diverse array of channels. These include journal and conference publications, magazine articles, white papers, and book chapters. Our goal is to contribute to over fifteen research topics in scholarly journals, aiming to publish more than 25 articles in technical, scientific, and scholarly journals.

Our commitment to open access is unwavering, with all completed scientific publications made available in line with the Grant Agreement, subject to any IRP, confidentiality, security, or data protection restrictions. While Green Open Access routes are our initial focus, the Open Research Europe platform is also under consideration for disseminating our work.

Our publication strategy prioritises international scientific or technical literature, targeting the most suitable journals for each specific research topic. Moreover, popular magazines are also on our radar due to their broader readership and potential to extend our reach.

As the STARLIGHT project and its research evolve, we anticipate new opportunities for dissemination. Below is a preliminary list of scientific or peer-reviewed journals and conferences deemed suitable for sharing the results of STARLIGHT as first included in D11.2.

Table 5: Relevant journal publication venues

Name of the journal (sample representation)	Main dissemination topics
EDPL – EU Data Protection Law Review; Data Intelligence Journal Data Protection; International Data Protection Law Review; Law Innovation and Technology; Computer and Telecommunications Law Review; Information and Communications Technology Law	Data Protection
European Journal of Crime, Criminal Law and Criminal Justice	Cybercrime, Criminal Justice
Journal of Cybersecurity; Computer Law and Security Review	Cybersecurity
EURASIP Journal on Information Security	
Computers and Security, Elsevier	
IEEE Cybercrime and Forensics	Data anonymisation
Neurocomputing; J. Visual Communication and Image Representation	Deep Learning
Dilemata - International Journal of Applied Ethics	Ethics
ACM Transactions on Interactive Intelligent Systems; International Journal of Multimedia Information Retrieval; Multimedia Tools and Applications IEEE Transactions on Multimedia	Multimedia modelling and retrieval
International Journal on Decision Support Systems (DSS); Information Fusion	AI, Textual Analysis and Processing, Decision Support
Computational Linguistics	Natural Language Processing
Computing Frontiers, ACM Digital Library	
European Law Enforcement Research Bulletin; SIAK - Journal (Journal for Police Science and Practice)	Innovations in Law Enforcement
Semantic Web Journal; Journal of Web Semantics	Semantic web
Knowledge and Data Engineering; Journal of Expert Systems with Applications	Knowledge engineering
Imaging for Crime Detection and Prevention (ICDP); Serious Organised Crime Threat Assessment (SOCTA); Internet Organised Crime Threat Assessment (IOCTA); EU Terrorism Situation and Trend Report (TE-SAT)	Cybercrime, Crime detection and prevention
IEEE Transactions on Information Forensics and Security	Information forensics, Information security
IEEE Transactions on audio speech and language IEEE TALPS, Journal of Acoustic Society of America, INTERSPEECH	Audio analysis

4.2 The Zenodo STARLIGHT community

The Zenodo STARLIGHT community (Figure 12: STARLIGHT's Zenodo community page) is our dedicated space within the Zenodo open-access repository, aimed at centralising and showcasing the research outputs of the STARLIGHT project. The Zenodo STARLIGHT community ensures that all publications, datasets, and other valuable materials produced by STARLIGHT are preserved and made freely accessible to researchers, stakeholders, and the general public.

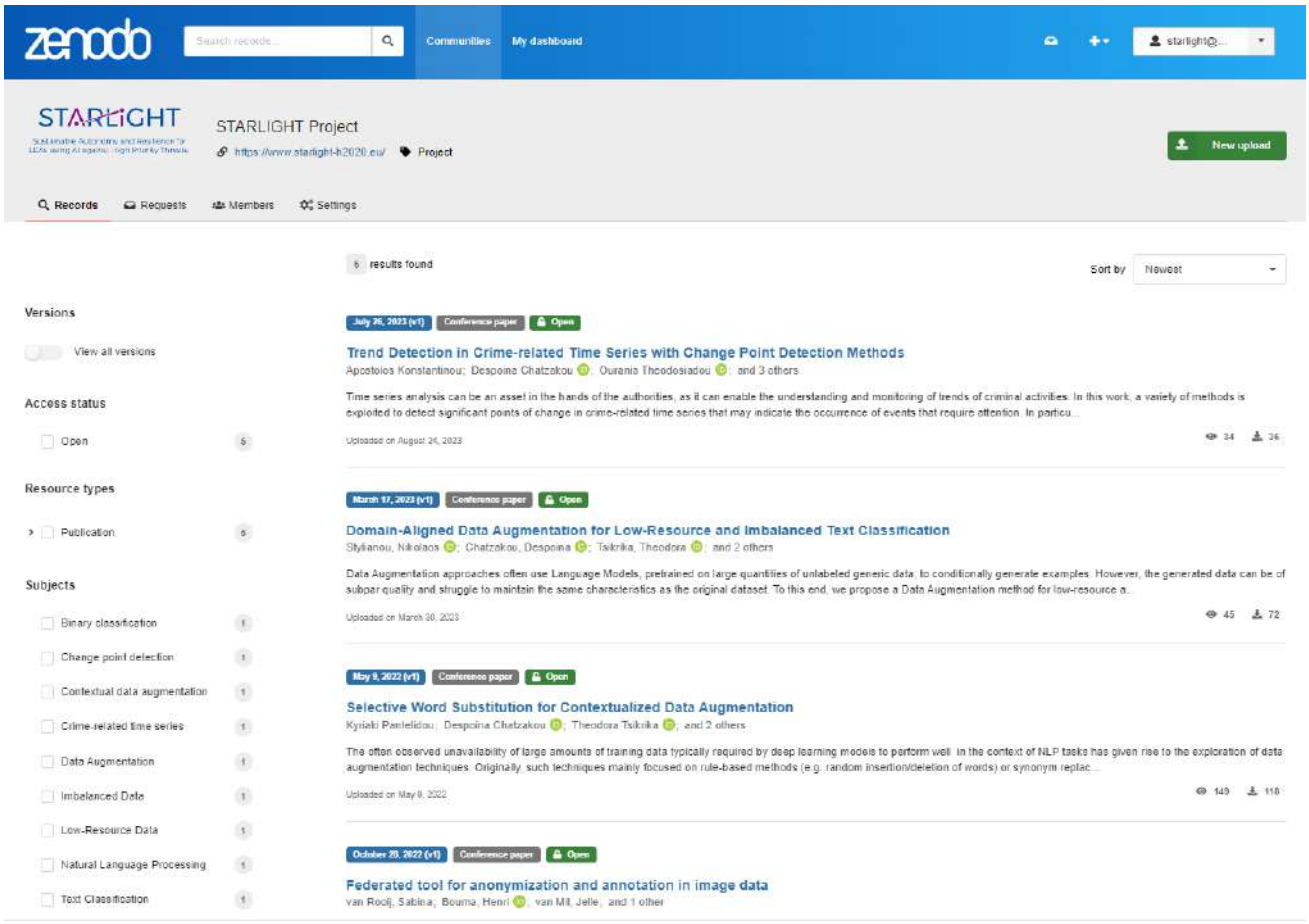

Figure 12: STARLIGHT's Zenodo community page

Embracing the principles of open science, the Zenodo STARLIGHT community facilitates knowledge sharing and collaboration and ensures the longevity and visibility of our research contributions. Learn more about our community and resources here.

4.3 Stakeholder engagement activities

Engagement with industry professionals, the user community, and the academic sector has been an important part of our communication and dissemination strategy. Over the past months, STARLIGHT consortium members have actively participated in a range of academic conferences, seminars, and workshops. These events (Annex 1: List of dissemination activities) have provided platforms for not just disseminating project findings but also for initiating valuable conversations with specific, relevant audiences.

We've strategically targeted events that align with our project's objectives and have the potential for high-impact dissemination.

The following tables provide an overview of the targeted events and potential conference venues for STARLIGHT dissemination, reflecting both practitioner-focused and academically oriented perspectives:

Table 6: Targeted events for STARLIGHT

Organiser	Name of the event	Dissemination aspects
European Commission	The European Security Summit	Cybersecurity, security, and safety
Milipol Paris	Homeland Security and Safety	
ISC West	International Security Conference & Exposition	
IFSEC International	Global fair and conference for the global security industry	
European Commission	Annual Security Research Event (SRE)	
CERIS	Community of Users on Secure, Safe and Resilient Societies thematic workshops	
CLUSIT	Security Summit	
HackInBo Group	HackInBo	
Expo Security	Expo Security – Cybersecurity Forum	
Lithuanian Innovation Agency	Baltic Miltech Summit	
APTIE	Tecnosec Fair	
USECIM iberia SL	USEC Bilbao Fair	
Dutch Police	Innovation Festival	Local and national events for LEA's
SINNOVA	Sardinian Exhibition	
The Netherlands Ministry of Security and Justice	Veiligheid en Justitie innovatie congres	
SICUR	International security event	
The French Association for Artificial Intelligence (AfIA)	AfIA workshops - AI French research community	
Council of the EU	COSI and CATS meetings	
UNICRI – INTERPOL	Conference on AI and Robotics for Policing	
EUROPOL - ENISA	AI /IoT Security conference	
EMPACT	European multidisciplinary platform against criminal threats	
ZITiS	TechZoom by ZITiS for LEAs within Germany	
Council of the EU	Council of the 'EU's Law Enforcement Workgroup	
KI@Polizei – Germany	Annual Symposium Neue Technologien	
DESDEi+d	Congreso Nacional de I+D en Defensa y Seguridad (Spain)	
EUROPOL	Annual Cybercrime Conference	Cybercrime
European Union Cybercrime Task Force (EUCTF)	EUCTF - European Union Cybercrime Taskforce	
European Network of Forensics Science Institute (ENFSI)	Annual Meetings	Digital Forensics

Table 7: Potential conference venues for STARLIGHT dissemination

Name of the conference (sample representation)	Main dissemination aspects
Cybertech Europe	AI, Decision Support, Cybersecurity and Machine Learning
CyberSec & AI Connected	
AIXIA - International Conference of the Italian Association for AI	
ICLR - International Conference on Learning Representations	
ESORICS - European Symposium on Research in Computer Security	
ICML - International Conference on Machine Learning	
ARES - International Conference on Availability, Reliability and Security	
EUSIPCO - European Signal Processing Conference	
USENIX Security Symposium	
EDEN Conference - EUROPOL's Data Protection Experts Network	Legal and Ethical Issues in LEA Investigations
Conference on Computers, Privacy and Data Protection	
Mykolas Romeris University - Scientific Conference on Social Innovations	
SPIE Counterterrorism, Crime Fighting, Forensics, and Surveillance Tech	Data anonymisation, data sensing
IEEE Int. Conf on Advanced Video Signal-based Surveillance	
IJCNN - International Joint Conference on Neural Networks	Biological neural networks, face recognition
IEEE International Conference on Automatic Face & Gesture Recognition	
IEEE Int. Conference on Image Processing (ICIP)	
ARES - International Conference on Availability, Reliability and Security European Intelligence and Security Informatics Conference	Security and data protection
CPDP – Computers, Privacy and Data Protection Conference	
EAFS - European Academy of Forensic Science Conference	Digital Forensics and Forensic Science
DFRWS - Digital Forensics Research Workshops	
ACM Multimedia (ACM MM)	Multimedia modelling and information retrieval
Intl. Conference on Content-Based Multimedia Indexing (CBMI)	
MMM – Intl. Conference on MultiMedia Modelling	
SIGIR – Intl. Conference on R&D in Information Retrieval	
ECIR - European Conference on Information Retrieval	
European Society of Criminology Conference	Criminology/Criminal law
LREC - Language Resources and Evaluation Conference	Computational Sciences, Computer Linguistics and Computer Vision
EACL - European Chapter of the Association for Computational Linguistics	
COLING – Conference on Computational Linguistics	
NLDB - Natural Language & Information Systems	
EMNLP - Empirical Methods in Natural Language Processing	
IJCNLP - International Joint Conference on Natural Language Processing	
ASONAM - Advances in Social Networks Analysis and Mining	Content understanding and AI-based multimodal analysis
CIKM - Conference on Information and Knowledge Management	
ICWSM - Conference on Web and Social Media	
WSDM – Web Search and Data Mining	
TheWebConf - The Web Conference	
International Conference on Advanced Video and Signal-based Surveillance British Machine Vision Conference	Tracking and Event Recognition
EKAW – Int. Conference on Knowledge Engineering and Management	Semantic Web
EURO - Association of European Operational Research Societies	Operational Research

ECC - European Control Conference	
ACC – American Control Conference	
Intl. Society for Music Information Retrieval Conference (ISMIR)	Audio and Music Analysis, Retrieval and Modelling
Challenge on Detection and Classification of Acoustic Scenes and Events	
IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP)	
IEEE Intl. conference on Audio	
Interspeech - Speech and Language Processing	

In each of the attended events, the STARLIGHT partners have made substantial contributions, ranging from securing speaking slots to sharing project updates and insights. The collaborative efforts extend beyond the events themselves, with partners actively using their social media platforms to amplify the reach of STARLIGHT by liking, retweeting, and reposting project-related content.

Moving forward, we aim to continue leveraging these platforms to maximise the visibility and impact of the STARLIGHT project. Our focus remains on not only sharing our findings but also fostering a productive dialogue with stakeholders, ensuring that our project contributes meaningfully to advancements in the fields of AI and law enforcement.

4.4 ToolFest: bridging theory and practice

The STARLIGHT project has benefited from the strong commitment of all LEA partners, driven by their trust in the consortium and a clear grasp of the project's objectives and methodology, where LEAs collaborate with technical partners to create AI-based solutions tailored to operational needs.

Partners from Vicomtech (VICOM) played a key role in successfully organising the first public ToolFest during the Security and Research Event 2023 (SRE2023) that took place on October 24-25, 2023, in Brussels. This was a hands-on demonstration focused on tool testing and evaluation of the proposed AI technologies.

To promote the ToolFest, partner VICOM produced a video (Figure 13: ToolFest Video) and a leaflet (Figure 14: Leaflet capture, SRE2023 ToolFest event . These were disseminated via our social media channels prior the event and over the course of the two-day event to practitioners, providing detailed information about the event and listing the tools presented.

Attendees at the ToolFest had the opportunity to interact with the co-developed AI functionalities, enabling them to directly understand the tools and foster a collaborative environment. The input and feedback from this event are important, serving as a guide for the project's ongoing development and for enhancing the structure and content of future ToolFests.

This event demonstrates the STARLIGHT consortium's proactive approach to fostering collaboration, sharing knowledge, and gathering valuable feedback to continuously enhance future events.

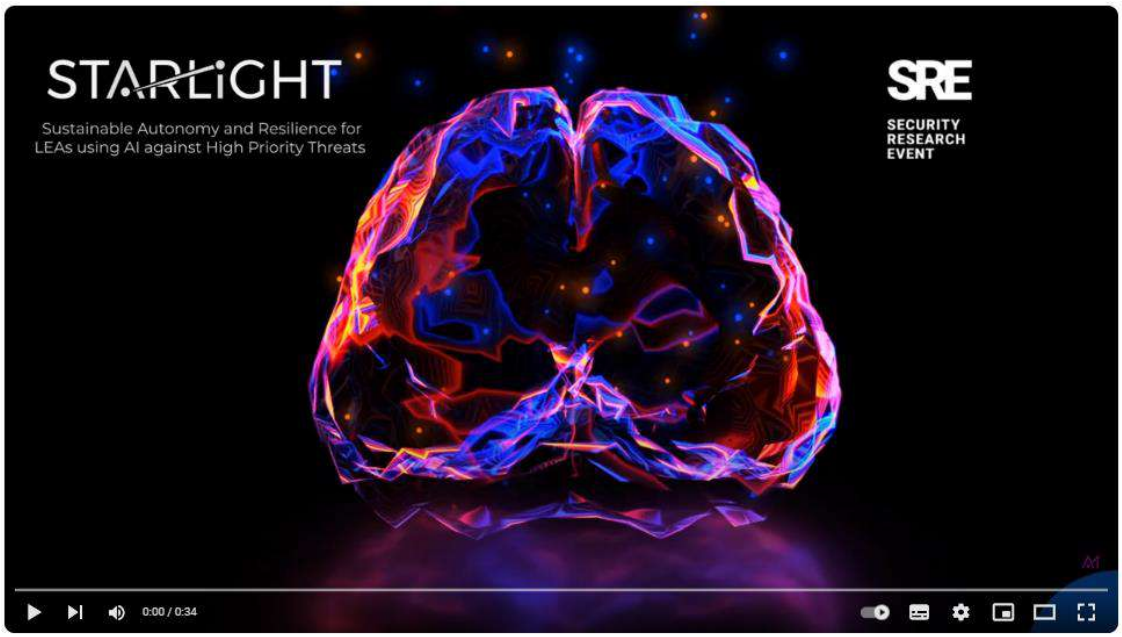

Figure 13: ToolFest Video

Figure 14: Leaflet capture, SRE2023 ToolFest event

4.5 Press and the media

The STARLIGHT consortium remains dedicated to transparent and effective communication with the public and professional press while ensuring the confidentiality and security of the project's outputs. The sensitive nature of our work, particularly concerning data protection, intellectual property rights (IPR), and security, necessitates a cautious approach to information dissemination. However, our commitment to fostering partnerships, particularly with specialised publications, remains strong.

To support our project partners in their interactions with the press and media, we have provided easily accessible resources on our shared platform. These resources include essential public information about the project, such as:

- The STARLIGHT project logo.
- A concise description of the project.
- A comprehensive list of all partners.
- Press releases detailing the launch and significant milestones of the project.
- A well-designed project flyer.

We encourage our partners to cultivate a network of contacts interested in the STARLIGHT project. This network will be instrumental in disseminating timely information about our achievements, milestones, and upcoming opportunities. To facilitate this, we are developing a common database of contacts. This database will be managed with the utmost attention to data protection standards, in strict compliance with the General Data Protection Regulation (GDPR).

In the context of the evolving regulatory landscape, notably the forthcoming EU Artificial Intelligence Act, the STARLIGHT project acknowledges the importance of aligning our activities with these new regulatory frameworks. Our approach to AI development and deployment is informed by a commitment to ethical standards and regulatory compliance, ensuring that our project not only leads to innovation but also responsible AI implementation. We will continue to monitor these developments closely, ensuring that our project remains at the forefront of ethical and secure AI research and application.

Table 8: EU networking opportunities

Media	Name	Targeted audience
Conference (annual)	Security Research Event H2020/HEU project events	Policy makers, industry, academia
Magazine	EU Results	General public
Workshops (several per year)	CERIS	Policy makers, industry, academia, LEAs

4.6 Networks and related projects

The STARLIGHT project has been actively engaging with related initiatives (see Table 9: Related projects), including SU-AI sibling projects ALIGNER and PopAI, through concentrated efforts such as clustering activities and regular participation in workshops like those of the TechEthos project.

We have established Non-Disclosure Agreements (NDAs) with LAGO, AP4AI, and MultiRATE projects to integrate and leverage our mutual findings.

STARLIGHT has demonstrated active engagement in several CERIS events organised by DG-HOME, underscoring our commitment to key European initiatives. Our contributions have spanned a variety of sessions, including the CERIS FCT Annual Event in September 2021 and a workshop on public space protection in April 2022, both in Brussels, Belgium, with CEA representing our efforts. In March 2023, we collaborated with EUROPOL, CEA, CENTRIC, and AP4AI at the event on 'AI for Security Purposes: Maximising Benefits and Reducing Risks', focusing on leveraging AI effectively while addressing

associated challenges. Additionally, TNO highlighted our data collection and integration progress at the 'Fighting Crime and Terrorism/Resilient Infrastructure Annual Event' in December 2023. Recently, the Project Coordinator, along with partners from VICOM and POLBRU, presented our methodology and results at the 'Foresight and Key Enabling Technologies' event in March 2024, showcasing STARLIGHT's contributions to the discourse on AI's role in enhancing security and defence capabilities across Europe. Through these participations, STARLIGHT has not only shared project results and tools but also engaged in valuable exchanges with practitioners, contributing to the broader discourse on leveraging AI for enhancing security and defence capabilities across Europe.

Additionally, in collaboration with PopAI and ALIGNER, we successfully hosted a workshop focusing on the "Ethical and Legal Aspects of AI for Law Enforcement" from January 25–26, 2023. This event drew a diverse group of participants, including law enforcement agencies (LEAs), academics, industry professionals, NGOs, and representatives from REA, DG-Home, and DG-CONNECT.

To illustrate our collaboration, we have jointly developed and distributed a 20-page brochure (see Figure 15 : SRE2023 SU-cluster brochure, pages 1 – 2 and Figure 16: SRE2023 SU-cluster brochure, pages 3 – 4) for the SRE2023 event, titled "Building a Secure and Ethical AI Ecosystem for Civil Security: The SU-AI Cluster." The collaborating projects made this material accessible online on their respective project websites, promoted it on social media, and distributed it as printed brochures during the SRE2023 event, effectively reaching a wide audience within the security research community.

Figure 15 : SRE2023 SU-cluster brochure, pages 1 – 2

THE SU-AI CLUSTER

In 2021, the European Commission funded the first cluster of three projects under the H2020 secure societies call "SU (Security Union)-AI" that had a specific focus on artificial intelligence (AI) and civil security: ALIGNER – Artificial Intelligence Roadmap for Policing and Law Enforcement; popAI – A European Positive Sum Approach towards AI tools in support of Law Enforcement and safeguarding privacy and fundamental rights; and STARLIGHT – Sustainable Autonomy and Resilience for LEAs using AI against High priority Threats.

These three research projects form the nucleus of the European AI hub in support of law enforcement to enhance the AI competitiveness of Europe, while strengthening society's perception of the EU as an area of freedom, justice, and security.

The three projects were specifically funded to complement each other. While ALIGNER mainly focuses on the operative needs of police and law enforcement to derive research and policy recommendations, popAI focuses on the societal and ethical dimension of AI for policing and law enforcement. STARLIGHT, on the other hand, co-develops practical AI applications.

Since its inception, the SU-AI cluster has collaborated closely—not just within the cluster but also with other projects and initiatives beyond—to make use of synergies and ensure AI can be put into law enforcement practice in an ethical, societal, and legal way.

Within multiple joint activities—most notably an event co-organised with DG Home on the ethical and legal aspects of AI for law enforcement—to derive complementary approaches and joint recommendations.

This brochure gives an overview of the applied approaches and gathers the main cluster recommendations.

ABOUT US

ALIGNER

aligner-h2020.eu

ALIGNER brings together European actors at the cross-section of AI, law enforcement, and policing to collectively identify and discuss needs for paving the way for a more secure Europe in which AI supports law enforcement agencies while simultaneously empowering, benefiting, and protecting the public. To achieve this, ALIGNER has established a forum for exchange between practitioners, civil society, policymaking, research, and industry to design an AI research and policy roadmap meeting the operational, cooperative, and collaborative needs of police and law enforcement.

popAI

pop-ai.eu

popAI aims to increase awareness, boost trust, and encourage a constructive dialogue on the ethical use of AI in policing between EU policymakers, law enforcement agencies (LEAs), technology providers, and civil society. The popAI project follows a comprehensive, cross-disciplinary, and inclusive approach, mapping and engaging all ecosystem stakeholder groups through a series of knowledge-sharing modalities and collaboration tools. The project results include AI policy recommendations and multidisciplinary best practices, as well as an ethics toolbox for law enforcement agencies, organising the knowledge around AI within functionality and ethical and legal taxonomies. These practical tools are part of popAI's blueprint for a European AI hub for LEAs, a hub facilitating the exchange of knowledge between stakeholders and supporting the responsible use of AI by law enforcement.

STARLIGHT

starlight-h2020.eu

STARLIGHT aims to enhance the EU's strategic autonomy in artificial intelligence for law enforcement agencies. STARLIGHT achieves this by creating a community that brings together LEAs, researchers, industries, and practitioners within the security ecosystem to work together in a coordinated and strategic effort to bring AI into operational practices. Underpinning this approach are five key components that make up the STARLIGHT vision: (i) improve the understanding of AI across LEAs; (ii) provide opportunities for LEAs to exploit AI solutions; (iii) enable LEAs to protect AI systems; and (iv) combat the misuse of AI-supported crime and terrorism. The final component (v) focuses on boosting the uptake of AI across European LEAs while delivering long-term sustainability as part of the AI hub in support of law enforcement. A comprehensive analysis, understanding, and application of legal and ethical principles and the protection of fundamental rights across the entire AI development lifecycle support STARLIGHT's work.

ALIGNER, popAI, and STARLIGHT have received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement nos. 101020574, 101020001, and 101021797.

Figure 16: SRE2023 SU-cluster brochure, pages 3 – 4

Looking forward, the project aims to enhance its communication and dissemination initiatives, which may include significant scientific publications. The increasing number of invitations to events hosted by entities like the EC (CERIS), EUROPOL, and various European projects (MultiRATE, ALIGNER, PopAI, TechEthos, AP4AI, GRACE, etc.) reflects the growing recognition and impact of STARLIGHT.

Our extensive network, the involvement of STARLIGHT partners in numerous projects, and our robust communication and dissemination efforts, which encompass event participation, social media engagement, newsletter publications, participation to online webinars, and the production of informative videos, contribute to this recognition and impact. Altogether, we estimate that the outreach of STARLIGHT's activities has engaged approximately 11,708 stakeholders for the physical events and 315,268 overall.

Close collaboration is the framework for these projects, involving joint communication and dissemination initiatives as well as reciprocal support throughout each project's duration.

Table 9: Related projects

Acronym	Website
AIDA - Artificial Intelligence and advanced Data Analytics for Law Enforcement Agencies	https://www.project-aida.eu
ALIGNER (Artificial Intelligence Roadmap for Policing and Law Enforcement)	https://aligner-h2020.eu/
AP4AI (Accountability Principles for Artificial Intelligence in the Internal Security Domain)	https://ap4ai.eu/
APPRAISE (Facilitating public & private security operators to mitigate terrorism scenarios against soft targets)	https://appraise-h2020.eu/
CREST (Fighting Crime and TerroRism with an IoT-enabled Autonomous Platform based on an Ecosystem of Advanced IntelligEnce, Operations, and InveStigation Technologies)	https://project-crest.eu/
CYCLOPES (Fighting Cybercrime – Law Enforcement Practitioners' Network)	https://www.cyclopes-project.eu/
DARLENE (Deep AR Law Enforcement Ecosystem)	https://www.darleneproject.eu/
GRACE (Global Response Against Child Exploitation)	https://www.grace-fct.eu/
iMars (image manipulation attack resolving solutions)	https://imars-project.eu/
INFINITY (Investigative, Immersive, and Interactive Collaboration Environment)	https://h2020-infinity.eu/
LAGO (Lessen Data Access and Governance Obstacles)	https://lago-europe.eu/
MultiRATE (Holistic framework for the MatUrity evaLuaTIon of ReAdiness level for security TEchnologies)	https://www.multirate.eu/
PERIVALLON (Protecting the EuRopean terrItory from organised enVironmentAl crime through inteLLigent threat detectiON tools)	https://perivallon-he.eu/
popAI (A European Positive Sum Approach towards AI tools in support of Law Enforcement and safeguarding privacy and fundamental rights)	https://www.pop-ai.eu/
RAYUELA (Empowering and education young people for the internet by playing)	https://www.rayuela-h2020.eu/
TECHETHOS (Ethics for Technologies with High Socio-Economic Impact)	https://www.techethos.eu/

5 Monitoring and evaluation of communication and dissemination and activities

The STARLIGHT project consortium is committed to enhancing AI adoption for EU LEAs and has consistently implemented structured dissemination and communication efforts. Embedded in WP1, our approach revolves around regularly monitoring, strategically planning, and targeting the implementation of these activities. Here, we provide a comprehensive overview of these efforts, reflecting on the progress made and the path forward.

5.1 Work package meetings

At the core of our strategy are the work package meetings held bimonthly via Teams. These sessions draw together the WP11 task leaders, a coordinator's representative, and other consortium members as needed. The primary focus of these meetings is to assess and guide our communication and dissemination efforts, ensuring they align with the broader objectives of WP11 and the STARLIGHT project.

5.2 Measuring KPIs

To measure the effectiveness of our dissemination and communication activities, we have established Key Performance Indicators (KPIs) across various channels. These KPIs are tracking engagement, reach, content interaction, and overall impact at different stages of the project. By systematically analysing these metrics, we can make informed decisions and fine-tune our strategies, ensuring our efforts resonate with our target audiences and foster the project's goals. All KPIs below are correct at the date of compiling this report, February 28, 2024.

Website and social media performance:

- Since its launch in February 2022, the website has experienced a significant increase in engagement. The number of unique visitors has risen from 1,200 in the first year to 7,459 at the end of the second year since launched. Similarly, pageviews have more than doubled, increasing from 4,100 to 18,941.
- Social media channels have also demonstrated significant growth. On Twitter (now X), followers increased from 138 at M12 to 379 currently, while LinkedIn followers rose from 155 to 447 over the same period.
- YouTube has gathered 118 views and six subscribers in the six months since its launch.

Podcast and webinar participation:

Engagement in multimedia platforms such as podcasts and webinars has been an integral part of our strategy, providing platforms for in-depth discussions on AI and security. Participation in events like the "L'intelligence artificielle dans la sécurité" podcast and webinars on AI bias in LEAs Decision-Making and Cybersecurity of AI has broadened our reach and deepened stakeholder engagement.

Our predictive analysis, extending to M48, considers the growth trends from M12 to M30. We anticipate further growth in metrics like website visitors, social media followers, and content

engagement, underpinned by our dynamic communication activities and the evolving nature of the project.

By closely monitoring our KPIs, we've gained valuable insights that inform our strategies. These include optimising content based on audience preferences, enhancing engagement through targeted communication, and making predictive adjustments to stay ahead of the curve in our dissemination efforts. As we continue to navigate the landscape of AI and security, the STARLIGHT project remains steadfast in its mission to foster innovation, collaboration, and knowledge sharing. Our diligent monitoring and evaluation of communication and dissemination activities ensure that we not only reflect on our journey but also pave the way for future advancements and continued success.

Table 10, Table 11, and Table 12, detail the performance of our key communication channels, the type of dissemination activities undertaken, and the audience reached. Figure 18 and Figure 17 illustrate these findings. These tables and figures provide a quantitative overview of our efforts and the impact they've had since the inception of the project. By maintaining this structured approach to monitoring and evaluation, the STARLIGHT project ensures its communication and dissemination activities are impactful, relevant, and aligned with the evolving landscape of AI and security research.

Continuous monitoring of KPIs for STARLIGHT's communication and dissemination activities will provide a reference point to track and evaluate the effectiveness of the communication tools and activities and redirect efforts as needed. For monitoring to prove effective, all partners must provide regular updates on the activity report document (Annex 3: Activity report document). Once complete, quantitative, and qualitative indicators will be collected by the WP11 leader (CENTRIC) and analysed, the results of which will be then presented at the monthly WP11 meetings. Based on these regular evaluations of the KPIs, changes may be required in relation to the type of activities, messages, tone of voice, or targeted audiences.

Table 10: C&D KPIs and progress to date

Channel	Activity	KPI	M12	M30	Predictive Analysis (M48)
Website	Online access to details about STARLIGHT	5000 unique visitors	1114	6900	>10000
Social Media	Twitter	>300 followers	141	326	>500
	LinkedIn	>300 followers	138	366	>400
	YouTube		Subscribers	6	>20
			Views	107	>1000
Newsletter	Annual newsletter	≥4	1	2	4
Flyer	High-quality pdf format	1 design	1 flyer & 1 poster	1 flyer & 1 poster	1 flyer & 1 poster
Project video	≥1	Number of videos:	1 project video in progress	2	>10

Scientific publications		Impact KPIs	Progress at M12	Progress at M30	Predictive Analysis (M48)
Journal publications	Publications in International referred technical journals in AI-related subjects including publications in international technical conferences	≥25 publications	None to date	10	≥25
Conference publications	Texts that have been published based on participation at a relevant conference	≥25 publications	2	20	≥25
Magazine publications	Printed/online publications in AI-related subjects	≥10 publications	None to date	None to date	≥10
Project related events		**Impact KPIs**	**Progress at M12**	**Progress at M30**	**Predictive Analysis (M48)**
Conferences	Organising a final conference in AI use for LEAs	≥150 people	0	0	1 event ≥30 attendees; 1 planned for 2025
Workshops	Organising workshops	≥10	2 workshops ≥30 attendees (each). 1 has taken place	6 workshops, 338 attendees	≥10
Local, regional, or national events	Participation in events in the research fields of cybersecurity, AI, digital forensics, criminal threats, law enforcement, cybercrime, security, and safety	≥50	Represented at 17+ events so far.	49	≥70
Meetings	Ethics board meetings	16	1 meeting/ quarter	3	>5

The type of dissemination and communication activities and the type of audience reached since the beginning of the project are summarised in the tables below:

Table 11: Type of dissemination and communication activities

Type of dissemination and communication activities	Number
Organisation of Conference	6
Organisation of Workshops	3
Press releases	2
Non-scientific and non-peer-reviewed publication (popularised publication)	3
Exhibition	8
Flyer	1
Training	0
Social media	155
Website	48
Communication Campaign (e.g., Radio, TV)	0
Participation to a Conference	22
Participation to a Workshop	9
Participation to an Event other than a Conference or a Workshop	27
Video/Film	3
Brokerage Event	0
Pitch Event	0
Trade Fair	0
Participation in activities organized jointly with other H2020 projects	23
Other	11

Table 12:Type of audience reached in the context of all dissemination & communication activities

Type of audience reached in the context of all dissemination & communication activities	Estimated number of persons reached
Scientific Community (Higher Education, Research)	3,386
Industry	1,593
Civil Society (engaged organisations, groups, or individuals)	100,463
General Public (broader community)	101,805
Policy Makers	907
Media	101,015
Investors	5
Customers (entities in both B2B and B2C)	3,599
Other	146

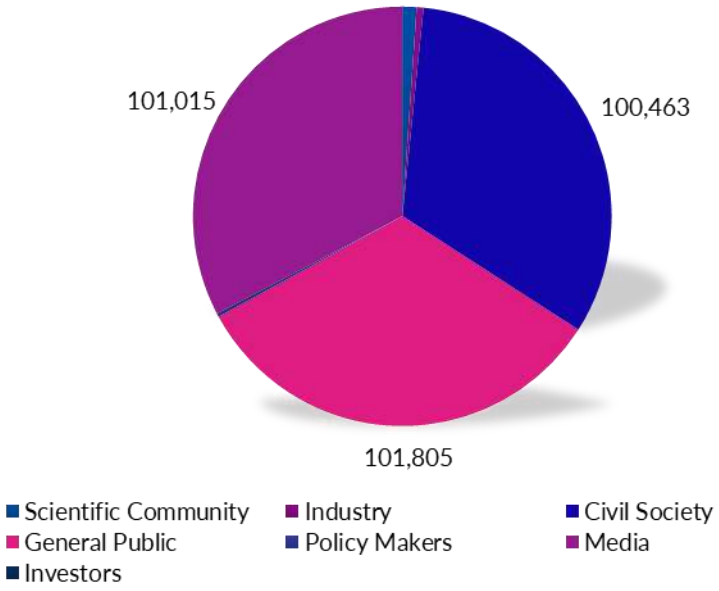

Figure 17: Type of audience reached

Figure 18: STARLIGHT website all time visitor statistics

6 Conclusions

At the 30-month milestone of the STARLIGHT project, it's time to assess our communication and dissemination journey since we first set out our plan in M12. This milestone is an opportunity to refine our approach, making sure that our project's messaging remains impactful and resonant with our diverse audience.

Our communication and dissemination strategy has remained flexible, adapting to feedback and the evolving needs of the project. This adaptability has kept our messaging relevant and engaging, helping us to build stronger relationships with key stakeholders such as LEAs, policymakers, and industry experts while also spreading awareness more broadly.

Utilising a mix of digital and offline channels has significantly expanded our reach. Engagements like the ToolFest have drawn our community closer, enhancing interaction with our initiatives. Monitoring our efforts through KPIs has been instrumental, providing insights that inform our forward-looking strategies, particularly as we anticipate the period leading up to M48.

The project's online collaboration platform has proved to be a great asset, making it easier for our team to share information and work together efficiently. This has been especially important for keeping everyone aligned and moving in the same direction.

We will continue to disseminate the project advancements through participation in key events, such as the CERIS events organised by DG-HOME in Brussels, the InCyber Forum in Lille, and the Security Mission Information & Innovation Group Event (SMI2G) 2024 event in Paris, to mention a few. As part of our outreach, the STARLIGHT experts will offer insights through an organised series of interviews, sharing their perspectives on the project's progress and impact. Our commitment extends to a wide range of dissemination channels, including webinars, conferences, seminars, and workshops. These platforms will serve not only to present our findings and tools to a diverse audience but also to make our research outcomes widely accessible to stakeholders with affiliated interests. Through live demonstrations, detailed presentations, and panel debates, we will showcase the real-world applications and advantages of our project's contributions, offering substantial insights and expertise to enrich the dialogue within the law enforcement and security sectors.

Looking ahead to M48, our focus remains on improving and adapting. The plan to review our strategy periodically shows our commitment to staying on track and making the necessary adjustments to meet our goals.

The next review at M48 will be another important step in this process. In sum, as we mark this 30-month point, the STARLIGHT project stands on a solid foundation of thoughtful planning, effective communication, and a willingness to adapt. The insights we've gained so far are guiding us as we move forward, ensuring that our project not only reaches but also resonates with our intended audience.

Annex 1: List of dissemination activities

Table 13: List of Dissemination Activities

Event Details	Type	Date	Partner
CERIS FCT Annual event: AI, communication-exploitation strategies (pre-kick-off), Brussels, Belgium	Event	September 22, 2021	CEA
EDEN Conference (Europol Data Protection Experts Network), Rome, Italy	Conference Presentation	17-18 October 2021	ZITiS
Leading Innovation in the LEA of the 21st Century. Lisbon, Portugal	Conference Panel	3-4 November 2021	CEA,PJ
ALIGNER stakeholder workshop	Workshop	17-18 November 2021	CEA
NTNU haping Our Digital Future: From Vision to Implementation	Conference	6-7 December 2021	CEA
CERIS workshop on protection of public spaces. Brussels, Belgium.	Workshop Panel	April 2022	CEA
Data for Forensics, EAFS Conference. Stockholm, Sweden	Workshop & Stand	May 2022	TNO, CEA, VICOM
USEC Bilbao and TECNOSEC Madrid	Stand	May 2022	VICOM
Project to Policy Seminar	Event	June 2022	CEA
Participation to several popAI and Aligner events	Event	2022	CEA, KUL,
popAI Stakeholder event, Dublin, Ireland	Event	October 25, 2022	CEA, KUL,
Aligner 4th Workshop	Online Event	November 30–December 1, 2022	Aligner
Ethical and legal aspects of AI for Law Enforcement, Brussels, Belgium	Joint Conference	25–26 January 2023	STARLIGHT, ALIGNER, popAI, AP4AI
Modern Technologies for Combating Terrorism Financing, Athens, Greece	Seminar	7-8 February 2023	KEMEA
Final AIDA Project Workshop, Rome, Italy	Workshop	February 15, 2023	AIDA, EUROPOL
The Information Day for the AIDA Project, Athens, Greece	Hybrid Event	February 24, 2023	KEMEA
popAI Plenary Meeting, Rome, Italy	Event	March 14, 2023	popAI
EUROPOL's new role in Horizon Europe, Brussels, Belgium	CERIS Event	March 14, 2023	EUROPOL
AI for Security Purposes. Maximising Benefits and Reducing Risks, Brussels, Belgium	CERIS Event	March 23, 2023	EUROPOL, CEA, CENTRIC, AP4AI
TechEthos	Online cluster meeting	March 28, 2023	PlusEthics
Research and Innovation Symposium for European SECURITY and Defense (RISE-SD), Rhodes, Greece	Event	29-31 May 2023	LINKS, ICCS, VICOMTECH, NPN, NFC

Aligner 4th Workshop, Sankt Augustin, Germany	Public Workshop	21-22 June 2023	popAI, ALIGNER, KUL
Cyber Journey event, Cagliari, Italy	Event	June 22, 2023	Pluribus One, CEA
INFINITY Final Demonstation Event, Sheffield, United Kingdom	Demonstration Event	July 27, 2023	INFINITY, APPRAISE, ENG
SPIE Conference on Artificial Intelligence for Security and Defence Applications, Amsterdam, Netherlands	Conference	4-5 September 2023	TNO
18th International Conference on Critical Information Infrastructure Security (CRITIS2023), Helsinki, Finland	Conference	13-15 September 2023	L3CE
popAI Final Event, Brussels, Belgium	Event	19 September 2023	KU LEUVEN
SRE 2023, Brussels, Belgium	Event	24-25 October 2023	popAI, ALIGNER, CEA, CENTRIC, VICOM
Anti-FinTer Seminar, Brussels, Belgium	Event	26 October 2023	CFLW
GRACE Project Final Event, Madrid, Spain	Event	29-30 November 2023	GRACE, CEA
CERIS Fighting Crime and Terrorism/Resilient Infrastructure Annual Event, Brussels, Belgium	Event	14–15 December 2023	TNO
CERIS - Foresight and Key Enabling Technologies, Brussels, Belgium	Event	March 5, 2024	CEA, POLBRU, VICOM
Internal presentations to guests and visitors	Several	Ongoing	EUROPOL, EPBG

Annex 2: List of publications

M6-M12

Article in Journals

- Gercke, M. (2021) Die Entwicklung des Internetstrafrechts 2020/2021 [The development of internet criminal law 2020/2021]. Zeitschrift für Urheber- und Medienrecht [Journal for Copyright and Media Law]. Issue 11, pp. 921.

Conference Proceedings/Workshop

- Pantelidou, K., Chatzakou, D., Tsikrika, T., Vrochidis, S., & Kompatsiaris, I. (2022). Selective Word Substitution for Contextualized Data Augmentation. In International Conference on Applications of Natural Language to Information Systems (pp. 508-516). Springer, Cham.

- van Rooij, S.B., Bouma, H. van Mil, J., ten Hove, J.-M. (2022) Federated tool for anonymisation and annotation in image data. Proc. SPIE, vol. 12275

M12-M18

Article in Journals

- Rios Insua, D., Naveiro, R., Gallego, V., & Poulos, J. (2023). Adversarial Machine Learning: Bayesian Perspectives. *Journal of the American Statistical Association*. doi:10.1080/01621459.2023.2183129

Conference Proceedings/Workshop

- Van Rooji, S.B., Bouma, H., van Mil, J., & ten Hoe J.-M. (2022). Federated tool for anonymization and annotation in image data. In SPIE (Ed.), *Counterterrorism, Crime Fighting, Forensics, and Surveillance Technologies VI*. 122750E, p. 10. Berlin: SPIE. doi:10.1117/12.2637420

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- Maccarulla, A., Geradts, Z., Worring, M., & Unzueta, L. (n.d.). International Workshop on Biometrics and Forensics 2023.

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- Blanco, G., Arnaudo, E., Salza, D., & Rossi, C. (2022). Impact Estimation of Emergency Events Using Social Media Streams. *2022 IEEE 7th Forum on Research and Technologies for Society and Industry Innovation (RTSI)* (pp. 102-108). Paris: IEEEE. doi:10.1109/RTSI55261.2022.9905213

- Dario, S., Edoardo, A., & Giacomo, B. C. (2022). A 'glocal' approach for real-time emergency event detection in Twitter. *CoRe Paper – Social Media for Crisis Management Proceedings of the19th ISCRAM Conference – Tarbes, France 2022* (pp. 570 - 583). Tarbes: CoRe Paper. Retrieved from https://idl.iscram.org/files/dariosalza/2022/2440_DarioSalza_etal2022.pdf

- Jalali, A., Haslhofer, B., Kriglstein, S., & Rauber, A. (2023). Predictability and Comprehensibility in Post-Hoc XAI Methods: A User-Centered Analysis. *SAI2023 Computing Conference* (pp. -). -: -.

- Graser, A., Jalali., A., Weißenfeld, A., Janowicz, K. (2023). Deep Learning From Trajectory Data: a Review of Neural Networks and the Trajectory Data Representations to Train Them. *Workshop on Big Mobility Data Analysis BMDA2023 in conjunction with EDBT/ICDT 2023*. Ioannina.

- Pham, L., Tran, K., Ngo, D., Tang, H., Phan, S., & Schindler, A. (2022). Wider or Deeper Neural Network Architecture for Acoustic Scene Classification with Mismatched Recording Devices. *MMAsia '22: Proceedings of the 4th ACM International Conference on Multimedia in Asia* (pp. 13-16). Tokyo: ACM Multimedia Asia 2022. doi:https://doi.org/10.1145/3551626.3564962

- Naveiro, R., Rios Insua, D., & Camacho, J. (2022). Augmented probability simulation for adversarial risk analysis in general security. *Proceedings of the 12th International Defense and Homeland Security Simulation/18th International Multidisciplinary Modeling and Simulation Multiconference* (pp. 1-9). Madrid: CALTEK. doi:10.46354/i3m.2022.dhss.002

M18-M24

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- Pham, L., Ngo, D., Salovic, D., Jalali, A., Schindler, A., Nguyen, P. X., Tran, K., & Vu, H. C. (2023). Lightweight deep neural networks for acoustic scene classification and an effective visualization for presenting sound scene contexts. Applied Acoustics, 211, pp. 109489. https://doi.org/10.1016/j.apacoust.2023.109489

- Caballero, W., Naveiro, R., & Rios Insua, D. (2023). Some statistical issues in automated driving systems. Applied Stochastic Models in Business and Industry, 26 April 2023. https://doi.org/10.1002/asmb.2765

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- Gallego, V., Naveiro, R., & Insua, D. R. (2023). Opponent aware reinforcement learning under threats. [Online]. Submitted.

- Gallego, V., Naveiro, R., Redondo, A., Insua, D. R., & Ruggeri, F. (2023). Protecting classifiers from attacks. [Online]. Submitted.

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Conference Proceedings/Workshop

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- Demertzis, S., van Rooij, S. B., Lazaridis, M., Bouma, H., Alvarez Fernandez, M., ten Hove, J-M., Sainz Mendez, R., Daras, P. (2023). One-shot logo detection for large video datasets and live camera surveillance in criminal investigations. Proc. SPIE, vol. 12742. [Online]. Expected October 2023.

- Leibl, A. J., Attenberger, A., Meißner, A., Altmann, D. S., & Mayer, H. (2023). De-identifying Face Image Datasets While Retaining Facial Expressions. [Online]. Expected November 2023.

- Nurye, D., Aktas, Y., & García, J. (2023). Efficient visual information indexation for supporting actionable intelligence and knowledge generation. Proc. SPIE, vol. 12742. [Online]. Expected October 2023.

- Pham, L., Le, T., Le, C., Ngo, D., Weissenfeld, A., & Schindler, A. (2023). Deep Learning Based Multimodal with Two-phase Training Strategy for Daily Life Video Classification. Proc. CBMI, 2023. [Online]. Expected December 2023.

- Pham, L., Nguyen, T., Lam, P., Ngo, D., Jalali, A., & Schindler, A. (2023). Light-Weight Deep Learning Models for Acoustic Scene Classification Using Teacher-Student Scheme and Multiple Spectrograms. Proc. IoS, 2023. [Online]. Expected December 2023.

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Thesis/Dissertation

Brinkhuijsen, S., Pernisch, R., Haspels, E., & van Staalduinen, M. (2022). Context-Aware Feature Vectors in Dark Web Page Classification. BNAIC/BeNeLearn. [Online]. Available at: https://bnaic2022.uantwerpen.be/wp-content/uploads/BNAICBeNeLearn_2022_submission_8031.pdf

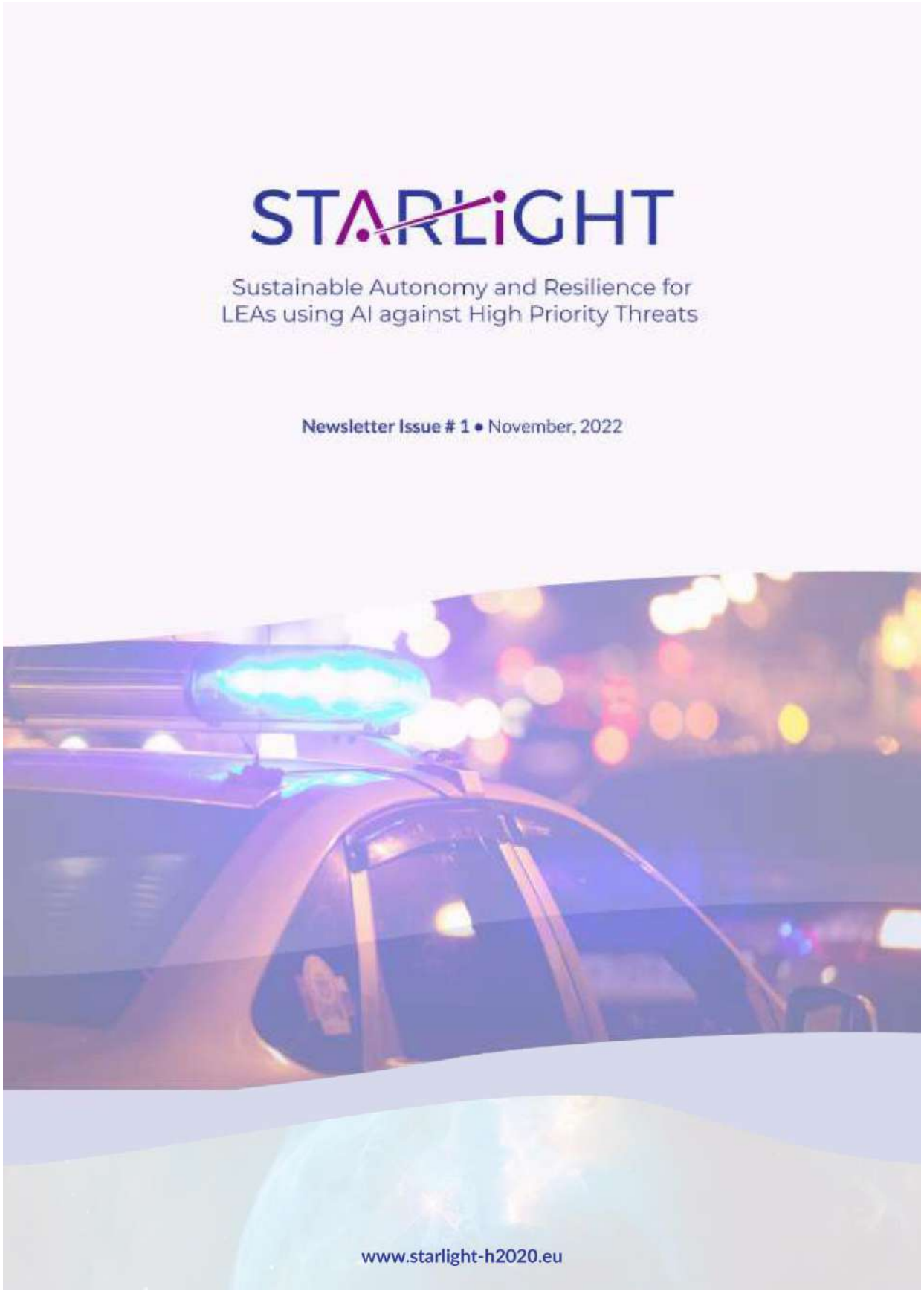
Annex 3: Activity report document

All presentations and active participation in events in the name of the project must be announced to the Project Coordinator, the Scientific & Technical Coordinator, and the Dissemination leader, and will be centrally documented in the Activity report document.

The template for the Activity report document is available on the STARLIGHT repository and it has the following structure:

- Type of dissemination and communication activities:
  - Non-scientific and non-peer-reviewed publication (popularised publication).
  - Participation in activities organized jointly with other H2020 projects.
  - Participation to a conference.
  - Participation to an Event other than a Conference or a Workshop.
  - Press releases.
  - Social media.
  - Website.
- Main leader.
- Date.
- Location/online.
- Title of presentation.
- Link.
- Title of the presentation/posters.
- Total funding amount (Euros).
- Estimated number of persons reached among the stakeholders:
  - Industry.
  - Civil society.
  - General public.
  - Policy makers.
  - Media.
  - LEAs.

Annex 4: Newsletters



STARLIGHT

Newsletter Issue # 1 • November, 2022

Kick-off meeting in Paris • October, 2021

Nizar Touleimat
Project Coordinator, CEA

Welcome to the first edition of the STARLIGHT newsletter! This edition will discuss the STARLIGHT project's aims, key milestones, and technical aspirations. In addition, we'll provide updates on events and publications, and introduce our consortium partners.

STARLIGHT is one of the largest security-focused projects funded under the H2020 framework. It is a flagship project that brings together 52 partners from 18 European countries with 15 law enforcement agencies (LEAs) to enhance the use of Artificial Intelligence (AI) in the security domain.

As we enter the second year of the four-year project, we are busy preparing for the first project review and reflecting on the achievements and progress made during the first year. The project's first year has centred on activities that have allowed us to gauge LEAs' understanding of the opportunities and challenges of utilising AI. From the results of several workshops, STARLIGHT now has a baseline of the extent to which AI is embedded into day-to-day operations and potential requirements for future AI-based tools.

STARLIGHT also recognises the importance of sharing and engaging with the security community to communicate activities and results, and receive feedback and new ideas. STARLIGHT partners were involved in several European workshops and conferences during the first year. CERIS provided the opportunity to describe the projects' goals and strategies and strengthen our relationship with the ALIGNER and popAI projects. Several other conferences also provided a platform to discuss the use of AI in security applications, emphasising the legal, ethical and accountable use of AI.

Data is the foundation of AI-driven solutions. Therefore, technical partners and LEAs have been collaborating closely on the STARLIGHT data strategy providing a basis for addressing the crucial issue of the interdependence between the quality and quantity of training and test data and the efficacy of AI models.

As the second year begins and we enter the second phase of the communication and dissemination strategy, we will continue to maximise the visibility and disseminate the results of STARLIGHT. STARLIGHT is in a privileged position to take advantage of the opportunities to deliver impact across Europe by leveraging the many partners and stakeholders involved.

The goal of this newsletter is to extend the reach of STARLIGHT, developing further cooperation between researchers and security practitioners. This interaction will continue to provide a driving force for the project and facilitate the ambition for fast and effective uptake and adoption of solutions. Furthermore, we provide a special focus on aligning legal and ethical provisions, legislative frameworks and the protection of fundamental rights for the uptake and adoption of AI technologies in the security domain. To find out more, please get in touch by email, follow us on social media or visit the project's website.

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 101021797.

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STARLIGHT

Newsletter Issue # 1 • November, 2022

Highlights of Year One

- October 6-7, 2021: **Kick-off meeting in Paris, France**
- November 3–4, 2021: **Leading Innovation in the LEA of the 21st Century Event, Lisbon, Portugal**
- December 6-7, 2021: **NTNU European Conference on Shaping Our Digital Future: From Vision to Implementation**
- April 7th, 2022: **Workshop on Protection of Public Spaces, Brussels, Belgium**
- May 11–12, 2022: **TECNOSEC exhibition in Madrid, Spain**
- May 12–13, 2022: **Responsible AI conference, The Hague, Netherlands**
- May 30th–June 3rd, 2022: **9th European Academy of Forensic Science Conference, Stockholm, Sweden**
- June 30th–July 1st, 2022: **3rd Edition of the Project to Policy Seminar, Brussels, Belgium**
- September 13–14, 2022: **EU Innovation Hub for Internal Security, Brussels, Belgium**

Main Achievements in Year One

Work Package (WP) 2 got off to a flying start by establishing the "Framework Specification for Trustworthy, Accountable, Responsible, and Transparent AI in Support of EU LEAs". In the first 12 months, we have established a baseline understanding of the needs of the EU LEAs and gained in-depth knowledge of the challenges faced in fighting serious crime in several strategic areas. We have further assessed how AI can improve and accelerate the investigation of major criminal activities and trends. Together with the LEAs and technical partners a framework has been developed for using AI in crime resolution and for developing tools and solutions addressing key LEA needs. Already, we see results in knowledge sharing and enhanced cooperation between LEAs, technical partners, research institutions, and universities in addressing LEA needs.

STARLIGHT has maintained a critical focus on ensuring AI solutions adhere to all legal, ethical, and privacy legislation and best practices relevant to the EU. As a result, LEA and its technical partners are working together to build the first set of AI solutions.

WP3 focuses on community building, and during the first year, our main achievement was preparing and organising the first innovative workshop. The focus was on a user story submitted by the MININT's Central Office for the fight against organised crime (OCLCO): "Photo and video comparison tools for target identification". It built upon a methodology designed and tested in the H2020-funded ASGARD project to prompt and structure the discussion. The Integrating Center will use the results to align the different technical solutions.

The scouting activities will combine all information on the desired functionalities in the photo and visual comparison tools. Also, we kept working on building communities by researching how to make communities last and talking to community managers from other projects to get advice, especially about communication and spreading the word.

In **WP3**, the notion of "building by doing" is at the heart of our activities, thanks to many actions such as meetings with the Gendarmerie Nationale's Datalab, the organisation of the first Innovating workshop in June 2022, or MININT's involvement in a co-development cycle on cybersecurity.

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Main Achievements in Year One

For the Customization Lab and Training, the main achievement during this period was the preparation of a questionnaire to identify best practices, potential solutions, and customization problems.

WP4 focused on identifying the main legal and ethical frameworks applicable to STARLIGHT and societal concerns that may arise from the project's operationalisation. By performing a comparative analysis of diverse national legal frameworks, we identified those that may influence LEAs' capacity and propensity to share data with STARLIGHT partners for Research & Development (R&D) objectives. Currently, WP4 is preparing for the Ethical and Legal Observatory (ELO) engagement conference in January 2023, as well as the impending deliverables including algorithmic bias and the Technology Readiness Level (TRL) calculator tool. WP4 is also monitoring the ongoing discussions for the Artificial Intelligence Act, the AI Convention of the Council of Europe, and any other developments that may be ethically and legally important to STARLIGHT.

To start with, **WP5** focused on datasets, we hosted a workshop as part of the European Academy of Forensic Science. At the same time, a paper on a "Federated tool for anonymization and annotation in image data" was presented at the SPIE conference in September 2022. In November, WP5 will submit its first deliverable, an overview of tools for collecting, annotating, anonymising, and generating datasets. It also contains the identified relevant datasets from the first year of STARLIGHT.

In **WP6**, focused on AI-solution development, we have compiled a list of all tools to be delivered within the WP, along with their functionalities, inputs, outputs, related datasets, and, more importantly, their correspondence to the defined use cases. Containing 48 tools at different TRLs, this list serves as a starting point for the upcoming co-development cycles. In addition, we have submitted the first deliverable on AI-based online source and content discovery and multimodal data sensing and understanding, reporting all available information about those tools. Furthermore, work continues on the remaining tasks, developing the tools needed to reach their target TRL.

WP7 aims to build AI-based solutions to improve LEA intelligence and investigation capabilities. It will deliver AI-based tools to transform sparse information into actionable knowledge, detect and monitor suspicious behaviours and links in criminal networks, predict dangerous activities and trends, automate online LEA activities, and provide decision support to facilitate the understanding and exploitation of generated knowledge.

WP8 focuses on AI cybersecurity and protection. During the first months of the WP8 activities, a risk assessment framework was proposed and described in the first deliverable, providing LEAs with a methodology to examine the potential weaknesses, limitations, and vulnerabilities of AI models developed within the STARLIGHT project. We have also proposed an ad hoc extension to analyse AI-related threats and related mitigation measures. Ethical aspects of introducing AI tools into LEAs' activities have also been considered.

WP9 develops the framework for STARLIGHT and has begun by preparing mockups of the STARLIGHT repository. We have submitted these as the first deliverable and have now begun development. The STARLIGHT repository will constitute the central repository in which tools, datasets, and other project solutions will be made available to end users for download. More generally, the integration plan has been set up. This includes the first set of rules that technical partners who are making software solutions need to follow.

WP10 will deliver the pilot demonstrations and user evaluations. In the first year, working closely with **WP2** and **WP4**, we initiated discussions within the consortium to arrange the operational environment for the pilots' execution. Currently, our focus is on defining the operational pilot scenarios, planning and preparing for the pilots, and beginning the process of evaluating STARLIGHT's tools' technological readiness level and maturity evaluation. We have submitted our first deliverable on the pilot scenarios.

WP11 has started with the initial set up of project visibility and communication materials such as the logo, website, and activating the social media channels. The STARLIGHT consortium has been actively presenting and attending several events to raise awareness of the project. We have established collaboration activities with the other projects in the AI cluster (popAI and ALIGNER) and invited external members to the Advisory Board. The initial communication and dissemination plan has been prepared, and we are currently implementing the proposed actions and activities.

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 101021797.

STARLIGHT Newsletter Issue # 1 • November, 2022

Opinion on the Proposed AI Act

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KU Leuven, Centre for IT & IP Law

This text provides a brief general overview of normative instruments that are relevant for STARLIGHT, including ethics guidelines and the proposed AI Act.

In Europe, the Ethics Guidelines for Trustworthy Artificial Intelligence (AI)[1] prepared by the High Level Expert Group on AI (AI HLEG) are one of the most significant ethics guidelines concerning AI-based technologies. Accordingly, AI should be lawful, ethical, robust, and follow four main ethical principles: respect for human autonomy, prevention of harm, fairness, and explicability.

These principles are supported by seven key requirements: human agency and oversight; technical robustness and safety; privacy and data governance; transparency; diversity; non-discrimination and fairness; environmental and societal well-being; and accountability.

The ethical principles and requirements laid down by the AI HLEG influenced many subsequent normative instruments. Similarly, taking inspiration from AI HLEG's guidelines, the European Commission prepared a White Paper on Artificial Intelligence[2].

The White Paper adopts a risk-based approach, categorising AI applications as high-risk and low-risk and suggests extra requirements for high risk AI.

Among the plethora of normative frameworks in Europe aiming to address potential challenges of AI-based technology applications[3], the Accountability Principles for Artificial Intelligence (AP4AI) in the Internal Security Domain[4] is one of the more relevant efforts for STARLIGHT.

A living document, the AP4AI framework aims to guide internal security practitioners in their self-assessment and compliance, and the Accountability Principles, which have been recently developed under the AP4AI Framework, concretize legal and ethical requirements under 12 principles.

On the legal side, the European Commission's proposal for AI regulation, the Artificial Intelligence Act (AIA), is relevant to STARLIGHT.

Following the European Commission's White Paper, the draft regulation takes a more nuanced, risk-based approach, differentiating between AI systems that create:

1) **an unacceptable risk** and are therefore prohibited, such as subliminal distortion of a person's behaviour in a manner that causes or is likely to cause physical or psychological harm; exploiting vulnerabilities of specific groups of people like the young, the elderly, or persons with disabilities; social scoring by public authorities that may lead to unjustified or disproportionately detrimental treatment; and real-time remote biometric identification in publicly accessible spaces by law enforcement (with some exceptions, e.g. search for missing persons or prevention of a terrorist attack).

2) **a high risk** to the health, safety, or fundamental rights of individuals that are subject to mandatory requirements and ex-ante conformity and post-market monitoring assessments.

3) **a low or minimal risk**, which are subject to a voluntary code of conduct. The Council of the European Union and the European Parliament proposed amendments to the regulation, and an agreement seems possible by mid-2023, depending on whether the co-legislators settle crucial issues such as the definition of AI, the risk classification, and related regulatory remedies.

Additionally, the Council of Europe's (CoE) Committee on Artificial Intelligence is drafting an AI Convention based on the CoE's standards of human rights, democracy, and the rule of law. The CoE's AI Convention is expected towards the end of 2023.

WP4 is keeping an eye on the ongoing negotiations for the AIA and the CoE's AI Convention, as well as any other developments that may be relevant to STARLIGHT both from an ethical and legal perspective.

[1] High-Level Expert Group on Artificial Intelligence (2019). Ethics Guidelines for Trustworthy AI. European Commission. Available at https://ec.europa.eu/newsroom/dae/document.cfm?doc_id=60419.

[2] European Commission (2020), White Paper on Artificial Intelligence – A European approach to excellence and trust (COM(2020) 65 final). Available at: https://ec.europa.eu/info/sites/default/files/commission-white-paper-artificial-intelligence-feb2020_en.pdf.

[3] Floridi, L., et al. (2018). AI4People -An ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations. Minds & Machines 28, 689–707 (2018). Available at: https://doi.org/10.1007/s11023-018-9482-5; Leslie, D. (2019). Understanding artificial intelligence ethics and safety: A guide for the responsible design and implementation of AI systems in the public sector. The Alan Turing Institute. Available at: https://doi.org/10.5281/zenodo.3240529.

[4] https://www.ap4ai.eu/: Akhgar, B., et al (2022), Accountability principles for Artificial Intelligence (AP4AI) in the internal security domain, AP4AI Framework Blueprint. Available at: https://www.europol.europa.eu/cms/sites/default/files/documents/Accountability_Principles_for_Artificial_Intelligence_AP4AI_in_the_Internet_Security_Domain.pdf.

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STARLIGHT

Newsletter Issue # 1 • November, 2022

Project Details

- **Project title**: Sustainable Autonomy and Resilience for LEAs using AI against High priority Threats.
- **Starting date:** 01/10/2021.
- **Duration in months:** 48.
- **Topic**: SU-AI02-2020, Secure and resilient Artificial Intelligence technologies, tools and solutions in support of Law Enforcement and citizen protection, cybersecurity operations and prevention and protection against adversarial Artificial Intelligence.

Strategic Goals

- Improve the widespread **UNDERSTAND**ing of AI across LEAs.
- Provide opportunities to LEAs to **EXPLOIT** AI tools and solutions.
- Ensure that LEAs can **PROTECT** their own AI systems.
- Raise LEAs' expertise and capacity to **COMBAT** the misuse of AI-supported crime and terrorism.
- **BOOST** AI for LEAs in Europe.

Contact

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Follow Us

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Twitter: @starlight_h2020

Consortium

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 101021797.


STARLIGHT
Sustainable Autonomy and Resilience for
LEAs using AI against High Priority Threats
Newsletter Issue #2, November 2023
www.starlight-h2020.eu

MESSAGE FROM THE PROJECT COORDINATOR

Welcome to the second edition of our newsletter as we bid our farewell to the STARLIGHT project's second year, filled with significant achievements and progress.

The project has made notable strides in developing innovative tools to bolster European Law Enforcement Agencies (LEAs), ensuring they are ethical, transparent, and accountable.

We are grateful for the collaboration and support from all contributors that are playing a crucial role in the project's success.

Over the past year, our team has been actively participating in seminars and workshops, sharing knowledge, and receiving constructive feedback from the community.

October was a month filled with significant events and milestones for STARLIGHT. We had the pleasure of participating in the Security Research Event (SRE) 2023 in Brussels, where we showcased our latest developments and engaged with fellow researchers and security practitioners.

This was followed by our third ToolFest and the first Physical Pilot in Brussels, where our technical partners had the opportunity to demonstrate their tools, offering a valuable showcase for our technological advancements.

The feedback received from our partner LEAs during these events has been extremely valuable, providing direction for the further refinement and enhancement of our tools.

As we move into the project's third year, we are inspired by your continuous support and are eager to share our key milestones, aspirations, and partnerships in this edition.

Our aim is to continue fostering collaboration between researchers and security practitioners driving the project forward and ensuring the rapid adoption of our AI-driven solutions.

This interaction will continue to facilitate the fast and effective uptake and adoption of our AI solutions.

I encourage you to stay connected with us through email, social media, and our project website to receive the latest updates and participate in our shared journey towards a safer and more secure Europe.

Thank you for your ongoing support.

Warm regards,
Nizar Touleimat

PAGE TWO

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 101021797.

HIGHLIGHTS OF YEAR TWO

In our second year, we were actively involved in a diverse range of activities as part of our project. We are pleased to share an overview of these engaging events with you.

January 25th and 26th, 2023: Joint conference on "Ethical and Legal Aspects of AI for Law Enforcement" in Brussels, Belgium.

February 7th and 8th, 2023: Seminar on Modern Technologies for Combating Terrorism Financing in Athens, Greece.

February 15th, 2023: Final AIDA Workshop in Rome, Italy.

February 24th, 2023: Information Day for the AIDA Project in Athens, Greece.

March 23rd, 2023: CERIS seminar on Artificial Intelligence for Security Purposes in Brussels, Belgium.

March 28th to 30th, 2023: General Assembly and 1st ToolFest in San Sebastian, Spain.

May 29th to 31st, 2023: RISE-SD in Rhodes, Greece.

June 15th, 2023: STARLIGHT 2nd ToolFest, online event.

June 21st and 22nd, 2023: ALIGNER 5th public workshop in Sankt Augustin, Germany.

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June 22nd, 2023: The Second Edition of the Cyber Journey—the European Edition in Cagliari, Italy.

July 7th, 2023: "Cybersecurity of AI and AI for Cybersecurity" webinar organised in conjunction with CLAIRE.

July 27th, 2023: INFINITY final demonstration event at Sheffield Hallam University in Sheffield, United Kingdom.

September 4th and 5th, 2023: SPIE Conference on Artificial Intelligence for Security and Defence Applications in Amsterdam, Netherlands.

September 13th–15th, 2023: 18th International Conference on Critical Information Infrastructure Security (CRITIS2023) in Helsinki, Finland.

September 19th, 2023: popAI final event in Brussels, Belgium.

October 24th and 25th, 2023: Security Research Event (SRE) 2023 and 3rd ToolFest in Brussels, Belgium.

October 26th, 2023: First Physical Pilot at the Belgian Federal Police in Brussels, Belgium.

October 26th, 2023: Second Anti-FinTer Policy Seminar in Brussels, Belgium.

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 101021797.

MAIN ACHIEVEMENTS IN YEAR TWO

In **Work Package 2 (WP2): STARLIGHT Framework specification for trustworthy, accountable, responsible and transparent AI in support of LEAs**, EUROPOL leads the effort to formulate a vision for the utilisation of AI within law enforcement. They have been actively involved in the first, second, and third rounds of CODEV cycles, commencing with small-scale ones to showcase the potential and viability of AI applications. WP2 identifies promising use cases and conducts thorough assessments of outcomes.

Extensive interactions have taken place among EUROPOL, LEAs, and technical partners through an array of activities, including virtual and face-to-face workshops, dedicated visits where community representatives from different LEAs visited various locations, and the organisation of innovative workshops. These activities have contributed to the design of the STRALIGHT framework, the supervision of co-development cycles, and the consolidation of the AI community. WP2 maintains continuous communication with the LEAs involved in the project to understand the latest AI gaps and best practices. Interviews are conducted to update LEA practices and gap analysis reports. EUROPOL also gathers input from LEAs regarding their evolving user requirements.

Feedback from LEAs and technical leaders on past CODEV work has been collected. The elicitation and formalisation of user requirements are fundamental aspects of the project, and EUROPOL's leadership involves periodic meetings, facilitating interaction among partners and users to promote discussions, brainstorm solutions, and co-create results, often through collaborative workshops. These workshops provide a favourable and constructive environment for gathering requirements, resolving issues, and identifying short and mid-term goals.

WP3: STARLIGHT community building and management of the project focuses on bringing together the STARLIGHT community to work towards a common goal. WP3 has been aligning and refining the various approaches and methodologies that have been developed since the start of the project. Their goal is to create a smooth process that starts with identifying the specific needs of law enforcement agencies and ends with delivering precise tools tailored to address those needs. This continuous loop ensures that feedback from law enforcement is used to refine the tools, making them more effective and user-friendly.

Earlier this year, a crucial meeting at EUROPOL laid the foundation for this collaborative journey. At this meeting, the roles and responsibilities of each partner were clearly defined. Then, in September, a dedicated workshop in Vienna focused on how to transition our prototypes into fully-fledged, market-ready solutions.

As we move forward, the WP3 team is excited to apply this refined methodology to upcoming projects and to make it a core part of STARLIGHT and a blueprint for future European initiatives.

In **Work Package 4 (WP4): Ethical, Legal, Societal & privacy impact & assessment**, the Katholieke Universiteit Leuven (KUL), in collaboration with the Netherlands Organisation for Applied Scientific Research (TNO), provided policy and data-compliance guidance to STARLIGHT partners concerning the use of databases identified in WP5.

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 101021797.

The deployment of the AP4AI tool in a co-development (CODEV) cycle is progressing well, due to the collaboration between Cybercrime Research Institute GMBH (CRI) and the Centre of Excellence in Terrorism, Resilience, Intelligence and Organised Crime Research (CENTRIC), with support from other partners.

Moreover, the Center of Security Studies (KEMEA) has been focusing on the TRL Calculator to assess the state-of-the-art legal and ethical subsection in preparation for the WP10 pilot.

PLUSETHICS has been working to mitigate algorithmic biases through collaboration with the Lithuanian Cybercrime Center of Exellence for Training, Research & Education (L3CE), TNO, the Centre for Research & Technology, Hellas (CERTH), the AIT Austrian Institute of Technology GMBH (AIT), the French Alternative Energies and Atomic Energy Commission (CEA), and Universidad Politécnica de Madrid (UPM) on the Assessment List for Trustworthy Artificial Intelligence (ALTAI) functionalities.

WP5: European Training/Testing Datasets fostering AI in support of LEAs made considerable advancements, with an array of new datasets and data-centric tools coming to the fore. Our achievements include the development of five collection and annotation tools, five anonymisation tools, and eight synthetic data generation tools, the majority of which are now primed for utilisation by LEAs.

Furthermore, over 100 pre-existing or public datasets have been scrutinised from legal and ethical standpoints; ten new datasets have been amassed or annotated; five datasets have been anonymised; and eight datasets have been generated.

Our rigorous testing has ensured that our privacy-preserving data handling protocols are robust, catering to both balanced and unbalanced data sets. Moreover, seven datasets have been meticulously assessed, with particular attention paid to bias.

Last but not least, WP5 have devised a benchmark framework, establishing uniform tool performance reporting structures that will facilitate comprehensive comparison and benchmarking of the tools in question.

PAGE FIVE

WP6: AI-based multi-source data sensing and understanding is committed to developing innovative methods and tools for optimal content acquisition and efficient data extraction. Significant progress has been made on all WP6 tasks over the past year with a focus on prioritised functionalities to meet the needs of LEAs in the CODEV cycles.

During the first CODEV cycle, two main functionalities were chosen and presented at the General Assembly in San Sebastian. For the second cycle, in addition to those, three more functionalities were introduced, with results to be showcased at the next GA. Additionally, over 20 WP6 tools were showcased at the third ToolFest, with six tools making their mark in the first Pilot during the SRE 2023 in Brussels.

WP7: AI-based tools supporting enhanced LEAs' investigation and intelligence capabilities is centred on providing LEAs with cutting-edge AI tools. These tools aim to transform minimal data into valuable insights, monitor suspicious activities within illegal networks, predict potential threats, automate online operations, and support decision-making for optimal knowledge use.

Our approach includes multidimensional data fusion, advanced intelligence exploration, monitoring illegal activities, behavioural analysis, early illicit activity prediction, extensive temporal and geospatial analysis, recommendation tools for clear decision support, autonomous online agents, and integrating robotics swarm intelligence into operational planning.

We have made significant advances, contributing to several scientific publications and showcasing our tools' capabilities at internal events.

Our collaborative development cycles have successfully incorporated LEA requirements into our tools, ensuring they are both effective and relevant to their needs.

This project has received funding from the European Union's Horizon 2020 Research and Innovation Programme under Grant Agreement No. 101021797.

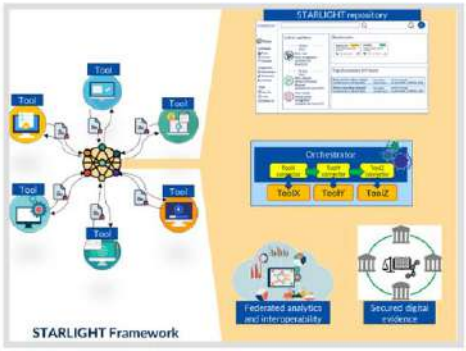
In **WP8: AI-based tools supporting enhanced LEAs' investigation and intelligence capabilities** our primary focus is on enhancing Threat Intelligence (ThINT) capabilities to understand and mitigate potential cybersecurity threats.

This is crucial for law enforcement authorities, equipping them with the necessary tools to stay ahead of cybercriminals, gather vital evidence, safeguard critical infrastructure, and collaborate with various stakeholders to bolster cybersecurity and public safety. AI plays a pivotal role in sifting through extensive datasets to provide actionable threat intelligence. This integration of AI not only expands the scope of threat monitoring but also significantly improves accuracy by filtering relevant information.

Notably, emerging threats are now targeting AI systems, highlighting the urgent need for comprehensive threat-risk assessments by law enforcement authorities. Such assessments are crucial to gauging the level of risk associated with systems that integrate AI.

In light of this, WP8 of STARLIGHT is diligently working to enhance tools such as ThINT from partner Engineering Ingegneria Informatica S.p.A. (ENG) and Dark Web Monitor from CFLW Cyber Strategies BV (CFLW). Additionally, we are in the process of developing a new threat risk assessment framework.

WP9: STARLIGHT Framework for trustworthy, accountable, responsible and transparent LEA AI solutions focuses on providing a centralised framework to cater to the diverse needs of LEAs.

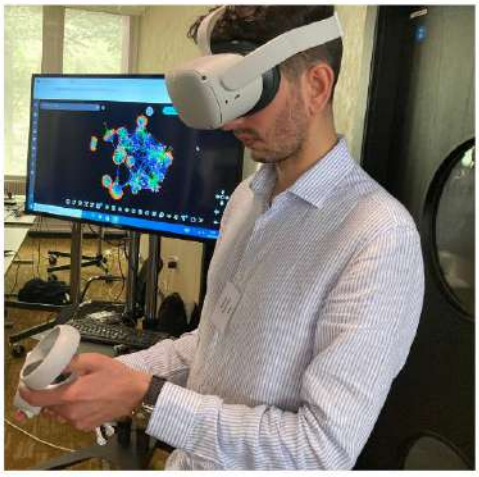


This framework includes a **Repository**, which acts like a marketplace, allowing technical partners to upload AI-based tools, models, and datasets. LEAs can then access these resources and engage in discussions through a dedicated forum.

Another integral part of the framework is the **Orchestrator**, which facilitates the execution of tool pipelines, streamlining the data processing for LEAs and enabling them to retrieve final results efficiently.

The framework is further enhanced by **Distributed Analytics** and **Secured Digital Evidence**, which provide a means for analysing data from different LEA entities without compromising privacy. This approach is essential for computing federated statistics on datasets used to train tools.

Moreover, the **Secured Digital Evidence** layer ensures a digital Chain of Custody approach, meticulously tracking access to digital evidence and imposing strict access rules.



In its second year, **WP10: Pilot demonstration and user evaluation in operational environments**, has seen significant progress. Building on the groundwork laid with WP2 and WP4 in the first year, we have successfully outlined the operational scenarios necessary for execution, demonstration, and user evaluation.

A notable milestone during this period was the planning and execution of the 1st Physical Pilot. This event saw eight AI tools being demonstrated and tested by participating LEAs, following the four scenarios described in two use cases, namely Counterterrorism and Cybersecurity-Cybercrime.

Following this pilot, we will soon initiate the evaluation process, involving both LEAs and technical partners, to gain valuable insights for refining and modifying the tools for upcoming pilot rounds.

Additionally, we have successfully conducted three Tool Fests in March, June, and October, with more scheduled for the future. These events provide an excellent platform for hands-on demonstrations of the novel AI tools developed within the project.

Lastly, we are pleased to announce that the first customised STARLIGHT version of the TRL Calculator is now ready for use by both LEAs and technical partners to assess the tools' Technology Readiness Level (TRL).

WP11, Fostering the adoption of AI in support of the EU LEAs, is instrumental in the dissemination and communication of the STARLIGHT project, using platforms such as social media, newsletters, and events to engage with various stakeholders including policymakers, industry experts, and the general public.

Activities under WP11 include producing two videos demonstrating the practical applications of AI tools, publishing the project's annual newsletter, and providing regular social media updates. Participation in key industry conferences and workshops, as well as collaboration activities with other projects in the AI cluster, such as popAI and ALIGNER, further enhances the project's visibility.

The awareness campaign of WP11 is designed to engage users in discussions and activities, targeting specific audiences based on their needs. This is achieved through a multi-modal campaign approach, consisting of a series of strategic events.

Progress to date includes the development of a conceptual framework, a matrix of target groups, and an awareness activity worksheet. Collaborative workshops with WP leaders have been conducted to synchronise efforts across the project.

Future tasks include reviewing results, planning actions for specific target groups, mapping cross-task activities, and outreach to external audiences.

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OPTIMISING LAW ENFORCEMENT WITH AI

Advanced Threat-Risk Assessment and Intelligence Tools for Modern Challenges

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In today's rapidly evolving landscape of crime, law enforcement agencies face an unprecedented range of digital threats. As criminal activities increasingly shift to the online realm, proactive measures become ever more vital. Threat Intelligence tools are pivotal in strengthening our defences, providing timely insights into potential threats, and enabling law enforcement to stay one step ahead in the ever-changing landscape of criminal behaviour.

The Power of AI-Driven Tools

AI-driven Threat Intelligence tools are proficient in data analysis, combing through vast amounts of data to detect patterns, anomalies, and correlations in real-time. These tools arm law enforcement with actionable insights into potential threats, expediting the investigative process and allowing for early intervention to disrupt criminal activities before they escalate.

Ethics and Responsible Use of AI

It is crucial that AI tools are used responsibly, navigating the ethical complexities of technological advancements. As law enforcement agencies integrate AI into their frameworks, a commitment to responsible and transparent practices is paramount. This commitment fosters public trust and ensures the security of AI tools against malicious attacks.

Risk Assessment Tools Developed by the Consortium

Consortium partners have developed two tools to assess the risks associated with using AI systems: qAIScore and AIRMF. qAIScore supports a qualitative multicriteria analysis based on the ALTAI List. The tool supports users, via a user interface, to manage multiple assessments simultaneously and allows for assessors to register all their scores and comments on the different assessment elements.

AIRMF is a cybersecurity risk management framework for systems with AI components, with a focus on quantitative measures. This tool can be viewed as an AI-focused extension of existing frameworks. It supports users in assessing the risks of different components at different levels, with a focus on quantifying the assessment where possible.

Threat Intelligence Tools

STARLIGHT partners have also developed two threat intelligence tools. The Dark Web Monitor automates the collection and classification of illicit content on the Dark Web, allowing law enforcement to filter content based on relevance and urgency. Assigning tags to dark websites based on their textual content to classes such as carding and drug and narcotics makes monitoring specific parts of the dark web focused and proportional. Given that crimes evolve, it is ensured that there is an expert in the loop to evaluate content for which the AI is not confident.

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The **Threat Intelligence module (ThINT)** identifies potential threats from a variety of sources, including social media and the dark web, using state-of-the-art natural language processing algorithms and deep learning techniques. It meticulously analyses the content of textual data, sifting through vast volumes of information. The tool has been developed to provide essential support to LEAs in proactively identifying potential threats originating from the web and focusing their investigative efforts on the most relevant and urgent cases.

Looking Ahead

During the remainder of the project, partners will continue to refine these tools to ensure law enforcement agencies can responsibly utilise AI for threat-risk assessment and threat intelligence.

OPEN ACCESS SCIENTIFIC PUBLICATIONS IN YEAR TWO OF THE PROJECT

Pham, L., Ngo, D., Salovic, D., Jalali, A., Schindler, A., Nguyen, P. X., Tran, K., & Vu, H. C. (2023). "Lightweight Deep Neural Networks for Acoustic Scene Classification and an Effective Visualization for Presenting Sound Scene Contexts." *Applied Acoustics*, 211, 109489. doi: 10.1016/j.apacoust.2023.109489.

Jalali, A., Graser, A., & Heistracher, C. (2023). "Towards eXplainable AI for Mobility Data Science." *arXiv preprint* arXiv:2307.08461.

Graser, A., Jalali, A., Lampert, J., Weißenfeld, A., & Janowicz, K. (2023). "Deep Learning From Trajectory Data: A Review of Neural Networks and the Trajectory Data Representations to Train Them." *Workshop on Big Mobility Data Analysis BMDA2023* in conjunction with *EDBT/ICDT 2023*.

Jalali, A., Haslhofer, B., Kriglstein, S., & Rauber, A. (2023, July). "Predictability and Comprehensibility in Post-Hoc XAI Methods: A User-Centered Analysis." In *Science and Information Conference* (pp. 712-733).

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Project Details

- **Project title:** Sustainable Autonomy and Resilience for LEAs using AI against High priority Threats.
- **Starting date:** 01/10/2021.
- **Duration in months:** 48.
- **Topic:** SU-AI02-2020, Secure and resilient Artificial Intelligence technologies, tools and solutions in support of Law Enforcement and citizen protection, cybersecurity operations and prevention and protection against adversarial Artificial Intelligence.

Strategic Goals

- Improve the widespread **UNDERSTAND**ing of AI across LEAs.
- Provide opportunities to LEAs to **EXPLOIT** AI tools and solutions.
- Ensure that LEAs can **PROTECT** their own AI systems.
- Raise LEAs' expertise and capacity to **COMBAT** the misuse of AI-supported crime and terrorism.
- **BOOST** AI for LEAs in Europe.

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