CSI-COP

Citizen Scientists Investigating Cookies and App GDPR compliance

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Deliverable D6.4 | D23

Citizen Science Stakeholder Cafés

Delivery due: 30 June 2023; Delivery date 14 July 2023

LEAD Partner for deliverable: UPAT

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Version: 2.6

Version control

<table>
<tr><td colspan="5" align="center">**Version Control**</td></tr>
<tr><td>Version</td><td>Date: 2023</td><td>Author(s)</td><td>Institution</td><td>Reason for Change</td></tr>
<tr><td>1</td><td>21.05.23</td><td>Huma Shah</td><td>CU</td><td>First draft</td></tr>
<tr><td>1.2</td><td>31.05.23</td><td>Yannis Gialelis, Maayan Zhitomirsky-Geffet, Maria Hinsenkamp, Tiberius Ignat</td><td>UPAT, BIU, NaTE, IB</td><td>Added content</td></tr>
<tr><td>1.3</td><td>15.06.23</td><td>Olga Stepankova, Ulrico Celentano</td><td>CTU, UOULU</td><td>Added content</td></tr>
<tr><td>2</td><td>27.06.23</td><td>Huma Shah</td><td>CU</td><td>Revised structure to address identified stakeholders and impacts achieved.</td></tr>
<tr><td>2.1</td><td>04.07.23</td><td>Yannis Gialelis and Huma Shah</td><td>UPAT, CU</td><td>Added content</td></tr>
<tr><td>2.2</td><td>08.07.23</td><td>Huma Shah</td><td>CU</td><td>Rearranged content for coherence. Added content on Ideas Fest and Invited talks.</td></tr>
<tr><td>2.3</td><td>10.07.23</td><td>Huma Shah</td><td>CU</td><td>Added content</td></tr>
<tr><td>2.4</td><td>12.07.23</td><td>Yannis Gialelis</td><td>UPAT</td><td>Added UPAT content</td></tr>
<tr><td>2.5</td><td>13.07.23</td><td>Huma Shah</td><td>CU</td><td>Added final content from NaTE, BIU, CTU, CU, and IB, wrote Executive Summary, finalised Introduction and closing paragraphs</td></tr>
<tr><td>2.6</td><td>14.07.23</td><td>Yannis Gialelis & Huma Shah</td><td>UPAT & CU</td><td>Final edits</td></tr>
</table>

Table of Contents

Executive Summary

A variety of stakeholders were identified in CSI-COP proposal's planning phase. In terms of the EU's general data protection regulation (GDPR) and its principles of transparency and informed consent, stakeholders are anyone who uses the Internet. With respect to compliance of regulations guarding data gathered from users of websites and apps, stakeholders would be proponents of the current GDPR, the EU, data protection policymakers, and online privacy lawyers. In terms of developing Internet technologies, the stakeholders are web and app developers, computer scientists, big tech, and ethicists concerned with innovations in artificial intelligence. For society at large, stakeholders include libraries, museums, universities, scientists, and students. This deliverable presents specific project activities related to reaching this broad range of stakeholders in CSI-COP and the expected and other impacts realised. The stakeholder activities detailed in this report highlight the myriad of opportunities that CSI-COP partners found and leveraged to raise awareness of the project's goals. The stakeholder cafés organised by partners across Europe and in Israel disseminated and exploited project's results by securing accessible venues and engaging a variety of stakeholders, including parts of the media through partner radio and TV interviews, citizen science researchers, scientists, policy makers, small and medium businesses, and big tech. The impacts realised showed a balance of males and females from young teens to silver surfers, the project's engagement actions in a responsible way so nurturing privacy champions. The stakeholder activities increased citizen science engagement in one part of Eastern Europe (Hungary) through partner NaTE events in Budapest. The combined partner activities achieved CSI-COP's short-term impact by raising awareness of privacy rights under GDPR. The long-term impact, for ethical development of technologies producing pro-privacy software, is achievable through CSI-COP's upskilling of educators and bringing the project's new knowledge and tools to students in higher education learning web and app development in the computer science, data science and artificial intelligence courses.

Keywords

Apps, citizen scientists, educators, GDPR, media, Repository, scientists, stakeholders, students, Taxonomy, websites.

Introduction

Stakeholder engagement was crucial to achieve CSI-COP project's specific objectives, including setting up a citizen science project (see deliverable report D2.3 'Framework for Engaging Citizen Scientists': Stepankova et al., 2020), and to realise its expected impacts. Designing a project to investigate the compliance of an EU regulation about online general data protection included identifying who the stakeholders were. A CSI-COP stakeholder is anyone who uses the Internet to visit a website or use an app for whatever purpose. This specific stakeholder cohort is the 'general public' whom the project engaged to join the project as citizen scientists (see deliverable report D2.2 'Guidelines for Citizen Science Recruitment': Hinsenkamp et al., 2020). The citizen science stakeholder group collaborated alongside the project's researchers investigating compliance of the general data protection regulation (GDPR), as it applies to websites and apps through transparency and gaining informed consent to share collected personal data with third parties. Other stakeholders in CSI-COP include those who could use the project's findings for educational purposes, and others who would benefit from the results of monitoring compliance of the GDPR in websites and apps.

This deliverable report details the various actions to disseminate CSI-COP to reach a wide audience through 'stakeholder engagement cafés' as identified in the project's strategy for communication, dissemination and exploitation - CDE (see deliverable report D6.7 'CDE Strategy': Shah et al., 2021). The next section explains the specific stakeholders CSI-COP aimed to reach.

Stakeholders

Stakeholders identified for CSI-COP project were as follows:

- **Citizen scientists** who might not want to learn about data protection in an informal way rather than follow the rigidity of formal education in college or university

- **Scientists** whose limited human resources for research projects might benefit from the inclusion of enthusiastic and motivated citizen scientists

- **Citizen science researchers** understanding the limits on citizen scientists' involvement (including sufficient time to devote to citizen science activities; lack of knowledge of opportunities available to participate in meaningful research and innovation projects)

- **Funders of citizen science projects** benefits to the local economy and society of citizen scientists collaborating with professional scientists in real-world projects

- **School and College Teachers** who might be looking for new ways to engage their pupils and students in technology activities [Note a separate series of specific activities for this stakeholder group are described in another CSI-COP deliverable report (D6.5) arising from parent-teacher roundtables.]

- **Parents** wanting to disengage their children from their mobile phones or computer games to interact more with other humans and with nature, thereby reduce the amount of data collected from interacting with the web

- **National Governments** recognition of citizen scientists' contributions and utilising their power to approve accreditation and validation of citizen science activities

- **University departments** responsible for creating outreach events and positively influencing engagement in formal STEM courses to bridge the technology skills gap

- **STEM Employment Recruiters**: looking for way to close the technology skills shortage by considering citizen scientists' informal education through participation in citizen science activities

- **Science and technology SMEs**: organisations whose core business is doing science, developing new technologies from science

- **Science and technology education researchers**: looking at new ways to engage more into people into science, particularly females and boys from disadvantaged homes

- **Science and technology journalists:** using the repository of trackers as a tool to inform the public how to better protect themselves from cookies and apps with software tracking their movement and behaviour across the Internet.

- **Libraries and Museums**: who provide access to computing devices and may need to consider privacy controls in any apps and website cookies made available for public use.

- **Tech Giants:** innovate pro-privacy technologies responding to society's privacy concerns

Engaging the different stakeholders listed above aimed at achieving the project's **short-term goal: Raise awareness of privacy rights under GDPR** and CSI-COP's expected impacts.

CSI-COP Expected Impacts

Alongside CSI-COP's short-term goal, the purpose of the project's stakeholder engagement aimed at achieving these **expected** and **other impacts**:

➢ Impact on the Citizen Scientists (Expected Impact 3 in the proposal and grant agreement)
➢ Impact on the science: GDPR compliance (Expected Impact 5)
➢ Impact on Society (Expected Impact 6)
➢ Upskilling the Public and Educators (Other Impact 3)
➢ Improving pro-privacy development in higher education courses (Other Impact 4)
➢ Reducing Barriers (Other Impact 6)
➢ Gender, socio-economic and geographical factors (Other Impact 7).

Table 1 overleaf shows the reach of CSI-COP through its stakeholder activities and the impacts realised.

The remainder of this report details the participation in externally organised events, and the organisation of internal events by partners to convey how CSI-COP reached far and wide. These stakeholder cafés are presented in the partner order beginning with the Coordinating partner, Coventry University, in each sub-section (External | Internal events). Partners arranged media interviews to reach stakeholders. CSI-COP participated in big and prestigious events such as the Ideas Festival, UK (External events), and partners organised stakeholder activities (Internal Events). This deliverable does not detail parent-teacher roundtables, a separate identified stakeholder group for whom separate activities were organised (see deliverable report D6.5| D24 from the CSI-COP project website results page: https://csi-cop.eu/projectresults/).

Citizen Scientists
Investigating Cookies
& App GDPR Compliance

Table 1: CSI-COP stakeholder reach and impacts realised

Stakeholders	CSI-COP Activity	Indicators to measure Impact and Impacts realised
Citizen scientists	Recruitment, engagement and delivery of practical training	Science communication through informal education into GDPR
Scientists	Invited talks in academic events: British Computer Society (BCS); Brocher Foundation; Council of Europe Professional Informatics Societies (CEPIS)	Responsible Research and Innovation (RRI) Training. Ethics at the level of the University and other partners in CSI-COP consortium
Citizen science researchers	Participation in CitSciVirtual and ECSA events	Partnership for goals
Funders of citizen science projects	Reviewing UK EPSRC AI proposal involving citizens.	Responsible Research and Innovation (RRI) Training & Balanced recruitment of male, female and other gender citizen scientists: Raised awareness of ECSA's ten principles of citizen science.
Parents	Newsletters (CSI-COP, ECSA, others); Ideas Fest, Researchers' Nights	Citizen science engagement. Science literacy and education: Raised access to opportunity to gain new knowledge: free informal education resource 'Your Right to Privacy Online'
National Governments	Contribution to UK Parliament: House of Commons Science and Technology Committee's inquiry, 'The right to privacy: digital data'. Written evidence submitted 25.01.22 by Coventry University's Dr. Huma Shah: *'Who has my data and why?'*	Active information search about controversial technology. Policy-oriented engagement with science
University departments	Internal communication and dissemination	Public engagement performance mechanisms at the level of research institutions
Science and Technology SMEs	Year1-end meeting December 2020- invited speaker in open session: Steve Zukor of SoloSegment.	Public engagement: SME SoloSegment became aware of 'privacy by design'.
Science and technology education researchers	Article 'The Cookie Jar' in external publication: 'The International Teacher Magazine' https://consiliumeducation.com/itm/2021/11/15/the-cookie-jar/	Open Access Literature

CSI-COP
Citizen Scientists
Investigating Cookies
& App GDPR Compliance

	Article 'Chraňme si své soukromí!' (Be aware of your privacy!) in CTU partner's internal magazine: TecniCall: https://media.cvut.cz/cs/publikace/20221017-tecnicall-podzim-2022#page/31	Science communication: raised awareness of CSI-COP citizen science project concerning GDPR compliance.
Science and technology journalists	Interviews of CSI-COP partners in the media: Professor Yannis Gialelis (UPAT), Professor Jordi Vallverdú, and Dr. Eva Jose Casabella (UAB)	
Libraries and Museums	Attendance in monthly meetings of the European Citizen Science Association- ECSA. Correspondence with The Library and Information Association (CILIP) CU stakeholder event in Memento museum, Auch, France.	Partnership for goals
Tech Giants	Application to inaugural industry award: PICCASO Privacy. Interaction with TikTok, and Meta.	CSI-COP reached industry through its award for 'Best Innovative Privacy Project' in the 2022 Piccaso Privacy awards. Raised awareness of CSI-COP project.

Next, are detailed the external events CSI-COP participated in, following that, the internal events organised to reach a variety of stakeholders to disseminate CSI-COP results.

External Engagements

CSI-COP leveraged opportunities to participate in external events through media interviews and invited talks. These are described in the next section.

Media Engagement

Reaching the media was done through press releases, a remote impersonal activity, at seminal points in the project, for example by Coventry University on the launch of CSI-COP's privacy-by-design website (CU, 2020), launch of the free informal education resource, and through university project research news inviting members of the general public to join CSI-COP as citizen scientists (CU, 2022). CSI-COP achieved deeper connection with the wide general public reach in Greece and in Catalonia through the media engagement of two project partners: University of Patras (UPAT) and Universitat Autonoma de Barcelona (UAB). The media engagement was initiated in spots in their national and local television and radio interviews and are described next.

University of Patras - UPAT

On 21 January 2023, Dr. Yannis Gialelis from the University of Patras was interviewed by Mr. Vassilakis, a journalist from the Greek National Radio Network, in the Patras studios (Image 1). The discussion centred around the CSI COP project, beginning with a comprehensive overview of the project. Dr Gialelis and the interviewer then delved into the topic of online tracking and the importance of avoiding cookies. The journalist was keen to find out about websites' compliance with the GDPR and the general public's awareness of their right to privacy online. The conversation also included a focus on the design and implementation of the project's workshops. Finally, the interview ended with Mr. Vassilakis asking for practical tips for the listeners on how to deactivate trackers and protect their personal data.

Image 1: UPAT's Dr Yannis Gialelis (left)

Universitat Autonoma de Barcelona - UAB.

Catalunya Radio interviewed **UAB**'s Professor **Jordi Vallverdú** about the CSI-COP project (see Image 2) from Twitter account of journalist Mariola Dinarès i Quera @PopapCatradio). Jordi was also interviewed on **data ethics** for an economy channel. Jordi's second interview in Spanish can be read here.

Image 2: UAB's Jordi Vallverdú

Catalan TV interviewed UAB's Dr. Eva Jove Casabella during CSI-COP project's main dissemination and exploitation event, this is reported in D6.3|D22, 'CSI-COP Main Dissemination and Exploitation Event' (Shah & Winter, 2023).

Next, Coventry University explains its engagement with a diverse range of stakeholders, including with TikTok, in a big festival held in Wickham, Hampshire, UK in August 2022.

Big Festivals: Ideas Fest 2022

CSI-COP coordinating partner, Coventry University, gained wide visibility by sponsoring the inaugural Ideas Fest in Wickham, Hampshire-UK in August 2022 (Image 3). The Ideas Fest provided a great opportunity to engage with all kinds of stakeholders, including other sponsors, and attendees of the big event, such as entrepreneurs, retirees, and big tech personnel from TikTok (Image 4). CSI-COP 's Dr. Huma Shah, and Research Assistant and Creativity Manager, Jaimz Winter were accompanied by PhD students/CSI-COP citizen scientists volunteering at the event, Sara Sardari; Rashid Barket (Image 5).

The two-day Ideas Fest allowed Coventry University, the only UK higher educational establishment present as a sponsor in the big festival, to host lively conversations about how to protect personal data online with many passersby. Visitors could play a free online game to avoid digital, tracking cookies: '**Cookies Consent speed Run**' (https://cookieconsentspeed.run/). This game features real cookie notices from different websites; players must carefully read the text to reject tracking cookies. The purpose of the game is to show how some websites host opaque cookie notices making it difficult to reject tracking cookies. CSI-COP consumables were offered to visitors playing the game (Image 4).

Image 3:CSI-COP one of the sponsors of Ideas Fest and CSI-COP tent

Image 4: Stakeholders in Ideas Fest 2022: (left) CSI-COP's Jaimz Winter overseeing vistor to CSI-COP tent playing Cookies consent game; (right) TikTok personnel visiting CSI-COP tent.

Image 5 below: Rashid Barket (left), Jaimz Winter (centre), Sara Sardari (right)

The CSI-COP team explained the research and innovation project, funded by the EU investigating GDPR compliance in websites and apps (Images 4&6). Additionally, Dr. Huma Shah, was invited to join one of Ideas Fest's panel discussions, on "*People like me: Why representation matters in the workplace*" (Image 6 – right).

Image 6: (left) Conversations with visitors in Ideas Fest; (right) Participation in panel '*People like me: Why representation matters in the workplace*" (bottom) inside the tent awaiting start of panel session.

Attendees to CSI-COP's involved panel included entrepreneurs and industry experts from private and social enterprises. Coventry University's team gathered contact details from individuals who had shown great interest in finding out more about the project and how they could get involved and become citizen scientists. The personal data was collected in an innovative way on Jaimz Winter's laptop so that registered names and contact details would disappear after input. This technique was created by Jaimz Winter so that people could not see the contact details of others who had registered their interest to be contacted. In this way, CSI-COP demonstrated that not only was the project investigating compliance of the general data protection regulation (the GDPR), in website and apps, it was also implementing compliance in the project by protecting the personal details of interested parties. Following CSI-COP's presence in the Ideas Fest, interested parties were approached to try the free informal education resource.

As an event, and the power of word-of-mouth, data protection was spread with CSI-COP team's explanations of how to avoid accepting tracking cookies in websites, and how to set permissions in apps. TikTok personnel were unable to discuss the company's data protection and privacy issues beyond what was available to read on their website pages. CSI-COP increased the scientific literacy of a wide-range of stakeholders, users of the Internet attending Ideas Fest.
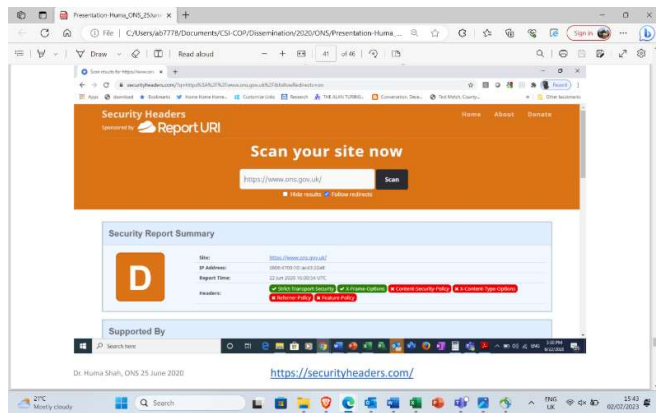
Invited talks that CSI-COP partners delivered in external events are explained next.

Invited Talks: Coventry University

Coventry University's Dr. Huma Shah, lead scientist in CSI-COP, delivered a series of invited talks to a variety of stakeholders. The first few invited talks were delivered online during COVID-19 restrictions in the first year of CSI-COP. This was during the project's research phase, and before the engagement of citizen scientists.

Office of National Statistics (ONS), UK

The UK's Office of National Statistics (ONS) held a series of invited online talks during the COVID-19 restrictions on travel and in-person meetings. On 25 June 2020, Huma Shah delivered a talk '*Complying with the general data protection regulation (GDPR): How hard is it to design privacy-by-default?*'. The ONS "is the UK's largest independent producer of official statistics and the recognised national statistical institute of the UK … responsible for collecting and publishing statistics related to the economy, population and society at national, regional and local levels…plays a leading role in

national and international good practice in the production of official statistics."(Gov.UK, 2023). In her 2020 talk Huma explained the objectives of the CSI-COP project. Huma also showed that the ONS's website could improve its website cybersecurity vulnerability, according to a free online tool 'Security Headers' (see Screenshot 1). The short-term goal of raising awareness of the GDPR was achieved in the talk. However, the ONS website remains at 'D' rating at the time of this report.
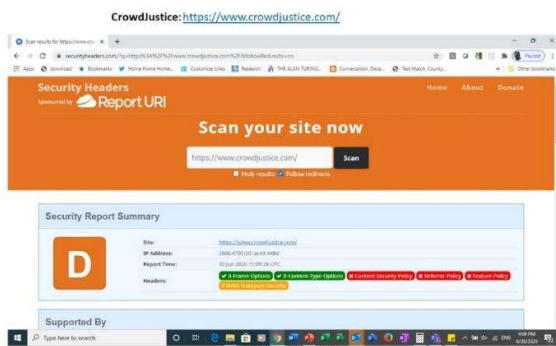
Screenshot 1: ONS invited talk 'Security Headers' report.

Engaging with the ONS realised CSI-COP's stakeholder committment to discuss GDPR issues with scientists.

Crowd Justice

On 1st of July 2020, Huma Shah delivered an online talk to Crowd Justice on the '*Human Rights in the Age of Cookies*'. Crowd Justice is an online platform enabling people and communities to raise money and receive donations for legal cases. For example, 'The People v the Snoopers' Charter' brought by Liberty and The Civil Liberties Trust which received over 1800 'pledges' to reach above its £50,00 target in 2017 (Crowd Justice, 2023).

Huma showed in 2020 that Crowd Justice's website received a rating of 'D' from the free online tool, Security Headers.

Screenshot 2: Security Header rating for Crowd Justice in 2020

In this talk the project's research and innovation around the GDPR became known. However, as in the case of the ONS, Crowd Justice's website remains at 'D' rating at the time of this report. Crowd Justice stakeholder engagement led to their IT personnel, as well as office staff who use websites and apps, becoming aware of CSI-COP project objectives and the GDPR.
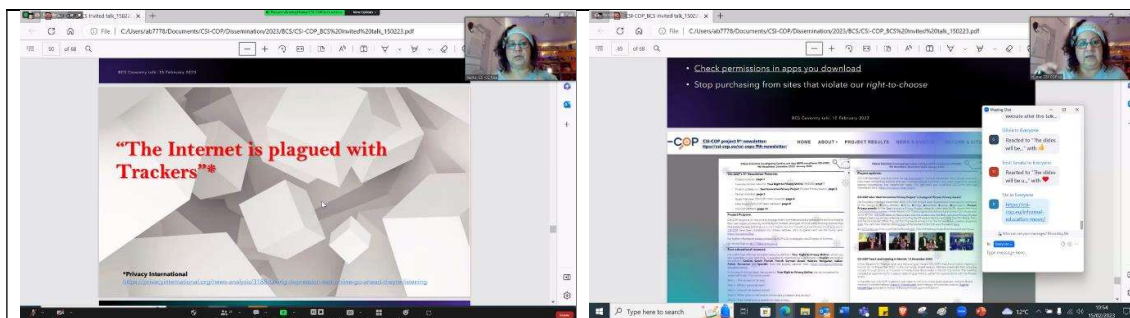
Coventry University's Dr. Huma Shah was invited to participate in two separate events for the British Computer Society (BCS):

    a.   Online for Coventry-UK branch meeting 15.02.23
    b.   In person for the annual BCS **Karen Spärck Jones lecture** in London on 05.06.23

15 February 2023

For BCS's local branch meeting held online on 15 February 2023, Huma presented some of the findings from the CSI-COP project (Screenshot 3). Attendees were shown how to check permissions in their apps from CSI-COP's free informal education resource 'Your Right to Privacy Online'.

Screenshot 3: Slides from Huma's BCS talk 15.02.23

Stakeholders reached in the BCS Coventry online engagement included information technology professionals, computer scientists, university lecturers, some of whom were parents, as well as students.

5 June 2023

On the 5th of June 23, Huma Shah was one of three invited speakers in the 2023 hybrid British Computer Society **(BCS) Karen Spärck Jones Lecture** in the organisation's venue in London (Image 7). As the final speaker of three, Huma invited attendees in person and online to think about female science role models and why it was so difficult to name many notable women scientists, such as the three scientists portrayed in the movie 'Hidden Figures' (IMDB, 2016). Huma also introduced the CSI-COP project and invited attendees to check permissions in apps on their mobile devices (centre photo, Image 7). BCS's Karen Spärck Jones Lecture was streamed live and is available to watch on YouTube at this link: https://www.youtube.com/watch?v=w0Nhy1uJCYY.

Additionally, the BCS interviewed each of the three speakers before the 2023 Karen Spärck Jones Lecture. The question asked was '**Why is it important to inspire more women to pursue a career in tech? (**Screenshot 4)**.** Huma's answers can be heard and viewed on BCS's YouTube page here: https://shorturl.ac/7aubo
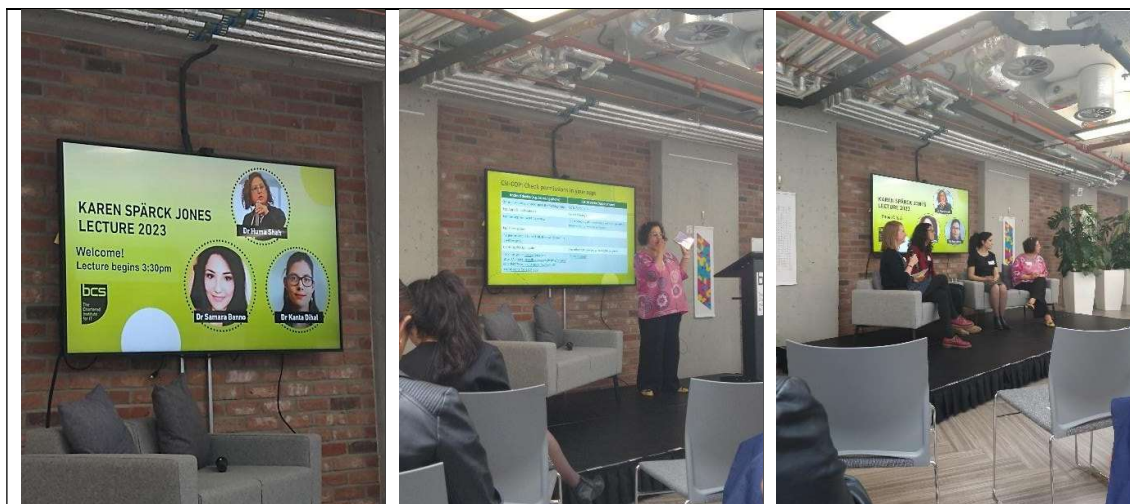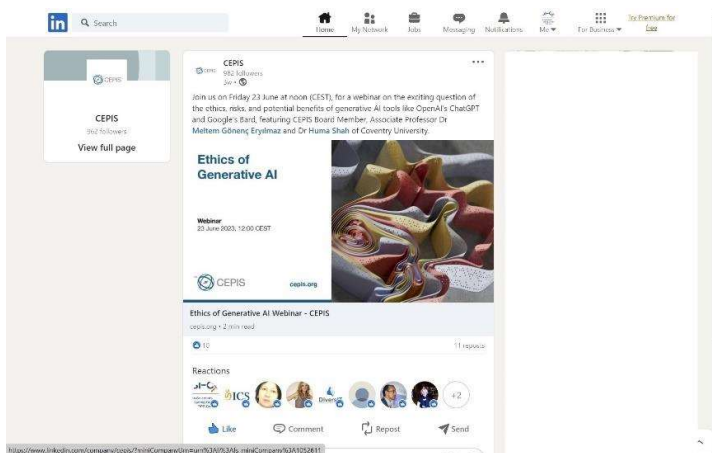
Screenshot 4: BCS YouTube

Image 7: Pictures from 2023 BCS Karen Spärck Jones Annual Lecture

Stakeholders reached in BCS's Karen Spärck Jones Lecture were female and male attendees in-person and online. The event allowed Huma to explain the purpose of the CSI-COP project, raise awareness of the results, including the Taxonomy of cookies (CSI-COP, 2023a), and the Repository (CSI-COP, 2023b). of investigated websites and apps to men and women computer scientists, IT professionals and students.

Council of European Professional Informatics Societies (CEPIS).

Screenshot 5: CEPIS LinkedIn post for 23 June 2023 event with Dr. Huma Shah.

CEPIS members attended CSI-COP'main dissemination and project results exploitation even in Brussels, 26 May 2023. CSI-COP partner Professor Olga Stepankova of Czech Technical University (CTU), introduced Coventry University's Dr. Huma Shah to CEPIS in the project's main dissemination and exploitation event in Brussels in May 2023 (Shah & Winter, 2023). The introduction resulted in an invitation accepted by Huma to participate in a Zoom event on the anniversary of the birth of codebreaker and mathematician, Alan Turing (Shah, 2014). Held online in the morning of 23 June 2023, CEPIS arranged an attendee-driven interaction around the ethics of generative AI (large language models such as ChatGPT from OpenAI). Data protection and privacy issues, in conversational systems that answer human questions online, were relayed to the information scientists attending the event. Hence the stakeholders reached were similar to the attendees in the BCS events.

Other external invited talks and meetings delivered by Coventry University's Huma Shah raising awareness of the extent of online third-party tracking through website visits and app uses, and the rights under the GDPR, and initiating partnerships for goals were:

- 05.08.20: **Digital Women** – online about the role of women in science, including in the CSI-COP project.
- 18.03.21: London Southbank University **(LSBU)**– online. This activity additionally achieved the impact of '**Upskilling Educators**' and **updating web and app development students** about **privacy-by-design.**
- 13.10.21: Invited talk **Brocher Foundation Symposium**, Geneva (CH) – online. Talk on '**Health-Citizen Science dilemmas under the GDPR' raised awareness of the CSI-COP project and the need to comply with the regulation when** collecting and processing sensitive personal data in medical/health information
- 24.08.22 The **UK data protection authority**, the **Information Commissioner's Office (ICO)** online meeting with Vanessa Adams, Lead Intelligence officer, ICO Intelligence department re intersection of work being done in CSI-COP and ICO raising awareness of data protection rights. Huma explained the purpose of CSI-COP's tasks. The ICO revealed connecting to stakeholders was a challenge.
- 05.09.22: Huma Shah met with her local **member of the UK parliament**, **Gareth Thomas, MP** for Harrow-West, London. In the meeting Huma explained the work in CSI-COP and the project's relevance to the **UK's forthcoming Online Safety Bill**, including protecting children online.
- 30 November 2022: **Africa chapter** of the Association for Information Science and Technology (**ASIS&T**) – online. Huma delivered a talk 'AI Safeguards: preserving your right to privacy online': https://www.asist.org/africa-chapter-ai-safeguards-preserving-your-right-to-privacy-online/

Invited Talks: CU & Association of Hungarian Women Scientists (NaTE)

CSI-COP partners Coventry University and NaTE collaborated in an online event organised by the European Citizen Science Association (ECSA) empower group meeting. On **25 January 2022**, CU's Dr. Huma Shah, NaTE's Maria Hinsenkamp and Dorottya Rigler participated in presenting "CSI-COP Inclusive Citizen Science in Online Privacy Project". Huma (CU) presented CSI-COP project's aims, including why inclusivity is an important factor in citizen science and how CSI-COP met these challenges. Referring to CSI-COP's deliverable report D2.2 "Guidelines for inclusive CS recruitment" (Hinsenkamp, et al., 2020). Dorottya Rigler spoke about the effect of the digital divide, the intertwining factors affecting Internet access, skills and usage, the statistical data regarding the demographic and socio-economic composition of participants in existing CS projects. Maria Hinsenkamp raised questions concerning the kinds of diversity factors that affect citizen participation, how to reach and motivate diverse target groups and encourage them. CSI-COP composed 10 recommendations for diversity in CSI-COP. Finally, NaTE presented some early data from learners completing CSI-COP 'Your right to Privacy Online' course. Huma Shah (UK) closed the section by speaking about CSI-COP ongoing work.

CSI-COP partner University of Patras - UPAT's Dr. Yannis Gialelis details his participation in an external event next.

Invited Talks: UPAT

Professor Yannis Gialelis delivered an invited talk in 'The Women in Digital conference 2023' in Athens, Greece (Image 8). This conference provides a platform for accomplished women in IT, technology, industry, retail, and digital marketing sectors to come together. It aims to address the

underrepresentation of women in STEM fields and highlights the skills women can excel in within technology-related disciplines. The conference brings together leading practitioners, mentors, researchers, and executives to share experiences and inspire the next generation of women in STEM. Professionals from various sectors, government officials, and students interested in technology careers also participate, promoting diversity and inclusion in the industry.

Image 8:: (left) Professor Yannis Gialelis presenting CSI –COPs' findings in WiD;
Participation in panel *"Supporting Women in Business Is Essential for Innovation"* (right)

UPAT presentation of CSI COP citizen science experience from a women's perspective at a conference dedicated to women in IT and technology shed light on the gender imbalance issues. The event showcased the opportunities that arise from such initiatives. By emphasizing the underrepresentation of women in citizen science, technology, and the digital innovation, it became clear that achieving gender balance requires determination, preparation, clear goals, hard work, collaboration, and perseverance.

Invited Talks: NaTE

CSI-COP team members in Partner NaTE delivered a series of invited talks to a variety of external stakeholders

- 03.03.21: **Interview of Environmental Social Science Research Group (ESSRG)** with Maria Hinsenkamp and Dorottya Rigler from NaTE about CSI-COP: cooperation, source of new knowledges, results, and exploitation.
- 7 April 2021: Dorottya Rigler, presented CSI-COP at an Hungarian event dedicated to open science and citizen science, organized by the **Philosophy Café group, Budapest**.
- 27.10.21: Maria Hinsenkamp, as member of the **Scientific Association for Infocommunication (HTE), Budapest** was invited to a Section meeting of the HTE to talk about the CSI-COP project. She presented the free informal education course MOOC "Your right on privacy online", the possibility to be a citizen scientist and the ways and methods to protect our privacy online.
- 10.03.22: Dorottya Rigler presented CSI-COP project at the **Corvinus University for PhD students a**nd encouraged them to complete CSI-COP MOOC "Your right to privacy online".
- 29.09.22: Maria Hinsenkamp as a member of the Scientific Association for Infocommunication (HTE) in the presentation "The online data protection is human right" spoke about citizen science, famous citizen science projects and famous citizen scientists, gave a short version of the MOOC course in Hungarian to awake appetite for competition of the MOOC and to become a citizen scientist.
- 09.03.23: Dorottya Rigler (NaTE) hold a course in English language: "Approaches to Technology and society" on citizen science, the importance of online data protection and the CSI-COP project at the **Corvinus University of Budapest**, Department of Sociology and Social Policy.

Invited talks: Bar Ilan University

Bar Ilan University's Professor Maayan Zhitomirsky - Geffet delivered a talk in the prestigious Association of Information Science and Technology (**AIS&T**) 2022 conference in Pittsburgh, PA on 31 October 2022. Maayan presented her article 'Turning Filter Bubbles into Bubblesphere with Multi-Viewpoint KOS and Diverse Similarity' (https://doi.org/10.1002/pra2.665) which won the best short paper award in the conference.

Immer Besser – IB

Transylvanian Clusters International Week 2022 in Cluj-Napoca, Romania

IB's first stakeholder event was held in Cluj-Napoca, Romania where we engaged with the Transylvanian Clusters International Week 2022 (Image 9) . IB had the chance to engage with businesses, academic start-up, academics and other public organisations. We held a workshop based on the CSI-COP MOOC and IB were also invited to participate in a round table where IB's input focused on the sustainability of the internet if the tracking activity continues as it is. This event helped IB in the recruitment process of citizen scientists and raised awareness in Transylvania and further in Romania about online privacy and GDPR compliance.

Image 9: CSI-COP in 2022 Transylvanian Clusters international Week

Stakeholder event in the LIBER Annual Conference in Odense, Denmark

IB's second stakeholder event was organised in Odense, Denmark on July 6th 2022 (Image 10). During the LIBER Annual Conference 2022, we used two opportunities to interact with professionals from European libraries, publishing houses and tech companies (including Middle East) and informed them about the CSI-COP project and the danger of tracking. We looked for their support to disseminate our results and to help us recruiting citizen scientists

Image 10: CSI-COP in LIBER conference 2022

PubMet International Conference in Croatia

Another CSI-COP stakeholder event organised by IB on 14.09.2022. IB held a workshop, an exhibition stand and participated in a plenary discussion panel at PubMet International Conference in Croatia (Image 11). Over 140 participants were informed about CSI-COP and invited to join our effort of raising

awareness and building evidence about GDPR compliance and online privacy. Participants were mainly parents, professors, business representatives and researchers. The participants were from Europe, USA and Canada. In addition to the awareness aims, we asked them to help disseminating our results, including the research papers we are about to publish and to recruit citizen scientists.

Image 11: PubMet International Conference in Croatia.

ECSA Conference in Berlin

On 07.10.2022 IB represented CSI-COP as participants in the ECSA Conference in Berlin. IB's Dr Tiberius Ignat interacted with other citizen science projects teams exchanging experiences about volunteer performance, volunteer management and training in citizen science (Image 12). We also learnt about storytelling in Citizen Science. It was also an opportunity to meet Prof. Dr. Darlene Cavalier, a member of the CSI-COP Advisory Board.

Image 12: CSI-COP in ECSA 2022 conference

The CSI-COP partners took advantage of all the access to opportunities to meet a variety of stakeholders in external events to raise awareness of project goals and the data protection issues. In the next section CSI-COP's internally organised stakeholder engagement events are detailed exploiting the project's results, including the new knowledge and innovation co-created with citizen scientists: the Taxonomy of Digital Cookies and Online Trackers, and the Repository.

Internal Engagements

CSI-COP partners organised a variety of events in their organisational venues.

Researchers Night

After the lifting of the COVID-19 restrictions CSI-COP partners UPAT, NaTE, UOULU and CTU leveraged the European Researchers' Night in these cities: Budapest, Oulu, Patras and Prague. These activities enabled CSI-COP to reach families. The Researcher's Night initiative, supported by the European Commission, aims to familiarise the public about science and provide an opportunity to meet with practicing scientists. The event offers interactive experiments, research games, artistic events, and more, allowing visitors of all ages to explore the world of research and technology. The Researcher's Night objective is to bridge the gap between the general public, especially young people, teachers, representatives of local/regional government, and the scientific community. Additionally, it seeks to highlight the human aspect of researchers and their significant contributions to benefit society.

University of Patras (UPAT)

UPAT organised a stakeholder event for the 2022 annual Researchers' Night held across Europe on Friday, September 30, 2022. UPAT's event took place at the Chamber of Achaia and Riga Fereou pedestrian street in Patras. UPAT's CSI-COP team involved their citizen scientists, and organised the event in collaboration with various departments from the University of Patras including Biology, Pharmacy, and Medicine, as well as the Associations of Greek Chemists and Physicists, came together to engage with attendees from diverse backgrounds. This interdisciplinary event provided a unique opportunity for people of all ages to explore and appreciate the fascinating aspects of science. The event also served as an ideal platform to raise awareness about human rights in the digital world, with a particular focus on online privacy and the important work carried out by the UPAT's CSI-COP team and its citizen scientists. Attendees were astonished to learn about the extent of online tracking and the role of cookies in website browsing, highlighting the need to defend digital privacy. They all agreed that it is more important to protect the right of digital privacy, than surf on whatever site on the internet, which can also lead to reduced time screen. The concept of citizen science generated excitement among the audience, as it offers inclusive opportunities for individuals from any background to actively participate in scientific endeavours. The UPAT team distributed informative leaflets and extended invitations to interested individuals to join the CSI COP team as citizen scientists, fostering a sense of collaboration and involvement in scientific exploration.

NaTE

NaTE organised a spectacular Researchers' Night in Budapest on 30 September 2022, at the Budapest University of Technology and Economics. About 150 interested and experimental young people absorbed the new knowledge at the event (Image 13).

The participating scientists representing a wide range of research centres and research groups presented their areas of research, which included natural extracts; tactile perception and tissue recognition in minimally invasive surgery; nanotechnologies.

Image 13: NaTE's 2022 Researcher's Night

One of the varied programs guided the visitors through the steps of turning a dream into business. Children were surrounded by the magic of making lightning and they asked the researchers to repeat the experiment several times.

In addition to university professors, there were also PhD students among the participants of the event. With the support of the mentor program of NaTE these young people had become confident speakers and won awards at NaTE's annual science communication contest called SCIndicator in the previous years. Winners of NaTE's Women in Science Excellence Award also attended the event, serving as role models for the younger generation by promoting science and technology careers.

According to NaTE's managing director Fanni Szigeti, science, technology, mathematics, and engineering careers are amazingly exciting, and the NaTE team wants to make sure that not only boys, but also girls notice the enormous potential in these fields early on.

University of Oulu – UOULU

UOULU CSI-COP team had their area at the Researchers' Night on 30.9.2022. Researchers' Night (https://www.oulu.fi/en/events/researchers-night) is a multidisciplinary event for the whole family to highlight scientists and their work, as well as the importance of science in our everyday life and society. CSI-COP presence was advertised beforehand with the distribution of flyers and was also featured on the UOULU website and in the hardcopy programme in both Finnish and English. Many visitors reached the UOULU CSI-COP team explicitly looking for the privacy rights and data protection booth, while others found the team wandering around the event area having picked up UOULU's CSI-COP literature (Image 14).

Images 14: UOULU material for 2022 Researcher's Night

The CSI-COP area at the Researchers' Night Oulu exhibited the Finnish language roll-up and a large screen looping the interview to CSI-COP team Immer Besser member Tiberius Ignat (Image 15). A laptop computer was available to guests for playing the consent speed game that tests the ability of the user in passing the cookie wall (Image 15). A lot of information was available to guests, including printed material in both Finnish and English, with information about the project and its activities, including a teaser for the MOOC and the citizen scientists' investigations.

The 2022 edition of the event gathered 3000 participants. UOULU CSI-COP team engaged in active interaction and discussion with about 100 participants of all genders, age and social position.

Images 15: UOULU visibility in Rsearcher's Night

Shaking Up Tech event for girls and other gender prospective technology students

Shaking Up Tech in Oulu targets involvement in the technology fields of young women and nonbinary students (https://shakinguptech.aalto.fi/en). On 13.10.2022, upper secondary school students came to Oulu from all over Finland. The event gathered 90 participants. The CSI-COP UOULU booth distributed a flyer in Finnish and English about the project its activities and a teaser for the MOOC and the citizen scientists' investigations (Image 16).

Students, representatives of relevant degree programmes and student guilds, were also present. In the event there were booths from the technology industry (Bittium, Nokia and Wärtsilä), the energy sector (Finnish Energy - Energiateollisuus), the European Institute of Innovation and Technology Raw Materials (EIT RM) and a professional community of academic engineers and architects in Finland (TEK - Tekniikan Akateemiset).

Image 16: UOULU's Shaking up Tech preparation

Czech Technical University-Prague – CTU

CTU organised two Researchers' Nights during the CSI-COP project: in 2021 and in 2022.

CTU Researcher's Night 2021

CTU annually organises a Scientists' Night in September. This event offers the general public a unique opportunity to learn more about the world of modern technologies that pave the way towards the society of the future. The CSI-COP project was introduced to participants at CTU's Researcher's Night event of 24.09.2021, which was characterised by the motto "Engineering a truly intelligent future". CTU's visibility in the event, in the CIIRC premises, welcomed more than 600 visitors. CTU team offered CSI-COP materials in their own stand in the attractive Testbed Industry 4.0 environment, a lab which no

one wanted to miss. Moreover, CSI-COP was presented in an introductory 30-minute lecture (Image 17), a live stream of which was also available online. Its recording has since been posted on the website of CTU's home institute, the CIIRC.
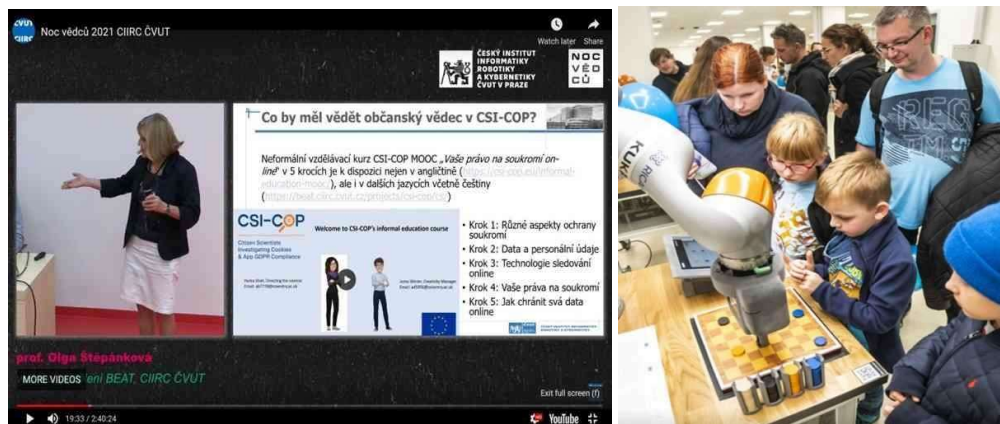

Image 17: CTU Researcher's Night 2021.

CTU found that none of the attendees seemed to care much about cookies and internet privacy. CTU's materials and posters for recruiting collaborators to the project remained untouched. This made the CTU team quite sorry, but it was obvious that it was really hard to compete with the interactive environment offered by the other booths where the visitors could:

- see what CIIRC Testbed has in store for industrial companies - a flexible robotic line, conveyor robots, sorting robots and much more,
- walk through the future city of Miltown in virtual reality,
- be served a non-alcoholic beer or lemonade by a robotic bartender
- or chase away fatigue with coffee prepared by one of the robotic coffee machines with milk foam decorated with a picture of visitor´s choice.

This meant that CTU had to reflect on its communication strategy in the 2021 Researcher's Night and how to better engage visitors with the importance of data protection and online privacy for the next year.

CTU Researcher's Night 2022

Following the experience in the 2021 Researcher's Night, CTU decided to get thoroughly equipped for the next year of the European Researcher's Nights 2022, with the motto "With all the senses". In the 2022 event, the CIIRC premises welcomed even more visitors than the previous year. In CTU's second CSI-COP Researcher's Night the CSI-COP booth was buzzing with visitors. CTU prepared an original adventure computer game, the '**Cookie Mansion**', in which a group of children are searching for a missing friend on whose desk shows only a scrap of paper with the words "computer cookies?" is found in the game. In the course of the search, the children's friends gradually gain a lot of important information about digital cookies and on-line privacy.

CTU's stand was equipped with two computers on which the game was installed so that those interested could try it out for themselves (Image 18). It was always full of children who wanted to try CTU's original cookie game themselves. In the moment in the game when the children were searching for their lost friend in the Cookie mansion game, the CTU team could explain to their parents what the CSI-COP project is all about and how they could get involved. CSI-COP project certainly gained a few little supporters and their parents in this way (Image 18). It turned out that a computer game with non-

aggressive graphics can boldly compete with what was offered by other stands, where it was possible to:

- chat with a chatbot (Alquist)
- touch interesting shapes and materials used in robotic 3D printing
- or try on an aging suit and discover that a tower of cubes cannot be built with shaky hands.

Image 18: CTU's 2022 Researchers' Night

Participation in the researchers' night convinced the CTU CSI-COP team that individuals need to be gradually taught to perceive the potential dangers associated with the loss of privacy on the Internet. The most receptive target group were young people in the 2022 Researcher's Night.

Other internal events

In addition to organising Researchers' Nights, partners organised other internal stakeholder events. These are summarised next.

Coventry University - CU

Coventry University's Winterfest'22.

On 23 November, 2022, Jaimz Winter, CSI-COP Research Assistant with Dr. Huma Shah hosted desk in Coventry University's Winterfest'22. Staff and students attended this event held in the university's Student Hub complex. At the CSI-COP desk, visitors were able to play the free online digital cookies' avoidance game '**Cookie consent speed**' (https://cookieconsentspeed.run/). Students were also provided with access to the free MOOC to enhance their knowledge about the GDPR.

Image 19: CSI-COP desk in Coventry University Winterfest '22

Research and COVID-19: Entanglements in the Epoch Symposium 2023

On 27 April, 2023, Jaimz Winter presented 'Meeting the challenge of the impact of COVID-19 on the EU Horizon project' in Coventry University's 'Research and COVID-19: Entanglements in the Epoch' Symposium (Image 21). Jaimz's presentation highlighted the effect that COVID-19 had on the CSI-COP project and the team, and also how the challenges were addressed.

Image 20: Jaimz Winter in the COVID-19 symposium

CU Techno Centre

On 1 May 2023, Dr. Huma Shah delivered an invited talk in a data science symposium for postgraduate researchers and academics. The event was organised by three UK universities (Newcastle University; Queen Mary-University of London, and Coventry University). Huma explained CSI-COP's GDPR-compliant personal data collection process (Image 21: top row). Attendees learnt what data CSI-COP's citizen scientists collected, and the project's data validation method. Mentimeter online interactive poll was used to gauge what the symposium attendees felt about involving the general public in scientific research. All poll participants responded with one of the positive answers for general public inclusion in scientific research (Image 22: bottom). This highlights the value of citizen science to the scientific community.
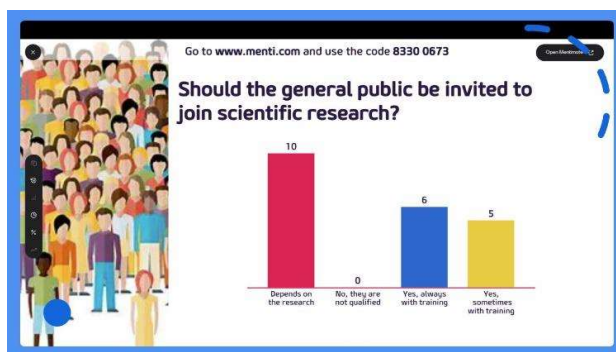

Image 21:Top: images from CU Techno Centre talk; bottom: poll results on including the general public in scientific research.

Stakeholder event in Melina Cultural Center

UPAT CSI COP team organised a stakeholder event on Saturday, April 1, 2023 at the Melina Cultural Center, in Thisio, Athens (Image 22). UPAT team planned the meeting considering the fact that bringing diverse stakeholders together can really help generate different points of view and solutions that are more reflective of broader interests, while also building understanding between different stakeholders with another perspective. Increased dialogue and understanding between different stakeholders can lead to improved trust and cooperation, generating meaningful partnerships. Invitations were extended to public authorities, non-governmental organizations, research institutes and federations, and citizens scientists that are active in the online privacy domain.

Image 22: UPAT at Melina Cultural Center

Throughout the event, participants had valuable discussions with the UPAT team and citizen scientists, exchanging perspectives and sharing experiences. UPAT's recruited citizen scientists shared their insights on the extent of online tracking and their involvement in CSI-COP website and app investigations. This stakeholder event effectively brought together diverse viewpoints and knowledge from scientists and citizen scientists, highlighting the importance of collaboration and partnerships in addressing the threats to online privacy and safeguarding this fundamental human right.

NaTE

NaTE Girl's Day Festival / For adults

The Girls' Day Festival organized by NaTE on 18 October 2022 was joined by a special program for adults. Among other things, the topic of how teachers and parents can help their children to succeed in the STEM fields was explored by educational experts. This workshop was joined by Mária Hinsenkamp's presentation on the CSI-COP project and its MOOC; online data protection and the opportunities provided by citizen science. In addition to teachers and parents, representatives of prominent companies (e.g., NOKIA) also participated in the event's session dedicated for adults.

NaTE's Annual General Assemblies
Since CSI-COP project started in 2020, NaTE's CSI-COP team member Maria Hinsenkamp, has been invited to NaTE's Annual General Assemblies to introduce CSI-COP's actual tasks, continuous progress of the CSI-COP project and NaTE's contribution to the planed results.

- 28 May 2020: Introduction to CSI-COP project. Presentation about the aim of CSI-COP project, the first task of NaTE: elaboration of "Guidelines for Diverse Citizen Science Recruitment", the free informal education resource, MOOC, about privacy online and the events to bring

scientists, data protection experts and citizen scientists together in order to assess motivation for participation, sustaining interest in citizen science activities, to raise awareness of privacy issues from digital trackers.

- 28 May 2021: In this presentation, information was provided about cookies found on websites and apps, awareness of their dangers, the way and means to avoid them, the joint research aimed at uncovering hidden trackers together with expert researchers. The research result will be a database, the repository attracting the attention of software developers and encouraging them to develop websites and apps without hidden trackers. Finally, it was a detailed description of the MOOC.
- 26 May 2022: Maria presented the latest NaTE contributions in CSI-COP including taking on the extra work of citizen science recruitment on the termination of one of the partners in 2021.
- 30 May 2023: Maria presented NaTE's contributions in CSI-COP through her talk 'Task and results - NaTE activities in 2022-2023'. Maria explained the state of the art of the tasks NaTE completed from the research phase through the course MOOC "Your Right to privacy online" and from the website and app investigations to the deliverable report on who CSI-COP citizen scientists are (deliverable D4.3: Hinsenkamp, et al., 2023). Finally, the new results in CSI-COP were presented: the CSI-COP Taxonomy of digital cookies and online trackers (Shah et al., 2023), and CSI-COP Repository of citizen scientists' and project team members' website and app investigations.

BIU

Stakeholder cafe at Bar-Ilan University campus

Bar Ilan University organised a big stakeholder café at Bar-Ilan University campus on 28 December 2022 (Image 23). About 80 people attended the café including senior representatives from the government organizations, academia and tech industry, students and the general public. The agenda of the café included the CSI-COP project introduction given by Professor Maayan Zhitomirsky-Geffet (Image 24), invited talks and open discussion with the public. The invited talks were given by:

Prof. Eran Toch, head of the Interacting with Technology Lab in the Industrial Engineering Dept., Tel Aviv University, https://toch.tau.ac.il/projects/.

Prof. Itay Bar Siman Tov, head of Law, Data and Ethics Lab in the faculty of Law, Bar-Ilan University - https://law.biu.ac.il/node/4469.

Dr. Harel Menashri, former head of cybersecurity department in the Israel Prime Minister's Office, present head of cybersecurity program in Holon Institute of Technology.

Dr. Uzi Hadad, founder and CTO of Privya, the Israeli start-up company that develops privacy-by-design products.

In addition, Dr. Sunny Kalev, attorney of the Israel Privacy Authority in the Ministry of Justice and lecturer at Tel-Aviv University, commented on the talks and brought the government's perspective on the topic of privacy online at the open discussion.

Image 23. Stakeholder cafe at Bar-Ilan University campus

Image 24. CSI-COP project introduction given by Prof. Maayan Zhitomirsky-Geffet

The stakeholder café organised by Bar Ilan University provided a platform for senior representatives from government organisations, academia, and the tech industry, as well as students and the general public, to engage in discussions and gain insights from experts in the field of technology, law, ethics, and cybersecurity, fostering a multidimensional understanding of the CSI-COP project and privacy online.

University of Oulu - UOULU

City Library Pekuri

CSI-COP UOULU team on 28.11.2022 held an event at the Pekuri city library in the city centre of Oulu. Guests could be informed about the project by the roll-up in Finnish or the printed material, which included a flyer (Finnish and English) and a document for warning parents and guardians about the risks minors are exposed to when personal data about them are collected.

Image 25: CSI-COP event in Pekuri city library

The UOULU team offered the visitors the possibility to conduct fully anonymous investigations of websites and apps. Two laptops were available for them in order to investigate without needing their own device and without having to confide any personal information about themselves (Image 26).

Image 26: UOULU's resources for visitors to Pekuri library

In addition, feedback and survey forms were available, to diversify the communication channels between citizen scientists and the CSI-COP UOULU team.

Citizen Science Network at the University of Oulu with multidisciplinary academics

The CSI-COP UOULU team is one of the first members of the citizen science network at the University of Oulu. The network is multidisciplinary, from humanities, through natural science to technology, and its scope is to exchange experiences of citizen science research from the viewpoint of diverse scientific disciplines and therefore diverse approaches.

Image 27: CSI-COP in UOULU's Agora event

The CSI-COP project was one of three projects presented by UOULU in the Agora event on 17.02.2023 covering three viewpoints: social sciences, natural sciences and technology. The event gathered 40 participants, that actively participated in the discussions after each presentation. CSI-COP UOULU team offered background knowledge on personal data collection and its risks. They also advertised the project, discussing with colleagues among other the adaptive methodology, including the MOOC resource in 12 languages made available for asynchronous learning during COVID-19 restrictions.
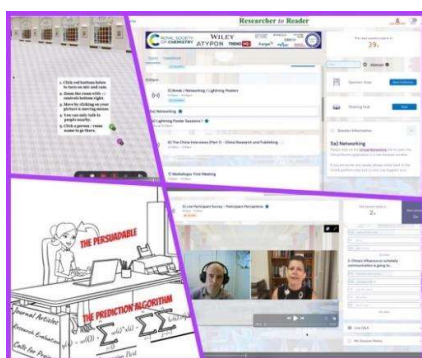
Fireside chat of CitizANTS

CitizANTS is a project of Envirocen, funded by the Nordic Council of Ministers Working Group on Biodiversity. Its aim is to promote diverse forms of knowledge-making in and beyond academic realms in times of environmental crisis as a collaboration between the University of Oulu and the NTNU, the Norwegian University of Science and Technology, Trondheim, Norway. Its multidisciplinary team, including scholars, artists, educators, activists, writers, and members of the wider community, invited UOULU's CSI-COP team lead, Professor Juha Röning as one of four speakers to talk on citizen science, arts and digitisation at the Fireside chat event on 17.03.2023. The event attracted 40 participants. Professor Röning presented the CSI-COP project and the challenges it faced together with the counteractions taken by the team. Additionally, personal data collection and its risks stimulated discussion on the subject. The projection of two relevant documentaries encouraged more discussions.

Image 28: CSI-COP in UOULU's CitizANTS stakeholder event.

Other Stakeholder Engagement

IB engaged with numerous stakeholders as part of their CSI-COP activities. One early stakeholder event delivered online in the 'Research to Reader Conference (23 Feb 2021). IB's Dr. Tiberius Ignat raised awareness of the use of cookies in the scholarly communication industry (Figure 1), including publishers, tech companies (like Research Gate, Academia.edu, Google, Editorial Manager), libraries and others. The event was attended online by about 230 managers and administrators.

Figure 1: IB at 'Research to Reader Conference'

Dr Tiberius Ignat was invited to deliver an online talk in Coventry University's research centre for computational science and mathematical modelling on 16 June 2021. Attendees were researchers and doctoral students who learned about the use of cookies in the scholarly communication system. The attendees were all interested in how trackers and dark patterns could influence researchers' hypothesis and publication practices.

Figure 2: Dr Tiberius Ignat invited talk 16.06.21

On 28 June 2023 CSI-COP were represented in the 'Economist Metaverse Enterprise Summit' in London by IB's Dr. Tiberius Ignat (Figure 3). The hybrid event was attended by many professionals from IT industry, Academia, Governmental organisation, Non-Governmental Organisations. Among Tiberius' interactions were with the Public Policy Manager from Meta, WIIT (Women in Immersive Technologies), Media Monks, The Economist, BMW, Metaverse Insider, Pfizer, Lotus, Ørsted, Vancouver Airport, BluSpecs.

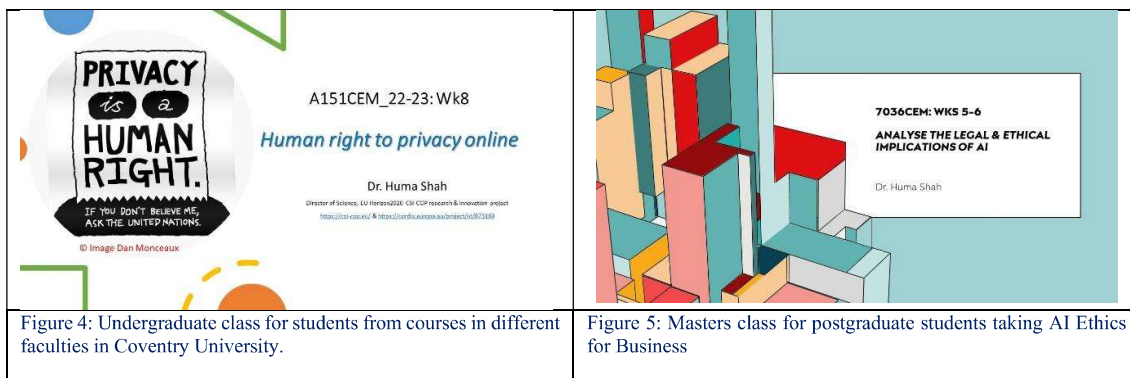Figure 3: Economist-Metaverse event London 2023

During the plenary sessions, Tiberius was involved in two interventions in which he raised awareness about digital privacy rights and concerns regarding the personal data used in the metaverse sphere. Tiberius talked intensively with many attendees on a one-to-one basis about CSI-COP project and presented its results and impact.

Upskilling Educators and Students

Findings and results from the CSI-COP has enabled the updating of knowledge of individuals and groups that its team members have interacted with since its start in 2020. The upskilling of educators and students has included university staff and students within CSI-COP consortia's higher education establishments, including Coventry University and the University of Oulu.
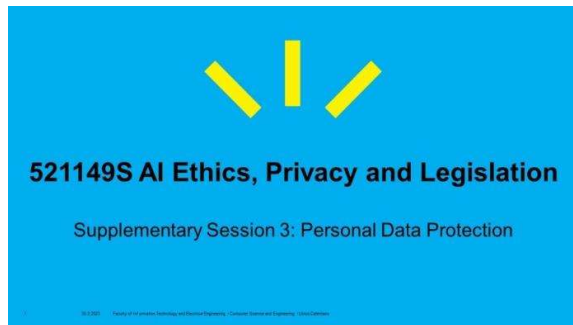
CU

As part of her teaching duties, Coventry University's Dr. Huma Shah teaches 'Artificial Intelligence, Creativity and Ethics' to first year undergraduates (see Figure 4), and masters students (see Figure 5). She also supervises final undergraduate and masters' students providing the opportunity to discuss data protection and privacy in the web and app development part of computer science, data science and artificial intelligence courses. In each semester, in each academic year, since 2018 one week in each of the modules Huma has led has been dedicated to data protection and online privacy.

| Figure 4: Undergraduate class for students from courses in different faculties in Coventry University. | Figure 5: Masters class for postgraduate students taking AI Ethics for Business |

Students undertaking the modules which include discussing the ethical issues in artificial intelligence (AI), have gained a better understanding why the development of machine learning algorithms that power current state-of-the-art in AI technologies, such as facial recognition, social media interaction, and information provision, should embed data protection and privacy in their design to protect human beings from real-world harm (including company's suffering cybersecurity breaches leading to data sold on the dark web compromising bank accounts resulting in fraud, theft, and psychological misery). CSI-COP's creation of new knowledge and tools, such as the Repository of CSI-COP website and app investigations, can further advance data protection with fresh ideas from students in their individual projects as part of university assignments.

Dr Ulrico Celentano of CSI-COP UOULU team prepared a section of the University of Oulu course on AI Ethics, Privacy and Legislation: *Personal Data Protection section at AI Ethics, Privacy and Legislation university course* (Figure 6)

The session was delivered on 30 March 2023 to an audience of 23 students. The interactive lecture included the activities of CSI-COP project and it was structured so that students had time for discussion on selected questions scattered throughout the delivery.

Figure 6: UOULU's AI ethics class

Universities are an ideal place to create, introduce and implement new knowledge into fresh minds. In the case of developing AI tools for human engagement and interaction requiring collection of personal data, it is crucial that young developers are inculcated with the principles of '**science and technology to benefit, not harm society**'. CSI-COP partners are continuing in this quest as the project concludes and forges a legacy with final events to improve the current state of default tracking online, and personal data passed to third parties without informed consent.

Final events

With a further extension to the project to 31 August 2023, CSI-COP partners are planning final stakeholder events which will be listed in the forthcoming deliverable 'Final List of CSI-COP activities' (D1.12|D28). Four events being organised at the time of this deliverable, to increase impact and reach more stakeholders, are:

1. Coventry University's CU team participating in the 'Emotional Intelligence' exhibition in Memento museum in Auch, France 20-25 July 2023. Stakeholder cafes in the museum will leverage the French translation of the 'Your Right to Privacy Online' MOOC in its engagement with stakeholders and visitors to the museum. Results from CSI-COP project will be presented highlighting the many ways individuals, parents, and teachers can manage their personal data online.

2. UPAT collaboration with a museum in July 2023 in Lesvos, Greece.

3. CTU will promote the French MOOC among a group of 40 French students who are visiting the Czech Technical University during summer 2023 to work on their individual term papers. CTU aims to invite these students to a 'CSI-COP stakeholder café' on 25 July to discuss the importance of privacy on the internet, and to answer their relevant questions. The main results of CSI-COP project will be presented explaining the engagement of the citizen scientists whose CSI-COP contributions included their website and app investigations included in CSI-COP Repository.

4. NaTE and Coventry University are hosting stakeholder cafés in the Sziget Festival in Budapest, 10-15 August 2023. The daily stakeholder cafés across the Festival will facilitate the awareness of data protection and privacy to people of all ages attending the festival raising awareness of the different types of tracking technologies in websites and apps using CSI-COP's Taxonomy.

Summary of CSI-COP Stakeholder engagement

Partners in CSI-COP deployed their individual creative and imagination skills leveraging access to many opportunities to forge an impact in society to care about 'who they give their personal data to'. As a CSI-COP collaborative, the consortium of nine partners involved in organising stakeholder café engagement activities for the project Task 6.4 reached widely hosting conversations with personnel working for big tech (for example, Meta and TikTok), to raising awareness of personal data protection and exploiting the project's results to families in European Researcher's Night hosted by partners in European cities including Budapest, Oulu, Patras, and Prague. These activities helped parents to understand how much screen time they and their children tolerated and what could be happening while they were online through websites and apps usage.

Stakeholders for CSI-COP are anyone who uses the Internet for work, rest or play. The impacts realised from the many CSI-COP stakeholder cafés organised by project partners included practicing responsible research and innovation. This ensured as many females and males becoming involved in the project aged from 13 to over 65. The short-term goal of CSI-COP was realised by raising awareness of the rights accorded in the GDPR. The impact on the citizen scientists is the realisation that the general public can effect societal change by monitoring compliance of regulations, in the case of CSI-COP project, the GDPR. CSI-COP's legacy in planned new projects would extend to investigating data protection in Internet-connected devices, such as smart televisions with apps such as Netflix, Amazon Prime, that collect personal data from these devices. CSI-COP's impact on society is a long-term goal with another legacy of the project being the improvement in transparency around what personal data is collected online, but also to ensure that once we become better informed about the extent of tracking in websites and apps, we are more careful with our precious personal data.

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