CSI-COP

Citizen Scientists Investigating Cookies and App GDPR compliance

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Deliverable D1.7 | D6

CSI-COP Societal Impact 2

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<tr><td>1.5</td><td>30.08.23</td><td>Huma Shah</td><td>CU</td><td>Final edits</td></tr>
</table>

Table of Contents

Executive Summary

This is the second and final societal impact report arising from activities in the CSI-COP project. It follows the first societal impact report which presented the initial impact of the project, affected by the COVID-19 pandemic, on CSI-COP project partners. Since then, we have seen societal impact spread to the citizen scientists who joined as website and app investigators with respect to compliance of the general data protection regulation (GDPR). Their experience with CSI-COP researchers, and as a result of their findings, has led to changes in their online behaviour to better manage their personal data when using the Internet, including through a smart mobile device. This behaviour change includes not accepting "all cookies" on websites and checking app permissions. The societal impact influenced word-of-mouth dissemination by the citizen scientists about the rights in the GDPR. Additionally, CSI-COP's societal impact included winning an industry privacy award (PICCASO), and inspiring an international organisation to join in legacy activities.

Key Terms

Behaviour, change, change in behaviour, citizen scientists, cookies, cybersecurity, data breaches, data management, personal data protection, GDPR, impact, personal data, privacy, purpose limitation, societal impact, and transparency.

1: Introduction to CSI-COP Societal Impact

Coventry University, as lead and coordinating partner of the CSI-COP project, considers its responsibility through its research contributing to positive impacts on the economic, environmental, cultural as well as societal impact. Leveraging the EU's science with and for society (SwafS) funding scheme, Coventry University brought together partners across Europe and in Israel to explore and support citizen science in the specific topic of investigating the extent to which tracking is *by default* and ubiquitous across the Internet. What societal impact could be achieved from such an exercise was understood from the SwafS call expectations, including the 'cost and benefit of citizen science', and the promotion of 'social inclusion and employability'. COVID-19 affected CSI-COP project from its third month in March 2020. From then it became apparent that a digital divide existed even in Europe where some households could not afford home broadband and had less access to adequate physical technologies (computers, laptops, notebooks) to benefit from the advantages of the online world (see CSI-COP deliverable D2.2: Hinsenkamp et al, 2020). The people caught in the information-poverty side of the digital divide would be less affected by the risks of sharing personal data online and would be harder to reach in the CSI-COP project.

The underlying motivation of CSI-COP was to effect change in online behaviour by engaging the citizen scientists in the project to explore the websites they visit and apps they use. The objective was to reach the general public and bring them along on a journey to learn how to better protect their personal data online. This was achieved through delivering informal education in accessible venues that did not daunt or overwhelm (Gialelis et al., 2023). Hence CSI-COP chose as much as possible to go to where the general public go, to libraries, museums, cafes, as well as utilise project partner spaces. Influencing website and app developers to adopt a privacy by design approach was another motivation, as well as recommending policy changes to help the EU monitor compliance of the general data protection regulation (GDPR).

The project reached all the intended stakeholders, however, the societal impact achieved shows more work is necessary post-project to ensure privacy-by-design is embedded in technology design to better comply with the GDPR. Additionally reaching more citizens through cooperation with international organisations could lead to taking convenience out of the equation and checking more what is going on beneath websites and apps. In this second and final CSI-COP societal impact report, we present some results from a survey of CSI-COP citizen scientists to understand their change in online behaviour following their experience in project collaboration. Citizen scientists engaged in CSI-COP showed that participation in real-world research and innovation projects could foster a positive change in online behaviour improving personal data management.

2: Change in Online Behaviour

Through its EU funding under the Horizon2020 'Exploring and Supporting Citizen Science' theme CSI-COP aimed to effect better personal data protection, so a change in online behaviour of people who use the Internet. CSI-COP did not offer any monetary reward to bring about change in general public behaviour. The extrinsic value for interested individuals who joined CSI-COP as citizen scientists was their becoming equipped (Khare and Dhar, 2021) with the knowledge and practical skills to overcome the convenience of 'accepting all' cookies in websites and default permissions in apps. The knowledge was delivered in an interactive way, in CSI-COP's short massive open-access online resource '**Your Right to Privacy Online**' (CSI-COP MOOC). The MOOC involved activities for the learners, including playing the cookies consent speed run game (Wordie, n.d.). The purpose of including the cookies consent game (Figure 1) is because it contains actual cookie text in cookie banner options from across the web. The goal of the game-player is to beat the clock by avoiding non-essential cookies (see CSI-COP Taxonomy: Shah et al., 2023) in the game's three levels. This involves the game-player rejecting the 'All cookie' option (Figure 2).
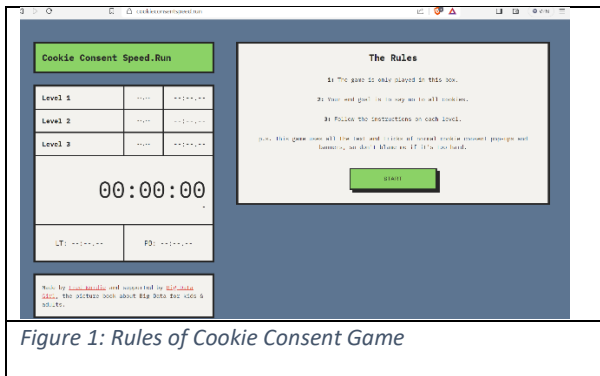

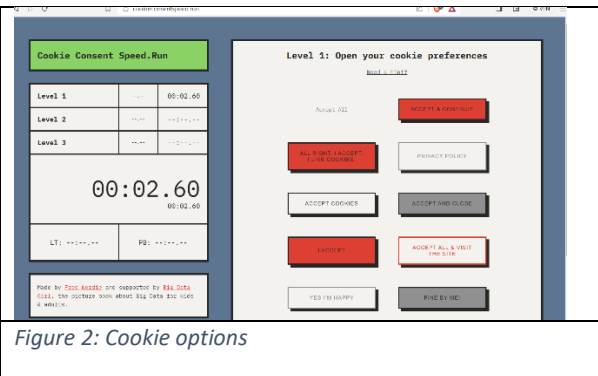|	
Figure 1: Rules of Cookie Consent Game	Figure 2: Cookie options

Each level in the game provides options that need careful reading. The correct option in Level 1 is to find the box with the option to find out more about what kinds of cookies could be present. This could be a box offering a link to the 'Privacy Policy' or 'More Options'. Once this is achieved in the game, players move to Level 2 where the options to reject "all cookies" become more difficult due to the opaque wording describing what the option actually means (Figures 3 and 4).
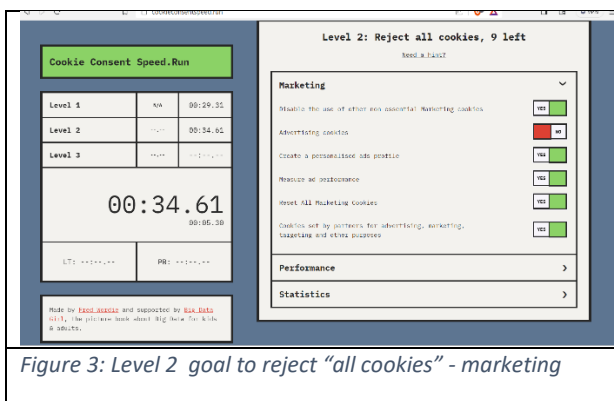

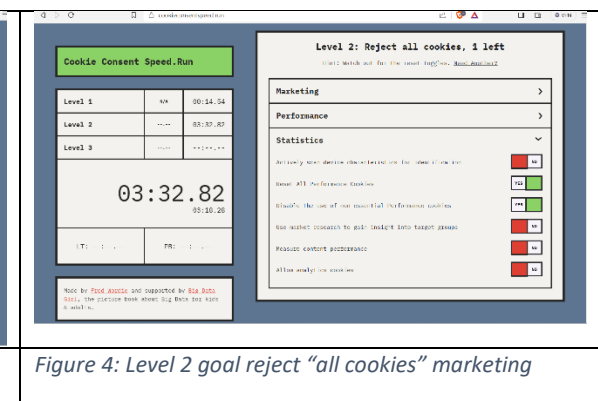|	
Figure 3: Level 2 goal to reject "all cookies" - marketing	Figure 4: Level 2 goal reject "all cookies" marketing

Each level becomes harder to disambiguate the unnecessarily complex wording of the cookie button. Wordie's (n.d.) cookie consent game does give a sense of confused feelings and time-consuming experiences, of being lost in a website's cookie lair, not knowing what cookies are necessary, and thus, not knowing which ones to reject. The goal of level 3 in the game expects users to remember the choices they made in the previous two levels (Figure 5). The cookie consent speed run game, in a fun-way timing game-players' choices, demonstrates the current Internet's digital universe lacking transparency. This leads to manipulating web surfers to go for the convenient, time-saving option of 'accepting all' without gaining full informed consent for third-party extraction of personal data through personalised, marketing, performance, and statistical cookies.
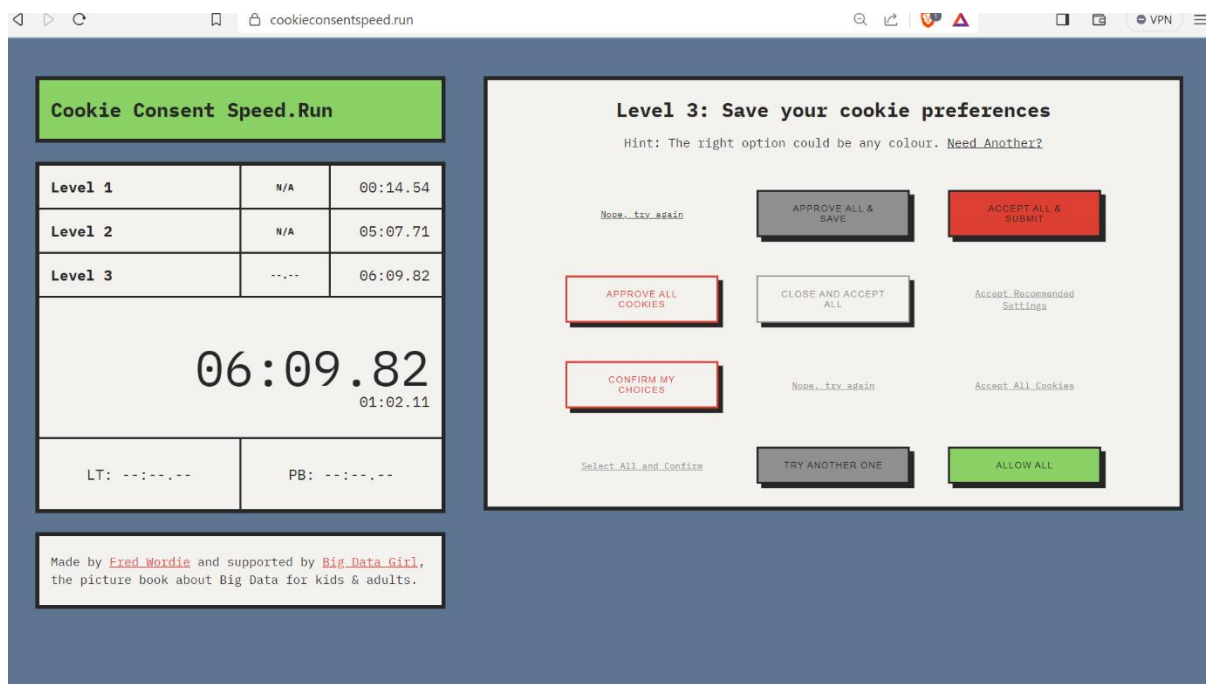

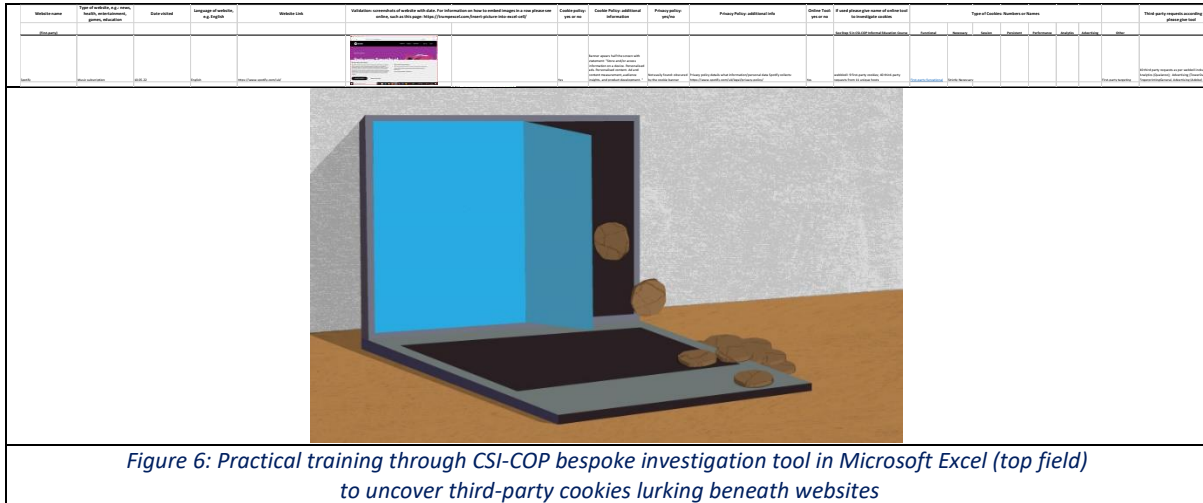*Figure 5: Cookies consent: timer going in Level 3 to save cookie preferences*

Steinemann et al. (2017) reported that "games can be used not only for entertainment but also for education" and "to further social change and prosocial behavior" since "games for change" can motivate their players" and "support social change" (p.54). In addition to the real-world interactive activities offered in CSI-COP's MOOC, the practical skills gained by the learners from investigating beneath websites and apps inculcated 'empowerment': individuals were able to understand what was going on with their personal data and could take ownership of when to give it. The next section explains this further.

2.1 Change in General Public Behaviour

In CSI-COP, change in public behaviour began by communicating to a wide audience the presence of third-party tracking in websites people visit and apps used. This was achieved through the CSI-COP events in the project's recruitment and informal education phase (work package 3-WP3) and in dissemination activities raising awareness of rights accorded in the general data protection regulation (GDPR). Additionally, individuals demonstrated their desire to learn more and change their online

behaviour through their informed consent following MOOC completions. One-to-one or group sessions were organised by CSI-COP partners providing practical training to uncover unnecessary and third-party tracking in websites and apps (Figure 6). More information about this can be found in CSI-COP project deliverable reports D4.1-website investigations, and D4.2 -app investigations (Shah and Winter, 2022ab).

Figure 6: Practical training through CSI-COP bespoke investigation tool in Microsoft Excel (top field) to uncover third-party cookies lurking beneath websites

Within CSI-COP's free informal education resource 'Your Right to Privacy Online' (MOOC) a GDPR compliant, anonymous voluntary survey (Survey1) was included to learn about the age-range, non-identifiable geographical location and socio-economic information on the general public learners. The findings from over 500 CSI-COP MOOC completions by December 2022 included CSI-COP's first survey were reported in CSI-COP deliverable D4.3|D17 'Age, Gender, Socio-Economic and Geographical (AGSEG) Distribution Report' (Rigler et al., 2023). Since December 2022 and by the end of CSI-COP project in August 2023, MOOC completion numbers had increased to over 600 learners. The MOOC's included survey aimed to learn about the individuals who progressed from CSI-COP MOOC-completers to CSI-COP citizen scientists. A second CSI-COP survey was designed for assessment of societal impact, and this was distributed to the individuals who had progressed as citizen scientists and who submitted their investigations of websites and apps. These investigations formed CSI-COP's open-access databases. They also contributed to creating CSI-COP's Taxonomy and Repository. These CSI-COP project results are accessible from the project website:

1. CSI-COP citizen scientists' investigations searchable through open-access Excel databases:

    a. Websites: https://csi-cop.eu/project-results/citizen-scientists-website-investigations/

    b. Apps: https://csi-cop.eu/project-results/citizen-scientists-app-investigations/

2. Taxonomy of Digital Cookies and Online Trackers: https://csi-cop.eu/project-results/taxonomy-of-cookies-and-online-trackers/ - the Taxonomy is also accessible from Zenodo (https://zenodo.org/).

3. Web-based open-access Knowledge Resource of Digital Trackers (CSI-COP Repository): https://csi-cop.eu/repository/

The experience of some CSI-COP citizen scientists can be gleaned from interviews featured in CSI-COP project newsletters:

   i.   9th Newsletter: https://csi-cop.eu/csi-cops-9th-newsletter/

   ii. 10th Newsletter: https://csi-cop.eu/csi-cops-10th-newsletter/

   iii. 11th Newsletter: https://csi-cop.eu/11th-newsletter/

In the next section, the self-reported change in behaviour of some of CSI-COP citizen scientists is presented from responses to CSI-COP's second survey (see blank survey in Appendix 1).

2.2 Change in CSI-COP CS Behaviour

Over 190 international citizen scientists engaged with CSI-COP researchers to collaborate in investigating GDPR compliance in websites and apps. A specially designed survey in English with fifteen questions was translated and distributed to CSI-COP citizen scientists. The aim was to learn whether any change in online behaviour to protect personal data resulted from the knowledge and practical experience gained in the project (Appendix 1). Eighty (80) of CSI-COP's citizen scientists returned completed survey 2 with details on change in behaviour following completion of the free MOOC and investigating websites and apps.

The societal impact expected, from participation as a citizen scientist in CSI-COP, included:

   1) The general public see the value in joining the project as citizen scientists

   2) Increase scientific literacy among the general public in the topic of data protection according to the EU's GDPR

   3) The general public understand scientific method and the need for data validation

   4) The collaboration between the general public and CSI-COP researchers improves trust in science and scientists

   5) Citizen scientists cooperate with and learn from other citizen scientists

   6) Citizen scientists Apply knowledge and skills gained in CSI-COP to:

      a. Reject unnecessary cookies on websites, especially third-party cookies.

      b. Set permissions in apps to reduce tracking.

    c.   Recognise the need for transparency in cookie notices and privacy policies.

7) Privacy Champions emerging from CSI-COP's engaged citizen scientists gain confidence in presenting their website and app investigation experience to stakeholders

8) Privacy Champions are motivated to continue their engagement in CSI-COP's legacy in a movement to reverse the ubiquitous third-party tracking through websites and apps across the Internet.

The realised change in behaviour was from three activities: a) CSI-COP survey 2, b) CSI-COP's Main project dissemination and results exploitation event in Brussels (May 2023), and c) an online meeting of CSI-COP's Privacy Champion at the end of the project (August 2023). From the project's second survey, eighty responses (from the 191 citizen scientists) showed a clear understanding in CSI-COP's citizen scientists of the risks of putting convenience of accepting all cookies, ahead of safety and security of personal data. The evidence is from the responses to some of the specific questions relating to change in behaviour in survey 2 (see Appendix 1 for full survey 2 questions). Regarding the 'before' and 'after' behaviour in relation to websites, two early questions in survey 2 asked:

Q2: Before joining CSI-COP as a citizen scientist, did you accept cookies on a website?

Q5: Do you accept cookies **now after** investigating websites as a CSI-COP citizen scientist?

For question 2 about behaviour relating to accepting cookies before participation in CSI-COP, 99% of the citizen scientists' responders (79 of the 80) answered one of the options shown in Table 1. Saving time and convenience were the main reasons for accepting cookies (52 out of 79; >65%).

Don't know just accepted	Saving time	It was convenient	I saw no harm in accepting
8	32	20	19

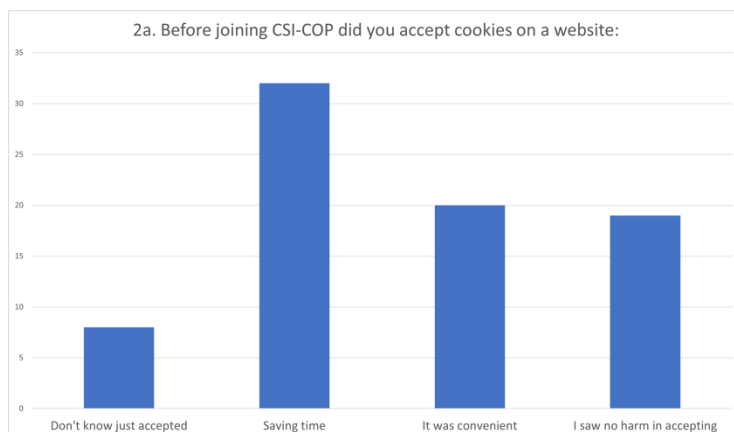*Table 1: Before CSI-COP behaviour relating to cookies on a website*

Chart 1 illustrates how websites users are manipulated to save-time, view accepting cookies as convenient, and with a perception of no-harm.

Chart 1: Reasons for accepting cookies on websites

![CSI-COP logo](Citizen Scientists Investigating Cookies & App GDPR Compliance)

Question 5 posed three sub-questions relating to behaviour after collaboration in CSI-COP: 75 citizen scientists responded. The responses showed that:

i.   out of the 75 responders, 34 (45%) said they now checked options (for cookies)

ii.   out of the 75 responders, 56 (75%) said they chose to reject (all cookies) if that option was available

iii. out of the 75 responders, 11 (15%) said they checked for other targeting techniques

5 a-c) Do you accept cookies now?	a. I check options	b. I choose reject if option available	c. I check for other targeting techniques
Number of Yes	34	56	11

Table 2: After CSI-COP: change in behaviour to seek more information about cookies in websites.
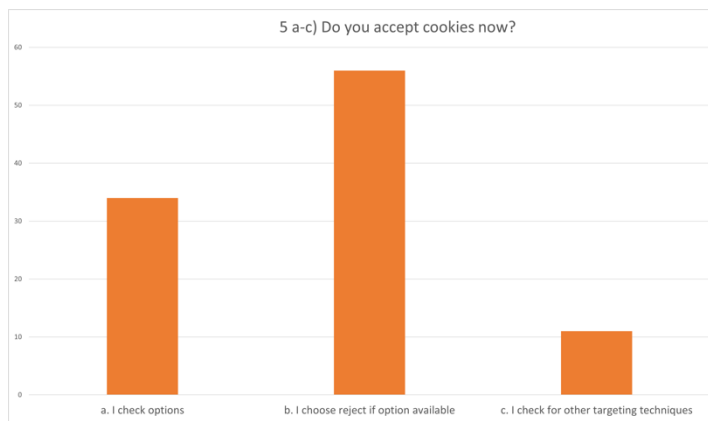

Chart 2 illustrates that following participation in CSI-COP most citizen scientists who responded to survey 2 would choose the 'reject' (cookies) option on a website, if that option were available. Additionally, some citizen scientists would check for other targeting techniques conveying a willingness to spend a bit more time than before participation in the project.

Chart 2: Citizen scientists' willingness to spend more time checking for cookies after collaborating in CSI-COP

In relation to apps, survey 2 posed similar change-in-behaviour questions about app permissions (Appendix 1):

Q7: Did you check permissions in the apps before you joined CSI-COP as a citizen scientist?

Q8: Do you:

a.   accept default permissions in apps after joining CSI-COP as a citizen scientist?

b.   do you now check what permissions an app is requesting and select which permissions you give access to?

For question 7, 96% of survey 2 responders (77 out of the 80 responders) answered the question relating to whether app permissions were checked before joining CSI-COP. Over half said that they did not (43; 55% (Table 3).

7. Did you check permissions in apps before joining CSI-COP: YES/NO	Yes	No
	34	43

Table 3: Checking app permissions before participation in apps.

Citizen Scientists Investigating Cookies & App GDPR Compliance

Fifty-nine of the 80 CSI-COP's citizen scientists completed survey 2 question 8a: whether default app permissions were checked after joining the project. Fifteen of the 59 (25%) still accepted default app permissions

8a. Do you accept default permissions in apps after joining CSI-COP? YES/NO	Yes	No
	15	44

Table 4: Accepting default app permissions after joining CSI-COP

8a. Do you accept default permissions in apps after joining CSI-COP? YES/NO

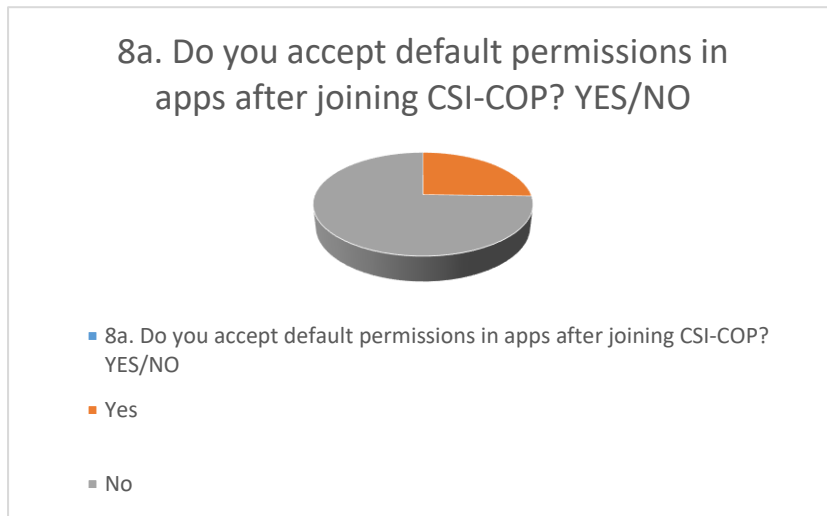- ■ 8a. Do you accept default permissions in apps after joining CSI-COP? YES/NO
- ■ Yes
- ■ No

Chart 3 illustrates that some survey 2 question 8a responders continue to accept default app permissions after joining CSI-COP.

Chart 3: Accepting default app permissions after joining CSI-COP.

Responses to question 8a suggests that some work might need to be done to spread the message concerning possible third-party tracking through app permissions to functions in a mobile device. Tracking and unnecessary permissions can include, for example, access to contacts and other personal data through a health or fitness management app. However, the responses to survey 2 question 8b convey a different story. Of the 73 (91%) citizen scientists who answered the question on whether they check app permissions, 67 (92%) replied that they did check app permissions after joining CSI-COP (Table 5).

Total number of Participants Responses for each question	8b. Do you now check app permissions? YES/NO	Yes	No
		67	6
73			

Table 5: Checking app permissions after joining CSI-COP

Post survey 2 responses, the structure of question 8 could be perceived as confusing. Most citizen scientists reported checking app permissions after collaborating in CSI-COP (Table 5), with most *not* accepting default permissions (Chart 3). However, it could be the case that unnecessary permissions are stopped at the download stage by the app user following CSI-COP MOOC learning. The reason for accepting default app permissions could also be that, as privacy-by-design is gaining momentum as an approach in web and app development environments, there are fewer unnecessary permissions in the

default app permissions. This enquiry requires further investigation. In addition to Survey 2, CSI-COP selected privacy champions who were invited to voice their change in behaviour due to taking part in the project to a range of stakeholders during CSI-COP's main project event in Brussels, and again later during an online meeting with privacy champions to discuss this project's legacy.

2.3 Cybersecurity issues

CSI-COP legacy aims to refine survey 2 with a new survey for the general public. Survey 3 questions have been drafted (Appendix 2) and will be tested before roll-out on large online platforms to gauge wider insights into public knowledge about managing personal data online. This is especially important with almost daily news of data breaches. While companies are adept at extracting personal data, they do not appear to be as robust with their cybersecurity. For example, in August 2023, a data breach was reported about Discord.io a third-party service to Discord (Martin, 2023):

> "Discord.io — a directory where users can search for Discord servers matching their interests — first became aware of the data breach when a user named Akirah appeared on the Breached hacking forum offering its data for sale.… Akirah promised further credentials of 760,000 users up for grabs. Data is said to include usernames, email addresses, salted and hashed passwords, and billing addresses."

The worry is this from Murray's (2023) report:

> "The inclusion of Discord IDs in the breach does 'mean that other people might be able to link your Discord account to a given email address' "

Discord, unrelated to Discord.io is an online platform enabling people to gather in 'channels' to "collaborate, and just talk about your day" through sharing communication via text, audio, and video-calling (Discord, n.d.) and is reported to have "140 million active monthly users" (Curry 2023). Larger platforms can also suffer data breaches. In August 2023, LinkedIn, the "employment oriented platform for professionals" owned by Microsoft to share professional news and connect with others in the same and other professions, was reported to be undergoing a "successful hacking campaign targeting LinkedIn accounts (CyberInt, 2023). In 2021, LinkedIn had over 770 users worldwide, according to Statista (2023). The attack against LinkedIn users has shown that the organisation's cybersecurity effort has not been sufficiently robust to protected individual users worldwide who had been affected:

> "… resulting in a significant number of victims losing access to their accounts. Some have even been pressured into paying a ransom to regain control or faced with the permanent deletion of their accounts. While LinkedIn has not yet issued an official announcement, it appears that their support response time has lengthened, with reports of a high volume of support requests".

The volume of reported cyberattacks and data breaches demonstrates that not only better cybersecurity systems need to be in place to protect users' data, we users of online resources must be cautious about what personal data we share across the Internet, including sharing personal data about others in our sphere of connections.

3: Societal Impact Achieved

CSI-COP project was a grain in the sand of enterprises seeking to make impact in the way individuals in society value and share their personal data. The EU Horizon2020 science with and for society (SwafS) 15-2019 CSI-COP funded project has gained some societal impact. This is evident from qualitative feedback provided by CSI-COP citizen scientists. One citizen scientist's comment showed the experience on CSI-COP affected this individual to spread the word "about the dangers of cookies" (Box 1). The responses to CSI-COP's survey 2 are undergoing systematic analysis for open-access peer-reviewed scientific papers, as well as accessible magazine articles and social media posts.

> "I am trying to inform those around me about the dangers of cookies. I am attracted by the idea that we can contribute to the "improvement of the world" if we ourselves behave more responsibly."

Box 1: Citizen scientist feedback following CSI-COP collaboration

Another significant impact is the second author, Research Assistant and Creativity Manager in CSI-COP's coordinating partner Coventry University (JW), pursuing a part-time doctoral degree taking privacy-by-design to serious games where gamers' personal data protection (including children using games to play or learn) as a result of learning about online tracking through this project.

Further impact of CSI-COP is its recognition within the privacy professional industry through the project winning the Picasso Privacy Award in the 'Best Innovative Privacy Project' category in December 2022. CSI-COP were one of nine organisations shortlisted in this category including the UK data protection authority, the Information Commissioner's Office (ICO), PwC, and Nokia. Additionally, below is feedback from an organisation with worldwide members, Rotary International:

> "Your project is, in our eyes, very necessary, and you [CSI-COP] are the best promotor!"

Box 2: Rotary International feedback about CSI-COP project

Lastly, the cost to citizen science is volunteering precious time. However, the benefits are wide-ranging, including gaining new knowledge and transferable soft-skills (communication and collaboration), and the experience of working alongside researchers on a real-world project. Citizen science is an effective way to promote social inclusion and skills for employability.

4: Societal Impact to Achieve

CSI-COP's stakeholder events organised by project partners and hosted in venues and cities across Europe and in Israel connected diverse groups and individuals with an interest in the GDPR. This included website and app developers and also students undertaking computer science, data science and artificial intelligence undergraduate, postgraduate, and doctoral level in formal higher education. Societal impact remains to be achieved in web and app developers to standardise cookie notices and privacy policies. This is part of CSI-COP legacy, to achieve wider societal impact beyond the general public to designers of web-based technologies used by the public. The CSI-COP movement for privacy-by-design and better personal data self-management will continue beyond the end of the project through new project proposals covering the risks to personal data in artificial intelligence (AI) tools from large language models (LLMs), such as OpenAI's ChatGPT and Google's Bard.
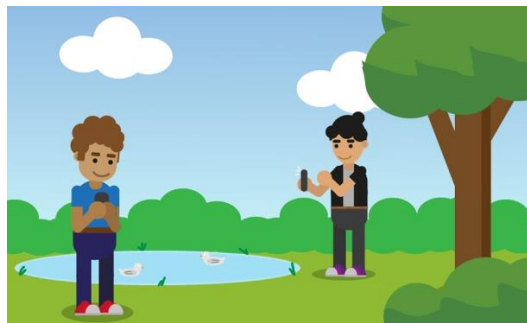

Figure 7: Safety, no-tracking mobile browsing

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Appendix 1: Blank survey2 for CSI-COP CS

The anonymous survey for CSI-COP's citizen scientists' only is across pages 14-18 in Appendix 1 and begins below.

Survey for CSI-COP Citizen Scientists

This questionnaire is for members of the public who became CSI-COP citizen scientists by:

1. Completing CSI-COP's free educational course 'Your Right to Privacy Online' (MOOC)
2. Completing the MOOC and the test questions
3. On 2) requested their MOOC completion certificate
4. On 3) completed CSI-COP participant information/informed consent to join the project as Citizen Scientists
5. Completing and submitting website and / or app investigations to their local CSI-COP project partner

This questionnaire seeks to learn if, after joining CSI-COP as citizen scientists, you have changed your online behaviour – please kindly answer the questions overleaf.

4. What browser did you use to access the Internet before you joined CSI-COP as a citizen scientist? For example, Microsoft Edge.

5. **Before joining** CSI-COP as a citizen scientist, did you accept cookies on a website? Please choose from:

    a. Before joining CSI-COP, I always accepted cookies in websites I visited, because (select all that apply from below)

        i. Don't know, just accepted

        ii. Saving time

        iii. It was convenient

        iv. I saw no harm in accepting all cookies

    b. Before joining CSI-COP I checked the cookie notice and /or the website privacy policy for any options about what cookies were and what they were for YES/NO

    c. Before joining CSI-COP I tried to reject cookies if that option was available on websites I visited. YES/NO

6. Do you use the same browser to access the Internet after joining CSI-COP as a citizen scientist? YES/NO/USE DIFFERENT BROWSERS

7. If you have changed browsers, which browser is your primary one to access the Internet?

<div style="border:1px solid black;">
Please write your answer in here
</div>

8. Do you accept cookies now after investigating websites as a CSI-COP citizen scientist?

   Please choose from the below:

   a. I check for options to reject unnecessary cookies, such as third-party cookies for targeting, marketing, personalisation

   b. I choose the 'Reject All' if that option is available

   c. I check further for other targeting techniques in websites, for example, 'Legitimate Interest' to object to all targeting

   d. I still accept all cookies because:

      i. There is no option to reject cookies on some websites

      ii. I don't have the time to reject

      iii. Other, please say

9. Do you use and download apps? YES/NO

10. Did you check permissions in the apps before you joined CSI-COP as a citizen scientist? YES/NO

11. Do you:

a. accept default permissions in apps after joining CSI-COP as a citizen scientist? YES/NO or

b. do you now check what permissions an app is requesting and select which permissions you give access to? YES/NO

12. Did you use public wi-fi for example, in cafes, in libraries, on trains, etc., before you joined CSI-COP? YES/NO

13. Do you still use public wi-fi after joining CSI-COP as a citizen scientist? YES/NO

14. Do you use a super-app that controls many functions, such as home surveillance cameras lighting in your house as well as grocery ordering? If so, which super app?

15. This question is for families: do you allow children in your family to have and use smart devices? YES/NO

16. If you so, at what age do you allow the children in your family to have a smart device?

17. If the children in your family use a smart device, do you, or do you ask the children in your family to check:

a. What apps your child uses on that phone? Please name the type of apps, for example, a messaging app, a games app, a painting app, etc

b. What permissions are on the apps on the phone that your child uses? For example, if it is a games app, does the app have permissions to contacts, photos, messages, etc.?

c. Does your family use any parental control app to protect children in the family? YES/NO

18. Would you like to share any other change in your online behaviour as a result of joining CSI-COP as a citizen scientist, or share your views about what you found from your investigations of websites you visited and apps you used?

Please send your completed survey to your local CSI-COP partner.

Appendix 2: Survey for the general public

The anonymous survey for the general public (not CSI-COP citizen scientists) is across pages 19-20 in Appendix 2 and begins below.

QUESTION 1:

Have you ever volunteered, i.e., conducted activities and not been paid as part of your interest in some project seeking volunteer participation?

If yes, please go to Question 2

If no, would you be able to say why?

QUESTION 2

If you have volunteered previously, what kind of project did you participate in and what was your role?

QUESTION 3

If you have volunteered previously, what benefit, if any, did you feel you gained from the volunteering experience?

QUESTION 4

Have you heard of citizen science?

If yes, please go to Question 5

If no, please see this page explaining citizen science: https://csi-cop.eu/faq/

QUESTION 5

Have you heard of the CSI-COP citizen science project?

If yes, please go to Question 6

If no, please see this page: https://csi-cop.eu/about/

QUESTION 6

If you were willing to volunteer, i.e., do unpaid work in your spare time, what kind of project topic would you be willing to participate in, please choose as many from the list below:

a. Plastic pollution
b. Space science
c. Climate science
d. Air pollution
e. Artificial Intelligence and robotics
f. Online data protection, privacy, and human rights
g. Other: please say…

{Partners place their contact name and email once translation of this survey2 is completed}