EUROPEAN
POLICYBRIEF

TITLE

Policy Brief 1: How Citizen Science Can Add Value to Investigate Compliance of the General Data Protection Regulation (GDPR).
[Deliverable D1.13/D29]

DATE: 30 March 2021

INTRODUCTION

We have "zero privacy" and should "get over it". These are words uttered in 1999 by Sun Microsystems co-founder, Scott McNealy (Sprenger, 1999). CSI-COP disagree. The idea that *privacy is dead* is much older and overlooks the fact that privacy is mentioned in the **1948** Universal Declaration of Human Rights (**UDHR**), article 12: "**No one shall be subjected to arbitrary interference with his [her] privacy … [or] correspondence**". Moreover, article 1 of the **2000** EU Charter of Fundamental Rights (**ECHR**) states "**Human dignity is inviolable. It must be respected and protected**". The **2018** general data protection regulation (**GDPR**) is "**designed to protect data in the era of mass Internet use**" (ICO, n.d.). The GDPR sets a "**high standard for consent**". Its **objectives** include the "**protection of fundamental rights and freedoms of individual persons with regard to processing of personal data**" and from this the "**right to be informed about the collection and use of personal data**" is the *key* "**transparency requirement**" (ICO, n.d.).

Using a **bottom-up approach** to assess whether the *informed consent* and *transparency* elements in the GDPR are being complied with, specifically on websites and in apps on smart mobile devices, the **CSI-COP** EU Horizon2020 funded research and innovation project (grant agreement 873169) will **engage**, **educate** and **inform** recruited adults from the general public to become **citizen scientists** joining the project's research team. **Citizen science** affords an invaluable opportunity for interested individuals to volunteer with researchers on real-world challenges. As an effort to '*open science*', citizen science has the very real potential to optimise the possibility of discovering new knowledge. In the case of the CSI-COP project, this is to co-investigate how far the GDPR is being complied with, since this new data protection framework came into effect on 25 May 2018. Citizen science participation in such a project can **increase appreciation of regulations and identify weaknesses in compliance**, as well as nurture a **better-informed society** (Ignat et al., 2020). Through interaction and volunteering alongside professional scientists, CSI-COP citizen scientists will gain a deeper understanding of the procedures of formal science: data gathering, hypothesis testing, modelling outcomes, and validating research results for veracity (ibid). This can increase their interest and trust in science. This is also one of the aims of the CSI-COP project.

This first policy brief in CSI-COP presents the pre-citizen science engagement stage with the project's team. Prior to recruiting and involving citizen scientists, the CSI-COP team has conducted exhaustive research on the best practices in citizen science. The first stage also involved making initial exploration into the compliance of the GDPR by analysing website privacy policies and cookie notices, and also exploring beneath apps on Android devices (e.g. Samsung mobile phone). This work has equipped the CSI-COP team with the experience and skills to deliver CSI-COP's planned informal education workshops: synchronous online and, subject to COVID19, in-person. At the time of writing, a massive open online course (MOOC) is being developed to informally educate citizen scientists about the *human right to privacy online*.

Extensive tracking of consumer behaviour occurs by default across the Internet. Some websites use *cookie walls*. These are barriers between website visitors and the website content (see Fig.1). The cookie wall can apply unethical practice by *nudging* visitors to accept all cookies without making it transparent what visitors are signing their data away to. This nudge practice is a *dark pattern* (Nouwens, et al., 2020) evidenced in the use of different font sizes, and larger and smaller button sizes for cookie options. An example of this can be seen from Lipault luggage website cookie wall options: 'More info', and 'Yes, I accept' (see Fig 1).

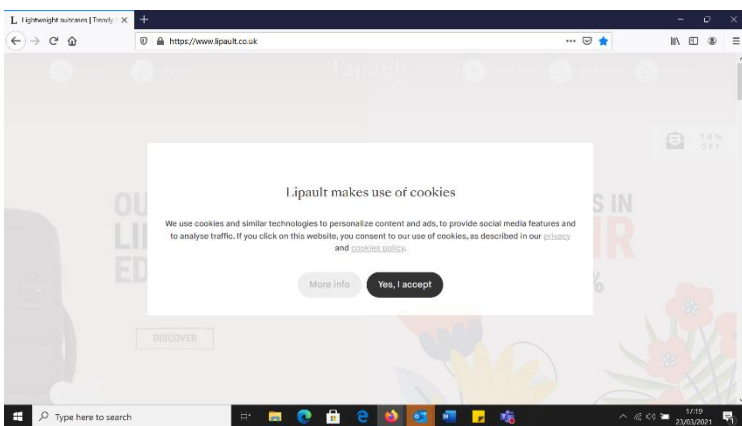*Figure 1: Lipault luggage website _230321*

Using a non-standard online technology to explore beneath websites, webbkoll tool shows that Lipault's website has no third-party cookies, but it does allow thirteen third-party requests from five unique hosts (see Fig. 2). This means that Lipault's website allows its visitor navigation behaviour to be passed on through the third-party requests. This is not made transparent to Lipault's online customers who might select the 'Yes, I accept' option for convenience. **This is not exactly the informed consent required under the GDPR**.
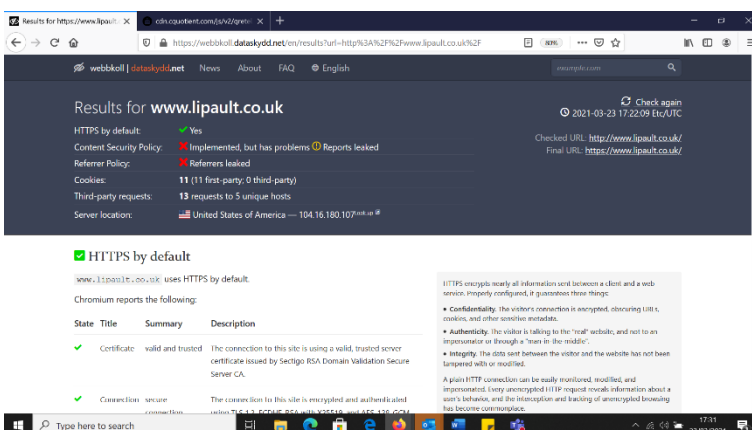

Figure 2: Lipault website webbkoll analysis_230321

Other websites use a cookie banner with minimal information about what a digital cookie is, and what is meant exactly by a "better browsing experience". An example of this is the EU's own website (see Fig. 3). Webbkoll online tool shows that the EU website does not carry any third-party cookies.

The advantage for citizen scientists in such a project as CSI-COP, with a focus on the ethics of web and app development practices, is a new way of learning: **experiential learning** or **learning in the context of meaningful tasks**. This type of learning is expected to greatly enhance citizen scientists' knowledge acquisition about the GDPR, the scientific process, and gain from state-of-the-art pedagogical techniques. It may also change the attitude of citizen scientists towards learning for the better. This may in turn help them encourage their children and grandchildren to trust in education and stay in school, pursue higher education, including science education.

EU funded projects: The CSI-COP consortium responded to the SwafS15-2018-19 EU grant call '**Exploring and supporting citizen science'.** The aim was to contribute to the EU's mission: "help policy makers monitor implementation and compliance with regulations … to increase public awareness about science and feeling of ownership of policies; and … enable faster and evidence-informed reactions to events and better territorial coverage". From CSI-COP's innovation, developing a privacy-by-design, **no-tracking** project website, we recommend that **EU funded projects should be required to set-up minimal tracking project websites** (Pocs, 2021). Similarly, if **EU funded projects create apps**, whether designed within the project by consortium partners or through sub-contracting, they should ensure that all requested permissions (e.g. to access contacts in smart phones), and any **third-party trackers** embedded **in the apps, are made explicit to the app users. This would provide the opportunity for app users to make informed choices** about whether or not to download and use the app. **This will drive ethical design of privacy-first technologies and tools**.

Online privacy: The second recommendation, for independence of data protection officers (DPOs) from organisations, arises from early findings of CSI-COP web pages' exploration that shows online tracking is out of control.
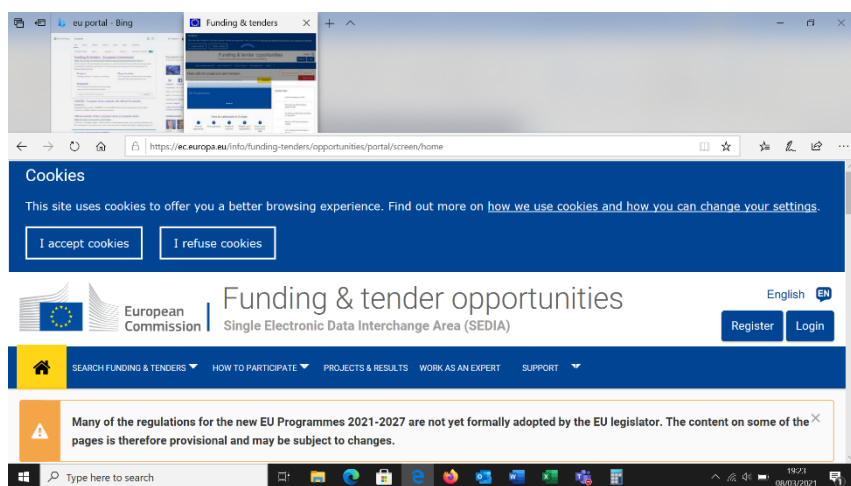

Figure 3: European Commission 'Funder & tender site cookie banner

The screenshots in this brief highlight that even when there are good intentions by an organisation (EU: Fig 3), cookie banners obscure data privacy options and the use of personal data. In the third year since it came into effect, **enforcing the GDPR appears weak**. A comprehensive programme of educating website development teams on GDPR compliance is necessary to ensure a tracking-free web experience. A change in the GDPR could allow **data protection officers (DPOs) to be made independent of organisations** (as in the case of auditors)**, rather than be employed in organisations with no power, or less power than the organisation's advertising and marketing teams**. Certainly, a discussion between the EU and a variety of stakeholders is necessary to ensure the GDPR is better complied with, than it is at present.

SUSTAINABILITY AND LEGACY

The CSI-COP project began in January 2020. The overall aim is to raise awareness of **informed consent** accorded in the GDPR. This will be achieved by the end of the project through the project's activities (with requested six-month extension: December 2022). These include informal education workshops, an online MOOC, stakeholder cafés and parent-teacher roundtables. The activities will be organised by CSI-COP partners considering COVID-19 restrictions.

CSI-COP will nurture **pro-privacy champions** encouraged to communicate their experience of investigating GDPR compliance. CSI-COP privacy champions will be the legacy of the project disseminating their knowledge of GDPR compliance on websites and in apps to a variety of stakeholders. This in turn is expected to promote data protection influencing policy makers, web and app developers, the Ad tech industry, educators, tech and privacy journalists, and citizen science research.

The CSI-COP project leverages the ten principles of the European Citizen Science Association (**ECSA**) to engage a diverse cohort of citizen scientists collaborating in the exploration of the GDPR. Investigating cookies on websites and tracking in apps is a novel area for citizen science projects. Citizen scientists will gain experiential e-learning and become equipped with practical skills to explore the intrusion of our privacy as we e-shop, e-learn, digitally surf, interact on social media, create content, and find entertainment (movies, music and play games). The CSI-COP has six specific objectives (SO):

SO1: Setting-up the CSI-COP project and citizen science initiative (**completed**)
SO2: Engage citizen scientists to investigate compliance of the GDPR (ongoing)
SO3: Co-create a taxonomy of digital behaviour trackers: classify the different types of trackers in websites and in Android apps and who the trackers are from (e.g. a big tech company, a social media owner).
SO4: Create an open-access repository of trackers (searchable knowledge base)
SO5: Co-creating additional pro-privacy policies with the EU and international stakeholders so that data protection regulations are made easy to comply with
SO6: Influencing Stakeholders to adopt a privacy-by-default, no-tracking policy across the digital space

At the time of this first policy brief, the CSI-COP project is entering the recruitment phase to engage citizen scientists (Stepankova et al., 2020). The next version of CSI-COP's policy brief will report on the remaining project objectives with the findings from citizen science investigations of GDPR compliance.

PROJECT IDENTITY

PROJECT NAME   Citizen Scientists Investigating Cookies and Apps GDPR Compliance (CSI-COP)

COORDINATOR   Coventry University - CU, UK

CONSORTIUM   BAR ILAN UNIVERSITY – BIU -
Ramat Gan, Israel

CESKE VYSOKE UCENI TECHNICKE V PRAZE – CTU –
Prague, Czech Republic

IMMER BESSER GMBH – IB –
Germany

NOK A TUDOMANYBAN EGYESULET – NaTE –
Budapest, Hungary

OULUN YLIOPISTO – UOULU -
Oulu, Finland

PANEPISTIMIO PATRON – UPAT -
Patras, Greece

STELAR SECURITY TECHNOLOGY LAW RESEARCH UG (HAFTUNGSBESCHRANKT) GMBH –
Stelar –
Germany

STICHTING KATHOLIEKE UNIVERSITEIT BRABANT – TiU -

Tilburg, The Netherlands

TRUST IN DIGITAL LIFE – TDL -
Brussels, Belgium

UNIVERSIDAD AUTONOMA DE BARCELONA – UAB –
Barcelona, Spain

FUNDING SCHEME	EU Horizon2020 SwafS-15-2019
DURATION	January 2020 – June 2022 (30 months) [6-month extension request underway]
BUDGET	EU contribution: 1 999 143.75 €.
WEBSITE	https://csi-cop.eu/
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EU Project Officer: Colombe Warin |

FURTHER READING

ICO (n.d.). *Data Protection by Design and Default. UK ICO*. https://bit.ly/3foQo0i

Ignat, T., Stepankova, O., Shah, H., Celentano, U., Zhitomirsky-Geffett, M., Gialelis, Y., Pierce, R.L., Vallverdú, J., Bal, D., Persic, S., Bencze, J., Wyler, D. & Ozdemir, D. (2020). Public report on Current Practices in Citizen Science Engagement. (CSI-COP Deliverable D2.1/D10). Version 4. Zenodo. DOI: `10.5281/zenodo.3899478`

Hinsenkamp, M., Rigler, D., Stepankova, O., Shah, H., Gialelis, Y., Pierce, R.L., Celentano, U., Zhitomirsky-Geffett, M., Vallverdú, J. & Ozdemir, D. (2020). Guidelines for Diverse Citizen Science Recruitment. (Deliverable D2.2/D11) Version 5.3. DOI: `10.5281/zenodo.3923820`

Nouwens, M., Liccardi, I., Veale, M., Karger, D., & Kagal, L. (2020). Dark Patterns after the GDPR: Scraping Consent Pop-ups and Demonstrating their Influence. *CHI '20CHI Conference on Human Factors in Computing Systems*, April25–30,2020, Honolulu, HI, USA. **DOI: 10.1145/3313831.3376321**

*Pocs, M. (2021). Personal email to author- Huma Shah: 25 March 2021.

Sprenger, P. (1999). *Sun on Privacy: 'Get Over It'*. Wired. https://www.wired.com/1999/01/sun-on-privacy-get-over-it/

Stepankova, O., Shah, H., Ozdemir, D., Pierce, R.L., Gialelis, Y., Hinsenkamp, M., Rigler, D., Celentano, U., Zhitomirsky-Geffett, M., Vallverdú, J., Lantavou, K., Evram, M. & Hriscu, A. (2020). CSI-COP Framework for Engaging Citizen Scientists. (Deliverable D2.3.D12). DOI: **10.5281/zenodo.4066515**