engage2innovate

POLICY BRIEFING 1

Advancing and enabling effective implementation in EU security research

Engage2innovate drives the transformation of EU security research through human-centred design, enabling practical innovation that tackles the critical challenge of implementation

01/
EXECUTIVE SUMMARY

✳ **Engage2innovate** (E2i) aims to transform EU-funded security research into an engine for impactful innovation by addressing the critical challenge of implementation.

✳ Despite billions invested in security research, only a fraction of outputs are implemented. E2i addresses this gap by championing a human-centred design approach that engages end-users, understands their needs and operational contexts, and prototypes and validates solution designs.

✳ Advocating a human-centred design approach, E2i will advance security R&I practice, enabling projects to deliver relevant, practical, and sustainable solutions.

✳ To support this, E2i is developing a *Security R&I Toolbox*. This Toolbox will provide practical tools and methodologies based on a human-centred design process, ensuring structured engagement with end-users and stakeholders. By supporting projects in framing problems, understanding operational contexts, and prototyping solutions, the Toolbox will enable the delivery of security solutions fit for real-world use.

✳ Through its efforts, E2i aims to shape the future of EU security R&I practice, embedding human-centred design principles that drive innovation uptake and impact across the EU.

We invite stakeholders in EU security R&I to engage with E2i in shaping this transformative process. Visit the project website at www.engage2innovate.eu or email info@engage2innovate.eu

02/
FRAMING THE CHALLENGE OF INNOVATION

The primary challenge facing EU security research is the lack of uptake and implementation of practical outputs, despite significant investment[1] — including some €1.6 billion for the Civil Security for Society cluster in Horizon Europe.

The issue is compounded by difficulties in tracking the implementation and impact of EU security research. This is highlighted by a 2022 report from the RAND Corporation, which criticises the lack of a centralised data source for tracking the uptake of security research outputs.

The lack of uptake is often attributed to 'issues of user acceptance,' implying that the fault lies with end-users and the general public — those on the receiving end of such security outputs.

E2i identifies that this is a misdiagnosis — one that serves to conveniently shift the blame as well as ownership of the problem. In reality, the issue can more accurately be described as a failure of 'implementation' — indicating a shortcoming in and misunderstanding of the innovation process itself.

03/
THE HUMAN-CENTRED DESIGN APPROACH

E2i applies a human-centred design approach to address the critical challenge of transforming EU security R&I projects into solutions that deliver real-world impact.

Human-centred design research prioritises the human element in creating sustainable and innovative solutions. By engaging with end-users and stakeholders, security R&I projects can gain deeper insight into problems and operational contexts. This approach enables the design, development, delivery, and deployment of solutions that are both appropriate and innovative.

In adopting this human-centred design approach, E2i directly tackles the implementation challenge, building on decades of literature on good practice in product and service innovation.[2]

This approach has already been validated in projects such as Cutting Crime Impact (CCI), which successfully demonstrated the practical value of human-centred design in security innovation *(see Box 1).*

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[1] Technopolis Group (2016) Executive summary, p.4. <u>available here</u>.

[2] See Davey & Wootton (2017), <u>available here</u>. For example, Cooper, R.G. and Kleinschmidt, E.J. (1989) "Success Factors in Product Innovation," Industrial Marketing Management, Vol. 16, pp. 215-223.

BOX 1

Proof of concept
The Cutting Crime Impact (CCI) project

The CCI project demonstrated the practical value of human-centred design in security innovation. By focusing on the role of police officers within their communities, CCI developed a tool with Lisbon Municipal Police to support the rollout of community policing. This tool's success earned the European Commission's 2023 Security Innovation Award for "Best Innovation with a Strong Societal Impact."

All tools developed by CCI were tailored to the operational needs of law enforcement partners and are available for adaptation to different contexts via the CCI website (see **cuttingcrimeimpact.eu**). The Triple Diamond human-centred design process used in CCI structured the research, prototyping, and delivery of solutions across four specific security domains, ensuring maximum uptake and impact of the six tools developed.

E2i aims to apply these principles to the broader EU security research programme, to enhance the implementation and impact of security research outputs. To achieve this, E2i will develop tools and support materials that foster more structured and effective engagement with end-users and relevant stakeholders, ensuring that project outputs are both practical and impactful.

04/
THE NATURE OF TRUE INNOVATION

Innovation is often confused with invention. While invention is the generation of novel ideas, true innovation goes further — requiring implementation. As Joseph Schumpeter, a pioneer of innovation theory, observed:
"Innovation is the market introduction of a technical or organisational novelty — not just its invention."

Without implementation, an invention remains an unrealised novel idea.

For E2i, developing a security innovation is not simply about creating new technologies. It involves designing solutions — whether new processes, systems, or approaches — that are effectively implemented to meet the real needs of end-users. This is where human-centred design comes into play. By focusing on the needs and contexts of end-users, E2i ensures that solutions are practical, usable, and ready for real-world application.

Too often, however, innovation is assumed to be synonymous with technology, which overlooks the potential for non-technological solutions *(see Box 2).*

BOX 2

Challenging the conflation
Innovation as 'technology'

Too often, innovation is equated with new technology. This mindset reflects a broader cultural and industrial bias wrapped up with conceptions of "modernity". However, this narrow view overlooks the potential for impactful, non-technological innovations — such as new processes, systems or ways of working.

The assumption that only a technology can be the outcome of an innovation process limits the scope of what can be considered innovative. In fields like security, where operational effectiveness and human factors are crucial, an innovation may not involve technology at all. It may instead involve rethinking workflows, improving coordination, or adapting strategies to meet end-user needs more effectively.

By correcting modern, technology-centred misconceptions and embracing the true definition of innovation, E2i advocates for a broader understanding of security solutions, focused on delivering real-world impact.

Blaming a lack of implementation on end-users' "acceptance" ignores not only the deeper factors that influence adoption, but also the role of good, empathetic and inclusive design practice in anticipating and addressing them. Instead, E2i advocates for a design process that anticipates these factors, incorporating end-user insights from the start through empathetic and inclusive design research.

Building on the extensive literature from Design and New Product Development (NPD) management, E2i emphasises the importance of incorporating the 'voice of the customer' and prototyping solutions with key stakeholders. Invention alone is insufficient. By confirming assumptions, refining requirements, and validating designs early, E2i positions inventors on the path to true innovation.

05/
BUILDING ON PROGRESS TO DATE

For over a decade, the European Commission has worked to improve the uptake of security research outputs through enhanced engagement with end-users and civil society, better integration of social sciences and humanities, and a stronger focus on the human factor. In 2022, the Commission launched the **Strengthened Security Research and Innovation** (SSRI) theme, calling for proposals focused on social innovation as a key enabler of security solutions and increased security perceptions. This call presented end-user and citizen engagement, Responsible Research and Innovation (RRI), and social innovation as strategies to enhance the success of security R&I projects.

06/
WHEN 'SOCIAL INNOVATION' ISN'T

While the funding call that led to E2i suggested 'social innovation' as a potential solution, this concept often confuses ends and means. Security is undoubtedly a social good, and so innovation in this domain could be considered 'social innovation' by default. However, beyond involving end-users and stakeholders — a recognised innovation 'success factor' across many domains — 'social innovation' offers little practical guidance that can be generalised across the diverse challenges of the security sector.

Rather than attempting to operationalise the vague concept of social innovation, E2i integrates its objectives (the ends) with the tried-and-tested human-centred design process (the means) to develop a Security R&I Toolbox specifically designed to address the practical needs of EU-funded security R&I projects.

Developed through research and consultation with end-users in the security research community, this toolbox will provide concrete tools, methodologies, and guidance to support the structured design and delivery of security R&I projects, maximising the uptake and impact of their practical outputs.

07/
FROM THE PROJECT TO THE PROGRAMME

E2i aims to influence the broader structure of the security research funding programme by developing policy recommendations that improve how projects are structured and assessed. These recommendations will focus on ensuring that proposals properly frame problems through front-end research with end-users and stakeholders, test solution concepts through prototyping, and carefully plan the roll-out and implementation of solutions. By embedding these practices, E2i seeks to ensure that future projects can effectively translate research outputs into practical innovations.

E2i will research, design, and develop practical outputs in collaboration with end-users, researchers, policymakers, and CSOs. To enable this, the project will actively seek the support and engagement of CERIS, aligning with their broader objective to strengthen security research and innovation. A series of three E2i Symposia will further engage members of the security research community. The first Symposium — Realising Security Innovation — was held on 19–20 June 2024 in Brussels and featured interactive colloquia and DesignLab sessions to explore new approaches to implementation.

E2i is a compelling call to action on the implementation of security innovation and a practical reframing of the role of design within Horizon Europe-funded security R&I projects. We invite you to join us at an upcoming E2i consultation event. In the meantime, please contact us at info@engage2innovate.eu or visit our website at www.engage2innovate.eu for more information.

WE WELCOME YOUR ENGAGEMENT IN SHAPING THE FUTURE OF EU SECURITY INNOVATION.

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Professors Davey and Wootton are the Scientific Coordinators of the **Engage2innovate** (E2i) project and bring over two decades of experience in design-led security research. As directors of the Design Against Crime Solution Centre at the Designamics Institute, University of Salford, they lead transdisciplinary, human-centred design research to address complex societal challenges.

Their work focuses on creating practical, real-world security innovations in collaboration with law enforcement, security practitioners and policymakers, ensuring solutions meet the needs of end-users and stakeholders. Under their leadership, the Solution Centre has developed impactful, human-centred solutions for over twenty years.

THE E2I PROJECT CONSORTIUM

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