

CHERITech'25 CONFERENCE

Manchester, UK

2025

14th November

■ cheri-alliance.org



CHERI

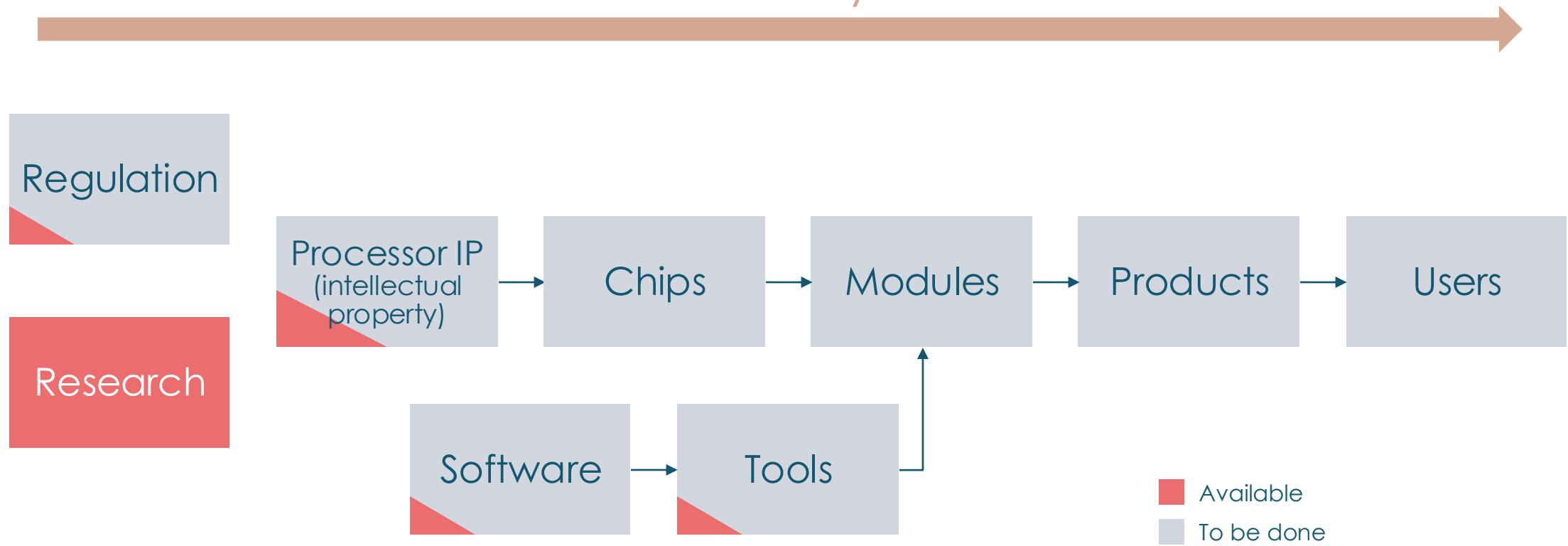
Progress of the Alliance

How we promote CHERI together

Mike EFTIMAKIS
Founding director – CHERI Alliance

Getting CHERI adopted

How to stimulate the industry?



○ The CHERI Alliance stimulates CHERI adoption



Technical

- Guidance, best practices
- Tech enablement (code, examples...)
- Interoperability, compliance



Promotion

- Technical & marketing info
- Media
- Policymakers, regulation



Community support

- Open-source software support
- Platform for collaboration
- Education, networking



Progress

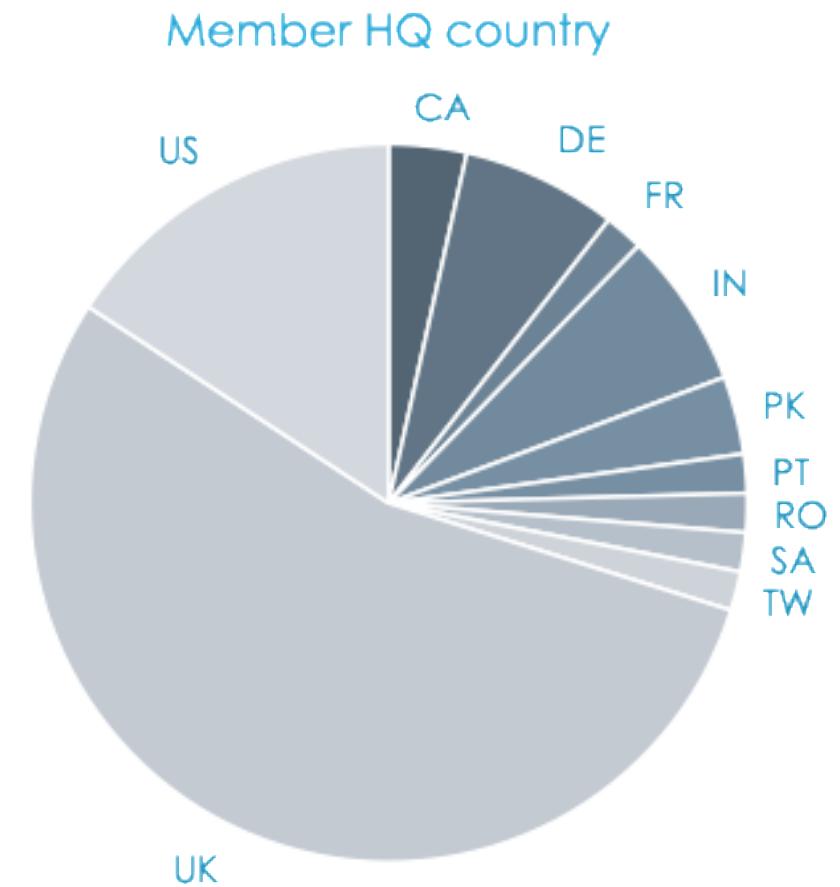
More credibility – more visibility – more members – more activity

Feb 2024	Nov 2024	Mar 2025	Apr 2025	May 2025	Oct 2025	Nov 2025
<ul style="list-style-type: none">• Creation of CHERI Alliance C.I.C.	<ul style="list-style-type: none">• Official launch	<ul style="list-style-type: none">• Embedded World• CHERI Blossoms conference	<ul style="list-style-type: none">• First Governing Board	<ul style="list-style-type: none">• Official partner of UK govt	<ul style="list-style-type: none">• Handover of Morello boards	<ul style="list-style-type: none">• CHERITech'25

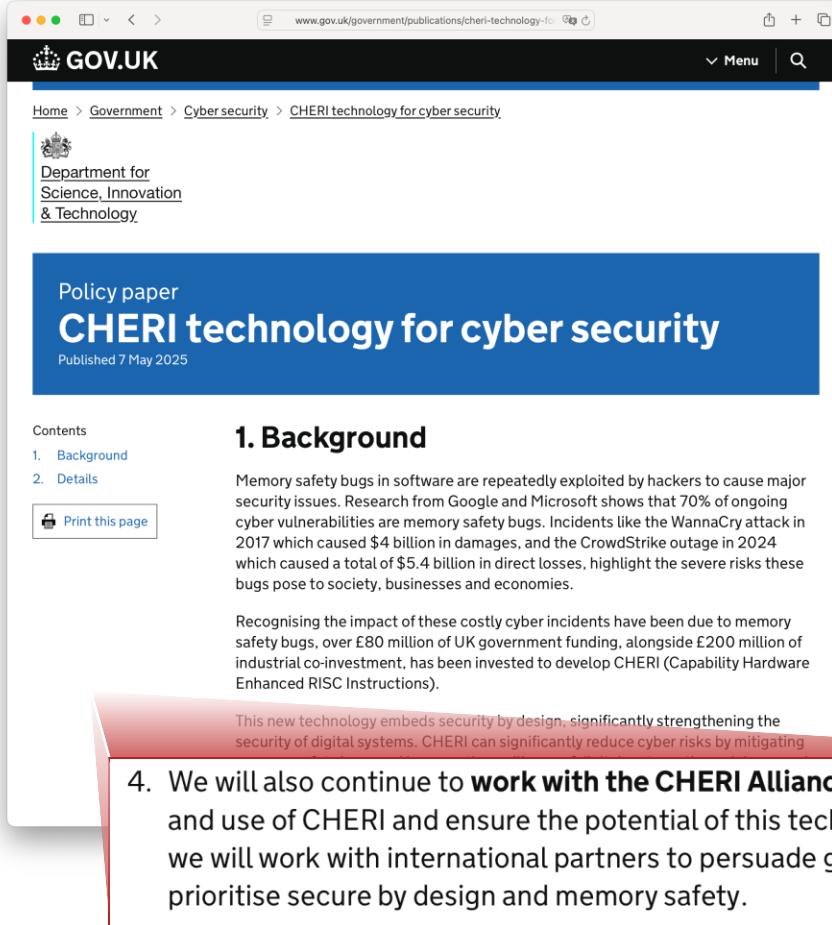
○ Building a global community

- ◆ Multiple types of members
 - ◆ Companies
 - ◆ Universities / Research labs
 - ◆ Community organizations
 - ◆ Govt organizations
 - ◆ Individuals
- ◆ 11 countries

10 universities /
research lab



UK govt's partner for CHERI adoption



Policy paper
CHERI technology for cyber security
Published 7 May 2025

Contents

- Background
- Details

[Print this page](#)

1. Background

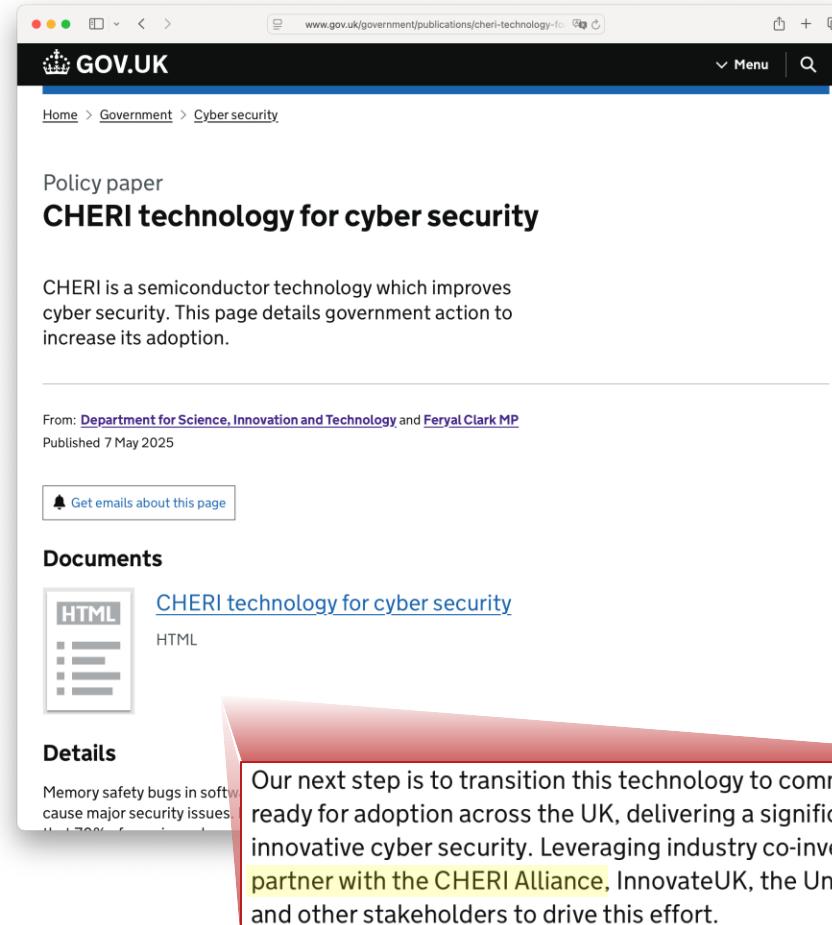
Memory safety bugs in software are repeatedly exploited by hackers to cause major security issues. Research from Google and Microsoft shows that 70% of ongoing cyber vulnerabilities are memory safety bugs. Incidents like the WannaCry attack in 2017 which caused \$4 billion in damages, and the CrowdStrike outage in 2024 which caused a total of \$5.4 billion in direct losses, highlight the severe risks these bugs pose to society, businesses and economies.

Recognising the impact of these costly cyber incidents have been due to memory safety bugs, over £80 million of UK government funding, alongside £200 million of industrial co-investment, has been invested to develop CHERI (Capability Hardware Enhanced RISC Instructions).

This new technology embeds security by design, significantly strengthening the security of digital systems. CHERI can significantly reduce cyber risks by mitigating

4. We will also continue to **work with the CHERI Alliance**, to encourage the take up and use of CHERI and ensure the potential of this technology is realised. Finally, we will work with international partners to persuade governments and industry to prioritise secure by design and memory safety.

<https://www.gov.uk/government/publications/cheri-technology-for-cyber-security/cheri-technology-for-cyber-security>



Policy paper
CHERI technology for cyber security

CHERI is a semiconductor technology which improves cyber security. This page details government action to increase its adoption.

From: [Department for Science, Innovation and Technology](#) and [Feryal Clark MP](#)
Published 7 May 2025

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Documents

[CHERI technology for cyber security](#)
HTML

Details

Memory safety bugs in software cause major security issues. The 70% of ongoing cyber vulnerabilities are memory safety bugs.

Our next step is to transition this technology to commercial products, ready for adoption across the UK, delivering a significant advancement in innovative cyber security. Leveraging industry co-investment, we will partner with the CHERI Alliance, InnovateUK, the University of Cambridge and other stakeholders to drive this effort.

<https://www.gov.uk/government/publications/cheri-technology-for-cyber-security/cheri-technology-for-cyber-security>

Morello boards

- Funded by DSbD program
- Some boards left
- Now under responsibility of the Alliance



Getting the community to collaborate effectively

Many working groups focused on bringing useful content



Certification Program
• Mike Eftimakis
• CHERI Alliance



CHERI in SoC
• Ben Fletcher
• Codasip



CHERI C/C++
• David Chisnall
• SCI Semiconductors



CHERI FreeRTOS
• Yaman Cakmakci
• Codasip



CHERI Linux
• Allison Randal
• Capabilities Ltd



CHERI QEMU
• Alfredo Mazzinghi
• Capabilities Ltd



CHERI seL4
• Hesham Almatary
• Capabilities Ltd



CHERI Virtual Machines
• Jeremy Singer
• Glasgow University



CHERI Zephyr
• Jennifer Jackson
• Birmingham University



Marketing
• Adam Finney



OS Support & Portability
• Brooks Davis
• SRI



Promotion & Ambassador program
• Mike Eftimakis
• CHERI Alliance



Repository Management
• Marno van der Maas
• lowRISC



Rust+CHERI
• Murali Vijayaraghavan
• Google



CHERITech'25

18 talks

7 exhibitors

5 posters

○ Next events...

- ◆ CHERITech'25 Reloaded

- ◆ 4th December 2025
 - ◆ Online event

- ◆ CHERI Blossoms 2026

- ◆ 26-27th March 2026
 - ◆ Cambridge

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Thank you!

Contact contact@cheri-alliance.org

Web

www.cheri-alliance.org



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25 November 2025