CENTRE FOR SECURE INFORMATION TECHNOLOGIES (CSIT)

NORTHERN IRELAND
CYBER SECURITY SNAPSHOT

SEPTEMBER 2024

FOREWORD

The Centre for Secure Information Technologies (CSIT) is the UK's Innovation and Knowledge Centre (IKC) for cyber security, delivered in collaboration with Innovate UK, the Engineering and Physical Sciences Research Council (EPSRC) and Invest Northern Ireland. CSIT is committed to world class research in and accelerating translation activity for economic impact. The centre also works collaboratively with the National Cyber Security Centre (NCSC), ensuring that the UK is the safest place to live and work online.

In February 2023, CSIT secured an £18.9m investment in the region's cyber security ecosystem, including £11 million UK Government funding through the New Deal for Northern Ireland, to help develop a pipeline of cyber security professionals in NI and provide collaborative research and development opportunities with industry through the creation of a Cyber-AI Hub. This is also supported by £3.3m of funding from the EPSRC, to deliver the third phase of CSIT's IKC programme, focused on "Securing Complex Systems" cementing its position as a world-leading centre for research and innovation until 2027.

Having brought more than 2,000 global cyber security leaders to the National Cyber Security Centre's (NCSC's) flagship 'Cyber UK' event in 2023, Northern Ireland's cyber security ecosystem has continued to excel: firms continue to deploy state-of-the-art AI powered cyber security products; specialist cyber security firms have chosen Belfast to be the hub of their research and development activity; and thirty NI based technology companies supported 250 girls to attend NCSC's first ever CyberFirst EmPower Girls event in Northern Ireland.

This document is the third in a series of short overviews of the Northern Ireland cyber security ecosystem. It shows that Northern Ireland continues to be an international hotspot for cyber security activity, and Northern Ireland's ecosystem supports cyber security technology development across all technology readiness levels.

Cyber security continues to be one of the region's greatest success stories, with over 2,750 related roles generating more than £237m direct GVA to the economy.

We remain on track to achieve our ambitious vision of growing the sector to 5,000 cyber security professionals by 2030, working closely in partnership with industry, academia and civic society. If you would like to hear more about CSIT, or to explore potential opportunities in Northern Ireland, just reach out to someone at the Centre, or to one of our partner organisations.
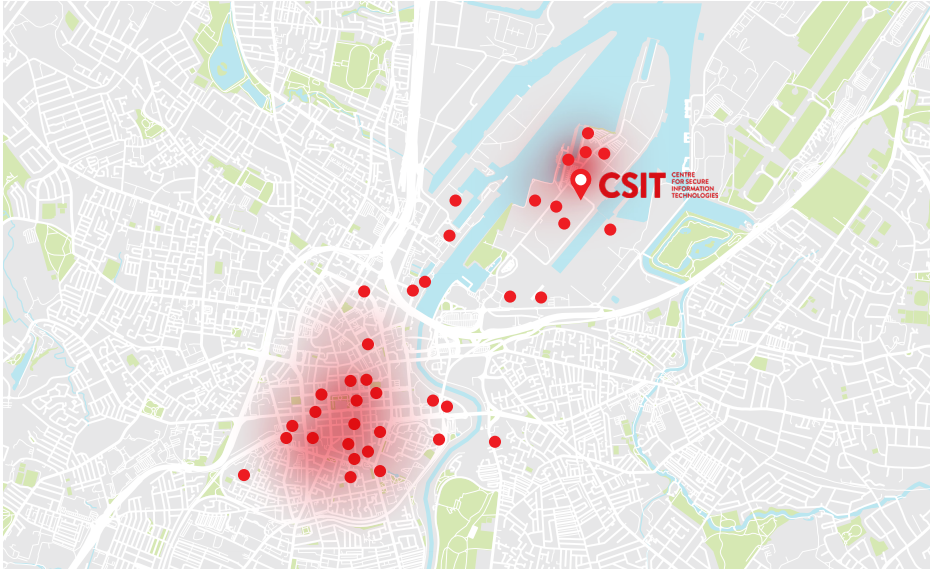
Professor Máire O'Neill
CSIT Director

Judith Millar
Head of Strategic
Partnerships & Engagement

NORTHERN IRELAND'S CYBER ECOSYSTEM

● Cyber security businesses and teams clustered in Belfast

Cyber security continues to be a major success story for the region, with over 2,750 related roles generating over £237m in direct GVA to the economy.

Belfast continues to be one of the world's most concentrated cyber security clusters, with more than 100 cyber security businesses and teams within 3 miles of the city centre.

Northern Ireland is the number one global destination for US FDI, and 66% of firms are headquartered overseas.

Almost 1,800 cyber security jobs in NI are backed by US FDI.

NI also attracts inward investment from Canada, Europe, Japan, Israel, and the wider UK and Ireland.

33% of cyber security firms are locally founded.

Over £72m raised by Northern Ireland cyber security firms in VC investment since 2018.

INVESTMENT

Total VC investment in NI-headquartered cyber security firms has grown by 67% (to £72m) since the 2023 snapshot, driven by substantial investment in companies such as Cloudsmith and B-Secur.

◇ cloudsmith

Cloudsmith develops pipeline management software for developers and is a cloud-native, universal artefact management platform for securely developing and distributing software. The company secured £9m in late 2023 to support research and development.

Northern Ireland continues to build its global cyber security reputation through:

- Strong private investment despite challenging macroeconomic conditions. However, the 2024 data suggests a more challenging labour market, with only a 2% increase in headcount between 2023 - 2024, reflecting global trends.

- International hub for cyber security research and innovation, underpinned by CSIT.

- An attractive location for inward investment, with partnerships between academia, government and industry – and access to talent across Belfast, Derry-Londonderry and beyond.

- A growing ecosystem of locally headquartered firms with global reach, supported by leading cluster network 'NI Cyber'.

128
Cyber Security Providers

Supports over £237m
Direct GVA to the NI economy

2,750+
Employees (2024)

£54,000
Average advertised salary (2023)

Target: 5,000+
Employees by 2030

Identification, Authentication and Access Control

Salt · Secure Communications   B SECUR   core · Transforming Lives Together

Risk, Compliance and Fraud

Signifyd   MetaCompliance   AuditComply   AMPLIPHAE

Securing Applications, Networks and Cloud

RAPID7   cloudsmith   IBM Security   SYNOPSYS

Threat Intelligence, Monitoring, Detection and Analysis

imperva   ANOMALI   BLACKFOG   SilverSky   proofpoint.

Operational Technology (OT) Security and Connected Devices

ANGOKA   NVIDIA   Cynalytica   Kigen

Managed Security Service Provision (MSSPs) and Advisory Services

kainos   VerticalStructure   Cybit   OUTSOURCE GROUP

WORLD-CLASS RESEARCH AND EDUCATION

CSIT is the UK's Innovation and Knowledge Centre for cyber security. Its mission is to couple major research breakthroughs in the field of secure information technologies with a unique model of innovation and commercialisation to drive economic and societal impact. CSIT brings together expertise in academic research, and applies this through its extensive business engagement and engineering activity.

CSIT has also been recognised by the NCSC for the high quality of its research and education activity, holding both Academic Centre of Excellence in Cyber Security Research (ACE-CSR) and Academic Centre of Excellent in Cyber Security Education for which it received Gold Award recognition in 2024. Further, the Queen's University Belfast MSc in Applied Cyber Security has also been recognised as an NCSC-certified degree programme.

CSIT plays a key role in the development of the cyber security ecosystem, through:

Supporting a **sustainable talent pipeline**

Strengthening **academic -industry relationships**

Championing **diversity** in cyber security talent

Promoting NI as a **cyber security destination for R&D**

Since the 2023 snapshot, researchers at Queen's have published almost two dozen academic outputs with a particular focus on:

- Applying AI to support secure control systems and embedded environments.

- Effectively integrating cyber-physical systems.

- Securing next-generation wireless technologies.

In parallel, CSIT's £11M Cyber-AI Hub which commenced in 2023, is continuing to deepen collaborative partnerships with R&D intensive cyber companies, and training a cohort of 15 PhD students and 40 Masters students in cyber security and AI. In 2024 CSIT secured a share of £8M in funding from the UK government* to establish a new Centre for Doctoral Training (CDT) in Future Open Secure Networks (CDT-FORT) in partnership with the University of Surrey which will create a community of at least 50 postgraduate researchers across the two locations, who will become industry-conscious thinkers and leaders with a unique range of expertise that encompasses cybersecurity, wireless communications, networking and AI.

* https://gow.epsrc.ukri.org/NGBOViewGrant.aspx?GrantRef=EP/Y035534/1

Cyber security remains a key priority for growing the region's economy, and as such continues to garner unwavering support through education and skills initiatives at all levels.

Education providers continue to work together to ensure a high-quality and sustainable pipeline of cyber security talent and skills that can support growth and development ambitions across the private, public and academic sectors.

In 2024 a total of 31 NI schools and colleges have achieved CyberFirst accreditation and 30 NI-based technology companies supported 250 school-aged girls to attend NCSC's first ever CyberFirst EmPower Girls event in Northern Ireland.

Belfast Metropolitan College (BMC) is training 20 people to become cloud data engineers through an Assured Skills Academy with corporate partner KPMG.

As one of Cisco's largest 'Networking Academy Support Centres', the Open University in Belfast is working with all six of Northern Ireland's Further Education (FE) colleges to equip students with industry-aligned skills in networking, cyber security and programming.

In early 2024, Ulster University announced a £16.3m investment in a new state-of-the-art 'Artificial Intelligence Collaboration Centre' (AICC) in partnership with Queen's to help business leaders across sectors harness the productivity and competitiveness benefits of AI, including in cyber security operations.

SUPPORTING INDUSTRY AND WORKING WITH PARTNERS

Industry engagement is at the heart of CSIT. Since its inception, CSIT's unique membership model has supported advisory and industrial collaborations with global partners including Allstate, BAE Systems, Cisco, Citi, Direct Line, First Derivatives, IBM, Infosys, Intel, McAfee, Nvidia, Qualcomm, Rolls Royce, Roke, Seagate and Thales. CSIT continues to support cyber security firms of all sizes to realise research, innovation and commercialisation opportunities through the Cyber-AI Hub.

CSIT has strong partnerships with:

NI CYBER

NI Cyber works to foster collaboration, innovation, and growth across its vibrant community of industry, academic institutions and training providers, organisations, and individuals working in cyber security. It provides a platform for members and stakeholders to share knowledge, resources, and expertise in an inclusive environment that benefits all participants.

Members represent the diversity of the sector including innovative start-ups, SMEs and multinational corporations delivering products and services globally, academic research, education and skills partners; and government. NI Cyber both supports and represents the region's cyber security community, ensuring that NI remains an attractive and innovative location for cyber security companies to form and scale.

NI Cyber continues to build strong connections locally and nationally, working with Cyber Ireland and the wider UKC3 cyber security cluster collaboration ecosystem.

CSIT is a delivery partner for Cyber Runway, funded by the Department of Science, Innovation and Technology (DSIT). Cyber Runway, the UK's largest cyber security accelerator, works with founders from idea to scale up to fast-track their growth.

Since 2021 Cyber Runway has supported over 250 companies to launch products, raise funding and secure pilots. Diversity is at the heart of the programme: 38% of cohort members have female leadership; and 48% have leadership from ethnic minorities. Cyber Runway is a truly national programme, and has welcomed startups from across the UK, with over half of alumni companies originating from outside of London and the South East.

SOURCES AND METHODOLOGY

This document has been produced by the Centre for Secure Information Technologies (CSIT) and Perspective Economics (PE), authored by Judith Millar (CSIT) and Sam Donaldson (PE). It provides a basic overview of the NI Cyber Security Sector. A full NI Cyber Security Snapshot (2024) will be published in late-2024, updating the previous 2023 snapshot (available via the QR code).

Sources Include:

- DSIT Cyber Security Sectoral Analysis (2024) – NI level data

- DSIT Cyber Skills in the UK Labour Market (2024)

- CSIT NI Cyber Snapshot (2021, 2023)

Scan to View

NI Cyber Security
Snapshot (2024)

Sector Specialism	Definitions
Identification, Authentication and Access Control	Systems designed to support the verification of users accessing systems.
Risk, Compliance and Fraud	Solutions to identifying risk (such as harmful actors or anomalies), ensuring compliance with cyber security standards.
Securing Applications, Networks and Cloud	Customisable solutions for identifying and patching potential software or network exploits or applying secure parameters to network or cloud.
Threat Intelligence, Monitoring, Detection and Analysis	Information security professional services focusing on network administration or network engineering, that helps counter the activities of cyber criminals such as hackers and developers of malicious software.
Operational Technology (OT) Security and Connected Devices	Manufacture and distribution of programmable systems or devices that interact with the physical environment (or manage devices that interact with the physical environment).
Managed Security Service Provision (MSSPs) and Advisory	Outsourced cyber security solutions focused on monitoring, network security, patching and remote device management, penetration testing, and wider security and IT advice.

SECURING COMPLEX SYSTEMS

UK Government
Northern Ireland

Invest
Northern
Ireland

UKRI
UK Research
and Innovation

Perspective
Economics