



DUBLIN

IRELAND

34th ANNUAL FIRST CONFERENCE
JUNE 26 - JULY 1

2022

#FIRSTCON22

Cyber Resilience through Collaboration & Cluster Development

Dr Eoin Byrne, Cluster Manager, Cyber Ireland (Ireland)



@eoinbyrne @CyberIreland



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Session Outline

- Ireland's Cyber Security Cluster & Opportunity
- Cyber security challenges we face
- Clustering approach to collaboration
- Cyber Ireland
- What have we achieved & What have we learned

Dr Eoin Byrne, Cluster Manager, Cyber Ireland (Ireland)

 @eoinbyrne @CyberIreland



Why Ireland for Cyber Security

+ 6 of the top 10
cyber security software
companies are located
in Ireland.¹

**+ Ireland's Vibrant
Start Up Scene**
With over 60 Irish cyber
security companies.²

+ Strong talent pool
3rd level attainment among
ages 30-34 of 55.4% vs
EU average 40.3%.³

+ Cyber Ireland
Ireland's cyber security cluster
driving specialist talent pipeline
and R&D.

**+ Ireland is a
neutral country**
with high geopolitical stability.

+ 12.5% corporate tax rate
and **25%** R&D tax credit.

**+ Dublin is now
Europe's largest data
hosting cluster,**
25% of the European market.⁴

**+ Ireland's National
Cyber Security Centre**
is responsible for Ireland's cyber
security and National cyber
security strategy.

**+ The Office of the Data
Protection Commissioner**
is Ireland's regulator for any
data issues - Ireland is an English
speaking country in the EU.



2022 EDITION

State of the Cyber Security Sector in Ireland



CYBER|IRELAND
IRELAND'S CYBER SECURITY CLUSTER

Position Paper: Achieving Our Cyber Potential 2030

KEY FINDINGS



The sector employs **7,351 cyber security professionals** in Ireland.

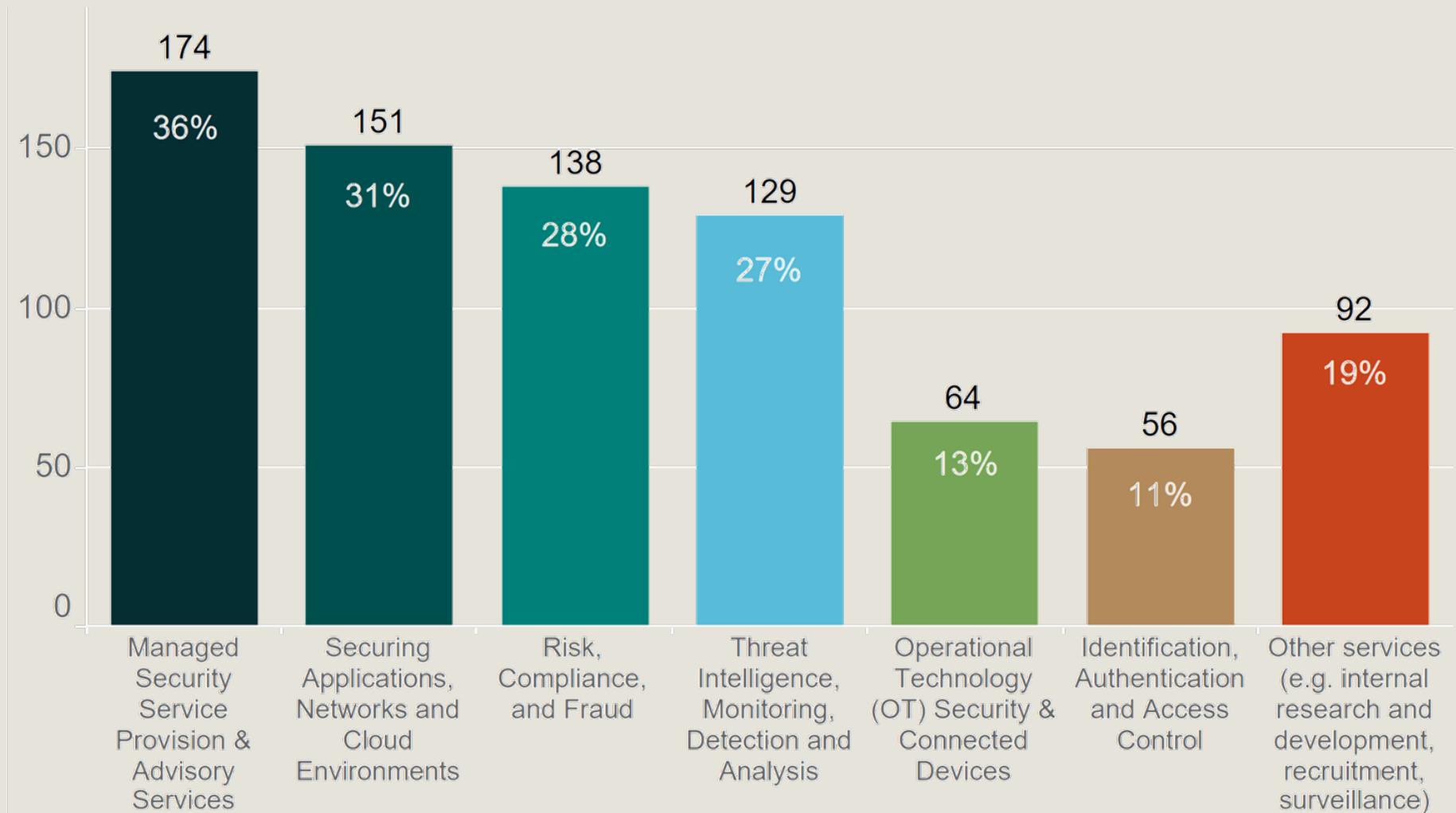


489 firms in Ireland employ staff in internal cyber security operations or offer cyber security products or services to the market.



It is estimated that in 2021 the Irish cyber sector generated approx. **€2.1bn in revenue & €1.1bn in GVA.**

Products and Services Offered



Locations in Ireland

>730 offices across Ireland.

Substantial clusters in Dublin,
Cork, Limerick and Galway

Strong links between
academic & research
institutions, and the cyber
security sector

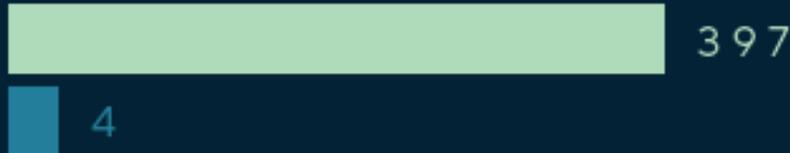


NUMBER OF OFFICES BY COUNTY / PER CAPITA

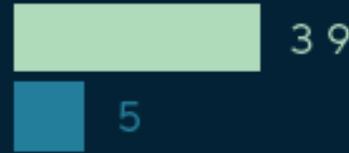
NUMBER OF CYBER SECURITY OFFICES

BUSINESSES PER 10K POPULATION

DUBLIN



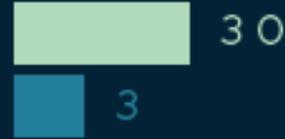
GALWAY



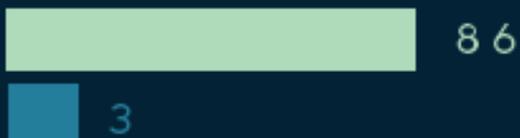
CORK



LIMERICK



BELFAST



TOTAL IN IRELAND

734 1.5

MCKESSON

QUALCOMM

IBM

Hewlett Packard
Enterprise

logitech

SecurityRisk
ADVISORS

pwc



ZURICH

McAfee

DELL

HID

Raytheon
Technologies

TREND
MICRO

vmware

accenture
High performance. Delivered.

CISCO

Johnson
Controls

stripe

VERITAS

VIGITRUST

Malwarebytes

FireEye

AT&T Cybersecurity

TransUnion

sift

CYLANCE

esentire

CIPHERTECHS

tenable

nuix

Microsoft

SOPHOS

keeper

RAPID7

verizon

solarwinds

skOUT

waratek

FORCEPOINT

VARONIS

VECTRA

Deloitte

RSA

Cyber Security SMEs



The Future

GROWTH PROJECTIONS BY 2030

 17,000 jobs

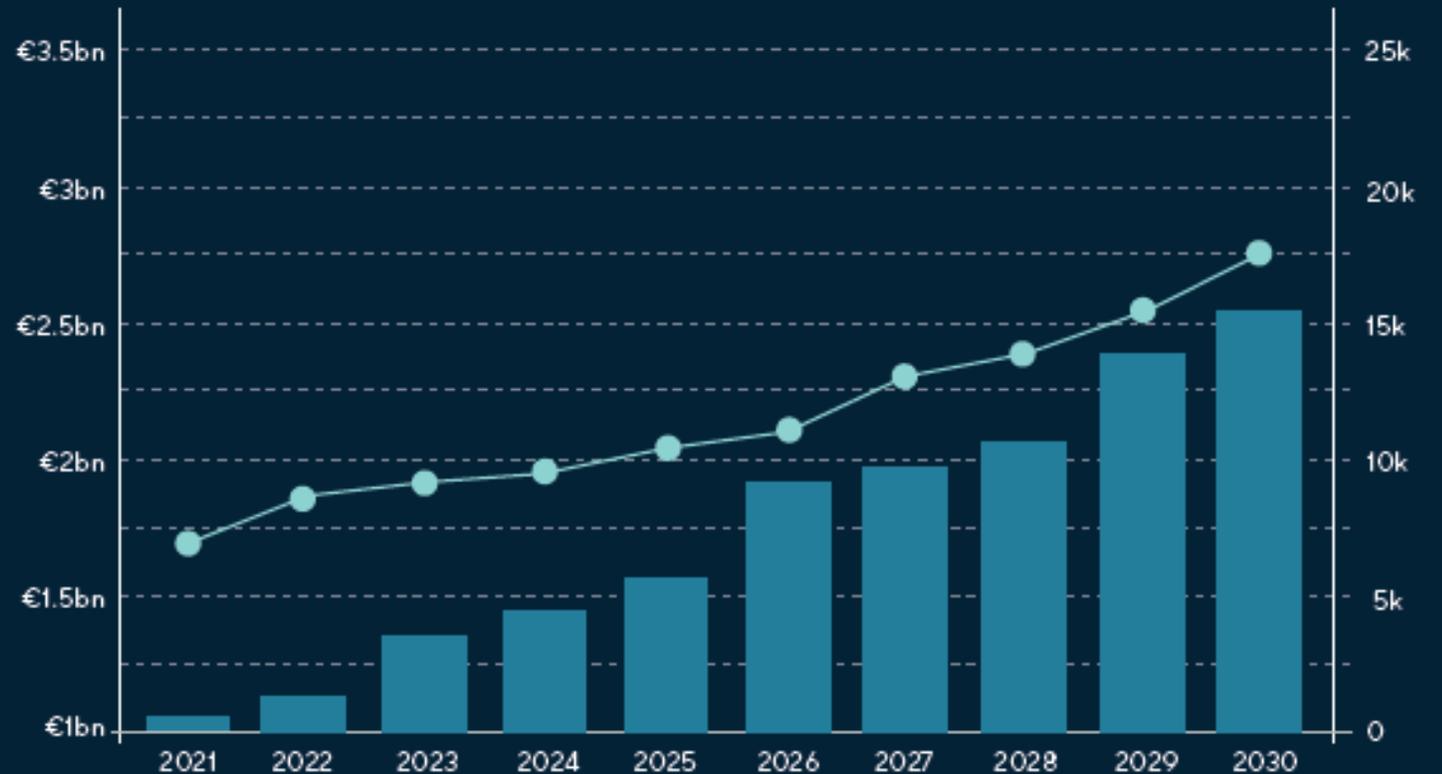
 €2.5bn GVA



Expect that their cyber security team will grow over the next 12 months.



Expect that this growth will occur at a rate of 25% or higher.



 GVA

 EMPLOYMENT

Barriers to Growth:

- **Skills Shortages:** 60% of firms surveyed have staff-related issues (suitable candidates, skills, salaries, retention), competing with MNCS, training & development.
- **Investment:** 26% of firms faced issues with raising or securing finance (expansion, scale, larger clients, cash flow)
- **Domestic No.s & Scale:** High number of micro-enterprise, lacking small & medium-size to deliver high value services...acquisitions
- **R&D:** Fragmented R&D, small scale projects, low-level of collaborative R&D

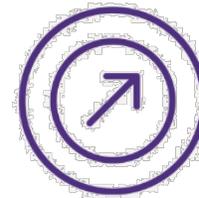


Position Paper:
Achieving Our Cyber Potential
2030

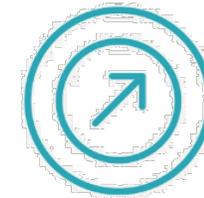
Ireland's Cyber Threats & Challenges

9.6 Billion

total economic cost of cybercrime in Ireland in 2020



55%
increase in
online fraud



45%
increase in
phishing complaints



While **95%** consider cyber security to be very important;

only **55%** have a formal cyber security strategy; and

only **45%** have cyber awareness training for employees.

Cybercrime – a threat to Ireland’s international reputation as a location for digital enterprise’



Trust

Ireland's data centre's house **30% of EU data**

Ireland must be a "most trusted" location for data security & privacy.

Our cybercrime statistics do not support this.



Cybercrime

No of cybercrime attacks on Irish organisations: **double global average**

Cybercrime attacks costing more than €4M: **60% higher than global average**

69% of companies spend the same or more on cleanup: **50% higher than global average**



Economic Value

Ireland's digitally intensive sections account for over 13% of our GDP and 26% of exports and employ 210,000 people

9/10 global software, 9/10 US technology and all of the top 10 born-on-internet companies have their EU HQs in Ireland

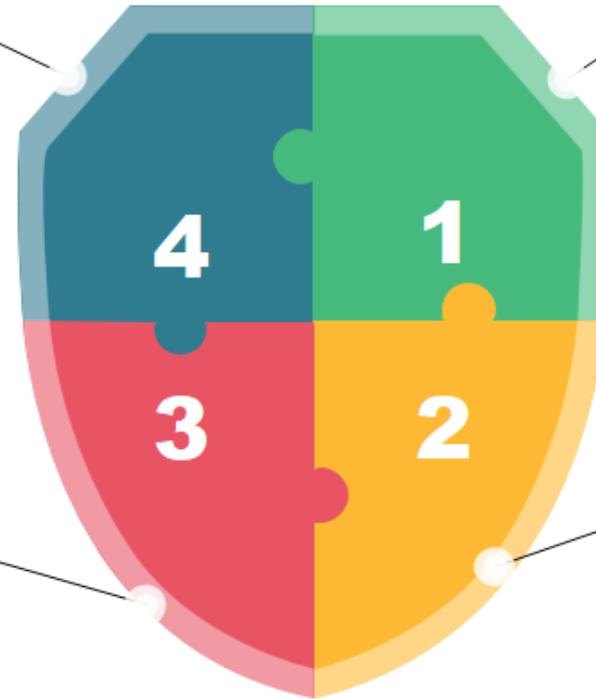


Our economy is at risk

Digital Development Level (DDL): **30th Globally**

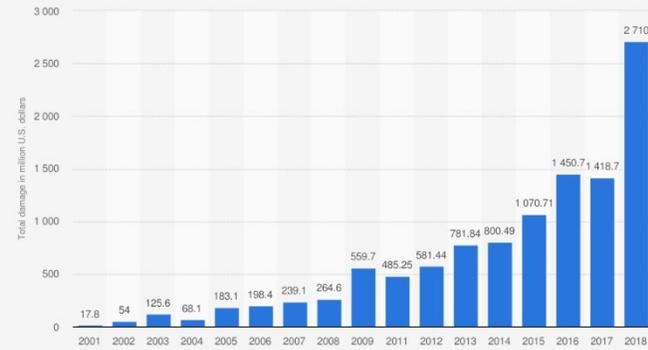
Cyber Security Preparedness: **73rd Globally**

Our digital developments are not in line with our cyber readiness: **our economy is at risk**



Cyber Security Challenges

Amount of monetary damage caused by reported cyber crime to the IC3 from 2001 to 2018 (in million U.S. dollars)



Sources:
FBI, IC3, US Department of Justice
© Statista 2019

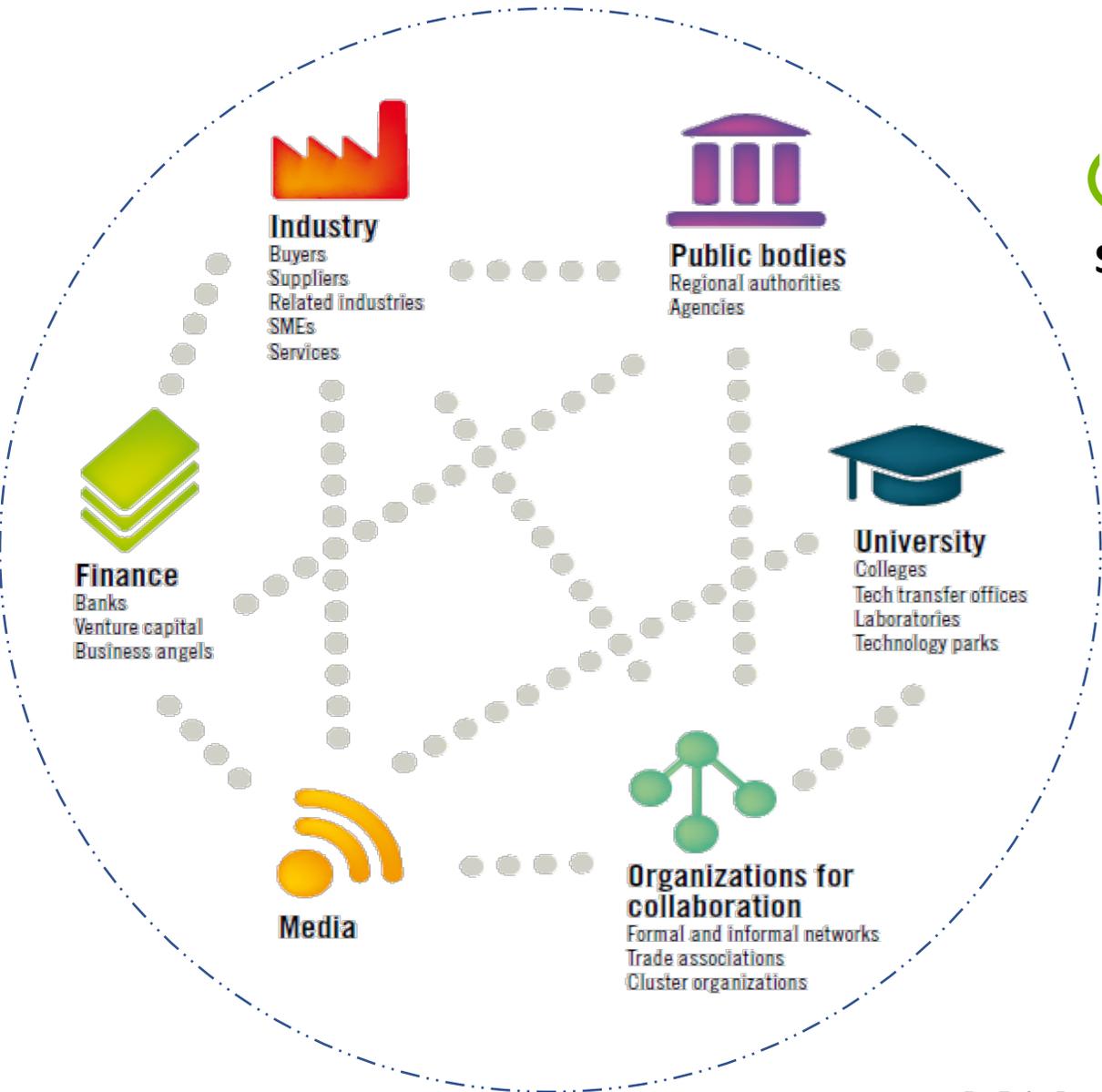
Additional information:
Worldwide, IC3, 2001 to 2018, excluding 2010; Cybercrime reported to IC3



Source: UK MoD / Institute for the Study of War (21:00 GMT, 13 April)

BBC





Addressing Complex Challenges through Clusters



Identifying the Need – Challenges of Industry

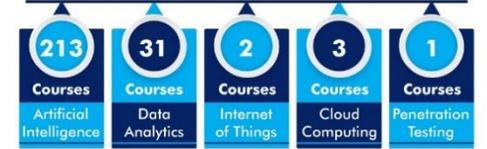
Cybersecurity Talent Crunch To Create 3.5 Million Unfilled Jobs Globally By 2021

CYBER SECURITY SKILLS IN THE UNITED KINGDOM

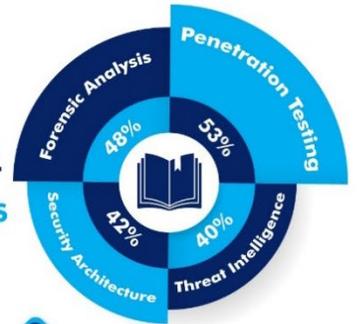
UK CYBER SECURITY SKILLS GAP



MOST IN-DEMAND SKILLS GLOBALLY (& Undergraduate Courses on UCAS with these Skills)



HIGH-LEVEL TECHNICAL SKILLS GAPS IN THE UK



siliconrepublic

CAREERS

Tweet

in

Share

Email

Almost two-thirds of CISOs see cybersecurity skills gap getting worse

...en cybersecurity positions from 2013 to 2021

by Lisa Ardill 18 FEB 2020 504 VIEWS

THE IRISH TIMES

Mon, Nov 30, 2020

NEWS SPORT BUSINESS OPINION LIFE & STYLE CULTURE

SPECIAL REPORT

Skills shortage of cybersecurity a major concern

May 20, 2020, 07:25am EDT | 802 views

Closing Cybersecurity's Gender Gap Can Aid The Skills Shortage And The Economy



Edward Bishop Forbes Councils Member
Forbes Technology Council COUNCIL POST | Membership (fee-based)
Innovation





13/04/2021



Eoin Byrne

Industry



Paul Walsh (Chair)

VP Engineering & Site Lead, McAfee



Jacky Fox (Vice-Chair)

Managing Director, Security Lead Ireland,



David Coffey

SVP of Engineering, Forcepoint



Pat Larkin

CEO, Ward Solutions



Carmel Somers

Cybersecurity Skills Initiative Chair & Organisation



Joanne O'Connor

Cyber Security Training & Education Officer, Hewlett Packard Enterprise



Shane Walsh

Ireland Country Head, JRI America



Paul Ryan

Senior Director Engineering Operations, Qualcomm

Academia



Michael Loftus

VP of External Affairs, Cork Institute of Technology



Cheryl Baker

Cybersecurity Director & Cybercrime Investigation, UCD Centre



Dr. Thomas Newe

Senior Lecturer, University of Limerick

Government



Dr. Richard Browne

Director, The National Cyber Security Centre



Victoria MacKechnia

VP of Mid-West territory, US, Enterprise Technology, IDA Ireland



Martin Corkery

Regional Director, Enterprise Ireland



CYBER|IRELAND

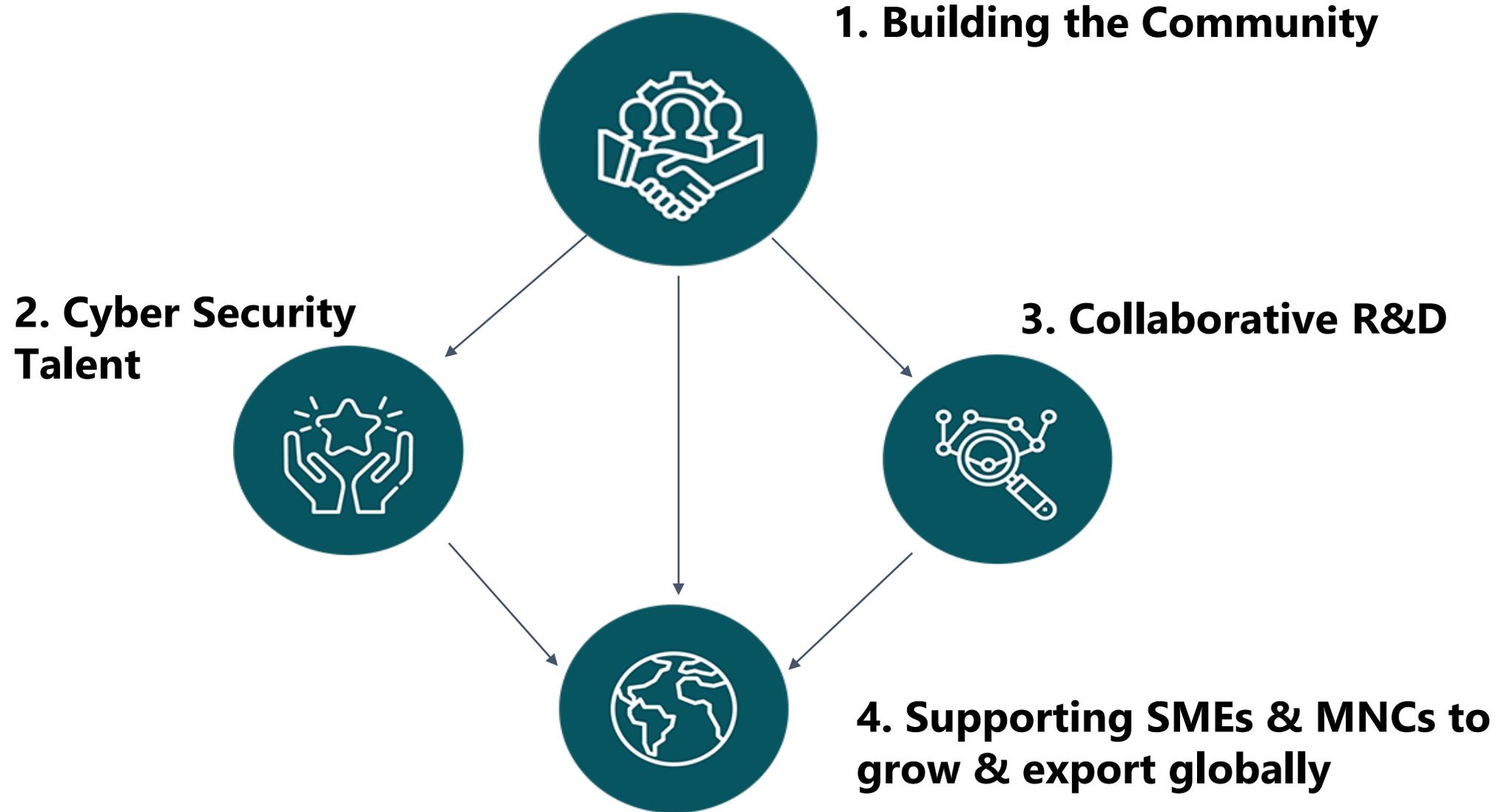
IRELAND'S CYBER SECURITY CLUSTER

Collective Voice of the Cyber Security Cluster in Ireland

Enhance the Innovation, Growth and Competitiveness

Supported by:





Building the Community

1. National Events & Promotion

2. Regional Chapters, Special Interest Groups

3. Advocacy & Policy





Threat Intelligence Series

From Zero to Hero



06

WORKSHOP

How to build a threat intel program

28

APRIL
12:30 pm



Derek Buchanan
Strategical Threat
Advisor EMEA at
Crowdstrike



CYBER | IRELAND - South Chapter TI Series

<https://www.cyberireland.ie/events/ti-series-6-session-threat-intel-program/>



Talent & Skills Pipeline

Talent & Skills

1. Understanding current & future talent & skills needs of industry – Skills Survey
2. Working with Education & Training providers to align with industry needs
3. Promotion of Cyber Security Careers & pathways to Adults & Students

CYBER|IRELAND
IRELAND'S CYBER SECURITY CLUSTER

February

25

12:00pm

Official Launch Cyber Security Skills Report

Addressing Ireland's Cyber Security Skills Shortage

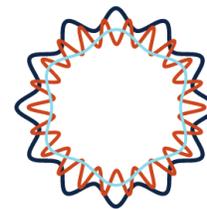
<https://www.cyberireland.ie/cyber-security-skills-report-2021/>





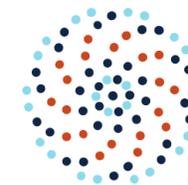
CYBERSKILLS

BUILDING IRELAND'S CYBER SECURITY SKILLS



Create

Create Innovative, Enterprise focused and Research informed cybersecurity courses through meaningful collaboration.



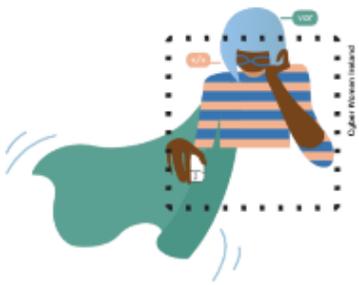
Empower

Empower Learner to design their own courses and take their own pathways with straightforward articulation and progression routes



Facilitate

Facilitate new learning pathways using micro credentials and by capturing learning through e-Portfolios.



Who are CWI

Where have I seen you before?

The Diver{Se}curity Project

The Diver{Se}curity Toolkit

Technical Toolkit (Coming Soon*)

Blog

Events

Members



Take The Diver{Se}curity Survey Now!

Take me to the survey

<https://www.cyberwomenireland.com/>

Diversity is Key. Diversity is Security.



CYBER SECURITY ACADEMY
Can you hack It?



<https://www.cyberireland.ie/ireland-cyber-security-academy-cyber-crime/>

Research Landscape

Involvement by leading academics and researchers in European research projects involved in threat intelligence and EU cyber security competency and standards.



Cyber Crime & Digital Forensics



Software for Analytics & Security



Network Analysis & Data Analytics



Networking Services & Security



Privacy & Cyber Security Market Opportunities



M2M Security



Risk & Safety



Threat detection & Prioritisation



National Cyber Security Cluster



Security in machine learning & AI applications

Collaborative RD&I

1. Cyber Security R&D Mapping
2. Funding & Match Making
3. National Cyber Security Research Centre
4. EU R&D Opportunities



Grow & Export



1. Connecting Internationally
2. SME Internationalisation
3. Cyber Security Start-up Ecosystem
4. FDI Growth & Attraction



27-28 June | Dublin, Ireland

CYBER INVESTOR DAYS

#InvestCyber



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IRELAND'S CYBER SECURITY CLUSTER



Cyber Assistance Scheme



Call for Volunteers - Subject Matter Experts



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Learnings: *Neart Le Chéile*

- Cyber security is not just a technical challenge but a political, economic and societal challenge
- Complex challenges require collaboration across boundaries
- Industry-led, support of academia & government, for society
- The role of passionate, dedicated leaders
- Think Long-term not short-term wins (e.g. revenues, jobs)
- COVID-19 - none of us are safe until everyone is protected

Dr Eoin Byrne, Cluster Manager, Cyber Ireland (Ireland)

 @eoinbyrne @CyberIreland