2022 EDITION

State of the Cyber Security Sector in Ireland

Executive Summary

This report (State of the Cyber Security Sector in Ireland 2022) has been independently commissioned on behalf of Cyber Ireland and Cyber Skills, led by Perspective Economics. It ou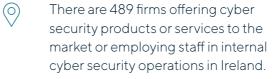tlines the size and make-up of Ireland's cyber security sector, assessing its economic contribution to Ireland's economy, in addition to benchmarking and exploring potential sectoral opportunities.

The report is an economic baseline for the sector and will form the basis of future recommendations and policies within Cyber Ireland.

KEY FINDINGS

The following sections set out the key findings from the economic analysis. Full definitions and methodology are set out within the report.

NUMBER OF FIRMS AND EMPLOYMENT

There are 489 firms offering cyber security products or services to the market or employing staff in internal cyber security operations in Ireland.

Approximately a third of cyber security firms offer dedicated (or pure-play) cyber security services, whereas the remaining firms offer diversified services (i.e., cyber security is part of a wider company offering).

There is a relatively even split between the count of large firms and SMEs in the sector, and almost half of all cyber security firms operating in Ireland are indigenous.

The sector employs 7,351 cyber security professionals in Ireland. Teams are typically small, and nearly two-thirds of firms employ between one to nine cyber security professionals.

Foreign direct investment plays an important role in Ireland's cyber security sector, supporting c.71% of all employment in the sector. Cyber security firms headquartered in the United States have a particularly strong presence in Ireland, making up 28% of firms and supporting c.55% of all employment.

CYBER SECURITY RELATED REVENUE AND GVA ESTIMATES

It is estimated that in the most recent financial year (2021), annual cyber security-related revenue in Ireland reached approximately €2.1bn.

It is also estimated that Ireland's cyber security sector generated approximately €1.1bn in GVA[1] in 2021. GVA per employee within the cyber security sector is strong in Ireland (€150k) signalling a productive workforce. This compares favourably to the UK estimate of c. £100k (c. €120k).

This analysis suggests that the cyber security sector is growing (with respect to the workforce) in Ireland by a similar magnitude to international growth (at a rate of 10%+ per annum). This suggests that based on the current baseline estimates, Ireland's cyber security ecosystem could support up to €2.5bn in annual GVA and the employment of over 17,000 cyber security professionals in the sector by 2030.

PRIMARY LOCATIONS

– There are 734 offices identified for the 489 cyber security firms nationwide. There are four particularly notable locations for cyber security activity in Ireland (Dublin, Cork, Galway, and Limerick). These are collectively home to 73% of all cyber security offices, but cyber security activity can be seen across the country.

– While Dublin is home to more offices overall, both Cork and Galway have more firms per capita and host a range of assets that support the development of a thriving cyber security ecosystem.

PRODUCTS AND SERVICES

– Main products and services offered by firms include managed security service provision and advisory services (offered by 36% of all firms), securing applications, networks, and cloud environments services (31%), and risk, compliance, and fraud services (28%).

– Other products and services include threat intelligence, monitoring, detection and analysis (26%), operational technology security and connected devices (13%), and identification, authentication, and access control (11%).

[1] Gross Value Added (GVA) is used as a measure of productivity (at a firm level, or above). It captures the sum of a firm's Gross Profit, Employee Remuneration, Amortisation and Depreciation.

Recommendations

There are a range of recommendations that should be considered by government, industry and academia to help promote sustainable growth within the sector.

These include:

01   Developing a talent pipeline

02   Government's role in supporting the sector through awareness, procurement, and business support

03   Promoting clusters and collaboration

DEVELOPING A TALENT PIPELINE:

01   There should be an increased emphasis on **developing a pipeline of suitable talent to support sustainable growth within the sector.** This could involve engagement with industry to ensure existing courses offer a curriculum that prepares students for a career within the sector, teaching them the skills necessary to engage at an entry-level. There is also potential to promote cyber security to students in wider STEM or IT courses by encouraging universities to offer relevant cyber security modules to more general learning.

02   **Further initiatives such as reskilling and retraining could also promote entry into the cyber security sector.** There is a good baseline of technical talent in Ireland also, with current estimates suggesting that there are c.80k professionals engaged in technological sectors in Ireland[2]. There is potential to support firms by developing transition courses or training schemes to support entry from other industries to address skill shortages.

GOVERNMENT'S ROLE IN SUPPORTING THE SECTOR THROUGH AWARENESS, PROCUREMENT, AND BUSINESS SUPPORT:

03   Public sector commitment to supporting cyber security services has increased, which could help Ireland improve national resilience. **The recent attack on the HSE should demonstrate the importance of investment in cyber security, and the requirement for increased integration of cyber security practices across all aspects of society.** Ireland can also learn from international models undertaken in countries such as the UK, Estonia, USA and Israel.

04   Public procurement is a powerful mechanism for increasing spend on cyber security and promoting resilience across the Irish economy. Within the business survey, conducted for this research, many firms report that specifications for tenders can be restrictive and difficult to engage with. **We suggest that there is potential to engage further with cyber security SMEs to help co-create inclusive and impactful tender opportunities, which would also help cyber security SMEs to scale domestically.**

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05   Many cyber security SME firms reported that they are experiencing a competitive labour market, in particular, competing with salaries offered by larger firms. The government could consider **supporting the development of the domestic ecosystem through the use of grants and initiatives to support employment growth within start-ups and scale-ups.**

06   The success of cyber security services hinges upon their application across different global regions. The composition of Ireland's sector suggests that foreign-owned firms have been particularly successful in developing cyber security teams in Ireland. **Ireland's expertise and attractiveness as a location for setting up cyber security teams could be used to encourage further investment from external firms seeking to further develop their cyber security capability and capacity.**

PROMOTING CLUSTERS AND COLLABORATION:

07   Sector composition indicates that domestic firms in Ireland typically have smaller teams. Therefore they are likely to benefit from increased support focused on scaling up their offering. While there are a range of services available in Ireland, **direct engagement with SME firms may increase awareness of services and uptake.** There is also wider potential to develop support informed by Enterprise Ireland's European Cybersecurity Market opportunity mapping exercise[3] which focuses on promoting engagement in European markets.

08   Firms also report difficulty engaging with larger firms. Building on the above point, **smaller firms could also be paired with larger firms to drive collaboration and increase market offering.** There is potential to leverage existing connections with organisations such as the IDA, InterTrade Ireland, and Cyber Ireland to promote business networking and collaboration between domestic SMEs and larger firms.

[2] An Rionn Fiontar, Trádála, agus Fostaíochta | Department of EnterpriseTrade and Employment (2022). 'Attracting Tech Talent to Ireland'. Available at: https://enterprise.gov.ie/en/What-We-Do/Workplace-and-Skills/Skills-for-Enterprise/Attracting-Tech-Talent-to-Ireland/

[3] Enterprise Ireland (2019). 'The European Cybersecurity Market Mapping The Opportunities And Route To Market For Irish SMES'. Available at: https://globalambition.ie/wp-content/uploads/2019/11/The-European-Cybersecurity-Opportunities-for-Irish-SMEs_Key-Takeouts.pdf