CyBOK

The Cyber Security Body Of Knowledge

Foundations and Resources for the Community

Professor Awais Rashid

contact@cybok.org
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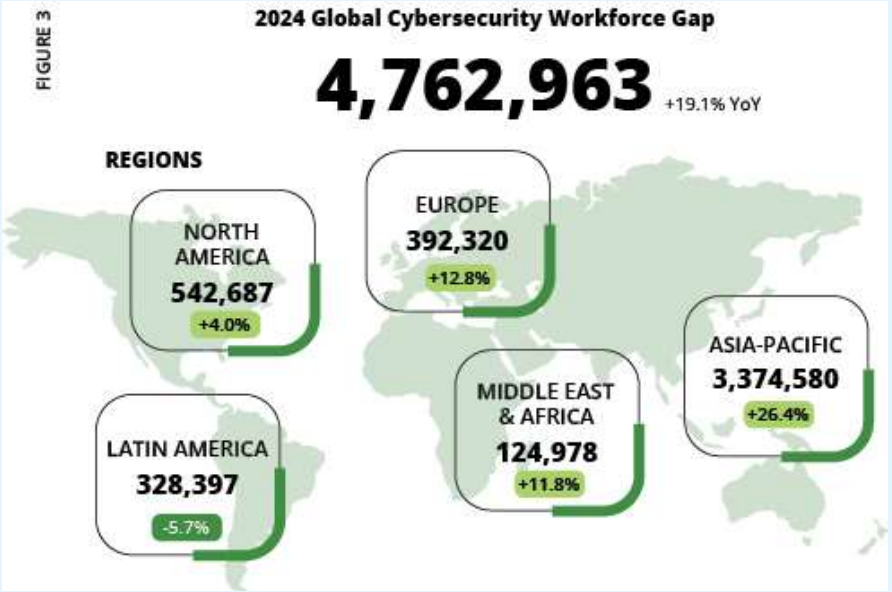


2024 ISC2 Cyber Workforce Study

~4 Million

2023

~3.4 Million

2022

~2.72 Million

2021

“The proportion of UK businesses with basic and advanced technical skills gaps has not changed significantly across the 6 years of data.”

~44%

Businesses with basic skills gaps

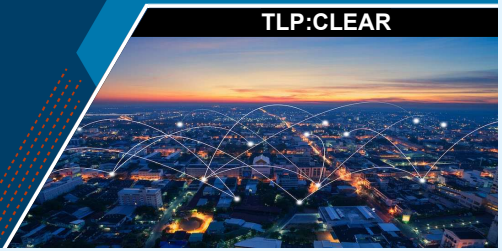
~27%

Businesses with advanced technical skills gaps

DSIT Cyber Security in the UK Labour Market Report 2024

Defending OT Operations Against Ongoing Pro-Russia Hacktivist Activity

TLP:CLEAR



MS-ISAC® Multi-State Information Sharing & Analysis Center®

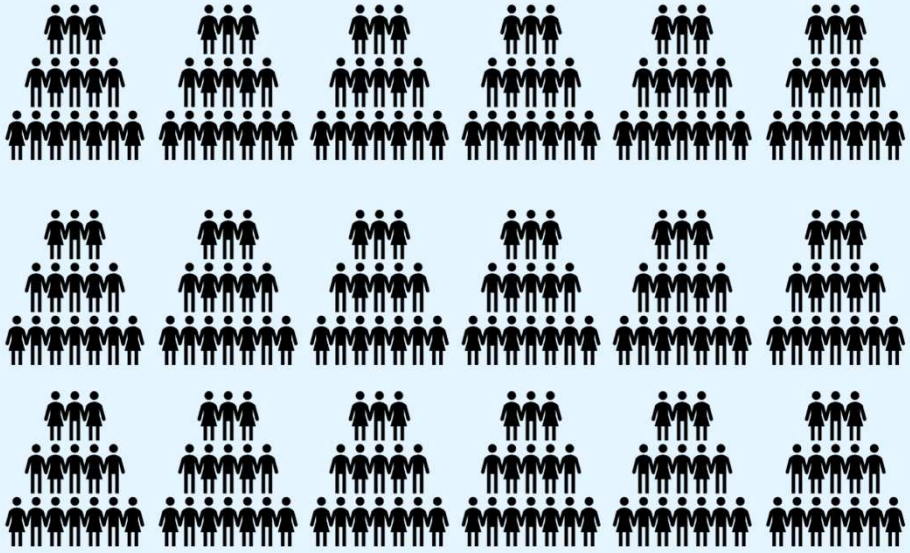
Communications Security Establishment
Canadian Centre for Cyber Security

Centre de la sécurité des télécommunications
Centre canadien pour la cybersécurité

National Cyber Security Centre
a part of GCHQ

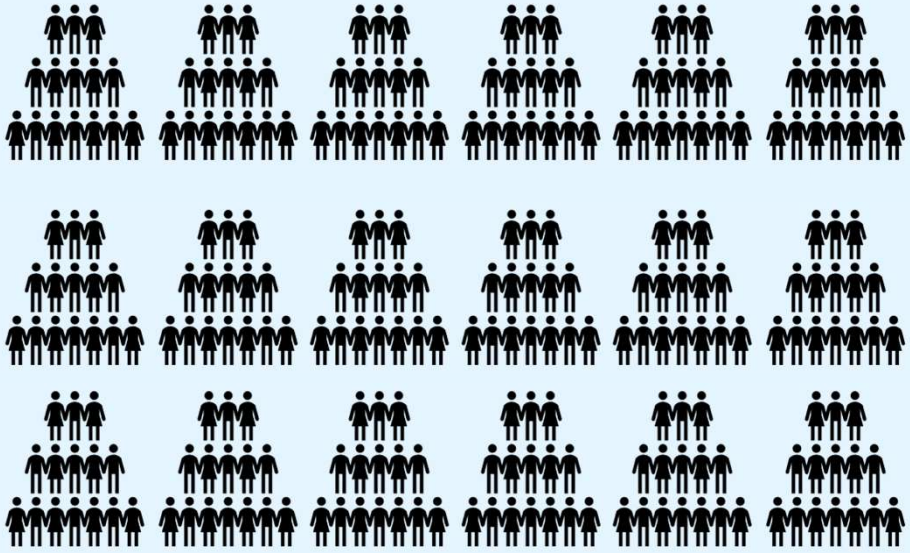
GOV.UK

Cyber Security & Resilience Bill



Cyber Security Skills

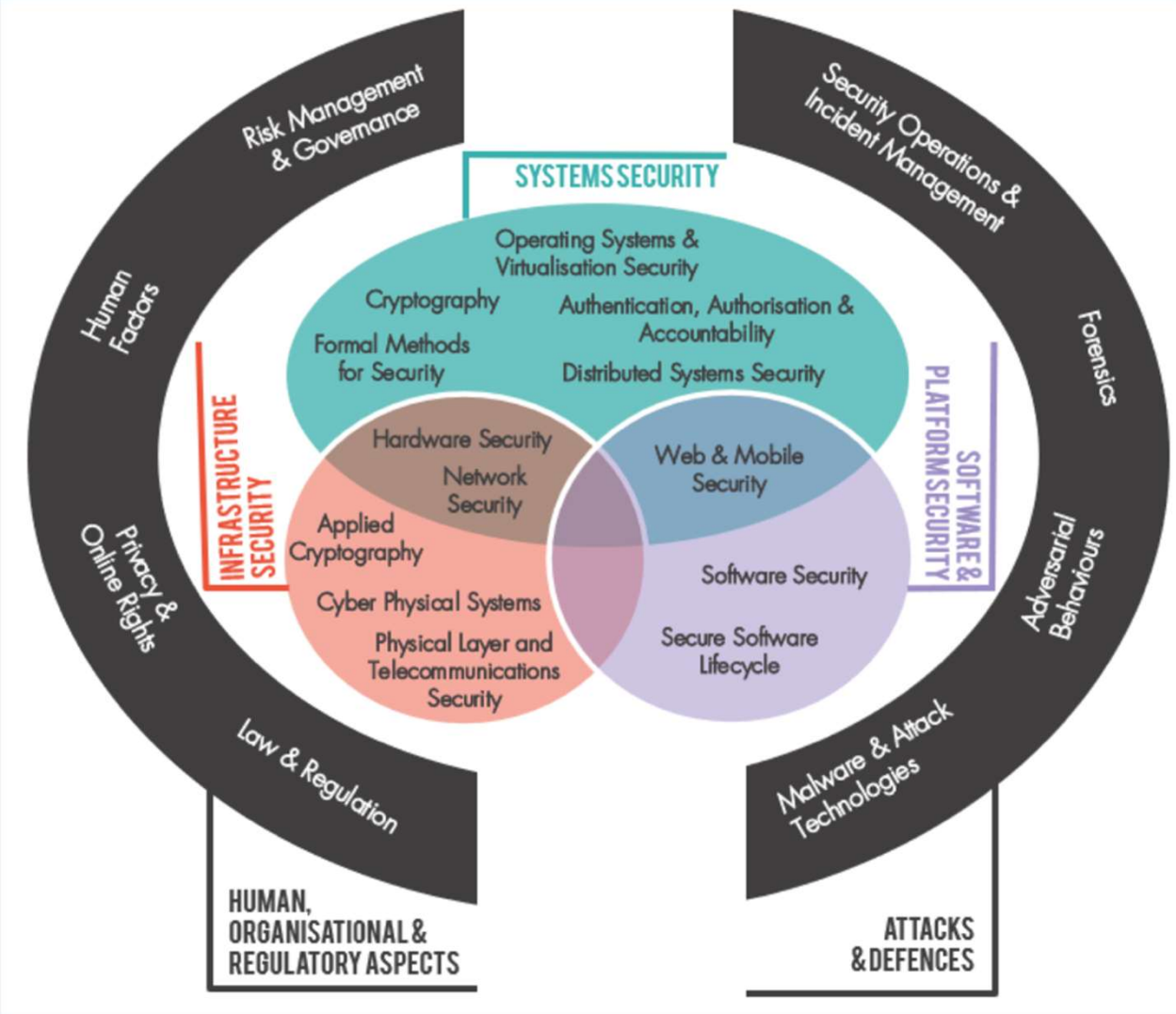
Knowledge



Cyber Security Skills

CyBOK

CyBOK 1.1


Risk Management & Governance
Security Operations & Incident Management
Human Factors
Forensics
Privacy & Online Rights
Adversarial Behaviours
Law & Regulation
Malware & Attack Technologies
SYSTEMS SECURITY
Operating Systems & Virtualisation Security
Cryptography
Authentication, Authorisation & Accountability
Formal Methods for Security
Distributed Systems Security
INFRASTRUCTURE SECURITY
Hardware Security
Network Security
Applied Cryptography
Cyber Physical Systems
Physical Layer and Telecommunications Security
SOFTWARE & PLATFORM SECURITY
Web & Mobile Security
Software Security
Secure Software Lifecycle
HUMAN, ORGANISATIONAL & REGULATORY ASPECTS
ATTACKS & DEFENCES

Codify ***foundational*** and generally recognised knowledge in cyber security following broad community engagement nationally and internationally

A ***guide*** to the body of knowledge

Focus is on ***established foundation*** of the subject (not on everything that has ever been written or on still-emerging, nascent, topics)

International effort
For the community by the community
Open and freely accessible
Transparency

>115 Experts: Authors, Reviewers, Advisors

>1000 Pages

>2200 Authoritative sources

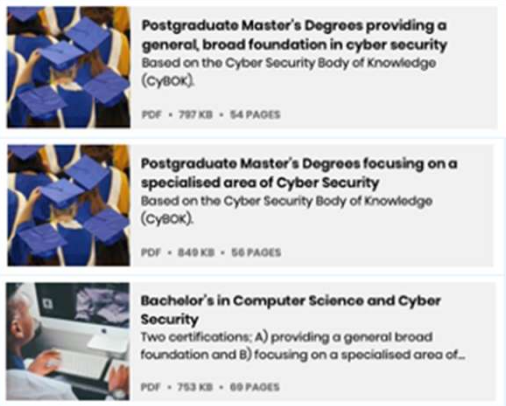
>1600 Comments from wider community

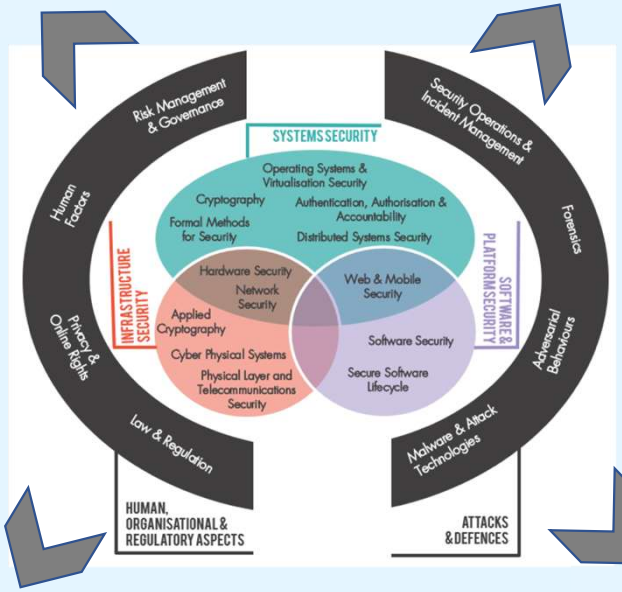
>30 Invited talks, panels and keynotes

Design new university or professional training programmes

Contrasting different programmes

Design new certification schemes



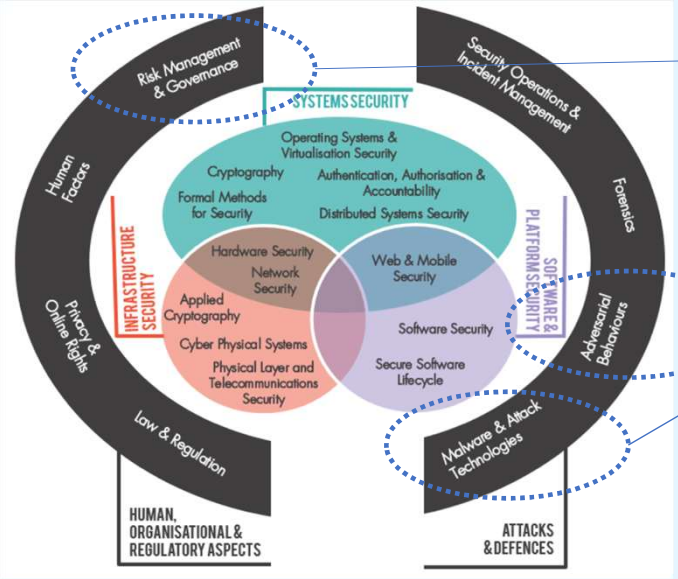


Knowledge requirements for job roles

Traceably meeting certification requirements

Benchmarking capacity

CyBOK



Risk Management & Governance

Adversarial Behaviours

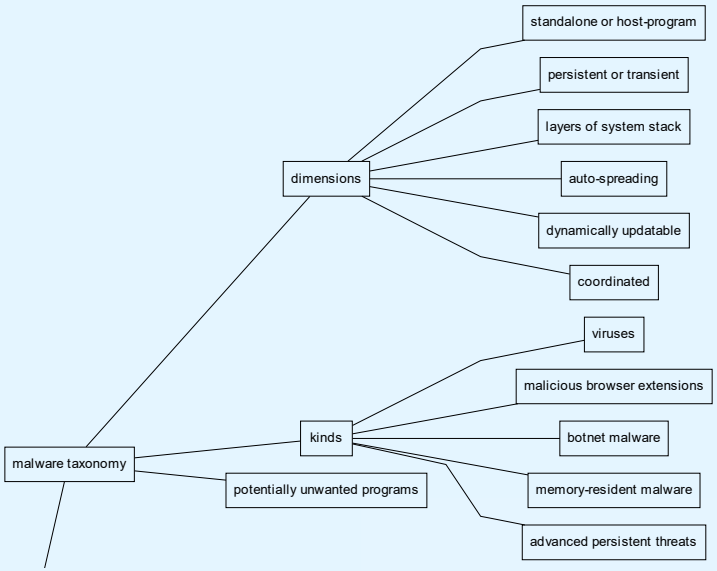
Malware and Attack Technologies

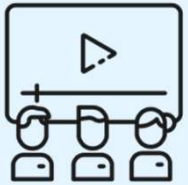
Mapping reference with > 13000 terms

An index for easy look up of terms

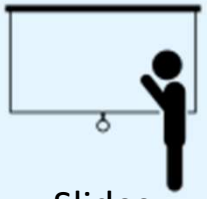
Designing a new training course

CyBOK





Webinars



Slides

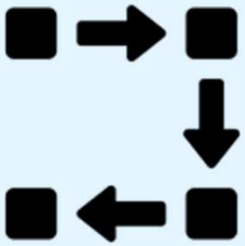
Lesson Plans, Labs and Exercises

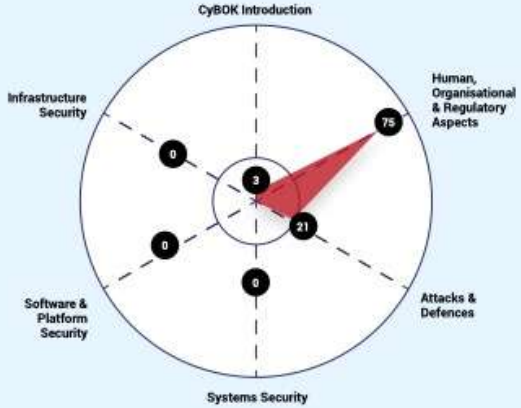
Designing a new training course

CyBOK

Mapping reference with > 13000 terms

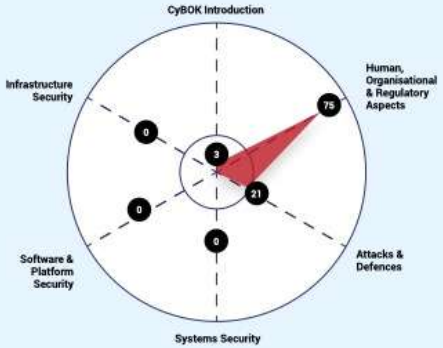
Mapping Framework

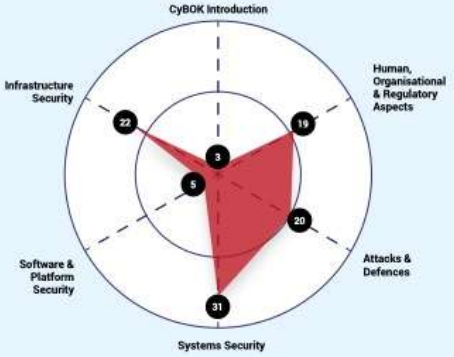




Showing a course meets training needs

CyBOK





Learner, Recruiter, Certification Body

CyBOK

6 Professional Programmes

51 University Degrees

CyBOK

The Cyber Security Body of Knowledge

Mappings of University and Professional Training Programmes to CyBOK

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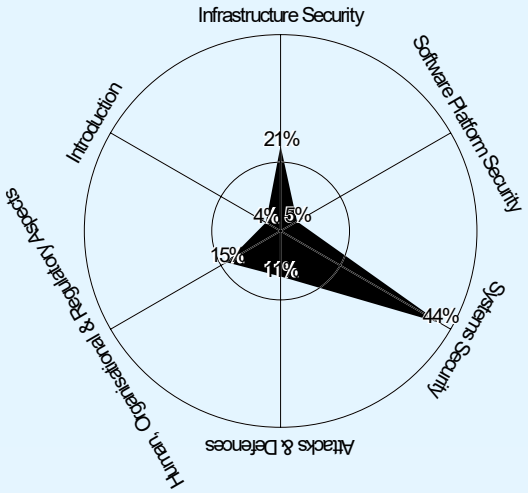
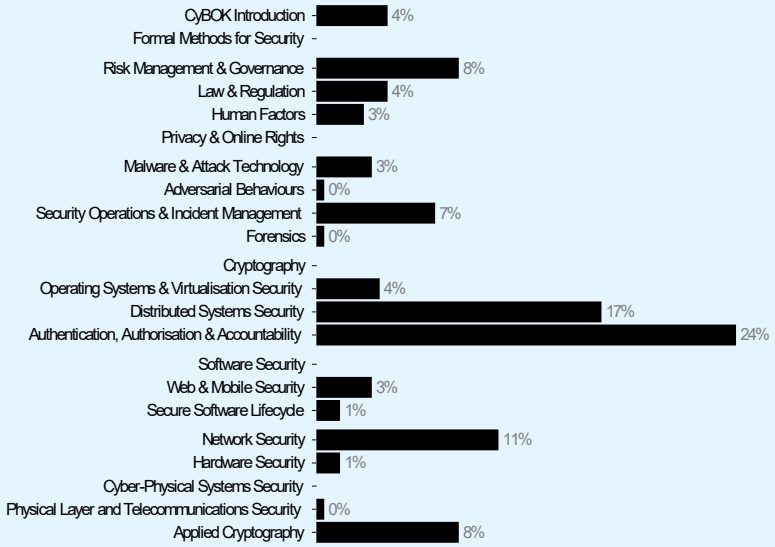
Mapping Booklet Version 2.2

Mappings are based on either CyBOK v1.0.0 + Formal Methods for Security or CyBOK v1.1.0

NCSC Cyber Advisor
(Cyber Essentials)



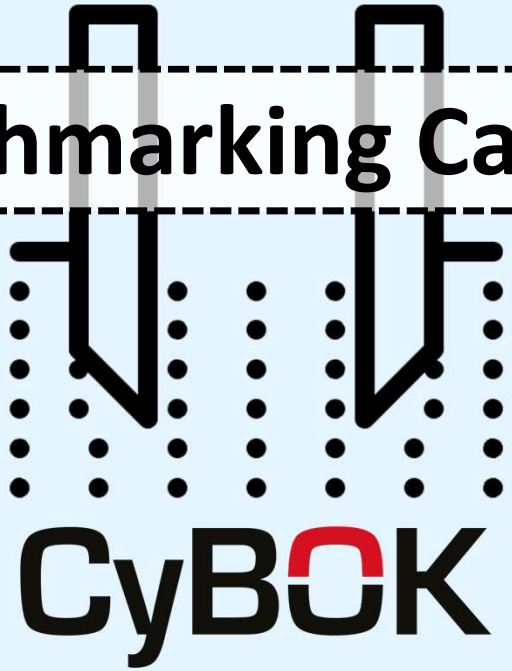


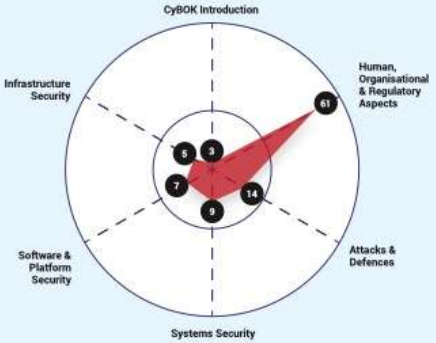
What knowledge to assess for particular roles?

CyBOK

My organisation’s cyber security capability is …

Benchmarking Capacity

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Attacks & Defences
Systems Security
Software & Platform Security
Infrastructure Security
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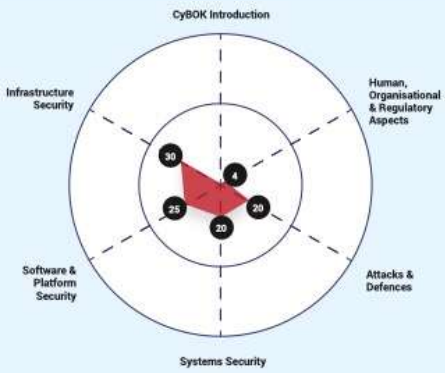
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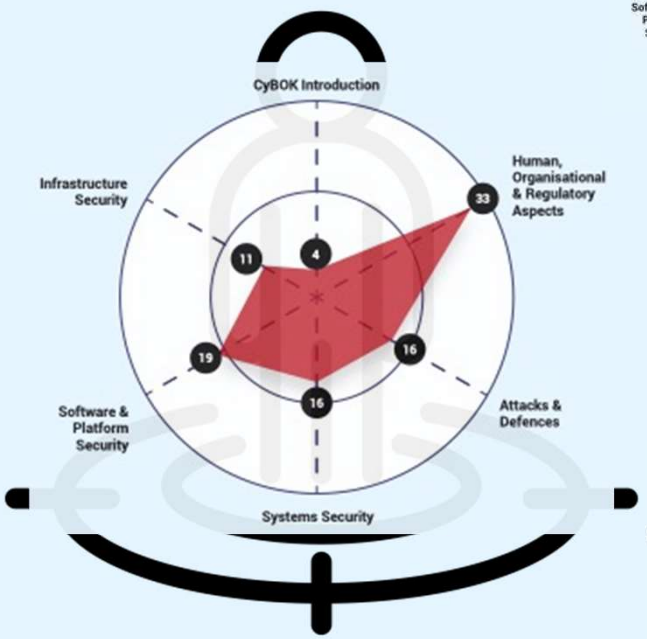
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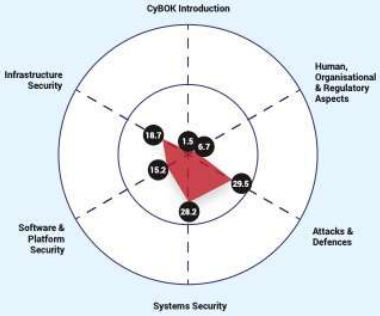
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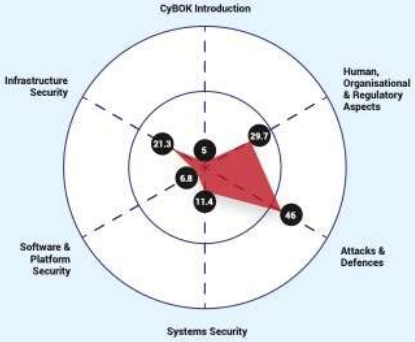
28.2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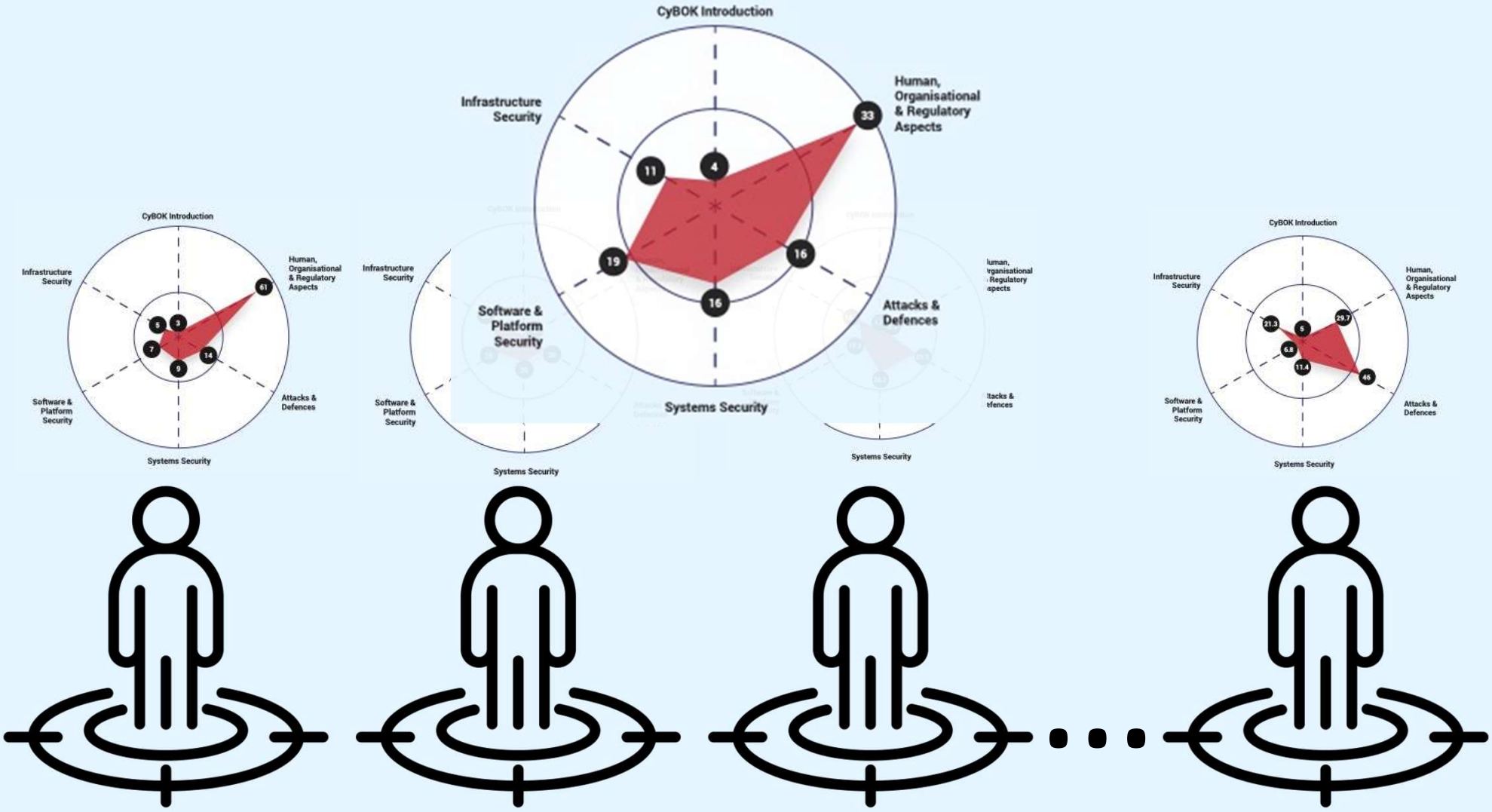
CyBOK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Practical exercises, labs and CTFs

Course Shells

Case studies

Outreach resources

Reports on relevant topics

From

To

CyBOK

The Project

Long term Sustainability

CyBOK

Community Interest Company

Now

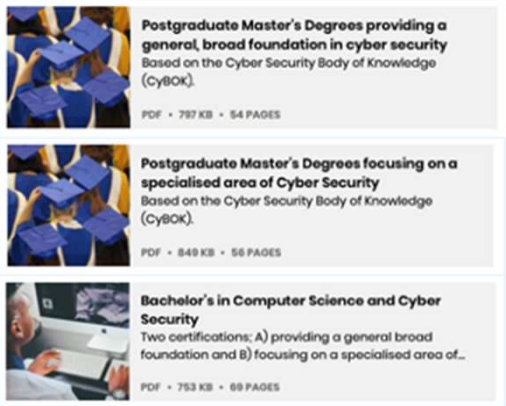
Transition

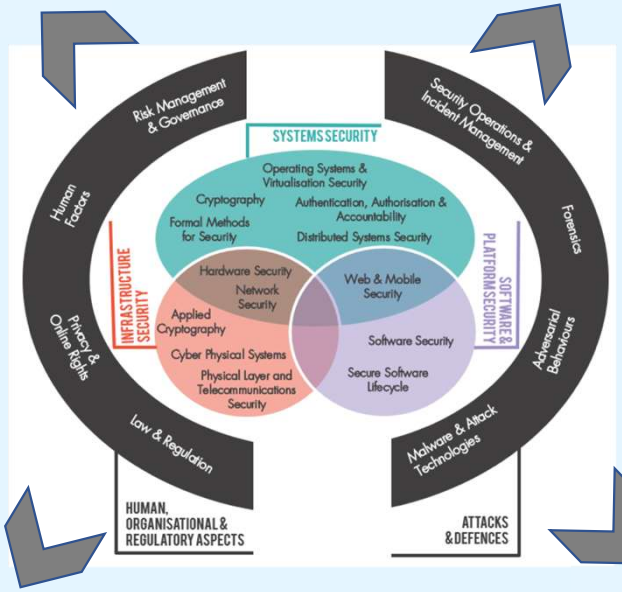
Summer 2026

Design new university or professional training programmes

Contrasting different programmes

Design new certification schemes





Knowledge requirements for job roles

Traceably meeting certification requirements

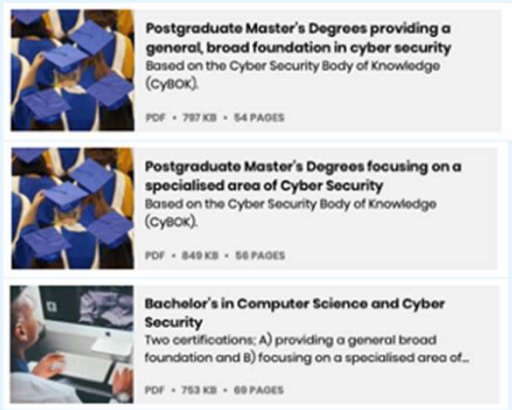
Benchmarking capacity

CyBOK

Design new university or professional training programmes

Contrasting different programmes

Design new certification schemes



CyBOK

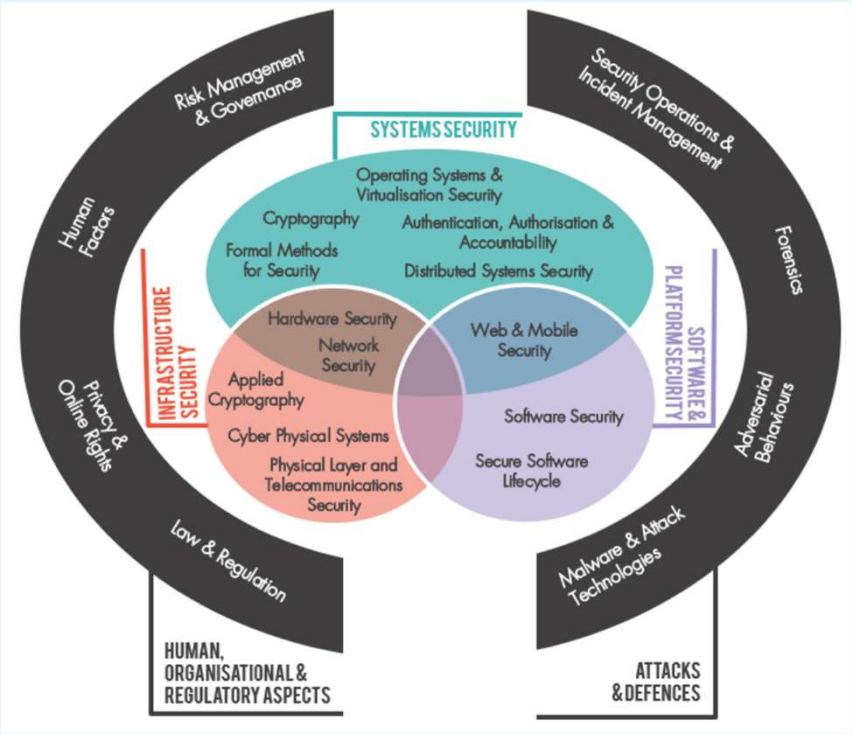
Community Interest Company

Knowledge requirements for job roles

Traceably meeting certification requirements

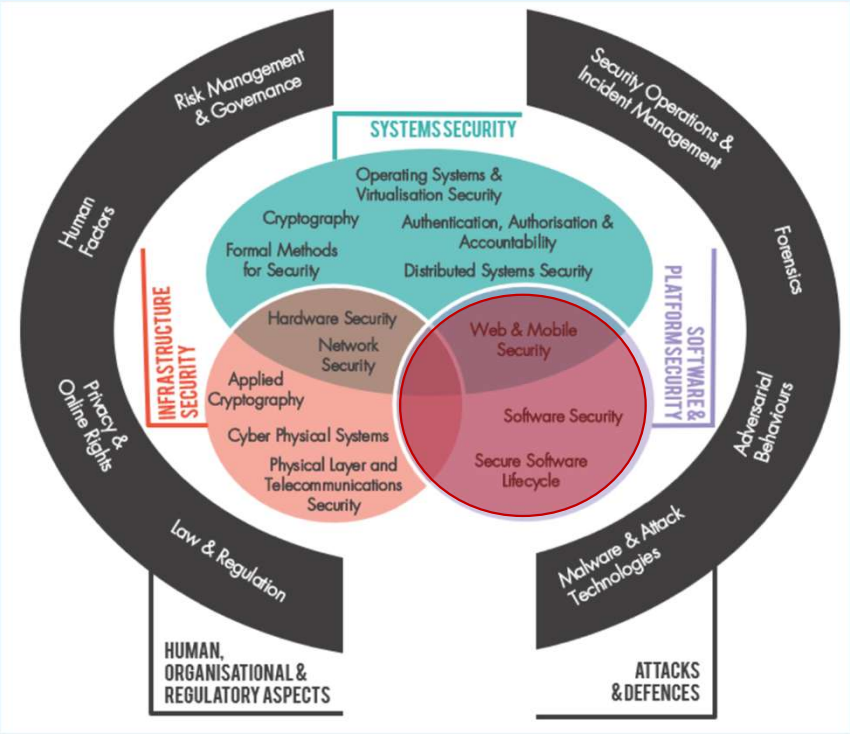
Benchmarking capacity

From V1.1



Pro-active Review

To V…



Practical exercises, labs and CTFs

Course Shells

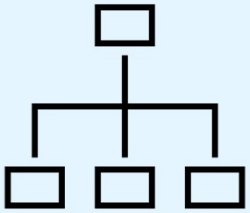
Case studies

Outreach resources

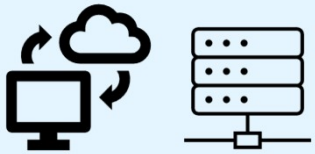
Reports on relevant topics

CyBOK CIC

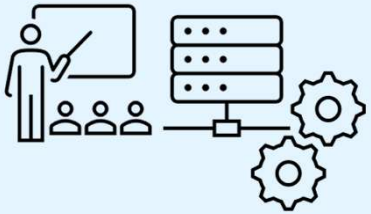
- International effort
- For the community by the community
- Open and freely accessible
- Transparency



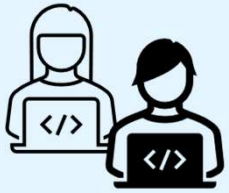
Governance



Technical Infrastructure



Services



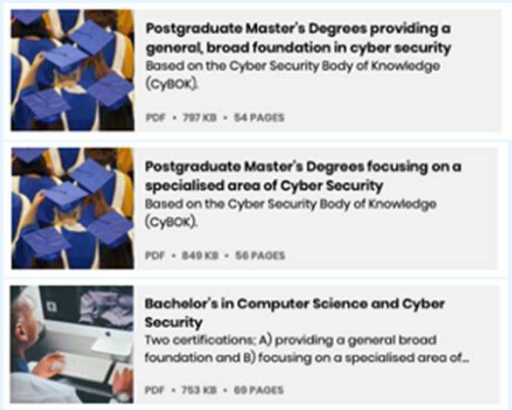
People

Revenue

Design new university or professional training programmes

Contrasting different programmes

Design new certification schemes



CyBOK

Community Interest Company

Knowledge requirements for job roles

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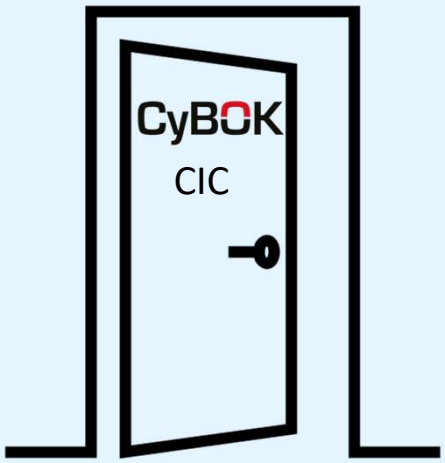
Benchmarking capacity



Service Users

Partners

Collaborators

Supporters

Sponsors

CyBOK

Community Interest Company

For the Community
By the Community

contact@cybok.org
www.cybok.org