

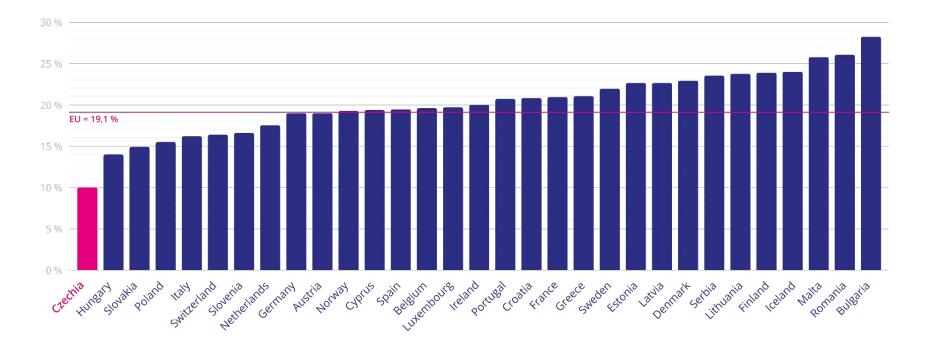
## CYBERSECURITY TRAINING FROM CZECHITAS



of ICT specialists in Czech Republic are men (**81%** in Europe)

Source: Eurostat (online data code: isoc\_sks\_itsps)

#### Proportion of Women among ICT specialists





#### **Czechitas Cybersecurity portfolio**



• Raise awareness

- Get to know cybersecurity roles and job positions
- Training for junior level positions



#### **Raising awareness**

#### How to stay safe in the digital world

How to protect data and devices



#### Get to know cybersecurity roles and job positions

#### Get to know Cybersecurity

#### Introduction to Cybersecurity



#### **Training for junior level positions**

Information security specialist

#### Digital Academy Cybersecurity





#### Thank you for your recognition and support.







# CyberQuest Academy





Ionad Oiliúna Barr Feabhais Ard-Déantúsaíochta

Advanced Manufacturing Training Centre of Excellence

## COLLABORATORY

CYBER SECURITY HUB AT TU DUBLIN





# Contents

- Context
- Local Research Collaboratory & Inter Trade's CYBR4AM
- Vision & Goals
- CyberQuest Collaboration & Experience
- Proposal





# Context

## **Be Prepared.**

- Many MNC, Software Security companies in Ireland plus indigenous employing 7500 in 500 companies
- 17 000 cyber vacancies on the island
- 61% of cybersecurity businesses have had personnel-related issues when it comes to recruitment
- Insurance Industry now selling Cyber Policies as Risk Mitigation, showing some leadership
- 70% of SMEs have had cyber attack
- Agencies being restructured NCSC, An Garda Siochana, Defence Forces
- NSCS providing support for CyberQuest Academy
- Universities running undergrad. and post grad. programmes supply does not meet demand
- Awaiting EU Regulations in 2025.





## Early CyberQuest Experience

- CyberQuest Originally a Covid Project with 700+Trainees, 240 returned to new IT & Cyber jobs
- Funded by Skills Connect for IT@Cork
- Provided Webinars, Soft Skills, Foundation, Intermediate and Advanced Cyber Skills Training
- 26 Nationalities
- Neurodiverse and Women's Group Support
- Personal Development & Preparation for Interview, Job Search with Berkely and Intreo.
- Now working with AMTCE, Collaboratory and University of Galway on Risk Management.





# Collaboratory Research in Fingal 2021 & CYBR4AM for Inter Trade 2023

## **Key Recommendations**

- Cyber security training for Executive teams
- Awareness for All with specific OT option
- Team Leaders are the key
- Plain speaking and cyber jargon-busting short courses
- Offer open learning access to cyber security modules
- Regulatory compliance short courses for Chief Information Security Officers (CISOs) and Senior IT managers
- Training programmes in line with NIST NICE or Mitre Att&ck2
   Frameworks
- ISO 27001 to be used as pathway to EU Regulations, provide security documentation
- Programmes targeting females and neurodiverse to improve diversity
- Bespoke training to organisations based on their industry or work functions
- Soft skills for cyber security
- Cyber Supply Chain, Risk Management
- Penetration testing simulation training
- Deeper dive needed into OT SCADA, ICS, PLCs



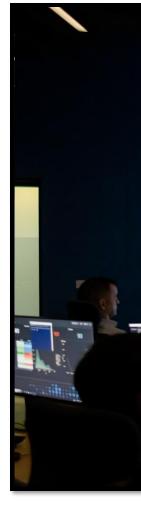


# Collaboratory Research in Fingal 2021 & CYBR4AM for Inter Trade 2023

### Key Recommendations Conclusion:

Foundation for cybersecurity awareness and practices exists but there is a need for targeted efforts to strengthen overall preparedness in addressing specific challenges in functional areas, such as Manufacturing, Engineering, Food & Drink.

Next steps must involve a collaborative approach: emphasizing training, policy development and alignment with EU & international cybersecurity standards to ensure a resilient and secure environment.



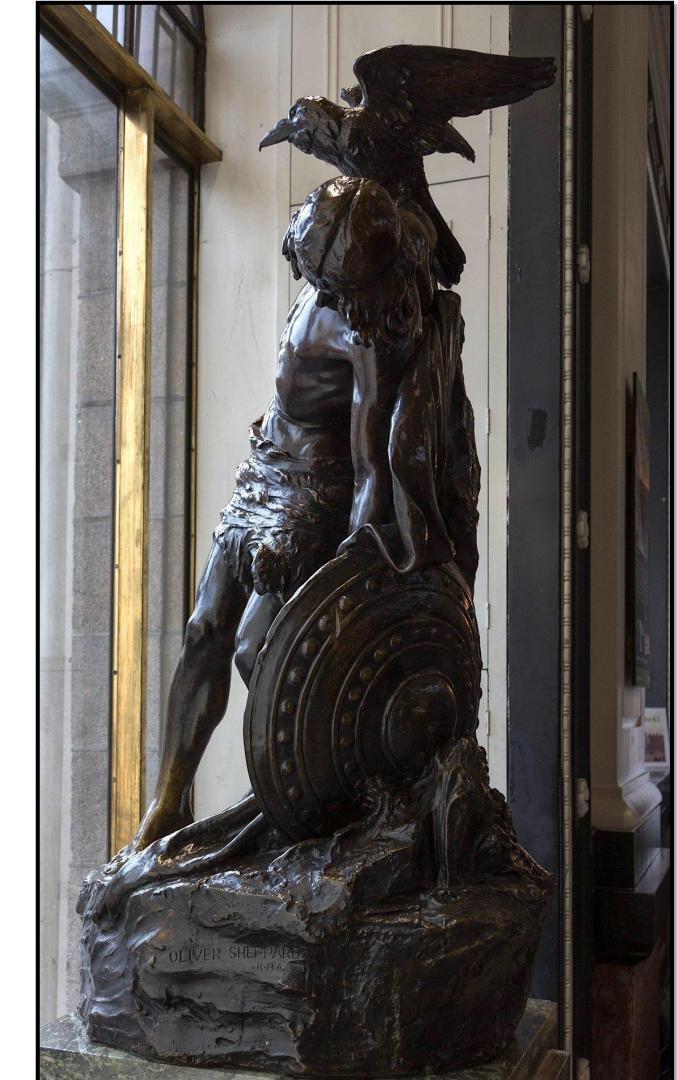




# **Cyber Security Vision for Ireland.**



The Vision is to make Ireland a global, cyber security leader with skilled talent, technological innovation and research that will provide a safer, digital environment by utilising tomorrow's skills today, for the benefit of all our Citizens.



# CyberQuest 6 – 96 Target Groups



#### Secondary 12 +

**Youths** 16 - 24



## **CyberQuest Academy Goals**

## • Provide direction and support SMEs to lower cyber risk.

- SME Support must be free to gain their engagement
- Conduct on-going Cyber Risk Assessment to measure and reduce risks
- Utilise ISO 27001 to provide pathway to EU Regulations for policy, practice and functioning ISMS
- Raise Awareness for All Employees through Foundation Training
- Identify key employees and skill up to take on part/full time Cyber roles
  - Cyber Analysts, Pen Testers, Forensic Investigators, Auditors, Network Architects Advanced Skills in Cloud and AI
- Audit company to maintain compliance and security
- Advise on next generation of Cyber Security Software that emphasises Prevention, Defence and Reaction.

- d reduce risks for policy, practice and
- Training me Cyber roles Auditors, Network Architects



# Blended Learning Approach

- Use On-line, Classroom and Training SOCs in AMTCE & Collaboratory in Phase 1
- Provide practical skills through Cyber Ranges & Simulators
- On-Going assessment using CompTIA
- Must provide Soft Skills and Personal Development support for those pursuing a cyber career
- Provide CompTIA micro-credentials for cyber & digital programmes.



IT@Cork Skill<mark>net,</mark>

# Hope is no Protection from Cyber Criminals.

Now is the Time to Invest in Ireland's Cyber Security Future

www.cyberquest.ie



# **CyberQuest Academy Education & Skills Partners**



# INFOSEC IQ

# INFOSEC Skills

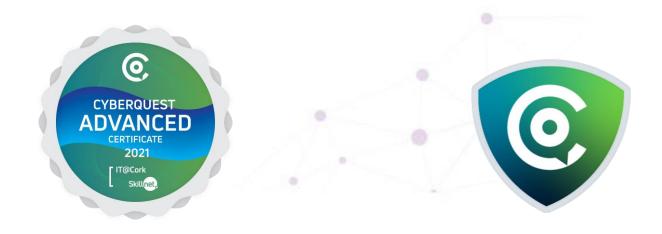




## IL IMMERSIVELABS







# **CyberQuest Collaboration**

## **Key Players**

#### Phase 1

- **AMTCE Training SOC** ullet
- **Collaboratory Training SOC & OT/IOT Lab** ullet
- **University of Galway Risk Management** ulletCentre

#### Phase 2

- Tech Industry Alliance •
- De Puy OT Lab ullet
- IMR ullet
- DMR ٠
- Udaras Na Gaeltachta ullet
- **Enterprise Ireland** ullet

## **Suppliers & Agencies**

- TalentSensus ۲
- CybSafe •
- Infosec & National Geographic ۲ **Immersive Labs** ۲
- Cybexer  $\bullet$
- ICS ۲
- REIM ۲
- CJHNetwork •
- Meptagon ۲
- **4Securitas** ۲
- Edgescan ۲
- Centripetal •
- NCSC •
- Cyber Ireland ۲
- NI Cyber •
- Inter Trade ۲



### **Research Projects**

SME's

https://www.collaboratory.ie/publications/collaboratory\_training-needs-skills-gapanalysis\_fingal-region\_2022.pdf

**National** 

https://cyberireland.ie/state-of-the-cyber-security-sector-in-ireland-2022/

**IT@Cork Skills** 

https://www.cyberquest.ie/post/cyber-security-skills-development-strategy-report-from-itcork-skillnet



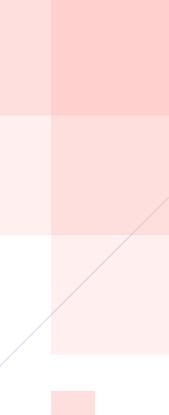
### **SOFTWARE IMAGINATION & VISION SRL**



# Cybersecurity Training

Commercial in confidence

12 DEC 2023





## DIGITAL LEARNING

Create meaningful digital learning experiences

Tackle key challenges with expert advice



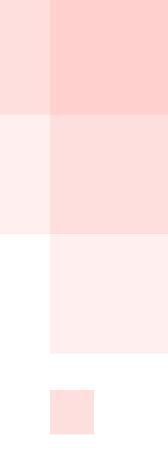


## L&D ADVISORY



## **TRAINING PLATFORMS**

Create the right platform for your needs



# Our Clients

- A trusted partner of the European Commission, SIMAVI is one of the main providers in designing and delivering high-impact online training initiatives for staff onboarding, compliance training, up-skilling and re-skilling.
  - Apart from corporate training, SIMAVI has a long and successful experience in working with governmental agencies and Ministries of Education in implementing nation-wide digital learning solutions, such as digital lessons, learning management systems and information management systems.
- Publications Office of the European Union Directorate-General for Human Resources and Security (DG HR) European Aviation Safety Agency (EASA) Consumers, Health, Agriculture and Food Executive Agency (CHAFEA) Directorate General Justice and Consumers, Eurostat (European Union Institute for Statistics) EuropeAid Cooperation Office European Investment Bank Directorate-General for Taxation and Customs Union (DG TAXUD) **Directorate - General for Communications Networks** Content & Technology (DG CONNECT) Council of Europe

















**Publications Office** of the European Union



Cybersecurity Skills Academy DIGITAL-2023-SKILLS-05-CYBERACADEMY How we can help

On-the-job training courses and traineeships opportunities for start-ups and SMEs and for public administrations in innovative companies in cybersecurity and cybersecurity competence centres

Online training, user friendly and accessible to everyone in all languages

# CYBERSECURITY ONLINE TRAINING PROGRAMMES

SIMAVI has implemented more than 200 online training projects in the last four years, including a wide range of training projects in cybersecurity training. Our outcomes-oriented approach and strong pedagogical foundation enables us to deliver compelling learning experiences using a wide range of training modalities, such as videos presentations, tutorials, software simulations, case-stories, branching scenarios, games-based learning, mobile learning and more.

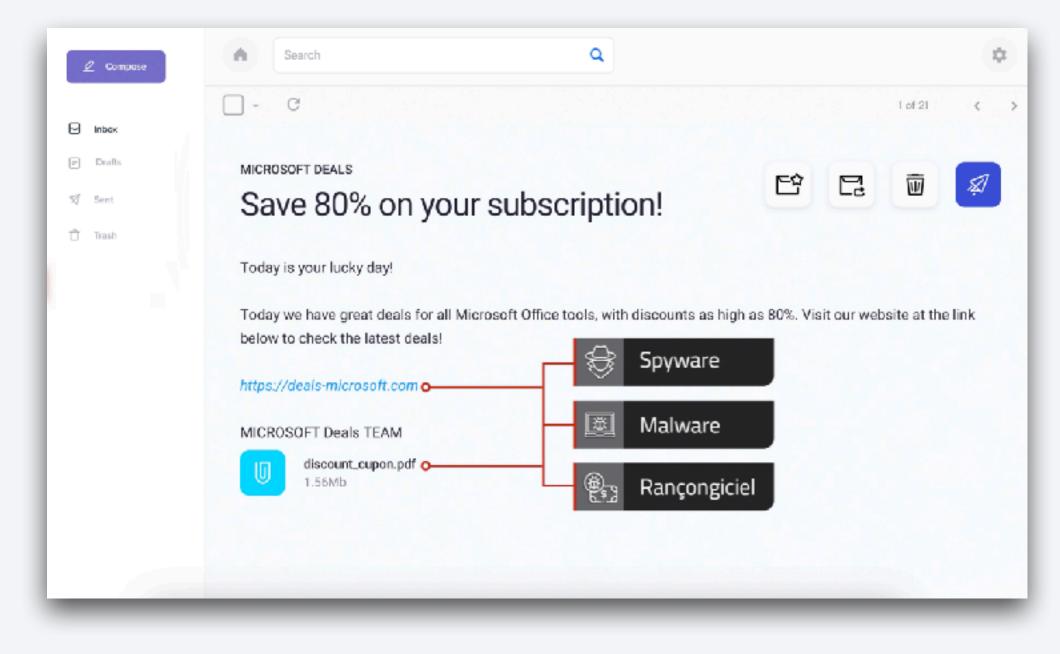


Fig 4-1: Replica emails and websites to mimic hackers behaviour

Dans le cadre de cette étude de cas, vous allez rejoi médias sociaux très populaire, qui met l'accent sur le votre vie quotidienne. Vous ne voulez pas être en rei décidez de créer un compte, en utilisant votre smart Quel smartphone utilisez-vous pour installer la nou sociaux?	retard sur cette tendance et vous artphone. Create an account artphone.
Choisissez une réponse Le téléphone que j'ai reçu de Curia à des fins profe	ofessionnelles
Mon téléphone privé     Les deux	Course
	VERIFIEZ

Fig 4-2: Simulation of social engineering in social media use

### Reducing formal training by as much as 87%

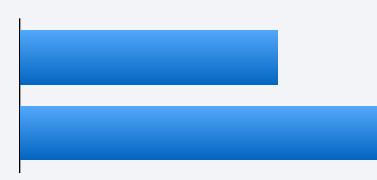
Time is key in cybersecurity training. Is a training course or too long, the percentage of people that will manage to remain engage with the learning content drops dramatically. Using a wide range of techniques such as outcomes-oriented design, storytelling and more, we can significantly reduce the duration of formal training.

### Completion rates increased by 600%

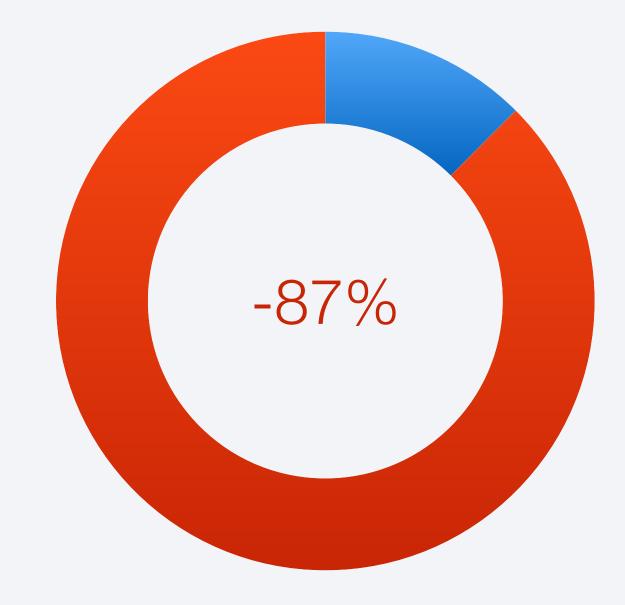
Our training courses in cybersecurity are more than engaging. They are useful. We consider this as a key design element to ensure high completion rates. Most of our training initiative enjoy completion rates that are as much as 6x higher than traditional means of instruction.

2-hour training

15-minutes self-paced course



# SOME OF OUR RESULTS



# CYBERSECURITY TRAINING FORMATS

SIMAVI has managed to develop a complete portfolio of digital solutions for learning and development, providing our clients with a wide spectrum of solutions, from traditional to cutting edge. We consider this broad offering as part of our key value proposition, enabling us to provide tailored solutions to the particular needs of each training initiative within your organisation.



#### Video learning

We have all video design, production and editing capabilities to create video learning courses

We have specialised designers that can build short learning experiences to address very specific skills



#### **Immersive learning**

Our Mixed Reality team can develop serious games, Augmented Reality and Virtual Reality experiences

#### Just-in-Time learning

We are a big advocate of on-the-job learning, designing support materials and job-aids



#### **Micro-learning**



#### Mobile learning

We can develop bespoke mobile learning solutions, from responsive course to native mobile apps





#### **Games-based learning**

Our MR Team can develop complex learning games that can engage any audience.

# Cybersecurity Training - Accessible and Inclusive

1 in 5 adults live with a disability and 61% of white collars living with a disability will not tell their manager about it (only 13% of disabilities are visible). Accessible design makes a big difference for those living with a disability. Let's take the example of colour vision deficiency, as 8% of men and 0,5% of women suffer from it.

As much as 1 in 5 adults live with a disability, totalling 83 million in the European Union, according to EUROSTAT.

63% of employees will not tell their managers about their disability, as only 13% of disabilities are visible.

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See sample mockups - For people with colour vision deficiency:

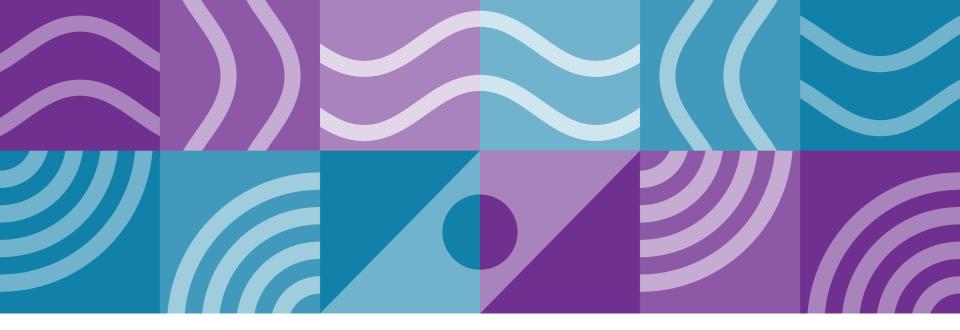
- The use of gray as a background (common practice) changes the visual experience completely  $\bigcirc$
- $\bigcirc$ Minimum contrast is very poor, at 2.08 (minimum recommended contrast is 4.5:1)
- Use of colour should not be used as the single way to convey information  $\bigcirc$

#### We can help:

- Accessibility needs assessment, to determine what disabilities need to be addressed
- Staff training, a 90-min webinar explaining how to create accessible content
- Guides, or step-by-step explanations on how to create accessible materials  $\bigcirc$
- UI/UX, complete user interfaces with embedded accessibility, for web and courses.  $\bigcirc$

S Normal vision Minimum contrast is 5.48:1 Q 10/100 Points (D) HELP Ccronavirus Pandemic Quiz QUESTION 1/10 + 10/10 point What causes the Coronavirus disease Choose 1 answer option Covid-19 virus Sars-CoV-2 virus +10 points 3ars-CoV-1 virus The whole thing is a heax CORRECT ANSWER! Spot on! Nothing else to add. NEXT Colour vision deficiency Minimum contrast is 2.08:1 Coronavirus Pandemic Quiz Q 10/100 Points (3 HELP QUESTION 1 / 10 +10/10 points What causes the Coronavirus disease Choose 1 answer option Covid-19 virus Sare-CoV-2 virue + 10 points Sars-CoV-1 virus The whole thing is a heax CCRRECT ANSWER! Spet on Nothing else to add.





# International cybersecurity project cooperation



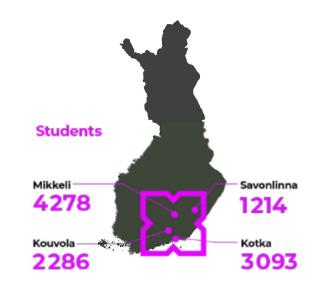


Co-funded by the European Union



# South-Eastern Finland University of Applied Sciences, Xamk

- 11 500 students + 28 000 students in open university, 1 000 employees (of whom 300 work in RDI).
- Four campuses in Southern-Eastern Finland: Kotka, Kouvola, Mikkeli and Savonlinna.
- 40 Bachelor's degree programs as well as over 30 Master's degree programs. In addition, Xamk Pulse offers the largest selection of Open UAS courses in Finland as well as plenty of other opportunities for continuing education.
- 300 national and international RDI-projects.
- Member of INGENIUM network









## Xamk in Cybersecurity

- BA and MA engineering programs in cybersecurity
- Projects related to cybersecurity: SMEs, social and health care, cyber range development, industry (automation, supply chain), maritime logistics.









South-Eastern Finland University of Applied Sciences

# We are here today looking for collaboration in:

SMEs and cybersecurity Social and health care cybersecurity



CyberShield Europe: Small Businesses protected

# Minimum cybersec skills for European small businesses

- European CyberCitizen project defined needed skills for all EU citizens.
- Our data is being handled by countless of small businesses. They need to be trained as well.
  - What is the actual level of cybersec with European small businesses
  - What kind of skills they lack and how they want to learn the missing skillset
  - Bringing the tools needed to gain the minimum required business cybersec level.
  - Cybersec practical training: cyber range and tabletop training for small businesses.









# CyberSecMed



#### **Education and Training Program:**

Specialized programs and workshops to enhance cybersecurity skills. These programs will focus on recognizing, preventing, and effectively responding to cyber incidents within healthcare systems. This includes scenarios that illustrate potential risks to patient data and healthcare operations.

#### **Simulation Environment:**

Create a dedicated environment within teaching hospital facilities, specifically tailored for training healthcare staff in handling cyber threats without compromising patient information or safety.

Develop adaptable spaces and scenarios to simulate lower-level healthcare facilities realistically, allowing hands-on training for scenarios typically encountered in these environments.

#### Hands-On Practice:

Simulate various cyber threats and breaches that might affect different healthcare settings, enabling staff to practice response protocols without posing any risk to actual patients or their data. Including cyber range target practice.







## **CyberSecMed: Strengthening Healthcare Cybersecurity to Prevent Fatalities**

Our mission is resolute: to fortify the healthcare sector's cybersecurity within SMEs, safeguarding lives and preserving patient safety.

At the heart of CyberSecMed lies the commitment to address the critical issue of cybersecurity in healthcare, with a particular emphasis on mitigating potential future risks that could result in loss of life due to inadequate cybersecurity measures.

While our primary goal is to enhance cybersecurity across the healthcare sector, including larger institutions, CyberSecMed acknowledges the unique vulnerabilities faced by small businesses within this sphere. We aim to provide tailored support to bolster the resilience of these smaller entities against cyber threats.











South-Eastern Finland University of Applied Sciences

## Contact us: kyberkymi@xamk.fi





Your Gateway to **EU Digital Identity Wallet** Related Cybersecurity Skills

2023.12.12



The Soverio startup agreement was signed in 2020 by 123C Consulting (LT) and Noltic (UA).

The legal entity "Identity Lab, UAB" was incorporated in 2022.

The headquarters is in Vilnius, Lithuania.



EU Digital Identity Wallet will become legal next, 2024 year.



The market of almost 500 million citizens including many businesses and government institutions will get a new tool for activities within digital environment!

Demand for a new type of Cybersecurity Skills related to the EU Digital Identity Wallet will be significant.



## Soverio proposal...

... is to address the demand for a new type of Cybersecurity Skills under the

Digital Europe Programme (DIGITAL) DIGITAL-2023-SKILLS-05-CYBERACADEMY - Cybersecurity Skills Academy

#### Activities:

1) Training programmes for SMEs, start-ups and the public sector for the Cybersecurity Skills Academy Or

#### 2) The Cybersecurity Skills Academy: support operations

- new training opportunities and update existing ones with a special focus on the needs of Small and Medium Size Enterprises (SMEs)

- public administrations in the area of cybersecurity
- the training that considers businesses' needs
- the training that will upskill and reskill of cybersecurity for civil servants

"The EU Digital Identity Wallet will offer a convenient and safe way to manage personal digital documents and access public and private online services on a daily basis. We will all have control over our personal data and the convenience to share them, if we want to, from an app. Security, privacy and convenience are Europe's way to the Digital Decade."

Margrethe Vestager, Executive Vice-President for a Europe Fit for the Digital Age - 29/06/2023

"The EU Digital Identity Wallet will revolutionise the way European citizens and businesses engage with online services by seamlessly integrating convenience, safety and privacy. It will empower citizens, give them control over their data and strengthen our technological sovereignty. By providing a transparent and secure framework, this innovative solution ensures that our personal data remains safeguarded as we navigate the digital world." Thierry Breton, Commissioner for Internal Market - 29/06/2023



## Soverio added value as a consortium member

Since 2016, we have been familiar with related specifications.

Since 2020, developing related products

Already participating in an EU wide Large Scale Project to test EU Digital Identity Wallet

Continuously sharing related knowledge

Our CEO at Vilnius University deliver related course unit:

"Digital identity regulation and technological solutions"

#### We are ready to share our EU Digital Identity Wallet related knowledge:

- to improve cybersecurity skills
- strengthening the cybersecurity workforce
- provide specialized training and lifelong learning adapted to the needs of the market





We are looking for a partnership where our knowledge of the EU Digital Identity Wallet technology will be a valuable asset for the Cybersecurity Skills Academy.





#### **Contacts:**

email audrius@soverio.com

**phone** +370 611 33712

web https://soverio.com

LinkedIn https://www.linkedin.com/in/audriusramoska/

## SIMPLON.CO CYBERSECURITY SKILLS ACADEMY





### About Simplon and its international network

Simplon is an international network of inclusive digital skills factories (schools). Our programs focus on traditionally excluded groups and adopt the approach of active project-based pedagogy.

**123** coding schools 82 run by Simplon | 41 by partners

22 countries

#### **3 regional hubs:** Europe, MENA, Sub-Saharan Africa

Simplon.co operates its own training factories and also supports partners in launching trainings. The Simplon network advocates for digital skills, and influences public policy on digital skills training and future of work.

Impact on individuals

21,007 trainees around the world
42% female\*
85% positive outcomes\*

Impact on the digital training ecosystem



### Cybersecurity - our two training offers



#### **Cybersecurity Initiation Bootcamp**

8-week program to:

- discover the Cybersecurity sector and its culture
- develop foundational technical and soft skills needed to successfully pursue further training in cybersecurity
- solidify the learners' career and training plans
- prepare to join the Cybersecurity professional training



#### Microsoft Cybersecurity School by Simplon

Professional training program that includes 3 months of intensive training and 16 months of apprenticeship, in order to:

- develop the technical and soft skills necessary to become a Cloud & Hybrid Security Solutions Operator
- gain professional experience within a company
- obtain a nationally recognized diploma and Microsoft certifications related to cybersecurity

## Microsoft Cybersecurity School by Simplon



A training and apprenticeship program that is **tuition-free for learners**, without education prerequisites.



The program targets the role of **Cloud and Hybrid Security Solutions Operator**. Learners earn the nationally recognized certification "<u>Secure Infrastructures Administrator</u>".



Learners complete **Microsoft certifications** on Azure: <u>SC 900, AZ-500</u> et <u>MS-500</u>

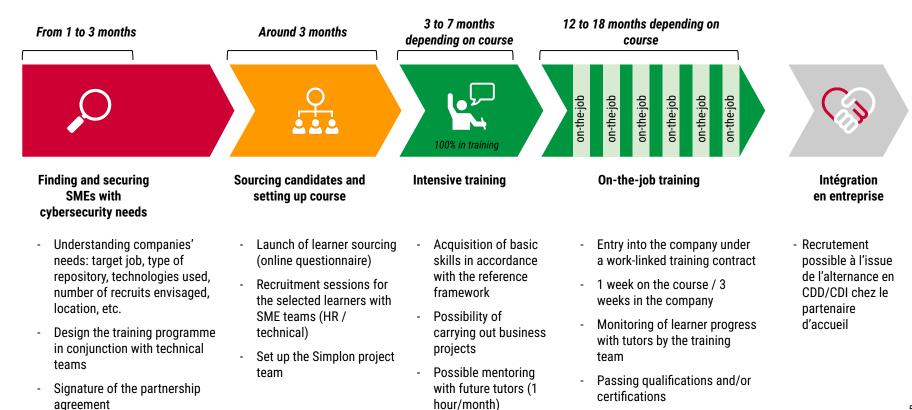


A strong network of hiring partners for learners to gain professional experience through apprenticeship roles.

• Advens, Rampar, Comsoft, etc.



## Training pathways for learners within the Skills Academy



## Contact

Mehdi Salim - International director <u>msalim@simplon.co</u> <u>LinkedIn</u>

Elyse Desrochers - International programs manager edesrochers@simplon.co LinkedIn

Theo Biddulph - International programs manager <u>tbiddulph@simplon.co</u> <u>LinkedIn</u>