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**Closing the Skill Gap: the added value  
of an integrated platform for  
cybersecurity training**  
Webinar, 22 October 2019







 Senior Project Manager at eyeo GmbH.

 Head of Botfrei.de

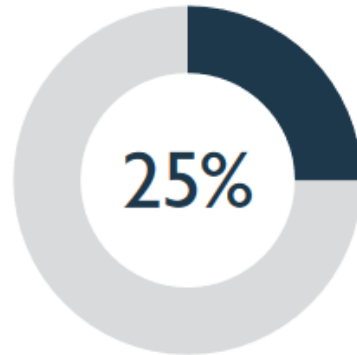
 Project coordinator FP7 project ACDC  
(Advanced Cyber Defense Centre) (2013-15)

 Advisory Board member at SoSafe Cyber  
Security Awareness

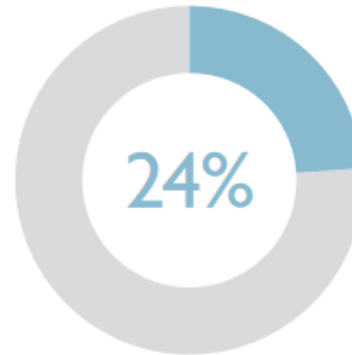
 CYBERWISER.eu Stakeholder Expert Board  
member.



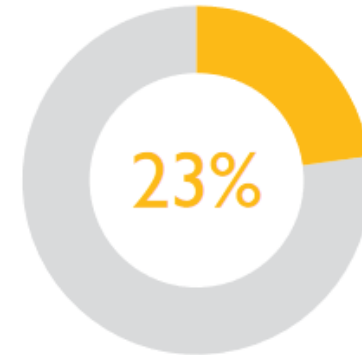
## Top Challenges Preventing Focus on Key Cybersecurity Initiatives



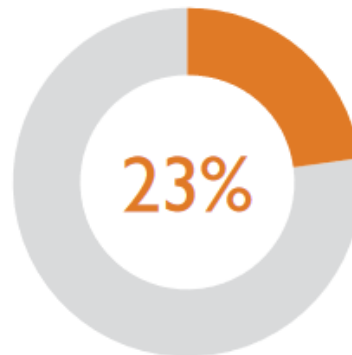
Low security awareness among end-users



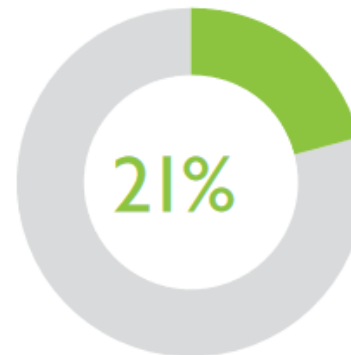
Not enough skilled cybersecurity professionals available



Inadequate funding



Too much data to analyze






Lack of management support/awareness

# A slowly changing mindset





- 🔒 Solving the skills gap crisis requires a different way of thinking - for organizations and talent.
- 🔒 Cultivating a security mindset is priority for any organisation, as Management only slowly adopts to the importance of cyber security training and awareness
- 🔒 Expect Awareness budgets to increase in companies
- 🔒 From an academic perspective, more and more universities are recognizing the need to better prepare their students on Cyber security

# How EU is helping? - 1 of 2


## Public Educational Activities

-  European Cyber Security Month (ECSM)
-  ENISA up to date database of courses and certification programmes
-  Education and sharing of good practices




## Competence Network Pilot Projects

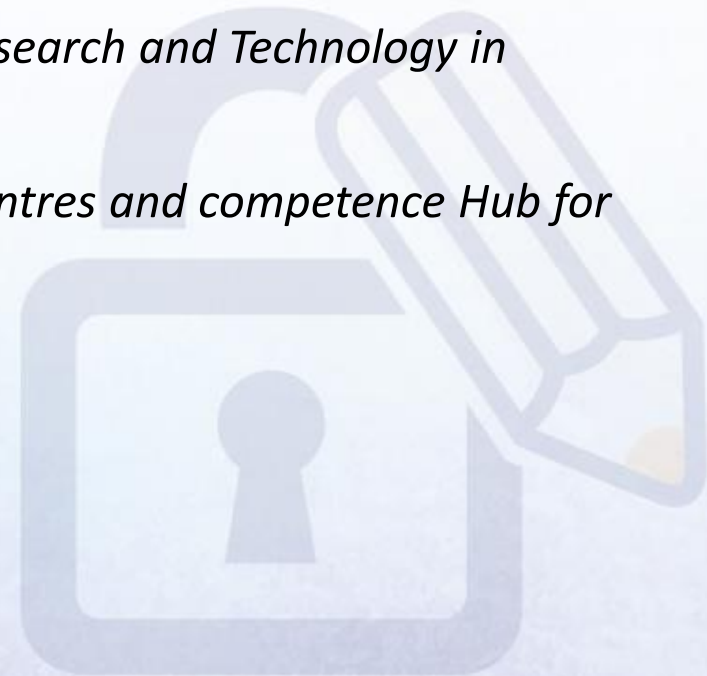
-  SPARTA (*Strategic Programs for Advanced Research and Technology in Europe*)
-  Cybesec4Europe
-  ECHO (*European network of Cybersecurity centres and competence Hub for innovation and Operations*)
-  CONCORDIA

## Challenges, competitions, hackathons

-  European Cybersecurity Challenge

## ECSO & H2020 funding

-  CYBERWISER.eu
-  Threat-Arrest
-  Etc.




# How EU is helping? 2 of 2

- 🔒 **Recommendations from ECSO WG5 report on Education, Awareness-training & Cyber Ranges**
- 🔒 Commercialisation of higher education with rising costs and growing number of students,
  - 🔒 The new Generation Z grew up with eLearning and considers it as a matter of course
  - 🔒 Risk of losing students to affordable and widely accessible MOOCS  
→ Online courses scale better, can sometimes offer the same level of knowledge at a cheaper price
- 🔒 Lack of enough skilled experts across industry, not only in the EU.
- 🔒 To satisfy the growing demand for skilled cybersecurity professionals, we need to:
  - 🔒 Expand educational opportunities at all levels
  - 🔒 Increase the number of qualified educators
  - 🔒 Create synergies between educational paths and training possibilities at the workplace
  - 🔒 Reach the skilled unemployed and displaced workers (workers who are not happy with their current profession)
  - 🔒 Create the fundamentals for life long learning in cybersecurity
- 🔒 More diversity in Cyber Security education and training:
  - 🔒 Gender diversity and inclusiveness
  - 🔒 Inform and encourage girls and women to engage into cybersecurity careers

# How the Training Is Delivered Matters

## Remote and On-Site Courses:

-  Enable your team to train remotely from a satellite location, or on-site with a live instructor.



## Self-Paced:

### Work without deadlines

-  An online, self-paced format allows trainees to consume material at their own pace and in accordance with their learning styles.





## Interactive Instruction:

### Some courses are best delivered with a live instructor


-  Allows trainees to ask real-time questions for instant feedback or clarification.
-  Look for courses that can be offered on-site or live via a remote meeting.

# How the Training Is Delivered Matters



## Course Length:

-  Look for scale and range with training courses that offer everything
-  5-minute training chapter lesson
-  Simply 30-minute “how-to”
-  24-hour to 5 days advanced skills development courses

## In-Course Labs:

-  Exercises and evaluations based on real-world scenarios have proven invaluable when applying training material to day-to-day implementation.

## Microlearning:

-  Bite-sized learning will go a long way in helping employees make the best use of their time.
-  Microlearning modules can be easily consumed and are often more effective than lengthy, passive lectures.



# Other key features to tackle cyber skills gap

- 🔒 Talk and adopt to the language of the trainees – not vice versa
- 🔒 Security training never to stop – it's an ongoing process
- 🔒 Use Gamification or interactive formats
- 🔒 Incentivise the trainees / training
- 🔒 Adopt training methods to corporate culture
- 🔒 Communicate Trainings wisely and with transparency
  - 🔒 Outline the risks when not doing a training
  - 🔒 Make the risks tangible for the employees and his organisation
- 🔒 Make IT-Security training and Awareness more “sexy”

Thank you for your attention! *Questions?*

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