About the Community Groups

- As part of the European Cybersecurity COmmunity (ECCO) project, we have launched six Community Groups with the intent to identify key topics and advance on those areas to strengthen the European position in cybersecurity.
  - Roadmapping
  - SMEs and Startups/Scaleups
  - Trusted Supply Chains & link to CISOs and SOCs
  - Human Factors and Human Rights for Users
  - Skills
  - Synergies on Cybersecurity for Civilian and Space

- The objective of these groups is to establish a network of experts to share best practices and knowledge with the ultimate goal to build and strengthen the European competencies in strategic areas for the European market and cybersecurity ecosystem.

- Several online knowledge sharing events are being organised every month for these groups and in-person meetings will also be planned during this year.

Community Group on Skills

ECCO Community Group on Skills is coordinated by Sotiris Ioannidis, Despoina Antonakaki (TSI/TUC) and Nina Olesen (ECSO). Some of the objectives are:

- Promote the development of skills and capabilities of cyber professionals

- Support the ECCC/NCCs in implementing the tasks on skills as identified in the Communication of the Commission "Closing the cybersecurity talent gap to boost the EU's competitiveness, growth and resilience

- Support the alignment of curricula in higher education with the workforce demand across EU-27

- Provide recommendations on filling the gaps in professional certification and attestation of skills in cybersecurity

A tentative list of topics for future knowledge sharing webinars include:

- Education and awareness (incl. cyber hygiene) for youth

- Impact of AI on skills and the workforce

- Academia-industry collaboration on skills

- Awareness of Social Engineering

- Educational curricula alignment with the needs of the market

- Tools for hands-on technical education in cybersecurity including fighting cybercrime

- Security and privacy 'by design' approach in training and education for IT professionals

To share your interest and join the group please send an email to community_skills-owner@list.cyber-ecco.eu with your contact details and the name of your organisation and your role.

There are currently 33 members in the group (mainly universities at the moment).

Today's webinar

Agenda:

- 12h00-12h05 Welcome and introductory remarks (Nina Olesen, ECCO)

- 12h05-12h20 Best practice case from DK (Jens Myrup Pedersen, Aalborg University)

- 12h20-12h35 Best practice case from AT (Joe Pichlmayr, CyberSecurityAustria)

- 12h35-12h50 Best practice case from EE (Birgy Lorenz, TalTech)

- 12h50-13h00 Q&A

- 13h00 Close of webinar

Jens Myrup Pedersen, Aalborg University, will discuss strategies for engaging youth in cybersecurity competitions, fostering community-building, and showcasing educational and career pathways.

Birgy Lorenz, Tallinn University of Technology (TalTech), will share insights into efforts to include girls in IT and cybersecurity in Estonia, addressing challenges and integrating gamified interventions.

Joe Pichlmayr, CyberSecurityAustria CSA, will delve into the AustriaCyberSecurityChallenge (ACSC) and its role in talent development and education, shedding light on its impact on Austria's security ecosystem.

Please write your questions in the chat or raise your hand when the floor is opened for Q&A.

Thank you for joining us today! For the schedule of all upcoming events, please visit the ECCC website.

Background: Why are we doing this?

How to get more young people into cybersecurity? We must:

- Increase the **general cyber competencies** among young people.

- Help **more young people** to become interested in cyber security.

- Create opportunities, where **those who are interested can become even better** (preferably together with others).

- Projects: Cyberhack, Training Platform for Cyber Scurity, Cyberskills, Cyber Security Championships, Cyberskills Career (all funded by Industriens Fond).
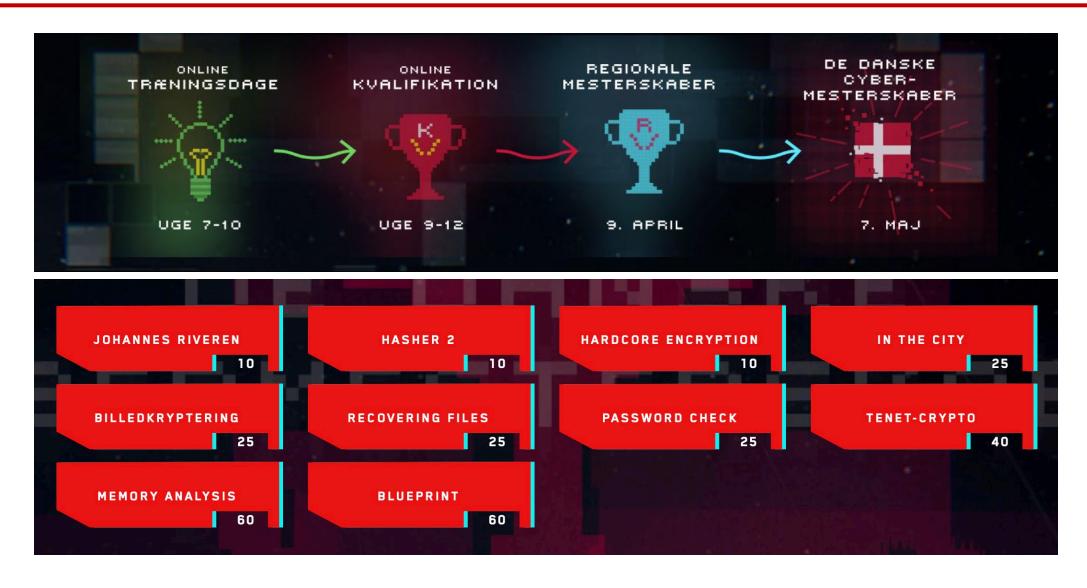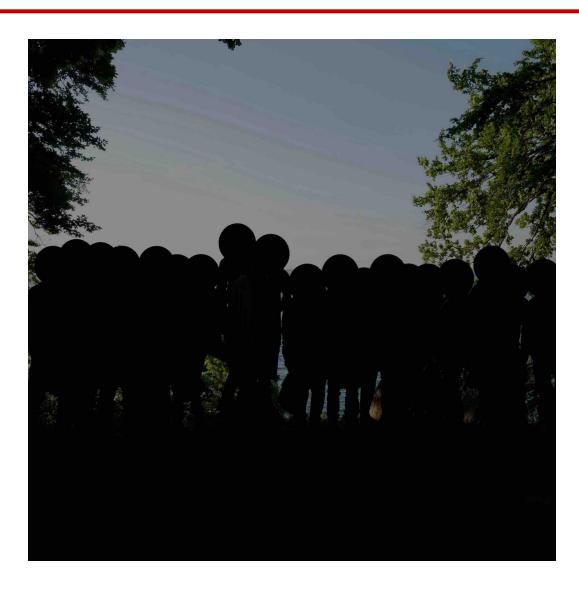
The long journey towards the national team

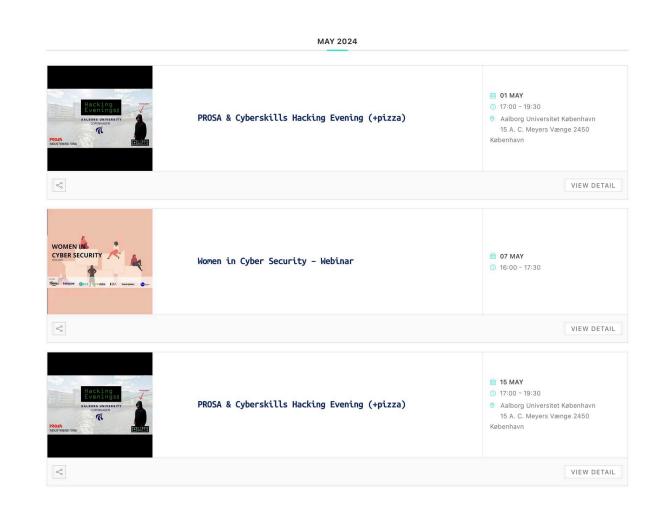# And a few numbers (2021-2023)

- 1700 onl.training participants-> 2000

- 450 online qualification -> 800

- 200 Regional Championships -> 400

- 100 National Competition

- 25 Bootcamp

- 10 Selected for the national team
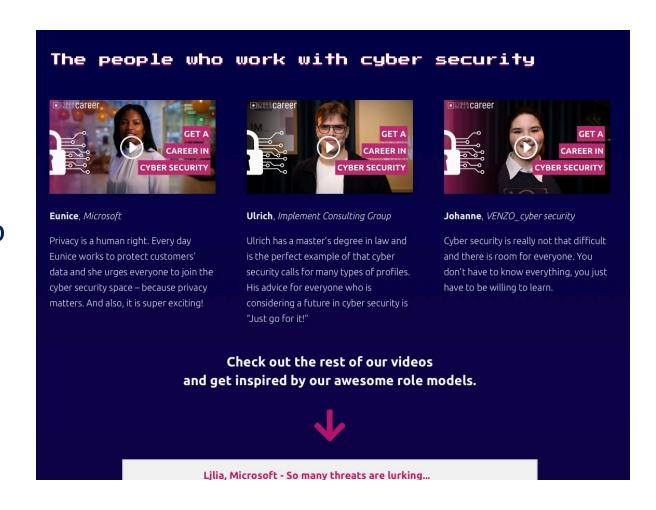
Creating communities – online and offline

- Cyberskills events – a mix of hacker events, diversity-focused events, and events company-driven events.

- ATU teaches talented high school students, supported by university profiles and professionals.

- Local communities in both cities and smaller towns acros the country.

- Lots of supporting/collaborating with other stakeholders.

- Discord!!

- Cyber mission, high school championships and cybercompetition!

MAY 2024

PROSA & Cyberskills Hacking Evening (+pizza)

01 MAY
17:00 - 19:30
Aalborg Universitet København
15 A. C. Meyers Vænge 2450
København

VIEW DETAIL

Women in Cyber Security – Webinar

07 MAY
16:00 - 17:30

VIEW DETAIL

PROSA & Cyberskills Hacking Evening (+pizza)

15 MAY
17:00 - 19:30
Aalborg Universitet København
15 A. C. Meyers Vænge 2450
København

VIEW DETAIL

Cyberskills Career (from 2024)

- We are able to create the interest in Cyber Security.

- We are also able to maintain the interest!

- But many still find it different to see how they get from "where I am now to where I want to be".

- Cyberskills Career aims at supporting the young people in choose the best educational and career paths.

We are a small country

- But when we work together across sectors (private, education, governments) there is no limit to what we can achieve.

- We also see other communities grow, e.g.
  - CTF teams and organisations, e.g. Kalmarunionen.
  - The organisation of cyber conscripts.
  - Other organisations teaching young people about computers (e.g. coding pirates).

- We are not there yet: We need to constantly push in order not to lose momentum, we need more girls, etc…

A strong partnership is behind – Thank You!

ACSC
Austria CyberSecurityChallenge

Austria´s CyberSecurity Talent Capacity-Building- Program

Successtory since 2012

Why the Hell a HackerChallenge ?

CyberSecurity Excellence –

a product of coincidence!!

Thoughts about sustainable structures for the development of IT (security) excellence

Rising Demand for IT (Security) Experts

Rising Cyberthreats meets rising Skills Shortages

hypothesis: There will be too few IT security specialists for the needs of our society !! Demand is increasing faster than our resources can be provided. Growing GAP!!

consequence: Less security, increasing risks, fewer projects, loss of competitiveness, project delays and loss of projects, reduced resilience, rising costs, etc

vision: Sustainable cooperation between public sector / companies with education / research sector to increase quality / quantity of graduates Institutional Knowledge Transfer - Business / Education
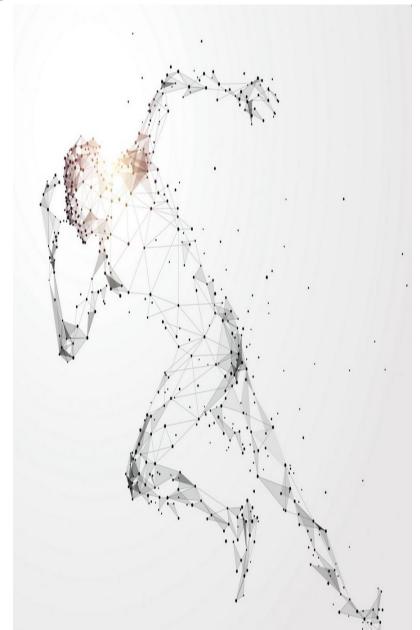
Educationsystem could not provide Teachers&Trainers.
Need for Mathematic-Teachers - Easy to cover !
Need for digital literacy /security experts Teacher – impossible to cover !

Our teacher education systems are not designed
to redevelop teaching content every 3-5 years.

People who have these skills work in top management
positions but are less likely to work as teachers

Sponsored by private Companys (~ 20)

Supported by Universities and Universities of Applied Science

Backed by FederalChancellery, Ministry of Defence,

Ministry of Internal Affairs, Ministry of Finance/Digitalisation,

Ministry of Education, City of Vienna
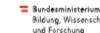
2012 -2024 Successtory
AustriaCyberSecurityChallenge

2015 European Champion, 2019 3rd place

5x successfull startups in the security field

13 x largest Austrian Security-Talent Challenge

227 x Talents in our Center of Excellence

601 x media reports about ACSC

6074 x participants in our challenges

18.000 people tryed our Level1 challenges /

14.000 active players on our cybersecurity quiz app

Goals and Objectives

Primary objectives

Identify cyber security talents
Encouraging young students unfolding their talents
Develop human networks / peer groups / local ctf communities
Promote ethics and values in cyber security

Raise awareness and promote cyber security in education systems
Implement train-the-train models

Other objectives

create awareness for the critical need for capacity building
programs providing cybersecurity excellence as well as
basic security understanding

Targeted audiences

participants
- apprentices /trainees
- highschool students / juniors according to ECSC rule set
- undergrad./grad. Students / Seniors according to ECSC rule set
- people over 25 with an affinity for security

supporter & sponsors partners
- government & universities & schools
- teacher training colleges,
- assocciations, NGO´s, other educational institutions
- companies – business and industry
- Media, influencer,opinon makers

Society
- General public
- Families

From Excellence to Basicprograms
Awareness-/Games-/Education-/Trainingsplattfom
ecoystem

ECCO
European Cybersecurity COmmunity

Circulation model driven - trainings sectors / economy / society

knowlege/Transfer

Motivation /Goals

GSG

KONCENTRATION, KOOPERATION, INTERNATIONALISATION

EXZELLENCE/TRAININGS/PROGRAMMS

INTERUNIVERSITY/ INTERDISICPLINARY/COMMUNITY

SCHOOLS/UNIVERSITIES- GAMIFICATION/ EDUTAINMENT / COMPETITION

GAMEFICATION/ AWARENESS-TRAININGS BASIC / GENERAL UNDERSTANDING

BASIC PROGRAMS/COMMUNITY

PRE-COMPETITIVE PLATFORM / LIGHTHOUSE MODEL

COLLABORATIVE SECURITY R&D/EDU COOPERATIONS

EXPERTS/TRAINER – POOL/ CTF- COMMUNITIES

SECURITY-KNOWLEDGEBASE – KNOWHOW TRANSFER

TRAIN THE TRAINER MODELS, TRAINER/TEACHER COMMUNITY

EMPLOYERS&CUSTOMERS, INTERNAL AND COOPERATICE (SEC CUPS)

"SECURE AUSTRIA", AWARENESS UND BASIC UNDERSTANDING

Cluster | Fokus
Excellence Programs | Circuit
Collaboration | Transfer
BasicPrograms | Student/Teacher Parents/Politics
Education/Training | HR / Operations
Individual | Family

KnowHow

Multiplyer

Thank you

joe.pichlmayr@cybersecurityaustria.at

Our strategic goals
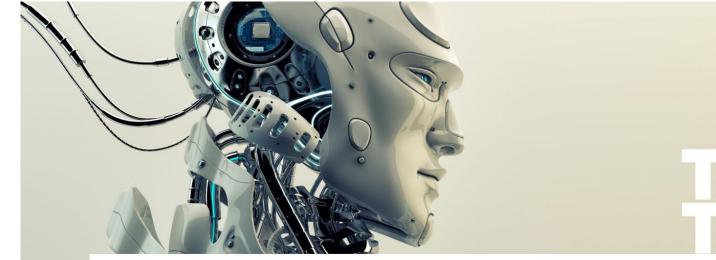
- Raising awareness that adequate security excellence is imperative for our society

- Benchmarking for young people, schools and universities

- Early discovery and promotion of IT security talents

- Development of long-term models to anchor IT security excellence in the education sector

- Raise attractivnes of cybersecurity / digital literacy for young people and our society

- Fingerprinting and human sensor project on available talent and resources

- National and European networks

- Development of sustainable IT security basis networks

- Development of resilient infrastructures /Secure Base layer for communication & supply networks

- Security Research Concentration (VISP) / Security Ecosystem (www.visp.wien)

CyberSecurityAustria enables

- IT-Security Excellence Programs - structured Talent Search/Encouragement

- **Increasing Security AWARNESS in our Society, in our Companies as well as in public sector and our among our political decision makers**

- institutionalized know-how transfer - knowledge carrier economy - education sector

- **high TRUST in Austrian security know-how, security provider, security excellence**

- strengthening the Austrian industry and economy through domestic products and services as well as qualified experts – decrease dependency increase resilience

- **optimal STRUCTURES for (OPEN) INNOVATION involving the cooperation partners and various other stackholders**

- new JOBS for security - research, -development and -innovation

HOW TO INCLUDE GIRLS IN IT AND CYBERSECURITY EXAMPLE OF ESTONIA

Birgy Lorenz
School of IT/ IT Kolledž
Tallinn University of Technology

What is available for all the schools in Estonia

Formal education
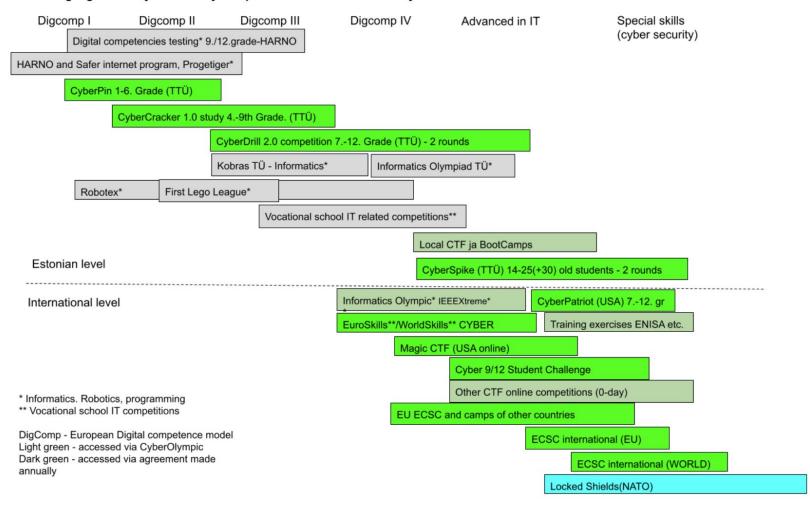
Informatics syllabus (available, but still optional) - design, programming, cybersecurity

- 1-3th grade "Digital safety"
- 4-6th grade "Digital Hygiene"
- 7-9th grade "Information Society" and "Creative work"
- 10-12th grade "Cyber Defence"

Informal education

- Different level informatic competitions
  - *Content creation*
  - *Unicorn Squad trainings*
  - Informatics Olympiad
  - Robotics (First Lego League, Robotex)
  - Beginner Leven Startup competitions
  - Local level Cyber Security testing and CTF-s
  - Cyber Camps
  - International level competitions and CTFs

Evaluating digital and cyber security competencies in Estonia for 8-25 year old students

Digcomp I	Digcomp II	Digcomp III	Digcomp IV	Advanced in IT	Special skills (cyber security)

Digital competencies testing* 9./12.grade-HARNO

HARNO and Safer internet program, Progetiger*

CyberPin 1-6. Grade (TTÜ)

CyberCracker 1.0 study 4.-9th Grade. (TTÜ)

CyberDrill 2.0 competition 7.-12. Grade (TTÜ) - 2 rounds

Kobras TÜ - Informatics*

Informatics Olympiad TÜ*

Robotex*

First Lego League*

Vocational school IT related competitions**

Local CTF ja BootCamps

Estonian level

CyberSpike (TTÜ) 14-25(+30) old students - 2 rounds

- -

International level

Informatics Olympic* IEEEXtreme*

CyberPatriot (USA) 7.-12. gr

EuroSkills**/WorldSkills** CYBER

Training exercises ENISA etc.

Magic CTF (USA online)

Cyber 9/12 Student Challenge

Other CTF online competitions (0-day)

EU ECSC and camps of other countries

ECSC international (EU)

ECSC international (WORLD)

Locked Shields(NATO)

* Informatics. Robotics, programming
** Vocational school IT competitions

DigComp - European Digital competence model
Light green - accessed via CyberOlympic
Dark green - accessed via agreement made annually

TalTech organized competitions and camps

- **Test CyberPin for 1-6th graders** - 50% male/female (annually 7000 participants)
- **Test CyberCracker for 4-9th graders** - 50% male/female (annually 8000 participants)
- **Beginner level CTF - CyberDrill for 7-12th graders**, vocational schools - 70/30 male/female (4000 participants)
- ……….(other actors in EE)
- **CyberSpike for 14-25 year old students** 90/10 male/female (300-500 participants)
- **CyberCamp for ECSC talents** 90/10 male/female (30 participants)
- **ECSC talents** 80/20 male/female (10 participants)
- …………………
- **Teacher trainings 40/60** male/female participants (~100 participants)

- **What happens after 4-5th grade?**
- **How to give beginner entry level starting from 7th grade?**

The CyberWizards camp

July 29th – August 3rd in Estonia

Cyber camp for 13 to 16 years old girls with no previous experience in cyber

International groups are welcome to join!

More information:

www.ria.ee/en/cyberwizards2024

tiina.pau@ria.ee

Co-funded by
the European Union

ECCC

CYBER WIZARDS · ESTONIA

How do we involve girls in cybersecurity?

CTF TECH

01 Girls' Cyber Academy in collaboration with the University of Tartu Science School

02 Bootcamps - for those with limited knowledge or none at all about cybersecurity

03 Qualification rounds for girls teams to get ticket into Cyber Battle finals

04 Telia Cyber Battle of Nordic-Baltic has "**Girls only**" league - The top 5 girls' teams will compete in their league

www.ctftech.com

Differences

Boys are motivated on thrill, competition atmosphere, to win something, to be the best, short and quick results, harder level puzzled with various (3-10 level) stages, less "teaching", team-feeling, to represent Estonia. When in camps - girls are ok to join.

Girls are motivated more on big picture (why in the world we need it?!), team (girlfriends) around them, stedy and good quality organization, interesting real life exercises with social cause, simple exercises (1-2 stages), long sessions with real teaching and learning, reading instructions first, to see role-models. When in camps - preferably no boys.
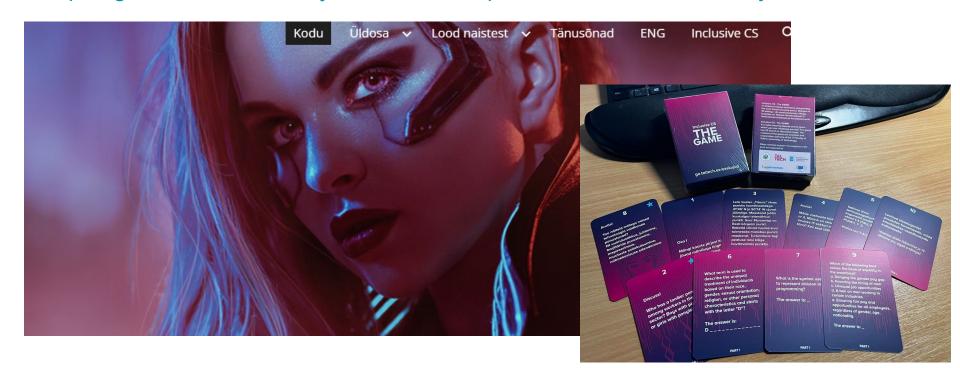
Similar: possibility to gain university access, cooperation with industry, to be useful in the future, to gain meaningful experiences, make deeper connection with the organizers.
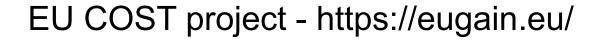
Other possibilities - role models stories, materials, games, teaching the teachers

https://go.taltech.ee/eeskujud   https://www.facebook.com/cybertomorrow

EU COST project - https://eugain.eu/

European Network For Gender Balance in Informatics

01
Deliverables
EUGAIN documents.

→ LEARN MORE

02
Research Publications
Scientific outputs of EUGAIN's members.

→ LEARN MORE

03
Research Hosts' Proposals
Research themes proposed by host institutions for STSMs.

→ LEARN MORE

04
Best Practices
Projects and activities of informatics departments, industry, and society, contributing to better gender balance.

→ LEARN MORE