



European perspective on NIS education

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IT Security is just the tip of the cyber-iceberg

IT SECURITY

MARKET FORCES

LAW

TECHNOLOGY

BEHAVIOUR

INTERNATIONAL

RELATIONS

PRIVACY

TRUST



This is about our Future

Make **Europe**
the world's most **trusted**
and **secure** online space,
so that **citizens** can fully reap
the **benefits** of the **digital** economy.



Mission letter from President-elect of the EC to Commissioner-nominee for Digital Economy and Society (10 Sep 2014)

I would like you to focus on the following:

[...]

- *Developing and implementing measures **to make Europe more trusted and secure online**, so that citizens and business can fully reap the benefits of the digital economy. I would like you to work with the Vice-President for the Digital Single Market on a plan to **make the EU a leader in cyber security preparedness and trustworthy ICT**, and to increase the confidentiality of communications*

[...]

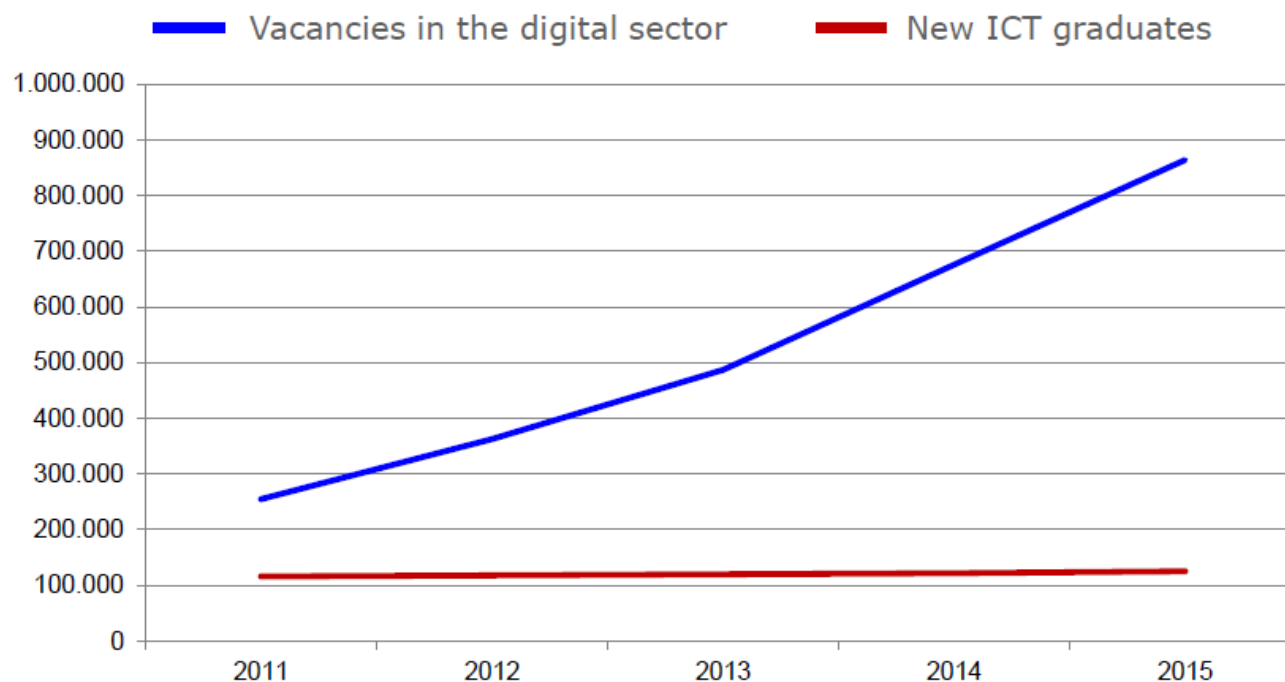


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The example of the ICT sector

Digital jobs: vacancies and graduates* (numbers)



* Surveys and forecasts assuming moderate growth in GDP and ICT investment. Only ICT graduates are considered here.

Source: Empirica

Cybersecurity Strategy of the EU:

An Open, Safe and Secure Cyberspace

(2013)

[...]

The Commission asks ENISA to:

- Propose in 2013 a roadmap for a "Network and Information Security driving licence" as a voluntary certification programme to promote enhanced skills and competence of IT professionals (e.g. website administrators).

The Commission will:

- Organise, with the support of ENISA, a cybersecurity championship in 2014, where university students will compete in proposing NIS solutions

[...]



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On-going initiatives on Network and Information Security (NIS) education

- 1. Development of a pilot quiz for self-assessment of NIS skills.*
- 2. Oct 2014 European Cybersecurity Month-
Release of*
 - ENISA report on "NIS education programmes in Europe"**
 - the self-assessment NIS pilot quiz.**
 - ENISA report on European cybersecurity championship**



Report on NIS education programmes in Europe

- *The primary intended audience are professors and trainers strongly involved in NIS education. The secondary target of this report are policy-makers in the field.*
- *The report will include*
 - 1. Map of the current courses and materials available.**
 - 2. Gaps between existing training/certification schemes and the market needs, including proposals of scenarios to narrow the existing gaps.**



Report on NIS education programmes in Europe (cont.)

- *Initial foreseen scenarios:*
 - **Health care organizations.**
 - **Data protection bodies.**
 - **Small and Medium Enterprises.**
 - **(Continuous) teach to teachers.**
 - **Digital forensics professionals.**



report on “Roadmap for NIS education programmes in Europe” (cont.)

- *Recommendations/suggestions include the idea of creating a Europass for NIS Skills for the general public, very much in line with the model of the Europass Language Passport.*
 - **Skills could be self-assessed for certain NIS areas (e.g. privacy, general security) and according to an established self-assessment frame.**
 - **A "NIS Europass" could facilitate jobseekers in applying for jobs across Europe and could facilitate employers in assessing candidates**



We actually need more than just **one boat**

Industry

SMEs

NGOs

Member States

Citizens

Global players

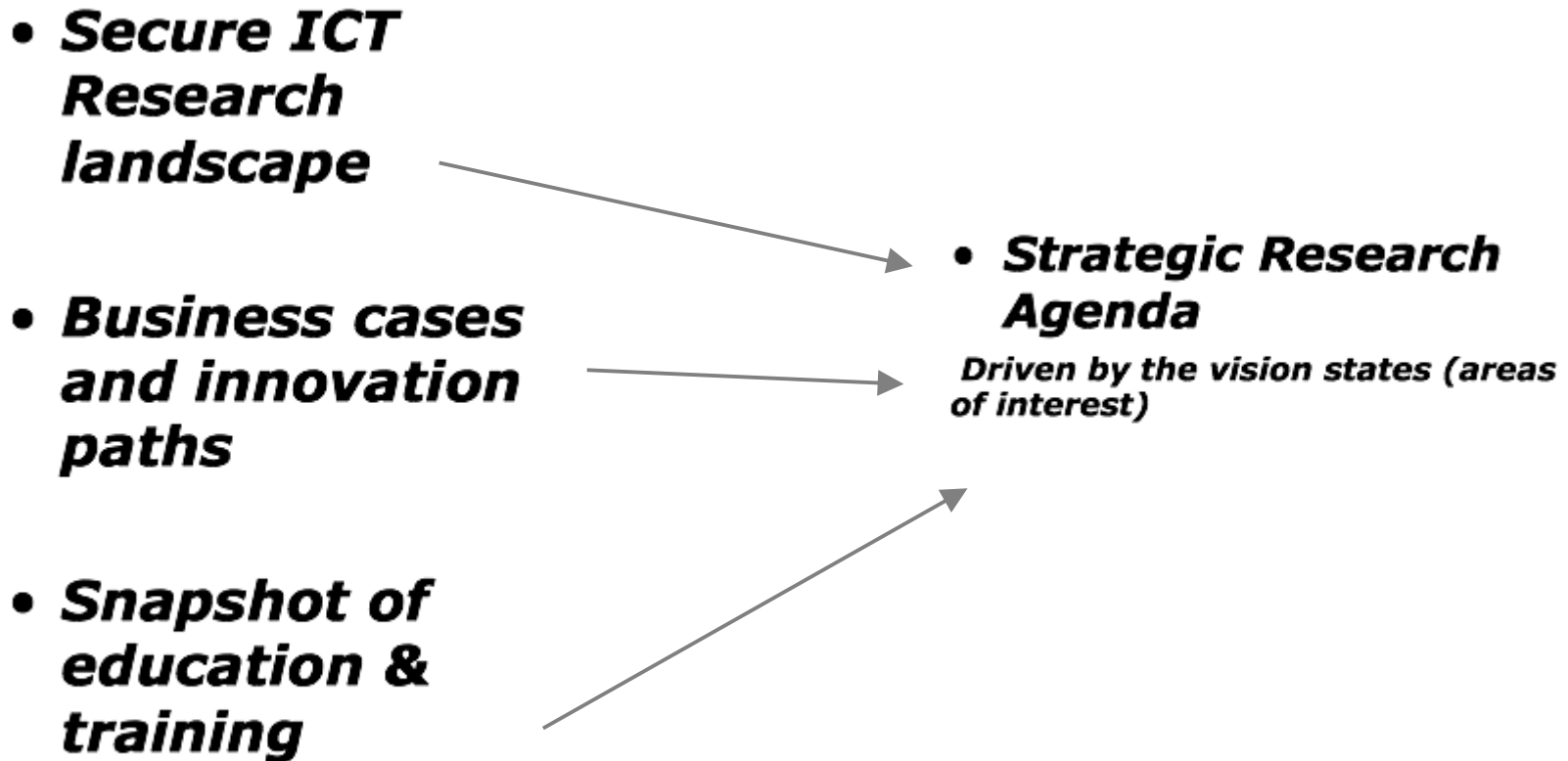
Regions

Competence Centres

H2020 as a strategic tool



Working Group 3 of the NIS Platform



Goal of WG3 of the NIS Platform

- *Define a **strategic** research and innovation agenda on cyber security*
- *Start from the **desired vision** states (or Areas of Interest) we wish to achieve in 2025*
- *Consider not just **technological**, but also **social, legal, business, and educational** aspects*



WG3 Deliverable: Education & Training

Goal:

*Collect information on cybersecurity **higher education curriculum** in member states of EU*

*Collect sample information about **training** available in cybersecurity in EU*

*Formulate **recommendations** for development based on findings.*

Structure:

1. Introduction and background
2. Methodology for the study
3. Data collection from primary and secondary sources
4. Including automated DB production (available on ENISA platform)
5. Data and Gap Analysis
6. Main findings and recommendations
7. Appendix

Some references

- *JOINT COMMUNICATION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS*

Cybersecurity Strategy of the European Union: An Open, Safe and Secure Cyberspace

Brussels, 7.2.2013 JOIN(2013) 1 final

http://ec.europa.eu/information_society/newsroom/cf/dae/document.cfm?doc_id=1667

- www.cybersecuritymonth.eu where you can find
 - **Interactive map with NIS courses across Europe**
 - **NIS pilot quiz addressed to all users for knowledge update, available by the end of October 2014**
- *WG3 deliverable on education (public release Dec. 2014)*
 - **ENISA web hosted portal for the NIS platform**



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