

Standardised cybersecurity education in the Netherlands

*based on PvIB generic professional profiles from the
European e-Competence Framework e-CF*

a structured approach

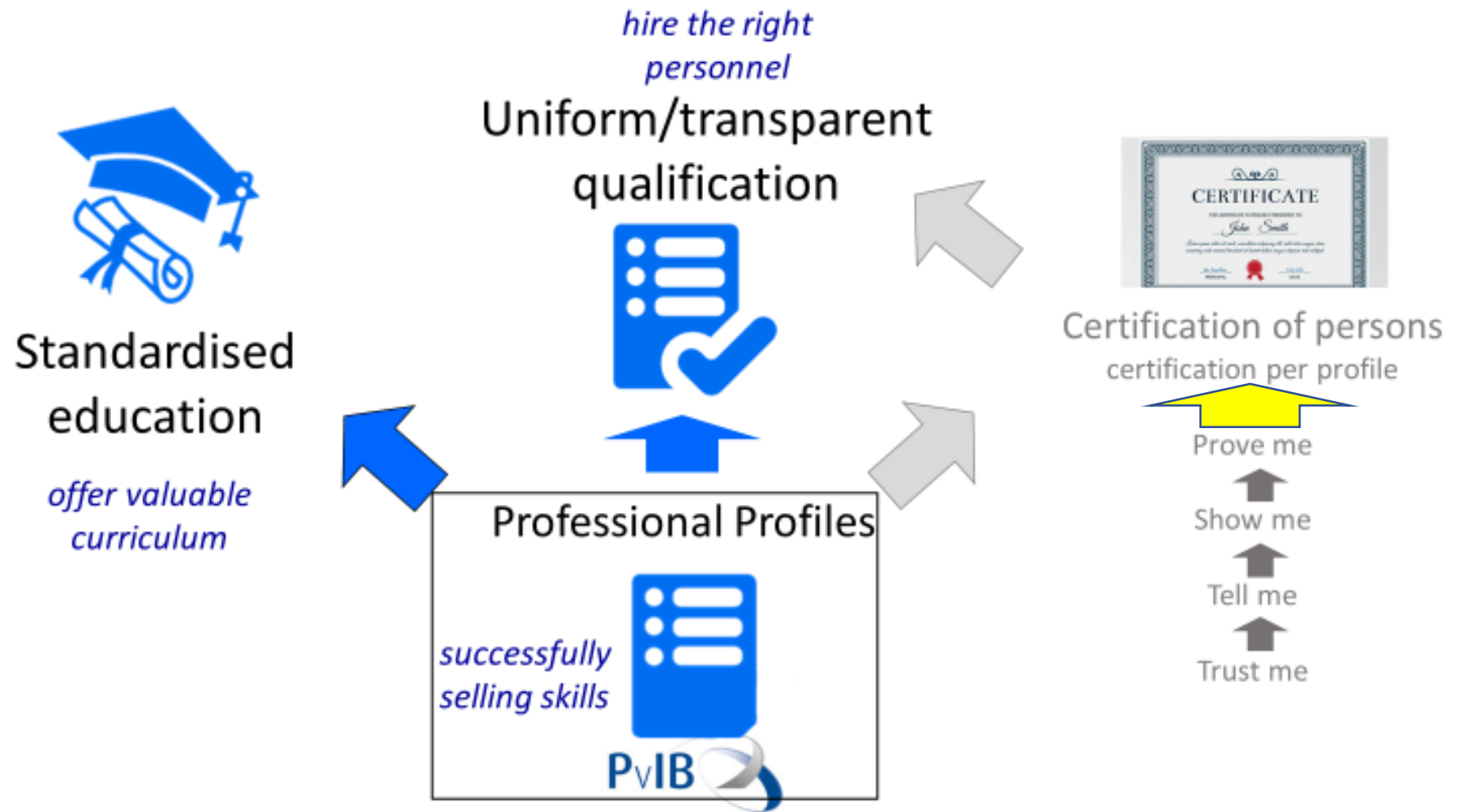
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13 April 2021

WSIS FORUM 2021

Building Cyber Resilience with a Professional workforce

The solution



Qualification level



Further Specialisation		
<p>Information Risk Management</p> <p><i>CISO ***</i> <i>ISO **</i></p>	<p>ICT Security</p> <p><i>ICT Security Manager **</i> <i>ICT Security Specialist ***</i> <i>***</i> <i>*</i></p>	<p>Domains with recognised qualification</p> <p><i>Privacy Officer</i> <i>ICT auditor</i> <i>Business Continuity mgr</i> <i>etcetera.</i></p>

*** master ** bachelor * secondary vocational

Professional profile

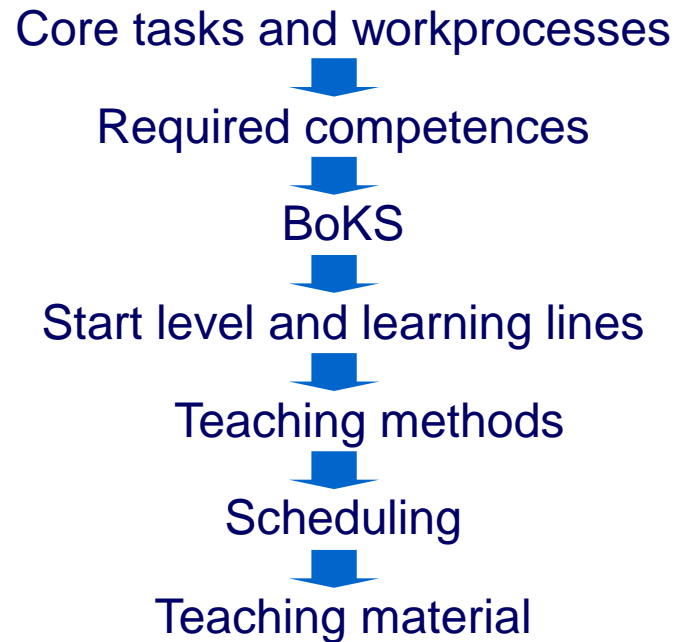
ICT Security Specialist 3

Profile title	ICT SECURITY SPECIALIST 3		
Summary statement	Designs and implements the organisation's ICT security policies.		
Mission	Proposes and implements technical security measures for ICT. Advises and supports to ensure secure ICT operation. Takes direct action to secure all or part of a network or system. Is recognised as the ICT security expert by peers.		
Deliverables	Accountable	Responsible	Contributor
	<ul style="list-style-type: none">• Knowledge base on ICT security	<ul style="list-style-type: none">• ICT security improvement proposals• New technology integration proposals• Technical ICT security solutions, measures and updates• -•	<ul style="list-style-type: none">• Risk Management strategy• ICT security policies and its implementation• Risk analyses for ICT• Forensic investigation• -•
Main tasks	<ul style="list-style-type: none">• Watch in-depth technology trends with respect to ICT security• Observe current threats and threat trends and determine their possible impact on the organisation• Provide knowledge base on information security• Draw up improvement proposals for ICT security• Draw up proposals for integration of new information technology• Design technical ICT security solutions•		
e-Competences (from e-CF)	A.7. Technology Trend Monitoring		Level 4
	B.4. Solution Deployment		Level 4
	E.3 Risk Management		Level 3
	E.8. Information Security Management		Level 3
General competences	G.3. Communication and persuasion		Level 2
	G.4. Research		Level 4
	G.7. Analytical skills		Level 4
	G.8. Integrity		Level 2
Education and experience	A completed Master study in the ICT domain or equivalent level of knowledge and skills.		
KPI	Necessary ICT security measures in place and effective.		

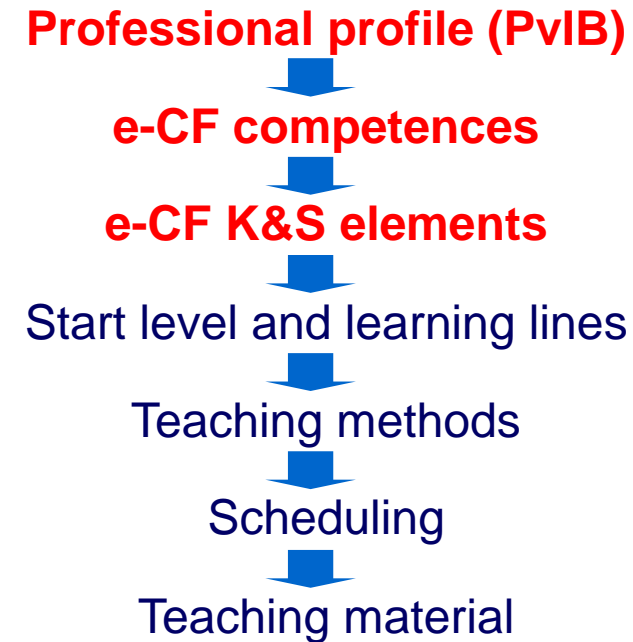
The challenge

- How to make education for a new curriculum?

The common approach



With professional profiles and e-CF



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[illegible]

Questions?



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With many thanks to:

Marcel Spruit, lector Cybersecurity

Jan Wessels, CISO Office Rabo bank

Olaf Streutker, CISO Office ABN Amro bank

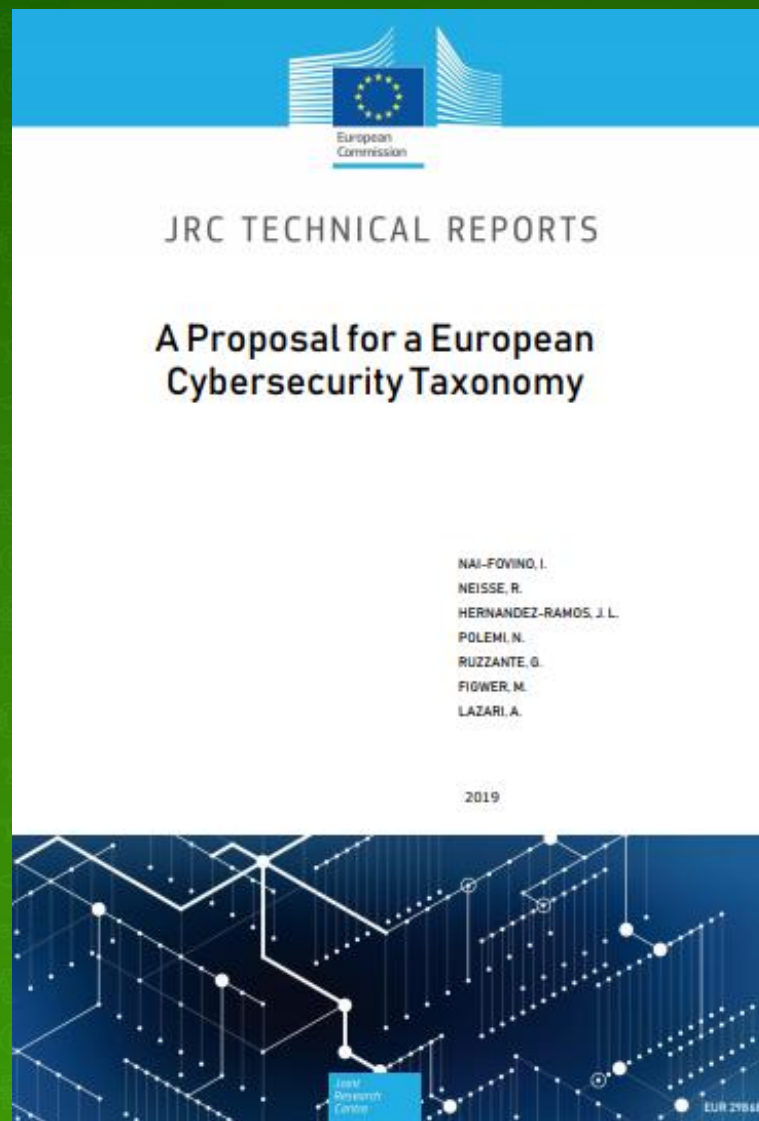
<https://www.pvib.nl/kenniscentrum/documenten/job-profiles-information-security-2-0>

<https://www.ecompetences.eu/>

<https://www.enisa.europa.eu/topics/cybersecurity-education/european-cybersecurity-skills-framework>

<https://ec.europa.eu/jrc/en/publication/proposal-european-cybersecurity-taxonomy>

APPENDIX 1 – European Cybersecurity Taxonomy



2	Methodology and Reference Sources analysis
2.1	Methodology
2.2	Reference Sources and State of the Art
2.2.1	Existing cybersecurity clustering approaches
2.2.1.1	Cyberwatching
2.2.1.2	ACM Classification System.....
2.2.1.3	NIST CSRC Taxonomy
2.2.1.4	IEEE Taxonomy
2.2.1.5	ETSI TC-Cyber working group domains
2.2.1.6	IFIP TC11 Working Groups taxonomy
2.2.1.7	IT-baseline protection catalog (IT-Grundschutz)
2.2.2	International Standards and Reference documents
2.2.2.1	ISO/IEC 27000, ISO/IEC 27001 and ISO/IEC 27005
2.2.2.2	ISA 62443
2.2.2.3	ISO/IEC 15408 (Common Criteria)
2.2.2.4	NIST SP 800
2.2.3	International Working Groups and Organisations
2.2.4	Regulations and Policy Documents
2.2.5	Cybersecurity Market Studies and Observatory Initiatives

APPENDIX 2 – European e-competence Framework



Dimension 1 5 e-CF areas	Dimension 2 41 e-Competences Identified	Dimension 3 5 e-Competence proficiency levels				
		e-1	e-2	e-3	e-4	e-5
A. PLAN	A.1. Information Systems and Business Strategy Alignment					
	A.2. Service Level Management					
	A.3. Business Plan Development					
	A.4. Product/Service Planning					
	A.5. Architecture Design					
	A.6. Application Design					
	A.7. Technology Trend Monitoring					
	A.8. Sustainability Management					
	A.9. Innovating					
	A.10. User Experience					
B. BUILD	B.1. Application Development					
	B.2. Component Integration					
	B.3. Testing					
	B.4. Solution Deployment					
	B.5. Documentation Production					
	B.6. ICT Systems Engineering					
C. RUN	C.1. User Support					
	C.2. Change Support					
	C.3. Service Delivery					
	C.4. Problem Management					
	C.5. Systems Management					
D. ENABLE	D.1. Information Security Strategy Development					
	D.2. ICT Quality Strategy Development					
	D.3. Education and Training Provision					
	D.4. Purchasing					
	D.5. Sales Development					
	D.6. Digital Marketing					
	D.7. Data Science and Analytics					
	D.8. Contract Management					
	D.9. Personnel Development					
	D.10. Information and Knowledge Management					
	D.11. Needs Identification					
E. MANAGE	E.1. Forecast Development					
	E.2. Project and Portfolio Management					
	E.3. Risk Management					
	E.4. Relationship Management					
	E.5. Process Improvement					
	E.6. ICT Quality Management					
	E.7. Business Change Management					
	E.8. Information Security Management					
	E.9. Information Systems Governance					