



Cybersecurity in the Digital Single Market

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European Union Agency for Network and Information Security



Summary



01 Digital Single Market







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Technologies revolutionizing IT markets



	Description of technology	Growth trend
 Big data	<ul style="list-style-type: none"> Ability to run complex calculations on big amounts of data in a meaningful time frame 	<ul style="list-style-type: none"> Global 33% CAGR 2011-2015
 Sensors and actuators	<ul style="list-style-type: none"> Introduction of cheap sensors and actuators to many different appliances to collect huge amounts of data 	<ul style="list-style-type: none"> Potential \$4-11 economic impact estimated in 2025
 Cloud computing	<ul style="list-style-type: none"> Hosting of software on centralized servers with high-speed access through the Internet 	<ul style="list-style-type: none"> Global 27% CAGR in public cloud services revenues
 Mobile technology	<ul style="list-style-type: none"> Massive increase of mobile computing power, storage, and bandwidth 	<ul style="list-style-type: none"> Global 27% CAGR in mobile-to-mobile communications revenues
 Natural user interfaces	<ul style="list-style-type: none"> Creation of new kinds of interfaces that allow for more intuitive handling of IT systems 	<ul style="list-style-type: none"> 30% reduction in page visits per click
 Computation, storage, and networks	<ul style="list-style-type: none"> Possibility to store large amounts of data and transfer the data with high bandwidth between computers 	<ul style="list-style-type: none"> Global 15% CAGR in enterprise storage market

Trends in cybersecurity challenges



	 Big data	 Sensors and actuators	 Cloud computing	 Mobile technology	 Natural user interfaces	 Computation, storage, and networks
1 Modularization, personalization, and simplification			✓		✓	✓
2 Anything-as-a-Service			✓	✓		
3 Integrated digital/physical experiences and digitization		✓	✓	✓	✓	
4 Experimentation, automation, and big data	✓	✓	✓	✓		✓
5 Internet of Things	✓	✓		✓		
6 The e-volution of commerce		✓	✓	✓	✓	
7 Collaboration at scale			✓	✓	✓	✓
8 Transformation of government, health care, and education	✓	✓	✓	✓		
9 The next 3 billion digital citizens				✓	✓	

EU Policy initiatives

- ENISA Regulation (EU) No 526/2013
- EU Cybersecurity Strategy
- NIS Directive
- Council Conclusions on the Cybersecurity Strategy
- CIIP Action Plan
- Commission Communication on CIIP
- Electronic Communications Regulatory Framework
- Data Protection Regulation
- Commission Regulation on measures applicable to the notification of personal data breaches
- eIDAS Regulation
- European cloud computing strategy
- Priorities for ICT standardisation
- E-Government action plan
- IoT staff working document
- Communication Digital Single Market

Communication Digital Single Market



- A framework to coordinate digital industry initiatives
- Co-investing in boosting Europe's digital innovation capabilities and across all sectors
- Leadership in digital value chains and platforms
- Standardisation
- An appropriate regulatory framework
- Human capital with skills to support the digital transformation

Cybersecurity in DSM



Cybersecurity in the DSM



- The EU seeks to become the single market of preference for governments and industry where cybersecurity is concerned
- The EU seeks to achieve a reasonable balance between strong ethical principles and business practices that could more effectively stimulate economic growth throughout the EU
- The EU pursues an industry policy approach to create a competitive EU based ICT industry
- ENISA can support promoting DSM in cybersecurity
- ENISA can bring together public and private sectors



DSM challenges



Improving cybersecurity throughout the EU needs to strike a better balance between opportunity and risk

The internal market for security products and services functions on a 'supply push' principle rather than a 'demand pull' principle

The area of privacy and data protection is moving from a legal and principle-based debate to an implementation phase

Current EU research & development in cybersecurity has yet to deliver prominent and successful product and services

Cybersecurity standardisation and certification activities are not sufficiently aligned with contemporary needs of the industry

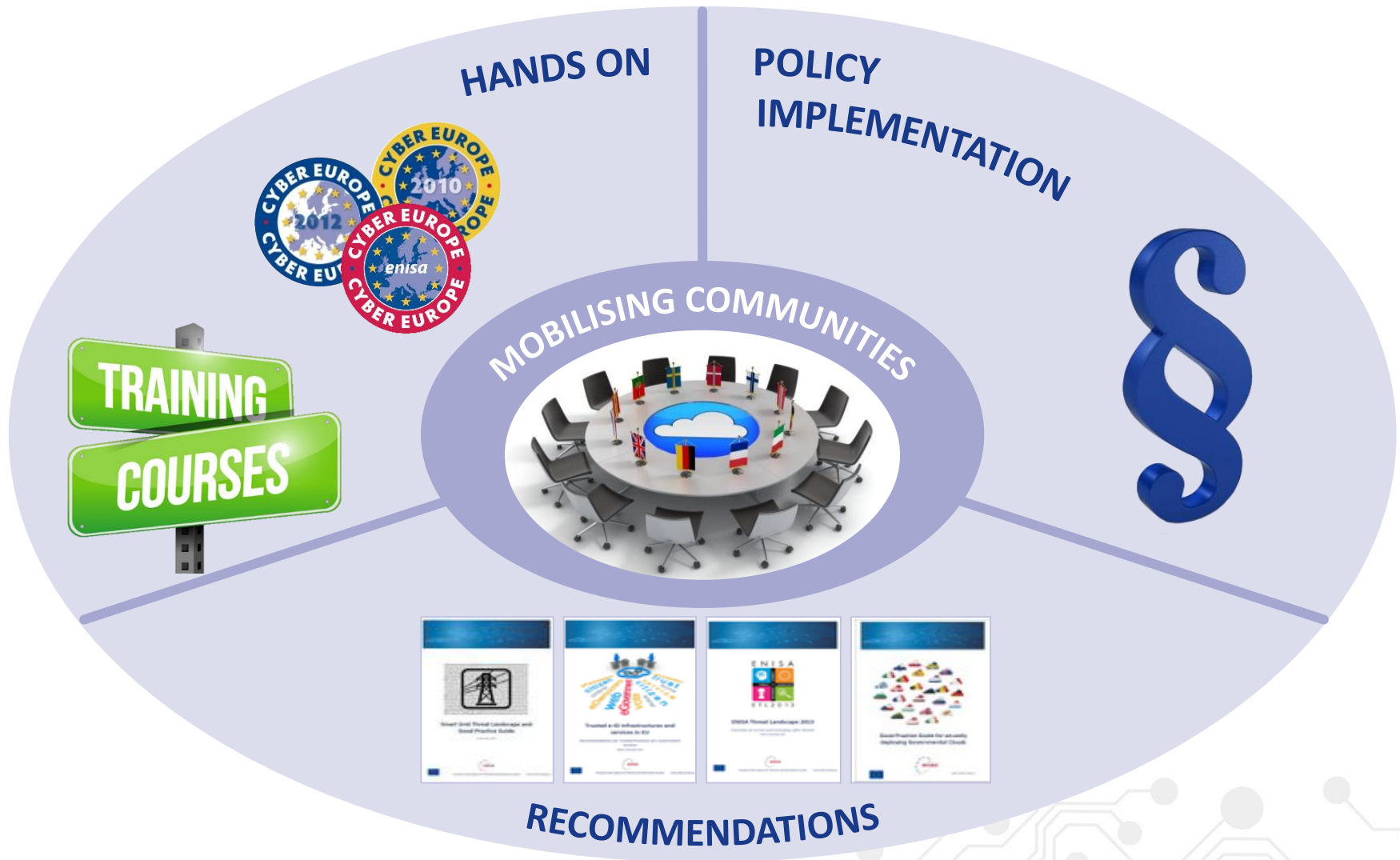
Knowledge and skills related to network and information security are developed and maintained in a fragmented manner

Multiple competences in ICT and security at EU level: EU Lisa, Frontex, Europol/EC3, CEPOL, Eurojust, EEAS, EDA, ENISA

ENISA and the DSM



The operational model of ENISA



Key messages to (DSM) Industry 1/2



- Consider new business models that capitalise on security as a differentiator of products and services
- Establish sectorial requirements for information security in order to move the cybersecurity market
- Invest more in awareness and education on security at all levels
- Reduce Operational Expenditure by improving Risk Management
- Secure the entire lifecycle of products by using security and privacy by design

Key messages to (DSM) Industry 2/2



- Improve cooperation within and across industry segments and national borders to improve threat intelligence and promote the application of good practices
- Consider new business models that capitalise on security as a differentiator of products and services
- Proactively drive standardisation through strong industry representation
- Support cybersecurity and privacy certification schemes to improve customer confidence
- Work closer together with academia to ensure that quality research results in concrete products and services



Thank you



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