Culture of cybersecurity : *from policies to practice*

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Cybersecurity for information economy

- **Cybersecurity culture** deals with key economic, legal, and social issues related to information security
    - in order to contribute to helping countries get prepared
        - to face issues and challenges linked to information and communication technologies (ICT) deployment, uses and misuses

A large range of issues …

- At the crossroads of technological, legal, sociological, economic, and political fields
  - **Cybersecurity is an interdisciplinary domain by nature**

- Depending on the country
  - it must reflect the vision, the culture and the civilization of a nation
  - as well as meeting the specific security needs of the local context in which it is introduced

A large range of issues …

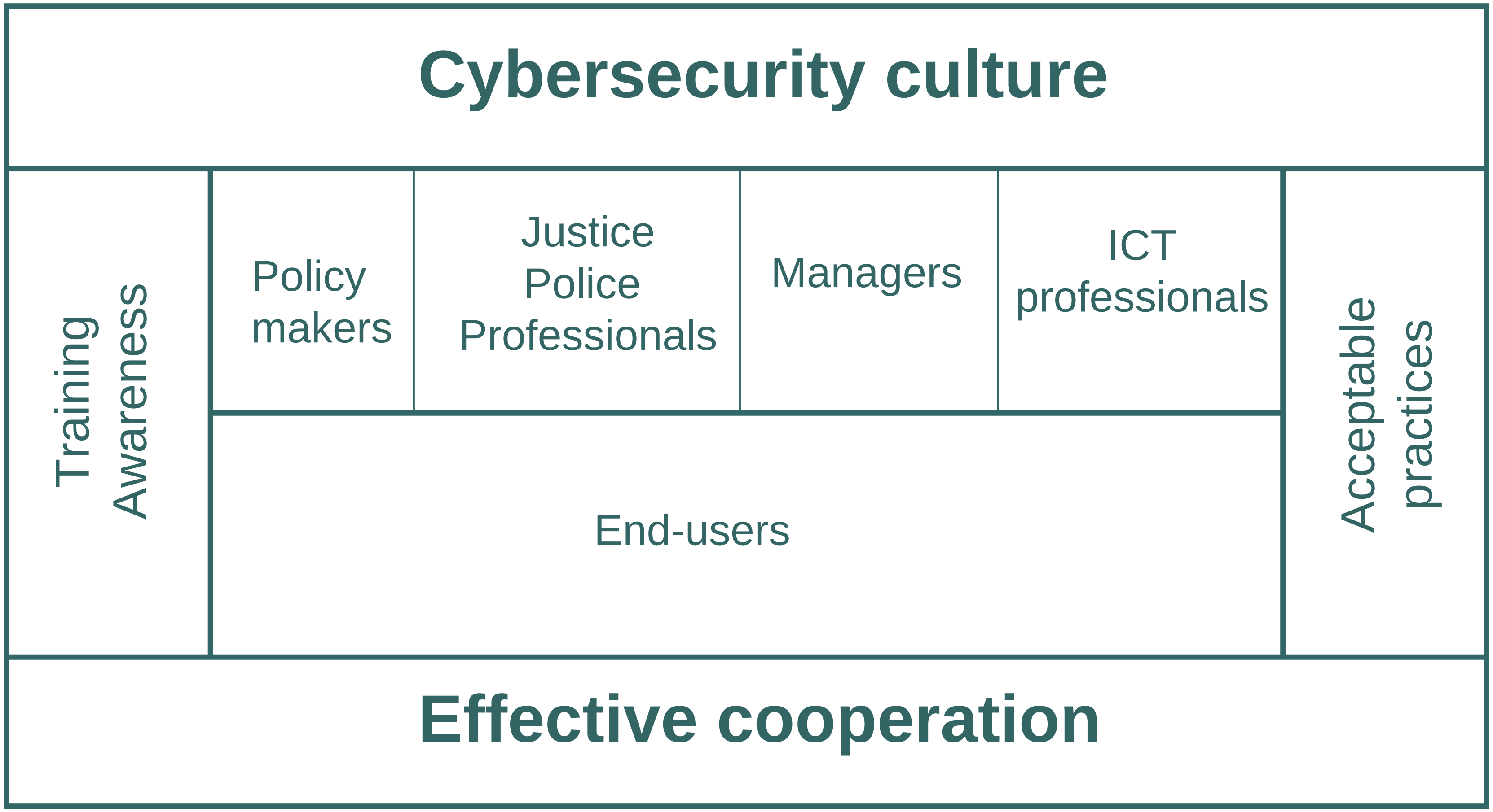
- **Educational efforts and investments** need to be made to educate and train all the members of the information society
  - from decision makers to citizens
  - including children and older people

- Specific actions should be taken at a **national level**
  - to raise or build cybersecurity capacities of various members
  - in order to be able to deal with national and international cybersecurity issues

Awareness is not enough

- **Awareness is not enough**
  - to empower the end-user in a way that he or she would be able to adopt a safe and responsible behaviour when dealing with ICT technologies
- Specific educational programmes should be effective and available
  - for each kind of stakeholder
    - policy makers, justice and police professionals, managers, information technology professionals, end-users

Building blocks



Cybersecurity culture

Training
Awareness

Policy makers

Justice
Police
Professionals

Managers

ICT professionals

End-users

Acceptable practices

Effective cooperation

Answering a global challenge by a local answer

- **Any global strategy** to develop a cybersecurity culture
  - **has to be adapted** to local needs

- When developing cybersecurity culture, one of the main challenges is to **identify** correctly what are
  - the global & international issues
  - the local specific needs for a cybersecurity culture

Strategic answer and political will

- Promoting a culture of cybersecurity that will touch the entire population needs to rely upon
  - an **appropriate** **political vision** and will
  - and **efficient** **private and public partnerships**
- There are no real theories or methodologies related to:
  - How to design, to communicate, to validate or to control the adequacy of a cybersecurity culture
    - Evaluating the **effectiveness** of cybersecurity culture, from policies and guidelines to practice, is very difficult

A need for private and public partnerships

- If the public and private sectors do not support such initiatives together as soon as possible
  - there will be a **long term negative effect** on **economic development** and the ability to ensure the **security of goods and people**

A question of responsibility

- *“**Awareness**: Participants should be aware of the need for securing information systems and networks and what can be done to enhance security”*

- *“**Responsibility**: All participants are responsible for the security of information systems and networks”*

  - It will also contribute to avoiding building security based on fear
    - Fear is a selling argument when dealing with security issues but is not always rational and does not lead to the best investments and efficiency in security

Basic recommendations

- **Educate** the end-user
- **Increase** public awareness to enhance users' behaviour in respect of security
- **Give** to the end-user the tools and means required to be responsible
- **Design** an end-user-centric security model within a given technical and legal framework whereby the user can decide what is judicious based on his own resources

Defense in deep

- **Education** contributes to developing a layer of **defence in deep** security approach and is the cornerstone of the information society

- Education constitutes a real **human capacity challenge** that governments have to face

Human capacity building

- Capacity building includes
  - **Human resource development**
    - The process of equipping individuals with the understanding, skills and access to information, knowledge and training that enable them to perform effectively

- Every citizen should:
  - **Understand** the cyberthreats for the end-user
    - viruses, spam, identity theft, fraud, swindle, privacy offence, …
    - and their impacts
  - **Understand** how to adopt a security behaviour for a safe use of ICT resources
  - **Be able to** promote a cybersecurity culture based on well recognized good practices;

Concluding words …

- With the **Global Cybersecurity Agenda**, ITU proposes a unique framework to consider cybersecurity issues in a holistic and systemic approach,
    - a unique model to deal with the global challenges of building confidence and security into the use of ICT that takes into consideration awareness and education issues

Concluding words

- **Promoting a culture of cybersecurity**
  - contributes to building a safe and inclusive information society

- Considering **cybersecurity education** is a long term approach which is efficient for a **sustainable information society**

Thank you for your attention

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