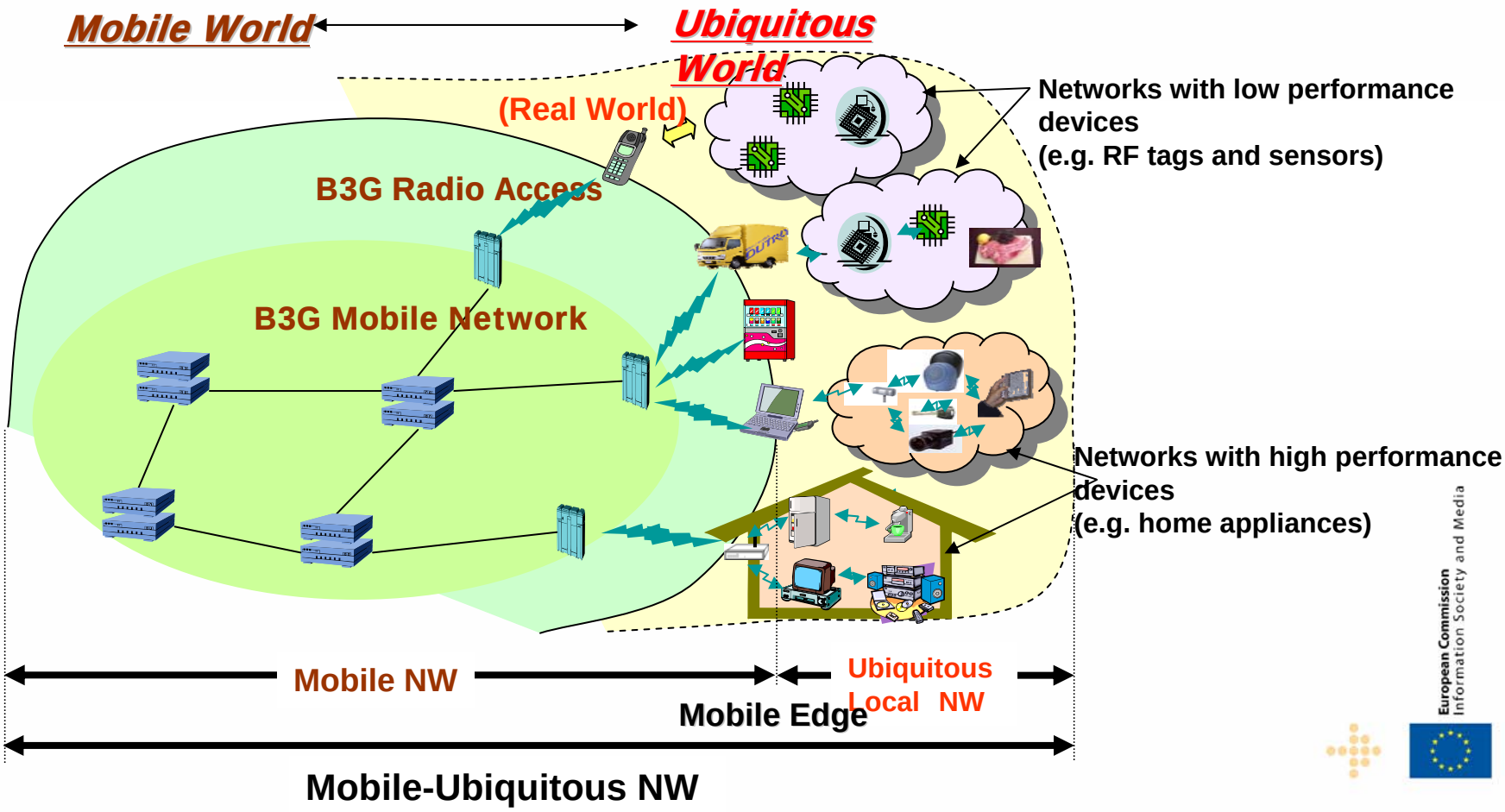
Security and resilience in Information Society: *the European approach*

Andrea Servida
Deputy Head of Unit
European Commission
DG INFSO-A3
Andrea.servida@ec.europa.eu

European Commission
Information Society and Media

What's ahead: mobile ubiquitous environments

Broaden communication parties, networking, and business opportunities



European Commission
Information Society and Media

The key objectives of the strategy

… to revitalise the EC strategy set out in 2001

- By reviewing the NIS situation and challenges posed by convergence of technologies, media and markets
- By building better coordination between the various EC policy initiatives (e.g. spam, 2006 Review, CIIP, cyber crime, RFID, etc)
- By mobilising all stakeholders to strengthen the cooperation in the EU

… to adapt the EU approach to future challenges

- By strengthening the role of ENISA
- By emphasising the value and benefits of measuring and learning
- By launching few actions to stimulate the exchange of good policy practice across the EU

NIS in the Information Society

TECHNICAL dimension

SOCIAL dimension

ECONOMIC dimension

LEGAL dimension

Depending on ICT

Today issues

Pervasiveness, interdependencies and intrusiveness

Influencing factors

- **incompatibility** between technology and human systems
- **technology-push** with no thinking in terms of **societal impact** (DRM, TC, biometrics, IPv6, etc.)
- emergence of new **social and governance** models
- little understanding of **human factor**
- excessive technical control **may put at risk "rights"** (DRM, biometrics, TC, etc.)
- there are **no safeguards** for users
- no attention to **economic and societal costs** of faulty software

Future objective

Develop a "respectful", productive, innovative and secure IS

How to go about it

- develop a new **ethics of digital behaviour and commercial conduct**
- **enforce everywhere the principle of user's choice**
- promote **the respect of the personal sphere** also by ensuring **resiliency and accountability of systems**
- investigate **interdependencies** between **technology & societal systems**
- develop **a vision on how to depend on technology** (including international governance) in societal systems
- **education** and awareness

The key principles …

… to improve and develop a culture of NIS

- **Technical**
  - Promote diversity, usability openness and interoperability as integral components of security
- **Economic**
  - Present NIS as a virtue and an opportunity
- **Social**
  - Individual users need to understand that their home systems are critical for the overall security chain
- **Legal**
  - Privacy and security are a prerequisite for guaranteeing fundamental rights on-line

The challenges for stakeholders …

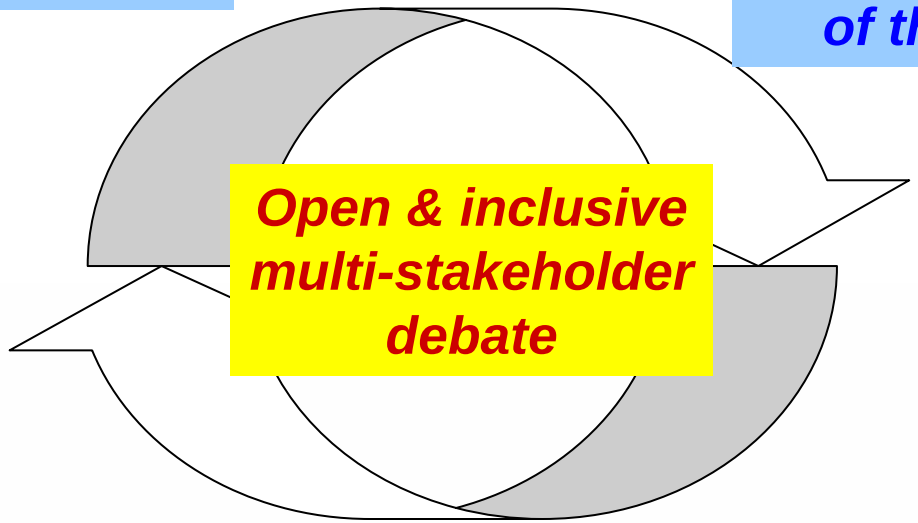
… to take responsibility for their respective roles

- **Public Administrations**
  - to address the security of their own networks and **serve as an example of best practice** for other players
- **Private sector enterprises**
  - to **address NIS as an asset and an element of competitive advantage** an not as a “negative” cost
- **Individual users**
  - to **understand that their home systems are critical** for the overall “security chain”

Towards a secure Information Society

DIALOGUE
structured and multi-stakeholder

PARTNERSHIP
greater awareness & better understanding of the challenges



EMPOWERMENT
commitment to responsibilities of all actors involved

European Commission
Information Society and Media

Dialogue

- ***"Benchmarking"* national NIS-related policies**
  - Comparing to learn and to transfer **best practices to improve awareness** among SMEs & individual users to
  - public administrations shall act **as 'intelligent' users and serve as an example for best practice** drivers (-> eID)

Structured multi-stakeholder dialogue

- **where to strike the balance between security and the protection of fundamental rights (-> PET, TC)**
- develop a **sector-specific policy for the ICT** sector to enhance the security and the resilience of information and communication networks (-> CIIP)

Business Summit & User Seminar

- stimulate industry commitment **to adopt effective approaches** to implement a culture of security in industry
- **raise security awareness** and strengthen the trust of end-users

Partnership

- **Improve knowledge of the problem**
  - **ENISA** is asked to develop a **trusted partnership with Member States and stakeholders** to create a data collection framework to collect EU-wide data on security incidents and consumer confidence
- **Understand the ICT security sector and market in the EU**
  - **fostering a strategic relationship between governments, businesses and research community** to deliver data on trends in ICT security
- **Support response capability**
  - ENISA is asked to **examine the feasibility** of a European information sharing and alert system (including a multi-lingual security portal)

Empowerment: *invite Member States*

- Proactively participate in the proposed *benchmarking* exercise of national NIS policies;
- Promote, in close cooperation with ENISA, **awareness campaigns on the virtues, benefits and rewards of adopting effective security technologies**, practices and behaviour;
- Leverage the roll-out of e-government services to **communicate and promote good security practices** that could then be extended to other sectors;
- Stimulate the development of **network and information security programmes** as part of higher education curricula.

Empowerment: *invite private sector*

- Develop an appropriate **definition of responsibilities for software producers and Internet service providers** in relation to the provision of adequate and auditable levels of security. Here, **support for standardised processes** that would meet commonly agreed security standards and best practice rules is needed.
- Promote **diversity, openness, interoperability, usability** and **competition** as key drivers for security as well as stimulate the **deployment of security-enhancing** products, processes and services to prevent and fight ID theft and other privacy-intrusive attacks.
- **Disseminate good security practices** for network operators, service providers and SMEs **as baseline levels for security and business continuity.**
- Promote **training programmes in the business sector**, in particular for SMEs, to provide employees with the knowledge and skills necessary to effectively implement security practices.
- **Work towards affordable security certification schemes** for products, processes and services that will address EU-specific needs (in particular with respect **to privacy**).
- Involve the **insurance sector in developing appropriate risk management tools and methods to tackle ICT-related risks and foster a culture of risk management** in organisations and business (in particular in SMEs).

The multi-stakeholder Dialogue on CIIP

Plans on CIIP

- In June 2004, the **European Council** asked for an overall strategy to protect critical infrastructures
- On 17 November 2005, the Commission adopted **a Green Paper** on the policy options for a **European Programme on Critical Infrastructure Protection (COM(2005)576)**
- Contributions were received from **22 Member States** and over **100 private companies and industry associations**
- Contributions confirm the need for action at the European level to **enhance the protection and resilience of critical infrastructures**
- Because of their horizontal nature with inter-linkages into many other critical infrastructures, **the protection of communication and information infrastructure is a priority**
- We are planning a **Europe-wide dialogue on CIIP with public and private stakeholders in the fall**
- A major **policy initiative on CIIP** will be launched in 2008

Challenges of the CIIP dialogue

- **Organisational:** to build trusted relationships and motivate the stakeholders (in particular the private sector)

- **Policy orientations:** to achieve a better understanding and clarity on the guiding policy principles

- **Issues:** National vs. European Infrastructures; long-term Internet stability & resilience; preventive, detection/early warning & responsive measures; recovery and continuity strategies; sharing knowledge and good practices; cross-sectors proactive information assurance methods; risk management culture and tools; inter-dependencies, in particular across heterogeneous infrastructures; etc.

CIIP - Preparatory study in 2006

"Availability and Robustness of Electronic Communications Infrastructures"

- Aimed at identifying the threats and vulnerabilities in next generation 3G mobile and Internet core networks
- developed 10 recommendations to MS, EU institutions and private sector to avoid or reduce their potential impact on the European Critical Infrastructure;
- Ended February 2007 - the contractor is Alcatel–Lucent;
- validation Workshop held in January 2007
- Comments invited until mid May 2007
- Final report available

http://ec.europa.eu/information_society/newsroom/cf/itemdetail.cfm?item_id=3334

CIIP – Initial discussions

"Informal meeting of National experts on CIIP – Brussels, 19 January 2007"

- Aimed informally discuss the outcomes Alcatel-Lucent study as well as exchange views on the CIIP component of EPCIP;
- The Focus was on
  - the needs, challenges and opportunities for an EU dialogue on CIIP;
  - How a EU dialogue could add value to the National initiatives;
  - Who should be part of such a dialogue;
  - How to engage the public and the private sector;
  - What are the main issues to address

CIIP – Initial discussions (2)

"Joint Member States and private sector meeting – Brussels, 18 June 2007"

- To debate the policy options for the EU;
- Exchange views on how resilience and robustness are approached and tackled in the EU;
- Focus on identifying:
  - The policy options for an EU dialogue on CIIP;
  - The roadmap for an EU initiative;
  - The role of stakeholders;
  - The mechanisms for an EU multi-stakeholder dialogue

CIIP - Preparatory study in 2007

"Study on critical dependencies of energy, finance and transport infrastructures on ICT infrastructures"

- Examine what are the critical ICT based dependencies in the sectors under consideration;
- Identify and assess existing (cross-sector) early warning systems and protection strategies;
- Identify existing (cross-sector) best practices where available to counter or mitigate cyber vulnerabilities and threats.

Call for tender 165210 - 2007/S 135/2007

deadline for submission 5 October 2007

European Commission
Information Society and Media

CIIP - Preparatory study in 2008

- We are planning activity to:
  - Identify the rationale and propose the criteria for the identification of European Critical Information Infrastructures;
  - Improve the emergency preparedness in the field of fixed and mobile telecommunication and Internet;
  - **Proof of concept for a European Information Sharing and Alert System;**
  - Identify the rationale and propose the criteria for the identification of European Critical Information Infrastructures in the sub-sector instrumentation automation and control systems;
  - …

Web Sites

A Strategy for a secure Information Society – "Dialogue, Partnership and empowerment" COM(2006) 251

http://ec.europa.eu/governance/impact/docs/ia_2006/com_2006_0251_en.pdf

Commission Staff Working Document – Impact Assessment SEC(2006) 656

http://ec.europa.eu/governance/impact/docs/ia_2006/sec_2006_0656_en.pdf

Background information (including the COM in all languages)

http://europa.eu.int/information_society/newsroom/cf/itemlongdetail.cfm?item_id=2706

http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:52006DC0251:EN:NOT