Resilience of Public Communication Networks and Services

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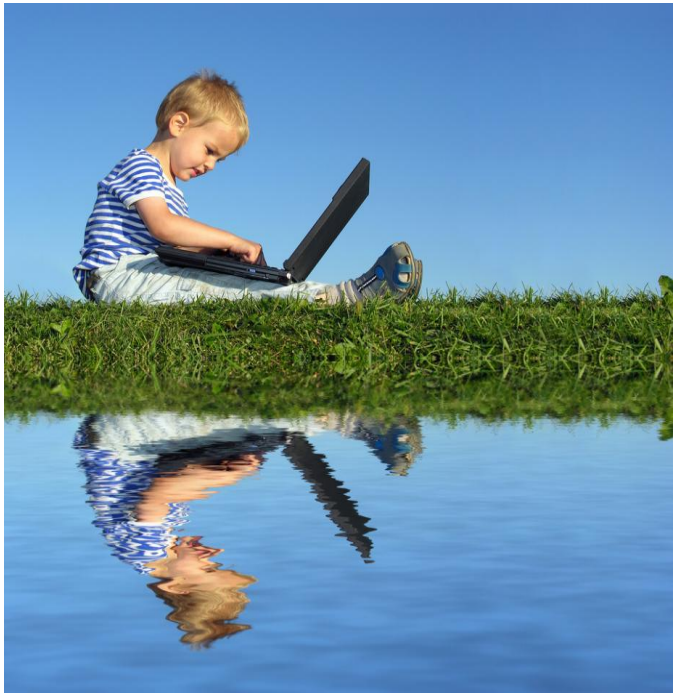
Context

- communication networks & services are critical for economy & society
- constantly changing threat environment
- security and resilience a major challenge for all



Threat Environment

- significant physical disasters affecting CIIPs
- complex networks and services
- low quality of software and hardware
- asymmetric threats allowing remote attacks to CII
- increasing organised cybercrime and industrial espionage
- lack of international agreements and regimes,
- lack of well functioning, international operational mechanism

Our Challenges

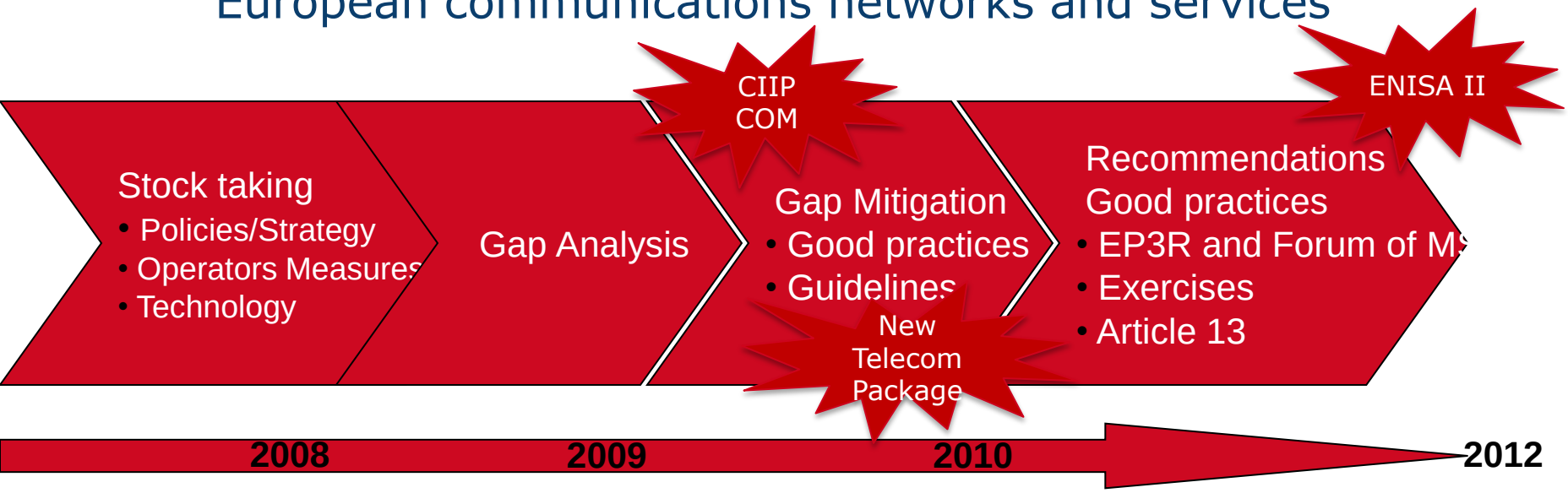
- CIIP - global issue without global governance
- uneven and uncoordinated national & European activities
- insufficient co-operation among private and public stakeholders
- lack of holistic cyber security strategies
- lack of efficient Information sharing & good practice guides
- insufficient experience in national and pan European exercises

EU Activities on Resilience and CIIP

- **CIIP Action Plan**
  - **Preparedness & Prevention**
    - Pan European Public Private Partnership for Resilience (EP3R)
    - Pan European Forum for Member States
    - Baseline Capabilities of National/Gov CERTs
  - **Detection and Response**
    - European Information Sharing and Alert System (EISAS)
  - **Mitigation and Recovery**
    - Pan-European exercises on large-scale network security incidents
    - National Contingency Plans
    - Reinforced cooperation between National / Governmental CERTs
  - **International cooperation**
    - principles and guidelines on long term Internet resilience and stability
- **Telecom Package**
  - **Article 13, Reporting Serious incident to NRAs and ENISA**
- **ENISA II – new mandate**

ENISA's Resilience and CIIP Program

collectively evaluate and improve resilience of European communications networks and services



EU Commission and at least 50% of the Member States made use of ENISA recommendations in their policy making process

12 High Level Recommendations I

- holistic and integrated national cyber security strategies
- need for a consistent pan European policy and strategy
- soft-law instruments (e.g. guidelines, recommendations, good practices)
- one State = 1 national/Gov CERT
- one State = one regular bi-annual national exercise
- one pan European exercise every 2 years

12 High Level Recommendations II

- one State = national contingency plans
- holistic and integrated national risk management processes
- establish national trusted information sharing schemes
- adherence of operators to preparedness measures and good practices
- cost effective incident reporting procedures based on good practices
- deployment of more secure technologies (IPv6, DNSSec, BGPSec, etc.)

Good Practice Guides and Results I

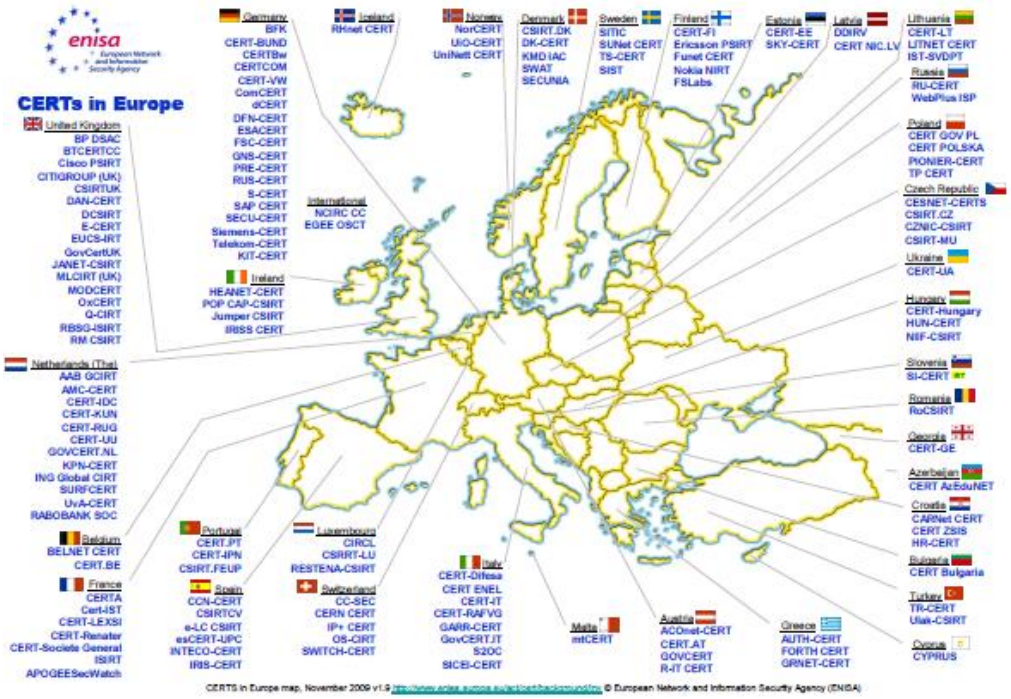
- **Information Sharing**
  - PPPs among private and public entities
  - sharing information on serious threats & vulnerabilities
- **Incident Reporting**
  - a practical guide to set up an incident reporting scheme
  - a solid basis for implementing article 13 of new Telecom Package
- **National Exercises**
  - a practical guide to set up national exercises
  - basis for the first pan European exerise
- **Stock Taking and Analysis of MS' Regulatory and Policy environments**
  - analysis of 25 national reports on policy, regulatory and operational environments
- **Providers Measures**
  - analysis and good practices on mutual aid assistance, business continuity, third party dependencies

Good Practice Guides and Results II

- **DNSSec Deployment**
  - good practices guide on how to deploy DNSsec
  - cost benefit analysis, trusted anchor repositories
- **Cloud Computing**
  - cloud computing recommendations and assurance framework
- **Priorities of Research On Current and Emerging Network Trends**
  - research trends, R&D areas and priorities for EU funded R&D Programs
- **Identification of standards**
  - gap analysis of existing standards
- **CERT baseline capabilities**
  - gap analysis of typical CERTs services

CERT situation in Europe – an overview

- **Number of national/governmental CERTs grows, but still there are gaps**
- **Capabilities of national / governmental CERTs still vary a lot among the Member States**
- **Cross-border cooperation among teams exists, but can be improved**
- **CERT responsibility / tasks grow!**



http://www.enisa.europa.eu/act/cert/background/inv

Highlights of 2010 Priorities

- implementing measures for reporting serious security incidents (article 13)
- first pan European Exercise
- metrics and data collection
- botnets
- DNSSec
- Secure routing and interconnection
- end to end secure architectures

Conclusions

- security & resilience of CII extremely important
- uneven and uncoordinated national & European activities
- Com's Communication on CIIP and Telecom Package reform a milestone; paves the way for a holistic pan European strategy
- strategic Public & Private Partnership is needed to enhance co-operation among public and private stakeholders
- ENISA's role stronger than ever to meet the challenges

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