



**AIIC – Associazione Italiana esperti
Infrastrutture Critiche**

International Workshop on Emergency Management for Critical Infrastructures Crises

New Challenges on Critical Infrastructures Protection

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www.InfrastruttureCritiche.it



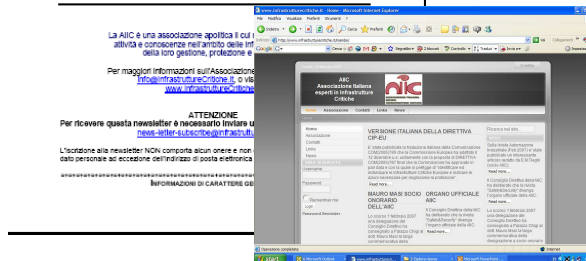
AIIC – Associazione Italiana esperti Infrastrutture Critiche

Non-governmental and non-profit scientific association legally registered in Italy that aims at exchanging experiences and knowledge related to the critical infrastructures to create an interdisciplinary and inter-sectorial shared approach among experts of different fields



NetONets²⁰¹²

Networks of Networks: Systemic Risk and Infrastructural Interdependencies



Threats and Vulnerabilities of Critical Infrastructures to Natural Hazards



- **England August 2004 (Boscastle Village)**
- **Gudrun January 2005 (Sweden, Norway, Finland,**)
- **Kyrill January 2007 /Germany, Austria, Ceck,**)
- **Klaus January 2009 (France, Spain,)**
- **Wolfgang July 2009 (Switzerland, Poland,**)
- **Eyjafjallajökull eruptions April 2010 (Iceland and many EU countries)**
- **Japan Earthquake March 2011 (Japan, magnitude 9.0)**

Threats and Vulnerabilities of Critical Infrastructures to Technological Accidents



- **Toulouse (France) September 2001**
- **Liege (Belgium) October 2002**
- **Priolo (Italy) April 2006**
- **Coryton (UK) October 2007**
- **Viareggio (Italy) June 2009**
- **Deepwater Horizon oil spill (2010)**
- **Fukushima (Japan) March 2011**

Threats and Vulnerabilities of Critical Infrastructures to Terrorist Attacks



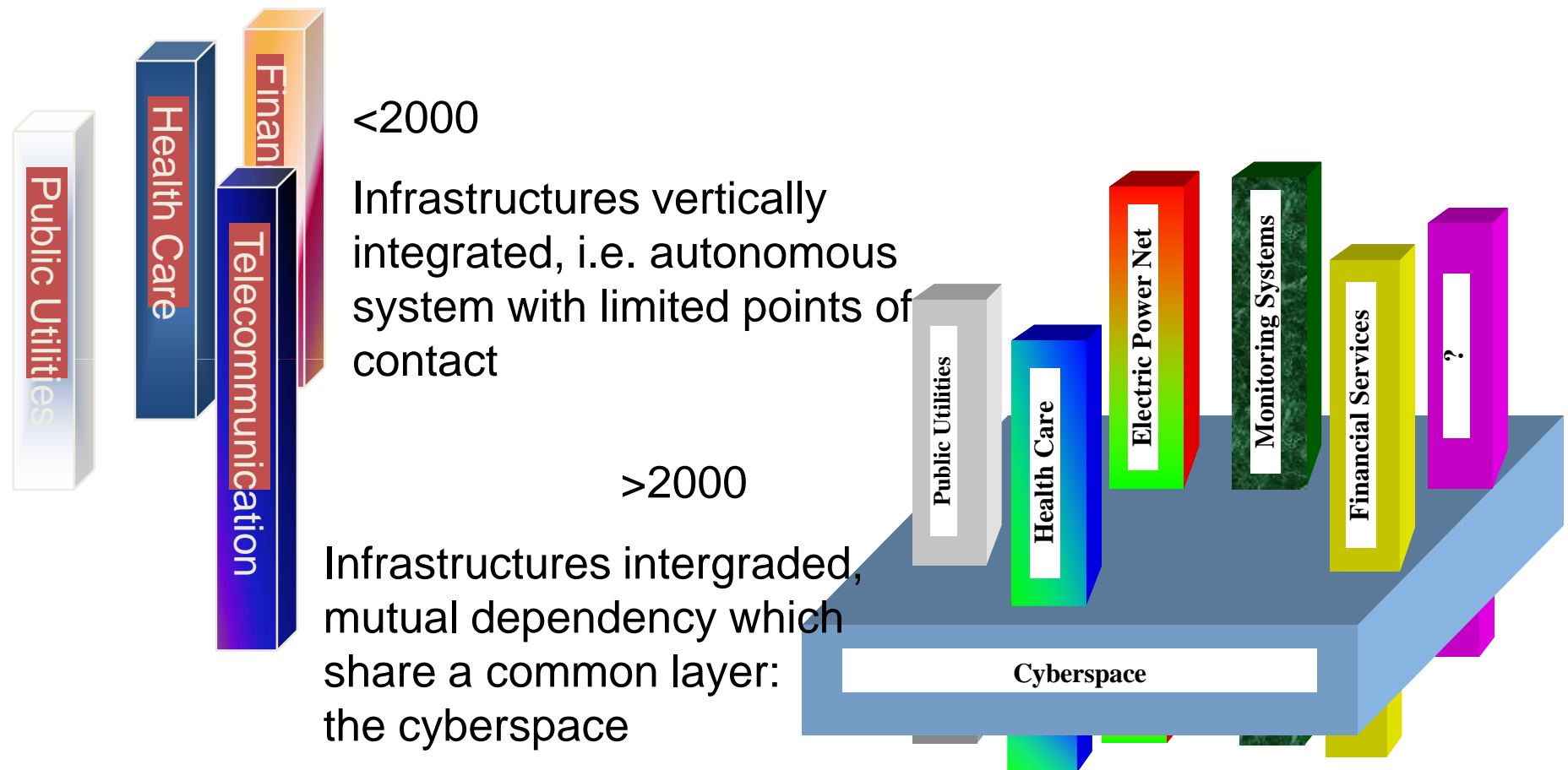
- **United States September 2001**
- **Madrid (Spain) March 2004**
- **Londra (UK) July 2005**
- **Mumbai (India) 2008**

Threats and Vulnerabilities of Critical Infrastructures to Cyber Attacks



- **US - 2006:** Hacker penetrated the Water Filtering Plant's production system
- **Estonia 2007:** Including banks, ministries, newspapers and broadcasters organizations
- **Poland - 2008:** City's SCADA Tram System
- **US - 2009** Computer Spies Breach Fighter-Jet Project
- **Iran- 2010:** Stuxnet
- **2011** Anonymous' Cyber Attack on Sony
- **2012** Flame malware cyber espionage

Increasing Mutual Dependency: Third millennium socio-techno scenario



Interdependencies/Interconnections are the risk multiplier

The Preparation Loop

The interdependency issue should be considered at the **Policy** level in order to set a proper Emergency Preparedness

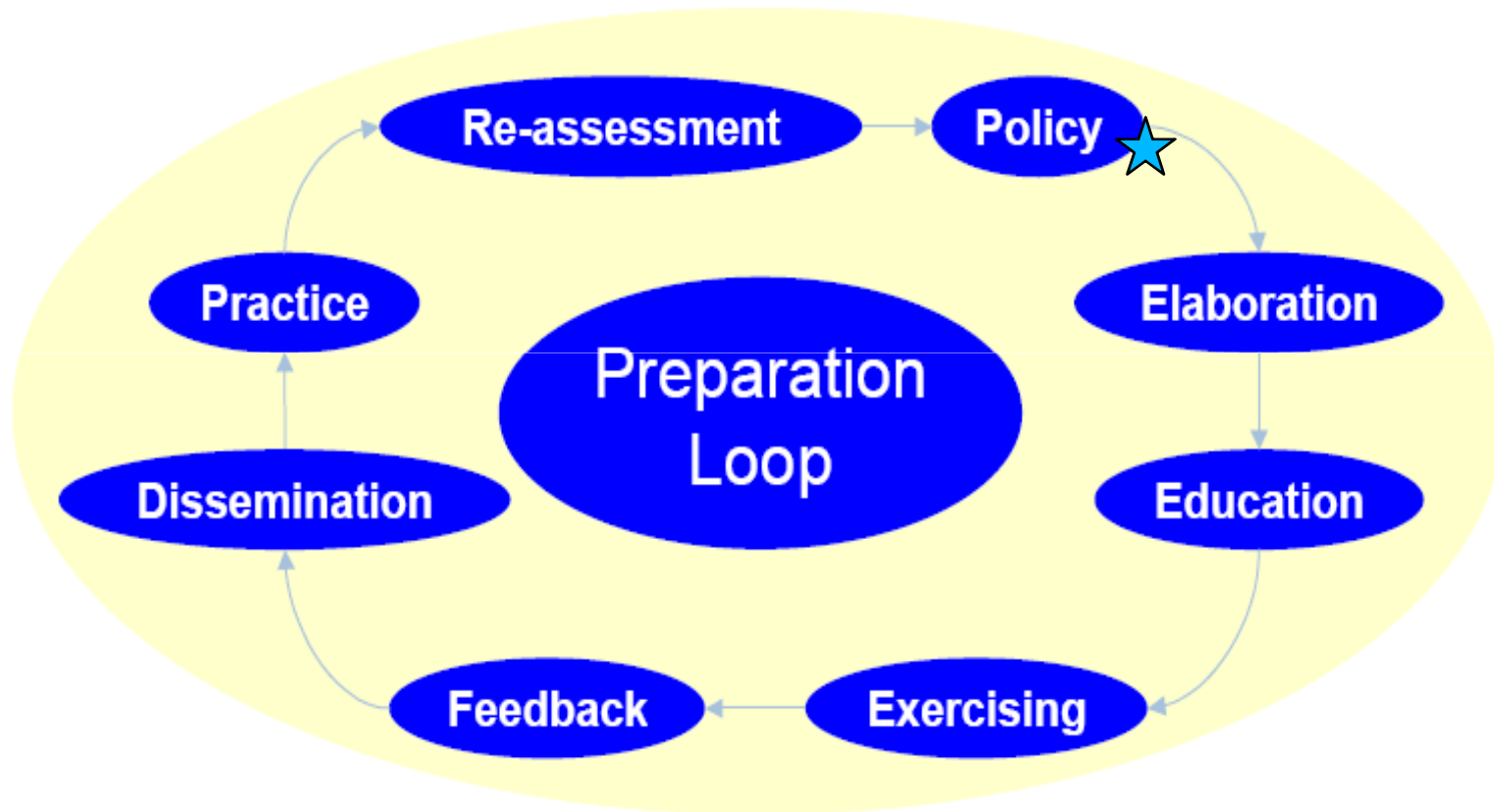


Figure 4-1 : The Preparation Loop and its activities

From Project JLS/2008/D1/018 "A study on measures to analyse and improve European Emergency Preparedness in the field of fixed and mobile telecommunications and Internet " http://ec.europa.eu/information_society/policy/nis/strategy/prep_study/index_en.htm