Establishment of the European ICT Security Risk Management Initiative (SRMI)

ENISA Risk Management Workshop

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Eyal Adar
Chairman of the SRMI
CEO of White Cyber Knight
Eyal@WhiteCyberKnight.com
http://www.WhiteCyberKnight.com

SecurIST

White Cyber Knight
WCK

Introducing Eyal Adar

Eyal Adar is a leading experts in the areas of Risk Management, CIP (Critical Infrastructure Protection) and IT Security

- Involvement in leading Research Activities by the European Commission:
  - The ***ACIP*** Project (Assessment of Critical Infrastructure Protection); this project yielded a roadmap for the development and application of methodologies and tools for CIP related activities
  - A member of the advisory board for the ***CI2RCO*** project (the European Commission's project on Critical Information Infrastructure Research Co-ordination), aimed at coordinating European CIP research
  - A member of the advisory board for the ***IRRIIS*** project (Integrated Risk Reduction of Information-based Infrastructure Systems), aimed at analyzing dependencies between critical infrastructures
  - A Founding Editor of the ***European CIIP Newsletter***
- Founder and Chairman of *iTcon Ltd.* (1995), an information security consulting firm, specializing in enterprise security architecture, in Israel and in Europe
- Founder and CEO of *White Cyber Knight* (2006), a start-up company developing a comprehensive IT Risk Management software, for large and medium-sized organizations

Building a Trustworthy Service-centric Information Society

ESFORS Software and Service Development, Security & Dependability Workshop

- Trustworthy, scalable services across any medium & domain
- Trusted cross-domain Collaborations & Interactions
- Trusted Computing Infrastructures
- Situational & Context Awareness; Self-Awareness
- Risk assessment & Risk Management
- Engineering Secure and Dependable complex SW & Service systems
- Empowering Users: User-friendly Privacy & Trust Services
- Metrics, Certification, Standards
- …

ESFORS NESSI

From: "*Setting the Scene and PF7 Update*" by **Jacques Bus**, presented at the ESFORS workshop in Paris, September 2006

Information Society Technologies
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Security Risk Management Initiative

- The *SRMI* is a European Commission's ICT Security and Dependability Task Force initiative

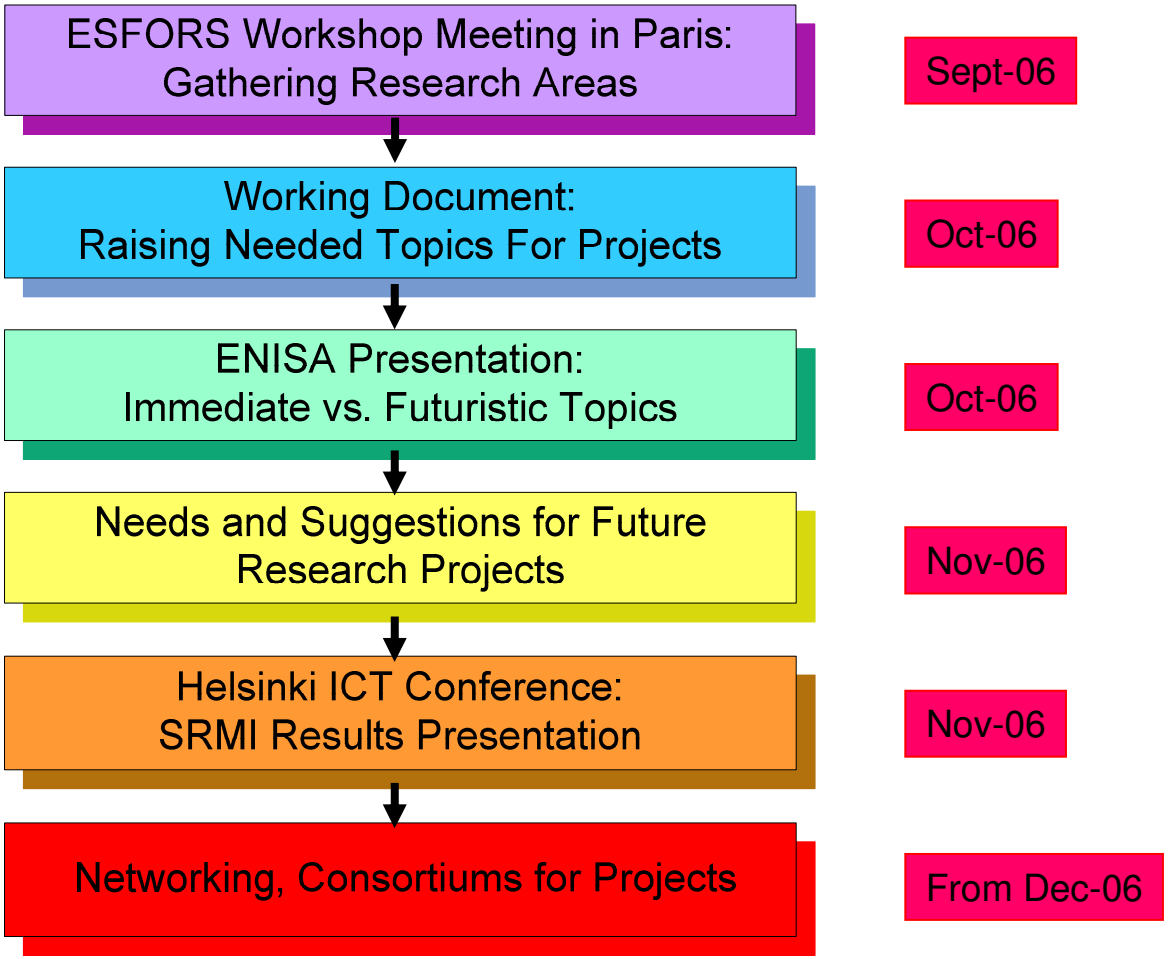
  http://www.securitytaskforce.org/

- The SRMI's goals:
  - Assisting the EC to characterize key Risk Management research topics
  - Helping in the creation of an umbrella for consortiums and projects under the Seventh Program

Consortium Members

- Michael Ruigidel, ENST
- Uwe Beyer, Fraunhofer
- Simin Teherani, Linkopongs
- Alan Stanley, ISF
- Aljosa Pasic, Atos Origin
- Volkmar lotz, SAP
- Pascal Bisson, Thales
- Dominico Salvati, Credit Suisse and ETH
- Andreas Wuchner, Novartis
- Louis Marinos, Enisa
- Jim Clarke, Waterford (Core Team),
- Bernhard Haemerlli, HAT, (Core Team)
- Eyal Adar, WCK, (Chairman)

The SRMI's Work Process



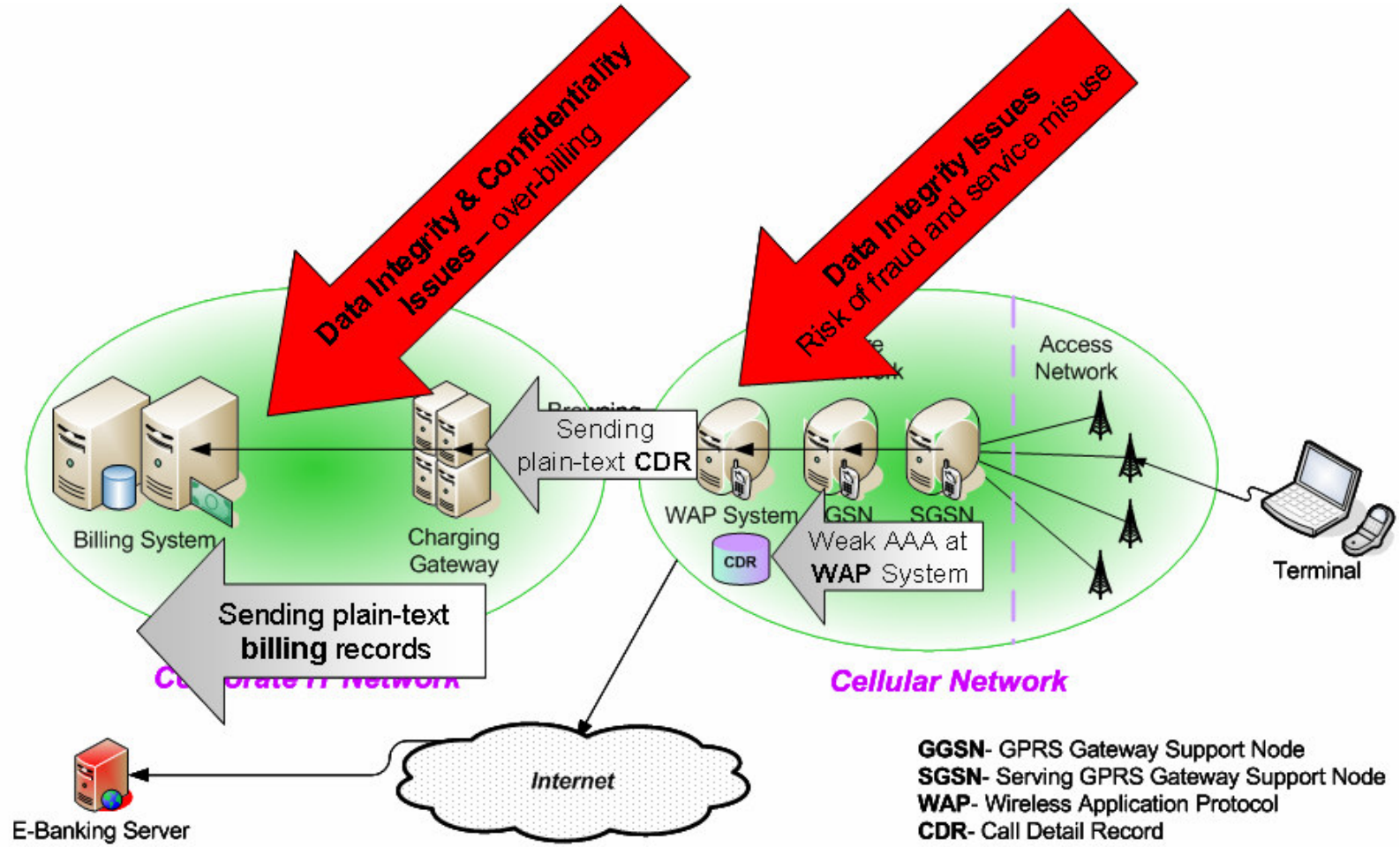
SRMI Research Areas I

- **Taxonomy and Terminology**
  - Examples:
    - Defined agreed terminology
    - For example Measure vs. Metrics
    - Integrative approach
- **Scenarios**
  - Example:
    - banking are using non-banking partners to deliver services, based on SOA and different security policies and the risks and responsibilities are not cleared
  - European research can address this challenge in an effective and an efficient way across different sectors

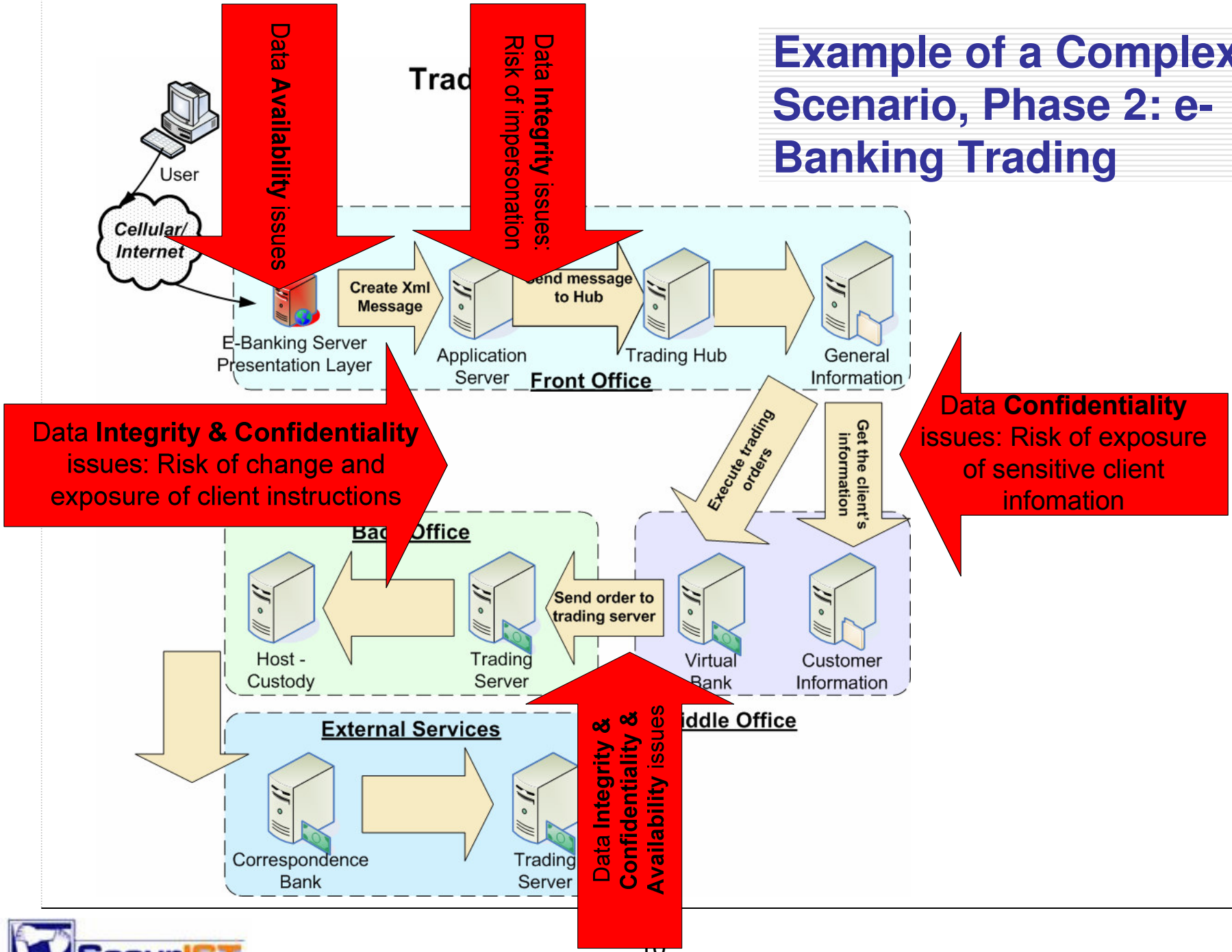
SRMI Research Areas II

- **Threats**
  - Examples:
    - Identification, measure (statistics), complex scenarios, motivation Identification, Integrating threat and incident management, anonymity of threats information
    - Finding methods and tools to identify new threats of complex systems, behavior of it systems (Attack scenarios and trees)
    - Likelihood and Impact of threats
    - Metrology (finding the right variables)
    - Develop understanding of threats, escalation and propagation
    - Intentional vs. unintentional threats

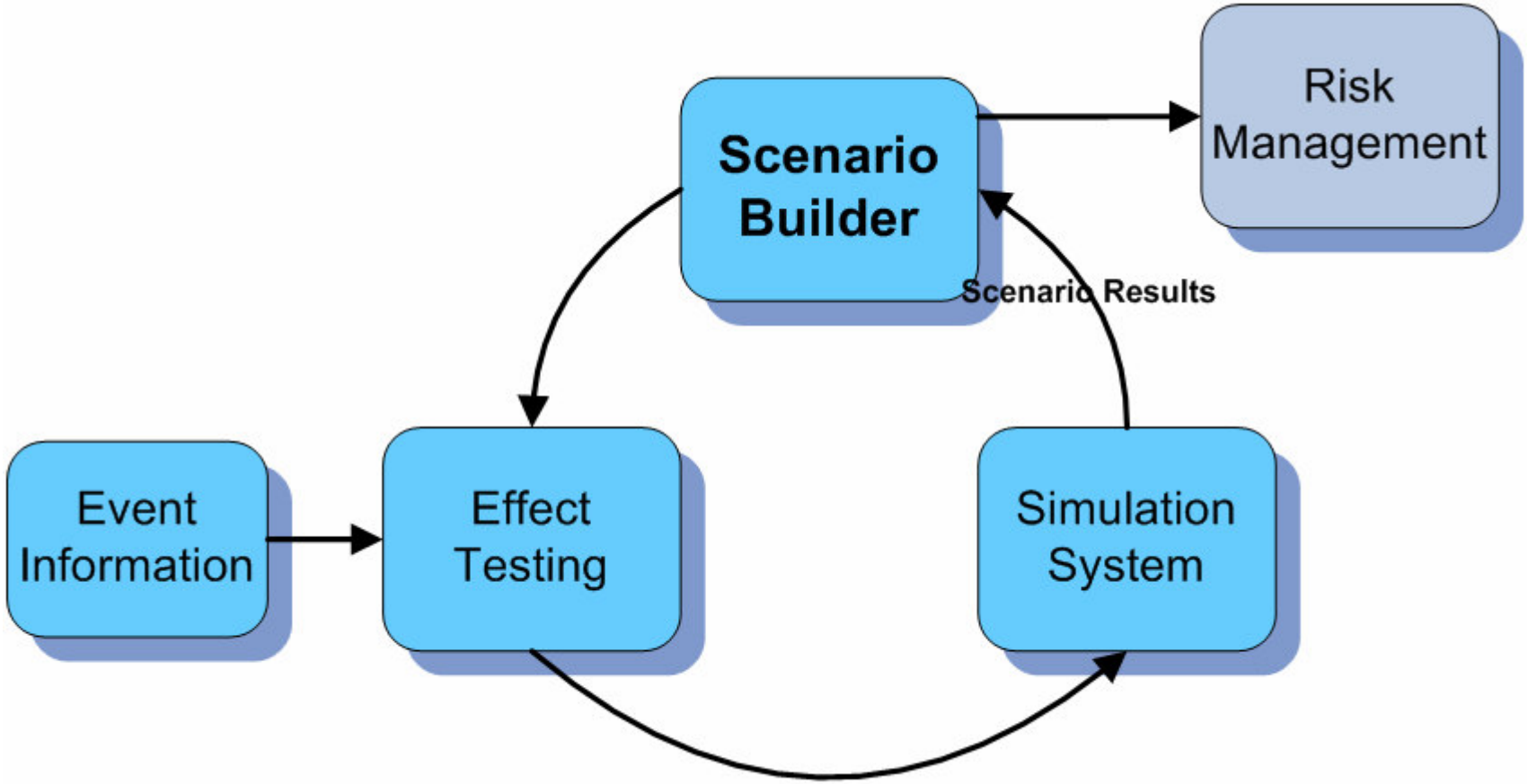
Example of A Complex Scenario, Phase 1: Cellular Browsing into an e-Banking Server



Example of a Complex Scenario, Phase 2: e-Banking Trading



Example for a Research Project – A Scenario Builder for Complex Systems



SRMI Research Areas III

- **Vulnerabilities**
  - Examples:
    - Meta language for automated tools
    - Threats to Vulnerabilities correlation
- **Risks**
  - Examples:
    - Risks ownership in complex environment
    - Organizational and process model to audit and control risk and impacts, and decision process

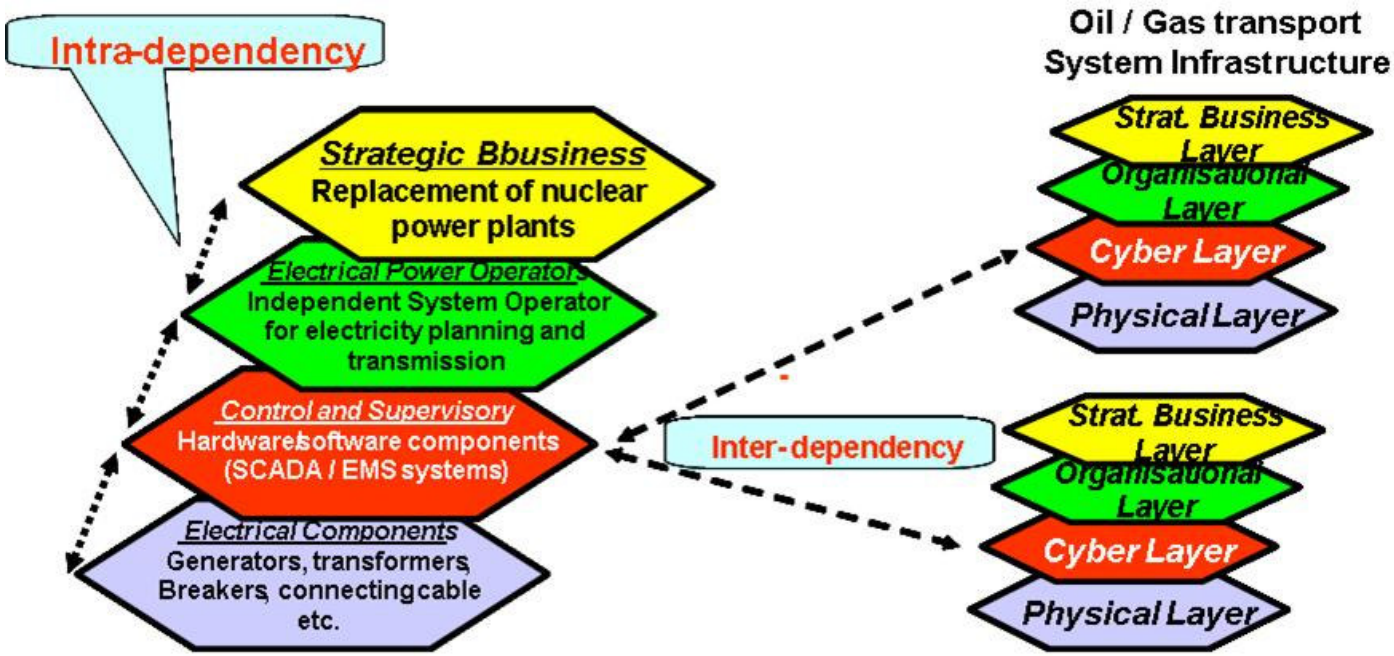
SRMI Research Areas IV

- **Metrics**
  - Examples:
    - Needed security level, technical requirements, SLA
    - Quantitative variables to quantify RM aspects
- **Cross Border Aspects**
  - Examples:
    - Identify gaps between countries and organizations
    - Reaching mutual recognition

SRMI Research Areas V

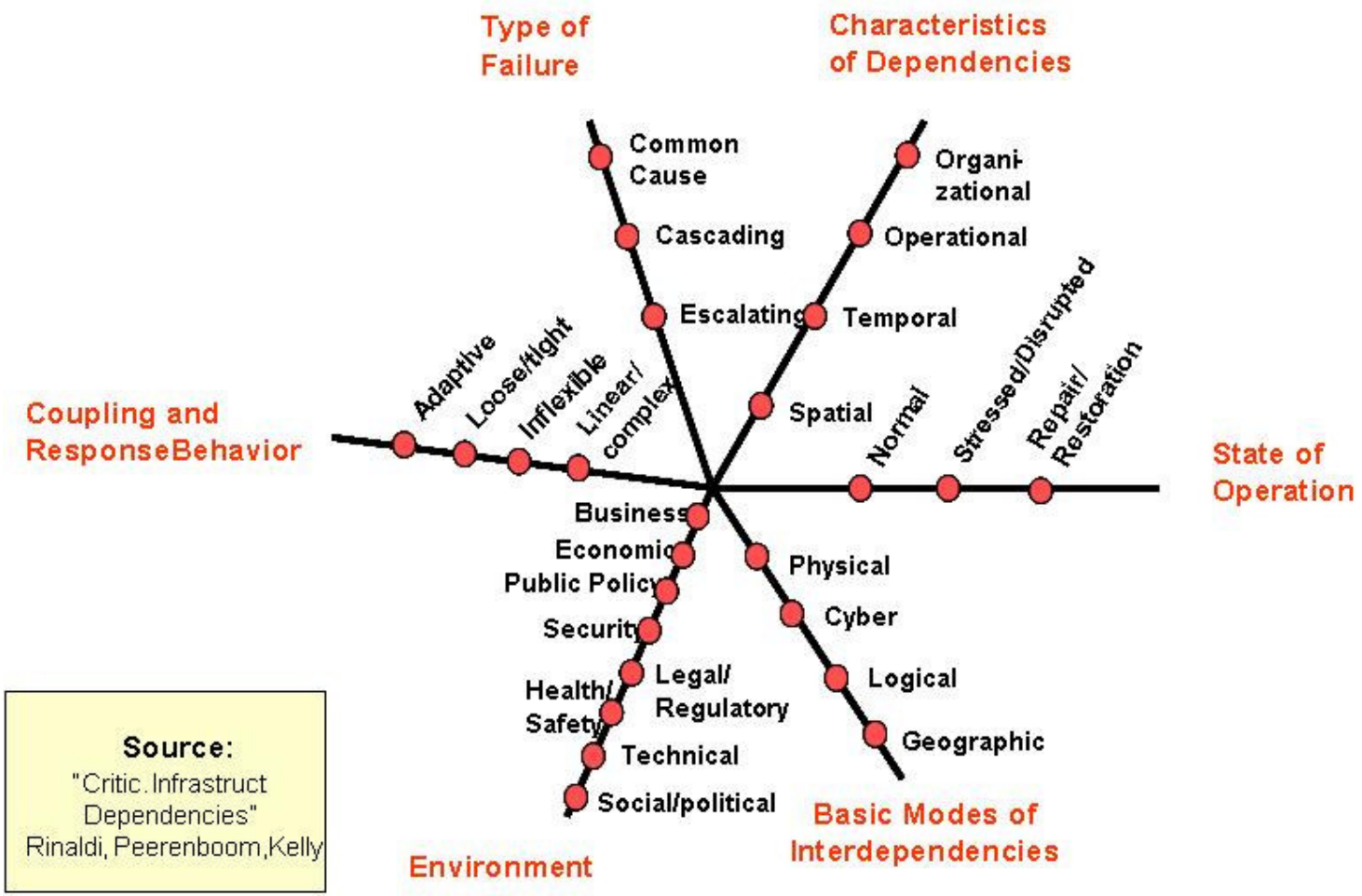
- **Policies**
  - Example:
    - Defined the needed future policies, dynamic and adaptive policies, converting policies to reality, policies implementation verification tools
- **Assessment**
  - Examples:
    - Futuristic assessment models
    - CIP (Critical Infrastructure Protection) dependencies
    - CIP Multidimensional Impact Vector
    - Dependencies between Governance and technical security

CIP Dependencies Assessment



Source: ACIP Project, D6.2

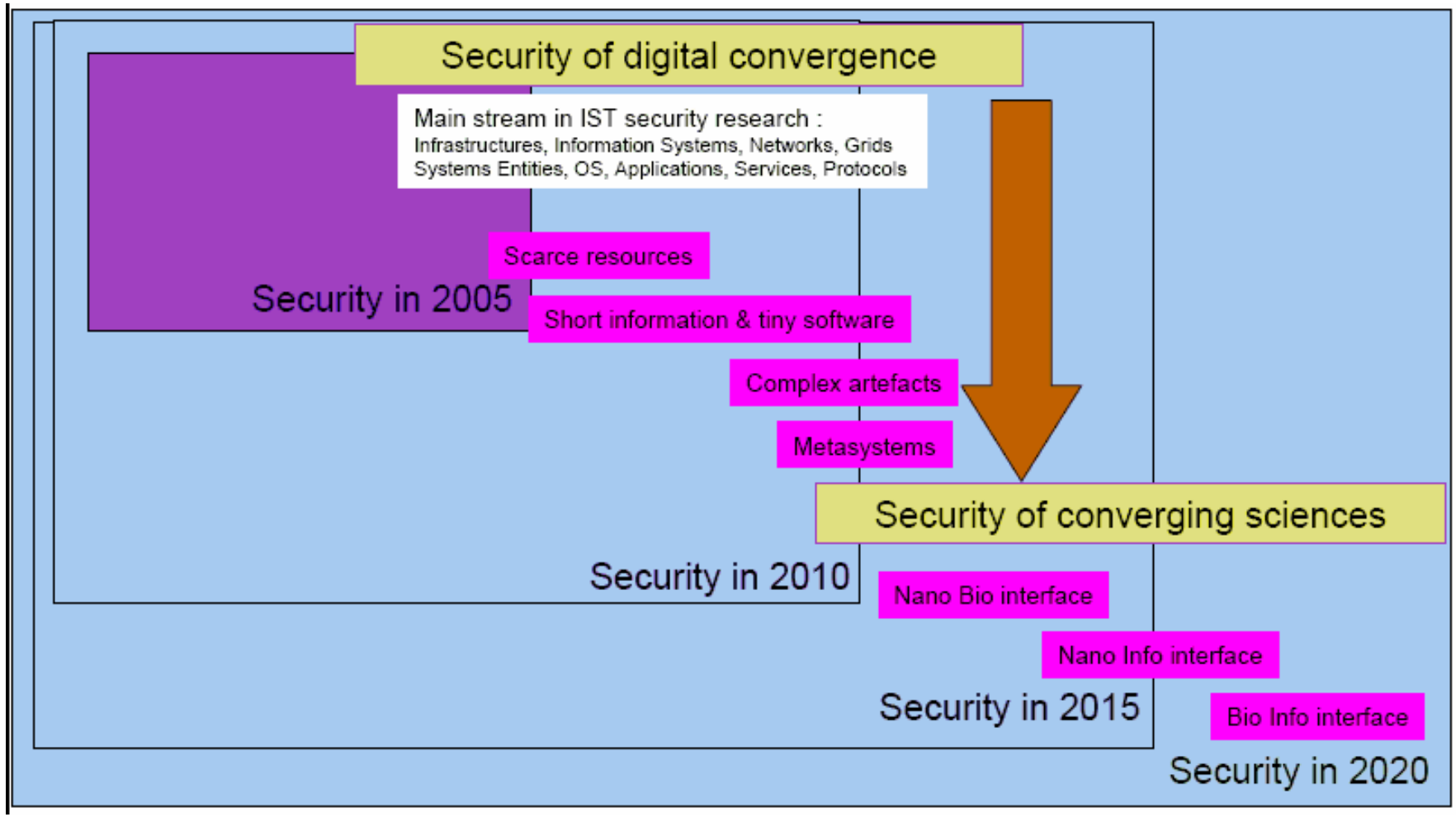
CIP Multi-Dimensional Impact Vectors



SRMI Research Areas VI

- **RM Models for New Technologies**
  - Examples:
    - SOA, Grid, Tiny physical Objects (RFID, Smart dust, etc…)
    - Typical RM aspects for each technology
    - Dynamic automatic Mapping of methods and controls

RM Models for New Technologies
(Michel Riguidel, Enst Paris, ESFORS Workshop, 2006)



SRMI Research Areas VII

- **Safeguard Selection**
  - Example:
    - Correlating threats and vulnerabilities to safeguards, Effective safeguard selection
- **Cost**
  - Examples:
    - Cost benefit analysis
    - Economics of cost, identifying costs and integrating it in RM
    - "What if" scenarios and simulations (cost related)
    - ROSI, cost of not doing

- **Business**
  - Examples:
    - Business Impact Analysis
    - Identification of business needs: protection level, assets, processes

SRMI Research Areas VIII

- **Compliance**
  - Example:
    - Compliance risk management,
      Compliance consolidation and cost-effectiveness
- **SME's, Citizens**
  - Example:
    - Cost-effective RM solutions for SME's
- **Sectors Templates**
  - Example:
    - CIIP: Health, Financial, Government, Energy, etc…

Thank You!