



European Commission



Information Society

SECURITY ISSUES IN FP6:

Towards a global dependability and security framework

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OUTLINE



- EU activities in network and information security
- FP6 & the IST vision of Aml
- Trust and security in FP6
- The Strategic Objective on security and dependability
- Relevant background



Overview of EU activities in network and information security



Regulatory Framework

- **Electronic Signature Directive**
- **Data protection in electronic communications**
- **Council Resolution on Information & network security**
 - coordination CERTs
 - CSTF
 - Int. Co-operation on dependency on electronic networks
- **Framework Decision on attacks against information systems**
- **Framework Decision on combating terrorism**

R&D Activities

- **Trust & Security:**
75 R&D projects (~80 M€)
- **Dependability:**
 - 16 R&D projects (~28 M€)
 - Joint EU-US task force on R&D for CIP
- **R&D in information security key in FP6**

Policy

- **eEurope 2005**
 - Cybersecurity Task Force
 - 'Culture of security'
- **JAI initiative on secure VISA**
 - use of biometrics
 - smart travel documents
- **International Fora**
 - OECD
 - GBDe,
 - CoE,
 - G8
 - ...

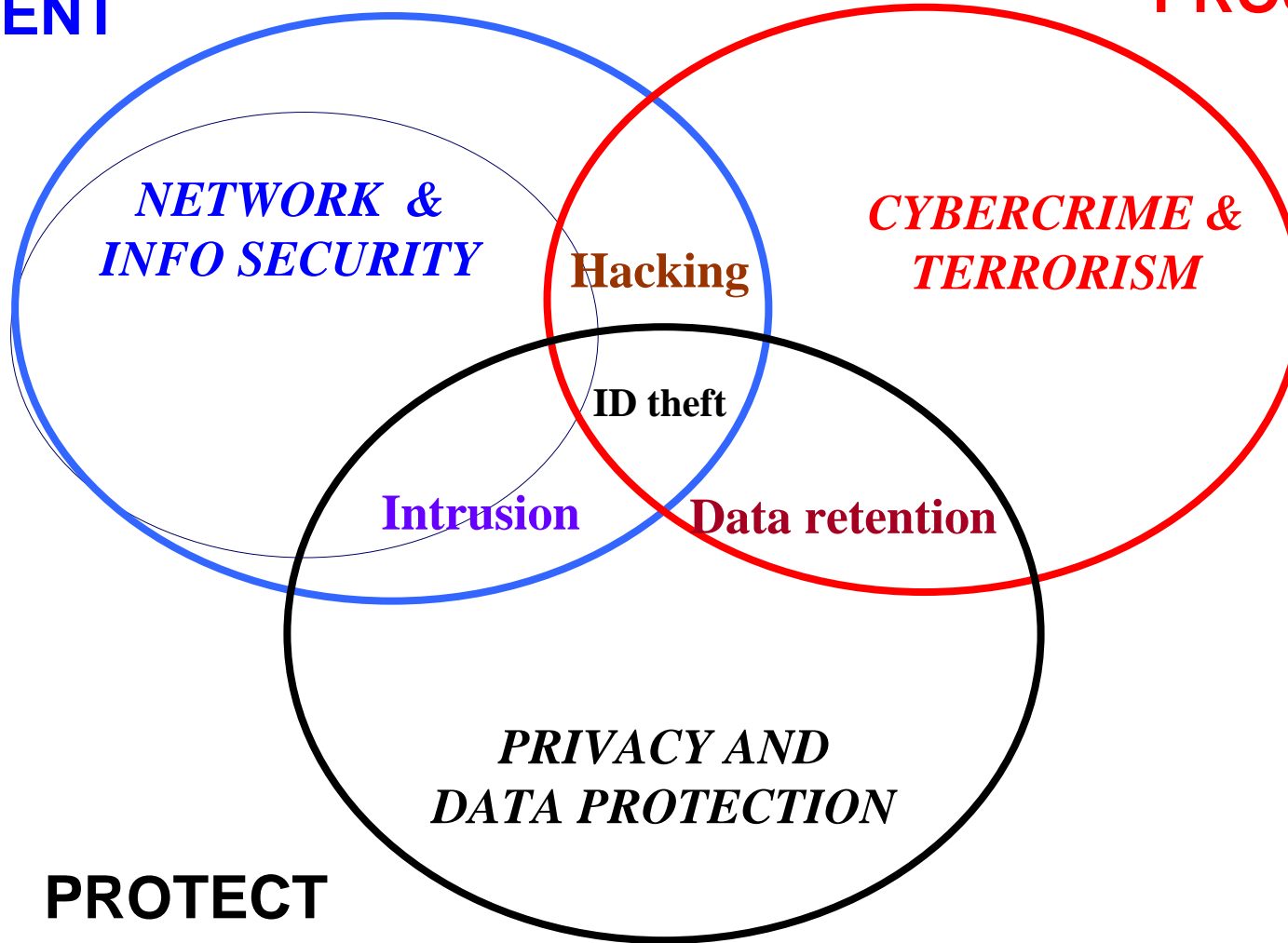


Three angles for actions on security Policy



PREVENT

PROSECUTE



PROTECT



eEurope 2005



- Policy initiative for Information Society for All
- Builds on the progress made in eEurope 2002
 - Internet penetration in houses doubled; legal framework for eCommerce; Telecom framework in place; fastest research backbone network; etc.
- Sets ambitious targets
 - modern online public services (eGovernment, eHealth and eLearning)
 - a dynamic business environment

enabled by

 - widespread availability of broadband at competitive prices
 - **a secure information infrastructure**



eEurope 2005: Secure Information Infrastructure: *Proposed Actions*



- Establish a Cyber Security Task Force (CSTF) - by mid 2003
 - supported by Member States and Industry
 - centre of competence on security issues
- Develop a 'culture of security' - end of 2005
 - develop best practice and standards
 - report on progress issued end 2003
- Secure communication between public servers



FP6 and the European Research Area



- Moving to a European level Research Policy
- Strengthen co-operation between national and EU activities
- Concentrate and focus effort to add value
- Improve links between national and EU policies and schemes
- Prepare for the EU enlargement process
- Simplify management and implementation procedures
- **FP6: an essential tool in support of ERA**

**“Making a reality of the European Research Area”
Commission Communication, October 2000**



Ambient intelligence

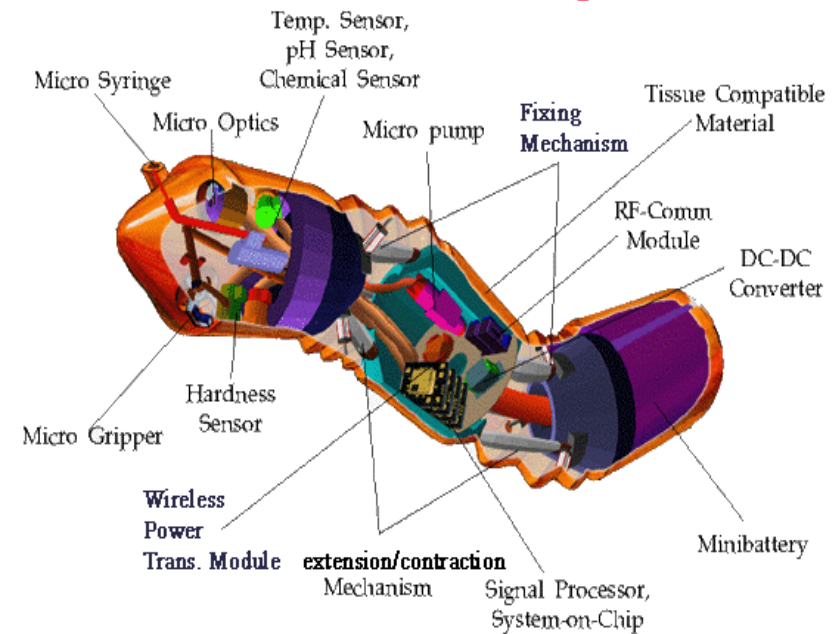


Around us ...

Micro-capsule



Products and equipment at the service of individuals



... inside us ?



Depending on technology



***Today's issues:
pervasiveness,
interdependency and
intrusiveness***

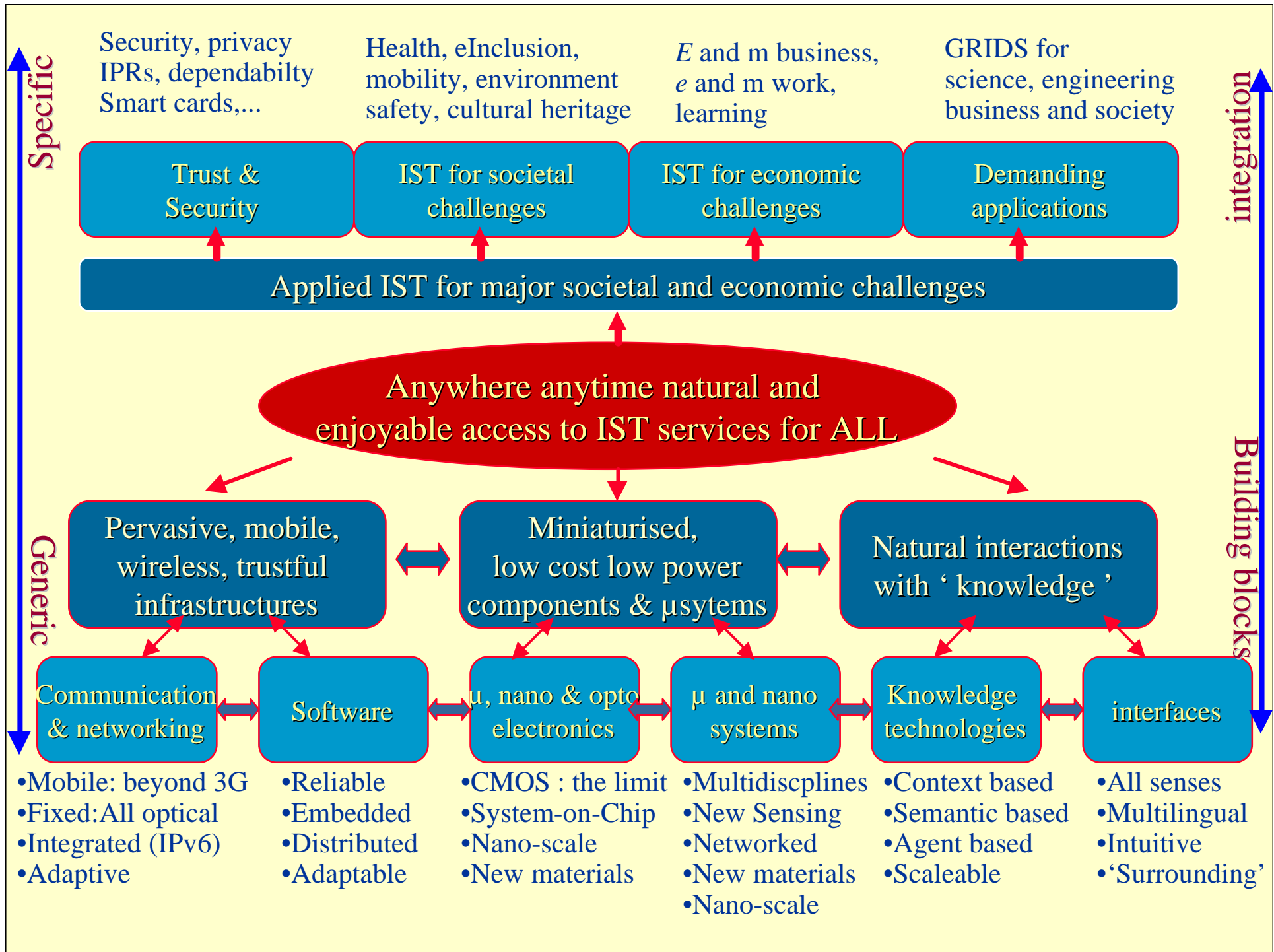
Influencing factors

- No attention to **compatibility between technology and human systems**
- No thinking in terms of **privacy respecting Society**
- No coordinated effort to address **dependability of information and communication infrastructures**
- Unforeseeable R&D development

***Future objective:
Develop a “respectful”,
productive, innovative
and secure Information
Society***

How to go about it

- Foster a global dialogue on an Information Society **respecting the personal sphere, safeguarding resilience, encouraging innovation, enabling productivity**
- Promote the **understanding of Interdependencies**
- Share vision **on how to depend on technology**
- **Innovative R&D**





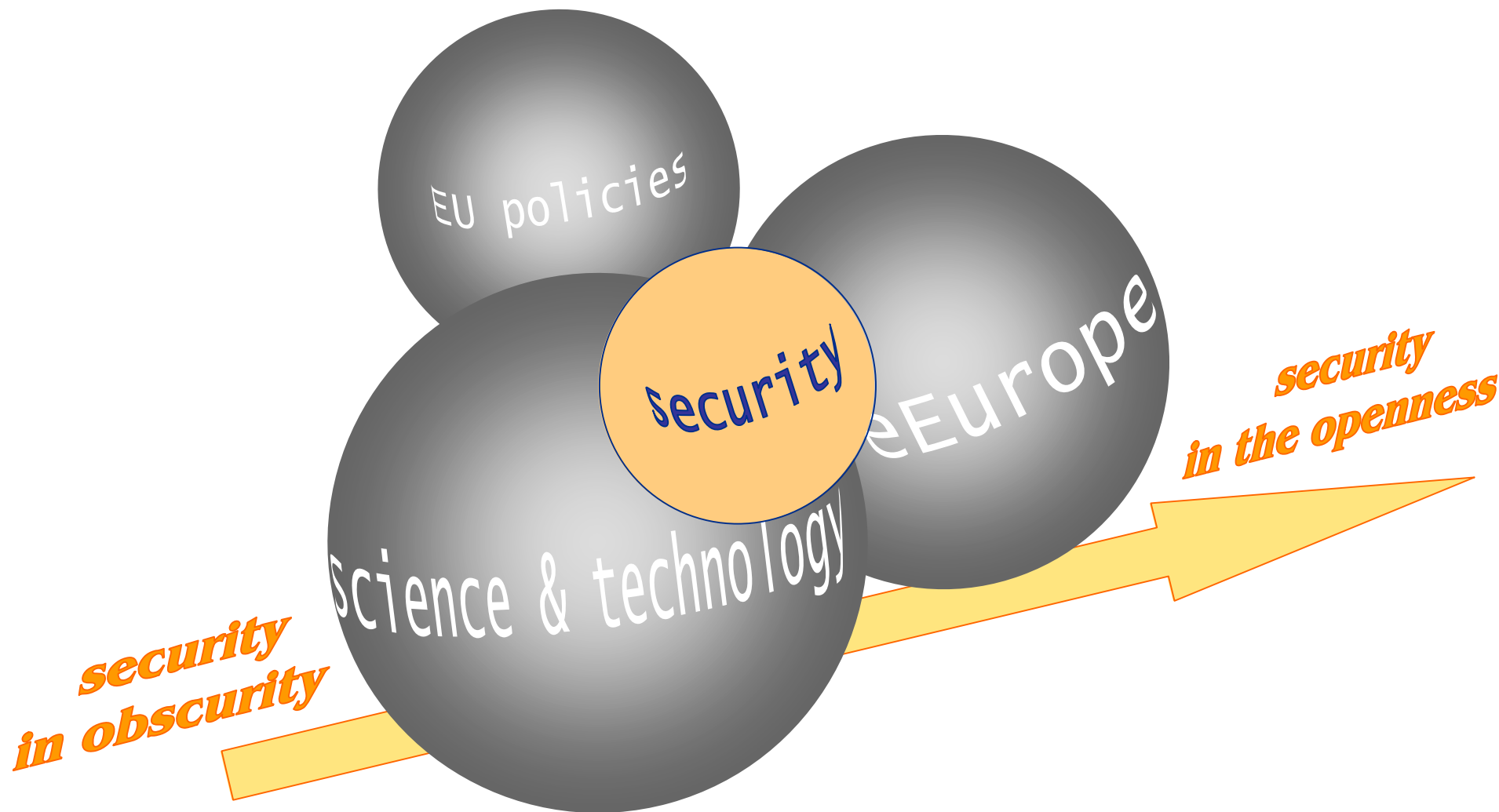
Security and dependability in FP6

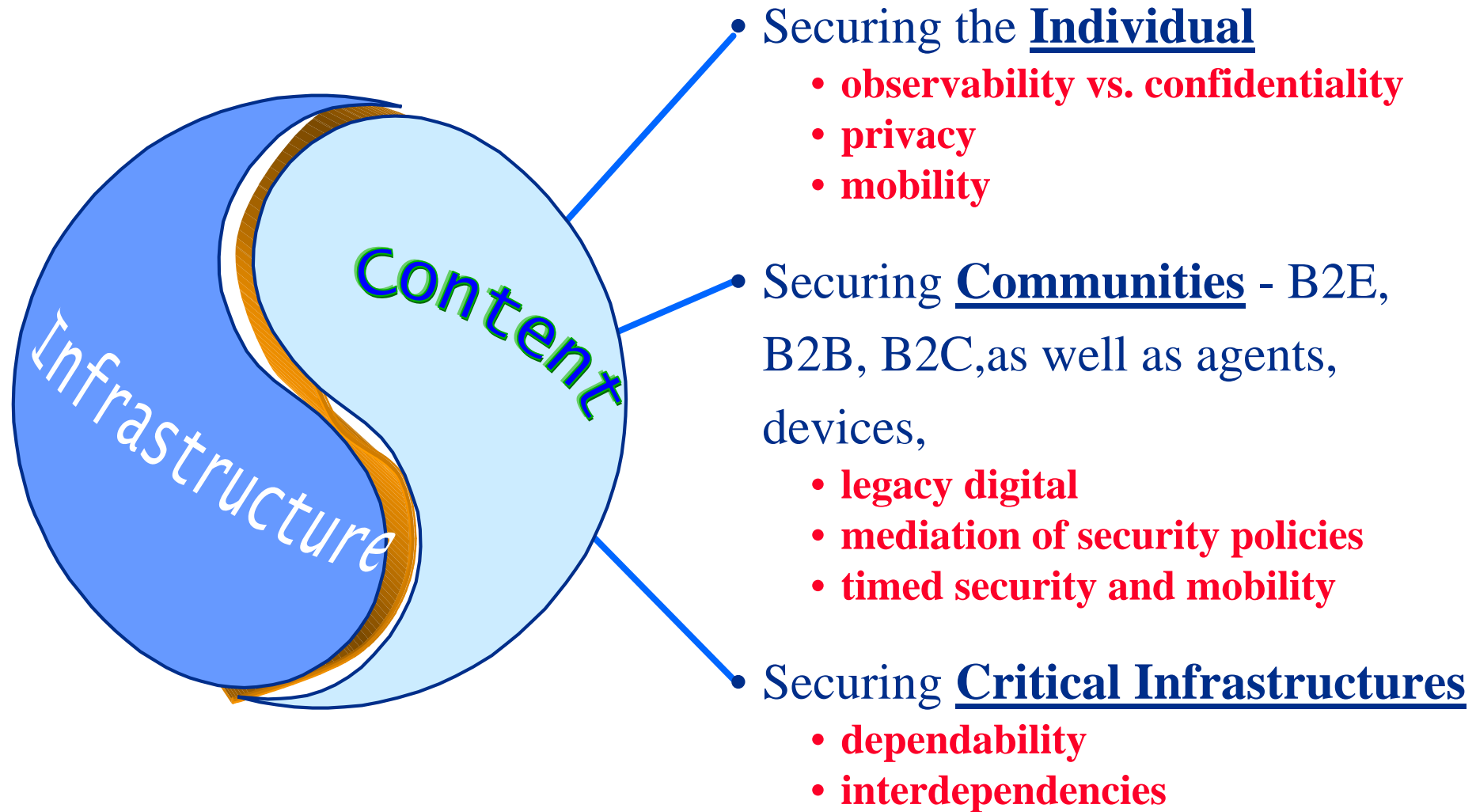


- Security and dependability **are key requirements for Aml** - they embrace all the **attributes** and **properties** of “critical systems”
 - There is a growing **policy interest** on **security and dependability of information infrastructures** and related interdependencies (**economic security, protection of assets and IT investments, etc.**)
 - The **IST Advisory Group** has identified **dependability** as an important topic for Aml - further reinforced after 9/11
 - Focussing on **dependability** implies stimulating an holistic reflection on our **dependency on technology**
- On-line privacy is a **key requirement for mobile Information Society**
 - There is a growing **policy interest** on technical developments on **virtual identity, virtual persona, anonymity, etc.** with related tensions and open questions
 - in IS the **personal sphere of individuals** would be more and more a technically open environment (Aml, instant networking, smart dust, etc.)
 - **Privacy is a human right** that we need to preserve and **technology should work** to avoid a **privacy crisis**



Changing the paradigm for security







2.3.1.5 Towards a global dependability and security framework



Objective: To **strengthen security and enhance dependability of information and communication systems and infrastructures** and to ensure trust and confidence in the use of IST by addressing **new security and dependability challenges**. These are resulting from **higher complexity, ubiquity of computing and communications, mobility, and increased dynamicity of content**. **Integrated and comprehensive approaches** involving all relevant stakeholders of the value chain should address security and dependability **at different levels and from different perspectives**.



2.3.1.5 Towards a global dependability and security framework



- **Focus is on:**
 - Development of integrated approaches, architectures and technologies for **security and mobility, virtual identity management, privacy enhancing both at application level and at infrastructure level.** Aspects of usability as well as socio-economic and regulatory issues would have to be taken into account.
 - Development of integrated **interdisciplinary approaches and ensuing technologies for the provision of dependable network and information systems that underpin our economy and our society**
 - Development of modelling-, and **simulation-based management decision support tools for critical infrastructure protection** addressing ICT-related interdependencies of critical infrastructures and aiming at prevention of threats and reduction of vulnerabilities



2.3.1.5 Towards a global dependability and security framework



- Development, testing and verification of underlying and novel **crypto technologies** for a wide spectrum of applications. Development, testing and verification of technologies for protecting, securing and trustable distribution of digital assets. Due consideration should be given to implementation and standardisation issues and to security policy development and consensus building among the relevant key players
- Research, development, testing and certification on **next generation secure smart devices (e.g. smart cards) and their components**. This includes design, production and automated verification of smart devices.
- Multidisciplinary research on **biometrics** and its applications with due consideration also of the social and operational issues. Strengthening European competence on security certification leading to mutual recognition as well as **network and computing forensic technologies to combat cyber-crime**

Work should link to Member State research initiatives and policies. Related to **dependability and critical infrastructure protection, targeted international collaboration** with complementary research communities and programmes should be fostered



EoI - Research priorities



Description	#EoI	IP	NoE
Information and service security infrastructures, security technologies, crypto	34	26	8
Trusted components/ devices, smart card	10	8	2
Information security management systems, security frameworks, security policies and ontologies	5	3	2
Privacy enhancing technologies, identity management, privacy	11	8	3
Electronic signatures, authentication, non repudiation technologies	7	7	-
Biometrics	14	12	2
Digital asset management, multimedia content protection, smart document and media, DRM	14	8	6
Security and mobility, mobile communication, secure ubiquitous networking, GRID	12	9	3
Cybercrime, high tech crime, forensics	4	2	2
Others (i.e. quantum cryptography, legal, etc.)	2	2	-
Dependability, Critical Infrastructure Protection, distributed Intrusion detection system	18	11	7 (+2)

131 EoIs: 96 IP's and 35 NoE

51 EoIs fitting better STRPs



Roadmap Projects Supporting the Transition to FP6



DDSI
Dependability
policy support

WG-ALPINE
Active Loss
Prevention

Derive

Constituency

Building

AMSD : Overall Dependability
e-business embedded CIP privacy

Research

Roadmaps

PAMPAS
mobile
privacy &
security

AMSD
dependable
embedded
systems

ACIP
critical
infrastruct.
protection

RAPID
Privacy /
Identity
Mgmt

RESET
Smart
Cards

BVN
Biometrics

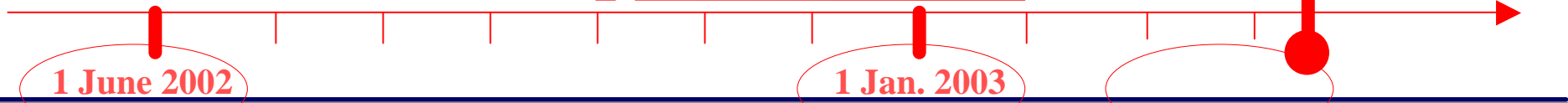
STORK
Crypto

Identify stakeholders & derive Research Roadmap

OPEN discussion

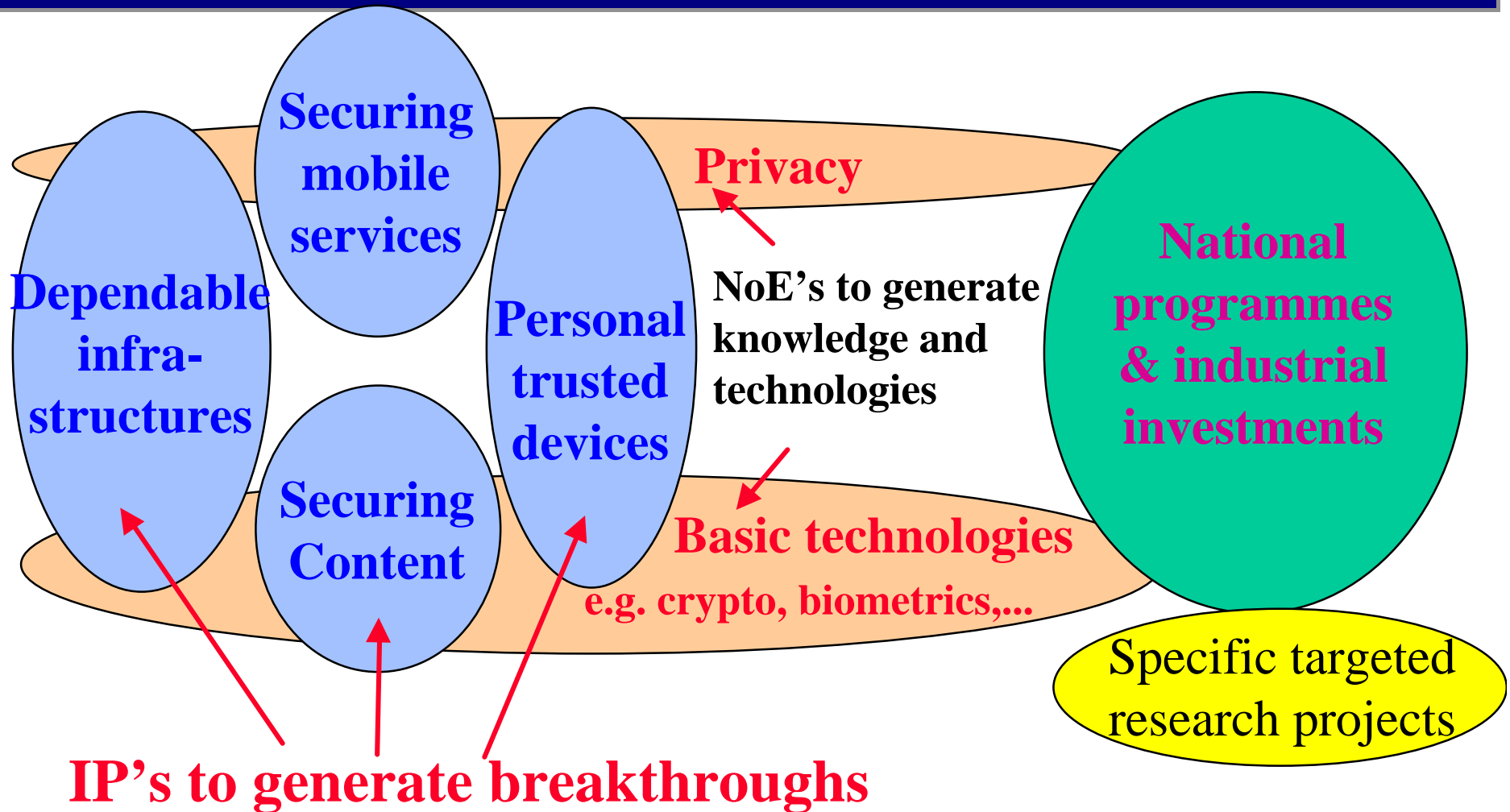
Dissemination

April 2002
Closure
Call 1-FP6





Example of potential co-ordinated actions in security





WEB sites



www.cordis.lu
www.cordis.lu/ist
www.cordis.lu/rtd2002



IST helpdesk
Fax : +32 2 296 83 88
E-Mail : ist@cec.eu.int

Instruments: <http://www.cordis.lu/rtd2002/fp-activities/instruments.htm>
EoI: <http://www.cordis.lu/fp6/eoi-instruments/>

IRG Workshop on T&S <http://www.cordis.lu/ist/events/workshops.htm>
ISTAG papers: ftp://ftp.cordis.lu/pub/ist/docs/istag_kk4402464encfull.pdf
Roadmap projects: <http://www.cordis.lu/ist/ka2/rmapsecurity.html>
T&S Workshops: <http://www.cordis.lu/ist/ka2/rptspolicyconf.htm>