

FIRE

Gateway to trustworthy ICT innovations in Europe

Supported under:



**Industrial & Research Challenges arising
from User Requirements in Trustworthy ICT**

Building a European Security Environment among regions

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Brussels, 13th October 2014



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Regional aspects of IT Security

- German IT industry is traditionally dominated by **SMEs**, which stimulates innovation, but also contributes to fragmentation of research, development and funding
- Germany has developed comprehensive and proven multi-level **cluster strategies** on both regional and federal level
- Sustainable growth of the German economy highly depends on exports to foreign markets
- An **increasing demand** for trustworthy IT security solutions is an evident trend in Germany



European aspects of IT Security

- A common approach **beyond the national level** is required to fully utilize the potential of European resources in IT security industry and research
- A **pan-European** strategy will improve competitiveness and strengthen EU member states in global competition
- Many programs and activities on the national level have matching themes in the **Strategic Research Agenda (SRA)** proposed by **FIRE**
- Topics and priorities of the SRA are based on systematic **analysis** of market requirements and **user needs** in different regions, revealing differences and similarities

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Challenges

Next steps forward:

- Promote collaboration on a regional and inter-regional level in order to form **larger organizational units**, which are **more competitive** against global players (US, Asia)
- Enhance collaboration between EU member states to foster the deployment of IT security solutions
- Ensure digital **sovereignty** in the common interest
- Strengthen European competitiveness in order to prepare for **future challenges** (new markets & players)

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Strategic objectives

High-priority themes identified in the Strategic Research Agenda (SRA):

- Establishing trustworthy relationships
- Information privacy, assurance and cyber security
- Addressing implications of trends in scale and complexity
- Encouraging and supporting appropriate user behavior
- Proving fitness for purpose



Mapping national programs and initiatives to European research themes (SRA)

Establishing trustworthy relationships

- **IT Security made in Germany:**
Joint initiative of ICT industry and federal ministries to promote security products developed in Germany
- **De-Mail:** Secure email service with seamless encryption, authentication and confirmation of receipt
- **Professional certification:** e.g. **T.I.S.P.**
(TeleTrust Information Security Professional)
Security professional certificate particularly adjusted to the European situation and prevalent requirements



Mapping national programs and initiatives to European research themes

Information privacy, assurance and cyber security

- **IT-Sicherheitsgesetz (Cyber Security Act):** recent additions to legal framework and related policies regarding IT security
- **Cyber-AZ (Cyber Defense Center):** coordination of security incident handling (against large scale attacks)
- **Trustworthy ID Management:** technologies for secure authentication and authorization “made in Germany”
- **Open Source Business Alliance:** promotion of open source solutions for securing business and administration (e.g. by optional code review, provable security and certification)

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Mapping national programs and initiatives to European research themes

Addressing implications of trends in scale and complexity

New **research funding** programs (coordinated by federal ministries) are aimed at most demanding trends and topics:

- **Big data**, digital innovation and complex **security threats** (e.g. APT, cyber espionage and identity theft)
- Security of **Smart Grids**: becomes an urgent matter in conjunction with the German Renewable Energies Act (EEG)
- **Smart Mobility** (E-vehicles): accelerating the shift to a sustainable low-carbon economy

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Mapping national programs and initiatives to European research themes

Encouraging and supporting appropriate user behavior

- **BürgerCERT, DsiN** (Deutschland sicher im Netz):
Initiatives for awareness campaigns addressing end users
- **Anti-Botnet consulting center:**
Publishing security reports and providing first aid for end users regarding new threats and defense mechanisms
- **ACS Alliance for Cybersecurity:**
Research and industry working groups coordinated by the Federal Office for Information Security (BSI)



Mapping national programs and initiatives to European research themes

Proving fitness for purpose

- **German Cyber Security Act (IT-Sicherheitsgesetz):** new legal framework for IT security and related
- **IT-Grundschutz (BSI): Overhaul** of IT security policies, next generation of IT baseline protection framework
- **Unification** of security **standards** and compliance regulations: e.g. Information Security Management Systems (**ISMS**) in **critical infrastructures**



Summary

- The given examples illustrate that themes and topics of the European SRA have **counterparts** on a **national level**, indicating a recognition of relevance
- SRA themes were derived from a comprehensive list of **user needs**, ranked and prioritized by all relevant **stakeholder groups** (industry, research, policy makers)
- Some best practices may be **transferable** among regions (e.g. cluster strategies), serving as a blueprint
- Others are adapted to **specific** local needs and may not be usable outside the scope of their domestic market



Conclusions

A common **SRA** improves efficiency and effectiveness by coordinating efforts, providing guidelines at the **EU level** to:

- harmonize R&D **priorities** within member states
- exchange of **best practices** and regional experience (knowledge transfer)
- better **alignment** of investments and funding (public and private) to key users needs in research and industry
- **speed up** market development and improve the competitiveness of European players in ICT markets





Thanks for your attention!

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