

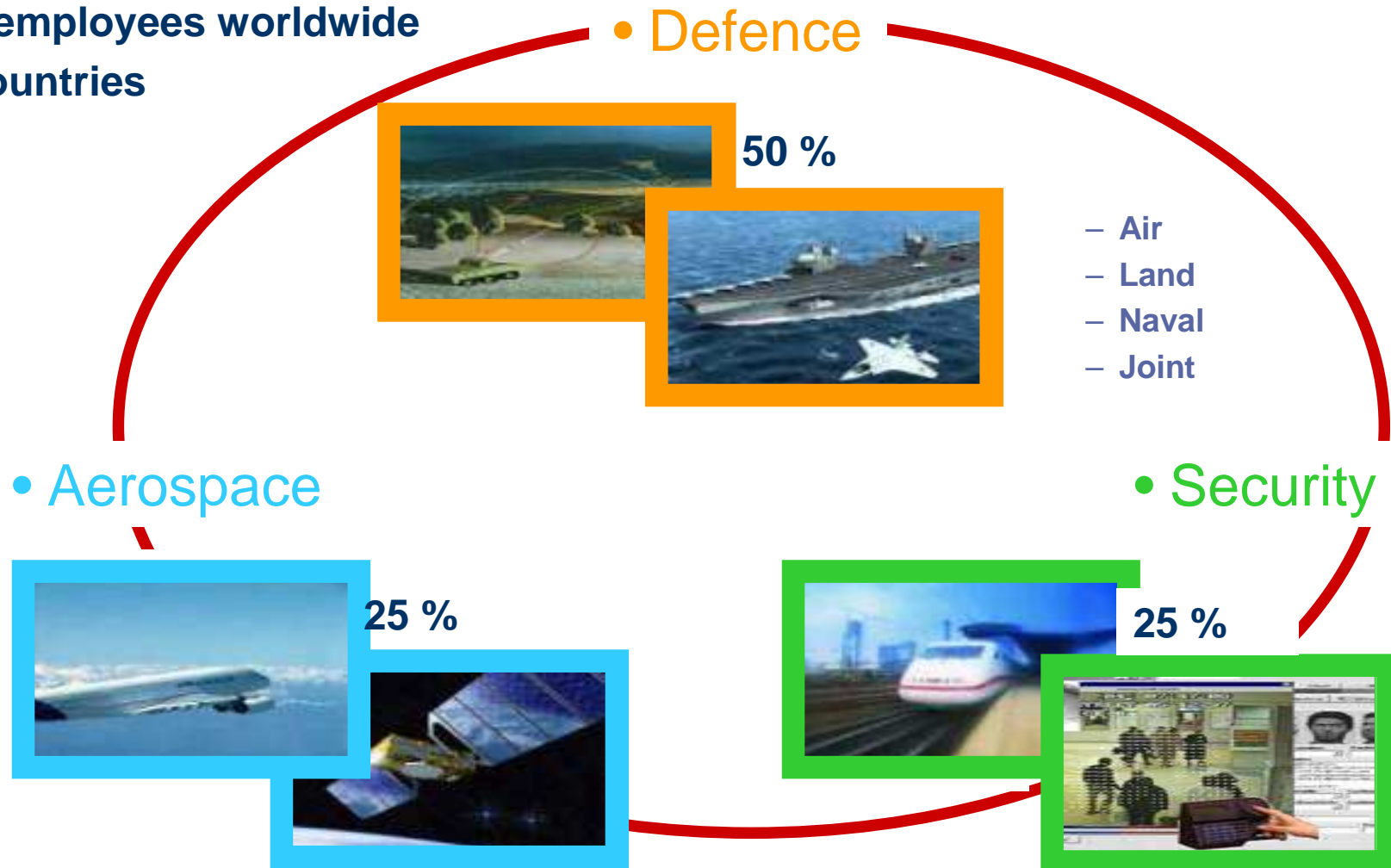
Information Systems Trust & Security

Thales vision and perspectives

Three core businesses



68.000 employees worldwide
in 50 countries



Over €13 bn annual revenue



Innovation and technological excellence

- R&D at Thales totals €2.2bn (18% of revenues)
- 25,000 researchers on cutting-edge technologies
- 300 inventions per year
- Over 15,000 patents
- Over 30 cooperation agreements with universities and public research laboratories in Europe, the United States and Asia



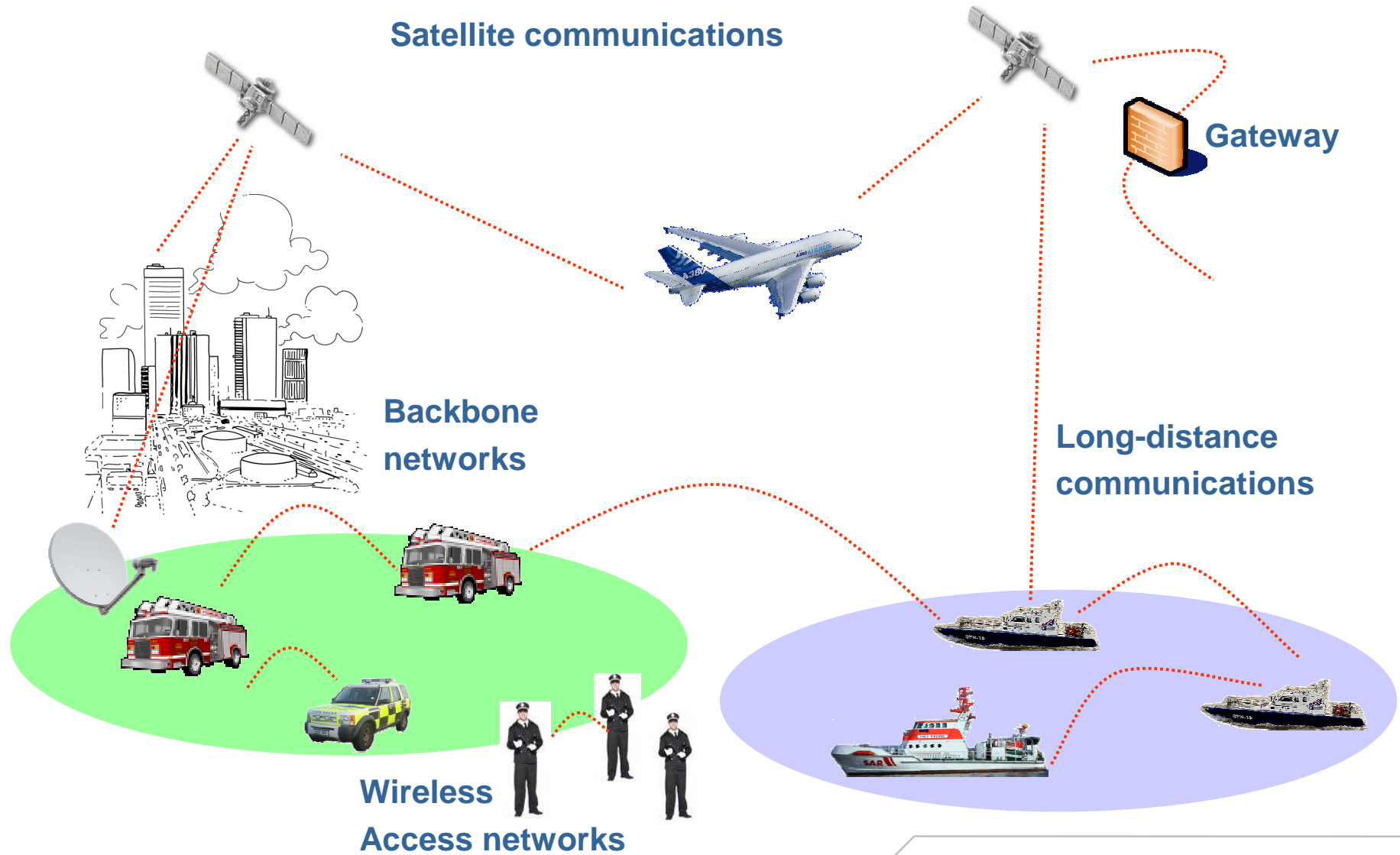


An organisation dedicated to the high-grade security

- Systems
 - Risk analysis, security audits, formal security policies
 - Design of the architecture of security systems, support to certification (Common criteria, TEMPEST)
- Expertise in cryptography
 - Crypto algorithms, advanced studies
 - Design of hardware crypto components and TPM processors (ASIC, FPGA)
- Products, support and services
 - Design of security products
 - Manufacturing of high-grade security components and products
 - Customer Support (training, maintenance, technical assistance, consulting...)



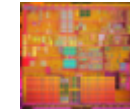
A global security offering





Security products and solutions

- High-grade reprogrammable cryptographic platform
- Mid- and high-bandwidth link encryption
- Networks security for Corporate, governmental and military (country level, NATO, UE-Secret) organisations
- Interconnection of secured networks
- Very high-grade security module for military and governmental applications
- Workstation's Security: authentication, mass-storage encryption, integrity assurance,...
- VoIP security (**voice and signalling**)
- Confidentiality and integrity of IP-based applications (**DMZ protection for media servers**)
- Very high-grade secured mobile handset and systems over **GSM** and **UMTS**



TITAN



CHANG HD
TRC 73xx



ECHINOPS
CHIP
MISTRAL



FOX
ELIPS-S



ISATIS



RECRU



IP Touch



TEOZ



TEOREM



Main Security Research Domains 2009-2012

- Metadata-based security
 - Inter-organisation information exchange
 - Traceability of information
 - Privacy enforcement
- Trust evaluation
 - Understanding trust mechanisms
 - Increasing trust
- Partitioned Operating System
 - e.g. Business / Private / On the move / shared laptop
- Context-adaptive security
 - Security policies negotiation, automated component selection
- Cyber-protection
 - Resilience by reconfiguration
 - Vulnerability analysis tool, Intrusion detection
 - Systems modelling, virtualisation and cloning



Longer-term Security Research Domains

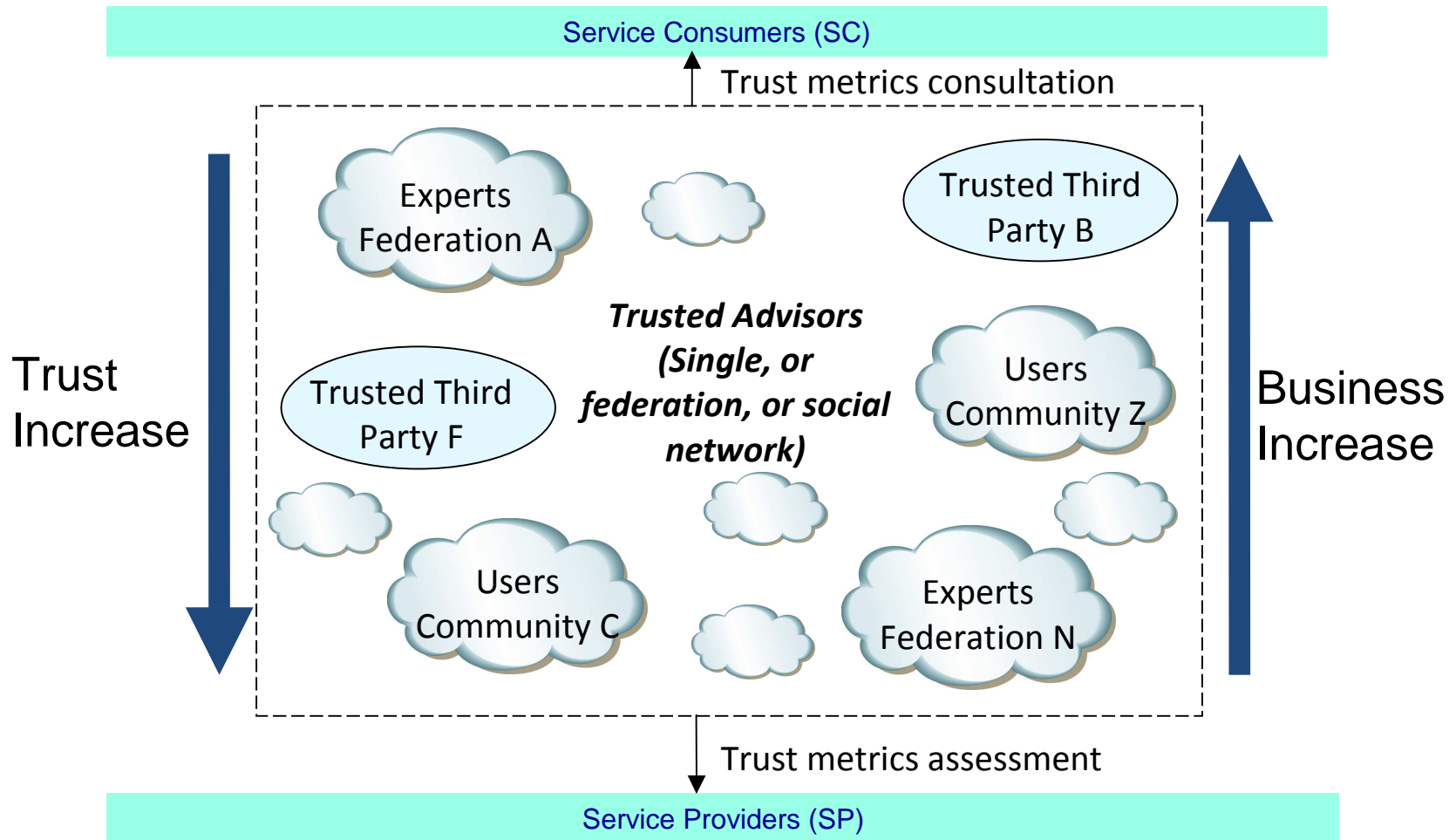
- Quantum cryptography
 - Secret key distribution
- New needs
 - Inter domain identity management
 - Adaptive security
 - Formal methods
 - Data traceability

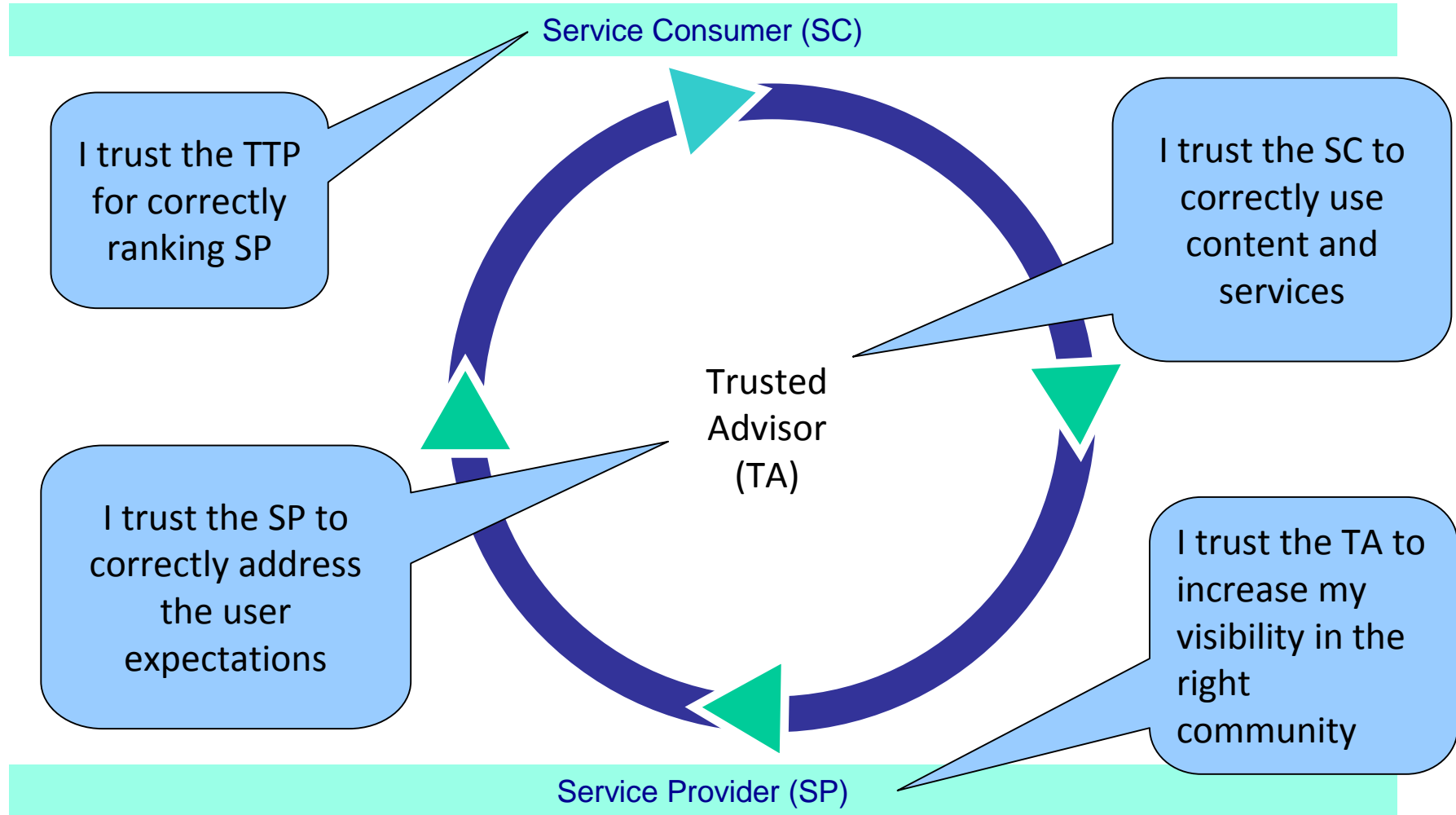


- Security by design not sufficient
 - For complex and large systems
 - For dynamic systems
 - For multi-players services providers
- Security and Trust tradeoffs
- Imposing a single common model/framework limitations
- Trust as a BUSINESS enabler
- We need to equip system evaluation tools with both:
 - Internal probes/actuators to ensure security assurance
 - External, non intrusive, trust evaluation engines

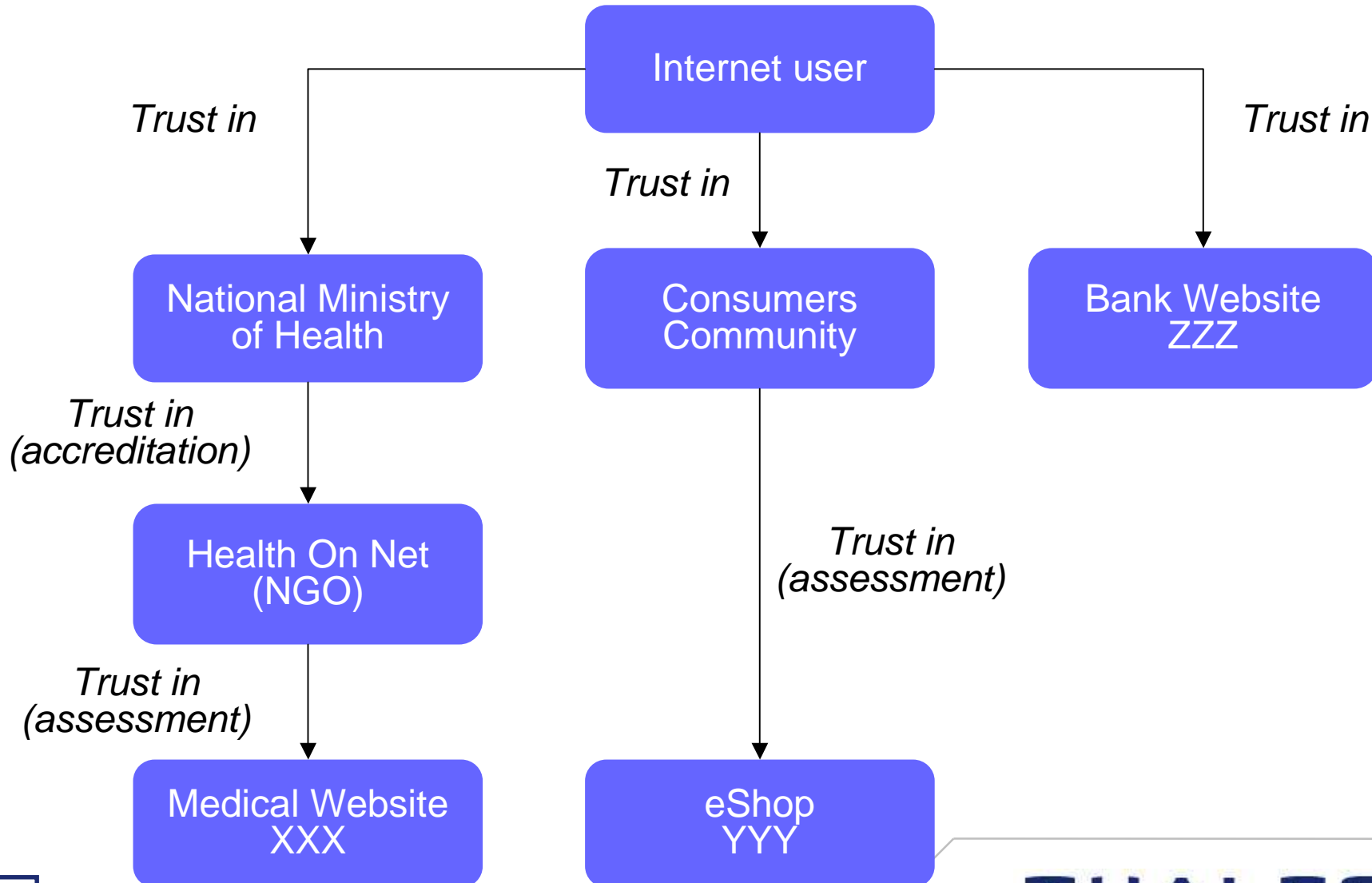


“Internet can only be evaluated by Internet”





How to introduce a part of regulation in Internet





- As security expert Thales intends to deal with Trust evaluation as a key challenge to correctly manage multi-domains end-to-end services
- We would like to:
 - Go one step beyond Trust/security by design
 - Propose non intrusive mechanisms to compute and increase systems trustworthiness