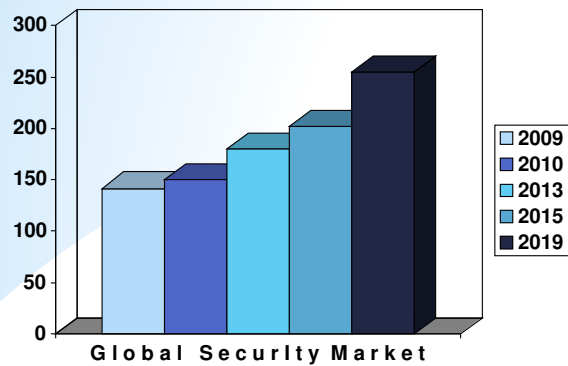# *Testen, Validieren und Standardisieren
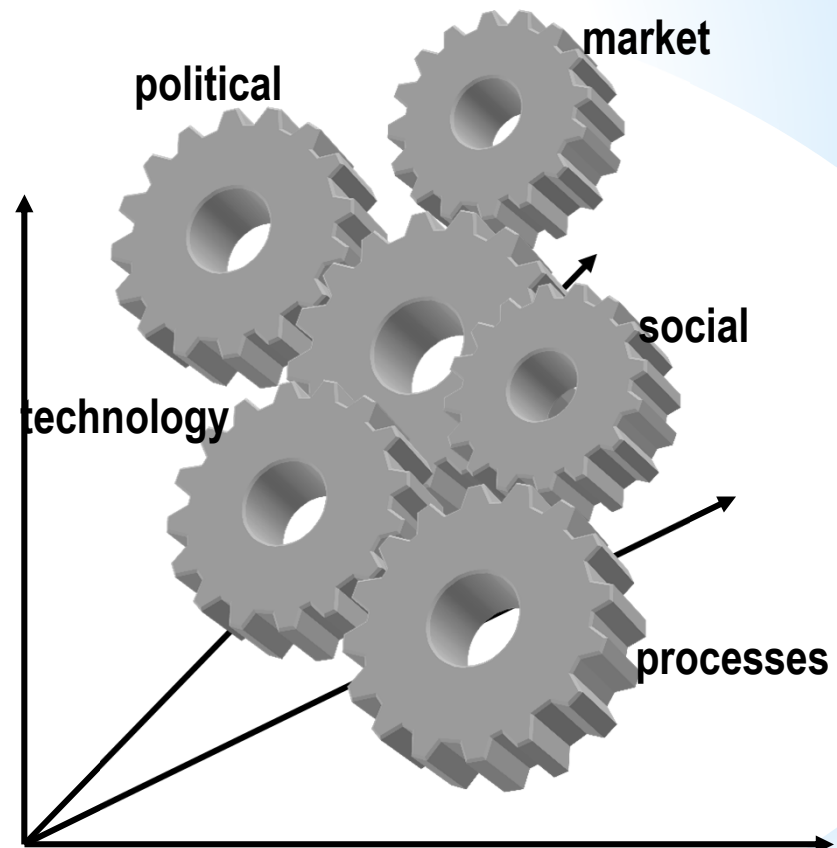
Dr. Alois J. Sieber

Current Security Situation: A multidimensional Challenge

Source: Visiongain 2009

Security – a rapid expanding market

political

market

technology

social

processes

Security – a multidimensional challenge

EC 'Grand Challenges' and 'Security'

Grand Challenges

- energy & climate change
- public health, consumer protection
- knowledge and innovation society
- crises management / natural disasters
- sustainability & growth
- safety & security
- sustainable production & consumption
- nuclear satety and secutity
- natural resources & agriculture
- fight against terror & organized crime

Security one of the central concerns of any society

* security industry represents a sector with a significant potential for growth and

* Commission made the security industry one of the essential parts of the EU 2020 flagship initiative *"An Integrated Industrial Policy for the Globalisation Era Putting Competitiveness and Sustainability at Centre Stage"* employment

* overarching aim is to enhance growth and increase employment in the EU's security industry

* **Action Plan for an innovative and competitive Security Industry**

* the market leading US companies are still the technological front runners, they additionally also benefit from a harmonised legal framework and a robust internal market

* US industry benefits from a clearly recognised and distinguishable US brand

* lack of a similar "EU brand" or "EU label" is especially critical if one considers that the central future markets for security technologies will not be in the Western Hemisphere but in emerging countries in Asia, South America and the Middle East

* Context

*aviation security;

*maritime security;

*border security;

*critical infrastructure protection;

*counter-terror intelligence (including cyber security and communication);

*physical security protection; and

*protective clothing

* **EU security industry – main market areas**

* Fragmentation of the EU security market

* Gap between research and market

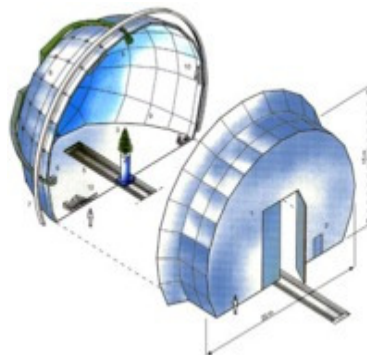* Societal dimension of security technologies

*Main problems
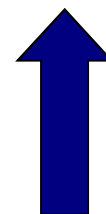
*Standardisation

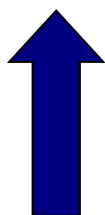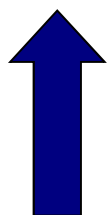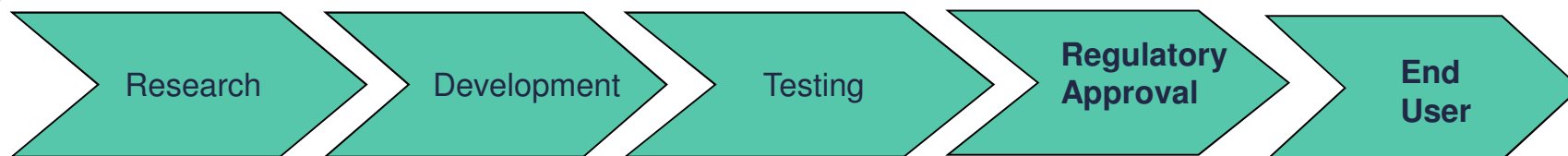*Certification/ conformity assessment procedures

*Exploiting synergies between security and defence technologies

* **Overcoming market fragmentation**

JRC supporting the way for innovation

The JRC Electromagnetic Signature Laboratory EMSL

| Research | Development | Testing | Regulatory Approval | End User |

Integrated solutions provided by JRC

*

Standardization

one milestone on the
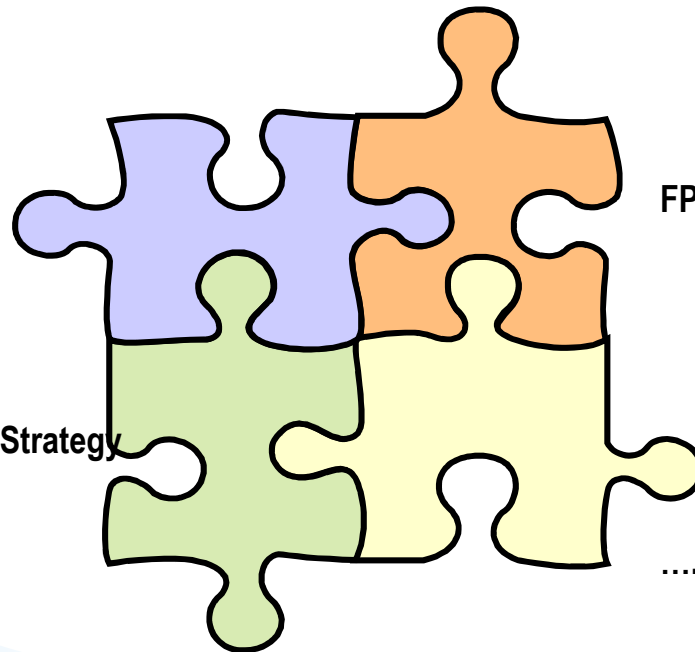
Innovation Road for Security

EUROPEAN Standardisation Strategy for Security

Standardisation Strategy for Security – from national to global challenge

DRAFT Communication On Industrial Security Policy

FP 7: next Call + HORIZON 2020

DG ENTR ICT Standardisation Strategy 2010-2013

DG ENTR Mandate 487

....

European Security Standardisation Map

Instruments within Security Research

* Programming mandate by European Commission (DG ENTR) to ESOs on "Development of a work programme for the definition of European Standards and other standardisation deliverables in the area of SECURITY"

* Study "Regulatory Framework, Certification and Conformity Assessment in the Security Sector", ECORYS

* Public Consultation **on an Industrial Policy for the Security Industry, including:**

  * **the lack of EU wide standards** (*in security*)

  * Lack of **Certification/conformity assessment procedures**

* Introducing the request for identification of needs for standards in open Call for Proposal (in the context of security research)
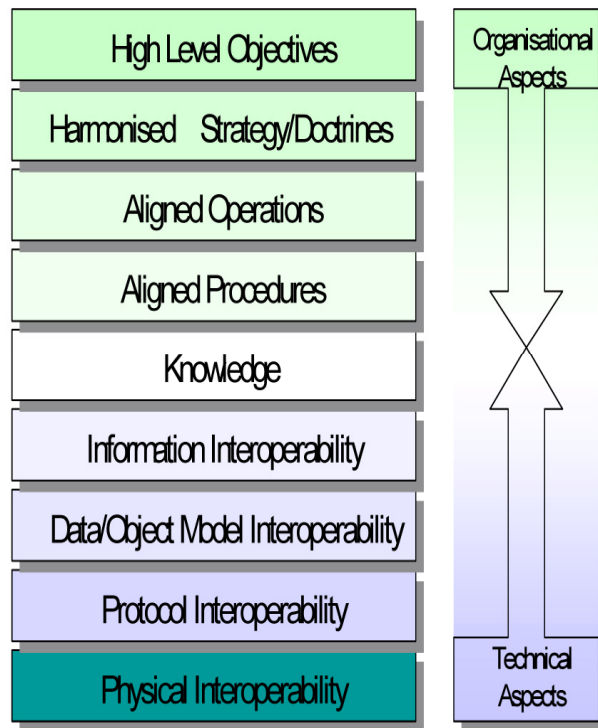
CAC: conceptual framework

* **Dimensions of security product requirements:**
  * **Scale:** from components/devices to systems of systems
  * **Scope:** from purely technical characteristics to broad processes and procedures
* **Technical requirements:**
  * **High:** compatibility / interoperability
  * **Low:** inter-changeability
* **Process requirements:**
  * **High:** information exchange / communication
  * **Low:** replication
* **CAC:**
  * **High:** Audit / 2nd Party – Peer Review
  * **Medium:** Inspection / 3rd Party – Certification
  * **Low:** Testing / 1st Party - Declaration

CAC = Certification and Conformity Assessment in the Security Sector

ECORYS

Standardisation and Interoperability – two sides of one coin

❑ Interoperability – a central user need

❑ **not a single definition** of interoperability

Layers of Interoperability

|	
High Level Objectives	Organisational Aspects
Harmonised Strategy/Doctrines	
Aligned Operations	
Aligned Procedures	
Knowledge	
Information Interoperability	
Data/Object Model Interoperability	
Protocol Interoperability	
Physical Interoperability	Technical Aspects

Secricom ©

The capability of two or more organisations or discrete parts of the same organisation to exchange decision-critical information and to use the information that has been exchanged.

Clearly, interoperability ranges from organisational to technical aspects all of which must be 'harmonised' in order to achieve full interoperability.

Security Standardisation and Research

❑ **Security Standardization and Research – two sides of one coin**

  ❑ Successful Standardisation requires **a new long time accompanying approach**

  ❑ **strengthen the alignment of research results into practice**

  ❑ **Pre-Normative standards** require the early involvement of ESOs
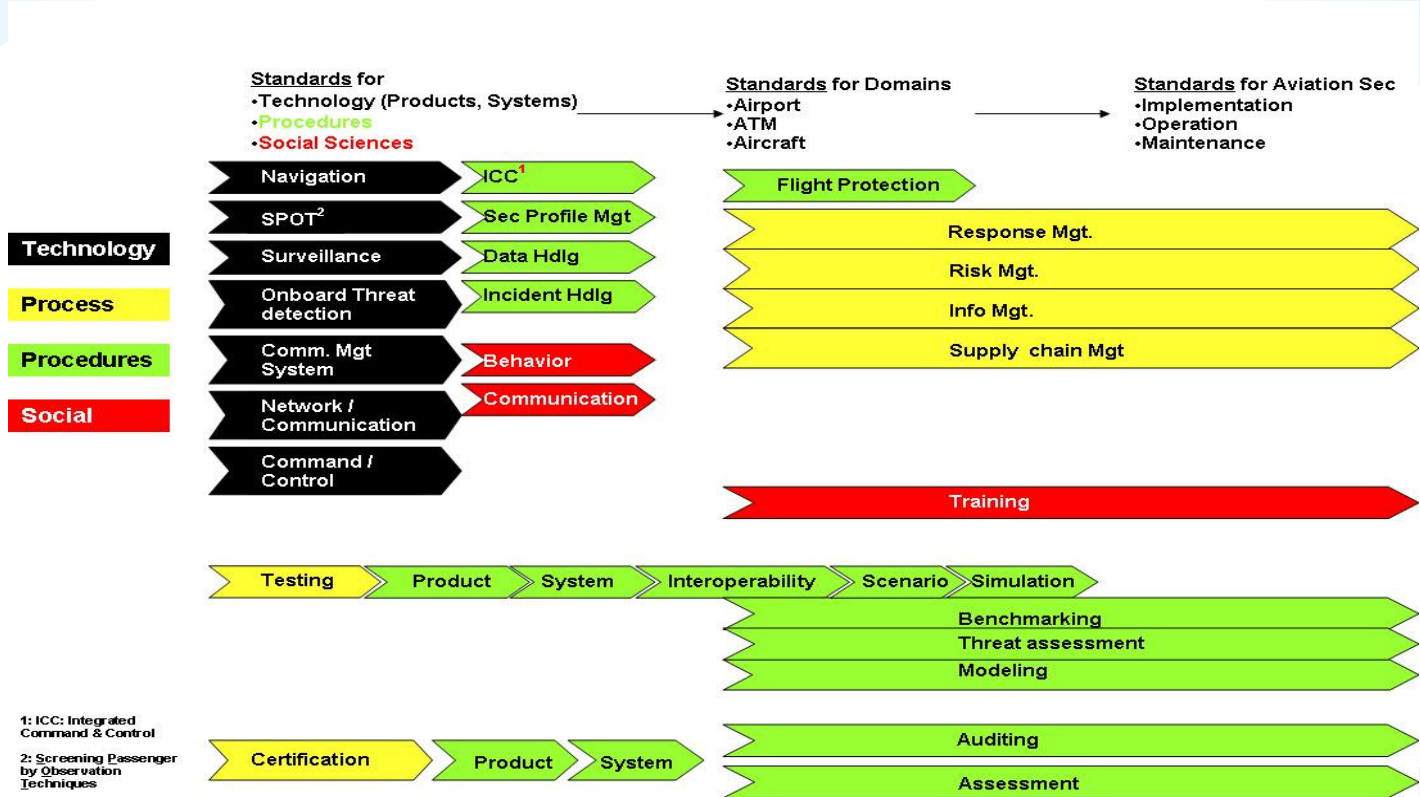
Example 'Aviation Security': from isolated standardized security topics to a standardized integrated solution
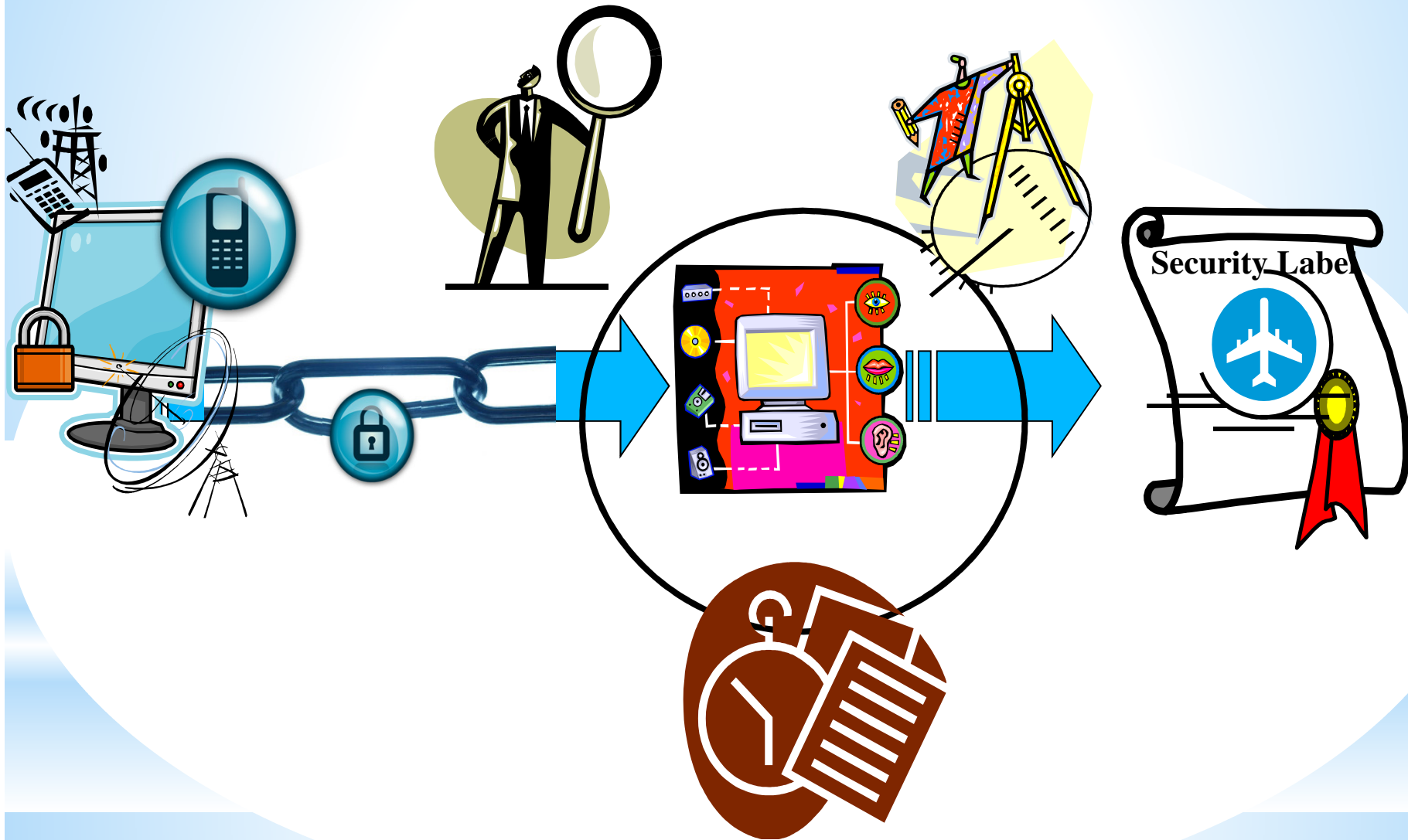
New Approach: Security Scenario Profiles

❑   **Application oriented flexible security mapping – the Security Scenario Profile (SSP)**
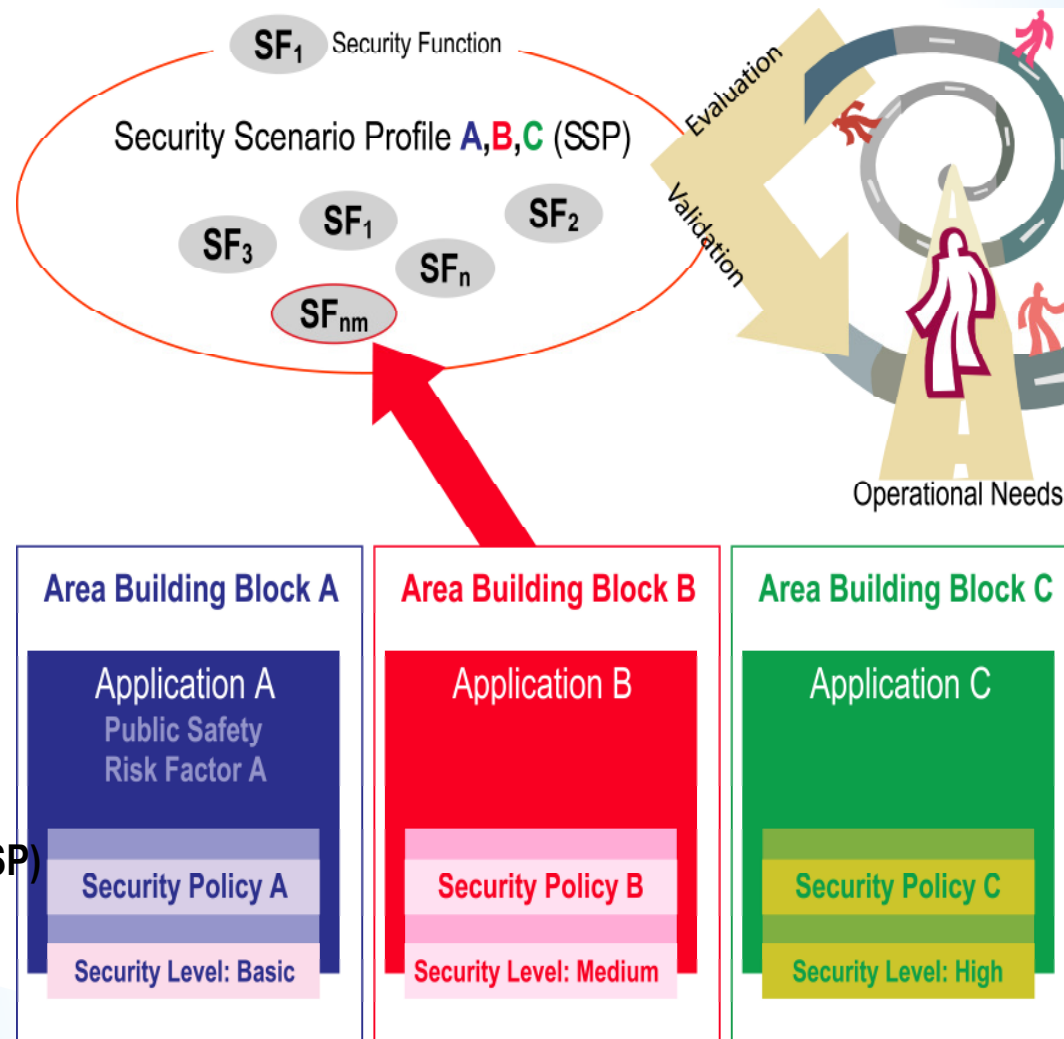
General structure of a Security Scenario Profile (SSP)
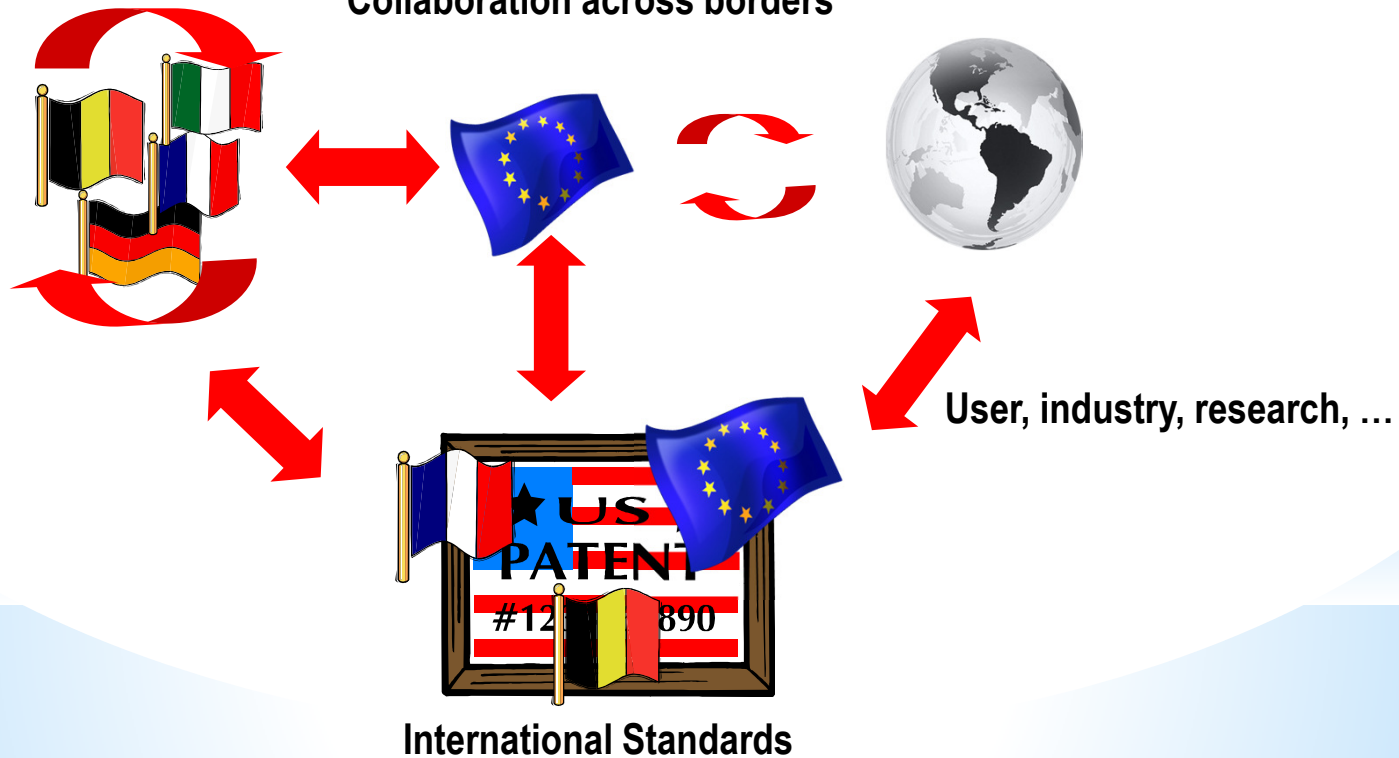
Improving the Awareness and Visibility of Security

Security Label

Measuring security and visualisation – how to do?

IPR and Patents – Borders need to be overcome ?

Collaboration across borders

International Standards

User, industry, research, …

*European Security Label
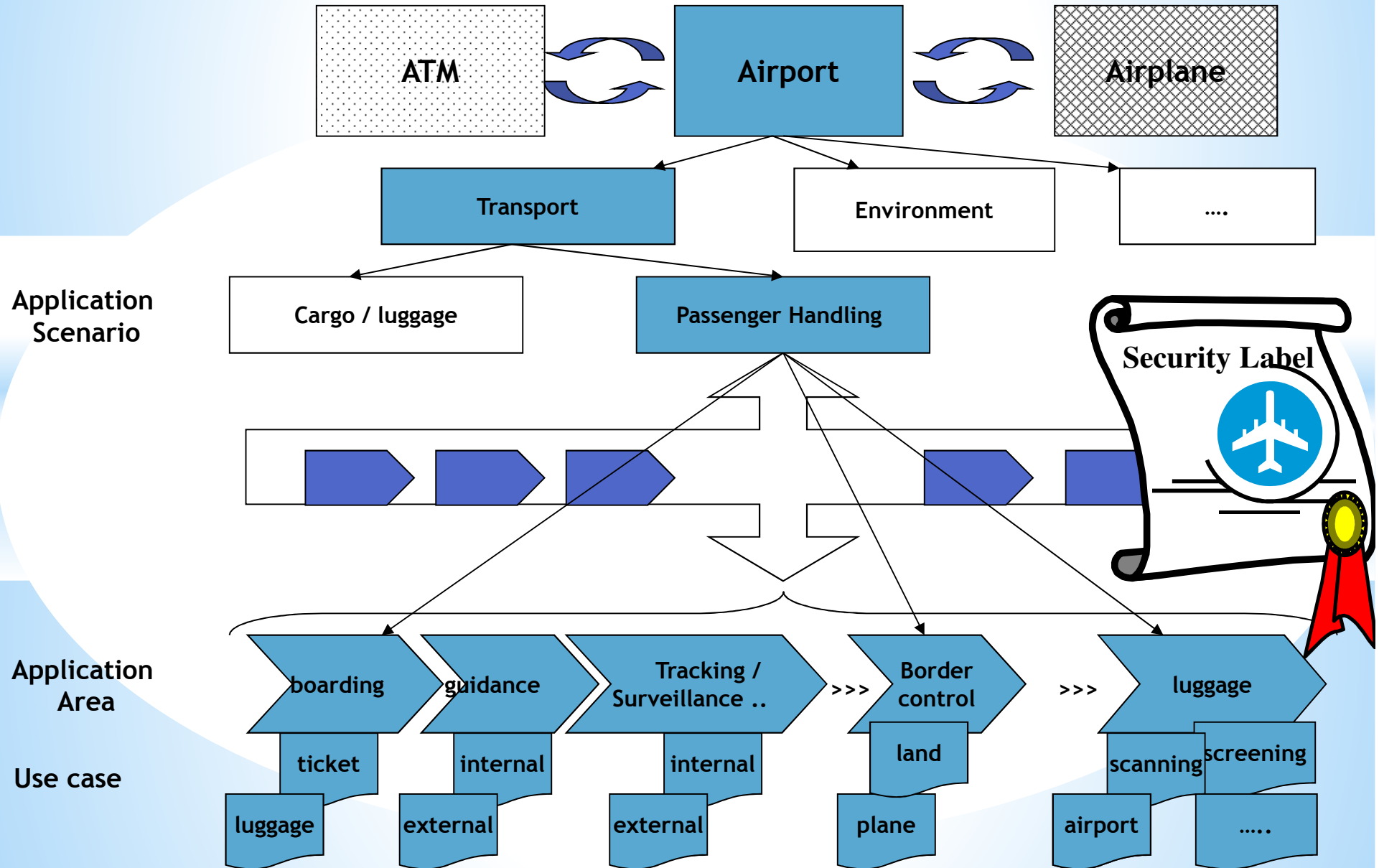
Considerations and arguments

How to see the European Security Label'?

❑ **instrument** to **facilitate** and **support the access** to the **European Security market**

❑ will serve as a **common reference point** for **suppliers, end-users**, **customers and society** to ensure confidence in security-related **technologies, products, systems, processes and services (stand-alone or part of integrated system)**

❑ through a **transparent, auditable and sustainable approach** to addressing security

❑ is not technology but **application and task driven**.

❑ Issuing the Label guarantees **compliance of proposed solutions** with the **specific tasks** it has been designed for

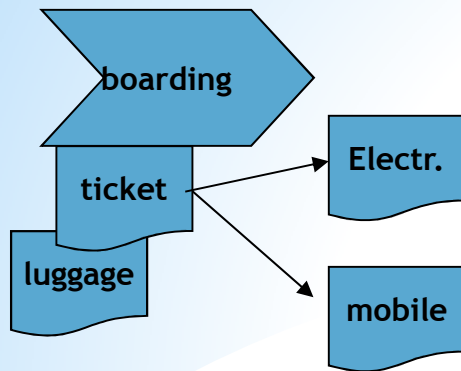❑ **confirms** respecting **the set of criteria** referred to by the Label.

'Airport security label': one first example and proof of concept of the underlying general 'Security Label'.

❑ a common **reference point** for suppliers, passengers, customers and society

❑ **infrastructure for transport** (people, goods) contributing to the **economy of the nation**

❑ **tasks and services**: in line with adequate related security requirements

❑ built upon **numerous different security and sensitive areas (**processes, technologies, data and services, involved people (social))

❑ a strong need for an approach **respecting all aspects** in an adequate manner

❑ **respect existing** airport security assessments, inspections and audits, legislation and regulations

❑ flexible approach **avoiding a complete re-assessment** (upcoming security goals and requirements or to address and cover new challenges)

❑ underlying **risk assessment and risk management**

❑ respect a **rating scheme**

Security Label: Example 'Aviation Security'

Aviation Security: Security <u>Scenario Profile</u> Area Building Blocks

boarding

ticket

luggage

→ Electr.

→ mobile

Tracking / Surveillance ..

internal

external

.....

....

...

T_1: Comm. & Network Technology

T_3: Scanning / screening technologies

T_4: Behavior analysis

T_n: .....

S_3: Communication

S_4: Training/ education

S_n: ...

P_2: Info Mgt.

P_2: Info Mgt.

P_n: ...

...

...

...

$T_1, T_2, .., P_2, P_5, ... S_3, SE_1$

$T_3, T_4, .., P_2, P_5, ..S_4, SE_2$
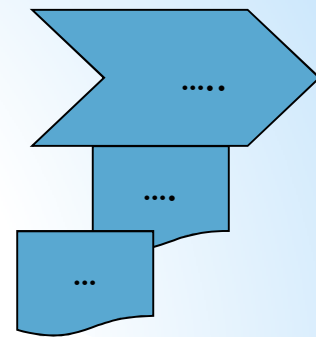
$T_n, P_m, S_k,$

T: Technology, P: Process, S: Social, SE: Service