

# ETSI RFID work programmes

Privacy and Security

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## Why RFID Privacy & Security?

### □ Privacy & Security are key factors in widening market adoption

- **Consumer trust** Minimize threats to individuals without compromising end users requirements
- **End user confidence** Investment risk reduction through diminishing chance of future punitive legislation
- **Positively influence future legislation** Clearly separating the 'good' from the 'bad' and just plain 'ugly'

### □ Increasing public general awareness through:

- **Retail**
- **Healthcare**
- **Government documents**
- **Financial instruments**
- **Etc...**



### □ Accelerate wider NGN applications

- **Providing route to consumer trusted IoT based consumer use applications in home, recreation, etc.** eHealth, smart home devices, enhanced internet services, etc.
- **Wider enterprise applications** SMEs, non-retail, etc..

## RFID Privacy – Building Public Confidence

### Real and Effective Choice

- Can I choose to use the RFID technology I own?
- Can I control the access of others to the technology I own?

### Visibility

- How can I know when RFID is invading my private space?

### Convenience

- Are the privacy & security features a positive experience for consumers?

### Protection

- Can I determine when I am threatened & take action when I am?
- Can I trust that I am protected?
- Where am I protected? [Interoperability of privacy & security features]

### Security through RFID

- Is my RFID an effective deterrent or offer me protection from crime risks?

### Safe

- Readers must not threaten health, particularly at risk are employees

## Likely threat models & Definitions

- ❑ **Message manipulation**
  - E.g. Modify traffic light signals in favour of the criminal
- ❑ **Message masquerade**
  - E.g. the traffic authority has raised the speed limit
- ❑ **Traffic analysis**
  - E.g. Knowledge of where you are may give a burglar accurate knowledge of the time a police car will arrive on scene
- ❑ **And so on ...**
- ❑ **Security is the feeling you get when there is no current known or perceived risk to your well being**
  - There is no simple definition so we don't tend to bother
- ❑ **Attributes we want to verify and preserve:**
  - **Authenticity**
  - **Confidentiality**
  - **Authority**
  - **Integrity**

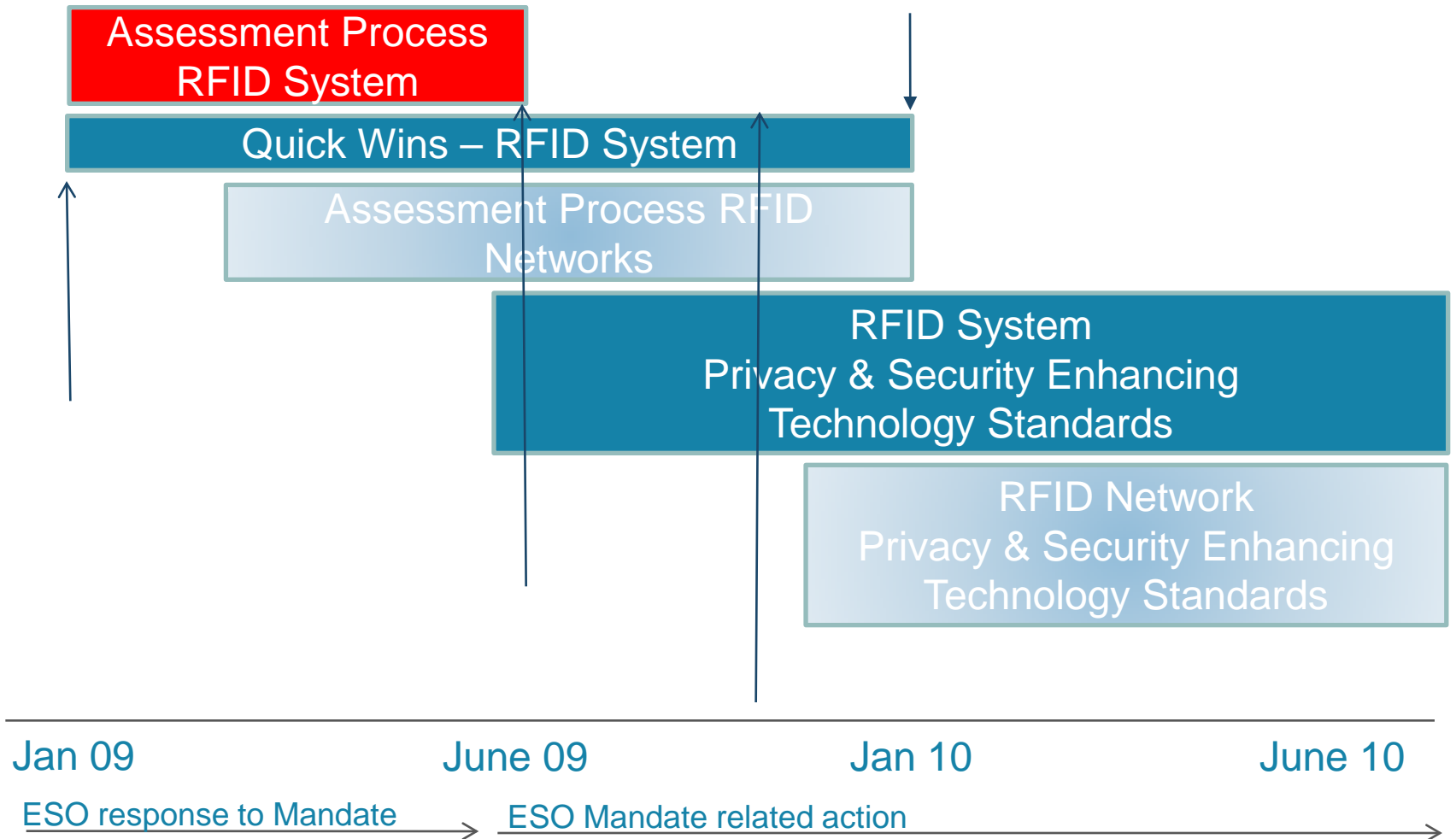
## Security in general terms

- ❑ **What we want to do is prevent unwanted incidents:**
  - **Assuming we model our system (RFID, FIT, ...) as a system containing assets where the asset may be physical, human or logical, then these assets may have weaknesses that may be attacked by threats.**
  - **The threat itself is enacted by a Threat Agent, and its invocation may lead to an Unwanted Incident breaking certain pre-defined security objectives.**
  - **A Vulnerability is modelled as the combination of a Weakness that can be exploited by one or more Threats.**
  - **When applied, Countermeasures protect against Threats to Vulnerabilities and reduce the Risk.**

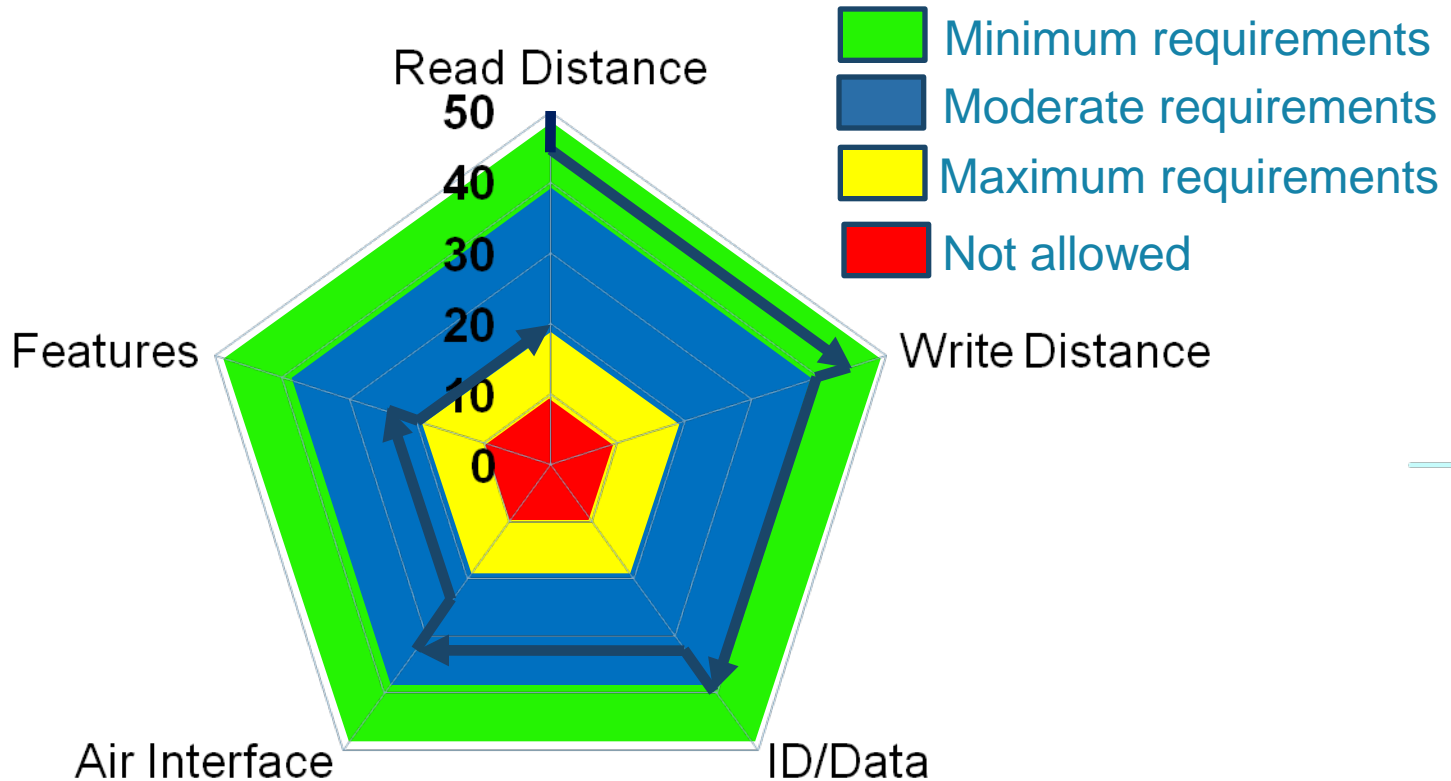
## ETSI – response to GRIFS

- ❑ **Management of ETSI involvement in EU RFID programmes**
  - **GRIFS and CASAGRAS programmes**
  - **GSC initiative for RFID**
- ❑ **Coordination of RFID activity**
  - **Hierarchical Work Item**
    - **A single management item encompassing work in a number of technical bodies (internal or external) leading to standardisation of a single feature or technology**
  - **ERM – coordinating radio aspects**
  - **SCP – coordinating platform aspects (UICC and NFD)**
  - **M2M – dealing with industrial application of RFID**
  - **ITS – dealing with transport application of RFID**
  - **TISPAN – dealing with network aspects of RFID**
  - **TISPAN – dealing with security and privacy aspects of RFID**
    - **Including use of RFID as a component of IdM**
  - **SAGE**
  - **eHealth**

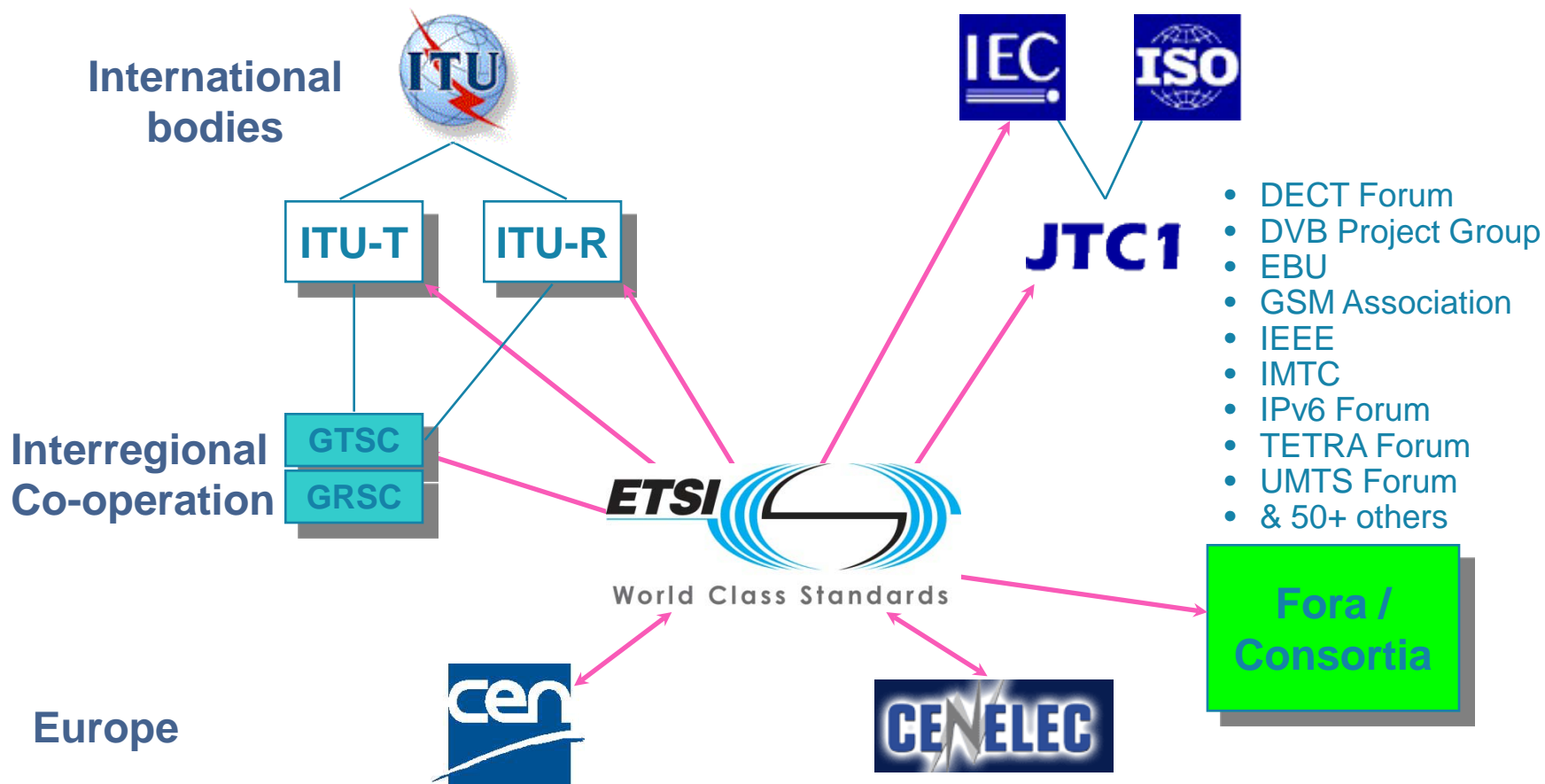
# WI Proposed Plan of Activities 19WTD075r4



# RFID System Security & Privacy Assessment Process – Defining the Challenge!



## ETSI's relations with ITU, IEC & ISO



# What did ETSI do with RFID/IoT in the EC projects?



**GRIFS**

Building the Global RFID Standards Forum



**CERP-IoT**

Cluster of European Research Projects on the Internet of Things



**CASAGRAS**  
an EU Framework 7 Project

EU REG: RFID Rec.,  
IoT Com.  
RFID Mandate

- Internet of Things/RFID
- TISPAN
- M2M
- Etc...

## Thanks for listening

Questions

➤ Maybe answers