

Cyber Security Management in Electricity Sector

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BACKGROUND

- **Cybersecurity** is concerned with protecting digital **assets**.
- **Asset** is everything from networks to hardware and information that is processed, store or transported by internetworked.

ISO 27032, Clause 4.6

Anything that has a value to an individual, an organisation or a government



- **Digitalization** of the electricity sector imply fast-evolving **cyber threats** in that sector
- Necessity to address **cyber security challenges in the electricity sector** by joining forces across electric system borders in order to:
 - **Protect electricity assets**
 - **Protect data and the privacy of consumers**

RECOMMENDATIONS

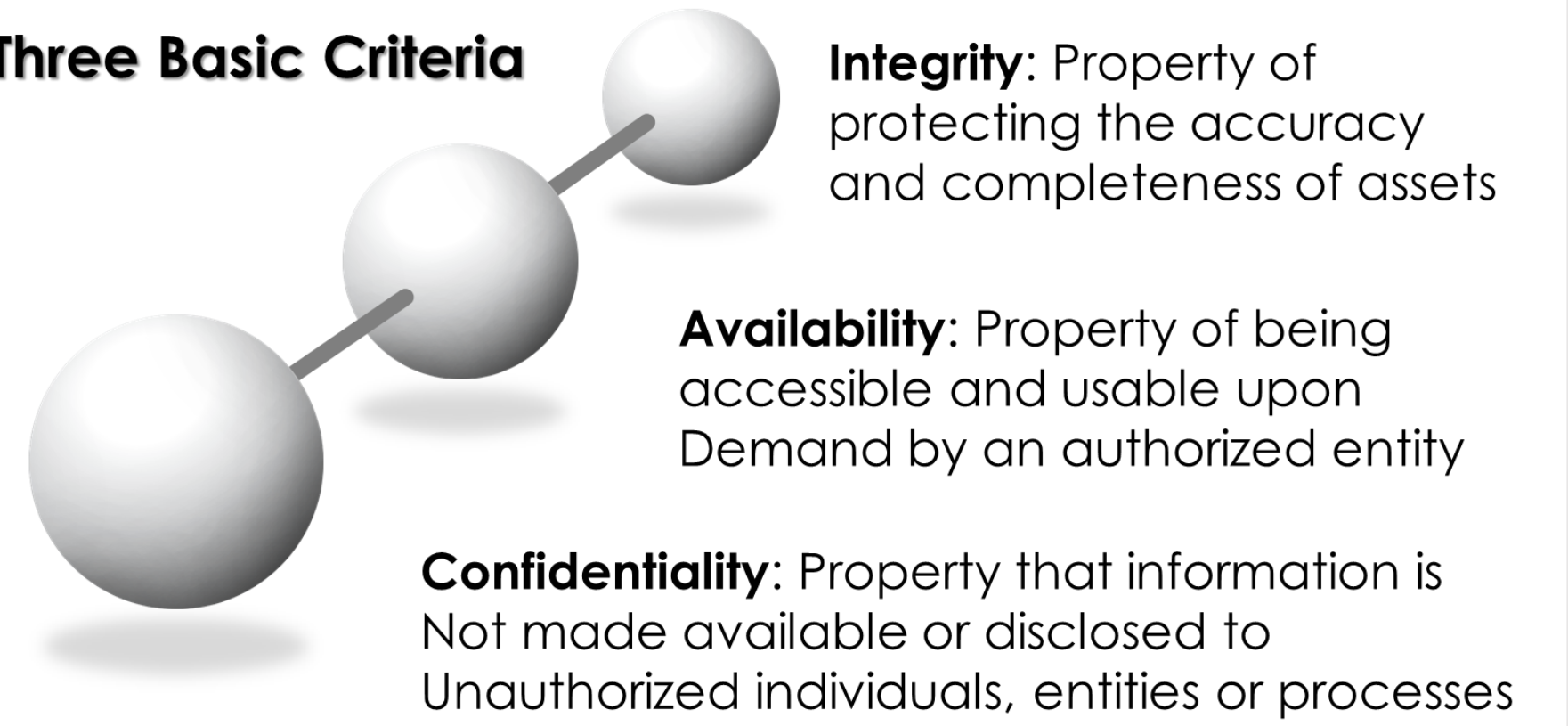
- Develop **cyber security norms and standard for electricity equipment** to insure technical and commercial **interoperability**
- Set clear and effective cybersecurity measures prior embracing new technologies
- Develop **standard and legal frameworks** for energy regulation taking into account new technologies and cyber risk
- Put in place special and **cooperative CSIRT and CERT for electricity sector**
- Regulators shall evaluate **cyber security expenditures** and set **incentives for cyber resilience performance**
- Stakeholders shall act for the creation of **specific academic program combining ICT, electrical engineering and information security**
- Associations of Regulators shall act for a **global cybersecurity maturity framework** and **promote research** in cybersecurity
- Regulators shall act for an implementation of a **cyber security change culture** amongst stakeholders

METHODOLOGY

The aim of cyber security strategy is:

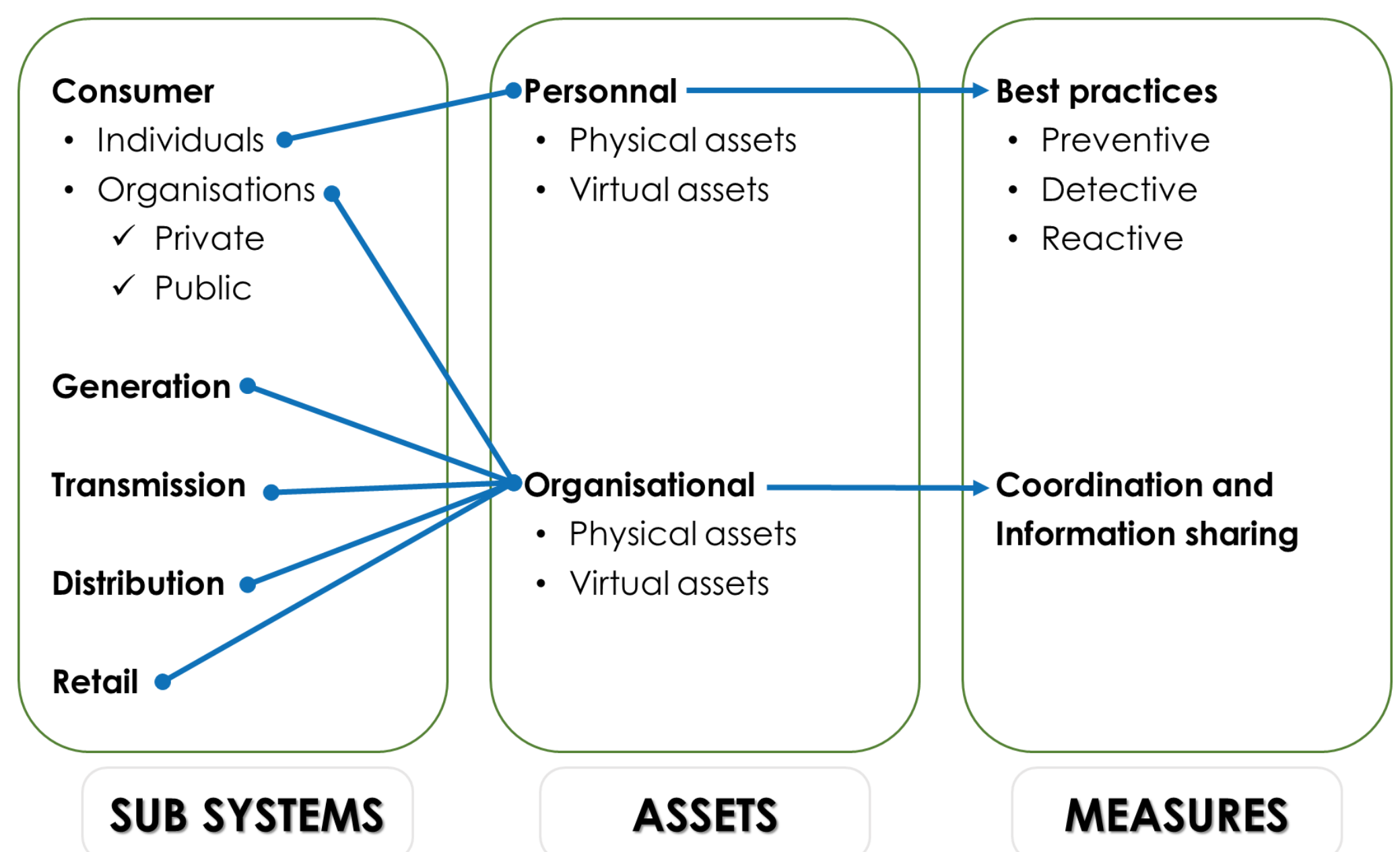
- to insure the **C.I.A** of all **assets** and all data manipulated in the electricity sector

Three Basic Criteria



- **coordinate** approach by all stakeholder
- **identification** of essentials assets in electricity sector
- identification and **analyze of potential risks** for each asset
- elaborate and implement a suitable **risk treatment plan**

Methodological approach for cyber security management in the electricity sector



OUTCOMES

- **cyber security for electric power infrastructure**
- **cyber security of electricity system data and consumer privacy**

Reference Materials

- Council of European Energy Regulators, "Cybersecurity Report on Europe's Electricity and Gas Sectors", Available online: <https://www.ceer.eu/>
- PECB, ISO 27032 certification training course
- <https://cis.omag.com>

Keywords

Cybersecurity, assets, confidentiality, integrity, availability, electricity

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