



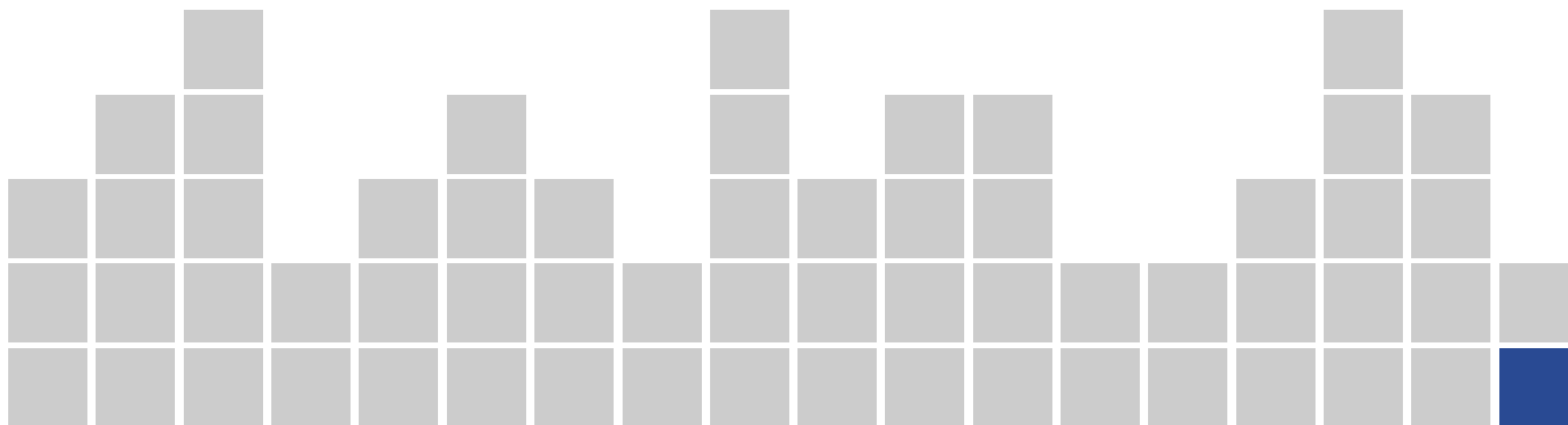
ESMIG

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Task Force Smart Grids - Expert Group 2: Steering Committee Report

22 June 2010

Frank Hyldmar
Chairman for Expert Group 2, Vice President
ESMIG, Executive VP EMEA, Elster Group





Scope and deliverables of Expert Group

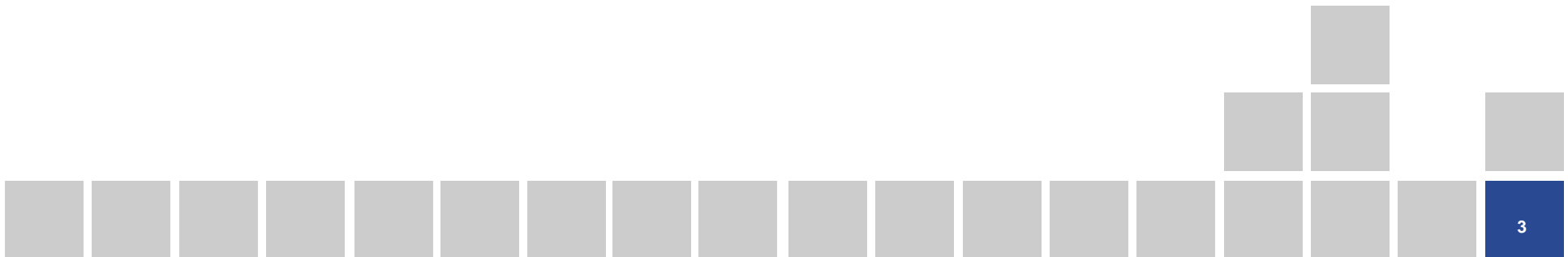
- **Expert Group 2 was asked to focus on the following topics:**
 - **Identify the benefits and concerns of customers**
 - **Provide an overview of European legislation on data protection and checking whether further protective measures should be put in place**
 - **Identify possible risks in the handling of data, safety and data protection, include data exchange issues**
 - **Identify ownership of data and responsible parties for data protection**
 - **Develop a framework in which data can be used**
 - **Recommendations for Information and Communication of Smart Grid benefits to consumers and politicians**





Achievements of the Expert Group

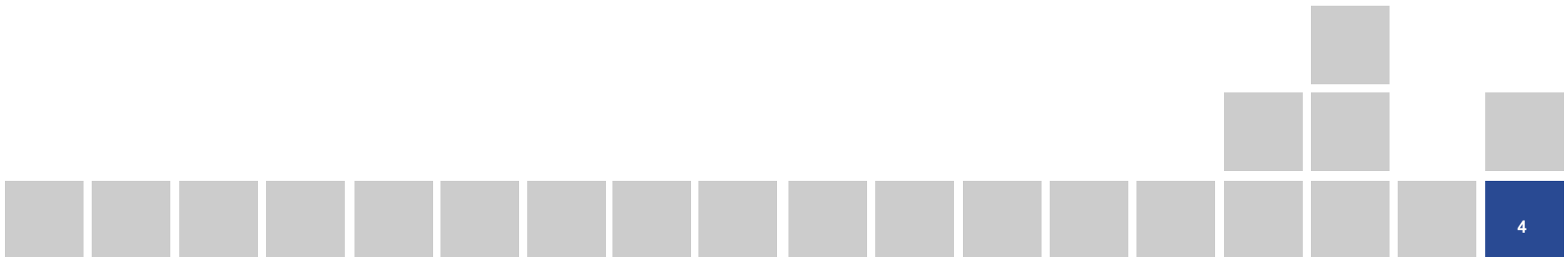
- **Consensus achieved for a definition of technical (anonymous) data and private data**
- **Identification of relevant standards for security, data handling and privacy**





Recommendation 1

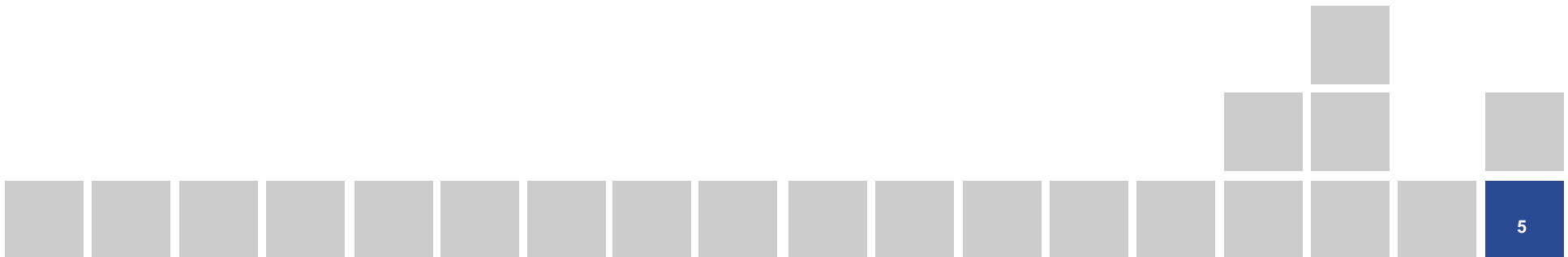
- **Expert Group 2 is tasked with further assessing in how the privacy and data protection issues of Smart Metering and Smart Grids could be covered by and/or fit into the existing EU privacy and data protection framework**
- **If this is not possible in a sufficient manner, the Expert Group 2 is tasked in detailing out the necessary additional legal framework to regulate those issues and in proposing particular privacy requirements for the stakeholders in Smart Grids**





Recommendation 2

- **ESO's (CEN, CENELEC, and ETSI) mandate that Smart Grid products and solutions should be designed incorporating agreed data privacy and security principles at their core**





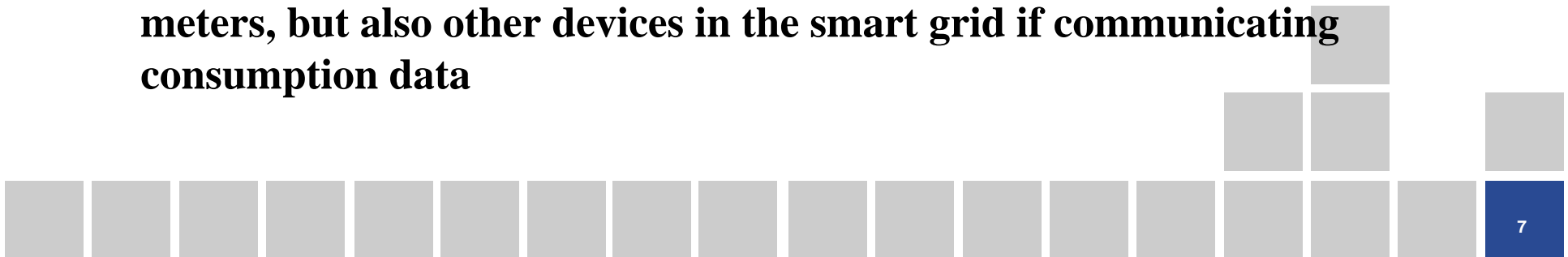
Recommendation 3 – Data Security

- **ESO's are tasked with either updating, extending or developing new standards regarding security aspects of Smart Grid interfaces**
- **The ESO's joint working group review the EG2 recommendations and relevant documents before starting new standardizations**
- **The ESO's are tasked to evaluate the current state of the art in cryptographic primitives**
- **ESO's joint working group on smart grids should play a key role in this standardization work, and be responsible for ensuring continuity of all standardization work**
- **The specification should not preclude the initial adoption of symmetric key cryptography followed by a further smooth migration to asymmetric cryptography if required**



Recommendation 3 – Data Security cont.

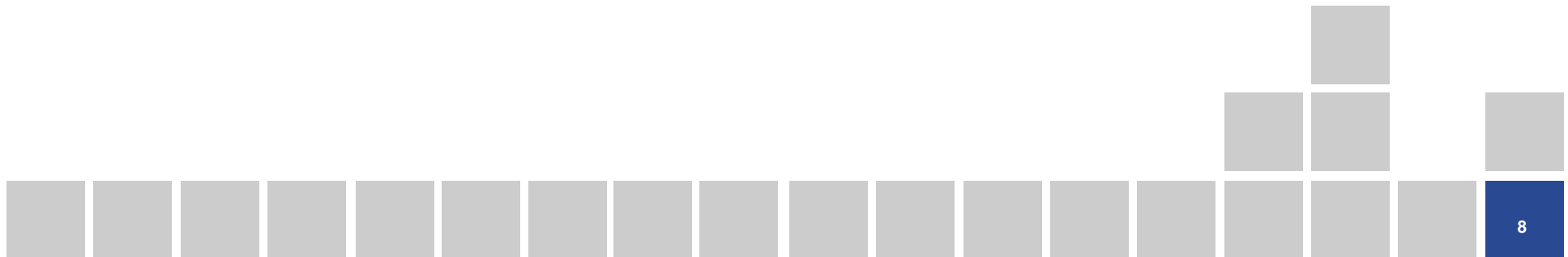
- A business model is investigated to make the creation and maintenance of certification authorities possible
- A study is conducted on how to handle multi-national key management and whom should be in charge of performing the key management
- One generic model is adopted by all European countries, for key management, security and privacy principles, regardless of the communication technology or protocol
- Where appropriate, adequate protection profiles should be defined for security sensitive smart grid components according to ISO/IEC 15408
- Security and privacy principles should be relevant to not only smart meters, but also other devices in the smart grid if communicating consumption data





Recommendation 4 – Data Handling

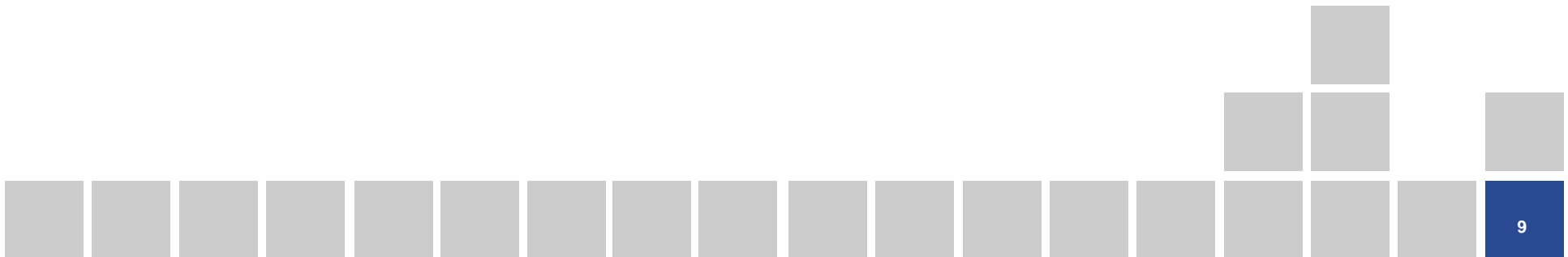
- Further pilot projects needs to be done in the area of data handling
- A paper should be produced highlighting the additional standardization required
- Security levels to be defined from minimum to advanced and the costs for the different security levels to be estimated





Recommendation 5 – Data Privacy

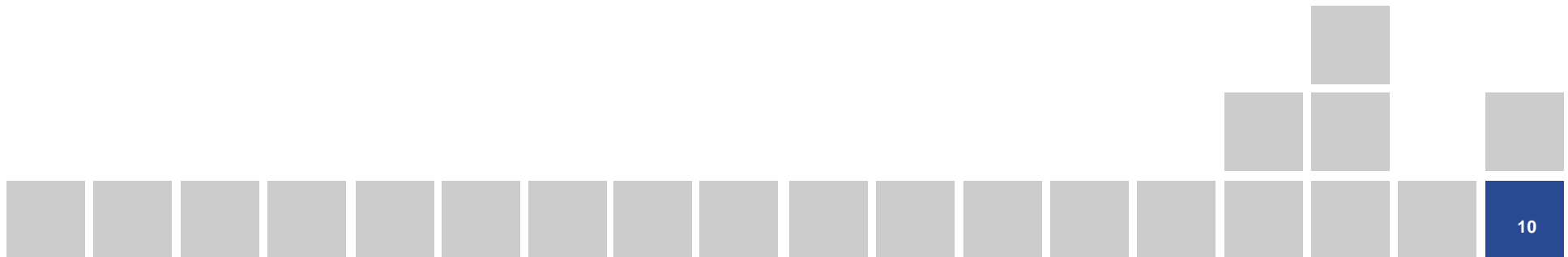
- **Distinguish between consumer and technical data to minimize the vulnerability of private data**
- **Consumer data is considered as specific data and can be traced back to the individual consumer whereas technical data is aggregated and anonymous and does not contain explicit references to persons**
- **To ensure data safety and security within an intelligent network a clear division of roles and responsibilities has to be defined**
- **The Expert Group is tasked with detailing out the different data elements and define roles and responsibilities, including handling, possession and access to data**





Proposed way forward

- **Develop further specifications and recommendations for the split of data (technical and private), security levels and procedures**
- **Define a framework for audit on data handling and related standards**
- **Encourage involved parties to conduct pilots with a sufficient scale**
- **Based on Expert Group findings, elaborate detailed Work Packages to be assigned to the ESO's**





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