



TELECONTROLLO
RETI DI PUBBLICA
UTILITÀ 2013

ANIE
AUTOMAZIONE



CONTATORI INTELLIGENTI E LORO EVOLUZIONI: L'ATTUALE CONTESTO DI SVILUPPO IN EUROPA

Giuseppe Mauri



Marco Baron



Agenda

- Il progetto Europeo Meter-ON
- Soluzioni Tecnologiche adottate in Europa
- Protocolli di comunicazione
 - Tra il contatore e l'infrastruttura
 - Tra l'infrastruttura di metering e il cliente finale
- Supporto ai consumatori attivi, ricarica dei veicoli elettrici e servizi multimetering sia per l'elettricità che per il gas

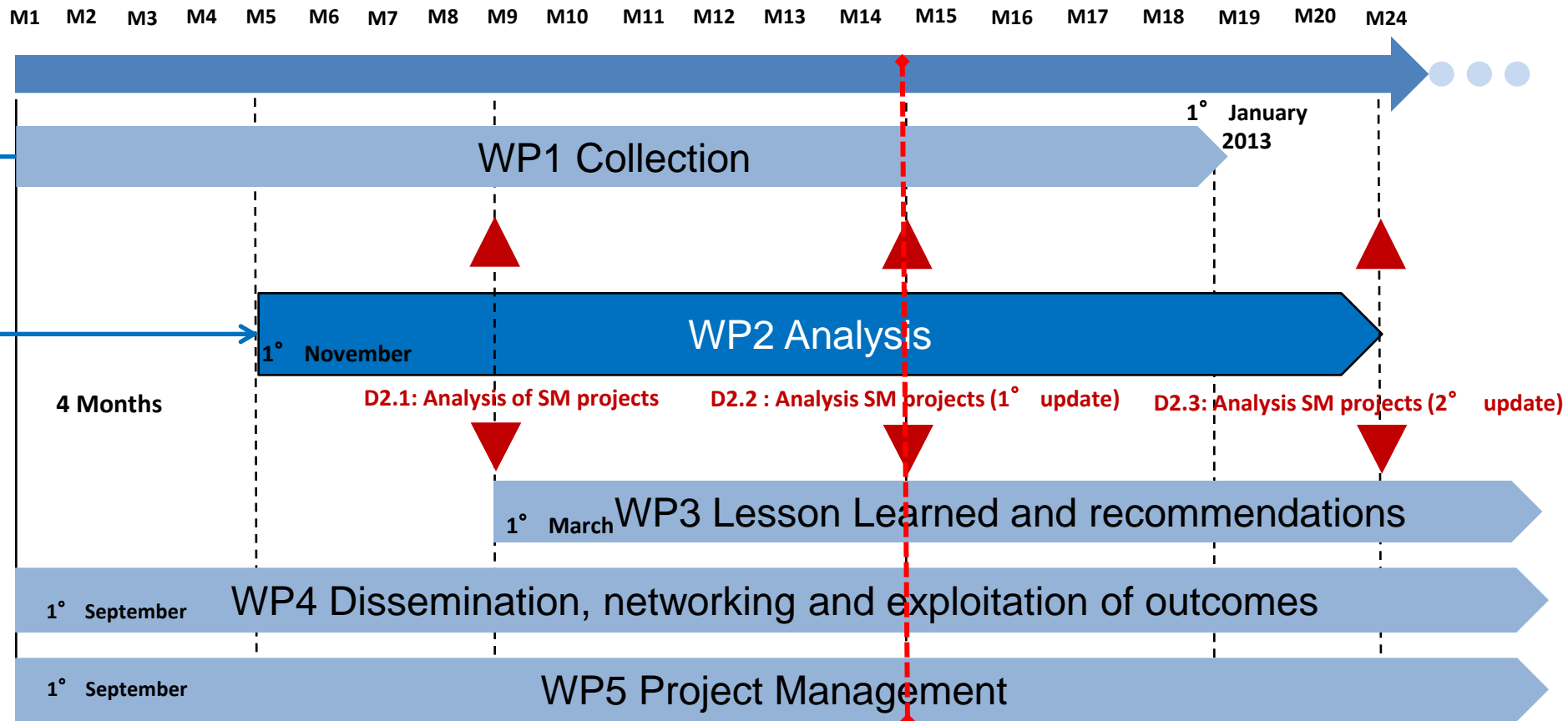
The METER ON methodology

- Meter-ON approach is based on the experience gained through completed, on-going or planned smart-metering projects.
- A three-step approach:
 - ➔ – i) collection of questionnaire from smart metering projects
 - ➔ – ii) per-project analysis
 - ➔ – iii) recommendations on the way forward based on the lessons learned from the most successful smart metering experiences



The METER ON Timeline

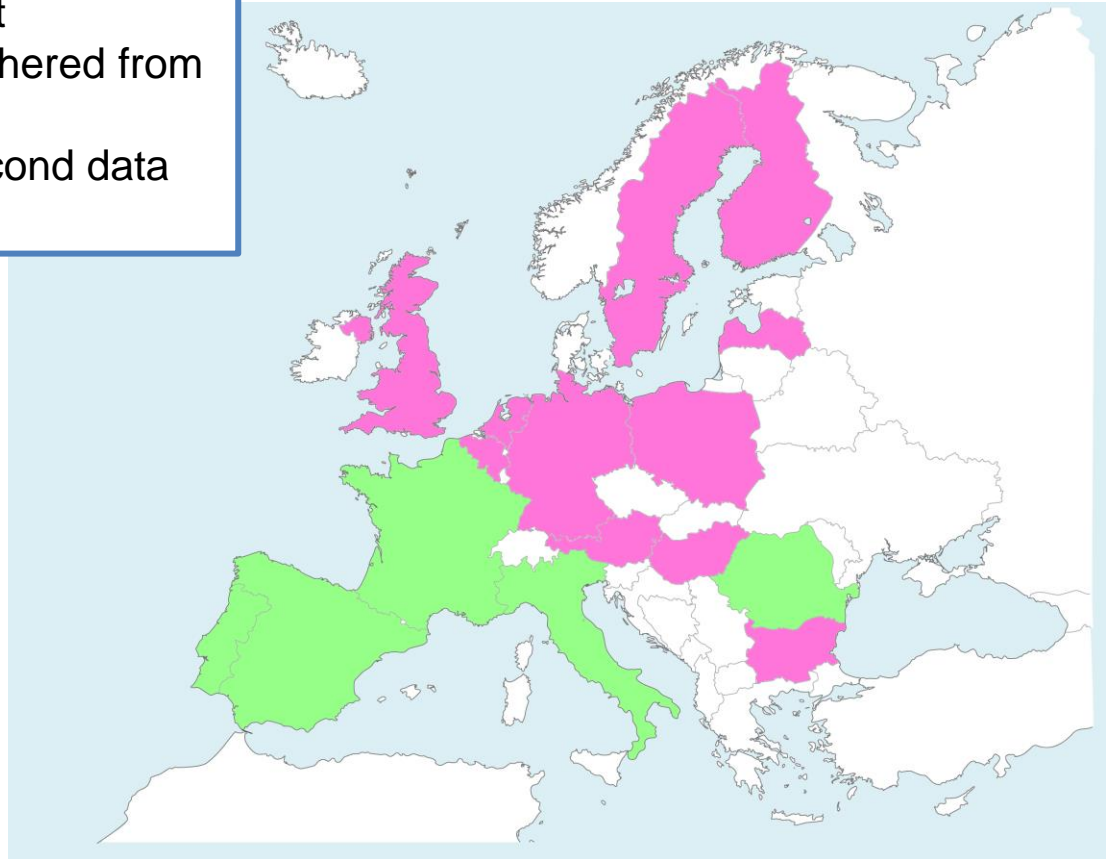
- 8 questionnaires were collected and analysed
- 10 questionnaires are under analysis



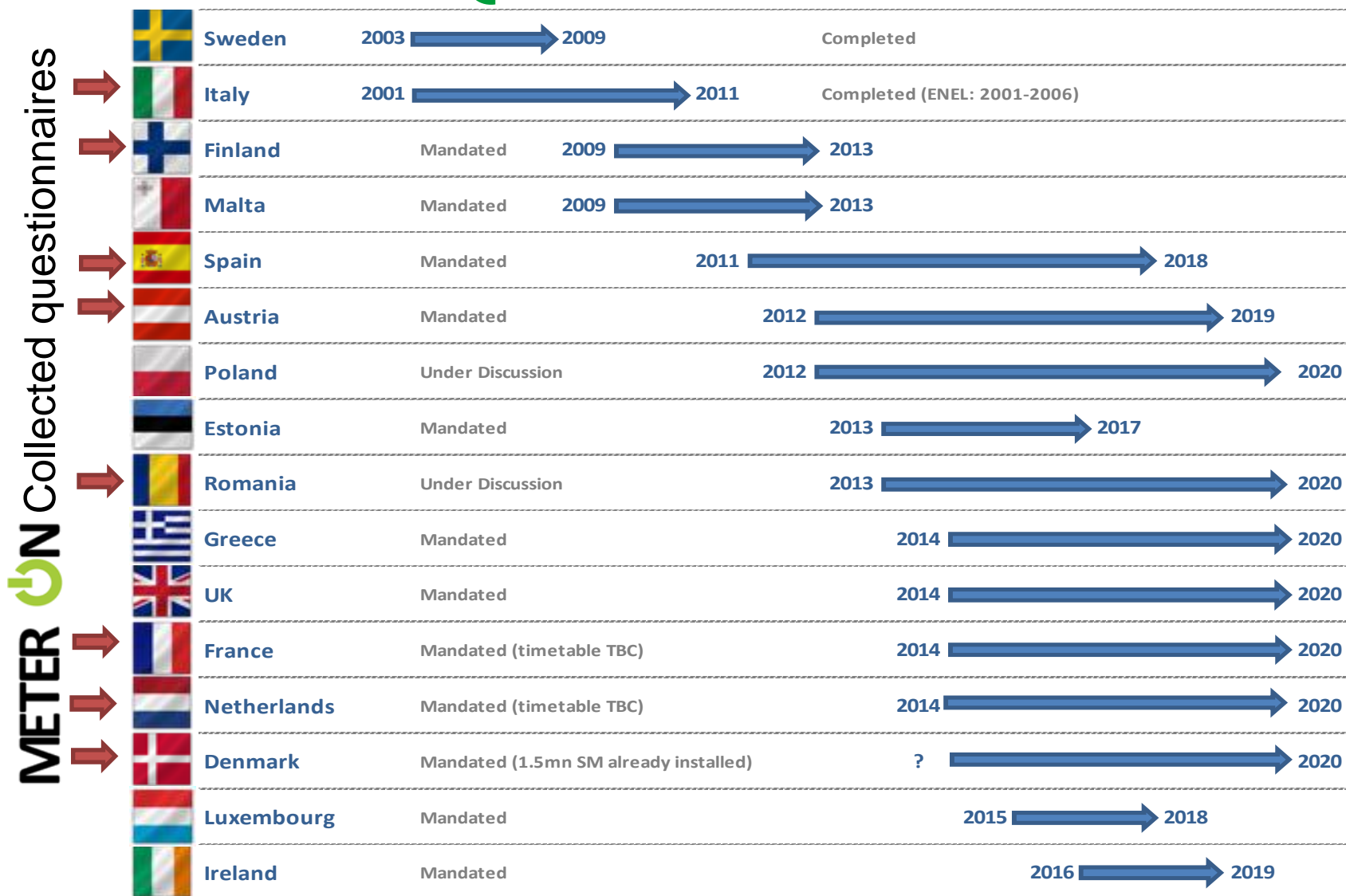
Collection of Questionnaires

Legend:

- Countries addressed in the first data collection. Information gathered from 8 projects
- Countries addressed in the second data collection.



Collection of Questionnaires



Analisi Tecnologica

- The analysis of the technology used for the transmission of data between meter and concentrator has highlighted the following points:
 - 10 projects use PLC, 3 projects uses GPRS, while a project uses both technologies depending on the location of the meter. One project is still considering which technology to use.
 - Of the projects being rolled-out, 6 use PLC technology, while the remaining 2 use GPRS.
 - The project in the demonstration phase uses both PLC and GPRS communication technology, while the one still in R&D phase has not yet decided which communication technology to use.

Outcomes

- With regard to the communication protocol used, it emerged that the most used communication protocols are Meters and More, DLMS/COSEM based protocols: PRIME, G3-PLC, with a very similar architecture
- Functions provided are very much similar
- Communication architecture is very much similar
- Differences are in the maturity of the technology and the number of meters already installed

Funzioni Avanzate

Smart metering can be a key tool to manage and operate power grids contributing to:

- Impact on network planning
- Impact on network maintenance
- Identification of technical and non-technical losses
- Monitoring quality of service
- Provide support to electric vehicle infrastructures
- Provide support to Distributed Generation
- Provide support to Demand Response

Smart metering of GAS

- 3 out of 15 DSOs are actively working on a metering solutions also for gas

Analisi Qualitativa

- Qualitative Analysis investigated:
 - Legal & Regulatory status for each Country
 - Customer focus in each project
- **Outcomes**
 - 10 countries: 10 “ways different ways of intending smart metering”
 - Deployment strategy needs to involve all stakeholders from the beginning
 - DSOs need to establish a trustful relation with the consumer

Analisi Quantitativa

- Promoters of smart meters claim the several benefits enabled by this technology, and the first phase of the Meter-ON project already identified the “technical” benefits originating from these solutions.
- In the next phases of the Meter-ON project the consortium will collect and evaluate economic information related to costs, benefits and will try to identify the more appropriate smart metering supply network configuration which is a major concern for companies in charge for the implementation of smart metering infrastructures.

Conclusioni

- Projects differentiates for communication protocols used within the metering infrastructures as well as for different devices/systems aimed at directly communicating with the final customer and supporting active demand applications
- Some of the smart metering projects are encompassing electric vehicle charging applications and multi-metering applications (e.g., a single metering infrastructure for both electricity and gas).

Ulteriori informazioni

www.meter-on.eu

- deliverable
- Iscrizione alla Newsletter
- Info e materiale di eventi organizzati (video, presentazioni)



Contatti	
Coordinatore del progetto	Per-Olof Granstrom (EDSO4SG) pog@edsoforsmartgrids.eu
Project manager	Marco Baron (Enel) marco.baron2@enel.com



TELECONTROLLO
RETI DI PUBBLICA
UTILITÀ 2013

ANIE
AUTOMAZIONE



Grazie per l'attenzione

Giuseppe Mauri



Marco Baron

