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EcoMeter

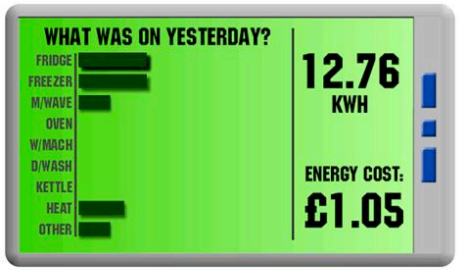
teri onse

PRI Home Energy Controller

PowerPlayer

Panel

EWE-Box



www.esma-home.eu
European Smart Metering Alliance;
www.esmig.eu
The *European Smart Metering Industry Group*

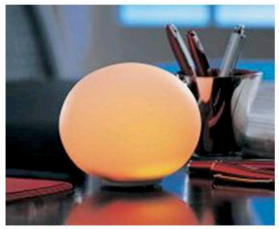
Advanced Metering

and

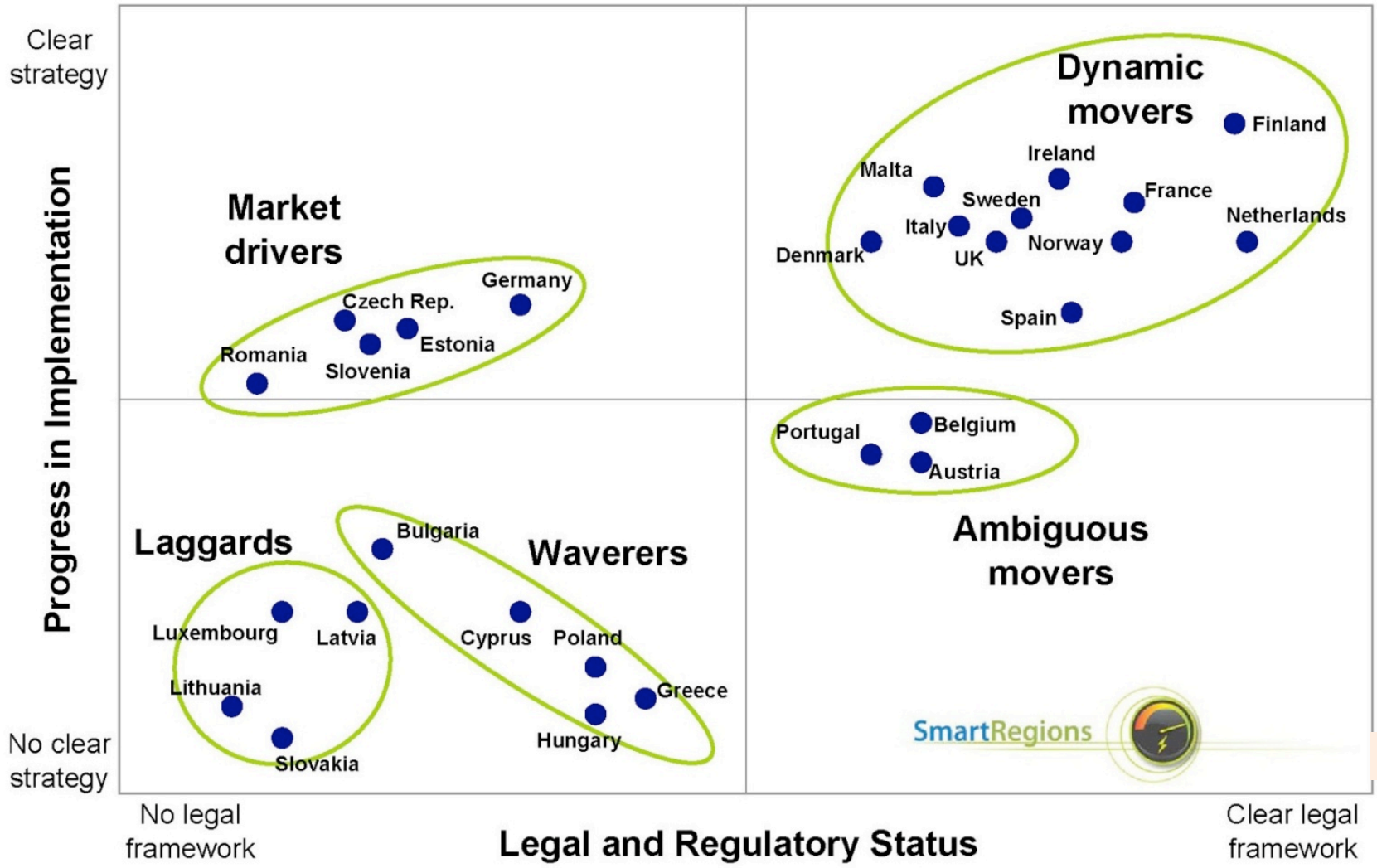
Demand Response

Sentec Coracle

Home Energy Hub



European Smart Metering Landscape



Febr. 2011

IEE-SmartRegions project - www.smartregions.net

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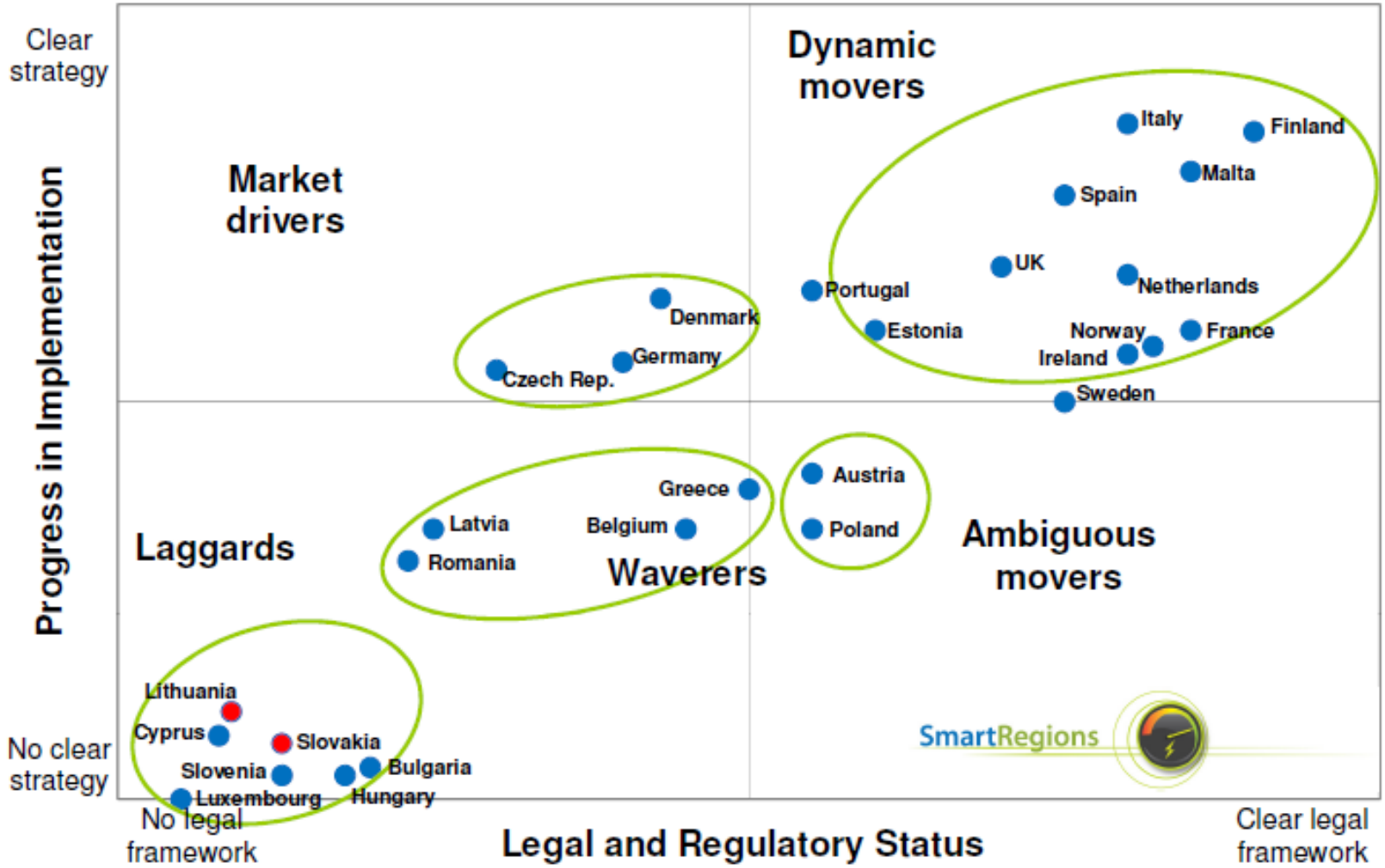
European Smart Metering Landscape



June 2012

IEE-SmartRegions project - www.smartregions.net

European Commission

Smart Metering Landscape

Legal and regulatory status:

By the legal and regulatory status we evaluate whether or not a framework has been created to not only provide clear guidelines to utilities for the installation of meters but to do so with the goal of achieving energy savings and/or peak load shifting.

Smart Metering Landscape

Progress in implementation:

By the progress in implementation we not only refer to the number of pilot projects, smart meters and corresponding services in the field, but also the existence of and progress towards a clear and realistic implementation roadmap for metering technologies that enable metering services with, once again, the goal of achieving energy savings and/or peak load shifting.

European Commission

Smart Metering Landscape

- The "dynamic movers" are characterised by a clear path towards a full rollout of smart metering. Either the mandatory rollout is already decided, or there are major pilot projects that are paving the way for a subsequent decision
- The "market drivers" are countries where there are no legal requirements for a rollout. Some DSOs or legally responsible metering companies nevertheless go ahead with the installation of electronic meters either because of internal synergetic effects or because of customer demands.

European Commission

Smart Metering Landscape

- The "ambiguous movers" represent a situation where a legal and/or regulatory framework has been established to some extent and the issue is high on the agenda of the relevant stakeholders. However, due to lack of clarity within the framework, at this point only some DSOs have decided to install smart meters.

European Commission

Smart Metering Landscape

- The "waverers" show some interest in smart metering from regulators, the utilities or the ministries. However, corresponding initiatives have either just started, are still in progress or have not yet resulted in a regulatory push towards smart metering implementation.
- The "laggards" are those countries where smart metering is not yet an issue. However, since transposition of Directive 2009/72EC is ongoing, it is possible that the laggards suddenly gain momentum.

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Smart Metering functionalities

- In 2011 based on the 11 CBAs performed by European countries (Austria, Belgium, France, Ireland, Netherlands, Norway, Poland, Portugal, Slovenia, Sweden and UK) the EU Commission defined a Smart Metering System in terms of **13 key Functionalities:**

  - **For the Customer (1-3)**
  - **For grid & network support (4-7)**
  - **For commercial aspects of energy supply (8-10)**
  - **For security and privacy (11-12)**
  - **To allow distributed generation (13)**

A joint contribution of DG ENER and DG INFSO towards the Digital Agenda, Action 73: Set of common functional requirements of the SMART METER (http://ec.europa.eu/information_society/activities /sustainable_growth /docs/smart-meters smart_meter_funtionalities_report.pdf)

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Smart Metering functionalities

1. Provides **readings** from the meter to the customer and to equipment that he may have installed;
2. **Updates these readings** frequently enough to allow the information to be used to achieve energy savings;
3. Provides these **readings in a form** easily understood by the untrained consumer, and with calculations enabling final customers to better control their energy consumption
4. Allows **remote reading of meter registers** by energy suppliers and by grid operators;
5. Provides two-way communication between the meter and external networks (both supply & grid) for maintenance and control of the meter;
6. Provides for the **monitoring of Power Quality**;

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Smart Metering functionalities

7. Allows readings to be taken frequently enough to allow the information to be used for **grid control**.
8. Supports advanced tariff systems. Includes multiple tariffs, time of use registers, block tariff registers, remote tariff control, etc as applicable;
9. Supports energy supply by pre-payment and on credit
10. Allows **remote ON/OFF control** of the supply and/or flow or power limitation.
11. Provides Secure Data Communications;
12. Fraud prevention and detection.
13. Provides Import / Export & Reactive Metering.