

PUA

PLC Utilities Alliance



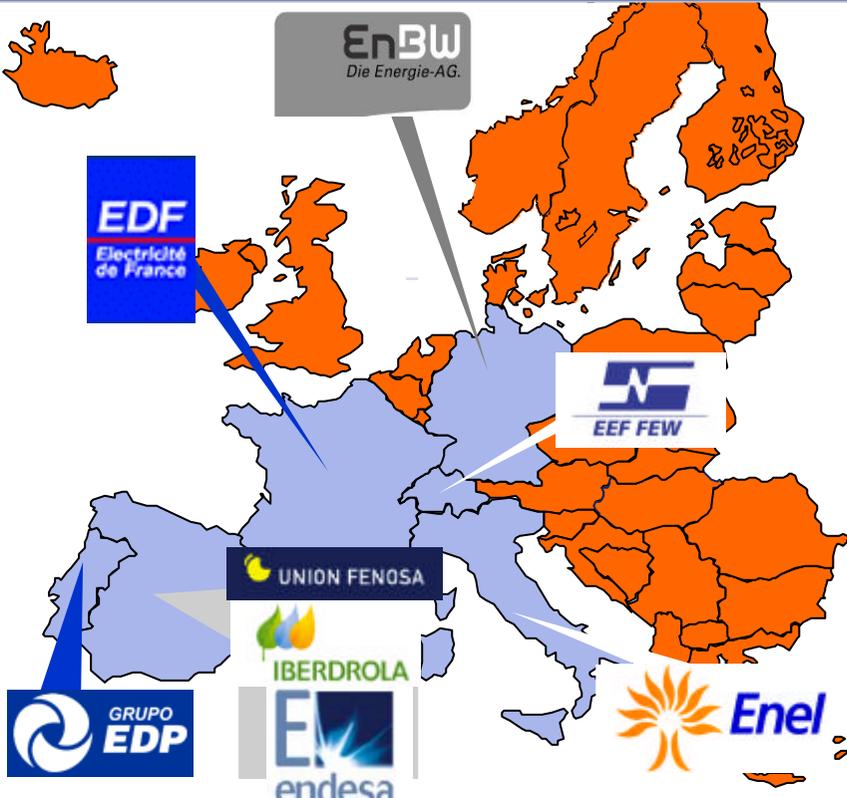
PLC Utilities Alliance Introduction

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The aim of the “PLC Utilities Alliance” (PUA) is to get a closer cooperation among Utilities to promote and influence the PLC industry development in Europe

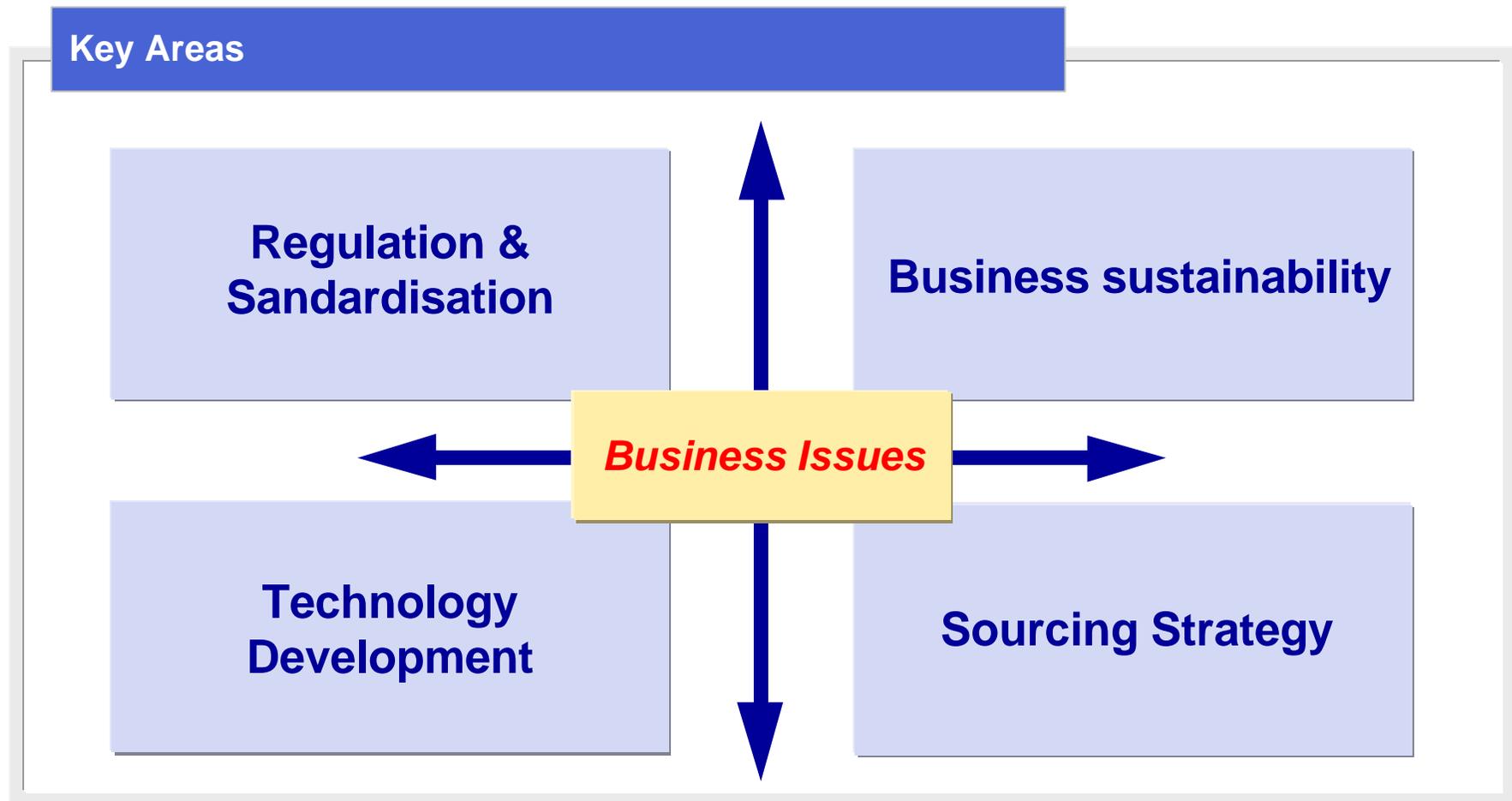
Alliance Members



The map shows the geographical distribution of the alliance members across Europe. Callouts point to the logos of the following companies: EDF (France), EnBW (Germany), EEF FEW (Austria), UNION FENOSA (Spain), IBERDROLA (Spain), GRUPO EDP (Portugal), endesa (Spain), and Enel (Italy).

- European Utilities
- More than 100 million electrical customers
- Presence in more than 24 countries worldwide
- Involved in PLC development
- Mainly members of the PLC Forum
- Currently almost 7.000 PLC PLC users and several PLC deployments

PUA was created to get a common position of Utilities on the PLC development in four key areas



PUA's mission is to create a regulatory and standardisation framework that supports the development of the PLC industry and to establish PLC as an EU broadband policy priority

Alliance Objectives

- **Common Platform:** Develop a common position among PUA members, acting as the basis for the work with national and EU bodies to obtain a favourable environment for PLC development
- **Raise Awareness:** Inform about the PLC opportunity, its possibilities and how it may help the development of the Information Society
- **Technical Reference Point:** Address perceived technical issues and become an available and interactive source of expertise on all PLC technical matters
- **Support Standardisation Process:** Help standardisation process and facilitate communication between the stakeholders involved
- **Support PLC equipment R&D:** Collaborate with the main PLC equipment providers in order to identify technical improvements and upgrades, and develop equipment responding to the requirements of the Utilities

Basic principles apply to voting in most cases, however in certain cases a higher majority or quorum may be required

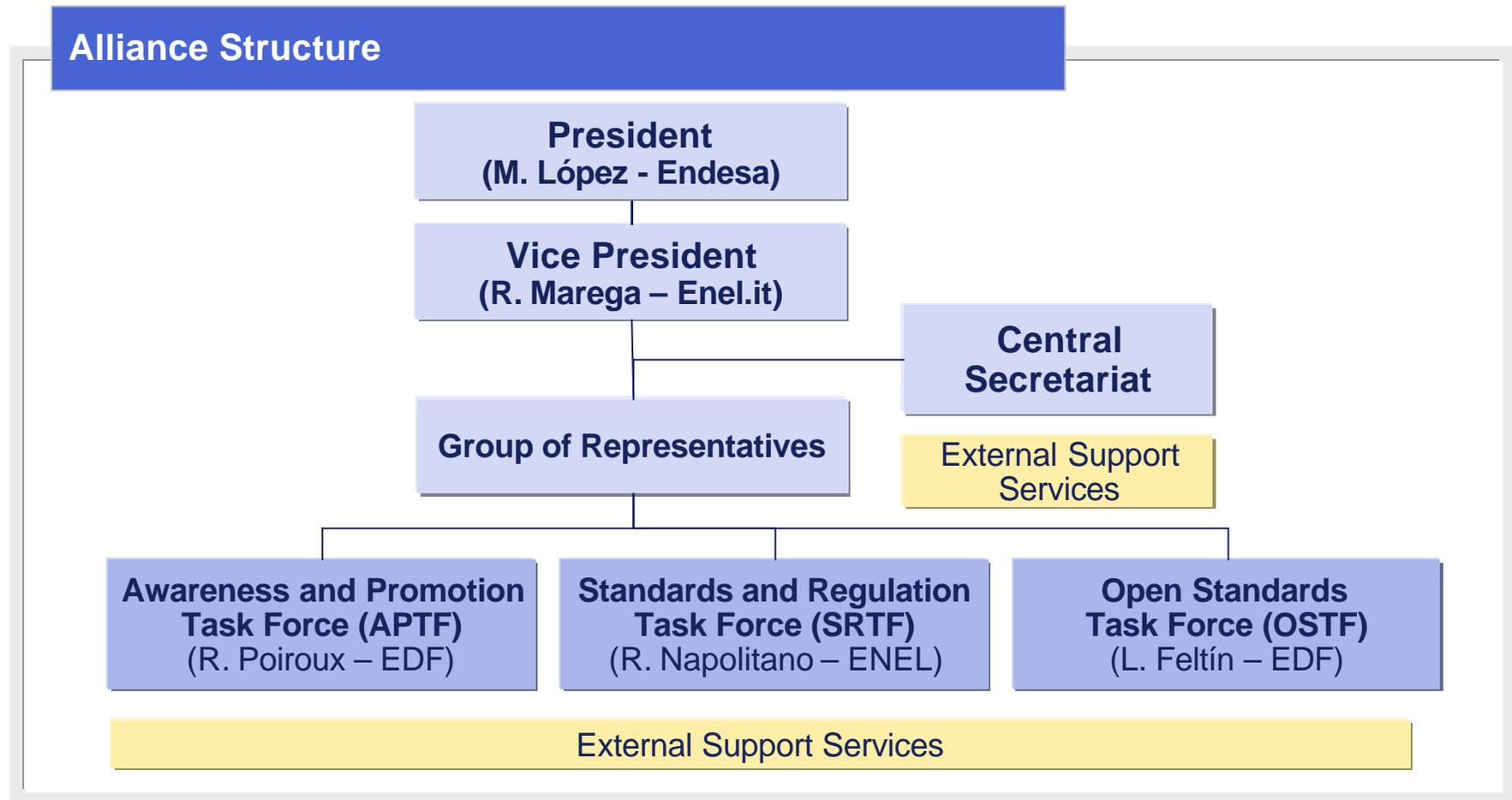
Basic Principles	
Foundation	<ul style="list-style-type: none">■ Founded in January 2002 by Iberdrola, Enel, EDF, EnBW, and Endesa
Meetings	<ul style="list-style-type: none">■ Meetings of General Assembly every ~ 40 days■ Task Force Meetings as needed (at least every twice a month)
Participants	<ul style="list-style-type: none">■ Board of Directors, other participants may be invited as non-voting guests as necessary
Focus	<ul style="list-style-type: none">■ Main focus on Europe■ National and European level

Place of Meetings



Meetings are held in offices of members on a rotation basis around Europe

The main bodies of the PUA are: Presidency, Vice President, a Representatives Body, and Task Forces



The PUA is working in its Standardization and Regulation Task Force in the development of an adequate regulatory framework

Standardization and Regulation Task Force (SRTF)

Situation

- Regulation issues managed at domestic level by single Utilities, with weak lobbying activity at European level and differentiated positions of Regulating Authorities
 - Several bodies are involved in the standardisation process for PLC technology with different scope: Worldwide, European, National
 - Regulations are developed to define criteria under which PLC can be rolled out without causing problems to other systems
- **ITU** (International Telecommunication Union)
 - **IEC-CISPR** International Special Committee on Radio Interference
 - **CENELEC** European Committee for Electrotechnical Standardization
 - **ETSI** European Telecommunications Standards Institute
 - **National Committees**
 - **European Commission**
 - European Conference of Postal and Telecommunications (**CEPT**)
 - National Postal and Telecommunications Administrations

SRTF Activities

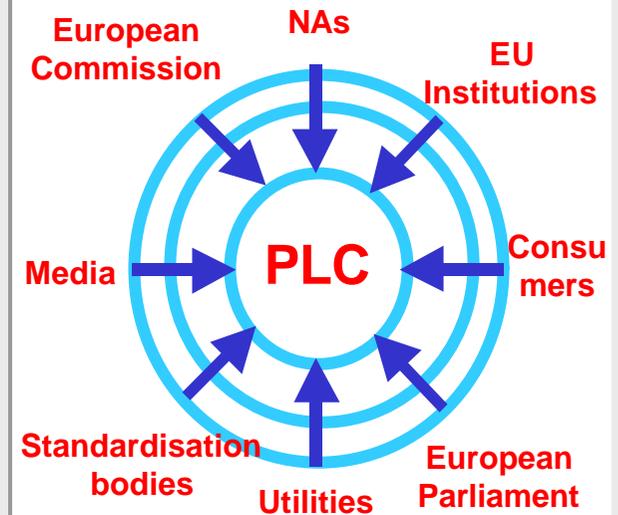
- Collect technical status and measurements of the PLC systems and build a common knowledge
- Agree on policies to be developed within standardisation bodies
- Promote and accelerate the process of definitions of regulations and standards

The PUA is working in its Awareness and Promotion Task Force (APTF) in the promotion of PLC technology with the EC and NA

Awareness and Promotion Task Force (APTF)

Situation

- In the beginning of 2002, there were still doubts from some stakeholders about the technical viability and the commercial maturity of PLC
- Regulation and standardisation of PLC is playing a central role in the facilitation of PLC development
- The creation of EU policies, standards and regulations involves a complex decision process and a diverse array of bodies and persons
- Need to identify and address key industry issues



APTF Activities

- Development of *White Paper on PLC and its impact on broadband in Europe* and distribution to main industry stakeholders
- Information activities with major regulatory and standardization bodies
- Communication with EU bodies, NAs, and other stakeholders
- Coordination of information exchange between PUA members

The PUA is working in its Open Standards Task Forces the development of an *Open Standard* for interoperable PLC systems supported by manufacturers

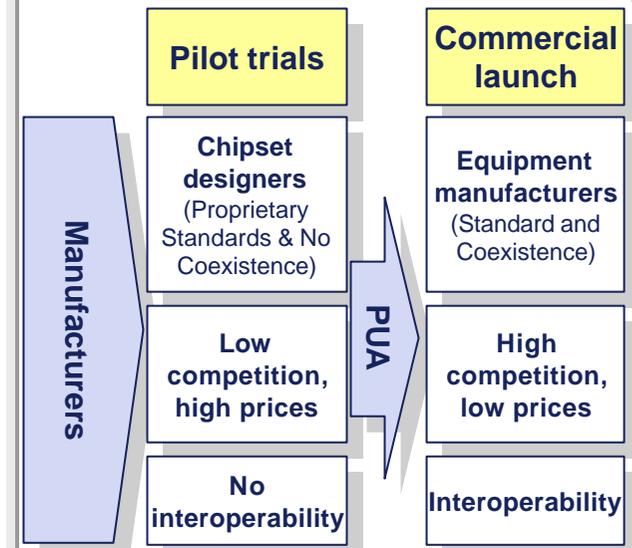
Open Standards Task Force (OSTF)

Situation

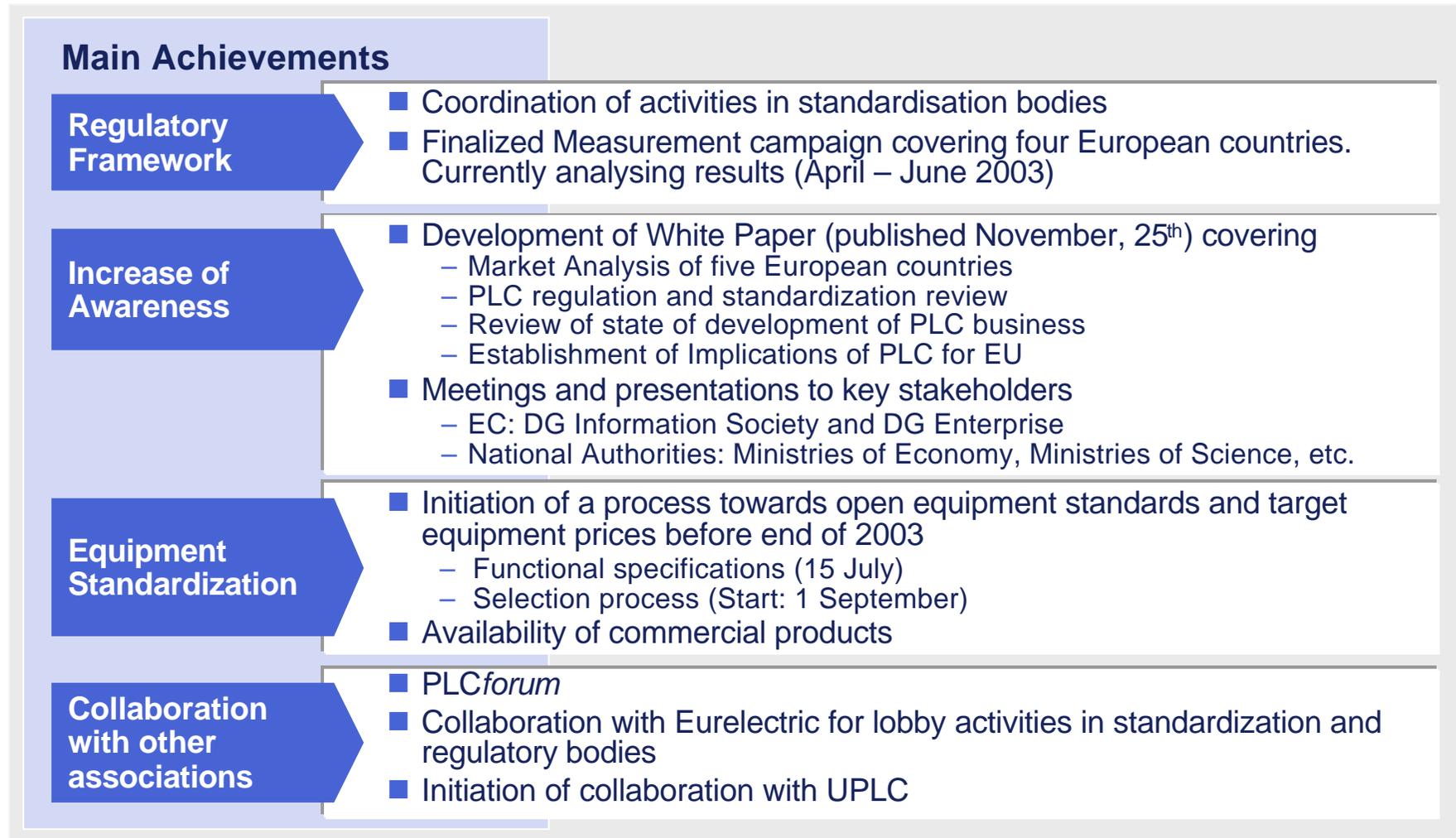
- Different technologies tested by Utilities, with no clear standard identified yet
- Suppliers relationship managed individually
- Cost thresholds to guarantee economic sustainability still to be clearly identified and shared in the industry
- Need for a closer cooperation among Utilities leads to effectively steer the industry development at European level

OSTF Activities

- Define and promote an open PLC access standard
 - Define the basic functional specifications for PLC systems
 - Selection process
- Share the testing experiences



The PUA members proved in their trials the technological viability of PLC and increased significantly the awareness of PLC in the industry



The difficulties in the communication of the value of PLC slowed down the development of PLC

Remaining Challenges

- Utilities have not yet decided to launch commercially
- The number of PLC users worldwide has not significantly increased in the past months
- The financial market is not “prepared” for PLC
- The regulatory process has proven to be slow and difficult to accelerate
- There are still prejudices against PLC technology
- Equipment price decreases depend on the standardization process that still will take more time. The economies of scale still have to be reached
- The commitment of the manufacturers will depend on equipment orders

The PLC associations should collaborate to overcome the remaining obstacles for the mass commercialisation of PLC

