The Linky system

- **INTEROPERABLE** (interchangeable equipments, standard communication protocols)
- **2-WAYS COMMUNICATION**
- **UPGRADABLE** (system and components, step by step)
New advantages for the customer

**Without Linky**

- Invoices bases on estimations
- Be at home for the reading
- Be at home for interventions
- Time between a demand and an intervention

**Linky’s benefits**

- Daily remote readings
- 70% of work done remotely
- Less than 24h

Energy management

1. **GIVE INFORMATION**
   - through the Linky system
   - by wire or radio
   - On the web
   - On an IHD

2. **MANAGE**
   - 8 interfaces
Linky, an ambitious pilot

III 3 main targets

- Check the roll-out processes
- Build the Linky IS
- Confirm financial hypothesis

III 300,000 customers & 2 regions

- Toursine: 100,000 customers, mainly rural, 33 inh. / km²
- Lyon: 200,000 customers, urban, 1.750 inh. / km²

III A 24 months pilot

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<tr>
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<th>2009 March</th>
<th>2010</th>
<th>2011 March</th>
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<td>Substations preparation</td>
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<td>Data concentrators installation</td>
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<td>Meters installation</td>
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March 31st, 2011: end of field operations. Main results

- **4,600** DC installed (99%)
- **250,000** meters changed (90%)
- **92%** of the meters communicate
- **98%** of tele-operations are achieved in less than 24 hours
- **30 mn** (average) to replace a meter, 8 per day per fitter
- **1,500** meters changed per day (average)
- Less than **1%** claims
Defining the benefits for ERDF

3 main domains benefit from Linky

- Reduction of non-technical losses: ~55%
- Performance of interventions: ~40%
- Better asset management and network operation: ~5%

% of each benefit brought by the project

On the side of the costs, our pilot gave us strong hypothesis

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~4.3 billions €
Conclusion: a viable business case

Key-points about the roll-out seen from ERDF

1. CLEAR THE WAY  Work upon the data in order to facilitate operations

2. PRIORITY TO TRAINING  Work with the subcontractors

3. CREATE THE RIGHT TOOLS  Consider the “2nd IS”, for roll-out

4. CHECK THE DETAILS  Get fast information about field operations
   Maintain the link between Paris and operational teams
   Collect, analyze and use customers’ reactions
Key-points about the roll-out seen from our customers

1. **INFORM**
   Use every mean of communication

2. **EXPLAIN**
   Include communication in the replacement itself

3. **RESPECT**
   Give them the choice

Next steps: national roll-out for Linky


- 35 millions

- EXPERIMENTS / G3 PURCHASE

- PURCHASE

- NATIONAL & LOCAL RECRUITMENTS

- EXPERIMENTATIONS / G3 PURCHASE

- 90%
**Linky : the first step to achieve smart grids**

**G3-PLC Alliance**

### Future developments based on PLC G3
- Real-time network operation
- Integration of IPv6 (M2M)
- EV

### PLC G3 pilot:
- 2000 meters in 2012 in Lyon
- 5000 meters in 2013

### A new global partnership with major players
- Promote G3-PLC in Internationally recognized standards organizations (IEEE, ITU, IEC, ISO, etc.)
- Organize and operate the industry users group to maintain the G3-PLC specification and to insure interoperability
- Support utilities in its deployment
- Promote G3-PLC in further applications

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**Linky : the first step to achieve smart grids**

### « Linky grid » project by ERDF
- Geographical Information System
- MV / LV Grid operation management
- Network modernization
- Power quality

### Specific demonstrators with many partners
- Peak load management
- Load balancing on a regional scale
- Direct integration of renewable energy sources on the MV network
- Customer Information and services
An extensive R&D programme
The setting up of demonstrators in France and Europe
Partnerships with a broad spectrum of companies, from the major distribution utilities to innovative start-ups

Linie : the first step to achieve smart grids

6 major European utilities, 28 partners
6 demonstrators
4 years (2011-2015)

Work in coordination
Define standards
Guarantee the scalability of technologies
Analyse smart grid cost-benefits
Network optimization (supervision & automation)
Renewables integration
Peak load management
DSM, EV, storage, micro grids
Customer engagement
Secure energy supply / network reliability
Thank you for your attention!

Any question?