# Open, Interoperable Advanced Metering System Development

# An overview of what is done in France and thinking for a step further

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# AGENDA

- **The way french meters are designed**

- **Looking ahead for a next step**

# HOW TO BUILD METERS FOR MASSIVE ROLL OUT

- **Needed multiple manufacturers**
  - For PLC meters
  - For PLC data concentrators

- **Use of international standards**
  - Will ease the writing of specifications

- **Huge work to produce the specifications**
  - Describe the functions of the meter
  - Define the profiles comming from the standards
  - Precise the standards when needed

- **Even more huger work for testing**
  - Define the tests profile
  - Precise the specifications

# STANDARDS CHOSEN FOR THE FRENCH SMART METERS

- **DLMS and COSEM**
  - Well known in the metering business (first draft in IEC TC 57 in begining of the 90s)
  - Available also from independant software compagny
  - Well maintained (IEC + DLMS UA)

- **G1 S-FSK PLC**
  - Well known in the metering business
  - Modems availables for long time

- **G3 PLC**
  - IP V6 based PLC
  - Designed for worldwide usage (Cenelec A, FCC & ARIB)
  - Multiples modems availables (32 devices certified)
  - Standard bodies
  - G3 PLC Alliance + tests labs + plug fest

# LOOKING AHEAD, AN R&D THINKING

- **Harmonized hardware**
  - Hardware specifications depends on the way you build your network
  - Modular approach could be an option

- **Low level metering feature**
  - API for raw datas

- **Standardize functions**
  - High level
  - Reused across the type of meter (fom LV to MV)

  - API + standardized functions  = ?