“How-to-Guide for Smart Grids in Distribution Networks”
12-13 September 2012
Dublin, Ireland

Smart Grid Roadmap Development
Global Experiences & Lessons-Learned

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Key Lessons-Learned...
NA, LA, APAC, Europe: utility, regional, country level

✓ ... different level of complexity and deployment details
✓ ... large diversity of „why, what, how, when”... stakeholder specific
✓ ... it is not an engineering or design document
✓ ... centered around added value, customer and market
✓ ... the main purpose is NOT to define (or select) technologies
✓ ... solution approach based on technical functionalities - justified through business case
✓ ... practical approach vs. unrealistic expectations
✓ ... art of the “compromise” and “disciplined execution”
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What It should be…

✓ Document with strategy and execution blueprint for technical performance (energy infrastructure value) empowerment (customer value), growth, innovation and job creation (economic/”stakeholder” competitiveness) – BIGGER, FASTER, BETTER

✓ Document defining (high level) practical steps of “why, what, how, when”

✓ “Top-Down” approach not “Bottom-Up” (scalability, interoperability)

✓ Direction justified by “business case” (prioritization, risk management, penetration level)

✓ Within existing and new “marker/regulatory” frameworks

✓ Change management (approaches, processes, etc.)
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...BUSINESS PLAN for a “business start-up”...
(without P&L, balance sheet, etc.)
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Process ...

1. SG Requirements
   (business, customer, technical, regulatory)
   ✓ Objectives (drivers)
   ✓ Expected outcomes
   ✓ Enabling “Building Blocks”
   ✓ Etc.

2. Functional Requirements
   ✓ Technical Functions (e.g. FDIR, CVVC, DR, etc.)
   ✓ Bundling
   ✓ Etc.

   ✓ Prioritization
   ✓ Scalability
   ✓ Risk Management
   ✓ Etc.

4. Roadmap & Programs
   Stakeholders Alignment

Scale Deployment

Demonstration Projects