



INNOGRID 2020+

The Smart Grids Deployment: a joint effort with many interacting stakeholders

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T&D Europe



The European Association of the Electricity Transmission
and Distribution Equipment and Services Industry

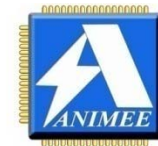
About T&D Europe : the Association

- T&D EUROPE is the European association of the electricity transmission and distribution equipment and services industry.
- Our scope includes the complete range of products and services necessary to transport and distribute electricity in high and medium voltage, between the producers and the end users.
- The companies represented by T&D Europe account for a production worth over €25 billion, and employ over 200,000 people in Europe.



About T&D Europe : the Members

- Members are all relevant European national associations



T&D EUROPE Organization

9 March 2010

ORGALIME

President : Ralf CHRISTIAN

General Assembly

Executive Committee

Chairman : Bertrand HUGOO

Spokesman & VP : Giuliano MONIZZA

Secretary General : Oliver Blank

WG 1 : G. Monizza
Energy Policy
and
Energy Efficiency

WG 2 : G. Amann
Marketing,
Communication,
Economics

WG 3 : J.L. Bessède
Technology
&
Innovation

WG 4 : A. Luxa
Legislation
&
Directives

TF
Smart Grids
R. Chamah

WG 2a
Stat Transformers
B. Hanze

WG 2b
Stat Switchgear
R. Chamah

WG 3a
Switchgear
Standards
D. Pulchiron

WG 3b
Transformer
Standards
M. Sacotte

TF
SF6 Global
J.M. Basse

WG 3c
EU Technology Plan - Energy
J.L. Bessède

TF
Offshore Wind Technology
G. Segers

Switchgear

Transformers

The background of the top section is a faded, blue-tinted image of high-voltage electrical equipment, including insulators and metal structures.

Objectives

- T&D Europe aims to promote and to defend the common interests of the European electricity transmission and distribution manufacturing industry towards and in cooperation with the EU institutions
- T&D Europe works in collaboration with European and international standardisation bodies, in order to establish a coherent system of worldwide standards and testing
- T&D Europe is committed to the supply of equipment, systems and services for electrical networks that are reliable and sustainable for the efficient transport and delivery of energy



Positioning and Scope

- The scope of T&D Europe encompasses equipment, systems and services for the complete network of electricity transmission and distribution (from generation to consumption)
- T&D Europe members provide the full range of grid technologies, including advanced, smart systems suitable for interaction with renewable energies and ICT (Information & Communication Technologies)
- T&D Europe is the voice of the manufacturing industry of electrical equipment and systems for transmission and distribution of electrical energy in Western Europe and is gradually expanding into Central and Eastern Europe

The Political Challenges

- Future of the European energy infrastructures and provision, climate protection, energy efficiency
- Lisbon-Treaty and new EU competencies in the areas of climate change and energy policies
- EU Commission with multiple entries and interests, in particular Commissioners Oettinger (Energy), Hedegaard (Climate Action), Tajani (Industry & Entrepreneurship), Kroes (Digital Agenda)

The EU Agenda

- EU-Energy Strategy 2011-2020 completed by 2nd Energy Efficiency and Energy Infrastructures Plans
- EU Smart Grid initiatives (Task Force and Standardisation)
- International Climate Change Agreements (Post Kyoto)
- Internal Market on Electricity: final implementation of third liberalisation package (due in 2014)
- European strategies for clean and energy-efficient vehicles, for smart cities.

The Cooperation Partners

- ORGALIME (European engineering industry umbrella federation)
- ESMIG (Smart Meters group)
- EUROPACABLE, Capiel LV, DIGITALEUROPE, CECED, CECAPI (Other electrical and electronic equipment associations)
- EURELECTRIC (Electricity Producers and Network Operators)
- ENTSO-E (European network of transmission system operators)
- ACER (Regulators Agency)
- CEN / CENELEC (Electrotechnical Standardisation) and ETSI (Electronic Standardisation)
- BUSINESSEUROPE (Confederation of European Business)

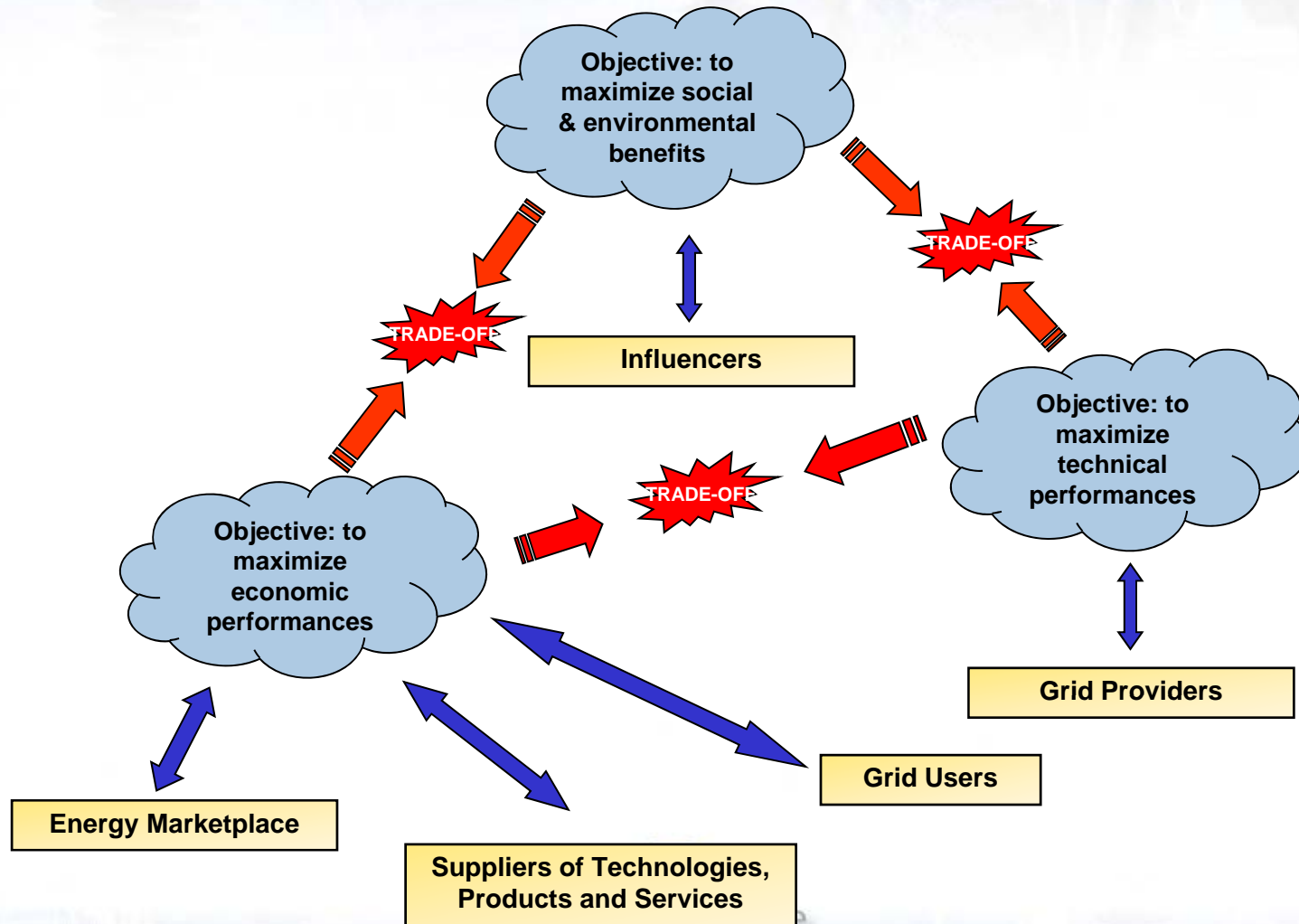
The background of the top section is a faded, blue-tinted image of high-voltage electrical equipment, including insulators and power lines.

EEGI initiative

“The T&D equipment manufacturers and ICT industry will be needed to support the integration of technology solutions into the European electricity grids based on the specifications from network operators, and will also have an early access to future needs of the electricity network.”



Objectives and relations





KPIs

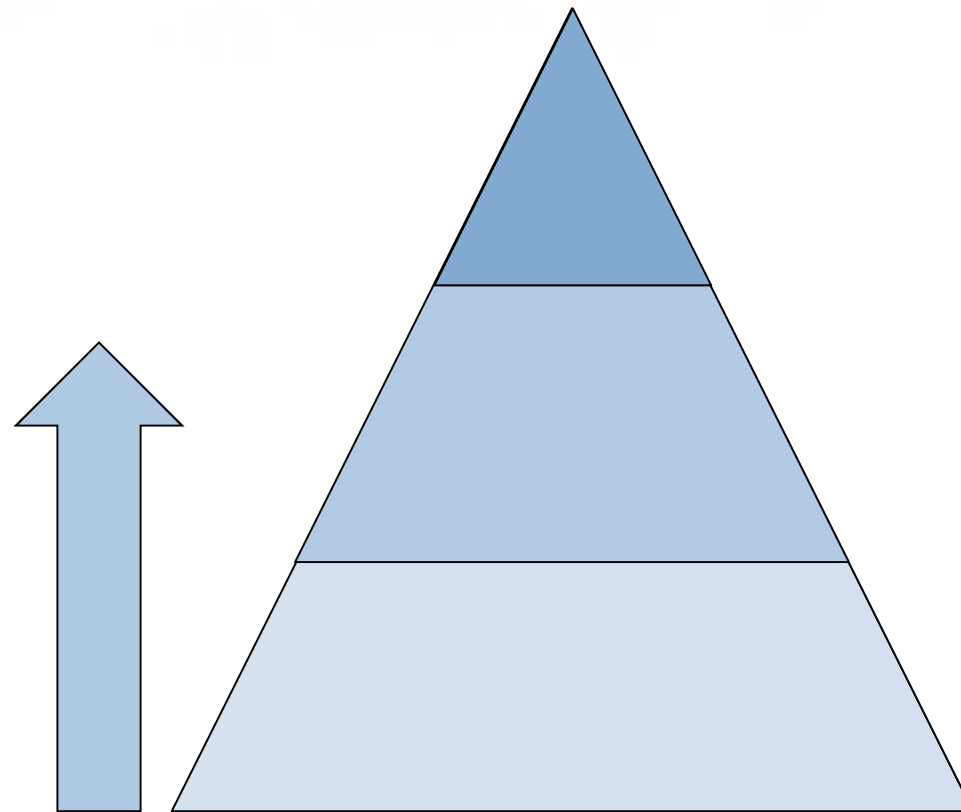
- T&D Europe contributes to GRID+ and EEGI in the KPIs definition activities
- Key Performance Indicators
- Requirements
 - Simplicity
 - Measurable
 - Assessable
- Related to real network components



KPIs

- KPI Level: 1, 2 or 3
- KPI Type: Economic, Technical, Implementation
- KPI Subtype: Sustainability and Integration, Coordination and Interconnection

KPIs approach



Level 1 KPIs
Programme

Level 2 KPIs
Clusters of projects

Level 3 KPIs
Functional projects



Benefits/1

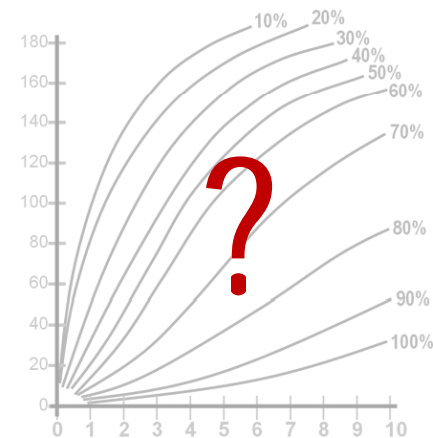
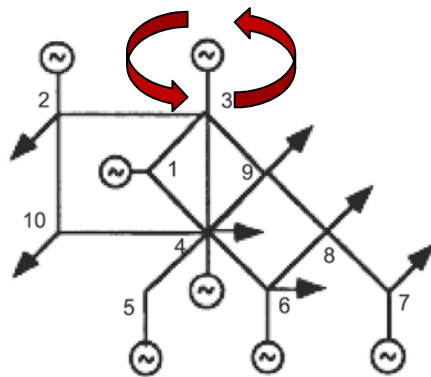
Benefit	Definition
B1	Increased sustainability & environmental
B2	Adequate transmission/distribution grid capacity to bring the electricity generated from all sources to consumers
B3	Harmonization and standardization of grid connection procedures
B4	Higher reliability, security and quality of supply
B5	Enhanced efficiency and better service in electricity supply and grid operation
B6	Support to pan-European electricity markets by load-flow control to alleviate loop-flows and increased interconnection capacity
B7	Coordinated grid planning and development involving joint European, regional and local grid processes

Benefits/2

Benefit	Definition
B8	Cost efficiency of the deployed solutions (CAPital EXpenditure CAPEX + OPerating EXpence OPEX)
B9	Enabling new business models and development of innovative products and services
B10	Enhanced consumer awareness and participation in the market by new players
B11	Enabling consumers to make informed decisions related to their energy to meet the EU Energy Efficiency targets
B12	Creation of market mechanism for new energy services such as energy efficiency or energy consulting for customers
B13	Reduction of consumer bills or mitigation of upward pressure on them
B14	Electrical energy theft and ICT attacks reduction

KPIs approach benchmark

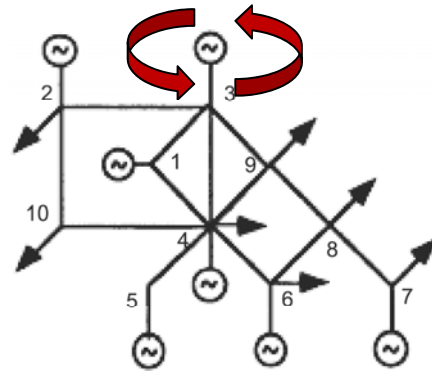
- Benchmark is needed to measure the real benefit of KPIs, during definition and use
- How a change of a power component affects the performance?



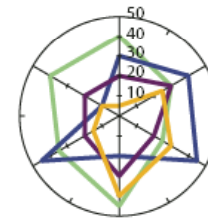
Benchmark example

KPI 2.1
Share of
RES

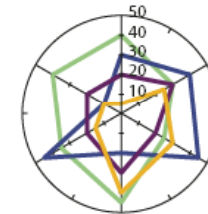
TARGET



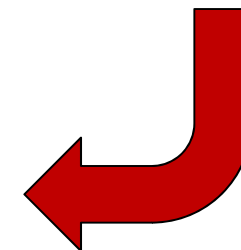
CHANGE



BEFORE



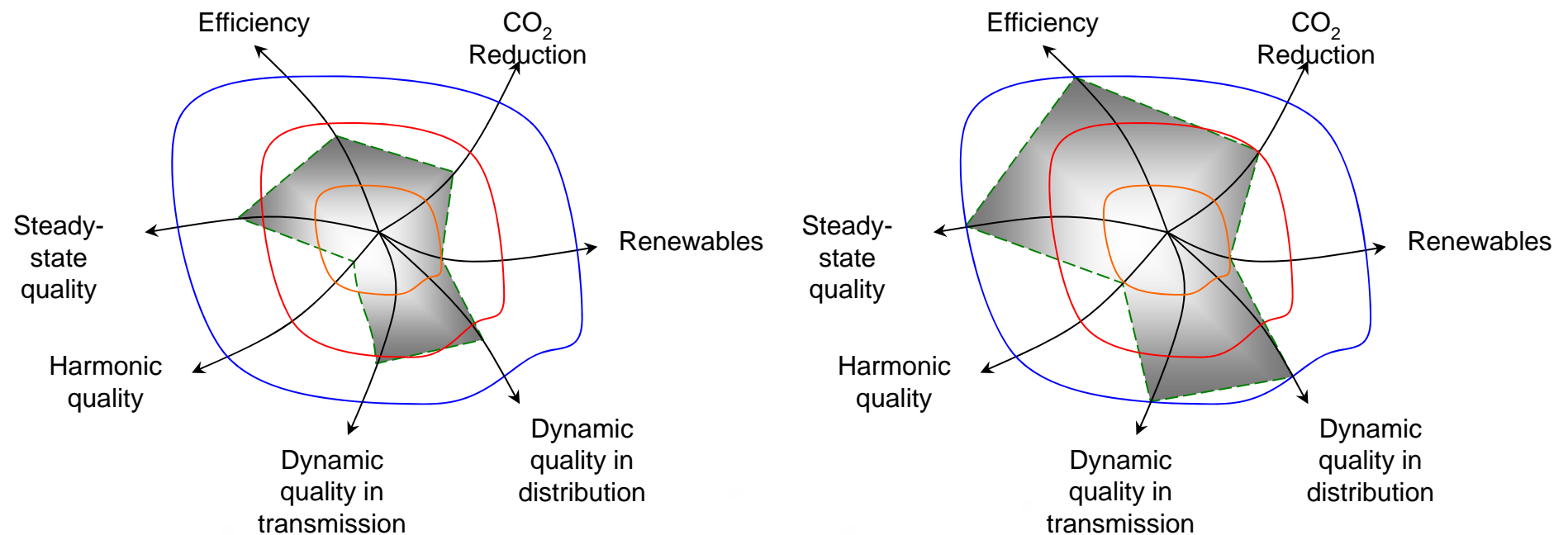
AFTER



Feedback
and
correction

T&D
europe

Benchmark example /2



BEFORE

AFTER

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Conclusion

- T&D Europe provides a **contribution** to EEGI KPIs definition activities within GRID+
- Introduction of a **benchmark methodology** in order to validate KPIs definition and use.



THANKS for YOUR ATTENTION

