

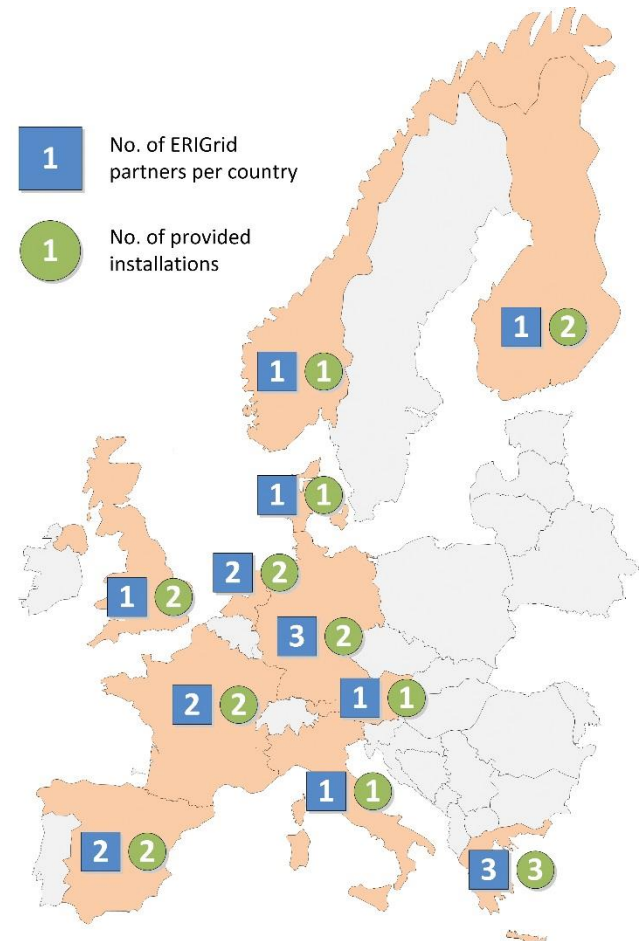
European Research Infrastructure supporting Smart Grid Systems Technology Development, Validation and Roll Out

Project Overview and
Trans-national Access Possibilities

Thomas Strasser / AIT Energy
(Project Coordinator)

Project Fact Sheet

- H2020 call
 - INFRAIA-1-2014/2015:
Integrating and opening existing
national and regional research
infrastructures of European interest
- Funding instrument
 - Research and Innovation Actions (RIA)
Integrating Activity (IA)
- 18 Partners from 11 European Countries
+ 3 Third Parties involved
- Involvement of 19 first class Smart Grid labs
- 10 Mio Euro Funding from the EC
- ~1000 Person Month

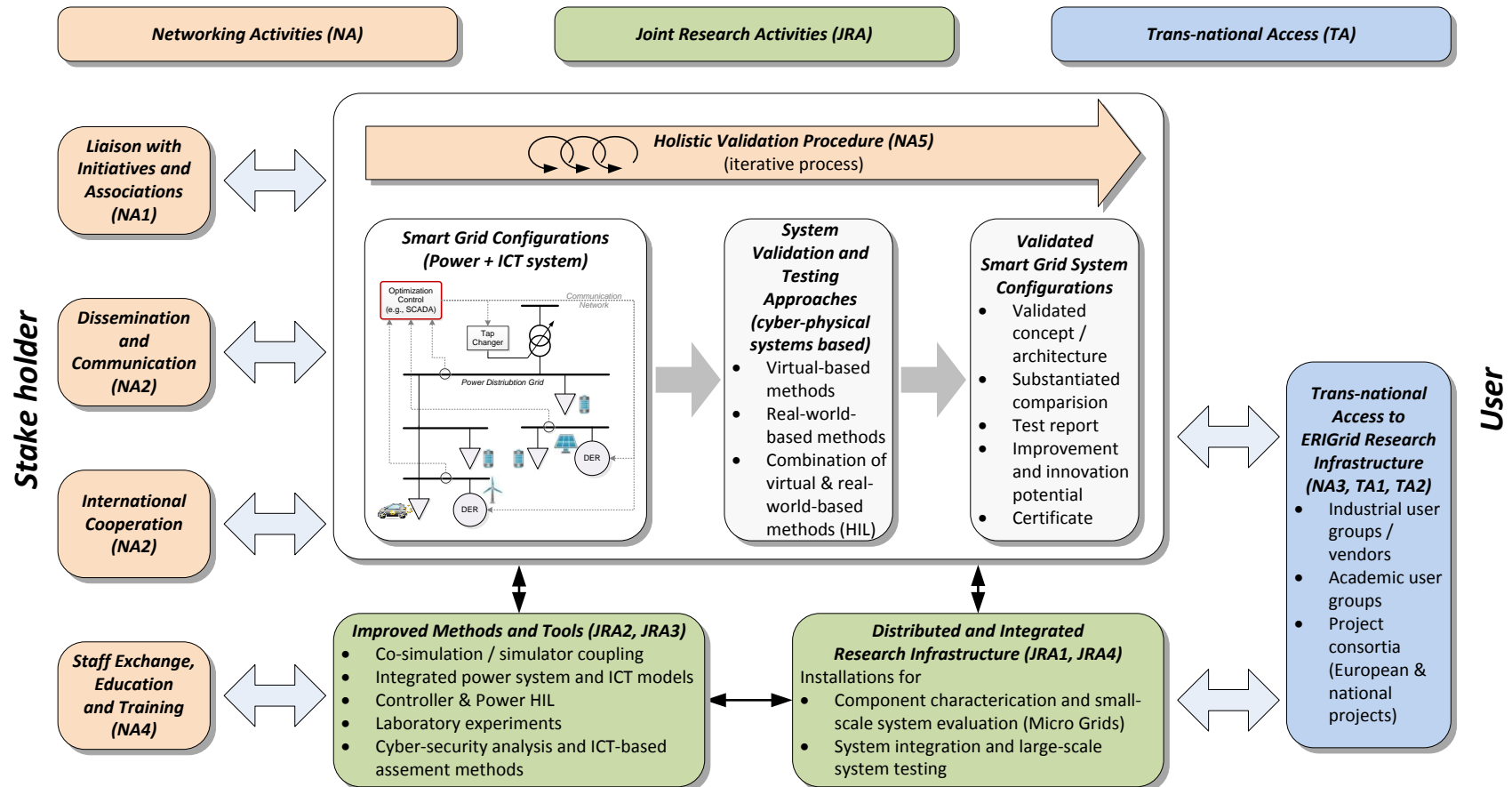


Main Goals

- Supporting the technology development as well as the roll out of Smart Grid approaches, solutions and concepts in Europe with a holistic, cyber-physical systems approach
- Integrating the major European research centres with a considerable, outstanding Smart Grid research infrastructure to jointly develop common methods, concepts, and procedures.
- Integrating and enhancing the necessary research services for analysing, validating and testing Smart Grid configuration.
- System level support and education for industrial and academic researchers in Smart Grid research and technology development is provided to foster future innovation
- Strengthening the technical leadership of the European Research Area in the energy domain

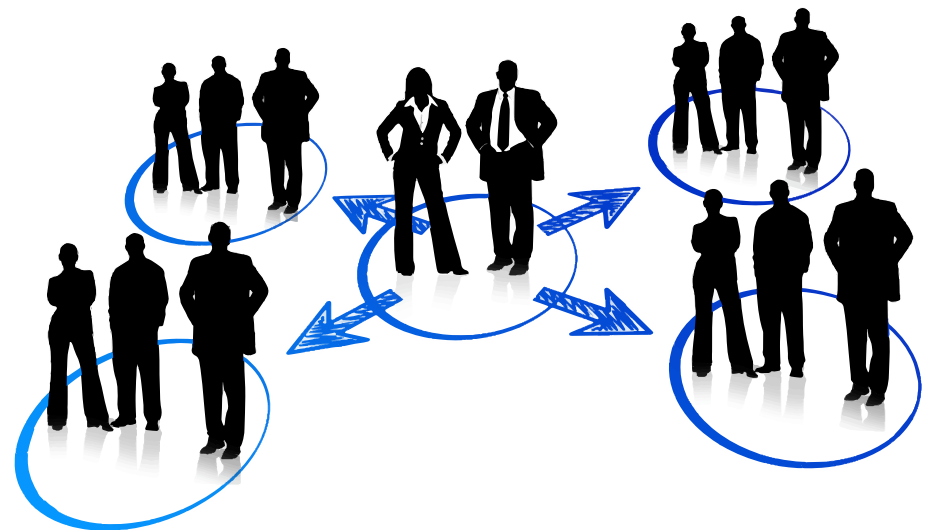
Overview ERIGrid Approach

- Leading research infrastructure in Europe for the domain of Smart Grids



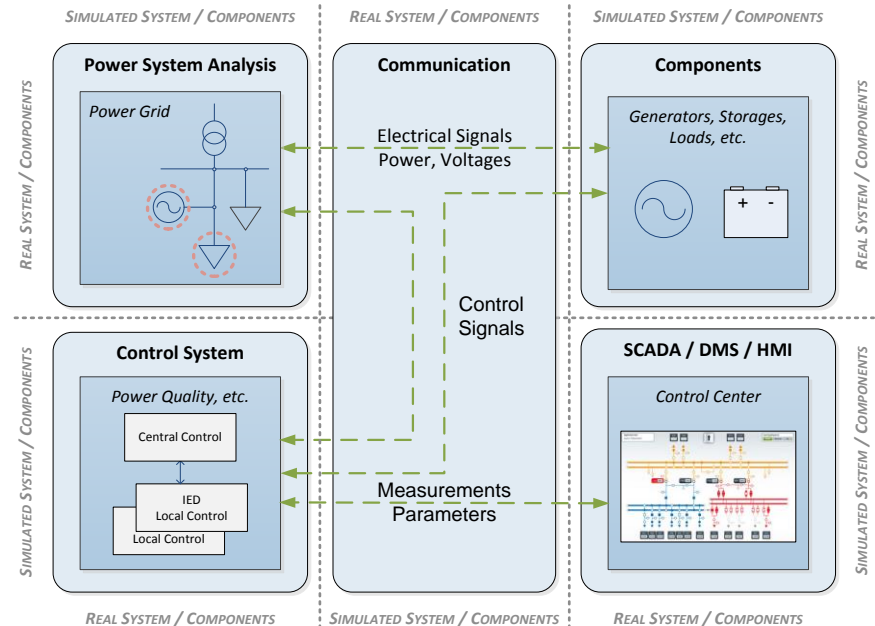
Networking Objectives (NO)

- NO1: Integrated European Smart Grid research infrastructure
- NO2: Reinforced collaboration of key research institutions and industry / utilities fostering innovative Smart Grid solutions
- NO3: Staff exchange of researchers, technicians and research infrastructure managers
- NO4: Training / education of power system and ICT professionals
- NO5: International collaboration



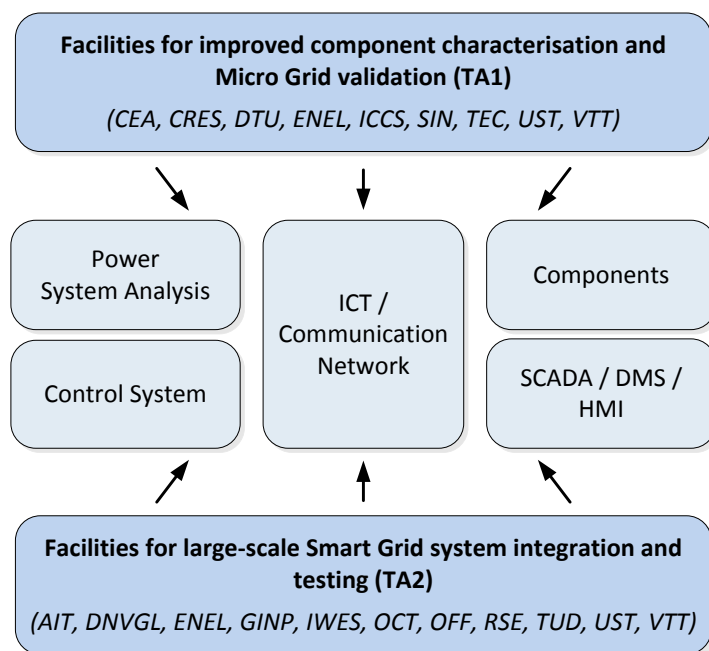
Joint Research Objectives (JRO)

- JRO1: Technology development and roll out support
- JRO2: Development of advanced system validation method and tools
- JRO3: Common models, harmonized validation and deployment procedures
- JRO4: Implementation of advanced services in the integrated research infrastructure



Trans-national Access Obj. (TAO)

- TAO1: Provision of user access to research infrastructure of the main players in the Smart Grids European Research Area
- TAO2: Attracting industry-related user projects



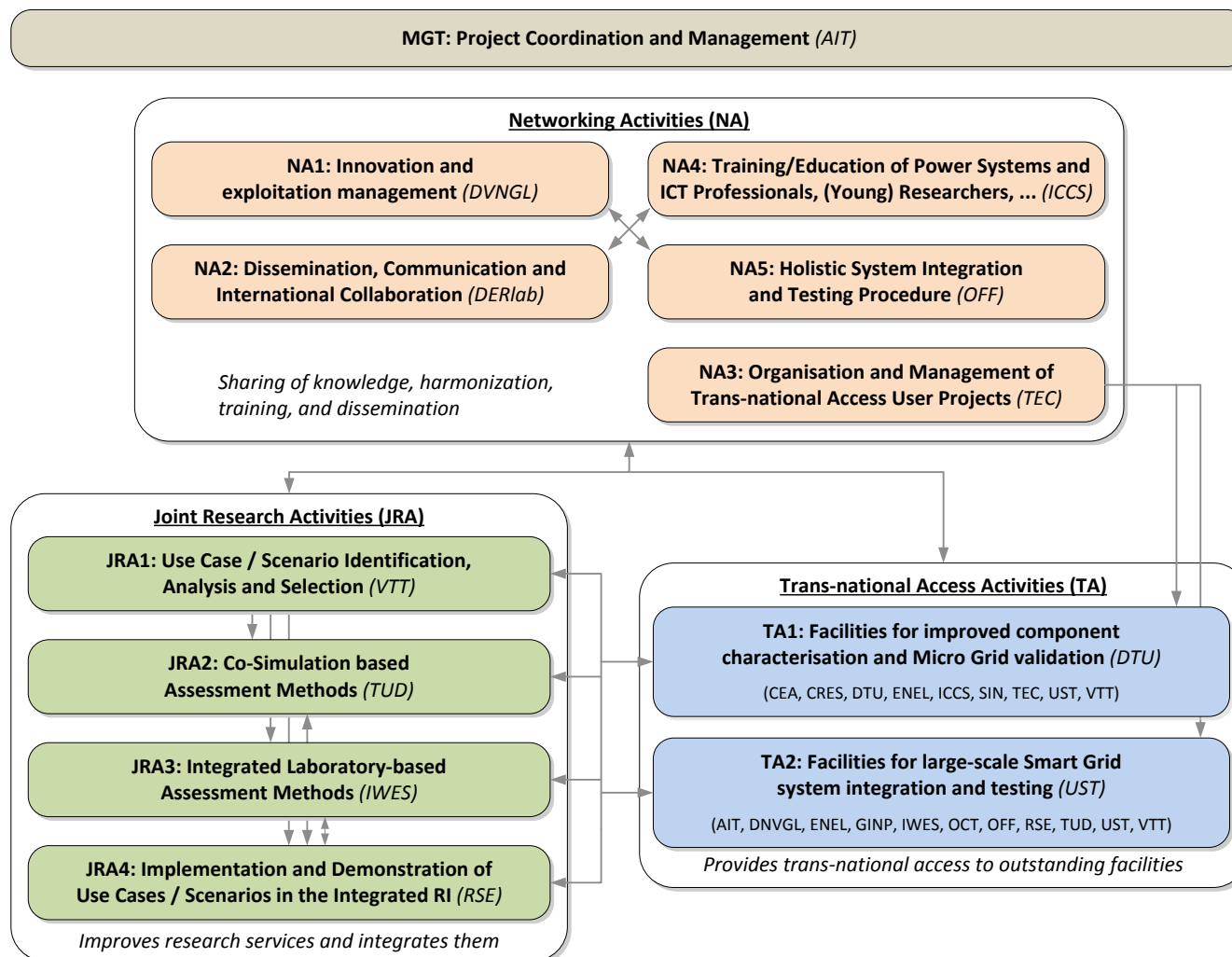
R&D topic	Provided services to external users
DER components	<ul style="list-style-type: none"> PV-inverter tests (component, integration) Storage, charging devices test (component, integration) ...
Development of new network components	<ul style="list-style-type: none"> Test of new component concepts Validation of advanced control methods for components ...
Smart Grid ICT / Automation	<ul style="list-style-type: none"> Validation of controller implementation and integration Validation of communication protocols Test of SCADA system developments and integration Cyber-security assessment ...
Co-simulation	<ul style="list-style-type: none"> Co-simulation tests power grid ↔ communication network Co-simulation tests power grid ↔ components ↔ communication network ...
Real-time simulation and HIL	<ul style="list-style-type: none"> Integration tests for inverter-based devices Validation of new power electronic component topologies ...
...	...

Long-Term Cooperation

■ Advanced Community

Activity	Involved partners	Covered topics	Input for ERIGrid
FP7 DERri	AIT, CEA, CRES, DERlab, DNVGL, DTU, ICCS, IWES, RSE, TEC, UST, VTT	Research infrastructure supporting DER topics	HIL testing methods for DER, lab-procedures for testing DER, experiences from TA projects
FP7 SOPHIA	AIT, CEA, CRES, DERlab, DTU, IWES, OFF, RSE, SIN, TEC, UST, VTT	Research infrastructure supporting PV components and systems	Lab-procedures for testing PV systems and components, experiences from TA projects
FP7 ELECTRA IRP	AIT, CEA, CRES, DERlab, DNVGL, DTU, ENEL, GINP, ICCS, IWES, RSE, TEC, UST, VTT	Architecture and concept of the future European electricity system	Requirements for operating future Smart Grids, Smart Grid concepts, inputs for roll out scenarios
FP7 COTEVOS	AIT, DERlab, DTU, IWES, RSE, TEC	Concepts, capacities and methods for testing EV systems	Experiences for testing EV systems (incl. charging stations)
FP7 STAR-GRID	DERlab, IWES, RSE, TEC	CSA analysing standardization activities for Smart Grids	Comprehensive overview of Smart Grid standardization activities
FP7 GRID+	AIT, RSE, SIN	CSA providing operational support for the development of EEGI	Industrial perspective on future Smart Grid developments, requirements for roll out scenarios
IEA ISGAN / SIRFN	AIT, DERlab, GINP, IWES, RSE, DNVGL, TEC, UST, VTT	International Smart Grid research facility network	International activities related to Smart Grid research facilities (incl. requirements and concepts)

Project Plan



Strong Stakeholder Group Support

- 35 support letters received
 - National, European and international networks
 - Technology platforms
 - Industry (manufacturers, vendors – power & ICT system)
 - Utilities / grid operators
 - Standardization bodies
 - Research institutes
 - Public bodies / national authorities



Access to Infrastructures (labs)

- Free of Charge
 - ERIGrid is supported by the H2020 programme of the European Commission under the research infrastructure funding scheme
 - Access to research infrastructures is called Trans-national Access
 - Access and use of the installations (labs) is absolutely free of charge for users (industrial and academic)
 - All expenses, including travel and accommodation are reimbursable, under the conditions agreed with the hosting infrastructure

Access to Infrastructures (labs)

- Who?
 - Accordingly with the EC Rules for Transnational Access the following Rules for eligibility of the Users Groups being access yield
 - The user group leader and the majority of the users must work in an institution established in a Member State or Associated State
 - The user group leader and the majority of the users must work in a country other than the country(ies) where the legal entity(ies) operating the infrastructure is(are) established
 - Only user groups that are entitled to disseminate the foreground they have generated under the project are eligible to benefit from access free of charge to the infrastructure

Access to Infrastructures (labs)

- When?
 - After the acceptance, the experimental access time interval will be allocated in the next part of the year, therefore allowing sufficient time for the hosting facility and the user group to agree on the technical and administrative details of the experiment activity

Coordinator Contact

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