



# The SPARKS Project

2<sup>nd</sup> Stakeholder Workshop

25<sup>th</sup> March, 2015

Cork, Ireland



# Project Information

## Partners:

1	AIT Austrian Institute of Technology GmbH (Coordinator)	AIT	Austria
2	Fraunhofer AISEC	AISEC	Germany
3	Centre for Secure Information Technologies - Queen's University Belfast	CSIT	UK
4	Energy Institute at the Johannes Kepler University Linz	EI	Austria
5	EMC Corporation, with the security division RSA	EMC/RSA	Ireland
6	KTH Royal Institute of Technology	KTH	Sweden
7	Landis + Gyr	L+G	Switzerland
8	United Technologies Research Centre	UTRC	Ireland
9	SWW Wunsiedel GmbH	SWW	Germany

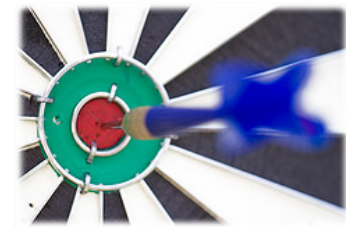
**Work programme topic:** Topic SEC-2013.2.2-3 Protection of smart energy grids against cyber attacks

**Proposed duration:** 36 months

**Requested budget:** €3.4M

# SPARKS Objectives

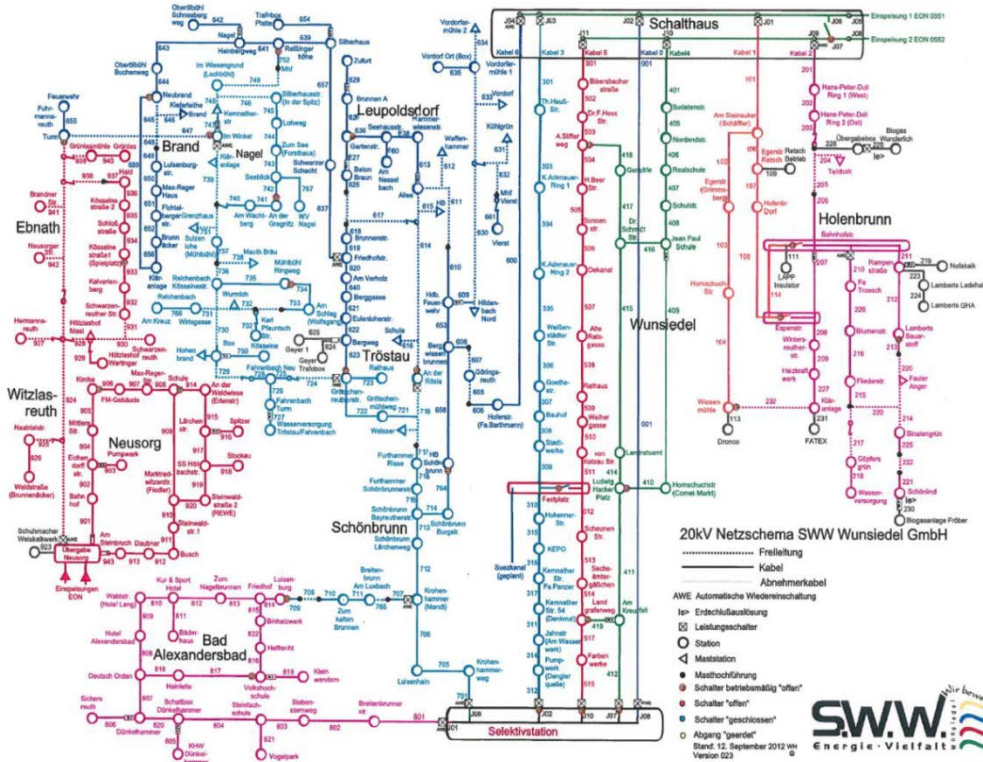
- 1. Analyse Smart Grid Security and Risk**
  - Produce vulnerability, threat and risk assessment methods
  - Develop tools to evaluate smart grid security and resilience
- 2. Examine and Propose Smart Grid Security Standards**
  - Establish a common and consistent view of a smart grid architectural model
  - Definition of best practices and engagement with standards activities
- 3. Develop Security Measures and Procedures**
  - Propose and develop novel security and resilience technologies and measures
- 4. Investigate Financial, Legal and Social Issues**
  - Cost assessment, legislative and societal examination of technologies and security measures
  - Development of business cases



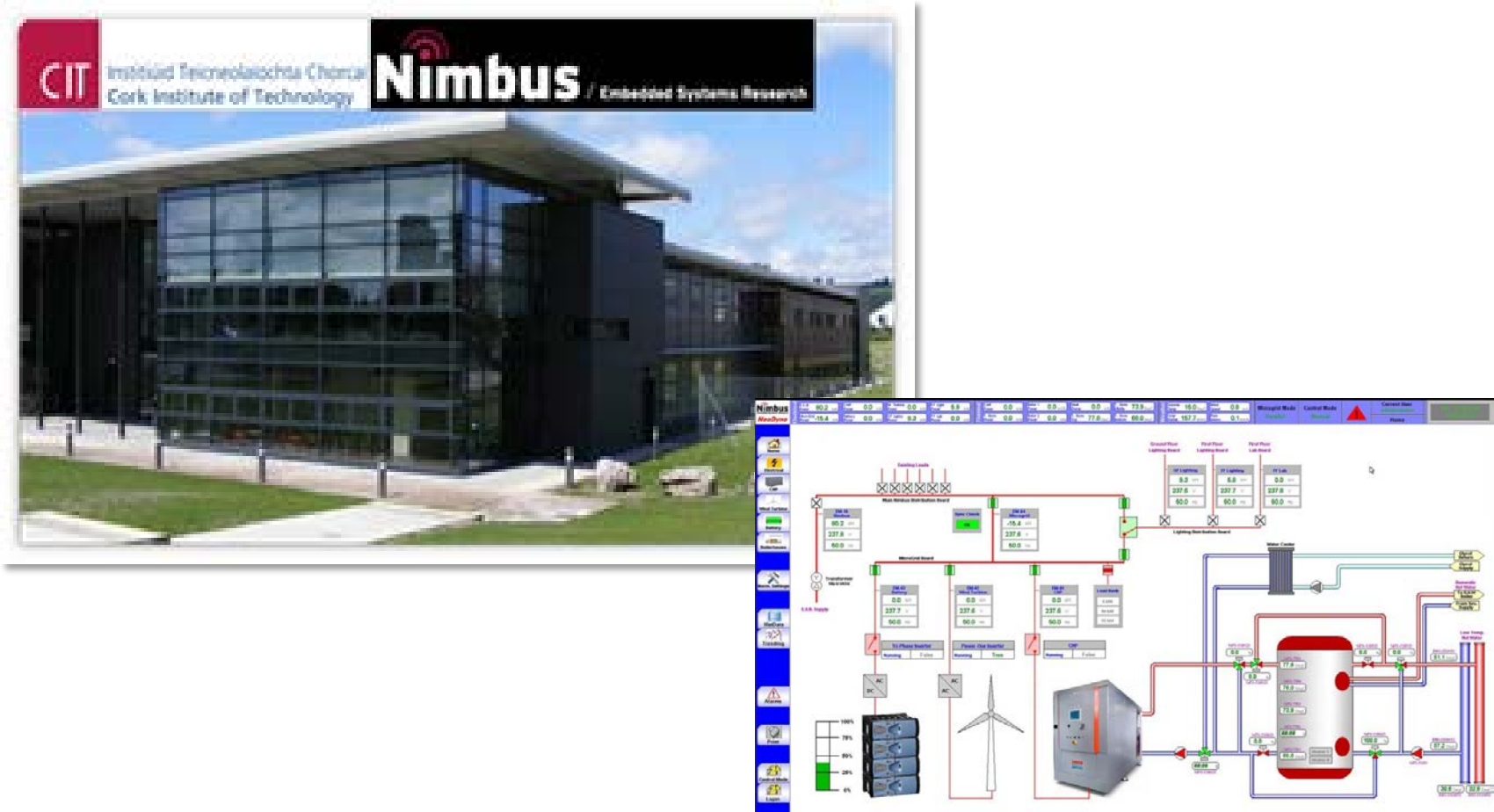
# The Focus of Today ...

- **Cyber-attack Demonstration**
  - To illustrate the nature of the cybersecurity problem
  
- **Risk assessment techniques**
  - For vulnerability and impact analysis
  
- **Ensuring the resilience of the smart grid**
  - Resilient control systems
  - SCADA-specific intrusion detection systems
  - Security analytics system

# Medium-to-low Voltage Distribution Networks



# (Federated) Microgrids



# Programme at EMC<sup>2</sup>

Time	Item
10:00 – 10:20	<b>Resilient Smart Grids</b> <i>Dr André Teixeira, KTH Royal Institute of Technology</i>
<b>Medium- to low-voltage Distribution Networks Session</b>	
10:20 – 11:00	<b>A Man-in-the-middle Attack to IEC 61850-controlled Photovoltaics</b> <i>Dr Kieran McLaughlin et al., Queen's University Belfast</i>
11:00 – 11:20	Coffee break and discussions
11:20 – 11:40	<b>SCADA Intrusion Detection Systems</b> <i>Dr Kieran McLaughlin, Queen's University Belfast</i>
11:40 – 12:00	<b>Tools and Metrics for Vulnerability Assessment</b> <i>Prof Henrik Sandberg, KTH Royal Institute of Technology</i>
12:00 – 12:20	<b>Financial, Legal and Social Implications</b> <i>Dr Michael Schmidthaler, Energy Institute, Linz</i>
12:20 – 13:20	Lunch
13:20 – 13:50	Move to the Nimbus microgrid site



# Programme at Nimbus

Time	Item
<b>Microgrids Session</b>	
13:50 – 14:05	Introduction to CIT and the Nimbus site
14:05 – 15:00	Tour of the Nimbus microgrid, attack demonstration and coffee break
15:00 – 15:40	<b>Data Analytics for a Secure Smart Grid</b> <i>Dr Silvio La Porta, EMC</i>
15:40 – 16:10	<b>Modelling the Impact of Attacks to Microgrid Systems</b> <i>Dr Rohan Chabukswar, UTRC</i>
16:10 – 16:25	<b>The Hybrid Risk Management for Utility Provider (HyRiM) Project</b> <i>Dr Paul Smith, AIT</i>
16:25 – 16:50	<b>The Security for Smart Electricity GRIDS (SEGRID) Project</b> <i>Dr Frank Fransen, TNO</i>
16:50 – 17:20	Open Panel Discussion with SPARKS stakeholders
17:20 – 17:30	<b>Workshop Close and Concluding Remarks</b> <i>Dr Paul Smith, AIT</i>



# Questions?

