

# ATC Seminar 2019

Presented by Greg Hesse - Convener  
Brisbane – 21 November 2019



**cigre**

For power system expertise

# C2

## Power system operation and control





# SC C2 Scope

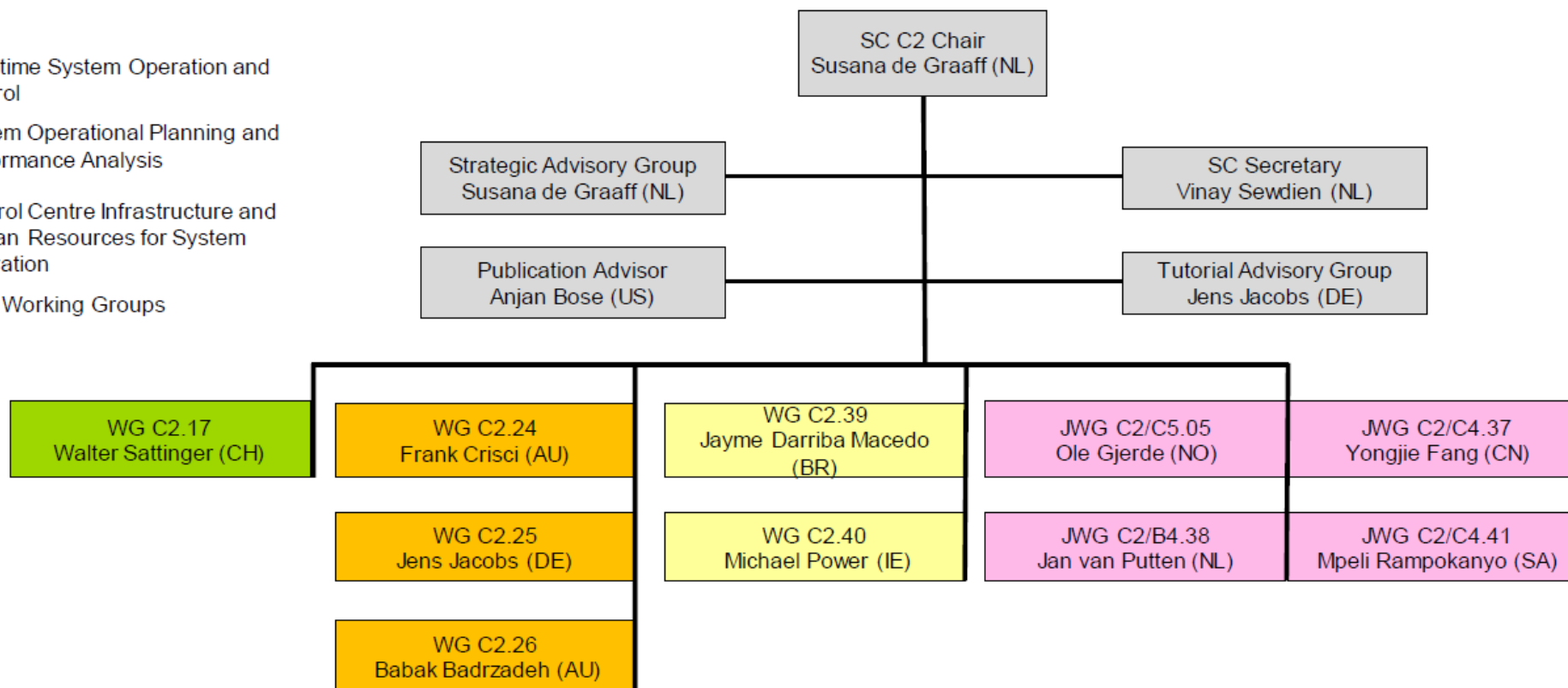


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- **Technical, human resource and institutional aspects and conditions for**
  - **Secure and economic operation of power systems**
- while protecting against
- **System disintegration, equipment damage and human injuries**

# Structure of C2

- Real time System Operation and Control
- System Operational Planning and Performance Analysis
- Control Centre Infrastructure and Human Resources for System Operation
- Joint Working Groups



# 2019 Activities

## Publications

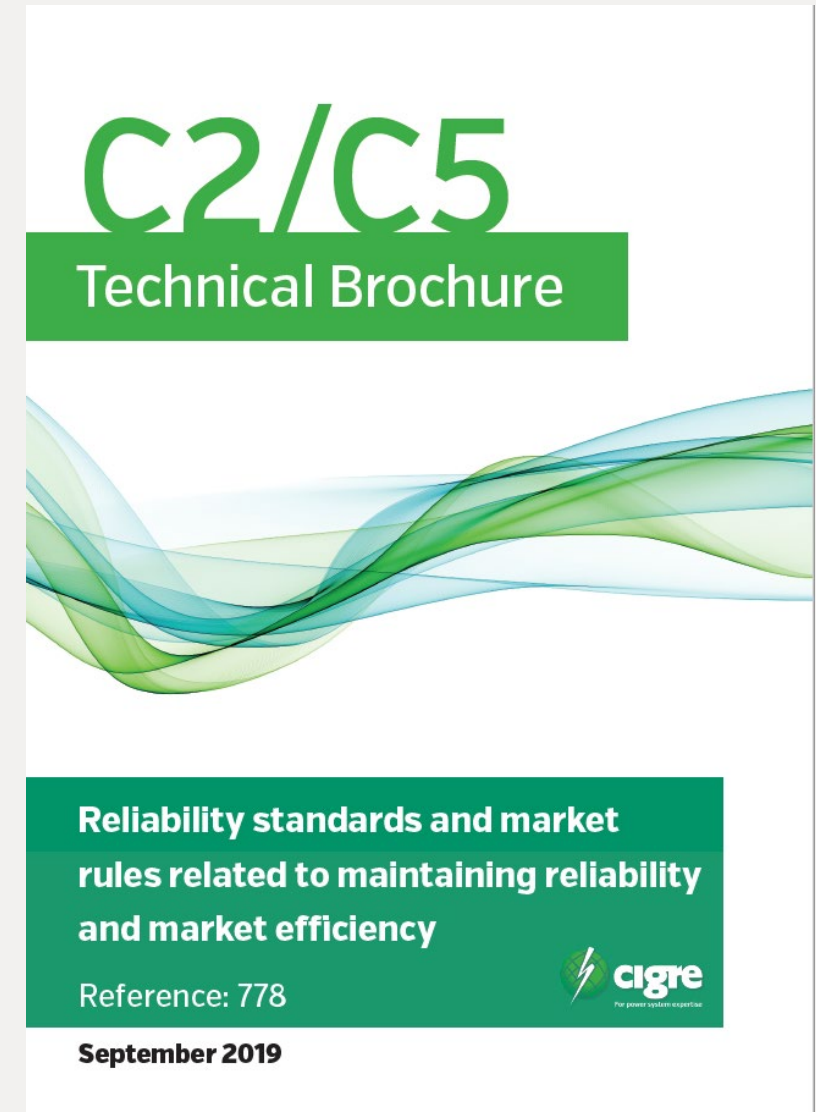
**TB742 - *A proposed framework for coordinated power system stability control* (Joint with SC C4)**

**TB778 - *Reliability standards and market rules related to maintaining reliability and market efficiency* (Joint with SC C5)**

**CSE13 - *Icelandic operational experience of synchrophasor-based fast frequency response and islanding defence***

**CSE14 - *System operation and control, power system restoration – World practices & future trends***

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# Aalborg Symposium – “Going Offshore”

## SC C2 hosted four paper sessions

- **Assessment and study tools for system operation**
- **Operation of hybrid and low inertia power systems**
- **Support from VSC HVDC for system operation**
- **Frequency support from power electronic interfaced devices**

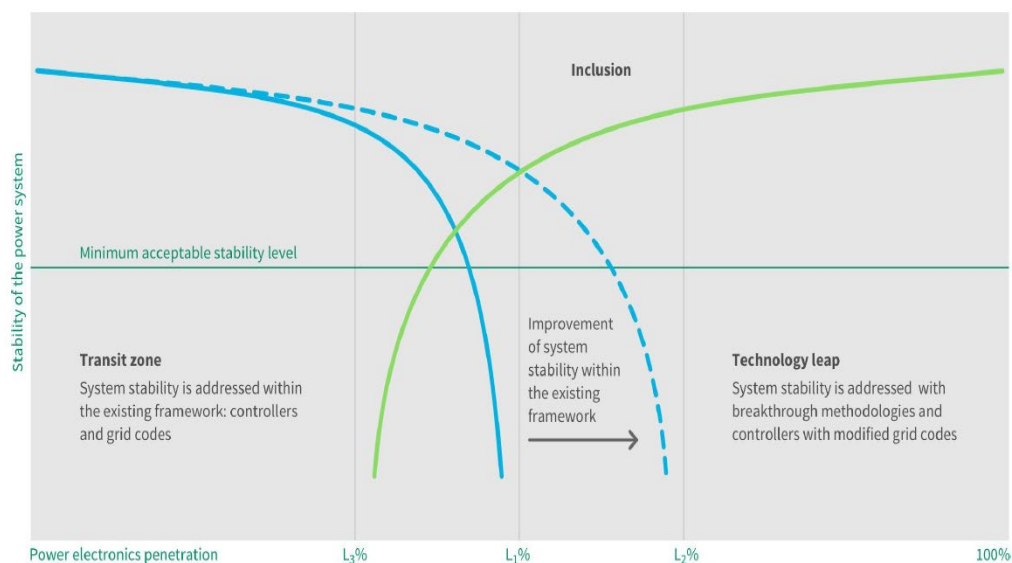
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# Aalborg Symposium – key insight



## OVERARCHING GOAL

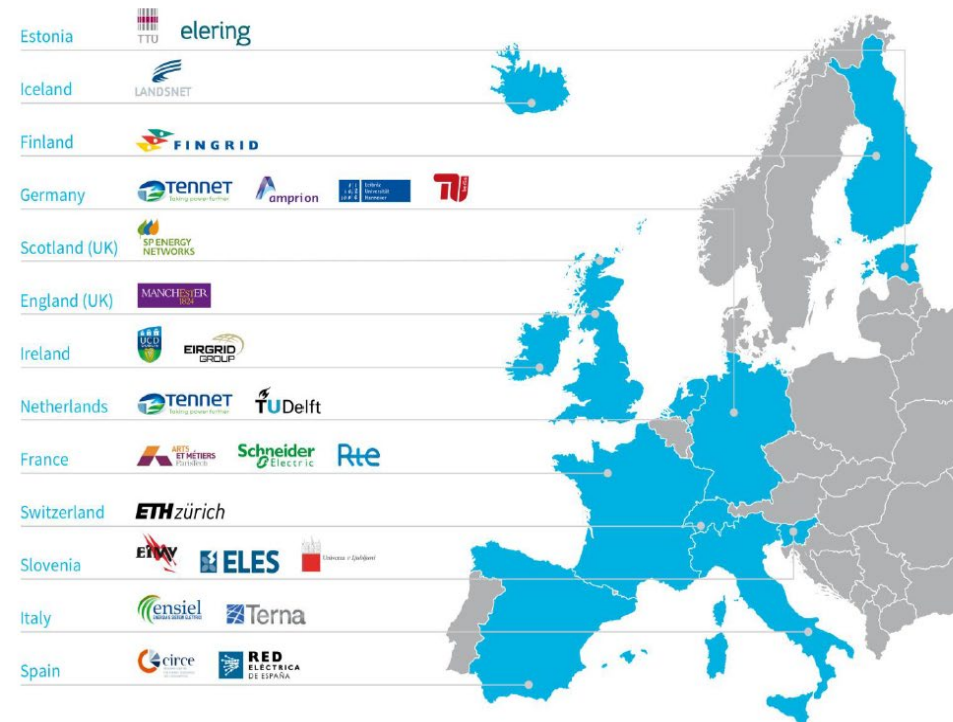


MIGRATE – Project description

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## THE CONSORTIUM



MIGRATE – Project description

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# SC C2 – Relevance for Australia / Paris 2020

Secure operation of power systems with high penetration of PE devices

- PS1 – Capabilities required for future power system operation
- PS2 – System operation interfaces: improving observability and controllability

Harnessing new technologies and DER to improve power system operations

- PS3 – System operation challenges with increasing use of distributed energy resources



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Figure 2 Accuracy and speed of regulation FCAS response – Hornsdale Power Reserve

