

# Project Board 2017-2018



**PETER JANSOHN**

Paul Scherrer Institute (PSI)



# Project Board

## 2016-2018



■ **Peter Jansohn** (chair)  
Paul Scherrer Institute (PSI)  
Switzerland

*Technical areas:*  
fuel flexibility, emissions



■ **Peter Breuhaus**  
International Research Institute  
Stavanger (IRIS)  
Norway

*Technical areas:*  
condition monitoring, advanced cycles



■ **Dominique Orhon**  
Total  
France

*Technical areas:*  
Turbomachinery, oil and gas  
operations



■ **John Oakey**  
Cranfield University  
UK

*Technical areas:*  
materials, CO<sub>2</sub> mitigation/CCS



■ **Nicola Rossi**  
Enel  
Italy

*Technical areas:*  
Power Plants efficiency and flexibility



■ **Abdunaser Sayma**  
City, University of London  
UK

*Technical areas:*  
operational flexibility, efficiency



■ **Mark George**  
Cullum Detuners Limited  
UK

*Technical areas:*  
Turbomachinery, noise control,  
filtration, emissions reduction



**ETN**  
Global

# Topics of Interest

reliability

maintenance

sensors/instrumentation

materials

fuel flexibility

operational flexibility

efficiency (at part load)

condition monitoring

emissions

advanced cycles

carbon capture

Power  
Generation

Oil & Gas

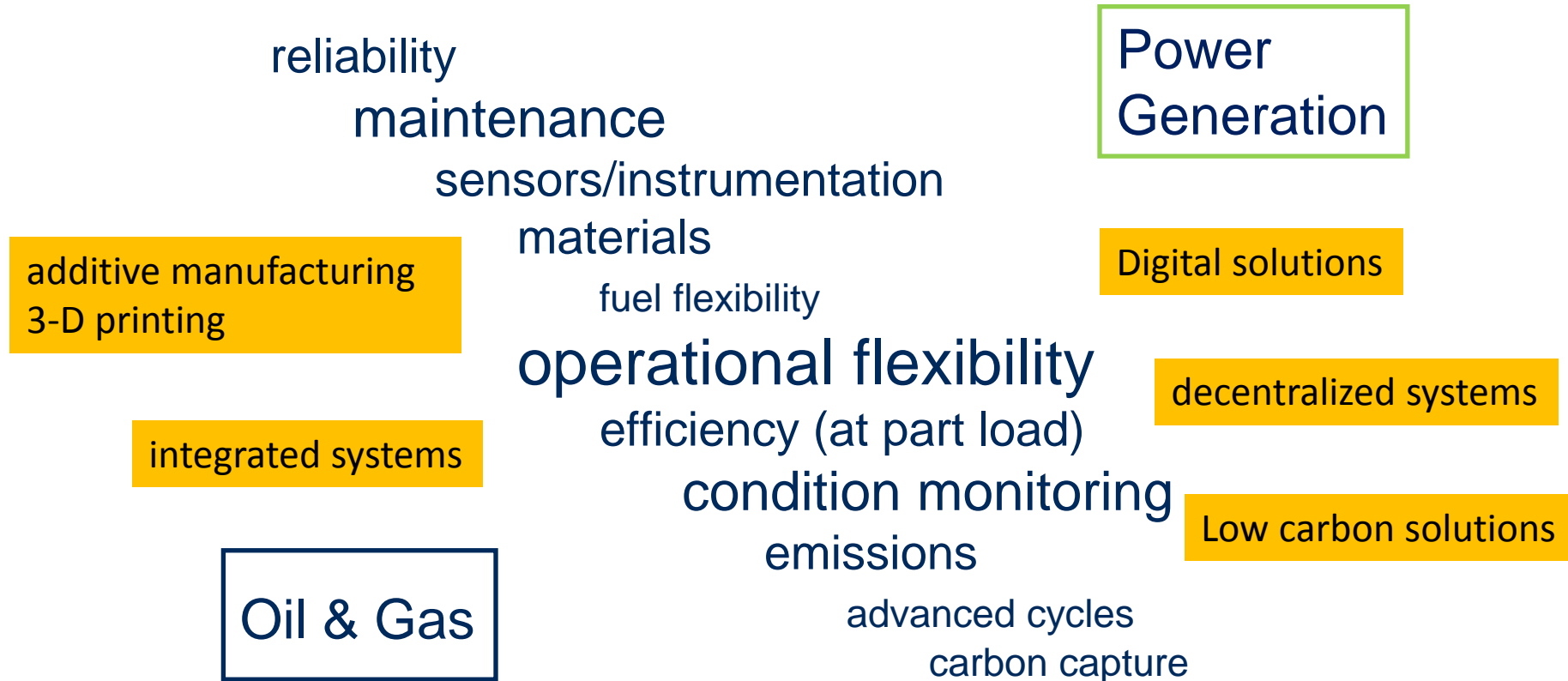


## List of Contents

- Operational Flexibility
- Efficiency
- Fuel Flexibility
- Emissions
- Carbon Mitigation and CO2 Capture
- Advanced Cycles
- Materials
- Reliability, Availability and Maintenance
- Condition Monitoring
- Sensors and Instrumentation

# R&D Report

## Edition 2018



adjusted to the widened scope of the ETN Strategy & Membership

# Market Conditions / Political Boundaries

## 5 main issues / topics

(with a strong influence on gas turbine technology development, gas turbine sales and gas turbine deployment/use)

- ❖ Operating conditions of gas turbine based power plants
- ❖ Economic environment for oil & gas business
- ❖ Integration of (large amounts of) renewable energy sources
- ❖ Decentralised electricity production
- ❖ CO<sub>2</sub> / climate change

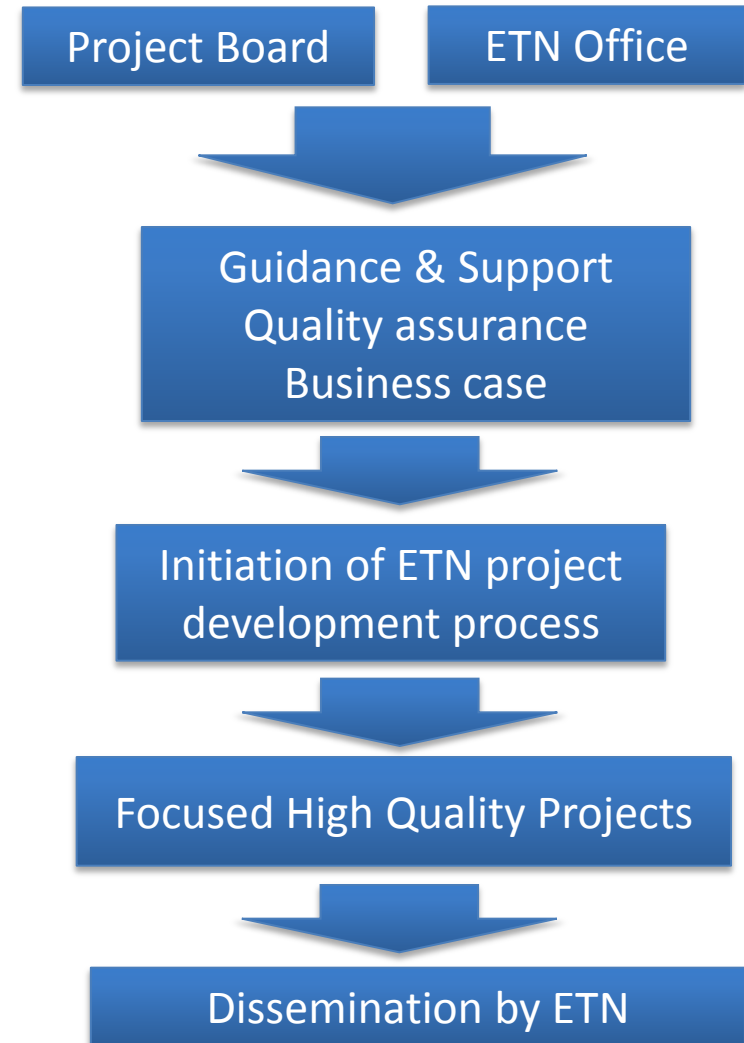
# Projects and Projects Initiation

Based on expression of interest from the ETN membership community



## Type of activities:

- R&D Projects
- Feasibility Study
- Best-Practice-Guidelines
- Development of Standards
- Position papers





## R&D RECOMMENDATION REPORT 2016

FOR THE NEXT GENERATION OF GAS TURBINES



### List of Contents

- Operational Flexibility
  - Efficiency
  - Fuel Flexibility
  - Emissions
  - Carbon Mitigation and CO2 Capture
  - Advanced Cycles
  - Materials
  - Reliability, Availability and Maintenance
  - Condition Monitoring
  - Sensors and Instrumentation
- new issues





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# European Technology and Innovation Platform

## “Smart Networks for Energy Transition”




ETIP-SNET Governing Board: ETN representative - Sigrid Gijbels (ENGiE)


### Working Groups




**WG1**  
Reliable, economic and efficient smart grid system




**WG2**  
Storage technologies and sector interfaces




**WG3**  
Flexible Generation



**WG4**  
Digitisation of the electricity system and Customer participation



**WG5**  
Innovation implementation in the business environment



**NSCG**  
NATIONAL STAKEHOLDERS COORDINATION GROUP

### ETN representatives in WG3 Flexible Generation

- Peter Breuhaus (IRIS)
- Peter Jansohn (PSI)
- Iarno Brunetti (ENEL)

### ETIP SNET Implementation Plan 2017-2020

- Topic 33 - Developing the next generation of flexible thermal power generation
- Topic 34 - Adaptation and improvement of technologies to novel Power-to-Gas and Power-to-Liquid concepts

**Activities are meant to support the European Commission in developing Research & Innovation programmes**

