



FCTEDI

Fuel Cell Testing and Dissemination **FCTEDI**

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Presentation Outline

Project Background
(FCTESTNET & FCTES^{QA})

Objectives

Structure and Work Packages

Project Background

The 'Fuel Cell Testing and Dissemination' (**FCTEDI**) is an EC-funded project, and complements the work performed under predecessor projects, namely:

- Fuel Cell Testing and Standardisation NETwork (**FCTESTNET**)
- Fuel Cell Testing, Safety and Quality Assurance (**FCTESQA**)



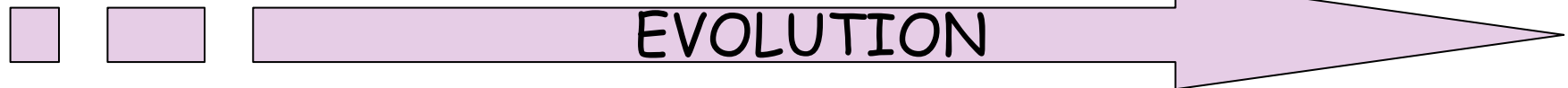
FP5 THEMATIC NETWORK



FP6 STREP Project



FP6 SSA Project



Project Background (cont.)

The Fuel Cell Testing and STandardisation NETwork FCTESTNET

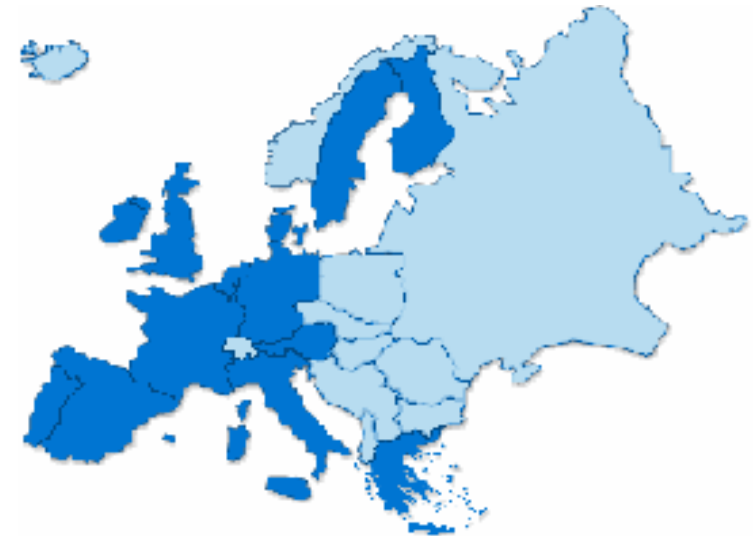


FCTESTNET OBJECTIVES

- Compile harmonised testing procedures applicable to:
 - transport applications;
 - stationary power sources;
 - portable fuel cells

Focusing on:

- PEM
- SOFC
- MCFC



55 EU partners were
were involved

**DELIVERED: AGREED TESTING
PROCEDURES**

Project Background (cont.)

Fuel Cell Testing, Safety & Quality Assurance (FCTES^{QA})

What:

- Validation of methods and procedures
- Benchmarking of performance
- Round robin testing of FC cells, stacks and systems

How:

- Virtual European laboratory (*ERA concept*)
- Optimised international collaboration
- Exploiting results from demonstration exercises

With due attention for

- Safety-related issues
- Quality issues
- Dissemination



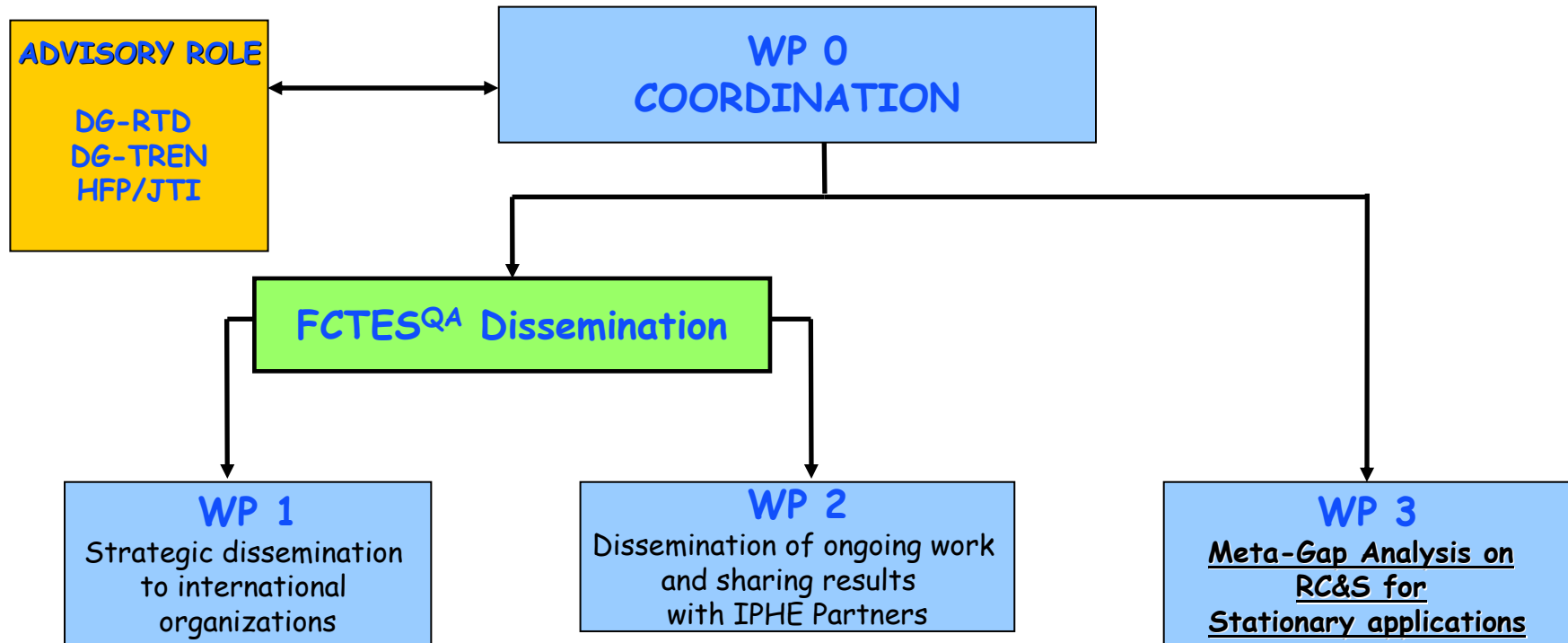
IPHE Recognized Project

FCTEDI Objectives

FCTEDI has the following Two Main objectives:

- To disseminate the results of the ongoing FP6 Fuel Cells Testing Safety and Quality Assurance (FCTES^{QA}):
- To perform a “Meta-gap” analysis on regulations, codes and standards (RCS) for fuel cells intended for stationary applications.

FCTEDI-Overview: Project Structure



WP1 Strategic dissemination to International Organizations (IOs)

Objectives:

The objectives of WP1 are:

- To disseminate the results of the FCTES^{QA} to international organizations for:
 - ✓ promoting awareness on the activities of FCTES^{QA}
 - ✓ supplying these organizations with reliable information about the state of experimentally validated test procedures, developed under the FCTESTNET/FCTES^{QA} activities

WP1 Strategic dissemination to IOs

➤ Disseminate to SDOs (e.g. IEC, ISO, ASTM) of FCTES^{QA} *Pre-Normative* results

✓ International Fuel Cell Glossary within IEC TC 105.

✓ Introduction of harmonised PEFC on single cell testing protocols into the standardisation process. A New Work Item Proposal (NWIP) coordinated by NEDO and in conjunction with USFCC, was submitted to IEC TC 105

WP1 Strategic dissemination to IOs

- Dissemination to IEA
- Dissemination of results of the Meta-Gap Analysis to HFP/JTI, IPHE, IEA, IEC TC 105 to facilitate the market introduction of fuel cells

WP2 Dissemination towards IPHE Member States

Objectives:

The main objective of WP2 is:

- To assist the international dissemination of information concerning testing aspects of fuel cell technology:

WP2 Dissemination towards IPHE MS

Methodology:

Results of FCTESTNET/FCTES^{QA} will be disseminated through symposia and preparing publicly accessible information. Special attention will be given to:

- ✓ Regulations Codes and Standards & Safety aspects
- ✓ Diagnostic methods in fuel cell technology (workshop scheduled for 2008)
- ✓ Fuel quality issues (workshop scheduled for 2009)

WP3 Meta-Gap Analysis

Objectives:

The objectives of the Meta-Gap Analysis (MGA) are:

- To identify both research and market barriers
- To develop a *complementary action plan and strategy* for regulations, codes and standards for fuel cells intended for stationary applications.

WP3 Meta-Gap Analysis

Methodology:

There is no intention to duplicate existing activities, but to be complementary, "Meta-Gap Analysis".

The analysis will be complementary to the experiences and the results of the gap analyses performed by

- ✓ The Initiative group for RC&S of the European Hydrogen and Fuel Cell Technology Platform
- ✓ The CEN/CENELEC feasibility study (Mandate M-349) in the area of hydrogen and fuel cells and
- ✓ The FP6 HarmonHy SSA in the area of fuel cells for stationary applications. Other international/national projects

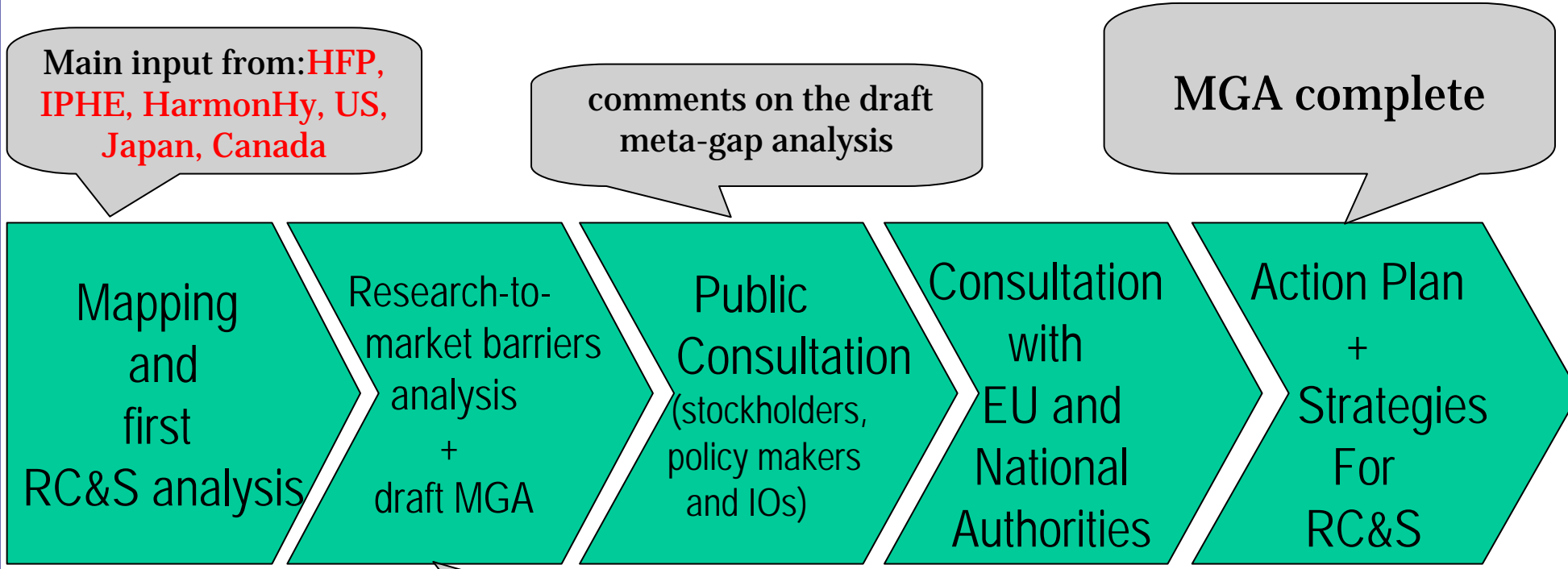
The MGA is intended to be in synergy to the work of the IPHE ILC RCS Working Group.

WP3 Meta-Gap Analysis

MGA in stages:

The meta-gap analysis will be executed in 5 stages:

Joint Research Centre



Complementary review of RC&S gaps and barriers in Europe, North America and Japan

WP3 Meta-Gap Analysis

Expected Results:

The result of the meta-gap analysis will allow for:

- Identification of gaps, overlaps and possible conflicts
- Defining priorities
- Preparing a work/action plan

FCTEDI: Expected Impact



Results from FCTEDI:

- The Meta-Gap Analysis will identify 'missing links' on RC&S for stationary fuel cells
- FCTEDI will create a discussion Forum & disseminate results on RC&S for fuel cells via dedicated workshops etc.



Synergies with IPHE RCS Activities:

- These results could be further exploited by IPHE for identifying and recommending appropriate actions
- Such activities could be closely linked with IPHE suggestions/priorities

FCTEDI CONSORTIUM



EU PARTNERS:

- DG-JRC-IE (EC)
- ENEA (I)
- NEN (NL)
- ZSW (D)
- CEA (F)
- VDI (D)
- HAW (D)
- CESI (I)
- KIWA GASTEC (NL)
- CAES (RO)



IPHE MS PARTNERS:

- UNIV OF ICELAND
- SINTEF (NORWAY)
- INMETRO (BRAZIL)
- CERCI (INDIA)
- DICP (CHINA)

JRC-Institute for Energy



**THANK YOU FOR
YOUR
ATTENTION**

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*<http://fctesqa.jrc.nl/>
www.jrc.nl/fctestnet*