

# Introduction to Roads2HyCom

**Research co-Ordination, Assessment, Deployment and Support to HyCom**

**Nick Owen**

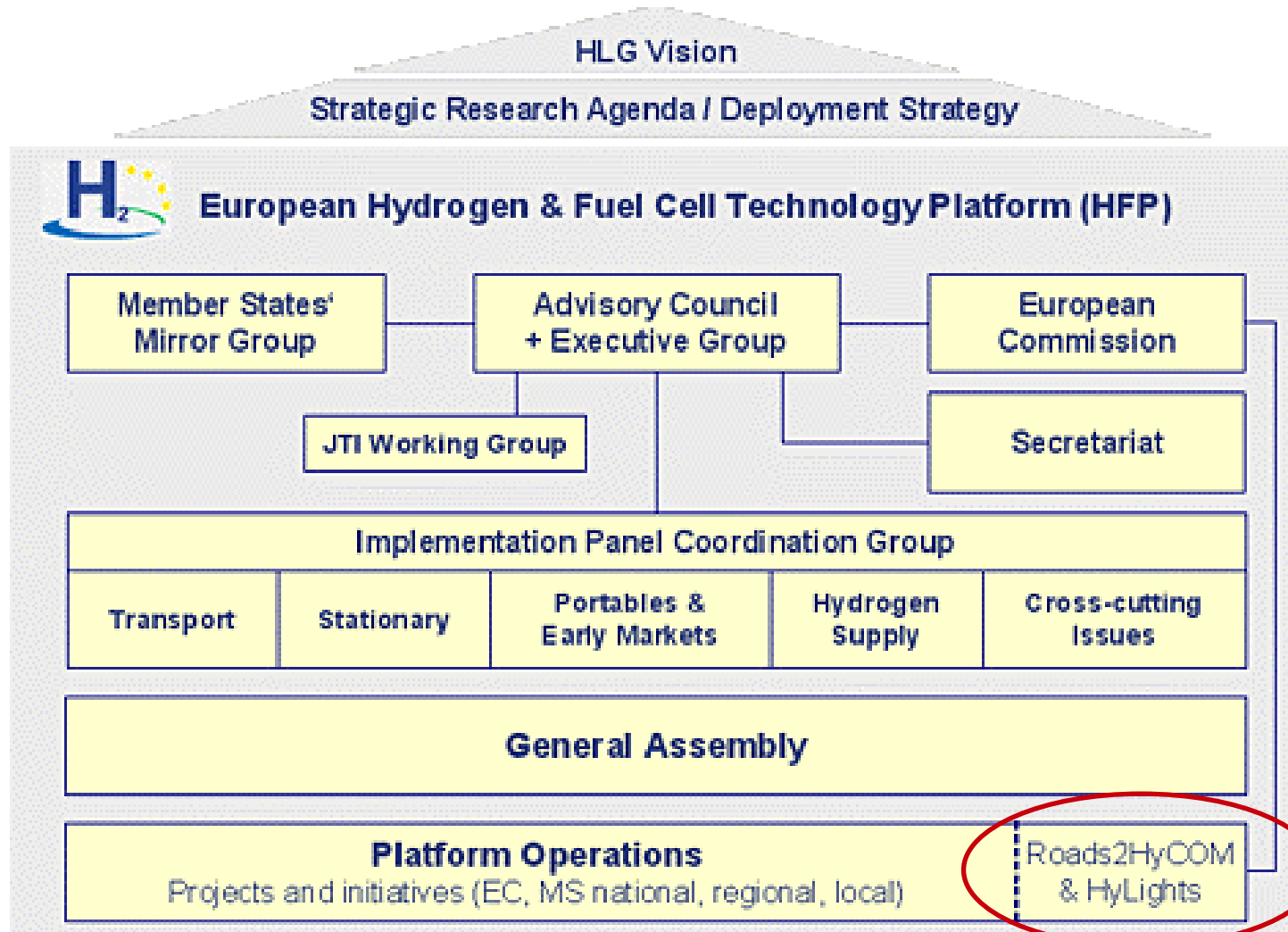
HFP General Assembly, Brussels, October 2006



- **A project to co-ordinate, assess and monitor research in the field of Hydrogen and Fuel Cells, to support the European Commission in planning the "Hycom" part of the Growth Initiative**
  - Which aims to develop "hydrogen communities" to stimulate growth and technology advancement in Hydrogen, Fuel Cell and "new energy" markets
  - Covers Transport and Stationary sectors in a broad-ranging study that embraces Technology and Socio-Economics
- **In practice Roads2HyCom is providing information to support the Commission and the Implementation Panel of the Hydrogen and Fuel Cell technology platform**
  - Together with partner project HyLights, which focuses on Transport demonstrations
- **The project started in October 2005, and is now developing deliverables (reports) from its first work packages**

- **The European Commission is supporting the Coordination Action “HyLights” and the Integrated Project “Roads2HyCom” in the field of Hydrogen and Fuel Cells.**
  - The two projects support the Commission in the monitoring and coordination of ongoing activities of the HFP, and provide input to the HFP for the planning and preparation of future research and demonstration activities within an integrated EU strategy.
- **The two projects are complementary and are working in close coordination.**
  - HyLights focuses on the preparation of the large scale demonstration for transport applications...
  - **...while Roads2HyCom focuses on identifying opportunities for research activities** relative to the needs of industrial stakeholders and Hydrogen Communities that could contribute to the early adoption of hydrogen as a universal energy vector.
- Further information on the projects and their partners is available on the project web-sites [www.roads2hy.com](http://www.roads2hy.com) and [www.hylights.org](http://www.hylights.org)

# HyLights, Roads2HyCom and the Hydrogen and Fuel Cells Technology Platform (HFP)



## Who is delivering Roads2HyCom? Project Partners...

Ricardo (GB)	DaimlerChrysler (D)	Icelandic New Energy
RWTH Aachen - IKA (D)	Air Products (GB)	Institute of Energy (Poland)
PLANET (D)	Airbus (D)	Intelligent Energy (GB)
EC - Joint Research Centre	AVL (A)	JBRC, Prague University (CZ)
Institut Francais du Petrole (F)	Coretec Ventures (GB)	Centre Cortes, Moscow (RU)
Air Liquide (F)	Centro Recherche FIAT (I)	Norsk Hydro (N)
CRES (Greece)	Element Energy (GB)	Riso (DK)
College d'Europe (B)	EnergieTechnologie (D)	TNO (NL)
NTDA (ES)	FEV Motorentchnik (D)	Volvo Technology (S)
ECN (NL)	Gaz de France (F)	

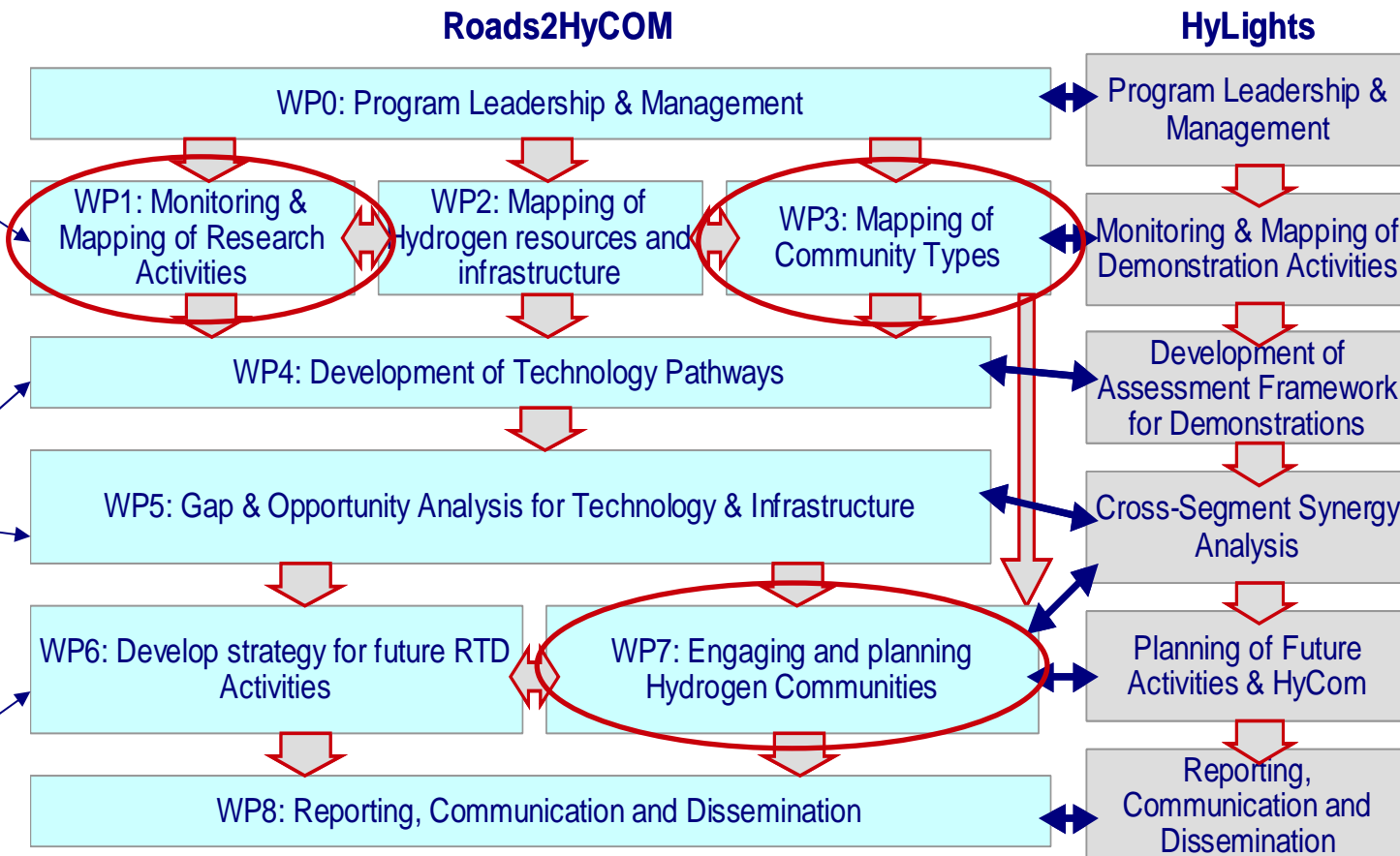
**○ Brings together 29 partners from a broad cross-section of areas**

- Energy and Hydrogen Supply
- Transport industries (Surface, Air)
- Stationary power (Buildings, Industry)
- Engineering and Socio-Economic research
- Community Expertise

**Mapping** of current  
RTD, Infrastructure  
and candidate  
"communities"  
(early adopters)

**Analysis:** State of  
the Art versus  
adopter needs;  
Evolutionary steps;  
Gaps & Synergies

**Engagement:**  
Communities, RTD  
Stakeholders



*Project is being delivered in cooperation with HyLights, which examines Transport Demonstration projects*

- The project has delivered:
  - **Support to Commission** in organising the "HFP Review Days 2005"
  - **Five "Area Reports"** on the research presented there, divided to align to HFP IP Working Groups
  - **Input to the EIB** on new Financing instruments
  - **Review of US research**, based on a delegation to the DoE's Annual Review
  
- And will deliver (October-November this year)...
  - **Mapping of research** (public and privately funded) in Europe
  - **Assessment of "State of the Art"** of European research
  - **Mapping of European Hydrogen infrastructure** and potential of Renewable and Low Carbon energy resources to provide H<sub>2</sub>
  - **Hydrogen Communities** - Mapping and characterisation of potential early adopters
  - **Organisation of "Regions Workshop"** at HFP GA, together with HyLights

# Web-based surveys have been used to map Researchers in the field of Hydrogen / Fuel Cells, and early-adopting Communities who will use the technology

## Financial Resources used by Researchers

	0%	10%-30%	40%-60%	70%-90%	100%
<i>Academic Funding</i>	76%	10%	10%	2%	3%
<i>Corporate Finances</i>	65%	14%	9%	5%	7%
<b>1<sup>st</sup></b> <i>National R&amp;D</i>	37%	34%	21%	6%	2%
<i>Regional R&amp;D</i>	82%	12%	7%	0%	0%
<b>2<sup>nd</sup></b> <i>EU (Framework) R&amp;D</i>	56%	28%	12%	3%	1%
<b>3<sup>rd</sup></b> <i>Private Source</i>	61%	18%	12%	6%	3%
<i>Venture Capital</i>	88%	6%	3%	3%	0%
<i>Bank Loans</i>	98%	2%	0%	0%	0%
<i>Other</i>	83%	7%	7%	1%	3%

## Basis of ongoing & potential Hydrogen Community projects

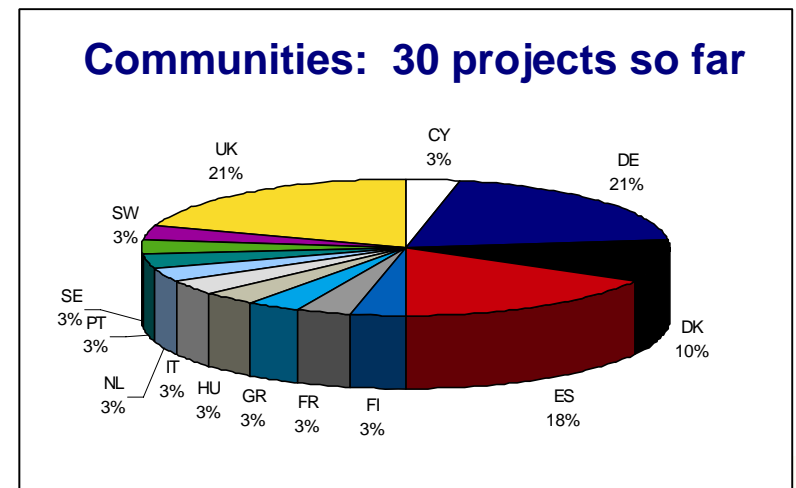
<b>PROJECT TYPE</b>	Demonstration	28
	Hydrogen Production	30
	Hydrogen Storage	23
	Fossil Fuels	12
	Hydrogen Trans / Supply	17
	Renewable Energy Source	30
	Stationary Application	28
	Transport Application	21
	Portable Application	11
	Other	0

## ○ Examples from the results of our Online Surveys

But - so far our coverage is incomplete, so we need YOUR HELP completing these surveys

- The online surveys take only a few minutes to complete, and will help the Commission and HFP to get a clearer picture...
- Please give us a few minutes of your time...
- Researchers' Questionnaire
  - [www.roads2hy.com/questionnaire.aspx](http://www.roads2hy.com/questionnaire.aspx)
- "Community" Registration of Interest
  - [www.roads2hy.com/registration.aspx](http://www.roads2hy.com/registration.aspx)
- Find both at

[www.roads2hy.com](http://www.roads2hy.com)



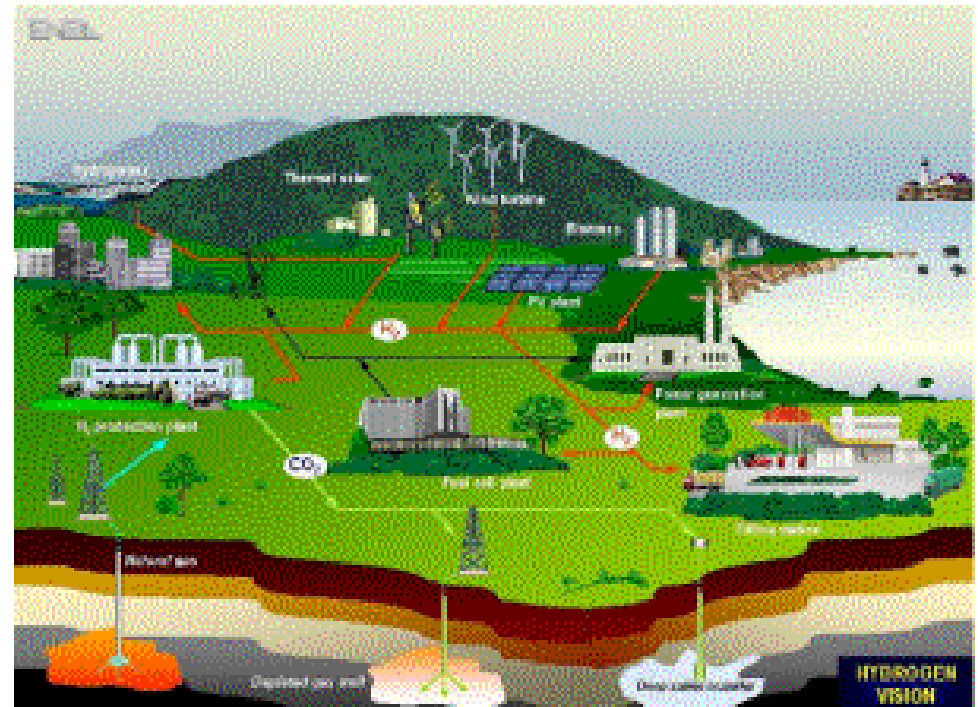
# Mapping status and potential for early-adoption in Communities - Using the Online Survey

- We are interested in:
    - Regions/ communities with concrete activities already in place
- E.g. integrated activities with Hydrogen or Fuel Cells "In Use"
- not basic or applied "research"

## BUT ALSO:

- Regions/ communities interested but not necessarily yet active in implementation

E.g. Plans, programmes for starting / increasing deployment of H<sub>2</sub> / FC applications, increasing H<sub>2</sub> use



*Activities embracing either Hydrogen or Fuel Cells - or both*

- **What is asked of you?**
  - **A few minutes of your time...**
    - The survey takes only a few minutes to complete
    - If you are not directly involved, please pass this request to Communities in your region
  - **We may then contact selected Communities to ask for more information**

**Overview of responses end-September:**

<b>PROJECT TYPE</b>	Demonstration	25
	Hydrogen Production	24
	Hydrogen Storage	18
	Fossil Fuels	11
	Hydrogen Trans / Supply	15
	Renewable Energy Source	25
	Stationary Application	22
	Transport Application	18
	Portable Application	6
	Other	0

- **WHAT'S IN IT FOR YOU?**
  - **Community can make its initiative known**
  - **Use R2H as a vehicle for having a say in the HyCom initiative**
  - **Will help the Commission and HFP, *and you*, to get a clearer picture...**

“Community” Registration of Interest

- [www.roads2hy.com/registration.aspx](http://www.roads2hy.com/registration.aspx)

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