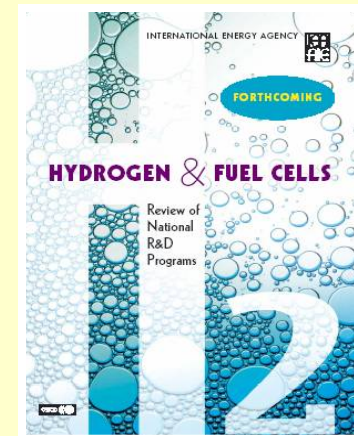
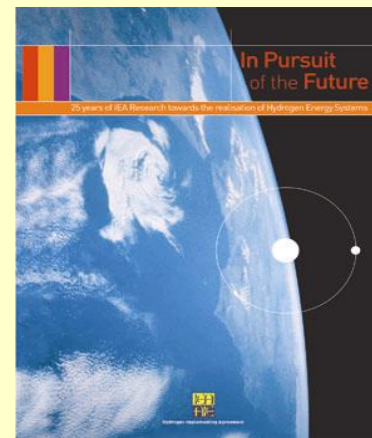
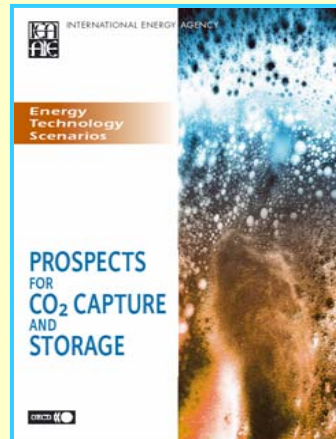
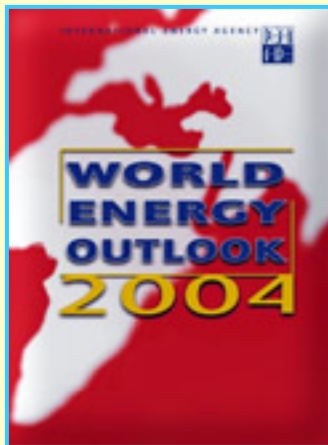
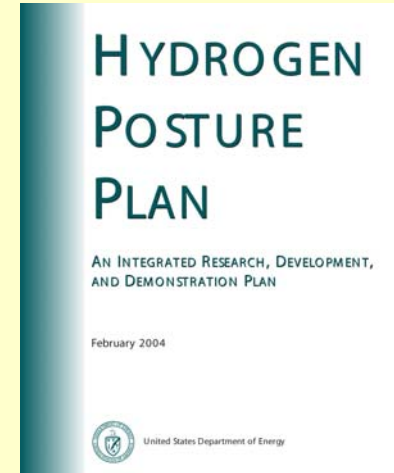


# France begins to have a clear strategic vision

- WHEC 2004 in Japan
- WEC in Australia
- EU Platform launched
- Bibendum Challenge in Shanghai



# R&D Investment and Co-operation

## National Programs

- US: \$ 1.7 B for 5 years
- EC: €2 B in FP6 (Renew. & H<sub>2</sub>/FC)
- Japan: ¥ 30 B/y tripled from 1995
- and ... Canada, France, Germany, Italy, Korea, UK ...

~ \$ 1bn/y global public effort

## International Co-operation

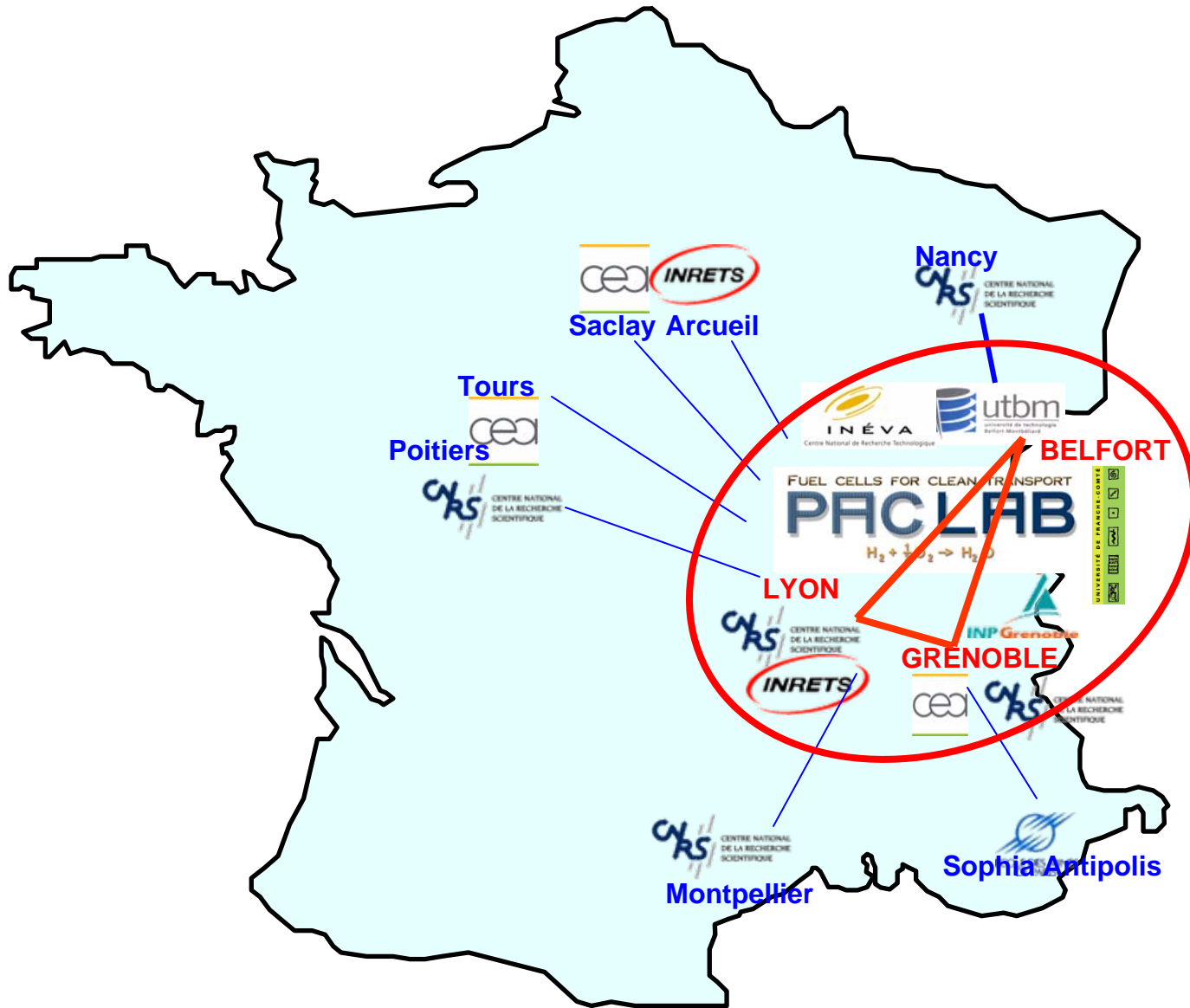
- IEA Hydrogen Co-ordination Group and Implementing Agreements
- International Partnership on Hydrogen Economy (IPHE)
- EU Technology Platform
- Bilateral Agreements

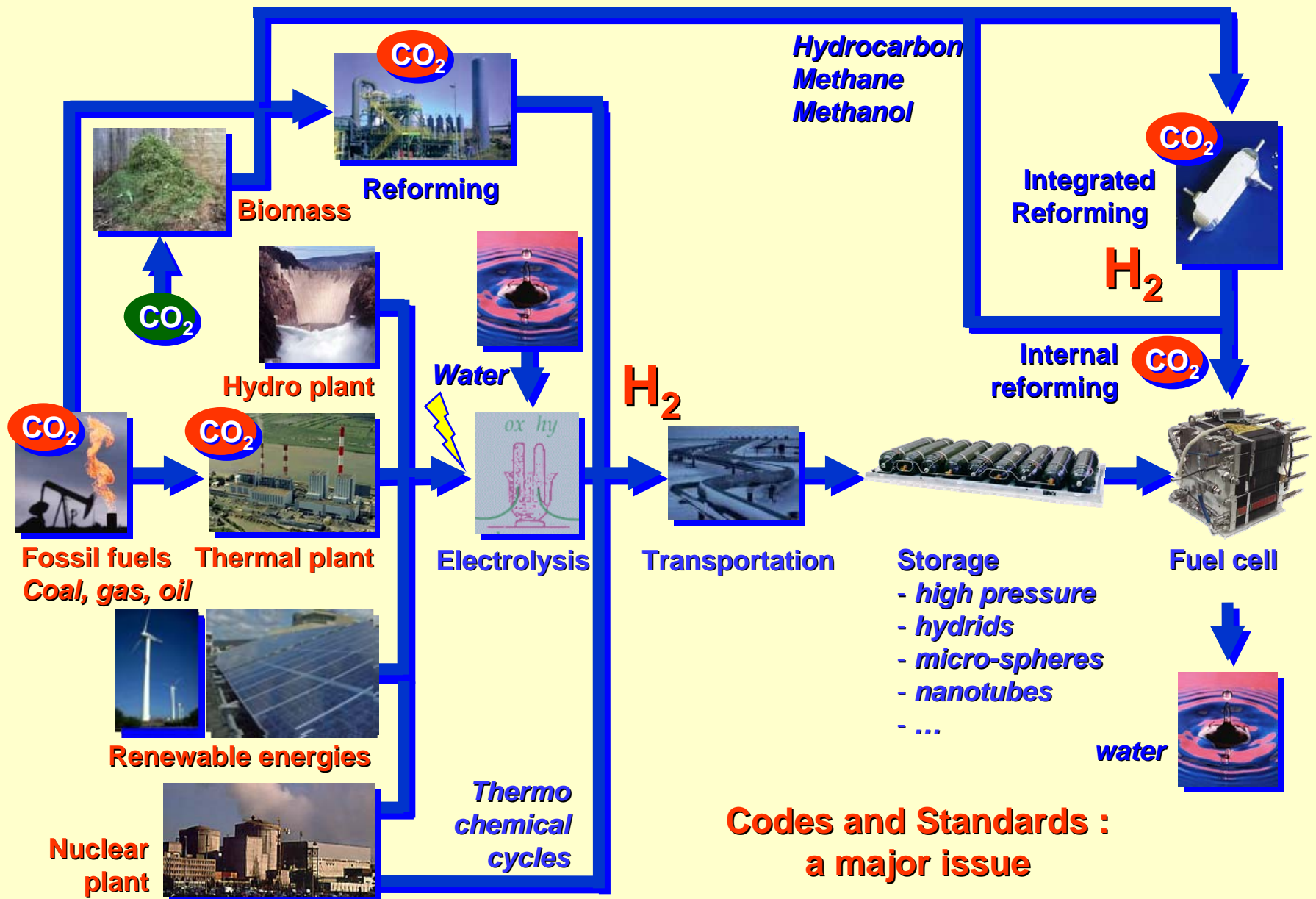


# PAN-H : Hydrogen High-Level Group

- Public research organizations
- Industry
- Academic research
- Major Goals : PEMFC, transport and distribution, high-temperature processes for H<sub>2</sub> production
- 5-years Action Plan (2006 – 2010)
- Proposal 600 M€ (40% public - 60% industry)
- Budget being discussed (NRA - NII)

# A National Strategy









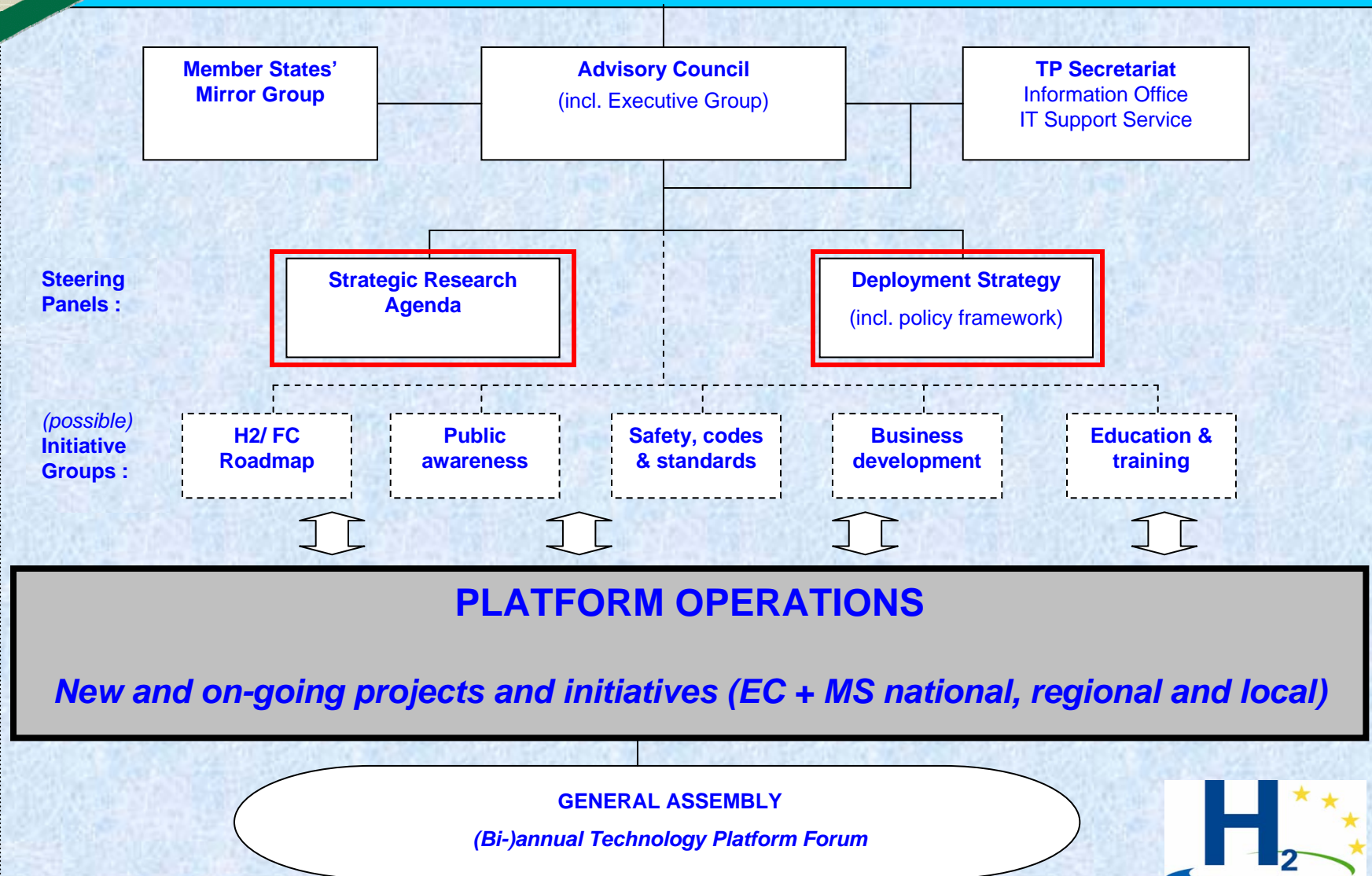
## The Shanghai surprise

4 seats  
850 Kg  
400 Km



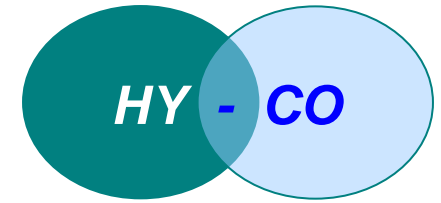


# H2/ FC TECHNOLOGY PLATFORM



# HY-CO : ERA-NET on Hydrogen and Fuel Cells

(1 October 2004 – 31 October 2008)



- Program coordination of H2/FC R&D activities
- 21 participants from 16 countries
- A common knowledge base
- HY-CO strengthens the European R&D and demonstration infrastructure on H2/FC technologies through joint activities
- A strong support to the Member States Mirror Group of the H2/FC Platform



# Projects in Europe on Hydrogen technologies, economics and environmental impact

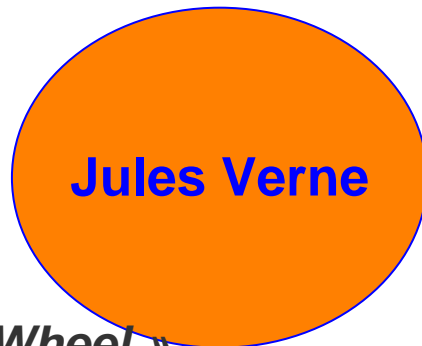
## Current Projects in Europe

**French-German : CEA-LBST-IFP**

*Systems Evaluation from « Well to Wheel »*

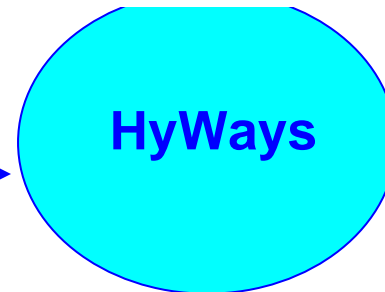


**Iceland-France**

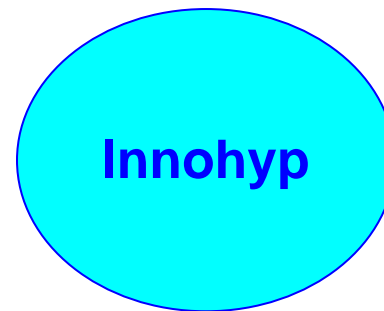


*Electrolysis Infrastructure from « Well to Wheel »*  
*Air Liquide-ECP-CEA*

## Projects in Europe 6<sup>th</sup> FWP



**Roadmap**



**Innovative Production Processes**



**Storage**

lap



*World Hydrogen Energy Conference 2006*  
*LYON, France*  
*13th-16th June 2006*



# Prospects

- Significant R&D results (FC, storage, etc.)
- Strong collaboration between industry and research
- Market, investment, social acceptance and transition to the hydrogen economy are fundamental issues
- R&D Effort in key areas to be focused and increased in the new agencies (Research and Industry)
- A strong partnership with EU - HTP
- Looking forward to IPHE projects