

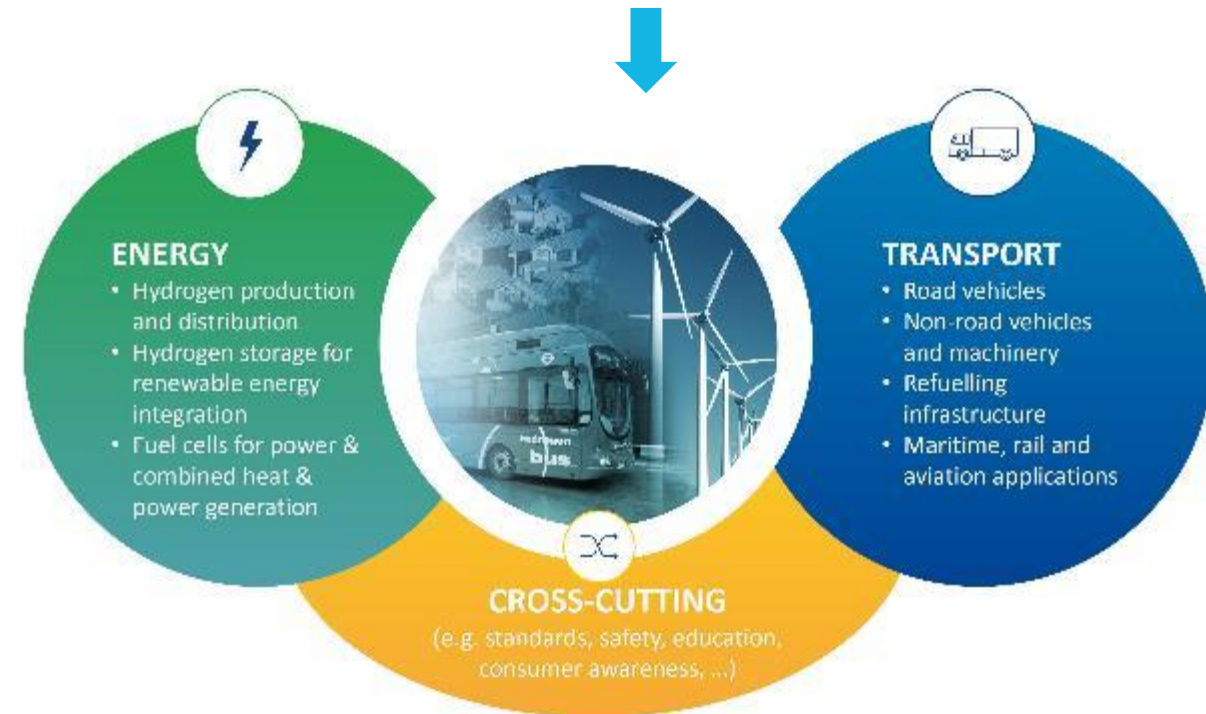
JIVE projects: strategy for joint procurement of fuel cell buses



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Hydrogen Europe and the Fuel Cells and Hydrogen Joint Undertaking



110+ industry companies representing the whole value chain; **67 research organisations**; **16 national associations**

JIVE projects: deployment sites and objectives



DEPLOYMENT SITES

- Aberdeen, UK
- Akershus, NO
- Auxerre, FR
- Birmingham, UK
- Bolzano, IT
- Cologne, DE
- Dundee, UK
- Gatwick Airport, UK
- Groningen, NL
- Herning, DK
- London, UK
- Pau, FR
- Reykjavik, ISL
- Rhein-Main, DE
- Rotterdam, NL
- South Holland, NL
- Sweden, SE
- Toulouse, FR
- Wuppertal, DE

- JIVE buses
- JIVE 2 buses
- MEHRLIN HRS*

*Hydrogen Refuelling Station



- **Deploy nearly 300 buses** and associated infrastructure
- **Stimulate the market for fuel cell buses** in Europe by creating demand for hundreds of vehicles
- **Lower the prices** of fuel cell buses using joint procurement and economies of scale
- Demonstrate routes to achieve **low cost renewable hydrogen**

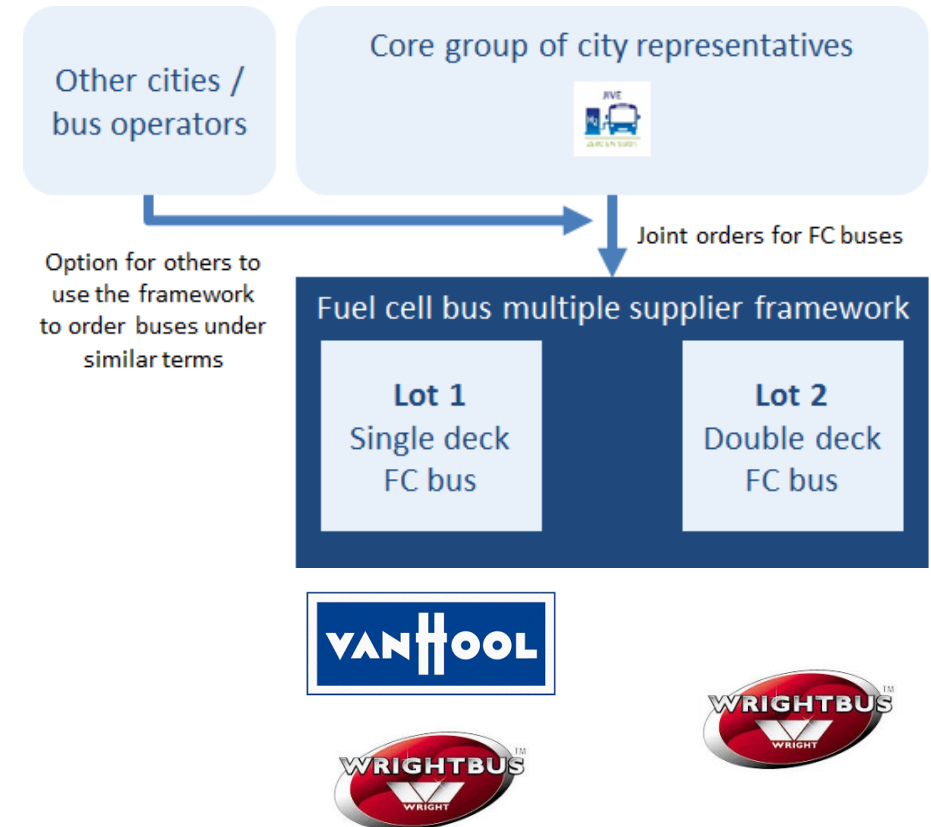
Joint procurement approach



- **In the UK: Joint procurement framework** established in the UK with two manufacturers meeting the conditions

Key features:

- Provide vehicles with a common specification → **standardisation and economies of scale.**
- Enable other cities/bus operators to procure buses under similar terms – mechanism for rapid purchase of FC buses.
- Live for four years from 2018.



Joint procurement approach

- **In Germany: Joint procurement strategy within the German cluster :** joint technical specifications
 - 40 buses for Cologne region and Wuppertal
 - Upcoming similar exercise within JIVE 2
- **In France: exemple of Pau:** procurement based on:
 - Supply of the whole transport system: buses + energy system + maintenance
 - Performance criteria (BRT system)



First lessons learned - recommendations



- Joint procurement have been **effective in aggregating demands and stimulating the supply side**, however they may not always been the best option given the complexity
- **Early engagement with operators and potential suppliers/OEMs is key**
- **Tender development:** Agree standard specifications with bus purchaser (JIVE partner) and operator
- **Contract award and call off:** Re-evaluate the operators' requirements in terms of specification of the bus and approach to maintenance
- **Infrastructure tender : question of “all-inclusive” tenders** - combining tender for Hydrogen Refueling Stations and civil works
- Important not to “over-specify” – focus on performance



Shift happens! Hydrogen enables you.

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