

Hydrogen in the Energy City

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WHAT...?

- Aberdeen Hydrogen Bus Project
 - Ten FCEBs and maintenance facility
 - Hydrogen production and refuelling facility - On site electrolysis from green tariff
- Hydrogen Strategy
- Global Oil and Gas Hub
- Renewable Energy – wind (and tidal)
- Electricity Grid Constraints
- Combined Heat and Power
- City Deal

WHY...?

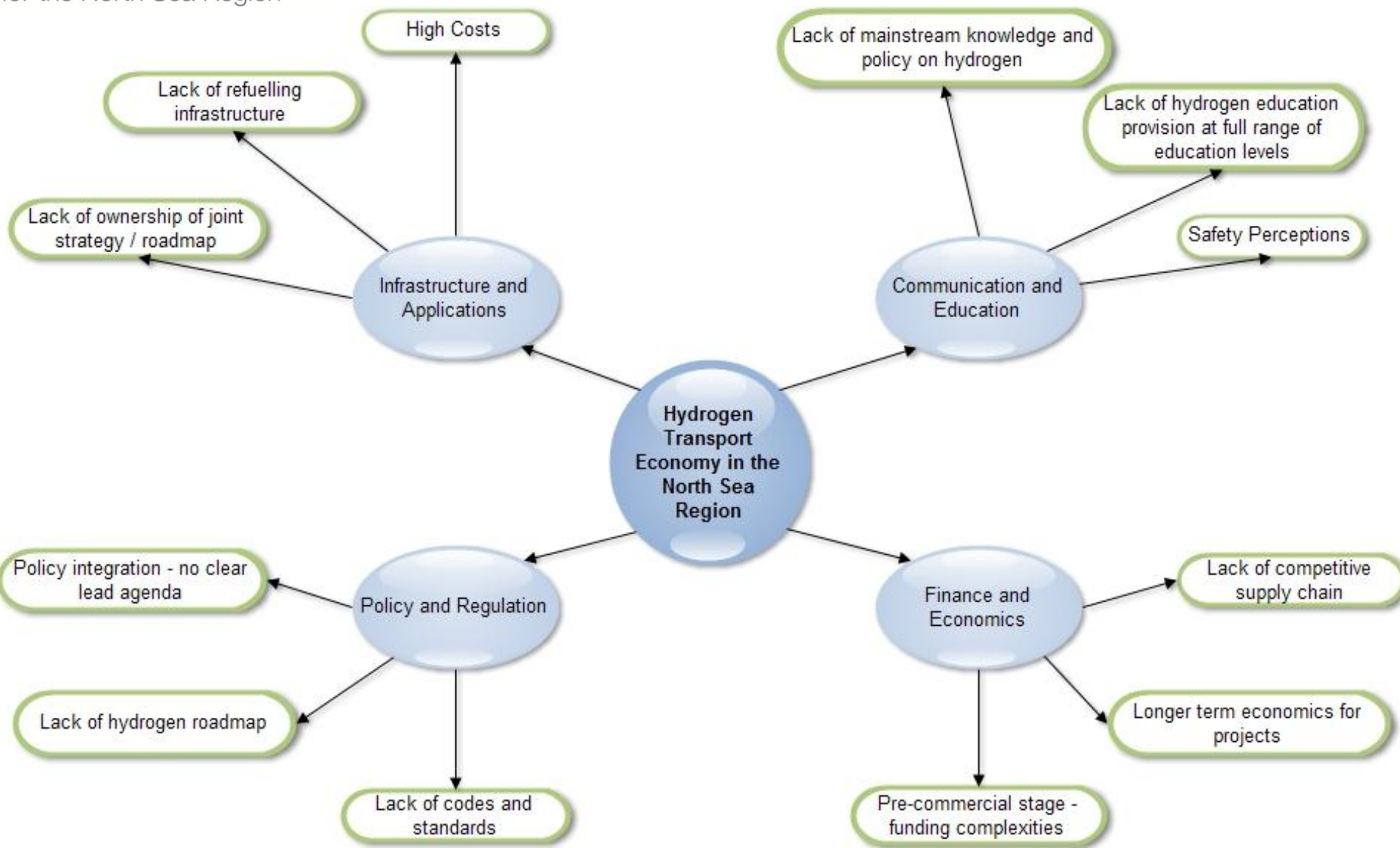
- Long term future as **The Energy City**
 - Low carbon economy (not just oil and gas)
 - Transferable skills – retain skilled workforce
 - Supply chain development – retain and attract businesses
- Air Quality
- Carbon targets and renewables capacity





Strategy Development - Barriers

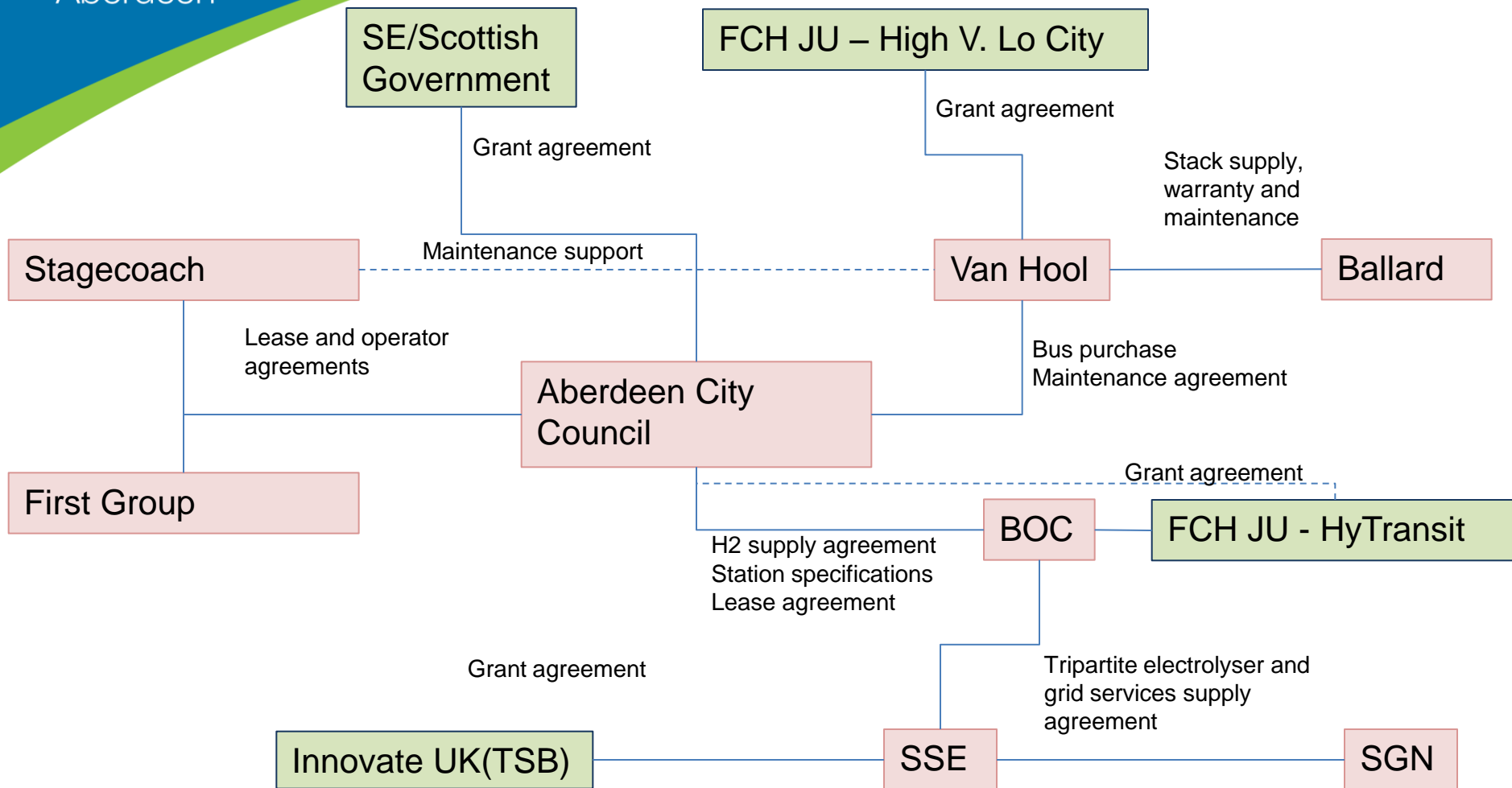
Hydrogen Transport Economy
for the North Sea Region



Lessons Learned

Infrastructure and Applications

- Timing is key – vehicles & refuelling / production
- Balancing specification / cost / safety
- Site operator needs to develop HRS – simplify relationships / roles
- Speak to people who have done it before!



Lines represent contracts, dashed lines are indirect contractual arrangements

Lessons Learned

Communication and Education

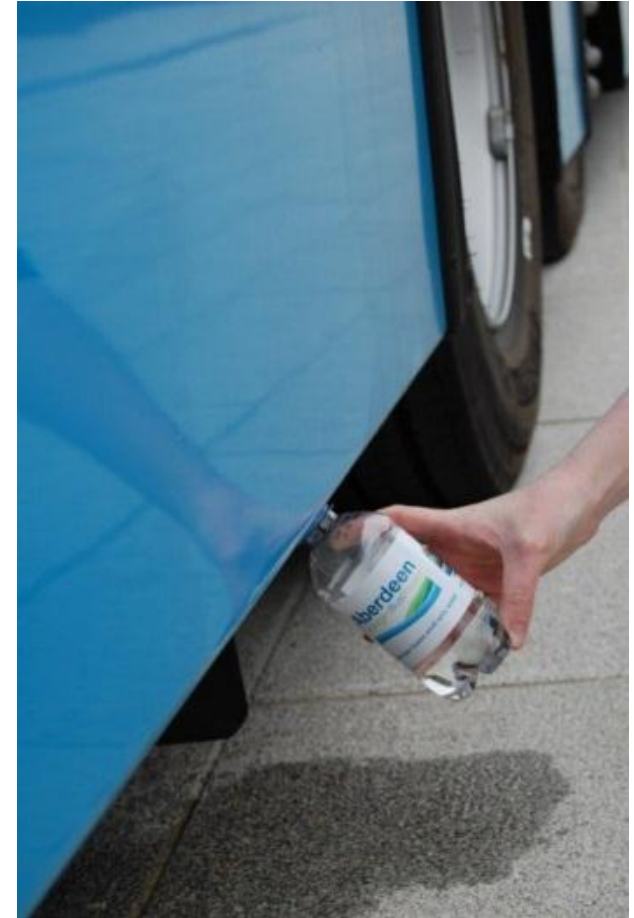
- Communications
 - Internal staff – Kittybrewster site impacts
 - Management – changes over time
 - Public – positive but fragile
- Education
 - Availability of technicians – competition with O&G
 - Success of schools engagement STEM, career development



Lessons Learned

Policy and Regulation

- Policy / Regulatory consistency – tax & VSO
- Invest time in getting contracts right
- Ensure contracts have high (85%+) availability
- Risk assessments / standardised guidance



Lessons Learned

Finance and Economics

- Project Planning – clear financial procedures
- Work to be done on business models:
 - Electricity price and operational data analysis
 - Local production + distribution or HRS on-site production / demand management..... versus import
- High costs / few suppliers – opportunity!

WHAT NEXT?

- Data collection and analysis
- Deployment of vehicles to support infrastructure – relies on success of first vehicles
- Business engagement – Supply chain
- Green hydrogen production / energy storage



A Hydrogen Economy for Aberdeen City Region

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