

Guernsey Hydrocarbon Supply Programme

June 2017



What we plan to share with you today

- What the programme is seeking to achieve
- Outline of the Hydrocarbons Programme
- What are hydrocarbons and why Guernsey needs them
- How Guernsey gets its hydrocarbons
- Challenges in getting hydrocarbons to Guernsey
- Some potential future solutions and how to assess them
- Where we have got to and what is next



Hydrocarbon Supply Programme Vision

**A safe and secure hydrocarbon supply
delivering socio-economic value
to Guernsey**



Critical Success Factors



Value for Money



**Minimising safety risks to
the Island**



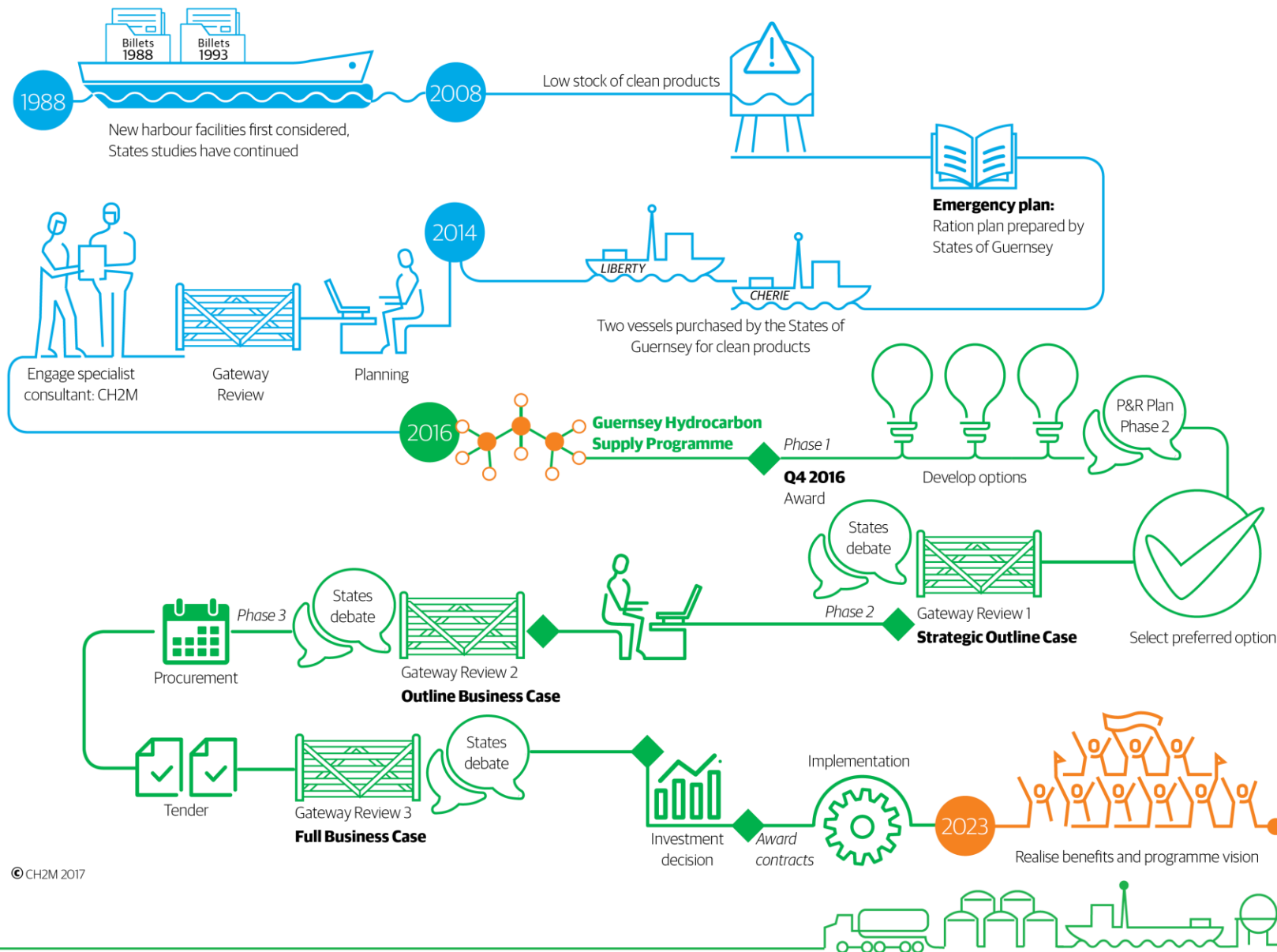
Security of supply



Reliability of supply



Hydrocarbon Programme Timeline



The Guernsey hydrocarbon supply chain

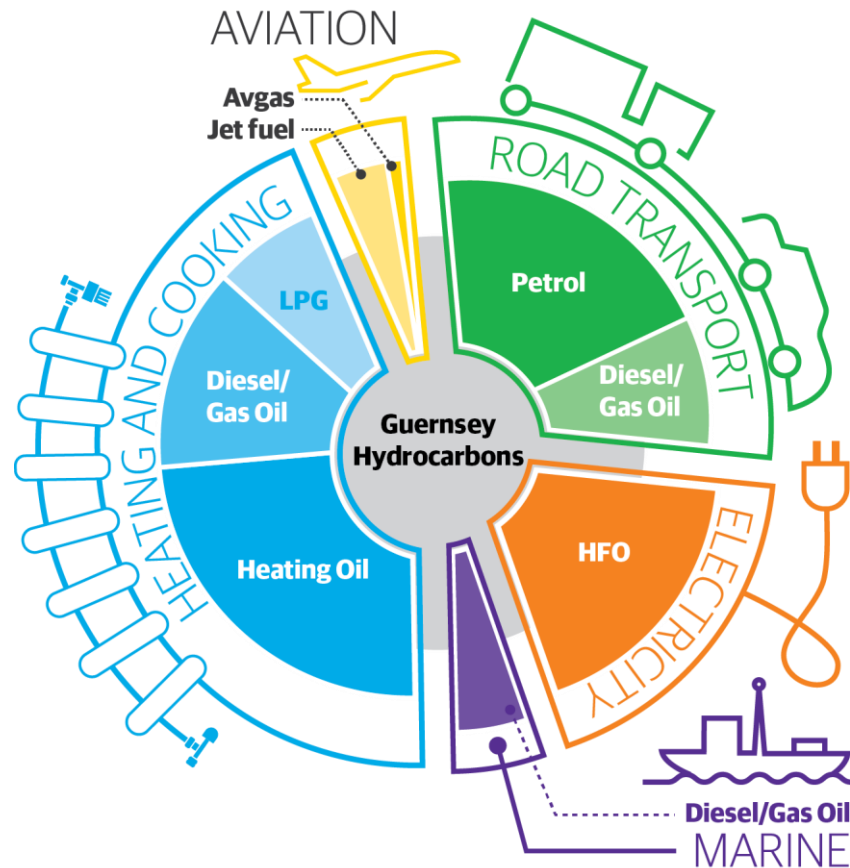
Infrastructure



Stakeholders



What are hydrocarbons and why do we need them?

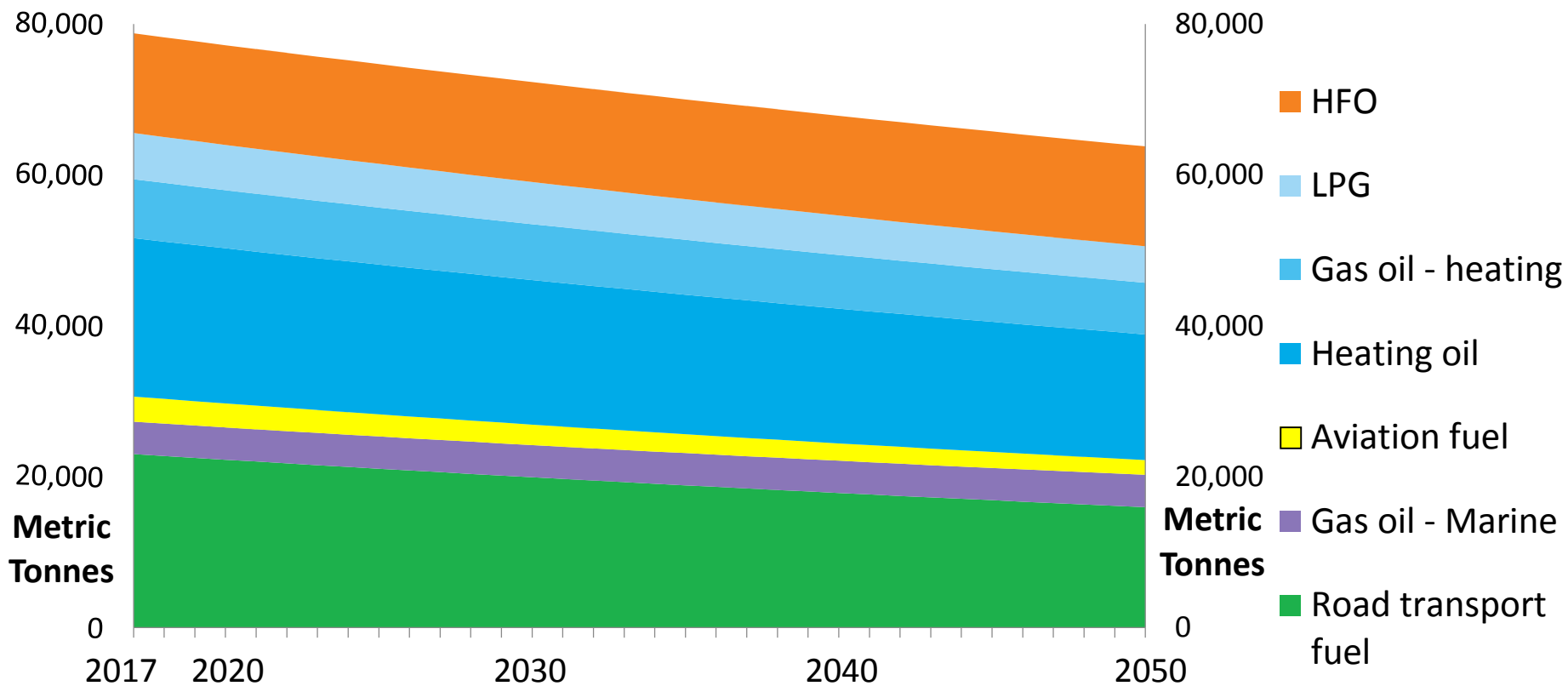


Forecasts based on analysis of underlying drivers

	Heating & cooking	Road Transport	Electricity generation	Aviation	Marine
Underlying demand	Population Weather	Population Distance travelled per person	Population Commercial activity Electrification	Flight numbers Aircraft size/type	Fishing fleet Inter-island travel Recreational boating
Energy efficiency	Boiler efficiency & insulation	Vehicle efficiency	Appliance efficiency	Aircraft efficiency	Vessel efficiency
Substitution	Domestic electrification	Electric vehicles	Cable link(s) Renewables	Other fuelling locations	-



Forecast future demand for hydrocarbons



Uncertainties

- Rate of uptake of electric vehicles
- HFO for on-island generation
- Relative shares for domestic energy

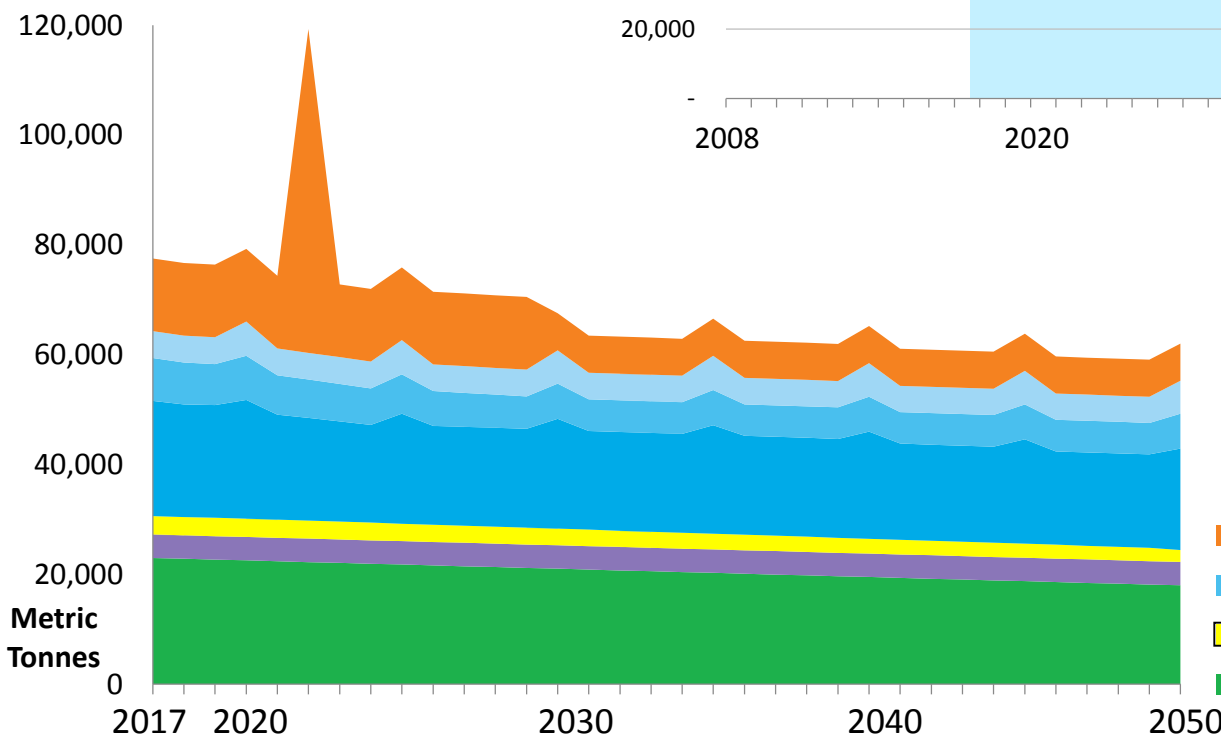
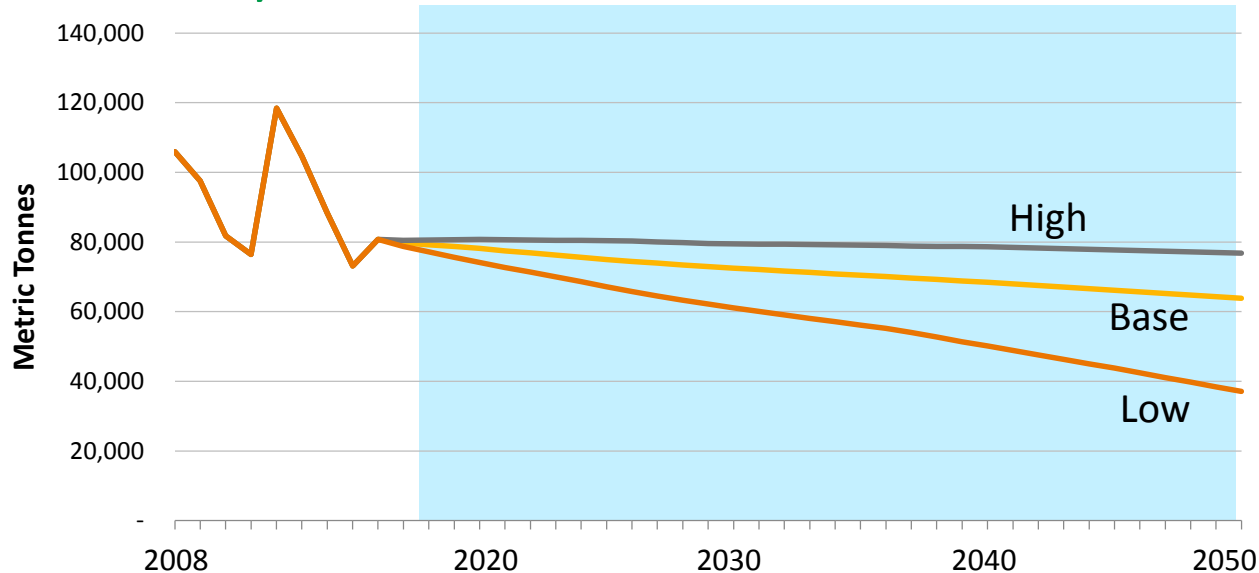
Assumptions

Forecasts are based on existing States of Guernsey policies.



Modelling uncertainty

Scenarios – base, high and low, taking different views of the underlying drivers



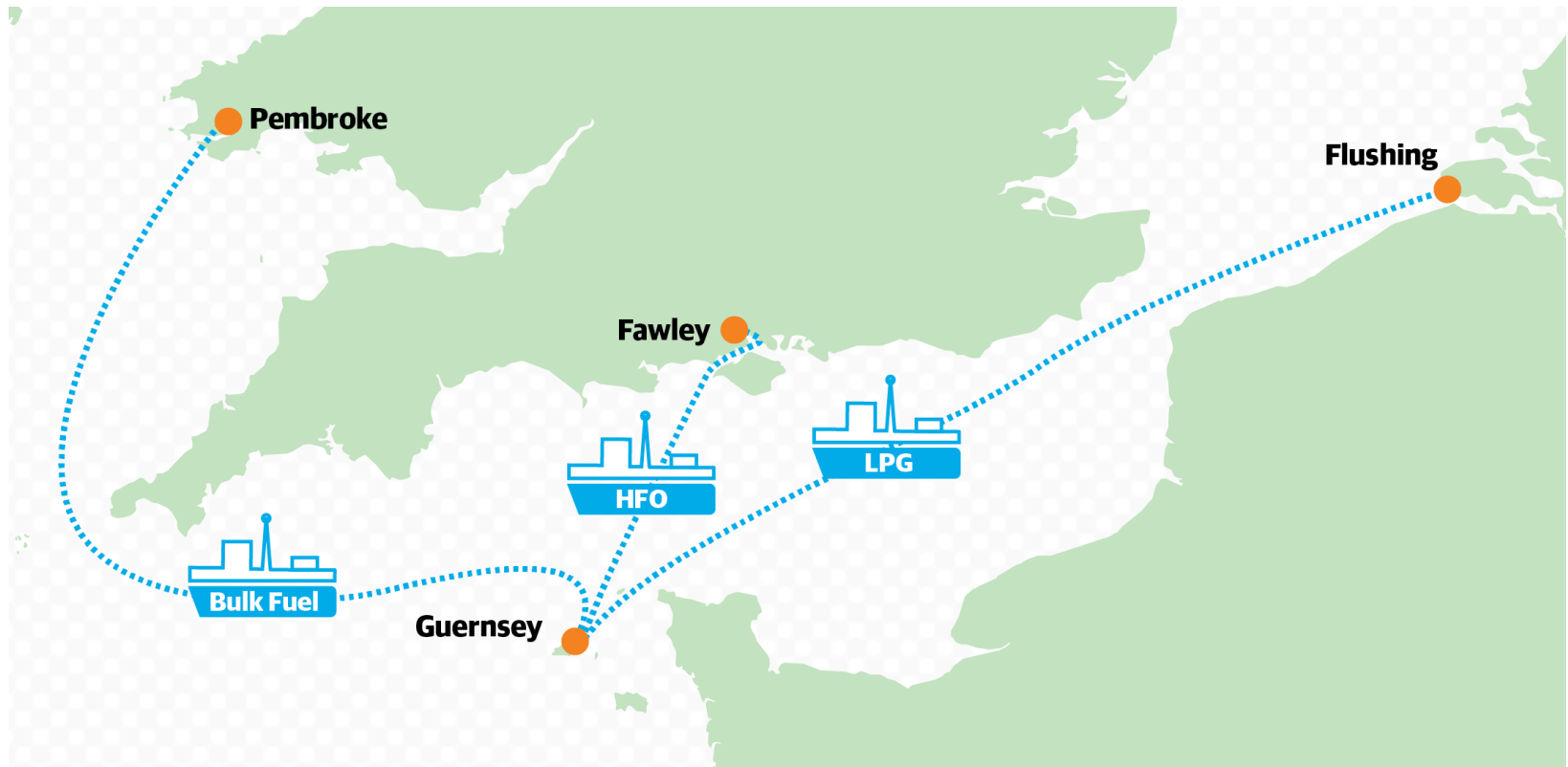
Toggles – discrete but unforecastable events

- Cable link outage
- 2nd cable link
- Cold winter

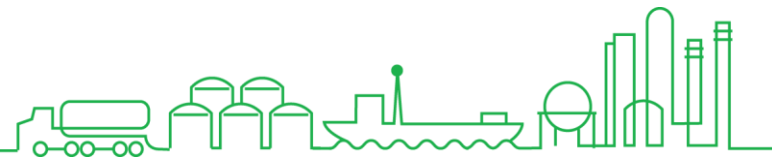
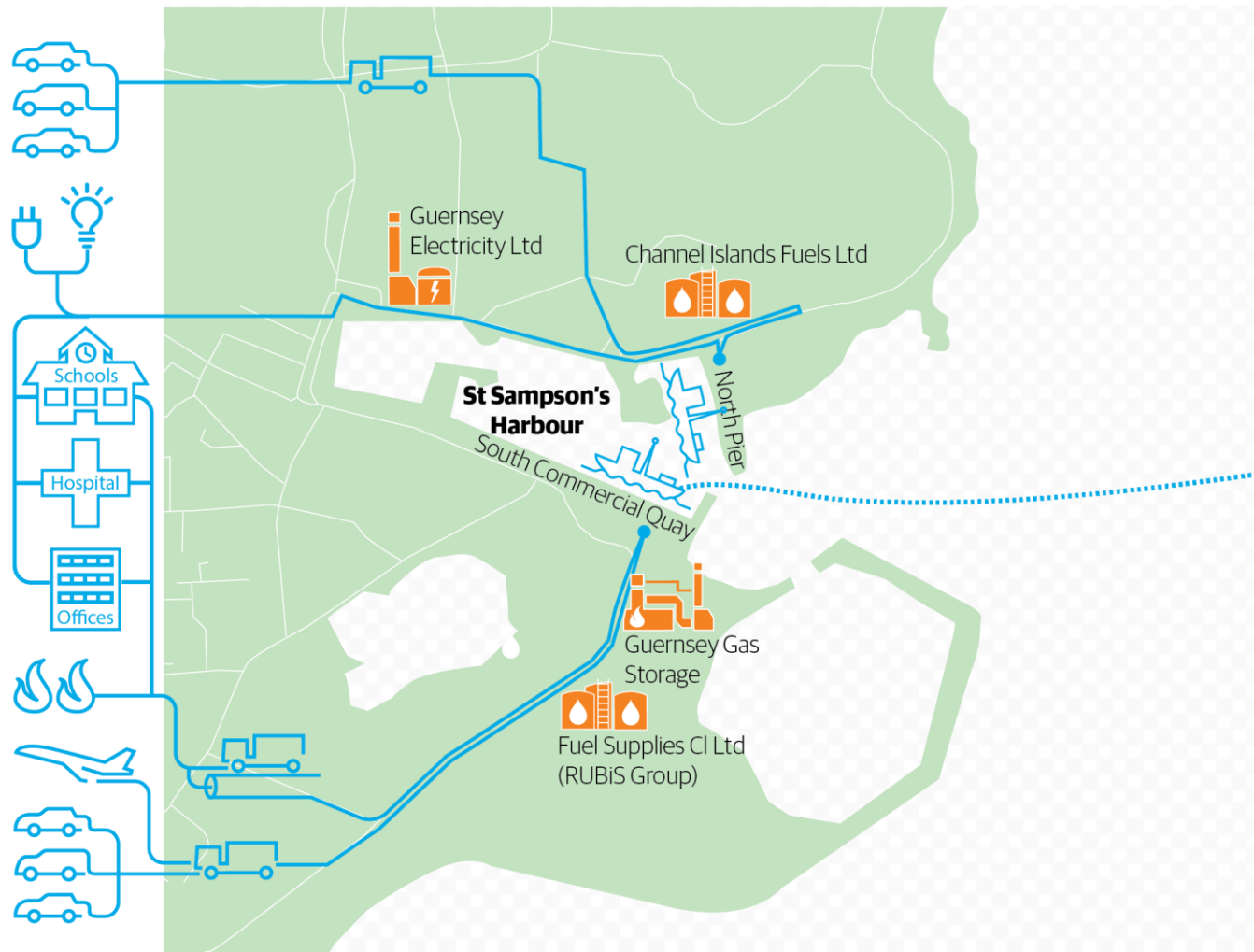
- HFO
- Gas oil - heating
- Aviation fuel
- Road transport fuel
- LPG
- Heating oil
- Gas oil - Marine



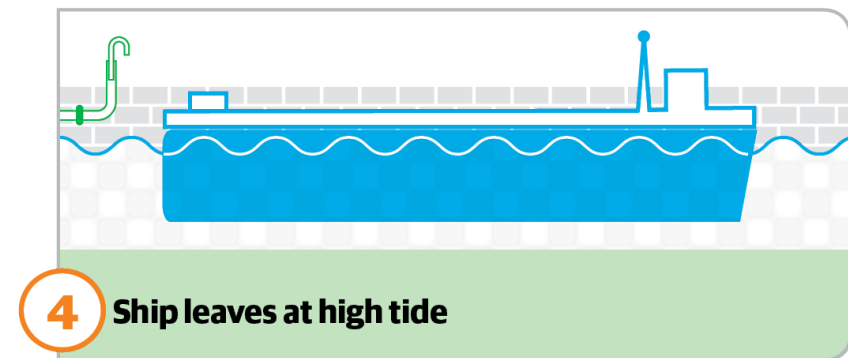
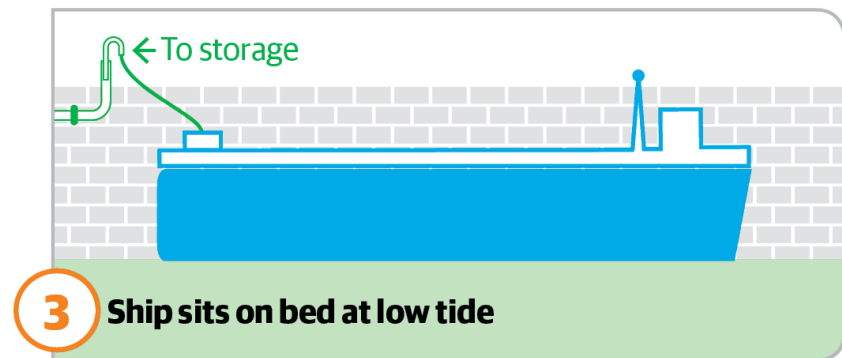
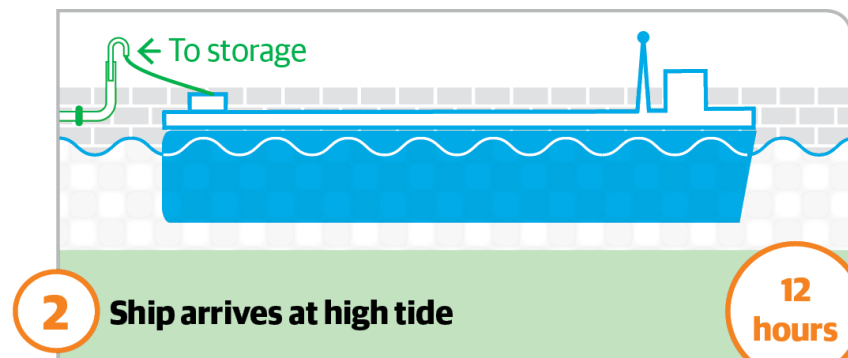
Current supply chain



Current supply chain



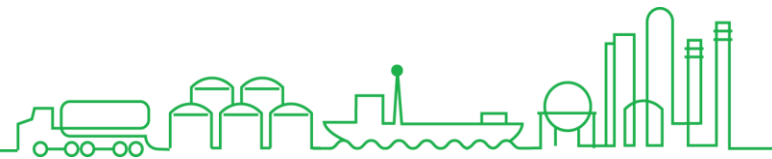
Berths at St Sampson's Harbour



St Sampson's Harbour



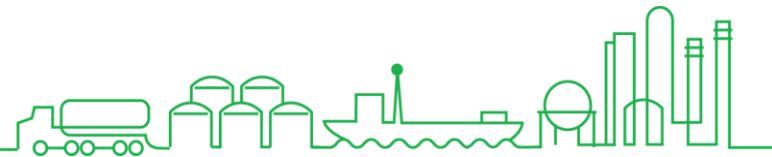
St Sampson's Harbour



St Sampson's Harbour



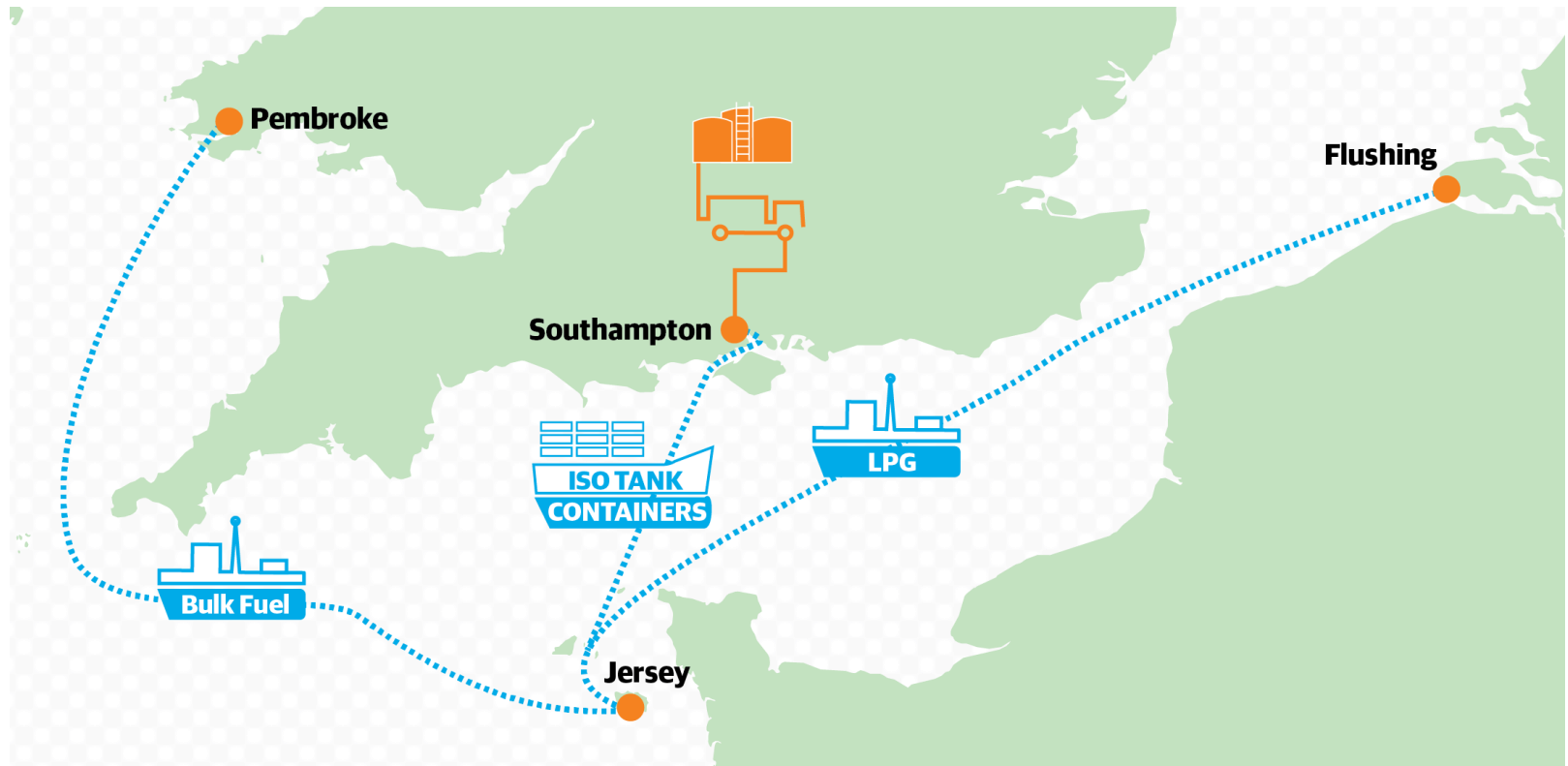
St Sampson's Harbour



St Sampson's Harbour

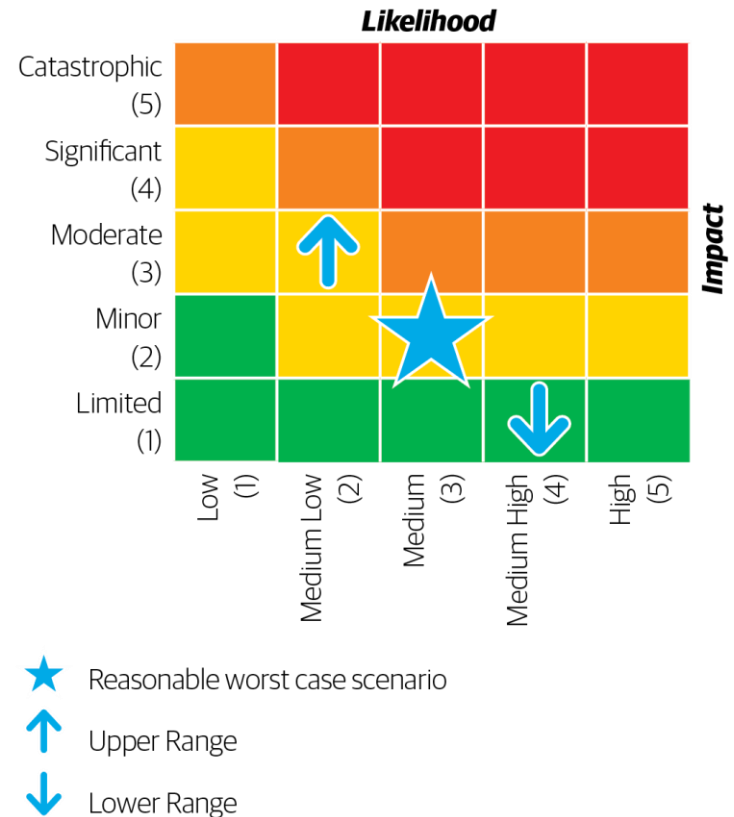


What do others do?

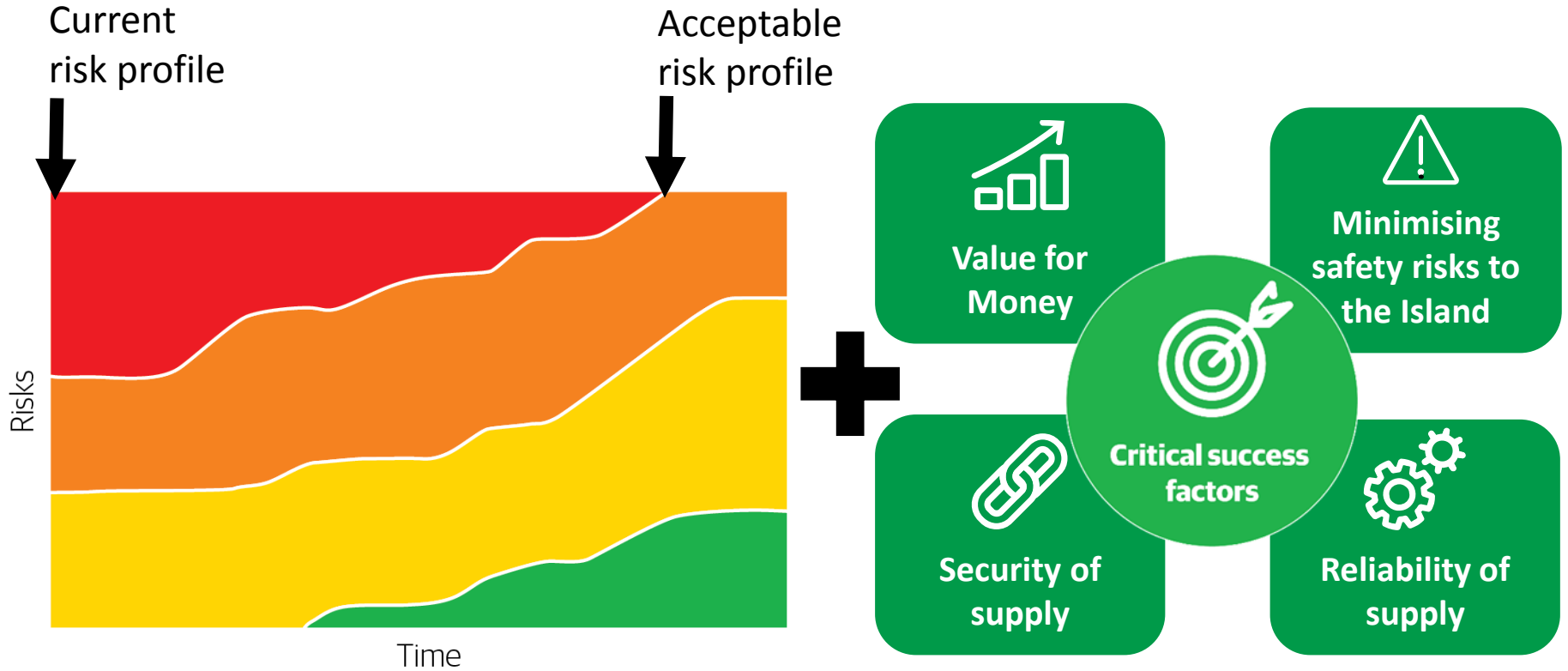


Current supply chain risks and challenges

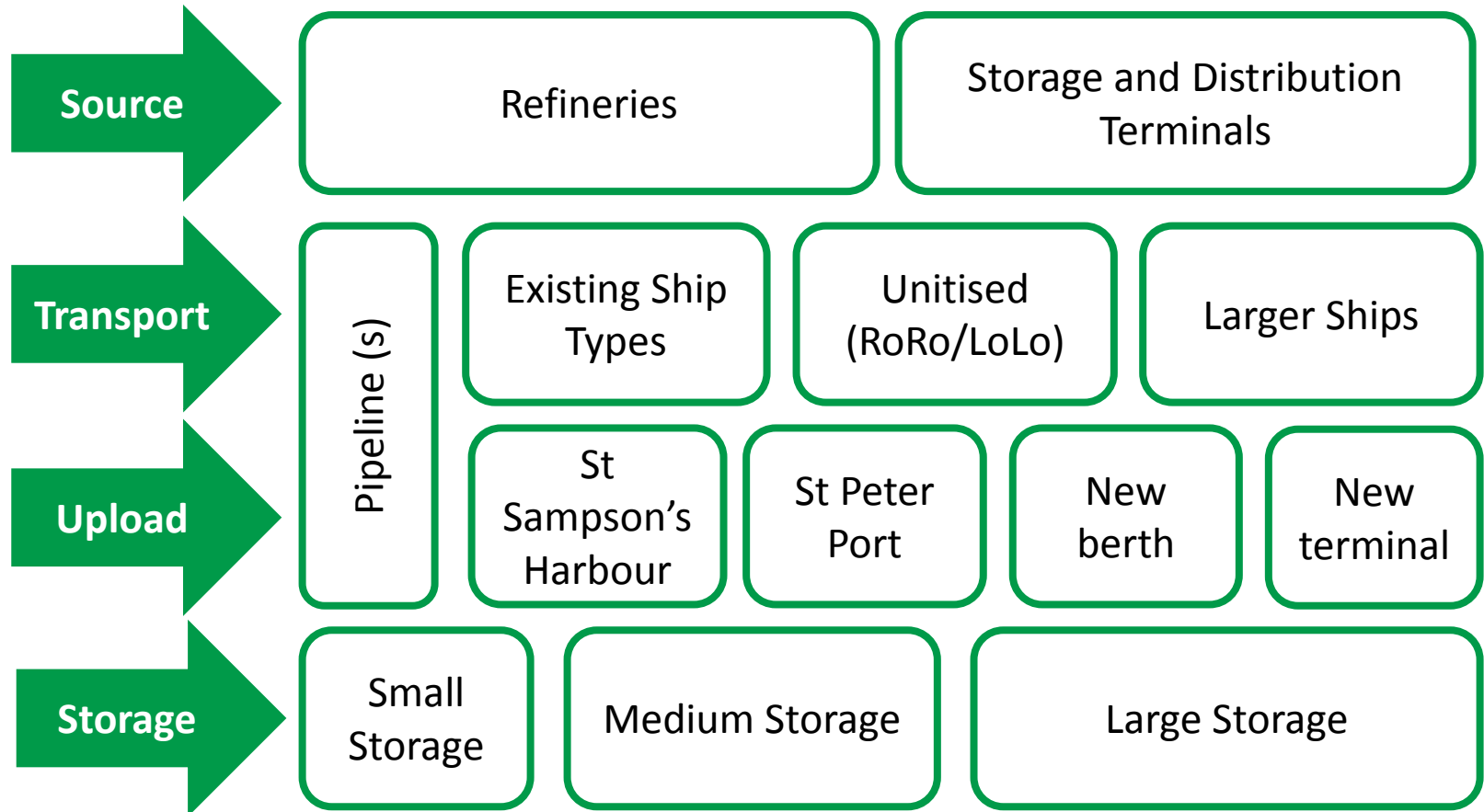
- Shipping risks
- Harbour access risks
- Explosion risks at St Sampson's Harbour
- Inadequate fuel stock available on Island
- Profitability/affordability makes part(s) of the supply chain unviable for private enterprise



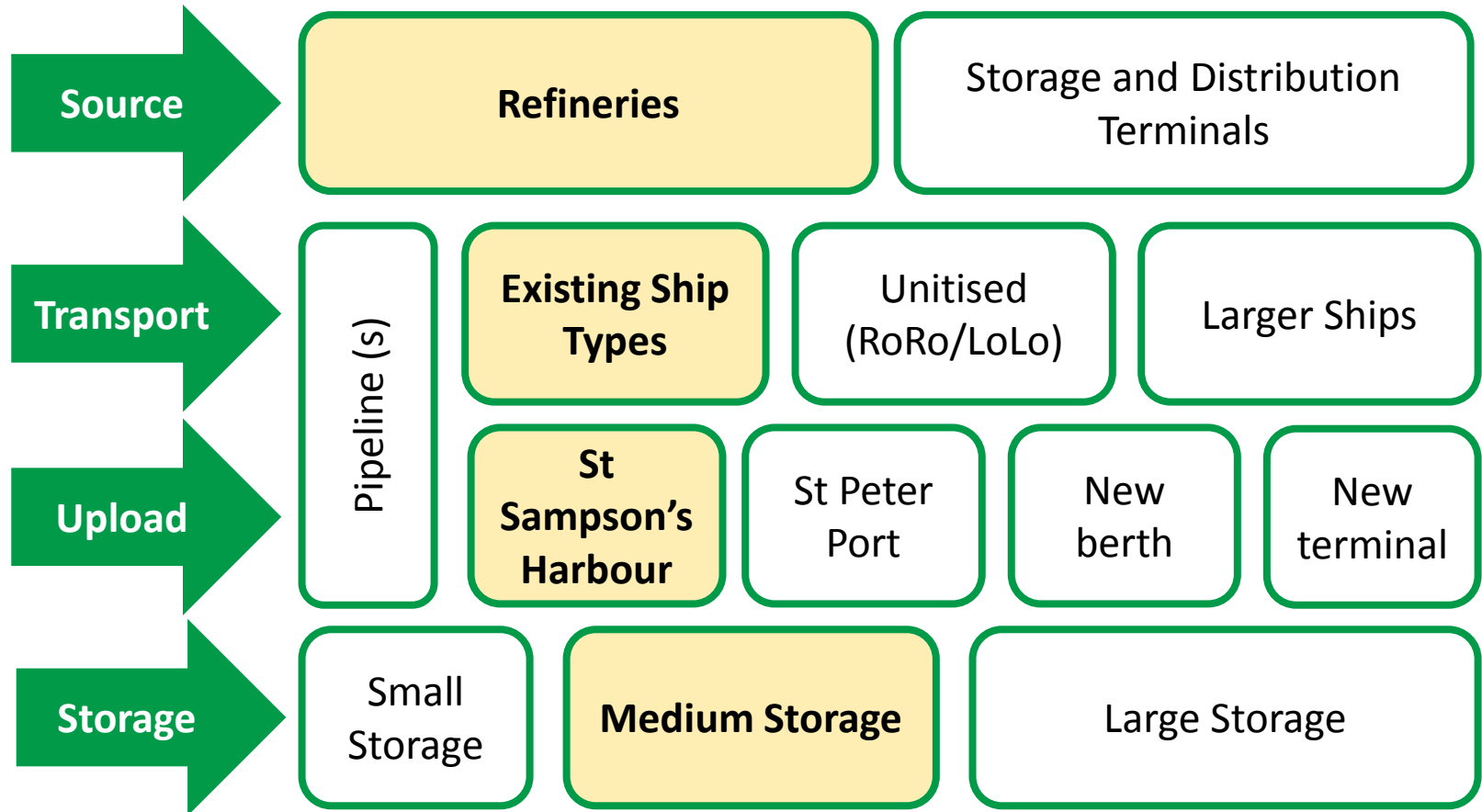
Where do we want to be?



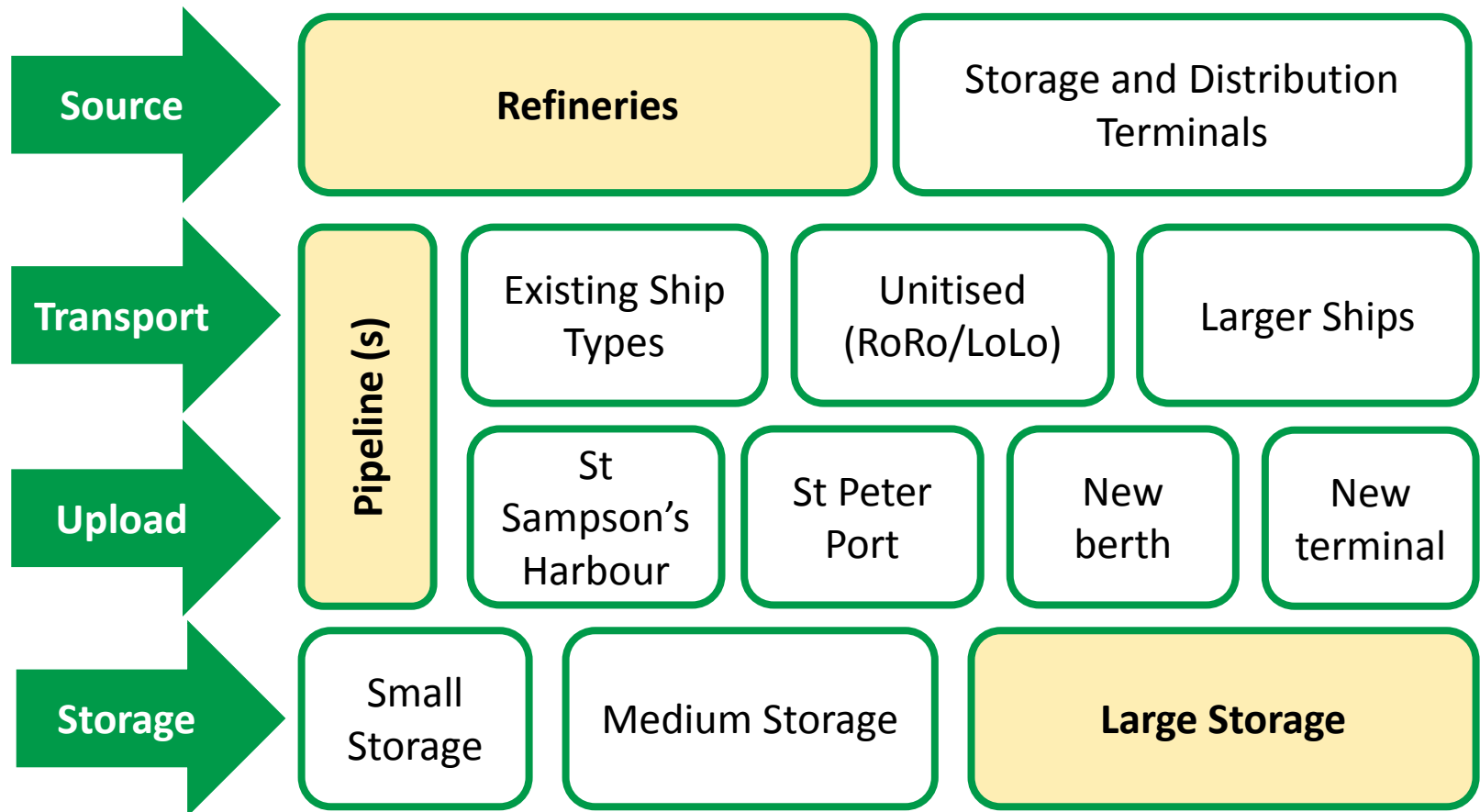
What are the options ?



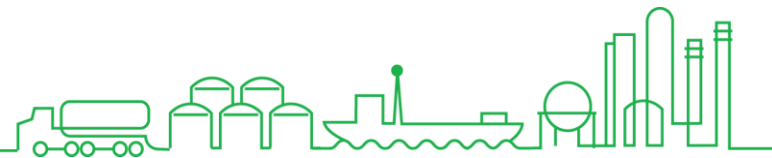
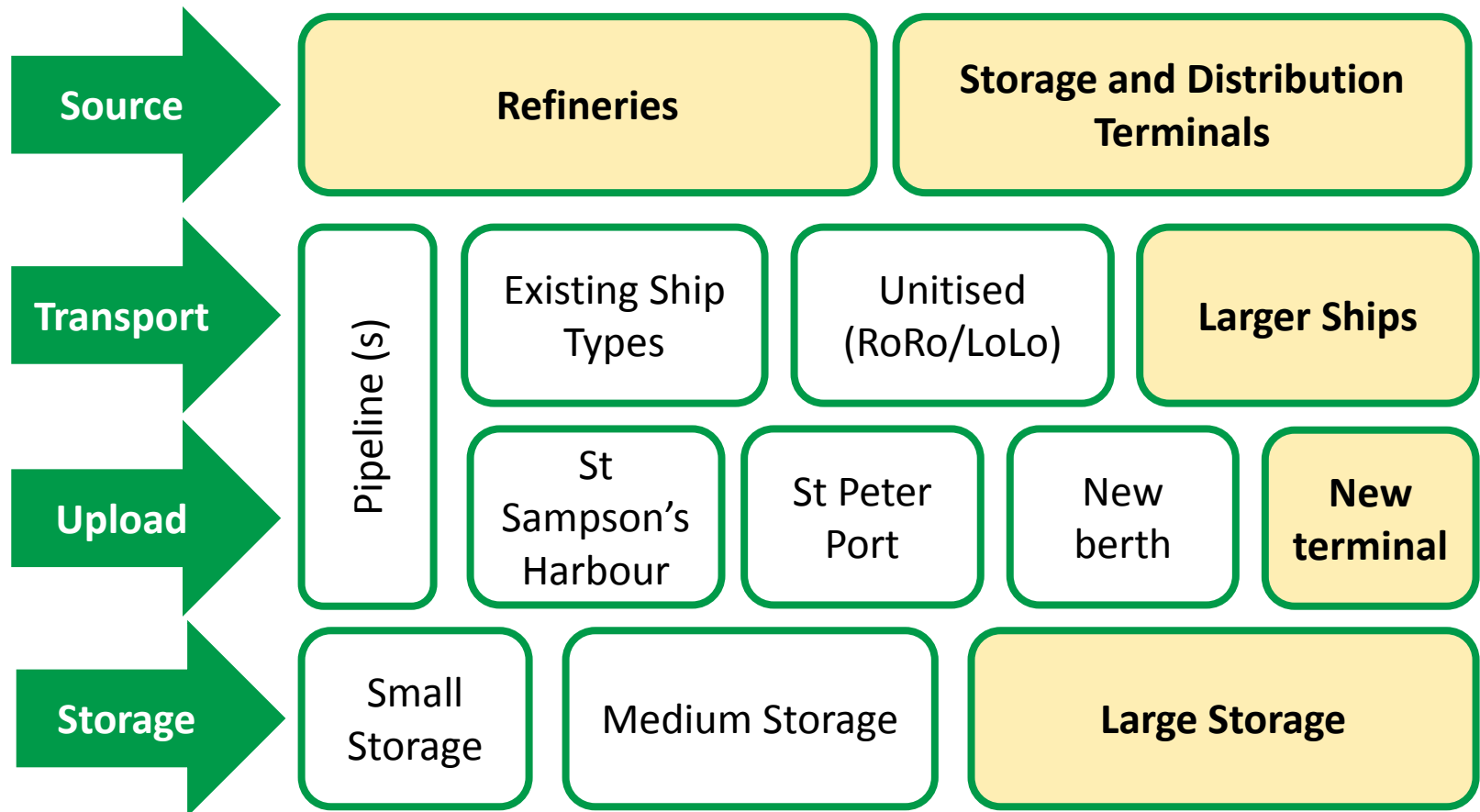
Options for evaluation



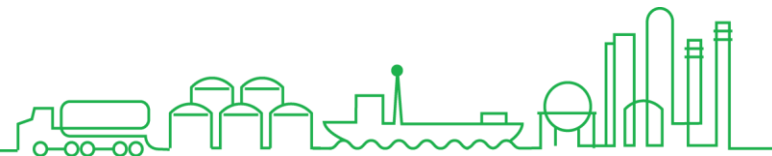
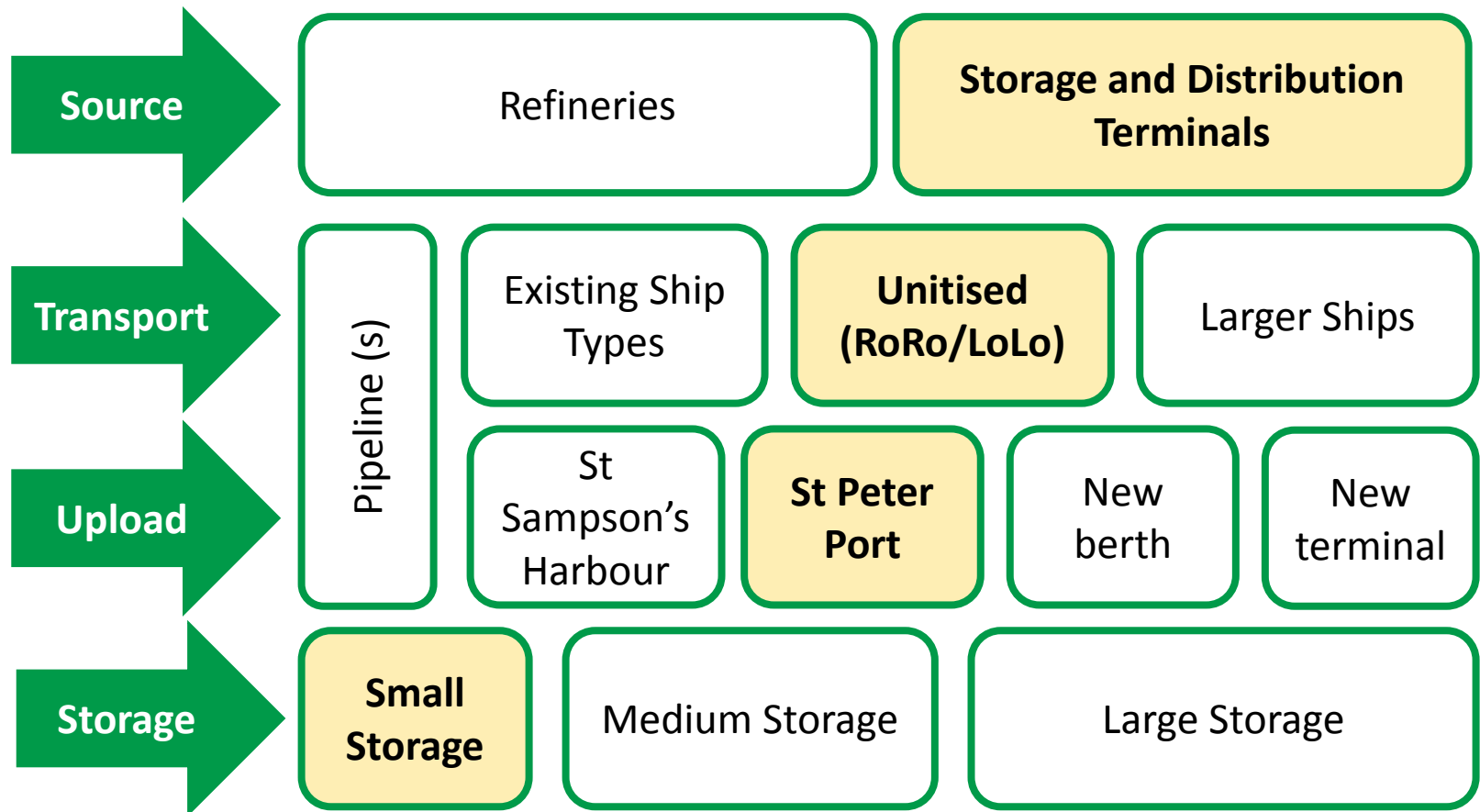
Options for evaluation



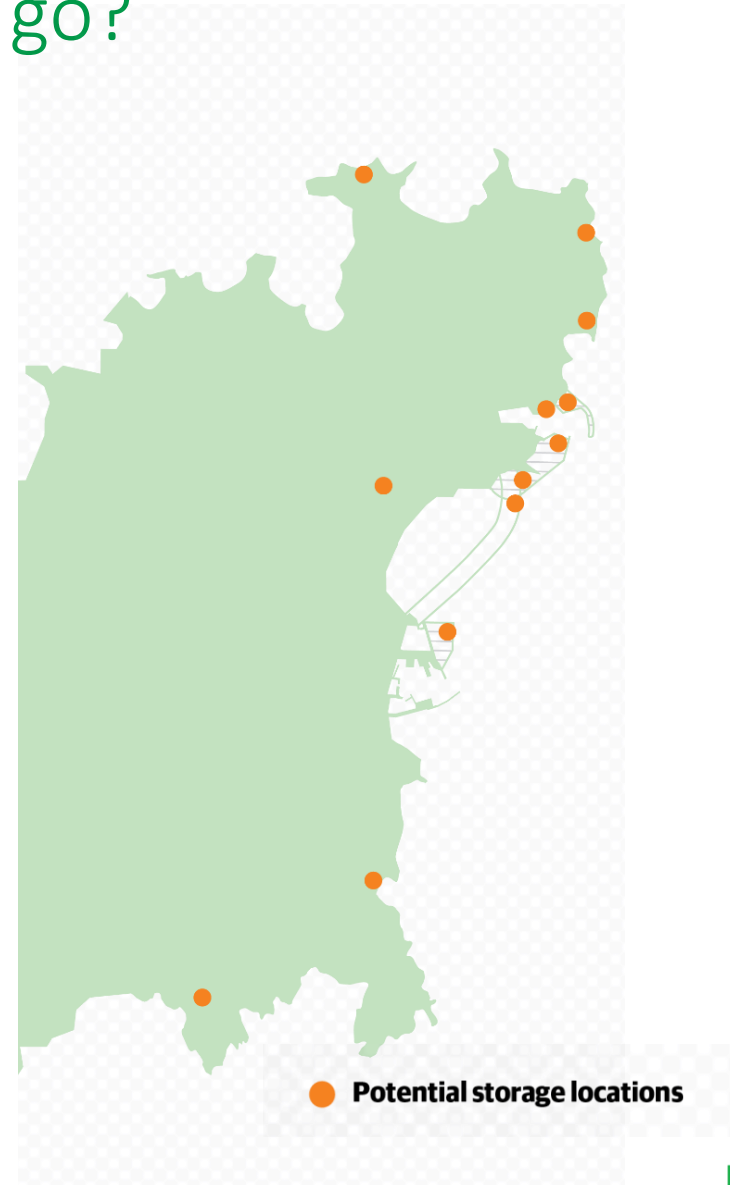
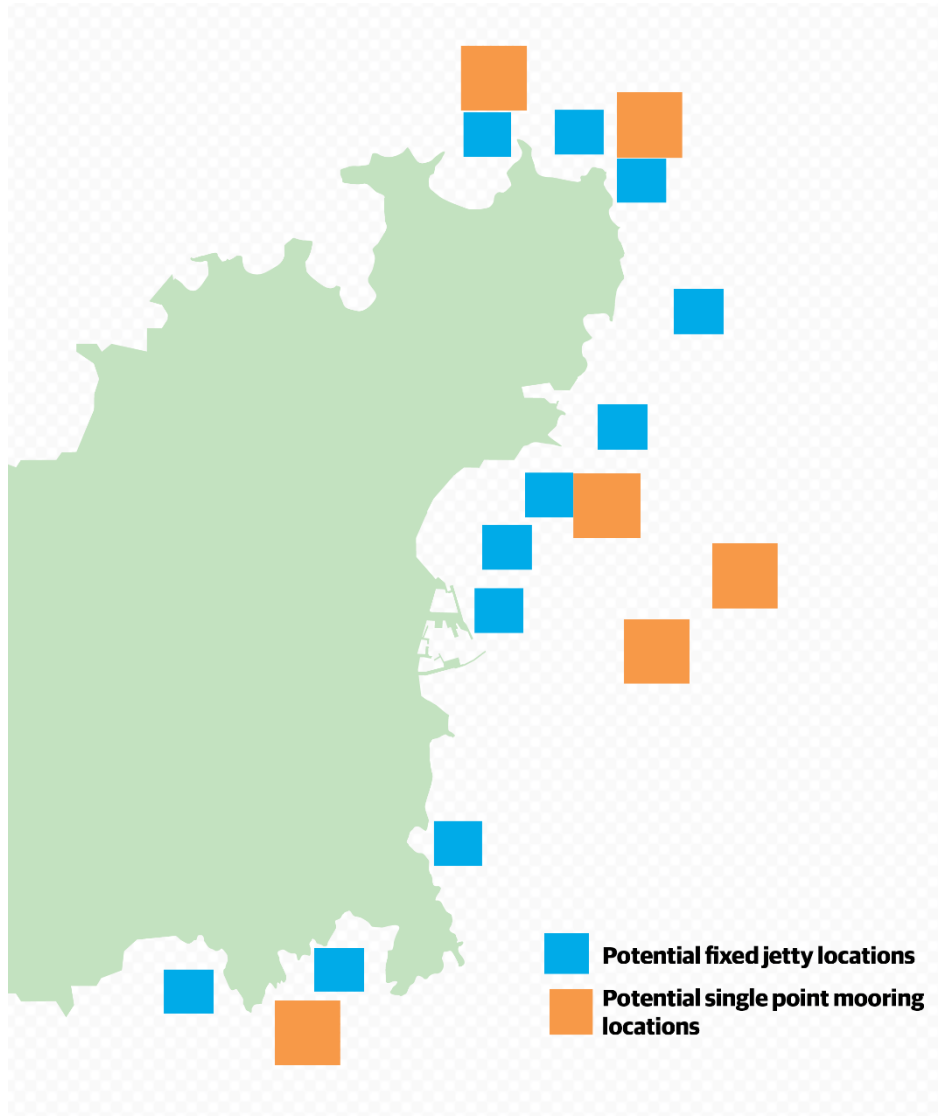
Options for evaluation



Options for evaluation



Where might new facilities go?

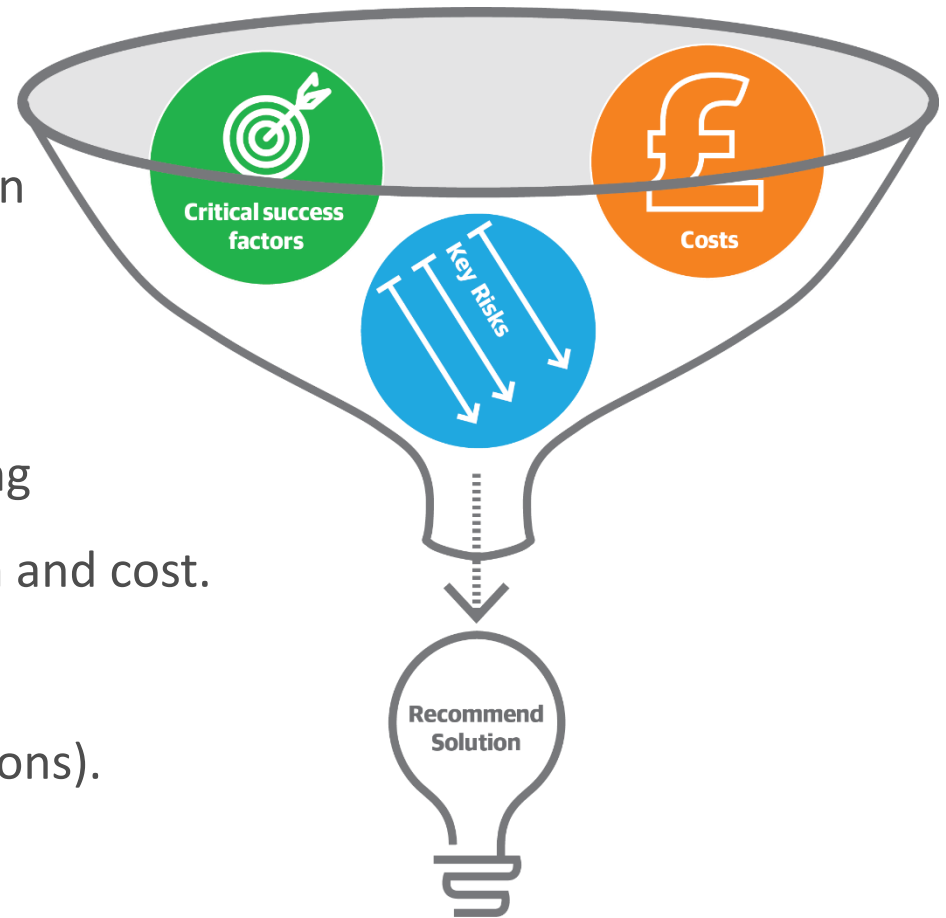


What is the solution?

A preferred or recommended solution has not yet been developed.

We will assess the options considering critical success factors, risk reduction and cost.

And recommend a solution (or solutions).



How will it be financed and funded?

Funding is about who pays for the infrastructure in the long run (ie user or taxpayer)

Financing is finding the money upfront to build it

- States capital investment
- Infrastructure fund or other private sector investors

Work on optimum funding and financing solution will iterate with the more detailed technical solution work to ensure best outcome for States of Guernsey and the island

Considerations will include:

- Different assets in the supply chain can be combined, procured and financed in different ways
- Value for money and affordability
- Significant appetite for infrastructure assets from private investors
- Ability to transfer risk of delivery and/or volume risk to private sector
- Residual role of the States of Guernsey



Next Steps

Making the vision a reality

A safe and secure hydrocarbon supply delivering socio-economic value to Guernsey.

