



Heavy Duty Vehicles (Marine Vessels) – Future Work

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Mission Statement

To bring about a meaningful change to the fuel efficiency and GHG intensity of the UK HDV marine fleets

- However, significant market barriers exist
- Technology development alone is not enough
- Assumption: additional legislation and policy will take time to agree and implement
- Therefore, considering market measures

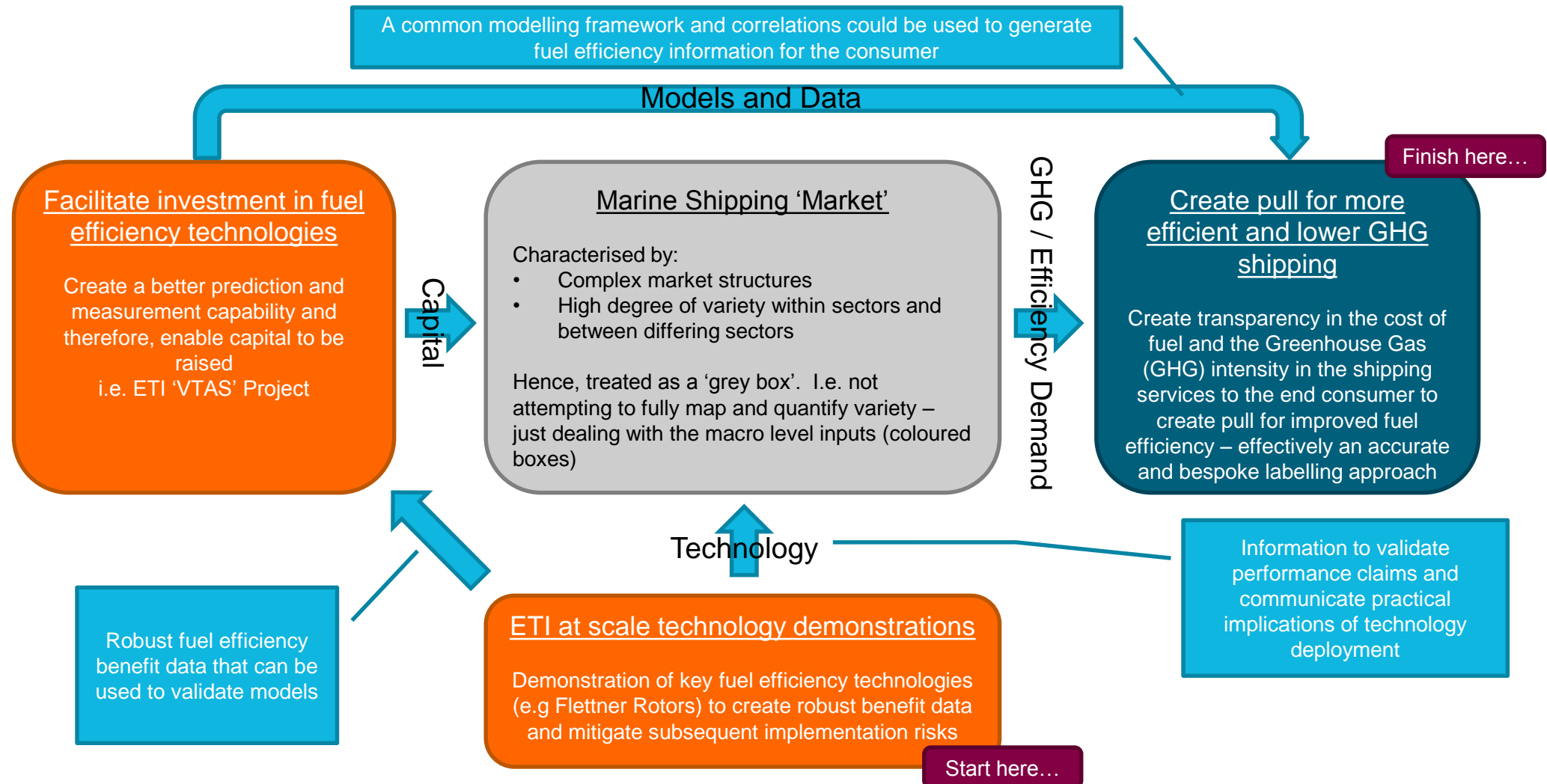


Market barriers

- A number of market barriers exist that could limit the uptake of cost effective fuel efficiency technologies.
 - One such barrier is the **inability to accurately and transparently *predict* and then *measure* real-world fuel consumption benefits** delivered through deployment of such efficiency technologies (both retro-fit and new build)
 - This inability to quantify and verify fuel savings leads to a lack of investment and hence technology implementation
- Furthermore
 - One of the major market barriers to efficiency investments within the maritime industry is the **split incentive** that exists between vessel owners and operators
 - Owners are rarely responsible for the fuel costs for their ships, this cost is borne by the ship charterer who rents the ship for a number of months of years
 - The volatility and uncertainty in ship earnings is high, and only partly related to the energy efficiency of the ship consequently its often the case that neither the vessel owner nor the charterer are motivated to invest in fuel efficiency technologies with payback periods much greater than a year

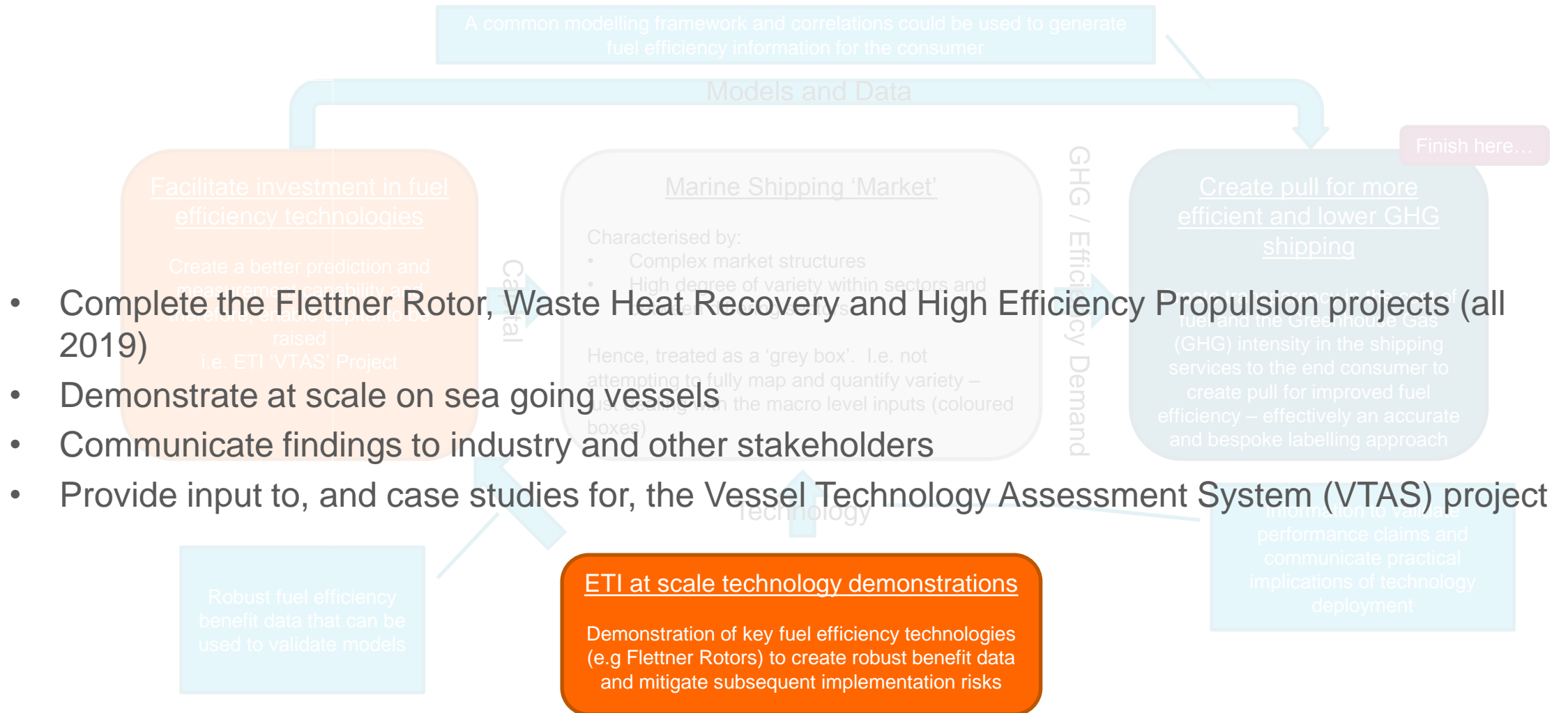


Strategy...



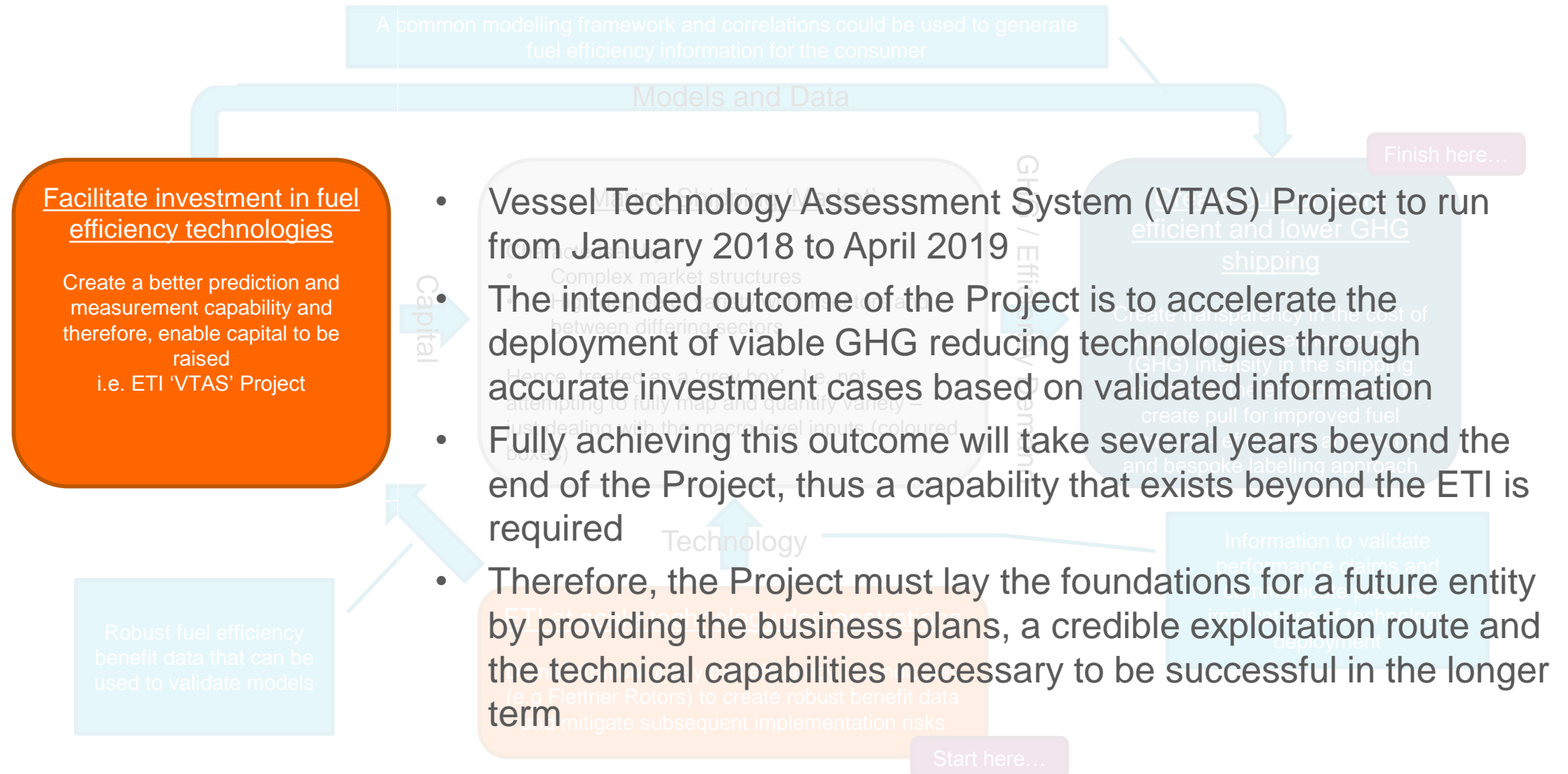


What we plan to do over the next 2 years...



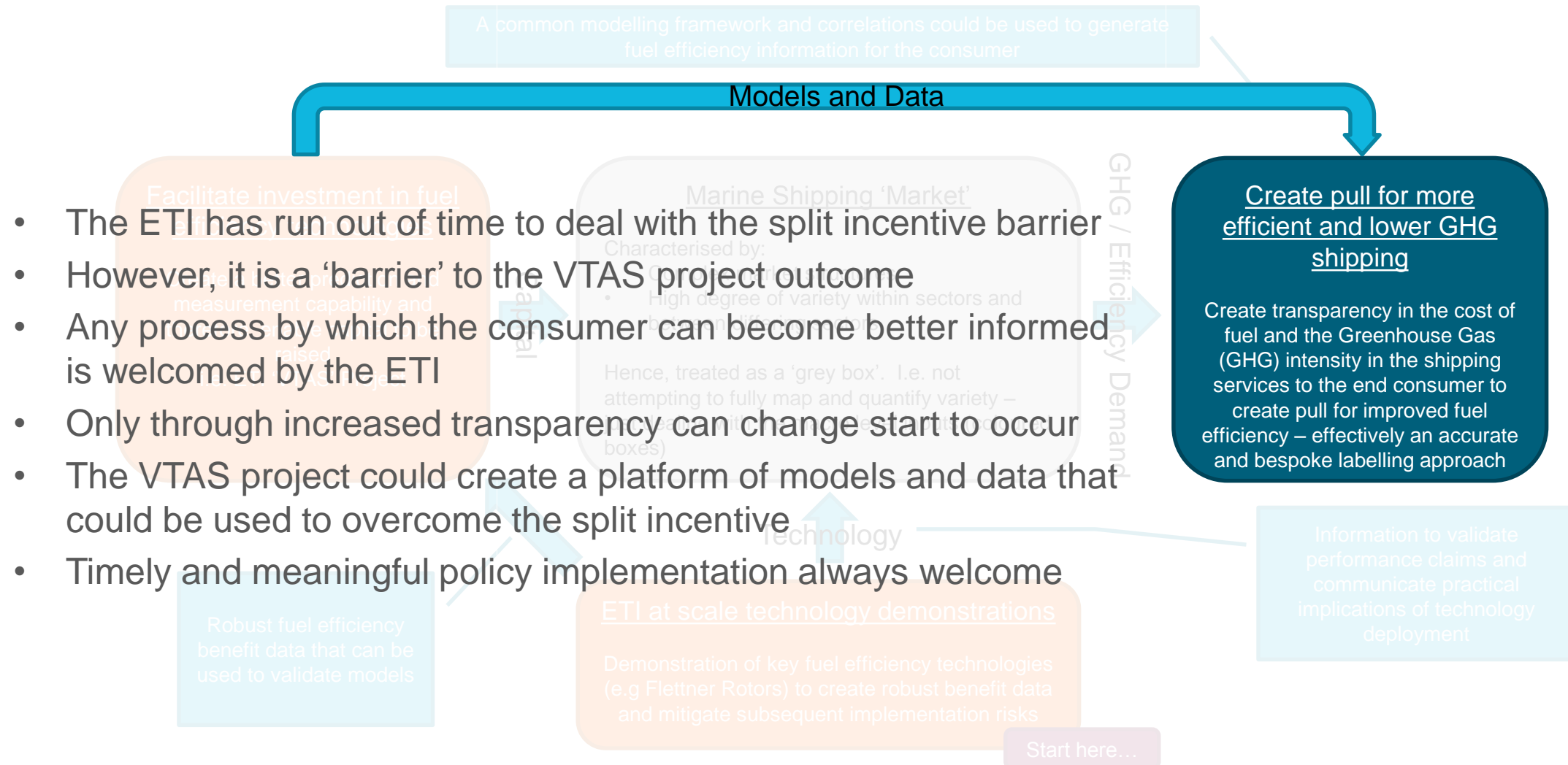


What we plan to do over the next 2 years...





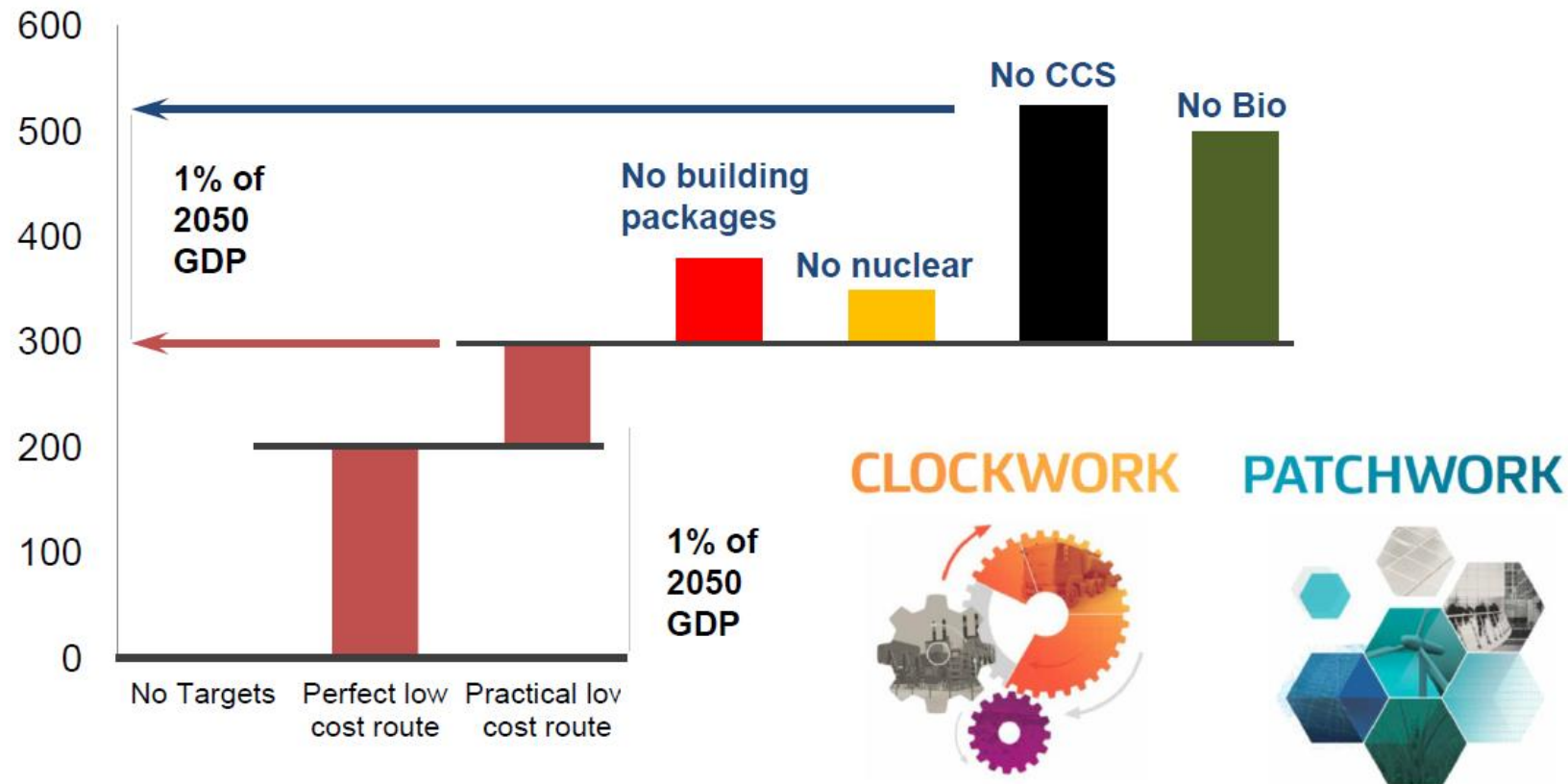
What we would like others to do & think about





Energy system cost sensitivity

Additional cost of delivering 2050 -80% CO2 energy system
NPV £ bn 2010-2050





What we plan to do over the next 2 years...

- Understand the opportunity for decarbonisation in the Maritime sector out to 2050
- To consider the costs vs abatement ratios that lower the total energy system cost in a range of scenarios (e.g. with and without carbon capture and storage technology)
- To consider the energy vectors that could be used to deliver the required cost vs abatement performances (e.g. how large a part could wind power play? Is hydrogen affordable?)
- To create a consistent narrative that takes us from where we are to where we want to be in 2050
- This is important as shipping is a truly global industry where common refuelling infrastructures are virtually essential



Summary

- The ETI's portfolio of technology development and demonstration projects are the foundation of the programme, these will complete in 2019
- However, market barriers may prevent mass market take up
- The ETI's VTAS project is designed to overcome one such barrier by leveraging the outputs generated by the demonstrations and creating an entity that can deliver information to the market post ETI
- Other barriers remain that need to be tackled post ETI, the major barrier being the split incentive
- Policy and / or transparency are likely to be key in mobilising a transition to lower carbon shipping
- Future work to inform debates on alternative energy vectors in the 2040 timeframe



Thank You

Speak to our specialists in the Heavy Duty
Vehicles exhibition area for more details