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Bridging the gap between technological innovation and market demand

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ETI10 TEN YEARS OF INNOVATION
2007 – 2017

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What is the ETI?

- A public-private partnership between global energy and engineering companies and the UK Government
- Set up to identify and accelerate the development and demonstration (and de-risking) of an integrated set of low carbon technologies

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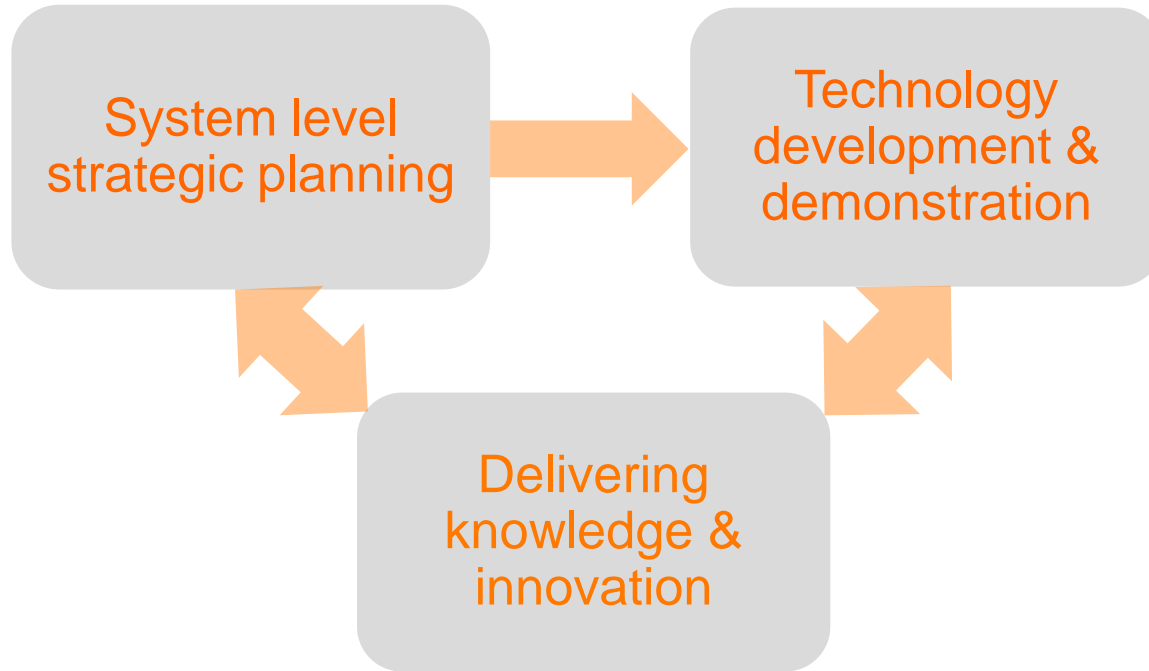
Innovate UK

ETI programme associate

HITACHI
Inspire the Next



What does the ETI do?





ETI's 'ESME' model indicates an important role for bioenergy and CCS in the UK

- Models pathway and supply chain constraints in the energy system out to 2050
- Used to model different scenarios for meeting the UK's 2050 GHG targets
- Develops understanding of key sectors and technologies

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

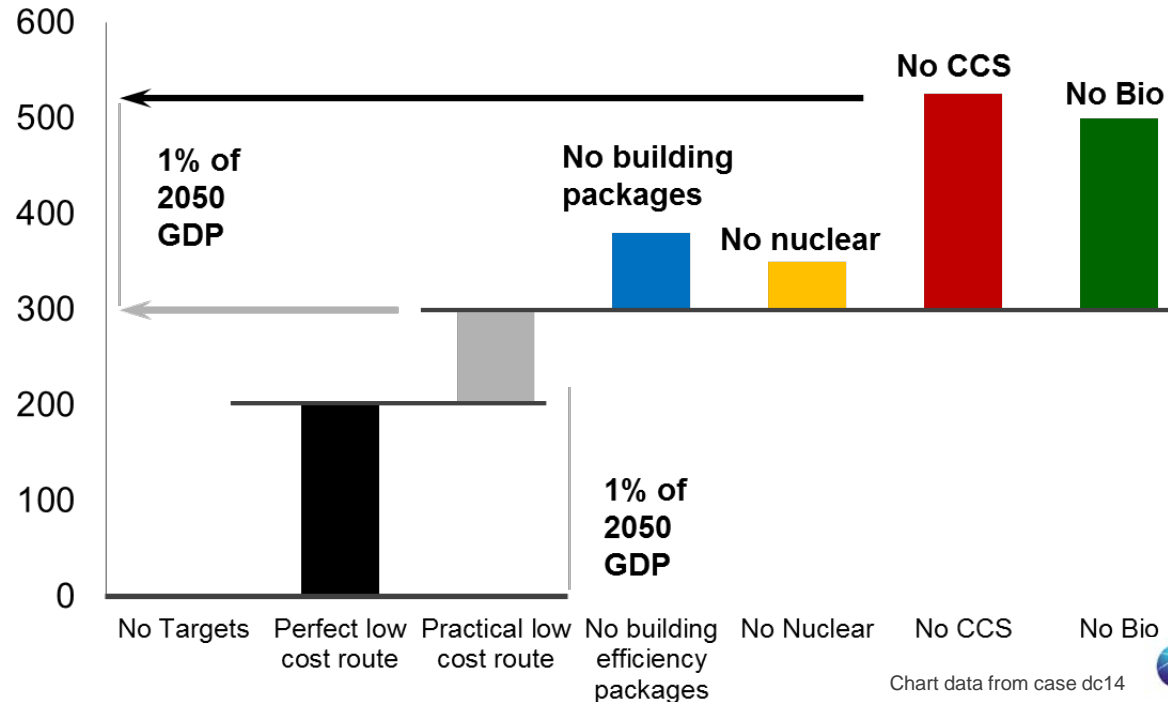
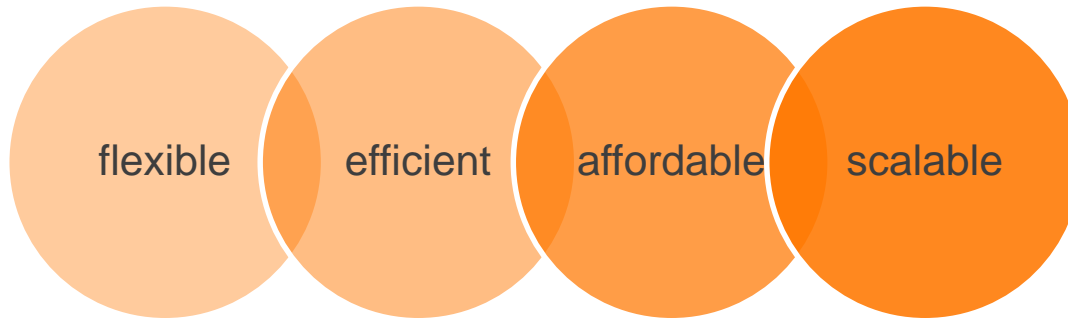
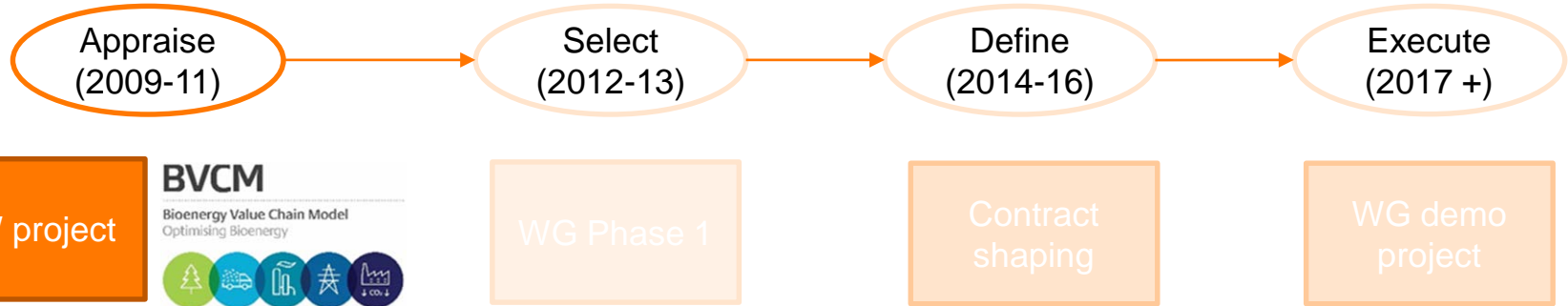


Chart data from case dc14



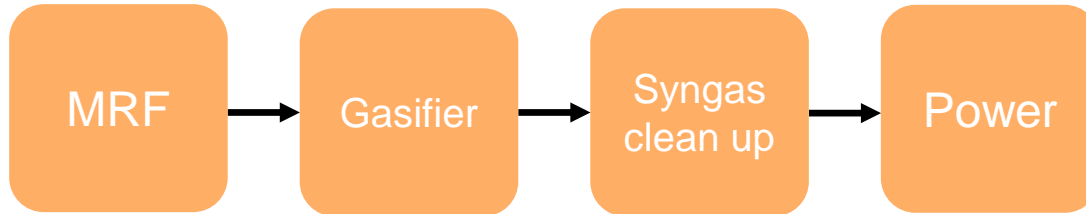
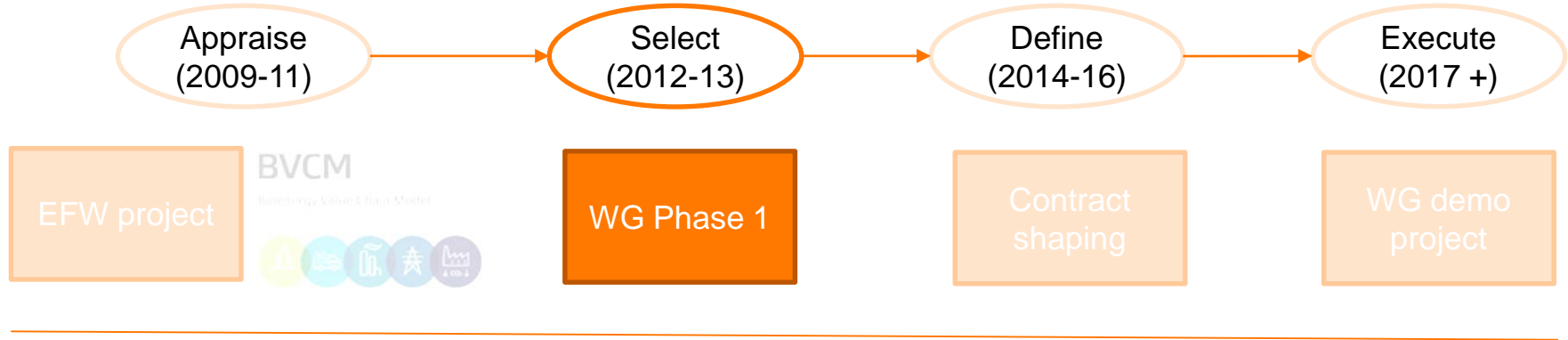
ETI analysis highlights gasification as a prominent, scenario resilient technology



Small scale (town) **waste gasification with syngas clean up** is a potentially important technology with near term deployment opportunities



ETI analysis highlights gasification as a prominent, scenario resilient technology



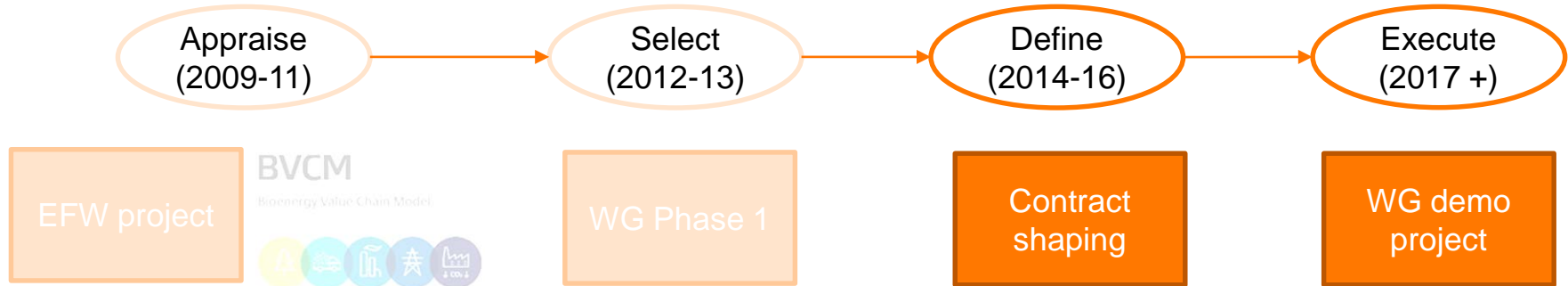
Competition – 3 designs

FEED study and Business Plan

Has to demonstrate high efficiency (net >25%) and availability (>80%)



ETI analysis highlights gasification as a prominent, scenario resilient technology



- Commissioned a 1.5 MWe demonstration project
- Joint investment with Syntech Bioenergy
- Plant will incorporate syngas testing facility
- Commissioning March 2018 – followed by feedstock testing





Lessons Learned

- Important to understand the long term role of an innovation in the low carbon transition – is it scenario resilient or only viable under a narrow range of circumstances?
- Short term opportunities for commercial deployment are also important!
- Funding for first-of-a-kind commercial demonstrators is difficult – public funding through Research Councils, Catapults, ETI and Government departments (e.g. DfT ABDC project) is often vital
- A careful and considered approach to scale-up is needed
- A stepwise or programme approach to technology development is more likely to build confidence and drive innovation

... and the implications of Brexit

- Inherently uncertain – but the UK has it's own climate change commitments to deliver
- Opportunities to develop technologies and inform policy still exist - particularly in areas where Brexit will force a policy rethink



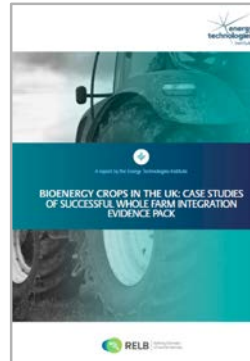
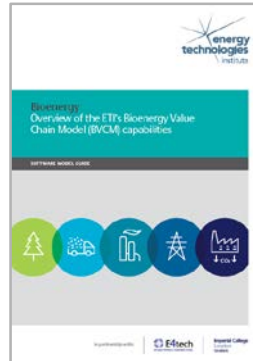
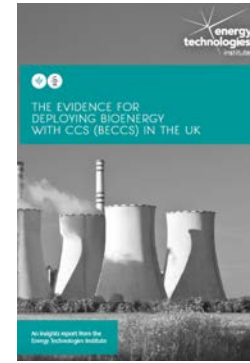
Thank you for listening – any questions?

10 years of Innovation

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