THE BRISTOL PORT COMPANY

Presentation by

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Challenges & Opportunities

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THE BRISTOL PORT COMPANY
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Introduction

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- **Bristol Port**
  - A short history
  - A great big little family business
  - A wonderful mix
- **Challenges & Opportunities:**
  - Power, emissions, green
  - Smart ports
  - 3rd party work on our land
  - Covid
  - The “B” word & how not to run a project
  - On going investment
  - No more coal but nuclear & plasterboard
  - Work by others

History of Bristol Port

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Recent History

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Bristol Port 2021

Bristol Port Today

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- 2,600 acre site in Avonmouth and Portbury
- Provides facilities to move cargo by sea, road and rail to national and international destinations
- Handles on average 8 million tonnes of cargo and over 2,000 vessels annually
- Recognised as a strategically important national asset
- £112.4 million contribution to UK GDP (in 2019)

Key Trades and Cargoes

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Bristol Port handles an eclectic mix including…

Bristol Advantages & Priorities

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Advantages include:

- Close to UK population centres
- Deep water / big ship capacity
- Modern infrastructure
- Development land available
- Excellent links by sea, road and rail

BPC priorities:

- Safety and security
- Efficiency
- Environment
- Securing new trades and other business opportunities
- Investing in people, plant, equipment and buildings

Over the past 30 years there have been huge technological advances in the Port industry providing safer, more efficient and cleaner operations

Green Power

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- The Port's annual power demand is ~45 GWh (45 million units)
- To put this into context, a three-bed house uses ~ 4000 units per year
- Renewable energy provided the solution for both reduced bills and green energy
- In 2007 three 2 MW wind turbines were installed along the Avonmouth foreshore
- Provides around 35% of the Port's electricity
- Saves 15,000 tones of carbon a year
- We are currently investigating more renewables, including potential for solar power
- All new buildings and warehouses built with the capacity to hold solar panels

Changing Environmental Priorities:

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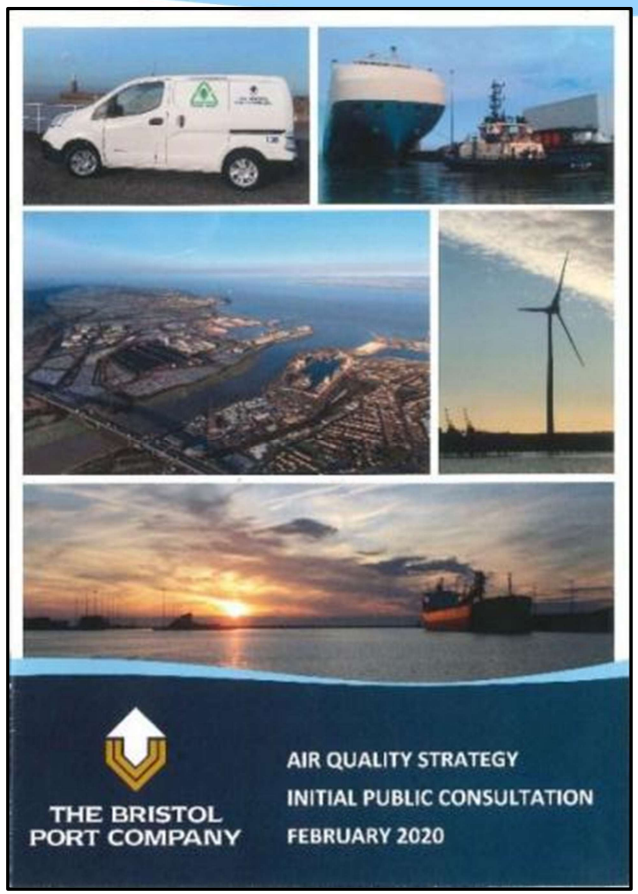
- The environment has always been an important consideration for Ports
- With increasing awareness of air pollution and climate change over the last decade, the need to reduce Port emissions has become a higher priority
- Bristol Port are committed to improving air quality for all who work and live nearby
- Our first Air Quality Strategy (AQS) sets out our long-term plans to reduce emissions on land and water in the Port Estate
- Key Port actions in progress include:
  - **Port Vehicles**: Transition to fully electric white fleet and invest in charging infrastructure
  - **Cargo Handling Equipment (e.g. forklifts):** Replace with lower emission or hybrid/electric models at end of life, prioritising oldest equipment first
  - **Harbour Vessels (e.g. pilot boat and dredgers):** Prepare energy efficiency plans for vessels and replace vessels with lower emission or hybrid/electric models
  - **BPC Offices and Workshops:** Replace oil burning boilers with low emission LPG boilers and investigate alternative heating solutions
  - **Sustainable Transport**: Cycle to work scheme, pool e-bikes, cycle infrastructure etc



Challenges: Zero Emission future

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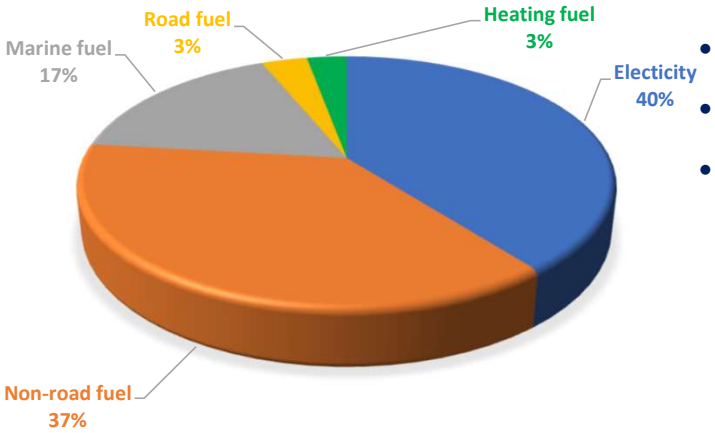
2019/20 BPC CARBON EMISSION SOURCES



- One of the biggest challenges facing Ports is the transition to zero-emissions
- Much progress has been made in recent years, but we need to do more
- Bristol Port Carbon emissions decreased by around 20% 2016/17 to 2019/20
- We will continue this trend by:
  - implementing more **energy efficiency and optimisation** initiatives
  - **Electrifying and using alternative fuels** in port vessels, vehicles and plant
  - Generating further **onsite renewable energy** – investigating opportunities for wind, solar and tidal energy, as well as battery storage
  - Exploring **offsetting projects** and green energy suppliers, as well as planting further trees, shrubs and hedges in the Port and local area underpinned by a **Port Planting and Woodland Management Strategy**
- Ships are the greatest source of emissions in Bristol Port and are beyond the Port's ability to directly control
- UK Ports are investigating how to supply alternative fuels and shore-side power to vessels to help reduce these emissions – **huge future challenge**!

Challenges: Smart Ports & 5G

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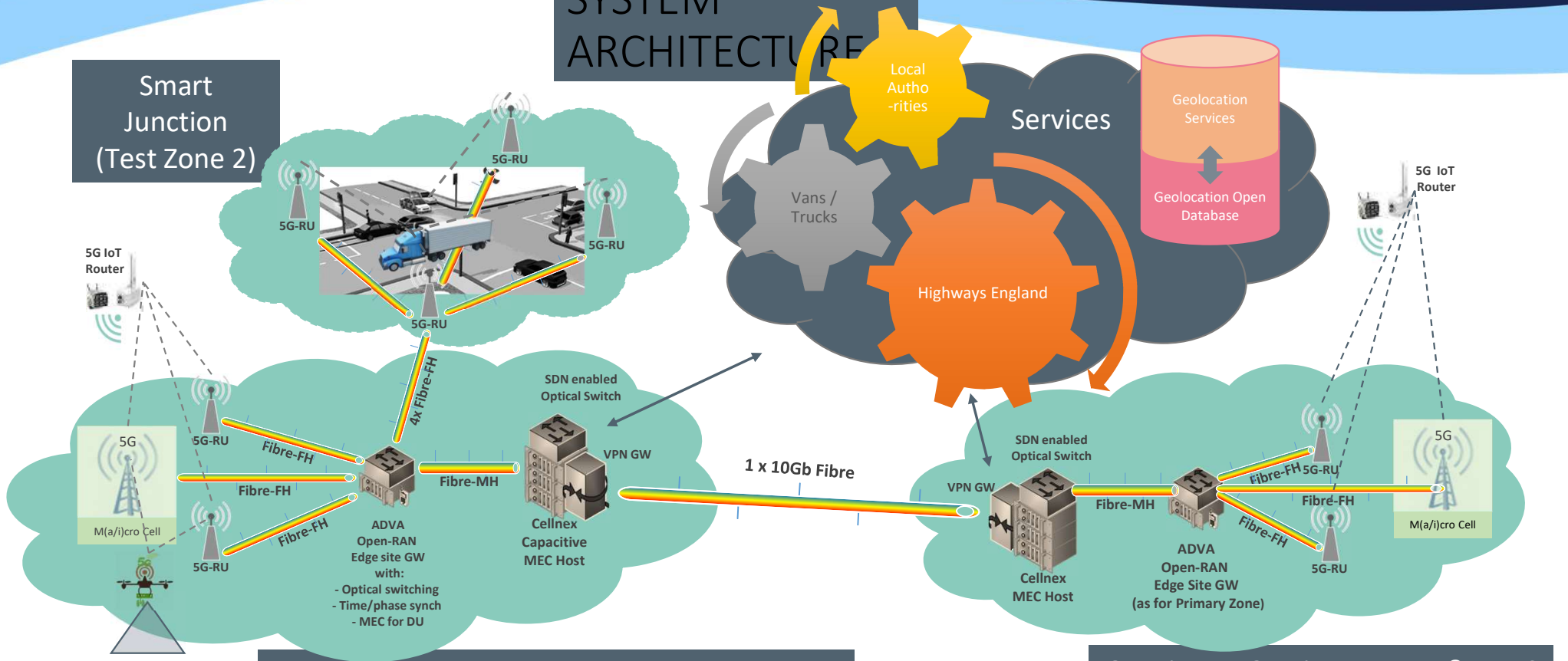
SYSTEM ARCHITECTURE



Challenges: 3rd party works

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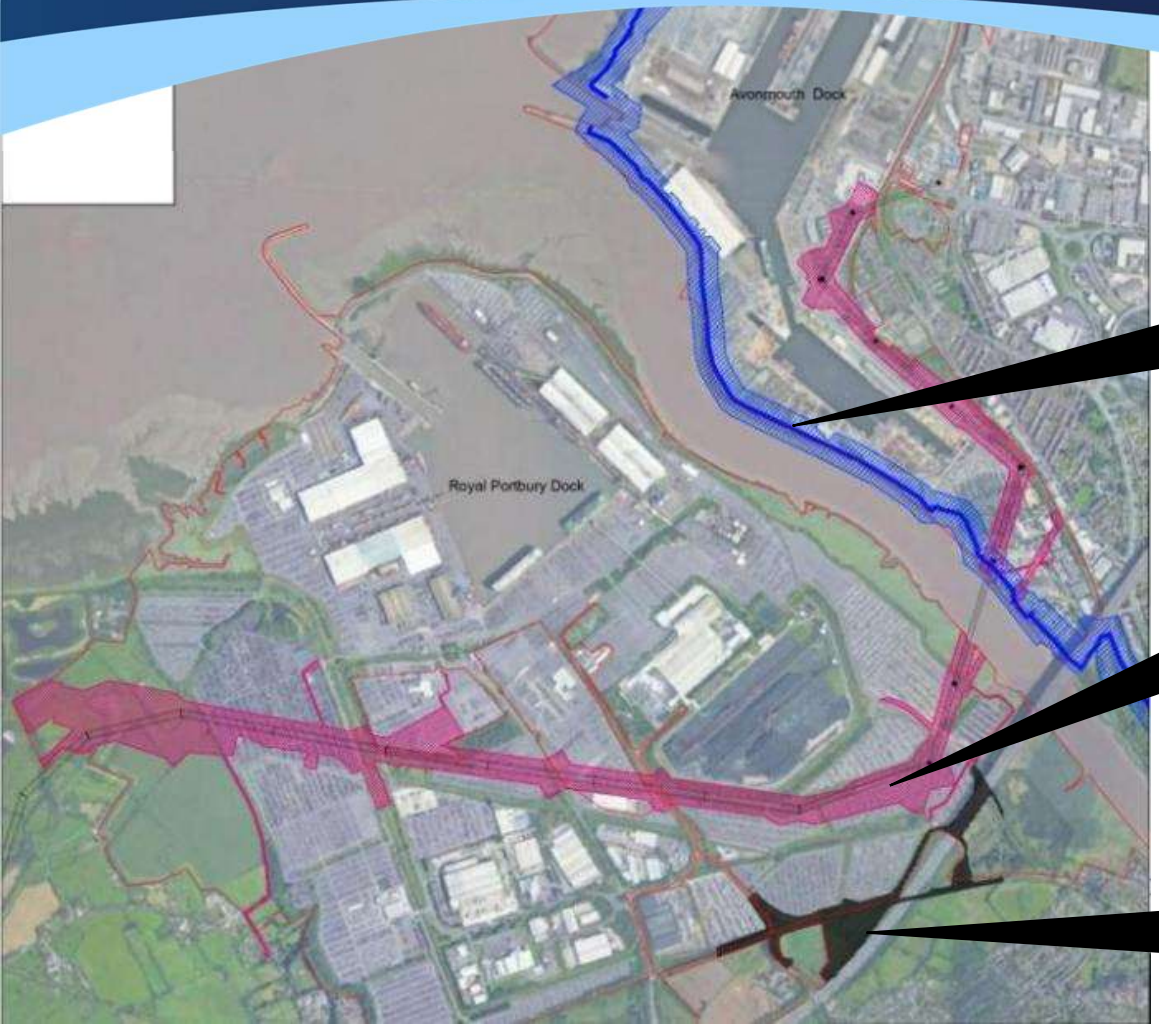

Avonmouth Severnside Enterprise Area Flood Defence Scheme (EA/BCC/SGC)

Hinkley C Connection Project (National Grid & WPD)

MetroWest Ph.1 Portishead Branchline (NSC & NR)

Challenges: Covid

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- During the COVID-19 Pandemic, Bristol Port was proud to **#keepBritainsupplied**
- Our key workers showed extreme resilience during these difficult times to enable the Port to remain open

QUAY WORKERS ARE KEY WORKERS

Challenges & Opportunities: Brexit

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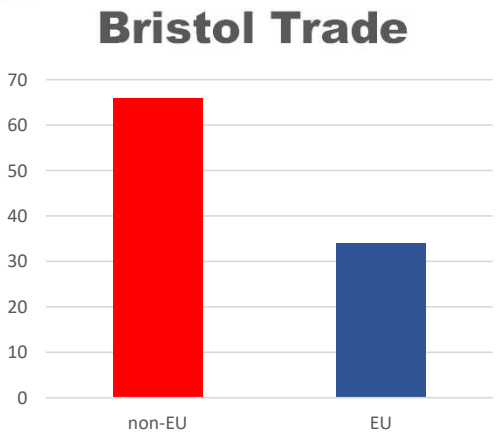

GOV.UK

Department for International Trade

Border Force

Challenges: Brexit & how not to run a project

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Cabinet Office

BORDER CONTROL POST

Required to inspect imports from the E.U.

- **Deliver on your promises**
- **Fix – dates and ALL information at the start**
- **Know what you want**
- **Have a level playing field**
- **Understand your capex & opex recovery**

Opportunities: on going investment

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Opportunities: on going investment

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Challenges: no more coal

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Opportunities: energy changes

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- In the 1990's power station coal was the main import with a peak of 6 Mt/annum, but last coal ship visited in November 2018
- Biomass, wood pellets and pulp are imported; RDF has been exported
- Increasing renewables plant handled, including wind turbine parts
- The Port has been the muster Port for Hinkley Point C since 2016
- In the future the Port will handle new green fuels (e.g. LNG, Ammonia, Biofuels, Hydrogen)

Opportunities: refurbishment

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Opportunities: new equipment

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KELVIN CAVE LTD

- ATEX rated field devices
- Control panel mounted outside in the non-hazardous area
- Hopper empty switch to stop machine once milling is complete
- Belt slip to reduce heat build-up on belt slippage
- ATEX rated bearing monitoring system to stop machine if the bearings get above 80°C

Opportunities: nuclear

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Opportunities: expansion

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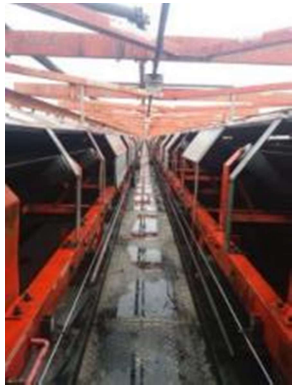

etex building performance

Opportunities: tenant works

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Thank you
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