

The logo for Discover Space UK Space Port is centered in the image. It features the words "Discover Space" in a large, white, sans-serif font. A stylized white rocket ship is positioned behind the letter 'S' in "Space", pointing upwards. Below "Discover Space", the words "UK Space Port" are written in a smaller, white, sans-serif font. The background is a vibrant space scene with a purple and blue nebula, numerous stars, and a bright star with a diffraction pattern in the upper left corner.

# *Discover Space*

UK Space Port

**LaunchUK**

**Location Brief: Campbeltown  
Jeff Cole, Discover Space UK**

**Tuesday 21 February 2017  
Royal Aeronautical Society**

# Assumptions



- Must have a viable route to space
- Must be able to achieve regulatory approval
- Must have technical viability in terms of operational capability
- Must be able to attract customers – a credible business case
- Horizontal and vertical launch capabilities have very different business cases, though can be mutually supportive

# Assumptions- horizontal



- Promising horizontal launch technologies slower to market than hoped
- Launch by 2020 constraint will exclude Single Stage To Orbit vehicles under development
- Notwithstanding the above horizontal especially Single Stage To Orbit of great importance

# Route to Space



- Existing Western Isles range well developed and subject to significant investment
- Range realignment required for polar orbit/sun synchronous
- Slight dog leg (payload impact)
- Southern edge of range close to Campbeltown
- NOTAMS range extension for horizontal launch from Campbeltown with addition of local launch control
- Plan is to leverage existing assets to the full, especially to meet 2020 deadline

# Route to Space



- Does not overfly populated areas
- Technically viable for economic space launch



# Business Cases

- Must meet business requirements & operate commensurately with the size of the market
- Must be internationally competitive in terms of cost and performance
- Must support UK strategic infrastructure requirements including defence
- Must be commercially and technically flexible due to rapidly changing nature of the business
- Must therefore support vertical & horizontal launch, R&D and testing for a wide range of customer requirements including current and future technologies

# Spaceport Enterprise



- Campbeltown (remote but accessible) horizontal launch
- A Centre of Excellence for UK/EU supply chain, academia (R&D, engine testing etc)
- Logistical support for other UK spaceport components (e.g. vertical/sea launch)
- Will link to other parties providing critical services/ supply chain

# Proposed Structure- Hinterland



- Leverage of existing assets and expertise in Northern Ireland (e.g. vibration test cell etc), close proximity to skilled workforce
- Close relationship with educational establishments within the central belt and the west coast of Scotland and the wider UK
- Development of a satellite site to the Harwell Space Gateway
- Campbeltown airport/ spaceport coexistence

# Hinterland 2



- A viable UK launch capability will provide enhanced business opportunities for existing space sector businesses but also major opportunities for development of a wide and deep supply chain in terms of goods and services and academia
- Non space related business opportunities
- All regions of the UK should seek to experiment, develop and exploit the opportunities

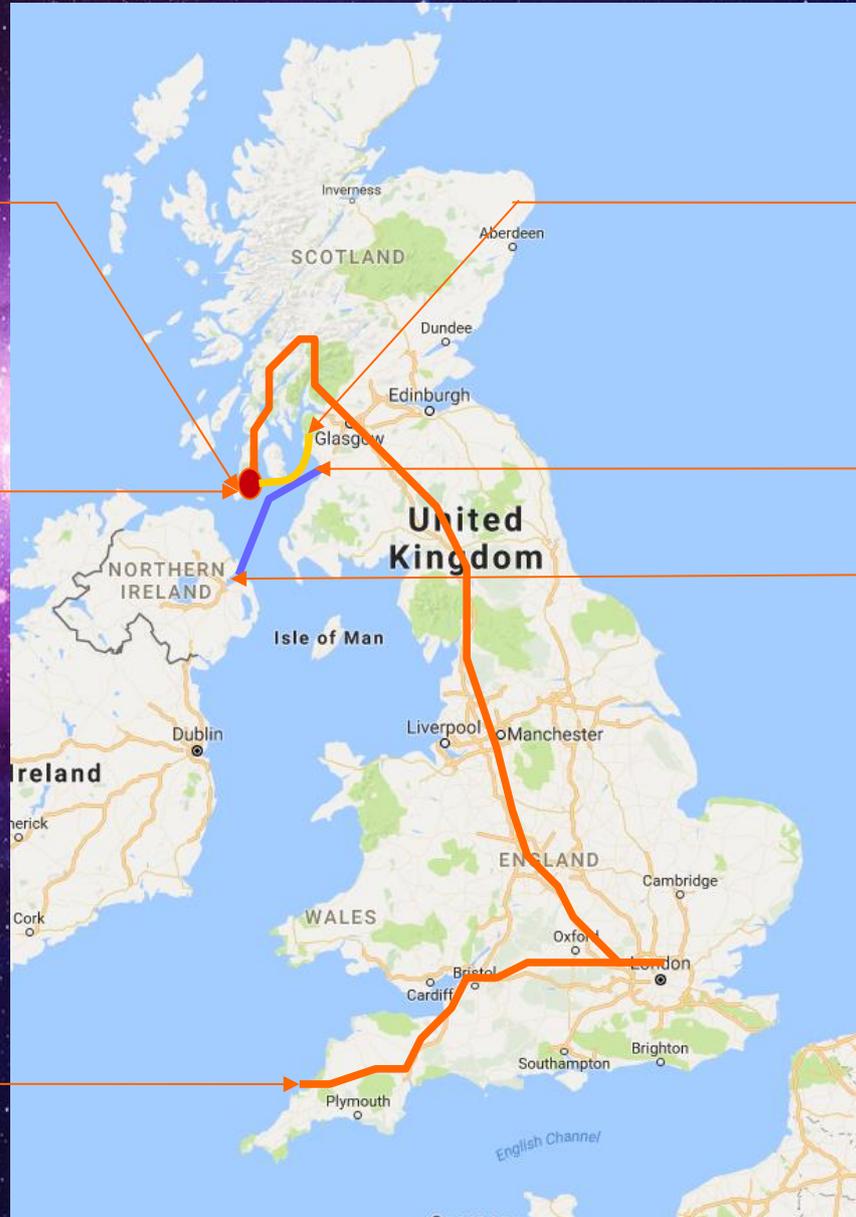
# UK Spaceport- logistics



Campbeltown port facilities linkspan and ex-NATO jetty

Campbeltown to Spaceport hub to Oxford/Harwell 8hrs 47 mins  
Glasgow 3 hrs 9 mins

Newquay, engineering services to SSTL Guildford 4 hrs 17 mins



Glasgow Int'l to Campbeltown 50 miles

Campbeltown to Troon (Prestwick) 31.7 nm

Campbeltown to Belfast (Prestwick) 52 nm

## Key

-  Air route
-  Motorway /A road
-  Sea route

(Approx distances from AA route finder, Google Sea Seek)

# Campbeltown Birds Eye View



# DSUK Asset Types



- Long runway with access to route to space, depopulated area
- R&D and testing of systems requiring distance from population/ settlements
- Engine testing/ prototype flight from long runway
- Large fabrication shipment/ handling
- Large volume/ logistics for fuel
- Residency/ conference/ office facilities ready to go

# Business Opportunities



- We see the UK Space Launch as an opportunity for a large number of businesses both large and small
- We do not see a single isolated location as the solution
- We believe it will succeed as a cooperative effort across the regions of the UK, business and academic sectors in conjunction with global partners

# DSUK Status



- High level operating model developed and now being used to create business case
- Working under Memoranda of Understandings with QinetiQ, Telespazio Vega and Newquay
- Studies underway/ required to benchmark current site and assess for spaceport requirements (airport surfaces & services, runway studies, strategic environmental assessments, noise and safety studies, transport expansion, power and communications, local services (health, education, housing, transport))

We are Open for Business

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