Met Office HPC and Cloud Convergence

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A new strategic collaboration…
Value for Money…

investment
£1.2bn
10 year investment period

return up to
£13.7bn
of socio-economic benefits

+ 

Social Value of at least
£4.5m per year
focused on local skills & employment and decarbonising & safeguarding our world
both reported publicly on an annual basis
A new approach...

a new fully managed service delivery model

a world class technology partner with global reach

round the clock 24x7 integrated operation and support service

wired into Microsoft Azure cloud platform
Approach

- Replace Supercomputer every 5 years or so
- Archive procured separately
- I/O focused HPC cluster procured separately
- Host everything on site
Why change?
Challenges

- Power requirements to site
- Aging M&E infrastructure
- Procurement conveyor belt
- Desire to move away from running infrastructure
## New Approach

### Managed Service
- Supercomputer
- Archive
- I/O focused HPC environment
- Hosting
- Connectivity

### 10 years, 2 generations
- 6x for Generation 1, further 3x for Generation 2
- Refresh at mid-term

### Open to variety of delivery modes
Archive and I/O focused HPC

**Archive**
- Active archive – high performance data storage, query and retrieval
- Built in Azure, implementing the existing CLI
- Will hold ~1.5 EB of data by 2027 ~4EB by 2032
- Existing data will be migrated

**I/O focused HPC**
- Cloud native solution
- HB-series InfiniBand clusters
- Variety of storage
Met Office supercomputing – cloud is forecast

but quite how cloudy remains unclear…