

Exploring the potential for a heat network in Blackpool



Data Centres Environment Impact



Energy

Water

Emissions

E-waste

Social/Environmental Justice

Using data centres for heat networks

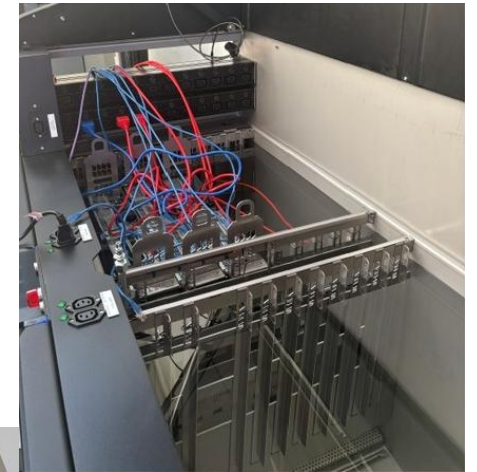
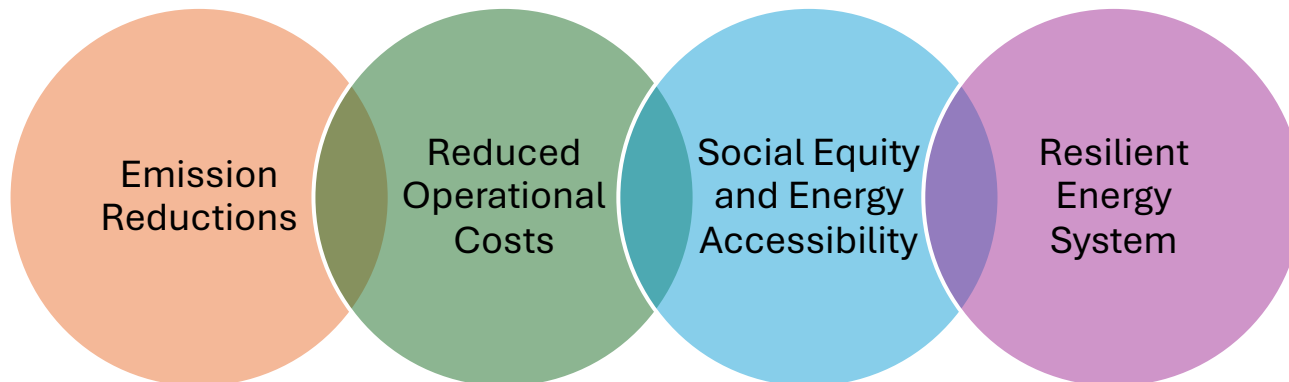
Every unit of electricity used by a server ultimately becomes heat. In most data centres, this heat is released into the atmosphere, therefore wasting energy.

Capturing and reusing this heat through a network transforms a by-product into a valuable resource, effectively using the energy twice.

How It Works:

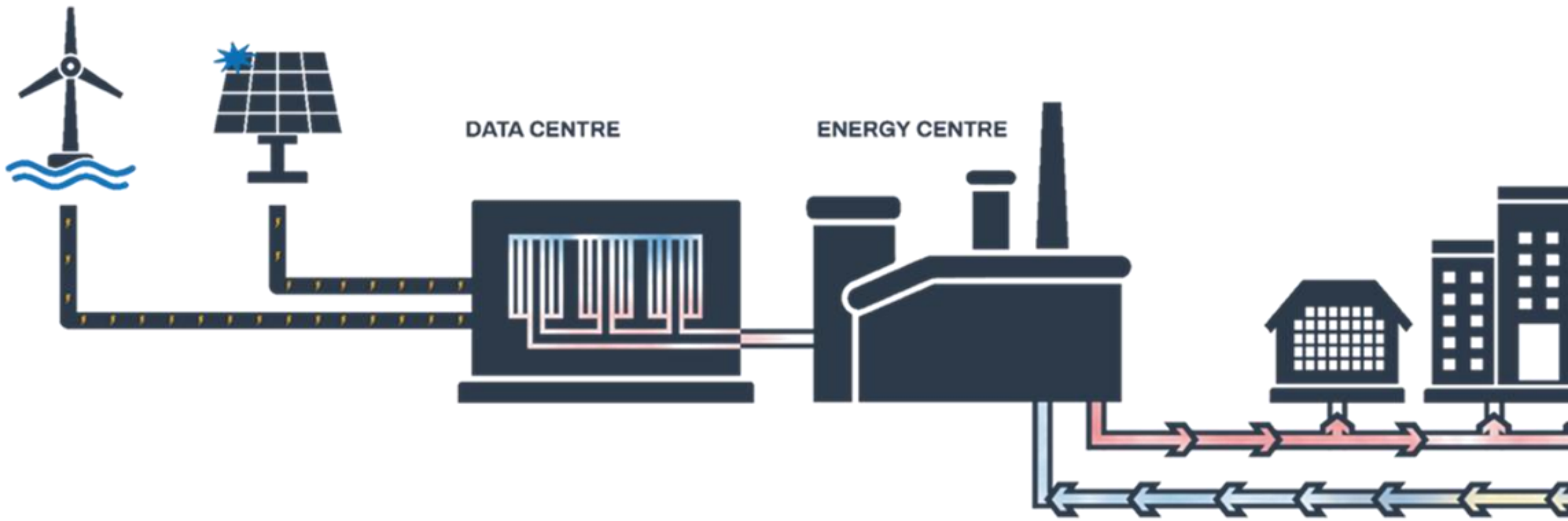
- **Capture** – Closed-loop systems (e.g. direct-to-chip or immersion cooling)
- **Transfer** – Heat moved to an energy centre via heat exchangers
- **Upgrade** – Heat pumps raise the temperature (80°C+)
- **Distribute** – Supplied through a heat network to end users

Benefits:



Exemplar Demonstrator –
Immersion cooled by running in a
tank of dielectric fluid

Why Silicon Sands?



Offshore wind

Silicon Sands

Solar farm

CGI of built out
Blackpool EZ



What we have learnt so far

Coming 2028



Get cross council buy-in at early stage and prioritise maintaining it.

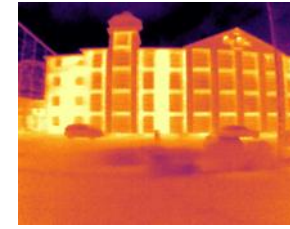


Utilise networks and experts – Danish mentoring scheme, Net-zero hubs, other councils, etc

Need to keep momentum



Keeping abreast of policy implications



Don't be afraid to try new methods / take opportunities to innovate



Go and see what has already been done

Don't be afraid to question the status quo

Engage, engage, engage!



Future plans

First data centre to be delivered ~2028

Refresh Techno-economic feasibility study

Continued innovation of heat network development (Innovate UK data project)

Coordinate GHNF application

Continued buy-in (internal and external)

DESNZ pipeline review and coordination of future Zone Coordinator Body with combined authority

OR look for development partner