

Marine Energy



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Overview



Scottish R&D base

R&D portfolio

R, D, D & D infrastructure

Laboratory to open sea test facilities

Projects led by ETP universities

Capacity building

International partnership and KT

Marine Energy

Scottish R&D base



There is world-class research in our universities,
estimated 30-40 academics & research staff
3 have wave tanks, most have wave flumes
3 towing or pumped tidal current tanks
6 other specialised, dedicated labs
3 have devices under development
Over £15m of research funding



SuperGen Marine Energy Research Consortium

R&D portfolio



For single and now array deployment:

Wave and tidal resource and yield analysis

Convergence of numerical and physical modelling

Energy converter design, build and test

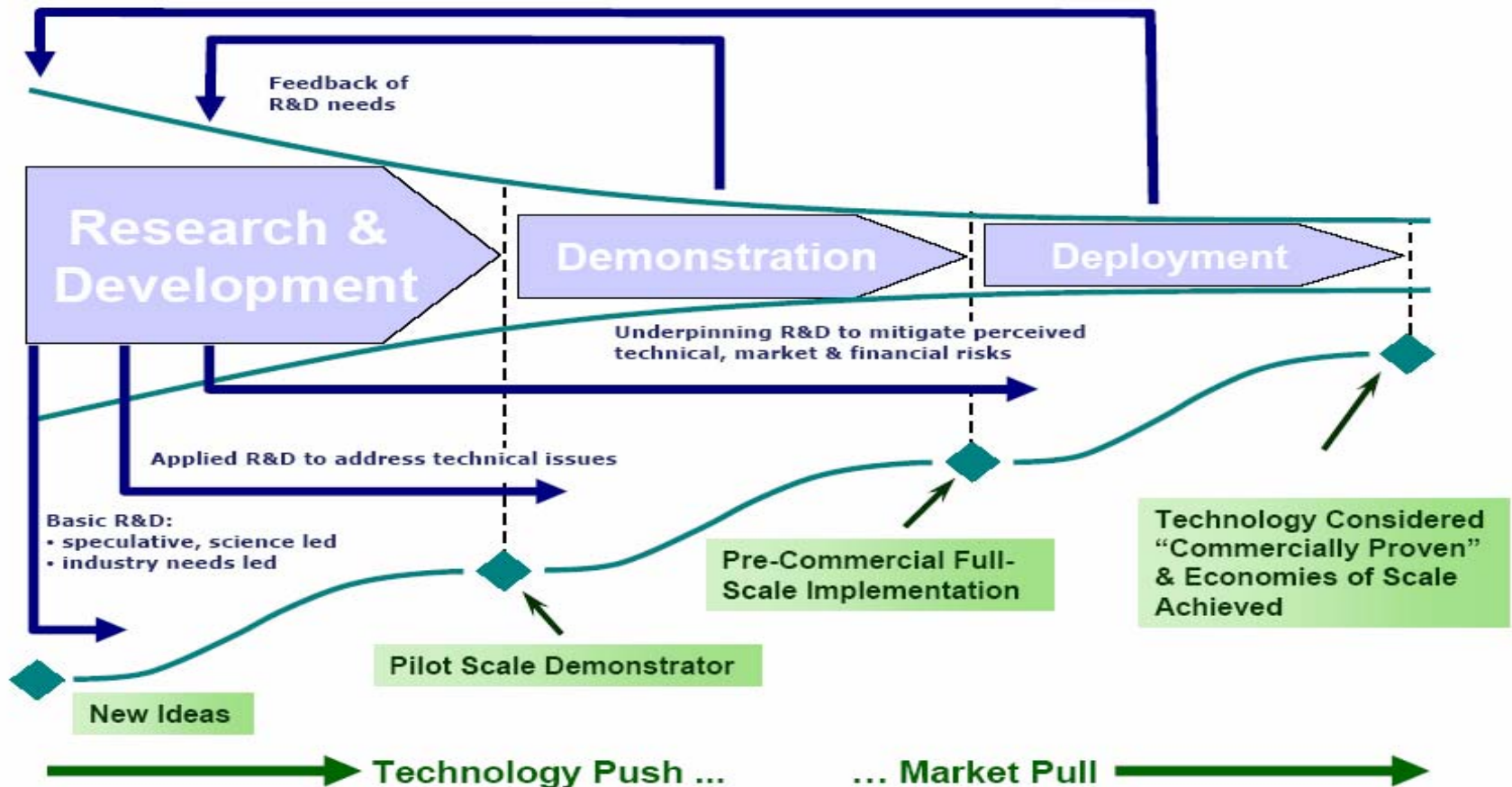
Field measurement and full-scale test

Moorings and seabed fixings

Novel generators and control for power take off

R, D, D & D infrastructure

ENERGY INNOVATION "CHAIN"

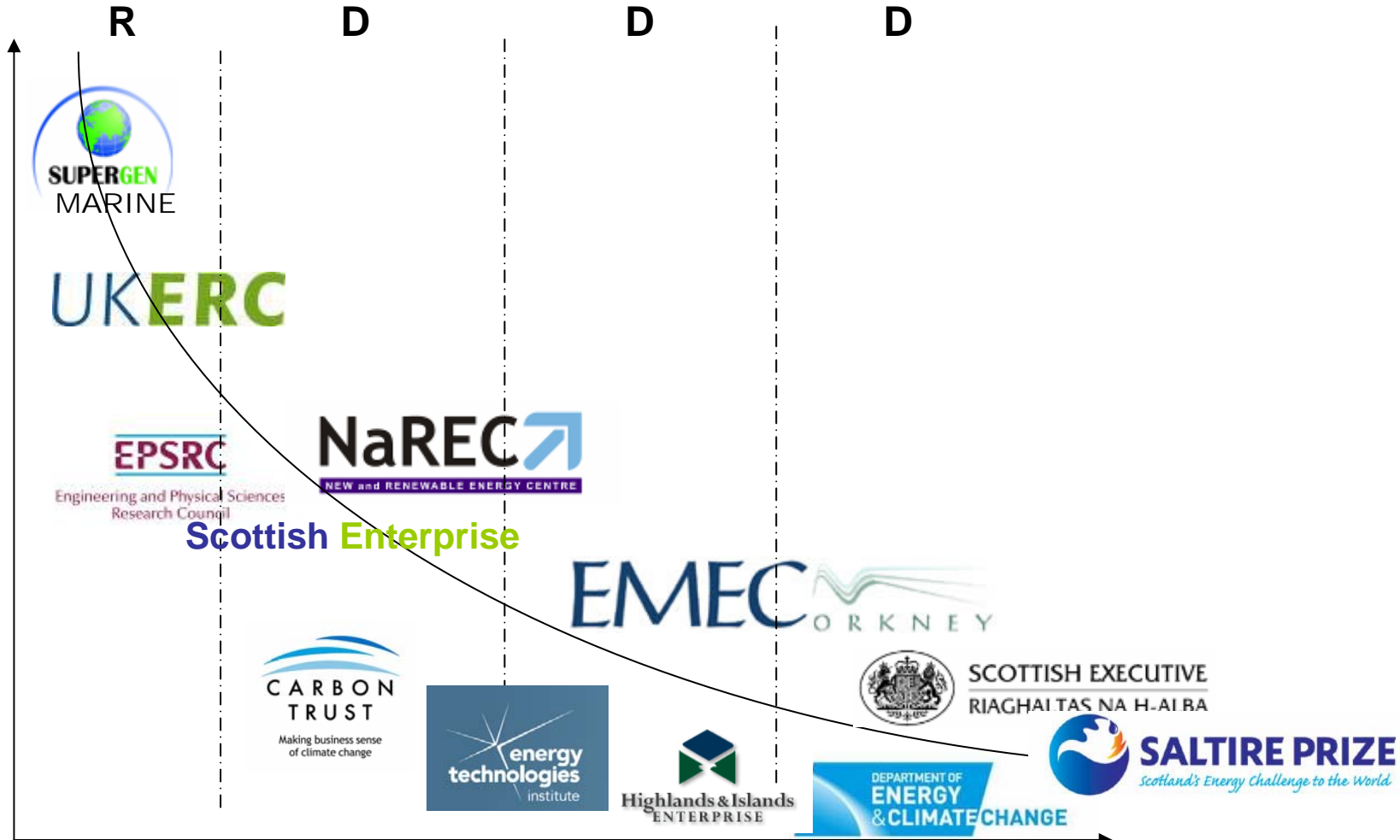


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R, D, D & D infrastructure

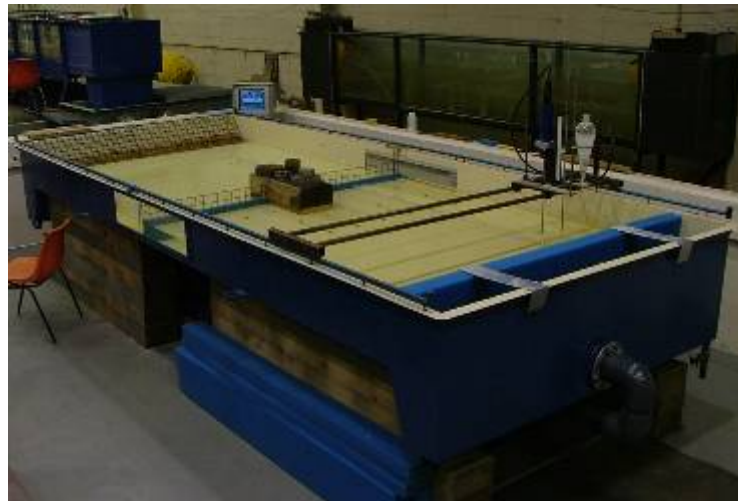
£/MW



MW to market

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Laboratory test facilities



Open sea test facilities

EMEC Wave Test Site

2km from shore

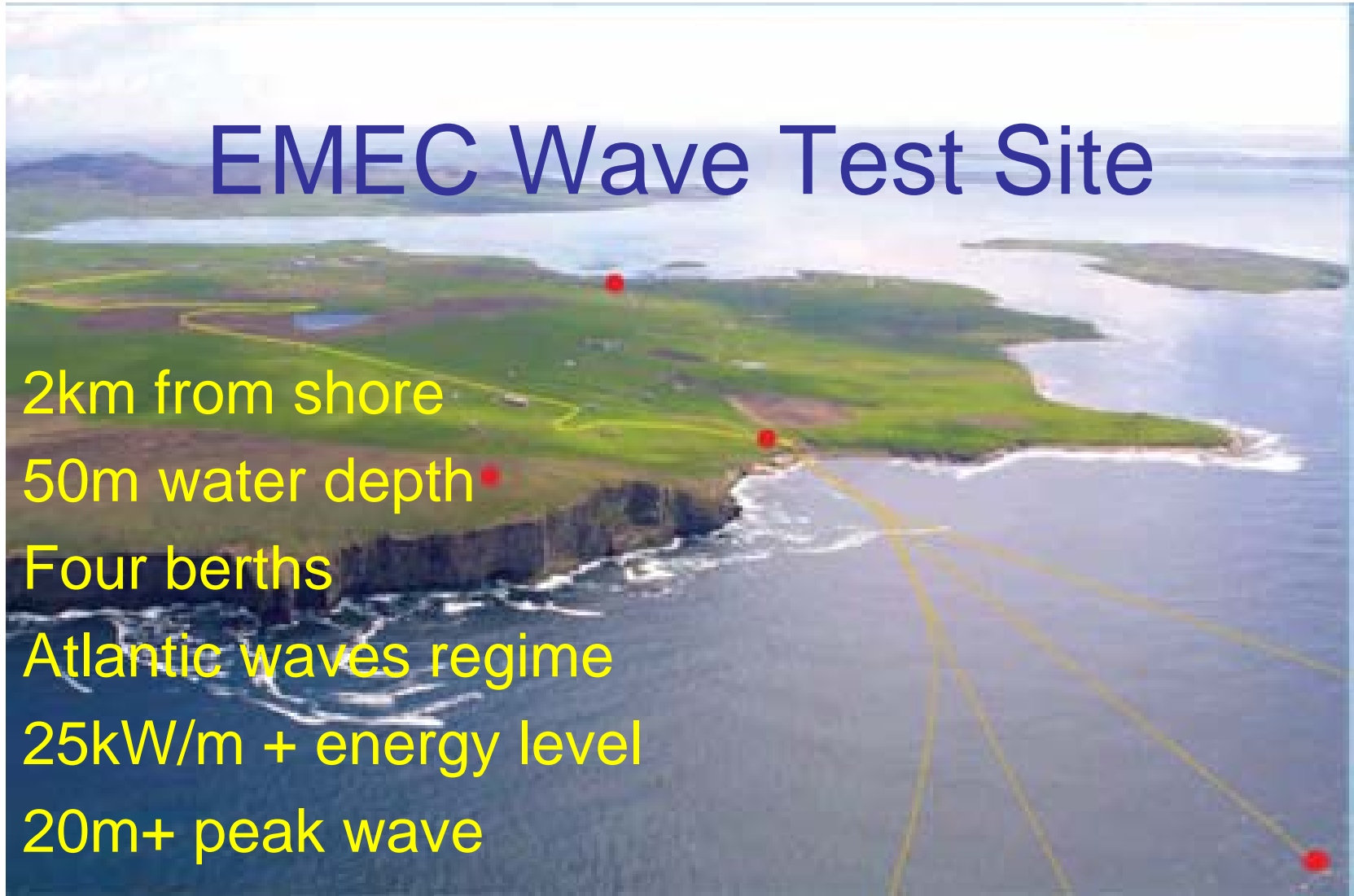
50m water depth

Four berths

Atlantic waves regime

25kW/m + energy level

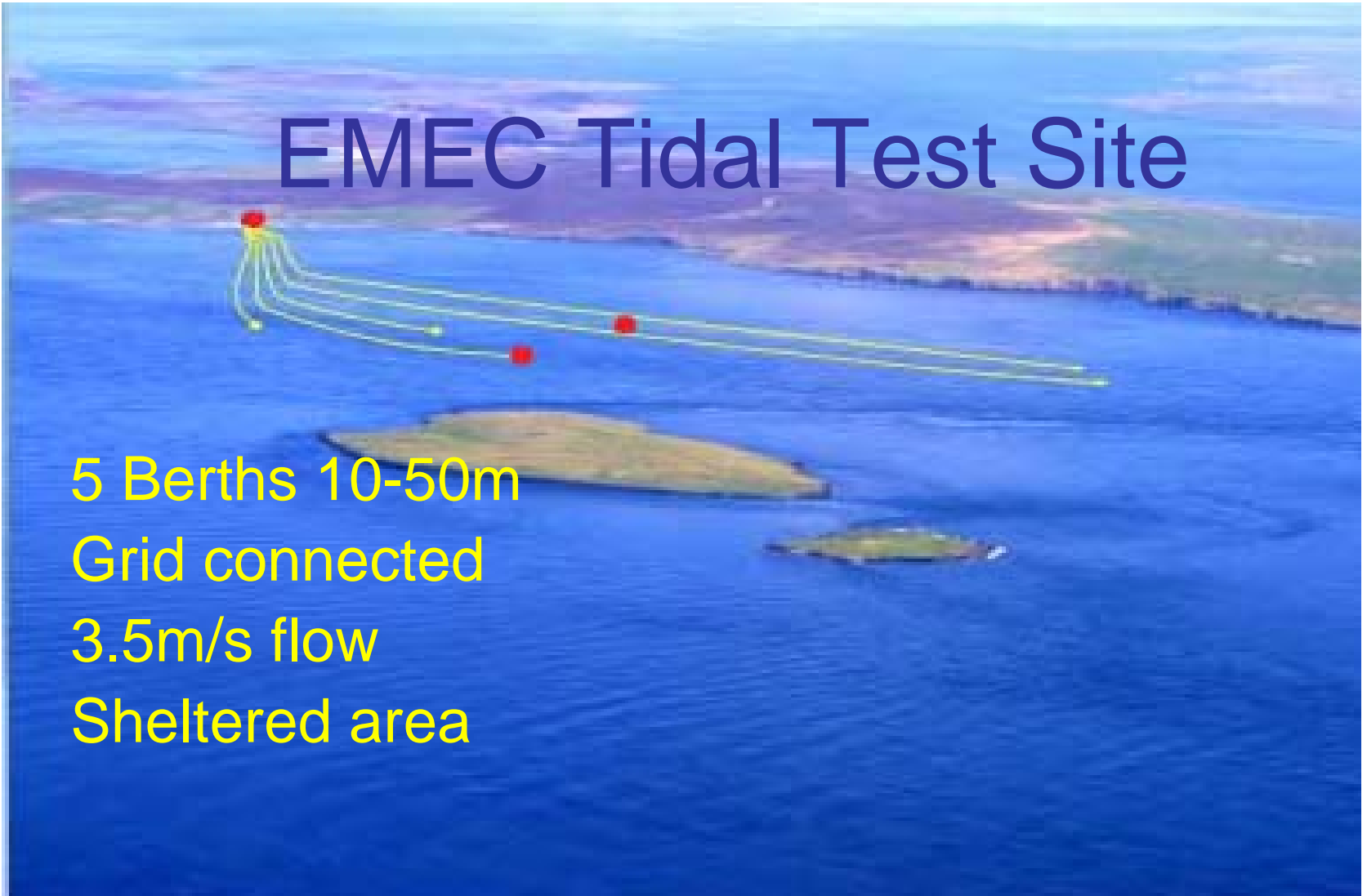
20m+ peak wave



Open sea test facilities

EMEC Tidal Test Site

5 Berths 10-50m
Grid connected
3.5m/s flow
Sheltered area



Projects led by ETP universities

Include, but not limited to:

EPSRC - SuperGen Marine Energy
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SFC - MREDS

FP7 - EQUIMAR

ETI - ReDapt (Partner)

DTI - MRDF Test Protocols

NERC - UK Energy Research Centre



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Capacity building

SuperGen Marine Doctoral Training Programme



Refreshing the supply of trained scientists and engineers
the academic, industrial and infrastructure sectors.



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Internationalisation and KT

High-level and detailed partnership in 16 countries. SuperGen and UKERC R&D roadmap been a significant influence in US and Canada. Being set in wider international context with IEA.



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Thank you

