A GLOBAL CENTRE OF EXCELLENCE IN
MARINE ENERGY TESTING AND RESEARCH

EMEC
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ETIP Ocean webinar: Knowledge sharing and collaboration

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Senior Business Development Manager

World leading test facilities

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- £36m public funding
- Not-for-profit organisation
- Independent test laboratory

Highlands & Islands ENTERPRISE
CARBON TRUST Making business sense of climate change
Project Part-Financed by the European Union
European Regional Development Fund
ORKNEY ISLANDS COUNCIL
Scottish Enterprise
The Scottish Government
DEPARTMENT OF ENERGY & CLIMATE CHANGE

VISION

A globally successful marine energy industry as part of a clean energy system

MISSION

To **reduce time, cost and risk** in the development of marine energy technologies

Collaboration in action

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- Hosted 31 devices from 11 countries
- 500,000 hours data collected
- 120 tidal developers engaged
- 260 wave developers engaged
- 75,000 guidelines distributed
- Worked with >75 universities
- 2,000 marine operations
- Hosted >3,000 visitors
- £284M GVA

How should we establish collaborations?

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Environmental factors	A history of collaboration
	A supportive/facilitative political and social context
Partner factors	Appropriate mix of knowledge, capabilities and resources
	A culture of understanding, trust and respect
	Benefits perceived as outweighing costs
	Effective leadership by white knight in all organisations
	Active involvement of most influential member
Structural factors	**A shared responsibility for collaboration outcomes**
	An adaptable collaborative structure
	Clear agreement on explicit rules and roles
	A problem-handling mechanism
	A monitoring, reporting and evaluation system
Communication factors	**Open and frequent communication**
	The establishment of formal and informal links
Purpose factors	**Explicit goals and outcomes are set together and are clear to all**
	One clear collaborative vision
Resource factors	Sufficient resources

In practice..

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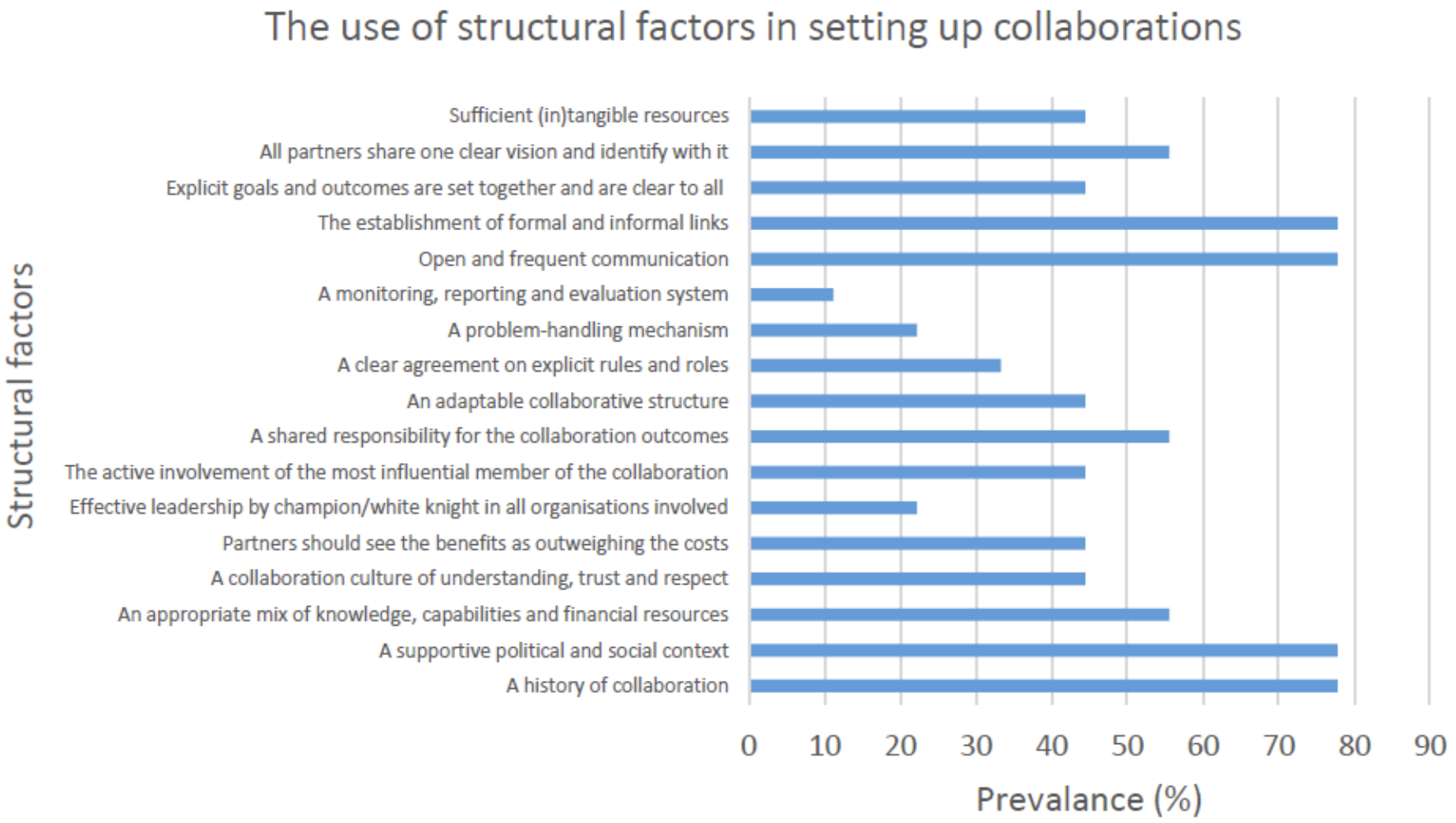
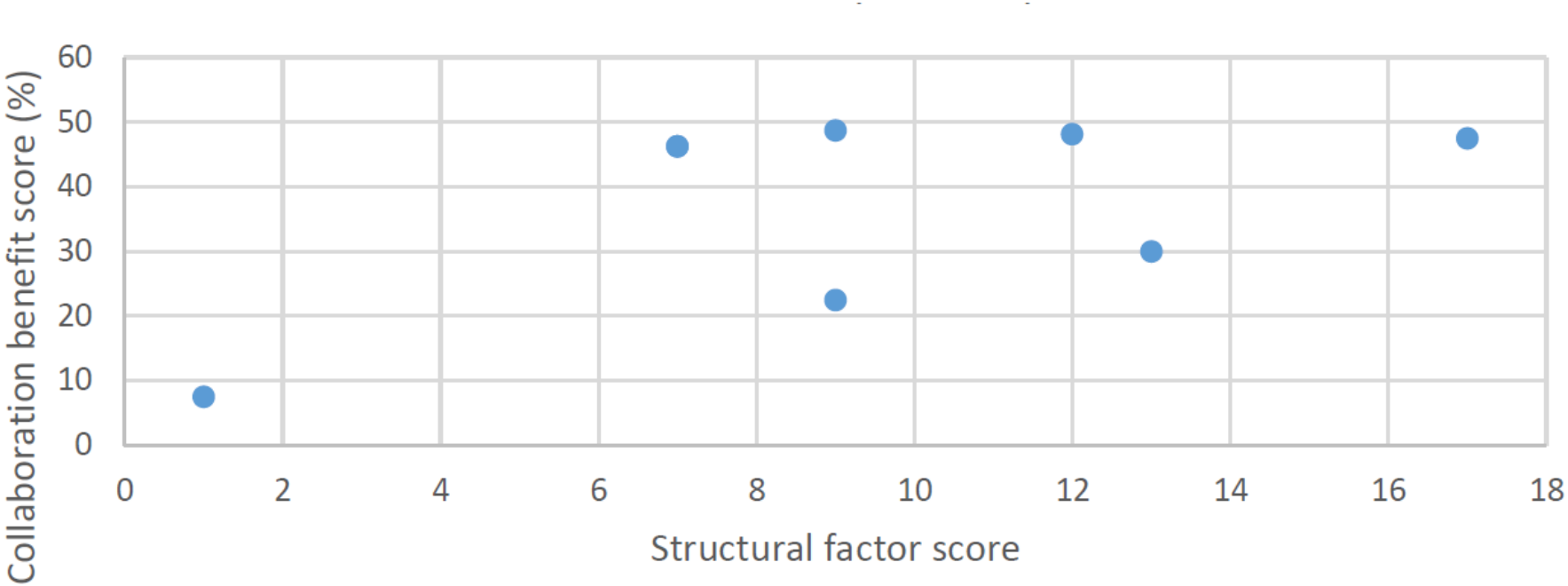


Results



What should we collaborate on?

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Priority area description	Priority level
●●● High priority ●● Medium priority ● Low priority	
Deploy demonstration projects to generate learnings necessary for commercialisation	●●●
Validation of components and sub-systems	●●●
Increase yield with improved power take-off	●●●
Control systems to increase reliability and survivability	●●●
Reduce uncertainty, risk and cost of foundations, anchoring systems and cables	●●●
Building a case for investment, including LCoE analysis	●●●
Technology development through validated numerical models and small-scale prototypes	●●
Develop high quality seaworthy materials	●●
Condition monitoring systems to optimise operation and maintenance	●●
Access to ocean energy sites, design adapted processes and vessels	●●
Standards, health, safety and environment	●●
Develop manufacturing expertise for ocean energy	●

What has been tricky to collaborate on?

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Case study: Orkney

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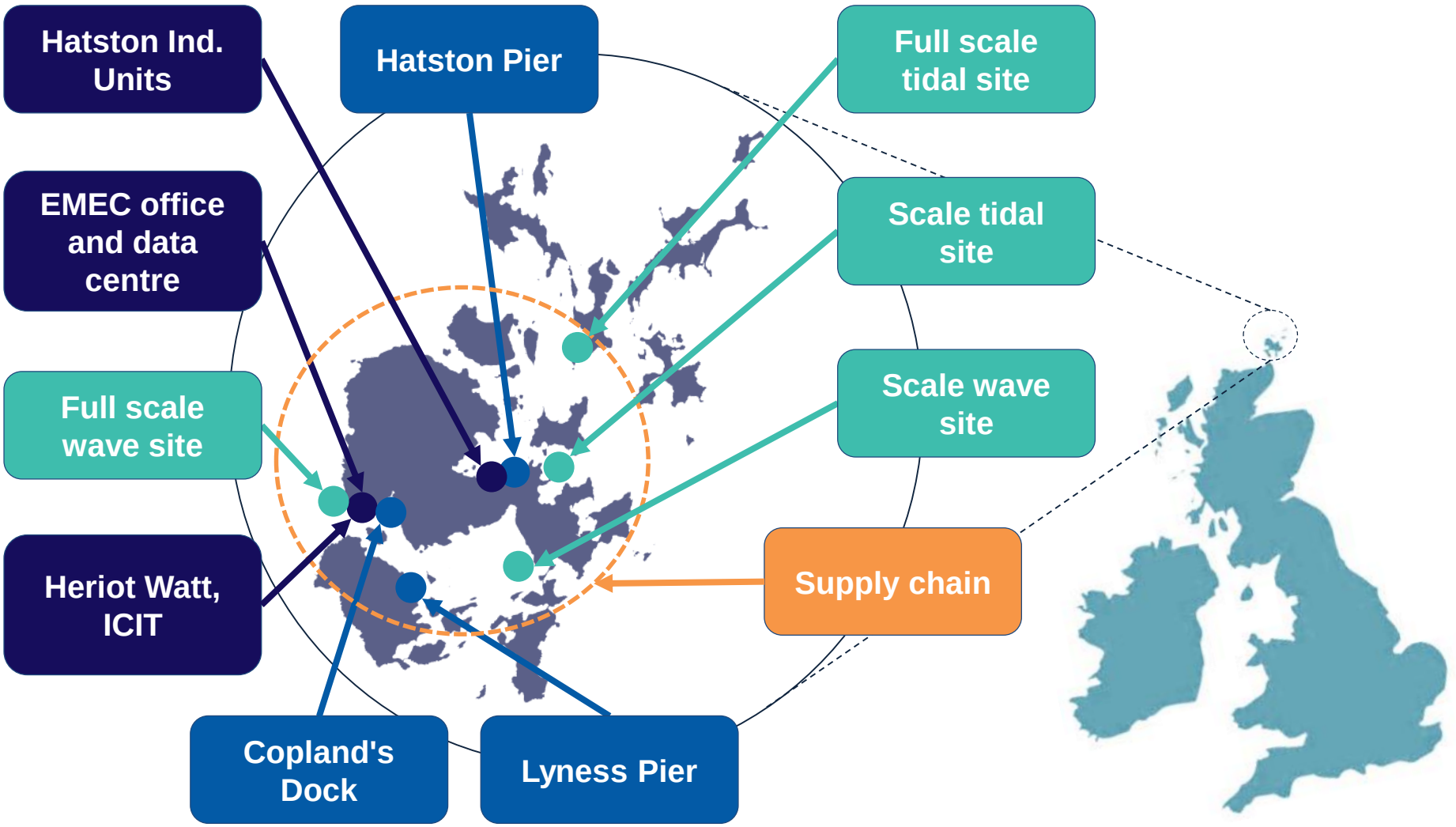

Case Study: WES

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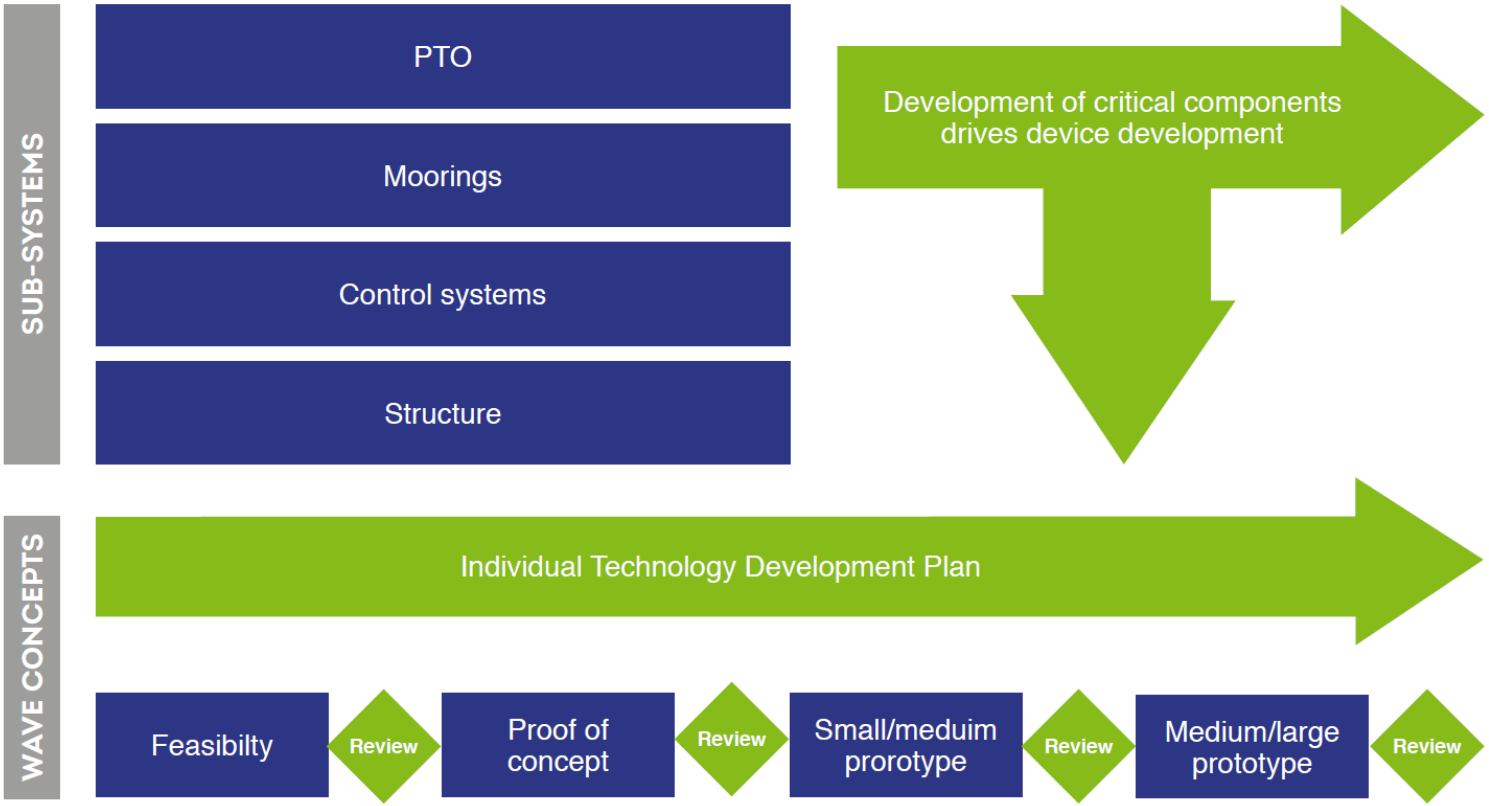
SUBSYSTEM AND WEC DEVELOPMENT APPROACH



Case Study: International Test Sites

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International WaTERS

OES OCEAN ENERGY SYSTEMS

Conclusion

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Industry
Govern ment
Supply Chain
Finance
Academia

VISION

A globally successful marine energy industry

Success will be driven through collaboration

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