



Problem solving with OPIN

29th March 2022

Welcome to the webinar

- Attendees, please mute your microphones and turn off your cameras during the presentation.
- After the presentation there will be time for interaction during the Q&A Session.
- Questions can be formulated in the Q&A window at any time, and they will be addressed during the Q&A session, or afterwards if necessary.
- The event will be recorded, and the slides will be shared on the OPIN website.

Agenda (GMT)

09:30 - 09:40 - Introduction to the webinar and the OPIN project

Ana Sladic – Sustainable Energy Authority of Ireland

09:40 - 09:55 – Technology Assessment Process (TAP)

Magnus Willett – Offshore Renewable Energy Catapult

09:55 - 10:10 - Introduction to Collaborative Innovation Groups (CIG)

Lesley Doyle – Scottish Enterprise

10:10 - 10:25 – Case study of SME led CIG

Shane Quill – Aquatera

10:25 – 10:40 – Heliorec case study

Polina Vasilenko – Heliorec

10:40 – 11:15 – Q&A

What is OPIN ?

Ocean Power Innovation Network (OPIN)
is a **European collaborative network**

OPIN Aim:

- Develop both cross-regional and cross-sectoral **collaboration**

OPIN Target:

- In-depth support to over 100 companies
- Develop a self-sustaining network (>200 members)



From 2019 to 2022.



2.6M€ total project budget
1.5M€ in financial support
from Interreg North West Europe



[Join the network \(free\)](#)

Who are OPIN ?

7 partners from Ireland, UK, Belgium, France, the Netherlands and Germany

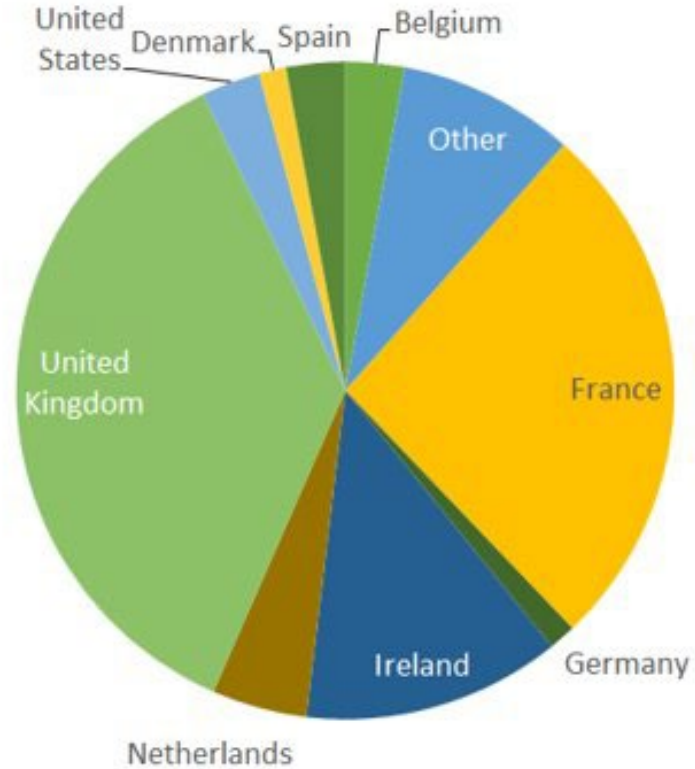


Project Partners	Countries/Regions
Sustainable Energy Authority of Ireland (SEAI)	Ireland
Scottish Enterprise (SE)	Scotland
Offshore Renewable Energy Catapult (OREC)	United Kingdom
Sirris, het collectief centrum van de technologische industrie (SIRRIS)	Belgium
West Atlantic Marine Energy Community, École Centrale de Nantes (WEAMEC)	France Pays de la Loire
Dutch Marine Energy Centre (DMEC)	Netherlands
Fraunhofer-Gesellschaft zur Förderung der angewandten Forschung e.V. (Fraunhofer IEE)	Germany

OPIN Members



517 members from 35 countries



Target Group	Target value	Current value
<i>enterprise, excluding SME</i>	20	67
<i>SME</i>	200	342
<i>sectoral agency</i>	10	20
<i>higher education and research</i>	10	77
<i>business support organisation</i>	6	8
<i>International organisation, EEIG under national law</i>	3	3

Other countries (5 members or less):

Australia, Canada, Chile, Colombia, Finland, Hong Kong, India, Indonesia, Italy, Malaysia, Norway, Poland, Portugal, Russia, Slovakia, South Korea, Sweden, Switzerland, Taiwan, Thailand, Vietnam

What can OPIN do for you (1/2)

Access **free events**: learning and networking opportunities.

OPIN Annual Symposium - May 10th Side event at [All Energy](#), Glasgow

Have a look at our [Events page](#) and register today !

What can OPIN do for you (2/2)

Access expert advice on your technology (TAPs)

- ✓ Independent expert opinion – e.g., on the route to market, on reducing development risks and costs, etc.
- ✓ Advice on next steps, funding and collaboration opportunities



Support collaborative projects (CIGs)

- ✓ Preparatory step to National and EU research calls
- ✓ Find ways to solve technical or financial problems you are facing
- ✓ Expand your network nationally and internationally
- ✓ Benefit from the experience of those in other industries



Receive **travel support**

- ✓ Enabling Irish and Scottish Enterprise SMEs to travel abroad for OPIN events

OPIN Resources



[OPIN Members list](#) & [OPIN website](#)



[OPIN Library:](#)

- Workshops/masterclasses presentations
- Value chain study - summary report
- Ocean energy challenges and recommendations: Desktop analysis of studies and reports



OPIN [Twitter](#) and [LinkedIn](#) groups. Join us for the latest updates!



Email us at: OPIN@seai.ie



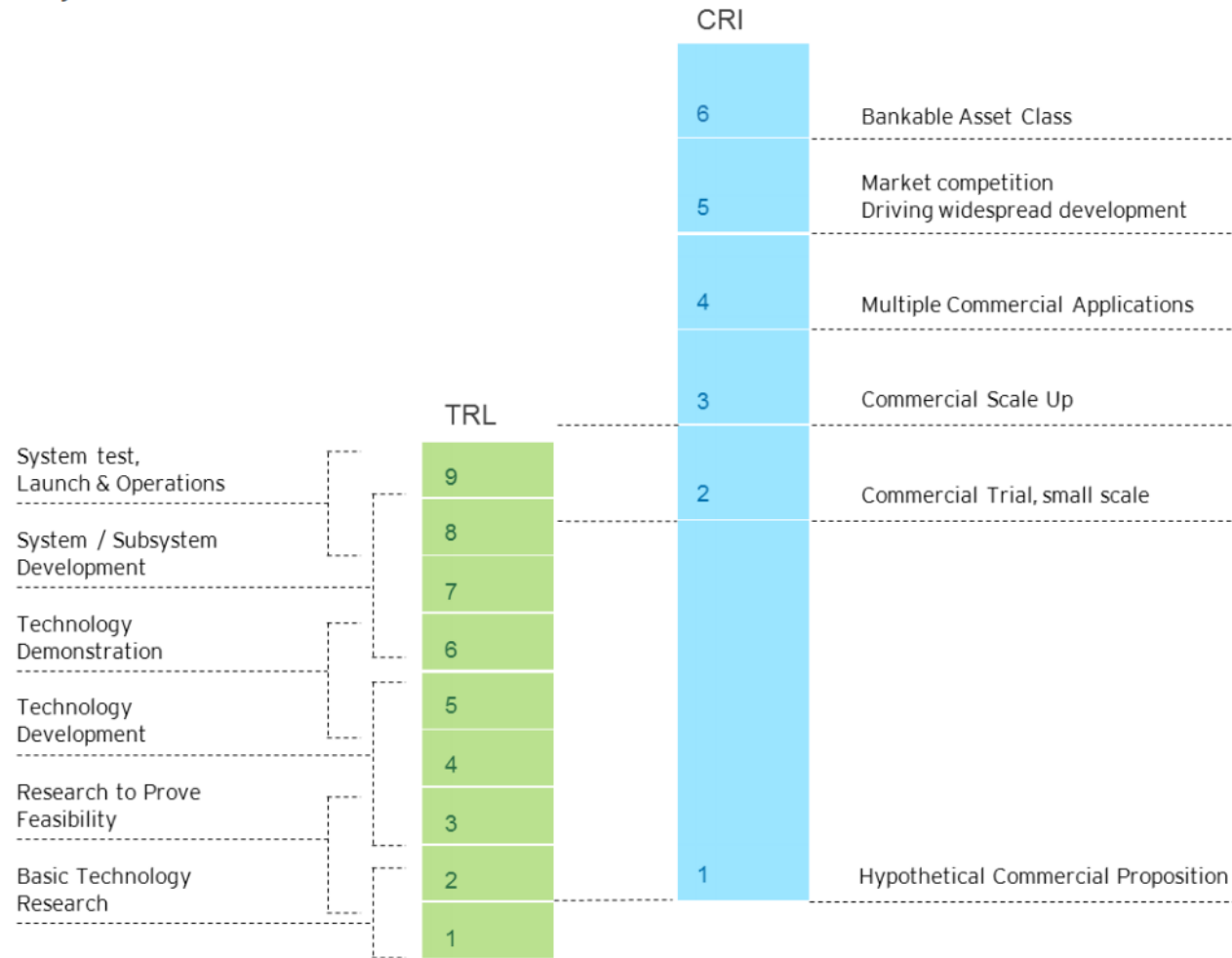
Technology Assessment Process (TAP)

Magnus Willett - Project Manager, Offshore Renewable Energy
Catapult

Agenda

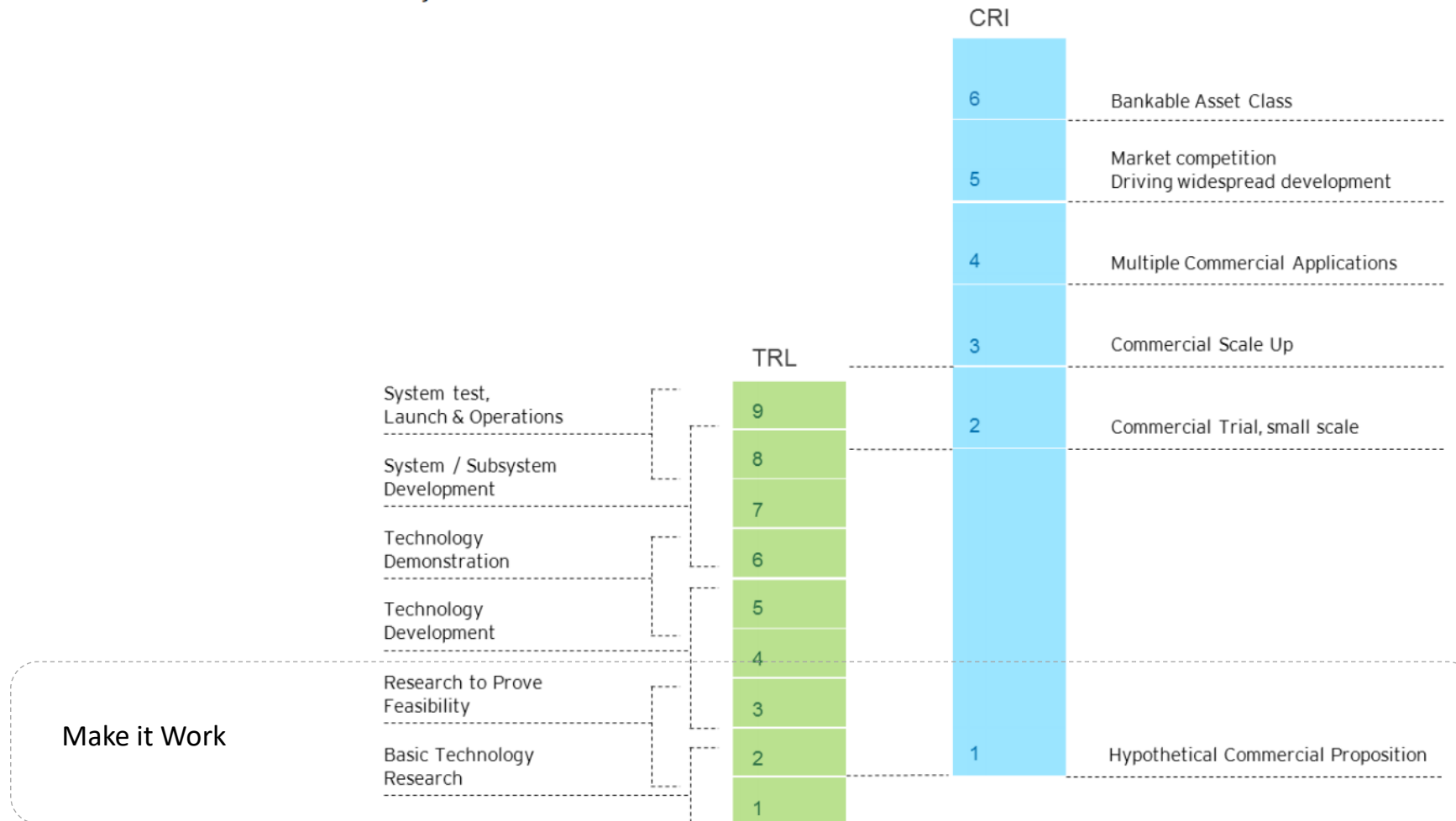
- Technology Development in Renewable Energy
- What is a Technology Assessment Process (TAP)?
- The OPIN TAP Process
- How to apply for an OPIN TAP

Technology Development Pathway



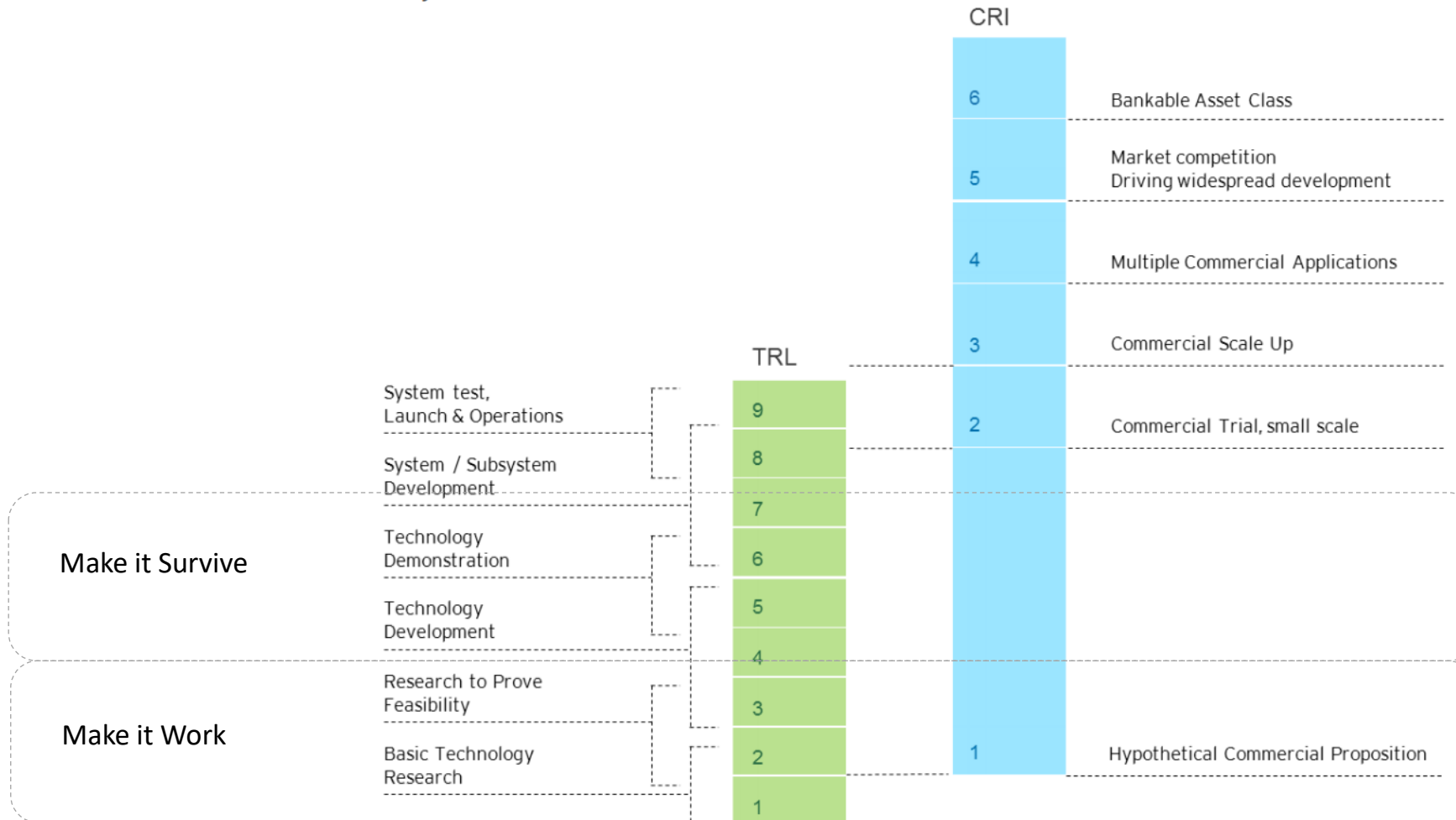
Australian Renewable Energy Agency TRL Definition:

Technology Development Pathway



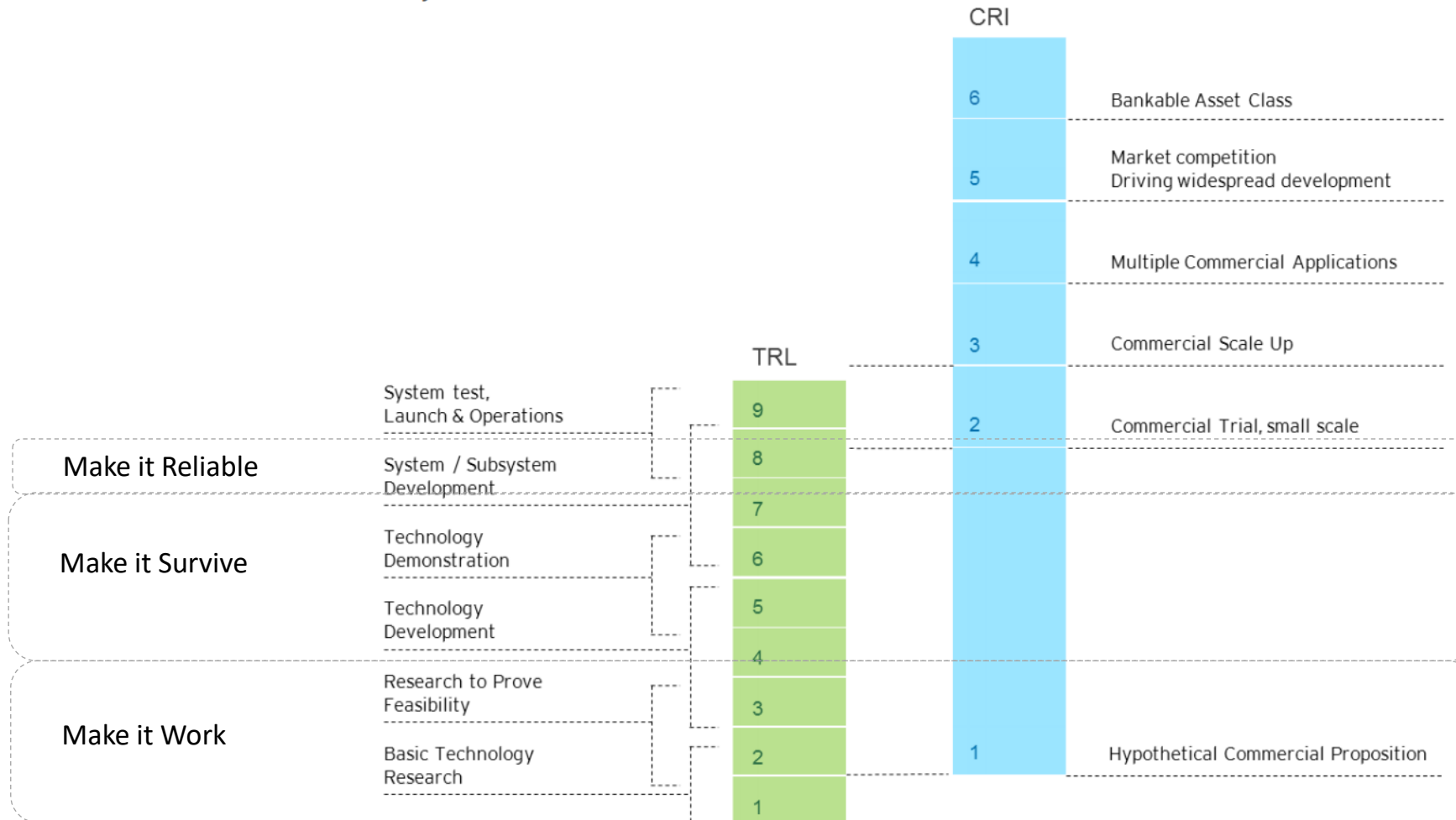
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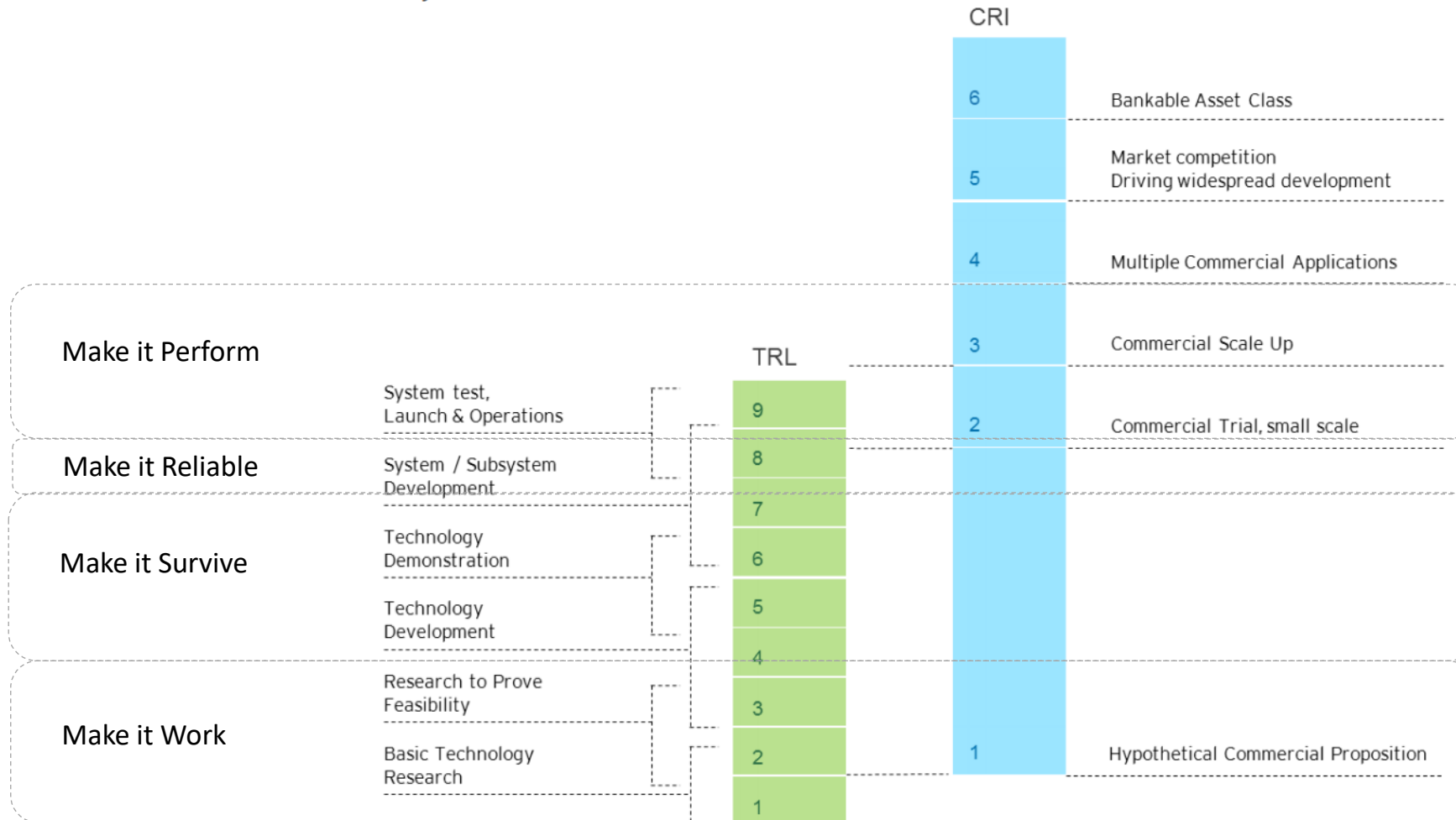
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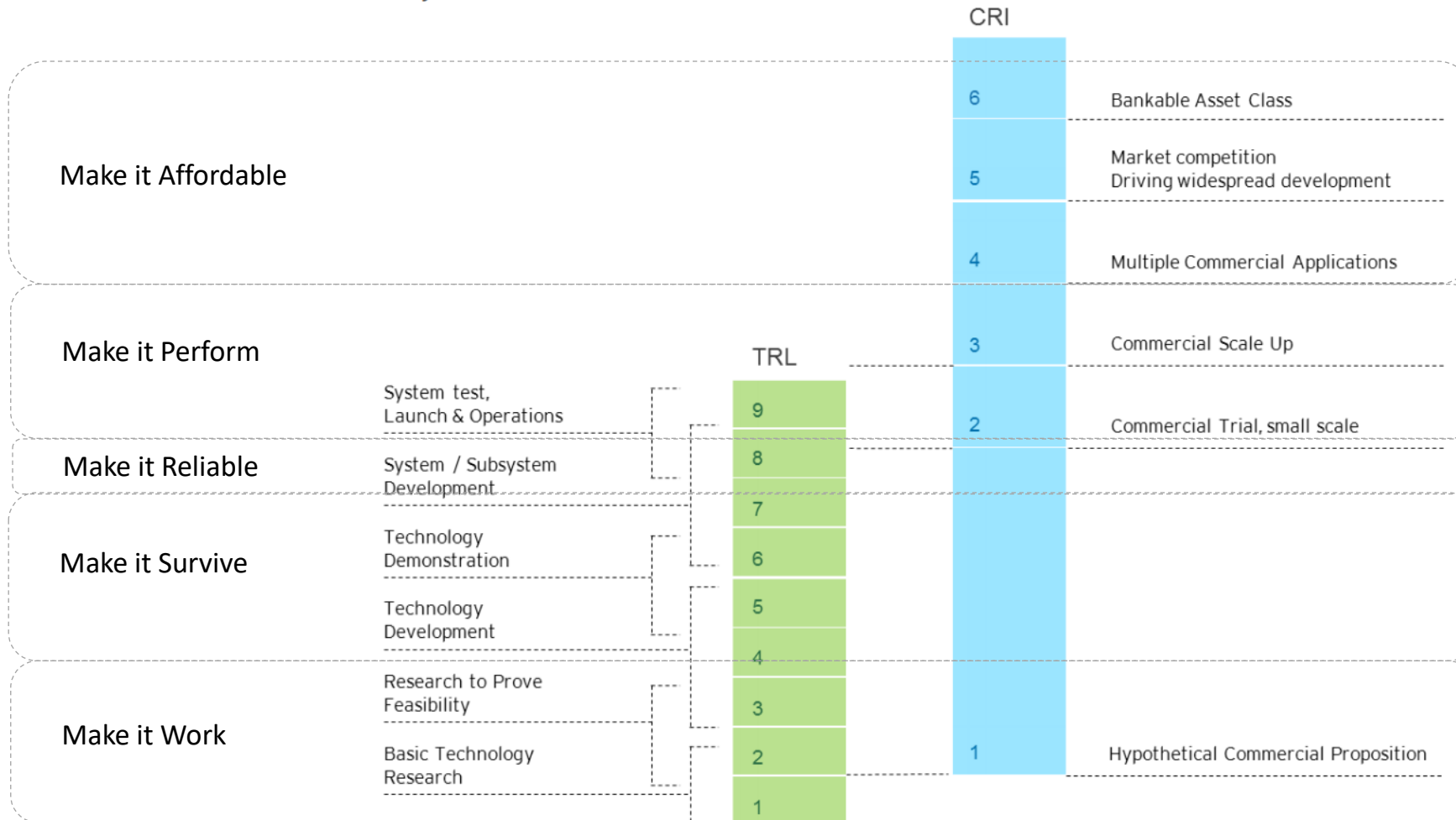
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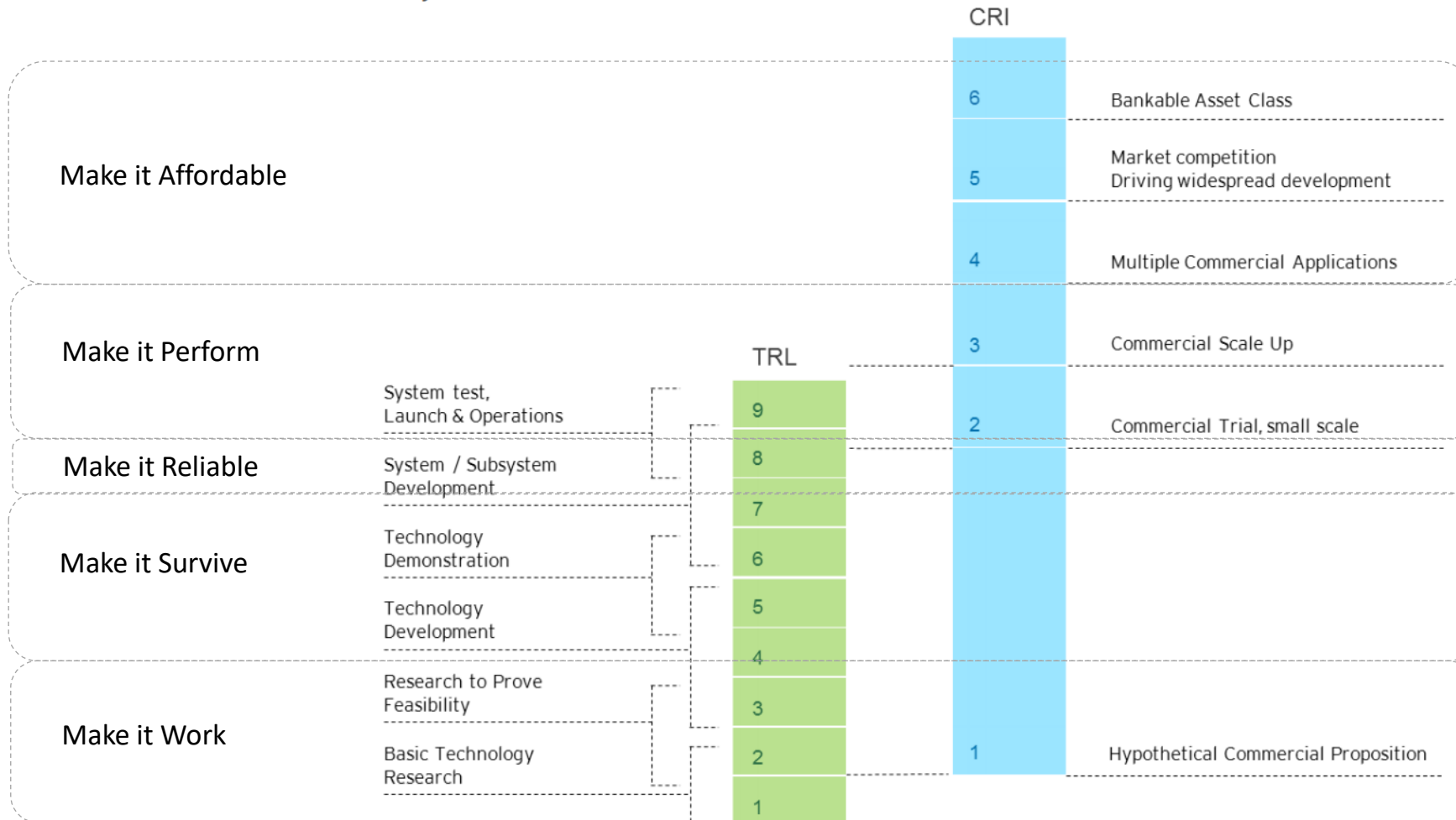
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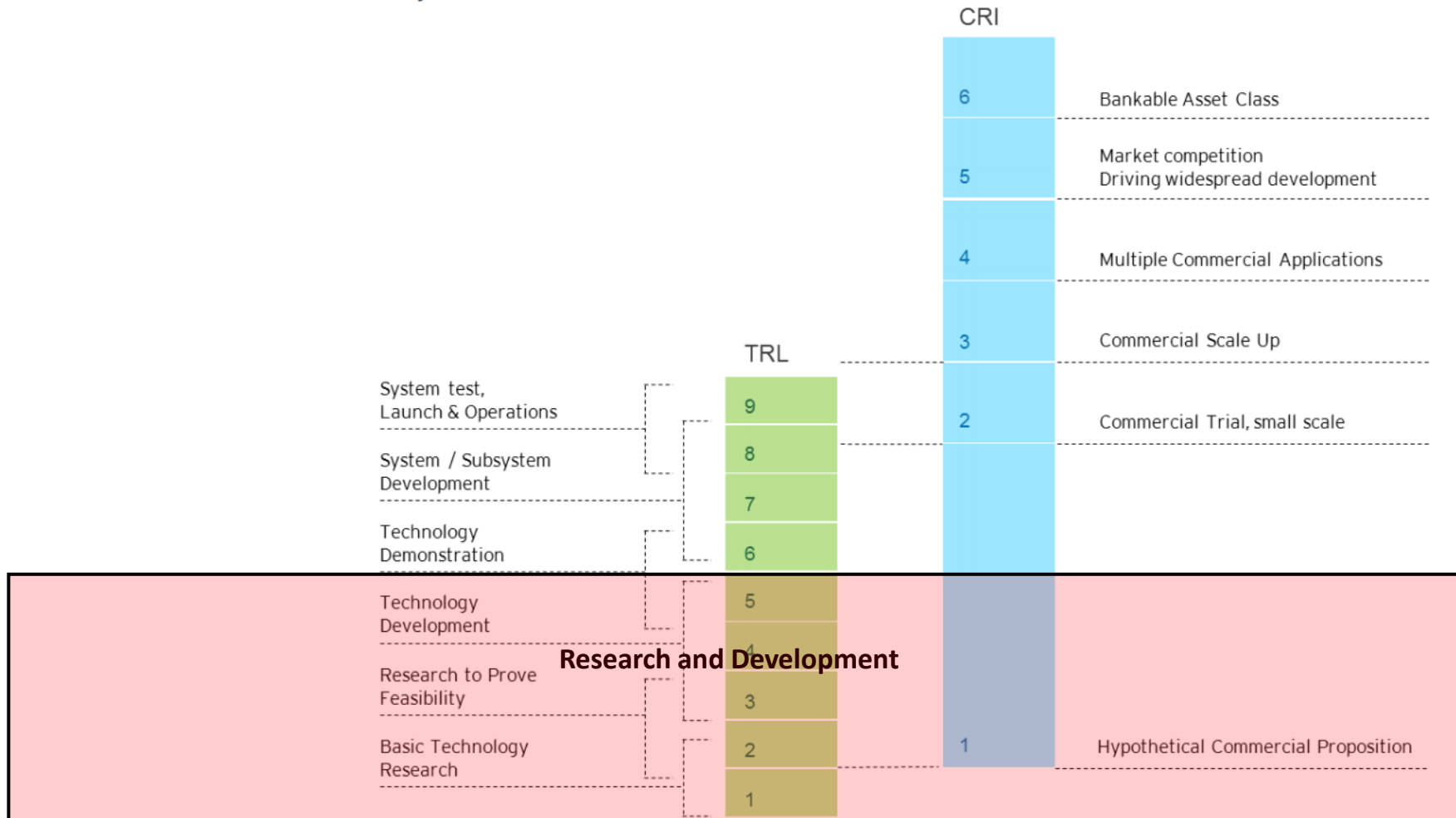
Technology Development Pathway



Typical TRL/CRI Pathway

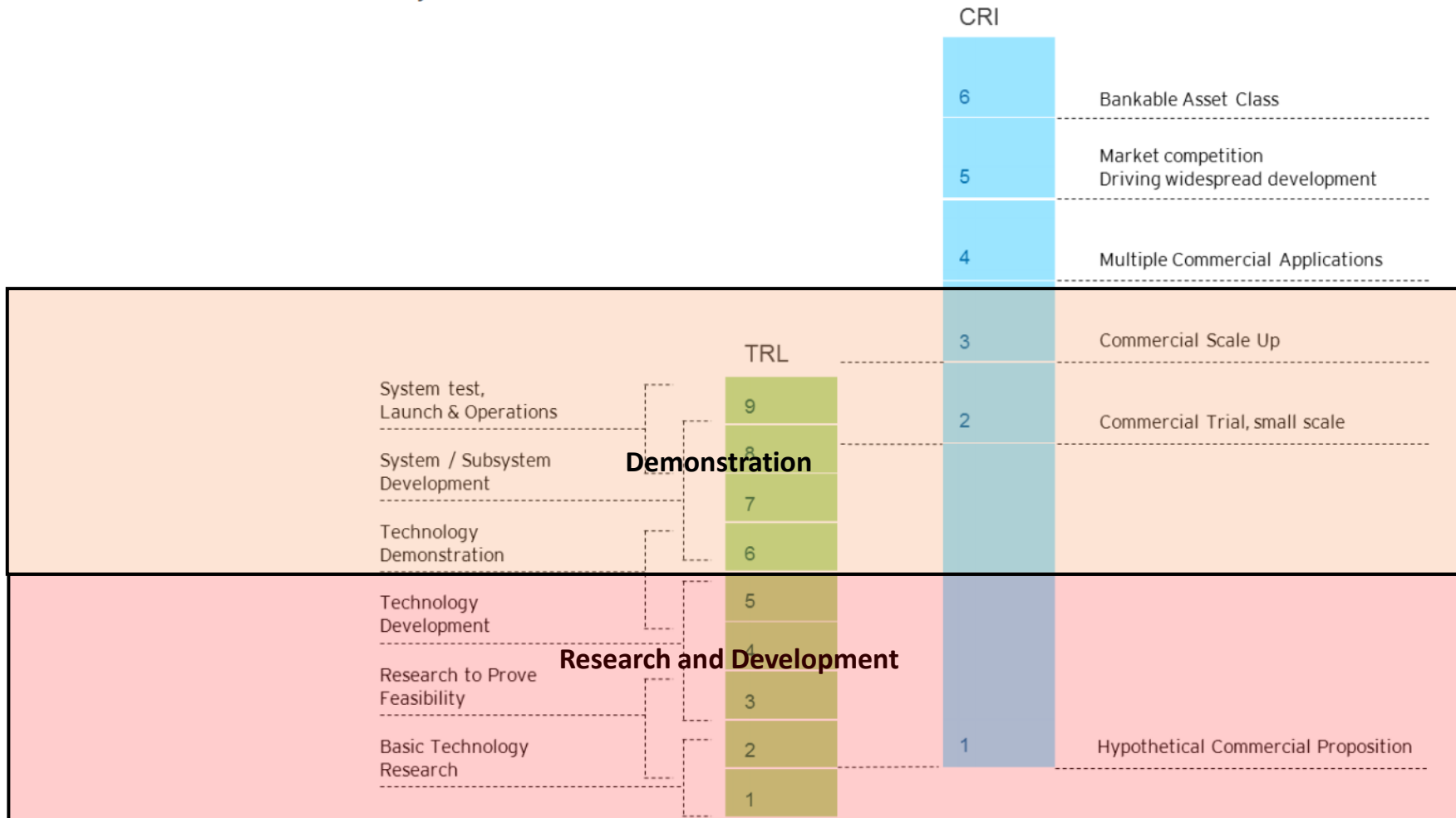
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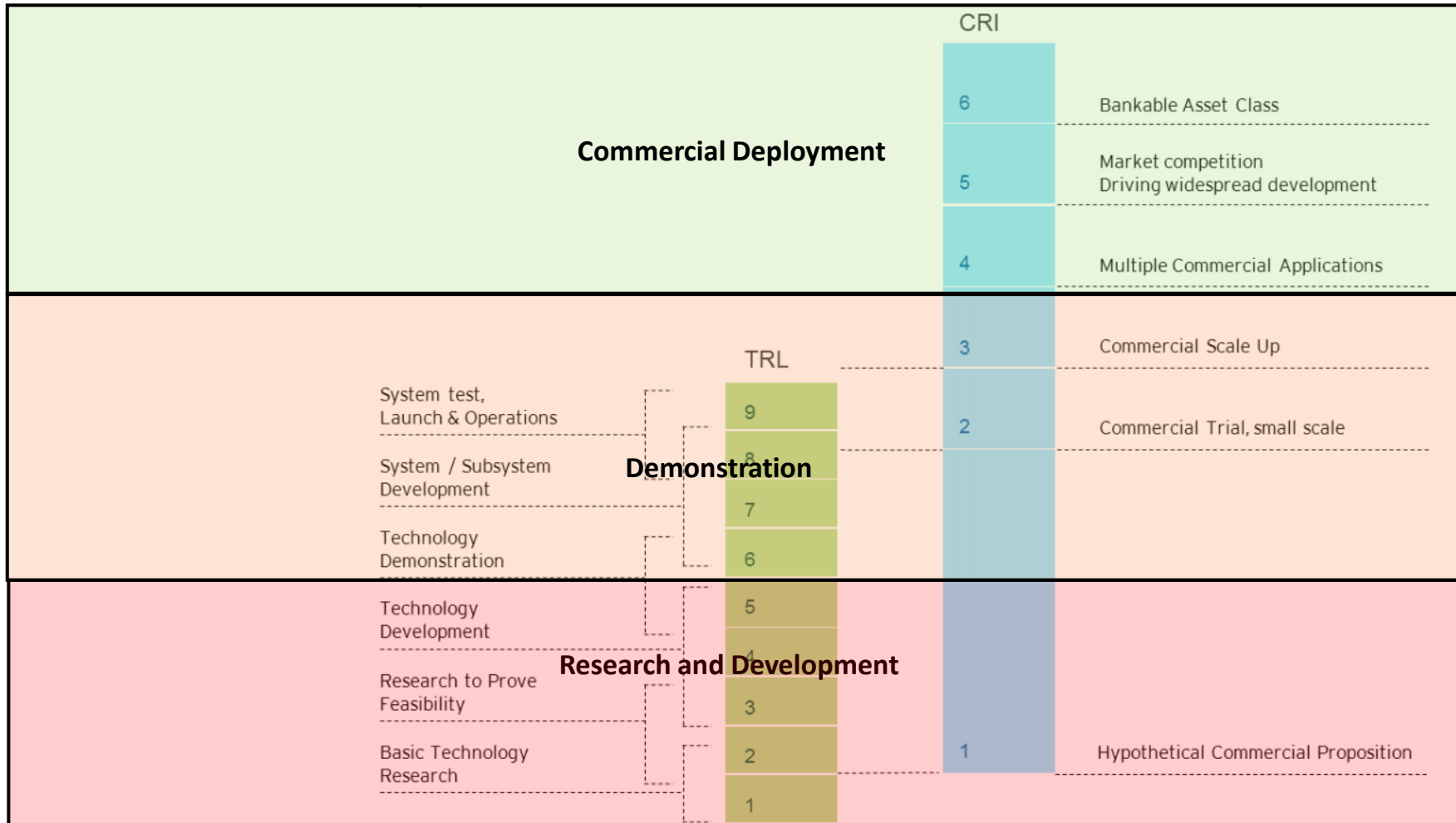
Technology Development Pathway



Typical TRL/CRI Pathway

Australian Renewable Energy Agency TRL Definition:

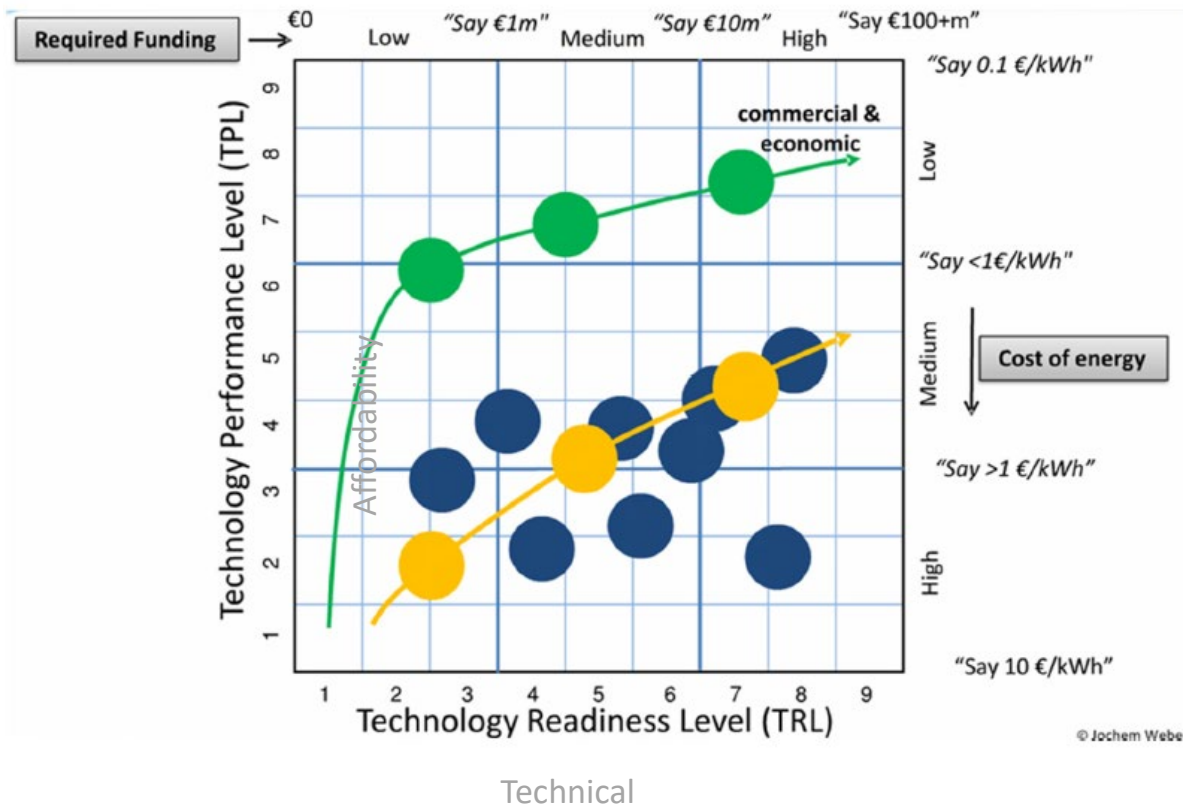
Technology Development Pathway



Typical TRL/CRI Pathway

Australian Renewable Energy Agency TRL Definition:

Challenges with the Technology Development Pathway



High TRL + Low TPL → Trajectory to being unaffordable

Increase TPL at high TRL → large cost, fundamental changes difficult

High TPL + Low TRL → fundamental changes
when tech flexible, easier and lower cost

Technology Assessment Process (TAP)

What is a TAP?



Assessment of new and emerging ocean energy technologies and services

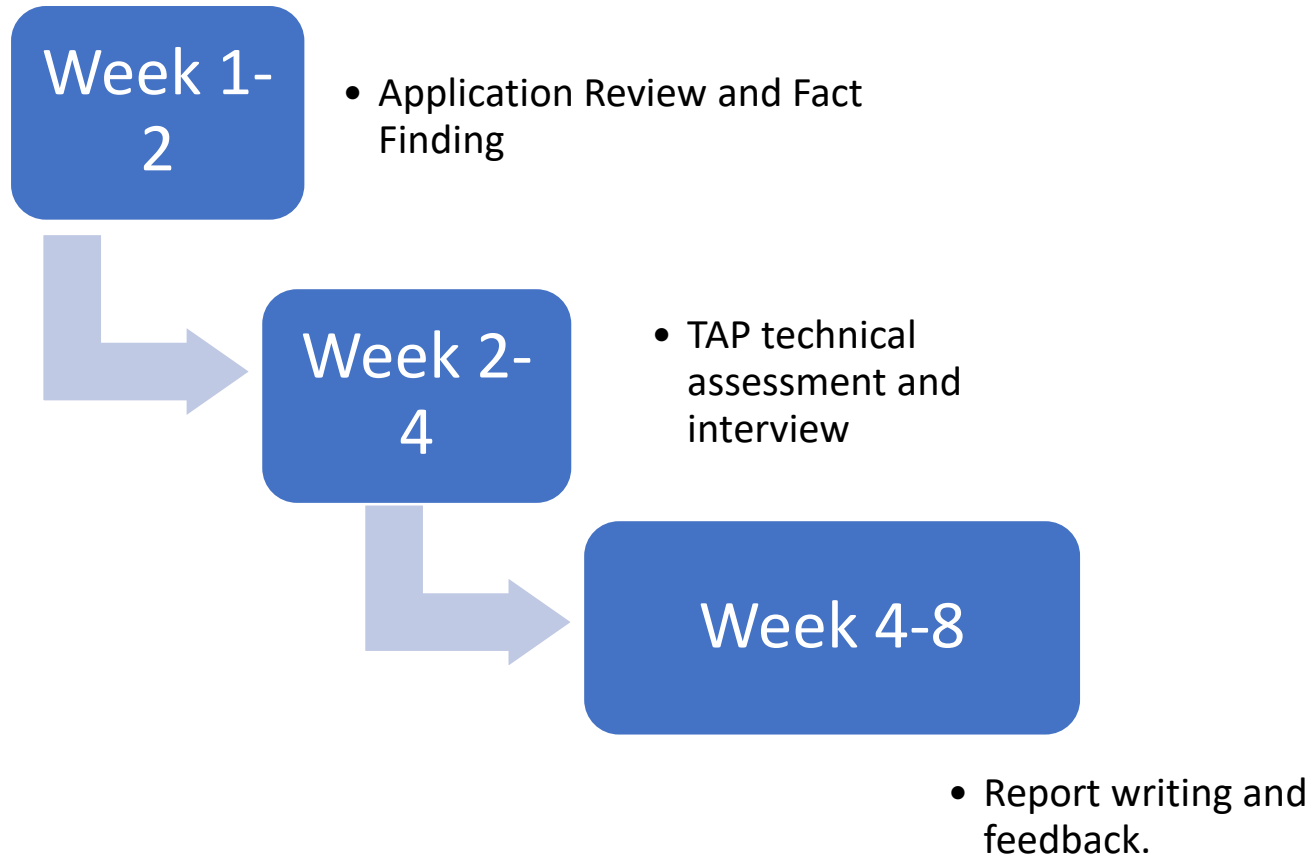


Evidence based Dossier



Examination of system, sub-system or component

The OPIN TAP Process and Report



The report generated during the TAP process would consist of the following:

- Methodology
- Technical viability
- Techno-economic competitive prospects
- The technology development route map and its progression targets
- References – list of evidence provided

The final TAP application call

Stages	April 11 th	April 18 th	April 25 th	2 nd May	9 th May	16 th May	23 rd May	30 th May
Final Application Review								
Engagement with Successful companies								
Delivery of Reports								

- Applications will close on the 10th of April
- Assessment will be undertaken by ORE Catapult and OPIN partners
- Notification to successful companies will be made w/c 18th of April.

How to apply for a TAP?

- As part of the OPIN project, project partners offer a high level assessment of an SMEs technology free.
- As part of the TAP, OPIN partners will discuss:
 - Design principles
 - Opportunities to de-risk onward development
 - Route to commercialisation.
- Transfer of technology from other sectors into ocean energy.
- The value of the Tap is limited to €2,000.

TAP Applications and Guidelines

- Evaluation Criteria
 - Strength of the Scientific/Technical Approach
 - Ability to competently carry out the project/development
 - Impact
- Application forms can be found [here](#).
- You should include de-minimis and SME declarations with your applications.
- Application forms should be sent to OPIN@seai.ie
- Guidelines for applications can be found [here](#).



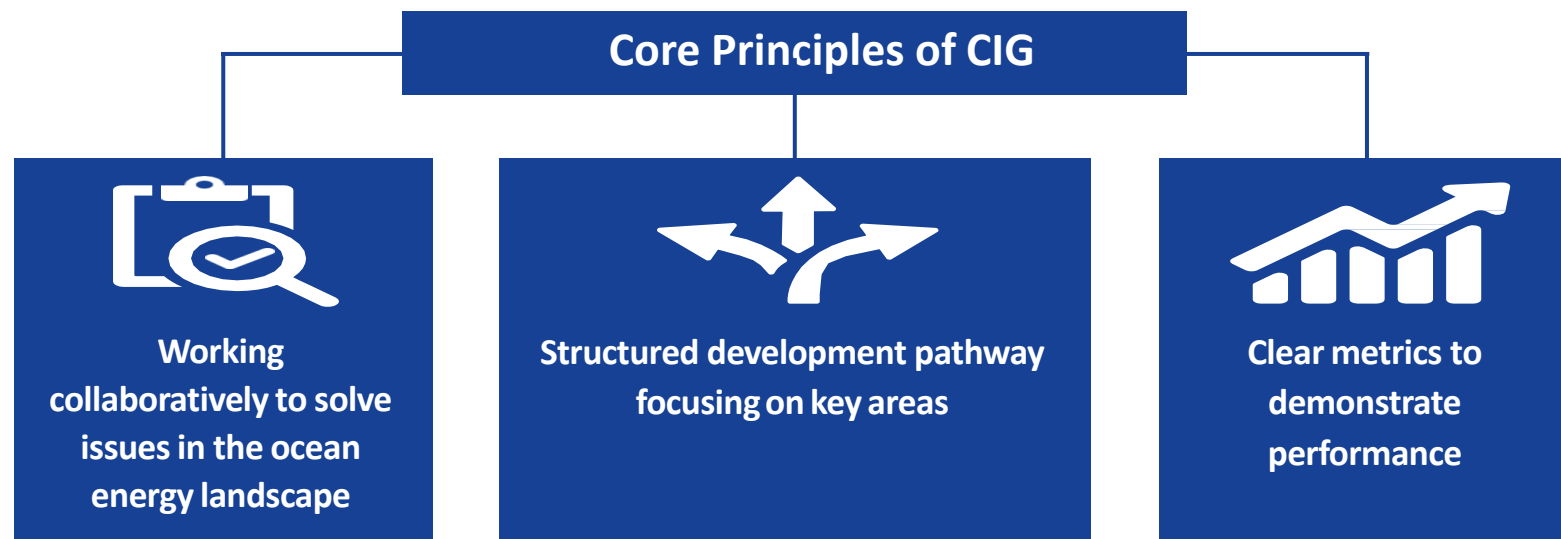
Introduction to CIGs – Collaborative Innovation Groups

Lesley Doyle – Project Manager, Scottish Enterprise

OPIN CIG – What is a CIG?

A CIG is one of the services offered to developers and businesses through OPIN. If you have an issue or challenge within the ocean energy sector that cannot be solved by your business alone, a CIG allows you to work with others to find a solution. The total level of support can be up to €20,000 of OPIN partner resources. This is not a grant to your organisation and reflects in-kind support.

Wave, tidal, and floating platforms are all innovation areas supported by OPIN.



CIg topic examples

CIgs can be formed to respond to identified challenges for the ocean energy sector and its value chain, and can include the following:

- **Technology challenges** – for example power transmission, grid connection and integration
- **Economic & supply chain** – for example LCoE analysis and cost reduction strategies; and Industry and supply chain development
- **Regulatory / environmental** – for example environmental impact assessment and monitoring

Benefits of CIGs and follow on support

- Explore opportunities for new products, services, markets
- Expand your network nationally and internationally
- Gain complementary skills and expertise
- Preparatory step to National and EU research calls

Following on from CIG support, there are other mechanisms available to explore your ideas further including support from:

- Other European projects such as [Marine Energy Alliance](#) and [OceanDEMO](#)
- OPIN partner organisations – contact details can be found on the [OPIN website](#)
- [Enterprise Europe Network](#)



Case study of an SME-led CIG: **aquatera** environmental services and products

Floating Solar technology demonstration

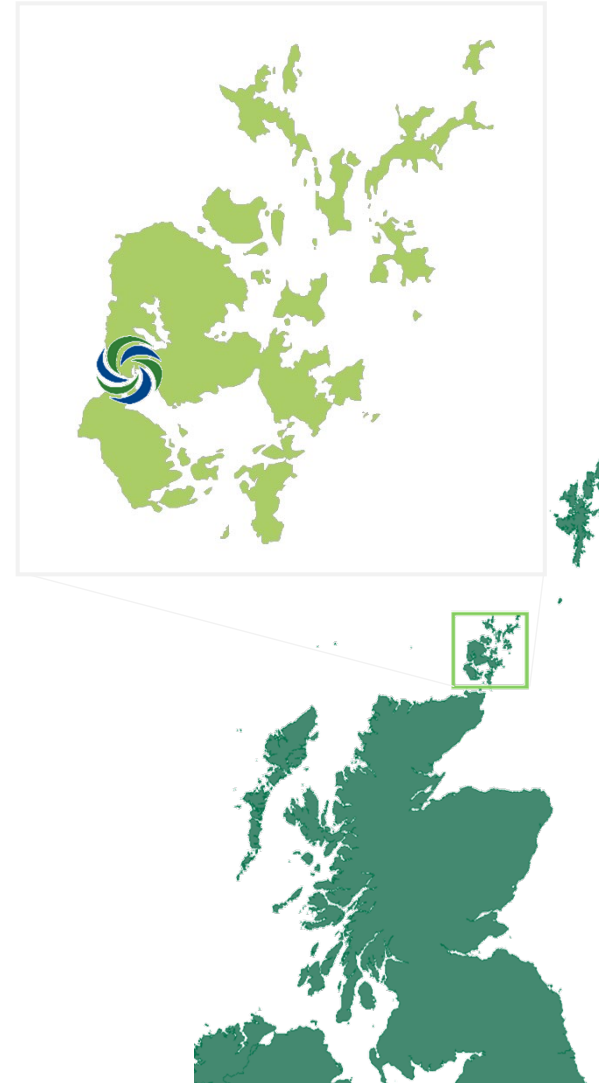
Shane Quill – Aquatera Shane.quill@aquatera.co.uk

Interreg 
North-West Europe
OPIN

European Regional Development Fund

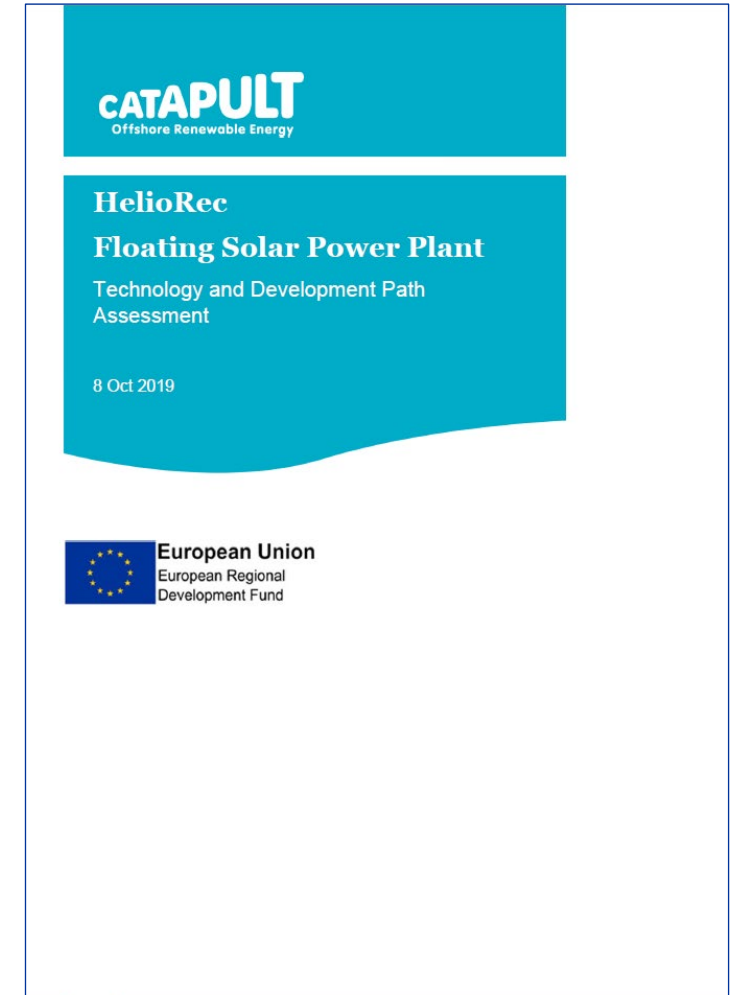
Aquatera

- Aquatera operates globally from a hub based in Orkney, Scotland.
- We provide environmental expertise and operational support for offshore, coastal and land-based activities
- Our aim is to make people, communities, businesses, projects, regions, countries and the wider world better and more sustainable



SME-led CIG

- Floating solar company HelioRec went through the TAP Process
 - OPIN Technology Assessment Process
 - Led by ORE Catapult, with expertise from DMEC, Sirris, WEAMEC/Centrale Nantes
- Key findings and recommendations from the TAP
- Purpose of these CIGs is to **bring together SMEs and to solve specific problems which are considered barriers to the deployment of ocean energy.**



SME-led CIG- Floating Solar

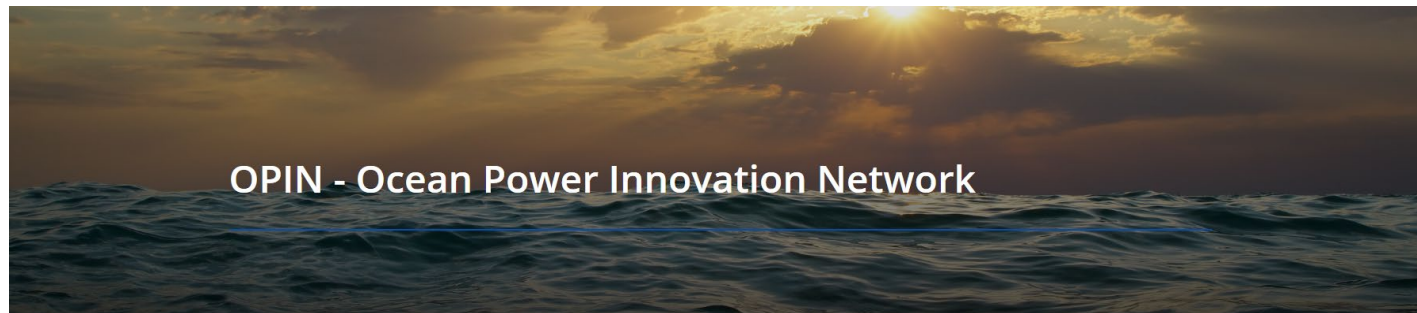
- OPIN Network of over 400 members utilised to build a Collaborative Innovation Group
- Three companies joined the CIG
- Each worked with HelioRec on specific recommendations from the TAP process
- Recommendations in relation to specific elements of:
 - The basis of design
 - Design criteria and mooring system
 - Installation, operation and maintenance and decommissioning
 - Electrical design



Image: <https://solarimpulse.com/efficient-solutions/heliorec-floating-solar-power-plant>

SME-led CIG - Floating Solar

- Process was simple & efficient:
 1. **Agreement** of Application Form and plan for CIG detailing the themes
 2. **Sharing** of relevant information and data
 3. **Preliminary** meeting with Partners of the CIG.
 4. **CIG Session preparation.** During this phase the CIG Partners reviewed the information and data provided
 5. **CIG Session.** The key topics of focus are discussed and key questions and answers will be shared between the Partners.
 6. **Finally**, some outstanding questions from the CIG session may be resolved via email between the CIG Partners.
- Process is guided and led by the SMEs but facilitated and coordination support is available from the OPIN Team



CIG Eligibility

- Minimum of 2 SMEs
- Large companies and research organisations may participate
- Cross border – members from minimum of 2 OPIN regions
- Cross sector - recommended





Heliorec case study

Polina Vasilenko, CEO of Heliorec

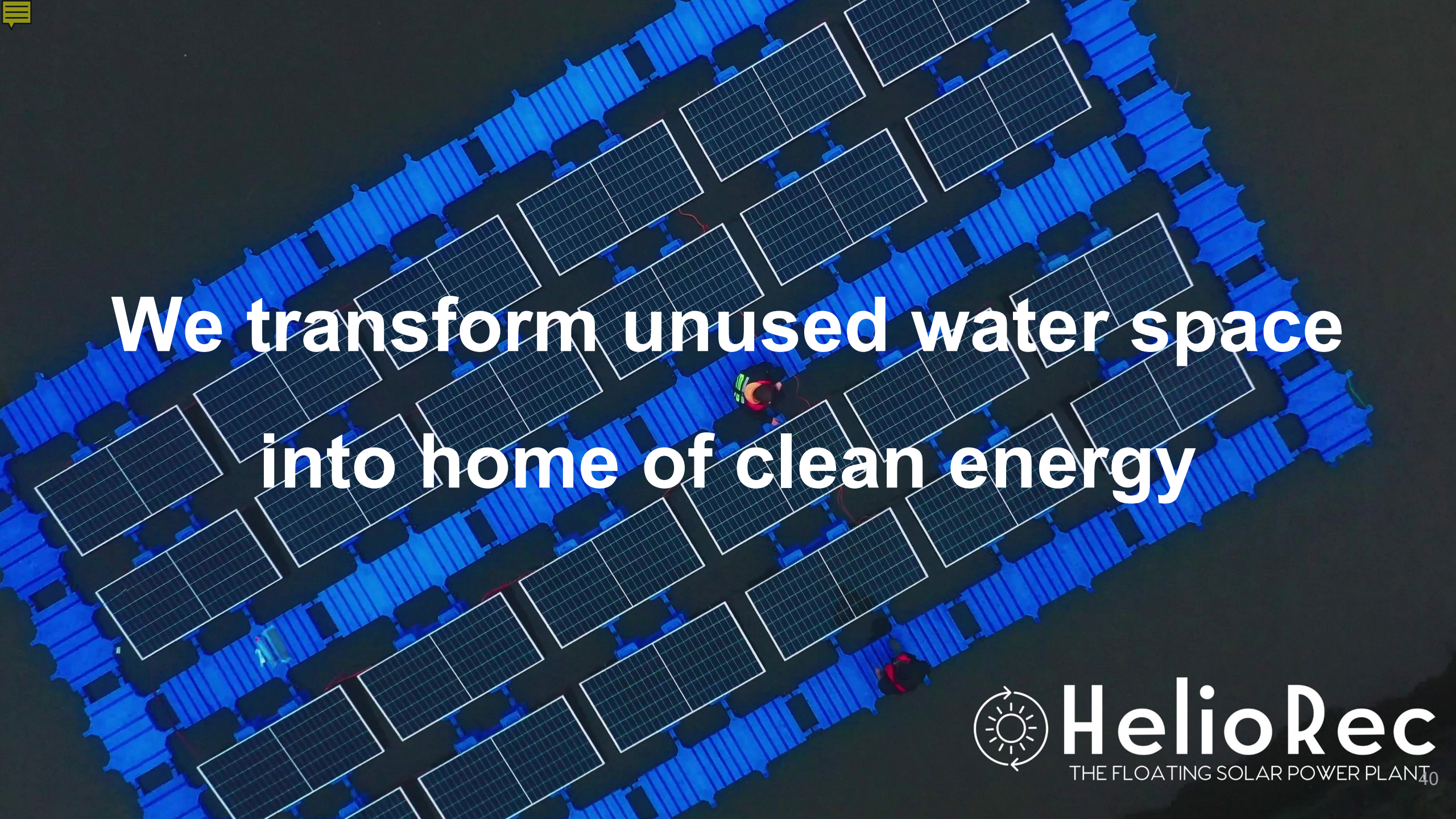


10kWp installation in Oostende Port under DualPorts EU programme

Polina Vasilenko, Founder & CEO

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+31 625 495 015

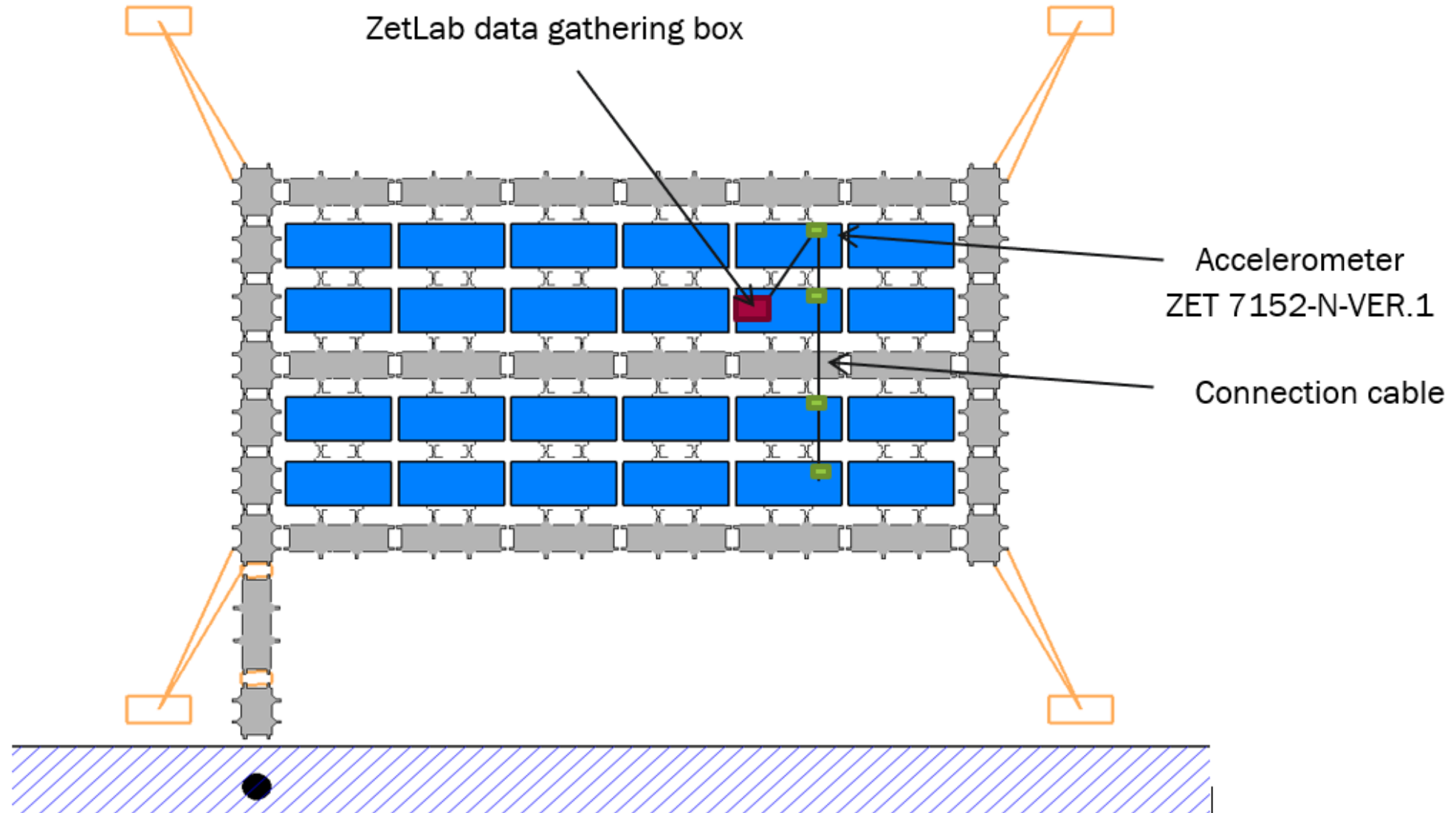


**We transform unused water space
into home of clean energy**

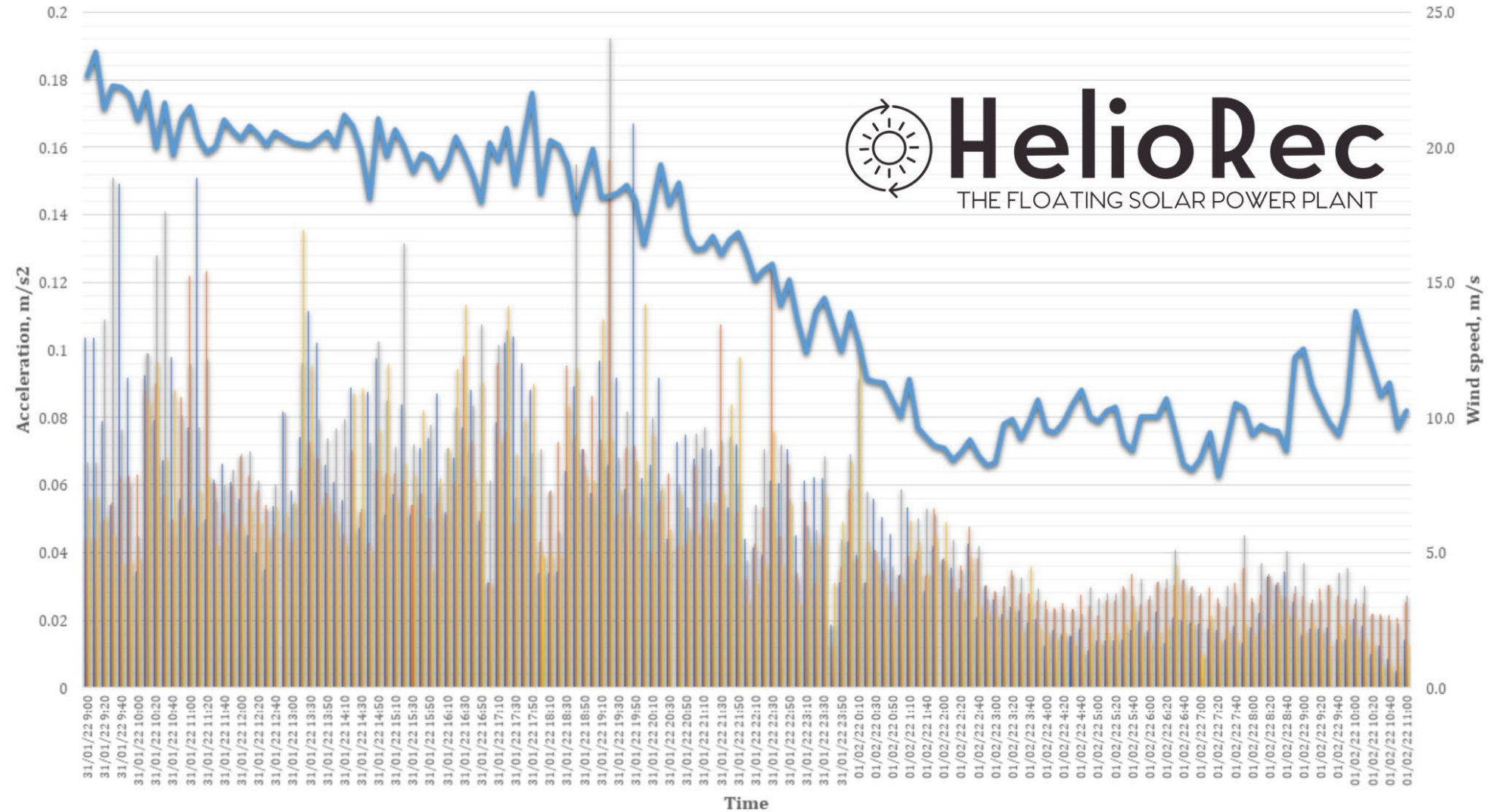
Oostende Port



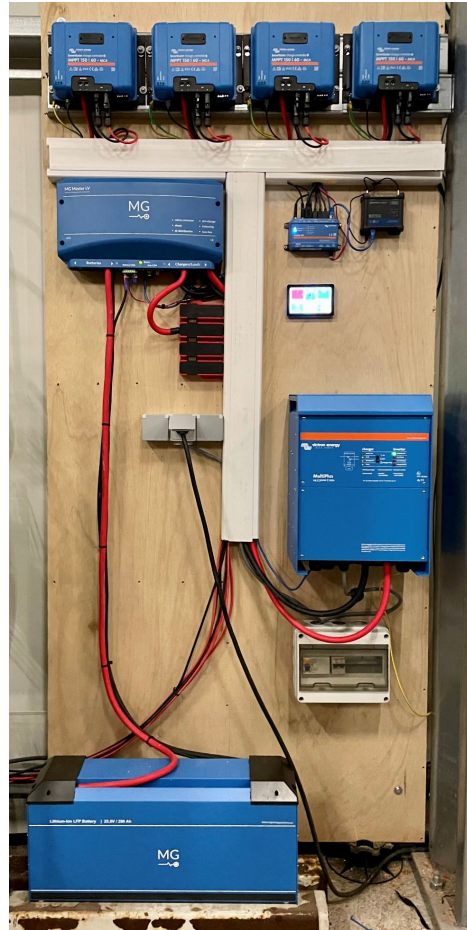
Sensors



Sensors



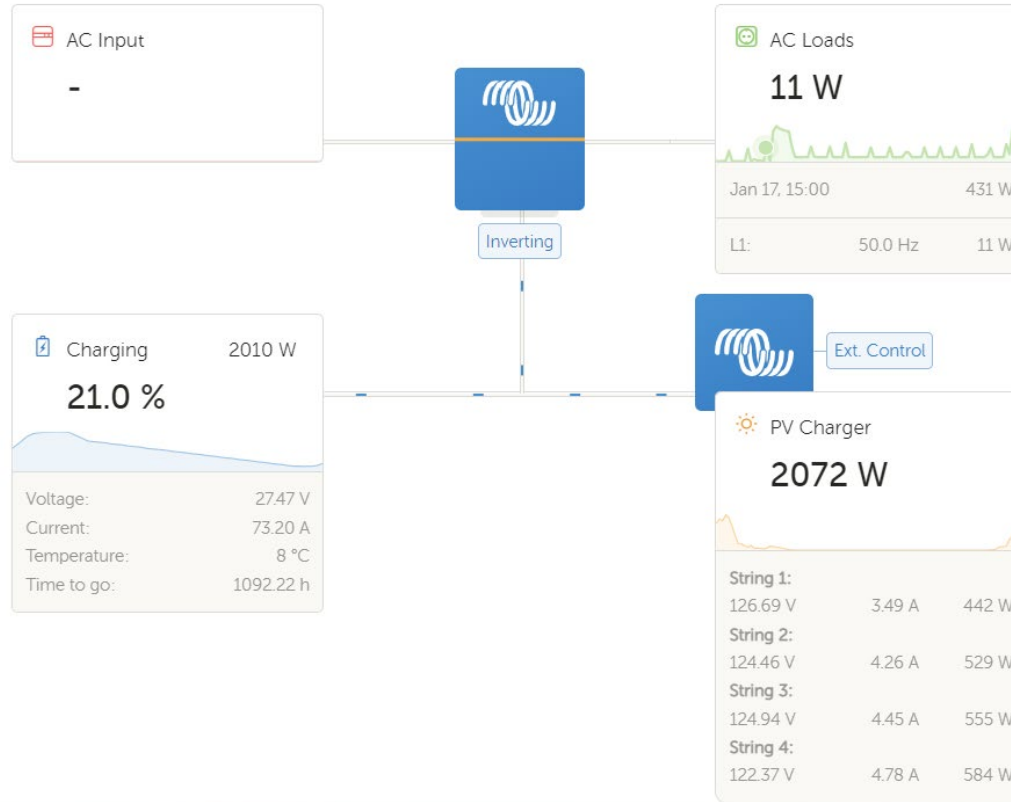
PV equipment



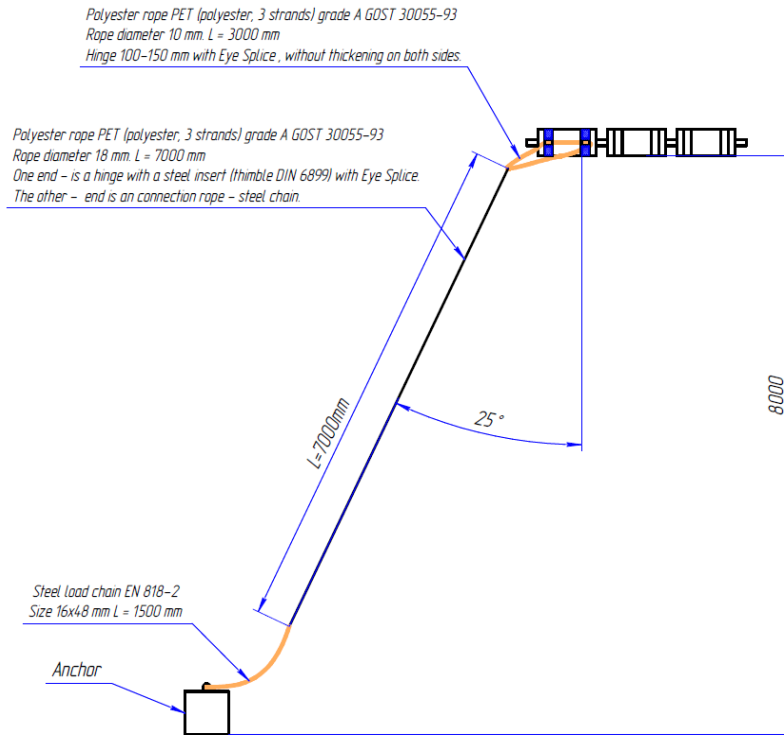
HelioRec Oostende

[Hide details](#)

Last updated:
a minute ago



Moorings



- 10 mm high strength polypropylene rope (breaking strength up to 1350 kg)
- 15 mm high strength polypropylene rope (breaking strength up to 3400 kg)
- 10 mm DIN 766 stainless steel chain (breaking load: 5000 kg)



Cable protectors



- 1 m Snap Hardlock 60/50 mm
- 1 m and 0.3 m Snap Panzar 110/99 mm
- Multiboxes



HelioRec

THE FLOATING SOLAR POWER PLANT

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Q&A Session