

History and Evolution of Knowledge Transfer within the Marine and Maritime Research Sector

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Europe's Investment into R&D

Framework Programme	Period	Budget (billions of €)
First	1984–1987	3.8
Second	1987–1991	5.4
Third	1990–1994	6.6
Fourth	1994–1998	13.2
Fifth	1998–2002	15.0
Sixth	2002–2006	17.9
Seventh	2007–2013	50.5 (+ 2.7 Euratom)
Horizon 2020 (Eighth)	2014–2020	80 (estimated)

“The Europe 2020 strategy is about delivering growth that is: smart, through more effective investments in education, research and innovation; sustainable, thanks to a decisive move towards a low-carbon economy; and inclusive, with a strong emphasis on job creation and poverty reduction.”

The Evidence for a Return on Investment

“Each € invested by FPs generates a return of about 7€” (EC, 2014)

“1€ of FP7 funding resulted in a rise in industry added value of 13€ on average” (UUK, 2015)

“The EU has become more innovative...Innovation performance index [has risen from] 0.493 in 2006 to 0.554 in 2013” (EC, 2014)

“50-70% productivity growth arises from innovation...what drives innovation...[is it] research...unfortunately, economists concede, no one really knows” (Nature, 2010)

“Europe 2020 indicators” (EC, 2014)

“Science economics - What is science really worth” (Nature, 2010)

“Public Consultation on Ex-Post Evaluation of the 7th Framework Programme” (UUK, 2015)

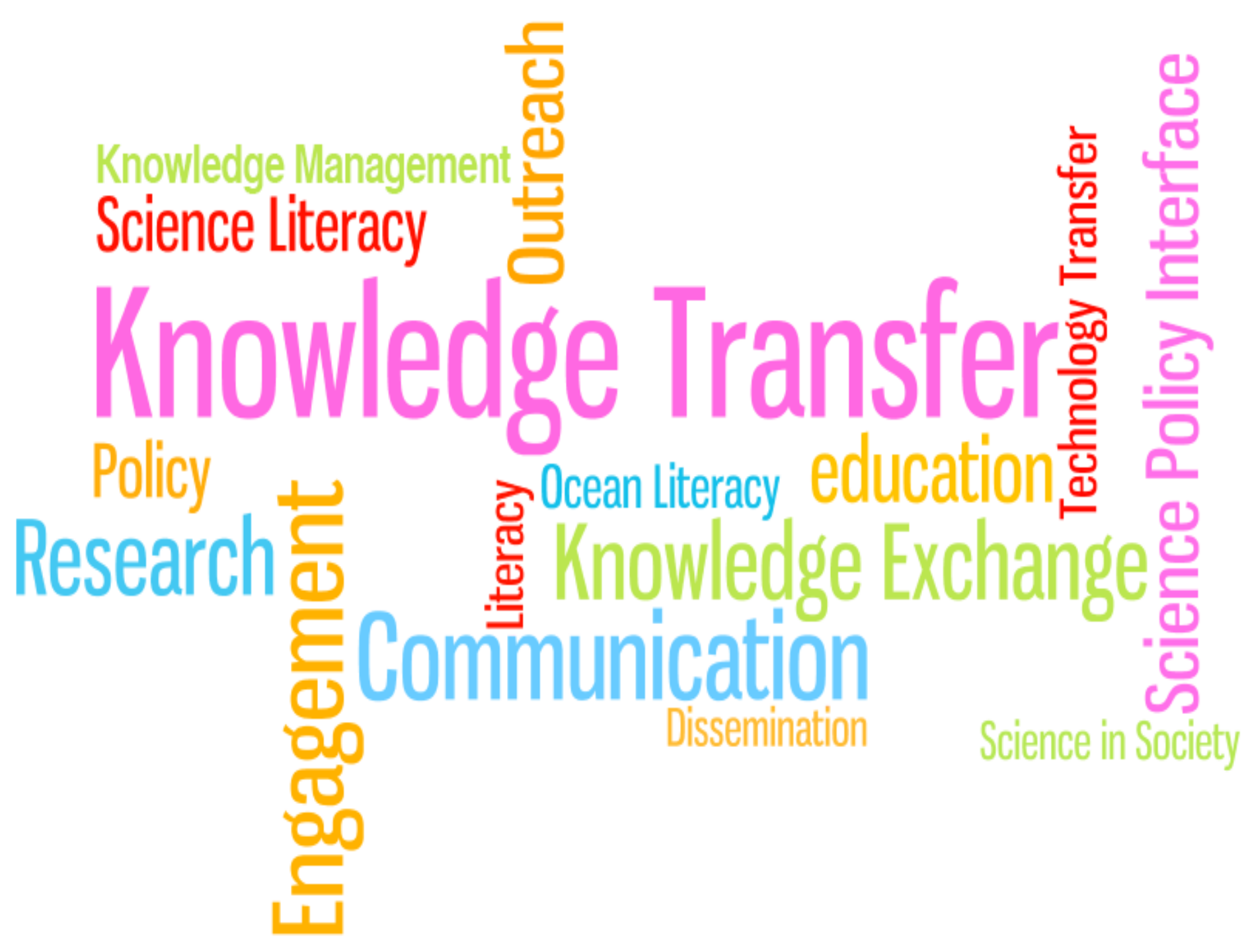
Indicators of impact

Societal Impact:	Academic Impact:	Economic Impact:
<p>Quality of life</p> <p>Health</p> <p>Environment</p> <p>Public services</p> <p>Evidence-based policy</p> <p>Public engagement</p> <p>Understanding</p> <p>Education</p>	<p>Theory</p> <p>Validation</p> <p>Knowledge Base</p> <p>Technology development</p> <p>Teaching and Training</p>	<p>Innovations</p> <p>Competitiveness</p> <p>Growth</p> <p>Jobs</p> <p>Budget savings</p>

Increasing the Odds of Achieving Impact

“Enhanced dissemination and exploitation are strategic matters for the success of Horizon 2020 and for the achievement by the programme of sizeable economic, social and environmental impacts” (EC, 2015)

**The standard answer is: DISSEMINATION
...or is it?**



What is Knowledge Transfer?

Dissemination: The act of spreading something, especially information, widely (Oxford English Dictionary)

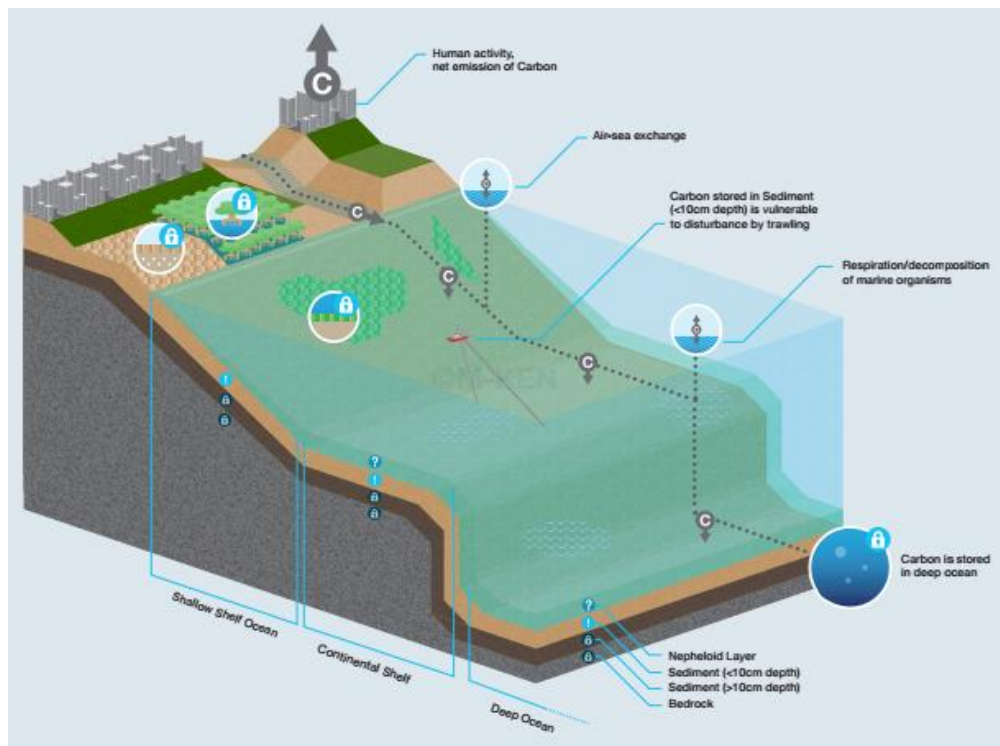
Knowledge Transfer: The term for the overall process of moving knowledge between knowledge sources to the potential users of knowledge. Knowledge Transfer consists of a range of activities which aim to capture, organise, assess and transmit knowledge, skills and competence from those who generate them to those who will utilise them (COLUMBUS, 2015)

...so how do we define Knowledge?

What is the Knowledge Output Table?

Short Title	Knowledge Output Description	Knowledge Type	Contact Information	Link to Knowledge Output	Sectors & Subsectors	End User	Potential Application	IPR Protection
<p>Please provide a short and concise title to describe the Knowledge Output.</p> <p>Please only include generated Knowledge Outputs, not those that are expected. Note: Knowledge Outputs can be non-deliverables, milestones or 'grey knowledge'. Also, multiple Knowledge Outputs could exist within one deliverable, and should be separated.</p>	<p>Try to give a comprehensive description, making the Knowledge Output fully understandable to a non-expert.</p> <p>If relevant please provide detail of where the Knowledge Output differs from its equivalent, e.g. 'What are the key characteristics of the Knowledge Output? What research is it adding to and what is innovative about the Knowledge Output?' (Max 500 characters).</p>	<p>DROPDOWN MENU - Please choose one option. If data or other is chosen please provide detail in Column P..</p>	<p>Please provide contact details of the most relevant person to provide further information, if required, on the Knowledge Output.</p> <p>Please indicate if the beneficiary/owner of the</p>	<p>If you can provide a link to the Knowledge Output then please do so, e.g. digital object identifier (DOI), web address, download, research paper.</p> <p>If the Knowledge Output is</p>	<p>DROPDOWN MENU - Choose as many options as required from the dropdown list. Pick those sectors that you think would benefit from the application of this Knowledge Output.</p>	<p>DROPDOWN MENU - Choose as many options as required from the dropdown list.</p> <p>There can be more than one type of End User, e.g. Industry, Scientific Community, Policy Makers, Environmental Managers, Education, Other.</p>	<p>Per identified End User, please identify possible applications of the Knowledge Output.</p> <p>For each application chosen, please use a separate row.</p>	<p>Please indicate whether IPR has been applied to this Knowledge Output (applied for a patent, copyright etc), or not.</p> <p>Please insert "n/a" if no IPR has been applied.</p>
Status	End User Description	Potential Impact	Project Exploitation	Notes				
<p>Please identify whether the Knowledge Output is finalized, is still being generated or whose status/future is unknown. Consider:</p> <ul style="list-style-type: none"> • Is your knowledge conclusive enough that it provides sufficient evidence to make an impact on, or be applied by, an End User? • Is there a corroborating body of evidence, or are contradictory results, available? • Does your knowledge progress beyond the current state-of-the-art / evidence base? • Is more research or demonstration needed to validate the results? <p>If the Knowledge Output is:</p> <ul style="list-style-type: none"> -Technology based, please indicate TRL level (1-9) -Able to inform evidence-based policy, please indicate whether further validation/contextualisation would be required. -relevant to the scientific community, please indicate 	<p>Try to be as specific as possible, for example for 'Policy Makers' indicate the exact type and level also, e.g. European Commission - DG Research & Innovation / Directorate E (Health) / E1 Strategy.</p>	<p>Please provide details of the potential resulting impact this Knowledge Output could have if it were transferred to the End User.</p>	<p>In this field, indicate any dissemination / transfer activities that are planned for or have been undertaken to reach your identified End User.</p> <p>Please also indicate any impact that was achieved.</p> <p>Planned events are of particular interest because we need to ensure that there is no overlap between what the project intends to do and what COLUMBUS can offer in terms of Knowledge Transfer activities.</p> <p>Examples of such activities are: publications, events and networking, collaborative research / researcher mobility, consultancy / training courses, licensing, new business / spin-offs, etc</p> <p>Please include web addresses, reference material, project reports so further investigation can be carried out.</p>	<p>Any extra information which you deem relevant but is not included in other fields.</p> <p>This can include confidential information which shouldn't be made public but would be useful for step 2 analysis.</p>				

Marine Knowledge Exchange Network

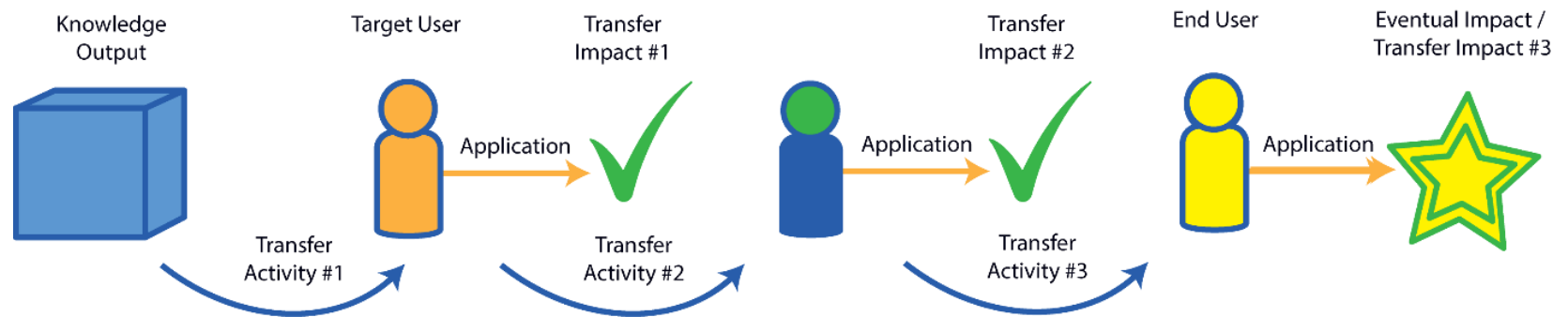


- Blue carbon complexity in budgeting: for scientists and economists
- Numerous meetings translating terminology and identifying common understanding
- Visualisation of concepts for publication, and wider use

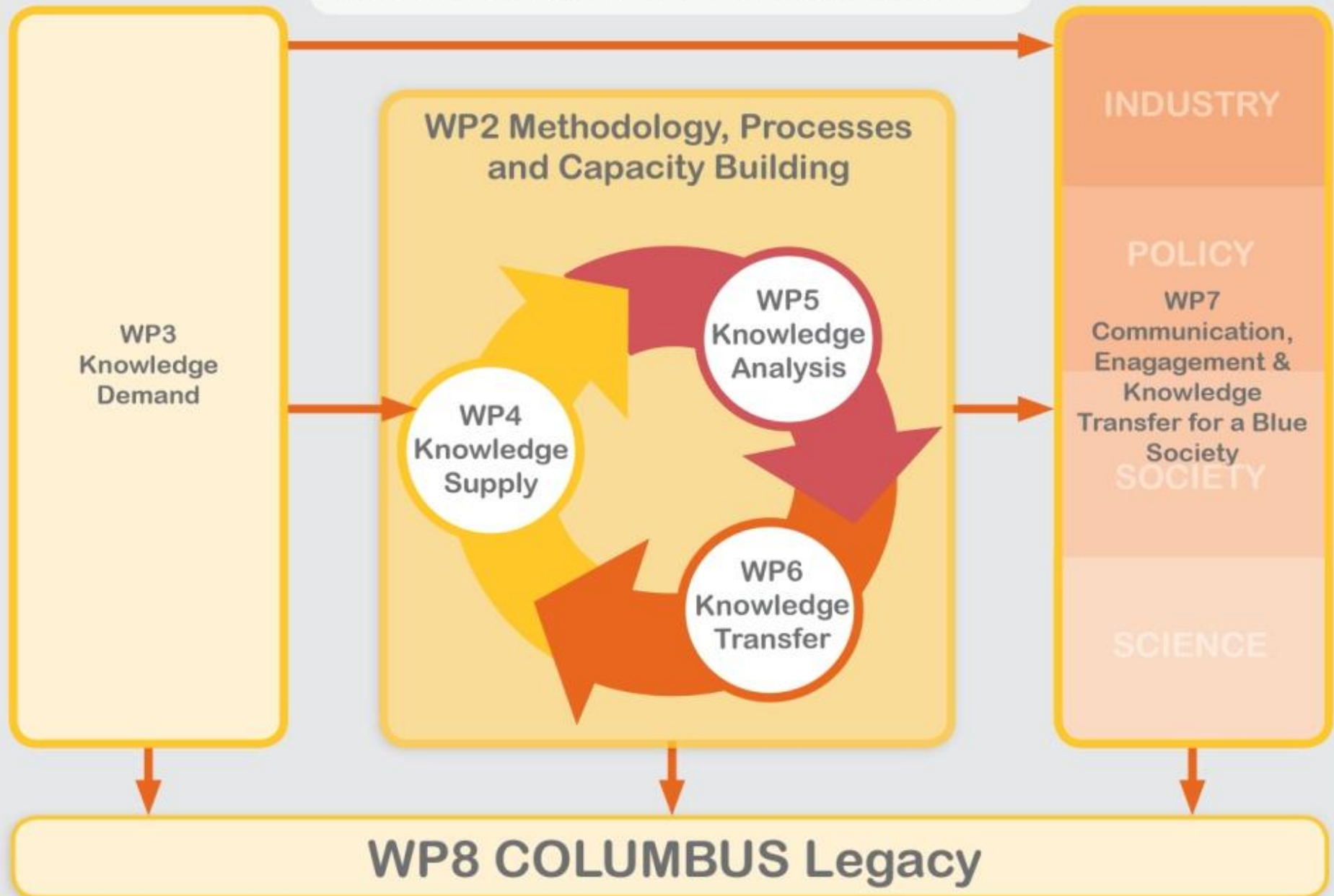
Marine Knowledge Exchange Network



- Understanding needs from businesses and communities impacted by December 2013 storm surge
- Informed meeting with UK Parliament and has led to funding targeted towards a focused-research institute being formed in the region



WP1 Coordination & Project Management



WP1 Coordination & Project Management

1. Collect Knowledge (WP4)

Identify projects based on knowledge needs

Desk-based study

Validated by Coordinator

Populate the Marine Knowledge Gate

2. Assess Knowledge (WP5)

Mapping of Landscape, Actors and Value chains

Define Eventual Impact

Create Knowledge Output Pathways

3. Profile Target User (WP5)

Attitudes
Beliefs

Preferences

Identity and role

4. Develop KT Plan (WP6)

Message

Channel

Timing

Design

5. Transfer & Measure (WP6)

Exploitation, Partners

Evidence for impact

Methodology development

WP8 COLUMBUS Legacy

Targeting excellence

- Optimise the research system to achieve its intended impacts
- Examine and improve existing systems and processes
- Influence research culture
- Iterate and share knowledge to perfect this design

A Consortium for Impact

- EC's largest investment to date in Knowledge Transfer
- Tested Knowledge Transfer Methodology and existing knowledge database (Marine Knowledge Gate)
- A network of 26 organisations
- Nine focus areas, or “Competence Nodes”, each led by a full-time Knowledge Fellow



**MONITORING
& OBSERVATION**



**MARINE
PHYSICAL
RESOURCES**

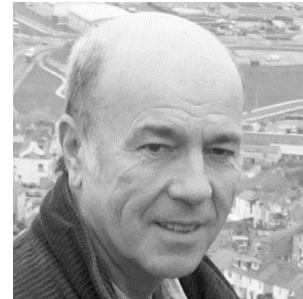


**MARINE
BIOLOGICAL
RESOURCES**



**MARINE
ENVIRONMENT**

**MARINE TRANSPORT & FUTURES
& LOGISTICS**



MARINE TOURISM



**MARINE
GOVERNANCE
& MANAGEMENT**



FISHERIES



AQUACULTURE

Any Questions?

Thank you for your time

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