SEA TECH WEEK BREST-FRANCE

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INTERNATIONAL MARINE SCIENCE & TECHNOLOGY WEEK | MARINE OBSERVATION : FROM SEABED TO SPACE

What trends and needs in marine training do we foresee?

Lucía Fraga Lago,

CETMAR
CENTRO TECNOLÓGICO DEL MAR

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CONSORTIUM

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2. Asociación de Industriales Metalúrgicos de Galicia (ASIME)
3. CT Ingenieros AAI SL (CT Ingenieros)
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12. COSNAV Engineering SRL (COSNAV Engineering)
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15. The Centre for Research and Technology-Hellas (CERTH)
16. Consellería de Cultura, Educación e Ordenación Universitaria da Xunta de Galicia (Xunta)
17. University of Strathclyde, Department of Naval Architecture, Ocean and Marine Engineering (NAOME)

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AT A GLANCE

PROGRAMME: ERASMUS+

INSTRUMENT: Sector Skills Alliances (SSA)

TOTAL BUDGET: €4.9 million

DURATION: January 2018 – December 2021 (48 months)

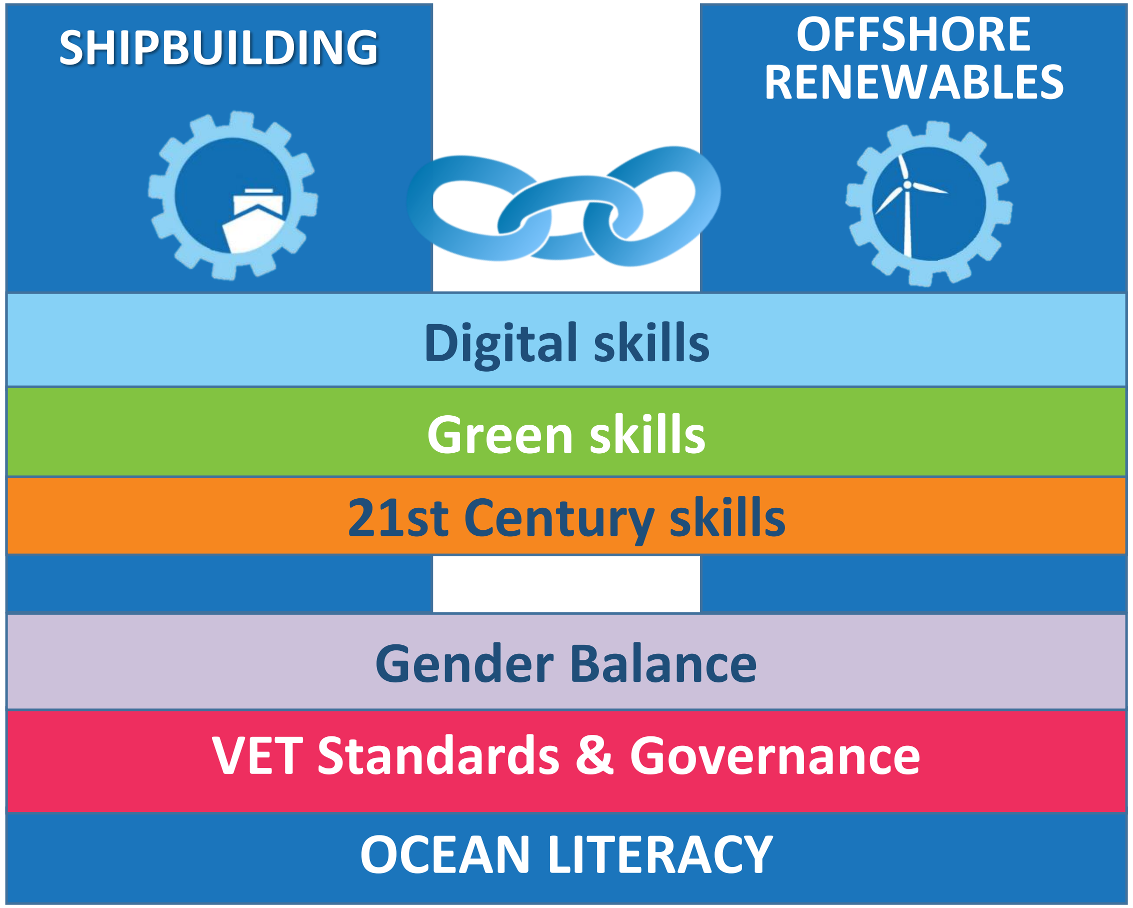
COORDINATOR: Centro Tecnológico del Mar (Fundación CETMAR), Spain

CONSORTIUM: 17 partners from eight countries

182 experts and stakeholders involved

A Skills Strategy for the future Maritime Technologies

OBJECTIVE: Match demand and supply of skills



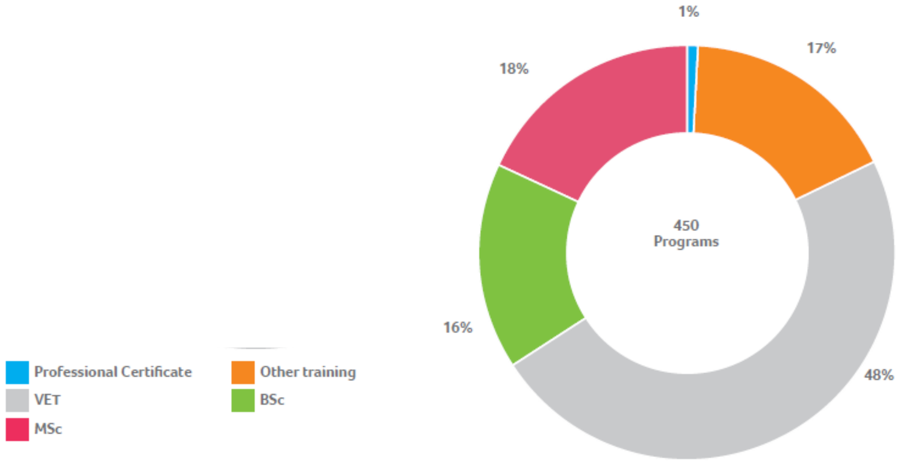
STRATEGY & ACTION PLAN

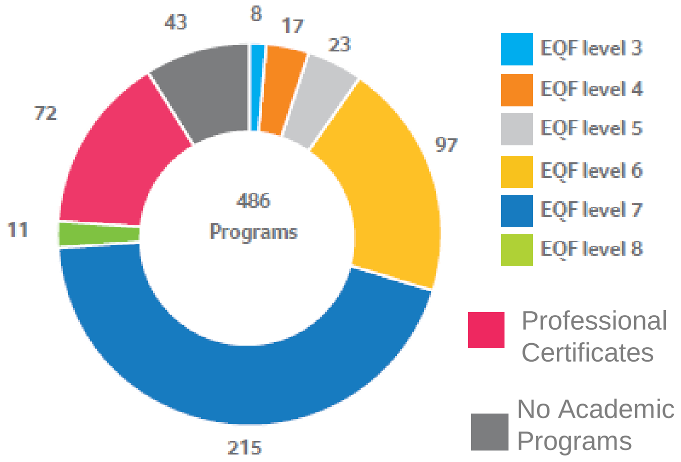
- **Skills intelligence** to great align educational opportunities and labour market by closing present and future skills gaps: **22 proposed Action Lines**
- **Validate actions and priorities** suggested by the skills strategy through **11 pilot case studies** involving both education providers and industry
- **Increase the attractiveness of maritime careers** through awareness raising
- **Widen perceptions of Ocean Literacy** initiatives with an industrial perspective

Some results on current skills gaps

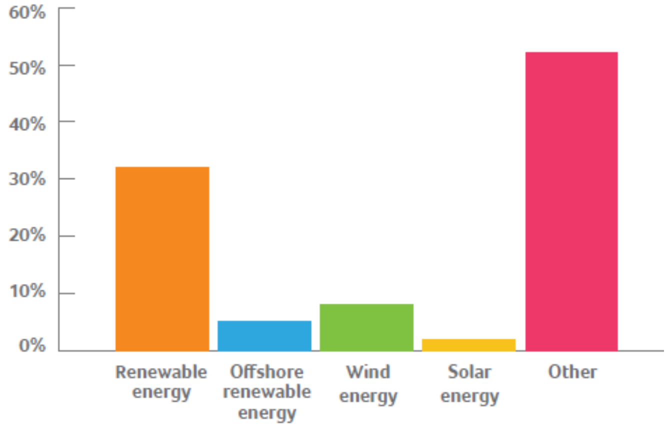
More than 450 E&T programs reviewed (2018-2019) analyzed all EQF levels

Distribution per EQF level





Sub-sectors addressed by E&T programs



- **Few programs directly target the shipbuilding** industry
- **VET programs** addressing 1st phases of specialization
- Only **17% in English** or bilingual (HE)

- Only **5%** programs **directly address offshore renewable energies**
- **44% are Master Degree programs**
- About **50%** programs are **offered in English or are bilingual.**

Future scenarios: Delphi, 83 experts

Agreement on the impact in jobs
> 60% (orange) > 70% (red)

% Agreement becoming mainstream

Shipbuilding 2019 – 2025 – 2030	OCUPATIONS Emerging	On the job training / Life Long Learning
Vessel Automation (> 70%)	Robotics	Webinars+ on the job training
Digitalisation (> 70%)	Automation Ciber security, Big data	Blended apprenticeships – mobility MOOC
Alternative fuels (> 60%)	Energy Management Alternative Fuels Innovation management	Webinars+ on the job training Blended apprenticeships – mobility
Offshore Renewable Energy		**On the job training + other training providers**
Smart grid, Sensors (> 70%)	Big Data Analyst Sensors (engineer, technician)	Webinars+ on the job training Training programs + Industry placements Higher education courses On-line courses
Big data (> 60%)	Big Data systems (developer, engineer)	Webinars+ on the job training Blended apprenticeships – mobility Higher education courses On-line courses

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Priorities were identified for each sector and ranked during a consultation process with more than 50 experts.

- 5 criteria used for the classification:
  - **Sector relevance**
  - **Political relevance**
  - **Urgency**
  - **Impact on employability**
  - **Attractiveness**

Shipbuilding:
10 lines of action
10 Pilot Experiences

ORE:
12 lines of action
9 Pilot Experiences

Lessons Learnt and Further Insights

Maritime Industry needs	New capabilities and skills Specialized training offer directly adapted to the sector
Lack of educational offer addressing specifically offshore renewable energies	**Need for mechanisms to facilitate the completion of training pathways:** - Modular trainings, Access to other sector trainings - Ad hoc training offer
The industrial maritime sectors need to attract talent	**Raising the level of ocean literacy could contribute to reverse this trend**
Skills needs are constantly evolving, and the rhythm accelerates	**Skills ecosystems:** meeting points for the most relevant stakeholders from industry, academia and research **Transversal skills:** increasing importance **Adaptation to remote learning** (on-line or blended)

Collection of information related to VET education levels

Language barriers for the analysis of T&E offer

Pilot Experience: DOP

Definition of New Occupational Profiles

Identification of skills and knowledge essential and optional for each Occupation, Following ESCO taxonomy (European Skills/Competences, qualifications and Occupations database)

- Skills and knowledge relevant to each future trend are identified and associated to the most affected occupations.
- Transversal skills and knowledge are addressed.
- Ocean literacy and ocean literacy principles are proposed for inclusion in the ESCO database, as relevant to all marine occupations.
- A pool of experts is involved in the process

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Coming soon (November 2020) : Webinar to present first results and gather experts inputs.
If you are interested in receiving more information, please contact us at mates@cetmar.org

Pilot Experience: MOL² - Galicia

Secondary school community

Non formal training contexts to interest youngsters in **maritime technologies**.
Ocean literacy as a hook to attract them to maritime careers.

V REGATA SOLAR
marine instruments 2020

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marine instruments

- Training offer addresses participants in the contest: students and teachers
- Workshops to **improve team working, design and development of radio-controlled maritime vehicles**
- **Take into account the ocean influence and your influence in the ocean.**
- Training abstracts spread in videos, as "training pills". Presentation video.

Thank You

Contact Details:

Lucía Fraga, Rosa Fernandez, Amaya Soto, Susana Bastón

CETMAR, mates@cetmar.org

+ Info on the REPORT

Contributors

Lefteris Sdokopoulos, George Tsafonias, Lila Perra, CERTH-HIT

Ioannis Ergas, George Smirnakis, WEGEMT

Olivia Daly, AQUA TT

www.projectmates.eu info@projectmates.eu @ErasmusMATES

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