Interreg Atlantic Area
European Regional Development Fund

EUROPEAN UNION

IN 4.0

IN 4.0

ADAPTATION OF INDUSTRY 4.0 MODEL TO THE NAVAL SECTOR

DEPUTACIÓN PONTEVEDRA

bpn

CIT CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

FORUM OCEANO

ACLUNAGA ASOCIACIÓN CLÚSTER DEL NAVAL GALLEGO

University of Strathclyde Glasgow

EMC2

asime
Asociación de Industriales Metalúrgicos de Cádiz

HSSM
HIGH-SPEED SUSTAINABLE MANUFACTURING INSTITUTE

Meet & greet Project Partners

IN 4.0 ADAPTATION OF INDUSTRY 4.0 MODEL TO THE NAVAL SECTOR

Interreg Atlantic Area
European Regional Development Fund

2nd Steering Committee Meeting
29 June 2018
Leçã da Palmeira

AGENDA

DATE: 29 June 2018
Start time: 9:00h
Venue: Fórum Oceano (UPTEC- Pólo do Mar)

09:00 Meet & Greet Project Partners
09:30 Approval of previous SC meeting minutes
09:45 Review of the Atlantic Area Programme management rules.
11:45 Coffee Break
12:00 1st Progress Report and the AA online Platform (SIGI)
13:00 Lunch Break
14:30 Review of the work plan: executed and due activities
16:30 Modifications
16:45 Decision on the next SC meeting
16:50 Questions and other issues
17:00 End of meeting

PARTNER	ATTENDEES
1. Diputación Provincial de Pontevedra (DEPO)	Benjamín López
	Maruxa Fernández
	Ana Aurora Villalba
2. Bretagne Pôle Naval (BPN)	Anne-Marie Cuesta
	Jean-Marc Messié
	Jacques Dubost
3. Cork Institute of Technology (CIT)	John Hobbs
4. Fórum Oceano – Associação da Economia do Mar	Frederico Ferreira
	Rui Azevedo
	Liliana Gonçalves
	Sofía Maciel
5. Asociación Cluster del Naval Gallego (ACLUNAGA)	Miguel Hidalgo
	Oscar Gómez Díaz
	Marta Chouza Diaz
6. University of Strathclyde	Luminita Manuela Bujorianu
7. Foro Marítimo Vasco (FMV)	Marimar Sánchez
	Oscar Valdecantos
8. Pôle de compétitivité EMC2 (EMC2)	Coline FIQUET
9. Asociacion de Industriales Metalúrgicos de Galicia (ASIME)	Pablo Fidalgo
10. High Speed Sustainable Manufacturing Institute Ltd (HSSMI)	Brais Carballedo

Approval of the previous meeting minutes

ADAPTATION OF INDUSTRY 4.0 MODEL TO THE NAVAL SECTOR

1st KICK OFF MEETING

Date: 20 November 2017
Start time: 16:00h
Location: Diputación de Pontevedra (Vigo branch)

AGENDA

- Welcome and attendees' presentations
- Short review of the objectives and main activities of the Project.
- Management structures of the IN4.0 Project: Creation of the steering committee and basic rules of its functioning.
- Review of the Atlantic Area Programme management basic rules.
- Review of partners responsibilities regarding the Project activities execution.
- Update of the Project execution schedule and programming of the activities execution during the last trimester of 2017.
- Questions and answers

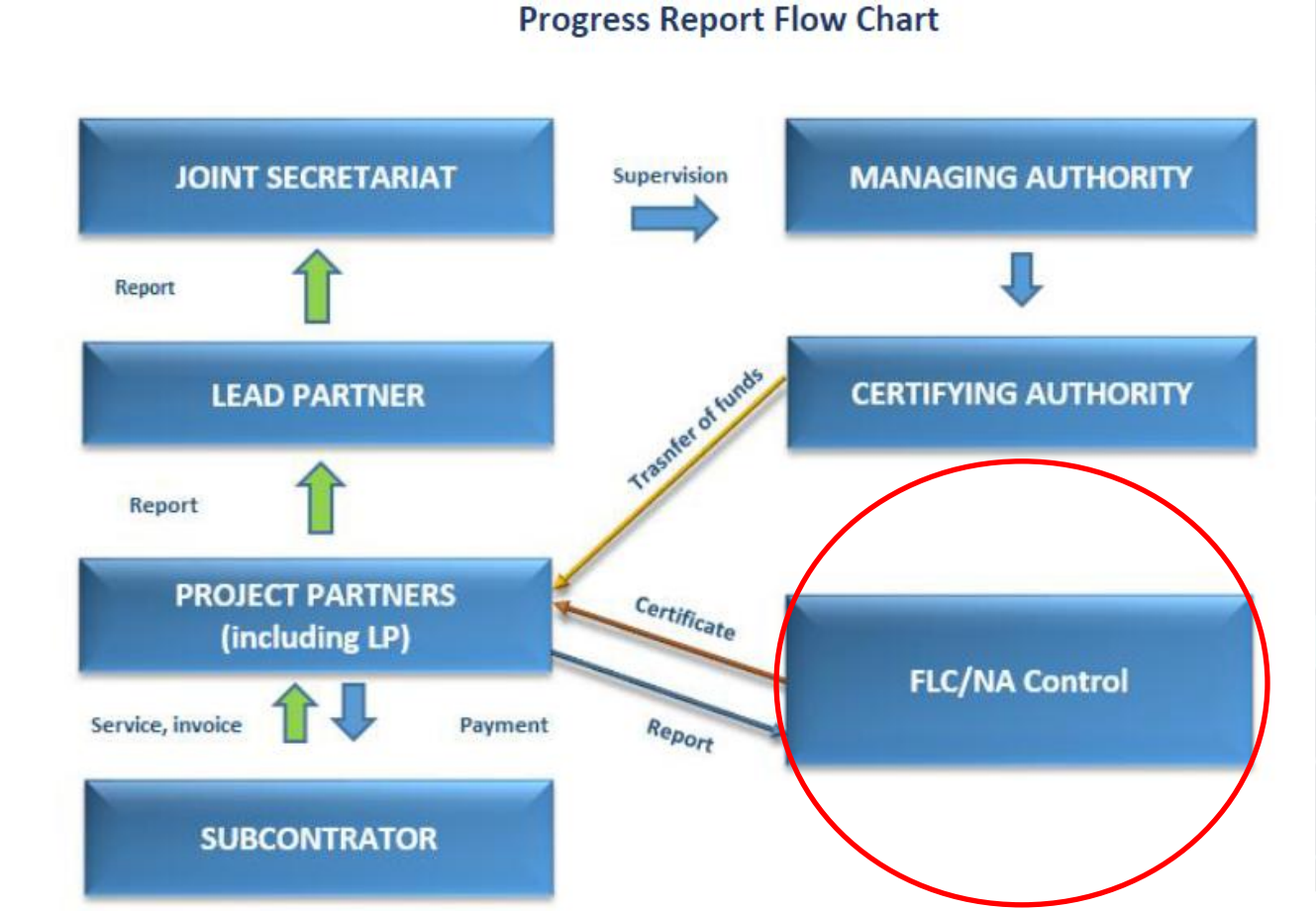
Review of the Atlantic Area Programme management basic rules

1. PROGRESS REPORTS AND PAYMENT CLAIMS

	SIGI	
1st Project Report 2018	**Opening**	**Closure**
	12 March	11 May (Actual: ????)
	This period includes following steps: 1. Progress Report submission from each partner 2. FLC/NA control of expenditures 3. Progress Report consolidation from the Lead Partner and submission	
	Atlantic Area assessment and payments	
	1. JS/MA assessment: 35 working days 2. Certifying Authority payment to partners: Maximum 90 days*	
	1. JS/MA assessment: 35 working days 2. Certifying Authority payment to partners: Maximum 90 days*	

	SIGI	
2nd Project Report 2018	**Opening**	**Closure**
	After 1st Project Report submission	October 2018
	This period includes following steps: 1. Progress Report submission from each partner 2. FLC/NA control of expenditures 3. Progress Report consolidation from the Lead Partner	
	Atlantic Area assessment and payments	
	3. JS/MA assessment: 35 working days 4. Certifying Authority payment to partners: Maximum 90 days*	

1. PROGRESS REPORTS AND PAYMENT CLAIMS



2. EXPENDITURE CONTROL SYSTEM

First level control system

Centralised (Ireland)	Decentralised (France, Portugal, Spain, United Kingdom)
Appointed by the MS	Short list/chosen by partner and approved by approbation body

Second level control system

Country	National Authority
France	Préfecture de la région Pays de la Loire
Ireland	Northern & Western Regional Assembly
Portugal	Agência para o Desenvolvimento e Coesão, I.P
Spain	Ministerio de Hacienda y Función Pública
United Kingdom	Ministry of Housing, Communities & Local Government

External evaluation of the Project

- Two project external evaluation reports are compulsory (end of 2018, end of the project)

- ASIME is in charge of this activity

Specific objectives 1.1 and 1.2 - Output indicators

Indicator	Unit
Number of enterprises receiving support	Number
Number of enterprises supported to introduce new to the market products	Number
Number of enterprises supported to introduce new to the firm products	Number
Number of enterprises participating in cross-border, transnational or interregional research projects	Number
Number of research institutions participating in cross-border, transnational or interregional research projects	Number
Number of case studies and pilot actions implemented	Number
Number of technical and scientific publications produced	Number
Number of policy, strategy and operational instruments produced	Number
Number of actions for the dissemination and capitalisation of results	Number
Number of participants in actions for the dissemination and capitalisation of results	Number

3. ELIGIBILITY REQUIREMENTS: Eligible costs

- **Trips outside the elegible area**
  - **Expenditure outside the elegible area:**
    - Minor trips to Madrid, London, Paris, etc. are acceptable as long as they are correctLy included in the work plan when modifications are allowed.
    - Trips outside the elegible area are not accepted unless they are foreseen in the project proposal. There are none in the IN 4.0 Project
  - **If you are not sure, ask the Lead Partner**

Eligibility of costs manuals

4. ELIGIBILITY REQUIREMENTS: Hierarchy of rules

There are different levels of eligibility rules for expenditure

1. The **European level**: EU regulations
2. The **Programme level:** specific rules decided for the Atlantic Area Programme;
3. The **national level**: national rules applicable in each Member State;
4. The **partner institutional level**: internal rules applicable to each partner organization.

The stricter rule prevails if there are differences between rules at different levels.

4. ELIGIBILITY REQUIREMENTS: Eligible costs

- **Related to activities** and be **included in the estimated budget** set out in the application form and subsequent revisions;
- **Necessary for carrying out the activities** and for achieving the project **objectives**;
- Related to **items that did not receive support from other EU Funds** or other contributions from third parties;
- **Reasonable, justified, consistent** with the applicable rules of the partner, the Programme, national/regional and the EU rules, and be in accordance with the principles of sound financial management;
- **Not in contradiction with any specific eligibility criterion** applicable to the respective budget line;
- In line with the relevant **public procurement rules**;
- **Incurred and paid by the beneficiary concerned in the period** between the project start and end date, as defined in the approved application form and subsequent revisions;
- **Identifiable, verifiable, plausible and determined** in accordance with the relevant established accounting principles;
- Supported with **sufficient evidence** to allow identification and checking;
- **Registered in a separate project specific account** or identified using an adequate accounting code set in place specifically for the project;
- **Validated by an authorized national controller**.

4. ELIGIBILITY REQUIREMENTS: Non elegible costs

- **In kind contributions** not meeting requirements defined in Article 69(1) of regulation (EU) No. 1303/2013;
- **Fines**, financial penalties and expenditure on legal disputes and litigation;
- **Costs of gifts** are not eligible, promotion, merchandising, communication, publicity or information items are not considered gifts;
- **Alcoholic beverages** other than those served at project meals and receptions;
- Costs arising from **fluctuation in foreign exchange rate**;
- **Interest on debt**;
- **Purchase of land in excess of 10% or 15%** (In accordance with Art. 69(3)(b) of the Common Provisions Regulation;
- **Recoverable VAT**;
- **Shared costs;**
- Charges for **national financial transactions;**
- **Discounts** not considered when claiming the costs (only the discounted amount is to be regarded as eligible);
- **Fees between beneficiaries** of a same project for services, equipment and work carried out within the project;
- **Any other** cost not eligible according to general provisions on eligibility (as well as specific provisions at budget line level).

4. ELIGIBILITY REQUIREMENTS: Audit trail

AUDIT TRAIL

Guaranteeing the audit trail means **having the necessary information to satisfy the information requirements** that the Managing Authority may make, relating to the fulfilment of the regulations in force.

Advices on this:

- **Each beneficiary must keep a separate accounting systems**.
- **Only the actual expenses can be entered in the books**.
- **Only the expenses with original bills** or equivalent provable accounting document can be declared.
- **The documents must be kept until three years past the closing time of the Operative Programme**.

FIRST LEVEL CONTROLLER

Each partner has to contract an **external auditor** in order to carry out the expenditures control declared in each implementation report and payment claim.

The **National Correspondent** appointed by the Atlantic Area Programme in each country has to validate:

1. The contracted first level controller
2. The expenses declared in each implementation report and payment claim

Staff costs

✓ Partners must choose one of the two following methods:

a) Flat rate: calculated as 20% of the direct eligible costs of the total project budget excluding staff costs. No supporting documents will be required when this method is chosen;

b) Direct costs: based on real and project related staff expenditure. This option will require supporting documentation according to the following tables

Calculation	Working hours	Audit Trail
1. Full Time Assignment		
100% of working time allocated to the project	No obligation regarding the use of time sheets	1. Employment/work contract or an appointment decision/contract considered as an employment document demonstrating that the person is exclusively working FT on the project; 2. Job description providing information on responsibilities related to the project; 3. Payslips or other documents of equivalent probative value; 4. Proof of payment of salaries and the employers contribution as well as pension contributions; 5. Evidence of pay scales applicable to the post within the organisation.

2. Part Time Assignment		
2.1 With a fixed monthly percentage of time worked on the project		
The percentage fixed in the employment/work contract or other equivalent document is multiplied by the monthly gross employment costs of the employee.	Time sheets signed by the employee and supervisor indicating the hours worked for the project and the related tasks on a daily basis. Exception: No need to provide timesheets if part time hours are fixed and contracted. The time registration system must cover 100% of the working time of the employee.	1. Employment/work contract or an appointment decision/contract considered as an employment document as well as the hourly rate; 2. Authorised salary scales for the post within the organisation; 3. Document setting out the % of time to be worked on the project per month (if not specified in the contract); 4. Job description providing information on responsibilities related to the project (can be included in the employment/work contract); 5. Payslips or other documents of equivalent probative value; 6. Proof of payment of salaries and the employer's contribution and pension contribution.
2.2 With a flexible hourly basis		
The employee's hourly rate as indicated in the employment contract is multiplied by the number of hours worked in the project.	Timesheets signed by the Employee are required and must cover 100% of the hours worked by the employee (including the working time not related to the project).	1. Employment/work contract or an appointment decision/contract considered as an employment document as well as the hourly rate; 2. Document setting out the % of time to be worked on the project per month (if not specified in the contract); 3. Job description providing information on responsibilities related to the project (can be included in the employment/work contract); 4. Payslips or other documents of equivalent probative value; 5. Proof of payment of salaries, the employers and pension contribution as well as authorised salary scales for the post within the organisation.

TYPE OF COSTS	JUSTIFICATION DOCUMENTS
OFFICE AND ADMINISTRATIVE EXPENDITURE	Not necessary
TRAVEL AND ACCOMODATION	✓ **Agenda** or similar document (e.g. report) of the meeting/seminar/conference, participants list and sign in sheets or registration to the conference/event, if applicable; ✓ **Travel documents** proving that the journey actually took place (for example, boarding passes or rail tickets, etc.); ✓ **Paid invoices** (e.g. hotel bills, travel tickets) ✓ **Daily allowance claims** (if applicable), including proof of reimbursement by the employer to the employee; ✓ **Proof of approved travel rates** and thresholds applicable to the organisation.
EXTERNAL EXPERTISE AND SERVICES	✓ Evidence of the **selection process**, in line with EU, national and internal procurement rules or the EU public procurement rules depending on the amount contracted; ✓ A **contract** or a written agreement laying down the services to be provided with a clear reference to the project ✓ An **invoice** or a request for reimbursement providing all relevant information and supporting evidence in line with the contract/agreement and applicable accountancy rules; ✓ **Outputs** of the work of external experts or service deliverables; ✓ **Proof of payment.**

TYPE OF COSTS	JUSTIFICATION DOCUMENTS
EQUIPMENT	✓ Evidence of the **procurement process** (announcement, selection, award) in line with the national procurement rules or the EU procurement rules depending on the amount of the contract; ✓ **Invoice** (or a supporting document having equivalent probative value to invoices, in case of depreciation) providing all relevant information in line with the applicable accountancy rules; ✓ **Methodology for calculation of depreciation**; ✓ **Proof of payment**; ✓ A reliable basis for valuation of second hand equipment; ✓ Sellers' declaration that second hand equipment has not previously been EU funded.
SMALL INFRASTRUCTURES AND CONSTRUCTION WORKS	✓ Evidence of the **procurement process** (announcement, selection, award) in line with the national procurement rules or the EU procurement rules depending on the amount of the contract; ✓ **Documents** pertaining to the work may be required such as **feasibility studies**, **environmental impact assessment and planning permission**; ✓ **Contract** laying down the works/infrastructure to be provided, with clear reference to the project and the Programme. For contracts based on a daily fee, such fee together with the number of days contracted and the total amount of the contract must be provided; ✓ **Invoice** providing all relevant information in line with the contract/agreement and applicable accountancy rules; ✓ **Proof of payment and delivery;** ✓ **Proof of ownership of the property.**

4. LEAD PARTNER AND PARTNERS' OBLIGATIONS

- **Subsidy contract:**
  - It is a contract between the Lead Partner and the AA Managing Authority which stipulates the rights and duties of the Lead Partner, as well as of the programme bodies and other organisations involved in the implementation of the programme (e.g. MA, JS, Partners, FLC, National Authorities, etc.).
  - **It regulates reporting obligations and procedures, conditions for project changes, obligations and rights related to information and communication activities, provisions on financial controls and audits of the project, use and ownership of project results or liabilities of the Lead Partner**

Deadlines and means of reporting are set up by the AA Programme. Failing to comply whit deadlines and means of reporting implies risks for partners

SIGI (the online platform) is currently the compulsory means of reporting

5. RISKS OF FAILING TO COMPLY WITH THE AA PROGRAMME'S RULES

- **Project penalties**
  - Taking into account the need of the programme to generate impact in the Atlantic Area to be measured through the programme results indicators, and the need to avoid the release of funds by projects, stricter rules will apply **that foresee penalties for delays in the submission of financial claims and reports. Provisions for such penalties will be laid down in the Subsidy Contract.**
  - Experience shows that project spending is delayed in the first months and that an underspending of 10% can be considered within normal parameters. **Projects whose implementation phase is half-way and their underspending equals or exceeds 30% compared to the spending plan in the Subsidy Contract, may be penalized**. This will be done through a de-commitment specifically applied to the project resulting in adjustment of project budget.
  - The decommitment penalty decision - will be based on an assessment of the project's spending plan as set in the Subsidy Contract and the actual project spending rate.

Expenditure is validated against executed activity, produced results and outputs (meeting minutes, result reports, dissemination materials, event programmes, interventions, etc...), so executed activity must be described in the Progress Report and outputs must be uploaded to SIGI

5. RISKS OF FAILING TO COMPLY WITH THE AA PROGRAMME'S RULES

USE OF LOGO AND PROJECT/PROGRAMME BRAND IDENTITY

- To ensure the visibility of the programme, the **project logo and the Interreg Atlantic Area logo shall be used in all documents addressed to the events participants** (e.g. agendas, list of participants, presentations, exhibition stands, advertising, Websites, etc.).

- **Projects are encouraged to place the EU flag in the meeting rooms of all events.**

- **Poster A3**: Each project beneficiary must display a poster (minimum size A3) at a location readily visible to the public, such as the entrance area of a building. It should contain information about the project and the Interreg Atlantic Area logo. The poster must remain visible for the whole duration of the project.. (To develop by Lead Partner together with the Website, Logo, etc.)

Risks of not using the programme or project logos and identity: the AA Programme may not recognise the activity in progress as a part of the project, and could refuse to finance it.

6. DISSEMINATION OBLIGATIONS. THE IN 4.0 PROJECT LOGO

USE OF LOGO AND PROJECT/PROGRAMME BRAND IDENTITY

- To ensure the visibility of the Programme, **the project logo and the Interreg Atlantic Area logo shall be used** in all documents addressed to the events participants (e.g. agendas, list of participants, presentations, exhibition stands, advertising, Websites, etc.).

- Projects are encouraged to place the **EU flag in the meeting rooms of all events.**

- **Project poster**: Each project beneficiary must display a poster (minimum size A3) at a location readily visible to the public, such as the entrance area of a building. It should contain information about the project and the Interreg Atlantic Area logo. The poster must remain visible for the whole duration of the project..

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Brand identity manual

6. PUBLIC PROCUREMENT

PUBLIC PROCUREMENT - Audit trail

- Terms of reference (sufficiently specified, including clear information to candidates on award and weighting criteria);
- Request for offers or procurement publication/notice;
- Offers/quotes received;
- Report on assessment bids (evaluation/selection report) including:
    - Justification for the procedure chosen in the light of the identified needs;
    - Evaluation of the offers in the light of the previously announced award and weighting criteria;
    - Letters of acceptance and rejection
- Contract, including any amendments and/or renewals (with evidence that these did not modify the economy on the market and that there was no modification of the object of the initial contract);
- Evidence that the payments made match the contract (invoices and proof of payment);
- Proof of delivery of goods or services.

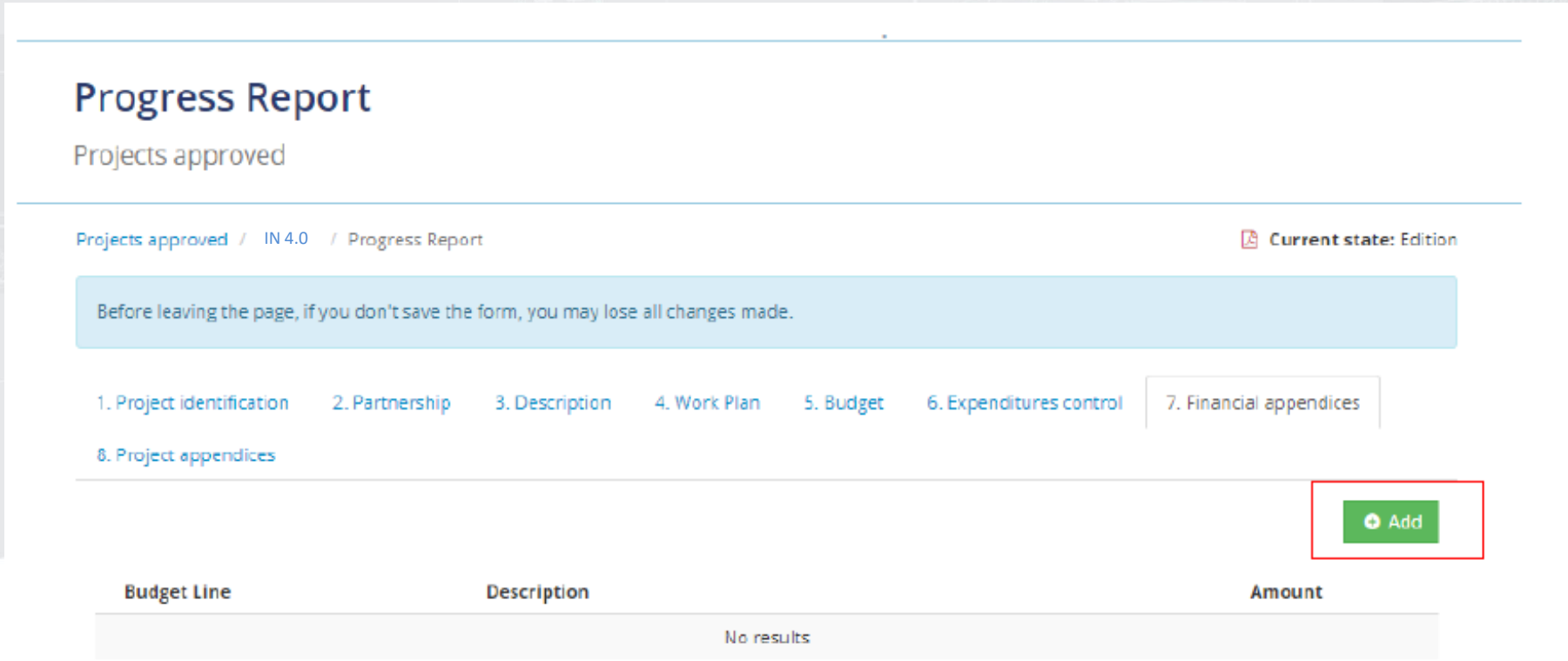
Progress Report and the AA online platform (SIGI)

1. SIGI- THE AA ONLINE PLATFORM

Every partner has their own user and password. The Lead partner cannot edit or build up partners' PR.

1. UPLOADING EXPENDITURE DOCUMENTS TO SIGI

- The platform will remain open in between PR & payment claim periods for partners to upload their expenditure documents
- Payment claims are always attached to the PR (description of activities). Every 6 months
- Expenditure documents are uploaded to the Financial appendices tab



Financial appendice

Invoice number *
0001

Date of issue *
2018-02-05

Payment Date *
2018-03-20

Description *
NEWSLETTER EXTERNAL EXPERTICE

Attachment *
Newsletter audit docs.zip

Type *
Invoices, receipts, payment orders and other

Budget Line *
EXTERNAL EXPERTISE AND SERVIC
Remaining: 167.800,00 €

Year *
2018
Remaining: 124.950,00 €

Eligible Value distribution by work package

WP 0: Preparation	0,00 €	Remaining: 800,00 €
WP 1: Coordination	0,00 €	Remaining: 41.340,00 €
WP 2: Communication	1.200,00 €	Remaining: 14.660,00 €

WP 4: Analysis and study of the evolution of the cities through their MMI heritage.	0,00 € Remaining: 23.745,00 €
WP 5: Elaboration of the director and management plan of the MMI heritage of the coastal edge of the AA	0,00 € Remaining: 12.070,00 €
WP 6: Implementation of alternative uses and tourist and cultural valorisation of patrimonial elements	0,00 € Remaining: 134.140,00 €
WP 7: Tourist positioning of the MMI heritage of the coastal edge of the AA	0,00 € Remaining: 82.825,00 €

VAT deductible *

120,00 €

VAT declaration *

VAT Declaration.pdf

Outside Programme Area

0,00 €

Remaining: 0,00 €

Total Eligible Value

1.200,00 €

Comment on the VAT

Comment on the VAT

Value (including VAT)

1.320,00 €

Cancel Add

Lessons learned:

•We must **improve at meeting deadlines**
•We must keep in mind that this is a **cooperation project**: an act or instance of working or acting together for a common purpose or benefit; joint action.
•We must not underestimate the risks of failing to comply with the AA Programme requirements and rules
•We must keep in mind that **the AA Programme co-finances executed activities based on evidence**
•We must **keep an eye on the online platform after submitting the PR**, as it will come back to partner, either to introduce modifications or to be sent to the next level of validation (FLC, NA or LP)

Actions that put the project and the partnership at risk:

•Not meeting deadlines set up by the AA Programme
•Taking too long to answer e-mails containing some kind of request by the Lead Partner
•Not reporting problems on time
•Forgetting that communication must also be fluent among all partners in order to come out with satisfactory results and outputs (work groups). Share your ideas, draft outputs, etc. Use e-mail lists.

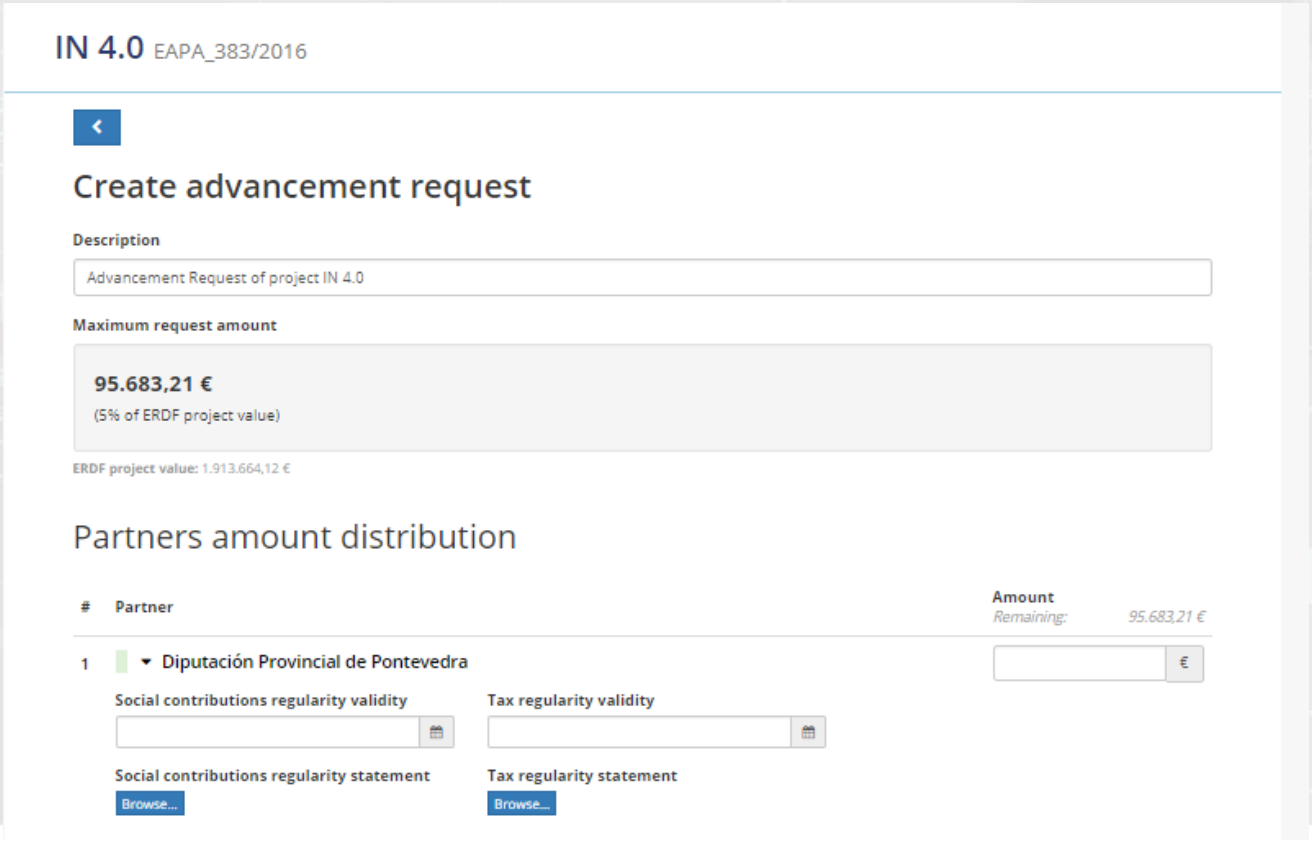
Review of the work plan: executed and due activities

1. PROJECT COORDINATION (Leader: DEPO)

TASK	RESPONSIBLE	OUTPUT
Creation and start-up of the Steering Committee (SC)	All	List of Steering Committee members . A certain degree of continuity is advised (confirm representatives)
Creation of the WP Working Groups	All	List of each working group members (confirm representatives)
General Coordination of the IN4,0 project	DEPO	Project activities monitoring 2017 sent to JS in April (go to slide 35)
		WP0 (no support docs are needed, it is directly reimbursed to partners) 1st PR report and payment claim in progress
		5% advancement claim pending (go to slide 34)
Project external evaluation	ASIME	Contracting of an external evaluation supplier
First level controller	All	Contracting of a FLC validated by the NA **No FLC**: U. STRATH, ASIME FLC must be appointed asap and enabled to access SIGI

1. PROJECT COORDINATION (Leader: DEPO)

5% Advancement claim. Claiming procedure



1. PROJECT COORDINATION (Leader: DEPO)

5% Advancement claim. Current situation.

		Claims 5%	Tax clearance	Social Security clearance
2	BPN	YES	RECEIVED	RECEIVED
3	CIT	NO	N/A	N/A
4	FORUM OCEANO	YES	RECEIVED	RECEIVED
5	ACLUNAGA	YES	RECEIVED	RECEIVED
6	U.Strathclyde	?	?	?
7	FMV	YES	RECEIVED	RECEIVED
8	EMC2	NO	N/A	N/A
9	ASIME	YES	RECEIVED	RECEIVED
10	HSSMI	NO	N/A	N/A

		TOTAL	75% EFRD	5% advancement (of EFRD)
1	Deputación de Pontevedra	367,832.50 €	275,874.38 €	
2	BPN	292,587.20 €	219,440.40 €	**10,972.02 €**
3	CIT	270,693.33 €	203,020.00 €	
4	Fórum Oceano	152,060.83 €	114,045.62 €	**5,702.28 €**
5	Aclunaga	269,198.33 €	201,898.75 €	**10,094.94 €**
6	U.Strathclyde	301,260.83 €	225,945.62 €	11,297.28 €
7	Foro Marítimo Vasco	251,833.33 €	188,875.00 €	**9,443.75 €**
8	EMC2	176,509.13 €	132,381.85 €	
9	Asime	318,743.33 €	239,057.50 €	**11,952.87 €**
10	HSSMI	150,833.33 €	113,125.00 €	
	TOTAL	2,551,552.14 €	1,913,664.10 €	59,463.14 €

1. PROJECT COORDINATION (Leader: DEPO)

Summary report of executed expenditures and activities 2017 claimed by the JS in May

Interreg Atlantic Area European Regional Development Fund

Title	ADAPTATION OF INDUSTRY 4.0 MODEL TO THE NAVAL SECTOR
Acronym	IN4.0
Priority/objective	1. Innovation / 1.1 1.1 Enhancing innovation capacity through cooperation to foster competitiveness IN 4.0 aims to improve the competitiveness of naval sector companies through the adaptation of the traditional productive model towards the Industry 4.0, guaranteeing the sector's endurance in an increasingly demanding market where technological innovation is a key factor of strategic advantage.
Project Nº	EAPA 383/2016
website	www.in40.depo.gal
Project Lead Partner	DIPUTACIÓN PROVINCIAL DE PONTEVEDRA (Spain)
Partnership	2. BPN (Bretagne Pôle Naval) (France)
	3. CIT (Cork Institute of Technology) (Ireland)
	4. Forúm Oceano (Portugal)
	5. Aclunaga (Spain)
	6. University of Strathclyde (UK)
	7. Foro Marítimo Vasco (Spain)
	8. EMC2 (Pôle de Competitivité EMC2) (France)
	9. ASIME (Spain)
	10. High Speed Sustainable Manufacturing Institute ltd. (HSSMI) (UK)
Starting date	01/09/2017
Ending date	30/08/2020
Total eligible budget	2.551.552,14 €
Total ERDF budget	1.913.664,12 €
Global performance until the end of 2017	
1) Implementation Progress- Activities	WP 0 Preparation and costs. Achieved WP 1 Management of the project: 3 actions contemplated has been started, the Steering Committee was celebrated on November the 20th WP 2 Main project communication activities has been started, website has been launched and Launching project event was held on November the 21st WP 4 Works was begun on The review of the Current State Analysis of the implementation of the factory of the future (industry 4.0) in the Atlantic Area's naval sector as well the arrangements for Existence of technologies tailored to the particular needs of naval sector companies
2) Main project achievements - Outputs	1 quarterly meeting celebrated (KoM) 1 Corporate image (logo of the project)

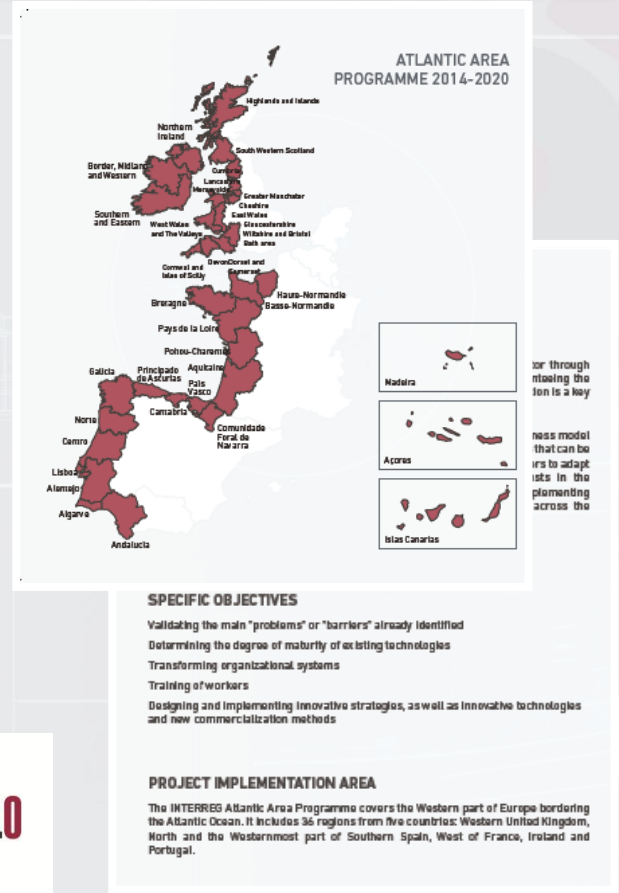
2. PROJECT COMMUNICATION (Leader: DEPO)

TASK	RESPONSIBLE	OUTPUT
Corporate image design, logo elaboration and design of materials	DEPO	1 logo of the IN 4.0 project (delivered) 1 communication pack (delivered) 1 corporate image manual (to be delivered in July) (go to slide 38)
Design and development of the project's website	DEPO / All	Project website: http://www.in40.depo.gal/in4.0 (in progress)
Elaboration and distribution of newsletters	Partners	5 Electronic Newsletters of the project
Creation and management of social network profiles	DEPO / All	Social networks profile in Facebook, Twitter, Instragram and Youtube (in progress)
Celebration of the project's launching event	DEPO / All	1 Launching event (delivered Nov 2017)

Communication pack

Includes:

- Project logo
- Folder
- Leaflet
- Lecturer stand poster
- Plotter
- PPT Template
- Projection transition
- Word Template



Communication pack. Project name

IN 4.0 ADAPTATION OF INDUSTRY 4.0 MODEL TO THE NAVAL SECTOR

-Project identity changes will be allowed
-A common decision need to be made about the Project extended name:

Naval or Maritime??

WORK GROUPS

EMC2

1. IN CONTEXT: This activity is the starting point towards the adaptation to a new productive model 4.0 on the basis of the existing state of the art.

U. Strathclyde

2. IN WORK & IN TRAINING:

Workers' tasks redefinition protocol and Training actions 4.0

CIT

3.IN COMMERCIALIZATION & COSTS:

Identification and development of new commercialization methods in the naval sector, as well as innovative strategies to save costs in the implementation of technologies

FMV

4. IN ADAPTATION: Counseling for the transformation of naval companies into intelligent companies.

WP4. IN CONTEXT (Work Group Leader: EMC2)

This WP is the starting point towards the adaptation to a new productive model, by developing a joint diagnosis of the current situation of the implementation of the industry 4.0 in the naval sector in the Atlantic Area. WP4 will be lead by Pole EMC2 that will coordinate all partners to come out with the following results: -the validation of the existing state of art and needs in the naval industry -the identification of existing technologies in the market, to be tailored to the particular needs of the naval industry -analysis of the degree of maturation of other existing technologies that can be applied to the naval industry -transnational level validation workshop involving all relevant stakeholders

Actions

- Review of the Current State Analysis of the implementation of the factory of the future (industry 4.0) in the Atlantic Area's naval sector
- Existence of technologies tailored to the particular needs of naval sector companies, in each of the paradigms of industry 4,0
- Analysis of the degree of maturation of existing technologies that could be implemented in naval SMEs

		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
		2017				2018											
ACTIVITIES	TIMETABLE	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
4.1. Situation of the implementation of the factory of the future (industry 4.0) in the	1-7																
4.2. Existence of technologies tailored to the particular needs of naval sector companies, in	5-11																
4.3. Analysis of the degree of maturation of existing technologies that could be	6-13																
4.4. International validation forum with agents who have collaborated in the detection	13																

4.1. Review of the Current State Analysis of the implementation of the factory of the future (industry 4.0) in the Atlantic Area's naval sector

TASK	RESPONSIBLE	
- Validate in all the regions the previous studies about the current situation of the companies of the naval sector in the countries and regions of EA, analyzing aspects such as the degree of innovation or factors that cause a loss of competitiveness in the sector	EMC2	**Deliverable:** Report on the results of global survey and business reviews with naval main actors and representatives to evaluate the situation of the implementation of the factory of the future
- Survey in the respective regions	EMC2, with the collaboration of ACLUNAGA, FMV, BPN, CIT y HSSMI	**Expected results:** 50 companies contributing in the global survey

4.2. Existence of technologies tailored to the particular needs of naval sector companies, in each of the paradigms of industry 4.0

TASK	RESPONSIBLE	
- Involves the identification of existing technologies which might be tailored to the particular needs of the naval sector (i.e. End User Requirements Identification), in each of the paradigms of industry 4.0. They will be determined based upon the likelihood of a pay-off on the investment.	Lead by EMC2, with the collaboration of ASIME, BPN y HSSMI	**Deliverable:** Relation of existing technologies with potential to be implemented in naval SMEs
- Identification of at least 20 existing technologies/technological processes in the market, that are being implemented in other sectors, but that can be adapted to the naval sector (Blockchain, Cloud computing, Big Data, etc.)	ASIME, EMC2, BPN and HSSMI	**Expected results:** 20 existing technologies with potential for the naval sector

4.3. Analysis of the degree of maturation of existing technologies that could be implemented in naval SMEs

TASK	RESPONSIBLE	
- An analysis on the Technology Readiness Levels (TRL) and Capability Readiness will be carried out in order to identify and customise Industry 4.0 paradigms according to the needs of the SMEs identified in WP4.2	ASIME in collaboration with EMC2, U. Strath. and HSSMI	**Deliverable:** 1 Report on the degree of maturation of the technologies identified
- Identification of at least 5 existing technologies with adequate degree of maturation to be applied to the processes of naval industry SMEs	ASIME in collaboration with EMC2, U. Strath. and HSSMI	**Expected results**: 5 existing technologies with adequate degree of maturation for the naval industry

4.4. International validation workshops with agents who have collaborated in the process of detecting naval sector needs

TASK	RESPONSIBLE	
- A transnational-level validation workshop will be carried out to provide feedback on the review work done, to which the agents that collaborate in the detection process of sector needs will be invited.	DEPO	**Deliverable:** 1 Transnational validation workshop including: Presentations and reports; Definition of the way forward
- Involving as many companies as possible in the validation forum, including those that have participated in the process of detecting the naval sector needs, as well as experts and other relevant representatives are expected at the transnational workshop	DEPO in collaboration with all partners	**Expected results**: 100 entities attending from the Atlantic Area Region

WP5. IN WORK AND IN TRAINING (Work Group Leader: University of Strathclyde)

WP5 will allow the redefinition of workers' functions and tasks adapted to technological productions processes (4.0). The transformation of the naval companies towards the industry 4.0 model implies significant organizational changes. Both managers and naval labour force will now be involved in highly technological processes, so a redefinition of positions, functions and skills will be necessary

Actions

- Definition of labour force new functions / tasks /skills
- Training and awareness actions, involving the development of adapted training syllabus
- Blended learning training programs and apprentship programme
- Dissemination of acquired knowhow on IN4.0 jobs and training

		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
		2017				2018											
ACTIVITIES	TIMETABLE	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
5.1. Definition of the new functions / tasks	4 - 13																
5.2. Awareness actions for training	8-15																
5.3. Training actions for workers	15 - 29																
5.4. Dissemination of know how of IN4.0 jobs and training	22/25/26																

5.1. Definition of labour force new functions / tasks /skills

TASK	RESPONSIBLE	
- Development of a procedure that considering the current state of art on the naval sector (identified in A4.1), allows an efficient introduction of the detected technologies in A4.2 and 4.3, as well as the adaptation of workers to the new processes. Workers' new skills need to be defined so they can be trained to carry them out. This document will constitute a procedure to guide naval companies	ACLUNAGA and FMV, in collaboration with CIT and HSSMI	**Deliverable:** 1 redefinition protocol of labour force's new tasks and skills
_ Dissemination	With the support of all partners	**Expected results**: 500 downloads form Website are expected, as well as direct distribution to at least 200 naval SMEs involved in the project (40 per country)

5.2. Training and awareness actions, involving the development of adapted training syllabus

TASK	RESPONSIBLE	
- Training program syllabus will be developed according to labour force's new skills identified in A5.1, and will include instruction in new the use of new technological tools and processes (collaborative robotics, intelligent communication, traceability, simulation and customization systems).	ASIME, with the collaboration on BPN	**Deliverable:** 1 training syllabus (in four languages)
- 1 common training syllabus including instruction in the use of new technological tools and processes (collaborative robotics, intelligent communication, traceability, simulation and customization systems), ready to carry out training programs	ASIME	**Expected results**: 1 training syllabus to be taught

5.3. Blended learning training programs and apprentship program

TASK	RESPONSIBLE	
- 6 month blended learning training programs including the development of a Shipbuilding Open Knowledge Web System (120 h online learning) 120 h of In house mentoring for SMEs, lead by technological experts, universities, etc.).Target groups: management and workers; young graduates who will participate in an 'apprenticeship' program, allocated in naval SME's companies for 6 months (5 per country)	DEPO, F. Oceano, EMC2, CIT and U. Strath	**Deliverable:** 2 training actions in each country (10) 1 Ship Building Open Knowledge Web System Mentor Networks (1 per country) 1 Scholarship program per country
_ 50 naval SMEs in the 5 participating countries being prepared to accomplish the technological transformation through all the provided means (online learning, in-house mentoring, 25 trainees)	With the support of all partners	**Expected results**: 50 naval SMEs receiving training and mentoring by means of all provided mechanisms

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_ 50 naval SMEs in the 5 participating countries being prepared to accomplish the technological transformation through all the provided means (online learning, in-house mentoring, 25 trainees)	With the support of all partners	**Expected results**: 50 naval SMEs receiving training and mentoring by means of all provided mechanisms

5.4. Dissemination of acquired knowhow on IN4.0 jobs and training

TASK	RESPONSIBLE	
- Organization of 5 workshops per country, to which companies and technological mentors participating in A5.1, A5.2, and A5.3, as well as other industry stakeholders will be invited. Results, lessons learnt and accumulated know how will be shared and discussed.	DEPO,, F. Oceano, EMC2, CIT and U. Strathclyde with the collaboration of all partners	**Deliverable:** 5 workshops to share acquired knowledge (1 per country)
- At least 40 naval sector stakeholders per country (200 total) are expected to participate in the dissemination workshops, including companies attending the previous training	With the support of all partners	**Expected results**: 200 naval sector stakeholders participating

WP6. IN COMMERCIALIZATION AND COSTS (Work Group Leader: CIT)

Detection and development of new commercialization methods that can be transferred to the naval sector, as well as on the detection of innovative strategies to save costs in the implementation of technologies. Methodology in this WP will consist in benchmarking, measuring and analysing firm linkages across different sectors (automotive, aeronautics, logistics, etc.), identifying the vendors and partners they have utilized in the integration of new technologies, along with levels of internationalization and connection with the local ecosystem. This information is expected to lead to collaborative new ventures which can happen through additional automation and data exchange in manufacturing technologies.

Actions

- Options for saving costs related to the acquisition of technologies
- New marketing/commercialization methods adapted to the industry 4.0
- Online cross-sector platform
- Cross-sector forums

		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
		2017				2018											
ACTIVITIES	TIMETABLE	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12
6.1. Options for saving costs related to the acquisition of technologies	12-17																
6.2. New marketing/commercialization methods adapted to industry 4.0	13-21																
6.3. Identification and documentation of successful business innovation processes in other sectors	15-23																
6.4 Online Inter-sectoral Platform	4-35																
6.5. Intersectoral forums between companies	14/16/13/21/25																

6.1. Options for saving costs related to the acquisition of technologies

TASK	RESPONSIBLE	
- Definition of a transnational methodology aiming to make SMEs aware of the various options available to save costs related to the acquisition of technologies. A chosen Business Case Analysis in an industry sector, other than the naval one, will be chosen in order to demonstrate cost savings and benefits of the adoption of Industry 4.0 technologies	U. Strathclyde with the support of BPN	**Deliverable:** List of the various options for saving costs related to the acquisition of technologies
-500 downloads form Website and distribution to 100 naval SMEs involved in the project throughout the 5 participating countries	All partners support	**Expected results**: 500 downloads form Website and distribution to 100 naval SMEs

6.2. New marketing/commercialization methods adapted to industry 4.0

TASK	RESPONSIBLE	
- Development of a transnational Guidelines document on new marketing and commercialization methods adapted to the naval industry, which includes success stories and case studies in other sectors for effective implementation in the naval sector.	ASIME and BPN	**Deliverable:** 1 guidelines document reflecting new marketing and commercialization methodologies in other sectors
–A minimum of 5 new marketing and commercialization methodologies identified in other sectors, that can be taken as a model for the naval sector and necessary to develop WP7 (SME growth measuring methodology and pilot mentoring program)	ASIME and BPN	**Expected results**: 5 new marketing and commercialization methodologies that are innovative to the naval sector

6.3. Identification and documentation of successful business innovation processes in other sectors

TASK	RESPONSIBLE	
- Development of a methodology based on the impact of successful business innovation processes that lead SMEs to growth in other sectors, including success stories and case studies.	ASIME in coordination with CIT, BPN and HSSMI	**Deliverable:** 5 Business innovation processes in other sectors
- 5 new business innovation processes identified in other sectors, that can be taken as a model for the naval sector and necessary to develop WP7 (SME growth measuring methodology and pilot mentoring program)	ASIME in coordination with CIT, BPN and HSSMI	**Expected results**: 5 Business innovation processes identified in other sectors , and that can be applied to the naval sector

6.4. Online Cross-Sector Platform IN 4.0 Connect

TASK	RESPONSIBLE	
- Development of the IN 4.0 Connect cross-sector online platform aiming to facilitate relevant cross-sector cooperation regarding commercialisation and innovation processes. All organizations previously involved in the project will have the opportunity to collaborate via the international platform and mapping.	CIT with the collaboration of all partners	**Deliverable:** IN 4.0 Connect cross-sector online platform
100 companies mapped across the five participating member states, finding in the platform a meeting point for collaboration and business	CIT with the collaboration of all partners	**Expected results**: 100 companies mapped across the five participating member states

6.5. Cross-sector forums between companies

TASK	RESPONSIBLE	
- One forum per country will be held, aiming to prepare the field for the measuring of impact after the adaptation to the naval sector and presenting the platform In 4.0 Connect.	DEPO, BPN, CIT, F.O, U. STRATH, EMC2	**Deliverable:**
- 40 cross-sector companies per country participating (200 total), fostering awareness across the naval sector stakeholders to face an imminent and necessary transformation towards the industry 4.0 model	With the support of all partners	**Expected results**: 40 cross-sector companies per country attending (200 total)

WP6. IN ADAPTATION (Work Group Leader: FMV)

The anticipated benefits obtained by companies after their incorporation to the industry 4.0 model will be determined and quantified in WP7. Expected results rely on the **assessment of the Technology Readiness level (TRL) and naval SME Growth measurement**.

Actions:

-Analysis of success cases in the shipbuilding and ship repair industry across the participating countries

-Counseling for the transformation of naval companies into intelligent companies

-Development of a SME Growth measurement tool based in the analysis of previously identified success cases in the naval sector

-A pilot technological mentoring program (in 2 naval SMEs per country), carried out by experts who will guide SMEs through the process of transformation into innovative firms.

Enterprises that are at an optimal TRL level will be better valued to participate in the pilot projects. A selection procedure will be launched in each country including the jointly agreed terms of reference and requirements for SMEs to participate.

		9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8
		2017				2018												2019												2020							
		MONTHS																																			
7.1. Identification of success cases among naval sector SMEs that have already implanted a	17-23																																				
7.2. Development of a tool to measure the growth of SMEs after changing their model into	20-26																																				
7.3. Identification of technological mentors and SMEs to participate in a technological mentoring programme	23-26																																				
7.4. Implementation of the mentoring programme to prepare slected SMEs to undergo the process of changing their model	25-35																																				
7.5. Dissemination of pilot projects	34-36																																				

7.1. Identification of success cases among naval sector SMEs that have already implemented a change in their processes towards the industry 4.0 model

TASK	RESPONSIBLE	
- Identification of companies that are considered to be success cases due to their innovation in the naval industry and whose trajectory allows the measurement of growth after the investment in automatised processes. Qualitative and quantitative indicators will be measured by external expert evaluators to reveal such growth. Used means: surveys with successful SMEs' managers; analysis of sales growth, international positioning; etc.	FMV With the cooperation of FMV and BPN and support of all partners	**Deliverable:** 5 success cases externally evaluated (1 per country)
- Identification of qualitative and quantitative indicators resulting from the evaluation of naval sector success cases that allow SMEs growth measurement. Acquired knowledge and selected indicators will be used to develop the SME's growth measurement tool	With the support of all partners	**Expected results**: 50 quantitative and qualitative indicators that allow SMEs growth measurement

7.2. Development of a naval SMEs Growth Measurement Methodology after transformation to the industry 4.0 model

TASK	RESPONSIBLE	
- Based on the resulting qualitative and quantitative indicators, a growth measuring methodology will be developed in order to help SMEs to evaluate the impact of innovation. It will help pilot naval SMEs that are at an optimal Technological Level of Readiness to plan such transformation. Benefits to forecast and plan business way forward will be disseminated to the sector across the participating countries and AA. This tool will be developed by external experts.	FMV	**Deliverable:** 1 naval SMEs growth measuring methodology
- Capability to forecast naval SMEs growth and readiness through the measurement of quantitative and qualitative indicators that allow decision making regarding their business plan towards technological transformation	With the support of all partners	**Expected results**: Capability to forecast naval SMEs growth and readiness

7.3. Identification of technological mentors and SMEs to participate in a technological mentoring program

TASK	RESPONSIBLE	
- Expert Technological mentors will be identified in each country. The selection process will be held through a public procurement procedure. Selected Pilot naval SMEs will participate in the technological mentoring program. Those with a higher level of readiness for innovation and 'enough' own technology will be better valued. SMEs will be lead towards the identification of their strengths, capabilities and weaknesses in order to develop an adequate business plan	All partners	**Deliverable:** 10 pilot naval SME Identified 5 technological mentors identified
- Naval SMEs and technological mentors identified to participate in mentoring program	With the support of all partners	**Expected results**: 10 Naval SMEs (2 per country) and 5 (1 per country) technological mentors identified to participate in the technological mentoring program in A7.4

7.4. Implementation of the technological mentoring program in selected pilot naval SME

TASK	RESPONSIBLE	
- A pilot technological mentoring program will be carried in 2 naval SMEs per country, lead by expert technological mentors. Main aim is to evaluate their current technological situation and forecast growth by using the measurement tool. The technological mentors will guide the companies towards the elaboration of a business plan to efficiently implement introduce new processes such as collaborative robotics, innovative communication systems, etc.	BPN, CIT, F.O, ACL, U. SRATH, FMV, EMC2	**Deliverable:** 10 pilot naval SME mentored by 5 technological experts
- 10 pilot naval SMEs (2 per country) involved in the mentoring program, where their growth is forecasted with the help of the growth measurement tool and technological mentors, so they come out with a business plan to accomplish such transformation	With the support of all partners	**Expected results**: 10 pilot business plans for naval SMEs technological transformation (2 per country)

7.5. Dissemination of pilot projects

TASK	RESPONSIBLE	
- 1 workshop per country to disseminate the pilot project results. Main objective is making other naval SMEs aware of the procedures to plan their transformation into the industry 4.0 model, as well as sector representatives and policy makers	BPN, CIT, F.O, ACL, U. SRATH, FMV, EMC2	**Deliverable:** 5 workshops (1per country)
- At least 20 naval stakeholders (SMEs, policy makers, funding institutions, unions, sector representatives, etc.) per country (100 total), attending the workshops and becoming aware of best practises to undergo the industrial transformation	With the support of all partners	**Expected results**: 100 naval industry stakeholders attending the workshops (20 per country)

Modifications

Modifications

- The procedure for modifications (budget, workplan and schedule) has not been open yet. A template is expected to be provided by the JS
- It will be submitted by the LP through the online platform
- Please, explain the main needs you foresee regarding modifications

Decision on the next SC meeting

SC meetings

•Eight SC meetings were foreseen in the Project Proposal. Two have already taken place (Vigo Nov 2017, hosted by DEPO and Jun 2018 Leça da Palmeira, hosted by **Fórum Oceano**.)

•Next SC meetings could be organised around relevant sector events happening in each host country.

•Remaining host partners with budget allocated for SC meetings: **HSSMI, BPN, CIT, EMC2**

3rd SC meeting

3rd SC meeting- 2018

Host:

Location:

Estimated date: **October 2018**

Next SC meetings

2019

- **4th SC meeting- Feb:**
- **5th SC meeting- Jun:**
- **6th SC meeting-Nov :**

2020

- **7th SC meeting- May:** a SC meeting could take place in Vigo coinciding with Navalia. One of the Galician partners (ACLUNAGA or ASIME) could host this SC meeting after budget difications
- **8th SC meeting- Jul/potencial project extension 2020:** BPN is hosting the closing event, so the 8th SC meeting should happen at the same time in France

Estimated schedule-Dissemination and communication events

Estimated schedule-Dissemination and communication events

DEPO	2018								2019												2020							
	may	jun	jul	aug	sep	oct	nov	dec	jan	feb	mar	apr	may	jun	jul	aug	sep	oct	nov	dec	jan	feb	mar	apr	may	jun	jul	ago
ACTIVIDAD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	30
Communication and dissemination events (DEPO's estimated shedule)																												
1. Corss-sector forums (Act. 6.5)																	*1											
2. Intenational validation workshop (Act 4.4)									*2																			
3. Dissemination of pilot project (Act. 7.5)																									*3			
4. Jornada de networking con actores implicados o stakeholders (Act. 3.2)					*4																							
5. Closing event and presentation of project results (Act 2.5)																											*5	

*1. Cross sector forum to be organized by DEPO. There other 4 cross-sector forums by: U. Strath ; F.O ; CIT ; EMC2 (two must happen in 2018 and 3 in 2019)

*2. It was foreseen for Sept/Oct 2018, but since it depend s on WP4, it is not expected to be celebrated before January 2019

*3 Five pilot project dissemination events are expected between April and August 2020, one per country and hosted by: DEPO, BPN, CIT, F.O, U. Strath.

*4 Networking events are expected to be celebrated by all partners along the duration of the project. DEPO will host one during NAVALIA 2020

*5 BPN is in charge of the closing event in June/July 2020. DEPO is planning one in Galicia.

Partners to explain their proposals for the events they are in charge of hosting

Questions and other issues

Interreg Atlantic Area
European Regional Development Fund

EUROPEAN UNION

IN 4.0

IN 4.0

ADAPTATION OF INDUSTRY 4.0 MODEL TO THE NAVAL SECTOR

DEPUTACIÓN PONTEVEDRA

Bretagne Pôle Naval

CIT CORK INSTITUTE OF TECHNOLOGY
INSTITIÚID TEICNEOLAÍOCHTA CHORCAÍ

FÓRUM OCEANO

ACLUNAGA ASOCIACIÓN CLÚSTER DEL NAVAL GALLEGO

University of Strathclyde Glasgow

FORO MARÍTIMO VASCO

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HSM HIGH SPEED SUSTAINABLE MANUFACTURING INSTITUTE