

Interreg
Sudoe



ADDISPACE
European Regional Development Fund

ADDISPACE

Monitoring & Evaluation Plan

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1. SCOPE AND CONTENTS

The goal of this document is to describe the Monitoring & Evaluation system put in place for ADDISPACE project.

ADDISPACE project is co-financed by the European Regional Development Fund (ERDF) in the framework of INTERREG SUDOE programme. Following INTERREG SUDOE programme rules, ADDISPACE project has defined a monitoring and evaluation system under Transversal Work Package n° 3.

The Planning and Monitoring of the project will be carried out internally by the partners and the support of the General Coordinator, but for the evaluation of the project, the sub-contracting of an external service is planned.

The Planning and Monitoring of the project will be carried out on the basis of six months' Work Plans and Monitoring Reports. Both documents will be developed by the external service subcontracted to support the Lead Partner on the general coordination, Iniciativas Innovadoras.

Monitoring process will also comprise the quality control and risk management sub-processes, and will allow the project's Steering Committee to conduct a tight monitoring of the project progress, identifying potential deviations that might put in risk the achievement of project results and adopting corrective measures if necessary.

As a preliminary step of the Planning effort, a review of the timetable to the project is agreed by partners, due to 1) the delay on the start of the project activities, which took place in November 2016, instead of in July 2016, official start date of the project and 2) the impossibility due to SUDOE programme rules to extend the project duration, which remains 36 months since the official date of start of the project, up to the end of June 2019.

External evaluation will rather focus on the impact of the project. To that end, the external evaluator subcontracted by Lead Partner will follow the traditional methods for such kind of evaluations. All in all, 3 different evaluation reports will be delivered by the external evaluator, Capital High Tech.

You will also find the Deliverables Timetable in Annex 1.

Update of Work Plan will be reviewed each 6 months, in the framework of the Steering Committee and/or Technical Committee Meetings held. Following such meetings, Iniciativas Innovadoras will update the time plan and recap the agreed tasks by partner with indication of the planned time of recompletion of such tasks, on 6 months' Work Plans.

In Annex you will find the template for six month Work Plans.

3. MONITORING SYSTEM

The process will be carried out internally by Iniciativas Innovadoras.

The monitoring will comprise the following fields:

- Monitoring of the work plans agreed each six months by the partners, in terms of completion on due form and time of the tasks agreed by partners, indicating any deviations.
- Monitoring of the delivery of deliverables and outputs on the reported period, following the Deliverable Timetable described in the previous section.
- Calculation of indicators following a balanced scorecard.
- Results of the quality control of deliverables carried out in the period (see section 5).
- Assessment of risk identified with indicating of mitigation measures (see section 6).

Each six months, Iniciativas Innovadoras will review the Work Plan, update the balanced scorecard, assess the identified risks and register the quality control activities carried out in a Monitoring Report that will be discussed in the following Steering Group meeting.

In Annex you will find the template of the Monitoring Report tool.

ADDISPACE balanced scorecard will include the following indicators.

| INDICATOR | TARGET VALUE |
|--|--------------|
| GT1. DIAGNOSIS | |
| Companies consulted on online survey | 100 |
| Companies consulted in groups | 60 |
| Consolidated Report with diagnosis and opportunities | 1 |
| Downloads of consolidated report | 500 |
| GT2. PILOTS | |
| ToR of pilots | 4 |
| Research & technology centres engaged in Pilots | 6 |
| Companies engaged in Industrial Research stage of Pilots | 4 |
| Companies engaged in Viability stage of Pilots | 4 |
| Companies proposing components for Pilots following open call | 15 |
| Companies expressing interest on getting involved on viability stage following open call | 20 |
| GT3. TRANSFER | |
| Transfer Workshops held | 4 |
| Attendants to Transfer Workshops | 120 |

| | |
|---|-----|
| Companies showing interested and engaged in brokerage event on 3rd Transfer Workshops | 50 |
| Companies engaged in tech transfer initiatives | 20 |
| Conferences held | 3 |
| Attendants to Conferences | 240 |
| Other universities and technology centers attending Conferences | 25 |
| MAM players showcased on catalogue of MAM offer | 80 |
| Downloads of catalogue | 200 |
| GT4. EDUCATION AND TRAINING | |
| ToR of pilots | 6 |
| Nº of students benefitting from Higher Education Pilot | 20 |
| Nº of students benefitting from Vocational Training Pilot | 20 |
| Nº of students benefitting from Lifelong Learning Pilot | 40 |
| Nº of vocational institutions transferring Vocational Training Pilot | 2 |
| Nº of vocational institutions transferring lifelong Learning Pilots | 5 |
| Education and Training Report with framework and itineraries | 1 |
| Download of Training Report | 150 |
| Presentation of Brief to regional/national authorities | 5 |
| GT5. TOWARDS A PLATFORM | |
| Roadmap for a platform | 1 |
| Organisations engaged in future platform | 8 |
| Policy & Strategic Brief | 1 |
| Downloads of Policy & Strategic Brief | 8 |
| Presentation of Brief to regional/national authorities | 5 |
| GTT2. COMMUNICATION | |
| Project logo | 1 |
| Project website | 1 |
| Project posters | 9 |
| Project roll-up | 3 |
| Project brochure | 3 |
| Downloads of brochure | 200 |

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| Average number of users a month in website | 500 |
| Average number of pages visited a month in website | 2.000 |
| Total number of news on website | 50 |
| Newsletters numbers | 6 |
| Subscribers to newsletter | 200 |
| Final Conference | 1 |
| Attendants to Final Conference | 80 |
| Non project events where ADDISPACE is disseminated | 18 |

4. EVALUATION

Evaluation of the project will be external, carried out by an evaluator subcontracted by ESTIA, as Lead Partner and as a shared cost between ESTIA, LORTEK, FADA-CATEC, AFM, PEMAS and IP-LEIRIA, following Annex 2 of the Partnership Agreement of the project.

Following the public procurement process followed by ESTIA, Capital High Tech company was awarded with the contract and Lucía Marta from this company, appointed as external evaluator of ADDISPACE project.

The role of the external evaluator is considered as key in order to anticipate problems and reorient underachieving activities of the project, reason why the partnership wills to sub-contract an external service in the first stages of the project, allowing the appointed evaluator to accompany the process all along the project implementation.

To that end the following Terms of Reference of the evaluation have been defined.

Objectives of the evaluation

As planned under Activity T3.2 of Transversal Work Package N° 3, the development of 3 external evaluation reports are planned:

- Ex-ante evaluation: To be carried out and a report delivered on the first 6 months of the project.
- Intermediate Evaluation: To be carried out and a report delivered at mid-project, before Month 24.
- Final Evaluation: To be carried out and a report delivered by the end of the project, before M36, unless an extension of the project is requested by the project and approved by the INTERREG SUDOE programme.

Overall goal of the external evaluation will be to assess the project relevance, effectiveness, efficiency and impact.

Specifically the EX-ANTE EVALUATION will have the following goals:

- To assess the pertinence, relevance and internal coherence of ADDISPACE strategy and work plan taking into consideration the priorities set up by INTERREG SUDOE Programme, national and EU policies.
- To identify the Key Success Factors to consider and monitor in order to be a successful proposal.
- To conduct a Stakeholders Analysis, considering the expectations, interests and potential barriers for engagement of the stakeholders of the project.
- To identify the expectations, strengths and weaknesses as perceived by partners in the project's design and future implementation.
- To identify the internal and external risks which might hinder the success of the project, as well as proposing potential mitigation measures, and early warning indicators.

Specifically the INTERMEDIATE EVALUATION will have the following goals:

- To assess the effectiveness and efficiency of the project, taking into consideration the implementation of the activities and the achievement of results vis a vis

originally agreed work plan and budget, to identify deviations on such implementation and to propose correcting measures.

- To assess the quality of management and coordination of the project in terms of the effectiveness and efficiency of proposed method, achieved results, role of Project Coordinator partners' involvement and spill over effects of the cooperation, and to identify recommendations for improvement on the overall management and coordination method.
- To assess the satisfaction level of ADDISPACE partners and associated partners with the project progress, results and preliminary impact.
- To assess the preliminary impact of ADDISPACE project, in terms of project and INTERREG SUDOE programme result and productivity indicators, and to deliver recommendations on how to improve such impact.
- To identify and assess the preliminary impact of the project on the following fields:
 - Networking and collaboration capacities of partners and associated partners for transnational cooperation.
 - Buildup and opening up of ADDISPACE Platform for the transfer of MAM technologies in the aerospace sector.
 - Advancement on the commercial buy in of MAM parts and components in the aerospace sector.
 - Advancement on the standardization and quality certification of MAM parts and components in the Aerospace sector.
 - Progress in the Education and Training offer and mainstreaming of MAMA related curricula.
 - Progress on the absorption of MAM technologies between SMEs.
 - Mainstreaming of support measures for MAM technologies into regional/national policies and programmes, including RIS3.
 - Spill over effect in terms of new interregional links, networks and initiatives promoted by subprojects.

The FINAL EVALUATION will have the following goals:

- To assess the effectiveness and efficiency of the project, taking into consideration the implementation of the activities and the achievement of results vis a vis originally agreed work plan.
- To assess the satisfaction level of ADDISPACE partners and associated partners with the project progress, results and impact.
- To assess the impact of ADDISPACE project, in terms of project and INTERREG SUDOE programme result and productivity indicators.
- To assess the final impact of the project on the following fields:
 - Networking and collaboration capacities of partners and associated partners for transnational cooperation.
 - Relevance and sustainability of ADDISPACE Platform for the transfer of MAM technologies in the aerospace sector.
 - Advancement on the commercial buy in of MAM parts and components in the aerospace sector.
 - Advancement on the standardization and quality certification of MAM parts and components in the Aerospace sector.
 - Progress in the Education and Training offer and mainstreaming of MAM related curricula.
 - Progress on the absorption of MAM technologies between SMEs and clusters.
 - Mainstreaming of support measures for MAM technologies into regional/national policies and programmes.

- Spill over effect in terms of new interregional links, networks and initiatives promoted by subprojects.

Method and work plan

External Evaluation Method is to be proposed by the external evaluator, following the standard and widely accepted evaluation tools and methods.

Nonetheless, it is expected to include the review of ADDISPACE documents and deliverables as well as some kind of consultation to ADDISPACE partners, associated partners and other relevant stakeholders.

At the request of the partnership, External Evaluator might be invited to take part on Steering Group meetings, in order to present any of the three Evaluation Reports. Travel and subsistence costs linked to such participating will be borne by ESTIA, as subcontracting party.

External Evaluation is to be conducted and Reports drawn in English language, working language of ADDISPACE project.

| Nº | Report | Delivery time |
|----|-------------------------|-------------------|
| 1 | Ex-ante evaluation | End of May 2017 |
| 2 | Intermediate evaluation | End of April 2018 |
| 3 | Final evaluation | End of June 2019 |

5. QUALITY CONTROL

The Quality Control System will be carried out by Iniciativas Innovadoras, all along the project, and will comprise 3 elements:

- Quality Planning
- Quality Control
- Quality Register

The following table summarises the process:

| Element | Sub-element | Description |
|-------------------------|-----------------------------|--|
| Quality Planning | Deliverable description | Statement of overall purpose of the deliverables; their composition; stakeholder quality expectations; acceptance criteria |
| | Quality management strategy | Describes how quality process will be implemented, including responsibilities |
| Quality Control | Quality methods | Describes how the quality process and activities will be carried out for each of the project deliverables |
| Quality Register | Quality Register | Historical 'diary' of quality control activities planned and undertaken and their outcomes with evidence that the quality activities are carried out and that deliverables have been assessed and are accepted |

Quality Planning

Iniciativas Innovadoras has laid out the following Quality Plan:

| Del. N° | Deliverable name | GT | Target group | Description | Quality expectations assessment criteria |
|---------|--------------------------------------|----|---------------------------|--|---|
| 1 | Opportunities Study for MAM in SUDOE | 1 | MAM & aerospace companies | Report comprising Diagnosis and Results from survey to companies. Available in EN, ES, PT and FR. Available in paper and digital | <ul style="list-style-type: none"> Usefulness: Must provide an accurate overview of MAM state of the art, future trends, market penetration, MAM players at SUDOE and companies barriers for adoption. It should entice companies to start assessing future adoption of MAM on |

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| | | | | | <p>aerospace sector.</p> <ul style="list-style-type: none"> • User-friendliness: It must be written on a divulgative way, not too technical. • Recommendation: Would you recommend the deliverable to your colleagues and peers? |
| 2 | Pilot Results Report | 2 | MAM & aerospace companies and research centers | <p>Report comprising Industrial Research stage results, results from Viability Stage with companies and definition of tech transfer readiness of developed techs and processes.</p> <p>Available in EN, ES, FR & PT.</p> <p>Available in digital. The report will not be discloses as such, but each contents disseminated through other dissemination events such as Transfer Workshops, Conferences, papers and articles.</p> | <ul style="list-style-type: none"> • Method soundness: The deliverable must provide a clear description of the whole process of Pilot implementation, with indication of the tasks carried out at each stage, the problems encountered and the solutions provided. • User-friendliness: The report must provide actionable insight on 1) the results of the stage of industrial research in terms of the innovations developed beyond the state of the art and how this can further benefit the MAM sector in the aerospace field, and 2) the feasibility and practical benefits that the transfer of such development into real companies, carried out on the feasibility stage. • Usefulness: Clear definition of the tech developments that can be publicly disseminated and definition of protection worthy developments with indication of IP protection and use |

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| | | | | | among partners. |
| 3 | Catalogue of MAM offer | 3 | MAM & aerospace companies and research centers | <p>Available in EN, ES, FR & PT.</p> <p>Available in paper and digital versions, as an online updatable database hosted in project website.</p> | <ul style="list-style-type: none"> • Scope: The catalogue has to provide a thorough overview of main players in the MAM and aerospace sector in SUDOE. • User-friendliness: the catalogue must be easy to navigate and provide links an contact person for showcased, as well as provide the possibility for non-reported players to voluntarily feed their information to the catalogue. • Usefulness: It should provide specific and reliable information on showcased players, rather than vague and non-relevant information, and it should be updated on a periodic basis. |
| 4 | MAM Education & Training Framework, Needs Assessment and Proposal. | 4 | Education & Training authorities | <p>Consolidated report comprising the Training Needs Assessment, findings from 4 education & Training Pilots, a general framework proposal and itineraries for MAM experts education and training for SUDOE.</p> <p>Available in EN, ES, FR & PT.</p> <p>Available in paper and digital versions</p> | <ul style="list-style-type: none"> • Method soundness: The deliverable must provide a clear description of the whole process of needs assessment stage, the identification, development of contents and evaluation of the Pilots at the Higher Education, Vocational Training and Lifelong learning levels, a general framework for education and training on this field. • Usefulness: The report must provide actionable insight on |

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| | | | | | 1) the programme and contents of the 4 Pilots, ready to be transferred and used by other stakeholders at SUDOE, and 2) a general education and training framework following the requirements of education authorities on the 3 countries. |
| 5 | Policy & Strategic Brief | 5 | R&I authorities | <p>Policy recommendations for the overall tech transfer of MAM technologies in SUDOE, specific recommendations for the promotion of MAM adoption in aerospace sector, smart specialization recommendations for the territories in the field of MAM for aerospace</p> <p>Available in EN, ES, FR & PT.</p> <p>Available in paper and digital versions</p> | <ul style="list-style-type: none"> Usefulness: The report must provide actionable insight aimed at policy makers and programme managers with feasible and specific recommendations on the 3 fields referred, stating, if applicable the specificities linked to the governance and policies at the different territories |

Quality Control

Iniciativas Innovadoras proposes the following work plan, quality methods and responsible for the implementation of the quality control.

| Del. N° | Deliverable name | Owner | Quality method | Reviewer |
|---------|--------------------------------------|--------|-----------------------------------|--------------------|
| 1 | Opportunities Study for MAM in SUDOE | PEMAS | Peer review assessing criteria | HEGAN, HELICE, AV |
| 2 | Pilot Results Report | LORTEK | Peer review of assessing criteria | ESTIA EADS-CASA |
| | | | Presentation of findings and | ESTIA, LORTEK, |

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|---|--|-----------|---|--|
| | | | report through an interview with regional/national authorities on R&I | FADA-CATEC, IP-Leiria. |
| 3 | Catalogue of MAM offer | IP Leiria | Peer review of assessing criteria | HEGAN, HELICE, AV |
| 4 | MAM Education & Training Framework, Needs Assessment and Proposal. | ESTIA | Peer review of assessing criteria | Don Bosco, AFM. |
| | | | Presentation of findings and report through an interview with regional/national authorities on Education & Training and/or Certification Bodies | ESTIA, Don Boco, Lortek, IP-Leiria |
| 5 | Policy & Strategic Brief | ESTIA | Peer review of assessing criteria | AFM, SUDOE |
| | | | Presentation of findings and report through an interview with regional/national authorities on smart specialization and R&I | ESTIA, LORTEK, AFM, FADA-CATEC, PEMAS, IP-Leiria |

Quality register or log

Iniciativas Inovadoras will coordinate the implementation of the Quality control Plan, requesting the appointed reviewer the assessment of the concerned deliverable.

Iniciativas Inovadoras will register the outcomes of such control in a register or log, to be included on the six monthly Monitoring Reports.

| Del. N° | Deliverable name | Owner | Del. date | Reviewer | Review date | Review results & recommendations |
|---------|------------------|-------|-----------|----------|-------------|----------------------------------|
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6. RISK MANAGEMENT

Risk management will be conducted internally, by Iniciativas Innovadoras, as coordination support of ESTIA, as Lead Partner.

The risk management system will be composed by:

- Preliminary assessment of Risks: This task has been carried out by the appointed external evaluator, Capital High Tech in the framework of the Ex-ante Evaluation Report.
- Monitoring, tracking and logging of early warning indicators and risks, by INICIATIVAS INNOVADORAS, on a six months basis, whose results will be included on Monitoring Reports described on section 3.

Preliminary Risks Assessment

The external risks identified and evaluated in terms of probability and impact from 1 (very low/inexistent) to 5 (very high), are the following:

| Risk | Probability | Impact |
|--|---|---|
| Risk 1: Low stakeholder and end-user engagement during and after the project | Low (2), since the consortium has foreseen many ways to engage them and survey shows a real interest in MAM. | Quite high (4) as it would weaken the pilots and the final objective: adoption of MAM |
| Risk2: Low adoption of MAM by aerospace sector in the Sudoe region at the end of the project | Medium (3), as the project is addressing most of the barriers, but as of today it seems no facing all of them: for instance, cost of the technology adoption and exploitation (including post-fabrication treatments), or quality of raw material. (see page 10 of this report) | Quite high (4), as it would hamper the final objective of the project: adoption of MAM |
| Risk3: Low engagement of the public sector for supporting training and TT platform replicability in other regions. | Very low (1), as policy documents at regional, national and European level push towards AM adoption and the Aerospace sector support for innovation and market. | Medium (3), as no public support would hamper the lasting impacts of the project (training and TT platform), but still private companies could engage in such an effort if they are convincing of the opportunity and advantages to do so (Pilots and dissemination are key). |

Capital High Tech has also identified the following early warning indicators and mitigation measures for the referred risks that will be considered on the on-going risk management of the project by INICIATIVAS INNOVADORAS.

| Risk | Early warning indicators | Mitigation measures |
|--|--|---|
| Risk 1: Low stakeholder and end-user engagement during and after the project | Low stakeholder engagement and participation since the beginning of the project. | Increase consortium efforts in disseminating information and Pilot results towards stakeholders and end users. Dissemination should concern not only project information and MAM information but also concrete results of demonstrations and results from studies on technical, environmental and economic feasibility. Success stories and examples should be strongly disseminated as well. |
| Risk2: Low adoption of MAM by aerospace sector in the Sudoe region at the end of the project | Economic analysis of pilots unveils prohibitive costs for the whole chain of MAM and low economic advantages for Aerospace industries comparing to conventional manufacturing. | A clear effort should be put on economic analysis and to find the right economic arguments to address end users concerns, which would complement concerns on training and technical feasibility. Another mitigation measure could be to invite to workshops funding entities (banks, consultants, other....) that may provide support to SMEs for funding their investments in MAM adoption |
| Risk3: Low engagement of the public sector for supporting training and TT platform replicability in other regions. | Drastic changes in the national and regional priorities and political engagement towards AM and the aerospace sector. | Provide arguments to convince that it is worth considering the opportunity for aerospace industries to fund (part of?) training and technology transfers. |

Risk management

Iniciativas Innovadoras will assess on a six-monthly basis the early warning indicators for identified Risks, propose further mitigation measures if necessary and add additional Risks if such are deemed as necessary and report this information to the Steering Group through a Risk Log to be included on the Monitoring Report.

7. ANNEXES

- Annex 1. Gantt Diagramme.
- Annex 2. Work Plan template.
- Annex 3. Monitoring Report template.
- Annex 4. Balanced scorecard.

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