Digitourism Project

Instituto Tecnológico de Aragón (ITAINNOVA)

Action plan

Content

1 PREFACE

During the Phase 1 of the Digitourism project (June 2018 – May 2021, extended to August 2021), all partners identified interesting practices and initiatives which could be inspiring enough to lead to an improvement of public policy, or to the duplication of this experience in their territory.

Following these three years, a two years long second phase of the project is starting, when project partners will improve their policies and use the outcomes of the project. This document is the road map of this second phase.

2 GENERAL INFORMATION

Partner organisation: Instituto Tecnológico de Aragón (ITAINNOVA)

Other partner organisations involved (if relevant):

Country: SPAIN

NUTS2 region: Aragón

Contact person: Sergio Mayo Macías

- email address: smayo@itainnova.es
- phone number: +34 691048924

Contact person: Pablo Pérez Benedí

- email address: pperez@itainnova.es
- phone number: +34 609217598

Contact person: Isabel Villarig Garrido
- email address: ivillarig@itainnova.es
- phone number: +34 976010070

3 IMPROVEMENT OF THE TARGET POLICY

Name of the target policy: ERDF Regional Operational Programme 2014-2020; Axis 1 – Thematic Objective 1 Strengthening research, technological development and innovation; Investment Priority 1B

Nature of the target policy: X Investment for Growth and Jobs programme

                                      ☐ European Territorial Cooperation programme

                                      ☐ Other regional development policy instrument

Name of the managing authority of the target policy: Ministry of Finance, Government of Spain

Further details on the policy context and the way the action plan should contribute to improve the policy instrument are described in the following sections.

4 POLICY CONTEXT AND ACTION PLAN METHODOLOGY

In this section it's detailed the framework of the policies targeted by the Actions of this plan, as well as the methodology we've used to build the different Actions.

4.1 ERDF Regional Operational Programme

Aragón has an operational program for granting ERDF aids under the objective of investment in growth and employment for the region of Aragón for the period from 1 January 2014 to 31 December 2020, and which contains eligible actions until 31 December 2023. The aim of the program[1] is to define a strategy to address the main weaknesses affecting the economic and social progress of the Aragon region, which is consistent with the EU's political intervention framework and enjoys a high degree of consensus in order to involve the various social players and institutions in its development.

The Action 1 of this Action Plan is connected with the ongoing ERDF program (2014-2020), more specifically, with the aforementioned Axis, Thematic Objective and Investment Priority.

At present, Aragón is developing the next period (2021-2027) ERDF program. ITAINNOVA, as regional ERDF managing body, is one of the organizations involved in this process and influencing this new program. The Action 2 of this Action Plan is connected with the development of the next period ERDF, in terms that it pursues to influence this policy testing a pilot that, if successful, could imply the possibility of funding this type of actions in the new ERDF framework.

---

[1] https://www.aragon.es/documents/20127/6488357/PO+FEDER+ARAGON+REPROGRAMADO+enero+2020+-con+car%C3%A1tula%2C+Decisi%C3%B3n+y+Anexo.pdf/76e4fe23-4f0c-faa3-164c-d8c6ca7b1f3a?t=1582789616578

4.2 Methodology of the Action Plan

The present action plan has been developed on the basis of acquired knowledge in the exchange of experiences, identified needs in stakeholders group, as well as contributions from cooperating agents of the regional environment, particularly Turismo de Aragón, in charge of the Tourism strategy development in Aragón, and that is providing advice to ITAINNOVA for the proper implementation of DIGITOURISM project.

The main contributions to the Action Plan come from the following activities carried out throughout the implementation of the DIGITOURISM project during phase 1:

4.2.1 Study Visits

During the execution of the phase 1 of the project, both on site and online study visits have been performed. Thanks to the contributions of both partners and regional stakeholders during these study visits, and also with fruitful discussions with them, were able to know the details of good practices for the supporting and fostering of innovation in the Tourism sector through a large variety of instruments (using digital technologies like AR/VR, etc.) implemented at local, regional and national level, some of them financed with EU regional funds. The most outstanding good practices known during the study visits have been collected in the [project website](), and they're a very valuable source of inspiration and transferability.

4.2.2 Stakeholders Group

Led by Turismo de Aragón, the regional authority for Tourism policies (that attended most of the study visits), we've shared a number of requirements, news, needs and good practices within this group, very useful both for the project goals (to check which kind of good practices are the most useful and transferable to our territory) but also for the stakeholders usual operation (to get to know the real needs and problems of the sector for adopting these solutions and technologies). Actually, the main output of this activity has been the acquired awareness (by Turismo de Aragón) of the importance of digital technologies and, thus, a deeper involvement and commitment for future collaborations (as it'll be pointed out in action 1 of this plan).

5 ACTION PLAN

5.1 Action 1 – Creation of an Innovation Unit for promote the use of Digital Technologies in Tourism

a.   Relevance to the project

During the phase 1 of the project we've learnt a number of Tourism sector related and AR/VR/Digital technologies good practices. Almost all of them have been really impacting and transferable to our region, but our main discovered insight have been the real need of cooperation between technology and Tourism agents. It's not been unusual to check in several regions that technological ecosystem is developing very valuable tools for tourists and tourism agents and, on the other side, that tourism sector can suggest and promote useful and innovative technological tools for their goals. A needed common place and dialogue is underlying the aforementioned scenarios.

Among other observed good practices, an key inspiring one for this goal was "Culture in Range 2.0", where cultural policy makers have promoted the development of technological tools for taking care, enhancing and putting into value the cultural assets of the region. This is a proven and succesful example on how a non-tech policy/target may use the technological ecosystem for reaching their goals.

Indeed, cooperation seen as punctual joint work is maybe a short approach for implementing and transferring this concept: The need of a permanent dialogue and work among technology and Tourism agents. This is the inspiration and the why for this action.

b.   Nature of the action

This action pursues the creation of a permanent joint Innovation Unit between **ITAINNOVA** (Instituto Tecnológico de Aragón), as main regional public body for technology innovation, and **Turismo de Aragón**, as regional public body in charge of Tourism strategy and promotion.

Both institutions have a record of past collaboration, in terms of specific projects and actions. In fact, one of them, the Smart Tourism Platform, was selected as good practice by DIGITOURISM partners in the Study Visit in Aragón, and is about to face an evolution in the coming months.

This Innovation Unit, with no legal/organizational entity, will be composed of personnel from both institutions, with a partial dedication to comply the following goals:

- To develop a roadmap for the innovation of the regional tourism sector via Digital technologies.

- To technologicaly evolve and develop further functionalities of the existing Smart Tourism Platform.

- To search funding opportunities for launching regional projects and/or calls addressed to SMEs (both technological ones and from the tourism sector) to develop digital solutions (AR/VR/Digital realities) for the regional touristic assets.

- To influence the next ERDF program to include the possibility of funding projects or launching calls for the tourism sector including digital solutions (AR/VR/Digital realities), which is not possible in present ERDF regional program (2014-2020). More precisely, we want to include this possibility in this concrete line: *ERDF Regional Operational Programme 2021-2027 - Policy Objective 5 Europe closer to citizens by fostering the sustainable and integrated development of all types of territories. Specific Objective: Fostering the integrated and inclusive social, economic and environmental local development, culture, natural heritage, sustainable tourism and security in areas other than urban areas*. Action 2 of this plan is one action supporting this task, but the Innovation Unit with Turismo de Aragón will promote other internal actions and workshops to influence the next ERDF program for including funding for Digital Realities projects for Touristic sector.

c. **Stakeholders involved (please indicate the organisations in the region who are involved in the development and implementation of the action and explain their role)**

Turismo de Aragón will be an stakeholder involved in this action. As the public body in charge of the regional Tourism strategy and management, they have the position to launch new initiatives and also to influence the policy making for complying with the aforementioned goals for the Innovation Unit.

d. **Timeframe**

Estimated start date: September 2021
Main milestones:

- Sept 2021 – Dec 2021: Formal creation of the Innovation Unit. Outputs: Document stating the creation of the Unit and detailed goals for year 2022.
- Jan. 2022 onwards: Development of the actions needed to meet the aforementioned goals. Outputs: New version of Smart Tourism platform; roadmap for the innovation of the regional tourism sector via Digital technologies; List of projects/calls launched. Report with recommendations for ERDF 2021-2027

Estimated Approval / enforcement date: N/A, continuous process

e. Indicative costs

We estimate an effort of around 30.000€/year, (15.000€ per involved institution). This is an estimation of around 3PMs/year per each institution. No relevant costs beyond the personnel involved in the Unit.

f. Indicative funding sources

ITAINNOVA will use own resources and the policy instrument indicated in point 3 (*ERDF Regional Operational Programme 2014-2020; Axis 1 – Thematic Objective 1 Strengthening research, technological development and innovation; Investment Priority 1B*) to fund these activities. ITAINNOVA is managing body of this instrument and launched a funded set of activities for working on the creation of this Innovation Unit. Thus, this action success influencing the aforementioned policy, which it was a main goal for us in DIGITOURISM project.

Turismo de Aragón will use own resources to fund this action.

5.2 Action 2 - HARD TO REACH (H2R) Pilot Action

a.   Relevance to the project

During DIGITOURISM project, many very interesting good practices have been identified, using digital technologies (mainly, but not only, AR/VR and Video 360º) to allow enjoying a new and different experience or to enhance existing ones with a 'digital touch'. An important set of these good practices have in common that they use digital technologies for giving access to difficult to reach touristic places/attractions/experiences. This 'hard to reach' concept may not be only due to the touristic destination/experience itself, but it also may happen because of the people capabilities (kids, elderly, etc. that may not be able to access those concrete experiences). This is a common shared view among different DIGITOURISM partners, and overcoming these difficulties is the why of this action.

We have acquired inspiration for this action in several good practices identified in DIGITOURISM study visits, but some of them are really in the focus of our goals. We are going to use specially 2 good practices observed during the project, to test at regional level the properness and adequacy of those solutions for allowing "difficult to reach" tourism.

- **Isère outdoor 360°** https://www.interregeurope.eu/policylearning/good-practices/item/3382/isere-outdoor-360/
- **Agroverzum** https://www.interregeurope.eu/policylearning/good-practices/item/3449/agroverzum/

These good practices were selected as the most proper ones for our action purpuses for several reasons:

Outdoor 360 shows a very good use of video 360º technologies, used with immersive devices (allowing also VR capabilities), for experiencing some so-called extreme sport practices in nature environments.

Agroverzum shows a very valuable sample of a proper use of digital (AR/VR) technologies for both educational and leisure purpose regarding agriculture research. The choice of each technology aims to be adapted to the content and the pursued objective.

NOTE 1: This action have been submitted (and approved) as a DIGITOURISM "Pilot Action" to the INTERREG EUROPE Program.

b.   Nature of the action

Going into detail, the precise nature of the activities to be performed is to check the impact of AR/VR/Video 360º 'virtual visits' in different type of tourists. On one hand, the virtual

visits have in common to be 'difficult to reach' places/experiences. On the other hand, the selected virtual tourists are a sample of high potential consumers of those difficult to reach digital experiences.

The target group we're focuing in this action has these characteristics:

- o Sparsely populated and aged area
- o Possible difficulties in internet connectivity
- o Lower level of use of tech devices supporting AR/VR/360º video

This means that people in these areas have more difficulties than others to enjoy both real tourism experiences and the possibilities of using digital technologies supporting an enhanced touristic experience. Besides, the selected content for the pilot will be especially proper for this group, since otherwise it would be hard to be reached by them. This means that we're facing the aforementioned twofold 'hard to reach' concept: The touristic experience itself and the possibilities of the people to access that type of experiences.

With this action, we're carrying tourism experiences to this target group. The touristic assets are the ones 'travelling', instead of the people themselves.

The content that will be created for the virtual experiences (2 experiences expected to be developed) will be selected among the following options:

- Immersive Tour in a natural protected area in Aragon
- Immersive Extreme experience in nature (sport, zip line, via ferrata, etc.)

We will test this action in a small and with aged population village, located in a sparsely populated area. We will use existing facilities (public place in the village) for testing the content with our AR/VR devices and also via web capabilities.

The planned activities to perform this action are the following, scheduled in a total of **12 months** of execution for the action:

1) **In-depth best practices analysis and detailed concept of the regional H2R Pilot Action** (4 months)
- Analysis of observed good practices + users groups: Revision of observed good practices and adecquation of a proper narrative of the eperience, depending on the target group capabilities and interests.
- Definition of the virtual experiences: We will define the proper content for each experience
- Definition of evaluation tools and/or methodology among partners: We will develop a joint methodology and set of tools for evaluating the impact of the action on the final users.

2) **Design of the AR/VR H2R solution** (5 months)
- Content creation: Content will be developed for the virtual experiences defined in activity 1. This will be "field work" to be developed in order to recording real video or developing 3D models for the virtual visits/experiences.

- _Devices selection and content deployment_: The most proper headsets for suporting the virtual experiences/visits will be selected, taking into account the final users environment and virtual content needs. Also, access via web with "virtual rooms" for experiencing visits easier will be also evaluated and, if considered proper, used for testing purposes. Technical tasks for deploying the content over the devices/web, and getting them ready to be used by final users.

3) **Development of the H2R experience** (7 months)
- This activity will complete the design of the H2R exprience of activity 2 (more focused on technical issues). Only content creation and deployment over devices or web platform is not enough for improving the chances of success.
- A complete "user journey" will be developed for engaging the target groups in their virtual experience. Using storytelling fundamentals, a meaningful story will be developed for final users experience.
- This activity may be started in semester 1, since it's closely joint to activity 2, but final output of this action will be obtained after activity 2 is over, since the "user journey" needs all the technical content to be deployed in order to build the complete experience.

4) **Testing phase and validation** (6 months)
- Testing with users: The H2R experiences will be tested with final users, selected jointly with Turismo de Aragón, in several and available scenarios (home, village social facilities, etc.), in order to answer the questions regarding the impact on our target group. A more detailed plan for this testing task will be developed while activities 2 & 3 development, but we expect ot test it in, at least, 2 different scenarios and with 2 different set of users. The selection of the testing scenario + users will be part of this task. We will focus on elderly people on sparsely populated areas.
- Impact evaluation with final users: Using the methodology/and tools developed in activity 1, we will collect users feedback for getting the best insights and areas to be improved in the pilot action.
- Report generation: A report to feed DIGITOURISM action plan will be developed, including the whole development of the pilot and the feedback received, and with the main goal of being useful for replication and generalization purposes.

5) **Dissemination, generalisation, transferability and management** (12 months)
- DIGITOURISM channels will be used for disseminating and making awareness of this action.
- Management effort will also be shared with DIGITOURISM action plan deployment (DIGITOURISM phase 2), since both tasks will be totally aligned.
- An initial workshop will be scheduled to clarify and put into detil the specific items and processes identified in the godd practices and to be transfered. DIGITOURISM partners owning those Good Practices may be invited. They could support us both in detailing the type of devices and contect creation issues, taking into account that renewals may have beed arised since we experience the good practices in the Study Visits. We will schedule monthly meetings/workshops with Turismo de Aragón + other stakeholders (depending on each meeting/workshop: SMEs, Regional Government Departments) to specify and detail both requirements and insights of the pilot action, to be used as input for the final

report of recommended actions for new regional ERDF Policy Objective 5 goals (stated in action 1 of this document). We will continue with the scheduled monthlly meetings among Turismo de Aragón, Instituto Tecnológico de Aragón and the proper stakeholders (if needed), and we will develop the final report regarding specific actions and recommendations for generalise this pilot action in ERDF Policy Objective 5 regional document.

c.   Stakeholders involved

Turismo de Aragón: As regional public body in charge of Tourism strategy and policies, they will support the action in terms of:

- Most proper content to be included in the virtual visits/experiences to be tested
- Suggested areas and users for testing (villages, target focus, spaces with potential to be permanent, etc.)
- Creation of a "user journey" (activity 4) for engaging the final users in their virtual experience enjoy.

Other members of the Regional Stakeholders Group may me contacted on demand, but this need may arise during the execution of the action.

d.   Timeframe

Estimated start date: November 2021

Main milestones:

- February 2022 outputs:
  o Methodology and tools for evaluating the impact of the pilot action
  o Set of Virtual Experiences definition
  o Content developed for Virtual Experiences
  o Technical developments for integrating the virtual content in the AR/VR devices / web platform
- October 2022 outputs:
  o Complete virtual experience pack: Virtual Experience (virtual tour) + user journey (for engaging purposes)
  o Report of insights and feedback: To be used in Action Plan for replication and generalization purposes
  o Report of recommendations and specific actions for including pilot action insights/outputs in ERDF Policy Objective 5 regional document.

Estimated Approval / enforcement date: September 2021 (depending on INTERREG EUROPE resolution)

e.   Indicative costs

Partner	Staff costs	Office and administration	External expertise and services	Equipment	Total pilot action budget
Instituto Tecnológico de Aragón (ITAINNOVA)	22.250,00 €	3.337,50 €	9.000,00 €	4.500,00 €	39.087,50 €
Total	22.250,00 €	3.337,50 €	9.000,00 €	4.500,00 €	39.087,50 €

f.   Indicative funding sources

This action will be funded by INTERREG EUROPE as DIGITORURISM Pilot Action

6   OTHER RESULTS OF THE PROJECT

Thanks to the Digitourism project, many interesting practices, initiatives and policies were observed. Some of them offered inspiration to improve the main policy instrument tackled by the project, as presented in point 5 of this action plan.

But these learnings can also benefit to other policy instruments or local and regional strategies. Digitourism partners intend to make use of as many interesting learnings from the project as possible, to make the most of this project.

This is the reason why, in addition to the actions presented in the section dedicated to the main policy instrument target, we tried to identify all possible contributions from our project to improve other regional, national or EU policies in one hand, and transfer effective practices on the other hand, of course always in relation to the main topic of the project: the innovative use of Digital realities in tourism.

Actually, many good practices could be quoted in the point below, since most of them have very valuable insights in terms of

a) Public-Private collaboration, including public policies for this goal

b) SMEs and collaboration with the Tourism sector and

c) Technological innovation in Digital Realities applied to Tourism.

Thus, we decided to describe just the most related to our plan goals and properness to be transferred.

6.1   Good practices transferred

Thanks to **Action 1** of this plan, we've been using inspiration and partial transferring of the following practices:

1) **Culture in Range 2.0** - Kujawsko-Pomorskie Voivodeship Marshal's Office - Kujawsko-Pomorskie (Poland)

   Description: The aim of the project is to provide all people interested (mainly residents of the region) with tools for active participation in cultural events in the region, as well as the digitization of the resources of cultural institutions, which will allow to preserve the regional heritage for future generations. The priority objectives of the Project will be achieved through a number of tasks involving an increase in the scope of application of information and communication technologies in the sphere of public services through digitisation, publication and reuse of regional heritage resources held by cultural institutions.

   We got inspiration from this practice in terms of the fruitful collaboration between two normally separeted worlds: Culture (heritage enhancement and conservation) and technology. This is a clear example on how success can arise whe two different approaches

try to foster the cultural/touristic assets of a region. Thus, we intend to partially transfer this approach via the Innovation Unit described in 5.1. Details on players, timeframe, budget and funding can be checked in 5.1

2) **FIWARE Digital Innovation HUB for Business Acceleration – FiiHUB** - Innovalia Association – Canary Islands (Spain)

Description: FiiHUB reaches its objectives in different ways: offer easy access to Open Source technologies, business development support, and community building that enable local digital businesses to thrive at a regional and a global level. FiiHUB is devoted to instructing and educating, helping and advising local communities, matching the demands of their local market, and creating new demands. FiiHUB has been implemented thanks to the Interreg Mac program (an ETC program), with 85% ERDF funds.
The main stakeholders are regional public institutions, science and technology centers, universities, and chambers of commerce and industry from the Canary Islands, Azores, Madeira, and Cape Verde.
The main beneficiaries are local businesses (SMEs) and entrepreneurs from the region, who need support to grow in regional, national and international markets, to engage in innovation processes using FIWARE technologies.

For us, as coordinators of the Aragón DIH (stated as good practice for our region) and developers of the Smart Tourism Platform (also good practice in the project), this a very interesting good practice. One of the goals of the Action 1 is to evolve the present Smart Tourism Platform, and the approach developed by FiiHUB (both technological and in terms of open access and ecosystem) has several key issues that can be partially transferred to our region

Thanks to **Action 2** of this plan, we will be able to partially transfer these observed good practices:

1) **Isère outdoor 360°** - Conseil Départemental de l'Isère - Auvergne-Rhône-Alpes Region (France)

Description: The Youth and Sports service of the Isère Departmental Council wanted to encourage the general public to practice outdoor sports innovatively. Using a series of 360° videos of different disciplines (kayaking, caving, mountain biking, via ferrata, etc.), and equipped with a virtual reality booth, the department offers immersive experiences at major sporting events in Isère as well as in schools. Virtual reality helps create genuine empathy with a safe approach to certain sports that are sometimes unjustifiably considered extreme.

The proposed immersive pilot action in Aragon has a lot in common with Action 2 of this plan: Used methods and technologies are similar as well as the goals are. We will provide this type of "hard to reach" experiences to our target groups, which are also living in "hard to reach" areas (in terms of access to touristic experiences). Thus, this practice will be partially transfered thanks to Action 2 of this plan.

Details on players, timeframe, budget and funding can be checked in 5.2

2) **Agroverzum** - Centre for Agricultural Research, Hungarian Academy of Sciences. Közép-Magyarország (Hungary)

Description: The exhibition of Agroverzum in Hungary contains numerous modern, interactive and AR/VR technological related solutions. The interactive permanent exhibition of the Agroverzum shows some of the phenomena that are being dealt with in the Centre for Agricultural Research Centre. You can use interactive tools, watch animations, movies and try yourself in various games. You can have a glance at scientific research work. There are spectacular multimedia touchscreens, augmented and virtual reality applications, as well as an indoor and outdoor tour guiding mobile application besides Hungary's digital terrain desk. 15 IT-based attractions (including an indoor and outdoor mobile application, touchscreen/AR/VR terminals, 3D layout).

We were inspired by Agroverzum because it shows that exhibitions with educational purpose should pay attention to modern technologies to achieve visitors satisfaction. It is a good example of how to adapt both content and devices to the target groups experiencing the visit. Thus, the type of content shown (adapted for different profiles/ages), the differente devices used (adapted to both techies and tech laggards) and the amount/type of information shown (configurable by users and adaptable for each target) from Agroverzum experience are a model for us to create a proper and adapted content for the virtual visits of our action. Thus, this practice will be partially transfered thanks to Action 2 of this plan. Details on players, timeframe, budget and funding can be checked in 5.2

Date: 13th October, 2021

Name of the organisation(s) : Instituto Tecnológico de Aragón

Signature(s) of representative of the relevant organisation(s):