



EULEP

WP2 -- MARKET ANALYSIS

**FOCUS GROUP ON ARTIFICIAL INTELLIGENCE AND
VIRTUAL REALITY IN TOURISM**

PANEL “TRAINING-UNIVERSITY”

(March 28th 2023)

REPORT

*EULEP - European Learning Experience Platform
Connecting Centres of Vocational Excellence to develop and deliver
innovative transnational C-VET training in AI, VR, social innovation*



**Co-funded by the
European Union**

Project Name: European Learning Experience Platform - Connecting Centres of Vocational Excellence to develop and deliver innovative transnational C-VET training in AI, VR, social innovation

Project Acronym: EULEP

Work Package: 2 - Market Analysis

Document title: Qualitative Focus Groups on needs and relevant skills required by companies in the tourism sector and its supply chain about Artificial Intelligence and Virtual Reality. Annex 3: Panel “Training-University” Report

Authors: edited by Unioncamere, reviewed by INAPP, IFOA, Università degli Studi di Genova



QUALITATIVE FOCUS GROUPS ON NEEDS AND RELEVANT SKILLS REQUIRED BY COMPANIES IN THE TOURISM SECTOR AND ITS SUPPLY CHAIN ABOUT ARTIFICIAL INTELLIGENCE AND VIRTUAL REALITY. PANEL “TRAINING-UNIVERSITY” REPORT

Table of contents

Introductory note.....	3
Introduction of participants.....	3
Findings	5
Recognisable features of digital-related change (ex. Artificial Intelligence)	5
Reflections on digital innovation-driven change in tourism.....	6
Opportunities, constraints, threats and incentives	6
Barriers to access: conditions enabling or hindering innovation	7
Business attitude towards digital tools (AI, VR etc.).....	8
Which factors should be invested in? How to develop the ongoing change (human capital, financial resources, management organisation)? How to activate learning chains?	8

Introductory note

This document reports the conclusions of the third Focus Group held by Italian partnership of EULEP project, specifically dedicated to tourism, a high priority industry in Italy's economy.

The Focus Group was held on March 28th 2023 and aimed at investigating the knowledge and use of AI/VR and related skills needs, from the point of view of training/Universities in tourism sector.

The results might indicate the best strategies for the evolution of the tourism sector, in Italy and in Europe, and provide strategic guidelines, useful to meet the demand for innovation promoted by the European Commission.

The training needs, detected with a bottom-up and end-user-centred approach, will be taken into account to develop some of the training modules of EULEP open learning experience platform, that Unioncamere will dedicate to innovative AI and VR topics applied to tourism sector and its supply chain.

Introduction of participants

Roberto Basili is Full Professor at the Enterprise Engineering Department of the University of Rome "Tor Vergata" and member of the Tor Vergata Artificial Intelligence group (ART) since 1991. His current research ranges from natural language processing to machine learning, knowledge representation and applications such as information retrieval and the semantic web. He teaches Fundamentals of Programming in C++, Database Systems and Information Retrieval at the Department of Computer Science, while a course on TAL (Automatic Language Processing) has been taught since 2005 at the Department of Linguistics of the University of Tor Vergata.

Stefano Armando Ceci is Adjunct Professor at IULM University of Milan where he teaches "Startup in Tourism" and "Narration and Communication of Territories". At the University of Padua he teaches "Innovation and digitization in Tourism". He is Senior Innovation Advisor of LVenture Group S.p.A. and Project Leader of the startup accelerator "Argo" promoted in collaboration with the Ministry of Tourism and CDP Venture Capital SGR. He is also a Web3 expert, founder of the Think Tank "Futurew3b", business designer and developer of some startups, including Reasoned Art (crypto art) and Takyon (travel exchange). He is an Angel Investor in Italian Angels for Growth.

Marianna di Salle is coordinator of the Master in Tourism Economics at Bocconi University (MI). Founded in 1902, Bocconi is a recognized University for training and research activities in Economics, Management and Social Sciences. Integration between research and teaching, close dialogue with companies and world of work and internationalisation are the pillars of Bocconi University, the first School in Italy to set up a post-graduate course in Tourism Economics in 1986, today a pre-experience university Master's degree.

Bocconi has recently introduced two degree courses that combine different aspects of STEM disciplines (the three-year degree course Mathematical and Computing Sciences for Artificial Intelligence and the master's degree course in Economics and Management of Innovation and Technology) and has a Lab dedicated to Artificial Intelligence.

Roberto Mancinelli is Head of Business Development of Treccani Accademia, Management School of Treccani Institute, historic Italian cultural institution responsible for compiling, updating, publishing and disseminating the Italian Encyclopaedia of Sciences, Letters and Arts. Treccani Accademia offers an authoritative and excellent education to recent graduates, managers, professionals and companies. The didactic methodology adopted is strongly innovative and operationally oriented and aims at developing professional skills and competences, through innovative teaching methods, focusing on individual talent and offering an important opportunity to enter and grow in the world of work. Treccani Accademia is an accredited body at the MIM (Italian Ministry of Education).

Danila Mele is Head of External Relations at Intrecci Formazione, where she coordinates the Master in "Sustainable Tourism Management". The "Accademia di Alta formazione di Sala Intrecci" (Intrecci Academy of Higher Education of Sala) at Castiglione in Teverina (Viterbo province) is a post-diploma training course with a residential formula exclusively dedicated to dining room service, oriented towards high-end and very high-end international catering. The project consists of three phases: a residential phase of lectures / practical workshops and study trips in Italy and Europe; an internship phase worldwide; a final phase of examination and overall assessment. Its proposal and methodology are innovative: each subject has a resident lecturer and multiple guest lecturers, coming from the world of work, in order to create direct contact with the market and immediately associate theory with professional practice.

Through a mix of learning, experiences and knowledge enhancement, the Master in "Sustainable Tourism Management" focuses on training profiles with technical-management skills to operate in tourism supply chain in territories with a strong vocation for cultural and "slow" tourism, from a sustainability perspective.

Susanna Mensitieri has been Coordinator and Head of the Master's degree course "Tourism and Territory: economics, marketing, eco-sustainability" at the Luiss School of Government since 2003, the year of its creation. She collaborated in defining the didactic structure and faculty and, over these twenty editions, she has overseen updating and integrating programs and faculty, relations with enterprises and supervision of placement.

Paola Persi is Manager in Institutional and Corporate Relations - Business Development- Marketing Project - Fundraising at Gambero Rosso, leading platform for content, training, promotion, and consultancy in the Italian Wine Travel Food sector. Gambero Rosso offers a complete range of integrated services for the Italian agricultural, agri-food, catering, and hospitality sectors. It has a wide range of periodicals, books, guides, broadcasting, web OTT which reach enthusiasts, professionals, commercial distribution channels in Italy and in the world; offers the Italian production system an exclusive program of B2B promotion events to encourage its constant international development and organizes national and international events dedicated to the excellence of Italian wine. It is also a community of enthusiasts and operators in the sector in continuous growth on social media. Gambero Rosso Academy is the largest professional training platform, which today includes 5 operating structures in Italy (Città del gusto Lecce, Naples, Palermo, Rome and Turin) and joint ventures with the main Italian universities and Academies in the most important foreign countries.

Findings

Recognisable features of digital-related change (ex. Artificial Intelligence)

To better understand the characteristics of the application of AI in tourism, it is necessary to start from the concept that the development of digital systems and AI takes place within computer science and has to do with pure technology. When it is transposed to applications dealing with the needs of a complex sector such as tourism, other domains come into play that have to do with both the individual, his psychology, natural language, and with the community, its economy, social relations and so on.

To graft advanced technology into tourism, interconnecting knowledge, from scientific to humanistic, is fundamental. In the modern world complexity has increased: relying only on the sophisticated AI tool, neglecting other skills (social, humanistic, economic), does not bring about any evolutionary change. In fact, AI cannot provide ready solutions but support the decision-making process.

Tourism, on the one hand is made up of people and social communities, but on the other hand it is represented by billions of data, micro-data and big data circulating on the web.

The change in digital innovation means that computer science, a STEM subject, now has to compete with other disciplines. The evolution of this interconnection has strongly influenced the provision of Higher Education and first and second level University training for tourism-related subjects (economics, geography, social studies, psychology, statistics, etc.); training offer has changed over the years, giving more space to technology, innovation, making advanced digital tools available. Specific modules have been introduced on digital innovation (Big Data, tourism analytics, machine learning and the most important software for working with data,) on data analysis and on systems that, thanks to their ability to analyze large amounts of data, can support the companies' management strategies, marketing and revenue strategies.

The training courses tend precisely to increase the skills to manage the tools useful for companies to optimize their business.

Another evolutionary step is being taken by those in charge of providing tourism training to develop start-ups and entrepreneurship, for technological innovation itself (open innovation) can evolve through innovative start-ups and the related ability to become entrepreneurs, in the sense of offering technological solutions to the tourism business system.

Training on technological innovation provided by Universities, Masters' degrees, Academies of Higher Education and Business Schools, offers students an adequate level of knowledge and competence, even higher than that required by Italian companies.

Basic training is suitable to start on a career path, the real issue to be solved is how the training system can better interact with companies on the training side, how innovation can be internalized by companies and what companies are able to do to develop transversal and entrepreneurial skills.

In fact, teaching programs are formulated in agreement with the organizations and institutional tables; as far as computer engineering is concerned, basic skills training is of an excellent standard, but its applications in transversal areas and its interaction with humanistic and economic training are still lacking.

Reflections on digital innovation-driven change in tourism

The drive for digital innovation in tourism concerns opening digital culture to all, so an effort is needed in terms of computer literacy, in the sense of culture of knowing how to correctly use and benefit from tools in tourism.

According to experts in the field of education, the Italian training system is not yet ready to ride the evolutionary changes of digital processes. Technology, in fact, enters, breaks in and modifies production and work processes, but training paths that are still vertically set on the single technical subject.

Moreover, while technical (IT) skills are sufficient to prepare IT technicians, in Italy the evolution in AI is not reflected even among IT corporate players themselves, because industrial organizations have not yet fully understood the change in production processes and grasped the opportunity for innovation.

Training must therefore act on the change of processes and organizations, in order to connect the evolutionary and disruptive drive of technology with its functional application, not only in tourism but also in many other economic sectors.

Business world talks a lot about training and demands trained personnel but does not invest in training, deeming to delegate the task to educational and training institutions: a distinction, instead, would be made between basic training (University level) and interdisciplinary training, based on in-company paths, or specialization in business schools for example, distinguishing different training stages, all aimed at professional growth.

Currently, however, there is a lack of connection between the various training chains.

Moreover, tourism appears reluctant to innovate, while digital transformation can have its positive evolution only if logistics and top management accept to be protagonists of the change process.

To make digital systems functional a great deal of technical training is needed, but to interact with the problems of communication, a greater economic and humanistic culture is essential.

In Italy the problem is not the lack of basic knowledge, but the ability of the production structure and organizational top management to accommodate and exploit knowledge.

Opportunities, constraints, threats and incentives

One of the main obstacles to digital innovation, and in general to tourism industry digitization is the lack of demand from companies for professionals with specific digital innovation skills.

The level of innovation of tourism businesses in Italy is poor, Italian enterprises are dwarfs if compared to the rest of the world.

Large companies, those for example belonging to international chains, are more advanced on these issues: the job placement of second-level Master's students or graduates in STEM subjects is also the prerogative of the international tourism offer (chains, OTAs, etc.).

Remaining Italian companies, even the largest ones, seem to require skills and knowledge directly from university which, however, fails to satisfy this demand since their role and training tasks are focused on basic knowledge.

The University systems provide for digital skills but, to trigger change, Italian trade associations need to be encouraged to invest in the aforementioned interdisciplinary training, that combines relational skills with more technical ones.

Moreover, the most advanced frontiers in AI and digital innovation (block chain, for example) are unknown and not ridden by the Italian tourist economic system.

Instead, there is a need to bridge the gap between the opportunities of advanced digitization and the current demand for technology, that still appears basic and not evolutionary.

Vice versa, the training efforts of Italian education system (from Universities to Masters' degrees, Business Schools, Academies), albeit lacking, is creating a generation of trained young people who will have to face both tourism businesses, backward and reluctant to innovation, and companies that are not able to access digital tools and their use.

One of the most worrying effects is the decline of young people's interest in job opportunities offered by tourism. Another negative consequence is the growing number of innovative startups that have no market outlets in Italy, because the corporate system lacks a widespread culture of innovation: thus, while it's currently very difficult to introduce innovation, it's equally difficult to link it to the market. It would be essential to set up higher education pathways also for non-graduates, for those who, for example, have attended ITS (Istituti Tecnici Superiori, Higher Technical Institutes) or Vocational training, in order to provide transversal skills also to intermediate profiles in companies.

Barriers to access: conditions enabling or hindering innovation

Tourism is still conducted in a very traditional way: as a result, companies are still looking only for traditional professionals. Young people who have undergone higher education in tourism, often end up working in companies resistant to change and innovation.

A similar attitude of closure to innovation can be found in Institutions and Public Administration. New professionals coming from interdisciplinary training, ranging from technical to relational and economic skills, are not yet legally recognized, in many cases. Figures such as innovation design or destination manager, cannot have a legal qualification or certificate their skills, despite many regional laws recognize DMO's as both public and public-private organizations aimed at developing territories in a touristic and economic sense.

This creates an obvious contradiction between the world of training and territorial tourist organizations on the one hand, which are betting on these figures, and Institutions on the other, which lack a skills' certification system, including extracurricular skills, for the definition of new professional profiles. Speakers underlined how fundamental extracurricular skills are for Italian tourism, precisely because basic (vertical) curricular training is not a sufficient condition to create new tourism managers.

A further barrier to the dissemination of digital innovation good practices is the lack of effective communication to smaller companies, that would allow them to learn about solutions and tools to draw on.

Business attitude towards digital tools (AI, VR etc.)

In Italy, 95% of companies have less than 45 employees. The small size of Italian tourism companies partly explains the low entrepreneurial culture towards innovation and consequently toward the inclusion of new figures from advanced training courses.

The result is a problematic mismatch between training providers and those who have to recruit trained personnel.

Today, tourism businesses require more relational than digital skills.

Italian tourism supply system thrives on a revenue of position from its attractiveness: this seems to satisfy businesses and does not stimulate change and investments in new innovative production processes.

Skills shortage also affects intermediate personnel: for the latter companies ask the world of training to implement interpersonal skills.

Companies do not demand for innovation and remain anchored to traditional management and organization. Changing companies, whose main asset is human capital, is very complex.

Often companies are not even interested in tailor-made training designed for their needs: many public funded training courses, workshops, accompanying services found no response and interest from tour operators.

According to the interviewees, it would be more useful and productive to include young graduates or with master's degrees, etc. in interdisciplinary projects if stimulated by the economic and labor system itself.

Which factors should be invested in? How to develop the ongoing change (human capital, financial resources, management organisation)? How to activate learning chains?

A large investment in open innovation is necessary towards the “middle earth” of tourism, made up of the majority of tourism enterprises that do not seem interested or do not know how to seize opportunities: a targeted investment on different territories, on the most attentive and interested companies in accompanying them in processes of digital transformation and innovation.

There is a need to move away from scattered and fragmented training towards a real investment in company support.

New ways also need to be found to stimulate a business world reluctant to change through reward mechanisms for companies that create new processes.

As regards the problem of entrepreneurial dwarfism and company size, the public system should suggest enterprises to federate, developing rewarding strategies and supporting business risks. It is a medium-term investment, but the timing of politics often does not coincide with medium and long-term projects.

To make public spending more efficient, one should have the courage to implement a reward system for companies that want to make a breakthrough. One of the most functioning mechanisms in Italy is emulation: rewarding companies that already have features of innovation could trigger in others the desire to grow, decisively selecting best practices and avoiding parceling out funds, which would otherwise be pulverized and have no effect.




UNIONCAMERE



tepav



This document was edited by Unioncamere – Unione Italiana delle Camere di commercio, industria, artigianato e agricoltura, and reviewed by IFOA, INAPP and University of Genova

© EULEP consortium partners 2023 (www.eulep.eu)

The reproduction of any information here presented is permitted provided that it is unaltered and that the source is quoted.

This document contains general information only. By no means its content can be considered as professional advice.

Funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or EACEA. Neither the European Union nor EACEA can be held responsible for them.

