

Report on the state of the art

Key findings of Work Package 1

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BIOHEALTH GEAR BOX ALLIANCE

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PROJECT

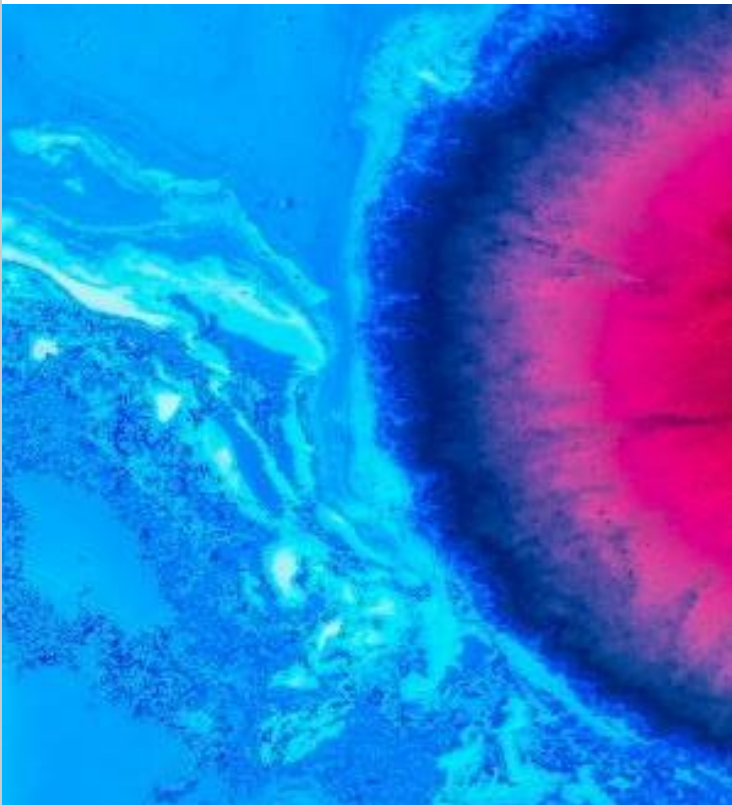
ACCELERATING KNOWLEDGE AND COMPETENCES TO BOOST EFFICIENT INNOVATION AND ENTREPRENEURIAL PROCESSES IN THE BIOHEALTH SECTOR

Today's needs and challenges:

- ✓ Entrepreneurial skills,
- ✓ Updated training,
- ✓ Upstream innovation,
- ✓ Acceleration knowledge,
- ✓ Startups support.



New, innovative and multidisciplinary approaches to teaching and learning entrepreneurial skills and competences for Business and Academia, in the BIOHEALTH sector.



Project's Objectives

- Boost innovation and startup in the BIO-HEALTH sector;
- Update the education & collaboration schemes so that both Business and Academia can join forces in the knowledge creation & share;
- Produce multidisciplinary human resources, with technical but more importantly t-skills and entrepreneurial mindsets that allow them to respond to the fast pacing technological and societal demands and explore the innovative potential of the BIOHEALTH sector;
- Enable learners to design and manage disruptive solutions and innovative business models.





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METHODOLOGY

CO-CREATION AND COLLABORATIVE DYNAMICS TO UNDERPIN THE DEVELOPMENT AND SUSTAINMENT OF GROUND-BREAKING EDUCATIVE ASSETS, METHODOLOGIES AND SCHEMES



The work developed within the Work Package 1, provides the necessary extensive and up-to-date theoretical and empirical backbone for the resources and activities to be carried out. Moreover, the results of these activities will also shape the roadmap (feeding the strategy with the relevant feedback of the key target-groups).

Desk-based and field-based research in close cooperation with Academia, Business and Incubators/Accelerators, plus public authorities, innovation agencies, business angels and venture associations.

PROJECT RESULTS

- 1. BIOHEALTH Gear Box Blueprint:** Driving Innovation and Entrepreneurship through the BIOHEALTH Sector;
- 2. BIOHEALTH Gear Box Engagement Events;**
- 3. International Joint Post-Graduation:** Advanced Skills for Innovation and Entrepreneurship in the BIOHEALTH Sector;
- 4. International Joint Accelerator Programme:** BIOHEALTH Gear Box Business Accelerator;
- 5. BIOHEALTH Gear Box Hub:** Virtual Network for Entrepreneurs and Innovators in the BIOHEALTH Sector;

TARGET GROUPS



Academia

- HEIs
- Staff
- Students (current and future)



Business

- Clusters, Chambers of commerce, Technology Broker, Venture Capital firms
- Established Technology-based Ventures
- Start-ups, Spin-offs (Seed-stage companies)



Science parks, innovation centers

- Staff
- Users

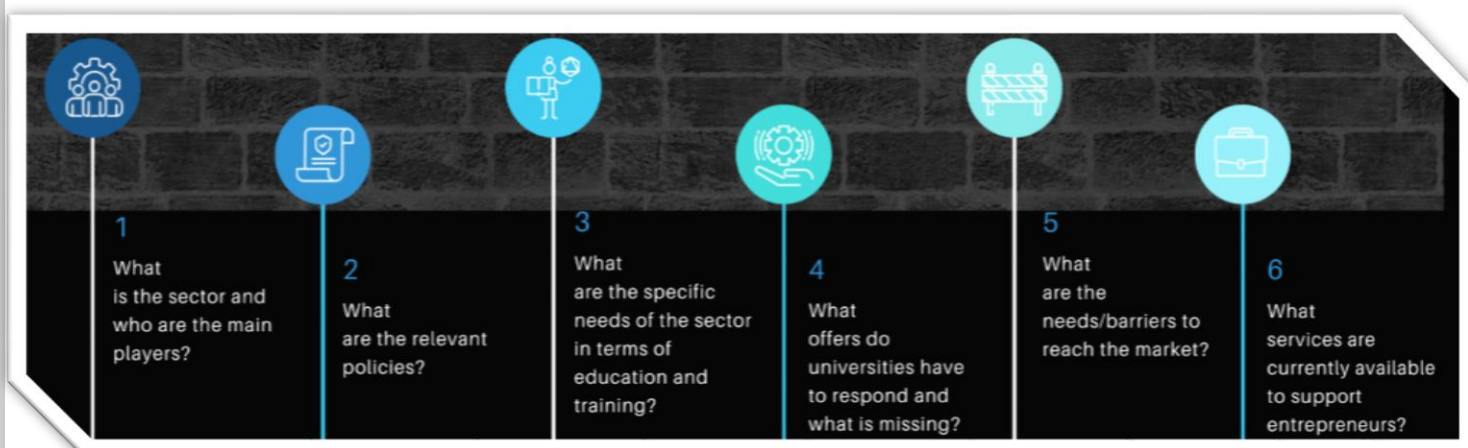




2 METHODOLOGY | DESK & FIELD RESEARCH

In the context of BIOALL project, the **DESK-BASED** research aimed to collect information, such as what exists in the BIOHEALTH sector in terms of governmental/ structural/ strategic perspective among Portugal, Spain and Italy, as well as examine official reports, documents at national and EU level.

KEY RESEARCH TOPICS



Revealing the field through the desk research led to a widely deployed field research activity, where the questions that derived from the country contexts analysis, were addressed to the main players in the BIOHEALTH field.

The **DESK-BASED** research aimed to collect evidences and validate assumptions from the desk research within the BIOHEALTH sector at national and EU level about:

- validation

These research activities have been implemented with the active involvement of the majority of the partners and main stakeholders through a participatory and mixed approach built-on balanced use of quantitative and qualitative methods and techniques.



The final **STATE-OF-THE-ART** report, includes a detailed descriptive framework and a comprehensive overview of the three countries (Italy, Portugal and Spain), also includes a comparative analysis between the three countries and final considerations to support the further development of the project. Each country then received a specific in-depth analysis aimed at capturing any specificity and characteristics with respect to the overall unitary framework.





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RESULTS | DESK RESEARCH

AN OUTLOOK TO 2030 SHOWS THAT EMPLOYMENT IN THE INDUSTRIAL BIOTECHNOLOGY VALUE CHAIN MAY INCREASE TO WELL ABOVE ONE MILLION FULL TIME EQUIVALENTS!

OVERALL ECONOMIC IMPACT



486.000 jobs in the IB value chain



€31,6 billion added value



1:4 job multiplier
For every job in the IB sector, there are 4 jobs created elsewhere

In 2030

Expected employment: 900.000 – 1.500.000
Contributing between €57,5 and €99,5 billion to the EU economy

The high multiplier effect that is driving an upstream employment in the IB sector generates a powerful modernised field of economy and action in the European landscape. Promoting a competitive knowledge-based economy, it spins-off growth and provides new jobs, while also supports environmental protection, sustainable development and public health.

Under this umbrella, the **BIOHEALTH** sector is recognised as the intersection of healthcare, life sciences, biosciences, information technology and manufacturing, and is offering several career opportunities in the industry, non-profit organizations and in government, or even in entrepreneurship.

POLICIES *Set in action we can find a wide kit of policies that support the sector*



- ✓ Entrepreneurship Action Plan to promote Europe's economic growth
- ✓ Erasmus for Young Entrepreneurs
- ✓ Also the Commission provides SME support through Europe Business Portal, Enterprise Europe Network and SMEs Internationalization support page.

NEEDS *BIO-entrepreneurship comes with unique challenges that demand for efficient training*



- ✓ Mentoring, marketing support, legal consulting, management coach and access to new tech
- ✓ Management, entrepreneurship, financial and marketing
- ✓ Entrepreneurial skills and competences

OFFERS *The training offers are mainly delivered in the Higher Education system*



- ✓ Entrepreneurship Action Plan to promote Europe's economic growth
- ✓ Erasmus for Young Entrepreneurs

BARRIERS *BIO-entrepreneurship comes with unique challenges in the following aspects*



- ✓ Regulatory affairs
- ✓ Research and Development (R&D) Costs
- ✓ Intellectual Property Challenges
- ✓ Product distribution
- ✓ Build collaborations

SERVICES *The training offers are mainly delivered in the Higher Education system*



- ✓ Incubators and accelerators
- ✓ Business development support programs (packages)
- ✓ EU and National funding schemes



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RESULTS | FIELD RESEARCH

A FRAGMENTED AND UNSTABLE TRAINING SCENERY IS UNCOVERED FROM THE PARTICIPANTS RESPONSES, REVEALING THE NEED FOR COORDINATED ACTION



Academy
involvement



Business
involvement



Incubators
involvement



Stakeholders
involvement

Among the 117 questionnaires received and coming from the three countries surveyed, the universities and their structures were mainly involved with 23%, followed by the "Companies" category with 20% and finally the "Incubators" category with 12%. The other categories included in the questionnaire are represented but with a high distribution and fragmentation.

EDUCATIONAL AND TRAINING SUPPLY

In the 58% provision of education and training, the hours vary between 8 and 16, and reach out to limited number of companies. Those who do entrepreneurial training appear to do it mostly in a structured way, on large groups and either as a continuous training or upon request. In 2 of 3 cases the training is free and is using internal and external personnel for compiling a more holistic capacitation. Also half of the participants are aware of the possibilities of the university courses offered.

CONSULTING SERVICES SUPPLY

Most companies interviewed, provide on average four different consulting spin-off services. The most commonly provided service is the "Business Analysis" followed by "Search for opportunities for collaboration" followed by "Support for Participation in Programs and Public Funds for Research, Innovation and Investment". Consultancy services, seminars, courses and training initiatives for business development are provided mainly free of charge in "Structured and Permanent" form or "Occasional on request" structures. the numbers relating to customers and organizations/companies that use the consulting services provided by each individual company are limited.

EDUCATIONAL AND TRAINING DEMAND

Of the 112 respondents, 65% replied that they received a request for educational and training services and on the other hand, the numbers relating to customers and organizations/companies requesting consultancy services provided by each individual company are limited.

CONSULTING SERVICES DEMAND

Among the 113 responses, we find that 71% received requests for consultancy services from spin-offs, start-ups, students, companies (more or less young) to support and for business development. The numbers relating to customers and organizations/companies requesting consultancy services provided by each individual company are limited.



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CONCLUSIONS

THE DATA COLLECTED AND THE OPINIONS EXPRESSED BY THE OVER ONE HUNDRED RESPONDENTS SEND ENCOURAGING AND SUPPORTIVE SIGNALS TO BIO/ALL

Nine out of ten respondent's claim that in the three countries considered there is a potential demand for these structured vocational educational training courses, consulting and services provided to support entrepreneurship in the BIOHEALTH sector.

Widespread and potential demand is so far matched by a supply of educational, training, consular and highly fragmented, articulated, mostly small-scale and small-scale services aimed at very limited recipients, interlocutors and segments, circumscribed, almost fragmented.

Thus the BIO-ALL intervention is considered a highly relevant and needed reforming action that will put in place the mechanisms that will spark the proliferation of the support and capacitating schemes.



Verdict: The "question" expressed by the interviewees but above all the fragmentation of the supply of services to organizations and people working in the so-called BIO-ALL sector pose the question and the need for the co-creation of collaborative dynamics between and within the relevant actors of the ecosystem (including universities, higher education institutions - staff and students, businesses, incubators/accelerators, investors, policy and decision-makers and other stakeholders), which will support innovative educational assets, methodologies and systems, intensifying the response capacity of the higher educational supply to current and future needs and supporting entrepreneurship in the sector.

OUR METHODOLOGICAL APPROACH INVOLVES YOU

The Bio-All project is built-on a sound participatory approach, where although partners represent end-users, the later are also called to participate and play an active role in co-creating, co-working and co-sharing activities. This is achieved through a set of small scale-events that cover various purposes





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