

DELOVNI SKLOP 3.3

WORKPACKAGE 3.3

Prenos tehnologije in znanja: spodbujanje inovacijskih zmogljivosti in konkurenčnosti na podlagi nove čezmejne Biotehnoške postaje

Technology and Knowledge Transfer: Promoting Innovation Capacity and Competitiveness Based on a New Cross-Border BioTech Station

Trasferimento delle tecnologie e della conoscenza: sfruttamento del potenziale per l'innovazione sostenibile e la competitività attraverso una Stazione biotech transfrontaliera

Aktivnost 3.3.5 – Načrt Biotehnoške postaje

Activity 3.3.5 – BioTech station action plan

Attività 3.3.5 - Roadmap della stazione biotech

Final document, in English

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Summary

The document "Technology and Knowledge Transfer: Promoting Innovation Capacity and Competitiveness Based on a New Cross-Border BioTech Station" was created for the purpose of developing the concept for the development of the BioTech Station.

The document drafts were written in English and the final version is available in Slovenian and English language. All partners will be involved in the development of the project, with TPLJ as the lead partner.

The concept for the creation of the Regional BioTech Station / Platform aimed to connect interested stakeholders of the FVG region and Slovenia, has emerged from an overview of the latest red biotechnology trends and a preliminary qualitative analysis of both regions and their stakeholders and further desktop research.

Global trends show us that, along with the high growth rate of the sector, the rich array of emerging biological drugs is changing the biopharmaceutical industry and as a consequence the red biotechnology sector. There is a great need for new technologies that enable more intensive production processes to reduce the cost, scale and overload of the environment. In addition, personal medicine guidelines are increasingly leading to the convergence of technology platforms that enable the rapid transition of innovation to standard care. Innovation, however, is increasingly being created and developed in so-called "Ecosystems" that allow the exchange of discoveries and access to expertise throughout the value chain from scientific discovery to treatment outcomes.

The document summarizes the key points of the health sectors of both regions and identifies its key stakeholders. The analysis of the identified stakeholders, based on the conducted interviews, showed that the stakeholders needs can be divided into 5 groups. These needs are; the need to market access, the need for a networking ecosystem, the need to acquire knowledge (staff), expertise in technology; need for access to finance and need for access to digital / big data / bioinformatics.

The identified needs could, in the long term, be effectively addressed by the BioTech station, which would become a regional integrated ecosystem for the promotion of innovations primarily in the red biotechnology and bioinformatics. The station would connect the biotech companies of red biotechnology, academic institutions (universities, faculties, institutes), biotechnology centers, associations and service providers in this industry.

The BioTech station would be launched with a Satellite workshop event, but to truly ensure its existence and long-term sustainability, a real physical office would have to be set up along with upgraded digital platform. The office would be in charge of connecting the stakeholders and organizing activities within the station.

The BioTech station would serve primarily for supporting and connecting of start-ups and small and medium-large companies. It will encourage the economy and political environment to invest in biotechnology. Stakeholders will help create an innovation-friendly environment, share knowledge and create synergies. The long-term goal is to become the central connecting, information and support institution in the FVG and Slovenia region.

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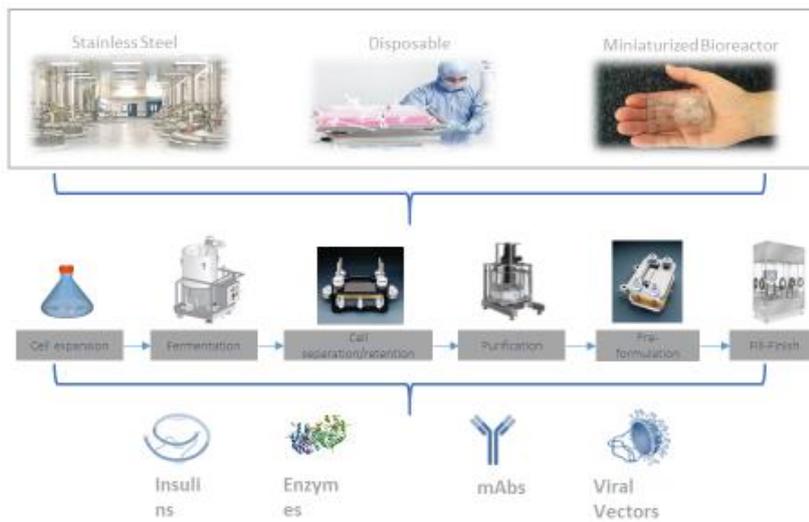
1. Summary of the analysis of the cross-border ecosystem

1.1. Global trends

Robust biologics pipeline coupled with **high growth rate** is transforming biopharma and as such red biotech landscape. There is a high need of new technologies enabling intensified manufacturing processes to reduce cost, volume and environmental burden. Furthermore, the trend to personalized (precision) medicine is driving the convergence of technology platforms that enable swift transition of innovation into standard of care.

Red BioTechnology miniaturization & convergence

Most modalities converging on similar process technology



- Moving from 'selling drugs' to 'enabling health outcomes' a new business model will emerge
- Moving from "one size fits all" to personalized medicine requires a new "Eco-system" of innovation
- Technology is global, hence capability & 'Eco-systems' of innovation will be key differentiators in translating ideas to products&services

Picture 1 Red biotechnology miniaturization and convergence

Improving the standard of care requires many different types of partners to access and share innovation and capabilities from scientific discovery to treatment outcomes, hence the source of innovation is moving towards so called "Eco-systems".

Disruptive business models between pharma, biotech, academia, start-ups, contract research & manufacturing organizations and break-through technology providers such as "**One-Stop shop**" & "**Risk Sharing Model**" alongside emergence of virtual pharma companies are the evidence of the transition from "in-house" to "Eco-system" innovation communities.

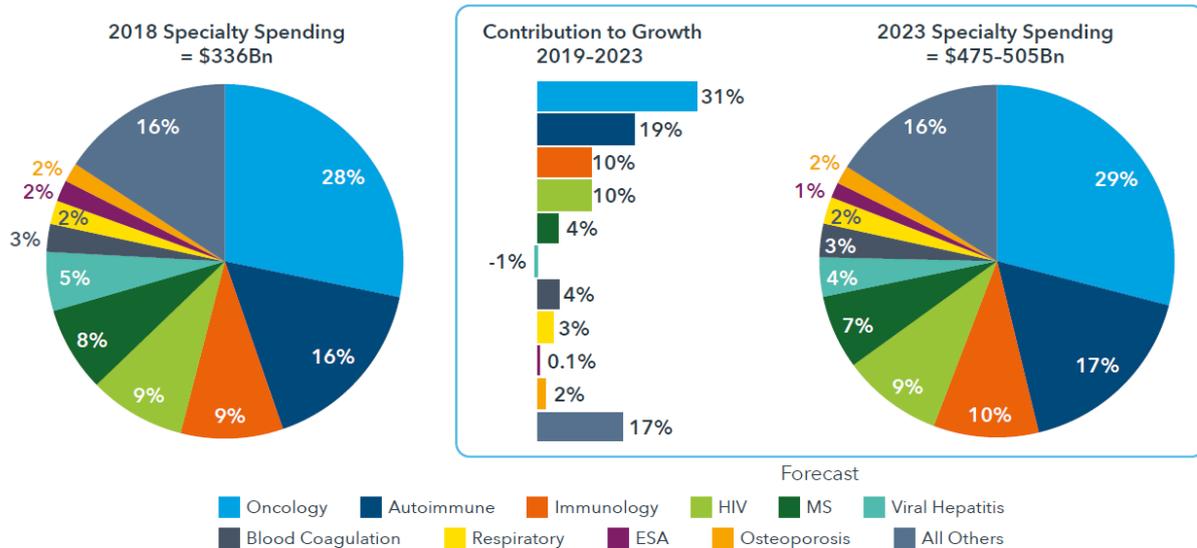
As strategic imperatives slowly progress towards **end-to-end solutions**, need for better **data integration across value chain** for error free biopharma manufacturing is critical.

The break-through digital technologies are the key enabler of the advances in **bioinformatics**, the key building block of all "omics" (genomics, proteomics...) and thus personalized medicine. The modern break-through therapeutic approaches are born with the patient outcomes in the central

focus... in the Eco-system in the intersection of Digital, IoT, biology, biotechnology, medicine, physics, bioinformatics...

Red biotechnology is driving the growth of pharmaceutical segment. Below is a graphical presentation of Specialty medicines spending in 2018 and its contribution to growth as forecasted for 2023.

Exhibit 22: Specialty Medicines Spending and Growth in Developed Markets



Source: IQVIA Therapy Prognosis Global, Jun 2018, IQVIA Institute, Dec 2018
 Notes: Therapy shares based on eight developed markets: U.S., Japan, Germany, France, Italy, Spain, U.K., Canada; MS = multiple sclerosis; ESA = erythropoiesis stimulating agent

Picture 2 Specialty medicine spending and growth in developed markets

1.2. Overview of identified needs in connection with Global Entrepreneurship Index (GEI)

In summary, **networking and human capital** are the two important pillars that were recognized as the weakest areas in this cross-border region in the 2018 Global Entrepreneurship Index report as well as within identified needs of involved companies in biotech, biomed and healthcare sector in the interviews.

The results from Global Entrepreneurship Index report in 2018 summarized in the following table:

	Italy	Slovenia	EU
GEI ranks Globally	42/137 (41%)	25/137 (54%)	
GEI ranks within the Europe region	24/38 (41%)	16/38 (54%)	
Strong area	Product Innovation	Startup Skills	Startup Skills
Weakest area	Human Capital	Networking	Networking

European nations post high average scores on Startup Skills, owing to a legacy of broadly available tertiary education and a populace that largely possesses the skills necessary to start a business. The region's biggest weakness is in Networking, though it still scores above the global average in this area. Overall, Europe's scores are relatively balanced across all components of the GEI, suggesting that a broader mix of policy is likely to have a larger impact on overall performance than focusing on single policy area might. Northern European nations are found in the region's top ranks, while Eastern European nations are found at the bottom. Seven of the GEI's top ten countries are in the European region. The United Kingdom, Bulgaria, Italy, Poland and Ireland all improved their overall GEI scores by at least 3.5 points over their 2017 GEI scores, placing them among the top ten biggest gains in score globally.

As explained in the Report, **Networking** is one out of 14 pillars of an entrepreneurial ecosystem. Networking combines an entrepreneur's personal knowledge with their ability to connect to others in a country and the whole world. This combination serves as a proxy for networking, which is also an important ingredient of successful venture creation and entrepreneurship. Entrepreneurs who have better networks are more successful, can identify more viable opportunities, and can access more and better resources. We define the basic networking potential of a possible entrepreneur by the percentage of the population who personally know an entrepreneur who started a business within two years (**Know Entrepreneurs**). The connectivity variable has two components: One that measures the **urbanization** (Urbanization) of the country and the other measuring the quality of the **transport infrastructure** (Infrastructure).

The prevalence of high-quality **human capital** is vitally important for ventures that are highly innovative and require an educated, experienced, and healthy workforce to continue to grow. An important feature of a venture with high growth potential is the entrepreneur's level of education. The Educational Level variable captures the quality of entrepreneurs; it is widely held that entrepreneurs with higher education degrees are more capable and willing to start and manage high-growth businesses. The labor market possibilities and the capability to easily hire quality employees also have an impact on business development, innovation, and growth potential. The institutional variable **Labor Market** has two components. **Labor Freedom** measures the freedom of the labor from the regulatory perspective and Staff Training is a country's level of investment in business training and employee development. It can be expected that heavy investment in employees pays off and that training increases employee quality.

1.3. Biotechnology sector

Biotechnology refers to a vast of industries involved in the use of living organisms, their parts or by-products in industrial applications. Main areas of biotechnology according to some classifications can be classified into red, white, yellow, grey, green and blue biotechnology sectors. In the context of the project TRAIN the **focus is in the biomedicine/biopharmaceutical segment of biotech** with the possible convergence of biomedicine/biopharmaceuticals with the **bioinformatics** (digital) areas of research and industry including the ones relevant for the TRAIN research groups as one of the trends in the niche market growth is also a convergence of biotech with other disciplines such as bioinformatics where potentials for economic growth exists as well.

Red biotechnology is usually referred as biopharma that connects stakeholders in medicine and veterinary products. Products and services in this category include vaccines, antibiotics, statins and now genetically engineered biopharmaceuticals such as proteins, enzymes, monoclonal antibodies, bispecifics, molecular diagnostics techniques, followed with the break-through personalized

approach in regenerative therapies and new modalities such as gene therapy (viral vectors), cell therapy (CAR-T) and stem cell therapy.

1.4. Summary of the biotechnology sector in Slovenia

The **health sector** is one of the **Smart Specialization Strategies (S4)**, launched in 2017 when SIH EEIG got a mandate from the multiple helix partners to manage and lead a platform for collaboration of the cutting-edge industry, advanced science, state of the art research, advanced health practitioners and empowered patient groups as well as of the progressive support organizations. **SRIP Health - Medicine** is among the nine strategic areas in Slovenia recognized by the government to lead the way towards the social and economic transformation as one of the key strategic developmental objectives in Slovenia.

Six areas of strategic importance for the transformation of the health and medicine were identified: translational medicine, **biopharmaceuticals**, resistant bacteria, **cancer treatment**, active and healthy aging, herbal and natural cosmetics. Products, services, technology processes to be developed in the following years in the scope of the SRIP partnership will lead medicine and health in Slovenia into the next decade.

In Slovenia there were **27 active biotech companies in 2017**. They dedicated at least 75% of their total R&D expenditure in biotech. Companies interviewed in this project TRAIN predominantly sell and market their products and services either to larger domestic and foreign biopharma or medical technologies companies or conduct research in the scope of the governmental grants, EU supported grants and/or publicly funded institutions such as domestic and foreign larger research institutions, clinical environments and/or national public health and food safety organizations. The analysis shows that there is a great diversity and variety of biotech products/services that companies offer.

In markets with high levels of biotechnology intensity additional market segmentations can be made also within each of the biotech categories. No such classifications exist in the currently available databases in Slovenia and the few companies in Slovenia operating in the red biotech sector develop products in more than one of the biotech indication domains. Further market segmentation by product indication would need to be developed in the future.

In the domain of the red biotechnologies there are global trends also indicated by the companies in Slovenia towards development of the so called advanced therapies i.e. “omics” in combination with the support of the bioinformatics in areas such as big data management, imaging, sequencing, artificial intelligence, cybersecurity. It is estimated that by 2020 the worldwide sales volume with biopharmaceuticals only will reach over USD 280 billion.

In 2016 the Slovenian innovation hub was established to set up a vibrant innovation ecosystem with numerous proposals made so far to the quadruple helix stakeholders including the government to create and support of the national innovation policy and create sustainable innovation policy instruments.

Major weaknesses were identified such as big fragmentation of R&D that prevents efficient technology transfer from research institutions into business environments and a very fragmented business support environments (there are over 120 organizations in the country that deal with technology transfer issues but no central body such as technology-innovation agency coordinating these

actions). Efforts have been made and need further support by the Government to strengthen collaboration and reach critical mass of knowledge also through implementing regional specialization strategy in key sectors of national economy.

Innovation policy is interdisciplinary and multiple sectoral policy need to collaborate. System of public funding of R&D needs reforms in order to reach the goal of 1% GDP funding. Elements of sustainable innovation ecosystem include entrepreneurs, investments in research and development, a vibrant and flexible education system in particular higher education, finances, especially seed and venture capital, competitive tax and regulatory environments and public policy institutions.

1.5. Summary of the health sector in FVG region

The **health sector** is one of the Smart Specialization Strategies (S3) of Friuli Venezia Giulia (FVG), defined by the Regional Administration after an **Entrepreneurial Discovery Process (EDP)**, launched by CBM in 2014, regarding **biomedical, biotechnological, and bioinformatics sectors**.

The results of the EDP justified the adoption of the “Smart Health” as a key strategic specialization for Friuli Venezia Giulia in line with the S3. The number of **private companies and the quality of public research institutions, including research hospitals**, operating in the field of healthcare (Smart Health), located in the regional territory with a high networking capacity, are the primary elements assuring an economic success.

In the regional territory there are about **150 companies** operating in the worldwide markets with a good turnover potential. The core business of the companies is focused on one or more of the technological and innovation development roadmaps and priorities: 30% focus on biomedical and in vivo diagnostics, 17.5% on in vitro diagnostics, 20% on e-health, 17.5% on innovative therapy, and 15% on AAL. Approximately 90% are SMEs, with 30 innovative high-tech start-ups. The yearly turnover of the sector is more than 900M euro and the number of employees amount to more than 5.000.

In addition to this strong industrial context, FVG has several international scientific research excellences such as:

- **3 universities:** Trieste, Udine, and the International School for Advanced Studies (SISSA) of Trieste
- **2 National Research Council institutions (CNR):** “Istituto Officina dei Materiali” (IOM) and Institute of Crystallography (IC)
- **6 international research institutions:** International Centre for Genetic Engineering and Biotechnology (ICGEB- Trieste), International Centre for Theoretical Physics (ICTP- Trieste), Elettra-Sincrotrone Trieste (synchrotron and free-electron laser light), National Laboratory of Biotechnology Universities Consortium (LNCIB- Trieste), the Italian Liver Foundation (FIF - Trieste), and the Callerio Foundation (Trieste).
- **2 academic medical center hospitals:** Trieste and Udine, both certified by the Joint Commission International
- **2 Scientific Research and Healthcare Institutes (IRCCS):** Ospedale Infantile Burlo Garofolo of Trieste – Child Hospital – and Centro di Riferimento Oncologico (CRO) of Aviano (Pordenone) – Oncological Hospital.

- **4 science and technological parks:** AREA Science Park of Trieste, Science and Technology Park Luigi Danieli of Udine, Technology Park of Pordenone, and InnovaFVG of Amaro
- **1 public organization providing services to senior citizens,** specifically focusing on those who are disabled: Azienda pubblica per i Servizi alla Persona (ITIS, Trieste)

All of these research institutes foster the creation of spin-offs in FVG.

By a Regional Law 3 of 02/20/2015, the Regional Administration officially acknowledged the **Smart Health Cluster FVG** and entrusted CBM - identified as Innovation District by Regional Law 3 of 02/20/2015 - with the task to foster the development of MedTech, Biotechnology, IT-HealthCare, and Ambient Assisted Living (AAL) industries.

In line with S3, CBM promotes an open and inclusive network of actors and contributes to a regional business ecosystem in the following technological and innovation development **roadmaps and priorities:**

- a) Biomedical technologies and in vivo diagnostics
- b) In vitro diagnostics
- c) Medical informatics (IT HealthCare) and bioinformatics
- d) Innovative therapy
- e) AAL

All of these technological innovations have to be integrated with **advanced manufacturing technologies**, such as big data, predictive analytics, virtualized processes, modeling and simulation, data security, cloud technologies for healthcare, high-performance computing, and **IoT technologies**, and with **sensor systems** in order to offer **innovation for monitoring and managing illness and improving wellness.**

As a matter of fact, one of the main goals of the regional policy is fostering innovation inactive aging and citizens' well-being in order to reduce chronic diseases and their costs. **FVG is one of the oldest regions in Europe** with 26% of people over 65 (Trieste 28%), where the health sector should focus on the transition **from “reactive medicine”** (meeting patients' needs) **to “proactive medicine”**.

The roadmaps and the technological priorities in the FVG region in the health sector are focused on:

1. **Biomedical technologies and in vivo diagnostics** - The development of **medical devices**, including diagnostic imaging systems, for the development of new products for **advanced biosensors** and for **prosthetics**; creation of **biomaterials and bioreactors** for regenerative medicine field and development of advanced instrumentation in the field of **nanotechnologies**;
2. **In vitro diagnostics** - The development of innovative technology platforms for **human diagnostics and clinical** evaluations of patients, for food diagnostics (quality, traceability and safety), and for veterinary and environmental diagnostics in the health sector and the development of “Omic” technologies;
3. **Medical informatics and bioinformatics** - The integration of informatics technologies into the development of new systems and software solutions for **hospital informatics; social and health informatics; informatics for bio-imaging**; informatics for medical laboratories; informatics for blood, tissue, and cell banks; and **informatics for personalized medicine.** The development of advanced manufacturing technologies, such as **big data**, predictive analytics, virtualized processes, modeling and simulation, **data security, cloud**

- technologies for healthcare**, high-performance computing, and **Internet of Things (IoT)** technologies, and with sensor systems in order to offer innovation for monitoring and managing illness and improving wellness.
4. **Innovative therapy** - The development of **biopharmaceuticals; biosimilars;** bio-materials (e.g. for oncological, cardiovascular, metabolic, respiratory, neurodegenerative, and inflammatory diseases). Advanced biotechnological platforms for the production of drugs aimed at the treatment of rare diseases; technologies for **cell therapies, gene therapies,** and small molecules for personalized therapy; **probiotics, prebiotics, symbiotic,** and bioactive supplements as proactive, health-promoting foods; and advanced services to support the productions mentioned above, such as in silico methods for molecular modeling and drug toxicity;
 5. **Ambient Assisted Living (AAL)** - The design of technological solutions to make the personal living environment active, intelligent, and cooperative, products, and services related to telemedicine, telecare, home automation, health aids, and wearable devices, as well as other products and services for the prevention of diseases and disabilities in older adults and the welfare of citizens.

An important facilitator of the Cluster Smart health FVG is **BioHighTech NET** – www.biohightech.net - in 2016, 36 BioHighTech companies (micro, small and medium size) set up an enterprise business network focused on the biomedical, biotechnologies and bioinformatics sectors.

1.6. Key stakeholders in FVG and Slovenian region – identification and description

FVG region, Italy	Region, Slovenia
3 universities: Trieste, Udine, and the International School for Advanced Studies (SISSA) of Trieste	2 universities: Ljubljana, Primorska
2 National Research Council institutions (CNR): "Istituto Officina dei Materiali" (IOM) and Institute of Crystallography (IC)	Academy: Centre for Functional Genomics and Biochips (Ljubljana), UL Faculty of Computer and Information Science (Ljubljana), Institute of Dairy Science & Probiotics (Ljubljana)
6 international research institutions: International Centre for Genetic Engineering and Biotechnology (ICGEB- Trieste), International Centre for Theoretical Physics (ICTP- Trieste), Elettra-Sincrotrone Trieste (synchrotron and free-electron laser light), National Laboratory of Biotechnology Universities Consortium (LNCIB- Trieste), the Italian Liver Foundation (FIF - Trieste), and the Callerio Foundation (Trieste).	National research institutions: National Research institute Inštitut „Jožef Stefan“ (IJS – Ljubljana), National institute of biology (NIB – Ljubljana), Elixir Slovenia (Ljubljana), National Institute of Public Health (NIJZ), National institute of Chemistry (KI Ljubljana) National research platform: SRIP Health-Medicine platform (Ljubljana)
2 academic medical center hospitals: Trieste and Udine, both certified by the Joint Commission International	3 academic medical center hospitals: University Medical Centre Ljubljana (UKC Ljubljana), Valdotra Orthopedic Hospital (Ankaran), Institute of Oncology Ljubljana
2 Scientific Research and Healthcare Institutes (IRCCS): Ospedale Infantile Burlo Garofolo of Trieste – Child Hospital – and Centro di Riferimento Oncologico (CRO) of Aviano (Pordenone) – Oncological Hospital.	1 Private fund Research institution: Centre of Excellence for Biosensors, Instrumentation and Process Control (Cobik – Ljubljana)

<p>4 science and technological parks: AREA Science Park of Trieste, Science and Technology Park Luigi Danieli of Udine, Technology Park of Pordenone, and InnovaFVG of Amaro</p>	<p>2 science and technological parks: Technology park Ljubljana, Slovenian Innovatin Hub (SIH - Ljubljana)</p>
<p>1 public organization providing services to senior citizens, specifically focusing on those who are disabled: Azienda pubblica per i Servizi alla Persona (ITIS, Trieste)</p>	<p>1 Non-profit research institution: Inštitut za nutricionistiko (Ljubljana)</p>
<p>150 companies</p>	<p>27 active biotech companies</p>

2. Analysis-based identified needs of key stakeholders

Based on specific interviews and research conducted, we will further identify stakeholder needs, which will help us identify common needs in order to find synergies to facilitate the establishment of the BioTech station.

2.1. Analysis-based identified needs of key stakeholders in FVG region

Identified needs of companies and research institutions in Biotech, biomed and healthcare sector (Source: Summary of the interviews in FVG region)

9 companies and 1 research institution that operates in Biotech, biomed and healthcare sector have been interviewed.

We identified different types of interest in the TRAIN project.

AB ANALITICA srl

They are interested in the technology of the ICGEB laboratory for the research and characterization of new biomarkers to develop in vitro diagnostic tests in the molecular biology field, particularly in the diagnosis of ovarian cancer.

Needs: to optimize the automation sector to reduce waste and to improve production processes.

ALIFAX srl

Interest in identifying and characterizing new biomarkers for oncology diagnostics.

ALPHAGENICS BIOTECH srl

They are interested in the ICGEB laboratory technology for research and characterization of new biomarkers to develop in vitro diagnostic tests. Furthermore, they are interested in evaluating the efficacy of new nutraceutical active ingredients for new formulations.

Needs: new foreign markets.

APE RESEARCH srl

Through their technology they are interested in collaborating with the ICGEB in analyzing the initial process of analysis of the pharmacological / nutraceutical active ingredient, visualizing the image of the cell and characterizing its surface. Furthermore, the technology is able to visualize the part underlying the surface and what changes. Needs: growth at the international level.

ASOLTECH srl

The company, operating in the nutraceutical sector, is interested in the ICGEB technology to evaluate the effectiveness of new active substances able to support inflammatory states present in metabolic syndromes.

Needs: new markets and new customers to develop new production lines.

G&LIFE SpA

The interest is based on the need to test new active ingredients for the formulation of innovative supplements to be associated with their DNA analysis platform that correlates the genetic patrimony

with the individual response to food. Furthermore, they are interested in the analysis of new compounds in the cosmetic field. Needs: new markets

THUNDERNIL srl

Interest in identifying and characterizing new biomarkers to be applied to their diagnostic platform based on bionanosensors.

Needs: private financing.

TRANSACTIVA srl

They are interested in the technology of the ICGEB to evaluate the effectiveness of new therapeutic molecules produced by plants for the therapy of tumors and rare genetic diseases. Needs: public or private financing.

VIVABIOCELL SpA

The interest exists if ICGEB technology develops a cell growth protocol to be integrated with the Vivabiocell bioreactor to provide an ATMP (Advanced Therapy Medical Product) in regenerative medicine and immunotherapies.

Needs: new foreign markets.

FONDAZIONE ITALIANA FEGATO

They are interested in developing in vitro / vivo models for the study of steatosis and steatohepatitis and to define new biomarkers. They are interested in a collaboration with the ICGEB for an exchange of information and know-how in the study of liver diseases. In addition, they are interested in in vitro cell models for the study of bilirubin neurotoxicity.

Needs: constant public financing.

2.2. Analysis-based identified needs of key stakeholders in Slovenian region

Identified needs of companies in Biotech, biomed and healthcare sector (Source: Interviews in Central Slovenia region).

7 companies that operate in Biotech, biomed and healthcare sector have been interviewed.

We identified different types of interest in the TRAIN project.

ACIES BIO d.o.o.

Has an established collaboration with the IJS research team involved in TRAIN project on the topic of Big Data. The company is also interested in participating at R2B events organized within the TRAIN project. Products are compatible with the TRAIN in the domains of agrotech, foodtech and biomedicine.

Needs: from the support institutions i.e. TPLJ is to create stimulated environment that sells globally, provide a vibrant community space, create some networking events where people can interact, support with recruitment of capable and skilled labor.

ASCALAB d.o.o.

Potential synergies with TRAIN are in image processing in relation to big data for medical use. They remain opened for collaboration at the R&D projects with the TRAIN partners and their research

groups in the future. Expertise exchange development for most promising market areas such as medicine & health where they have established M&S networks.

Needs: Events related to recruitments; assistance with external funding for pilot testing and new product development ; assistance to connect with the research groups from the national research institutions.

CELICA d.o.o.

Currently there are now synergies detected with the researchers and business in the TRAIN project.

Needs: global market exposure i.e. being incentivized and invited to participate at the global scientific and business conferences in the area of cell research.

COSYLAB d.o.o.

Big data is becoming an important asset in all areas of medicine and Cosylab is therefore open to collaborations (mostly research based) in this field. Genetics is not in their focus, but they are also aware of the emerging field of genomic data and wish to remain updated on the matter. Moreover, they welcome opportunities to meet research groups and young PhDs, especially in the field of image analysis. Informing on joint projects exploring control systems in the areas of radio therapy, space exploration, energy and big science.

Needs: Recruitment of skilled personnel and head-hunting events (booth camps, hackathons).

JAFRAL d.o.o.

Bacteriophages could be one of the modules for targeting cells to deliver therapeutical mRNA molecules. Big data system would come handy with modernizing analytical methods (sequencing data, predictions) as well as cybersecurity of data.

Needs: access to researchers, improved analytical methods (data sequencing), collaboration with the project on fighting infections with building up immune systems (Valdoltra hospital).

LABENA d.o.o.

At the moment, no clear-cut synergies were identified, mostly due to Labena's very niche research orientation, which does not "fit" with TRAIN's agenda. But, the very fact that ddPCR is becoming the next default method in screening and gene analysis, knowing Labena could be beneficial in coming years, especially when applying for new projects, as the company pointed out that they are interested in participating in bigger research projects.

Needs: skilled human resources and attracting researchers.

OMEGA d.o.o.

Possible synergies could be found with the bioinformatics in the area of big data mining for diagnostics, classification systems, imaging with sequencing analysis, data security with the forensics research and analytics. They are well established in area of small genomics - i.e. research with bacteria, viruses, fungus. Small genomics research and classical sequencing would be possibly areas of interest for developing methods of data mining. Collaborative projects would be of interest i.e. they could enter into projects as industrial partner in the future should they find the commercially viable interest in the R&D project. In the area of intellectual property and technology transfer the company does not own any intellectual patents or handle other IP rights as R&D was insofar not their main service. They would be interested to give presentation about their research and lab training possibilities at IJS postdoctoral school.

Needs: Collaborative projects; performing research for external partners; identify trends in ICT supported sequencing (i.e. data mining, hierarchical classification, machine learning and complementarity research and lab services with the ICGBE).

2.3. Classification of identified needs

Identified list of needs of key stakeholders in this cross-border region could be clustered into the following **five clusters**:

1. Market access
2. Networking ecosystem: Vibrant community space to provide space
3. Knowledge, expertise and technology
4. Access to funding
5. Digital / Big data / Bioinformatics

Key challenges	Slovenia	Italy
Market access	new foreign markets (Celica d.o.o.)	new foreign markets (Alphagenics Biotech srl, Asoltech srl, G&Life SpA, Vivabiozell SpA)
		growth at the international level (Ape Research srl, Acies Bio d.o.o.)
		new customers to develop new production lines (Asoltech srl),
Networking ecosystem: Vibrant community space to provide space	collaborative projects (Omega d.o.o.)	
	global market exposure i.e. being incentivized and invited to participate at the global scientific and business conferences in the area of cell research (Celica d.o.o.)	
	support institutions i.e. TP LJ to provide a vibrant community space (Acies Bio d.o.o.)	
	networking events (Acies Bio d.o.o.)	
Knowledge, expertise and technology	headhunting events – booth camps, hackathons (Ascalab d.o.o., Cosylab d.o.o.)	to optimize the automation sector to reduce waste and to

Knowledge, expertise and technology	access to researchers (Jafral d.o.o.)	improve production processes (AB Analitica srl),
	support with recruitment of capable and skilled labor (Acies Bio d.o.o., Ascalab d.o.o., Labena d.o.o.)	
	performing research for external partners (Omega d.o.o.)	
	collaboration with the project on fighting infections with building up immune systems, Valdoltra hospital (Jafral d.o.o.)	
Access to funding	assistance with external funding for pilot testing and new product development (Ascalab d.o.o.)	private financing (Thundernil srl, Transactiva srl)
		public financing (Transactiva srl, Fondazione Italiana Fegato)
Digital / Big data / Bioinformatics	identify trends in ICT supported sequencing (i.e. data mining, hierarchical classification, machine learning and complementarity research and lab services with the ICGBE) (Omega d.o.o.)	
	improved analytical methods (data sequencing) (Jafral d.o.o.)	

3. Strategies to fulfil the needs

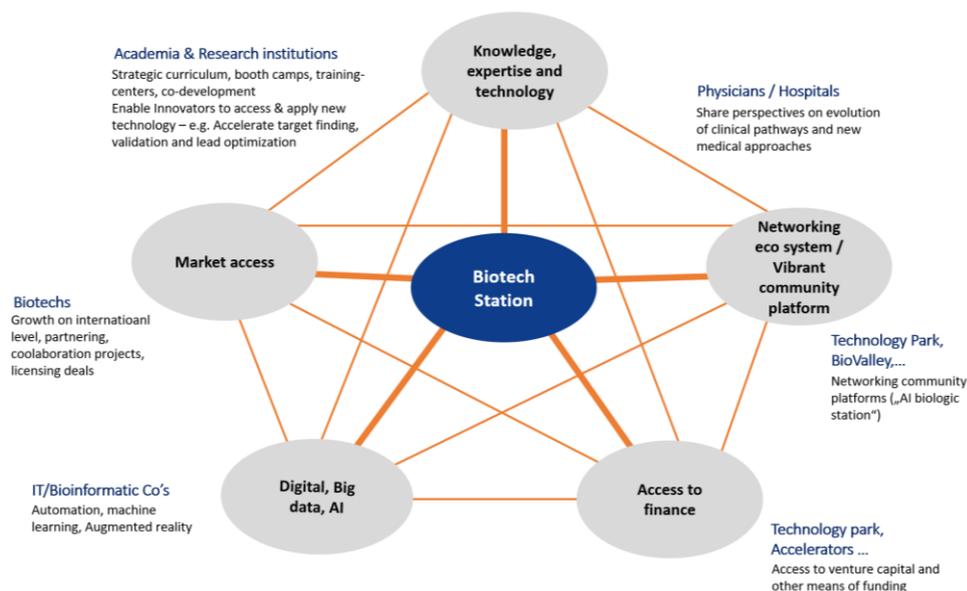
The BioTech station will be designed to support start-ups in particular when they face major challenges that are not adequately covered by the ecosystem in the cross-border region of Slovenia and the FVG region - this is especially true for red biotechnology and bioinformatics. Given that these two areas are of strategic importance, as they are key factors in the advancement of personalized medicine, setting up a BioTech station will ensure the appropriate conditions for the start-up companies in the region and their successful operation in one of the most advanced fields of medicine.

The BioTech station will thus become a central regional "Ecosystem", which will be a key source of innovation and will connect all stakeholders of both regions.

The long-term goal of the BioTech station is to develop into a recognizable platform that can go side by side with similar and already established platforms such as BIO International Convention (USA) and BIO-Europe, but unlike these two the BioTech station will focus solely on the needs of start-ups and small businesses in the area of red biotechnology.

Biotech station – Regional Integrated ‘Eco system’ of innovation

BioTech station – specialized vibrant cross-boarder community platform intersection



Biotech station concept will be built on the current infrastructure & activities already provided by project partners (ie. BioHighTech NET, Healthday.si, ...)

Biotech station will enable focus end targeted networking within the biotech eco system starting with activities across Slovenia and FVD region, Italy with the opportunity to develop and provide a networking platform in the broader Alpe/Adria and EU space in the future

Approach TBD... ie. platform format, events...

Picture 3 BioTech station - Regional integrated "Eco System" of innovation

The concept of the biotechnology station will be based on the current infrastructure and activities that are already provided by the project partners (i.e. BioHighTech NET, Healthday.com,...)

The BioTech station will enable focused networking in the Biotechnology Ecosystem, starting with activities across Slovenia and the FVG region, in Italy, with the possibility of developing and providing a network platform in the wider Alps / Adria region and the EU in the future.

The BioTech station must be designed to partner with the academia, research institutes, doctors and health care institutions, venture capital resources, have access to appropriate professional staff and have a vibrant connection with actors that will help to improve market access and increased capital (access to major related companies, biotech accelerators).

The academia and research institutes will assist in the development of the strategic curriculum, the preparation of boot camps and training centers, co-creation of content, as well as providing innovators with access to and use of new technology (e.g. accelerated goal finding, validation and optimization). Physicians and health care providers will share perspectives on the development of clinical pathways and new medical approaches. With the help of the BioTech station, biotech companies will acquire new strategic partners, licensing offers, new project collaborations and thus growth in the international market. IT companies and companies that work in the field of bioinformatics will expand their knowledge of automation, machine learning and augmented reality. Business promoters, Technology Park, Slovenian innovation hub, AREA Science Park of Trieste, Science and Technology Park Luigi Danieli of Udine, Technology Park of Pordenone, and InnovaFVG of Amaro would be helpful in accessing venture capital and other funding. The purpose of the BioTech station will be to connect and network all interested stakeholders of red biotechnology.

As we have found out through the analysis, the key needs of the stakeholders of both regions in the field of red biotechnology are as follow: market access, networking opportunities, recruiting suitable staff, obtaining investments and bioinformatics, digital and big data.

Below we list the existing activities and events of both regions, which to some extent already satisfy some recognized needs, but not yet sufficiently in the field of red biotechnology, the field of our stakeholders.

Existing platforms to fulfill the need – Market access

• SIS EGIZ (Slovenian Innovation Hub)	/
SLO	FVG

SIS EGIZ as association of excellent and creative, creates new opportunities for the organizations willing to explore development possibilities of breakthrough technologies in their own development as well as in the scope of the projects of Slovenian Smart Specialization. The Hub serves as a new model of networking around breakthrough technologies as the fastest route to the results. It, therefore, involves start-ups, SMEs, big companies, domestic and international research partners.

SIS EGIZ is not specialized specifically for red biotech but serves as a general platform.

Examples for specialized global red biotech platforms for market access (access to business partners, distributors and costumers) are: BIO US, BIO Europe, Bio Asia, JP Morgan Healthcare, CPHI and such like.

Existing platforms to fulfill the need - Networking ecosystem

<ul style="list-style-type: none"> • Slovenian Biotech Database • Slovenian Business & Research Association • SIS EGIZ (Slovenian Innovation Hub) • EIT Health • HealthDay • Euraxess Networking Slovenia (incl. IJS, University of Ljubljana and others) 	<ul style="list-style-type: none"> • Meet in Italy for life sciences (Trieste) • BioHigh Tech NET (Trieste) • CBM (Trieste) • Friuli Innovazione (Udine) • Euro Bio High Tech (2019 Trieste) • SIS FVG
SLO	FVG

HealthDay.si is a community of health and care stakeholders from Slovenia working towards an innovation friendly ecosystem. HealthDay.si DIH program is made specifically with the aim to support SMEs and Midcaps in their digital transformation as well as enhance their role as agents of transformation of the whole Slovenian health and care system. We do this by connecting stakeholders, across clusters and sectors, identify specific needs for competencies development and internationalisation.

The Slovenian Biotech Database is a product of Venture Valuation and part of the global Life Sciences lead generation and intelligence platform Biotechgate. Their mission is to provide up-to-date company and business information of the Biotech, Pharma and Medtech sectors to professionals everywhere, in order to support them in identifying the most appropriate business partners, customers and suppliers.

The Slovenian Business and Research Association (SBRA) is a Brussels-based representation office of the most successful and highly respected Slovenian organisations from both the public and private sectors. Established in 1999 as an international non-profit association connecting business, research and local communities in Slovenia with the EU institutions and other public and private bodies at EU level. SBRA members represent a wide-spectrum of Slovenian interests, from the fields of business and research.

EIT Health is the largest network of organizations and innovations in the field of health, supported by the European Institute of Innovation and Technology (EIT) and the European Union. It organizes one of the largest pan-European accelerators with more than 20 different programs for students, PhDs, SMEs and professionals in the fields of medical technology, biotechnology and life sciences and eHealth. At LUI ad a part of EIT Health they also organize an Innovation Day - EIT Health iDay - which is a great opportunity to develop a health idea for the first time. Together with the team, under leadership innovators have the opportunity to take the first steps into the world of entrepreneurship.

CBM (Connecting bio-research and industry), acknowledged by Regional Law 26/2005 and identified as Innovation District in Regional Law 3 of 02/20/2015, has the role of developing the potential of the Smart Health Cluster in the Italian Region of Friuli Venezia Giulia in the biomedicine, biotechnology and bioinformatics sectors. In this context, CBM has the task of creating close links between the industrial and research systems, as well as regional and national institutions in order to develop synergies covering the regional health sector. CBM is in charge of the "Smart Health" area in the framework of FVG region's Smart Specialization Strategy (S3) and plays a leading role in building relationships between all the actors in this field - entrepreneurs, researchers, clinicians,

policy makers and people involved in finance and education - with the goal of promoting business innovation and social and economic growth at a regional level.

Meet in Italy for Life Sciences is the leading national matchmaking and update event on Life Sciences. Health-related innovations are among the key elements that influence the progress of mankind, the environment in which we live, and our wellbeing. Speaking about health, therefore, does not mean simply speaking about investments and costs, but rather about an absolute value that sees in technological innovation and scientific research the fundamental elements of growth.

BioHighTech Net is interested in coordinating and developing the demand for innovation of high-tech and bio-tech enterprise systems operating in the human health sector, in particular in the biomedical, in vivo and in vitro diagnostics, medical informatics and bioinformatics sectors, Internet of Things (IoT) and Industry 4.0, biotechnologies for innovative therapies and for agro-food and for the environment, technologies for ambient-assisted living.

Friuli Innovazione's task is to foster collaboration between researchers and companies and the industrial use of scientific and technological results produced by research. We assist young entrepreneurs, companies and researchers in the development of business ideas, innovative and high-tech, through the search for partners and funding, the start-up of new businesses, incubation and settlement at our reality.

Euro Bio High Tech is the first-ever showcase devoted to innovation in the biomedical sector, biotechnology and bioinformatics in the Central and Eastern Europe and Balkan areas. Globally, Bio High Tech and pharmaceutical industries are facing a series of new challenges brought about by market and R&D dynamics. Euro Bio High Tech provides an answer to these challenges, by showcasing and fostering debate with regard to research and development projects implemented by companies with Research Centres. Within the context of sector related events, Euro BioHighTech's distinctive features are: **UNIQUENESS**: presenting a concentration of territorial centres of excellence in the Bio High Tech field that is truly unique in the world **CROSS-DICIPLINARY NATURE** showcasing in an integrated and synergic way, BioHighTech companies working in the fields of biomedical technologies (BioMed), biotechnologies (BioTech) and bioinformatics (BioICT) **COMPLETENESS** featuring and comparing all components of the Health sector production chain: research, development, production, finance and communication.

Since 2016 SiS FVG, the Scientific and Innovation System of Friuli Venezia Giulia, represents a networking initiative of research institutions located in the Friuli Venezia Giulia region.

SiS FVG objectives are:

- Create a 'Scientific Network of Excellence' that will enhance attractiveness and competitiveness of the Friuli Venezia Giulia Region at the national and international level
- Enhance activities that help valorisation of innovation, scientific and technology research
- Promote internationalization support services for research centres
- Technical and scientific divulgation and dissemination of innovation

Existing platforms to fulfill the need - Knowledge, expertise & technology

<ul style="list-style-type: none"> • Euraxess Networking Slovenia (incl. IJS, University of Ljubljana and others) • Annual Regional BioCamp (Lek/Novartis, Slo) • Hackaton events (TP LJ, Slo), • “Jožef Štefan” Institute • SIS EGIZ (Slovenian Innovation Hub) 	<ul style="list-style-type: none"> • Meet in Italy for life sciences (Trieste) • CBM (Trieste) • BioHigh Tech NET (Trieste) • Friuli Innovazione (Udine) • Vitae biotech network • ESOF 2020 (Euroscience open forum Trieste) • ITS Alessandro Volta Foundation for the New Technologies of Life (Trieste) • Euro Bio High Tech (2019 Trieste) • Data Science and Scientific Computing (DSSC) – International course
SLO	FVG

Euraxess is a platform for researchers, entrepreneurs, universities and businesses to interact with each other. Packed with information, EURAXESS covers mobility issues for researchers and entrepreneurs, allows universities and businesses to find the right talent, and connects people, projects and funding.

BioCamp is a three-day forum where the best students of choice were met with recognized members and top management. The Forum is a great opportunity for talented young people to gain direct insight into the world of research in the international business environment of the pharmaceutical industry.

The ITS Alessandro Volta Foundation for New Life Technologies is a "non-profit" legal entity involving universities and research centers, training organizations, schools, businesses, local authorities and operates through projects consistent with the "New" technology area. Technologies of Life ". In relation to the strategic priorities for the country's economic development and in the areas and according to the priorities indicated in the regional programming, the Foundation pursues the aims of promoting the dissemination of technical and scientific culture and supporting measures for the development of the economy and policies active work.

VITAE Biotech Network – a business network headquartered in Friuli Venezia Giulia – was set up to provide personal healthcare services such as consultancy, assistance, maintenance and measurement to a wide range of enterprises. To achieve this goal the Network's eight companies pool their skills and resources.

Existing platforms to fulfill the need - Access to funding

<ul style="list-style-type: none"> • Venture Capital Funds: META INGENIUM, venture capital company, Ltd., target industries biotech, nanotechnology... (investment in Bia Separations), Business Angels of Slovenia (Medicoapps), Silicon Gardens & Fil Rouge Capital (Mediatly medicine registry) • Business accelerators: ABC Accelerator (ResSky) • Venture Capital Funds such as STH Management (Visionect) • Business accelerators: Gratr:up Geek House accelerator, Go:Global Slovenia accelerator, DsgnFwd accelerator, • Slovene Enterprise Fund (public venture capital fund) • SPIRIT Slovenia – Public Agency for Entrepreneurship, Internationalization, Foreign Investments & Technology • SIS EGIZ (Slovenian Innovation Hub) • SID Banka • Regional Operational Programme of the European Regional Development Fund 2021-2027 	<ul style="list-style-type: none"> • BioValley investment (IT) – <u>focus on red biotech</u> • Bio4dreams (Milan, Trieste), privately funded certified incubator for innovative startups • Banca Popolare di Cividale – Civi Bank • Regional Operational Programme of the European Regional Development Fund 2021-2027
SLO	FVG

Existing platforms to fulfill the need - Digital, Big data, AI

<ul style="list-style-type: none"> • HealthDay (TP LJ, Slo) • SRIP Health - Medicine 	<ul style="list-style-type: none"> • Meet in Italy for life sciences (Trieste) • CBM (Trieste)
SLO	FVG

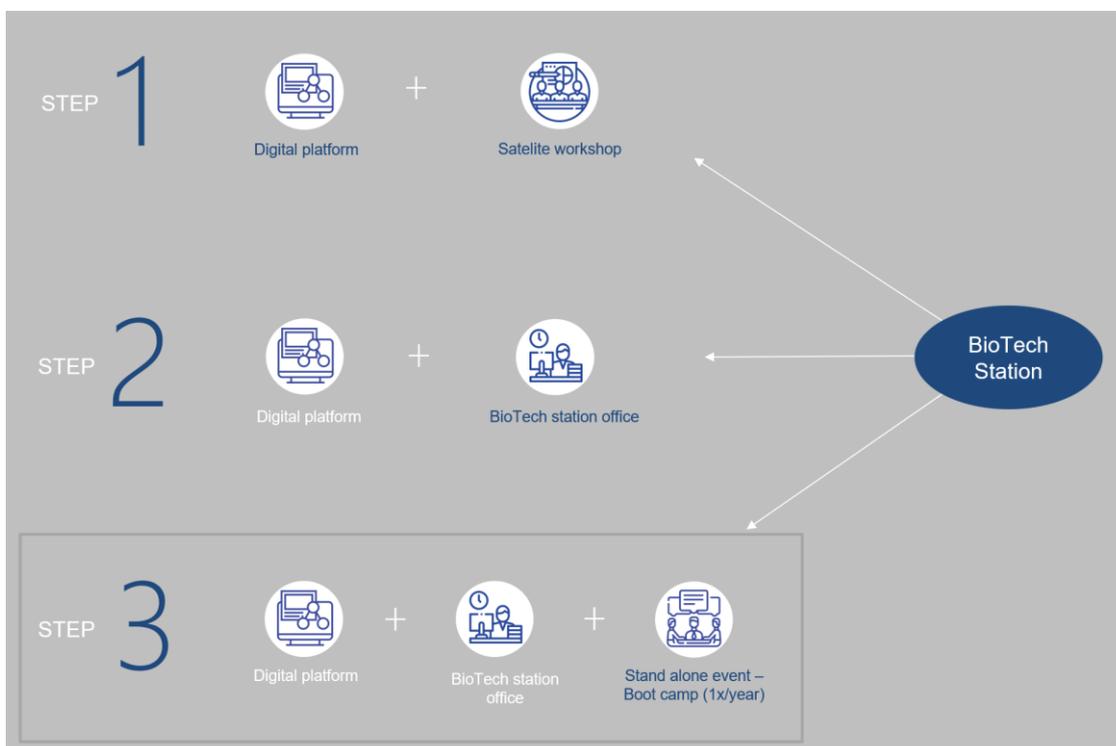
4. Strategy/Action plan for launching the BioTech station

The BioTech station will be a regional integrated Ecosystem for fostering innovation mainly in the field of red biotechnology and bioinformatics, bringing together biotechnology companies in the field of red biotechnology, academic institutions (universities, faculties, institutes), biotechnology centers, associations, service providers in this industry (contract research organizations CROs and contract manufacturing organizations CMOs) and bioinformatics companies.

The strategic goal of the Biotech station is to provide a platform that will enable start-ups and medium size companies to become the “Acies Bio” (SLO) and the “VivaBioCell” (FVG) of the future.

It will serve the needs of start-ups and small to medium-sized companies, most of which have not yet approved major products and are not yet on the market. It will seek to promote the economic and political environment and investment in biotechnology, will focus on the critical issues of start-ups and small businesses and will develop programs to increase their development – primarily access to capital, the market and relevant experts. Stakeholders will help create well-paying jobs in the growing market of red biotechnology and bioinformatics, which are driving the development of the healthcare field.

The BioTech station will strive to enrich the industry through networking, partnerships and education. For the launch of the BioTech station, we will organize a regional Satellite event, which will be set up side by side with already established and recognizable events in FVG (Meet Italy) and SLO (HealthDay), to ensure adequate awareness in the environment. At the same time, the BioTech station will rely heavily on modern digital technology to enable the management and reach of a larger number of target users.



Picture 4 Action plan for launching the BioTech station

SHOWCASE COMPANIES: Acies Bio d.o.o. and The VivaBioCell S.p.A

Acies Bio d.o.o.

Acies bio is a small size R&D based company operating in the areas of agrobiotechnologies, food biotechnology, synthetic chemistry. Acies Bio Ltd. was founded in 2006 by a small group of visionary scientists and has since grown to 50+ including microbiologists, molecular biologists, chemists and bioprocessing specialists, of which over a third with a Ph.D.

Company's core products/services are strain development through directed evolution and synthetic biology, fermentation process development for scaling up in industrial use, development of downstream processing steps in development of bioprocess technologies, chemical synthesis processes (i.e. new methodologies), fine tune key bioprocess parameters in its pilot scale bioreactors and a corresponding scale in DSP development (scaling up production facilities). Amongst the R&D based products are ingredients for rare disease treatments, new antibiotics based on resistant bacteria, new processes for vitamin production and other molecules for pharmaceutical, food, agriculture and chemical industry. The company operates in Europe, Asia and in the USA. They developed a unique business model based on the creation of joint ventures with their clients, extensive research collaboration (through their own facility with pilot fermentation equipment suited for technology demonstration collaborations) and R&D partnerships (acting as co-investors in technology development and co-ownership in the new IP and technology).

Acies Bio's business development process is business-industrial clients oriented (problem solving) and scientific-academia (research) based company. Company's R&D process is collaborative (with domestic and foreign research institutes) and defined ahead with their clients; depending on the type and nature of R&D project they enter different phases of development, sometimes also as investors.

Acies Bio owns facility with pilot fermentation equipment which is uniquely suited for technology demonstration collaborations. Acies Bio has successfully completed numerous FP7 and H2020 projects (TIRCON, TOPCAPI, Whey2Value, CIPKeBiP, TRIH) with significant contribution to final project success.

All this makes Acies Bio a premier partner for collaborative project proposals, related to food, feed and agro biotechnology and synthetic chemistry.

The VivaBioCell S.p.A

VivaBioCell S.p.A is an Italian biomedical company based in Udine that operates in the development and marketing of devices and instruments to be used for the manufacture of advanced therapy medicinal products. Founded in 2007 as a spin - off of the University of Udine, it was acquired in 2015 by the US company NantCell, and thus became part of the NantWorks LCC group.

VivabioCell S.p.A. offers innovative solutions to support the development and production of ATMP in a strong, controlled and efficient manner. The company is currently certifying NANT 001, a bioreactor capable of automating the process of cell expansion in a closed system, which is currently performed in cleanrooms. Thanks to experience and ecosystem relationships they developed over time, they are also a facilitator for the adoption of advanced therapies in various markets, in particular in the European and US markets, ensuring the protection of the intellectual property at both the clinical and the manufacturing level.

The idea that gave life to VivaBioCell SpA, comes from a research conducted for the Italian Space Agency, aimed at the evaluation of the expansion of adult stem cells in particular conditions of microgravity and exposure to radiation, through the use of a "closed" automated tool that is able to ensure sterility.

The company was established on the initiative of Professor Francesco Curcio and accompanied during the establishment and initial phase by BIC Incubatori Fvg. The company has been able to

gather around it important partners such as TOR - Tissue Organ Replacements srl, spin-off of the University of Udine and vehicle company of the founders, Friulia Sgr (Fund Aladdin Ventures), Allegro Srl (Luxembourg investment fund operating on behalf of Assicurazioni Generali), Banca Popolare di Cividale and ZIP (Zanchi investments and shareholding).

In 2014, VivaBioCel S.p.A won the Altran Italia award for technology transfer and the first prototype of NANT 001 was developed, a device that works as a "GMP in a box" that automates the process of cell expansion in a closed system. The company, in the same year, initiated contacts with research centers and companies of great international importance, which would be fundamental for the upgrading of NANT 001, that is to say the Spanish clinic ITRT (European leading clinic for the musculoskeletal system therapies through expanded MSC) and with NantWorks.

2015 has been a pivotal year for the company, since it has been acquired by NantWorks Group, owned by the doctor - American entrepreneur Patrick Soon-Shiong, based in Los Angeles, California. Thanks to the acquisition, the development activities of the bioreactor system have been boosted, targeting applications both for the therapy of osteoarthritis and in synergy with the NantWorks activities in the new field of immunotherapies.

The commercial launch of NANT 001 has taken place in May 2018, at the World Advanced Therapies & Regenerative Medicine Congress 2019 in London, and has raised a lot of interest and confirming itself as a solution with a high degree of innovation compared to the solutions offered by its competitors.

Currently VivaBioCell S.p.A. is engaged in the launch of the industrialization of the "NANT" technology platform aimed at making the new therapies accessible to a large number of patients. In fact, there are more and more cell drugs that have shown in the main characteristics of safety and efficacy, but whose adoption is braked above all by the prohibitive costs of "labor-intensive" manufacturing processes.

VivaBioCell is committed to its region in the creation of an "ecosystem for advanced therapies" involving networks of companies, research centers, clinical centers, investors, etc. It is in fact a fundamental step for the development and diffusion of advanced therapies and the consequent progress of medicine.

STEP 1: SATELLITE WORKSHOP

In a vibrant biotech and medical ecosystem, the digital platform and Satellite workshop will be the first launch event for the BioTech station. It will outline the challenges faced by stakeholders in both regions. The workshop will focus on presenting the BioTech station as a long-term strategy for growth, development and integration of the two regions. This would be complemented by content from the field of red biotechnology, presentation of trends, examples of good practices and guests from successful and established companies. The event will also give participants networking opportunities during the break periods such as the morning coffee during registration and the lunch break.

The organizer could also use this opportunity to conduct a survey with which they would obtain even more information on the needs of the stakeholders.

5. Sustainability of the BioTech station

STEP 2: ESTABLISHING A BIOTECH STATION OFFICE

In order to achieve the long-term and sustainability of the BioTech station, it would also be necessary to set up a physical office, which will be responsible for linking and organizing activities within the station. For easier integration, it would also be advisable to upgrade the already existing digital platform which will ease the work of the project office. The project office would thus focus on informing stakeholders, organizing events (boot camps, workshops), informing on existing events, organizing various meetings and establishing a database of all stakeholders in both regions. Through the digital platform, stakeholders could also interact with each other, be informed of all events and access relevant and current information, professional resources, relevant laws and more.

The office would also help stakeholders with different challenges or issues that they encounter, by connecting different stakeholders and thus create additional synergies. It would thus serve as the first information source and a support institution in both regions.

For the BioTech station to be operational it is also necessary to secure its financing, which could come from different sources. The basic idea is to finance the Station from one of the examples below or a combination of a few:

- from relevant projects aimed at promoting an innovative and entrepreneurial initiative in the field of medicine with a focus on red biotechnology and bioinformatics,
- from contributions from major stakeholders and interested parties through participation fees,
- from the input from major stakeholders and stakeholders through event sponsorship
- in the long term it will also be funded by stakeholder membership fee.

STEP 3: STAND-ALONE EVENT (BOOTCAMP)

Subsequently, when the scope of topics and the size of interest outgrows the Satellite workshop and an annual stand-alone event (bazaar / bootcamp) would be prepared that brings together all major stakeholders from both regions (SLO & FVG) and beyond once a year.

The concept of a standalone event (bazaar / bootcamp) would be designed as a two-day event full of training and networking opportunities. It will be aimed at companies in the mentioned field, already qualified professionals, professors, representatives of the academy and other research institutions, investors and students of higher years who are already looking for career opportunities.

The event would be divided into several sets, which will take place simultaneously, addressing different needs and issues of stakeholders. The first set would be the core topic of the conference, where training, lectures, roundtables on current trends, issues and an overview of current topics in the field of biotechnology, bioinformatics and digital trends would take place.

Second set would be specialized boot camps that would focus on different specific topics e.g. in the field of biotechnology, digital technology, bioinformatics, investments, marketing, product launch, clinical studies ... In this part we would connect companies that lack specific knowledge with already qualified experts in the specific field, who will lead workshops and solve specific case studies.

The third set would be one on one meetings with potential investors. In this section companies would have the opportunity to meet investors who are investing in similar companies and gain additional knowledge, advice, and potentially new investments.

The fourth set would be a stands of individual companies from both regions. Here, companies would present with their innovations, technologies, would have an additional opportunity to network. Interviews to recruit new potential employees would also be conducted at pre-determined hours.

Both days of the bootcamp would be connected through numerous opportunities for informal networking such as morning coffee, breaks and evening socializing.

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