Alps Bio Cluster

**European transalpine network serving
biotechnologies and medical technologies**

2008 – 2011: Inventory and Sustainability

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I.   PROJECT ORIGIN

A. SMEs and European Programmes: stimulating innovation through cooperation

Although the Alpine area is recognized as one of the most attractive in Europe in terms of quality of life, and enjoys a high level of economic drive, it still suffers from a problem of connectivity and accessibility. The development of competitiveness and attracting business to the Alpine area has become decisive. This is the challenge met by the European Alpine Space Programme within which the Alps Bio Cluster has been set up. A Programme launched by the European Commission in 2008, which, through the original transnational partnership proposed, attracted six transalpine regions spread across five countries making up the Alps Bio Cluster.

B. Objectives & ambitions

Alps Bio Cluster is designed to federate resources in research, industry and training in the fields of biotechnology and medical technology in an expanded transalpine area.

This rapprochement developed through the various partners' desire to develop an apposite and effective method of cooperation to serve a highly competitive sector that nonetheless has great potential for economic development over the entire area concerned.

Their declared ambitions are many and enterprising:

- create the requisite conditions to support the development of SMEs at European and international levels by stimulating innovation by means of cooperation within the transnational Alpine area;

- multiply development opportunities to bring new business in, promoting technology transfer between research centres and SMEs;

- thereby helping to strengthen the appeal and competitiveness of the alpine area.

C.   Alpine area on the move

The countries and regions united in this cluster are:

- **France - Rhône-Alpes region**
    - Active partners: ADEBAG (project coordinator); LyonBiopôle

- **Italy - Lombardy and Piedmont regions**
    - Active partners: Bioindustry Park Silvano Fumero; Milan Chamber of Commerce

- **West Switzerland**
    - Active partner: BioAlps

- **Austria – Tyrol region**
    - Active partner: Tiroler Zukunftsstiftung (Tyrolean future foundation)

- **Germany - Bavaria and Oberbayern regions**
    - Active partners: Helmholtz-Zentrum München (German Research Centre for Environmental Health, Microbe-Plant Interactions Department), Weihenstephan-Triesdorf University of Applied Sciences (Faculty of Biotechnology and Bioinformatics)

The French, Italian and Swiss partners have been active in the Bioalpine cluster since 2006. Extending their cooperation to other European countries was a logical extension of the drive generated through this first cluster.

D. European financing in line with its ambition but complex financial engineering

Alps Bio Cluster is co-**financed by the European Commission to 76%**, for the three years of the project (2008-2011). The Rhône-Alpes Region, Isère department and Grenoble Métropole (Grenoble urban area) have also made a financial contribution. The cluster's global budget is 1,862,505 Euros. The Grenoble association ADEBAG (Rhône-Alpes / France) has been in charge of project coordination from the outset.

II. THEMES: a strong, direct link with the alpine area

"A Healthy life at home in the Alps in a natural environment worth to be preserved"

A. Transnational and trans-sectoral cooperation

For three years now, the partners have endeavored to **encourage transalpine cooperation** between **R&D centres, start-ups and SMEs** by creating **thematic networks** uniting resources from academic, industrial and training environments.

B. Themes based on Alpine area issues

With the main working principle of "A Healthy life at home in the Alps in a natural environment worth to be preserved", the Alps Bio Cluster teams concentrate their actions on two strong major themes of the Alpine area:

- Autonomy and Healthcare
Here, the network deals with aspects relating to the use of new technologies in medical devices, to ensure more effective accessibility to healthcare. The subject is fully exploited in an Alpine environment where accessibility is a fundamental issue. The transalpine market has already more than 500 companies (start-ups, SMEs, large companies) working in this field as well as many research centres. All the same, it is vital for these players to be able to harmonize their skills if they wish to develop innovative products and services to meet end users' expectations. By promoting meetings between these players, Alps Bio Cluster encourages the creation of transnational cooperation and development of this sector.

- New diagnosis and therapies
Key fields such as cancerology, infectiology and more transverse fields such as diagnostics, vaccine and environmental health are all concerned. The aim is also to set up transnational cooperation **between research and industry**. Environmental health issues concern combining "Green biotechnology" linked to the environment with "Red biotechnology" which focuses more on healthcare applications.

III.   ACHIEVEMENTS: promoting meetings between players

Based on the principle that the best results can only be achieved if the various players in the sector are organized and structured on a European scale, by breaking down geographical barriers and by mobilizing businesses - from start-ups to large companies - and research centres; the work done by the Alps Bio Cluster essentially concerns setting up networks of players.

Ten events involving European and international players for each of the key themes have been organized. Expert groups have been set up to extend the discussions begun.

A. Eleven European events organized during three years

More than **640 attendees** (cluster members, SMEs, big companies, laboratories, technology transfer organizations) have participated to **11 European events** organized by Alps Bio Cluster during these three years.

Partnering days

24 November 2009 - Innsbruck (Austria)
The 1st "**Medtech Partnering Day**" included 57 participants. 36 companies specializing in medical technologies presented their projects based on 4 themes: innovative medical devices for diagnostics and surgery, telemedicine, subcontractors and assemblers for medical systems, technologies for the autonomy of the elderly. 72 business meetings were organized onsite, following which 14 cooperations were planned and 2 organized directly.
Organizer: Tiroler Zukunftsstiftung

27 October 2010 – Milan (Italy)
During the "**Biotech Fair 2010**", Alps Bio Cluster organized **business meetings** which were attended by 52 companies and research centres from France, Germany and Italy. 129 bilateral meetings were organized in a single day, from which new cooperation projects should shortly emerge.
Organizer: Milan Chamber of Commerce and Industry

Workshops

1 December 2009 – Lyon (France)
35 players mainly from France, Germany, Italy and Switzerland met to discuss the theme "**New diagnostics and therapies**". 8 projects and/or companies were presented during the day and participants were invited to discussions at three round tables, concerning "Personalized medicine", "Targeted treatments" and "Vaccination and immunotherapy".
Organizer: LyonBiopôle

7-8 July 2010 – Grenoble (France)

Grenoble held the second network event "Autonomy and Healthcare" on the theme "**ICT and healthcare: towards personalized services**".

70 industrialists, researchers, professionals in the medico-social sector and representatives of end users from Europe (Austria, Spain, France, etc.) and North America (Canada) met to discuss the issue of transversally reconciling ICT and healthcare. Societal and economic issues were discussed by the 23 participants at round tables (ethics, acceptability and user needs, business models, etc.). At the end of the event, the idea of creating thematic expert groups was proposed and an initial "e-care" group was set up.

Organizer: Adebag

11 April 2011 – Lausanne (Switzerland)

The Alps Bio Cluster team decided to organize a thematic meeting on the European funding opportunities for the telemedicine field backed to the event "e-Health 2011", 12 April 2011 in Lausanne.

The event was supported by the Swiss Agency for European Research and Innovation – EURESEARCH, and experts of EU-funded projects – VITAMIB. The objective of the meeting was to enable the participants to identify the most adapted European financing tools to their needs and projects.

The event gathered 13 participants from France, Germany and Switzerland (SMEs, Research institutes, universities and associations). 8 face-to-face meetings enabled the participants to have personalized advices.

Organizer: Adebag

11-13 May 2011 – Garmisch-Partenkirchen (Germany)

Alps Bio Cluster organized a 2.5 day workshop for international experts in the field of green biotechnologies. Besides information exchange and presentation of newest scientific results, it was aiming the setup of two project proposals that offer today's solutions for tomorrow's environmental problems.

Also in Garmisch-Partenkirchen, the green biotech focus group had its first official meeting and the members took the opportunity to contribute their knowledge and expertise to the groups working on the project proposals. Information on administrative matters and funding opportunities was provided by representatives of the GründerRegio München and the Bavarian State Ministry of the Environment.

The importance of personal contact between key players was enlightened by the fact that during the spring seminar not only ideas for the actual project proposals but also for common projects in the future were gathered – projects that keep the environment in the Alpine space worth living.

Organizer: Helmholtz Zentrum, German research centre for environmental health

*** Seminars & Conferences***

3-4 February 2010 – Neuherberg (Munich / Germany)

70 European stakeholders took part in a **seminar on "Environmental (so-called "Green") biotechnologies to improve human health and quality of life"** presented by 17 international experts. At the end of this second network event, "New diagnostics and therapy", the members of Alps Bio

Cluster launched an **appeal to public authorities** concerning the boom in environmental biotechnologies, to agree on economic development objectives in these areas, with commitments for improving environmental quality and human health (see text in the appendix 1).

Organizer: Helmholtz Zentrum, German research centre for environmental health

12 April 2011 – Lausanne (Switzerland)

BioAlps organized on April 12 the first conference (www.e-health2011.com) in Lausanne dedicated to e-Health (or telemedicine). This area is revolutionizing the way medicine will be performed tomorrow. Beyond the technological challenges that lie ahead, this evolution in medical and clinical practices raises a number of issues, in particular at the societal, legal, political and socio-economic levels. Speakers from numerous countries could present their views and projects during a long day in the beautiful Rolex Learning Center of the Swiss Federal Institute of Technology (EPFL) in Lausanne, Switzerland. A total of 166 participants, including the Head of Unit, ICT for health, Directorate INFSO of the European commission in Brussels, made this event a lively and fruitful event.

Organizer: BioAlps

4-5 July 2011 – Plenary conference – Innsbruck (Austria)

The Alps Bio Cluster project has came to an end at a plenary conference organised in Innsbruck in July 2011. The time was for all partners to take stock on three years of cooperation and to envisage prospects for pursuing transalpine cooperation on the cluster's key themes.

The event focused on European experiences and strategies in building transnational Life Science clusters. The 2 day event has been organized around 2 principal themes: Megatrends in Life Sciences (Technologies, Markets and European Policies) and Opportunities, Challenges and Best Practices in building Transnational Life Science Clusters. Participants had the opportunity to interact with experts from the European Commission and representatives of successful Transnational European Life Science Clusters.

The project partners also worked to identify and formalised the best practices implemented during this project so that they can be replicated for future cooperation.

Organizer: Tiroler Zukunftsstiftung

At the same time, Alps Bio Cluster was also represented at major events in the sector such as Biosquare in Geneva (February 2010) and the Lausanne Industrial Day held on the occasion of the international conference of the European Society for Biomaterials in September 2009.

*** International Summer Schools***

26 July – 1 August 2010 – Freising (Munich / Germany)

Alps Bio Cluster organized an **International Summer School** on biotechnology. There were many applicants and 25 students from across Europe (France, Germany, Italy, Austria, Switzerland, Estonia, Romania, Poland and Ukraine) were selected to take part in this initial experience.

For a week, the students (undergraduate, master and doctorate) were able to share with eminent university professors and experts from leading companies who had come to present the different application areas of biotechnology. They also visited some renowned companies of the sector such as Roche, Penzberg, Wacker and the Hemholtz Research Centre which specializes in environmental

health in Munich. As a result of the success of this initial edition, a second Summer School was organized the year after in Grenoble.

Organizer: Weihenstephan-Triesdorf University of Applied Sciences

18-23 July 2011 – Grenoble (France)

Following the success of the Summer School 2010 on biotechnologies in Germany, Alps Bio Cluster, in collaboration with its local partner Adebag and with local players such as EDISCE-PhD school (among others), organized a Summer School MedTech focused on "the process of innovation and the industrial challenges in medical technologies".

25 international master degree and PhD students:

- visited leader companies such as bioMérieux, Becton Dickinson, Trixell, Roche Diagnostics, and high-level European facility like the ESRF (European Synchrotron Radiation Facility)

- discovered a visionary platform for augmented intervention in medicine with start-ups in surgical robotic such as SQI (Surgiqual Institute)

- have gathered their varied skills and cultures for teamwork on the process from lab to market for a concrete project, supervised by expert tutors in technology transfer and valorization.

Organizer: Adebag

Thanks to the success met by these two first editions, French and German partners are willing to make this event continue beyond the end of Alps Bio Cluster project. A Summer School would be organized every year alternatively on the two topics, Biotech and Medtech, in the two cities, Munich and Grenoble.

B. Three expert groups extend the work begun

To promote the initiatives and transnational projects undertaken at the major meetings organized, Alps Bio Cluster has created three expert groups related to the key themes discussed over the past two and a half years. The groups are both transnational and multidisciplinary and work to help build innovative solutions on an innovative market.

- **"e-Care"**

Alps Bio Cluster players are convinced that the approach relating to "health and information and communication technologies", must be transverse and involve industrial and research players as well as end-user representatives and professionals from the medico-social sector. Taking social and human aspects into account in the proposed solutions is a decisive criterion for both patient acceptability and the definition of the needs of users and health professionals.

10 experts from the Alpine Space (3 from SMEs, 3 from big companies, 1 from research institute, 2 from university and 1 from local governmental agency (IT cluster)) have defined 4 working axis:

- Set up a European open platform interoperable
- Access to the market by involving the big companies of the medical device field
- EU lobbying to influence next calls for projects
- Project engineering to set up European projects

- **"Bring red biotechnology and personalized medicine together"**

The Leading Group on Personalized medicine narrowed its perspectives to the complex activity of project engineering. Members have already drafted a project proposal related to *in vivo* cancer treatment.

- **"Ecosystem services for the benefit of human health"**

Key players in green biotechnologies, companies as well as research centres, offer a magnitude of technologies and instruments to keep the environment in the Alpine space worth living. But there is still a lack of transnational co-operation in this sector regarding to applications for environment, economy, health and social fields. For this reason the Alps Bio Cluster consortium decided to build the Green biotech focus group in order to foster the development of transnational projects.

C. 2 tools implemented to support collaborations

- **Google like tool - A transalpine web-based search engine dedicated to biotechnologies**

In line with the mission of the AlpsBioCluster network to enhance the visibility of our regions and promote partnerships, especially in the field of Life Sciences, BioAlps developed a search engine dedicated to life sciences in the Alpine Space: www.alpslifesciencesearch.com. This tool centralizes the URLs of all actors in the regions of the cluster active in Life Sciences. The eight partners contributed to feed the data and keep the search engine up-to-date. Search of specific companies, research centers or laboratories can be carried out either with generic terms (oncology, research…) or with a combination of targeted keywords for a more precise search. The tool aims at facilitating the identification of potential partners and fostering cooperation between our regions.

- **Mindbrowser tool**

In order to support networking and project building activities, Alps Bio Cluster project partners will act as a contact point for their regions thanks to an internal tool that acts mainly as a catalyzer of ideas. *Mindbrowser*, a bioPmed tool, is structured as a database, opened only to project partners and divided into two main sections. The first collects project ideas, while the second offers the possibility to share requests and opportunities coming from each partner's region, namely technology offers, technology requests, cooperation requests, partner offer/search and commercial/licensing/financial agreements.

This common workplace will then ease the process of matchmaking, tailored to specific needs, by allowing partners to share ideas, requests and offers arising from each region, thus facilitating their diffusion in a collaborative environment.

IV.   Building a shared future for life sciences support in the Alpine Space

Thanks to Alps Bio Cluster, a transalpine network deserving of its name have been set up, and key players identified. Next step is to understand how to scale up the process, how to realize a system that will be self-sustaining, how to transform thematic networks, a key tool for the realization of common and shared initiatives, in systemic tools.

During these last three years, partners have shared their know-how and the experiences and they learnt from each other. They built pilot actions starting from those experiences and they created common initiatives.

To ensure the sustainability of the process and the continuation of the activities after the end of the project, partners have built an organizational model, and have developed a common marketing and positioning strategy. This has been materialized by the signature of a Memorandum of Understanding in September 2011.

The ambition is to keep a common identity through the Alps Bio Cluster brand in order for each partner to become better known and to facilitate interactions and partnerships across the Alps.

A. Marketing proposal

The objective is to build a recognizable and strong image with a unique trademark: Alps Bio Cluster.

Alps Bio Cluster will have a unique Cluster Marketing Platform for each of the Clusters involved. The added value is the ability to provide investors/potential clients, on demand, with detailed and integrated geo-referenced data about the area in which they are interested in relocating their business or looking for new business/services.

The Cluster Marketing Platform will include and integrate several structures:

- Front office/entry point
- ALPS Bio Cluster web site
- Call centre and Back office through clusters involved

The Territorial Marketing Platform will provide:

- investment information
- location opportunity research
- identification of location options throughout the region in line with
- requirements from the cluster's members,
- overview of incentives (for investment, recruitment and training)
- financial and tax facilitation studies

- business location assistance
- project definition support
- assistance in the relationship with local institutions/SMEs
- Directory of companies and R&D centers

Several tools and common promotion activities will be developed for promoting the meta-cluster as a single entity (networking, participation to exhibitions, organization of road-shows, organization of stands, advertising, international presence events, web site, targeted mails, e-mail, newsletter, brochure and leaflets, labelisation of specific projects ...).

B. Governance model

The model chosen by Alps Bio Cluster partners is based on the following principles:

- Alps Bio Cluster stays a 'group of friends': **no formal organization unit** will be created;
- **non fee based**: each partner will budget and cover its own initiative/event;
- **specific initiatives** such as common marketing/labeling investment cost or promoting costs will be **co-financed by partners**;
- Alps Bio Cluster is **an open club**, open to new members from Alpine area;
- Alps Bio Cluster Innovative and Virtual Network will **label event and initiative** under a common strategic marketing 'umbrella'.

Concretely, Alps Bio Cluster is the Central Platform in charge of coordinating the transcluster activities and trans-territorial marketing actions with a strategic responsibility.

It is represented on a national level by the different (regional) cluster platforms, depending on the topic concerned.

It is managed by a President, which remains in charge for 1 year, and by one representative per partner.
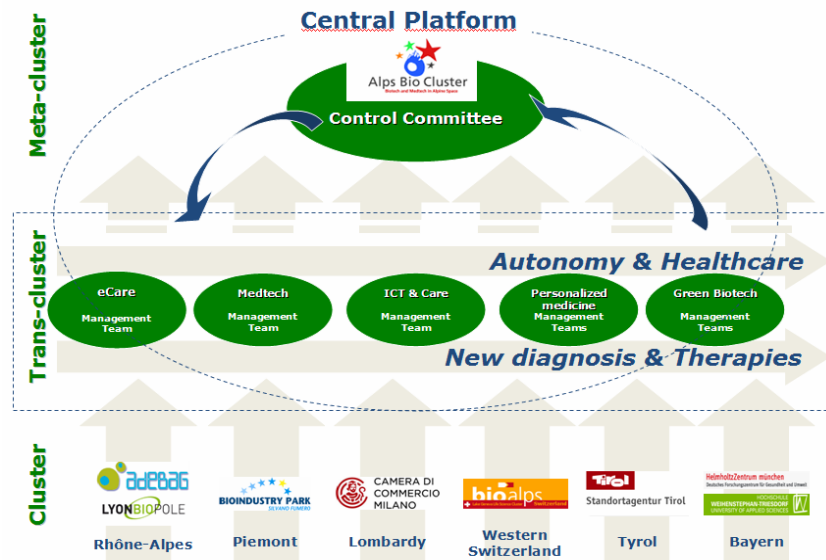
C. Memorandum of Understanding

To formalize this meta-cluster, Alps Bio Cluster's partners signed in September 2011 a Memorandum of Understanding (MOU). All parties intend to encourage and promote cooperation in order to stimulate the growth and development of life sciences in the Alpine space. Every other player having an interest in developing those relationships and shares the vision can join the cluster.

D. Best Practices

Boosted by their experience gained through these three years of collaboration, Alps Bio Cluster's have already identified some best practices in order to ensure the success of their meta-cluster:

- annual trans-Alpine Summer Schools interfacing Education and Enterprises alternatively on Biotechnologies in Munich and MedTech in Grenoble (see appendix 2)
- creation of thematic experts groups to draw attention of policy makers (national, regional, EU levels) on Alpine Space specific issues and to be proactive by suggesting that the Alpine Space is the right place to experiment innovative solutions on e-Health services (contribution to the e-Health Action Plan 2012-2020 and Implementing large scale e-Health solutions in European mountains areas, see appendix 3) and on ecosystem services for human health (10 recommendations on environmental biotechnologies)
- creation of co-operation areas between the different stakeholders (SMEs, Big Companies, Researchers, Policy Makers) to foster public/private partnerships to facilitate the emergence of innovative solutions

- SMEs support to foster their participation in European projects (partnership tools, recommendations, contribution to the Green Paper EU consultation – see appendix 4).

APPENDIX 1

10 recommendations for local authorities for the implementation of green biotech

3rd Alps Bio Cluster event: Winter seminar on Environmental Biotechnologies –
Perspectives for the Alpine Space

The winter seminar focused on four different topics identified as the most important challenges for the future development of the Alpine region:

Pollution in the Alpine space:
- Environmental pollution in the Alps is ubiquitously found in air, soil, water and biota
- Quality of life is a social asset: threats for human and environmental health are amplified through the evergrowing energy demand with its pollution problems. Intelligent use of fossil fuels but also introduction of renewable bio-organic energies is indispensable - a rapidly developing field of research

Novel diagnostic tools:
- novel tools are needed to detect the fate of pollutants in the Alpine space: risk assessment has been improved by novel diagnostic tools with lower detection limits
- SME's should adopt these novel diagnostic tools for services to the public and the ecosystems; the eco-advantages of novel techniques are to be explained to stakeholders and politicians and various sectors of biotechnologies have to be linked to each other

Solutions for pollution problems:
- Multiple examples were presented for the use of green biotechnologies by academia and SME's (PIXE, isotopes and antibodies for pollution detection in the environment). New techniques should be gained access to broad public SME's
- Local use of phytobiotechnology is an important instrument to improve human health and environmental safety in the Alps: local pollution requires local detection and local response.

Utilizing novel green biotechnologies:
- The Alps offer a multitude of options for bio indication, bio detection, bio remediation and bio energy
- Transfer of knowledge form academia to SME's is the main challenge for the future of the Alpine space as a central European region with high potential

Local problems require local solutions but regional efforts
Being considered as one of the most attractive regions for living and working throughout Europe,
- Care has to be taken to preserve the Alpine region as an growing economic space in a delicate environment
- Networking and clustering are indispensable to yield best impact of accumulated academic knowledge and practical green solutions offered by SME's

- It is necessary to stimulate discussions between stakeholders, local authorities, policy makers, SME's and researchers on green biotechnologies and foster public/private partnership

The Alps Bio Cluster team has chosen to build a thematic network on "Ecosystem services for human health". This thematic network will bring together experts for the Alpine Space and with diverse backgrounds (researchers, start-ups, SMEs, companies, local authorities). The aim will be to work towards solutions for the Alpine region and their implementation.

In an area that provides us with such a multitude of valuable ecosystem services, we need to take action.

APPENDIX 2

ALPS BIO CLUSTER – SUMMER SCHOOL SUTAINABILITY TABLE

	Biotech summer school Münich, 2010	Medtech Summer Shool Grenoble, 2011	Sustainability
Organizators	Weihenstephan-Triesdorf	Adebag - EDISCE (PhD School) - partner : Floralis (technology transfer structure)	Working with the university is helpful to implement the pedagogic program, to spread the information, to have rooms, to find speakers, and in Grenoble it was also a good link to convince Floralis to work with us, since it is a technology transfer structure of the university
Topic	Biotechnology	Medical Technology - Industrial challenges and process from lab to market in the medtech field	Topics refer to host city specialities. For Grenoble, the concrete aspect of the topic really attract students
Finance	Staff cost paid by the Alps Bio Cluster project Other fees paid by the Alps Bio Cluster project	Staff cost and communication paid by the Alps Bio Cluster project Other fees paid by the PhD school	One of the most important cost is staff cost for organization. For next editions it is possible that companies will be ok to sponsor the event. The local authorities could also sponsor the event, since the summer school is a good way to give visibility to the host city assets, at a European and international level, and also to attract foreign people in the territory.

Companies	**Companies'tours**	Small (Wacker Consortium and Erdinger Weißbräu) and big companies (Roche) and the HMGU have been involved	Start-ups and big companies : bioMérieux, Trixell, ESRF (European Synchrotron Radiation Facility), SQI (Surgiqual Institute) & ECCAMI (Excellence Center for Computer Assisted Medical Interventions) platform, Becton Dickinson + Intervention of Roche Diagnostic	Companies -start-ups, as well as leaders- are really enthusiastic regarding our summer school. To convince them to be part of the summer school a power point presenting the project, the last edition, the objectives and benefits for students and for companies (appendix 1) can be used. Companies are interested in : - valorising their skills, especially for start-ups - the ''universities/ companies'' relationships, in the framework of their policy of innovation, and regarding the recruitment and the integration in the labour pool of their area - showing students examples of successful industrial transfers (success stories) to encourage them
	Companies'support	Receive students for lunch and organize the visit	Receive students for lunch and plan specific programs and interventions, for the visit to fit with the topic "industrial challenges and process from lab to market in the medtech field"	
Expert tutors in technology transfer		no tutor	The tutors are present during the 4 teamwork afternoons in order to help students to list the different steps for the process from lab to market and start some of them	Be part of the summer school can be helpful for the technology transfer structure since students work on real project, and can for instance start the market studies on the web, or bring their multicultural point of views.

Speakers	Speakers from the Life Science Sector in Germany have been involved	Conferences on Grenoble assets and applied research in medtech	Be part of the summer school is a good way for speakers to promote their work and the assets of their area in order to attract international PhD for instance. A power point also can be used to convince them.
Spread the information	Flyers and posters International relationships contact of the University and alps bio cluster partners spread the information 77 people registered Registration : january to april included	Flyers and posters International relationships contact of the University and alps bio cluster partners spread the information Information spread to universities with biomedical trainings found on the web ...people registered Registration : april to may included	Having a long period of registration is really important Email: most efficient way to spread the information (better than flyers and posters), but flyers useful to spread during special events and meetings with international attendees. It could be really useful to have an address book with at least all the universities contact in the Alpine Space, filled out by all the partners (it could be linked to the document for bourse students exchange), and add on it all the contacts found on the web, of the universities which have medtech/bitoech trainings. For the Grenoble summer school, international students applied (Canada, Brazil, Mexico, USA...), so it is a really attractive event, and at the same time a good opportunity to give visibility to the host city assets

Recruitment	Recruitment depends on motivations, trainings, age, sex, nationality in order to have a European Group of interested students	Recruitment depends on motivations, trainings, age, sex, nationality in order to have a group multicultural, mixed, with no great difference in age, and with students motivated and with knowledge which fit the topics of the conferences and companies' tours	In the registration form having a box for training details and one for motivations is a good way to select students.

APPENDIX 3

Public Consultation on the eHealth Action Plan (eHAP) 2012-2020

Public Consultation on the eHealth Action Plan (eHAP) 2012-2020

Respondent information

Please provide your name	
Coralie Riou / Valérie Ayache	

Please provide your country of residence	France

Please provide your email	
v.ayache@adebag.org	

I reply on behalf of:	My employer (other than a public authority)

Please indicate the sector(s):	Associations and/or NGO (please specify)

Benefits of eHealth solutions

In your view, what are the main benefits you expect from the large scale deployment of eHealth solutions?
Large deployment of eHealth solutions would enable to validate the product and service at a large scale and thus adapt them to a large public. Industrials will involve themselves only for large scale market and their involvement is necessary so that the solution reach to market. Business models and organizational issues can only be solved at large scale level.

The four objectives of the Action Plan

Objective 1: Increase awareness of the benefits and opportunities of eHealth, and empower citizens, patients and healthcare professionals	a. Yes, I agree

Comments
It is necessary in order that the eHealth solutions are adopted by the users. I would add the involvement of the citizens, patients and healthcare professionals during all the development process of the solution in order to adapt in the best way possible to users ' needs, expectations and habits.

Objective 2: Address issues currently impeding eHealth interoperability	b. Yes, I partially agree

Comments
The interoperability is of course a crucial issue for the development and the easy implementation of the eHealth solutions. But the establishment of standards creates a gap between big companies (which could afford to pay for the standards) and SMEs (which do not have budget to access to standards). One challenge would be also to enable to access to the standards to all type of actors in order to easy the collaboration between them. Open source interoperability should be targeted to ensure the participation of innovative SME's.

Objective 3: Improve legal certainty for eHealth	a. Yes, I agree

Comments
Users could be afraid by the eHealth solution, as personal data are exchanged and could be a barrier for adoption of these solutions. Users must be confident in the systems so data and communication must be under a clear legal framework. A clear legal framework is also required to secure medical professionals responsibility.

Objective 4: Support research and innovation in eHealth and development of a competitive European market.	c. No, I disagree

Comments

The technologies exist. What is now necessary to do is to integrate these technologies to design a complete solution that could reach the market. Moreover, the development of a new solution must be user need driven and thus involve the end-user early in the development process in order to develop a solution adapted to users need. Innovation must not be only technology push and overall market pull. For this point, the innovation is in the social aspects that should be taken into account when developing a new solution. The support should be focus on the user involvement and the evaluation and validation phases with the end-users. Organizational issues and professionals' practices and training are more crucial challenges. Dialogue and cooperation between these different stakeholders need to be organized.

Main barriers

What do you consider to be the main barriers preventing the large scale deployment of eHealth solutions? (Please choose maximum 5)	b. Budgetary constrains c. Lack of leadership (policy makers, local managers) g. Inappropriate legal frameworks and lack of reimbursement schemes i. Inappropriate organization of the healthcare process l. Other (please specify)

Comments
Lack of involvement of big European industrials from ICT and Medtech

In your view, how should the European Commission contribute to addressing the barriers you selected above, and provide incentives to promote eHealth solutions? (Please choose maximum 5)	b. Facilitate cooperation between Member States and/or regions to address common challenges c. Support systematic evaluation of the benefits and costs, effectiveness/usefulness of eHealth solutions e. Support deployment of eHealth services/solutions based on evidence f. Explore innovative financing, reimbursement and incentive schemes to promote innovation in eHealth i. Improve ICT skills of users (citizens/patients/health professionals)

Objective 1: Increase awareness of the benefits and opportunities of eHealth, and empower citizens, patients and healthcare professionals

In your view, what actions should the European Commission consider to improve awareness and empowerment of **citizens and patients**?
Focus on new methodology to integrate citizens and patients in the innovation engineering process and development phase of the solution as Living Lab methodology. Provide them solution to be their own actor of their healthcare (enable them to make their own decisions)

In your view, what actions should the European Commission consider to improve **healthcare professionals' awarness and acceptance**?
Focus on new methodology to integrate them in the innovation engineering process and in the development phase of the solution as Living Lab methodology. Support the training of the healthcare professional necessary for their acceptance of the new technologies and demonstrate the benefit (time saving, more efficient...)

Additional comments

In your view, in which of the areas listed below European cooperation is most important? (Please choose maximum 3 options.)	a. ICT systems for clinical use (decision support systems, EHR, ePrescription, Radiology Information Systems etc.) d. ICT systems for patients / individuals (lifestyle, prevention, monitoring)

Objective 2: Address issues to achieve eHealth interoperability

In your view, in which of the areas listed below European cooperation is most important? (Please choose maximum 3 options.)	b. Taking steps to advance technical interoperability to facilitate de-fragmentation of the eHealth market f. Other (please specify)

Comments
Focus on open source interoperability

A European Interoperability Framework could be developed to provide support to Member States and stakeholders to solve interoperability issues. In your view, in which of the areas listed below is European	a. the harmonised standards, profiles and technical specifications to be used to ensure cross border eHealth Interoperability c. the harmonised medical terminologies, ontology,

cooperation most important ? (Please choose maximum 3 options.)	classifications and codification systems that need to be used at EU level

Objective 3: Improve legal certainty for eHealth

In your view, how should the European Commission address legal issues related to eHealth? (Please choose maximum 3 options.)	a. Encourage and support Member States in addressing relevant legal and organisational issues in a coordinated manner c. Encourage professional associations, scientific societies and civil society representatives to promote best practices through the development of guidelines and/or codes of conduct for eHealth services
In your view, which areas should the European Commission focus on? (Please choose maximum 3 options.)	b. Reimbursement c. Data protection

Objective 4: Support research and innovation in eHealth and development of a competitive European and global market

In your view, how should the European Commission support innovation? (Please choose maximum 3 options.)	b. Provide funding for the scaling up of innovative eHealth solutions, for example by facilitation deployment of research results e. Support user-driven research through use of appropriate financial instruments (for example use of CSO or similar instruments)
In your view, in which of the areas listed below should the European Commission cooperate with international partners? (Please choose maximum 3 options.)	d. Promote benchmarking and evaluation projects in order to provide evidence to support deployment of ehealth solutions. f. Promote deployment of telemedicine services

Comments
Access to the market for SMEs: how to reach a strong dissemination, what is the good level of deployment: regional, national, European? EU should put a strong support for first implementation of e health solutions on specific territories with specific constrains as Mountains areas or islands or other isolated territories.

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APPENDIX 4

Contribution to the Green Paper "*From Challenges to Opportunities: Towards a Common Strategic Framework for EU Research and Innovation funding*"

Working together to deliver on Europe 2020

The questions in this section correspond to Section 4.1 of the Green Paper.

1.   How should the Common Strategic Framework make EU research and innovation funding more attractive and easy to access for participants? What is needed in addition to a single entry point with common IT tools, a one stop shop for support, a streamlined set of funding instruments covering the full innovation chain and further steps towards administrative simplification?

SMEs often feel disconnected or even excluded from European projects and particularly Cooperation FP7 projects considered as "fundamental research" projects that is to say "far from market" projects. One of the major SMEs concerns is the market vision/access in order to exist and to grow. In most cases SMEs integration in European consortia is made in order to fulfill the global eligible criteria (technology provider, end user profile). It is rarely a proactive approach fitting with their global development strategy.

SMEs are more present on other European projects, i.e. Research for the Benefit of SMEs FP7 Capacities or Eurostars, etc. However those instruments dedicated to SMEs are the most competitive one, i.e. poor return on investment. Thus it prevents a lot of them from submitting a proposal.

In spite of a SME NCP network all around it is a huge task to extract information of interest for a given SME. Thus the "one-stop-shop" idea is of a great interest provided that this "one-stop-shop" is closer enough to SMEs, interacts regularly with them so as to better fit with their needs (and transmit them the right information at the right moment.

Not only providing a "one-stop-shop" for SMEs, it is necessary to prove by the facts of the interest for SMEs development to take part in such projects. This goes in particular through:

- administrative simplification, *i.e.* the current time to contract is not convenient with the usual SMEs project timing;
- a greater transparency of the evaluation criteria (number of SMEs required or expected, budget per country limit, *etc.*);
- making project pre-financing become the rule in order to free SMEs from advance cash.

2.   How should EU funding best cover the full innovation cycle from research to market uptake?

EU funding mainly covers research and demonstration phases of a project. To fund the entire innovation cycle, funding should cover all project development phases from the concept to commercialization. Moreover not only technological innovation should be taken into account but also usage, social or organizational innovations.

Healthcare market has features such as clinical evaluation, regulatory affairs (CE marking, EMA, *etc.*) and reimbursement that are taking part in the new product/service/process development. On top of

that, these development phases are often all the time even the most critical and riskiest phases for SMEs. In order to support SMEs development at European but also international level it is necessary to fund these riskiest phases

3.   What are the characteristics of EU funding that maximise the benefit of acting at the EU level? Should there be a strong emphasis on leveraging other sources of funding?

In order to maximise the benefit of working at European level EU and regional/national funding should complement or even strengthen each other and should not overlap. Thus a project that has already found regional/national/European funds for given phases of the development of a new product/process/service should be given priority to complementary regional/national/European funding for the other development phases (market research, commercialization, *etc.*).

4.   How should EU research and innovation funding be used to pool Member States' research and innovation resources? Should Joint Programming Initiatives between groups of Member States be supported?

Joint Programming Initiatives should address a wider range of thematics.

In order to pool Member States' research and innovation resources EU funding could provide SMEs a favored access to EU high technological measure instruments.

5.   What should be the balance between smaller, targeted projects and larger, strategic ones?

Both targeted projects and strategic ones are important. One could imagine call for proposal based on:
- open or "bottom-up" approach for smaller/targeted projects;
- workprogramme for larger/strategic projects.

The chosen balance between the two types of projects could be the global EU funds could be distributed as follow:
- 50% for smaller/targeted projects;
- 50% for larger/strategic ones.

Thus there would be many smaller "close to market" projects with smaller consortia and smaller budgets than large "far from market" projects.

6.   How could the Commission ensure the balance between a unique set of rules allowing for radical simplification and the necessity to keep a certain degree of flexibility and diversity to achieve objectives of different instruments, and respond to the needs of different beneficiaries, in particular SMEs?

For the moment, SMEs are reluctant to participate in EU projects as there is a mass of funding schemes depending on the type of organization, the type of instrument, the type of activities, etc. The Commission could ensure the wished balance by setting up unique set of rules per type of beneficiary whatever the instrument and the type of activities.

Moreover SMEs do not have the cash flow and the human resources to make financial reports as required. One could imagine that subcontracting activities for these tasks could be funded.

7.   What should be the measures of success for EU research and innovation funding? Which performance indicators could be used?

The measures of success for EU research and innovation funding could be evaluated since the submission of a proposal by demanding the inclusion and the implementation of a business plan of the new product/process/service developed.

The setting up of projects with "Go / No Go" milestones at critical points of the project development (feasibility study conclusions, market research conclusions, etc.) could be encouraged. Projects in SMEs are driven this way.

Projects set up with such a scheme would allow EU but also SMEs to capitalize on the best practices and pitfalls to avoid.

8.   How should EU research and innovation funding relate to regional and national funding? How should this funding complement funds from the future Cohesion policy, designed to help the less developed regions of the EU, and the rural development funds?

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Tackling Societal Challenges

The questions in this section correspond to Section 4.2 of the Green Paper.

9.   How should a stronger focus on societal challenges affect the balance between curiosity-driven research and agenda-driven activities?

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10.   Should there be more room for bottom-up activities?

The term "bottom-up" approach is extensively used to qualify ideas arising from the company. However the end-user needs dimension should not be missed out of this "bottom-up" approach. Thus there should be more room for "bottom-up" activities if and only if innovative aspects are combined with end-user needs and access to market.

11.   How should EU research and innovation funding best support policy-making and forward-looking activities?

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12.   How should the role of the Commission's Joint Research Centre be improved in supporting policy-making and forward-looking activities?

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13.   How could EU research and innovation activities attract greater interest and involvement of citizens and civil society?

EU research and innovation activities could attract greater interest and involvement of citizens and civil society if citizens and civil society were directly involved in these activities as "partners" of projects.

The Living Lab project engineering approach through the involvement of all the stakeholders on the chain value from early stages of new product/service/process development should be of a great interest in order to achieve the interest and the involvement of citizens and civil society.

Strengthening competitiveness

The questions in this section correspond to Section 4.3 of the Green Paper.

14.   How should EU funding best take account of the broad nature of innovation, including non-technological innovation, eco-innovation and social innovation?

EU funding could best take account of the broad nature of innovation by funding all types of innovation (social, environmental, usage, …) and not only technological innovation.

15.   How should industrial participation in EU research and innovation programmes be strengthened? How should Joint Technology Initiatives (such as those launched in the current Framework Programmes) or different forms of 'public private partnership' be supported? What should be the role of European Technology Platforms?

SMEs currently have limited participation in European projects as they feel left out of funding schemes:
- project size (duration, cost, consortium) is not adapted to SMEs issues;
- the low success rate of submitted proposals makes SMEs invest time and resources for such a poor ROI.

In spite of this assessment, SMEs are well aware of the strong incentive of playing at European level. European projects can give them not only an access to the market but are also a stepping stone towards the international development (US, Japan and also emergent countries markets). Indeed SMEs offers are too often niche market offers preventing from being more complete offers. Collaborate at a European level with other partners is a real opportunity for them to reach a critical size and also a critical offer by pooling all together their offers.

All initiatives giving an access to European projects with a greater ROI are welcome.

16. How and what types of Small and Medium-sized Enterprises (SME) should be supported at EU level; how should this complement national and regional level schemes? What kind of measures should be taken to decisively facilitate the participation of SMEs in EU research and innovation programmes?

SMEs feel currently left out EU research and innovation programmes for the reasons mentioned above. They are also limited by their equity. In order to facilitate the participation of SMEs in EU research and innovation programmes, the following measures should be considered:
- all projects should be evaluated even those with small budget;
- step by step funding schemes with ongoing evaluation and strong "Go/No Go" milestones
- project prefinancing should become the rule in order to limit the impact on the SMEs cash flow.

17. How should open, light and fast implementation schemes (e.g. building on the current FET actions and CIP eco-innovation market replication projects) be designed to allow flexible exploration and commercialisation of novel ideas, in particular by SMEs?

Spreading these schemes and making them less competitive than they are currently should be of a great interest for SMEs. Thus the setting-up a proposal ROI in such schemes would make them consider the EU projects participation as a real opportunity for them and their business.

18. How should EU-level financial instruments (equity and debt based) be used more extensively?

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19. Should new approaches to supporting research and innovation be introduced, in particular through public procurement, including through rules on pre-commercial procurement, and/or inducement prizes?

Yes, definitely. This could be a real competitive advantage for our SMEs as it had been since 30 years for American companies. It opens a great opportunity to co create offer which matches user's need and overcome more easily difficulties to access the market by implementing innovation project

engineering as Living Lab methodology. It should imply training on innovation purchase for the public procurers.

For SMEs, it's a leverage tool in the way that it validates both their innovative solutions and business model and could trigger private funding.

20.   How should intellectual property rules governing EU funding strike the right balance between competitiveness aspects and the need for access to and dissemination of scientific results?

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Strengthening Europe's science base and the European Research Area

The questions in this section correspond to Section 4.4 of the Green Paper.

21   How should the role of the European Research Council be strengthened in supporting world class excellence ?

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22   How should EU support assist Member States in building up excellence?

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23.   How should the role of Marie Curie Actions be strengthened in promoting researcher mobility and developing attractive careers?

Marie Curie actions are extensively used by academics in order to develop researchers' skills all along their career. However, these actions, often no or little known by SMEs, could be a real chance for them of having trained personnel on strategic thematics for which no training courses are available at regional/national/European level.

24. What actions should be taken at EU level to further strengthen the role of women in science and innovation?

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25.   How should research infrastructures (including EU-wide e-Infrastructures) be supported at EU level?

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26.   How should international cooperation with non-EU countries be supported e.g. in terms of priority areas of strategic interest, instruments, reciprocity (including on IPR aspects) or cooperation with Member States?

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27   Which key issues and obstacles concerning the ERA should EU funding instruments seek to overcome, and which should be addressed by other (e.g. legislative) measures?

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