

Cross border cooperation
2007 - 2013



Meet Croatia in Primošten

Days dedicated to

IPA Adriatic CBC project– Bridge technical differences and social suspicions contributing to transform the Adriatic area in a stable hub for a sustainable technological development,
project acronym: **ADRIA-HUB**

AdriaHUB

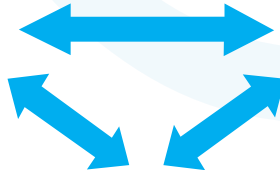
Primošten, Croatia,
25 - 28 September 2013

1. Project summary

Major efforts have been made by the European Union to increase the fundamental interaction between research, education and innovation, as key driver of a knowledge-based society. Furthermore, the Union recognised that the relationship between the business community and the university, considering its double role as education and research institution, is of strategic importance for a modern vision of future and development. Several “case-studies”, made across the whole Europe, have demonstrated an increase of opportunities by “structured business-university partnerships”, especially in industrial innovation and social deployment. At the same time, beyond all the official aspirations to enlarge the “collaborative friendships” between Industrial and Academic worlds, a genuine and functional networking is something very hard to accomplish everywhere in Europe and, particularly, in the Balkans

area. Until the recent past, these territories had been affected by various political, social and economical crises, leading to a high fragmentation of scientific knowledge and deep impoverishment of the productive infrastructure. Nowadays, existing obstacles and divisions have to be rapidly removed to avoid serious delays in innovation and a potential “point of no return” for regional competitiveness.

A partnership established by IPA Adriatic CBC AdriaHUB Project, made of 23 different partners/associates over 5 countries, directly connects 8 universities with 5 public institutions and 10 private subjects, enterprises and consortia of enterprises. This trans-national association aims to promote and facilitate the contact among Educational and Business galaxies, creating “new channels and methods of communication”. Total value of the project is 2.240.775,00 Euro.



2. Areas of the Adra-HUB project activities

- **Political Approach:** merging interests and efforts for common purpose, overcoming divisions between populations inherited from past;
- **Educational Evolution:** comparing education models and effects, pushing the university curricula toward the needs of industry;
- **Social Action:** reinforcing the employment of young people and their correct positioning on the labour-market;
- **Research and Development:** forwarding the R&D efforts and capabilities of university partners toward a “business-driven research”
- **Transfer of Technology:** providing industrial needs for technology to the universities as source of innovation



- **Industrial Innovation:** focusing resources and attention on a specific industrial sector, the wood processing industry, relevant for the whole area
- **Eco-sustainability in production:** developing methods and prototype solutions in respect to environmental and eco-friendly aspects.



- **Implementation of ICT:** creating an advanced web-oriented platform to connect data and information on all over the Adriatic region;
- **Workforce Straightening:** merging individual skills and industrial needs towards the recruitment of the most appropriate professionals



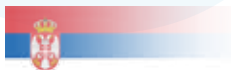
3. Project objectives

- › Adria-HUB proposes a mechanism for supporting a wide cooperation of universities and industry by:
 - » Building a sustainable hub of intellectual/human capital. The hub will be based on an innovative ICT platform connecting graduates from 72 universities in Italy (64 connected to AlmaLaurea), Serbia, Croatia, Montenegro and BiH with the demands of companies from those countries as work force.
 - » Creating a sustainable platform, filling the communication gap between the academic R&D offers of services and the R&D needs in productive sector.
 - » Testing the new methodology for cooperation on a selected primary industrial sector as target particularly relevant in the local economies (wood processing) by creation of a list of high-potential innovative companies and selection of a panel of graduates, in order to carry out relevant training activities, and facilitate the transfer of technology between University and involved businesses.
- › Adria-HUB aims to drive university research toward a common path of innovation, merging the scientific curiosity of researchers with demands of competitiveness from enterprises.
- › As social objective, the project promotes the correct positioning on the Adriatic labour market of qualified human resources, facilitating the employment of graduates by merging personal skills with industrial needs. Joining these two complementary aspects, technological know-how and human expertise, a prolific environment for innovation is realized on the Adriatic area and efficiently offered to large enterprises and SMEs as support for their innovation.
- › Objectives related to the project outputs are: improving research capacity, encouraging transfer of innovation, rising competence levels, reinforcing high educational training, facilitating the employment of graduates, promoting joint activities and focusing on a key sector.

4. Participants on the project



- University of Bologna, LB
(Responsible for WP0, Project Preparation and WP1, Crossborder Project Management and Coordination)
- Inter-University Consortium AlmaLaurea, FB1
(Responsible for WP3, Transnational Education and ICT platform for graduates)
- CNA Provincial Associations of Ravenna, FB10
(Responsible for WP4, Industry cooperation patterns and ICT Platform of R&D Services)
- Friuli Innovazione, Research and Technology Transfer Center, FB11
(Responsible for WP6, Transforming Knowledge in Innovation and Technical Evaluation)
- SCM Group, Rimini, FB12
- Venetian Cluster of Cultural and environmental Heritage, FB13
(Responsible for WP5, Exploiting ICT platforms to foster technological knowledge)
- Italian Consortium for Tools Manufacturing – UTECO, FB14
- WIRUTEX, Assoc.
- Confindustria Rimini, Assoc.



- Faculty of Engineering - University of Kragujevac, FB2
- Faculty of Mechanical Engineering Kraljevo - University of Kragujevac, FB3

- Faculty of Electronic Engineering – University of Niš, FB5
- Regional Chamber of Commerce Kragujevac, FB7
(Responsible for WP2, Communication and Dissemination)
- Faculty of Mechanical Engineering, University of Belgrade, Assoc.
- Belgrade Chamber of Commerce, Assoc.
- GIR, Assoc.



- Chamber of Commerce and Industry of Banja Luka Region, FB4
- Faculty of Mechanical Engineering - University of Banja Luka, FB8
- Chamber of Commerce and Industry of Banja Luka Region, Assoc.



- Faculty of Mechanical Engineering - University of Montenegro, FB9

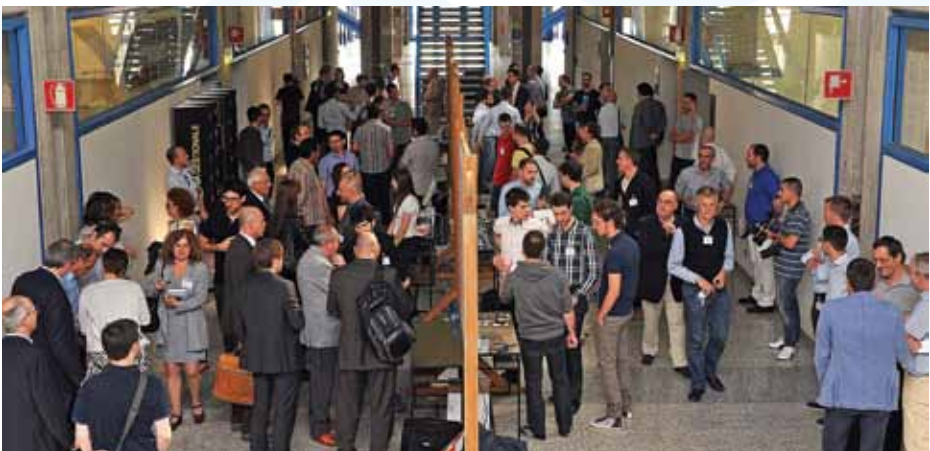


- University of Rijeka - Faculty of Engineering, FB6
- Civil engineering, University of Zagreb, Assoc.
- Croatian Employment Service, Dubrovnik Regional Office, Assoc.

5. Communication and Dissemination (WP2)

Communication and Dissemination are a fundamental part of the IPA Adriatic CBC projects and all the project partners, according to their specific role, are directly involved in the diffusion of information and results. Media communication is provided through press conferences on local television and radio stations as well as through an interactive project website that would include forums and FAQ. Non-media communication is provided by organizing

various activities, such as public appearances related to international conferences, info days and students festivals, brochures, flyers and other advertising materials. Additional National & International Teamwork Forums involve actively stakeholders in project activities, bringing their specific competencies and defining strategic guidelines (as for DBs implementation) and therefore, in order to disseminate projects results.





6. Transnational Education and ICT platform for graduates (WP3)

A transnational methodology to improve integration between University, in its educational function, and Industry is being developed. It aims to establish enduring linkages and a common language permitting the most appropriate placement of highly skilled human resources as a driver for Innovation in the Business sector. Starting from the positive experience of AlmaLaurea's platform, an additional ICT platform for CVs will be specifically developed for Balkan area (overcoming heterogeneity) and implemented, to facilitate the research of graduates and their access to the labour market. The Academic partners in cooperation with AlmaLaurea define the needs and requirements for the local DB implementation in accordance with the specifications suggested by local higher

education experts and Bologna Process. The Industrial partners define a common approach to identify innovation needs, discussing with University, their issues and challenges. Actions range from the definition of standards and equivalences to the direct programming of the new Balkan DB. As final output, an advanced information system integrating AlmaLaurea and Adria-HUB DBs will be realized. It will foster recruitment of graduates providing an on line market place where companies can research useful information on workforce, comparing data coming from different sources on a standardized format following recommendations and guidelines developed in a Academic-Industrial interchange.



7. Industry cooperation patterns and ICT Platform of R&D Services

A common and standardised DB regarding University Research and Development advanced services provided by each university project partners to businesses will be implemented. The DB will be at disposal of businesses to guide them in the process of solving their technology problems. The DB will be structured to provide companies with a clear map of services provided by the University and the related technological area of interventions. The DB will actively contribute to the technology transfer from University to Business by a direct contact between offer and the demand of R&D services. The first release of this DB will map all R&D services afferent to all the wood processing chain. Those information will be widespread to enterprises in order to attract their interest toward R&D

services performed by Universities. Thanks to the DB, business will easily know where to ask for technological R&D advice and solutions and check inside the University know-how. From the technical point of view one single DB will be set and hosted within each university. The local DBs will be interconnected in the web Platform using the Virtual engine previously developed. In this way the Virtual Engine will be able to compare data coming from different sources and will provide a standardised environment where companies can easily find information they need, mapping and matching all aspects concerning innovation: education (Graduate DB), technology transfer (R&D DB) and Innovation (pilot actions in wood processing).



8. Exploiting ICT platforms to foster technological knowledge (WP5)

The ICT platforms will be used to create a trans-national technological framework on Adriatic region, merging public and private expertise, specialized in the wood processing and powered by an exclusive multidisciplinary know-how on conceptual and aesthetic design, advanced materials, numerical simulations, virtual manufacturing, machining technology, drivers and controls. This integration of capacities will foster the social development in the Adriatic regions as the

the associates of business project partners consortia will be realized with the aim at: (1) better defining the technological needs of the whole Adriatic area, (2) searching for supplementary resources and technical synergies and (3) extending the impact of outcomes. Beyond all the specific aspects of innovation, WP5 will represent a first evaluation of the whole methodology developed and used to foster technological knowledge in the area.



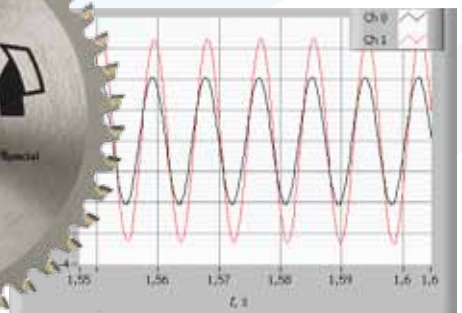
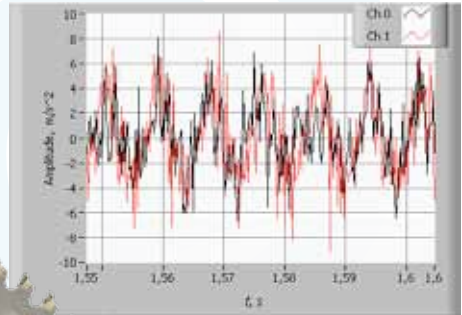
technical innovation in enterprises. By the Workforce Platform, graduates and early-stage researchers will be selected according to their skills, trained on specific aspects of applied research in wood manufacturing and inserting on industrial internships. On the other side, by the Platform of R&D Services the most appropriate academic research groups will be selected to support innovation in enterprises by a functional merging of competences. A “call for additional industrial supporters” between



9. Transforming Knowledge in Innovation and Technical Evaluation

The framework of technological know-how and human capacities will be directed to foster the regional clusters of excellence and support the creation of an interregional and integrated “production chain” consisting of mechanical design in Kraljevo and Rijeka, numerical optimization in Kragujevac, tools production in Pesaro, machine tools production in Rimini, electronics in Nis, control of machines in Bari and Montenegro, manufacturing and testing of innovative materials in Forlì. Technological challenges of relevance for the Adriatic area have been selected and a joint R&D action is planned. Focusing on wood processing, attention will be paid to technical solutions improving eco-sustainability and efficient

use of resources, acting on complementary aspects like: modifying the approach to design with “eco-efficiency” as a key-driver for design of solutions, virtual machining to foresee and optimize the industrial process, using innovative materials to raise performances, accurately controlling the dynamic response of machines and developing a better way to use cutting tools. Evaluation of outcomes will be tested by providing industrial needs for technology to the universities as source of innovation, forwarding the R&D efforts and capabilities of academic project partners toward a “business driven research”, focusing resources on a specific industrial sector.



10. Informations about Faculty of Engineering, University of Rijeka stakeholders

Lokve d.o.o. Lokve – Modernly equipped company in which knowledge and skills in the exploitation and processing of wood date back to the 18th century. Today it

manufactures: windows, doors, sliding and folding walls, blinds and shutters.

For further details visit:
<http://www.lokve.com/>



Ravna, d.o.o. Ravna Gora – A factory equipped with modern technology. High standards achieved in production of massive edge glued panels have directed their vision and business activities towards segments

of half-products and final products. The company's main production activities are: massive wooden edge glued panels.

For further details visit:
<http://www.ravna.hr/>



Drvenjača d.d. Fužine – A company produces refined mechanical pulp (the raw material used for production of multilayer cardboard) through refining coniferous wood. Multilayer coated cardboard is commonly used in the form of small boxes

essential for packing various items, such as foodstuff, pharmaceuticals, perfumes, spare parts, ...

For further details visit:
<http://www.drvenjaca.hr/>

Di Klana d.d. – Although in its 100 year history the company was involved in the manufacture of various wooden product (mainly furniture, wardrobes, beds), in recent years, it specializes in production of manufactured chairs.

For further details visit:
<http://www.klana.com/>

Calligaris d.o.o. Ravna Gora –

A company's main production activities are: armchairs, chairs, tables, desks and parts of furniture.

Energy Pellets d. o. o. Delnice –

A company's main activity is the production of wood pellets as a renewable energy source. In their production program there are: wood pellets, briquettes, pallets and sawn timber.

For further details visit:
<http://www.pellets.hr/>

FinvestCorp, d.d. Čabar - A company produces furniture for decades. In its wide production assortment they offer a large selection of upholstered sofas, bedrooms and children's bedrooms and plate furniture for the living room.

For further details visit:
<http://www.finvestcorp.hr/>

Ferenčić d.o.o. Viškovo – A furniture factory which main activity is the production of furniture, furnishing and decorating of interiors. They offer the expertise of an interdisciplinary team, from concept to detailed interior project implemented with the quality, modern and functional designed furniture.

For further details visit:
<http://www.ferencic.hr/>



10. Informations about Faculty of Engineering, University of Rijeka

The Faculty of Engineering of the University of Rijeka is a leading higher education, scientific and research institution in the field of technical sciences not only at the University of Rijeka, but also in the region

where it is situated.

It is competitive on the European and the world knowledge market. The Faculty encompasses today 11 departments, namely:



- Department of Automation and Electronics;
- Department of Naval Architecture and Ocean Engineering;
- Department of Electrical Power Engineering;
- Department of Industrial Engineering and Management;
- Department of Mechanical Engineering Design;
- Department of Mathematics, Physics, Foreign Languages and Kinesiology;
- Department of Materials Science and Engineering
- Department of Fluid Mechanics and Computational Engineering;
- Department of Computer Science;
- Department of Engineering Mechanics;
- Department of Thermodynamics and Energy Engineering.

37 chairs and 50 laboratories operate within the departments, while the Faculty encompasses also a Computer Centre, a Library as well as an Accounting Division, Procurement and Commercial Office, the General and Personnel Office, the Students' Registrar and Affairs Office and the Technical Maintenance Services. Of 188 employees, 105 are professors, 9 lecturers and 25 assistants, 32 junior researchers and 51

work in the administrative and professional staff section.

The Faculty holds undergraduate university, graduate university and vocational study programs in mechanical and electrical engineering, naval architecture and in computer engineering as well as post-graduate doctoral studies in the fields of mechanical engineering, naval architecture and basic technical sciences.

UNDERGRADUATE UNIVERSITY STUDY 3 years (180 ECTS)

<i>Study</i>	<i>Title</i>
Mechanical Engineering	University Bachelor Engineer of Mechanical Engineering
Naval Architecture	University Bachelor Engineer of Naval Architecture
Electrical Engineering	University Bachelor Engineer of Electrical Engineering
Computer Science	University Bachelor Engineer of Computer Science

POSTGRADUATE DOCTORAL STUDY 3 years (180 ECTS)

<i>Field</i>	<i>Title</i>
Mechanical Engineering	D. Sc. in Engineering Sciences
Basic Technical Sciences	D. Sc. in Engineering Sciences
Naval Architecture	D. Sc. in Engineering Sciences
Other interdisciplinary technical sciences	D. Sc. in Engineering Sciences

GRADUATE UNIVERSITY STUDY 2 years (120 ECTS)

<i>Study</i>	<i>Title</i>
Mechanical Engineering	Masters in Mechanical Engineering
Naval Architecture	Masters in Naval Architecture
Electrical Engineering	Masters in Electrical Engineering
Computer Science	Masters in Computer Science

VOCATIONAL STUDY 3 years (180 ECTS)

<i>Study</i>	<i>Title</i>
Mechanical Engineering	Bachelor in Mechanical Engineering
Naval Architecture	Bachelor in Naval Architecture
Electrical Engineering	Bachelor in Electrical Engineering



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Adria**HUB**