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UNIVERSITAT POLITÈCNICA DE CATALUNYA



POLITECNICO DI TORINO



FOLLOW

PROMOTION AND FOLLOW-UP OF GRADUATE EMPLOYABILITY IN EUROPEAN HEIS

WP 1. INFORMATION COLLECTION AND ORGANIZATION

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INTRODUCTION

The FOLLOW project is a partnership between the higher education institutions (HEI's) Instituto Superior Técnico, KU Leuven, Universitat Politècnica de Catalunya and Politecnico di Torino of the partner countries Portugal, Belgium, Spain and Italy. In this report, the different agents and their respective practices and activities in the area of monitoring and promoting of graduate employability in the FOLLOW partner countries and institutions are compared.

This report is the deliverable of the first work package (WP 1) concerning the information collection on the different internal and external performing agents and practices in terms of employability. The ultimate goal of this report is to provide comparative information on topics related to graduate employability in higher education. Data collection variables were determined by the FOLLOW coordinating institution, Instituto Superior Técnico, and agreed upon by all partners. Data were collected in the first half of 2012.

Figure 1 - WP 1 data collection topics and features.

Topic	Features
Performing agent	Identification
	Type: internal or external
	Brief description
Practice	Identification
	Type: monitoring, promoting or both
	Areas of intervention ¹
	Brief description
Human resources	Number of persons involved in each practice
	Estimated time spent on each practice (one-year period)
Material resources	Infrastructures
	Logistics
Impact	Results
	Deliverables
	Main effects

This table provides a list of all variables. These variables fall into three categories: those pertaining to the performing agents and practices, those pertaining to human and material resources and impact. In this report, we will center on the first category and discuss the performing agents and (best) practices of each partner successively in two sections. Where possible, we will give an indication of the resources involved as well as the main results and deliverables. Finally, in the third section we provide extended information on the mechanisms and motives behind the internal performing agents indicated.

¹ For monitoring practices, we have identified the following areas of intervention: follow-up of job search, follow-up of job vacancies, follow-up of internships, graduate employability observatories, follow-up of employability within companies (e.g. surveys on salary), internal indicators (e.g. surveys, internal reports, informal reports, qualitative surveys), external indicators (e.g. government, ministry, professional association) and other practices. For promotion, the following areas of intervention were identified: promotion of internships, dissemination of job search by students, job vacancies by companies, professional and career guidance, promotion of entrepreneurship, skills and education match (e.g. learning of employability or transferable skills), specific collaborations with companies (e.g. recruitment opportunities, promotion of field placements), link to alumni, public policies (e.g. government programmes, job centres), university as employer and other practices.

I. COMPARISON OF PERFORMING AGENTS

In this section, we provide an outline of the internal and external performing **agents** for each individual participating institution. In this respect, the main practices of each performing agent as well as the most common areas of intervention will be described.

1. Instituto Superior Técnico (IST)

1.1 Internal agents' identification

1.1.1 Technology Transfer Office

Technology Transfer Office (TTO) is the central office providing the link between IST and the labour market. This agent has the objective of enhancement of employability of graduates and a clear tradition of promotion of entrepreneurship and corporate relations.

The main activities of the Technology Transfer Office (TTO) are concerned with promotion. IST students are offered several recruitment opportunities through an online job bank platform, summer internships and other recruitment activities (i.e. forum of student associations and academic merit awards). This external agent organizes career sessions, scholarships and workshops for Master degree students to inform them about recruitment procedures and to reinforce and improve their labour market approach. Also, in the IST career weeks students and companies collaborate to organize events helping students set their professional future and helping companies to disseminate their needs and activities.

Results

In 2011-2012, 600 and 900 Msc students participated in the IST career sessions and career workshops respectively. In the IST career weeks almost 140 companies were represented².

Finally, different practices of TTO are focusing on promotion of entrepreneurship. For instance, the IST Spin-off network promotes active relationships between companies that have their origin in IST while maintaining a close relationship to IST. This network aims to stimulate students, graduates and researchers to create their own companies. Furthermore, the ISTART-I funding initiative supports potential entrepreneurs from different higher education institutions. This emphasis on promotion of entrepreneurship seems to be a rather **exclusive practice of this agent**.

1.1.2 Employability Observatory

In response to a legal requirement, IST has started to collect information on the employment situation of graduates by means of an Employability Observatory (OEIST). The OEIST collects and analyzes all information directly or indirectly linked with IST graduates' employability. This series of information is updated on a yearly basis, so that the evolution of graduate employability could be observed. There are several main concerns: promoting the appeal of IST' programmes as leading to high levels of employability, observing and evaluating the value of IST degrees in graduates' professional career, observing the value of skills obtained as well as the employability patterns and

² These results are realized by one person of TTO being responsible for the organization of these events.

levels of entrepreneurship, evaluating the correspondence between educational and professional profile and the evolution of the mobility and employment situation of graduates.

The Employability Observatory of IST (OEIST) represents a strong monitoring technique³. The graduate surveys are an important tool to collect information on the placement and evolution of IST graduates. Both recent graduates and graduates with 5 to 10 years of professional experience take part in this survey. The reports resulting from these surveys comprise detailed information both at institutional and course level and serve to disseminate the high levels of employability of IST graduates. In the senior students survey, current students are questioned regarding their employability capital, employability before graduation, satisfaction and perception of their future career. The departments of IST regularly present the employability of the programmes.

In addition, the national unemployment analysis of OEIST examines IST graduates' employability and the employability of graduates from other HEI offering similar programmes. More specifically, this analysis compares how many graduates are registered with unemployment centers by institution and course. This produces objective information on how IST performs in terms of employability when compared to similar institutions and therefore the national unemployment analysis serves as a **national benchmark**.

1.1.3 IST Student Association

Finally, the IST Student Association organizes and disseminates various activities relevant to the academic, social and professional life of IST students. More specifically, AIEST engages in promotion activities. Through the online job platform, students can easily access job search services. Furthermore, the Student Associations' Office for Job, Training and Entrepreneurship (GEFE) offers information and guidance for improving students' employability skills and entrepreneurship.

1.2 External agents' identification

1.2.1 Institute for Employment and Professional Training

The Institute for Employment and Professional Training (IEFP) is a public organization whose mission is to promote the creation and quality of labour on a national level. Through active labour policies and professional training IEFP aims to prevent unemployment, supported by a network of services in several offices. In fact, IEFP is specialized in offering professional internships for higher education graduates.

1.2.2 International programmes

The INOV programme has been created with the intention of providing international internships and facilitating the transition of young graduates to the labour market. A similar initiative has been taken with the inception of the International Association for the Exchange of Students for Technical Experience (IAESTE). This is an independent and international organization promoting the exchange of higher education students among member countries. In particular, IAESTE provides students in technical degrees with on-the-job training experience abroad.

Thus, INOV and IAESTE internships represent similar promotion initiatives to smooth the transition from higher education to employment.

³ There is only one person in charge of and occupied with the Graduates Employability Observatory at IST.

Conclusion

To summarize, the internal agents of IST are involved in **monitoring as well as promotion activities**. The most common areas of intervention in the field of promotion are promotion of entrepreneurship, professional and career guidance and recruitment opportunities. Furthermore, IST has been organizing observatories to monitor and promote graduate employability and to make a comparative analysis between higher education' graduates employment at a national level. The main external agents are public institutes or international programmes promoting internships and student exchanges to strengthen graduates' socio-professional skills and to facilitate a successful entry into the labour market.

2. KU Leuven

2.1 Internal agents' identification

2.1.1 Student Employment Service

The Student Employment Service is a central service by KU Leuven offering student jobs to students from all disciplines. Through active mediation with students and employers, this agent helps to find suitable candidates for suitable jobs and vice versa. International students can rely on this service as well and for students with special needs, intensive job guidance is provided. Furthermore, this internal agent can be contacted for additional and personal advice and information on social legislation with regard to student employment.

The main practice of this agent is concerned with promotion. Students of KU Leuven and associated institutions can register to a student jobs database and perform job searches corresponding with their skills, interests and availability. This information can also be accessed by employers.

Results

More than 9,300 students subscribed to the student jobs database in 2011-2012. The database consisted of 4,960 employers from inside and outside of university of which 619 employers had created almost 3,700 student positions in 2011-2012. In this period of time, the Study Employment Service has drawn up 2,430 contracts for student employment at KU Leuven for approximately 1,255 different students.

2.1.2 Study Advice Service

The Study Advice Service of KU Leuven is a central service providing information and advice on further education and employment for a very broad target group.

Results

In 2010-2011, 6,144 students and future students contacted the Study Advice Service for guidance or advice. Future students (36,9%) typically contact the service for information on their future programme of study at KU Leuven. Current students (57,4%) frequently request additional information about their programme, tutoring services, reorientation,... Also, special attention is paid to international students.

The promotion activities of this central service are extensive. The Study Advice Service provides orientation activities for future and incoming students, actual students and students graduating from university. This service is also responsible for the organization of professional career guidance activities, targeting all last year university students (i.e. not engineering students in particular). In this respect, this agent organizes a job fair and several information sessions in cooperation with companies as well as job and competency trainings spread over the academic year. The job

information day is the most important event, consisting of a job fair and information sessions for last year students from all disciplines. Students have the possibility to register their resume on CD-ROM. In cooperation with EURES and VDAB, several European career counselors are present at this event. Finally, the Study Advice Service has set up an internship and job openings database for students and companies.

Results

In 2011, 88 companies took part in the job information day. This event attracted approximately 1,500 last year university students of which 1,263 had registered their resume. The curricula as well as students' contact information are delivered to participating companies.

In 2010-2011 between 100-450 last year students participated in the information sessions on employment in different sectors: working in the cultural sector, media sector, public services to diplomacy, working at the EU and UN, working abroad (in cooperation with EURES and VDAB) and working in developing countries. In the application training, there were 400 participants. Finally, 2,657 job openings and 73 internship offers were posted online in the job openings database. Up to now, more than 5,400 employers are registered in the database.

To follow-up and monitor the employment situation of recent graduates, Study Advice Service organizes alumni surveys for graduates of all Initial Master's and Master after Master programmes. These graduates are questioned one year after graduation and for each Faculty and department, a report with the results is produced.

2.1.3 Student Association of the Faculty of Engineering Science

The Student Association of the Faculty of Engineering Science (VTK) offers a range of services to engineering students, but engages only in promotion activities. The Business Relations department is responsible for the organization of several events such as stage fairs, job fairs, job fora and on campus interview days. The stage/job fair and job forum are yearly events consisting of company presentations and information sessions where students can explore internship and job possibilities. During the career days, students are offered professional career guidance as they could attend lectures and soft skill trainings focusing on different steps in the application process. This association also organizes specific workshops for last year students imparting specific skills (e.g. how to write a Master's thesis). Finally, engineering students could engage in panel discussions with companies, consult a job openings and internships database and publish their resume online.

2.2 External agents' identification

2.2.1 Flemish Public Employment Service

The Flemish Public Employment and Vocational Training Service (VDAB) is responsible for employment services, job training and career guidance in the Flanders region⁴. The local job shops in the Flemish cities and municipalities provide services of labour market mediation and vocational training. The provincial training centres focus on the development and assessment of competences.

This external agent is involved in monitoring and produces annual statistics on school-leavers and their current employment situation. The school-leavers study, however, includes persons with lower educational qualifications and is not limited to graduates of higher education. Still, this study gives a clear picture of the success of higher education programmes with regard to labour market entry.

⁴ In Belgium, the majority of labour market activation measures are managed at the regional level. Also, the delivery of employment services is regionalized. There are four Public Employment Services (PES) that cover the Belgian territory and job seekers have to register at the employment service in their region: VDAB in Flanders, ACTIRIS in the Brussels-Capital region, Le FOREM in the Walloon region and ADG in the German speaking region.

Furthermore, this public employment service promotes recruitment and placement for different type of job seekers⁵. They can register their resume online and receive job offers through multiple channels, such as face-to-face contact in local offices, call centers,... They can search a database with job openings, subscribe for automatic job matching and dissemination by e-mail. Finally, VDAB participates in the EURES network helping several Flemish employers in **recruitment from abroad**.

2.2.2 Royal Flemish Society of Engineers

The Royal Flemish Society of Engineers (KVIV) engages in monitoring as well as promotion activities. The career and salary survey of this agent is intended for Flemish civil, agricultural and industrial engineers working in the private sector in Belgium. The survey focuses on job, career and salary and is aimed to inform employees and employers about engineering jobs and salaries.

Results

In 2010, 2,865 Flemish engineers took part in the career and salary survey. In the report, there is paid special attention to the comparison of civil (and agricultural) engineers graduating from university and industrial engineers graduating from university colleges. The main factors that affect gross monthly salaries are years of work experience, sector and region of employment, number of employees, leadership capacities and function level.

The promotion activities of this external agent involve job services for members, professional advice on different employment matters and members can also submit their resume for analysis.

2.2.3 IE-net

IE-net, the community for all people with a passion for engineering and technology in Flanders, organizes specific promotion events where engineering students can meet and speak to employers. In addition, IE-net conducts a graduate survey for recently graduated civil, industrial and agricultural engineers as well as professional career surveys intended for 25-50 year old professionals as well as senior-professionals to follow-up employability within companies. Thus, similar to KVIV, this agent is occupied with both promotion and monitoring tasks.

2.2.4 Other: e.g. salary surveys

In Belgium, there are different sources available for information on employability and labour market outcomes. But only the above mentioned surveys are **dedicated to engineering students, graduates or professionals**. Other examples are:

1. Salary survey: survey of the Belgian working population organized by Vacature magazine in cooperation with the KU Leuven Faculty of Business and Economics. This annual salary survey focuses on the average starting salaries for each degree and sector. However, the results do not enclose specific information on higher education institutions.
2. Labour force survey: survey in the member states of the European Union, coordinated by Eurostat. The survey is executed in Belgium by the federal public service of Economy.
3. SONAR survey 'from education to labour market': longitudinal survey that registers the transition from school to work of Flemish youngsters. E.g. 3,010 Flemish youngsters, born in 1976, 1978 and 1980 have been interviewed face-to-face about their educational and labour market career over different periods of time.

⁵ These types of job seekers are young people, immigrants, long term unemployed, occupationally disabled persons and persons over the age of 50.

Conclusion

For KU Leuven, we have identified a lot of existing but disparate efforts from internal as well as external agents with practices emphasizing **promoting rather than monitoring activities**. The internal agents offer promotion and recruitment opportunities, professional and career guidance and specific company collaborations. In comparison, the external agents and associations are monitoring graduates' employability through graduate employability surveys and surveys of the working population.

3. Universitat Politècnica de Catalunya (UPC)

3.1 Internal agents' identification

3.1.1 UPC Alumni

UPC Alumni is a central service of UPC offering career guidance, training, networking opportunities and other activities to its graduates. The aim is to foster new professional and personal relationships and augment employability possibilities⁶. Therefore UPC Alumni is focusing on promotion activities.

This agent organizes career guidance activities such as personal interviews, career counseling, job search seminars or sessions, specific orientation programmes and professional skills workshops (job interviews, psychometric testing, group dynamics, selection processes,...). There are also regular collaborations with companies: recruitment activities and company presentations explaining career opportunities for graduates, visits to industrial plants, visits to companies to find and identify new areas, new profiles, new working environments... Moreover, there are conferences, roundtables on career opportunities, professional sectors, international mobility,... UPC Alumni offers online job vacancies exclusively for juniors and seniors, assistance and support for companies regarding recruitment of people with technical profiles, recruitment for national and international companies,... Finally, UPC Alumni organizes networking sessions aiming to encourage and support professional relationships between UPC community members. These events are organized relating to specific subject areas or around one of the schools of UPC⁷.

Results

The career guidance activities of UPC Alumni consist of about 400 personal interviews a year. In the same period of time, on average about 25 job search seminars or training sessions are organized. There are 6-10 company presentations and 2-3 conferences and information sessions a month, each time for about 50-80 participating students. The specific orientation programmes are organized less frequently, about 1-2 times over a one-year period. Finally, there are monthly networking sessions to maintain the link to alumni.

⁶ UPC Alumni employs up to 7 persons of which 1-3 are working part time on each practice. The most labour intensive practices of UPC Alumni are the job search seminars, guidance activities and professional skills workshops.

⁷ The schools of UPC are: EET Terrassa School of Engineering, EETAC Castelldefels School of Telecommunications and Aerospace Engineering, EPSEB Barcelona School of Building Construction, EPSEM Manresa School of Engineering, EPSEVG Vilanova I la Geltru School of Engineering, ESAB Barcelona School of Agricultural Engineering, ETSAB Barcelona School of Architecture, ETSAV Valles School of Architecture, ETSECCPB Barcelona School of Civil Engineering, ETSEIAT Terrassa School of Industrial and Aeronautical Engineering, ETSEIB Barcelona School of Industrial Engineering, ETSETB Barcelona School of Telecommunications Engineering, Barcelona School of Informatics, FME School of Mathematics and Statistics, FNB Barcelona School of Nautical Studies.

3.1.2 UPC Schools

UPC is composed of various schools each of which do have a role in promoting graduate employability⁸. In fact, each school has taken a similar approach, offering internships for students at Bachelor and Master level, incorporating job offers for students in schools' job lists, promoting exchanges through international mobility programmes and cooperation, supporting other student initiatives of BEST, IAESTE,...

In cooperation with companies, most schools hold business fora and company fairs where invited companies explain their career opportunities (nine to ten times a year). These events are mostly organized by students of the schools, with the agreement of the school but there are cases in which the company days are organized directly by the school itself.

Finally, through the Ministry of Work and Industry of the Government of Catalonia UPC is participating in the EURES network. In this context, numerous promotional activities are organized for students.

3.2 External agents' identification

3.2.1 AQU Catalunya

The Catalan University Quality Assurance Agency (AQU Catalunya) is a public entity with an internationally recognized status. Its mission is to assure the quality of higher education through compliance with the European standards of quality and to safeguard of the interests of society in the quality of higher education. More specifically, AQU Catalunya reviews Catalan university institutions, degree programmes, degree courses, faculties, schools and services. Since 2011, the Agency is implementing the framework for the validation, monitoring, modification and accreditation of recognized programmes, with the purpose of life-long quality assurance and continuous enhancement of degree courses.

For more than twenty years, Catalan universities have conducted studies of graduate placement. These studies have served as the basis for understanding the process of transition for graduates between the university and the labour market and, in certain cases, the degree of graduate satisfaction regarding the training received at university. Both the format and content of these studies were, however, specific and corresponded to the objectives and priorities of each individual university.

In 2000, AQU Catalunya and the seven public Catalan universities (Universitat de Barcelona, Universitat Autònoma de Barcelona, Universitat Politècnica de Catalunya, Universitat Pompeu Fabra, Universitat de Girona, Universitat de Lleida and Universitat Rovira i Virgili) agreed to an ambitious project to carry out a transversal assessment of university graduate placement in the labour market. This pioneer project, which for the first time included all of the universities, involved harmonization of the methodology used to compare and integrate the information and extract reliable conclusions in reference to the situation in Catalonia.

The project involved three main processes:

1. The establishing of a frame of reference for the evaluation of the state of graduate placement according to the different forms of university education in Catalonia, Spain and Europe;

8 In each school, there is only one person in charge of the promotion activities, working part time.

2. Preparation of a methodology to assess the process of university graduate placement in the labour market;
3. A survey on graduate placement and collection of information.

Given the importance of the survey as an instrument, periodic repetition and gathering of information were estimated to be a positive way of establishing records that would show the ongoing development of graduate placement and allow for the analysis of trends.

3.2.2 Barcelona Activa

Barcelona Activa is an institution financed by the City Council of Barcelona to foster employability through training and job offers. Porta 22 is Barcelona Activa's employment facility offering a range of services and resources for professional development: e.g. labour orientation, training and inclusion programmes that combine training with work experience. It is also supporting entrepreneurs, innovation, improvement and the creation of employment.

This external agent is focusing on promotion.

Barcelona Activa Porta 22 provides numerous services and activities that are tailored to students and graduates. First, Porta 22 offers individual counseling and training, professional development programmes and coaching as well as other initiatives. For instance, there are workshops at UPC helping students to develop job search skills and enhancing personal and career development. Second, Porta 22 allows students and graduates to register their resume in a database and to get in touch with companies collaborating with Barcelona Activa. Finally, this external agent provides guidance and career support based on an innovative model with the main objective of discovering and bringing out peoples' talent and helping them developing their professional potential.

Conclusion

The different schools of UPC as well as UPC Alumni represent UPC's internal agents. These agents focus exclusively on **promotion activities** that include specific company collaborations and events, sessions and workshops relating skills and education. The external AQU Catalunya is implementing monitoring observatories of graduate employability at Catalan universities and Barcelona Activa is fostering employability of students and graduates through professional career guidance and training as well as job offers.

4. Politecnico di Torino (POLITO)

4.1 Internal agents' identification

4.1.1 Stage & Job unit

Stage & Job unit of Politecnico di Torino is a central unit offering a service of support to companies and students or graduates to improve job matching. The team responsible for this unit matches demand and offer of online internship vacancies and manages paperwork. In addition, the Stage & Job unit monitors internships through surveys and questionnaires and disseminates different placement activities.

This agent engages in various practices in the areas of monitoring and promotion. Through an observatory, the Stage & Job unit aims to monitor the effectiveness of internships offered and improve the quality of the students' work experience. Therefore students complete a questionnaire at the end of their internship. Furthermore, the Stage & Job unit promotes internship and job

positions on a devoted webpage and through sending internship or job offers to students and graduates with the requirements specified in the job description. In career counseling, this unit also provides professional and career guidance through individual support for students writing their resume, preparing interviews and conducting job search.

Results

In general, the management of internships by Stage & Job unit of Politecnico di Torino is very successful. In 2010-2011 3,071 internships were activated of which 2,138 curricular or compulsory and 933 extra-curricular. What is more, 10% of internships ended with a job offer and 24% if the internship was optional.

By the same token, the thematic workshops of the Stage & Job unit give students and graduates the practical and theoretical tools to enter the world of work (e.g. soft skills training, etc.). Furthermore, this unit maintains specific collaborations with companies and events such as regular on campus events, career days, specific job and orientation fairs and visits to industrial plants. The Stage & Job unit also organizes an infostage event in order to support students in finding internships and generates a graduates database⁹.

Results

In 2010-2011, 34 on campus events were organized and each event attracted on average 35 students. In short, the Stage & Job events attract a large number of students as the different on campus events have reached approximately 1,200 students. Moreover, Politecnico di Torino had 57 participating companies and 2,300 students or graduates attending the career days or job fair in 2012. Finally, at the infostage 30 companies were present helping about 300 students a year in finding an appropriate internship.

4.1.2 Incubatore di Imprese Innovative

I3P, Incubatore di Imprese Innovative del Politecnico di Torino, promotes the creation of new science-based start-ups either founded by university researchers or entrepreneurs from outside the university sphere. It provides open spaces and professional consulting services as well as a network of entrepreneurs, managers and investors. I3P is a non-profit consortium constituted by, among others, Politecnico di Torino.

I3P is focused on the promotion of entrepreneurship and launching start-ups to exploit the results of research in different fields. There are different activities in the field of technology transfer incubation. The Start Cup Piemonte Valle d'Aosta is a competition for the best innovative and knowledge-based business ideas aimed at creating innovative enterprises within the incubators or the province of the supporting agencies. The competition is free of charge and the best business ideas can engage in pre-incubation activities organized by the promoters of the competition that are providing the key tools to set the business plan. Pre-incubation activities include tutoring and coaching by experts in the drawing up of a business plan. In the second stage of the competition, winning ideas can compete for cash prizes.

⁹ The Stage & Job unit of Politecnico di Torino employs 9 persons in total, of which 1-4 people are working on each practice. The most labour intensive practices besides the management of internships are the specific job and orientation fairs, on campus events, mailing lists, factory tours, career days and thematic workshops.

4.2 External agents' identification

4.2.1 AlmaLaurea

The first external agent is AlmaLaurea, run by a consortium of Italian universities with the support of the Ministry of Education, University and Research. AlmaLaurea is a reference point for everyone who deals at different levels with issues as academic studies, employment and youth conditions.

AlmaLaurea is offering monitoring services. On the one hand data are collected regarding the graduates' career and on the other hand different courses, faculties and universities in the consortium are analyzed and compared with regard to graduates' characteristics and performances as well as the effectiveness of the study programmes in the labour market. As a result, AlmaLaurea publishes an annual report on graduates' employment situation, examining the employment condition of graduates after one, three and five years of graduation. For each university, faculty, degree,... a number of factors as employment conditions, time needed to access the labour market, contract, earnings, effectiveness,... are examined.

The placement tasks include facilitating and improving the access of young people to the labour market. Students' curricula are published on the website and can be consulted by hiring companies. In the AlmaLaurea databank information of recent graduates and graduates with work experience is gathered. This service providing online graduates curricula seems to be an **exclusive practice of this agent**. Furthermore, students can access job offers posted by companies.

Results

The AlmaLaurea-databank can be consulted online from 1994. It comprises more than 1,670,000 curricula in August 2012, involving 78% of Italian graduates from 64 Italian universities. Every year about 150,000 units are added.

4.2.2 Centro per l'Impiego della Provincia di Torino

Centro per l'Impiego della Provincia di Torino is a local job center for employees and companies providing employment services such as information, orientation and placement services. The main purpose is to tackle unemployment and improve the match between labour supply and demand.

This agent promotes recruitment opportunities and job vacancies by companies. This center also established specialist employment services for high profile professionals in the Sportello Alte Professionalita. Finally, the Centro per l'Impiego della Provincia di Torino is linked to the EURES network. EURES offers access to the labour market at local, national and European level to all job seekers, employers and companies specializing in recruitment. EURES provides information on jobs and job seekers and offers a wide range of services to assist in job searches and recruitment.

4.2.3 BEST Torino

BEST Torino is a non-profit European student network providing communication and cooperation as well as exchange of students in the most important Technical Faculties and Universities all over Europe. BEST develops activities in order to help European technology students to become more internationally minded, by reaching a better understanding of European cultures and developing capacities to work on an international basis.

BEST Torino conducts promotion activities by offering an online service that connects students with companies. It gives students a chance to browse through offers from companies and universities and to send their resume.

4.2.4 Junior Enterprise Torino Politecnico

JETop, the Junior Enterprise Torino Politecnico, is an apolitical and non-profit association run by students of Politecnico di Torino with the goal of creating direct contact between the university and the world of work. In this context, JEToP has set up promotion activities such as collaborations with companies and this association also organizes a yearly job fair targeted to students and graduates.

Conclusion

Politecnico di Torino has identified different internal and external agents offering services to students and graduates as well as companies and employers. There is a clear emphasis on **promotion activities** by internal agents. The Stage & Job unit of Politecnico di Torino engages in different activities in the area of promotion, such as specific collaborations with companies and recruitment offers. Politecnico di Torino also participates in I3P, a non-profit consortium promoting entrepreneurship. AlmaLaurea is the main external agent run by a consortium of Italian universities and occupied with **both promotion and monitoring tasks**. On the one hand, AlmaLaurea conducts graduate employability observatories and on the other hand AlmaLaurea collects information on graduates' curricula that are gathered in a databank.

Discussion

The first section of this report has revealed significant similarities and only minor differences between the agents identified by our partners. Below we highlight a few of the most striking similarities between performing agents:

Promotion

Both at IST and Politecnico di Torino, there is an internal office dealing with the transition from higher education to employment. For instance, the Technology Transfer Office of IST aims to enhance the employability of graduates through school guidance activities and collaborations between students and companies. The Stage & Job unit of Politecnico di Torino specializes in offering internships and job positions, but also offers professional and career guidance, specific training and collaborations with companies.

In comparison, there is no central unit at KU Leuven or UPC dealing exclusively with the transition to the labour market. There are two central offices at KU Leuven, one of which related to student employment with the purpose of helping students to find student jobs in or outside university. The other service was established to inform students about further education and employment and in this respect students can register for several orientation and career guidance activities. These entities and their practices could potentially have a positive impact on students' career development. However, they do not have the explicit objective to enhance graduate employability.

IST and Politecnico di Torino also have an internal agent focusing on the promotion of entrepreneurship. The Technology Transfer Office of IST launches initiatives to promote and support potential entrepreneurs. Likewise, the Innovative Enterprises Incubator of Politecnico di Torino promotes the creation of new science-based start-ups from inside or outside university. At the other FOLLOW partner institutions, there were no agents identified that are occupied with the promotion of entrepreneurship.

IST, KU Leuven and Politecnico di Torino have identified a student association offering various promotion services. For instance the IST Student Association manages an online job platform for recruitment opportunities, while the Student Association of the Faculty of Engineering Science at KU Leuven also performs a similar service. Further, the Student Association of the Faculty of Engineering Science organizes different events in collaboration with companies such as annual job fairs similar to the event of Junior Enterprise Torino Politecnico.

Monitoring

Both IST and Politecnico di Torino have agents operating in the area of national comparative studies and analysis of graduate employability. OEIST conducts a national analysis of IST graduates' employability as well as the employability of graduates from other national higher education institutions. Likewise, AlmaLaurea examines the employment condition of graduates. For each university, faculty and degree in the consortium a number of factors are analyzed and particular attention is given to the effectiveness and added value of the study programmes. Yet, AlmaLaurea is no internal agent of Politecnico di Torino. For UPC, now the AQU Catalunya is conducting quality review studies at institutional, programme and course level.

Both AlmaLaurea and the Public Employment Service in Flanders have a similar mission of facilitating and improving access of people to the labour market and both closely monitor graduates' employment situation. Yet, the report published by the Flemish Public Employment Service does not include a comparative analysis between higher education institutions or programmes and is limited to the Flemish region. In contrast to other partners (i.e. Portugal), there is no legal demand or requirement in Belgium to report figures concerning the employability of graduates at an institutional, programme or course level. Also, AlmaLaurea is a private entity run by a consortium of Italian universities with the support of the government while the Flemish Public Employment Service is a public authority.

Also, the external Institute for Employment and Professional Training in Portugal and the Flemish Public Employment and Vocational Training Service are both Public Employment Services (PES). Moreover, the rationale of Barcelona Activa in Spain and the Centro per l'Impiego della Provincia di Torino in Italy closely resembles the mission of these Public Employment Services. In addition, each of these agents offers services not only to job seekers, but also to companies. Moreover, each of these agents participates in the EURES network.

II. COMPARISON OF PRACTICES

In this section, we elaborate on the different monitoring and promotion practices and techniques carried out by the agents outlined in the previous section. The main similarities and differences between the practices will be addressed where possible, organized by each area of intervention.

Discussion

It can be argued that most internal agents of the FOLLOW partners engage in multiple practices or multiple areas of intervention. Instead, most external agents concentrate on one particular area of intervention – sometimes overlapping with the interventions of the internal performing agents.

In the next 2 Tables we give an overview of the most common areas of intervention per type of practice (promotion or monitoring) and higher education institution.

Figure 2 - Overview of the most common areas of intervention (promotion) per institution.

	IST	KUL	UPC	POLITO
Promotion of internships	✓	✓	✓	✓
Recruitment opportunities	✓	✓	✓	✓
Professional guidance – skills and education match	✓	✓	✓	✓
Entrepreneurship	✓			✓
Link with companies – companies collaborations	✓	✓	✓	✓
Link to alumni			✓	

✓: practice carried out by internal agent

The type of practices most frequently employed are concerned with promotion rather than monitoring. The most common areas in the field of promotion are:

1. Recruitment opportunities: job search by students and/or dissemination of job offers;
2. Professional and career guidance activities including skills and education match;
3. Specific company collaborations.

At least one internal agent of each participating higher education institution has developed activities in these areas of intervention. The practices of these agents in these areas are also very similar. For instance, the career sessions of IST are comparable to the job training services provided by the KU Leuven Study Advice Service, the career counseling offered by Politecnico di Torino and the orientation programmes and seminars offered by UPC Alumni.

The following table shows that all partner universities have internal agents that developed activities in the field of promotion of internships. Also, the table clearly indicates that IST and Politecnico di Torino are the only institutions of which an internal agent is occupied with the promotion of entrepreneurship. UPC seems to be the only institution maintaining a strong link to alumni through an internal agent. Other areas of intervention such as public policies, university as employer and other practices were less or not represented and therefore not incorporated in the Table.

Figure 3 - Overview of the most common areas of intervention (monitoring) per institution.

	IST	KUL	UPC	POLITO
Follow-up of internships				✓
Employability observatory	✓	✓	(✓)	(✓)

✓: practice carried out by internal agent

(✓): practice carried out by external agent

In comparison, the most common areas in the field of monitoring are graduate employability observatories and follow-up of internships. Every institution has an internal or external agent implementing graduate employability observatories (. The graduates survey and the national unemployment analysis are the most important practices conducted by OEIST. This is driven by a legal demand in Portugal to report figures concerning the employability of graduates at an institutional, programme or course level. Likewise, the alumni career research of the Study Advice Service of KU Leuven allows gathering knowledge on graduates' employability. In Spain and Italy, the external agents AQU Catalunya and AlmaLaurea are responsible for conducting graduate employability observatories. It seems that other monitoring activities are fragmented and exclusive for each partner or agent and dependent of the different realities and legislation in each country. The Stage & Job unit of Politecnico di Torino for instance, organizes events in order to support students in finding internships and monitors internships' effectiveness. Lastly, there were no practices classified in the areas follow-up of job search, follow-up of job vacancies, employability within companies, internal and external indicators.

To conclude, in the following table a list is given of all practices for each area of intervention per type and higher education institution.

Figure 4 - Overview of all practices for each area of intervention per type and higher education institution.

	IST	KUL	UPC	POLITO
Monitoring				
Follow up of internships				<p>Stage & Job unit Internship management. Matching demand and offer of internship vacancies.</p> <p>Stage & Job unit Internship observatory. Survey aimed at monitoring internships' effectiveness and improving the quality of work experience.</p>
Employability observatory	<p>OEIST Graduates survey. Main information collection tool about the placement and evolution of IST graduates. Both recent graduates and graduates with 5-10 years of professional experience take part in the survey.</p> <p>OEIST Employability reports. Detailed information on the levels of employability both general at IST level and specific for each course.</p> <p>OEIST National unemployment analysis. Analysis and comparison between IST graduates' employability and employability of graduates from other HEI (national benchmark).</p>	<p>Study Advice Service Alumni career research. Surveys of MSc programmes' graduates. Data are collected regarding employment status, sector, income, fringe benefits, period of job search, duration of job search, main reason for recruitment and usefulness of the degree.</p> <p>Royal Flemish Society of Engineers Career and salary survey. Survey focusing on job, career and salary intended for Flemish civil, agricultural and industrial engineers working in the private sector in Belgium. Purpose is to inform employers and employees about engineering jobs and salaries.</p> <p>IE-net Employability observatories.</p>	<p>AQU Catalunya Quality reviews and reports. Reviews of Catalan universities at institutional, programme and course level.</p> <p>AQU Catalunya Graduate placement surveys. Survey to assess university graduate placement in the labour market.</p>	<p>AlmaLaurea Graduate employability observatories. Data are collected regarding graduates' career, courses, faculties and universities in the consortium are analyzed and compared with regard to graduates' characteristics and performances as well as the effectiveness of the study programmes in the labour market.</p> <p>AlmaLaurea Employability reports. Report on graduates' employment situation, examining their employment condition after one, three and five years of graduation. For each university, faculty, degree a number of factors are examined and compared.</p>

	IST	KUL	UPC	POLITO
	<p>OEIST Disciplinary journeys presentations. Events held by departments of IST in which they promote and present multiple aspects of the courses including employability.</p> <p>OEIST Senior students survey. Survey of current students and their employability capital: employability before graduation, satisfaction, level of participation in non-academic activities, perception of future professional career and reputation of IST among employers.</p>	<p>Surveys intended for recently graduated civil, industrial and agricultural engineers focusing on their professional activities. Further, IE-net also conducts professional career surveys intended for 25-50 year old engineers and senior-professionals.</p> <p>Flemish Public Employment Service School leavers' study and report. Yearly report on graduates' employment situation in the Flemish region.</p>		
Promoting				
Promotion of internships	<p>IST Summer internships. Internships to provide MSc students with an opportunity for on-the-job experience.</p> <p>IEFP Professional and qualification Internships (12 months) in order to strengthen the socio-professional skills of unemployed HE graduates and facilitate their transition to the labour market.</p> <p>INOV and IAESTE Internships. International internships increasing the mobility of young professionals.</p>	<p>Student Association Stage fair. Exposition of companies introducing their internship possibilities.</p> <p>Student Association Internships database. Overview of internships.</p>	<p>UPC Schools Bachelor and Master internship offers. Each school of UPC develops their own internship opportunities.</p>	<p>Stage & Job unit Internship posting. Promotion of internships on a devoted webpage.</p>

	IST	KUL	UPC	POLITO
Recruitment opportunities (e.g. job search by students and job vacancies by companies)	<p>IST Job bank. Online platform designed with the objective to make the labour market needs and the skills of IST students converge.</p> <p>IST Forum of student associations. Platform for collaboration between student associations and IST to disseminate recruitment activities or other activities to skills development and training by e-mail.</p> <p>IST Academic Merit Awards. Job offers or recruitment activities with companies and students associations, supported by those companies.</p> <p>IST Student Association Job Shop. Online platform on which students upload their CV's and search jobs.</p>	<p>Student Employment Service Student jobs database. Database to which students can register and search for a student job offered by employers from inside and outside KU Leuven. Students can enter their skills, interests and availability.</p> <p>Study Advice Service Job openings database. Job vacancies and internships by companies. But also dissemination of job search by last year students, alumni and PhD students. They can search by discipline, sector and region.</p> <p>Student Association Resume book. Students might publish their resume online.</p> <p>Royal Flemish Society of Engineers Job services. Members can publish their resume online as well as offline and get an overview of vacancies for civil and agricultural engineers. They can obtain professional advice on different employment matters and submit their professional resume for analysis.</p> <p>Flemish Public Employment Service Services for jobseekers. VDAB allows job seekers to register their resume online. They can also search a database with job openings posted by employers.</p>	<p>UPC Alumni Online job vacancies. Online publication of job vacancies by companies.</p> <p>UPC Alumni Conferences. Sessions for 50-80 participants aiming at showing graduates career possibilities and opportunities abroad.</p> <p>UPC Alumni Recruitment activities designed to meet companies' needs, to facilitate the employment of people with polytechnic profiles (with local, national or international companies).</p> <p>Schools of UPC Online job vacancies and internships for students by each school of UPC.</p> <p>Barcelona Activa Porta 22 Job offers. Students and graduates are able to register their resume in a database and get in touch with companies.</p>	<p>Stage & Job unit Job posting. Promotion of job positions on a devoted webpage.</p> <p>Stage & Job unit Mailing list and graduates database. Possibility to send internship or job offers to students and graduates with the requirements specified in the job description. Companies can request access to the graduates database through e-mail.</p> <p>Stage & Job unit Newsletter "Polijob". Periodical online newsletter to promote placement activities.</p> <p>BEST Torino Career support. Online service connecting students to companies. Students can browse through offers from companies and universities and send their resume.</p> <p>AlmaLaurea Promoting services. Students' curricula are published on the AlmaLaurea website and can be consulted by hiring companies. Furthermore, students can access job offers posted by companies.</p> <p>Centro per l'Impiego Sportello Alte professionalita. Employment services dedicated to high profiles.</p>

	IST	KUL	UPC	POLITO
Professional guidance – skills and education match (e.g. learning of employability or transferable skills)	<p>IST Career sessions aimed at master degree students and intended to inform about recruitment procedures.</p> <p>IST Career scholarships. Contest to give scholarships for the IST career workshops .</p> <p>IST Career workshops. Sessions of training and development offered to master degree students. The ultimate goal is to reinforce and improve IST graduates in their labour market approach and recruitment processes.</p>	<p>Study Advice Service Job training services. Information, workshops and training for last year students.</p> <p>Study Advice Service Competency training. Competency training for students and graduates in presentation and negotiation techniques and coaching.</p> <p>Student Association Career days. Invited lecture and soft skill trainings focusing on different steps in the application process, e.g. how to write a resume and cover letter, how to make a job interview successful and how to negotiate salary.</p> <p>Student Association Workshops preparing students to write their Master's thesis.</p>	<p>UPC Alumni Career guidance activities. Personal interviews assisting with the elaboration of students' resume. Follow-up by e-mail.</p> <p>UPC Alumni Job search seminars. Training sessions in small groups aimed at developing job search strategies to achieve successful job search and completion of the selection process.</p> <p>UPC Alumni Specific orientation programmes. Events organized in collaboration with a UPC school and external agents such as professional associations.</p> <p>UPC Alumni Professional skills workshops. Workshops for 20-25 people organized with the support of companies, professionals and experts to promote professional profiles linked to the polytechnic environment, reporting on the labour market or discuss employment prospects of graduates of UPC.</p> <p>Barcelona Activa Porta 22 Workshops helping students to develop job search skills and enhancing personal and career development.</p>	<p>Stage & Job unit Career counseling. Individual support for students writing their CV, preparing interviews and conducting job research.</p> <p>Stage & Job unit Thematic workshops. These workshops give students and graduates the practical and theoretical tools to enter the world of work (soft skills, etc.).</p>
Entrepreneurship	<p>IST Spin-off network fostering</p>			<p>I3P Technology transfer</p>

	IST	KUL	UPC	POLITO
	<p>active relationships between companies and companies-IST. Purpose is to stimulate students, graduates and researchers to create companies.</p> <p>IST ISTART I Funding. Initiative supporting potential entrepreneurs from different HEI. Office for job, training and entrepreneurship offering information and guidance for improving students' employability skills and their ability to start their own companies.</p>			<p>incubation activities. Different initiatives for technology transfer, incubation and growth of enterprise.</p> <p>I3P Start Cup Piemonte Valle d'Aosta. Competition for the best innovative and knowledge-based business ideas aimed at creating innovative enterprises within the incubators or the province of the supporting agencies.</p>
<p>Link with companies – companies collaborations (e.g. recruitment opportunities, promotion of field placements)</p>	<p>IST Career weeks. Cooperation of students and companies in organizing events helping students set their professional future and helping companies disseminate their needs and activities. Companies can choose in which events they want to participate.</p>	<p>Study Advice Service Job information day. Job fair and information sessions for last year students from all disciplines.</p> <p>Study Advice Service Information sessions for last year students on employment in different sectors: cultural sector, media, public services, diplomacy, working at the EU and UN, working abroad and in developing countries.</p> <p>Student Association BR launch. Different activities as well as company presentations.</p> <p>Student Association Job fair and job fora. Company presentations and information sessions.</p> <p>Student Association Interview days. Interviews with</p>	<p>UPC Alumni Visits to publicize projects and companies located in the Catalan territory. Often career opportunities are presented.</p> <p>UPC Alumni Company presentations to explain career opportunities for graduates.</p> <p>Schools of UPC Company fair where invited companies explain their career opportunities. These events are mostly organized by students with the agreement.</p>	<p>Stage & Job unit On campus events. Events defined and promoted by companies. Companies can directly reach students and graduates with the requested qualifications and obtain feedback on the success of the event.</p> <p>Stage & Job unit Factory tours. Plants, productive sites, visits to laboratories.</p> <p>Stage & Job unit Career days. Job fair for Athenaeum students and graduates.</p> <p>Stage & Job unit Architects (or designers) on the job. Specific job and orientation fair dedicated to architects (or designers).</p>

	IST	KUL	UPC	POLITO
		<p>companies on campus.</p> <p>Student Association Panel discussions where representatives of companies debate about hot topics.</p> <p>IE-net Job events. Events where students and young graduates can meet and speak to potential employers.</p>		<p>Stage & Job unit Infostage. Two-day event in order to support students in finding internships.</p> <p>JETop Carriera & Futuro job fair. Event organized every year addressed to students and graduates.</p>
Link to alumni			<p>UPC Alumni Networking sessions. Events around a school or faculty of UPC aiming to encourage and support the professional relationship between members of UPC community.</p>	

III. CONTEXT INFORMATION

In this section, we provide extended information on the mechanisms and motives behind the internal performing agents indicated in the WP1 Matrix for each individual institution. In the data collection, we have centered on the following questions:

- Problems and issues: In what context or situation has the internal performing agent been created? What were the problems or issues that have led to the creation of the internal performing agent?
- Boundary conditions: What were the boundary conditions and resources available (e.g. human, financial and material resources) at the time of the creation of the internal performing agent? To what extent have these conditions influenced the option that was chosen?
- Goals and strategic objectives: What are the main goals and strategic objectives of the internal performing agent?
- Improvement possibilities: What were the biggest challenges the internal performing agent was confronted with in the past? How were these challenges addressed and what are the main challenges for the future? What improvement suggestions can be given?

This information allows partners to give feedback on the whys and wherefores certain performing agents have been created and why their practices have established.

1. Instituto Superior Técnico (IST)

1.1 Internal agents' context information

1.1.1 Employability Observatory

Problems, issues and boundary conditions

Since 1993, Instituto Superior Técnico (IST) has steadily addressed graduate employability. After collecting the first data on its overall graduate population in 1998, which until that point covered some programmes in an isolated manner, the procedure became broader. There has been a growing need to formalize a structure in order to collect reliably and regularly information on the socio-economic conditions of IST graduates. The legislation in force in Portugal which required the collection of employability indicators and the growing search of information by families, students, teachers and graduates were the main reasons for the establishment of the IST Employability Observatory (OEIST) in 2008.

The OEIST was created in 2008, taking advantage of the resources allocated to the Institutional Studies and Planning Office (AEP) of IST, which followed up its graduates through studies carried out on a regular basis (every 3 years). The social, legal and economic requirements and the need to convey an image of seriousness and methodological competence in processing and accessing information, as well as creating a hub in terms of communication with all the stakeholders, prompted it to make use of the already existing resources in the new structure. This allowed for

enhancing further all activities, namely the partnerships with other HEIs, with Students' Units, Departments and businesses, centralizing expertise and aiming at a better relationship with all partners.

Goals and strategic objectives

At the beginning, the OEIST aimed at being exclusively a statistic production unit on employability, and did not even take very elaborate dissemination initiatives into account. Recently, the OEIST's activity has focused on:

- 1 Promoting the attraction of IST programmes by disseminating their levels of Employability (internet; brochures; social networks; meetings; conferences; seminars, etc.);
- 2 Watching and evaluating the effects of training on the graduates' professional paths, namely the consistency between the training profile proposed and the professional profile acquired (qualitative and quantitative matrixes);
- 3 Watching and identifying the employability patterns of IST graduates, including the levels of entrepreneurship (in particular checking the propensity and levels of entrepreneurship and intra-entrepreneurship);
- 4 Analyzing critical factors constraining the evolution of employment and the levels of employability (in terms of curriculum, labour supply, sectoral analysis, etc.);
- 5 Watching and evaluating the contribution of training acquired at IST for the performance of graduates' professional activity, namely by monitoring the latter in the performance of their professional activities (in particular checking the importance of the different levels of skills and the responsibility for the development);
- 6 Evaluating the professional evolution/mobility from university to the last known job.
- 7 Participating in international projects and information sharing networks with a view to improving the capacity and understanding of these issues;
- 8 Strengthening the dynamics of attraction of HE candidates, HE students, and HE graduates, acting on the basis of the experience of the latter to reinforce the employability-support initiatives and measures.

Improvement possibilities

The challenges for 2013-2014 are as follows:

- 1 To integrate social networks in information sharing platforms on employability;
- 2 To promote informal meetings and get-togethers on employability;
- 3 To embark on new information processing and collection forms and methodologies, which are appropriate to the time of analysis and the instruments available (i.e.: open source software);
- 4 To organize a biannual International Conference on Employability of Higher Education graduates;
- 5 To carry out an annual thematic event associated with the areas of Intervention of Employability, in cooperation with national, public or private partners;
- 6 To launch half-yearly the OEIST Journal on Employability of Higher Education Graduates – "Journal of Graduate Employability".

At long-term:

- 1 To be able to take part in the national public policies by fostering the establishment of an integrated employability network in Portugal;
- 2 To create an international association on graduate employability with strong emphasis on short-term internships in different countries;
- 3 To foster the virtual knowledge network entitled "Graduate Employability", being an international repository of information with MSc and PhD theses on the issue and to organize meetings with some of the authors;
- 4 On a different issue, and considering the number of resources involved and the time allocated, further growth of investment is expected by allocating either resources exclusively to these activities or the necessary time.

2. KU Leuven

2.1 Internal agents' context information

2.1.1 Student Employment Service

Problems, issues and boundary conditions

In 1960 the Belgian legislator declared that universities had, outside their traditional missions, new responsibilities as a result of the marked increase in the number of students. These included student housing, food, health care, culture, sports, psychological orientation and vocational guidance.

The Student Employment Service of KU Leuven has evolved out of a student movement that had established a limited student employment office where both Dutch and French speaking students could address their demands for employment. In 1973, the Student Employment Service of KU Leuven was professionalized and could be seen as a central office and point of contact for the employment of students within KU Leuven. Initially, the Student Employment Service was only involved in external placement. From 1998 onwards it is offering placement services inside KU Leuven too. This has led to a more transparent and better service for students.

Goals and strategic objectives

The Student Services at KU Leuven aim to promote equal access to and participation in higher education for all students. This is done by offering material and immaterial support and by eliminating medical, psycho-socio-cultural or financial constraints. In particular, the Student Employment Service is considered as the central point of contact for all matters related to student employment. Students of KU Leuven and associated university colleges, including international students, students with disabilities and less wealthy students (for who student employment is often a means to generate additional income) are the main target groups for the Student Employment Service. The office consists of two units, one for active mediation and one for job administration. The first unit is responsible for providing advice and information on student employment and for recruitment and mediation processes. Students can contact this unit also for additional and personal advice and information on social legislation with regard to student employment. The job administration unit is responsible for management and handles all the administration.

Improvement possibilities

Two decennia ago the Student Employment Service mainly promoted student work and search for student jobs. Today the Student Employment Service has shifted its main focus to active mediation with students and employers. Still, focus lies on the student and not on the employer. In the future the Student Employment Service wishes to increasingly consult policy makers for improvements or modifications of existing or future legislation with regard to student employment. The Student Employment Service has to deal with continuous changes in labour market regulations. One of the main challenges for the future is the continuing evolution from face-to-face counseling to an online counseling service available 24 hours a day. Other challenges are the following:

- Extending its services for a growing group of international students;
- Building partnerships with the other Student Services of the KU Leuven Association;
- Developing a new database for an efficient and effective service to all actors and stakeholders. The use of various applications currently leads to loss of efficiency.

2.1.2 Study Advice Service

Problems, issues and boundary conditions

In the 1950s, universities had become more accessible and the number of students had increased. The Study Advice Service was founded in 1953 as a central service of KU Leuven with the mission to provide information and advice on further education and employment for university students. There was a widening participation in higher education, especially in the 1970s-1980s, after the abolishment of the high school exit exam. Universities had a clear tradition of providing tutoring services, mainly focusing on guidance of incoming and first year students. However, the idea had risen to guide students not only at the start but during their entire graduate career, until their transition from education to the labour market.

Goals and strategic objectives

- 1 Providing information and advice on further education and employment. For future and incoming students the service takes an individual approach, for actual and graduating students the approach is both collective and individual;
- 2 Organizing orientation activities (job information day, information sessions, job and competency trainings) for future and incoming students, actual students and graduating students both collective and individual;
- 3 Organizing career guidance activities targeting all last year students at the university, including international students.

Finally, this agent organizes alumni surveys to monitor the employment situation of graduates of Msc programmes.

The service addresses a very broad target group: future and incoming students, actual students and students graduating of KU Leuven as well as international students and students with disabilities.

Improvement possibilities

In general, students mostly contact the Study Advice service for information and advice or for personal guidance and reorientation. The number of contacts tends to increase. The main (future) challenges are:

- Improving the cooperation with faculties, and in particular
 - 1 To assume a facilitating role: improve the contact with faculties and promote the complementarity between the Study Advice service and the faculties;
 - 2 To (help) professionalize: encourage faculties to become more aware of and make use of scientific evidence. The Study Advice service offers expertise that needs to be shared and utilized better;
 - 3 To encourage cooperation between the service and the faculties. Now the service is provided independent from the faculties (education) itself.
- Improving the guidance of incoming students, without limiting access to higher education
- Increasing involvement in policy making

Other:

- Increasing assistance for specific target groups
- Introducing an online form where students can make an appointment

2.1.3 Student Association of the Faculty of Engineering ScienceProblems, issues and boundary conditions

The student association is organized for and by the students of our Faculty. It has developed activities in the field of business relations, education, recreation and support. The business relations unit of our Student Association exists since approx. 2004. The business relations activities have been initiated by the Faculty of Engineering Science but have gradually been delegated to the Student Association. Since that time, our student association takes the lead in all employability matters and especially in promotion activities. This means that the Faculty is not involved, and it does not grant any direct financial support whatsoever to the student association.

Now the Student Association holds a well-established and in-depth expertise in the field of business relations. The budget has also grown over the last years.

Problems:

- There are only 6 student members in the business relations unit, not working on a fulltime basis. This is a limited number that has remained stable over the years. However, demand from students and companies alike has surpassed all expectations. There is a growing interest to participate, especially from companies. Also, if the number of graduating students is low, companies seem to be more willing to invest in recruitment;
- Material problems and boundary conditions. Infrastructure is inadequate, since there are only one or two auditoria suitable for events organization. The capacity is insufficient and certain events, such as the job fair, have reached maximum capacity.

Goals and strategic objectives

The main mission of this association is the representation of all students of engineering science and engineering architecture at departmental, faculty and university level.

The main goal of the business relations unit is to introduce and link students to companies and potential employers through several job events, such as the job fair, stage fair, job forum, on campus interview days (company collaborations). These events inform students and could also help giving brand awareness to certain small companies. Besides the company collaborations, there are career days, workshops (professional and career guidance) and a job openings and internships database (recruitment opportunities and promotion of internships).

Improvement possibilities

In the past, the student association has been confronted with an increasing demand from students and companies alike. In this respect, the team of student members has proven to be too small. For the future, the following challenges will arise:

- Integrating and profiling of civil and industrial engineers;
- Tackling logistical issues and infrastructure;
- Tackling issues related to human resources: limited number of student members who are not working fulltime and are often not motivated. The number of student members should increase, otherwise the student association could not handle the demand.

3. Universitat Politècnica de Catalunya (UPC)

3.1 Internal agents' context information

3.1.1 UPC Alumni

Problems, issues and boundary conditions

AAUPC started its activities in 1992 and aimed to offer graduates support in job placement and career development. UPC Alumni, established in 2011, is a new integrated structure that replaced the former. However, it is offering a similar service taking advantage of the knowhow of the highly experienced staff of the former AAUPC.

The staff of UPC Alumni are directly reporting to the Vice Rector for Institutional Relations of UPC. To overcome the missing link with university and institutions or companies outside university, the director and president of UPC Alumni are participating in the management bodies of UPC. These are senior managers of companies related to technology, innovation, architecture or engineering. Their experience, strategic vision and value-added contacts allow to reinforce an already professional structure, with a strong focus on projecting UPC Alumni to institutions and companies. The new structure allowed to launch the new Career Service and "Borsa de Treball". Despite budget constraints, UPC Alumni manages to carry out its activities and career development services. This is also attributable to several companies and professionals either working in favor of university or interested in the potential of UPC graduates.

Goals and strategic objectives

UPC Alumni is offering services to graduates and people who are or have been involved in the university. Its main objectives are enhancing their sense of belonging to UPC and offering services and resources that facilitate interaction and the ability to develop new professional and personal relationships.

And more concrete:

- To facilitate the exchange, sharing of knowledge and experience of members of the UPC community;
- Provide community services related to training, career guidance and employment, entrepreneurship, sport, leisure and culture;
- Facilitate interaction between members through clubs, promotion meetings and social networking.

UPC Alumni is relying on the support of UPC, qualified professional staff in career counseling, coaching and vocational guidance and the loyalty and support of graduates and companies appealing to UPC Alumni. Also the demand for engineering graduates is an important factor for UPC Alumni, although UPC has been able to build and maintain a strong reputation among employers.

Improvement possibilities

In the future UPC Alumni wants to improve the quality and diversity of its services and activities, for instance by organizing career guidance activities with high added value. In this way, UPC Alumni wants to distinguish itself from the former AAUPC. Other issues to address in the near future are the following:

- Promoting UPC Alumni to students and alumni in terms of its registered members, increasing the number of people taking part in various (orientation) activities;
- Organizing new activities for alumni and graduates by theme of interest or by their respective UPC school, strengthening professional networking;
- Organizing a single job fair for all UPC graduates and promoting it to companies;
- Introducing and linking students to partner companies and gaining the benefits of UPC's strong reputation among employers.

3.1.2 UPC Schools

Problems, issues and boundary conditions

Goals and strategic objectives

In the first section of this report it was already mentioned that UPC is composed of various schools. Each school is involved in job guidance of its own students.

Improvement possibilities

Currently each UPC school has its own independent, but often similar, approach towards the promotion of their students. In their contacts with companies, there is a lack of collective approach and this causes loss of efficiency as each school is setting up its own partnerships, sponsorships or new projects. Other schools are managing outsourced job boards through professional associations.

In the future, UPC could introduce a portal where companies can contact one or more schools directly for cooperation agreements. This would benefit both sides, the university as well as companies without UPC schools losing their authenticity. Another possibility for the future is a direct involvement of UPC Alumni as to provide support to the UPC schools in orientation and career development activities. The staff of UPC Alumni hold a certain expertise that needs to be shared among the schools and applied.

4. Politecnico di Torino (POLITO)

4.1 Internal agents' context information

4.1.1 Stage & Job unit

Problems, issues and boundary conditions

In 2002, the Stage&Job Unit of Politecnico di Torino was established in order to create a central office dealing with the management of internships.

At that time the government was urging for universities to create central structures dealing with this subject. At Politecnico di Torino, multiple actors were involved in the management of internships. However, due to the lack of a central structure to whom students and companies could refer, the following problems occurred:

- Dispersion of information
- Poor communication towards students
- Inefficiency, fragmentation and significant waste of human and economic resources

As universities could play an important role in supporting students and graduates in the transition from school to work, the Italian government started to support universities in this matter. The ultimate goal was to increase students' employment opportunities and to create relations among all territory actors dealing with these issues.

Goals and strategic objectives

The main goals of the Stage&Job Unit of Politecnico di Torino are:

- Internship management: matching offer and demand of internship positions, managing paperwork, monitoring of internships;
- Placement activities: increasing the employability of students and graduates (e.g. matching of job positions, career days, on campus events, support to companies for employer branding strategies);
- Orientation and career counseling (e.g. thematic workshops, individual support on CV writing, interview preparation, job research, work contracts).
-

Improvement possibilities

The main plans and strategies for the future are:

- Improving the follow-up of internships, the unit's monitoring capabilities, examining the effects on employment outcomes (both in short and long term);
- Improving the visibility of the office (internal and external) and the promotional aspects by the use of new media too;

- Increasing the synergy with other units of Politecnico di Torino in order to organize combined activities;
- Establishing medium and long term partnerships with companies to develop more complete and structured activities;
- Maintaining and developing networks with other local, national and international subjects;
- Developing more specific activities according to the various university courses.

4.1.2 Incubatore di Imprese Innovative

Problems, issues and boundary conditions

In 1998 a feasibility study sponsored by the Chamber of Commerce and Politecnico di Torino, conducted by COREP, revealed how the Torino area and the technological university were a potential hotbed for the creation and incubation of enterprises. The local industrial context, the strength of the technological university, and the socio-economic situation in Piedmont represented the perfect framework in which to insert a university incubator.

In 1999, Politecnico of Torino, the Province of Torino, the Torino Chamber of Commerce, Finpiemonte, the City of Torino and Torino Wireless Foundation founded the non-profit joint-stock consortium (S.c.p.a.) called I3P. Now the Innovative Enterprise Incubator of the Politecnico di Torino, is the main Italian university-based incubator and one of the leading incubators at European level.

Goals and strategic objectives

The mission of I3P is to promote the creation of new science-based firms with high-growth potential and more specifically, to:

- Provide consulting services during the enterprise creation process;
- Manage a network and an high-profile marketplace involving entrepreneurs, managers and investors;
- Provide a location to enterprises in order to create reciprocal synergies.

The activity of I3P follows the global strategies of the Piedmont region, in order to sustain research, technology innovation and new entrepreneurship. The Innovative Enterprise Incubator of the Politecnico di Torino is open to:

- Students, researchers, faculty members from Politecnico di Torino or other research bodies;
- Enterprises who want to create spin-offs for the exploitation of research results;
- Anyone who is interested in the creation of a knowledge-based firm and could take advantage of the proximity of Politecnico and its Cittadella.

Improvement possibilities

Last year I3P launched an incubator dedicated to consumers digital projects, such as portals, e-commerce, social networking sites, web and mobile applications.

Figure 5 - Overview of creation and boundary conditions for the internal performing agents per higher education institution.

INSTITUTION	PERFORMING AGENT	MAIN ISSUES	RESPONSE
IST			
	OEIST	<ul style="list-style-type: none"> • Lack of structured and organized information about graduate employability • Dispersion of information and irregular periodicity of surveys • Difficulty creating time series and longitudinal analysis 	<ul style="list-style-type: none"> • Organize available human resources with knowhow and skills on the subject and formalize a structure dedicated exclusively to employment issues
KU Leuven	Student Employment Service	<ul style="list-style-type: none"> • Increased number of students, bringing new responsibilities • Issue of equal access to and participation in higher education for all students 	<ul style="list-style-type: none"> • Creation of new professionalized services to manage new responsibilities, such as a vocational guidance service • Offer (im)material support and help students eliminate financial constraints, for instance through student employment • Offer special attention to specific target groups such as impecunious students, international students, students with disabilities,...
	Study Advice Service	<ul style="list-style-type: none"> • Tradition of providing tutoring services for incoming and first year students 	<ul style="list-style-type: none"> • Creation of a new service guiding students during their entire graduate career, until their transition from education to the labour market • Taking a different approach for future and incoming students (individual) and actual and graduating students (individual and collective)
	Student Association	<ul style="list-style-type: none"> • Business relations activities were initiated by the Faculty 	<ul style="list-style-type: none"> • Creation of a student association unit focused on business relations, being the only responsible actor in this matter
UPC	UPC Alumni	<ul style="list-style-type: none"> • Lack of internal structure providing job placement and career development services • Implementation of a new structure and service without losing continuity • Lack of direct link with university and institutions and companies outside university 	<ul style="list-style-type: none"> • Incorporation of the knowhow and experience of the staff of a former association in a new integrated structure offering a similar service • Participation of the director and president of UPC Alumni in the management bodies of the university, also providing the link with companies
	Schools of UPC		
POLITO	Stage & Job unit	<ul style="list-style-type: none"> • Dispersion of information • Poor communication towards students • Lack of efficiency and efficacy concerning human and economic resources 	<ul style="list-style-type: none"> • Create a central office/structure to improve communication and to make the best possible use of the available human and economic resources

INSTITUTION	PERFORMING AGENT	MAIN ISSUES	RESPONSE
	I3P	<ul style="list-style-type: none"> Local potential/framework (Torino Area and Technological University) for creation and incubation of enterprises 	<ul style="list-style-type: none"> Creation of a non-profit joint-stock consortium. Potential analysis and creation of a suitable structure to enhance the identified potential

Figure 6 - Overview of improvement possibilities for the internal performing agents per higher education institution.

INSTITUTION	PERFORMING AGENT	MAIN ISSUES	RESPONSE
IST			
	OEIST	<ul style="list-style-type: none"> Widespread dissemination of information concerning IST employability performance Adequation of methodologies to recent labour market evolutions 	<ul style="list-style-type: none"> Integrate social networks in information sharing platforms on employability Development of new information processing and collection forms and methodologies Organize periodic events (conferences, seminars, informal get-togethers, etc.) and launch the half yearly Journal of Graduate Employability
KU Leuven	Student Employment Service	<ul style="list-style-type: none"> Continuous changes in labour market regulations Evolution from face-to-face counseling to an online service available 24h a day Loss of efficiency 	<ul style="list-style-type: none"> Consult policy makers for improvements or modifications of existing or future legislation with regard to student employment Develop a new database and an online counseling service for all actors and stakeholders, extending it also for a growing group of international students
	Study Advice Service	<ul style="list-style-type: none"> Increasing number of contacts with students Lack of cooperation with (academic staff of) faculties 	<ul style="list-style-type: none"> Introducing online tools where students can easily make an appointment Improving the cooperation with faculties (through facilitation, professionalization)
	Student Association	<ul style="list-style-type: none"> Increasing demand from students and companies Inadequate human resources while demand has increased Inadequate infrastructure, some events have reached maximum capacity 	<ul style="list-style-type: none"> Recruiting more student members for the business relations unit Consider a new collaboration with the Faculty to tackle logistical issues and infrastructure
UPC	UPC Alumni	<ul style="list-style-type: none"> Need for publicity for the new structure 	<ul style="list-style-type: none"> Promotion of the new structure to students and companies, offering better services and increasing the diversity of the services and activities
	Schools of UPC	<ul style="list-style-type: none"> Lack of collective approach of UPC schools 	<ul style="list-style-type: none"> Introduction of a portal where companies

INSTITUTION	PERFORMING AGENT	MAIN ISSUES	RESPONSE
		in their contacts with companies • Loss of efficiency	can contact one or more UPC schools for cooperation agreements • Involvement of UPC Alumni as to provide support to the schools in orientation and career development activities
POLITO	Stage & Job unit	• Room for improvements in terms of agent visibility and scope of action	• Improving follow-up of internships • Improving the visibility of the office • Establishing synergies & partnerships with internal and external partners (other Polito units, companies, etc)
	I3P	• Act as a consultant during the enterprise creation process • Need to consider, identify and to act on the current main business areas	• Oriented incubators (e.g. digital projects)

