

BRIDGE  
Bridging the gap between Industry and Academia

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## PROJECT DESCRIPTION

Over the years, the transition of graduates from the academia toward the procurement of the suitable career line of job in the industry of their choosing, which is in tune with their skills and talent had been an arising and interesting topic. But surely, there has been a gap between the academia and the industry in terms of perfectly matching each graduate to their new jobs, that people in these sectors mentioned, have been trying to describe and fulfil it completely; but it has never been enough. Companies had begun to see the need to adequately match each employee's skills and abilities to their relevant job. This is to encourage a smooth transition during the employee's course of working in the company and thus maximizing their potential to proffer solutions as deemed fit due to their prompt adaptability to the job specification being assigned to them. Overtime, lots of steps have been taken to crunch this gap as much as possible,

ranging from on-the-job training while in studies as related to undergraduate training-ship, curriculum adjustment and so on. But still yet, this effort has never been enough to see this imminent problem solved.

In an attempt to explore and solve this problem, the bridge project took a critical multi-criteria analysis at the above mentioned issues.

First, the initial step taken, was to perform a Stakeholder and needs analysis, necessary to deepen the investigation into the problem at hand, to identify all relevant needs and requirements.

Then in a study of state-of-the art, a preliminary screening is conducted in looking at the journey from education to employment while looking at it from two perspectives; the social-economic perspective and a broader theoretical perspective.

A systematic methodology was adopted on the development of possible solutions considering the needs and its respective requirement. This methodology was defined by listing these collective requirements and weighted based on their relevance. The solutions were analysed using the SWOT analysis, whereby the best fit solution was selected using numerical evaluation through weighting of requirements met. Second details about proof of concept prototype were noted, of which is divided into different phases, followed by the key performance indicator of the solutions measuring the feasibility of the solution.

The final phase of the report discussed about the feasibility of the solution with concern to the future. The main stakeholders were highlighted and all possible scenarios were developed about the future sustainability and scalability of the project. Moreover, layout was drawn for the future activities which needed to be done to make this project more effective and efficient for future iterations.

An important fact to point out, is that the selected solution” called “Bridge”, added much value to the project by creating a connection for students and their prospective employers, as this model brings about a platform for interaction whereby each student can learn certain facts about their skills and build on their communication with interviewer and an overall boost in their confidence.

### **Task and Skills**

The group was multidisciplinary and worked jointly towards the realization of the final idea and proof of concept. Starting from the three solution generation, interviews to stakeholders, realization of surveys and many other team-activities. Then the team split up and each member focused and worked on specific part of the project.

- **Martina Bonetti:** worked on the graphic part of the project and performed the user requirements studies.
- **Sneha Davis:** organized and facilitated the proof of concepts
- **Emecheta Kemjika Chukwunyere:** organized and facilitated the proof of concepts
- **Subhojit Mukherjee** organized and facilitated the proof of concepts

- **Awais Sadaqat:** worked on the solutions business logic and meetings with the stakeholders
- **Gianfranco Savino:** performed the state of the art studies and literature review.

## ABSTRACT

Seeing the need to have more communication skill training done in the academic sector, gave birth to this project being recommended by IBM and further harnessed by the Alta Scuola Politecnica advisors. To explore the transition for this work, a multi-criteria analysis is performed. The first step is the Stakeholder analysis, necessary to deeply investigate the problem and to identify needs and requirements. In this section, five stakeholders were identified and a correlation between them was carried out to fully meet those needs with the right requirements. Then with the study of state-of-the-art for each technology, a preliminary screening is obtained.

A systematic methodology is adopted to select the most promising solution. This methodology needs a list of criteria, defined by clustering of requirements and weighted depending on their relevance. *Job satisfaction, increased employability and feasibility* were basic needs been highlighted for consideration to be met based on the solution deduced.

the criteria were defined and weighed, the selected solution was prototyped through a proof of concept event and then further analyzed in terms of business viability in the community. This study required the team to design three different business plan options:

- **Alumni** -making use of the ASP Alumni network as a resource to keep our service proposal running in the future.
- **Career service** -exploiting the already existing Career Service infrastructure to organize more events like the project proof of concept.
- **In-house outlook** -ASP board taking full charge for the service future, logistically and financially.

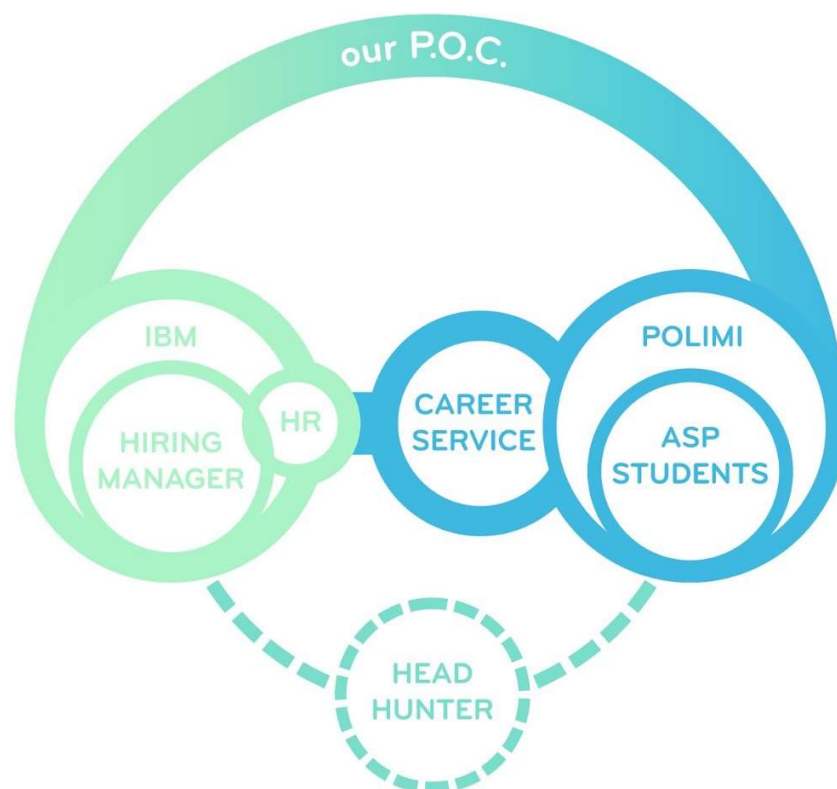
## 1. UNDERSTANDING THE PROBLEM

Our project investigates on the gap between the academia and the industry from a multidisciplinary perspective. In this context, to improve the knowledge of the problem, a fundamental step is the Problem Analysis, which consists of Stakeholders Analysis. Three very important Stakeholders were identified for the BRIDGE project: IBM, Career service and Politecnico di Milano (Career Service)

IBM : it provided the platform for the hiring managers and Human resources, who needed more solution to the rising need of having recent graduate groomed in certain soft skills such as communication, teamwork and adaptability to their job roles in the industry, being that fighting the retention rate in newly graduates hiring has been an issue at hand.

Career Service : Sustainable relationships with a number companies. Would love to create more understandable job ads, more events to promote job opportunities for the students in the campus, as well as more events to prepare students to job finding which would eventually all lead a more higher hiring rate amongst students of the institute

ASP Students : They were the ones who would require the need in developing soft skills, understanding the match between their study course and job titles thus knowing where to find job ads and having more contacts with the industry while still in university.



Schematic future State

The next step in the analysis is to individuate and make a list of the NEEDS and suitable requirements that the outcome of the project – the final product – must fulfil. The requirements are mainly of three types and can involve one or more stakeholders.

1. **Job satisfaction** : The solution should provide a common jargon for job ads, so that students know their future roles before applying. It will reduce the churn rate.
2. **Increased employability** : The solution should assess and accentuate the students' soft skills to become better prospective candidates during job seeking.

3. **Feasibility** :The solution should be viable for testing within the time-frame of the ASP project

## **2. Exploring the opportunities**

The problem can be seen from two different perspectives: a socioeconomic perspective and a broader theoretical perspective. The Socio-Economic Perspective describe the problem from the market standpoint. Job market is intended as the platform where employers, education providers and youth deal with each other. A 2012 McKinsey report, *Education-to-Employment: Designing a System that Works*, highlights the following six facts:

1. **Employers, Academia, and youth live in parallel Universes.** They have different understanding and perspective of the same problem.
2. **The education-to-employment journey is full of obstacles.** The journey is a highway with three critical intersections: enrolling in education, building skills and finding a job. Each intersection hides significant challenges.
3. **The education-to-employment system fails for most employers and young people.**
4. **Innovative and effective programs around the world have important elements in common.**

Successful school programs around the world share two important features: (1) education providers and employers actively step into one another's worlds. Employers help to design curricula and offer their employers as faculty. Academia have students spend half their time on a job site, eventually receiving a job offer. (2) employers and academia work with their students early and intensely.

5. **Creating a successful education-to-employment system requires new incentives and structures.**

6. **Education-to-employment solutions need to scale up.** There are three challenges to achieving scale: (1) constraint on the resources of education providers, such as finding faculty and investing in expansion; (2) insufficient opportunities to provide youth with hands-on learning; (3) the hesitancy of employers to invest in training unless it involves specialized skills.

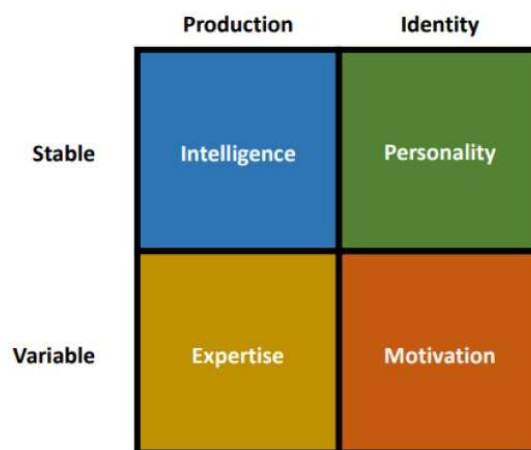
Education providers, employers and youth live in parallel universes. Each one sees a different perspective of the whole picture, making difficult their alignment to improve the education-to-employment system. For instance, education providers focus their efforts principally in developing technical skills in young graduates, while what companies are really looking for are soft skills. A theoretical perspective of the problem is given by the book "Il Cerchio e la Bilancia".

Here, the author talks about the functional description of the human brain, and also methods for testing and measurement.



The goal of the framework is to objectively compare candidates and to minimize evaluator bias. The brain is stimulated by the environment. It is then divided in four zones, that can be seen horizontally and vertically.

The horizontal view identifies two different zones: The production zone where the human brain concerns principally in primary needs, e.g. Find food, knowledge, and skills applied to work. In this zone, there is no generation gap: our brain is shaped by evolution, over thousands of years, not by technology. The Identity region implies Social interactions, Self-consciousness and the way we behave at work. The vertical view shows the difference between the stable area which is less likely to change over the years and the variable area.



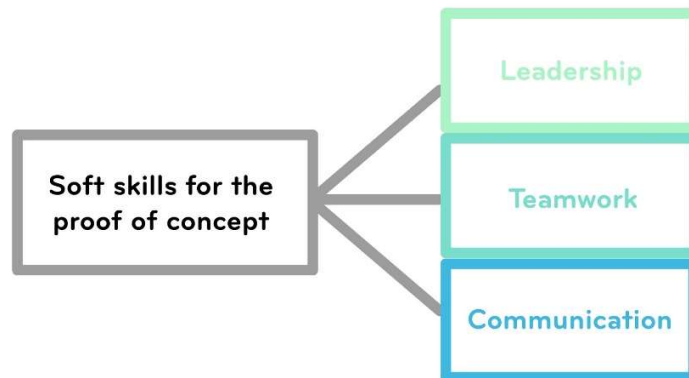
#### Assessment logic Model

### 3- Solution:

With the framing of the problem and a thorough understanding of the environment we established the guidelines for the selection of the most feasible and effective solution. The solution developed was able to justify and satisfy most of the requirements of the three main stakeholders.

Our service, Bridge, is changing the way ASP connects to companies by offering its students soft skills assessments run by professional hiring managers. Through the evaluation, Bridge teaches hiring managers from the industry how to spot the perfect candidate for their company. At the same time, it provides students with training for their upcoming first job interviews.

Bridge is an objective structured assessment in which hiring managers from market leading companies will come and assess the students(ASP) on their **soft skills** (*such as Leadership , Communication Skill and team working*).



### Soft skills for Proof of concept

The basic concept of the solution revolves around assessing the soft skills of the students which was identified as one of the major need for all the concerned stakeholders. It involves the managers of the company who will be trained by the external HR consultants on how to assess the soft skills, who then assess the soft skills of the students in specially designed exercises which highlight the competences of the student.

#### Elements of Innovation:

The concept in itself is unique in the way it combines the two main stakeholders. The solution provides a platform which allows the stakeholders (Industry, Academia and students) to interact in a completely different way so as to understand each other in a better way. Instead of using standard advertising methods and career service events to understand the requirements, an interactive platform leveraging on the soft skill assessment activity which brings to the surface the needs of all the stakeholders and giving an open networked approach to better fulfill the requirements.

The platform does more than just providing a multi stakeholder interactive environment, as it possesses attractions for all the stakeholders packed in a unique way. This solution in comparison to others possess the following **advantages**:

This solution, though requires the involvement of one extra stakeholder, is a flexible and scalable option. The solution set can be designed in its entirety from scratch, and later can also be molded according to the needs of the other stakeholders. Also, since soft skills evaluation and training is one of the key pillars of all the three solutions, it is best if we could actually employ the expertise of a person or a body, who is experienced in the same. Hence, it was decided that in the interest



of the task at hand, the solution which involves a third party needs deeper analysis so that it can be employed in future.



POC Implementation



POC Implementation

The **disadvantages** are of course the bureaucracy due to involvement of multiple stakeholders, both public and private, and this is delineated later.

In summary, this structure in itself inherits the following **benefits** for all the stakeholders:

**Students:**

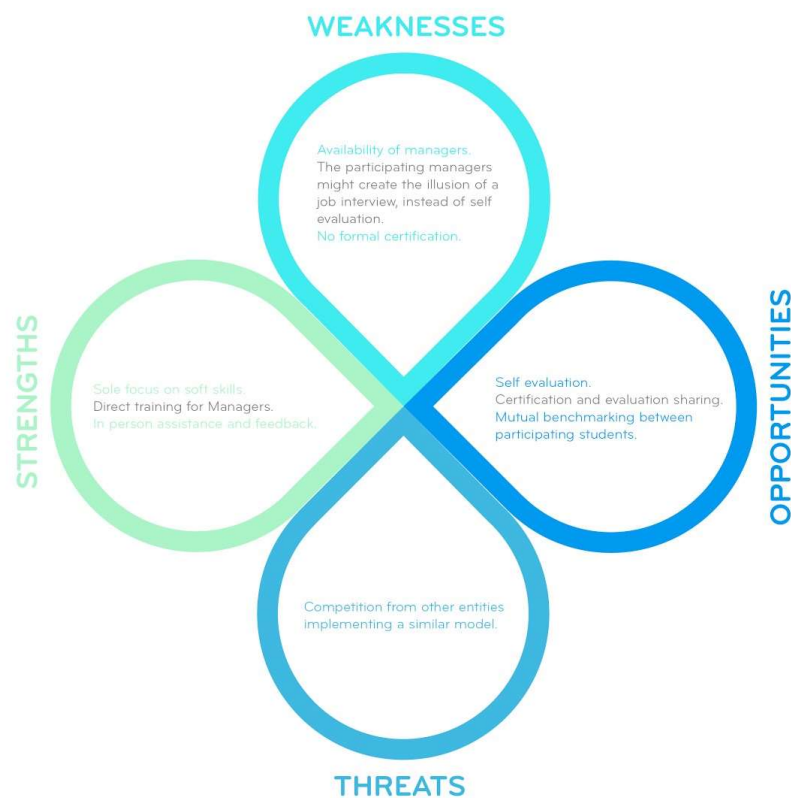
- Identify personal strengths
- Get feedback from Industry managers on their soft skills
- Opportunity to network beyond study courses
- Experience an interview assessment before real interviews

**ASP**

- Improve the visibility of the ASP program and communicating the worth and value of the ASP students.
- An new interactive channel to interact with the Industry
- A possible channel to strengthen the network with the ASP Alumni

**Hiring Managers:**

- Meet Young Talent
- Get training on soft skills assessment from professional HR consultants
- Get feedback on the assessments performed



SWOT Analysis of solution bridge

**Implementation and bureaucracy:**

The concept though simple in its formulation, inherits many implementation and bureaucratic difficulties. One of the biggest problems which project presents is finding an agreement with all the academic partners involved in this initiative on management and implementation issues, since it involves the students from two different universities, the level of response and integration of resources from the career services of the two universities (Polimi and Polito) remained a major issue.

**References**

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Mckinsey Center for Government, 18, 1-7. Carelli, G. (2005). Il cerchio e la bilancia. L'oggetto e gli strumenti della valutazione obiettiva

**Tags**

Soft-skills, communication, teamwork, leadership