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## Article

# Fostering sustainable development and entrepreneurship : the new role of university

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## Fostering Sustainable Development and Entrepreneurship: The New Role of University

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**Abstract.** *Sustainable development is a global objective to overcome the economic, environment and society crises worldwide. The research aims are twofold: (i) Explores the proactive and dynamic model of the university's education system, focusing on the new role played by the School of Economics in the promotion of economic, social and environmental sustainability, and how this goes beyond, in stimulating bottom-up social entrepreneurship ideas through students engagement; (ii) Provides a descriptive analysis of innovative laboratories modules, by studying and mapping the best project proposals initiated by the student. Finally, it presents a case study analysis on waste management (UniRecycling) project, scaling up objectives, stakeholder mapping, activities and the expected results. The findings show the new role played by School of Economics, along with other partner institutions, in supporting the student's engagement in practice-oriented workshops that enable the transfer of knowledge, skills, and self - development. The implications of the research to be developed show that a dynamic bottom-up model of learning and dissemination of sustainable and entrepreneurial should aim to sensitise students to be active and create project ideas for social and environmental entrepreneurship and build and strengthen the local territorial networks, to contribute to the creation of a system of services attentive to responsible and sustainable entrepreneurial development.*

**Keywords:** *education, sustainable development, Third Mission, sustainable projects, social entrepreneurship.*

## **Introduction: conceptual framework and research methods**

On September 2015, the United Nations formally adopted a new sustainable development agenda, the 2030 Agenda for Sustainable Development, including a set of goals, called the Sustainable Development Goals – SDGs. These are the most significant and unprecedented global commitment to eradicate poverty, improve the quality of people's lives, ensure environmental sustainability, provide inclusively and equal quality education opportunities for all, building sustainable partnerships and so on. The sustainability has become a priority and is increasingly playing a role in the strategic choices of all actors, which look for economical, social and environmental sustainability and shared value creation (Porter & Kramer, 2011) to preserve well-being for future generations.

The European Strategy (2020) noted the importance of the quality education able to promote inclusively and equitable learning opportunities (SDG). The social responsibility, social entrepreneurship, and sustainable innovation are considered critical means to facilitate the access of all citizens to competencies and professional skills. On a similar vein, United Nations, Agenda 21 Ch. 36 (1992) emphasises the role of education to create awareness about the environment, ethics, and values and also strengthens the attitudes and skills needed for sustainable development and active participation in the decision-making.

On such grounds, the research aims are twofold:

*Firstly*, to develop a conceptual framework on the role of education at university level in promoting sustainability, according to the Third Mission approach (§1.1). It links the idea of quality education to social responsibility entrepreneurship, stressing the need for dialogue, shared knowledge- skills- behaviors, and values among different actors, to fostering collaborative, entrepreneurial and innovative ideas for sustainable growth.

*Secondly*, analysed the University's curricula on CSR and sustainable education to SDGs agenda, through a case study analysis. It presents faculty's experience on how linking education to the territory to stimulate sustainable development. In particular, the School of Economics role in promoting economic, social and environmental sustainability, and how this goes beyond, in encouraging bottom –up social entrepreneurship ideas through student's engagement.

At the case study level, the research embodies:

- 1) An analysis of the role of education, supported by the international strategies, in fostering social development and entrepreneurship and as well, the rising need for stimulating cohesion on the sustainability issues,

including youth, public and private businesses and third sector organisations;

2) A descriptive analysis of innovative training modules (education + Action), namely the *Labs of the New Economy*, by exploring and mapping the best project proposals initiated by the students.

3) A case project analysis on waste management (UniRecycling), scaling up objectives, stakeholder mapping, activities and the expected results. Primary data were collected by questionnaire to the university campus's beneficiaries, and gather their real perceptions on the project.

The findings show the new role played by School of Economics, along with other partner institutions, in stimulating the student's engagement in workshops that enable the transfer of knowledge, skills, and self - development. The model is based on a dynamic bottom-up approach of learning and dissemination of sustainable and entrepreneurial ideas. The sustainability labs were constructed around the ideas (1) to sensitize students to be active and develop project ideas to promote social and environmental entrepreneurship, defining a first learning experience with the profile of 'local ethical promoters', (2) build and strengthen the local territorial networks, to contribute to the creation of a system of services attentive to responsible and sustainable entrepreneurial development.

### **The new role of university: Third Mission for sustainable development**

At a time of profound rethinking of development scenarios, where many challenges are concentrated at the urban level, the Academia can make the difference to improve sustainable lifestyles in the territory and communities, if they break their intangible barriers and adopt a bottom up model to integrate practices and expertise from other for profit and non-profit organizations, public administrations and civil society.

In this context, the Universities recognize the responsibility to commit to talent development, supporting ideas and multiplying the intellectual energy of the country. Therefore, the academic activity development, mainly based on core activities, such as high education, training, and research, should be integrated by the so-called "Third Mission", which is one of the main tools enabling resources allocation (Malakoff, 2013). "Third Mission" refers to a set of activities by which the University triggers processes of direct interaction with civil society and businesses, with the aim of promoting the growth of the territory. Therefore, the knowledge becomes instrumental for attaining output production (Novelli & Talamo, 2014). Traditionally, the Third mission of University has been studied and implemented as a means

for transferring technology and economically exploiting the results of research activities carried out by universities, for example through the creation of spin-offs and incubators. The changing of socioeconomic conditions has recently led to integrate this paradigm, as shown by the diffusion of the conceptual models of the Triple, Quadruple and Quintuple Helices for national innovation ecosystems, which can be seen as an advanced mode of experimentation of the third mission approach.

The Triple Helix innovation model focuses on university-industry-government relations; it underlines the importance of higher education for innovation and is compatible with the knowledge economy. In the Quadruple Helix, the territorial context and the civil society (Fourth Helix) are seen as key drivers in a democratic approach to innovation where government, business, academia and civil participants work together to co-create the future (Open Society model: from a knowledge economy to knowledge society and democracy). Finally, the Quintuple Helix Model, adding the perspective/helix of the 'natural environments of society', supports the formation of a win-win situation between ecology, knowledge, and innovation, creating synergies between economy, society and democracy (The 'socio-ecological transition', European Commission in 2009).

Therefore, the advocacy and promotion of sustainable development in the phases of the education process, namely, *the formal, and the non-formal* education requires strategies aimed at engaging various stakeholders, namely university-industry-government (Etzkowitz, 1993, 2008; Etzkowitz & Leydesdorff, 1995). Such new relationships require a balanced configuration of "three-helix" highly supportive of joint initiatives among the institutions (Etzkowitz & Leydesdorff, 2000) to promote sustainable socio-economic development. In support of the importance of the role played by the university in this process, Ranga & Etzkowitz (2013) noted that "Triple Helix" model in a knowledge society is driven by the University role and the hybridization of the elements resulting from the relationship between universities, industry, and government to generate new formats of institutional and social production, transfer, and application of knowledge. Therefore, the university's playing a critical role in the physical space of encounter between academia, civil society, for-profit and non-profit organisation and government. The newly renewed mission (Third Mission) it has the power to stimulate networks between institutional and private actors in the territory and creating a virtuous circle for the social and economic development. A "regional hub" that triggers engagement of students and citizens, NGOs, businesses, and governments in economic, social and environmental issues.

Although there is an emerging field of debate around the topic, there are increasingly fragmented initiatives oriented to more sustainable and

entrepreneurial efforts to strengthening these relationships at sub-university level.

### **Education: linking sustainable development to social entrepreneurship**

This research aims to map the initiatives relevant to sustainable development, entrepreneurship and social innovation at the level of higher-education. This nexus between the three fields is becoming particularly relevant and is supported by the university policies and strategies increasingly oriented to corporate social responsibility (CSR) and sustainability.

Some changes of particular impact are to be observed:

- At the international level, Lisbon agenda with its focus on the quality of life for European citizens requires that businesses are increasingly reconciling sustainability aspects with innovation and entrepreneurs. Sustainability requires incremental change, and the role of the entrepreneur is critical to its success.

- The education plays an important economic sector, accounting 6.1% of OECD countries' GDP (OECD, 2014). The education plays a significant role in shaping behavioural attitudes and skills- from the primary level up. It plays a central role to provide the entrepreneurial skills building, mix of experiential learning, and mindset shift. This attitude is reinforced at the university level, because the globalisation and the technological development have completely changed the nature of work, and its role is not more just only focusing on ensuring students secured future jobs - but also to become entrepreneurs. Therefore, it is no longer enough to train students for a career but to give them the necessary entrepreneurial skill to increase competition and innovation in the market.

- At the micro level, the local actors as the University play a significant role. Novelli and Talamo (2014) define the Third Mission at university' level "as a set of activities that triggers processes of direct interaction between the university, civil society, and businesses, to promote the growth of the territory". Therefore, the transfer and acquisition of knowledge and skills are instrumental for attaining output production. The universities are nowadays acquiring new responsibilities and managerial transformations: from merely being entities for knowledge creation and dissemination, they have evolved to increasingly play an entrepreneurial role, where networking and collaboration, as well as sustainability, are crucial (OECD, 2012).

- The University curricula should be aware of the needs of the market and the required transferable skills, thus making easier the transition and circularity of skilled individuals among the sectors. The inter- sectoral

dialogue is essential and opens much more space to innovation and sustainable development, through harmonising inter-disciplinary skills and expertise.

### **University of Rome “Tor Vergata”: School of Economics & CSR Labs**

The new role of the University shows its managerial responsibilities of increase engagement with other local actors in creative networks of collaboration to change learning and stimulate social entrepreneurship and innovation.

The new mission and vision of the University of Rome Tor Vergata, through the prisms of the Third Mission, aim to contribute to people’s education and training, to scientific research and technological, organisational and social innovation needed to achieve the SDG approved by the UN September 2015. The University aims to be a real promoter of the territorial sustainability and to straightening the collaboration with the private and public sector, third sector organisation and investors, at national and international level.

From 2014, was released a Sustainability Plan, including the actions required to reduce long-term negative externalities - with particular reference to greenhouse gas emissions - generated by the University activities. More recently, in February 2016, in collaboration with the Unipolis Foundation, proposed the creation of the Italian Alliance for Development Sustainable (ASviS) with the intent to grow the awareness on the importance of the issues addressed in Agenda of Global Sustainable Development 2030.

The School of Economics is located in the VI District at outskirts of Rome, an area that encounters various issues, from social deprivation, poverty to micro-criminality, a small degree of education, unemployment, racial inclusion, and security (Fiorani et al., 2015).

Main trends visible over the past years undertaken at the level of academia, and structural changes in the School of Economics are linked to:

- *From the edition 2009-2010 onwards:* a comprehensive, integrated set of CSR and social reporting courses into bachelor and master’s level programs. The faculty structured the course program based on an innovative approach that combines theories, case studies and group works and business professional’s testimonials. To a large degree, it aimed to strengthen the contact between universities and institutions associations- companies. Fiorani et al. (2015) noted that a primary trend on 2013-2015’s CSR programs attendance, was showing 30% of students attending the CSR course and final examinations, carried out thesis and participated and were

winners of national awards for “Best thesis on sustainability”. The findings show 25% students that completed their thesis in CSR considered it quite useful in passing related job interview, while 63% of students get employed within six months from completing their studies.

- *From the edition 2014-2015 onwards:* has been integrated the CSR Labs as part of the CSR programs of activities. Therefore, in collaboration and support of the Rome Capitale/VI Municipality, Lazio Region and Next-New Economy for all” (civil society association) has been activated extra-training activities called “The New Economy Labs- Preparing for the Future” engaging students from the various faculties of the University campus. The Labs have been designed in collaboration with the “*11<sup>nd</sup> edition Exhibition on CSR and Social Innovation of Rome*” and the *Prepare for the future Oscars*, a competition for the innovative and sustainable ideas among youth. The main aim of the initiative, defined, for its characteristics, as “EducAction” (Education + action), is to stimulate the student’s self-entrepreneurship and the grassroots mobilisation, enable meetings, and create synergies between local entrepreneurs and creative young students. The expected results are to straighten a hub of creative ideas among students, support forms of self-employment and social innovation and raise awareness among students about environmental issues and sustainability. This new approach raises student’s awareness with a new kind of self- responsibility, *rethinking their role in society, rethink their needs and how they can use tools and resources to answer the needs of a more sustainable territory*. In summary, according the Quintuple Helix Model, the successfully extra-curricular activity “New Economy Labs” is a new Training-Action format capable to interest young students on the needs of their own territory/university and go through innovative ideas and projects in cooperation with local business, creating a bridge between science and society, with a view to generate shared value and sustainability development.

In practice, the Labs stimulate teamwork skills to enable project ideas co-design (work groups), motivation, dedication and entrepreneurial thinking to provide social, environmental and economic development by a) starting from experiences already realized or b) identifying new needs to be answered with concrete and innovative proposals (stimulation of self-entrepreneurship).

The workshop program, structured on several meetings, gives students support through training and resources and guides them towards the co-design of project proposals. The project work developed consist of a structured formularies compilation that enables students to brainstorm for creating an integrated plan from the *initial idea* and *objectives*, defining and classifying *stakeholder*, *to activities* and *management of the resources*.



The main strategic aims of the labs focused on two main dimensions:



- 1) Video story-telling of a best practice sustainable company and design and co-implementation of ethical and sustainable initiatives (e.g., Ethical Cash Mob);
- 2) Sustainable territorial development and entrepreneurship (e.g. Cooperative start-up, through the partnership Confcooperative –CooUp).

During the Third Edition of “The New Economy Labs- Preparing for the Future” the specific focus was on:

- Sustainable consumption initiative through Ethical Cash Mob and Design and co-implementation of Sustainable territorial initiatives;
- Sustainable and social entrepreneurship, due to the partnership with BCC Tuscolo (Cooperative Credit Bank) that promoted cooperatives start-up of sustainable business (see Figure 1).

The Credito Cooperativo is a system based on a network comprising 313 cooperative banks, associative structures and several service companies, all of which work together to guarantee a complete and diversified range of products, in keeping with the values and identity of a cooperative. The most important feature of these cooperative banks (BCCs) is that of being local, mutual, and not-for-profit cooperatives. BCCs, which are found throughout the length and breadth of Italy, promoting development and meeting their social and economic needs: *“The Bank aims to serve the interests of its stakeholders and members of the local community through the provision of financial operations and services, to improve their moral, cultural and economic conditions, promoting collaboration and teaching the benefits of saving and forward planning as well as encouraging social unity and responsible, sustainable growth in the surrounding territory. The Bank distinguishes itself through its support for the community and its commitment to further the common good.”* In 2016 BCCs started a new project called CoopUp, which is a project to promote start-ups of cooperatives. This project in Lazio region was developed thanks to a big partnership with Universities and non-profit organizations. In specific, a partnership with Tor Vergata gives the opportunity to students implement their innovative idea in social businesses. CoopUp is not only a project that finance start-ups, but it is a place where innovative ideas are becoming cooperatives, thanks to the networks, partnerships and training.

**Figure 1. CoopUp project (<http://www.coopup.net/>)**

	- University of Rome "Tor Vergata" (Public University).
	- Lazio Region (Public Administration) - Partner of "The New Economy Labs- Preparing for the Future"
	- NEXT: Nuova Economia Per Tutti, (Non-Profit organization) - Promoter and "The New Economy Labs- Preparing for the Future"
	- BCC Credito Cooperativo, Cooperative Bank (Private organization). Promoter of CoopUp project and partner of "The New Economy Labs- Preparing for the Future".
	- Prepararsi Al Futuro Awards. - Promoted by NEXT in partnership with the private, public and non-profit organization (see figure 1).
	- COVISION LAB (Non-profit organization). - Multidisciplinary research centre and promoter of the "The New Economy Labs- Preparing for the Future".
	- Government and Civil Society Research Group, Department of Management and Law, Faculty of Economics, University of Rome "Tor Vergata" (Public University) - Created and promoted by "The New Economy Labs- Preparing for the Future" (Department of Management and Law).
	- Municipal district where is located the University of Rome "Tor Vergata" (Public administration); - Partner of "The New Economy Labs- Preparing for the Future" and others projects, in particular the Ethical Cash-Mob promoted in this suburbs area.

**Figure 2. Partners of "The New Economy Labs- Preparing for the Future"**

The three editions of the "Labs" showed a significant number of participation in seminars and workshops: 120 students (I<sup>st</sup> ed.), 200 students (II<sup>nd</sup> ed.) and 83 students (III<sup>nd</sup> ed.).

In the I<sup>st</sup>ed. Lab's attended mostly by men (56%) of average age 25 years from the School of Economics, Law, and Social Sciences were produced around 21 projects. In the II<sup>nd</sup> Labs edition "the project ideas submitted were 26, distributed as follows:

- Sustainable territorial development (22 project ideas);
- Storytelling video around sustainable business activities and Ethical cash mob events (4 projects actively implemented).

The first edition awarded 2 out of 3 Oscar's of Sustainability to the projects developed by the students of University of Tor Vergata. While, the second and third edition, awarded 3 Oscars to projects developed by students of the University of Tor Vergata. Figure 3 shows the awarded projects.

Year	Title of the project
I ed. 2015	<p><i>First Prize:</i> Ethical Cash Mob for MOBilitation in the territory, named “RiCompriamoci il future/ Cash Mob_ Let’s buy our future”; implemented at the outskirts of Rome, aiming to “voting with the portfolio”, for the Fair Trade products of the supermarket ‘Altromercato’, products that were sold into the first ecosostenibile supermarket of Lazio region (Simply Market).</p> <p><i>Second Prize:</i> Ethical Cash Mob for MOBilitation in the territory, named “Bite the injury”, implemented at the <i>Imm of sunflowers</i>, dedicated to the disadvantaged young people. gestita da ragazzi disabili.</p> <p>Both events had a great level of participation and engagement of the academic community (researchers, students, rector and so on).</p>
II ed. 2016	<p><i>First Prize:</i> Ethical Cash Mob for ‘World Fairtrade challenge’ a worldwide campaign on Fairtrade Coffee to support farmers affected by climate change; The Ethical Cash Mob “Christmas Gifts” at “Le Artigiane” (“The Craft”) in Rome to support Female <i>Made in Italy</i> and recycling waste materials.</p>
III ed. 2017	<p><i>National Prize:</i> Lov’Oil, a startup idea that produces heart shaped soaps made with the free recovery of used food oils.</p> <p><i>Regional Prize:</i> Orto 2.0 Società Cooperativa Agricola, a start-up created within the Laboratories and created due to the CoopUp program, which, thanks to a simple app, allows everyone to cultivate a small lot.</p>

**Figure 3. First Prize Cash mob at Social Innovation Awards**

In all the editions, more than a third of the projects presented in the final stage of the labs were designed proposals to be undertaken for concrete project implementation. The themes of the projects are covering a broad range of various areas, for social inclusion and regeneration to ethical consumption, recycling, and management of waste, organic products, and so on. An important event was for Milano EXPO in 2015, where students, researchers, and Professors from CSR Lab made an Ethical Cash Mob at the COOP supermarket of the future (Milan, 27 September 2015). The aim of this ethical cash mob was to promote the sustainable consumption thanks to the action where all the participants have bought the organic product at the same time.

Regarding entrepreneurial proposals probably most significant are those related to ‘sustainable development of the territory’ and dealing with recycling management (e.g. UniRecycling, ReBottle, Lov’Oil) agriculture sustainability (e.g. OrTor, Orto 2.0), transportation (Car Pooling) and so on (Table 1).

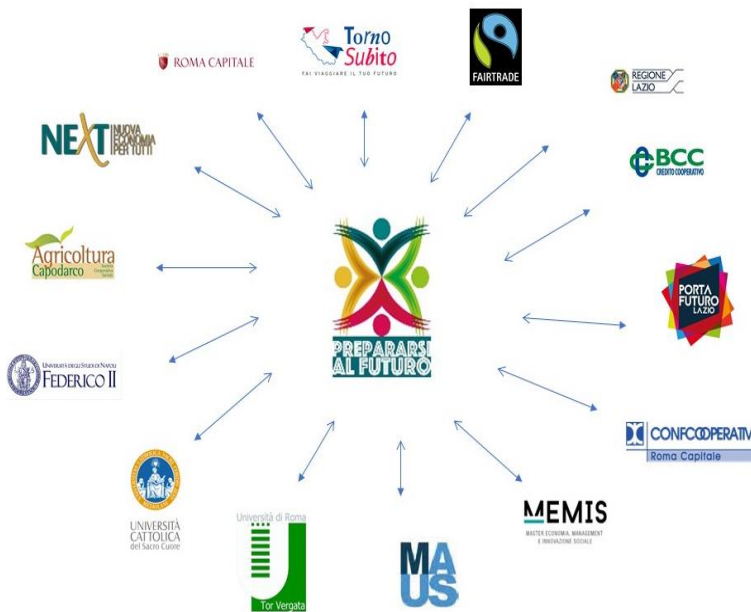
**Table 1. Mapping social entrepreneurial project proposals**

Name	UniRecycling	OrTor	Orto2.0	Lov'Oil	ReBottle	Car Pooling (2015) & YAM - You Are Movement (2017)
<b>Primary objectives</b>	<ul style="list-style-type: none"> <li>- project idea to solve the problem of plastic bottles recycling and the creation of a compactor to reduce the pollution;</li> <li>- give incentives for the behaviour of recycling to students, teachers and so on;</li> </ul>	<ul style="list-style-type: none"> <li>- create a mobile platform that aims to solve the problem related to the imitation of Italian food brand 'Made in Italy.'</li> <li>- provide a service to "foreigners" that buy typical Italian products, and poorly informed on certified food</li> </ul>	<ul style="list-style-type: none"> <li>- create a service that offers everyone the opportunity to own a garden while living in the city, and to be able to follow the cultivation of their own product while ensuring their provenance.</li> </ul>	<ul style="list-style-type: none"> <li>- project idea is born with the goal of raising awareness and providing a service for collecting and reusing oil.</li> </ul>	<ul style="list-style-type: none"> <li>- recycling of municipal waste, such as glass and the consumption-saving of electric energy for domestic use (kwh).</li> <li>- to create a value chain that has as final result the creation of lamps made from recycled glass bottles (LED lamps)</li> </ul>	<ul style="list-style-type: none"> <li>- an innovative mobility idea that allows users to protect the environment (reduction of saving of traffic, CO2, and costs).</li> <li>- to use one car with several people on board, to make the same journey.</li> </ul>
<b>Expected Results</b>	<ul style="list-style-type: none"> <li>- sensitise, communicate and increase awareness (user guide, social media, crowdfunding and so on)</li> <li>- purchase compactor &amp; achieve a high number of compacted bottles</li> <li>-kg of plastic sold by the university for disposal cooperatives</li> <li>- benefits for users</li> </ul>	<ul style="list-style-type: none"> <li>- reduces transaction costs for purchase, and sustainability on the long term.</li> <li>- communication and events of promotion: cuisine, food and culture, promotion of the service App Made in Italy</li> </ul>	<ul style="list-style-type: none"> <li>- responsible consumption of the food;</li> <li>- sustainability on the long term;</li> <li>- re-birth of local land and community.</li> </ul>	<ul style="list-style-type: none"> <li>- reduce environmental and economic damage;</li> <li>- to favour the local population in the disposal process by clearing the costs.</li> </ul>	<ul style="list-style-type: none"> <li>-design the product development and creation</li> <li>-website development</li> <li>- dissemination of information on practices adopted</li> <li>-use social platforms to sensitise the community</li> </ul>	<ul style="list-style-type: none"> <li>- communication and adhesion to the service: around 400 accessions to 'I use the CAR-POOLING Tor Vergata.'</li> <li>-organisation of an event</li> </ul>

Ad hoc survey's findings submitted to the participants in the final stage of the Lab I ed. shows that there is a general appreciation of the path attended. The results show an average mark, not below 3 (on a scale from 0 to 5), in successfully delivering the training (e.g. content, coordination, and learning). More than 58% recognised an increased knowledge in the field of CSR and sustainability after such activities. On the other hand, the transfer of knowledge to enable self-entrepreneurship, co-design idea evaluation and the development of autonomous critical skills appear to be appreciated but should be improved, showing rather weak results regarding impact on the participants.

During the 2017 closure event of the CSR laboratories, hosted by the University of Rome "Tor Vergata" has been seen a high number of participants (around 400) gathering students from various Italian universities, as well as private organisations, institutions, and non-profit organizations. The event "Prize Preparing for the Future" was opened with

piano music thanks to the contribution of the “Scuola Viva Musica” and “Mancini Pianoforti”, who donated the piano to the Research Group in “Government and Civil Society”, and furthermore the event was open to entire academic society from the School of Economics and beyond. During the event, the participants were asked to answer to a survey looking to assess the perceptions of the university role in the context. The survey’s data are currently under analysis, and just a few preliminary trends can be set at this stage. It can be considered that, due to the increasing engagement of the students in these several events and opportunities, aiming to growing dialogue with different actors in the territory (business, nonprofit and so on) there has been seen an improvement of perception on the role played of the University, bridging the shift from a closed to an increasingly open and innovative system.



**Figure 4. “Prize Preparing for the Future” network**

### **Case study: UniRecycling**

The project proposal starts from the idea that today’s social dynamics require increasing attention around the reuse of materials, as well as a more rational use of available resources. Among the different objectives promoted by the Sustainability Plan in 2020 of the University is the improvement of waste management - aimed at raising awareness of the academic world to the sustainable recycling collection. The project starts from the need to find

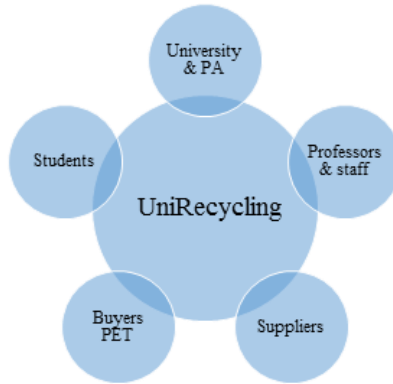
solutions to eliminate or improve the status –quo of the waste management in the campus.

More in depth, at local context, the recycling issue is a critical point, which is worsened by the faculty's limited economic resources as well as, institution's lack of interest in recycling. Students, staff, and teachers do pay little attention to waste collection management, and such behaviour may be determined by the lack of tools (no bins for recycling), which should be made available by the faculty.

Therefore, the foundation of this proposal idea relies on few determinants that also define the general and specific objectives of the project:

- Waste differentiation is a critical starting point for its active management;
- General objectives: to transmit a genuine cultural orientation towards sustainable behaviour, with the help of the direct incentives; to create a system of waste management for the plastic and aluminum cans; also, to stimulate an alliance at campus level, motivated by the desire to work for progressively reducing pollution and creating a sustainable environment.
- Specific objectives: the need to identify a strategic point, accessible to the greatest number of people, for an incentive recycler for the plastic and aluminium cans and to generate benefits for all stakeholders. The strategy should turn in a win-win approach that enables those who enter PET bottles or aluminium cans to turn the waste into real "resource", and get a voucher to be used in commercial businesses.

The main stakeholders of the project are various, ranging from the professors, staff, and students to external members. It is expected that once the results are achieved, there would be the possibility of extending the initiative to all the other public and private institutions. By stakeholder are understood "those who can influence the achievement of the objectives of an organisation, or those who are affected by the attainment of those goals" (Freeman & Reed, 1983). The following figure (Figure 5) shows the primary stakeholders identified.



**Figure 5. Stakeholder mapping**

The partnership involves the participation of:

- Universities (as promoters, investors, and final beneficiary);
- Students and professors (active recipients);
- Ecolife, Eurven, Garby or PAAndaa (machinery suppliers);
- Businesses involved in the project (bars, restaurants and so on).

The main project *activities* require analysis, in a first initial stage, of the leading businesses dealing with the distribution of recyclers operating in the area. The companies manufacturers of compactors identified to be contacted were Life Italy Srl or Eurven Srl. In a second stage, the availability of the university leaders to promote and support UniRecycling project is undertaken. Once the financial resources identified and recycling point have been settled, a third stage will consist in the inaugural event of the project. Finally, it is expected to sell the collected plastics periodically in a consortium, with the aim to extend the project with a future prospectus of self-financing.

The project financing methodological approach adopted is the crowd funding. An analysis of the leading best-existing platforms of crowdfunding (Lawton & Marom, 2013; Kleemann et al., 2008) at national and international level was performed. The priority regarding fundraising will be the establishment of a university request economic contribution, supported by an initiative of crowd funding through EPPELA platform.

Regarding the *sustainability of the project*, it is considered that is directly related to the responsible behaviour of those involved and to the attainment of the objectives set regarding recycling. It is strictly linked also to the expected results of the material purchased by the Corepla consortium, and to what degree this will enable to installing other compactors.

The main activities to promote awareness are:

- Strengthening the network of collaboration around the project that is critical for its sustainable success and the creation of shared value for the entire community.
- Recycling-day: organised in the event of the compactor installation aimed to explain the benefits of its operation. Social media strategy to sensitize the stakeholders, mainly students; created a Facebook page, followed by 500 fans in less than a week and a LinkedIn professional profile which reached a considerable number of followers; the use of traditional advertising media, such as posters and leaflets, and the word of mouth to advertising the policy: zero impact.



Figure 6. Facebook page of the UniRecycling (<http://www.facebook.com/>)

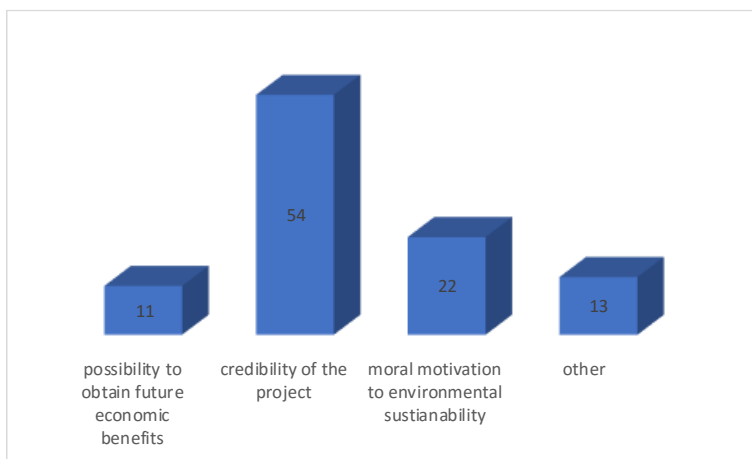
The project *expected results* are to:

- Increase the efficiency of recycling plastics, with the aim of raising awareness and actively involve about 50% of the students and university staff;
- Support a win-win gain among the parties concerned;
- Reduction of CO<sub>2</sub>; every bottle that is recycled generates a progressive improvement of the environmental conditions, extensible to the surrounding community. It is estimated that every kg of recycled plastic (approximately 35 bottles of 0.5 L) saves 1.5 kilogrammes of CO<sub>2</sub>.



### ***Key findings from the survey***

The online survey checked the availability for the academic community to finance the launch of such project and the motivation related to their donation. There have been completed 201 questionnaires; about half completed by both sexes (respectively 51% males and 49% women). Approximately 79% of the academic community has shown its propensity to support the launch of the project financially, with 175 favourable responses - while only 28 responses have expressed dissent. Does not surprise the approval got for the project; 54% of the responses shows that the credibility of the project is the primary motivation for donation, followed by moral/ethical rationales with 22%, and economic benefits, with just 11% of the replies.



***Figure 7. Motivation of the participants for UniRecycling***

To confirm these percentages are also the feedback received on the actual economic propensity of the donors. As shown in the next figure, the majority of respondents (93 responses, 42% of the total) would donate 5 to 10 euro to such initiative while from 2 to 5 euro was confirmed by 56 replies, equivalent to 25% of the total. At most extreme limits are those who would donate 1 or 2 euros (32 replies) and between 10 and 20 euros (16 answers). Relatively small are however donations exceeding 20 euros, with just nine donors willing to donate such sums.

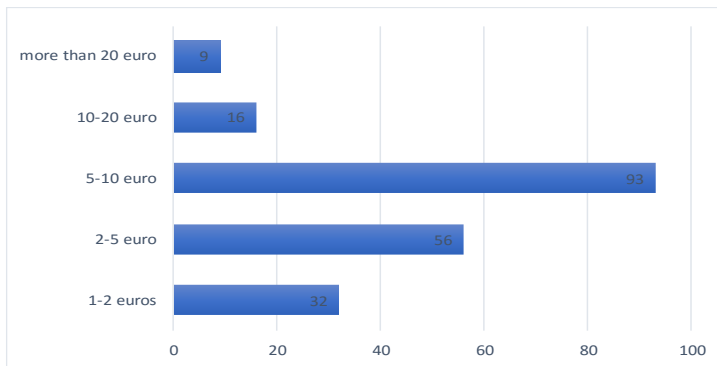


Figure 8. Economic availability for financing UniRecycling

## Conclusions

A structured and organic CSR training course program linked to the sustainability is ongoing, and further efforts are needed.

The CSR Labs undertaken at the School of Economics enabled the process to foster several social entrepreneurship and social innovation proposal ideas, through a *bottom-up model* of teamwork learning, training, and skills dissemination. The results, over the past two years, brought several positive implications. It raised dialogue and collaboration on several sustainability topics among students, stimulating their self-awareness on the real problems of their territory. It encouraged students to overcome the bridge to local development through entrepreneurial thinking. The innovative projects proposal created, required the engagement of group work students, sometimes along with the public and private institutions, and third sector organisations in meaningful projects of local development. It supported the dissemination of social entrepreneurial skills needed for a CSR project manager and bench learning on the territory development.

The dynamism created around the innovative changes to improving the campus is worth nothing, seeing the preliminary analysis of the project proposal UniRecycling. The idea was met with enthusiasm by potential users, as confirmed by data on the use of an incentive compactor and shows the sensitivity to environmental issues and waste management. About 66% of the students surveyed stressed its importance and about 98% confirmed their active participation in the project. The initiative is a first initial stage of testing a project proposal in the territory and opens channels to debate and evaluation of the most suitable modes for inserting such project in the University campus.

The projects analysed shows how important is the collaboration and engagement of the various stakeholders to reach the expected results, providing contexts that stimulate government, industry, university, and civil society to work together, sharing ideas to co-create ideas that answer needs to the territory. The main challenges encountered at the University project co-design and implementation should be noted in the lack of a coordination point for sustainable activities and the need to improve the visibility and long-term strategies. Secondly, taking into consideration the limited resources is highly advisable the collaboration of the several faculties into the campus and the participation of their students, to stimulate a cross-fertilization of entrepreneurial ideas that answer the entire university campus needs. Last but not least, a more focused CSR program dedicated to stimulating ideas and concrete proposal of start-up and social entrepreneurial incubators to enable innovative interaction with the public and private actors could push an efficient, sustainable agenda implementation forwards.

Furthermore, more recently the UniRecycling project was submitted for funding and currently is under review for the call of “Mission Sustainability 2017”, promoted by University of Rome “Tor Vergata”. The focus of the project is to create a green student association able to promote sustainable initiatives on the campus, through the recycling waste by the collected PET. The project, through the lens of the Third Vision, aims to address the sustainability needs at different levels:

- *at the curricula level* and management of education, through the inserting in the curricula of practical agenda, based on team working laboratories able to sensitize the students on the topic of sustainability development as well as to enable the students’ soft skills, creativity and self-employment to meet territory’s needs and challenges (Traning-Action format);
- *at the research level*, aimed to enable “research-action projects” that proposes the collaboration among the research units to minimize the environmental impact, therefore, unifying common interests between the different institutions of the Athenaeum and other internal and external actors.

As such, many relationships are involved around Botanical Garden, the “Agevola” network, the internal relationships (between teachers, researchers, administrative personal, technician, librarians and students GREENtosi), interdisciplinary relationships (as the interdepartmental research centre COVISION), and outside relationships (strong link with territory, entrepreneurial field and public administrations). It is expected that all these research interactions will create an innovation process continuum for the University and their employees (including students),

catching the opportunities from the market and improving the strategic collocation of the University in the territory.

However, much calls for action and practice at University level to strengthen its role in fostering sustainability is needed. This research case studies are limited, and their developments are contextual and the data cannot have generalized. However, these projects while carrying out University of Tor Vergata' vision for a successful Third Mission, may become an "example of sustainable development" at the national level, as well as open up opportunities and strengthen the linkage between academia and market.

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