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Drafting the Strategy for Sustainability in Universities: A Backcasting Approach

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Abstract: The contribution of universities to the sustainability challenge is nowadays crucial due to their role as centers of learning, innovation and research. However, universities can deal with sustainability matters in many different ways which should be accurately identified in their strategies. In this context, the present paper has tested the suitability of backcasting as a participatory approach to involve stakeholders in discussing the most effective actions to improve sustainability within universities' strategic plan. The experiment—carried out at University of Foggia (UniFg-Italy)—has demonstrated the flexibility of the backcasting approach in identifying the actions required to reach the UniFg sustainability goals according to the 2030 Agenda, allowing the university governance bodies to reach a number of objectives in the design stage. Furthermore, backcasting enhanced the confidence of stakeholders involved with an overall improvement of their empowerment, enabling them to follow and keep track of the whole process of the university's strategy definition.

Keywords: participatory approaches; strategic planning in universities; environmental sustainability; backcasting; Agenda 2030

1. Introduction

After the publication of Agenda 21 and the “United Nations Decade for Education for Sustainable Development”, an increasing number of universities have introduced the topic of sustainability within their own mission and improved their strategy towards sustainable development [1,2]. Many universities, for instance, have modified their curricula and research programs to make them more compatible with the requirements of sustainability; others have adapted their structures, programs and activities to the principles of sustainable development [3]. However, after so many years, some universities still lag behind in the transition process towards more sustainable paradigms. Indeed, when dealing with organizations, innovations normally need much time to be adopted, particularly if the innovation is an abstract idea like sustainable development [4]. Moreover, the widespread diffusion and consequent stabilization of sustainability values within the institution represents a long and challenging process [5].

In this framework, the Conference of Italian University Rectors (CRUI) in July 2016 established the ‘Italian University Network for Sustainable Development’, which represents the first experience of coordination and sharing among Italian universities committed to the topic of environmental sustainability and social responsibility. In particular, starting from the awareness of the key role that universities have in training, knowledge diffusion and fostering civil society involvement in sustainability topics, in May 2019, the Rectors of the Italian universities signed a Manifesto entitled ‘From Universities for Sustainability to Sustainability in Universities’. This document states that Italian universities have to devote a specific section of their strategic plan to the topic of sustainability by including the 17 objectives defined by the United Nations 2030 Agenda [6].

However, sustainability represents a long-term and complex process, since it involves many different dimensions (environmental, economic, and social) and many people on multiple levels and sectors [7]. In this view, several studies [8–12] highlight that stakeholders' participation represents an essential approach to the management of long-term and complex issues such as sustainability. Therefore, drafting the strategy for sustainability in universities asks for a holistic and inclusive approach, taking into account inputs and knowledge from different stakeholders [13].

Starting from these premises, this paper investigates the relevance of involving stakeholders from civil society in defining an effective 'sustainability' strategy in universities. Such an involvement allows to consider the heterogeneity in knowledge and perspectives originating from different people that otherwise would be ignored or underestimated. In particular, the paper founds on the necessity of implementing a structured technique to facilitate stakeholders' involvement, fostering their collaboration and providing an effective synthesis of the participative process [11,14].

One of the most promising participatory approaches to deal with complex and long-term issues such as sustainability is represented by backcasting [15–17]. After identifying a desirable future, backcasting works backward by outlining actions to link the present to that future. Indeed, as argued by Quist and Vergragt [18], backcasting is particularly suited for long-term problems and solutions due to its normative and problem-solving characteristics. Starting from these premises, the present paper aims at testing the suitability of the backcasting approach as a participatory tool to identify strategic actions towards sustainability within a university strategic plan.

The case study involved the mid-sized University of Foggia (UniFg) located in Southern Italy, with a student population of about 11,000. The innovativeness of this study relies on the fact that it is the first time that a backcasting approach has been adopted to draft the 'sustainability' actions to be integrated into a university's strategic plan. Indeed, despite the importance of universities considering local stakeholders' perspectives and expectations in the design of their strategic plan, especially about sustainability matters, there is a limited number of studies exploring stakeholders' involvement by means of participatory approaches applied to sustainability in universities. Therefore, this paper provides a rational approach as well as an operational tool to gather the needs of involved stakeholders in designing a targeted strategy aimed at improving sustainability within universities. Along with its strengths that will be discussed in the final section of the paper, the basic advantage of using backcasting to define universities' 'sustainability' strategies is twofold. Firstly, it represents an opportunity to incorporate the perspectives and priorities of the local stakeholders [19], reducing the risks associated with uncertainty and imperfect knowledge. Secondly, stakeholders' involvement contributes to defining a robust strategy that can consistently support university governance bodies in pursuing the 2030 United Nations Agenda objectives.

The paper is structured as follows: Section 2 focuses on the stakeholders' involvement in strategic planning for universities; Section 3 deals with the case study; and in Section 4, some concluding remarks and policy implications are presented.

2. Scenario Building in Strategic Planning for Sustainability in Universities

2.1. Strategic Planning in Universities

Nowadays, universities operate in a competitive marketplace, looking to attract highly respected scholars, top-tier students, donors, as well as to increase their visibility and reputation [20]. As being private enterprises, therefore, universities increasingly resort to strategic planning, i.e., structured methods for developing strategies and action plans necessary to identify and resolve specific issues [21]. Indeed, strategic planning considers a range of possible futures, focusing on the implications arising from present decisions and actions in relation to that range [22].

Since universities are composed of multiple departments and supporting units, literature suggests that they should carry out strategic planning by following a participatory approach in order to involve as many stakeholders as possible [23,24]. According to the authors of [25], universities may benefit in a

variety of ways from engaging stakeholders in their strategic planning process. In particular, stakeholder involvement contributes significantly to creating a framework for determining the direction that a university should follow to achieve its desired future and to increasing dialogue among the participants, fostering thus, a sense of ownership of the strategic plan and of belonging to the organization.

One of the most current issues which universities play in an important role in shaping is environmental sustainability, taking into account their role towards students and the community.

It is worth noting that due to the current global context increasingly concerned with climate change, universities' strategic plans should also include specific actions to deal with finite resources and to develop environmental, social and economic responsibility. Indeed, universities play an important role for shaping the future of global society in terms of sustainable development as entities dedicated to the transfer of knowledge and research promotion on a wide range of subjects.

By generating new knowledge, they may significantly contribute to developing appropriate competencies and raising sustainability awareness by addressing sustainability-related problems through their major functions of education, research and outreach [26].

Specifically, universities could improve sensitivity and awareness towards sustainability through their teaching activities (degree programs, masters, etc., on sustainability), research activities (fostering projects in the environmental field), dissemination activities (conferences and seminars on specific environmental topics), and by reducing their environmental impact as consumers of goods and services (energy, water, paper, etc.) and waste producers.

2.2. Public Participation and Scenario Building

Although there are numerous responses to the sustainability challenge, most interpretations of sustainability focus on detailed and often fragmented issues without appropriate consideration towards the high level of complexity characterizing the whole system perspective [27]. When dealing with a complex issue, some scholars argue that the use of public participation methodologies may represent the best solution for achieving a common purpose [28,29]. Generally speaking, participation may be considered as a dialogue among stakeholders regarding needs and resources that should be met [21]. Such a dialogue may take the form of a vision statement implemented by a strategic plan. Visioning is a process concerned with eliciting desirable futures for the purposes of assisting a strategy development and providing decision-making guidance [30]. It is worth noting that public 'involvement' or 'participation' refers not only to processes that enable 'one-way' information flows but also to those that may facilitate 'two-way' flows. However, public participation still represents a relatively informal field due to the lack of recognized bodies with deputy to regulate and oversee participatory processes [31].

Recent studies related to the future of universities (see, for instance, [32]) have adopted various future studies and tools that can be descriptive or prescriptive. Descriptive tools objectively describe what the future will be or could be. Many scholars and international organizations have adopted descriptive approaches using trend-based [33], scenario-based [34,35] and Delphi-based methods [36]. In contrast, unlike forecast tools, prescriptive tools focus on what the future should be and, starting from a desirable picture of the future (vision), ask how to get there [37] and explore the feasibility and implications of different futures according to criteria of social or environmental desirability [38].

2.3. Participatory Backcasting to Sustainability Issues

According to the literature, with complex problems such as sustainability, the huge number of interconnected variables or long time frames required for changes to occur create a state that is complex by definition. Complexity makes traditional approaches to planning, such as forecasting from past trends, ineffective or even dangerous [39]. In contrast, 'backcasting' can be particularly suitable to describe future scenarios or desired goals and to analyze the way they may be achieved. According to a number of authors [40–42], backcasting represents an approach, rather than a method: it does not aim to predict the future, but concentrates on any possible solution to deal with current and upcoming

problems in reaching the desired future. The existence of a plethora of different backcasting approaches suggests the lack of a general consensus about the best one to use, proven that all of them combine a number of strengths and weaknesses. Nevertheless, all these approaches share the same normative nature other than the possibility to work backwards starting from a specific and desired goal [42]. From this viewpoint, backcasting is particularly suitable in participatory planning where—due to its normative characteristics—policy actions are identified according to external criteria, e.g., in terms of social or environmental desirability [42,43].

3. From Stakeholders' Consultation to the Draft of the Strategic Plan for Sustainability: The Backcasting Experiment

3.1. The Strategic Plan of the University of Foggia

The UniFg is a small and dynamic university located in the north of the Apulia region (in the South-East of Italy). The university was founded on 5 August 1999 and since its foundation has presented an active and innovative proposal in terms of both education and research due to didactics in step with the territorial requirements as well as local research projects, internationalization, orientation, cultural events and promotion of university activities. It currently counts approximately 11,000 students and about 650 among teaching and administrative staff across six Departments ('Sciences of Agriculture, Food and Environment', 'Economics', 'Law', 'Humanities', 'Literature, Cultural Heritage, Education Sciences', 'Clinical and Experimental Medicine', 'Medical and Surgical Sciences'). The university's objectives in terms of improvement and development are outlined in its multi-year Strategic Plan. The Strategic Plan is the document that illustrates the university's strategies for the coming three-year term, describing the guidelines and strategic objectives that will drive the decisions of its departments, training centers and organizational units.

The new Strategic Plan of UniFg for 2020–2022 is articulated in five strategic areas: (i) Training and internationalization; (ii) Research; (iii) Third mission, technological transfer, communication and placement; (iv) Human resources; and (v) Real estate. In fulfilling the commitments of the Manifesto 'From Universities for Sustainability to Sustainability in the University', the area of 'Third Mission, technological transfer, communication and placement' includes the strategic objective of 'improving the environmental, social and economic sustainability of UniFg'. The whole draft of the plan was designed following a public participation approach articulated in four main moments: (1) Consultation of University stakeholders in December 2019; (2) Public participation with thematic groups held on 12th December 2019; (3) Writing of the Strategic Plan and online publication; (4) Online collection of stakeholders' opinion; (5) Amendment, discussion and approval of the Strategic Plan by the Collegial Bodies.

3.2. The Backcasting Experiment for the Sustainability of UniFg

In this framework, a backcasting approach was adopted regarding the strategic objective of 'improving the environmental, social and economic sustainability of UniFg'. As argued earlier, literature proposes a number of methods within backcasting that differ in many dimensions such as stakeholders' involvement and number of steps.

Since, as highlighted in literature [14,16,17], the traditional structure of a backcasting experiment (with two workshops) does not guarantee the attendance of the same participants in both of them, the structure of the experiment was adapted to the local context (see Table 1).

This procedure exhibits a number of strengths since it shortens the workshop length, allows to involve a larger number of stakeholders, and guarantees the same stakeholders to identify and analyze the various options.

Table 1. Main steps of the backcasting experiment.

Step	Date	Format	Objectives	No. Participants
Preliminary Focus group	10 December 2019	Meeting with experts	To identify endpoints, actions, barriers and opportunities	5
Workshop	12 December 2019	Plenary meeting	To identify strategic actions and prioritize them from a temporal point of view	39
Results validation	24 January 2020	e-mail questionnaire	To receive validation about the results also from stakeholders who did not participate to the workshop	19

Specifically, the backcasting experiment was articulated in three main steps:

1. a *preliminary focus group* with experts and researchers in sustainability from UniFg,
2. a *workshop* with the stakeholders;
3. the stakeholders' strategic actions, validation and feedback on the proposed methodology.

These three steps allowed us to speed up the design and the implementation of the experiment since we had already successfully carried out a similar structure of the backcasting experiment in the same area and involved stakeholders with a similar socio-cultural background [17].

3.2.1. The Preliminary Focus Group

A preliminary focus group with experts on and researchers of the sustainability topics was carried out in November 2019, with the aim of identifying obstacles and opportunities hindering and fostering the achievement of the desirable endpoint defined by the current UniFg governance bodies in accordance with the provisions of the CRUI Manifesto. The investigation was made for each of the following thematic areas: (i) education; (ii) research; (iii) third mission; and (iv) reduction of environmental impacts of UniFg activities (as part of the built environment, universities affect and are responsible for waste and natural resource management, and energy generation and consumption).

Moreover, participants were asked to identify and rate, from a list of the factors most mentioned in literature, the five most relevant factors fostering [44,45] and hindering [3,20,46,47] the implementation of the UniFg sustainability strategy plan (Figure 1; Figure 2).

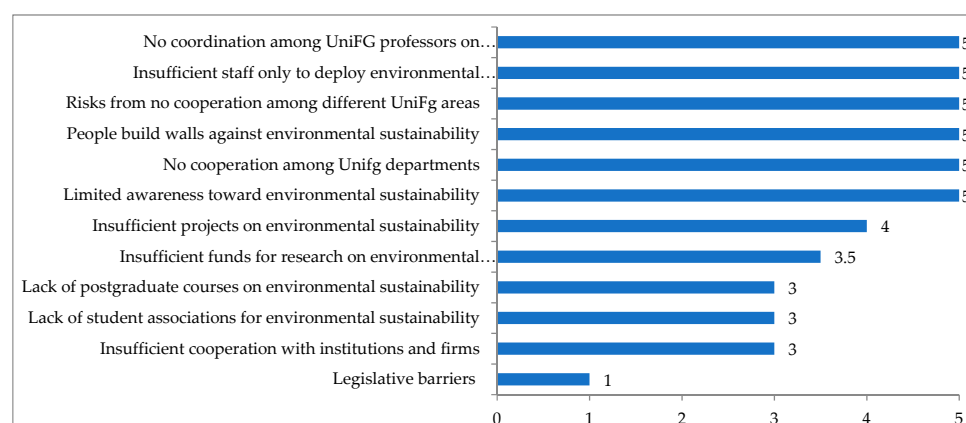


Figure 1. Identification of the obstacles hindering environmental sustainability. *Source:* own elaborations.

Note: it relates to the number of preferences expressed for each item, based on a multiple-choice mark sheet. The contacted stakeholders had to assign the rate from a Likert scale 1–5 (1 = completely disagree and 5 = completely agree).

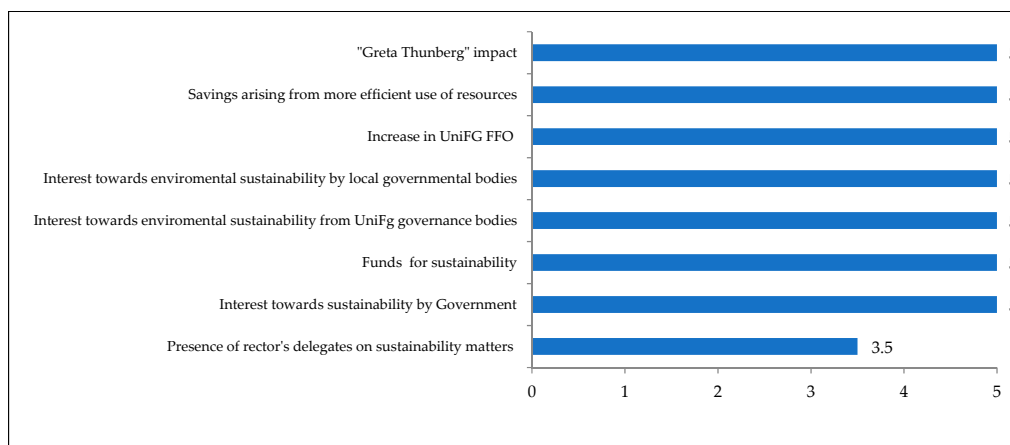


Figure 2. List of the opportunities fostering sustainability. *Source:* own elaborations. *Note:* it relates to the number of preferences expressed for each item, based on a multiple-choice mark sheet. The contacted stakeholders had to assign the rate from a Likert scale 1–5 (1 = completely disagree and 5 = completely agree).

Furthermore, they could broaden the list by including other possible obstacles and opportunities which they felt characterized the UniFG situation.

In addition to this list, the final output of the focus group was a very rough draft of the actions to be implemented in the final strategy according to four thematic areas: Education, Academic research, Third mission and Reduction of the UniFG environmental impact.

The results of this focus group were used as a basis for the backcasting experiment in the workshop.

3.2.2. The Workshop

The participatory workshop with stakeholders was organized in December 2019, with the aim of discussing the strategic actions most suitable to achieve, starting from the obstacles and opportunities selected in the previous step, the desirable endpoint of ‘improving the environmental, social and economic sustainability of UniFG’. The stakeholders’ selection was carried out by ensuring a balance of power among them so that each could be represented by an equal voice at the workshop. More specifically, we identified the following five categories of stakeholders:

1. Internal stakeholders i.e., the groups and/or individuals that work at the university and are involved in the sustainability area (e.g., the vice-rector, rectoral delegates for socio-environmental sustainability, professors, researchers, technical-administrative staff, students’ representatives);
2. Government or public sector: policymakers, municipal level institutions (Carabinieri, Regional Environmental Protection Agency, Public Health Service (ASL), the regional councilor for the environment, the Province of Foggia and the Municipality of Foggia, the Port Authority, the representatives of professional orders of engineers and architects, etc.
3. Civil society: environmental associations’ representatives, experts in the sustainability matter, and local community organizations;
4. Private sector: entrepreneurs, industry associations’ representatives, etc.;
5. General public.

Stakeholders were contacted by the University Office of Communications, both telephonically and by e-mail and were preliminarily informed about the workshop aim, and about the day, time and location of the meeting. Overall, 47 stakeholders were contacted, 39 of whom actually took part in the event.

After introducing the aim of the research to the participants, the workshop proceeded to discuss, in detail, obstacles and opportunities, and to modify and integrate the draft of the 25 identified actions (Table 2). These were not inspired exclusively by literature but stem from the specific context

surrounding the UniFg. More specifically, starting from obstacles and opportunities, actions were designed starting from the most recent regulatory framework, the UniFg scientific, training and third mission's characteristics, and other specific documents (grey literature) on sustainability in universities.

Moreover, stakeholders were asked to rank actions and to identify their best position within a timeline to reach the desirable endpoint for each thematic area as identified by the UniFg governance body.

Table 2. Strategic actions by thematic area.

Education	High	Priority Medium	Low
(a) Subjects programs partially dedicated to envir. sust. issues;	X		
(b) Subjects fully focused on envir. sust.;	X		
(c) Pathways for transversal skills and orientation with a specific focus of sustainability;		X	
(d) Bachelor and master programs designed on envir. sust. issues;		X	
(e) Seminars for students on envir. sust. issues;			X
(f) Seminars for teaching and administrative staff on envir. sust. issues.			X
Academic Research	High	Priority Medium	Low
(a) Scholarships reserved to students engaged in thesis or researches on envir. sust.;	X		
(b) Inventory of all papers published by UniFg staff on envir. sust.;	X		
(c) Funds for research projects and/or scientific publications on envir. sust.;	X		
(d) Awards granted to research outputs on envir. sust.;	X		
(e) Funds to pay publication fees for scientific articles on envir. sust.;	X		
(f) Co-financing of external research projects or scientific papers on envir. sust.;	X		
(g) Establishment of a Ph.D. program on sustainability issues;	X		
(h) Awards granted to the best research projects on envir. sust.;	X		
(i) Establishment of an UniFg lab dealing with envir. sust. issues.		X	
Third Mission	High	Priority Medium	Low
(a) Partnership with international organizations based on envir. sust. issues;	X		
(b) Establishment of a permanent UniFg Council for sustainable development;	X		
(c) Partnership with other universities, firms, institutions on envir. sust. issues;		X	
(d) Planning of public events on envir. sust.;		X	
(e) Participation in the "Eventi sostenibili" platform certifying events that reduce environmental impacts;			X
(f) Establishment of student associations for envir. sust.			X
Reduction of the UniFg Environmental Impact	High	Priority Medium	Low
(a) More efficient resources consumption and waste management;	X		
(b) Implementation of the UniFg Corporate Social Responsibility;	X		
(c) Establishment of a monitoring group on the improvement of the UniFg environmental performance;			X
(d) Achievement of EMAS accreditation.			X

3.2.3. The Stakeholders' Strategic Actions Validation and Feedback on the Proposed Methodology

To improve the robustness of the study and consistency of the results, a validation step was arranged. Specifically, some weeks after the workshop, the outputs drafted in the workshop with stakeholders were submitted to all invited actors (both participants and absent) together with a

questionnaire to know if their viewpoint was fully included in the final document. It included questions on the level of influence they had on the workshop's results, on the quality of the workshop's achievement and questions aiming to receive feedback on the process. It was completed anonymously by 19 of them.

Therefore, the strength of this step was twofold: (1) it allowed to submit the workshop's results to absent actors to give them the opportunity to express their own opinion at regards. In this way, we could broaden the participation rate; (2) by submitting results to participants, we could further involve stakeholders and analyze if their viewpoint was correctly interpreted and transformed into strategic actions.

Results and scores from the questionnaire are reported in Table 3.

Table 3. Questionnaire on the validation of workshop's results and on the participatory process: results and scores.

Topics	Average Score	% of 4 or Higher *	% of Yes	Nr.
Involvement				
Results reflect my own ideas	4.1	73.7%		14/19
Results are useful for my organization			84.2%	16/19
Proposed methodology				
Quality of results	3.9	68.4%		13/19
Adequacy of the work method to identify strategic actions	3.9	68.4%		13/19
Participating helped to make my opinion heard	4.1	68.4%		13/19
Usefulness of the meeting to improve my relations	3.9	78.9%		15/19
Duration of the meeting	4.0	78.9%		15/19
Agreeableness of the meeting	4.2	73.7%		14/19

Note: the opinion of participants was assessed through a Likert scale where 1 = 'totally disagree' and 5 = 'totally agree'. Source: our elaboration. * With a score of 1 meaning 'not at all adequate' and score 5 'very adequate'.

Results achieved from the questionnaire were very encouraging: stakeholders appreciated the participative experience that they considered a good to excellent way to outline strategic actions towards sustainability. Moreover, they perceived the workshop as a valuable tool for expanding their relations with other actors involved in sustainability initiatives. Lastly, the stakeholders' opinion regarding the workshop achievements, agreeableness and duration was definitely positive.

4. Concluding Remarks

Sustainability is, nowadays, also a very critical issue for universities. Indeed, due to their role as centers of learning, innovation and research, their contribution to the sustainability challenge is crucial. However, consistent with their multiple roles, universities can deal with sustainability matters in many different ways which should be accurately identified in their strategic plans.

Specifically, their role is not limited to teaching and research activities only but involves the whole society through dissemination activities of the research outcomes and the scientific and cultural contribution in increasing the public opinion's awareness on specific issues. In this framework, universities may provide a significant contribution to environmental sustainability both from a didactic and scientific point of view. For instance, they can offer degree programs centered on the sustainability, encourage research projects on environmental protection with the involvement of private companies and public institutions, as well as organize seminars and conferences on environmental problems, establishing relationships with stakeholders for future partnerships and synergies. Moreover, as consumers of goods and services (e.g., energy, water, paper) and waste producers, universities may carry out concrete actions to reduce their environmental impact. As a consequence, universities may contribute significantly to sustainability pathways by implementing tailored policies which can be more effective when shared with the stakeholders.

In this context, the present paper has tested the suitability of backcasting as a participatory approach to involve stakeholders in discussing the most effective actions to improve sustainability within a university's strategic plan. The experiment was carried out at UniFg and was organized into three steps, namely: (i) an introductory focus group organized with UniFg researchers and experts in sustainability to identify and select the main barriers and opportunities with respect to the desirable endpoint for each thematic area; (ii) a workshop with stakeholders involved in the sustainability initiatives with the purposes of debating about opportunities and obstacles selected in the previous step and of identifying the strategic actions to overcome them; (iii) the design and consequent validation of the strategy as arisen in the workshop.

The experiment has demonstrated the flexibility of the backcasting approach as one of its most relevant strengths. By involving stakeholders, backcasting allowed to recognize the actions necessary to achieve the specific UniFg sustainability goals, according to the 2030 Agenda, favoring more creativity in the results obtained. Moreover, the participative experience has provided evidence about the relevance of stakeholders' contribution along the whole strategy definition process in the presence of very specific and complex issues, such as sustainability. In addition, the workshop allowed participants to learn more about the UniFg commitments for sustainability, as well as to acquire more awareness about the broad complexity encompassing sustainability actions. They entered in contact with other actors with whom they shared their experiences on this issue. Moreover, looking at the questionnaire's outcomes, stakeholders were definitely enthusiastic about the entire participative experiment and extremely gratified to provide their contribution towards the definition of the UniFg sustainability strategy. Finally, on the whole, backcasting has allowed the UniFg governance bodies to reach a number of objectives in the design stage and to improve the stakeholders' confidence regarding their contribution to the strategy definition, enabling them to keep track of the entire process. This occurred even after the workshop by means of the validation questionnaire that was administered to the workshop participants, together with the draft of the sustainability strategy.

Overall, our findings are very promising and provide evidence that backcasting is a particularly suitable approach to involve stakeholders in strategic design processes of universities allowing to improve significantly the quality of decisions when dealing with complex systems. More specifically, such a participative approach has demonstrated to have a significant potential in combining expectations and opinions arising from different stakeholders, contributing also to: (i) reducing subjectivity and bounded rationality that may influence the decision-making process, (ii) enlarging the knowledge base, and (iii) providing greater transparency of the whole process [17].

Regarding generalizability and transferability of the results achieved, it can be said that they reflect the views of the stakeholders at the time of the study. They are constructs of the experts who are influenced by their respective contexts, and, hence, the results cannot be regarded as representative. Nevertheless, they have a relevant significance, because the experiment involved experts from both practice and science who have a strong influence on the sustainable development activities. Therefore, it can be assumed that the essential elements and actions of sustainability are reflected in the workshop's results.

The relevance and the great value of a so formulated document relies on the approach we followed for its outline.

Due to the feedbacks received concerning the workshop achievements, agreeableness and duration were definitely positive, and this case study may represent a good practice that can be exploited by other universities for designing sustainability strategies or other complex issues where the involvement of different actors can provide a fundamental contribution.

This case study represents one of the few cases where a structured participatory approach was adapted to defining an effective 'sustainability' strategy in universities. This remarkable commitment was carried out to help university governing bodies to reduce potential conflicts that may arise from the need, to making everyone's interest converge in sensitive and complex issues as sustainability, with

an improvement of the plan's overall effectiveness. Therefore, it is mainly addressed to governing actors both of universities and higher education institutions.

Despite the positive outcomes, the present study also exhibits some shortcomings. In particular, results from the preliminary focus group were influenced by the endpoint identified by the UniFg governance bodies, which in turn was affected by the commitments of the 2030 Agenda. We are also aware that the current strategic actions of UniFg sustainability are still in draft form and will be influenced by external financial constraints and shortages, although the current governance bodies of the university intend to invest more resources in favor of sustainability. However, the main problem with the document was not to design the strategy, but rather to test an effective method for its structure.

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