

## Stakeholder Engagement case: the Green Casting Life project

Gianluca Fratta\*, Davide Favoriti\* and Stefano Saetta\*

*\*Dipartimento di Ingegneria, Università di Perugia, Via Duranti 93, [gianluca.fratta@unipg.it](mailto:gianluca.fratta@unipg.it)  
[davide.favoriti@studenti.unipg.it](mailto:davide.favoriti@studenti.unipg.it), [stefano.saetta@unipg.it](mailto:stefano.saetta@unipg.it)*

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**Abstract** Over time, the role of stakeholders has changed. This consideration can be verified by observing how, in the PMBOK (Project Management Body of Knowledge), the presence and relevance of stakeholder engagement have evolved across the years, from simply collecting the applicable communication techniques to a complete description of the methodologies needed to ensure the complete involvement of stakeholders in each step of the project based on their relevance. In the seventh and last edition of PMBOK, “stakeholder engagement” is defined as a set of six tasks (“identify”, “understand”, “analyse”, “prioritize”, “engage” and “monitor”) that start at the beginning of the project and last for its whole duration. All these activities are carried out with the intent of maximising the efficacy of the engagement, which is considered one of the keys to the success of the project. The presented paper analyses a real-life case, the Green Casting LIFE Project. This project aims to evaluate the use of inorganic binders to reduce the environmental impact of ferrous foundries. In this context, stakeholder engagement is applied to guarantee the correct engagement of the external stakeholders, which generally have a significant influence on the activity of foundries. In detail, the work describes the steps of stakeholder engagement and their application in the project, focusing on the description of stakeholder mapping, intended as a series of different techniques used to classify the stakeholders in order to prioritise their relevance. After that, the communication strategy adopted to ensure the correct engagement of each stakeholder is presented.

**Keywords:** External Stakeholder, External Stakeholder Engagement, Stakeholder Management, Salience Model, Foundry.

### 1. Introduction

The stakeholder figure has been presented and discussed in management literature for a very long time, dating back to the first edition of the PMBOK (Project Management Body of Knowledge) in 1987 (Project Management Institute, 1987). In recent years, the role of the stakeholder has gained increasing importance, becoming a central figure in the project. Nowadays, the correct engagement and management of this figure is widely recognised as a key factor that contributes to the success of the project, measured by “product and project quality, timelines, budget, customer satisfaction, and achievement of intended outcomes” (Project Management Institute, 2021).

The term stakeholder was introduced for the first time in an internal memorandum at Stanford Research Institute in 1963, in which it was stated that a stakeholder is a person, a group, or an entity who belongs to one of the “groups without whose support the organisation would cease to exist” in a corporation (R. E. Freeman, 1983).

Over the years, various definitions of a stakeholder have emerged. (R. E. Freeman, 2007) reports some of these definitions, covering a period from the eighties to the beginning of the millennium. The first definitions, as the one present in the first edition of PMBOK, emphasised the importance of the interest and direct involvement of stakeholders in the project. In recent years, however, the definitions proposed have expanded this concept by considering the important role of the human factor. For instance, the ISO 21500 standard, date back to 2012, defines a stakeholder as “a person, group or organisation that has interests in, or can affect, be affected by, or perceive itself to be affected by, any aspect of the project.” ( International Organization for Standardization, 2012). Other recent authors extend this basic definition and highlight the

importance of other concepts, such as participation, interest, or influence on the program or portfolio. For instance, the seventh and last edition of PMBOK defines a stakeholder as “an individual, group, or organisation that may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project, program, or portfolio.” (Project Management Institute, 2021). Today, project management tends to identify two groups of project stakeholders, those internal and those external to the client organisation. The latter, that are central in the work described in this paper, are defined as the individuals or organisations who are not part of the client organisation but nevertheless have an interest in the project. They are perhaps the stakeholder groups most readily recognised (Vogwell, 2003).

The evolution of the stakeholder's definition over the years reflects the progressive understanding of the complexity and variety that usually characterise a group of stakeholders present in a single project. To address this complexity, the correct management of the stakeholders can help to understand the influence that each of them can have on the project, aiding its involvement and leading to a better outcome. Employing flexible and adaptable tools is evidently necessary to achieve this. In this context, stakeholder engagement (SHE) is crucial. This technique, which can be considered an element of stakeholder management (Hamidu, 2014), means communicating with, involving, and developing relationships with stakeholders to achieve a successful outcome (Yang, 2011).

Despite the increasing attention that stakeholder engagement has received in the last few years, the literature lacks a unified understanding of the essentials of stakeholder engagement, and the fragmented use of the stakeholder engagement construct challenges its development and legitimacy (Kujala, 2022). In addition to this, the real-case

studies that can be found in the literature are generally based on infrastructure or construction projects (see (Chung, 2023) or (Khalilzadeh, 2023)) while the topic of industrial manufacturing and production is widely underrepresented. For instance, research conducted on Scopus inserting the key words “Stakeholder AND Engagement AND Case AND Manufacturing” provided only 43 results, most of them weakly related the topic.

In the presented paper, the application of SHE to a real-case study, the Green Casting LIFE Project, is described. This project aims to evaluate the use of inorganic binders to reduce the environmental impact of ferrous foundries. In this context, stakeholder engagement is applied to guarantee the correct engagement of the external stakeholders, which generally have a significant influence on the activity of foundries. This work is intended to fill the gap that the literature presents concerning this topic, as the authors were able to verify with bibliographic research on Scopus. In fact, the research conducted using the key words “Stakeholder AND Engagement AND Case AND Foundry” and “Stakeholder AND Engagement AND Foundry” didn’t provide any results.

At the end of the analysis and classification of the external stakeholders, a communication strategy for each of them is detailed. This approach allows for reaching a more effective engagement of the stakeholders using personalised communication that can be carried out through different channels and with different regularity, depending on the role of the stakeholders in the project.

## 2. Stakeholder engagement and Stakeholder Mapping

Stakeholder engagement has been introduced by project management in recent years, aiming to extend the existing concept of stakeholder management. As claimed in (Eskerod, 2013), the fourth edition of PMBOK (Project Management Institute, 2008) advocates an instrumental approach to stakeholder management, concentrating on a few and marketing the project interest rather than including stakeholder interests in the project. According to the authors, this approach goes in the direction of selling the project to the most important stakeholders rather than involving them and their interests in the creation of project objectives.

Considering this, *stakeholder engagement* has been proposed as a practice that could overcome this limited vision of the relationship between stakeholders and the project. Indeed, stakeholder engagement has been defined as practices that the organisation undertakes to involve stakeholders in a positive manner in organisational activities (Greenwood, 2007). Concerning the PMBOK, in the last edition is stated that “stakeholder engagement includes implementing strategies and actions to promote productive involvement of stakeholders. Stakeholder engagement activities start before or when the project starts and continue throughout the project.” (Project Management Institute, 2021). This implies that, given the role that a single SH plays, it will need a customised approach and involvement in the project. To achieve this goal, a series of activities should be applied throughout the whole life of the project and, in some cases, even before. To conduct a proper and successful SHE, the PMBOK proposes six steps:

- **Identify:** This step is fundamental to every project and can significantly influence the outcome. The process can be distinguished into two phases: the high-level classification and the low-level classification. The first is more general and can be carried out before the start of the project. It consists of identifying the main SH who have a high interest in the project (customers, sponsors, project team, etc.). Based on this, the low-level classification, on the other hand, is a continuous process that aims to extend this research to all the SH who can be involved throughout the project's life.
- **Understand:** Once the identification is complete, understanding the sensations, beliefs, and expectations of the SHs is fundamental to achieving a successful outcome. In fact, this can help identify opportunities or threats.
- **Analyse:** The analysis consists of investigating the types of interactions that each SH maintains with the project. To achieve this, factors such as power, impact, influence, and interest are evaluated. In addition to this, the interactions between SHs should be investigated.
- **Prioritise:** This phase is indispensable, especially in cases where the project presents a high number of SHs. Based on the previous step of analysis, it allows for selecting and filtering the parts on the basis of their level of power, influence, or interest, leading to a different involvement of them.
- **Engage:** Engaging SHs entails collaborating with them, defining their requirements, managing their expectations, solving their problems, negotiating, prioritising, and taking decisions. This process necessitates a range of skills, including leadership and diplomacy, to successfully engage the SHs and facilitate the active exchange of information using different channels, such as conversations, calls, meetings, and brainstorming.
- **Monitor:** The monitoring phase allows for the evaluation of the applied engagement strategy's effectiveness and allows for introducing modifications in the presence of unsatisfactory results. Periodic conversations and meetings can facilitate this evaluation by inspecting the obtained results. If there is a consistent number of SHs, surveys for evaluating the level of satisfaction are recommended.

It is evident that the SHE necessitates continuous application of the previously mentioned steps throughout the project's duration. In this scenario, *stakeholder mapping* is an essential tool for applying theory to practice. This technique is crucial for project management. Indeed, this tool is helpful to carry out the “Analyse” and “Prioritise” steps in a simple way, enabling the creation of a graphical representation, the so-called stakeholder map, that represents and classifies the SHs who are part of the project.

To create this map, first, it is necessary to have previously carried out the two initial steps of SHE, “Understand” and “Identify”. After completing these steps, stakeholder mapping can be implemented. The first part of the process consists in analysing the role of the stakeholders in the project through an evaluation of specific attributes, such as power, influence, and interest (or a combination of them), depending on the model adopted. Generally, this analysis provides a score for each SH, corresponding to its weight in the project. In the second part, this score allows for sorting

the stakeholders into different categories, prioritising them in order of relevance. In this way, it is possible to obtain a diagram that summarises both the "Analyse" and "Prioritise" steps. Moreover, this map represents a good starting point for the creation of a tailored communication strategy for each SH, which can aid in achieving an efficient engagement.

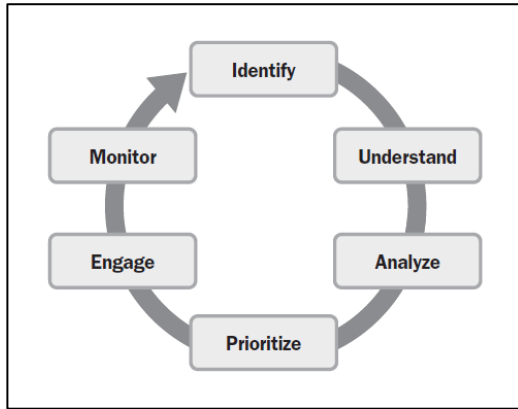


Figure 1: The steps of SHE (Project Management Institute, 2021).

In the literature, there is a well-documented collection of reliable methods for stakeholder mapping based on different parameters. In recent years, different methodologies have been proposed, such as the Stakeholder Cube (R. Murray-Webster, 2006) or the Direction of Influence (Bourne, 2010). Some works, such as (Yang, 2011), proposed innovative techniques based on a combination of pre-existing ones, attempting to address their shortcomings. Recent studies, such as (Khalilzadeh, 2023), implemented these methodologies by adding elements proper to statistical analysis. However, among the documented methodologies, the power/interest grid and salience model are surely the most popular. These two methodologies were chosen to conduct the analysis described in this paper because of their favourable features, which better suit the project's needs and continuous evolution. In particular, P/I grid and Salience were preferred because the number of external stakeholders considered in the case study is quite limited, while methodologies such as the Stakeholder Cube are intended for managing a significant number of stakeholders. This, of course, simplifies significantly the study.

It's important to emphasise that the choice of the parameters and the application of the methods are not objective tasks, but both are influenced by personal beliefs and experiences. The methods and criteria chosen will divide the SHs into different categories, each requiring a different communication strategy and level of involvement.

To deepen the argument about external SHs management, (Roya Derakhshan, 2019) is a good starting point.

### 3. Case study: Green Casting Life Project

The project investigates the possibility of using inorganic binders in the production of ferrous foundries, an innovation that could help reduce hazardous and polluting emissions coming from these industries. In fact, the organic binders currently used in the production of steel and iron castings, derived from petroleum, emit significant levels of dangerous pollutants such as VOC (especially BTEX) and PAHs (Holtzer, 2014) in addition to CO, CO<sub>2</sub>, SO<sub>2</sub>, etc. Conversely, inorganic binders consist of a mixture of

sodium silicate or aluminium silicate with water, resulting in almost zero emission (Daňko, 2023). However, the use of this technology for manufacturing sand cores and moulds nowadays is limited because of some problematic features, such as low resistance to humidity. To solve these issues, in recent years, inorganic binder manufacturers have developed new technologies, specifically for use in ferrous foundries. Nevertheless, verification of the effectiveness of these innovations is necessary. In this regard, the project gathered six European foundries from different countries (Finland, Spain, Poland, Lithuania, and Italy) to test these binders in their plants in order to verify the effects of their involvement in industrial production. Moreover, the project enlisted other stakeholders to assist the foundries in executing the experimental activities, offering them technical, logistical, and financial support.

It goes without saying that the number of parts in the project is relevant. To ensure the correct engagement of all the parts involved, the SHE techniques previously introduced were applied. The presented work specifically focuses on engaging the external SHs. According to (Olander, 2003), "internal stakeholders are those who are members of the project coalition or who provide finance; the external stakeholders are those others affected by the project in a significant way.". This work, through in-depth research, aims to identify, analyse, and classify the external SHs of the project in order to define for each of them a specific communication strategy, a fundamental element to ensure their correct involvement.

### 3.1. Materials and methods

To accomplish this goal, the first step of the research was represented by an accurate analysis of the documentation related to the Green Casting Life project. This allowed for a complete understanding of the context, its state of art, and the topics that it aims to address. A preliminary analysis identified 11 different categories of external SH that, later, through the application of the salience model and the power/interest grid, were classified into different groups according to their role. For the classification of the parts, the Salience Model uses parameters such as power, urgency, and legitimacy towards the project, while the Power/Interest Grid, as the name suggests, aims to evaluate through these two parameters the influence of each stakeholder on the project. In conclusion, a customised communication strategy for each SH was implemented on the basis of the classification obtained from the mapping procedure.

### 3.2 Identification

The stakeholder identification process involved all of the Green Casting Life project's partners. Initially, the process identified only six categories. During the course of the project, the number increased to 11 to better reflect the heterogeneity of the external SHs. The following table reports the categories along with a brief description.

Table 1: External SHs categories.

Category	Description
European Foundries	European foundries that were contacted during the preparation phase and execution of the project, aiming to directly involve them in the testing phase.

<b>Follower Foundries</b>	This category contains the foundries that, once contacted, will join the project to test new inorganic binders and produce ferrous castings in order to evaluate their quality and the emissions produced. The aim is to reach at least 15 foundries.
<b>Foundries Associations</b>	Organisations that gather companies, technicians, and freelancers operating in the world of foundries with the aim of promoting activities and knowledge and supporting the development of quality standards. Often, they are actively involved in regulatory matters.
<b>Public Entities</b>	Authorities and agencies possess both regulatory and legislative power. They can influence public policy by formulating laws and regulations.
<b>Environmental Groups</b>	Groups and organisations engaged in environmental protection and awareness campaigns.
<b>Equipment Suppliers and Coremakers</b>	This category includes both producers and suppliers of machinery and tools for foundry production and core manufacturing.
<b>Inorganic Binder System Suppliers</b>	Inorganic binder suppliers and manufacturers. It is possible to distinguish between general binder producers and exclusively inorganic binder producers.
<b>Institutions</b>	This category of stakeholders includes all organisations or entities created to pursue safety and environmental protection objectives, operating within a governmental context, collaborating with public authorities for the implementation of environmental policies, and providing technical advice. Collaboration with these entities may be necessary to validate the alleged reduction in pollutant emissions achieved using inorganic binders.
<b>General Public</b>	This category includes all individuals and communities who are not directly involved in the project activities but who are potentially influenced by the results achieved. For example, those who live near industrial plants can be included here. This category has a strong interest in reducing the environmental impact of industrial activities.
<b>Research institutions and Academia</b>	This category includes research institutions, universities, and the academic world in general. They play a key role in providing the necessary scientific innovation and can assess the effects of these new technologies on industry, public health, and the environment.
<b>Foundry Products Users</b>	This category includes companies or organizations that purchase the products made by the foundries (ferrous objects, etc.). They may show a high interest in the

quality and performance of the materials purchased, while also paying special attention to sustainability.

### 3.3 Analysis and classification

Following the identification of these categories, the work focused on their classification using the Salience Model and the Power/Interest Grid. Even if it is possible to use just one of these methodologies, generally more than one model is used to achieve complete coverage.

#### 3.3.1 Salience Model

This model allows for classifying the SH through the evaluation of three attributes:

- **Power** is defined as the ability to influence the organisation and the outcome of the project.
- **Urgency** is defined as the stakeholders' claim for engagement.
- **Legitimacy** is defined as the stakeholders' right to maintain a relationship with the project.

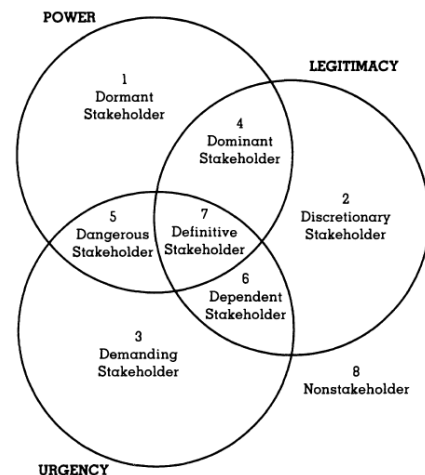


Figure 2: Qualitative Classes of Stakeholders (Mitchell, 1997).

Each stakeholder category received a binary score for these three attributes: "1" if the SH presents that specific attribute, "0" if not. The following table reports the scores assigned to each category and the corresponding class of stakeholder, according to the classification described in (Mitchell, 1997).

Table 2: Application of Salience Model to the external SHs.

ID	Stakeholder	P	U	L	Class
A	European Foundries	0	0	1	Discretionary stakeholder
B	Follower Foundries	0	1	1	Dependent stakeholder
C	Foundries Associations	0	0	1	Discretionary stakeholder
D	Public Entities	1	1	1	Definitive Stakeholders
E	Environmental Groups	0	1	0	Demanding stakeholders
F	Institutions	0	0	1	Discretionary stakeholder

<b>G</b>	<b>Equipment Suppliers and Coremakers</b>	0	0	1	Discretionary stakeholder
<b>H</b>	<b>Inorganic Binder System Suppliers</b>	0	1	1	Dependent stakeholder
<b>I</b>	<b>General Public</b>	0	0	1	Discretionary stakeholder
<b>L</b>	<b>Research institutions and Academia</b>	0	1	1	Dependent stakeholder
<b>M</b>	<b>Foundry Products Users</b>	1	0	1	Dominant stakeholder

The following figure inserts the SHs into their respective classes.

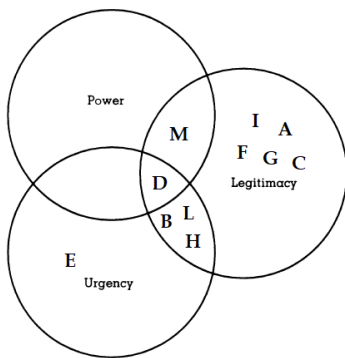


Figure 3: Distribution of the SHs.

The values in the table have been assigned after analysing the position of each stakeholder. Each combination of the values of the three attributes is related to a specific class of stakeholder, as shown in figure 2. The analysis that led to these values is omitted, but as an example, the case of public entities is reported in the following table.

Table 3: Example of analysis conducted for each SH.

Public Entities (Policymakers)		
Power - 1	Urgency - 1	Legitimacy - 1
This category, which includes governmental bodies and entities, has a high level of project authority because it has the regulatory and legislative power to directly influence the project itself. These entities can influence the regulatory and political context.	Given the nature of the role they play, this category of stakeholders has a high expectation of quick responses to their needs and demands.	Given the nature of the role they play, this category has the right to be involved in the project.

This classification will be recalled later when the communication strategies will be discussed.

### 3.3.2 Power/Interest Grid

A second analysis and classification of stakeholders was carried out using the Power/Interest Grid. This is one of the

most common classification methods and allows for categorising the stakeholders based on two fundamental attributes. To facilitate understanding, the definitions of the two key attributes are summarised below:

- **Power** is defined as the ability of the stakeholder to influence the work, organisation, or outcome of the project, or as the level of authority the stakeholders have over the project.
- **Interest** is defined as the desire of the stakeholder to be involved in the project or as its level of concern about the project and its results.

For each individual category of stakeholders, the attributes described above have been evaluated, allocating each of them a “high” or “low” level. In the following table, the values attributed to each SH is reported. Each value combination corresponds to a specific kind of relationship that the project management should maintain with the stakeholder (Scholes, 2002).

Table 4: Application of P/I Grid to the external SHs.

ID	Stakeholder	Power	Interest	Relationship
<b>A</b>	<b>European Foundries</b>	Low	High	Keep informed
<b>B</b>	<b>Follower Foundries</b>	Low	High	Keep informed
<b>C</b>	<b>Foundries Associations</b>	Low	High	Keep informed
<b>D</b>	<b>Public Entities</b>	High	High	Key Player
<b>E</b>	<b>Environmental Groups</b>	Low	Low	Minimal Effort
<b>F</b>	<b>Institutions</b>	Low	Low	Minimal Effort
<b>G</b>	<b>Equipment Suppliers and Coremakers</b>	Low	High	Keep informed
<b>H</b>	<b>Inorganic Binder System Suppliers</b>	Low	High	Keep informed
<b>I</b>	<b>General Public</b>	Low	Low	Minimal Effort
<b>L</b>	<b>Research institutions and Academia</b>	Low	High	Keep informed
<b>M</b>	<b>Foundry Products Users</b>	High	High	Key Player

It is important to emphasise that the judgements produced are purely subjective and personal, so the results obtained could be different if the case is analysed by another individual. Applying the power/interest matrix to the relationships revealed that the SHs classified as "keep informed" have high interest but low power, so it is advisable to inform them of new developments. On the other hand, the SHs belonging to the "Minimal Effort" class should just be monitored. Regarding the "Key Player" class,

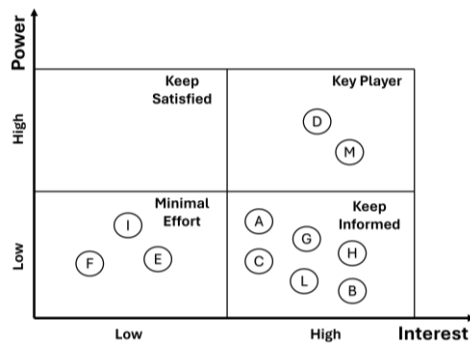
because of their importance, it is evident that they require active and careful management.

As happened with the previous methods, the considerations that led to assigning a certain value to an attribute are not discussed, but an example is reported in the following table.

**Table 5: Example of analysis conducted for each SH.**

Public Entities (Policymakers)	
Power - High	Interest - High
This category, which includes governmental bodies and entities, has a high level of project authority because it has the regulatory and legislative power to directly influence the project itself. These entities can influence the regulatory and political context.	This category has a high level of interest and concern, especially for the issues and problems, both political and environmental, related to the project.

The following figure represents the distribution of the SHs in the four categories.



**Figure 4: Distribution of the SHs in the P/I grid.**

In the following paragraph, the communication strategies implemented will be discussed.

### 3.4 Communication Strategies

The previous phase of stakeholder analysis and classification was conducted using two different models, the Salience Model and the Power/Interest Grid, providing interesting information about the SHs. Subsequently, on the basis of these data, a specific communication strategy was developed for each category of stakeholders. This was carefully designed by identifying the preferred communication channels in order to achieve effective and adequate involvement from each of them, aiming to maximise the dissemination of the project, effective communication of the activities carried out, the progress made, and the results achieved.

In the following table, the customised communication strategy adopted, and the communication channel used for each SH are reported.

**Table 5: Communication strategies and channels.**

Stakeholder	Communication Strategy	Communication Channel
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<b>European Foundries</b>	It is necessary to keep this category of stakeholders regularly informed about the progresses, results, and impact of the project (in the future, they will participate in the project activities and use inorganic binders in their production lines).	Press releases, progress reports, project documents, events, conferences, social media, webinars, and websites.
<b>Follower Foundries</b>	This category must be kept informed about the progresses and activities of the project, the results achieved, and it must be actively involved in the project.	E-mail, newsletters, brainstorming, regular meetings, webinars, progress reports, and project documents.
<b>Foundries Associations</b>	Providing periodic updates on project progress and results is needed.	Press releases, newsletters, progress reports, project documents, events, conferences, social media, and webinars.
<b>Public Entities (Policymakers)</b>	It is necessary to provide monthly and timely updates on project progress and results, or on specific requests that may be received.	Press releases, e-mails, progress reports, and project documents.
<b>Environmental Action Groups</b>	It is enough to monitor this category of stakeholders occasionally, without investing excessive resources since their involvement in the project is limited.	Press conferences, social media, web, events, conferences.
<b>Institutions</b>	It is enough to monitor this category occasionally without investing excessive resources since their involvement in the project is limited.	Press conferences, newsletters, events, e-mail.

<p><b>Equipment Suppliers and Coremakers</b></p>	<p>This category must be updated periodically and informed about the progress of the project and the results.</p>	<p>E-mail, newsletters, events, conferences, visits to foundries, briefings, progress reports, and project documents.</p>
<p><b>Inorganic Binder System Suppliers</b></p>	<p>This category must receive periodic updates on the progress and status of the project, including progress, results, and specific information on inorganic binders provided by them.</p>	<p>E-mail, newsletters, events, conferences, visits to foundries, briefings, progress reports, and project documents.</p>
<p><b>General Public</b></p>	<p>This category should be monitored from time to time. It is possible to provide information about the state of progress of the project and the results achieved, with the aim of raising awareness and promoting acceptance of the use of inorganic binders.</p>	<p>Social media, website.</p>
<p><b>Research Institutions and Academia</b></p>	<p>This category of stakeholders must be kept informed about the progress and results of the project.</p>	<p>E-mail, newsletters, press releases, progress reports, project documents, events, conferences, and websites.</p>
<p><b>Foundry Products Users</b></p>	<p>This category must be managed with the utmost care, as their satisfaction is crucial to the overall success of the project. It is essential to actively involve them, responding to their specific requests and keeping them regularly and promptly updated on the state of progress of the project and the results achieved.</p>	<p>Press releases, emails, newsletters, organising events, visits to foundries, briefings, periodic reports on progress, and detailed documentation of the project.</p>

#### 4.0 Discussion

The communication strategies developed for each category of stakeholders constitute a fundamental starting point for strategically and effectively involving the stakeholders of the Green Casting Life project in order to maximise its dissemination and impact. Their definition has been achieved through a thorough assessment and understanding of the project, the context in which it operates, and a careful analysis of the categories that have been identified. The practical implementation of these strategies, followed by a careful assessment of feedback from stakeholders, will be crucial to ensuring that engagement and communication initiatives are effectively calibrated to the needs and expectations of each stakeholder or if they require changes in order to be tailored to each of them. This process of verification and adaptation is essential to being able to cope with the complexity and dynamism that characterise both the stakeholder group and the project they are part of. This process requires a constant commitment to monitoring the developments throughout the project in order to catch up with any new requirements or changes. This is evident in the analysis and classification phase of stakeholders, during which it is crucial to maintain a flexible and adaptive approach. The roles, expectations, and level of influence of stakeholders, in fact, can change significantly over time, requiring periodic reassessment of previously established communication strategies.

Furthermore, although the methods used to classify, orient, and prioritise engagement strategies have been extremely useful, it is important to emphasise that attribute allocation and the corresponding categorization of stakeholders are intrinsically characterised by a certain degree of subjectivity. This means that the perception of a stakeholder’s power or interest in the project can be influenced by cultural or personal factors, as well as being difficult to quantify. Such subjectivity can lead to assessments and results that, if not constantly questioned and updated, may not adequately reflect the reality of the context in which the project operates. For example, the role, interest, expectations, and urgency in the responses of a certain stakeholder could be overestimated, or worse, underestimated, or ignored. In order to mitigate this problem, it is possible to actively involve stakeholders to obtain a more balanced and accurate view, or by creating a team of members with different backgrounds and perspectives. Therefore, it is essential to carry out a constant critical analysis, refining the evaluation tools to ensure that each stakeholder is considered in terms of its specificity and complexity. This analytical and dynamic approach further highlights the importance of a personalised engagement and communication strategy.

Moreover, although stakeholders may share the same category of belonging, as outlined through the application of analysis and classification models, each of them has an individuality that must be recognised and enhanced through tailor-made initiatives to be able to respond effectively to their unique needs and expectations.

The identification phase has led to the definition of eleven distinct categories of stakeholders, which play different roles that best represent its current context. However, the life cycle of the Green Casting Life project may highlight the need to identify new stakeholders or to reconsider the role of those previously identified in response to progress

achieved or new directions taken by the project. This possibility underlines the importance of periodically repeating the steps of the work already carried out in order to ensure an adequate representation of the current state of the project and its dynamics.

## 5.0 Conclusion

In conclusion, defining a specific communication strategy for each of the SHs of the Green Casting Life project has become a complex and multifaceted operation, which has required a deep understanding of the dynamics at stake and a constant commitment over time. The communication strategy, in order to effectively involve each of them, has been conceived not only in terms of immediate effectiveness but also with a prospective vision, able to adapt to the best possible developments of the project and its conditions.

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