

An Approach to Identifying Stakeholders for the Aircraft Manufacturer

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Abstract

It is important for the aircraft manufacturer to identify all the relevant stakeholders, in order to get their requirements towards the aircraft at the beginning of preliminary design phase. However, there hasn't been a specific and proper stakeholder-identification approach which is applicable in the aircraft project. In this paper, we propose an approach to identify the stakeholders for the aircraft manufacturer. Based on the investigation over the stakeholder concept and previous approaches to identifying stakeholders, we conclude a 'baseline stakeholder-extended stakeholder' approach to identify the stakeholders for the aircraft manufacturer. This brand-new approach is meaningful for the aircraft manufacturer to identify the relevant stakeholders in order to capture all their requirements on the developing aircraft.

Keywords

Stakeholder, Stakeholder Identification, Aircraft Manufacturer.

1. Introduction

A successful commercial aircraft design is not just determined by its performance. More importantly, whether the new aircraft meets the stakeholders' requirements and expectations, matters a lot for this complicated project. In order to capture all the requirements from different stakeholders, it's essential to develop an exhaustive stakeholder list.

Until now, there hasn't been a specific and proper approach to identifying the stakeholders which is applicable in the aircraft industry. In this paper, firstly, we have a deep review on the stakeholder concept in order to understand what the stakeholder is. Then, we investigate on the previous approaches to identifying the stakeholders. Based on the above research, we attempt to propose an approach to identify the stakeholders for the aircraft manufacturer.

2. Stakeholder Concept

The generation and spread of the concept of the stakeholder can be found in the investigation on the social responsibility theory to the project management application. The actual word 'stakeholder' was first mentioned in the management literature in an internal memorandum at the Stanford Research Institute in 1963 as Elias, Cavana and Jackson [1] presented in their research of the stakeholder approach into system thinking. The term was meant to generalize the concept of stakeholder as the only group to whom management need be responsive. Thus, the stakeholder concept was originally described as 'those groups without whose support the organization would cease to exist'. Until now, the most famous and widely used stakeholder concept was from Freeman's book [2], Strategic Management: A Stakeholder Approach. In his book, the definition of stakeholder was 'any group or individual who can affect or is affected by the organization's objectives'. Since Freeman presented the stakeholder concept, many other researchers had defined the stakeholder in a more specific way. Wicks [3] defined the

stakeholder as 'those who interact with and give meaning and definition to the corporation'. From the Clarkson's view [4], the stakeholder was 'persons or groups that have, or claim, ownership, rights, or interests in a corporation and its activities, past, present, or future'. Brenner [5] considered the stakeholder as 'which could impact or be impacted by the firm/organization'. In addition, Donaldson & Preston [6] named the stakeholder with 'people or groups with legitimate interests in procedural and/or substantive of corporate activity'.

3. Previous Approaches to Identifying the Stakeholders

Sharp [7] proposed an approach to discovering all relevant stakeholders of a specific system. The first step is to recognize the baseline stakeholder, which is classified into four groups: users, developers, legislators and decision-makers. Starting with the baseline stakeholder, the supplier stakeholder and client stakeholder can be identified. The supplier stakeholder provides information or supports details to the baseline stakeholder. And the client stakeholder utilizes or inspects the products of the baseline stakeholder. Another type of stakeholder called satellite stakeholder can also be recognized based on the baseline stakeholder. The satellite stakeholder interacts with the baseline stakeholder in a variety of ways. Interaction may involve communicating, searching for some data, reading a set of rules or guidelines etc. Fig. 1 illustrates the main elements of stakeholder identification.

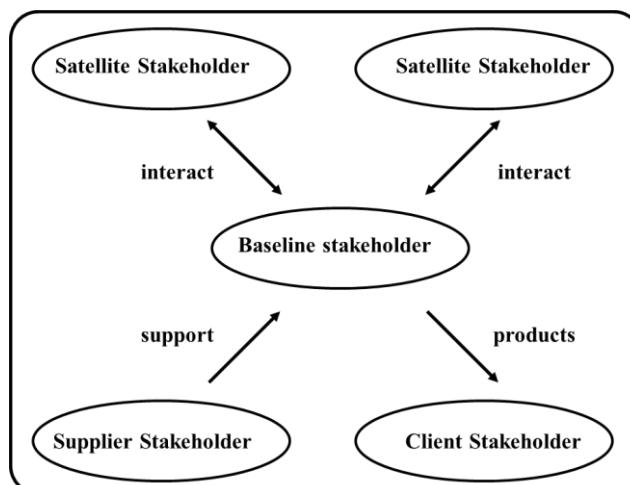


Fig 1. The main elements of stakeholder identification proposed by Sharp [7]

In conclusion, the above approach to identifying the stakeholder is summarized as the following five steps:

- (1) Identify all definite roles within the baseline stakeholder group;
- (2) Identify 'supplier' stakeholders for different baseline roles;
- (3) Identify 'client' stakeholders for different baseline roles;
- (4) Identify 'satellite' stakeholders for different baseline roles;
- (5) Repeat steps 1 to 4 for each of the stakeholder groups identified in steps 2 to 4.

Ballejos [8] proposed a method for identifying stakeholder considering the diverse dimensions involved in interorganizational environments: organizational, interorganizational and external. In the interorganizational environment, the stakeholder is classified into two categories: internal stakeholder and external stakeholder. To be more specific, internal stakeholder contains firm and interorganizational network (ION). In order to identify the relevant stakeholder, getting started with the Firm (part of the internal stakeholder), some external stakeholders are identified, like competitors, customers, suppliers, government and business

partners. The firm has different internal members. All of these internal members constitute the ION. As a result, based on the analysis of the 'firm', another internal stakeholder ION can be confirmed. Finally, the rest of the external stakeholders can be identified based on the ION. The above approach is systematic for performing the identification of concrete stakeholders for an interorganizational project.

Ding [9] established a three-dimension model to identify the stakeholders. The model is based on three dimensions: the phase dimension, the mission dimension and the role dimension. The phase dimension is constituted with starting phase, planning phase, execution phase and ending phase. The mission dimension consists of planning activities, operating activities and maintenance activities. And the role dimension includes beneficiary, operator, influencer, decision maker and coordinator. These roles in the role dimension are the final stakeholders and they are identified through the following path: from phase dimension to mission dimension and from the above mission dimension to the final role dimension. One specific phase in the phase dimension can generate some stakeholders. Similarly, all phases can be processed via the three-dimension model to produce the whole list of stakeholders.

Liang [10] proposed a method for developing an exhaustive list of the relevant stakeholders. The first step is applying the key informant approach. The key individuals are those experts and powerful leaders. Then, through the meeting, the researchers let the key informants to identify others who might influence or be influenced by the organization. The next step is using content analysis to expand the list. Through the content analysis, the researchers investigate on the corresponding literatures (publication, report of government etc.). Finally, the above lists are combined into the eventual list.

4. An Approach to Identifying the Stakeholders for the Aircraft Manufacturer

Analyzing the above the stakeholder identification approaches, we can find that their approaches to identifying stakeholders are all based on a common criterion: baseline stakeholder – extended stakeholder. From the Sharp's finding [7], the supplier stakeholder, the client stakeholder and the satellite stakeholder are the extended stakeholders compared with the baseline stakeholder. These extended stakeholders support for, or receive products from, or interact with the baseline stakeholder. In the Ballejos's stakeholder identification theory [8], the internal stakeholder – external stakeholder is similar to the 'baseline stakeholder – extended stakeholder' theory. In addition, regarding our approach to identifying the stakeholders for the aircraft manufacturer, in order to generate the detailed and exhaustive stakeholder list, it is meaningful to classify the baseline stakeholder into the aircraft manufacturer itself and aircraft manufacturer's interorganizational network. In the Ding's three-dimension model [9] which is used to identify stakeholder, the roles derived from the starting stage of the phase dimension are exactly the baseline stakeholders. In addition, the roles derived from the remaining stages of the phase dimension are the extended stakeholders. As a result, Ding's approach to identifying stakeholders corresponds with the criterion 'baseline stakeholder – extended stakeholder'. Regarding Liang's key informant approach [10], the key individuals including experts and influential leaders, are the baseline stakeholders. The expanded list via content analysis belongs to the extended stakeholder.

Based on the analysis above, we propose a brand-new approach to identifying the stakeholders for the aircraft manufacturer, which also caters to the criterion 'baseline stakeholder – extended stakeholder'. The aircraft manufacturer is the organization like Boeing, Airbus, Commercial Aircraft Corporation of China, Ltd. (COMAC) etc. For the baseline stakeholder, the aircraft manufacturer itself and aircraft manufacturer's internal members are the baseline stakeholders. Aircraft manufacturer's internal members equal to the organization structure of

the aircraft manufacturer. Taking the Boeing Company as an example, Boeing's internal members [11] are the Boeing Aerospace & Autonomy Center, Boeing AnalytX, Boeing Capital Corporation, Boeing Technology Services, Boeing HorizonX, Boeing International, Government Operations, Advertising & Brand and Licensing. These internal members all belong to the Boeing Company. The internal members and the aircraft manufacturer itself contribute to the baseline stakeholder.

Once the baseline stakeholders are confirmed, the next step is to identify the extended stakeholders. Concerning the above stakeholder concept, Freeman's definition on the stakeholder is widely acknowledged. According to Freeman's view, the stakeholder is any group or individual who can affect or is affected by the organization's objectives. In the above definition, the organization is the aircraft manufacturer, including its internal members. Consequently, 'any group or individual' is the extended stakeholder. What's the relationship between the baseline stakeholder and extended stakeholder? Based on the Freeman's definition, there are three categories of relationship. The first one is that the extended stakeholder affects the baseline stakeholder. The second one is that the extended stakeholder is affected by the baseline stakeholder. The third one is that the extended stakeholder interacts with (affect plus be affected) the baseline stakeholder. In terms of these three kinds of relationships between the baseline stakeholder and the extended stakeholder, the extended stakeholder is supposed to be identified.

Fig. 2 shows the approach to identifying stakeholders for the aircraft manufacturer. Firstly, based on the aircraft manufacturer itself, the aircraft manufacturer's internal members need to be identified. Both the aircraft manufacturer and its internal members constitute the baseline stakeholder. Secondly, based on the baseline stakeholder (aircraft manufacturer itself), the corresponding extended stakeholder is identified through three different relationships (affect or be affected). Thirdly, based on another baseline stakeholder (aircraft manufacturer's internal members), the corresponding extended stakeholder is identified in the same way as the second step.

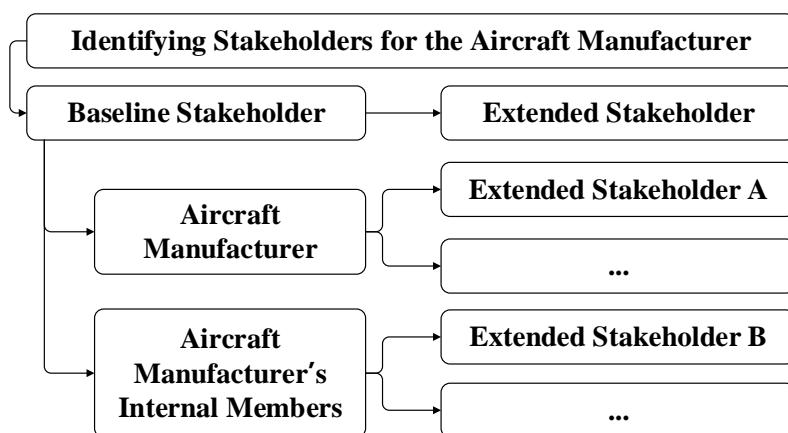


Fig 2. An approach to identifying stakeholders for the aircraft manufacturer

5. Conclusion

In conclusion, both the stakeholder concept and the approaches to identifying the stakeholders are reviewed. We summarize a common stakeholder identification criterion, which is called baseline stakeholder – extended stakeholder. Based on the criterion, we propose an approach to identify stakeholders for the aircraft manufacturer. It is interpreted by the following three steps.

Step 1: Based on the aircraft manufacturer itself, the aircraft manufacturer's internal members need to be identified. Both the aircraft manufacturer and its internal members constitute the baseline stakeholder.

Step 2: Based on the baseline stakeholder (aircraft manufacturer itself), the corresponding extended stakeholder is identified through three different relationships (affect or be affected).

Step 3: Based on another baseline stakeholder (aircraft manufacturer's internal members), the corresponding extended stakeholder is identified in the same way as Step 2.

This approach is of great significance for the aircraft manufacturer to identify the relevant stakeholders, develop the exhaustive stakeholder list and capture stakeholders' requirements towards the aircraft during the preliminary aircraft design phase.

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