The Outcome Based Method for Project Stakeholder Identification

Richard Woolridge
University of Alabama

Denise McManus
University of Alabama

Joanne Hale
University of Alabama

Follow this and additional works at: http://aisel.aisnet.org/irwitpm2006

Recommended Citation
http://aisel.aisnet.org/irwitpm2006/12

This material is brought to you by the International Research Workshop on IT Project Management (IRWITPM) at AIS Electronic Library (AISeL). It has been accepted for inclusion in International Research Workshop on IT Project Management 2006 by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.
The Outcome Based Method for Project Stakeholder Identification

Richard W. Woolridge
Culverhouse College Of Commerce And Business Administration
The University of Alabama
rwoolrid@cba.ua.edu

Denise J. McManus
Culverhouse College Of Commerce And Business Administration
The University of Alabama
dmcmanus@cba.ua.edu

Joanne E. Hale
Culverhouse College Of Commerce And Business Administration
The University of Alabama
jhale@cba.ua.edu

ABSTRACT

Systems development project success is not only dependent upon technological components; it is also heavily dependent on the accurate identification of stakeholders. Stakeholders are a source of requirements, risk, and acceptance. Stakeholder theory identifies environmental systems, while assessing the implications and anticipating the responses. The identification of stakeholders, such as employees, customers, suppliers, and local communities, as well as the potential influence of the stakeholder will prove invaluable to the success of any project. This paper proposes the Outcome Based Method (OBM) for identifying stakeholders and their impact on the organization. Consequently, we will not only identify the project sponsors, users, and subgroups; but also, internal and external environment stakeholders.

Keywords
Systems development, project management, stakeholders.

INTRODUCTION

There is a plethora of research indicating the importance of stakeholder identification on project success; however little specific guidance is offered to direct their identification for a specific project. This study will propose an Outcome Based Method (OBM) to identify stakeholder interest in the prescribed systems. The OBM will investigate project shareholders, i.e.; sponsors and subgroups, at the level of the business initiative triggering the IS project. In addition, customers, MIS team members, suppliers, partners and regulators will be considered as members of the stakeholder community. These stakeholders will extend to influencers that have no legitimate interest in the project, but have the ability to impact the organization’s success.

The identification of relevant stakeholders at all levels of the organization will have a direct impact on the success of the project. The proposed OBM method builds on stakeholder theory, while assessing the implications of stakeholder responses. One systems development project will be illustrated and the outcome of stakeholder identification and impact to the organization will be reported.

PREVIOUS RESEARCH

System’s theory provides the foundational basis for the proposed OBM stakeholder identification approach. A business application is a system to be designed with a purpose for which there is choice for both means and ends. “There are three central problems that arise in the management and control of purposeful systems: how to increase the effectiveness with which they serve their own purposes, the purposes of their parts, and the purposes of the systems of which they are part. These are respectively, the self-control, the humanization, and the environmentalization problem.” (Ackoff 1974) This paper proposes that identifying all of the systems, or at least categories of systems, involved can help identify project stakeholders.

Bounded rationality explains the limits of man’s abilities to comprehend and compute in the face of complexity and uncertainty (Simon 1979) and thus a project manager’s ability to identify stakeholders in a complex multi-functional or enterprise development project. To reduce the impact of bounded rationality, a decision maker may look for satisfactory choices instead of optimal ones; replace abstract, global goals with tangible subgoals, whose achievement can be observed.
and measured; and/or divide the decision-making task among many specialists and then coordinate their work by means of a structure of communications and authority relations. Combining these coping mechanisms for the stakeholder identification task, the OBM approach suggests decomposing the systems development project goal into subgoals and identifying stakeholders of subgoals is more effective than attempting to simply list all stakeholders of the project as a whole.

Stakeholder theory suggests that serving the interests of company stakeholders is the ultimate purpose of any firm (Evan and Freeman, 1993; Cragg, 2002). Kaler (2003) argues that from a business ethics point of view, only a “claimant definition” of stakeholders, which is defined as “persons or groups with legitimate interests in procedural and/or substantive aspects of corporate activity” (Donaldson and Preston, 1995) is required. However, Kaler (2003) also says that an “influencer definition” is perfectly compatible with the demands of business decision making in that it entails no presuppositions about the firm’s objectives. Influence stakeholders relate to the firm’s objectives only in so far as their power to influence (or that of the firm to influence them) might help or hinder the attainment of the firm’s objectives (Kaler 2003). This paper assumes an influencer definition when identifying stakeholders in that these stakeholders can influence the success of a project.

Project delivery is generally acknowledged to be a complex activity that requires expertise in two disciplinary areas, the area of the problem being solved (the application) and the area of constructing a software solution (the systems and software discipline) (Vessey & Glass 1998). The application knowledge component of this dual disciplinary problem is significant as illustrated by “… much of what we consider to be software development is actually application domain problem solving …” (Blum 1989). This paper proposes that understanding this duality is important to successfully identify project stakeholders.

THE STUDY THE OUTCOME BASED METHOD FOR STAKEHOLDER IDENTIFICATION

The proposed OBM aims to provide a structured method for stakeholder identification. The OBM will provide coverage of all aspects described by systems theory, use decomposition to reduce bounded rationality issues to stakeholder identification, use an inclusive influencer definition of stakeholders, and use the duality inherent in an MIS project. Using this foundation, the OBM is presented in the following sections.

OBM Pre-Condition:  Project Scope

A pre-condition to identifying the stakeholders of a systems development project is to have a defined project scope. Many methods may be used to define project scope, but project scoping methods that include details of the application domain solution as well as the MIS domain solution provide additional information that aids the process of identifying project stakeholders. One method for defining project scope that provides useful information about the application domain and the breadth of scope required is the Target State Specific Outcome (TSSO) method (Woolridge, Hale, and Hale, 2006). For example, an airline may request a “crew scheduling system” project. From the business domain perspective, the desired outcome encompasses the processes or tasks necessary to prepare an arriving plane parked at a gate for departure from that gate. The scope of this business initiative is shown in Error! Reference source not found.. and the scope of the associated systems development project is shown in Error! Reference source not found..

The MIS Project scope provides the information required to begin project stakeholder identification. The stakeholders of interest can impact, or can influence those who can impact the success of the project. The OBM approach to stakeholder identification is in line with the role based view of stakeholders as described by Kaler (2003) in that consideration of stakeholders, as opposed to only shareholders, must be through the lens of a role specific interest that is ultimately objective fulfilling for the organization (Kaler 2003).

Identify Business Initiative Stakeholders

Using the OBM, the project manager is directed to first identify the stakeholders of the business initiative, followed by identifying the stakeholders of the systems development project. Identifying stakeholders is accomplished by answering questions about impact and perception. These questions are first asked for the business initiative, followed by the project as a whole and then for each lower-level outcome in the project.

To identify business initiative stakeholders from the impact perspective, the project manager asked the following questions: Who will be impacted by the business initiative? Who can impact the business initiative?

To identify stakeholders from the perception perspective, the project manager asks the following questions: Whose perceptions will be influenced by the business initiative? Who can influence the perceptions of others with regard to the business initiative?

Answering these sets of questions will typically lead to identification of stakeholders such as:
• Shareholders
• Customers
• Internal environment stakeholders, such as employees and internal departments.
• External environment stakeholders which have direct interaction with the organization such as suppliers, partners, and regulators.
• External special stakeholders who have an interest in the organization’s performance, such as community and complementary organization’s. A complementary organization does not have direct interaction but may sell complementary products or services, such as an aftermarket supplier for a car manufacturer, a consulting company that supplies services for software product, or an accountant that makes law firm referrals.
• Influencer stakeholders, including all organizations and groups with no legitimate interest in the organization, but perceive that the organization influences or impacts on their interest, or may impact the organization’s interests, such as the competitors, press, politicians, and environmental groups.

The impact of the business initiative may have been determined prior to the initiative being mapped to an IS project. In such a case, this OBM framework will simply help identify any additional objectives that relate to such stakeholders.

**Identify Project Specific Stakeholders**

Using the OBM, the project manager is next directed to identify the stakeholders of the systems development project. As for the business initiative, identifying project-level stakeholders is accomplished by answering questions about impact and perception.

To identify project-specific stakeholders from the impact perspective, the project manager asks the following questions: Who will be impacted by the project, or the product of the project? Who can impact the project, or the product of the project?

To identify stakeholders from the perception perspective, the project manager asks the following questions: Whose perceptions will be influenced by the project, or the product of the project? Who can influence the perceptions of others with regard the project or the product of the project?
<table>
<thead>
<tr>
<th>Target State Specific Outcome</th>
<th>Strategic TSDD Product Scope</th>
<th>Responsibility</th>
<th>Work Practice</th>
<th>Human Resources</th>
<th>Strategic TSDD Process Scope</th>
<th>Information and Technology</th>
<th>Internal Stakeholders</th>
<th>External Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Airplane Is Turned Around</td>
<td>Time from park of gate starts 30 minute countdown to deplane</td>
<td>Ground Crew Director</td>
<td>No changes permitted that will impact employee, contractor, or flight safety</td>
<td>Sufficient staffing for all tasks to be completed handily by the staff and we will have no difficulty to achieve goal</td>
<td>Continue cultural shift towards effective management of ground crews and achieve the goal</td>
<td>Automation is critical to successfully schedule ground crews and achieve the goal</td>
<td>On-time departures to the satisfaction of all departments</td>
<td>Coordinate and manage plans and expectations with the FAA and the Union</td>
</tr>
<tr>
<td>Airplane Is Fueled</td>
<td>Fuel truck arrives by van at the ground crew within 15 minutes</td>
<td>Local Fuel Company</td>
<td>Changes process to provide more frequent updates on aircraft to schedule fueling</td>
<td>Performed by a vendor or is responsible for this process</td>
<td>No changes are required</td>
<td>Update the fueling company’s scheduling computer of all aircraft schedule updates</td>
<td>Legal - 'Negotiate' contracts to include bonus and penalty clauses for on-time performance</td>
<td>Local fuel companies will have a concern about meeting commitments and pricing</td>
</tr>
<tr>
<td>Cabin Is Cleaned</td>
<td>Trash is removed, cleaned, and sanitized, and beverage service is performed</td>
<td>Cabin Servites Crew</td>
<td>N/A</td>
<td>No changes required</td>
<td>N/A</td>
<td>No charges</td>
<td>N/A</td>
<td>Local catering services will have a concern about meeting commitments and pricing</td>
</tr>
<tr>
<td>Luggage Is Loaded</td>
<td>Luggage arrives at the airport within 15 minutes</td>
<td>Baggage Handling Crew</td>
<td>Connecting flight luggage is baggage issue Change process and increase current equipment</td>
<td>After process change, five additional people (including one per active gate) are provided</td>
<td>No changes</td>
<td>No changes</td>
<td>N/A</td>
<td>FAA - This is governed by the FAA, all FAA regulations must be met</td>
</tr>
<tr>
<td>Airplane Is Serviced</td>
<td>Standard service is performed by ground crew</td>
<td>Maintenance Crew</td>
<td>No changes</td>
<td>No changes</td>
<td>No changes</td>
<td>Safety - verify procedures to prevent violations of safety rules</td>
<td>FAA - This will increase baggage handling traffic on the ramp that could cause an issue with the ramp safety issues</td>
<td></td>
</tr>
<tr>
<td>Airplane Is Loaded</td>
<td>Luggage is loaded by the ground crew and is ready for departure</td>
<td>Baggage Handling Crew</td>
<td>Connecting flight luggage is Connections baggage issue Change process and increase current equipment</td>
<td>After process change, five additional people (including one per active gate) are provided</td>
<td>No changes</td>
<td>No changes</td>
<td>N/A</td>
<td>FAA - This will increase baggage handling traffic on the ramp that could cause an issue with the ramp safety issues</td>
</tr>
<tr>
<td>Airplane Is Departed</td>
<td>Passengers are boarding, seat, and baggage is checked by passengers</td>
<td>Baggage Handling Crew</td>
<td>Connecting flight luggage is baggage issue Change process and increase current equipment</td>
<td>After process change, five additional people (including one per active gate) are provided</td>
<td>No changes</td>
<td>No changes</td>
<td>N/A</td>
<td>FAA - This will increase baggage handling traffic on the ramp that could cause an issue with the ramp safety issues</td>
</tr>
<tr>
<td>Airplane Is Serviced</td>
<td>Standard service is performed by ground crew</td>
<td>Maintenance Crew</td>
<td>No changes</td>
<td>No changes</td>
<td>No changes</td>
<td>Safety - verify procedures to prevent violations of safety rules</td>
<td>FAA - This will increase baggage handling traffic on the ramp that could cause an issue with the ramp safety issues</td>
<td></td>
</tr>
<tr>
<td>Airplane Is Departed</td>
<td>Luggage is loaded by the ground crew and is ready for departure</td>
<td>Baggage Handling Crew</td>
<td>Connecting flight luggage is baggage issue Change process and increase current equipment</td>
<td>After process change, five additional people (including one per active gate) are provided</td>
<td>No changes</td>
<td>No changes</td>
<td>N/A</td>
<td>FAA - This will increase baggage handling traffic on the ramp that could cause an issue with the ramp safety issues</td>
</tr>
<tr>
<td>Target State Specific Outcome</td>
<td>MIS TSSD Product Scope (identifies MIS features required for each cell of the Strategic Process Scope, blank cells mean no MIS features required)</td>
<td>Note</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
<td>------</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airplane is Turned Around</td>
<td>Automation is critical to successfully schedule ground crew and achieve goal</td>
<td>CIO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airplane is Fueled</td>
<td>Update the fueling company’s scheduling computer of all incoming schedule updates</td>
<td>CIO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delay is Blocked</td>
<td>No changes are required</td>
<td>CIO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabin is Clean</td>
<td>Send automated dispatch</td>
<td>CIO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luggage is Loaded</td>
<td>Create connectivity</td>
<td>CIO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Passengers Are Boarded</td>
<td>Implement boarding</td>
<td>CIO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airplane is Canceled</td>
<td>Deliver automated notification</td>
<td>CIO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Airplane Has Departed</td>
<td>Record flight arrival and departure times to measure turnaround</td>
<td>CIO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Figure 2. Achieve Fast Turnaround MIS Project Scope

Answering these sets of questions will typically lead to identification of project-specific stakeholders such as:

- Project sponsors, including executive management, strategic project managers, among others.
- Users, who are defined as specific roles that directly interact with the MIS to be built by the project and those roles chain of command. The user definition also includes other MIS’s that receive information from the MIS.
- Internal environment stakeholders, including all members of the MIS project team. (analysts, developers, testers, architects, etc.).
- External environment stakeholders have direct interaction with the MIS project such as suppliers, partners, and regulators. The external environment definition also includes other MIS’s that supply information to the MIS.
- External stakeholders have a special interest in the organization’s performance such as the IT organization, other internal departments of the parent organization, customers that users may service, etc.
- Influencer stakeholders include all organizations and groups with no legitimate interest in the MIS project, but perceive that the MIS project influences, or impacts, on their interest, or may impact the organization’s interests, such as the competitors, press, other departments, and privacy advocate groups.

While some of the category names are changed between the business initiative and project contexts, they identify parallel stakeholder classes, as shown in Error! Reference source not found. For example, taking a single project as an organizational entity, the project sponsor is a parallel stakeholder to the business initiative shareholder stakeholder. Similarly, taking a single project as an organizational entity, the resulting system user is a parallel stakeholder to the business initiative customer stakeholder.

<table>
<thead>
<tr>
<th>Strategic Initiative Stakeholder Category Name</th>
<th>MIS Project Stakeholder Category Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shareholders</td>
<td>Sponsors</td>
</tr>
<tr>
<td>Customers</td>
<td>Users</td>
</tr>
<tr>
<td>Internal Stakeholders</td>
<td>Internal Stakeholders</td>
</tr>
<tr>
<td>External Stakeholders</td>
<td>External Stakeholders</td>
</tr>
<tr>
<td>Special Stakeholders</td>
<td>Special Stakeholders</td>
</tr>
<tr>
<td>Influencer Stakeholders</td>
<td>Influencer Stakeholders</td>
</tr>
</tbody>
</table>

Figure 3. Stakeholder Category Name Mapping

Identify Variant Stakeholder Subgroups

Project managers are next directed to identify any subgroups of stakeholders that may for some reason be impacted by or perceive the project or its driving business initiative differently. These subgroups may have a different impact on the organizations objectives than that of the stakeholder superset. For example, customers whose luggage does not make the connection in the Fast Airplane Turnaround business initiative would be impacted by, perceive differently, and have a different impact on the business initiative than customers in general who simply see that plane turnarounds are faster, so these lost luggage customers should be identified in addition to customers in general. The result of the OBM approach is a comprehensive list of stakeholders for the business initiative (see Figure 4) and for the systems development project (see Error! Reference source not found.).

IMPLICATIONS AND CONCLUSIONS

Numerous studies have recognized that project success is dependent on the early and accurate identification of project stakeholders (Dix et al., 1993; Gotel, and Finkelstein, 1995; Pouloudi and Whitley, 1997; Sharp, Finkelstein, and Galal, 1999). However, the literature is severely lacking in explicit guidance regarding how to identify stakeholders for a specific project. Proposed methods tend to either suggest that stakeholders are obvious, or provide broad generic categories that are of limited usefulness (Pouloudi and Whitley, 1997). Sharp, Finkelstein, and Galal’s (1999) proposed model for stakeholder identification is a significant improvement over previous approaches.
identification works outward from known stakeholders and suffers from an inability to recognize when the stakeholder list is sufficient.

Figure 4. Business Initiative Stakeholder Identification

The proposed model fills this notable gap by allowing the desired project outcomes (and the processes necessary to achieve those outcomes) to drive stakeholder identification. This top-down business (rather than technology) driven approach helps insure that the resulting list of project stakeholders is complete. Once an individual stakeholder is identified using this approach, the project management team can then in parallel:

- Define the anticipated positive or negative impact of the project on that stakeholder.
- Identify the expected positive or negative stakeholder perceptions of the project.
- Estimate the stakeholder’s power to impact project success from the perspective of others

These three factors can then be combined into a measure of stakeholder risk, and be used to guide the project risk mitigation effort.
### Stakeholder Identification

<table>
<thead>
<tr>
<th>Stakeholder</th>
<th>Airplane is Turned Around</th>
<th>Aircraft is Fueled</th>
<th>Cabin is Cleaned</th>
<th>Luggage is Loaded</th>
<th>Passengers Are Bounded</th>
<th>Aircraft is Crewed</th>
<th>Aircraft Has Departed</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sponsors</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Executive Management</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strategic Project Manager</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VP Ground Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VP Maintenance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VP Flight Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VP Marketing</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Users</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gate Agent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ground Crew Director (GCD)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Fuel Company</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fuel Company Scheduler</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catering Company Scheduling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catering Company Scheduler</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabin services crew supervisor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cabin services crew</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maintenance Supervisor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aircraft Maintenance System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baggage Supervisor</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Baggage Handling Crew</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HR Motivation System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flight Crew Dispatcher</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flight Operations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Internal Stakeholders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Analysts</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Developers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Testers</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Technical Architect</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td><strong>External Stakeholder</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purchasing Agent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flight Ops System</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FAA</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Special Stakeholders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Customer Service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Luggage Services</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Influencer Stakeholders</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outsourcing Vendors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Employee Union</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Figure 5. MIS Project Stakeholder Identification**

### REFERENCES


