Start-Up Tasks for Software Development Projects from Customer and Vendor Perspectives

Completed Research Full Papers

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Abstract

Project start-up is defined as a short-term systematic process leading to project execution. Literature to date lacks emphasis on a definition of the project start-up phase and the tasks conducted during this phase. Whilst studies have explored causes of project failure to derive from the early stages of a project, limited studies have explored the impacts of project start-up tasks to a project’s execution and outcome. Using semi-structured interviews from 17 participants across 7 organizations, this study identifies the project start-up tasks and its impact to project delivery and outcomes from the perspective of in-house and outsourced projects. The start-up phase of each organization was then displayed in a comprehensive model depicting the substages within this phase, its corresponding tasks, and the ultimate outcome of each substage. Commonalities and variations within and across organizations are further highlighted.

Keywords

Project start-up, project success, project failures, start-up tasks.

Introduction

Project start-up tasks have been identified in prior literature as having an impact on project success and failure. Project failure factors often derive from tasks prior to execution which could have been avoided if identified and actioned upon early (Ahonen and Savolainen 2010; Atkinson et al. 2006; Charette 2005). Whilst there is a great overlap in tasks identified in IS project failure literature and project start-ups, a more defined alignment to these two domains can identify where aspects of project start-up cause failure.
or problems throughout execution. For example, clearly defining requirements is a task which has been discussed in prior start-up literature and project failure papers (Charette 2005; Egginton 1996). More recently, project start-up is being described as a complex and multi-dimensional activity with a specific focus on supplier firms only (Merikoski et al. 2017). We believe that both customer and supplier (vendor) firms have important roles to play in the start-up phase of any outsourcing software project collaborations. Equally, the complexity of software projects necessitates the proper execution of start-up tasks for improving successes in in-house projects. We adopt IS success definition as defined by (DeLone and McLean 1992) and (William and Ephraim 2003), where information and system qualities ultimately organizational impact. Project success is as defined by (Project Management Institute 2013) would mean that projects are on time, in budget and in specifications. Understanding what tasks should be executed in the start-up phase improves the preparation of software projects, increases the chances of project successes, and reduces the chances of failed/cancelled projects; thereby substantially minimizing the financial loss from the trillions of dollars currently lost annually from failed IT projects (Tiemann and Initiative 2009).

Whilst there are disagreements between the start and end of the project start-up phase, there is a common agreement that the start-up phase is a “process designed to promote mutual understanding and cooperation among project participants” (Fangel 1991). Given the increasing complexities of projects combined with the evermore-restrictive time and budget, the subject of project start-up is growing in the spotlight since it first emerged in the 1990s (Morris 1984). Aiming to launch a project as quickly as possible, project start-up focuses on getting participants to rapidly work in a team to address key project goals and tasks (Morris 1984). By focusing on the initial phase of a project, this study aims to identify the start-up tasks and ascertain how they impact project delivery and project outcomes, for both in-house and outsourced projects. Although PMBOK and PRINCE2 provide comprehensive industry guidelines for each phase of a project’s execution, this study aims to better understand the equivalent start-up phases by exploring for new tasks which occur prior to project execution.

In this paper, we explore the start-up tasks that are agreed upon by both customers and vendors because we believe these tasks serve as a good starting for a successful collaboration. We begin by first providing a summary of the published literature in this area to derive a model of defining the start-up phase of software development projects according to prior literature. Then, using this model, we collected empirical data to explore common start-up tasks common to a representative sample of organizations.

**Summary of Relevant Literature**

This section presents the variations of project start-up definitions from extant literature. To date, the definition of project start-up within information systems (IS) projects remains inconsistent across contexts and organizations (Fangel 1991; Fung et al. 2014; Morris 1984). Whilst the idea of project planning and team building remains consistent throughout similar literature, these definitions are varied across IS literature (Fangel 1984).

The aim of project start-up is to get the project going effectively as quickly as possible, with a developed team that can focus on project goals and tasks (Morris 1984). More recently, project start-up was defined from a vendor perspective as commencing with a signed formal agreement and ending once the project has officially begun (Savolainen 2011). The Internet committee on project start-up established in 1984, defined project start-up as “an intensive process of initiating the project, or one of its major phases, in a manner designed to ensure that the necessary resources are committed and applied to meet the objectives” (Gilbert 1991).

An empirical study was conducted to further understand practitioners’ understanding of this phase from a vendor perspective (Savolainen 2010). This study conducted interviews in four separate software engineering companies to identify the activities in the tendering process and the start-up phase which was defined to commence after the sales process prior to project execution. Through these interviews, it was found that there is no common understanding of the project start-up phase inside organizations. Interviewees stated varying project starting triggers with 4 participants saying it starts from the time they received an order from the client, and 3 saying it begins after the kick-off meeting. This discrepancy from one study emphasizes the need to clarify the meaning of project start-up across organizations and from the customer and vendor perspective.
Another study examined the effectiveness of project start-up, dividing the phase into the intake (to clarify scope, purpose and objectives), the workshop (to determine, phases, tasks, time, budget, monitoring, controlling and analyzing quality and risk), and finally, the follow-up phase (Halman and Burger 2002). The final follow-up phase involves a presentation of the workshops and discussion to the project owner who will ultimately approve the project to continue and commence execution.

More specifically, project start-up was studied from the perspective of the vendor companies only (Savolainen 2010). They defined that the start-up commences once the customer has confirmed the order and agreed deliverables and requirements are established from the vendor company. This definition differs because it has identified the one activity believed to trigger a project. This is compared to the definitions which acknowledge the start-up phase by its tasks and ultimate goal which is aligned in this study. In this paper, the vendor company will begin planning the project based on the tender during the project start-up. They will form a project team, assign roles and responsibilities, clarify procedures and processes, install technology tools and controls for communications and they will make the initial contact with the customers. Project success from this perspective is therefore dependent on the customer’s accurate and honest effort estimates, which have been agreed upon in the project. Clarification of requirements, activities and cost is thus a critical task to be accomplished during the project start-up.

In a comprehensive literature review on project start-up (Fung et al. 2014), synonymous terminology was derived from literature which contains similar elements of the early definition of project start-up. These terms include start-up phase (Nobelius and Trygg 2002), 2) pre-project phase (Elonen and Artto 2003), 3) pre-phase of a project (Elonen and Artto 2003), 4) initiation phase (Project Management Institute 2013), 5) project set-up (Williams et al. 2012), 6) early in the project lifecycle (Pinto and Prescott 1988), 7) early phase (Flynn and Du 2012), 8) early stage (Rolstad 1991), or 9) initial stages of a project (Ipe 2004).

Attempting to capture the start-up tasks from both the customer and vendor perspectives into one model through a synthesis of the literature, a model (Figure 1) was developed to represent the project start-up phase (Fung et al. 2014). In this model, project start-up begins at the project conceptualization and ends at project execution. Several tasks noted in the diagram are captured and visualized in timeframes which have reflected the time period of when the task would occur in this phase based on current literature around this topic. This model represents a visual timeline of the start-up phase based on a consolidation of related literature. The model is used in this study to further identify the tasks in the start-up phase as well as the definition of it.

![Figure 1 - Model of project start-up phase (Fung et al. 2014)](image-url)
Table 1 - Summary of key literature identifying project start-up tasks

Table 1 shows a lack of consensus in the start-up tasks common to both customers and vendors. Our research explores the list of tasks agreed upon by both parties and examine what changes need to be made to the definition of the start-up phase (as represented in Figure 1). This will serve as good starting point of collaboration between them. This study does not purport to contribute theories; its results however must allude to theoretical contributions in future work.
Research Methodology

Our research begins with the definition of the start-up phase developed by (Fung et al. 2014) as shown in Figure 1. The tasks in the model are examples of start-up tasks which can overlap and occur in parallel in typical systems development projects. This model (Figure 1) is used to support or challenge the findings in order to evolve the diagram to reflect a current definition of project start-up. This model is used to further identify the tasks in the start-up phase.

Given the exploratory nature of this research, semi-structured interviews were adopted to elicit the tasks in the start-up phase and ascertain a project start-up definition. This choice of methodology is ideal for collecting first hand data from multiple organizations in order to gain an understanding of the start-up phase across organizations, industries and from a vendor and client perspective. Data collected will provide an insight into the commonalities and differences of project start-up definitions and tasks.

The study consisted of semi-structured interviews, supporting documents and follow-up e-mails after the completion of the initial interviews. The research methods employed are aimed to generate the best and most diverse data about the project start-up phase within the experience of the participant. Semi-structured interviews were selected as they allowed for pre-interview preparation, providing instructions for the interviewer so that the collected data was consistent, comparable and reliable (Cohen and Crabtree 2006). Semi-structured interviews also provided the participants with the freedom of expression to respond to interview questions in their own terms. Furthermore, the researcher was able to instantly reply to responses in order to clarify what was mentioned. Participants either came from an organisation delivering in-house projects or outsourced projects. We restricted the research to software development projects only as we believe that different project types have different characteristics. For both perspectives on the start-up phase, the semi-structured interviews aimed to answer three main questions:

1. Which tasks occur in the phase prior to the commencement of the project?
2. Under what conditions would this phase differ?
3. Which tasks must be well-executed in this phase to minimise project delivery challenges and to improve chances of project success?

Whilst prior literature has previously identified some project start-up tasks, these tasks were not questioned to participants as to avoid any bias. Participants were asked to list the tasks conducted in the start-up phase, commencing from the conceptualization of the project until the point in the project phase where they believe the project is executed. Once the process of the start-up phase was explained, interviewees were asked to identify any situation where this process would change. This required the participant to recall project experiences where tasks were conducted in a different order or if tasks were conducted at a different pace or manner than usual. To help answer this question, examples of different projects were encouraged to explain the factors contributing to this variation of the project start-up phase.

Lastly, interviewees were asked to recount a project where the start-up phase contributed to the success or demise of the project. By associating tasks to a real past scenario, they were able to re-tell the steps and details of the start-up phase which led to its outcome. Understanding what went wrong or what went well can help discover which start-up tasks should be well executed during the start-up phase to prevent avoidable issues during the project delivery.

The model of the current start-up phase developed by (Fung et al. 2014) was then presented to the interviewees who were encouraged to modify and challenge it, based on their experience of their project start-up phase. As displayed in section 3.1, this model was presented to interviewees to physically draw on. Milestones and key activities conducted by the interviewee were also asked to be noted on the diagram. This activity during the interview will demonstrate what actually occurs in the current practice, validating whether or not standard project methodologies such as PRINCE2 and PMBOK are still applicable to the current software development projects.

An interview guide was developed for the semi-structured interviews. This was to ensure the responses required to answer each research question are attained, whilst providing participants with the flexibility to identify their project start-up tasks. The interview guide initially asks the participant to describe their role and years of experience in IT projects in their career and in the organization. This information was used to understand which area of the start-up phase their role was involved in. Next, participants were
asked to state what they call the phase prior to project execution, known as the project start-up phase in this research study. An explanation of the start-up phase or the equivalent phases in their organization was discussed with the participant in order to gather the start-up tasks under various conditions. The guide ensured that the interviewee would maintain consistency in the questions posed to the participant. Once the tasks have been identified, the participant was asked to discuss a project where the tasks in the start-up phase have affected the delivery or outcome of the project. This helped to answer the final research question of this study. Finally, the interview guide allowed participants to visualize the start-up phase and state any additional tasks which were not mentioned earlier in the interview. The order of tasks was also validated on the diagram.

Given the objective of this study is to define the start-up phase and identify the project start-up tasks, multiple organizations delivering in-house and outsourced software development projects were studied to attain a holistic understanding. Snowball sampling was the technique used to attain participants. Initially, potential participants were contacted based on convenience sampling from existing relationships with the researchers. An e-mail was then distributed to the acquaintance to verify that the participant is working for an organization that delivers software development projects. More specifically, the participant must have at least 5 years of experience in software or systems development projects and they must have been involved in the project start-up phase. The participant also had to be physically available in their office, or they must have a phone number to contact for a phone interview. Regardless of the screening result, screened participants were possibly asked to refer another colleague who would be willing to participate in the interview and who passed the participant criteria developed. Participants would be asked to refer the researcher to a colleague if the number of interviews conducted within the organization were insufficient to develop a thorough understanding of the start-up phase for the organization.

Multiple industries were selected to compare the start-up process of software development projects for that organization. In total 7 organizations participated in the study. 5 delivered software development projects in-house and 2 were involved in outsourced projects. Representatives from a pharmaceuticals, financial services and professional services organization were selected to provide a vendor perspective. In total, 17 interviews were conducted across 7 organizations. 16 were completed face-to-face and 1 was conducted through a call. Table 2 summarizes the organizations and participants involved in the semi-structured interviews. To maintain anonymity, each organization name has been coded.

<table>
<thead>
<tr>
<th>Organization</th>
<th>Industry</th>
<th>No. of interviewees</th>
<th>Participant</th>
<th>Participant Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phar-Alpha</td>
<td>Pharmaceutical</td>
<td>3</td>
<td>Participant 2</td>
<td>Program Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant 3</td>
<td>Business Analyst</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant 5</td>
<td>Project &amp; Program Manager</td>
</tr>
<tr>
<td>Fin-Alpha</td>
<td>Financial Services</td>
<td>3</td>
<td>Participant 11</td>
<td>Lead Project Manager (IT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant 12</td>
<td>Business Analyst (IT)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant 17</td>
<td>Director (Business)</td>
</tr>
<tr>
<td>Fin-Beta</td>
<td>Financial Services</td>
<td>2</td>
<td>Participant 15</td>
<td>Subject Matter Expert</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant 16</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Fin-Charlie</td>
<td>Financial Services</td>
<td>3</td>
<td>Participant 1</td>
<td>Project Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant 6</td>
<td>Technical Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant 8</td>
<td>Project Manager</td>
</tr>
<tr>
<td>Fin-Delta</td>
<td>Financial Services</td>
<td>1</td>
<td>Participant 4</td>
<td>Deputy Head of IT</td>
</tr>
<tr>
<td>PS-Alpha</td>
<td>Professional Services</td>
<td>3</td>
<td>Participant 9</td>
<td>Senior Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant 13</td>
<td>Senior Business Analyst</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant 14</td>
<td>Project Delivery Lead</td>
</tr>
<tr>
<td>PS-Beta</td>
<td>Professional Services</td>
<td>2</td>
<td>Participant 7</td>
<td>Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Participant 10</td>
<td>Partner</td>
</tr>
</tbody>
</table>

Table 2: Summary of interviewed organizations and participants

A member of each firm completed the organisational consent form prior to the commencement of any interviews. Participants were provided with an option to have their interviews recorded in hope to attain data accuracy for analysis. Those providing consent had their interviews digitally recorded and generated into transcripts for data analysis. Hand-written notes were manually captured when participants declined to provide recording permission.

All 17 participants signed the participant consent form agreeing to participate in the research. 16 out of 17 participants allowed for the interview to be digitally recorded whilst 1 chose to have hand-written notes to be taken rather than a digital recording. On average, the interviews lasted 52 minutes long. Only 1 organization shared documentation to support the project start-up phase within their firm. A summary of
the interview listing the emphasized tasks, positive and negative start-up stories were noted immediately after the interview on a word document. The 16 recorded interviews and 1 unrecorded interview with handwritten notes were transcribed (more than 250 pages of font 11 text) and loaded into NVivo for analysis.

Open and axial coding schemes were adopted. Open coding presents a low-level abstraction of the data to allow for flexibility in the study to further uncover new ideas and concepts (Corbin and Strauss 2007). Start-up tasks were identified in the interview and coded into nodes. Fifty low-level tasks were identified in this process. These were named appropriately according to the data, e.g. “We will openly discuss the good, bad and ugly concepts” was coded as ‘Discuss project concepts’. Theoretical saturation was reached once all tasks were uncovered (after eleventh interview), after which, a few more participants from the interviewed organization were similarly asked to partake in the interview to validate the process and tasks of the project start-up phase. One last organization was contacted and two participants were interviewed to verify that no other tasks were conducted from other organization from a client perspective of in-house projects.

Axial coding was conducted, categorizing tasks with similar goals and outcomes. Once all tasks were identified and theoretical saturation was attained, the coding process ended (Corbin and Strauss 2008). Tasks were grouped per similar outcomes. Axial codes were named based on the outcome of each group of the categorized, open code tasks. Whilst not all participants have discussed each of the tasks identified, it is important to note that the task may still be conducted within the organization. Participants may have failed to identify certain tasks as their role may not require their involvement in the task or because they have only discussed the tasks they believe to be important in this phase. The table below depicts the number of participants who identified the task throughout the interview. Therefore, these figures do not conclude the importance or frequency of the task performed.

**Key Findings**

Table 3 shows the start-up tasks derived from the interview data through the open coding process.

<table>
<thead>
<tr>
<th>Task Category</th>
<th>Tasks identified in the start-up phase</th>
<th>Participants who raised this task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Conceptualization</td>
<td>Research market trends</td>
<td>3, 4, 5, 11</td>
</tr>
<tr>
<td></td>
<td>Identify a need, problem or idea to conceptualize a project</td>
<td>1, 2, 3, 4, 5, 6, 7, 8, 13, 15, 16, 17</td>
</tr>
<tr>
<td>Understand and prioritize projects</td>
<td>Discuss and filter project concepts</td>
<td>5, 7, 15, 16, 17</td>
</tr>
<tr>
<td></td>
<td>Prioritize projects</td>
<td>4, 7, 11, 15, 16, 17</td>
</tr>
<tr>
<td></td>
<td>Understand the problem, need or project idea</td>
<td>1, 2, 3, 5, 7, 9, 10, 11, 15</td>
</tr>
<tr>
<td></td>
<td>Showcase available system services</td>
<td>5, 7</td>
</tr>
<tr>
<td>Define scope</td>
<td>Read and understand scope from client</td>
<td>9, 10, 13, 14</td>
</tr>
<tr>
<td></td>
<td>Clarify project assumptions with client</td>
<td>9, 10, 13, 14</td>
</tr>
<tr>
<td></td>
<td>Communicate and evolve project scope with technology teams</td>
<td>1, 2, 3, 5, 8, 11, 12, 17</td>
</tr>
<tr>
<td></td>
<td>Evolve project scope with the client</td>
<td>2, 3, 4, 7, 9, 10, 13, 14</td>
</tr>
<tr>
<td></td>
<td>Ensure overall objectives are achieved by looking at the bigger picture</td>
<td>4, 5, 10, 13, 17</td>
</tr>
<tr>
<td></td>
<td>Identify and justify project benefits</td>
<td>4, 8, 11, 12, 15, 17</td>
</tr>
<tr>
<td></td>
<td>Create project success measures</td>
<td>2, 3, 8, 15</td>
</tr>
<tr>
<td></td>
<td>Identify high level project risks</td>
<td>8, 12, 13, 14, 15, 17</td>
</tr>
<tr>
<td>Discuss idea with impacted teams</td>
<td>Discuss project idea with legal and compliance team</td>
<td>2, 3, 6, 7, 12, 15, 16, 17</td>
</tr>
<tr>
<td></td>
<td>Discuss project idea with security team</td>
<td>3, 8, 16</td>
</tr>
<tr>
<td>Identify project implications</td>
<td>Identify impacted teams</td>
<td>2, 5, 11, 12, 15, 17</td>
</tr>
<tr>
<td></td>
<td>Identify impacted systems</td>
<td>10, 14, 17</td>
</tr>
<tr>
<td>Identify project stakeholders</td>
<td>Identify key stakeholders</td>
<td>2, 3, 4, 5, 7, 8, 10, 11, 13, 14, 15, 17</td>
</tr>
<tr>
<td></td>
<td>Assess resourcing options</td>
<td>7, 9, 13</td>
</tr>
<tr>
<td></td>
<td>Identify roles and skill sets required for the project</td>
<td>5, 8, 15, 16</td>
</tr>
<tr>
<td></td>
<td>Assist client to find vendor</td>
<td>7, 14</td>
</tr>
<tr>
<td></td>
<td>Select vendor</td>
<td>15, 16</td>
</tr>
<tr>
<td></td>
<td>Gather the right resources</td>
<td>1, 2, 4, 5, 6, 7, 8, 9, 10, 13, 15, 16</td>
</tr>
<tr>
<td>Attain support from stakeholders</td>
<td>Gain top management support for</td>
<td>2, 4, 6, 8, 11, 15, 16, 17</td>
</tr>
<tr>
<td></td>
<td>Ensure buy in from stakeholders</td>
<td>15, 17</td>
</tr>
<tr>
<td>Assess need for</td>
<td>Decide if external vendor is required</td>
<td>2, 5, 14, 15, 16</td>
</tr>
</tbody>
</table>

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Start-Up Tasks for Software Development Projects
### Table 3 - Summary of tasks identified through open and axial coding process

41 tasks were identified within in-house software development projects and 30 tasks were extracted for outsourced projects. 13 task categories were developed after grouping detailed tasks which had the same outcome. Table 4 displays the start-up tasks identified by all organizations. The tasks ascertained were extracted if at least one interviewee from the organization identified the start-up task.

<table>
<thead>
<tr>
<th>Start-up tasks identified by all organizations</th>
<th>No. of respondents identifying task</th>
</tr>
</thead>
<tbody>
<tr>
<td>Approve concept and formalize project</td>
<td>17/17</td>
</tr>
<tr>
<td>Ascertain a high-level cost estimate</td>
<td>17/17</td>
</tr>
<tr>
<td>Ascertain project schedule estimate</td>
<td>18/17</td>
</tr>
<tr>
<td>Conduct kick-off meeting</td>
<td>17/17</td>
</tr>
<tr>
<td>Identify a need, problem or idea to conceptualize a project</td>
<td>11/17</td>
</tr>
<tr>
<td>Identify key stakeholders</td>
<td>12/17</td>
</tr>
<tr>
<td>Organize project team</td>
<td>16/17</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Start-up tasks affecting project execution and outcomes</th>
<th>No. of respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manage client expectations</td>
<td>5/5 vendors</td>
</tr>
<tr>
<td>Manage team and vendor expectations</td>
<td>5/12 clients</td>
</tr>
<tr>
<td>Gathering the right resources</td>
<td>12/17</td>
</tr>
<tr>
<td>Identify impacted systems</td>
<td>3/17</td>
</tr>
<tr>
<td>Identify impacted teams</td>
<td>6/17</td>
</tr>
</tbody>
</table>

### Table 4: Start-up tasks affecting project execution and outcomes

Project start-up is defined as the phase from the conceptualization of a project until its execution once the project kick-off meeting has been conducted. The start-up diagram by (Fung et al. 2014) was altered by all interviewees and developed into new and more detailed diagrams per organization. Multiple diagrams were developed for different start-up conditions that have varied the start-up process. All organizations delivering projects with third parties would initiate an internal kick-off meeting or workshops prior to the introduction of the third party teams at the project kick-off meeting. Vendor organizations are encouraging the idea of scope co-creation with the client to enable project transparency, minimizing the need to create assumptions and increasing the accuracy of the calculated project costs. Start-up phases differ as the client ultimately decides the project approach and make the build or buy decision of the systems. The vendor has to validate the statement of work proposal with their legal team prior to
attaining signed agreement with the client. New tasks previously unidentified in the literature were identified in this study (summarized in Table 6). There were also a number of start-up tasks from the study were also found to be lacking from project management guidelines (PMBOK and PRINCE2): 1) Create project success measures, 2) Manage team, vendor and client expectations, and 3) Conduct internal and official project kick-off meeting.

After asking participants to share positive and negative project start-up examples, the tasks in Table 5 were identified to have had an impact on project delivery and project outcomes. The number of respondents identifying the task to impact project delivery and outcomes are not representative of the importance of the task. Table 6 shows the ‘new’ start-up tasks which have not been previously identified from the literature. This study identified all the tasks in the start-up phase to the level of detail which may not be presented in prior startup literature. Thus, the few start-up tasks identified below may in fact be grouped under a more generic term. For example, discuss project idea with security team may have occurred in the development of the scope, which would result in a task called ‘define scope’.

<table>
<thead>
<tr>
<th>Type of project</th>
<th>New start-up tasks identified</th>
</tr>
</thead>
</table>
| In-house project (Client perspective) | • Showcase available system services  
• Ensure overall objectives are achieved by looking at the bigger picture  
• Discuss project idea with legal and compliance team  
• Discuss project idea with the security team |
| Outsourced project (Vendor perspective) | • Identify a need, problem or idea to conceptualize a project  
• Discuss and filter project concepts  
• Understand the problem, need or project data  
• Evolve project scope with the client  
• Ensure overall objectives are achieved by looking at the bigger picture  
• Identify impacted systems  
• Assist client to find software vendor |

Table 6: Summary of tasks unidentified from prior related literature from 2 perspectives

The start-up tasks which impact project delivery are: 1) Manage client expectations, 2) Manage team and vendor expectations 3) Gathering the right resources 4) Identify impacted teams 5) Identify impacted systems. Ultimately, a lack of clarity across the project scope from missing stakeholders, unidentified teams, unavailable key resources, and expectation mismatch can all attribute to problems identified during project execution. This often results in the need to introduce scope creep which must be managed through change requests. Ultimately, problems past the start-up phase will require more funding and possible schedule delays for the project. This can also impact the relationship between the client and vendor.

Conclusion

This study identified the start-up tasks of in-house and outsourced software development projects. With an analysis to conclude common and unique tasks, this study also aligned the derived tasks to those identified in literature. Whilst project management guidelines and other start-up literature have attempted to define the phase, this study has pinpointed the start and end of the start-up phase. Commencing from project conceptualization and ending at the execution of the project after a project kick-off meeting, this start-up phase consists of a number of tasks which may differ depending on the conditions of the project. The identification of start-up tasks which were lacking from start-up literature proves that this study has contributed to the extant literature on the start-up phase of software development projects. Given that this study also identified the tasks which affect project delivery and outcomes, this research thus provides significant contribution to practitioners of any role and of any level, who are involved in the start-up phase. By raising an awareness of the start-up tasks, practitioners are able to pay close attention to those which have the ability to negatively impact a project’s outcome. The focus of getting tasks done correctly and done well from the phase prior to execution can help lower the numbers of failed software development projects and increase the chances of project success. Future work can explore how start-up tasks differ according to different software development methodologies such as waterfall or agile methods.
References


