Understanding Project Failures

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Unforeseeable Events

In recent years, one of the most prominent large scale project controversies involved the US 2010 Decennial Census, more specifically the failure of the Field Data Collection Automation (FDCA) project. The project was initiated in 2001 after the appointment of the Associate Director for the Decennial Census but after several established milestones and budgets were missed, a Red Team was formed in Mar 2007 to analyse the root causes. This was followed by the formation of a FDCA Risk Reduction Task Force in Feb 2008. Two months later, the US House of Representatives were informed of the FDCA project failure and an additional budget of US$3 Billion was requested.

Given the visibility of the project and involvement of public funds, audits were carried out by the US Government Accountability Office (GAO) and case studies were developed by others to learn from the project. Amongst the various contributing factors, one that stands out pointed to the Census Bureau's under-estimation of the project complexities as it was deemed a relatively simple task to automate an existing paper-based process of data collection. The lack of robust project governance structure, effective communication across different project teams, firm baseline for system requirements and performance measurements were the other major contributors[1,2]. Then there were also others who highlighted that warnings raised during the project implementation were not heeded[3].

For many practitioners who are involved in managing projects wonder how these could be considered unforeseeable events as these are known factors that could be avoided in most projects.

For the Record

Before we discuss the reasons for project failures; let's start with the definition of project failures.

According to the Standish Group[4], a successful project is one that is completed on time and on budget with all the features and functions that were initially specified. The other definitions for failed and challenged projects are:

- Failed projects were cancelled before completion or never implemented
- Challenged projects were completed and operational, but over-budget, over the time estimate and with fewer features

Based on the above definitions, the FDCA project is a failed project because it was cancelled and manual data collection was used instead to complete the 2010 Census.

In a study of 1,471 large IT projects executed from 2005 to 2010 with a total value of US$241 Billion conducted by Alexander Budzier and Bent Flyvbjerg at the University of Oxford[5], 8 out of 10 projects busted their budget, 1 out of 6 (17%) on an average 70% behind schedule and the same ratio with budget exceeding 200%. Using the definitions above, these would probably fall under the category of "challenged" projects.

In a McKinsey report[6] released in late 2012, its collaborative study with the University of Oxford indicated that half of all large IT projects—defined as those with initial project value exceeding US $15 million; had budget overrun. On an average, large IT projects run 45 percent over budget and 7 percent over time, while delivering 56 percent less value than predicted. The report noted that while most of these companies survived the pain of cost and schedule overruns, 17% of the IT projects covered in the study

had gone so bad that they threatened the existence of the affected companies. Since the report did not indicate if any of these projects have been terminated or cancelled, these would also probably be considered "challenged" projects.

Although the Chaos Report introduced since 1994 by the Standish Group is often a popular source of reference used by many authors on challenging and failed projects; there are controversies raised by some researchers[7]. While statistics from the Chaos Report are not cited in this article, the interested readers would easily find a wide range of literature over the web relating to project failures. For instance, Cognizant[8] estimated that 25% of core banking system transformation for financial institutions failed without achieving any result.

While most statistics showed a high percentage of "challenged" projects, it must be recognised that the strict definition of a "challenged" project on missing original schedule, exceeding budget and offering lesser functionalities would in most circumstances put many projects under this category for two basic reasons. Firstly, these "original" parameters were arrived at during the project initiation and planning phases and given the fact that progressive elaborations[9] is a common process in most projects that adopt the Project Management Institute's standards; modifications to requirements (scope) would inevitably lead to changes in schedule and budget. Secondly, change management is an established project management process and if changes to scope, schedule and budget are authorised at the change management platform but considered deviation from original project parameters for statistical purpose to classify projects then many projects would not be deemed successfully implemented from a definition perspective.

Such clarifications are by no means to diminish the importance of tracking project implementation and studying why some projects are more successfully implemented compared to others. On the contrary, the purpose is to establish greater clarity in these definitions so that organisations and the project teams do not get overly marred or discouraged by these industry statistics leading to the adoption of an "acceptance" attitude; i.e. since majority of projects are going to be "challenged" anyway, why is ours going to turn out differently?

Common Project Challenges

Just as there is an abundance of literatures on failed project statistics, there are also many studies identifying the common project challenges. Since most government agencies are responsible for a sizeable portion of the total IT projects undertaken in their respective countries, it is useful to look at what are considered common causes of project concerns. Since US has already offered a case study in its FDCA project, let's look to UK for reference.

In 2006, the UK National Audit Office (NAO) and the Office of Government Commerce (OGC) agreed on the eight common causes of project failures[10] associated with government projects and these are:

1. Lack of clear link between the project and the organisation's key strategic priorities, including agreed measures of success

2. Lack of clear senior management and Ministerial ownership and leadership

3. Lack of effective engagement with stakeholders

4. Lack of skills and proven approach to project management and risk management
5. Too little attention to breaking development and implementation into manageable steps
6. Evaluation of proposals driven by initial price rather than long-term value for money

7. Lack of understanding of and contact with the supply industry at senior levels in the organisation
8. Lack of effective project team integration between clients, the supplier team and the supply chain

From the private sectors, Joseph Gulla[11] from IBM Corporation identified the top 7 reasons why projects fail. This study was based on his review of literatures from a wide range of sources; namely: Research organisations (IDC & Garner), Services Companies (IBM & HP), PMO Executive Council, Consultants, PMP practitioners, and software developers:

1. Poor project planning and direction
2. Insufficient communication
3. Lack of change, risk, financial, and performance management
4. Failure to align with constituents and stakeholders
5. Ineffective involvement of executive management
6. Lack of skilled team members in soft skills, ability to adapt, and experience
7. Poor or missing methodology and tools

Much earlier, a white paper from TenStep[12], listed the top 5 common project problems as (1) Inadequate project definition and planning (2) Poor scope management (3) Not managing the work plan (4) Poor communication and (5) Poor quality management.

The three common factors that emerged from these three sets of references point to the inadequate project planning, lack of communication and ineffective stakeholder engagement. One of the most respectable PMP practitioners is the late Rita Mulcahy[13] who mentioned that if there is one single most important critical successful factor for project management; that would be communication. Conversely, a project will fail if there is lack of communication. We will come to this in a moment.

Plan, Communicate and Manage

Project Planning is the second phase of the Project Lifecycle after the project is initiated and while there are many established methodologies[14] and tools to aid in the project planning processes; many root causes of project failures or challenged projects could be traced to the planning phase.

According to EHR Intelligence[15], a testimony delivered by the Government Accountability Office (GAO) to the House Committee on Veteran's Affairs in late Feb 2013 reported that efforts to make Electronic Health Record (EHR) systems used by the Departments of Veterans Affairs and Defense Affairs (VA, DoD) have failed as a result of inadequate project planning and poor management.

Many years ago, when I first started out my career as an engineer, my mentor shared with me an important analogy: it would be an enormous task standing downstream at the bottom of a water fall trying to plug the leaking dam. In contrast, the remedial efforts would be significantly reduced if one finds the root cause which in this case is the source of water leak at the upstream. This lesson points to the importance of addressing the problem at its root and hence, why proper and adequate planning must be carried out during the early phase of the project than carrying out rectification works much later due to poor planning.

Moving on to communication, many of us understand the importance of communication and most Project Management Office (PMO) would have developed a communication plan as part of good project management methodologies. However, it is not uncommon for many projects to view this communication plan as the source document for the primary purposes of scheduling meetings, submitting reports and updating project statuses. In

some cases but rarely, the communication plan includes stakeholder management strategy and public responses in the event of emergencies.

Communication in itself is a complicated subject and it is made even more complicated with the myriad of communication devices and medium available; e.g. emails, short messaging system, instant messaging, tweeting, social media, etc. The number of persons involved adds further complexities as shown by the simple formula showing the number of communication channels required arising from the number of participants (n): $[n * (n-1) / 2]$

If the communication plan is viewed mostly as a functional document for the purpose of fulfilling a process as part of project governance; then it is not surprising that a project will face challenges due to the lack of communication amongst stakeholders, across project teams and even between members within the core project team.

The PMBOK Guide 5th Edition[16] defines stakeholders as an individual, group, or organisation who may affect, be affected by, or perceive itself to be affected by a decision, activity, or outcome of a project. It also includes all members of the project team as well as all interested entities that are internal or external to the organisation. This definition would have given us more than enough hint to understand why stakeholders' management is another common area of contention in project management and why there are always differences in view pertaining to whether a project is successful or has failed.

So it is important to understand that different stakeholders would have different needs and expectations from the project. Even a customer (organisation buying the product or service) and its users have different set of expectations. Likewise, the primary interests of the vendor, sub-contractors, consultants and project members are different from those of the customers and users. Hence, managing these varied expectations is essential.

Recognising that needs of stakeholders have increasingly become a key contributor to successful project implementation, the Project Management Institute has in its latest 5th Edition of the PMBOK Guide added a new Knowledge Area: Stakeholder Management to its other nine existing Knowledge Areas.

While these processes are now clearly documented, executing them may not be as straightforward. For instance, in the identification of stakeholders, it may not be easy to identify those stakeholders that are not so obvious. Excluding these stakeholders mean that their needs are not articulated and hence not incorporated in the baseline requirement documents. In developing the stakeholder management strategy, there will always be stakeholders that belong to the quadrant that have the greatest influence on the project but are not aligned with the project objectives for various reasons. Worst, if these stakeholders are "difficult" individuals to manage. From observations, most of us have the tendency take the path of least resistance and avoid confronting these "difficult" individuals thereby compounding to the risks of project failures.

Condensed Ideas
Planning, communicating and managing stakeholders will not ensure that projects will be successfully implemented and the desired benefits reaped but a good plan will help to identify the associated risks so that mitigation actions are planned. Management guru, Peter Drucker (1909 – 2005) was quoted as saying; "*Plans are worthless, but planning is invaluable*".

Understanding that communication requires pro-active discussions, dissemination of information to the appropriate parties on a timely basis will help us appreciate that having meetings just because these are scheduled is not communicating unless the intended purpose is shared and expected outcomes acknowledged by the involved

participants. George Bernard Shaw (1856-1950), an Irish playwright, socialist, and a co-founder of the London School of Economics once said, "*The single biggest problem with communication is the illusion that it has taken place*".

Stakeholders' management is sometimes mistaken to mean meeting the needs and wants of every stakeholder (which is impossible) and sharing only good news (which is disastrous). Stakeholders' management is a continuous effort of engagement with all involved parties and goes beyond just delivering on the required specifications and functionalities. From experience, many stakeholders remember the overall mood of the project and how they were being engaged. It is for these reasons why some projects are considered failures even though project parameters are somehow delivered.

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