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Project Charter: Filling the Communication Gap in ICT Projects.

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Summary

There is always a risk of failure in major Information & Communication Technology (ICT) projects, including acquisition contracts in government and defence. It is evident that something different needs to be done to achieve better results. Part of the answer may be to ensure a clear understanding and definition of the project from the beginning, using some form of "Project Charter". Use of project charters is far from universal, and is inconsistent. The aim of this research is to develop a model for a Project Charter, and guidelines for how to use it, to make it useful in practice. This paper compares different proposals for what a Project Charter might contain, proposes a new model for a Project Charter, and maps existing approaches to the model. It outlines ongoing qualitative research performed to validate the model by comparing it to what happens in real projects.

Kevwords:

Project Charter, Project Charter model, Project Charter contents, ICT project management

Introduction.

There is always a risk of failures in major software projects, including acquisition contracts in government and defence. Usually there is also huge cost involved when things go wrong. Software project crashes are unpredictable, occurring all over the world, and in small as well as big organisations. Losses in billion of dollars a year are reported (Charette, 2006).

Charette (2006) lists the following most common reasons for project failure: unrealistic or unarticulated project goals; inaccurate estimates of needed resources; badly defined system requirements; poor reporting of the project's status; unmanaged risks; poor communication among customers, developers, and users; use of immature technology; inability to handle the project's complexity; sloppy development practices; poor project management; stakeholder politics; and commercial pressures. Jost (2006) also highlights communications issues as a major reason for projects crashes. Kerzner (2006, p198), notes that "project management structures create a web of relationships that can cause chaos in the delegation of authority and the internal authority structure." All of the above-discussed issues impact on projects right from the beginning or even before they are started, through organisational culture and internal politics.

It is evident that something different needs to be done to achieve better outcomes, especially in complex projects such as software intensive projects. Part of the answer may be to ensure a clear understanding and definition of the project from the beginning, using some form of "Project Charter".

The Project Management Body of Knowledge (PMBOK) Guide (2004) defines a Project Charter as "a document issued by the project initiator or sponsor that formally authorizes the existence of a project, and provides the project manager with the authority to apply organizational resources to project activities".

A key question is what the Project Charter should contain. Several models exist, as described in the next section, and they are inconsistent. The PMBOK Guide does not mandate any particular solution, approach, or model for starting a project, but only highlights processes, which may be customised. Although this approach provides flexibility it may also be a contributing factor to why the Project Charter concept is not widely used or understood.

Another question is when the Project Charter should be created. The PMBOK Guide identifies three phases in the lifecycle of a project – initial, intermediate and final – and locates the creation of the

Project Charter in the initial phase i.e. during the project itself. The PMBOK Guide also states that the process of developing the Project Charter is "primarily concerned with authorizing the project or, in a multiphase project, a project phase". Its intended use as formal authorisation of a project indicates that this document should be created before the project is formally started and used as a communication instrument to represent a view of a project as conceived by upper management to the middle management level for execution. There is a grey area on the timescale that warrants the clarification of the sequences of processes leading to the start of the project and the creation and use of a Project Charter.

To overcome the above limitations, research is proposed that aims to develop a generic model for Project Charters, outlines a realistic and practical methodology for developing and using them, and proposes this developed model. Initial analysis is complete and detail analysis still coming in.

Project charter models.

According to PMBOK (p82, 2004), the project charter should contain the following eleven elements: requirements, business needs, purpose (justification), project manager and his authority, summary milestones, stakeholder influences, functional organization (including participation in project), assumptions, constraints, business case (with return on investment analysis), summary budget.

PMBOK presents broad view of project charter with no particular limitation to the size or nature of the project. This universal approach can be applied to ICT and software projects. Although the exact timeframe for drawing up a project charter is not strictly prescribed by PMBOK, it is suggested to be at the start of the project.

It is important to notice that the above Project Charter model does not contain a description of Project Scope; this is the next step in the process (PMBOK Guide, p86, 2004).

SWEBOK (2004) does not make any reference to project charters yet. However, it emphasises that software development "shares a common boundary" with such disciplines as management, project management, quality management, and systems engineering. Therefore, the concept of a Project Charter cannot be ignored and should be seen as vital element in the software development process, because it may provide useful upper management information to software engineering practice.

The Six Sigma methodology (Pyzdek, 2000), which has strong roots in the domain of statistics, concentrates on process improvement/process optimisation/quality. In Pyzdek view, the Project Charter plays very important role in the SixSigma methodology. It is the first stage in the whole project management process, and in his words, "can make or break a successful project".

The following eight main project charter elements are identified: project information (leader, master black belt, project start, project end, cost of poor quality), team members (sponsor, black belt, master black belt, subject matter experts), process time (start point, stop point), process importance, process problem, project goals, process measurement, project time-frame (milestones/dates).

Main difference and addition in this model (to compare with the PMBOK model) is comprehensive list of mentoring and support for the Project Manager/Leader which include sponsor, master black belt (highest technical and organisational Six Sigma proficiency), black belt, and subject matter experts. The other noticeable difference is introduction of process/project measurement.

The Prince 2 (1999) methodology on the other hand does not use Project Charter document. Prince 2 methodology when used in strong line management organisation may initially create some issues with project organisation structure or Project Board selection/nomination. Project charter seen as the project authorisation may help as it may convey or mandate certain project information and arrangements to the Prince 2 processes. Depending on the content, it may simplify development of some Prince 2 products like Project Initiation Document (PID) or even replace some of them. This should not be seen as a simplistic replacement of one document with the other. The real difference is in the source of information - document created by or for the executives, and that it is signed by

executive/upper management confirming in writing commitment to the project that should be part of enterprise wide approach to the organisation business.

Prince 2 first process is the Starting up a Project (SU) and requires Project Mandate that conveys some information from the executive to trigger a project (Prince2 2004, p106). However, this trigger is very loosely defined as "... a term used for whatever information comes in to trigger the project, be it as a Feasibility Study or details on the back of an envelope "(Prince2 2004 p107). Certainly, this is not the best way to start multimillion-dollar project. Therefore the whole SU stage is oriented toward documenting additional project related information such as Project Brief, Project Approach, Risk Log, Initiation Stage Plan (including the Project Initiation Document(PID)) in view to secure Initiation Authorisation of a project. Prince 2 PID covers such management information (Prince 2, 2004, p142) as: Project Brief, Project Management Team structure and job definitions, Project Approach, Project Quality Plan, Project Plan, Business Case, Risk Log, Project Controls, Communication Plan, Project filling structure. Certainly some of the above information although useful in later stage of project initiation, is not relevant to project charter contents presented by PMBOK. It is worth noticing that most if not all of Prince 2 PID will benefit enormously if creation of this documentation has input from executive/upper management of the organization. Therefore, introduction of project charter concept in organisations currently using Prince2 methodology may provide significant benefits to them as well.

McKeever(2006) proposes the following 14 elements for the Project Charter Model: project name, project purpose, project scope, project objectives (specific, measurable, agreed, realistic, time constrained), roles and responsibilities (sponsor, project manager, customer, project team), project approach, project deliverables, constrains and assumptions, references, terminology, risk management, project facilities and resources, performance measures, and approval.

According to Kerzner (2006, p448) the project charter as a minimum should include nine elements such as: identification of the project manager, the business purpose of the project (with assumptions and constrains), summary of conditions defining the project, project description, objectives and constrains, scope (with inclusions and exclusions), key stakeholders and their roles, risks, stakeholders involvement.

Many of the described above elements are difficult to compare as understanding of terms are assumed and relevant definitions or dictionary are not always maintained under different project methodologies. However, there are noticeable overlaps and differences in various proposals for project charter. Across different proposals, most often overlapping project charter elements are: project purpose, project objectives, project manager, and roles and responsibilities (stakeholders, sponsor, team members, and customer). The most noticeable differences are in such elements as: assumptions, constraints, budget, project approach, performance measures, resources, and facilities.

Proposed Project Charter.

In an attempt to develop theoretical project charter model the assumption was made that the Project Charter:

- is developed after decision to run the project is reached (based on the assessment of the Business Case or Initial Business Case); and
- it is used to authorise the start of the project.

From information gained during analysis of different literature proposals, the suggested theoretical model of Project Charter should contain the following elements (this is a superset of the other proposals after making allowances for different terminology in different proposals):

1. **Project Name** Customer 2. **Project Objectives** 8. Sponsor 3. Project High Level Requirements. 9. Project Team Roles and Responsibilities 4. Project Purpose. 10. Subject Matter Expert Assigned Project Manager 5. 11. Project Budget 6. Stakeholders

12.	Project Resources and Facilities	18.	Project Performance Measures
13.	Project Approach	19.	Project Risk Log
14.	Assumptions	20.	References
15.	Constraints	21.	Terminology
16.	Project Duration (Start/End)	22.	Project Approval
17.	Milestones Schedule		

Research method.

The challenge is to assess and understand whether it is really true that a project charter contributes to project success; which of the suggested elements are already used, could be used, and/or should be used in ICT and software intensive projects; and when and by whom each useful element should be defined.

A questionnaire was developed to collect information about proposed model and to improve it, based on the current and past experience of project managers working with ICT and software intensive projects.

An initial study was undertaken, where half a dozen projects were scrutinised for existence of project charter and its elements. Subsequently, the proposed Project Charter elements were mapped to real projects. The aim was to get an initial comprehension of how and when Project Charters were applied and to gain understanding how this may affect project performance.

Based on the initial study, a survey was developed. In a pilot study it was tested by two project managers in an attempt to revise and clarify survey questions.

The improved survey was distributed to the wider community of available projects/project managers in June 2008. Whenever possible face to face, interviews were conducted, but some questionaries were send by email. Intention was to run survey in Defence as well as in civilian environments to cover significant number of projects to collect as much information from different sources as possible; AIPM and CSA members were approached for participation in this research.

Although the most complete information may be gained from finished projects, restricting gathering data to only such cases may be counter productive and limit the available data significantly. Therefore, to cover a big number of projects no attempt is made to limit the selection to completed projects. The surveyed projects are in different stages, some finished and some continuing. Similarly, the size, duration and cost although monitored will not disqualify any project from the survey.

Planned analysis will include identifying which Project Charter elements are perceived as the most essential and if and how they relate to the project success in terms of cost, schedule and quality. Collected information may also provide answer to status and popularity of Project Charters. Impact of project charter on effectiveness on communication channels at the start of and during projects lifecycle will be analysed as well.

In every research, threats to validity must be considered and steps to address limitations must be planned. The following elements affect qualitative research (Trochim, 2007):

- credibility;
- · transferability;
- dependability; and
- · confirmability.

To address credibility issues in this research the selection of participants include professional project managers (with recognised qualifications) and/or people employed on project management positions for several years with relevant hands on expertise and experience.

To address transferability issues the research context and the assumptions that are pivotal to the research will be described in details to allow anyone to facilitate transfer of the results to a different

context and to judge the applicability of such transfer accordingly. In addition, intention was to run survey in different organisations (among Australian Institute of Project Management and Australian Computer Society members) to get wider audience perspective on the subject.

To enhance dependability issues the research will describe changes (if any) to setting of the study and how the changes influenced the research approach.

To boost confirmability, process of checking the data will be documented. Audit of collected data and analysis may be performed as well to eliminate potential bias and distortion.

Whenever possible, when coding survey responses, quantitative measures will be applied to facilitate statistical analysis.

Results.

From the analysis conducted so far it is evident that the Project Charters are not widely used. There is a big inconsistency how to start a project and wide discrepancy exists between different project methodologies. PMBOK introduced project charter concept just recently i.e. in 2004. Some of the project methodologies like Prince2 and SWEBOK have not addressed this concept yet, although relevant strategies to start the project exist in each methodology. So far, the biggest challenge was in analysing approaches from different methodologies as they use different terminology and not always provide sufficient definitions to facilitate detailed analysis.

Projects that used project charter	75.64%
Projects that did not use project charter	24.36%

Table 1. Usage of project charter (or a document resembling project charter) in surveyed projects

None of the projects in initial pilot activity has used project charter as a vehicle to start the project although all of them follow one of the major project management methodologies. The application of this methodology was heavily customised in each project. One of the project suffered from lack of resources from the start and although was eventually finished the completion date was significantly delayed. Clear lesson from this project is that resources and budget need to be clearly defined and allocated for the project to be delivered on time. Over 24% of survey responses (Table1) indicated that they did not use a project charter or any document which is similar to the project charter.

Element	Percent of responses	Element	Percent of responses				
Very important – critical, should be standard							
Project Objectives	73.49%	Project Budget	54.22%				
Project Purpose 66.27%		Stakeholders	43.90%				
Sponsor	62.65%	Assigned Project	39.02%				
		Manager					
Project Approval	Project Approval 60.98% Project Assumptions		37.35%				
High Level	54.88%	Project Approach	36.59%				
Requirements			·				
Customer	54.88%	Project Start/End	33.33%				
Important to a great extent							
Project Constraints	37.80%	Project Team Roles	32.53%				
		and Responsibilities					
Project Performance	33.72%	Project Risk (Project	31.33%				
Measures		Risk Log)					
Project Milestones 32.93%		Project Resources	29.27%				
Schedule and Facilities							
Important to moderate extent							
Project-specific	32.91%	Project-specific	30.49%				
Terminology		References					
Subject Expert 31.33%							
Important to some extent							
Project Name 25.30%							

Table 2. Opinions on importance of various elements in the proposed project charter.

From the proposed model, the elements seen as most important (Table 2) were: Project Objectives, Project Purpose, Sponsor, Project Approval, Project High Level Requirements, Customer, Project Budget Stakeholders, Project Manager, Project Assumptions, Project Approach and Project Duration. Only first seven elements were identified as very important by absolute majority of the responses. It seems that documenting project assumptions is seen as more important than identification of project risk.

Our hypothesis is that a project charter with relevant contents may influence the outcome of the project from the beginning by improving communication channels between corporate and middle management through documentation of key project information. The next step in the analysis will be to test whether this hypothesis is supported by the data.

Conclusions.

Assuming that the decision to start the project (after business case was evaluated) is reached, well-developed and timely applied project charter has a potential to set project in the right direction straight from the beginning. Additional benefit of using project charter may be an improved project communication and coordination on the organisational level. Therefore, project charter was selected for this study, and the hypothesis that project charter may benefit ICT and software intensive projects, where failure rate is still high, will be tested.

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