

**Series on increasing project management contributions
to helping achieve broader ends¹**

Article 2 of 4

Customers' needs and project requirements

By Alan Stretton

BACKGROUND

In the project management world, all too often the project is viewed as an end in itself. The focus is usually on delivering planned project outputs. However, this viewpoint loses sight of the bigger picture. It is virtually always the case that projects are really only part of a means to help achieve broader ends. If we focus more on the latter, opportunities can emerge to increase the contributions project managers can make towards the achievement of such ends. I believe it is important for the project management industry to understand and embrace this broader context, because it provides a platform for project managers to add more value to customers.

This series looks at how project managers can add value via three mechanisms.

- Helping convert project outputs to actual realisation of customers' planned business (or equivalent) outcomes;
- Helping customers determine their business needs, plan for appropriate outcomes, and establish requirements of projects to help realise these outcomes;
- Helping organizations determine their strategic objectives, plan for achieving them, and develop an appropriate portfolio of projects to help such achievement.

The first article of the series (Stretton 2016b) addressed the first bullet point. This article is concerned with the second bullet point.

INTRODUCTION

The processes which conclude with customers achieving their desired outcomes start with planning processes – i.e. with customers establishing their business (or equivalent) needs, and deciding just what future outcomes they do wish to achieve.

It is strikingly obvious that, if the customers' business needs have not been accurately determined and captured, then any subsequent project designed to help satisfy such needs will almost certainly be ineffective. Yet, the project management literature rarely discusses the necessity for doing this, let alone ways and means.

This article is first concerned with what I have called capturing customers' business (or equivalent) needs, and possibilities for project management to contribute thereto.

¹ Editor's note: This series of articles is by Alan Stretton, PhD (Hon), Life Fellow of AIPM (Australia), a pioneer in the field of professional project management and one of the most widely respected voices in the field of program and project management. Long retired, Alan is still accepting some challenging research and writing assignments; he is a frequent contributor to the *PM World Journal*. See his full profile at the end of this article.

We then discuss planning processes for converting these needs into outcomes, which generally involve projects. We go on to discuss the meagre material in the literature on establishing requirements for projects which will best facilitate the achievement of customers' outcomes, and the potential for project management to contribute here. But first, two notes on organisational types, and terminologies.

TWO DIFFERENT TYPES OF ORGANIZATIONS THAT UNDERTAKE PROJECTS

As will be noted in all four articles of this series, there are two quite different types of organizations that plan and execute projects. I follow Cooke-Davies 2002 in describing them as project-based and production-based organizations, and borrow from Archibald et al 2012 (who use different descriptors) in defining them:

- **Project-based organizations** derive most (if not all) of their revenue and/or other benefits from creating and delivering projects.
- **Production-based organizations** derive most (if not all) of their revenue and/or benefits from producing and selling products and services. They utilize projects to create or improve new products and services, enter new markets, or otherwise improve or change their organizations.

As will be seen in more detail in later discussions, the scope of involvement by project managers in project-based organisations is normally far greater than in production-based organisations.

A NOTE ON TERMINOLOGIES

Sponsors, stakeholders, funders, owners, clients, users – customers

As discussed in more detail in the Appendix to this article, different writers use different descriptors for some of the key stakeholders in projects. For the purposes of this article I am not overly concerned about these differences, and simply propose to use the terminology “customers” to cover any and all of the above, plus any other key stakeholders not already mentioned.

CAPTURING CUSTOMERS' BUSINESS (OR EQUIVALENT) NEEDS

The nature of customers' business (or equivalent) needs

By “equivalent” needs I mean customers' needs in other non-business contexts, such as educational, healthcare, transportation, etc. In the following I will drop “or equivalent”, and simply describe customers' needs as business needs.

It must be emphasised that these business needs should not be confused with any project which may subsequently help satisfy these needs. The project itself does not satisfy such needs merely by its existence. As we saw in the first article, it is what is then done with the product of the project which contributes to needs satisfaction.

Whilst project managers tend to think project first, customers rarely do, if ever. This was first brought home to me over fifty years ago, when a Civil & Civic client commented to me along the following lines.

“Alan, I want the worry of a project like I want a hole in the head. But I can see that I must undertake this project to help me implement my business plan. So, I'll simply have to put up with it”.

Project managers need to be continually mindful of this important distinction between the customer's perception of his/her business needs, and the project manager's somewhat natural propensity to think project first.

As noted in the introduction, it is strikingly obvious that, if the customers' business needs have not been accurately determined and captured, then any subsequent project designed to help satisfy such needs will almost certainly be ineffective. From the customer's perspective, the success or failure of the project is represented by success or failure in satisfying the business needs. From the project manager's perspective, it is therefore absolutely vital to ensure that the business needs have been accurately captured in the first place.

Processes of capturing customers' needs

Capturing needs is very often easier said than done. As Dalcher 2014a reports,

Steve McConnell notes that the most difficult part of requirements gathering is not recording what the users want but the exploratory development activity of helping users figure out what they want.

In somewhat similar vein, Frame 1994:106 points out that the role of the needs analyst is essentially a helping one (which is the way we in Civil & Civic also saw it). Frame put it this way:

Customers generally do not know what they need with any degree of precision. A major function of needs analysis is to work closely with customers to help them develop a more precise sense of their needs.

A good statement of needs is the product of a partnership between the needs analysts and the customers

Winter, Andersen et al 2006 quote the approach of Normann 2001 of “mentally framing oneself as part of the customer's business”, and particularly looking at the client organisation's relationships with its own customers:

a particularly useful way of re framing , in our experience, is to focus on the customer of the company as the major stakeholder, and to mentally frame oneself as part of the customer's business. Many pay lip service to this idea; few take it to their hearts.

The most detailed contribution to needs capture processes that I know of is by Frame 1994, who devoted a complete chapter (pp.95-122) to “Satisfying customers: Knowing who they are, what they want, and when they are right or wrong”.

I drew on this heavily in an article I wrote entitled “Identifying/verifying customers' needs before specifying product/service requirements in the program/project context” (Stretton 2009e), which also incorporated some of the experience of Civil & Civic in my time with them. That article attracted more requests for reprinting in other journals around the world than anything I have written before or since – which I assume indicates that many others had also recognised a need for more guidelines in this area. It was republished as a Second Edition in this journal in Stretton 2013e.

The importance of accurately capturing customers' needs

The project management literature seldom discusses the pre-eminent importance of accurately capturing customers' business needs. Morris 2013:232 observed that project managers still don't really think about sponsors' needs hard enough.

However, there have been some exceptions. Recently, Dalcher 2014b observed that

....a project must take great care that it accurately defines the customers' needs and expectations, as the ultimate power about deciding on quality is given to the customers.

Over two decades ago, Frame 1994:99 emphasised that the importance of doing a good job of identifying needs cannot be overstated. Indeed, it is blindingly obvious that if the customer's business needs have not been accurately captured, there is little, if any, chance that satisfactory outcomes will be realized, and needs satisfied.

I understand from colleagues in IT and related application areas that the importance of customers' needs has been seriously addressed in some service industries such as IT, finance and marketing. In particular, evidently Business Analysts have become prominent, particularly in IT, and this industry has recognised processes for needs and requirements gathering. However, little of this context-specific experience appears to have yet found its way into the mainstream project management literature. Let us hope that this situation will soon be redressed.

The importance of having effective needs analysts

As I noted in Stretton 2013e, the process of accurately identifying the customer's needs is not only critically important – it is a difficult task, calling for people with special skills in this area. Frame 1994 calls such people “needs analysts” (evidently with similar functions to IT's Business Analysts) and suggests that

Perhaps the single most important step we can take to assure the proper identification of customers' needs is to hire competent needs analysts.

Frame goes on to discuss six traits of effective needs analysts, summarised here as follows.

1. The analysts must have a strong ability to deal with customers and extract from them a sense of what they truly need
2. They must have good political skills. This means they must recognise that all customers are not equal in a political sense.
3. They must be technically competent. They should be able to match customers' ill-defined needs to possible solutions
4. They must be open-minded and possess a good imagination. Open-mindedness is necessary so that they do not close off possible solutions to problems because of a narrow outlook
5. They must have a high tolerance for ambiguity. Because customers do not generally know what they need or want, they will provide the needs analyst with mixed signals.
6. They must be articulate.

This suggests the following question, "Can project managers become effective needs analysts?" The above traits do not necessarily coincide with those of effective project managers. However, our experience in Civil & Civic was that quite a few of our project managers became very effective needs analysts, as now discussed.

Project management involvement in capturing customers' business needs

From the late 1950s my old employer, Civil & Civic, was primarily in the business of providing project management services to customers whose business needs tended to involve possible buildings or other engineering projects to help satisfy these needs. By the early 1960s it was abundantly clear that many of our customers simply did not have the necessary in-house resources to clearly articulate their business needs. Civil & Civic therefore became increasingly involved in helping customers think through the nature of their businesses, and their business needs.

This very often involved helping customers look at their businesses in the strategic sense, as will be discussed in more detail in the next article in this series.

In more specific instances, we instituted a practice which we called Client Needs Determination (CND) which was really a process of helping clients capture their business needs. These were all done by our project managers and staff, and the demand for CND services rapidly increased – to the extent that we had to develop individuals and small teams who specialised in CND in the business areas that were in most demand at the time, such as health-care, education, meat processing and the like. In the course of doing this, we found that many of our project managers became very able at helping customers capture their business needs.

In general terms, there appears to be a strong case for involving project managers in needs capture. Further, even if this work has already been done by others, disciplined project managers will generally want to check out its adequacy.

Overall, the lack of adequate materials on this crucially important work in the project management literature is nothing less than appalling. This also appears to apply in the practice of project management, and it is small wonder that we have so many failures through not “doing the right project”, as I discussed quite recently in this journal (Stretton 2015c,d).

PLANNING TO CONVERT BUSINESS NEEDS INTO BUSINESS OUTCOMES

Having captured customers' needs, then come the tasks of developing alternative ways to convert these needs into desired outcomes, evaluating these alternatives, and choosing the best option. The best option may, or may not, include a project, or projects. In some cases, satisfaction of customers' needs does not involve projects at all. I described such a case in Stretton 2013e. But, in most cases, one or more projects will be involved.

Returning to the planning work involved in this stage, who is better equipped to develop alternatives, evaluate them and choose the best option than project managers? I suggest the answer is no-one. And, as already implied, disciplined project managers will be motivated to make sure they are doing the right project.

This leads us to the next step, which is establishing the technical requirements that such project(s) need to deliver to best help satisfy the customer's business needs.

ESTABLISHING REQUIREMENTS OF PROJECTS TO HELP SATISFY NEEDS

A note on the terminologies “requirements” and “requirements management”

There are two different ways in which the descriptors “requirements”, and “requirements management”, are used in the project management literature.

- ***Requirements specifically associated with projects:***

This is the most common usage in the project management literature, as illustrated by the following descriptors from Morris 2013:168.

Requirements state project needs.

Requirements management begins with the process of defining the *users'* (the customer's and others') requirements for the project.

- ***Requirements associated with capturing broader customers' needs:***

However, the terminology “requirements management” has also been used in the literature in the context of capturing broader customer/stakeholder needs – e.g.

Requirements management: The process of capturing, assessing and justifying stakeholders' wants and needs. (APMBoK 2012:241)

Requirements management is concerned with understanding, formulating and documenting the perceived needs of stakeholders. (Dalcher 2014a)

Discussion: As already noted, customers' needs are business (or equivalent) needs. These are totally different from, and should not be confused with, any project which may subsequently contribute towards satisfying these needs.

It is therefore confusing to have "requirements management" being used in two completely different contexts. However, there appear to be many project managers who do not recognise the nature of these different contexts.

My suggestion is that we do not use the word "requirements" at all when we are discussing client and other stakeholder (i.e. "customers") needs, but restrict its use entirely to requirements of any ensuing project(s).

Establishing project requirements to help satisfy customers' business needs – Project definition

Requirements, in turn, are developed from our understanding of needs (Frame 1994:103)

As Frame says in this lead quotation, requirements for projects should be developed from understanding customers' needs – and he means business needs. However, there is little guidance in the literature as to how to go about this task. One of the relatively few comments relevant to this that I know of comes from Morris 2013:233.

....we should be thinking of the purpose for which they [the projects] should be being managed. They should add value to the realisation of the sponsors aims and strategies, should 'fit' the context in which they and their sponsor will be operating,....

In making this comment, Morris was focusing more on opportunities to build in value later in the project life cycle. However, the best place to build in value is surely in the initial establishment of the requirements of the project. As Morris noted (p.283),

The front end is the most important part of the project offering the greatest opportunities to add, or destroy, value.

As already noted, needs capture and developing project requirements from these needs has evidently been seriously addressed in service industries such as IT, finance and marketing – and perhaps also elsewhere. However, few of these materials appear to have found their way into the broader project management literature. It would be a great boost to project management if we were able to access and publish some of these materials on developing project requirements, and to then build on those. We need these sorts of contributions to enhance project definition.

Regarding involvement by project managers in developing project requirements, it is first noted that, in project-based organisations, they are invariably involved.

However, evidently this often does not apply in production-based organisations. Dalcher 2014a describes a relatively common situation in such organisations as follows.

...requirements managementis an often ignored aspect of project elaboration that is done by business analysts, systems analysts, systems engineers or requirement engineers. Project managers often inherit an agreed statement of requirements which can become a confining constraint around the project.

This leads us to a broad question put by Morris 2013:88, as follows (his italics)

Should project management be responsible for ensuring that requirements are adequately defined? This is one of the defining issues of the project management discipline.

Later in his book, Morris answers his own question as follows (pp. 167-8)

For years, there have been arguments about how involved project managers need to be in managing the technical development of a project. Yet there is plenty of evidence that technical issues cause projects and programs to fail.

The answer surely is that project and program managers need to ensure the right processes and practices are being followed with respect to technical definition and development so that obvious errors are avoided.

There appears to me to be an unanswerable case for project management to undertake this type of checking, at the very least. However, I believe there is a very strong case for project managers to go well beyond merely ensuring that others have followed the right processes and practices.

I contend that project managers themselves should be responsible for the effective definition of project requirements. Who else is better placed than project managers to ensure well defined technical requirements which the project must deliver, and to do so in formats best suited to facilitate subsequent project execution?

SUMMARY/CONCLUSIONS

The three main sectors discussed in this article are summarised in Figure 1 below. (I have used the short descriptor "Project definition" in this figure instead of the more detailed and accurate descriptor "Establishing project requirements to help satisfy customers' business needs").

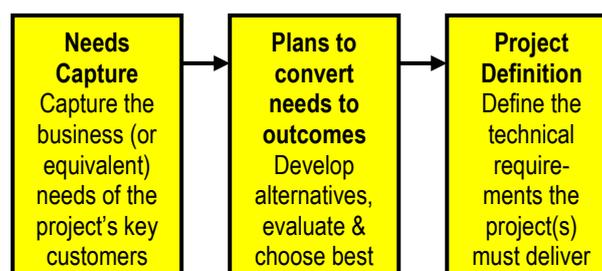


Figure 1: Summarising the three main sections discussed in this article

We summarise each of these in turn.

Needs capture

- Customers' needs are rarely, if ever, for a project per se. Their needs are invariably focused on their broader business needs (or their equivalent in other contexts, such as educational, healthcare, infrastructure, etc.).
- Capturing needs is a process of helping customers think through the nature of their business, and their business needs.
- It is critically important to accurately capture customers' needs. The validity and utility of all current actions depend on it.
- Need capture therefore requires the needs analyst to have particular relevant skills.
- Civil & Civic's experience in needs capture indicates that many project managers have been able to do this job well.

Plans to convert needs to outcomes

- These planning processes involve developing alternative ways to convert these needs into desired outcomes, evaluating these alternatives, and then choosing the best option.
- Who is better qualified for this kind of planning work than project managers?

Project definition – project requirements

- These are processes for establishing the technical requirements of projects which will make the best contribution in helping satisfy customers' needs.
- The terminologies "requirements" and "requirements management" are used in two very different contexts in the literature, which can cause real confusion. It was recommended that these terminologies be applied only in the context of project requirements.
- The broader project management literature offers few guidelines on developing project requirements. However, evidently some service industries such as IT, finance and marketing have developed substantial know-how in this domain, and it would be most helpful to have these more widely published and accessed.
- Who else is better placed than project managers to define the technical requirements which the project must deliver, and to do so in formats best suited to facilitate subsequent project execution?

In conclusion, I note that the third article in this series will discuss potential (and sometimes actual) roles for project management in helping organizations determine their strategic objectives, plan for achieving them, and develop an appropriate portfolio of projects to help such achievement.

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APPENDIX: NOTES ON TERMINOLOGIES

Sponsors, stakeholders, funders, owners, clients, users – customers

Different authors use different descriptors for certain of the key stakeholders in a project. The following appear to be the most frequently used.

Sponsors: Many authors describe the key stakeholder as a sponsor. For example, Morris & Edkins 2014 say

The **sponsor** is “the holder of the **business case**” – the person responsible for the project and accountable for the satisfactory realization of the project proposal.

APMBoK 2012:36 says much the same, and expands on it slightly.

The **sponsor** is accountable for ensuring that the work is governed effectively and delivers the objectives that meet identified needs.

Sponsorship is normally carried out by an individual who may also be known as an executive, **senior responsible owner (SRO) or client**.

Stakeholders: Morris 2013:284 cites the sponsor as one of the many stakeholders in a project, as follows.

Of the many stakeholders influencing the front-end and downstream execution, the sponsor is the most critical.

APMBoK defines project stakeholders thus:

The organisations or people who have an interest or role in the project, programme or portfolio, or are impacted by it.

Morris 2013:284 also associates sponsors with funding, as shown in the extension of the above quotation.

Of the many stakeholders influencing the front-end and downstream execution, the sponsor is the most critical. It is his, or her, money (or budget) that is being drawn on.

Funders: Zwikael & Smyrk 2009 use the more direct descriptor funder to cover this role:

The person (or entity) approving these [project] outlays is identified below as the **“funder”**

Owners: Zwikael & Smyrk 2009 also introduce a project owner as follows.

...the question of accountability for target outcomes needs to be answered. At first glance it would appear that the **funder** is self-accountable. [if not] The new role identified here is that of **project owner**, who becomes the **funder's agent**.

Clients: This was the terminology we used in Civil & Civic to describe the principal representatives of the organisations to whom we were providing project management services. Morris 2013:284 also uses this terminology, albeit in a more expansive context

Projects' clients may formally be their sponsors but morally the client is also Operations or 'the user'.

Users: In this quotation Morris has also equated clients with users, as do several other authors. For example, APMBok 2012:244 defines users as follows.

Users The group of people who are intended to receive benefits or operate outputs.

Dalcher 2015 also notes that

The Fifth edition of the PMBOK Guide confirms that **users** are included amongst the project stakeholders, as "**users are the persons or organizations who will use the project's product, service or result**".

Customers: Zwikael & Smyrk 2009 introduce customers in the following way.

The entities who **utilise** a project's outputs in such a way as to generate target outcomes are called the project's **customers**.

Discussion

Rather obviously, different writers are discussing different contexts, and also come from different countries which have differing common usage terminologies. For the purposes of this article I have not been overly concerned about these differences, and have simply used the terminology "customers" to cover any and all of the above, plus any other key stakeholders not already mentioned.

About the Author



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Alan Stretton is one of the pioneers of modern project management. He is currently a member of the Faculty Corps for the University of Management & Technology (UMT), USA. In 2006 he retired from a position as Adjunct Professor of Project Management in the Faculty of Design, Architecture and Building at the University of Technology, Sydney (UTS), Australia, which he joined in 1988 to develop and deliver a Master of Project Management program. Prior to joining UTS, Mr. Stretton worked in the building and construction industries in Australia, New Zealand and the USA for some 38 years, which included the project management of construction, R&D, introduction of information and control systems, internal management education programs and organizational change projects. He has degrees in Civil Engineering (BE, Tasmania) and Mathematics (MA, Oxford), and an honorary PhD in strategy, programme and project management (ESC, Lille, France). Alan was Chairman of the Standards (PMBOK) Committee of the Project Management Institute (PMI®) from late 1989 to early 1992. He held a similar position with the Australian Institute of Project Management (AIPM), and was elected a Life Fellow of AIPM in 1996. He was a member of the Core Working Group in the development of the Australian National Competency Standards for Project Management. He has published over 160 professional articles and papers. Alan can be contacted at alanailene@bigpond.com.au.

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