Series on Project Contexts

3. Contexts of projects undertaken by supplier organisations (SOs) and by owner organisations (OOs)[1]

By Alan Stretton

INTRODUCTION

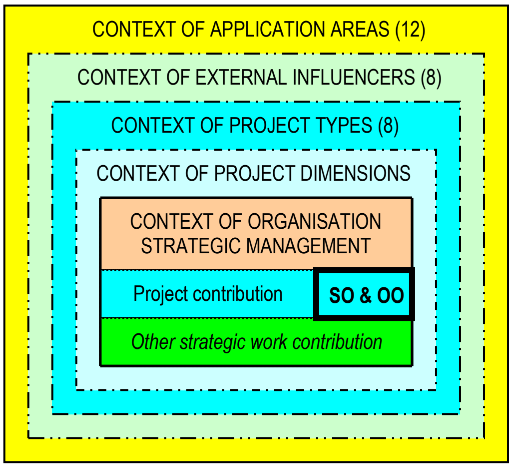

Figure 1: Outline project context model

This is the third of a series of seven articles which identify and discuss a variety of key contexts which impact on the management of projects. The basic reason for developing this series is that there is far too little attention given to the contexts of projects in the relevant literature – particularly when you consider that, in practice, effective management of projects' contexts is usually quite critical to achieving overall project management (PM) success.

The first article of this series (Stretton 2019e) identified six key types of project contexts. These were summarised pictorially into a combined model, depicted in skeleton format in Figure 1 to the left.

The second article of this series (Stretton 2019f) was concerned with further discussion of the context of organisational strategic management. This third article is concerned with supplier organisations (SOs) and owner organisations (OOs) as indicated by heavier outlines in Figure 1. It will focus on two groups of extended SO services, and with OOs that create and manage long-term assets.

RECAPPING REPRESENTATIONS OF PROJECTS IN THE CONTEXTS OF BEING UNDERTAKEN BY SOs AND OOs IN THE FIRST ARTICLE

Some definitions/descriptors of the two types of organisations – SOs and OOs

There are two quite different groups of organizations that plan and execute projects. Taggart 2015 describes them as Supplier Organizations (SOs) and Owner Organizations (OOs). For many years I followed Cooke-Davies 2002 in describing these as project-based and production-based organizations respectively. I borrowed from Archibald et al 2012 (who use different descriptors) in defining them as follows:

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- **Project-based organizations [SOs]** derive most (if not all) of their revenue and/or other benefits from creating and delivering projects.

- **Production-based organizations [OOs]** 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.

Lehmann's list of differences for project management between SOs and OOs

Lehmann 2016 uses the descriptor **"customer projects"** to describe projects delivered by an SO to an OO, and **"internal projects"** to describe projects run internally by an OO. I adapted his table of differences as shown below in Figure 2 (originally in Stretton 2017e).

	COMMON DIFFERENCES	
	Customer projects (SOs)	**Internal projects (OOs)**
Are .... for the performing organization	Profit centres	Cost centres
Project selection is mostly made as	Bid / no-bid decision	Internal decision
Project work for the requester is based on	Legally binding contracts	Internal agreements
Team's familiarity with the target environment at project start is	Low	High
Project managers are mostly	Rather powerful	Rather weak
Obtaining resources is mostly	Rather easy	Rather difficult
Management attention for the project is mostly	Rather high	Rather low
Project managers must consider	The interests of both the customer and contractor	The interests of the own organization
Staffing and procurement mostly managed by	Project mgt. team	Functional units
Reputation inside the own organization is mostly	Rather high	Rather low

Figure 2: Adapted from Lehmann 2016, Figure 5 – Differences in the environment and the requirements that project managers are facing

Other differences for project management between SOs and OOs

I added the following observations about such differences:

- In the SO context the project manager often has to cover a wider range of project life-cycle processes than in the OO context.

- The extent of the project manager's responsibility and authority in the SO context is generally far greater than in OOs.

- In the SO context, our perspective in Civil & Civic (C&C) was that if you were managing a project, you were managing a business, and that that was the project manager's job, albeit with appropriate support.

- The project management literature tends to focus on internal OO projects. However, Taggart 2015 suggests that there appear to be more project people working in SOs than OOs, and that bodies of knowledge should give more guidelines that are particular to project management in SOs.

Adding the context of SOs & OOs to the organisational strategic mgt. context

This was done as indicated in Figures 3 and 4 below – the latter being in the skeleton format shown earlier in Figure 1.

CONTEXT OF ORGANISATIONAL STRATEGIC MANAGEMENT				
1. Establish strategic objectives	2. Develop strategic options, evaluate, choose the best	3. Consolidate strategic initiative(s)	4. Execute strategic initiatives	5. Achieve strategic objectives.
PROJECT(S) CONTRIBUTION (PLC)	Project Incubation Phase	Project Feasibility and Definition Phases	Project Design and Execution Phases	**CONTEXT OF SOs & OOs**
OTHER STRATEGIC WORK	*Other strategic work* incubation stage	*Other strategic work* feasibility and definition	*Other strategic work* design and execution	*Other strategic work* in transition

Figure 3: Adding the context of SOs & OOs to the organisational strategic management context

CONTEXT OF ORGANISATION STRATEGIC MANAGEMENT	
Project contribution	**SO & OO**
Other strategic work contribution	

Figure 4: Skeleton format of Figure 3

We will first look at two groups of SOs which provide extended project management services to OOs in the contexts of their strategic management processes. The descriptor "extended" indicates that the scope of these SO services goes well beyond those normally associated with project management per se. The first group comprises SOs that provide such services to a variety of clients, whose in-house strategic management capabilities vary from very substantial through to very few.

SOs THAT PROVIDE EXTENDED PM SERVICES TO CLIENTS WITH VARYING IN-HOUSE STRATEGIC MANAGEMENT CAPABILITIES

Introduction

Most of my nearly forty years in the practice of project management were spent in SO organisations, mainly providing project management services to external clients. Provision of these types of services was not necessarily straight-forward, as client organisations varied very widely indeed with regard to their own in-house capabilities in strategic planning and execution.

This presented some interesting challenges, and the nature of these, and how to respond to them, is the main subject of these discussions on this first group of SOs. The following will draw heavily on our extensive experience in Civil & Civic (C&C) in this area. I will use an abbreviated headline version of Figure 3 – as shown in Figure 5 below – to illustrate some relevant issues (this time with project contributions at the bottom of the figure, to help the utility of these illustrations).

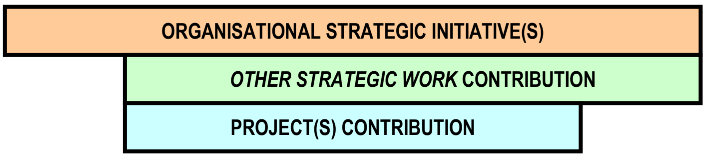

Figure 5: An abbreviated headline version of Figure 3

Before looking in more detail at how we engaged with clients with varying in-house capabilities, I want to briefly discuss the governance arrangement that Civil & Civic insisted be put in place for all our SO project management services to clients, irrespective of the level of their in-house capabilities. We called this the Project Control Group, or PCG, as now discussed.

Governance via Project Control Groups (PCGs)

The Project Control Group (PCG) acted in a similar governance role to the Board of Directors of a public company. The core PCG membership was as follows.

- Senior client management
- Client representative
- Senior Civil & Civic management
- Civil & Civic project staff – project manager

The PCG would be supplemented by others at various stages of the project, when particular types of knowledge or expertise were deemed to be advantageous. PCGs were mandated in Civil & Civic from 1963, and were very effective indeed in providing not only effective governance, but also management guidance as needed, and in establishing and maintaining effective working relationships with clients.

Categorising the varying levels of in-house capabilities

The in-house organisational strategic management capabilities of our clients varied over a very wide range, but can be broadly grouped into three categories.

(a) SOs and clients with substantial to very substantial in-house capabilities
(b) SOs and clients with few, if any, relevant in-house capabilities
(c) SOs and clients with some, but limited, relevant in-house capabilities

(a) SOs and clients with substantial to very substantial in-house capabilities

Clients who are relatively rich in appropriate in-house people resources know what they want to do strategically, both long term and short term, and have appropriate resources to plan and develop their own strategic initiatives. Provision of the project components of the strategic initiatives by SOs is normally secured by contract.

Well-resourced clients generally appoint a senior manager to be responsible for effective implementation of specific strategic initiatives, and to supervise associated contracts for projects. I describe this position as the client's *strategic initiative manager*, as shown in Figure 6 below.

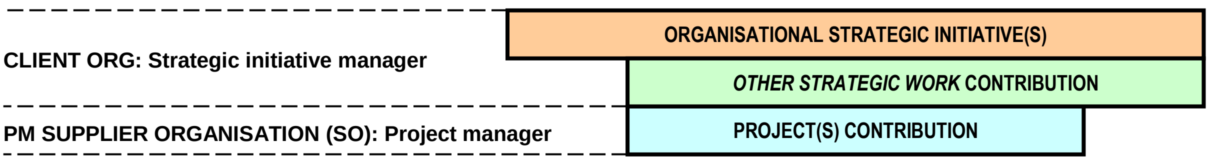

Figure 6: Resource-rich clients: Participants' responsibilities for the components of Figure 5

In addition to project-related responsibilities, the client's strategic initiative manager is also responsible for the planning and execution of *other strategic work*, and for its coordination with the project work being undertaken by the SO project manager. The latter is, of course, is responsible for delivering the product of the project to the OO.

We now move on to look at the SO/client scenario at the other end of the client strategic capability spectrum.

(b) SOs and clients with few, if any, relevant in-house capabilities

At the other end of the spectrum, in our experience these type of clients were generally smaller organizations which were looking to expand, or relocate, or similar, and/or had only rarely made significant changes in the past, and therefore did not have appropriate in-house resources to plan and manage such changes.

These clients typically needed substantial help with such strategy-related issues as:
- Determining their longer-term and/or shorter-term strategic business objectives;
- Developing plans and strategic initiatives to achieve their objectives.

In this scenario, smaller organisations would generally nominate a responsible senior executive. However, often there would not be effective representation at detailed operational levels, which put extra pressures on their senior executive. In these circumstances, effective guidance by the PCG becomes particularly important.

The working arrangements under this scenario might appear to be somewhat one-sided, because the client organisation is very substantially reliant on inputs from the SO. However, there is only so far an SO can go in helping clients establish and/ or implement their strategic objectives and/or strategic initiatives. There is still much work that only the client can undertake, particularly with *other strategic work*.

The responsibilities of our SO project manager varied widely, but were mainly dictated by the findings of what we used to call Client Needs Determination (CND) – i.e. helping the client determine its strategic and/or commercial/business needs. The strategic components of these types of efforts were usually very substantial indeed, and in this sense it would be reasonable to describe our project managers as *"strategic" project managers*, as represented in Figure 7.

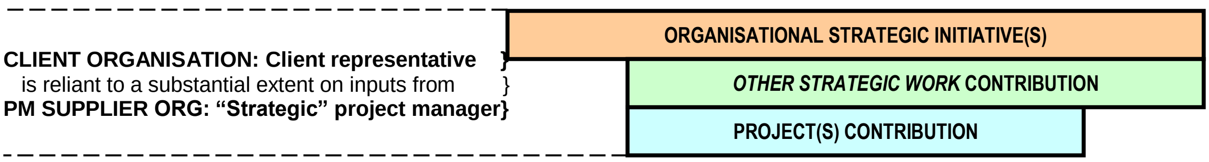

Figure 7: Few/no-resources clients: Participants' responsibilities for the components of Fig. 5

Civil & Civic originally became involved in helping clients in the broader strategic area in 1959, in the education sector, in helping Loreto Convent, Kirribilli, develop an integrated business and financial plan for the school's rebuilding and expansion.

(c) SOs and clients with some, but limited, relevant in-house capabilities

The situation with this scenario is quite similar to scenario (b) in many ways. The main difference here is the availability of at least some reasonably substantial, if somewhat limited, contributions by the client's own in-house resources.

In this scenario, we found that the types and capabilities of persons nominated as the clients' representatives were very variable indeed, as were the extents of their authority to make decisions. As the SO, we had to be flexible, and appoint people to each project team who had appropriately complementary capabilities.

For this scenario I describe the combined effort between the SO and client as "a kind of joint venture", simply because I cannot find a better descriptor of how this actually worked in practice. The fact that the client organisation contributed some of its resources to work jointly with our SO resources made it more of a joint venture in a literal interpretation, so that the above descriptor seems to be quite appropriate. This working arrangement is illustrated in Figure 8.

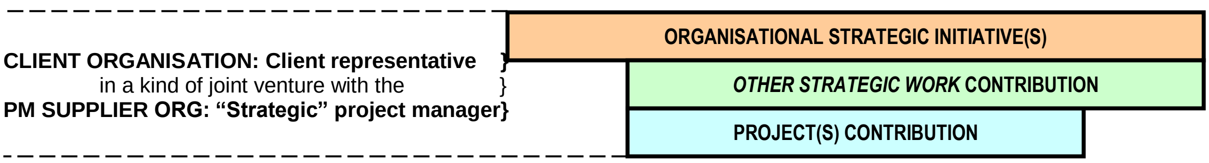

Figure 8: Partially resourced clients: Participants' responsibilities for the components of Fig. 5

Discussion on these categories/scenarios

In one sense, the above discussions about the scenarios associated with these three different categories may appear to be rather pedestrian. However, with the two scenarios in which the client did not have adequate in-house strategic management capabilities, Civil & Civic found it necessary to develop the capabilities of many of its project managers well beyond traditional project norms, in order to be able to offer clients effective extended commercial- and/or strategic management-related services. This was far from being a pedestrian development.

Indeed, such enhancements to many of our project managers' capabilities became increasingly important components of Civil & Civic's services, and several of our project managers and project teams became strongly specialised in helping owners in particular domains, notably in developing assets in the industrial, health, office, retail and leisure sectors (as recorded in Clark 2002:94). In effect, this resulted in generating several new lines of business for Civil & Civic.

Meantime, another group of SO services was emerging, on a much larger scale, and in a different domain. These were services offered by EPC organisations, many of which became very large organisations in their own right, and whose work has been most commonly associated with major complex projects, or mega-projects. This group of SOs is now discussed in more detail.

SOs PROVIDING EXTENDED EPC SERVICES IN MEGA-PROJECT CONTEXTS

The nature of EPC services

EPC is widely used shorthand for Engineering, Procurement & Construction, which is a descriptor for organisations that provide these types of SO services to OOs, most notably in the contexts of major complex projects and mega-projects. Bob Prieto, from whom we will be quoting below, usually uses the descriptor "program manager" – and sometimes simply "project manager". But I will stick with the EPC descriptor, which is widely used, and rather more specific.

EPC organisations have been providing services in the context of very large projects for many decades – organisations such as Fluor, Bechtel, Jacobs, and a host of others. EPC contractors typically provide a wide range of services beyond projects per se, to help OOs achieve their business objectives – hence the inclusion of the descriptor "extended" in the main heading above.

I have had little direct hands-on experience with EPCs operating in the mega-project domain. However, in 2012 I was a guest presenter in two senior level internal project management (PM) forums conducted by Rio Tinto, the minerals giant. These forums included joint presentations and extensive discussions of the relationships between Rio Tinto (as OO) and two of the EPC organisations serving it as SOs, as well as many PM cases with more indirect references to SOs. I propose to draw on examples from discussions at these forums.

In relation to relevant project management literature, I will be quoting particularly from Bob Prieto, who is one of the few practitioners I know of to have written extensively in the mainstream project management literature on details of how to go about managing what he normally describes as large complex projects.

We now look at some contexts in which EPC organisations contribute to OOs.

EPC services relating to assets creation

Probably the most prominent area in which EPC services are engaged is in that of strategic planning, particularly in helping the OO in making decisions about creating assets. This activity is often called Front End Loading, or FEL, and is described by Morris 2013:60 (in a footnote) as follows.

> IPA, the oil, gas and minerals project benchmarking company, coined the useful term 'Front-End Loading': "Front-End Loading (Business FEL) is a tool for determining which is the "right" project to meet the demands of business. The FEL tool assesses the level of definition of a number of critical items that are used to determine what, if any, asset should be built to meet a particular business need.

It happened that Ed Merrow, the President and CEO of IPA (Independent Project Analysis Inc.) was also a guest presenter at the Rio Tinto PM forums mentioned above.

Merrow's subject was "Shaping minerals mega-projects". The descriptor "shaping", which was also used by several Rio Tinto presenters, refers to that part of FEL that is particularly concerned with developing ("shaping") a project which will best deliver the proposed asset.

With regard to OOs engaging EPC organisations, the senior vice-president of Fluor at the time, Prieto 2008, discussed the engagement of this type of SO (which he describes as a Program Manager), and how its processes and responsibilities may relate to those of the OO, as follows.

> In a programmatic approach to achievement of a set of business objectives, Owners may engage the services of a Program Manager. Under such an approach many of the processes and responsibilities of the traditional Owner organization are transferred to the Program Manager ….

Prieto 2009 goes further, invoking the concept of an EPC/OO partnership:

> Most importantly, the owner requires a partner that can help it translate its programmatic vision and broad objectives into a well-defined set of specific business objectives that underpin an actionable and implementable strategic plan for the "giga" program [super-large mega-programs/projects].

This theme of partnership came through strongly in the Rio Tinto forums. One of the presentations on the development of a huge group of self-sufficient facilities for mining, transportation and processing in a very remote area was made jointly by the senior EPC executive (from Bechtel in this case) together with his Rio Tinto counterpart. This very professional joint presentation was an impressive partnership effort in its own right. Whilst the operational aspects of this mammoth venture were clearly seen by both parties as being a form of partnership, they openly discussed many difficulties they had in dealing with problems from their different perspectives.

EPC services relating to assets expansions

These are similar in most respects to creation of the original assets, but usually with added complication of various types. Another joint presentation at one of the Rio Tinto PM forums with the EPC contractor (in this case Monadelphus) was concerned with a huge expansion of a group of mining, transportation and loading facilities which had to mesh in with an existing group of such facilities, but without interfering with the ongoing operations of the latter whilst being constructed. Amongst other things, both parties were concerned with governance issues.

Other presentations at these forums were concerned with different types of expansion issues, such as moving from open cut to underground mining. Although the focus of these presentations was more explicitly on Rio Tinto perspectives, they occasionally discussed issues involving SOs – for example in moving from one type of mining to another (as above); or in relation to expanding geographically remote operations; and doing so in underdeveloped countries.

EPC services relating to repairing and/or replacing assets

Replacement of assets in particular was also a prominent concern at the Rio Tinto forums. One presentation discussed a project involving the progressive replacement of most key components of a very large minerals processing facility, which also had to maintain full production whilst this was being done. I found the complexity of this project quite mind-blowing – but evidently it is not an uncommon type of project for Rio Tinto. Here again the engagement of SOs was not discussed as a specific topic, but of course SOs undertook the actual operations, and had to manage their way around all these complexities, obviously in close cooperation with OO Rio Tinto.

This concludes discussions on how EPC organisations help OO clients create and utilise assets in major complex project contexts. The first group of SOs also helped OOs with asset creation, but in a different context. We will now look at some broader issues from the perspective of OOs whose main-stream businesses focus on developing and then managing productive assets, typically over very long life-spans.

OWNER ORGANISATIONS (OOs) THAT FOCUS ON ASSET MANAGEMENT

Giammalvo’s discussions of asset-management-focused OOs

In the second article of this series in last month’s journal (Stretton 2019f) I introduced the subject of project management involvement in the contexts of longer-term asset and strategic life-spans, drawing particularly on some materials on asset management from a recent article in this journal by Giammalvo 2019. Giammalvo was particularly concerned with organisations whose main business focus is on asset management and performance, such as most of those in the oil and gas industries, with which he is particularly familiar.

These organisations plan and operate their businesses within a very long time frame, as is exampled in the following quotation from Giammalvo.

> Back around the early to mid-1950s either Esso or Diamond Shamrock Oil developed a model that integrated portfolios of assets and projects, with operations (programs) and project management into a single all-inclusive methodology designed to “create, acquire, expand, develop, maintain, repair and eventually dispose of” organizational

> assets. Attesting to the fact that this model works, it is still in use after 65 years by all the major international and nearly all national oil companies today.

In this context, Giammalvo discusses relevant responsibilities, in part as follows.

> The two starring actors are the Asset Manager, responsible primarily for CAPEX funded projects in the role as the project SPONSOR and the Operations Manager, responsible primarily for OPEX funded projects, also in the role as the project SPONSOR. …. It is the project SPONSORS who are responsible for the business case and who make the STRATEGIC decisions. …. The project manager's role is purely TACTICAL, responsible for delivering the project on time, within budget in substantial compliance with the technical specifications ….

The long-term perspective discussed by Giammalvo is, of course, shared by many other industries, although I am not aware of any others which follow a model in quite the manner he describes in the oil and gas industry.

In Stretton 2019f I drew on a parallel example from my experience with Lend Lease, whose own office building developments were usually reckoned to have a life span of some fifty years. We had different names for the starring actors in this quite different environment, but had a basically similar approach. For example, our equivalent for "asset managers" was essentially *development managers* from the Lend Lease Development company; whilst our *investment managers* from the Lend Lease Investments company were the equivalent of Giammalvo's "operations managers". However, as just noted, the basic approach was similar, with the focus on the longer term, and with the place of the project seen in much the same way as represented by Giammalvo.

The prominence of this type of OO long-term asset management

Looking at the prevalence of entities and enterprises that are heavily involved in assets management and performance, Pells 2019 observed that,

> Good examples are in the O&G and mining industries. …. But even better examples are cities, towns, states, government bodies and agencies (including militaries) that own, operate, maintain and replace such assets as buildings, roads, utilities, fire stations, police forces, military bases, capabilities, etc. …..
>
> ….these organizations and types of organizational contexts not only represent a huge portion of the global economy but have largely been overlooked in the PM models and bodies of knowledge.

There can be little doubt about the prominence of organisations operating this way. I have just a few observations about the place of projects in these contexts.

Project management's place in the context of longer-term assets management

In relation to assets creation and operation

The very long timeframes of assets operations tend to put the contribution of project management in creating the asset into rather a different light to many of the other forms of strategic initiatives to which project management might contribute. It is almost as if the time factor could be added to the contexts that are relevant to asset creation by projects. This is illustrated in the following time-scaled figure from the previous article of this series (Stretton 2019f)), in which asset creation is shown as Phases 1-5, and disposal as Phase 7.

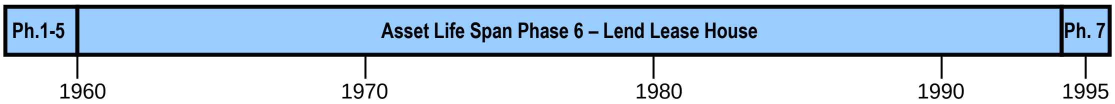

Figure 9: A time-scaled representation of the asset life span of Lend Lease House (From Stretton 2019f, Figure 8)

In these circumstances it is hardly surprising that, as Giammalvo has made it clear in the second-last quotation above, the project management role is not seen as important in the overall picture as are the assets management and operations management. Giammalvo put it this way in the recommendations from his article.

> Stop positioning the Project Manager as the “star” of the show. The project manager is an important supporting actor, but the real stars of the show are the Asset and Operations Managers in their role as project SPONSORS. Those are the people who make the strategic decisions that determine whether a project will or will not enable the organization to “realize any benefits”.

In relation to assets expansion

Project management’s place in relation to expanding long-term assets appears to be much the same as with the original creation of assets. In Giammalvo’s terminologies of position titles, the role of project managers, whilst important, remains subsidiary to the roles of the Asset and Operations Managers, who make the strategic decisions that determine whether expansion of assets, and therefore of associated projects, actually go ahead.

In relation to maintaining/repairing and replacing assets

Virtually all long-term productive assets will need to be maintained and repaired to retain their functionality, and in most cases without any interruption to their mainstream functioning. Ultimate responsibility for decisions on these types of work remains with operations management, who also decide if project management input is required, and if so, of what type.

Along with repairs and maintenance of long-term assets, there are frequently needs to actually replace components of these assets, which also very often involve upgrading to embrace new technologies, market opportunities, or the like. Once again, responsibilities for the key decisions here will rest with assets and operations management.

Concluding this section on OOs that focus on longer-term asset management, it is evident from the above discussions that, although project management has an important supporting role to play with asset creation phases, and asset expansion and/or replacement when they are needed, its overall role in the longer term is clearly subsidiary to those of assets management and operations management (or their equivalents with managing other types of long-term assets).

This type of recognition of where projects stand in the broader context of the operations of organisations seldom finds its way into the project management literature – which I assume is one of the motivations for Giammalvo's plea to stop positioning the project manager as the "star of the show".

SUMMARY

We have been looking at some contextual issues which relate to project supplier organisations (SOs) and owner organisations (OOs). The first issue, which emerged in the first article of this series, identified many differences between SOs and OOs which particularly affect how best to manage the projects they undertake.

In this article, we started by focusing on two groups of SOs whose services to OOs extend well beyond the range of those normally associated with project management per se, but whose contributions are not well covered in the literature.

The first group comprised SOs providing extended services to clients/owners whose in-house organisational strategic management capabilities varied from very substantial, through some but limited, to little if any such internal capacity. I drew on Civil & Civic's extensive experience in discussing how to best help clients develop their organisational strategies in these different contexts. I also discussed how we needed to expand our project managers' capabilities to include front-end skills in both project and strategic contexts in order to provide effective services. Some of these extended services developed into specialised business units, helping owners develop assets in domains which included industrial, health, office, retail and leisure.

The second "extended" PM SO group we discussed was EPC organisations. (Engineering, Procurement, Construction). EPC companies have been operating for decades in the arena of major complex projects and mega-projects, helping OOs create long-term assets, expand their assets, and repair and/or replace these assets. The main focus was in asset creation, in which EPCs are often involved in helping determine what, if any, assets should be built to meet a particular business need, and what types of projects would best help deliver these assets. Here, again, the extent of the SO services goes far beyond mere delivery of projects, and are often undertaken in partnership mode with the relevant OOs.

Both of the above groups of SOs which actually deliver extended services illustrate the potential opportunities that exist for SOs which do not see themselves as being restricted to a PM silo, but extend their services to meet the clients' broader needs.

We then looked at some perspectives of OOs whose main businesses focus is on developing and managing productive assets over very long time spans. The latter put the project contribution to assets creation into a very narrow time slot. Moreover, Giammalvo points out that the project management role is purely tactical, whereas responsibilities for strategic decisions, and the business case, lie with assets and operations management. This also applies in expanding and/ or replacing assets. None-the-less the project component is an important one, particularly when you consider that these types of OOs comprise a substantial portion of the global economy at large. So, although one can certainly sympathise with Giammalvo's plea to stop positioning the project manager as the "star of the show", PM involvement on such a large scale in the world economy would appear to merit more attention in the project management literature that it is currently accorded.

As a final note, it is always the case that projects are only partial means towards helping an entity achieve broader objectives. Projects are not ends in themselves, but are all too often represented this way in the project management world. The whole purpose of this series is to present a variety of different contexts in which project management is undertaken, in an endeavour to encourage people to see the place of projects in more holistic contexts.

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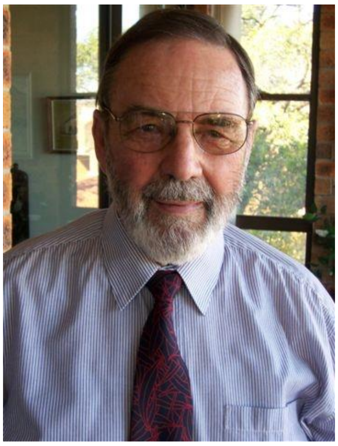
About the Author



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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.

Alan 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 200 professional articles and papers.

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