Project Services Pty Ltd

UNDERSTANDING PROGRAMS AND PROJECTS

OH, THERE'S A DIFFERENCE!

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Patrick Weaver PMP, FAICD, FCIOB,
Director, Mosaic Projects Pty Ltd

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Abstract

Projects and Programs are different; and this difference has been ignored or confused by too many people for too long. From the very beginnings of modern project management, the terms have been used interchangeably; for example, the Manhattan Project to create two completely different atom bombs involved numerous major elements such as the construction of factories and the operation of those plants. The Manhattan Project was by all modern definitions a full blown program of work. This confusion in terms continues in many quarters to the current day.

The publicised failures of a number of so-called major projects, particularly in the Defence and ICT arenas would appear to be caused by the clients attempting to procure a complex program of work (frequently involving significant elements of R&D) as a simple 'fixed price' projects in a perversely misguided attempt to offload risk[1].

This paper will:

- Describe the differences between projects and programs based on the PMI Standards.
- Define the key differences between managing a project and managing a program.
- Focus on setting and managing realistic expectations on the part of key stakeholders for a program compared to a project in terms of expected levels of change and the risk profiles.
- Briefly review the PgMP qualification framework for Program Managers and demonstrate how its structure supports the objective of effective program management.

Introduction

The difference between Projects and Programs has been ignored or confused for too long. At the most basic level, a project is created to deliver a specified output as efficiently as possible (PMI, 2008a). Programs focus on the coordination of a number of related projects and other activities, over time, to deliver outcomes that benefit the organisation (PMI 2008b).

At more sophisticated levels, these differing objectives fundamentally alter the management of change, risk, and communication. The challenge facing organisations is to recognise the difference between a project and a program and then apply the optimum management approach. Whilst it is absolutely possible and often desirable to contract a project to an independent third party (eg, the developer of a shopping complex can easily contract the building of the centre to a construction company), it is virtually impossible to effectively contract out the program management role, the program manager has to be an integral part of the organisation's strategic business management team.

Despite the best efforts of PMI, OGC and a range of other organisations, the confusion between projects and programs continues in many quarters to the current day. Most disaster relief efforts are described as 'projects' when in fact they are an on-going program of work to realise a benefit (ie, a return to normality). Disaster relief 'programs' include projects and elements of operational work and adapt as times and circumstances change. In these circumstances, program management is about maximising the benefits realised with constrained resources in a changing environment. Project management is focused on the efficient creation of a defined deliverable (eg, re-building a school).

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[1] For more on which party carries the ultimate risk of a project failing see: The Meaning of Risk in an Uncertain World
- https://mosaicprojects.com.au/PDF_Papers/P040_The_Meaning_of_Risk_in_an_Uncertain_World.pdf

A more worrying recent trend has been for organisations to start classifying quite simple projects as 'programs' in an apparent attempt to avoid the necessity of defining the specific 'product, service or result' they need. Whilst the degree of difficulty in determining the deliverable may alter the project's strategy and approach, a project remains a project! If the performing organisation / client cannot tell the project manager what they want, the project is unlikely to succeed and changing its name to a 'program' won't help.

The boundary that needs to be drawn much more sharply, and the focus of this paper, is between projects that are initiated to create a known deliverable and then shut down and programs that are initiated to create a change and/or realise benefit(s) for the host organisation, adapting to circumstances as conditions change and using projects to create individual deliverables within the overall matrix of the program.

Defining the Differences – Project or Program

The Defining Standards

Both PMI and the Office for Government Commerce (OGC) in the UK agree that organisations have one or more portfolios of projects and each portfolio contains a number of programs and projects. Portfolio management focuses on selecting the optimum mix of projects and programs the organisation should undertake based on its available funding and resources. Program management focuses on the coordination of a number of related projects over time to deliver outcomes that benefit the organisation and projects are about the efficient delivery of a defined output.
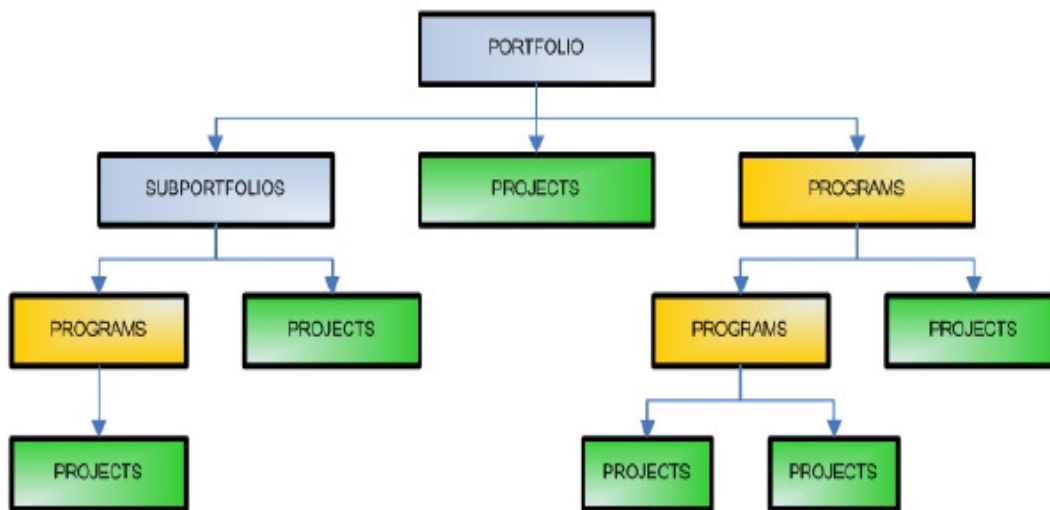

Figure1 Projects, Programs and Portfolios

PMI Standards

The definition of a project contained in *A Guide to the Project Management Body of Knowledge* 4th Edition, p5 (PMI, 2008a) is: "a temporary endeavour undertaken to create a unique project service or result". Projects are temporary and close down on the completion of the work they were chartered to deliver.

The definition of a program contained in *The Standard for Program Management* 2nd Edition Glossary, p 312 (PMI. 2008b) is: "A group of related projects managed in a coordinated way to obtain benefits and

control not available from managing them individually. Programs may contain elements of work outside of the scope of the discrete projects in the program."

OGC Standards

The OGC has very similar views embedded in its methodologies. PRINCE2 defines the management of projects and the Managing Successful Programmes (MSP) methodology defines a program as: "A portfolio of projects and activities that are coordinated and managed as a unit such that they achieve outcomes and realise benefits" (OGC, 2003, p126).
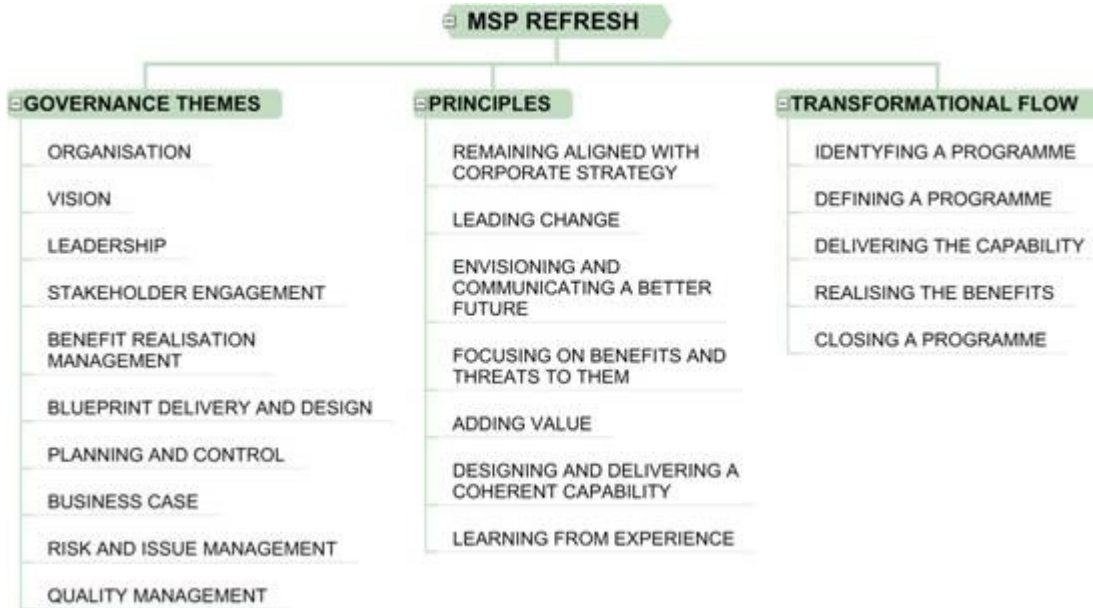

Figure 2, The MSP program management structure

Standardisation

As can be seen from above, the definition of a program is consistent. Programs involve the coordinated management of two or more projects to achieve benefits that would otherwise not be obtained. The defined objective of a program, the realisation of benefits, is very different to the standard definitions of a project that focus on the efficient delivery of products, services or results; ie, deliverables. A regularly used short description of the differences is that projects are focused on the efficient creation of outputs; programs are focused on delivering outcomes.

The Four Dimensions of a Project or Program

There are four basic dimensions to every project or program:
- Its inherent size usually measured in terms of value;
- The degree of technical difficulty in creating the output;
- The complexity of the relationships ('small p' politics) with the stakeholders; and
- The degree of uncertainty involved in the work.

The difference between how complicated the work is and its complexity is that managing complicated work (ie, work with a high level of technical difficulty) is achievable by implementing appropriate systems such as quality management and configuration management. The consequences of technical difficulty are definable, predictable and manageable provided people with the necessary skills and experience are available. The essence of complexity is that the future is inherently unpredictable and the

reactions of people to each other within the project or program's network of relationships are nonlinear. The responses/reactions of stakeholders to the work and consequences of any interaction or communication are not predictable on a linear scale[2].

Project Size

The size of the project or program will impact the degree of difficulty in achieving its objectives but large projects are not necessarily complicated or complex. There are projects in Australia to shift millions of cubic meters of 'overburden' from mine sites with expenditures rising to several $million per day but the work is inherently simple (excavating, trucking and dumping dirt), and the relationships in and around the project are relatively straight forward. The management challenges are essentially in the area of logistics. One only has to contrast this type of mega-project with the difficulties of successfully delivering a small program to instigate a culture change within an established bureaucracy (say introducing a new timesheet system with supporting software) to appreciate size is only one dimension of a project or program.

Size Does Matter

Large projects, eg the construction of a major shopping centre, can easily be larger than a small program, eg reorganising the business processes of a department. As the size of a project or program increases the flavour of issues surrounding its management will tend to change. The two major differences to be expected are:

a) 'Money can't buy friends but it can get you a better class of enemy[3]' – the size of the project is likely to make external stakeholder management more important. Increasing the scale of a project or program is unlikely to significantly change the supportiveness of supporters but may well galvanise the interest and reactions of opponents.

b) Stakeholder management issues within the project or program are likely to emerge as major issues – a small team or 3 or 4 people will generally resolve issues if well lead. A team of 300 or 400 people will require significant formal processes as well as leadership, motivation, etc.

Major projects certainly exist and it is quite feasible for a large project to be bigger than a small program. Organisations such as the UK's Major Projects Association[4] have been focusing on the skills and knowhow needed to run large projects since the 1980s. The challenge facing organisations is to know the difference between a major project and a program and then apply the optimum management approach.

Technical Difficulty (degree of complication)

Complicated high tech projects and programs are inherently more difficult to manage than technically simple projects and program. The nature of the technical difficulties and the degree of certainty largely depend on how well understood the work is. Bleeding edge research has a far higher level of uncertainty associated with every aspect of its management than work of similar technical difficulty that has been undertaken several times before. The degree of understanding of both the work's characteristics and the way it will be accomplished on the part of the client is as important to the success of the endeavour as the understanding of the team. The lower the levels of knowledge and understanding, the more difficult it is to achieve a successful result.

Complexity = Stakeholder Relationships

Complexity Theory has become a broad platform for the investigation of complex interdisciplinary situations and helps understand the social behaviours of teams and the networks of people involved in and

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[2] For more on the difference between complicated work and complexity see: A Simple View of 'Complexity' in Project Management - https://mosaicprojects.com.au/PDF_Papers/P070_A_Simple_View_of_Complexity.pdf

[3] Spike Milligan, 1918 - 2002

[4] See http://www.majorprojects.org/

around a project. These ideas apply equally to small in-house projects as to large complicated programs. In this regard, complexity is not a synonym for complicated or large.

Complexity Theory has developed from and includes the earlier field of study known as Chaos Theory. Complexity Theory can be defined as the study of how order and patterns arise from apparently chaotic systems and conversely how complex behaviour and structures emerge from simple underlying rules (Cooke-Davies, Cicmil, Crawford, Richardson. 2007). Some of these ideas appear directly relevant to understanding project and program management from a stakeholder relationship perspective and are generally more important in program management (Weaver, 2007).

Uncertainty

The degree of uncertainty associated with the desired output from the team's endeavours has a major impact on the management of the project or program. This is different to the issues around bleeding edge projects discussed above. When a bleeding edge project has a clearly defined end point you are on a quest the challenge is finding the optimum route to the end. When the end point is unclear you are either making a movie – the process are well known but the outcome is uncertain or on a 'walk in the fog' where neither the route nor the outcome are defined.

The less certain the client is of its requirements, the greater the uncertainty associated with delivering a successful project or program and the greater the effort required from the team to work with the client to evolve a clear understanding of what's required for success. This is not an issue as long as all of the stakeholders appreciate they are on a journey to initially determine what success looks like, and then deliver the required results. Problems occur if expectations are couched in terms of achieving an 'on time, on budget' delivery when the requirements are not defined and the expected benefits are unclear.

Project / Program Typology

Source: Obeng E (1994) *The Project Leader's Secret Handbook.* Financial Times Prentice Hall

Figure 3, Project Typology

One of the more established ways of describing projects is a typology that maps the interaction of uncertainty and technical difficulty. Knowing both 'what to do' and 'how to do it'; or more importantly knowing how much you know about these two elements. The typology describes four types of project based on these criteria: 'painting by numbers', quests, 'making a movie' and 'lost in the fog'. It was developed by Eddie Obeng (1994) in the *Project Leader's Secret Handbook* and asks two questions:

- Are you clear about what to do (the outcome to be achieved)?

- Do you know how to do it (processes, methods, experience)?

Painting by Numbers

Traditional project management works well when both 'what's to be done' and 'how to do it' are well understood by all key stakeholders including the client and the project team. Closed projects (panting by numbers) can be fully defined, estimated and planned. There are low levels of uncertainty and ambiguity; risks are largely known and manageable. Value is largely achieved by delivering the requirements on time and on budget.

A typical software program of this type would be installing a standard software upgrade across a large organisation based in several different cities and with several operating divisions.

Going on a Quest

In these projects and programs, the objective is clear but the way to achieve the objective is uncertain. At the end of the day, success or failure is clear cut; the objective has been achieved (or not). The challenge is optimising the way forward. Process and system improvements tend to fall into this category. The objective is to reduce processing time by 20% – this is easily measured at completion. The difficulty is knowing what is the best way to achieve the objective.

Before committing major resources to the main part of the work adequate time has to be allowed to prototype solutions and test options before a final design solution can be determined and then implemented. The project or program needs to be developed in phases with go/no go gateways as the design is firmed up. There are risks associated with any creative design process and most software developments are 'quests' requiring creative solutions to identified problems to achieve the desired objective.

Making a Movie

In these projects the tools and techniques are well known but the final outcome is uncertain. Only after completion can the results be measured and success or failure be determined. Most culture changes and marketing initiatives (and making movies) are in this category. The tools to be used including: training, communicating and advertising, are well known and the traditional (if not optimal) mix of techniques understood for most situations. What no one can predict is if the 'public' will acclaim the final result, merely accept the final result or dump the final result.

Traditional project management is not enough in these projects; there is a continual need to measure results, feedback information and adapt the mix of activities to optimize the likelihood of success. The key value measurement is attempting to answer the question is it worth spending more or should we cut and run? Efficient stakeholder communication and relationship management is crucial. Whilst there will be some outstanding successes (block busters) and some total flops most projects and programs in this category finish somewhere in the middle. The art is spending just enough effort to achieve an acceptable outcome – dealing with shades of grey.

Lost in the Fog

I actually prefer Prof. Rodney Turner's version 'a walk in the fog'. This classification is a journey towards a desired new state. Whilst the problem can be described, no one is sure of the optimum solution or outcome, or how best to achieve it. The only option is to proceed carefully, stop at regular intervals to check exactly where you are and re-plan the way forward. Exactly the way you navigate through a thick fog. Both ambiguity and uncertainty are high.

Effective management is about making sure at each 'stop point' the value achieved to date is locked in and then refocus on the next increment. Management is both easy and difficult. It is easy because there is no point in setting fixed plans (you have no idea what to plan). It is difficult because decisions on value and whether to stop or continue are subjective and need to be made in a collaborative environment of trust.

Traditional measures of success such as on-time and on-budget are largely meaningless; typically there are no statistics to base this type of measure on. Consequently these projects are the realm of cost reimbursable contracts and partnerships; stakeholder relationship management[5], and a clear understanding of value are the only effective tools for building to a successful outcome. Agile software development is ideal for this type of project. Each iteration builds new capability and value and the learning provides a platform for the next iteration of development.

The Dimensional Overview

None of these 'dimensional factors' differentiate projects from programs, whilst most programs are likely to be larger, more complex and less certain than most projects the key differentiator between a program and a project is, as described in the PMI and OGC Standards above, their objective. Programs are focused on realising benefits through the coordinated management of a group of projects and other work; projects are focused on delivering a defined output. One of the major roles of a program manager is to initiate projects to create the outputs the program needs to deliver its intended outcomes.

Types of Program

In addition to the degrees of certainty/uncertainty in 'what' and 'how' used by Obeng above, programs can be created to achieve significantly different organisational objectives. The Global Alliance for Project Performance Standards (GAPPS) has defined three basic types of program:

- Multi-Project Programs: focused on managing several projects in parallel to deliver coordinated support for a new business objective. Project origination and termination is generally external to the program (by business or Portfolio management).

- Strategic Programs: focused on achieving business change or strategic outcomes, involving many projects running both sequentially and in parallel with early outputs and outcomes influencing decisions about later projects; the program is a "learning organization". Project origination and termination is generally internal to the program; Portfolio management approves the program's budget.

- Operational Programs: focused on minimize negative impact on, and supporting, the ongoing business of the organisation. Facilities maintenance projects for a major item of infrastructure (eg, a rail system) fall into this category; the key measure of success is budget -v- actual impact on operations. Project origination and termination is generally external to the program (by business or Portfolio management).

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[5] For more on stakeholder management see: https://mosaicprojects.com.au/PMKI-TPI-075.php

The GAPPS (2006) framework[6] clearly differentiates the three program types outlined above from a major project; and although most programs in most application areas should fit clearly into one category, recognises some programs may have characteristics from multiple categories.

Key Differences between Projects and Programs

Determining if the work to be undertaken is a project or a program is important because it will determine what management approach to use. Attempting to manage a program as a project can lead to failure, or at best sub-optimal outcomes.

Programs generally have a multiplicity of requirements, deliverables, customers, stakeholders, departments and interfacing organisations interacting with the work. The following checklist can help determine the difference (adapted from Duggal, 2009):

1. Is the associated change wide-ranging, and designed to achieve a strategic business objective?
2. Are there multiple deliverables staggered over a period of time?
3. Is the timescale loose and flexible focused towards achievement of benefits, rather than meeting strict deadlines alone?
4. Is the scope fluid and are dynamic changes expected?
5. Is there a lot of ambiguity and uncertainty?
6. Is it at a departmental or higher level?
7. Are benefits expected to be delivered incrementally during the lifespan of the initiative?

The first two questions are key, projects are best if there is one primary goal for the project to focus on delivering; multiple goals are best dealt with by way of a program with a series of projects each focusing on a particular goal.

The remaining questions are secondary, and the criteria that separate projects from programs are not always clear cut. The building works for the 2012 Olympics are being managed as a multi-project program of works; multiple projects managed in a coordinated way. Whereas a construction project to build a major export oil refinery in Saudi Arabia due for completion in 2013 and with a similar construction value to the Olympics is being managed as a single major project despite many of the packages exceeding US$1 billion.

Using the criteria above the reasons for the different decisions becomes clearer:

	Olympics	Oil Refinery
- The associated change is wide-ranging, and designed to achieve a strategic business objective.	Yes	Yes
- There are multiple deliverables staggered over a period of time.	Yes	No
- The timescale is relatively loose and flexible focused towards achievement of benefits, rather than meeting strict deadlines.	No	No
- The scope is relatively fluid and dynamic changes are expected to optimise outcomes.	??	No
- There are relatively high levels of ambiguity and uncertainty (particularly	??	No

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[6] Download the GAPPS framework from https://mosaicprojects.com.au/PDF-Gen/GAPPS-Program-Typology.pdf

> at the beginning, focused on how the business objective can best be achieved).

- The work is complex and multi-disciplinary.	Yes	Yes
- Management is at a departmental level or higher.	Yes	Yes
- The benefits are expected to be delivered incrementally during the lifespan of the initiative.	??	No

The Olympics has a significantly higher number of 'Yes' or possible/partial '??' criteria (the intention is to progressively open and test venues) than the oil refinery but neither are 100% definitive. Provided the skills are available within an organisation if there is any doubt, the problems caused by managing a major project as a program are far fewer than the problems caused by trying to manage a program of work as a project.

The Differences in Managing Projects and Programs

In many respects, the management of projects and programs appears similar. Both are selected via the portfolio management processes on the basis they support or enable one or more of the organisation's key strategic initiatives. Both are initiated, planned, executed and closed with on-going monitoring and controlling during their life cycle. And both apply common processes such as time, risk and communication management.

However, there are distinctly different themes and focuses in managing projects and programs which have major consequences on the style of management:

- A successful project is delivered 'on time and on budget' whereas a program should be focused on the overall benefits being created, taking more time or spending more money to deliver increased benefits can be a good outcome; 'value' is the driver rather than budget.

- Project managers focus on producing the optimum deliverable. Program managers focus on integrating the deliverables into the organisation's operations to reap the maximum benefit from using the deliverables.

- Stakeholder management is a far more complex and important issue for program managers as most benefits are only realisable in the future. Project managers should be working within a more constrained framework.

- The risk management framework of a project should be largely definable. The risk management profile of a program is open ended and heavily influenced by external factors.

These differences require distinctly different management focus:

Program Management	Project Management
Focuses on the vision of the program architecture – design, prioritise and align the projects to create the vision.	Focuses on the detail, planning and managing the work to deliver your component of the overall vision
Is strategic, focused on the big picture and the implementation of a strategy to realise benefits	Is tactical, focused on delivering the specified outputs on time and on budget.
Requires management and coordination with an overall business focus.	Requires leadership and facilitation to achieve the projects technical objectives.

The three key management themes that form the framework for PMI's program management standard are Benefits Management, Program Governance and Stakeholders Management. Whereas, projects are managed in line with project management good practice defined in the *PMBOK® Guide* and focus on minimising unnecessary change.

A few of the key differences in management approach are highlighted below:

Managing uncertainty:

- The project view – seek certainty before commencing execution.

- The program view – expect uncertainty as the world changes and impacts on the organisation.

Managing change:

- The project view – seek to minimise unnecessary change. Projects change management focuses on the change of scope, and its consequences (time, cost, risk, quality).

- The program view – embrace change to future works to maximise the benefits delivered to the organisation whilst maintaining stability for current projects. Program management focuses on the change of strategic outcomes. Changes to current projects are designed to maximise the benefit contribution of the project deliverables to enhance the final program outcomes.

Managing risk:

- The project view – seek to minimise undefined risks by locking in benefits and mitigating threats.

- The program view – expect undefined risks to occur. Maintain adequate contingencies for future occurrences and actively seek new opportunities to create value. Program risk can be quite different from project risk; a stakeholder who is assessed as only a moderate risk on each of the 5 projects within a program may be seen in aggregate as a high program risk because if the risk associated with the stakeholder occurs all of the program's projects are impacted.

Managing stakeholders and communication:

- The project view – seek to align stakeholders with the project's objective.

- The program view – engage with stakeholders and use the relationships to map future possibilities focused on maximising long term value to the organisation.

Managing the schedule:

- The project view – seek to encompass 100% of the work within the schedule at an appropriate level of detail for controlling the work.

- The program view – incorporate the project schedules at a summary level and manage the gaps and interfaces between the projects. Focus on interdependencies and the medium to long term future. Interdependencies are critical; the slipping of a minor deliverable in one project may have major consequences in another that is dependant on it. All interdependencies should be mapped and the precise form of the deliverable defined. Information from the detailed project schedules should be rolled up into the program schedule on a regular basis to maintain alignment.

Taken overall, project management is based on systems thinking, processes, inputs, outputs and predictability. Whilst the concept of complexity thinking is important to the practice of project

management, complexity is central to program management. Creativity and the emergence of new ideas to maximise opportunities are critical aspects of program management[7].

An important program management role is the sourcing and allocating of scarce resources to the projects within the program based on the overall priorities of the program, not the project. This requires standardised resource management systems within the projects and the developing of a culture that focuses the individual project managers on the overall good of the program in preference to their specific project's needs. Rewards and recognition should go to the project manager's who gave up some key resources and finished late as a consequence if their sacrifice benefitted the overall program.

Whilst 'controls' or at least the measurement of performance against plan have a role in both projects and programs, the importance of controlling is significantly lower in program management than project management[8]. In both spheres the importance of controlling is overrated and the value of leadership and governance underrated. However, whilst project managers can survive in a controls focused environment, program managers cannot control the day to day operations for several projects, they have to be leaders that inspire their project managers to achieve the objectives of the overall program.

Setting and Managing Senior Management's Expectations

A key challenge facing project and program management professionals is managing the expectation of senior managers. Unrealistic expectations are unlikely to be realised and creating realistic expectations in senior management thinking requires a sustained process of education and communication.

Realistic expectations of a project should include reasonably high levels of certainty in terms of time, cost, scope, risk and quality. And importantly, the level of certainty should progressively increase as the project moves through its life cycle. The skill of a project manager is identifying ambiguity and uncertainty and then seeking to remove or resolve the causes. The more uncertain the work, the more likely program management approaches will deliver better outcomes for the organisation.

Realistic expectations of a program are based around achieving the maximum value from the overall endeavour. The program manager should be expected to balance relatively short term stability and certainty needed for the current projects with flexibility and value management to optimise longer term outcomes. In this sense value management is not a cost cutting exercise; rather the balancing of any value proposition though 'the eye of the stakeholder' – this is rarely solely constrained by either time or cost. The program manager should be capably of creating a vision of the future for his/her colleagues on the executive management team and helping them to help the program be successful.

Value Management

Effective value management is a key part of effective program management and requires an understanding of what is valuable to the organisation. To realise a benefit, the outcomes from the program need to support a strategic objective of the organisation. Therefore, the processes to initiate a project within the program should have as a basic consideration its alignment with the organisations strategic objectives.

Whilst the value chain starts with a project being initiated to create a new product, service or result, the new output by itself cannot deliver a benefit to the organisation. The program's management, in

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[7] For more on complexity see: A Simple View of 'Complexity' in Project Management -
https://mosaicprojects.com.au/PDF_Papers/P070_A_Simple_View_of_Complexity.pdf

[8] See Project Controls in the C21 – What works / What's fiction -
https://mosaicprojects.com.au/PDF_Papers/P083_Project_Controls_in_the_C21.pdf

collaboration with the organisation's management has to make effective use of the output to realise a benefit. It is the organisation's management that manages the organisation and these people need to change the way the organisation works to use the new capability to realise the intended benefit.

Assuming strategic alignment is achieved, the realised benefits should translate into real value. The challenge is often quantifying value – the concept of 'value drivers' helps. Value drivers allow the benefit to be quantified either financially or by other less tangible means.

In the current economic climate, organisations are finding operating capital in short supply. Therefore the value of a new process to accelerate the organisation's billing cycle can be measured at several levels:

- The output from the activity to develop the new billing process is simply the new process – this has no value

- Once the organisation's management starts using the new process the measurable outcome is a reduction in the billing cycle from (say) 45 days to 30 days.

- The benefit of this reduction in the billing cycle could be a reduction in operating capital needs of $500,000.

- The value of this reduction is $500,000 at 12% interest = $60,000 per annum.

The above example may also trigger additional value by allowing the capital to be redeployed into another profit generating activity, improving customer relationships, and potentially reducing bad debts.

The challenge of program management is identifying and communicating the value drivers to all levels of the organisation's management involved in the activity so that valuable decisions are made in preference to knee jerk gut-reactions focused on short term, easy to measure metrics. Value is created by meeting the strategic needs of the organisation's stakeholders – this requires careful analysis and understanding of who they are and what are their real requirements; ie, effective stakeholder management.

Project managers can quickly describe success in terms of the project deliverable, program managers need to be able to convey a much more subtle message effectively. In the above example, if the project is overrunning budget by $20,000 which option is better?

- Is it better to reduce scope and only achieve a 5 day reduction in billing time and recover the $20,000? This would reduce the annualised saving by $40,000 (two thirds).

- Slow the project down and achieve savings by reduced overtime etc if the delivery is delayed by 2 months. The likely saving is $10,000 (ie, the project will still overrun by $10,000), but the annualised cost of 2 months loss of interest is also $10,000 (one sixth of $60,000)

- Keep going and absorb the additional costs??

From a value perspective, the option to reduce scope is clearly not effective; the organisation would spend $40,000 in additional interest in the first year to save $20,000; unless there are opportunities to recover the value in later projects. The other two options preserve value, which is best choice depends on the availability of funds to finance the work.

Figure 4, the Value Chain

The Leadership Ladder for Project and Program Managers

The book, *The Leadership Pipeline* (Charan, Drotter, Noel, 2001) describes the transitions between 6 levels of leadership:

- From managing oneself to managing others – the move to a team leader's role.

- From managing others to managing managers – the move to a project leadership role.

- *From managing managers to managing a function – the move to taking responsibility for the performance of an area of the business (possibly major project management).*

- From functional manager to business manager – the move to a program management role focused on achieving strategic goals and objectives.

- From business manager to group manager – responsible for a whole line of business and developing strategic goals.

- From group manager to enterprise manager – a 'C' suite executive responsible for setting the overall strategy of the organisation.

As can be seen from this brief extract, the first step is the biggest; the move from being a good worker to a good team leader who helps others to work to their optimum requires a quantum change in thinking.

The progression from team leader to junior project manager to project manager simply involves developing the same skills to a higher level and learning to take one's hands off of the day to day work of the project.

However, the jump from project leadership to program leadership for project managers will frequently bypass the 'functional management' level. Very few organisations run major projects with internal teams of sub-project managers, etc. The differences in skills needed are huge and learning program management on-the-job can be very hard work. Because of these skill differences, many program managers are drafted from functional management (but then have to learn about projects).

Neither option is ideal; organisations seeking to implement effective program management should invest in designing a career path to move managers from their current roles into program management roles.

Project and Program Governance

Governance is different to both controlling and leading the work of a project or program. Governance is a process of putting in place policies and procedures that provide an acceptable level of assurance the work of the project/program conforms with the objectives outlined in its Charter and other key organisational policies. This involves aligning the interests of the organisations directors, its programme and project teams and the wider stakeholder community and forms part of the organisation's overall corporate governance. Corporate governance (including project and program governance) provides the structure through which the objectives of the company are set, and the means of attaining those objectives and monitoring performance are determined[9].

From an organisational perspective, the difference between the governance of projects and programs is minimal; projects and programs are chartered, sponsored, monitored and reviewed in similar ways. The only difference, discussed above, is the degree of stability expected of forward work projections.

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[9]   For more on Governance see: https://mosaicprojects.com.au/PMKI-ORG.php

However, the governance of the projects within a program place a range of specific responsibilities onto the program management team. Some of the key project governance activities likely to be performed by the program manager include:

- Chartering the project.

- Sponsoring the project (the program manager may be the project sponsor, or would need to work collaboratively with the senior manager appointed as the sponsor)[10].

- Creating and setting the project strategy in consort with the project manager.

- Monitoring all aspects of the performance of the project including quality, time, cost, scope and risk (usually through a dedicated PgMO[11]).

- Ensuring continued project alignment with the overall program objective (as adjusted). If necessary terminating projects that no longer align with the program's objectives.

- Consolidating information for reporting to higher level governance bodies.

This need to be part of the organisations governance processes, responsible for the governance of project work is one of the key differences between managing a major project and managing a program of work. The major project manager needs to conform with and support the organisations governance policies; the program manager needs to implement the policies in an appropriate way for the work of the program.

PMOs can play an important governance role. A Program Management Office PgMO will frequently provide a range of key functions including over sighting the performance of the projects within the program, acting as a repository for lessons learned on the early project to the benefit of later projects, managing the overall program schedules and other functions, providing the link between the organisations strategy and the work of the projects and supporting the overall corporate governance processes within the program. The PgMO should be a key conduit translating project data into executive management information[11].

Program Management and the PgMP Qualification Framework

From the discussions above, it should be apparent program management is not a natural extension of project management; for most project managers it is a career change. Project managers manage technicians and subcontractors. Program managers manage project managers and collaborate with other senior managers as part of the organisation's senior management team focused on the strategic delivery of value.

These basic differences are recognised in the PMI certification structure:

- The PMP credential is focused on project management knowledge and some general management knowledge. Whilst there is a need for 3 years experience directing and leading project activities, this is a relatively low threshold to achieve.

- The PgMP credential has a much stronger focus on experience and the ability of the candidate to manage relationships with key stakeholders. A sound knowledge of program management is required but this is one third of the overall assessment. The candidate needs to demonstrate a strong background in program management and receive a favourable assessment from a range of people in a multi-rater assessment.

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10 For more on the role of the sponsor (or Senior Responsible Owner, SRO) see:
    https://mosaicprojects.com.au/PMKI-ORG-015.php#Process2

11 For more on PgMO's and PMO's see: https://mosaicprojects.com.au/PMKI-ORG-045.php

The natural career progression for a project manager is to bigger, more complicated and more critical projects. Becoming a program manager is a significant career change that needs to be recognised as such and properly managed and supported by the person and the organisation.

Conclusion

Programs are not big projects, they are different! The key difference is in the focus of the management effort; project management is focused on creating a deliverable as efficiently as possible, program management is focused on maximising the benefits realised by the organisation.

The key difference between a project and a program of works can be described as:

a) Projects are about delivering a product to meet stakeholder needs and expectations with unnecessary change minimised. The key element in project management is efficiency.

b) Programs are about delivering benefits to the organisation within defined constraints and in alignment with its strategic objectives. Changing the elements within a program to maximise benefits actually realised, and maintaining alignment with changing strategic objectives is essential. The key focus of program management is in the delivery of value, working in consort with the operational and strategic elements of the organisation.

The processes, skills and competencies needed to manage a program to deliver benefits are now well understood and described in standards published by PMI and OGC and knowledgeable program managers can seek formal accreditation as PgMP from PMI or MSP Practitioners from OGC.
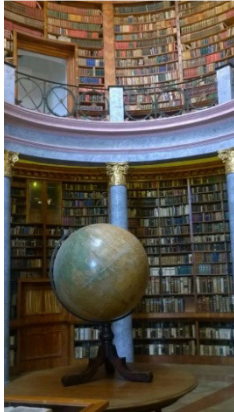
What is needed now is for organisational management to recognise the differences and make effective use of both program and project management to create a strategic advantage for their organisation. Using project management processes to deliver a program generally will not work despite many of the tools being superficially similar.

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