Portfolio Management

A portfolio is a collection of projects and/or programs and other work that is grouped together to facilitate the effective selection and management of the work undertaken within the portfolio to meet strategic business objectives. As a consequence, the portfolio management function is a relatively permanent part of the executive management structure (not temporary like projects and programs). The projects and programs within a portfolio may be mutually independent or directly related depending on the way the portfolio is structured.

An organisation may manage its projects and programs through a structure of several portfolios or in a single portfolio. Each organisation has at least one portfolio that consists of a set of current projects and programs and planned future initiatives.

Project portfolio management[1] provides the capability to effectively select, prioritise, and oversight the organisations project and programs to optimise the creation of sustainable value for the organisation, despite shifting business, technology, and market conditions. Managing and controlling the portfolio involves re-visiting each project's critical success factors, including resource availability and the continued validity of the business case[2], with the business sponsors on a regular basis. Projects and programs that are no longer viable should be closed and the resources redeployed to more valuable work.

(Diagram adapted from «The Project Age: Working Paper No. 1», Claude Emond, Renee Thibault, Hugues Bouchard)

The selected components both reflect and affect the achievement of the strategic goals of the organisation[3]. The strategic plan defines the specific goals and objectives, and the means of attaining them through either operations (ongoing organisational activities) or temporary endeavours (projects/programs). The selected portfolio is the organization's active set of programs, projects, sub-portfolios, and other work at a specific point in time designed to achieve as much of the strategic plan as possible. Consequently, all of the work being undertaken should align with and support elements of the organization's strategy.

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[1] The management of the portfolio is in effect an investment management process; it should not involve the physical management of the project and programs approved for investment. For more on the ***overall structure*** needed to strategically manage the work of programs and projects see: https://www.mosaicprojects.com.au/WhitePapers/WP1079_PDC.pdf

[2] Effective portfolio management requires well developed ***business cases*** that are as accurate and reliable as can be managed when dealing with an uncertain future (with the uncertainties clearly defined). For more on developing a business case see: https://www.mosaicprojects.com.au/WhitePapers/WP1018_Business_Case.pdf

[3] For more on ***alignment*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1042_Outputs_Outcomes_Benefits.pdf

Importantly, the work not selected due to resource, funding and/or capability limitations also affects the strategy. The work 'not done' represents strategic options that are not capable of being supported at the current time and will affect future strategic planning.

Two key measurements need to be tracked for successful Project Portfolio Management (PPM) the first is to validate the selected components achieving the benefits and value promised during the selection process[4]. The second, is to validate the PPM processes are achieving the designated objectives of balancing risk and rewards, avoiding the over commitment of resources, etc.

Portfolio management is also a key part of the organisations overall governance structure. Organisational governance[5] occurs at different decision-making levels of the organisation to support the organisation's governance system. Whether managing operations or managing projects, all governance levels are linked together to ensure that each organisational action is appropriate, sustainable and aligned with organisational strategy.

Portfolio Inputs

Portfolio management is a key link in the overall value delivery chain; and is also the link between strategy and the implementation of organisational change/improvement through the medium of projects and programs.

As outlined above, the primary input to portfolio decision making is the organisations current strategic plan[6] and the individual business cases for potential projects and programs. This is the framework used for deciding where the organisation will invest it resources and as a consequence which projects will be selected to start (or continue) and which will be rejected or cancelled.

Within the organisation's overall strategic planning processes, there should be a 'portfolio strategy' that considers long and short term initiatives, different types of requirement, optimising risk levels, and the management of interdependencies[7]. The objective is to achieve the best Net Present Value (NPV) from the investment over the medium to longer term; not the highest (NPV) this month! Taking a longer term view ensures 'pathfinder' and 'enabler' projects[8] that are essential to develop the potential for future initiatives that will build 'tomorrow's organisation' are not ignored simply because the current project is high risk or low value. The portfolio strategy needs to be synchronised with, and feed back into the organisations strategic planning process.

The other key input is a mapping of the organisations current capacity and capabilities including:

- Information on the levels of funding available for investment on projects and programs, derived from the financial planning and budgeting systems.
- Information on internal resource capacity, commitment, availability and capability, largely derived from the reporting and surveillance systems used to support other governance processes (usually via a strategic PMO).

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[4] For more on ***benefits realisation*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1023_Benefits_and_Value.pdf

[5] For more on ***Governance*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1033_Governance.pdf

[6] For more on ***strategic planning*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1038_Strategy.pdf

[7] The decision making framework should be defined as part of the organisation's overall ***governance structure***. See: https://www.mosaicprojects.com.au/WhitePapers/WP1084_Governance_Systems.pdf

[8] Enabler projects are particularly important - these projects very often have a negative value in themselves, but are a critical prerequisite to the implementation of other high value projects. For example upgrading network capabilities beyond the current system requirements to allow for 'high bandwidth' applications to be developed in the future. The 'value' is in the potential for future developments.

- A mapping and understanding the external resources the organisation can call on from 'the market' to help implement its projects and programs, this research is more likely to be a function undertaken by the portfolio management team or the strategic planning team (both need similar information).

From these inputs, the portfolio management have the necessary data to select and balance the mix of projects and programs that best support the strategic objectives of the organisation.

Portfolio Balancing

The project portfolio should be optimised for the current economic climate, business strategy, emerging competitive forces and a host of other imperatives that could influence the organisations overall investment strategy. Most of the risks and rewards associated with any project or program are determined long before the project/program manager is appointed; if these decisions are wrong (or non-existent) project and program management cannot resolve the problem. The role of effective project management is to deliver a realistic and achievable outcome efficiently; if the parameters for the project are unrealistic in the first place, the best project management can do is stop the situation deteriorating further!

The objective of portfolio risk management is to accept the right amount of risk commensurate with the anticipated reward to deliver the optimum outcomes for the organization in the short, medium and longer term. Projects and programs need to be selected based on a range of factors; some high risk high reward programs that may create the 'organisation of tomorrow', some operational projects needed to 'keep the lights on' and some 'safe' projects with a satisfactory ROI and payback period that improve the current business[9].

Portfolio risk management differs from project and program risk management as in the right circumstances at the portfolio level the organization may choose to actively embrace appropriate risks in anticipation of high rewards; eg, investing in new, unproven technology with a view to being 'first in the market' in anticipation of highly profitable sales; accepted risks include recognising the technology may not work, and/or the market may not accept the new product, alternatively, the product may be highly successful and profitable. It is impossible to create a risk free environment and most projects carry a significant amount of risk that should be actively managed. Attempts to avoid 'all risk' are always counterproductive and lead to organisational obsolescence.

One of the main effects of a portfolio is to reduce the overall risk to the organisation holding the 'portfolio'. This is common practice in most investment areas such as investments in 'stocks and share portfolios', 'personal superannuation account portfolios' and mineral prospects[10]. A properly constructed portfolio is always diversified, with a focus on 'growth', 'income' 'capital protection', etc. However, whilst balancing risk and the 'desired reward' is common practice in most types of portfolio, there is little sign of any clear definition and focus for risk in most PPM objectives.

9 For more on ***selection processes*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1062_Ranking-Requirements.pdf

10 Modern Portfolio Theory (MPT) was developed by Markowitz in the early 1950s. MPT purports to specify the specific mix of investments potentially generating the highest return for a given level of risks (within tolerances). However, MPT whilst MPT is commonly used in financial investment portfolios and models have been developed for the mathematical solution to the selection of R&D projects and mineral prospecting, it is the technique is rarely used to optimise PPM investments. For more on MPT see: https://mosaicprojects.wordpress.com/2012/07/08/averaging-the-power-of-portfolios/

The focus of current practice is focused on five main areas:

- **Achieving strategic alignment[11].**
- **Achieving a balanced portfolio** using tools such as Portfolio Maps, Bubble diagrams, Histogram, Bar charts, Pie charts, mathematical models[12].
- **Dependency management** ensuring that none of the selected projects included within the portfolio are dependent on outputs from projects that have been deselected, and that the projects included in the portfolio are commenced in the optimum order so that the dependencies between projects are not compromised.
- **Managing the portfolio efficiently** so that the costs are optimised, processes are effective and used consistently, information is communicated effectively, and stakeholder needs, and desires are listened to, and management appropriately.
- **Maximising the value of portfolio** using tools such as Scoring models, Analytical Hierarchy Process, Economic Methods, Payback Time, Net Present Value (NPV), Internal Rate of Return, Return On Investment (ROI), Monte Carlo and decision tree, Cost/Benefit Analysis.

A rigorous approval processes can proactively assist in achieving these objectives and managing the risks, portfolio approvals may be for the component as a whole or conditional. Conditional approvals may be based on the component successfully passing one or more stage gate reviews, or completing other processes such as a 'feasibility' study. Some of the options include:

- A project may be approved for a stage of the development such as a feasibility study with the project deliverable being the report, and based on the report a new project proposed for the next phase in the development.
- The overall component may be approved subject to the component passing specific reviews or stage gates. The 'gate reviews' may be undertaken by the portfolio management team or other governance bodies.
- The component may be approved as a program with responsibility for framing projects within the program delegates to the program management team (with or without external reviews).
- The component may simply be approved and included in the routine portfolio review process.

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[11] For more on ***strategic alignment*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1006_Strategic_Alignment.pdf

[12] The term ***Balance Point*** is used to refer to the optimum target percentage for your portfolio balancing two or more factors. For example, you may be allocating 90% of your funding today in low-risk projects and missing out on the opportunities created by high-risk, high-reward projects. The portfolio management team may make a conscious decision to identify and fund more high-risk projects so that in two years you are achieving a balance of 70% low risk and 30% high-risk. These percentage targets (70, 30) are called *Balance Points*. This approach can be used to balance many different factors, a few include:

Corporate vs. field projects. If you have a corporate office and field offices, you might be surprised how much of the money for projects is allocated to corporate projects – in spite of the fact the field offices are normally generating the revenue.

Strategic vs. tactical projects. Some organizations seem to approve too many strategic projects. Since strategic projects tend to be longer, they tie up resources and make it hard to get the short-term tactical projects implemented. On the other hand, some organizations focus too much on short-term tactical projects and have a hard time achieving their goals and strategies. Understanding your allocation today will allow you to set more optimum Balance Points in the future.

Technology vs. business projects. Some companies spend too much of their money on internal IT initiatives and others do not spend enough.

Once you know what you are spending in each category, you can set the optimum *Balance Points* you want to achieve in the future.

Balance is also important, too many projects and programs in any one area will diminish the long term growth of the organisation and the current selection of projects and programs should be rigorously reviewed on a routine basis culling projects or programs that no longer contribute value and redirecting resources to more valuable work. Some of the factors that limit the optimisation of the portfolio, and make it very difficult to divest under performing projects and programs in order to divert their funds and resources to higher valued projects are:

1. Ineffective governance processes that permit individual business units and departments to spend budgets 'under the radar', tying up resources that could be better used elsewhere.
2. Projects which are difficult to stop because they have significant upfront costs with few early or intermediate benefits making it difficult to kill a project before it has delivered something - sunk costs should not influence decisions but frequently do because of the way people's minds work.
3. Approval processes that sanction projects individually instead of looking at the collective portfolio for the best use of organization resources.
4. Few, if any, ongoing structured gateway reviews to assess project performance and its alignment with the current objectives of the organisation[13].

Balancing these factors with the need to invest in changes that have the potential to deliver the maximum value to the organisation is the key challenge facing portfolio managers.

The validation process can be very unpopular with powerful executives. You will not find it in 'How to win friends and influence people"! This is why many organizations have outsourced the validation process to experts who have no up or downstream involvement in the portfolio and are independent of political pressures (however, they do need the continued full support and backing of the CEO against all of the pressures that will be brought to bear). Another option is to have a quick and simple preliminary process (a one-pager…) that outlines the idea, if approved at this stage, the business case can be worked up for formal approval; the low level of investment in a one-pager will reduce the level of commitment to the project if it is rejected and save on wasted business case development costs.

Validating Components prior to Approval

The validation process needs to assess both the business case and the project/program itself to answer the fundamental question: *'Is this the optimum available investment, and will we actually realise the value?'*

This fundamental question leads to a series of more detailed questions that should be answered before considering the project/program for investment

- **Have all of the available benefits been identified?** Or are available benefits being withheld for other projects when they could be realized through this project at no additional cost?
- **Have all of the likely costs been identified and reasonably estimated?** Or have the costs been understated to be increased later once the investment has been approved[14], or overstated to give the project team a comfortable cost cushion?
- **Is the rationale for the investment clear, and will it further the organisations strategic objectives?** There are many projects that can be done, but only those that need to be done and that advanced the firm's strategy should be done. A worthwhile investment can be found to be not relevant to the strategic imperatives or out-scored in terms of priority by other more worthwhile investments. The decision to 'not to proceed at this time' should be applied to 'good proposals' that are not strategically useful.

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[13] For more on ***Gateway reviews*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1092_Gateways-Scorecards.pdf

[14] There are powerful influences that naturally bias the information in a business case towards underestimating the cost and time needed for the work, and to overestimate the benefits to be realised. A solution is to apply ***reference class*** adjustments, see: https://mosaicprojects.wordpress.com/2017/05/23/the-reference-case-for-management-reserves/

- **Is all of the investment necessary?** Can we eliminate high cost/low value elements with little-to-no impact on the overall outcomes and benefits of the investment (ie, has an effective value management analysis been undertaken)?
- **Can we achieve essentially the same outcomes and value for a fraction of the cost with a totally different approach?** Reframe the problem and look at radically different approaches.
- **Is the project appropriately set up to deliver the agreed desired business outcomes and enable the associated business benefits and value?** Is the project focused on delivering this value or merely delivering a project?[15] The return on investment will only be achieved once the project's deliverables are being used.
- **Do we, as an organization, have the capability, the wherewithal to successfully deliver this investment and its value?** It is easy to start a project but the value comes from its successful delivery – and many projects can be too complex to be successfully delivered by the organization. This 'value delivery' capability deficiency needs to be identified up front so that either the investment is reshaped to be within the organization's capability to deliver, or the organization needs to swiftly uplift its value delivery capability to meet the demands of the project investment, possibly through partnering, alliances or buying the requirements as a service.
- **Are the project team and governance team up to the task?** On small projects a 'hero' project manager may be able to pull the project over the line singe-handed. On larger projects and programs, the project and governance teams need to be equipped, skilled and experienced to successfully deliver the size, scale and complexity of the project. Skilled people are usually the scarcest resource within an organisation.

By asking, and having these questions answered, the portfolio management team will be better placed to know whether or not the proposed investment is worthwhile, optimal, relevant, do-able and likely to succeed; all questions that need to be answered before an investment is approved. Recognising the commitment of effort needed to develop a business case that fully addresses all of these questions (and the commitment to the proposed project this effort will generate) many organisations are adopting a two stage approach. The initial rejection/selection is based on a one page project proposal with the primary consideration being the proposed project's contribution to achieving the organisations strategy. Selected project that have a demonstrated strategic benefit then go forward for a more thorough assessment based on a fully developed business case. It is much easier to reject a 'one page' proposal and the waste of valuable effort in developing unsuccessful business cases is minimised.

Then during the life of the project, regular surveillance[16] is needed to ensure the project remains aligned to the organisations changing strategy and is still contributing value.

Over time asking these questions will lead to an improvement in the quality of thinking and preparatory work that goes into investment proposals, so that many of the potential problems that can cause downstream delays and extra costs are eliminated before the proposal is submitted for validation. This improvement in the quality of investment proposals lead directly to improved project investments and increased value delivery.

To be successful, the process needs to be rigorous, and have the total support of the CEO to ensure that all proposals are validated including 'mandatory' and 'pet' projects despite the inevitable protests of key executives.

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15 For more on ***benefits*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1042_Outputs_Outcomes_Benefits.pdf

16 For more on ***project surveillance*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1080_Project_Reviews.pdf

Validating Components after Approval

The validation process needs to be repeated at regular intervals to ensure portfolio optimisation:

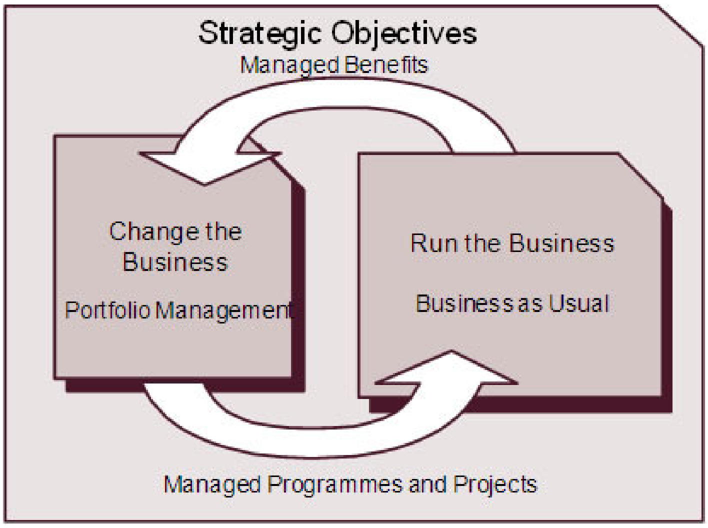
- **Re-validate the Business Case**. The time lag since the original approval may have changed the assumptions in the Business Case. For instance, it is possible that the competitive opportunity has come and gone.
- **Re-validate sponsorship**. It is possible that the client is no longer committed to the project. This could happen with changing priorities and it could also happen with a changing of the sponsor.
- **Re-validate staff**. It is possible that the resources that were going to work on the project are no longer available.
- **Re-validate budget**. It is possible that budget cuts, or overruns from other projects, have resulted in a lack of funding for the project.
- **Re-validate the estimates**. It is possible that the more accurate estimates developed during the project result in the project being no longer viable.
- **Re-validate priorities**. Business changes and revisions to the strategic plan may result in a number of new projects with high priorities. These new projects may take the funding that was originally allocated to this project.

The reassessment of projects in progress, and cancelation of those no longer contributing value frees up resources for more valuable work.

Axelos – Management of Portfolios

The UK based Axelos have released their Management of Portfolios[17] (MoP) guidance. Axelos define Portfolio Management as *a co-ordinated collection of strategic processes and decisions that together enable the most effective balance of organizational change and Business As Usual.*

Within this framework, the Portfolio, Program and Project Office (P3O[18]) supports the portfolio function in addition to providing assurance for the projects and programmes they oversee[19].



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[17] For more on MoP see: https://www.axelos.com/best-practice-solutions/mop

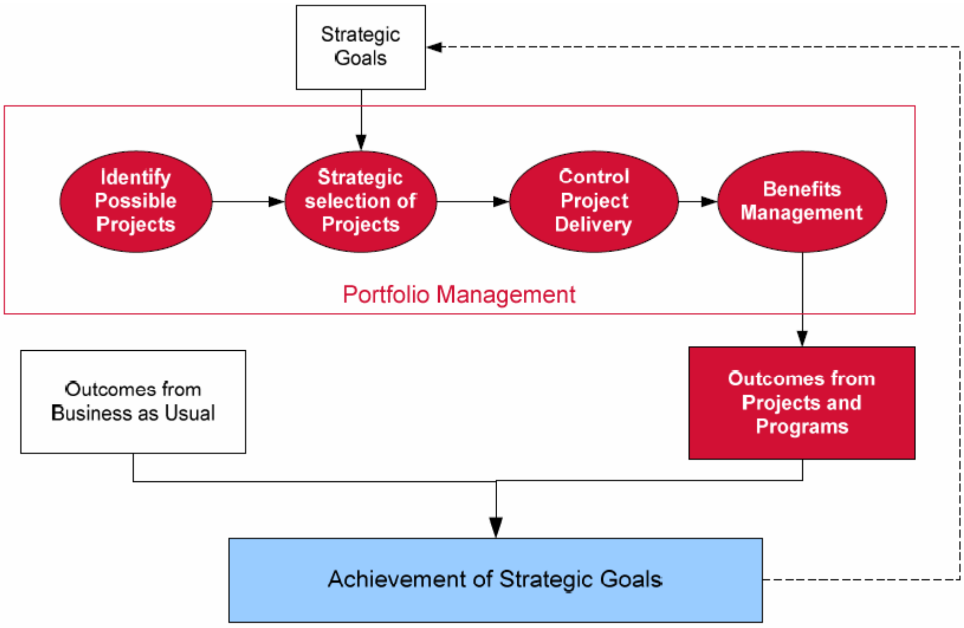
[18] For more on P3O see: https://www.axelos.com/best-practice-solutions/p3o

[19] For more on ***PMOs*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1034_PMOs.pdf

MoP covers a wider spectrum of organisational governance than either the PMI *Standard for Portfolio Management*[20] or this set of White Papers suggests is appropriate[21].

MoP enables investment in the right, well implemented change initiatives including ensuring that:

- The programmes and projects undertaken are prioritized in terms of their contribution to strategic objectives and overall level of risk
- Programmes and projects are managed consistently to ensure efficient and effective delivery
- Benefits realization is maximised to provide the greatest return (in terms of strategic contribution and efficiency savings) from the investment made.



Within the PMI framework and Mosaic's Project Delivery Capability framework[22], the Portfolio Management function is responsible for the oversight of the performance of selected projects and programs with a view to authorising their continuation or termination, but the organisational management of these disciplines requires a different skill set and should be undertaken by a specialist management function.

Similarly oversighting and reporting on the realisation of benefits may be an appropriate Portfolio Management function, but the actual management of the realisation process should be vested in the business unit that requested to project/program and prepared the business case. The manager accountable for achieving the benefits is the Sponsor[23].

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20 For more on the PMI ***Standard for Portfolio Management*** see: https://mosaicprojects.com.au/shop-the-practice-standard-for-portfolio-management.php

21 For more on the overall structure of the various processes for ***'managing project management'***, see: https://www.mosaicprojects.com.au/WhitePapers/WP1074_PPP_Taxonomy.pdf

22 For more on the ***PDC framework*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1079_PDC.pdf

23 For more on ***sponsorship*** see: https://www.mosaicprojects.com.au/WhitePapers/WP1031_Project_Sponsorship.pdf

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