# The 6-S Philosophy of Project Management

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#### Introduction

"The secret of getting ahead is getting started. The secret of getting started is breaking your complex, overwhelming tasks into small manageable tasks, and then starting on the first one." – Mark Twain

Our world today is undoubtedly going through an extremely difficult time as a result of Covid-19. Many of us are grieving over the loss of near and dear ones. The global economy is also facing turbulent and uncertain times and some of us are facing job losses as well as economic insecurity. Many organisations are facing very tough and turbulent times, some have collapsed, and others are on the brink of collapse.

One year ago, in the middle of March 2020, I had to prematurely cut short my overseas trip and rush home to Melbourne. We had to cancel a large number of CMA programs, as Australia and other countries were shutting down their borders to combat Covid-19. Any prospect of international travel seemed bleak for years ahead. Back home alone on a 14-day home quarantine, the future looked bleak for me personally as well as for CMA Australia. One year later the world is still struggling to cope with Covid-19, and it would probably be an understatement to say that the future still looks turbulent and uncertain. But on a personal level I am incredibly happy with the way I have navigated my life through these very tough times.

My secret? I have used Project Management as my guiding philosophy in managing both my personal and professional life through these Covid-19 times. I am also proud of the way our organisation has navigated our way through these Covid-19 times. Our Management team here at CMA has also used a philosophical approach to Project Management to navigate the turbulent Covid-19 storm, remain afloat, and emerge one year later as a stronger and tougher organisation ready to face the future.

# **Achieving Organisational Success by Project Portfolio Management**

# What is a Project Portfolio?

It is often assumed that projects are undertaken in large organisations which build buildings, roads, airports, or other such large undertakings. However, every organisation, big or small, is required to regularly undertake multiple projects, the cumulative success of which is responsible for and results in the success of the organisation as a whole. All the projects taken together constitute the Project Portfolio of the organisation

#### Do or DIE - Key to Organisational Success.<sup>2</sup>

To survive and not die, organisations need to systematically **D**esign **I**mplement and **E**valuate **(DIE)** its portfolio of projects. These three phases form part of the project portfolio management within

<sup>&</sup>lt;sup>1</sup> Institute of Certified Management Accountants

<sup>&</sup>lt;sup>2</sup> Keleher Kieran - Design Implement and Evaluate (DIE)- Logical Framework Training Manual

organisations. The acronym DIE is significant as it is often crucial for organisational survival, especially in a crisis like the current Covid-1919 pandemic. DIE also means a specialised machine tool used in *manufacturing* industries as a blueprint to cut and/or form material to a desired shape or profile. Thus, the acronym DIE used in Project Portfolio Management symbolises a blueprint for organisational success.

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# The Philosophical Approach to Project Management

This philosophy of project management extends project management principles to all areas of business and life – I consider my own life as a project and my life goes through a life cycle which is initiated at birth, planned during the years of growth, executed through one's productive life and the process of evaluation and completion starts in the golden years of retirement and inevitably closes with death. This life cycle also pertains to companies and other organisations.

A philosophical approach to organisational management comprises the following key components:

- Organisations can be best managed by systematically breaking down the many components
  required for its success into manageable projects. This philosophy recognises that achieving
  organisational success can be a daunting task and suggests that breaking down this into
  appropriate smaller components and then running them as projects can be the key to success.
- The success of these manageable projects can be achieved by primarily utilising the organisation's collective experience in the "application of knowledge, skills, tools, and techniques to project activities" The utilisation of *experience* is, in my opinion, the key to success.
- If an organisation can ensure that most of its projects and all of the critical projects are successful, then the success of these key parts will ensure success of the organisation as a whole.

This philosophy can also be expressed in the following terms:

- 'Divide and conquer'.
- 'Delegate and achieve success'.
- 'Tasks that seem overwhelming can be achieved by breaking down into manageable segments'.

Often organisational management can look daunting and overwhelming when viewed as a whole – thus taking a philosophical approach to the myriad of tasks to be done makes any project much more manageable. Note that the philosophy applies not only to organisational management but also to managing the busy lives of executives.

In my opinion every manager and organisation will greatly benefit from the conscious application of a philosophical approach to project management in managing their businesses. Conscious application does not require every manager to obtain a PMP certification in Project Management or to read all 592 pages of the *Project Management Book of Knowledge* (PMBOK\*).

Instead, in my opinion, every senior manager should have:

- An awareness of the importance of applying good practice Project Management in projects of any size.
- An understanding of essential elements, including the Leadership Role of the Project Manager, Project Planning, Risk Management and Stakeholder Engagement.
- An understanding of the principal elements of design control to be applied within projects.

<sup>&</sup>lt;sup>3</sup> https://www.pmi.org/about/learn-about-pmi/what-is-project-management

My proposition is that every manager and even other professionals like doctors, engineers, accountants etc (even politicians) should know and understand the basics of project management. I would go even further than that and suggest that having project management training at school level would provide our children with a set of invaluable skills to help them navigate their way through life and work.

Of course, if a particular project is exceptionally large and involves millions of dollars then it would require the use of trained professional project managers and potentially sophisticated project management software like *Primavera*. However, even in such large projects, it would be advisable to adhere to what I call the 6-S philosophy of project management, rather than get lost in the jungle of PMBOK® I am not questioning the validity of the knowledge contained in the book, in fact I have referred to it in various places in this article. My proposition is that you should treat it like a cafeteria – just go in there and pick what you need to apply to the 6-S philosophy. My criticism is that the book has been designed by people who take an engineering approach to project management whereas the success of organisations depends upon taking a strategic approach to project management as explained below.

# The 6-S Philosophy of Project Management

The 6-S philosophy of project management for organisations, developed over years of consulting work, is summarised as follows (Figure 1):

- 1. Start
- 2. Stepped
- 3. Scalable
- 4. Systematic
- 5. Success-oriented
- 6. Synergistic

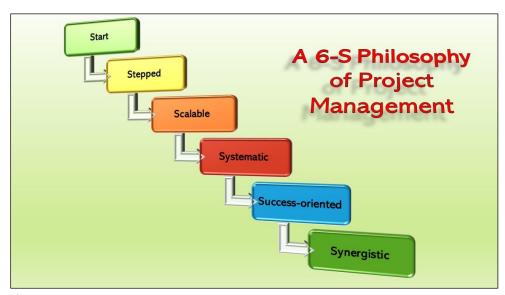


Figure 1

Implementing the 6-S philosophy of project management and organisation can consciously work its way towards successful achievement of its strategic objectives.

#### 1. START

As the well-known philosopher Lao Tzu said:

'A Journey of a thousand miles starts with a first step'.

An organisation has limited resources and potentially an exceptionally large number of projects on its wish list. It is neither possible nor desirable to attempt all possible projects. The senior leadership team within an organisation is therefore tasked with selecting only those projects which will help it attain its strategic objectives and making a start on at least one of them.

This selection of the right projects from a range of possible projects is the function of the design phase of Project Portfolio Management (Phase 1). What impact do you want the project to have on your organisation? Select projects which will help your organisation achieve its strategy. The wrong project even if successfully implemented has no impact on organisational success.

#### 2. STEPPED

Stepped is defined as having or formed into a step or series of steps; carried out or occurring in stages or with pauses rather than continuously. But with each step there is continuous improvement (Kaizen).

#### Kaizen (Continuous Improvement)

In the CMA program we talk about a time in Japan when Toyota found that their factory was taking 8 hours for gear box manufacturing whereas in Germany Volkswagen was doing it in 4 hours. They sent their engineers to study Volkswagen's production and when they came back, they set out to match Volkswagen. They achieved that celebrated milestone and then set out to improve on it by reducing the set-up time from 4 hours to 2 hours. Once that was achieved and celebrated, they took the next step and reduced set up time from 2 hours to 1 hour — one more small step and victory celebrated. Every small step was thus not only celebrated as an achievement, but also motivated them to take the next step and they did that till the set-up time was reduced to 3 minutes. From 8 hours to 3 minutes was not achieved as one project or in one shot. It was the cumulative result of a number of small steps. I believe the Japanese were using the 6-S philosophy of project management in Kaizen.

Focus on the Small Milestones as much as on the Final Destination.

'Rome was not built in a day' and 'From little things big things grow' aptly conveys the importance of the philosophy in achieving an ambitious final target.

If you focus on the destination at the start of your journey instead of focusing on making sure you are taking the right steps and going in the right direction, there is a danger that you might reach the wrong destination. Take the famous example of Boeing 737Max – when the project to develop the plane was completed and the aircraft launched it was deemed to be a great success as Boeing proceeded to manufacture a couple of aircrafts every day. But in hindsight we now know that it was a failure. I suggest that in focusing on getting the entire aircraft (large project) ready they lost focus on getting crucial little things right. It is now well known that it was the failure of one of these smaller MCAS project that led to the huge problems that Boeing is facing today.

#### 3. SCALABLE

Step 2 of the 6-S philosophy of project management revolved around breaking up the large task of achieving the strategic objective of an organisation into smaller achievable objectives. It follows that most projects will need to be repeated on a larger or smaller scale on an ongoing basis. So, it does not make sense to have to reinvent the wheel at the start of every project. Both at the design phase and in the planning part of the implementation phase the element of scalability needs to be kept front and centre of the process.

For example, in the case study of CMA Australia (discussed later in this article), when we designed the Zoom program in March 2020 at the onset of the pandemic, it was first meant to be delivered to a small group of participants from Singapore. But it was designed to be scalable, and the same delivery design was then applied in March 2021 where it was delivered in the same basic format to 102 participants from 20 countries.

Another good example is this article, it began as a project for a webinar. The objective of the project was to design a webinar to help our members meet the challenges they will be facing due to the pandemic. As always it was scalable, and its scalability helped me to create the 6-S philosophy of project management. It can be further scaled up to be a chapter in a book on Management and potentially I could scale it up to be a book on its own. It could also be scaled up to be included into a CPD program in project management.

#### 4. SYSTEMATIC

This is where we get down to actually implementing individual projects. Now we move from portfolio management to systematically managing individual projects. The 6-S philosophy to individual projects will also help in achieving success at this stage.

Once the right projects have been selected, these projects move into the Implementation phase (Phase 2). In this phase we go through the four stages in the life of the project (aka Project life Cycle):

- 1. Project Initiation Start
- 2. Project Planning Scalable & Stepped
- 3. Project Execution Systematic & Success-Oriented
- 4. Project Completion / Closure Synergise

In this phase we can go the cafeteria called PMBOK® and carefully select the techniques and methodology required to successfully implement your project. In this process you need to rely on your experience to make appropriate selection. Appendix 1 lists the most useful tools and techniques of project management. Remember however, the key to the application is the philosophy of project management i.e., the 6S's – Start, Stepped, Systematic, Scalable, Successoriented and Synergise.

#### 5. SUCCESS-ORIENTED

Before we undertake any project, we should ask the question – *Why undertake the project?* It should only be undertaken if it contributes to attaining the strategic objective of the organisation. A right project successfully implemented can be termed to be successful. Projects should be successoriented at two levels – at the project selection level and throughout the project to ensure that they are in keeping with the strategic objectives of the organisation and this includes being agile enough to make required changes as circumstances change. And Covid-19 has reminded us that unforeseen crisis can upend the strategic objectives of projects as well as the organisation. The use of the AIM method (outlined below) is recommended whenever an external crisis strikes.

# AIM (Abolish, Influence, Monitor) Technique of Crisis Management<sup>4</sup>

An example of the extent of externalities which can potentially impact projects actually happened when Covid-19 hit our world - almost all managements would have needed to revaluate and recalibrate their project portfolios to accommodate the changed circumstances.

<sup>&</sup>lt;sup>4</sup> Keleher Kieran - AIM (Abolish, Influence, Monitor) - Logical Framework Training Manual

When dealing with a crisis, use of the AIM technique is recommended, and this can be used effectively for managing projects in a crisis. AIM is how one should **manage** external factors, in decreasing order of preference, either:

- 1. <u>Abolish</u> if one can (as this increases the likelihood of success the most obviously with Covid-19 that was not possible in the short-run).
- 2. <u>Influence</u> if one can't abolish (as this increases the likelihood of success but not as good as Abolish) or
- 3. <u>Monitor</u> if one cannot abolish or influence (this does not increase the likelihood of success at all but is all about terminating the work/project if the external factor is going 'pear shaped').

#### **Evaluation Phase**

Evaluating a project in terms of Project Portfolio Management is different from evaluating a project in terms of successful implementation. Here we look at the impact the project has had in achieving the strategic objectives of the organisation. Projects that have not been successfully implemented, in terms of cost and time for instance might still be considered successful in terms of contributing towards the strategic objectives of the organisation. Conversely projects that have been successfully implemented might, on evaluation, be deemed to have been unsuccessful in terms of meeting their strategic objectives.

# Projects Failure - Implementation Failure vs. Impact Failure

On an Implementation level, project failure often occurs due to failure in one or more of the key aspects of project management listed above. In other words, projects are unsuccessful due to failure in cost management and/or failure in time management and/or failure in quality management and/or failure in scope management.

Projects that fail to meet their objectives in terms of cost and time might still be a success in terms of the overall organisational portfolio in that they still help achieve the strategies of the organisation. Conversely, a project could be successfully implemented but still be a failure in that it has not had the desired impact on the strategy of the organisation. This could be because of many factors due to the dynamic nature of the external environment that the organisation operates in. This portfolio risk needs to be understood and the risk needs to be managed and projects need to be recalibrated.

## 6. SYNERGISE

On a broader strategic level, as mentioned earlier, projects are evaluated in terms of their impact on achieving the strategic objectives of the organisation. Synergise here means that the combined activity of all projects undertaken by an organisation should result in a joint effect greater than the sum of their separate effects.

Projects should never be viewed in isolation, and they are only ever useful in the impact they have on achieving the overall organisational objectives. For example, if the individual impact of project A would be 2 and another similar project B with an impact of 2, the combining of the two projects A and B should give you an impact of 5 instead of 4 because they are synergised towards achieving a common strategic objective.

Take the example of the Olympic Games where there are over 300 gold medals to be won. Each of those gold medal events would be a project on their own. But synergised together, they create a far

bigger impact called the Olympics which is far more prestigious than the sum of those individual parts if they were to be held separately and not under the Olympic umbrella.

Thus, the biggest benefit of consciously applying the 6-S philosophy of project management would be that the sum of carefully selected and designed individual projects would be far greater than the sum of their individual contributions.

# Project Success in a Covid-19 World: CMA Australia - A Case Study

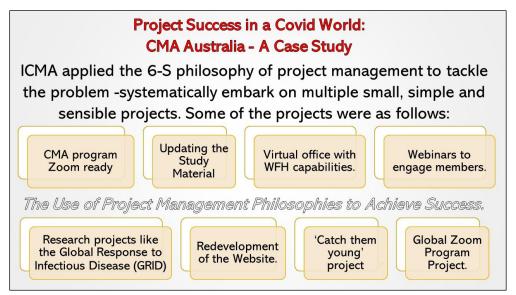


Figure 2

# The Use of Project Management Philosophies to Achieve Success.

As mentioned earlier In April 2020, ICMA like many other organisations around the world, was staring at a complete disruption of its activities. At the time, the Australian Prime Minister warned that our borders could be shut for years. Locally in Melbourne, our office had to physically shut down due to Covid-19 restrictions. The big picture was daunting – survival of this crisis was at the front and centre of the minds of our senior leadership team. We first applied the AIM analysis on this crisis and realised that we had no chance of abolishing or influencing a global pandemic. So, all that was left for us to do was to Monitor and Manage our way through the crisis. ICMA applied the 6-S philosophy of project management to tackle the problem. Instead of stressing over the big picture, we decided to systematically embark on multiple small, simple and sensible projects which we believed could help us navigate the organisation through the Covid-19 storm and come out stronger on the other side. Some of the projects were as follows (Figure 2):

- Getting the CMA program deliverable on Zoom.
- Updating the Study material for the CMA Program to reflect impact of Covid-19.
- Transitioning our systems to create a virtual office with WFH capabilities.
- Systematically organising Webinars to engage members.
- Undertaking various research projects like the Global Response to Infectious Disease (GRID) index that were very topical and controversial.<sup>5 6</sup>
- Redevelopment of the Website. www.cmaaustralia.edu.au
- 'Catch them young' project engaging students who are prospective CMA's
- Global Zoom Program Project.

<sup>&</sup>lt;sup>5</sup> https://cmaaustralia.edu.au/ontarget/grid-index-tracking-the-global-leadership-response-in-the-covid-19-crisis/

<sup>&</sup>lt;sup>6</sup> https://cmaaustralia.edu.au/ontarget/grid-index-2-ostrich-leadership-and-ostrich-reactions/

We achieved success in all these small projects by taking simple steps systematically and sensibly (the 6-S approach to project management). By themselves none of the above projects looked significant, but as a portfolio of projects they helped us achieve our strategic objectives in a crisis. That is the reason why today we can claim to have had a successful year. In achieving our success in the projects we undertook, we strongly relied on the 6-S philosophy of project management.

### Achieving Work Life Balance Using the 6-S Philosophy of Project Management

JAMAR

Not just organisations, but every individual, would regularly undertake projects in their personal life. For example, the first major project I remember undertaking was at the age of 16 when I initiated, planned, implemented, and successfully executed the silver jubilee celebration of my parents 25<sup>th</sup> wedding anniversary. Life can sometimes look overwhelming and daunting when we look at the number of things we need to achieve. By applying the 6-S philosophy of project management to life, we can break down life into small simple and systematically achievable projects. For example, health management could be one project, achieving academic qualifications (like an MBA or PhD) could be another project, and even your professional or job demands can be broken down to achievable projects; and then the skills, tools and techniques of project management can be applied to successfully achieve these.

Successful executives today need to achieve a suitable and sustainable work life balance. This requires balancing financial well-being, with health/physical well-being, with professional well-being, with emotional/spiritual well-being, with social well-being. This can often be exceedingly difficult. What if executives could apply the 6-S philosophy of project management to the whole of life management? Then they could have the following projects:

- Financial well-being project (have annual objectives and manage the achievement of that objective as a project)
- Physical well-being project (have monthly or quarterly objectives for aspects such as 'weight management' 'cholesterol lowering' 'improve VO2 max levels')
- Emotional well-being project (use techniques like meditation to manage stress)
- Social well-being project (projects which increase your social life as well as engaging in projects which give back to society)
- Professional development project (set up projects for expanding your knowledge in areas critically important to your career)

Personally, I have managed my life using the 6-S project management philosophy as I navigated my way through life successfully while attaining a balance in my life. Currently the project I am working on is setting up my pension fund to ensure a comfortable retirement. This requires a lot of planning and implementation – the first phase of which will finish in September 2022. Even this first phase has been systematically broken up into smaller, simpler and four smaller and sensible sub-phases. Having used the philosophy of project management in my approach I am reasonably confident of its success.

Another project I have just completed recently is a weight management project. In January this year, I found myself a somewhat overweight after a particularly indulgent holiday in Tasmania. I set myself a target of losing 12kg in 4 months – set up a project to manage my diet and activities and achieved my target with ease (ahead of schedule). I credit my success in this endeavour to the application of the 6-S philosophy of project management. Many years ago, completing my PhD and CPA studies were also managed as a project. Two decades ago, my migration from India to Australia was managed using the project management philosophy.

Many of you might also have intuitively used the project management philosophy in your various endeavours of life. However, it is my experience that consciously and actively managing the requirements of your business and life using the project management philosophy will reduce stress and ensure overall well-being, increasing the chances of success at all levels.

The 6-S philosophy of project management as applicable to life management and business management is probably being applied by people around the world in one form or another. So, in stating the obvious, I have two objectives:

- More people should use this "small-steps" philosophy in the application of project management techniques to manage their lives and businesses.
- Even those who are successfully using this philosophy, albeit not consciously, acknowledge the advantage of using it deliberately and consciously in all aspects of their lives.

# Summary

It is not the intention of this article to be a comprehensive guide to learning project management. It is intended to arouse enough interest in project management to encourage you to use it in more aspects of life and business. There is no dearth of information at all levels, on most of the matters I have referred to in this article.

"Nothing is particularly hard if you divide it into small jobs." said Henry Ford.

I would like to conclude by paraphrasing the above quote of the greatest inventor of the 19<sup>th</sup> century "Nothing is particularly unachievable is you divide it into achievable projects".

# Appendix 1

#### What is a Project?

A project is "a temporary endeavour undertaken to create a unique product, service or result" which is achieved by a well-planned set of controlled and coordinated processes. So, a project is:

- A temporary endeavour it has a start and finish date as opposed to organisational operations which are ongoing year after year.
- It is a planned endeavour.
- It required good process control and coordination.
- It has an objective to be attained which is to achieve a unique result and could be to create a unique product or service.
- A Project has time, cost, quality, and resource constraints.

Once the project objective is achieved the project is deemed to be successful.

# What is Project Management?

Project management, then, is the application of knowledge, skills, tools, and techniques to project activities to meet the project requirements."<sup>8</sup> These set of skills, tools and techniques are required to be used as applicable at each of the 4 stages of the project life cycle.

- During *Project Initiation* where applicable we find a sponsor, identify stakeholders, appoint a project manager, and draw up a project Charter.
- Project Planning is arguably the most important part of the project and the success of the
  project depends upon adequate planning. In the words of Benjamin Franklin "If you fail to plan
  you plan to fail". Planning looks at what you want to do (also called the objective of the project),
  and then systematically setting down how you are going to do it and laying out the time frame in
  which you want to complete the project. A Comprehensive Project Management plan is used in
  project planning which includes:
  - Statement of Work (SOW)
  - WBS (Work breakdown schedule)
  - Work packages and project schedules
  - Project budget and cost
- Project Implementation involves monitoring and control of the project through all stages of its execution.
- *Project Completion* or closure, among other things involves a review of the project to apply key learnings from the project to future or other ongoing projects.

# Skills Required in Project Management:

The skills required in project management vary depending on the size and complexity of the project. As mentioned before, large and complex projects potentially require trained qualified project managers. However, the skills required in managing smaller projects which are a regular feature of most organisations are leadership skills which are critical part of general management. So, it would be appropriate to state that every good manager should also be a good project manager. The skills required are the same though the application might be slightly different.

To manage a project successfully a manager, would need to be:

- Decisive
- Authoritative not authoritarian.

<sup>&</sup>lt;sup>7</sup> https://www.pmi.org/about/learn-about-pmi/what-is-project-management

<sup>&</sup>lt;sup>8</sup> https://www.pmi.org/about/learn-about-pmi/what-is-project-management

- Proactive not reactive
- Manage by data and facts, not uniformed optimism
- A Good Communicator
- Leading by example
- Have sound Judgement
- Be a Motivator
- Diplomatic
- Delegate
- A good leader.

#### **Techniques and Methodology of Project Management**

Every Project is different and consequently would require different techniques and methodology to manage. There is no one size fits all.

"Every project is unique. Some projects are relatively straightforward and predictable. Others are highly complex and risky. Each requires a different approach when it comes to how the project should be managed. Applying the same amount of project management rigor to every project is wasteful."

Especially in applying the 6-S philosophy of project management, there would be may different types of projects of every shape size and form. So, the technique and methodology selected for the project should be selected according to the project.

#### **Tools of Project Management:**

There are a myriad of tools which can be usefully applied in project management. But for the purposes of utilising the 6-S philosophy of project management, the tools you already have learnt in general management should be sufficient. Some of these tools are as follows:

- SWOT analysis.
- Change Management
- Risk Management
- Flow charting
- Stakeholder Management.

There are tools which are more specific to project management which are listed in the next section.

#### Managing Cost, Quality, Time & Scope – Key Challenge of Portfolio And Project Management

Portfolios as well as projects have time, cost, and scope constraints and quality standards to meet. Achieving project success would be easy if we threw a huge amount of money and resources at the project. But in reality, our challenge in project management arises because we have to operate within the constraints of cost and time limits and still achieve a desired level of quality. There is a well-known saying: Fast, Cheap, Or Good. You Can Only Pick Two. So, anything can either be:

- Fast and Cheap (quality suffers)
- Cheap and Good (will not be quick)
- Fast and Good (will be expensive)

<sup>&</sup>lt;sup>9</sup> Burgan, S. C. & Burgan, D. S. (2014). One size does not fit all: Choosing the right project approach. Paper presented at PMI® Global Congress 2014—North America, Phoenix, AZ. Newtown Square, PA: Project Management Institute.

So, you cannot attain the holy grail of fast, cheap, and good. In project management, there is an additional aspect of scope management and so we have what is known as the 'Iron triangle':

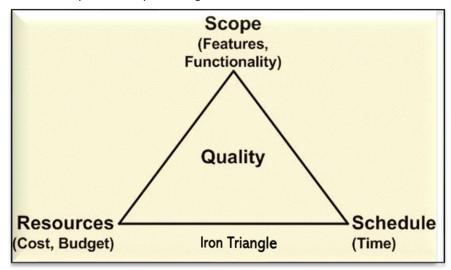


Figure 3

#### **Project Cost Management**

There are many cost management techniques which we are all familiar with and management accountants who have studied CMA Australia's Strategic Cost Management module would be adept in cost management. The specific tools of value in project cost management are:

- Cost estimating
- Cost Budgeting
- Cost Control
- Earned Value Management. (EVM)
- Work Breakdown Schedule (WBS)
- Activity based cost allocation (ABC)
- Responsibility Accounting using ABM

# **Project Quality Management**

Quality is relative, in that you can only get a certain quality, for a certain cost within a certain time. However, the level of quality which is required in a project needs to be that which will satisfy the end user or customer for that project. That level of quality needs to be determined in tandem with cost and time required to attain that level at the planning stage.

The PMBOK<sup>®</sup> Guide summarises the tools and techniques associated with quality management. Project quality management is broken down into three main processes<sup>10</sup>:

- Quality Planning,
- Quality Assurance, and
- Quality Control

Thus, quality requirements for a project are not very different from quality requirements for products and general business services.

# **Project Time Management**

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<sup>&</sup>lt;sup>10</sup> Rever, H. (2007). Quality in project management—a practical look at chapter 8 of the PMBOK® guide. Paper presented at PMI® Global Congress 2007—Latin America, Cancún, Mexico. Newtown Square, PA: Project Management Institute.

Time is often critical to the success of a project as projects need to be completed within a specified time frame to considered successful. Time management is not unique to project management.

The *Time Management Function* could be broken down into essentially four separate sub-functions as follows<sup>11</sup>:

- A) Planning
- B) Scheduling
- C) Monitoring
- D) Control

The Time Management of projects using some techniques like:

- Gantt Charts
- PERT
- CPM
- Line of balance
- EVM (Earned Value Management)
- WBS (Work Breakdown Schedule)

EVM (Earned Value management) is a technique that combines cost management with time management. The concepts of time and cost are intrinsically connected – "Time is Money" as the saying goes. In project management a time overrun almost always ends up with cost overruns and conversely projects completed before time end up costing less.

Work Breakdown Schedule (WBS) is another tool that extends from the planning stages of a project and combines cost management and time management.

# **Project Scope Management**

It is essential that the scope of a project is clearly defined and established at the initiation stage. Many times, the scope of a project can be clearly stated in the objective of the project, alternatively it should be clearly stated in the project charter which is signed off at the initiation of the project. To avoid doubts it is often useful to state what is not within the scope of the project in the project charter,

Other Areas of Knowledge in Project Management

Besides the 4 key areas of project management – *Time, Cost, Quality and Scope* listed above the other areas of knowledge relevant to project management are:

- Project Human Resource Management
- Project Communication Management
- Project Procurement Management
- Project Risk Management.
- Stakeholder Management
- Integration Management

<sup>&</sup>lt;sup>11</sup> MacDonald, D. H. (1983). PMI/ESA project time management function. Project Management Quarterly, 14(1), 20–26.