

# TECHNICAL PROJECT MANAGEMENT

## DESCRIPTION

Technical Project Management is the ability to support the management of an IT initiative from a concept through to a concrete deliverable as a project with specialist technical knowledge. Working with a project requires that we have clear goals, a defined scope and a definite start and end.

In general we would expect a Administrative Project Management to have overall responsibility for the project and the Technical Project Management performing a supporting role in the many aspects of project management.

Technical Project Management differs from Administrative Project Management in that specific knowledge about technologies, applied methodologies and development models are required to ensure success in planning, estimation and execution of the project. Technical Project Management provides support to ensure the project is run effectively employing both project and development models (or SDLC) which provides an organization and working processes to help the project team successfully delivery the project.

It is not uncommon that the Architect can hold both the Administrative Project Management and Technical Project Management roles. This can depend on the organization or geographical culture in different countries, or even the size of the project. However in our definition of the Architect role the skills lie firmly in the Technical Project Management domain.

## OVERVIEW

### **Why does an architect need this skill?**

In many IT projects we are transitioning from a current architecture to a new architecture and as an Architect we need Technical Project Management skills in order to realize this transition. Administrative Project Management does not have the depth of technical knowledge required to plan, execute and deliver the project and therefore relies on the support of Technical Project Management typically provided by the Architect.

Working IT Projects often differs from projects in other industries in that we work with conceptual models and requirements which are often difficult to define. The IT branch is dynamic and tools, standards and business requirements have a high rate of change. This poses a real challenge for IT projects and Administrative Project Management particularly in long term projects. As part of a project team the Architect can use Technical Project Management skills to support management of business and technical requirements, support the project team in successfully executing activities and support the general management of the project.

### **Common tasks involved in this skill?**

Technical Project Management is a broad area and each project is unique and roles can be formed differently depending on the given project. However the following are some of the common tasks which we can expect within Technical Project Management.

- Leadership and Management
- Supporting Administrative Project Management in defining the Business Case for a project
- Support definition of project scope
- Translation of business requirements into technical requirements
- Managing time and resources
- Communication and presentation skills
- Control and Monitoring of progress

### **What is their ownership in this skill?**

The Architect will support Administrative Project Management using this skills and provide leadership for the team from a technical perspective. Depending on the project organization the Architect may work in an advisory capacity to Administrative Project Management or may even have a mandate to make decisions regarding specific areas of the project.

## How is this skill used by the architect in daily activities?

The Architect would be expected to be able to:

- **Perform detailed planning and support Administrative Project Management in planning**

The Architect performs planning of technical activities for the team, as well as estimation of time and resources for the activities. Support is also given to Administrative Project Management in the broader project planning. The Architect also supports Administrative Project Management with definition of the Business Case.

- **Support Administrative Project Management in defining and analyzing the project requirements**

This involves requirements gathering activities with the project sponsor, both functional and non-functional (quality attributes included). The Architect also provides support in structuring the requirements in some form of Requirements Specification.

- **Communicate and describe the scope and requirements to the project team**

The Architect ensures consistently that the team understands the requirements and how they translate to a technical perspective. The Architect provides leadership for the team and guides them as to what is “in scope” and “out of scope”.

- **Monitor the progress and support risk management**

The Architect will monitor the progress of the team and raise any potential risks with Administrative Project Management. The Architect will also describe the consequences of changes and support Administrative Project Management in mitigating risks.

- **Support delivery of the project**

The Architect shall support delivery of the project ensuring that all technical deliverables are accounted for and the requirements placed on the project have been met by the solution. The Architect shall also support the evaluation of the project effect assessing if the Business Value delivered meets the project Business Case.

**Describe why an architect should be involved in this skill at a corporate level**

The Architect often provides the link between business and IT and a comprehensive understanding of the complexity of IT initiatives. This makes the Architect a valuable asset in project management contributing with a unique perspective on planning, estimation and risks which may not be apparent to an Administrative Project Management. Understanding the technical challenges in an IT project also facilitates communication with the project team and other stakeholders.

**Primary push back and/or challenges for architects**

As an Architect it is challenging to balance the concerns of the project with the concerns of the architecture. We often want to deliver the best possible architecture but at the same time we may be constrained by the time plan, budget and resources. This may mean that Architect will have to balance and prioritize the most important aspects of the architecture to fit with the project budget and resources.

**How would a stakeholder engage an architect for assistance utilizing this skill?**

Stakeholders can engage the Architect at any stage in a project either in a supporting or in a review capacity, however there are serious benefits from involving the Architect from the very beginning at project initiation. A Stakeholder can use the Architect in an advisory capacity ensuring the feasibility of the project, this is in terms of business case, surrounding business eco system and technology. This can help to set the boundaries of the project and reduce risk, for example ensuring that expected quality can be achieved with the given resources and early mitigation of risks increases the chances of the project being a success.

SUB-CAPABILITIES

PROJECT PLANNING AND ORGANIZATION

Understanding the organization of a project including stakeholders, groups, roles and responsibilities. Planning the project in terms of time and resources by defining the project model, milestones and deliverables.

Iasa Certification Level	Learning Objective
<b>CITA – Foundation</b>	<ul style="list-style-type: none"><li>- The Learner shall be able to outline the contents of a project plan</li><li>- The Learner shall be able to identify the roles in a project organization</li></ul>
<b>CITA – Associate</b>	<ul style="list-style-type: none"><li>- The Learner shall be able to describe the contents of a project plan and explain why these are important to a project</li><li>- The Learner shall be able to describe the roles in a project organization including responsibilities</li><li>- The Learner will have practical exposure to both project planning and project organization within small projects</li></ul>
<b>CITA – Specialist</b>	<ul style="list-style-type: none"><li>- The Learner shall have work experience with a project planning and working within a project organization</li><li>- The Learner shall be able to demonstrate how to form a project plan and organization based on the project unique requirements of a project</li></ul>
<b>CITA – Professional</b>	<ul style="list-style-type: none"><li>- The Learner can demonstrate leadership in the planning and organization of large complex projects</li><li>- The Learner has the ability to mentor other Technical Project Managers</li><li>- The Learner is able to support stakeholders with a feasibility assessment of a project initiative providing viable Business Cases for change</li></ul>

## SCOPE AND WORK BREAKDOWN

Understand and support the definition of the Business Requirements placed on the project. Support Administrative Project Management in defining the scope of the project identifying boundaries and breaking requirements down into activities in the form of a "Work Breakdown Structure" which is understandable to all stakeholders.

<b>Iasa Certification Level</b>	<b>Learning Objective</b>
<b>CITA- Foundation</b>	<ul style="list-style-type: none"><li>- The Learner understands the importance of Scope in a project and the consequences of having an ill-define Scope</li><li>- The Learner can articulate the concepts behind and components within a Work Breakdown Structure</li></ul>
<b>CITA – Associate</b>	<ul style="list-style-type: none"><li>- The Learner understands techniques for identifying Business Requirements from stakeholders and defining these in a project scope</li><li>- The Learner can read and understand a Work Breakdown Structure and communicate these effectively to other stakeholders</li></ul>
<b>CITA – Specialist</b>	<ul style="list-style-type: none"><li>- The Learner can demonstrate experience in gathering Business Requirements and formulating these in a requirements specification to define scope</li><li>- The Learner can demonstrate experience in supporting the definition a Work Breakdown Structure for a project and executing of a project using such a structure</li></ul>
<b>CITA – Professional</b>	<ul style="list-style-type: none"><li>- The Learner can demonstrate experience using a number of methods for gathering Business Requirements from many stakeholders in a complex environment</li><li>- The Learner can demonstrate experience in working with Work Breakdown Structures in a complex environment with many dependencies</li><li>- The Learner has the ability to act as a mentor for other Technical Project Managers</li></ul>

## TIME ESTIMATION AND BUDGET

The calculation of accurate estimates for project activities in terms of man hours or financial terms with a view to ensuring that the project can maintain the allocated time plan and budget.

Iasa Certification Level	Learning Objective
<b>CITA- Foundation</b>	<ul style="list-style-type: none"><li>- The Learner understands the basic concepts for estimating time on project activities and estimating budget</li></ul>
<b>CITA – Associate</b>	<ul style="list-style-type: none"><li>- The Learner is able to show understanding of different techniques for estimating time and budget</li><li>- The Learner is able to describe the different types of cost which form part of a project budget</li></ul>
<b>CITA – Specialist</b>	<ul style="list-style-type: none"><li>- The Learner has work experience in supporting the estimation of a budget for a project</li><li>- The Learner has work experience in performing estimates on project activities with a project team</li><li>- The Learner has the ability to present an estimate/budget to stakeholders in an easy to understand form</li></ul>
<b>CITA – Professional</b>	<ul style="list-style-type: none"><li>- The Learner has experience and can demonstrate knowledge of how to build a viable Business Case</li><li>- The Learner can demonstrate experience in a number of techniques for estimating project activities</li><li>- The Learner has the ability to act as a mentor in estimation techniques</li></ul>

## CONTROL AND REPORTING

Supporting Administrative Project Management in the control and monitoring of the actual project status against the project plan including the management of risks.

Iasa Certification Level	Learning Objective
<b>CITA- Foundation</b>	<ul style="list-style-type: none"><li>- The Learner understands the basic concepts for monitoring a project plan and reporting to stakeholders within the project organization</li></ul>
<b>CITA – Associate</b>	<ul style="list-style-type: none"><li>- The Learner is able to show an understanding for how to monitor a project plan and identify risks or events which reduce the likelihood of project success</li><li>- The Learner is able to describe the reporting channels and processes used for distributing information to stakeholders</li></ul>
<b>CITA – Specialist</b>	<ul style="list-style-type: none"><li>- The Learner can demonstrate experience in practicing monitoring project events and taking action on those events</li><li>- The Learner has experience of performing risk analysis</li><li>- The Learner can demonstrate experience in reporting project status to Administrative Project Management or other stakeholders</li></ul>
<b>CITA – Professional</b>	<ul style="list-style-type: none"><li>- The Learner can demonstrate experience in monitoring a project or number of projects in a complex environment</li><li>- The Learner can demonstrate experience actively identifying and mitigating risks</li><li>- The Learner can demonstrate experience supporting the presenting project status to senior stakeholders</li></ul>



## DELIVERY AND EVALUATION

This support of Administrative Project Management in project delivery ensuring the acceptance of the project result by the project sponsor. Closure of the project and evaluation the results against the project goals.

Iasa Certification Level	Learning Objective
<b>CITA- Foundation</b>	<ul style="list-style-type: none"><li>- The Learner understands the basic concepts for project closure</li></ul>
<b>CITA – Associate</b>	<ul style="list-style-type: none"><li>- The Learner is able to show an understanding for activities which need to be performed during project closure</li><li>- The Learner is able to describe why good project closure is important</li></ul>
<b>CITA – Specialist</b>	<ul style="list-style-type: none"><li>- The Learner can demonstrate experience in supporting the closure of a project and gaining acceptance from the project sponsor</li><li>- The Learner has experience in performing project evaluation</li></ul>
<b>CITA – Professional</b>	<ul style="list-style-type: none"><li>- The Learner can demonstrate experience of project closure in a complex environment where the acceptance can span many stakeholders</li><li>- The Learner can demonstrate experience and ability to perform project evaluation based on the original Business Case</li></ul>

## RESOURCES

### BLOGS/WEBCASTS/NEWS/REFERENCE SOURCES:

IASA IT Architecture Body of Knowledge (ITBOK) <http://www.iasaglobal.org/iasa/ITABoK.asp>

Project Estimation Techniques: <http://www.projectmanagementguru.com/estimating.html>

Managing the Triple Constraint

<https://programsucces.wordpress.com/2011/05/02/scope-time-and-cost-managing-the-triple-constraint/>

Gathering Requirements <http://www.projectsart.co.uk/requirements-gathering.php>

Business Requirements [http://www.mindtools.com/pages/article/newPPM\\_77.htm](http://www.mindtools.com/pages/article/newPPM_77.htm)

Work Breakdown Structure <https://www.workbreakdownstructure.com/>

### TRAINING:

Various Project Management <http://www.learningtree.com/>

\* Certification organizations below also provide training

### CERTIFICATIONS:

PMI Certification <http://www.pmi.org/>

IPMA <http://ipma.ch>

Prince2 <https://www.prince2.com/>

Scrum.org <https://www.scrum.org>