



**SUCCESSION
TRAINING**

BSB51415 Diploma of Project Management



Constraint Management

Version 1.11 Produced 18 October 2018

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Version control & document history

Date	Summary of modifications made	Version
5 May 2016	Version 1.0 produced following Training Package update	1.0
22 June 2017	Updated Table of Contents	1.1
18 October 2018	Change to Practical Assessment	1.11

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ASSESSMENT WORKBOOK COVERSHEET

WORKBOOK:	Workbook 2
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Please read the Candidate Declaration below and if you agree to the terms of the declaration sign and date in the space provided.

By submitting this work, I declare that:

- I have been advised of the assessment requirements, have been made aware of my rights and responsibilities as an assessment candidate, and choose to be assessed at this time.
- I am aware that there is a limit to the number of submissions that I can make for each assessment and I am submitting all documents required to complete this Assessment Workbook.
- I have organised and named the files I am submitting according to the instructions provided and I am aware that my assessor will not assess work that cannot be clearly identified and may request the work be resubmitted according to the correct process.
- This work is my own and contains no material written by another person except where due reference is made. I am aware that a false declaration may lead to the withdrawal of a qualification or statement of attainment.
- I am aware that there is a policy of checking the validity of qualifications that I submit as evidence as well as the qualifications/evidence of parties who verify my performance or observable skills. I give my consent to contact these parties for verification purposes.

Name: Z Van Hunnik

Signature ZVH

Date:

7/3/21

WRITTEN QUESTIONS

Part 1 – Project Scope

1. Which of the following are project initiation documentation required at the start of the project?

Select all that apply.

☐	a. Communications log
☒	b. Project plan
☐	c. Work Breakdown Structure (WBS)
☐	d. Gantt Chart
☒	e. Project charter
☐	f. Risk management

2. Which of the following are components of a project scope-management plan?

Select all that apply.

☒	a. Project deliverables
☐	b. Project staff assignments
☐	c. Change request
☒	d. Project justification
☒	e. Product description
☐	f. Performance reports
☒	g. Project objectives
☐	h. Project funding requirements
☐	i. Quality metrics
☐	j. Budget forecasts

3. In your own words, discuss how project time and cost affect the project scope. Do not exceed 100 words.

Project time is the length of the project and cost is regarded as how much the job will cost the client. These will both affect the scope as the budget and time restraints will be the main contributing factors of what the client can receive.

4. Which of the following are events or problem areas relating to project scope that could trigger the need for a formal change request?

Select all that apply.

☒	a. The deliverables may not meet quality requirements.
☐	b. Grammatical and typo errors are found in the project initiation documents.
☒	c. The deliverables may not be what the client wanted, even though they were covered in the project plan.
☐	d. The stakeholder considers the change request and advises the project manager.
☒	e. Observance of non-working holidays affecting project time.
☒	f. Additional quality requirements (such as new legislation or changes in standards) will render the deliverables non-compliant.
☐	g. Failure of equipment needed to produce the deliverables.
☒	h. Missing documentations in the project's information system.
☒	i. Raw materials are no longer available.
☒	j. Supplier or contractor closing business.

5. Which of the following are procedures that typically must be followed under change control processes?

Select all that apply.

☐	a. Project manager seeks advice from supervisor regarding changes in cost.
☐	b. Project manager assigns a project team member to recalculate for the critical path.
☒	c. Project manager provides the change request to the appropriate stakeholder for approval.
☒	d. The stakeholder considers the change request and advises the project manager.
☒	e. The project manager updates the project plan and other documentation where required.
☒	f. Project manager drafts the change request.
☐	g. Project manager delegates the authority to the project team members in advising other stakeholders of the changes.
☒	h. The project manager advises relevant stakeholders (sponsor, team members, etc.) of the changes.
☒	i. Details of the proposed change to be communicated to the project manager.
☐	j. The project sponsor and owner may automatically terminate the project contract.

6. The following are methods of measuring work outcomes and progress against plans. Match each method to its correct description.

Write the letters that correspond to your answers in the spaces provided.

	Method	Description
c.	Units completed	a. Also known as the 'steps' method, this is used for projects that involve subtasks that need to be completed in an orderly fashion.
a.	Incremental milestones	b. In this method, tasks that are being calculated tend to occur over a longer duration time and include multiple subtasks, where subtasks can have different units of measurements.
d.	Start / finish	c. This method is used when project tasks are done repeatedly. Assuming that each task is completed at the same amount of time, resources and effort, each task is counted and totalled.
b.	Weighted or equivalent units	d. This method is used to determine the percentage of the work completed and the percentage of the work that is still yet to be completed.

7. Which of the following are activities involved in decomposition of the total work project?

Select all that apply.

☐	a. Summarise project tasks in the form of a written report.
☒	b. Identify and analyse the deliverables and related work.
☒	c. Structure and organise the work breakdown structure (WBS).
☐	d. Arrange the smallest project tasks to form an aggregate representation of the total project task
☒	e. Decompose the upper work breakdown structure (WBS) levels into lower level detailed components.
☐	f. Calculate duration and resource effort for each project task.
☒	g. Develop and assign identification codes to the WBS components.
☐	h. Inspect whether work and deliverables meet requirements and product acceptance criteria.
☐	i. List resources required for each project task.
☒	j. Verify that the degree of decomposition of the work is necessary and sufficient.

8. List three (3) ways in which the Work Breakdown Structure (WBS) can be created.

- a. Using phases of the project lifecycle as the first level of decomposition, with the product and project deliverables inserted at the second level
- b. Using major deliverables as the first level of decomposition
- c. Using subprojects which may be developed by organizations outside the project team such as contracted work.

9. The following are some problem areas in scope management. In your own words, briefly discuss each problem area.

Do not exceed 100 words for each discussion.

Problem areas	Discussion
Scope creep	Scope Creep is continuous or uncontrolled growth in a projects scope . this can be from poorly defined /documented scope
Sponsor / project owner approval	Sponsor / Project owner approval is the process that is in scope management that ensures that the owner / sponsor approves the current scope and furthermore any changes that may be proposed. It is important to seek this approval as a project manager, as if this process is ignored, this may result in such things as not getting paid for the change or process during the project.
Project team accountability	Project Team accountability is to make sure the entire project team is responsible for the goals and requirements for the project. It is important that the project team is fully aware of the scope while agreeing how the project goals will be met. If the project team does not get held liable for the goals / scope it will be easy for them to lose focus.

10. In your own words, discuss the significance of scope management.

Do not exceed 150 words.

Scope management is very significant to eliminate scope growth/creep while assisting with any problems or challenges that arise. Without scope management, the project team would not be aware of what is/is not included and have minimal understanding of what is being added or removed whilst the project is being completed.

11. The *PMBOK Guide* outlines the following processes in project scope management. List one (1) tool or technique used in each process.

Project Scope Management	Tool or technique
Collect requirements	Facilitated workshops
Define scope	Expert judgement
Create WBS	Decomposition
Verify scope	Inspection
Control scope	Variance analysis

12. Consider the roles and responsibilities of the project manager in project planning. List five (5) roles of the project manager in project planning and list at least one responsibility for each of these roles.

Roles (list five (5))	Responsibilities (List at least one (1) for each role)
Forecast Timeframes	Start and completion dates of the projects along with timeframes for each discipline will be included in each
Forecast Costs	The proposed costs to complete the project. The project manager will need to organise quotes from the required contractors / suppliers needed to complete the project.
Write a Scope	The project manager, along with the sponsor / owner must negotiate a scope of works. The scope is the project plan that will include what the project will / will not include.
Confirm Quality Requirements	Determine the projects quality requirements, including council regulations and manufacturer's specifications. Some projects have certain requirements such as a Greenstar Rating. This information will then be used to assist in selecting contractors/suppliers for the project.
Allocate Resources	During this stage of planning, resources need to be allocated to each discipline/contractor/supplier to ensure that the forecasted costs can be achieved.

Part 2 – Project Time

- The following are estimation tools and techniques used in determining duration. Match each tool and technique to its correct description.

Write the letters that correspond to your answers in the spaces provided.

	Estimation tools and techniques	Description
b.	Analogous estimating	a. This technique uses a statistical relationship between historical data and other variables to calculate an estimate for activity duration.
a.	Parametric estimating	b. This uses parameters such as duration, budget size, weight, and complexity, from a previous, similar project, as the basis for estimating the same parameter to measure for a future project. This technique relies on the actual duration of previous, similar projects as the basis for estimating the duration of the current project.
e.	Three-point estimating	c. This is guided by historical information. It provides duration estimate information or recommended maximum activity durations from prior similar projects. This can also be used to determine whether to combine methods of estimating and how to reconcile differences between them.
c.	Expert judgement estimating	d. Contingencies are accounted for into the overall project schedule to account for schedule uncertainties.
d.	Reserve analysis	e. This technique uses a mathematical formula to determine a weighted average of estimates. It uses the formula: $Te = \frac{To + 4 \times Tm + Tp}{6}$.

2. The following are estimation tools techniques used in determining activity resource. Match each to its correct description.

Write the letters that correspond to your answers in the spaces provided.

	Estimation tools and techniques	Description
d.	Expert judgment	a. Several companies or organisations routinely distribute updated production rates and unit costs of resources for an extensive array of labour trades, material, and equipment for different countries and geographical locations within countries.
e.	Alternative analysis	b. In this technique, when an activity cannot be estimated with a reasonable degree of confidence, the work within the activity is decomposed into more detail. The resource needs are estimated. These estimates are then aggregated into a total quantity for each of the activity's resources.
a.	Published estimating data	c. This tool has the capability to help plan, organise, and manage resource pools and develop resource estimates.
b.	Bottom-Up estimating	d. This technique is often required to assess the resource-related inputs to this process. Any group or person specialised with knowledge in resource planning and estimating can provide such expertise.
c.	Project management software	e. These include using various levels of resource capability or skills, different, size or type of machines, different tools (hand versus automated), and make-or-buy regarding the resource.

3. In identifying the critical path, the following parameters need to be determined for each task. Discuss each parameter.

Do not exceed fifty (50) words for each discussion.

Parameter	Discussion
ES	ES is an abbreviation for Earliest Start, meaning the earliest time in which a particular task can start, keeping in mind any previous tasks that may be required to be completed prior to a new task being started. An example of this is, framing must be complete prior to services rough-in starting.
EF	EF is an abbreviation for Earliest finish time. This is simply calculated by adding the ES + task duration time . The EF is an important calculation for tasks that have another task following, that cannot be started without a previous task being completed.
LF	LF is an abbreviation for the Latest finish time. This is the latest date in which a task can be completed, without delaying the project. LF is used for tasks that do not have a following task that relies on the completion of the previous task being finalized.
LS	LS is the abbreviation for the latest start time. This is simply calculated by subtracting the task duration from the latest finish time. If previous tasks have gone over time, LS is used to determine the latest start time for finishing tasks.

4. Which of the following statements accurately explain the process of developing the project schedule, including the schedule baseline?

Select all that apply.

☒	a. Developing the schedule is the process of analysing activity sequences, durations, resource, requirements, and schedule constraints to create the project schedule.
☒	b. The project schedule and schedule baseline are developed or established using the activity lists, activity attributes, project scope statement as the bases.
☒	c. Entering the activities, durations, and resources into the scheduling tool generates the schedule baseline.
☐	d. Tools and techniques used in developing the project schedule and schedule baseline include decomposition of the total project work.
☐	e. Developing the schedule baseline starts and ends in the planning phase of the project.

5. Schedule control is the process of monitoring the status of the project to update project progress and manage changes to the schedule baseline.

Which of the following are processes that are involved in schedule control?

Select all that apply.

☒	a. Determining the current status of the project schedule.
☐	b. Defining activities or specific actions to be performed to produce project deliverables
☒	c. Influencing the factors that create schedule changes
☐	d. Decomposing total project work into its lowest levels.
☒	e. Determining that the project schedule has changed
☐	f. Estimating duration and resource effort for the project.
☒	g. Managing the actual changes as they occur.

6. Consider the methods used in project time management.
- a. In your own words, discuss the application/use of the Gantt Chart. Do not exceed fifty (50) words.
 - b. List three (3) project data generated from the Gantt Chart.
 - c. List three (2) limitations of the Gantt Chart.

- a. The Gantt Chart is a useful tool that is used to plan and schedule a project. The chart is used to assess the duration of the project, along with each individual task within the project and the order each task is to be completed. Furthermore, it assists to determine the resources required for the entirety of the project.
- b. Three pieces of project data that can be generated from the Gantt Chart are as follows:
 1. Duration of each task and overall duration of the project
 2. Resources required for the project
 3. Order in which tasks are required to be undertaken within the project and the relationship between other tasks
- c. Two limitations of the Gantt Chart are as follows:
 1. The area of the Gantt chart is very large and often difficult to print
 2. The progress of each task is very subjective so a project manager can be tempted to exaggerate the progress of a task to make the Gantt chart look better

7. Consider the methods used in project time management.
- a. In your own words, discuss the application/use of the Critical Path Method. Do not exceed fifty (50) words.
 - b. List three (3) project data generated from the Critical Path Method.
 - c. Discuss the limitation of the Critical Path Method. Do not exceed fifty (50) words.

- a. The critical path method (CPM) is a technique used by project managers to identify step-by-step activities on the critical path to completion. The CPM splits the project into individual tasks, with an estimated duration time for each task to produce a flow chart which determines the duration of the project.
- b. Three pieces of project data generated by the CPM:
 1. Parameters of each task: ES, EF, LS, LF
 2. Critical path
 3. Critical elements within the project
- c. The main limitation of the CPM is that it only produces tasks on the critical path. During a project, there are often tasks that do not directly impact other tasks, therefore are not required in the CPM. Furthermore, the CPM is only as good as the durations that are estimated by the Project manager.

8. The following are tools and techniques used in project scheduling. Match each tool and technique to its correct description.

Write the letters that correspond to your answers in the spaces provided.

	Project scheduling tools and techniques	Description
b.	Schedule network analysis	a. This is the process of looking at all of the activities that must be completed, and calculating the 'best line' – or critical path – to take so that you'll complete the project in the minimum amount of time. The method calculates the earliest and latest possible start and finish times for project activities, and it estimates the dependencies among them to create a schedule of critical activities and dates.
A.	Critical Path Analysis	b. This is a graphic representation of the project's activities, the time it takes to complete them, and the sequence in which they must be done. Project management software is typically used to create these analyses. Common formats for this include Gantt Charts and PERT Charts
d.	Schedule compression	c. They expedite the scheduling process by generating start and finish dates based on the inputs of activities, network diagrams, resources, and activity durations.
c.	Automated scheduling tools	d. This tool helps shorten the total duration of a project by decreasing the time allotted for certain activities. It's done so that you can meet time constraints, and still keep the original scope of the project.

9. Which of the following statements accurately explain the work breakdown structure (WBS) including its application in project schedules?

Select all that apply.

☒	a. Work breakdown structure (WBS) is the subdivision of project deliverables and project work into smaller, more manageable components.
☐	b. The work breakdown structure (WBS) identifies project personnel who are responsible for each project task.
☒	c. Work breakdown structure (WBS) helps define activities of the project which provide the basis for estimating, scheduling, executing, and monitoring and controlling the project work.
☐	d. The work breakdown structure (WBS) is used to represent the full project scope of the project.
☒	e. The work breakdown structure provides the relationships among all components of the project and the project deliverables.
☒	f. The work breakdown structure (WBS) is used as the basis for the scope baseline which is used in identifying activities or specific actions to be performed to produce of the project deliverables.
☐	g. Project work at lowest levels are not included in the work breakdown structure (WBS)

Part 3 – Project Cost

1. The following are processes involved in project cost management including budgeting the cost of the project. In your own words, discuss each.

Do not exceed fifty (50) words for each discussion.

Estimating costs	Estimating costs is the process of developing a prediction on the financial requirements to complete the project based on the information known at the time of the calculation. The estimate will cover all activities to complete the project including materials and labour.
Determine budget	Determining budgets is the process of accumulating the estimated costs to create a cost baseline. To determine the budget, you must combine the WBS of the project along with the estimated costs. The budget may differ from the formal cost once the project is underway.
Control cost	Controlling costs is the process of monitoring the monetary value spent in relation to the status of the project. During this process, it may be required to update the budget once the actual expenses are known.

2. The following are different tools and techniques used in cost management. Match each to its correct description.

Write the letters that correspond in the spaces provided.

	Strategy	Description
b.	Analogous estimating	a. This is used to establish both the contingency reserves and the management reserves for the project with regards to cost.
c.	Parametric estimating	b. This strategy uses the values of costings from a previous, similar project as the basis for estimating the same parameter or measure for a current project. This is used when the current project is similar to a previous one in terms of defined parameters.
e.	Cost aggregation	c. This uses a statistical relationship between historical data and other variables to calculate and estimate for cost. This technique is used to produce higher levels of accuracy depending upon the sophistication and underlying data built into the model. Estimates made through this project can be applied to the whole project or to segments of a project.
a.	Reserve analysis	d. These are used to develop mathematical models to predict total project costs.
d.	Historical relationships	e. Cost estimates are combined by work packages in accordance with the Work Breakdown Structure. The work package cost estimates are then combined for the higher component levels of the WBS and ultimately for the entire project.
g.	Earned value management	f. In this technique cost performance measurements are used to assess the magnitude of variation to the original cost baseline.

f.	Variance analysis	g. This is commonly used as a performance measurement. It integrates project scope, cost, and schedule measure to help the project management team assess and measure project performance and progress.
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3. List four (4) processes which are followed in monitoring the project costs against outcomes to ensure that additional expenses are not incurred.

- | |
|--|
| <ul style="list-style-type: none"> a. Using an effective tools for managing the project finances b. Being up to date with sending invoices for payment c. Paying invoices for suppliers promptly d. Checking incoming invoices against contracts, quotes, agreements etc., |
|--|

4. You are appointed as one of the Project Managers of Bigger than Big Corporation. As one of the Project Managers, it is essential that you have a full understanding of the organisation's policies and procedures relevant managing projects within Bigger than Big.

Review Bigger than Big Corporation's [Project Management Policy and Procedures](#) (username: cstclearner password: CstcPty@123).

- a. In your own words, discuss the organisation's Project Management Policy, including its background, purpose, and its scope.
- b. In your own words, discuss the organisation's Project Management Procedures including their purpose and scope.
- c. In your own words, list and discuss the Project Phases prescribed in the organisation's Project Management Procedures.

Do not exceed 100 words for each discussion.

- a. Bigger than Big Corporation project management policy summarizes the values and responsibilities associated with the management of Bigger than big projects. Bigger than Big issues standard project management procedures and templates that reflect the missions and principles of the company to minimise risk and maximise project benefits.
- b. The project management policy is a company-wide overarching method to improve the way a project is managed through all stages, including the initiation, planning, implementation and closure of projects that needs to be adapted to each project separately. This is because all projects do not require the same level of documentation.
- c. Bigger than Big Corporations project management procedure states the processes and responsibilities required by management throughout the life cycle of a project. The procedure recommends all projects follow the correct project phases from the start of the project to the end date following the formal methodology.
- d. The project phases in the organisations project management procedures are as follows:
 1. **Pre initiation Phase** - this phase builds the foundation of the project which will identify what the project will attempt to achieve
 2. **Initiation Phase** – this phase begins process of determining how the project will be executed by preparing a detailed model along with confirmation of the in-principle finding decisions
 3. **Planning Phase** – This phase covers the completion of the project schedule, project budget, risk management and a risk register.
 4. **Implementation phase** – this phase determines how the project will be delivered through an implementation plan that consists of all required systems, staff, processes that must be completed to achieve project outputs.
 5. **Closing Phase** – This phase is the formal closure of the project and handover to the projects operations department. Furthermore, an evaluation of the outcome of the project is completed.

Part 4 – Project Quality

1. In your own words, discuss each of the following key concepts in Quality Management.

Do not exceed 100 words for each discussion.

Key Concepts in Quality Management	Discussion
Customer satisfaction	Customer satisfaction is an indication of the quality of the project. If the project was produced to a high quality, and the customers' needs and expectations are generally met, the customer in turn will hold the project quality in high regard. Managing customer satisfaction is a crucial part of the project to ensure project success and also future on going works.
Prevention over inspection	Prevention over inspection is a term used in project management that refers to the cost of quality (COQ). is When extra money is spent throughout the project, to avoid mistakes or failures sometimes this allocation of funds often costs more for remedial repairs post completion.
Continuous improvement	Continuous improvement is the process to continually better your services/products/processes of a project. This process is in place to improve the final results of previous projects and avoid repeating the same matters that have previously be encountered. These improvements can very small right through to whole business structure changes.

2. In your own words, discuss the difference between Quality Assurance and Quality Control.

Do not exceed 100 words.

The main difference between (QA) Quality Assurance and (QC) Quality Control is that QA forms the processes, standards and techniques put in place (prior to producing the product) during the production phase to prevent defects, this involves QA checks and inspections by managers

QC is the process of detecting defects (at the end result of the product) which are reported to management to allow or deny product release.

3. The following are standards that could apply in various projects. In your own words, discuss each standard. Do not exceed fifty (50) words for each discussion.

People standards	People standards are the standards for the requirements for people working on the project. This standard includes ensuring that all personnel have the correct qualifications and experiences to complete their given task, along with the correct qualifications, tickets and or licenses
Process standards	Process standards is the standard for in which the project will be delivered, involving quality assurance review and inspections. This process is in place to ensure that the procedures within the project run well to ensure the correct end desired result
Product / service standards	Product/Service Standards are the standards which examine the final product, involving quality control standards. This standard is in place to ensure government regulations and required Australian Standards are being adhered to in product/service delivery.

4. The following are quality assurance and control methods, techniques and tools. Match each to its correct description.

Write the letters that correspond to your answers in the spaces provided.

	Methods, tools, techniques	Description
h.	Benchmarking standards	a. This is a distribution of dots comparing two variables. If the two variables are completely independent you would expect the dots to be evenly distributed randomly across the graph. If there is a strong relationship though, the graph will show a straight line or a mathematical curve going through it.
g.	Brainstorming sessions	b. These are graphical representations showing a visual impression of the distribution of data. Usually it shows the frequency up the Y axis of the bar graph and the measuring variable along the X axis.
d.	Control charts	c. It is a graph where the X axis is time dependent. This allows you to look for time-based cycles in processes.
f.	Flowcharts	d. These are also known as Shewhart charts or process-behaviour charts. These charts are used to statistically measure the quality characteristics of a process are under control. This is based on a statistical analysis where a centre line is drawn for the mean of the output, then an upper control limit and a lower control limit is created either side of the centre line. The process is then measured over a period of time and the results plotted on the graph. Once the graph has been created, it can be analysed to test the stability of the process and also any cycles of errors.
b.	Histograms	e. It is very similar to a histogram, but it includes a line over the graph indicating the cumulative distribution of the results.

e.	Pareto charts	f. A diagram that represents a process. It shows the steps visually as a series of boxes with arrows in between them showing the work flow. Rectangular boxes represent tasks and diamond shaped boxes represent decision points, where the flow can split into two or more directions.
c.	Run charts	g. It occurs when a group meets and is presented with a scenario where they creatively come up with a range of solutions.
a.	Scatter grams	h. These may be dictated to by legislation through Federal, State or Local Government regulations, and may be dictated by industry bodies.

5. List five (5) responsibilities of the project manager in quality management.

- A. Determining the quality assurance standards for the project
- B. Determining the quality control standards for the project
- C. Documenting all the required standards in the project plan
- D. Leading/coordinating the project QA and QC activities inclusive of inspections
- E. Conducting / Coordinating regular project wide and department wide project audits and reviews

6. The following are methods used in managing continuous improvement. In your own words, discuss each method.

Do not exceed fifty (50) words for each discussion.

Six Sigma	Six sigma is a tool used to process used to improve the quality of the output of a procedure. This is done by identifying then removing the defects and changing any inconsistencies in the manufacturing and/or business methods.
Lean Six Sigma	Lean six sigma is process used that requires the whole teams input to eliminate any excess waste within the project. This can be in the form of excess materials, time, processes and skills. An abbreviation used in this process is “TIMWOODS” which refers to the elimination of surplus Time, Inventory, Motion, Waiting, Overproduction, Over-processing, Defects and Skills.
Total Quality Management	Total Quality Management is a wide-range and organized process that is used to improve both the quality of products and services through continuous feedback from your team.

CASE STUDY

Instructions to Student

These case studies are hypothetical situations which will not require you to have access to a workplace, although your past and present workplace experiences may help with the responses you provide. You will be expected to encounter similar situations to these in future as you work in a project team environment.

In the real world you are likely to encounter the situation where you enter a project, taking over from another project manager. The documentation that is handed over to you is not necessarily up to scratch, and there could be serious issues with the project. This assessment captures that real life scenario.

The case studies are the first part of dealing with “multiple complex projects” required in all the units of this subject. The other assessment covering this requirement is the practical assessment. When you have completed the case studies you will be able to commence the practical assessment which covers the generic skills needed to function as an effective project team member. This assessment on the other hand covers the application of the underpinning knowledge and background theory.

Introduction

You have been appointed as a project management consultant to the project team at Awesome Landscapes Pty Ltd. Specifically, you are required to provide independent advice on seeing their current project throughout its entire lifecycle.

You have already provided advice to Awesome Landscapes in the previous workbook.

Today is 24 July 20xx. The project will shortly progress into the implementation stage. You have now been provided with up-to-date project documentation below, including an updated Project Plan. The project steering committee have reviewed the Project Plan, but they wish to have you conduct an independent evaluation of the project prior to signing it off.

As part of your consultancy services, you will be assisting the team in addressing issues around project constraints by answering the questions that follow this scenario.

The documents you need to complete the succeeding tasks can be accessed through the following links:

[Project Charter version 2 \(.pdf\)](#)

[Project Plan version 2 \(.pdf\)](#)

[Project Gantt Chart version 2 \(.mpp\)](#)

[Project Gantt Chart version 2 \(.pdf\)](#)

[Project Network Diagram version 2 \(.pdf\)](#)

(username: cstclearner password: CstcPty@123)

Note: These documents were generated in year 2016. For the purpose of this assessment, refer to ‘2016’ as the current year and ‘2017’ as the succeeding year.

1. List the three (3) project deliverables in Phase 1.

- a. Removal of vegetation in areas being cleared and replanting//maintaining the plants for replanting in stage 3
- b. Access roads through the existing forest for builders to access each building site
- c. Retaining walls to provide stability. Includes three additional retaining walls as per updated site plan.

2. Discuss the project constraints in terms of scope, time, cost, and quality.

Scope	The scope constraints are set out in the Project Plan in Section 2 - Scope Management plan. This includes the project deliverables, along with the inclusions and exclusions of all 3 phases of the project.
Time	All work must be completed within 9 months and in conjunction with the building construction works and the Gantt Chart. Furthermore, refer to Appendix 5 (task dependency worksheet) that has a column with all of the required time constraints.
Cost	There is a fixed budget of \$550 000 + GST. The budget must include all of the financial resources needed to complete the project on time, in line with the scope provided.
Quality	The quality of work must follow the strict guidelines of the council. As the environment is very sensitive, the natural environment must be carefully preserved.

3. Review the project schedule as set out in the Project Plan and the Gantt Chart. Arrange the following tasks in the proper sequence as dictated in Phase 3 of the critical path.

Write 1 – 12 in the spaces provided; where 1 goes first and 12 goes last.

8	Remove weeds
11	Plant additional plants
2	Move gravel to car park

1	Expand car park
12	Remove greenhouses
9	Plant plants from greenhouses
3	Seal car park
6	Soil preparation
7	Add boulders
5	Construct stone paving pathway
10	Purchase additional plants
4	Landscape over old access roads

4. Review the Project Plan. The change request has outlined one change in the scope of the project.
 - a. What is the change in scope?
 - b. How does this change in scope impact the overall duration of the project?
 - c. How does this change in scope impact the quality aspect of the project?

- a. Three new retaining walls need to be added due to a change in the construction plan requiring more chalets to be built.
- b. There will be no impact to the overall duration of the project. J.P digging have altered their procurement plan, along with committing to providing extra resources to the project which will in turn, prevent any extensions to the project timeframe.
- c. The change in scope should not impact the level of quality delivered for the project. With the extra resources provided with J.P digging, and the funds available in the contingency, the level of quality should not drop.

5. Why does the change request only list one change in project cost, yet when you look at the financial tables the costs seem to have increased in numerous parts of the project not even related to the item in the change request?

Do not exceed 100 words.

The increase in project cost on the change request is the overall cost calculated to cover all individual costs covered within the financials table.

Although the change seems quite minor, the project as a whole is undertaking quite a substantial change which has a flow on effect to individual tasks required to construct the retaining walls. Awesome Landscapes are responsible for the gravel roads, hence the additional cost provided in the table.

Finally, the additional costings for the project management and project support are present to cover the costs required to manage and implement the change process.

6. Who is responsible for working out these impacts of what initially seemed to be such a simple change, and ensuring all affected stakeholders understand the impact of such a change?

Sam Ng (Project Manager – Awesome landscapes) will negotiate with Susan Wills (program Manager – Massive Eco Developments) the details going into the change request, including all impacts. Once the impacts are finalised, Sam Ng will communicate the impacts with all affected stakeholders.

7. Access and review the Gantt Chart version 2.
 - a. What important tasks are not included in the project Gantt Chart?
 - b. Discuss why these tasks must be included in the Gantt Chart? Keep your discussion within 100 – 200 words in length.

- a. Quality Assurance (QA), Quality Control (QC) along with defect rectification as a result of the QA & QC process
- b. The main tasks that I believe have been left out of the Gantt chart is the Quality Assurance and Quality Control process. Due to the severity of the harshness of the environment, time shall be allocated in the Gantt Chart to these processes. With the numerous audits outlined in the project plan, along with a number of council inspections expected, it will become a vital part of the project that must be included. Once the QA and QC processes have been undertaken by the project team, council inspectors and third-party auditors, it is likely that their will be defects to rectify. Whilst all Project managers endeavor to have a defect free project, time must be allocated to both the audits, inspections and the rectification works. If the above listed tasks are not included in the Gantt Chart, it puts unnecessary pressure along with false guidelines to complete the project as the tasks have not been included.

8. List the three (3) personnel who signed off on the change request.

- a. Susan Wills – Program Manager – Massive Eco-Development Corporation
- b. Stephen Lyons – Planning Manager – Cascade Peaks Shire council
- c. Kim Nguyen – Director – Awesome Landscapes Pty Ltd

9. What is the total increase in cost of the project as a result of this change request?

Due to the change request, the total cost of the project has increased from \$444 253+GST to \$462 153+GST, therefore there has been an increase on **\$17 900+GST**.

10. List five (5) exclusions under Stage 2 – Building Support of the Scope Management Plan.

- a. Monitoring the building site for erosion, subsidence or other environmental issues
- b. Excavation for incoming utilities (electrical cable, water supply etc.)
- c. Excavation of sewerage and septic system
- d. Maintaining the plants removed in stage 1
- e. Construction of the septic system buildings or other infrastructure.

11. Review the Project Plan. Does it follow the change management procedure? Explain your reasoning.

Do not exceed 50 words.

The Project Plan does not follow the change management procedure. Although the majority of the points have been covered, the change register (Appendix 37) is not up to date. Further to this, the required stakeholders are yet to sign off the change request (appendix 38).

12. Access and review the Gantt Chart version 2. It shows double bars for each task.
- What do the coloured bars  represent?
 - What do the grey bars  represent?
 - Why do the grey and coloured bars do not match up in the Gantt chart?

- The colour bars represent the progress and manual progress of the current status of the project.
- The grey bar represents project baseline which outlines the anticipated completion date of the project. The project schedule is determined at the start of the project.
- The grey and coloured bars don't match up as the project is still in progress and the coloured bar determines the current status in relation to the completion date of the project. As tasks are completed and the project comes to a close, the coloured bars will eventually line up with the grey bars.

13. Assuming the project runs on schedule, list two (2) tasks that should be in progress if Sam was to visit the site on Monday 22 August.

Do not include the task 'Project Management'.

- Stage 1.1 – Move plants to glasshouse and dispose
- Stage 1.3 – Delivery of granite boulders

14. If Sam was to visit the site on Thursday, 22 September, he will see that two (2) tasks are in progress, namely:
- Construction of retaining walls.
 - Install and compact soil behind walls.

According to the procedure documents, these two activities cannot happen at the same time. The retaining wall has to be built first. Once construction is completed, the soil needs to be added behind. Why are these two tasks in progress on the same day?

The two tasks are in place on the same day as there are retaining walls at each chalet. Due to this, the backfill behind the first boulder wall can be completed, whilst the construction of the boulder wall on the second retaining wall is being constructed.

As J.P digging have committed to allocating extra resources, the two tasks can now be completed simultaneously. By overlapping the two tasks, this will assist with the meeting the deadline of completion date of the project by fast tracking the phase as a whole.

15. According to the Gantt Chart, if there is a delay in the completion of Task 57 'Construct stone paving walkway',
- Which tasks, if any, are immediately delayed?
 - Will this delay push out the completion of the project? Why or why not?
 - Discuss how this could affect the resourcing of the project.
 - List one (1) risk that could arise from this issue.

- a. Assuming that the stone walkway has both landscaping on the side and the signs erected on top, it will delay the start of both stages 3.3 (erect signage) and 3.4 (detailed landscaping).
- b. As the stone paving is one of the last tasks required to complete the project, it is highly likely that the flow on affect from delaying the initial task, will push out the completion date of the project.
- c. This could affect the resourcing as there has only been 566 hours (\$18 720) allocated to stage 3.2. If this task takes longer than the allocated timeframe, this will create a cost overrun in the budget.
- d. If the completion of the project is delayed, this may cause Awesome Landscapes to incur Liquated Damages for the delays and delays in the final payment. This maty cause cashflow issues within the business.

16. What is the total budget for the project expenditure?

The total budget for the project expenditure is \$462 153 + GST which includes change request 1.

17. Sam is very concerned about the cash flow of the project.
- a. What is the problem?
 - b. What would you suggest be done to rectify the cash flow issue?

- a. Awesome landscapes have the potential to spend \$224 724 prior to their first initial project payment to be cleared in the bank. The first payment is expected on October 1. As per Appendix 8 of the project plan, the cumulative expenses by then will be \$248 671. This would leave Awesome Landscapes with a \$23 947 cashflow deficit problem.
- b. A suggestion that could be implemented, is a change in the payment dates. Payment 1 and payment 2 are very close together (1st October and 29th October). As the project starts on 27th July, it is quite reasonable to request payment 1 be moved forward. This would eliminate all cashflow issues for the remainder of the project.

18. Discuss whether Awesome Landscapes should seek increased funding from Massive Eco-development Corporation to absorb some or all of these cost increases.

Your discussion must be 200 – 300 words in length.

Guidance:

The change requests have incurred extra expense, yet the funding to be paid by Massive Eco-development Corporation has not changed.

If you believe Awesome Landscapes should seek increase funding from Massive Eco-development Corporation, provide a strong argument for your case. If not, explain your reasoning.

In my opinion, I believe that Awesome Landscapes should seek extra funding to be paid by Massive Eco-development corporation. This is a legitimate variation to the original scope of works, outlined in the project plan, due to the construction of the extra chalets. Although the funding is based on a fixed price contract, in the long term, Massive Eco-development corporation will benefit greatly from the construction of the extra chalets.

While the extra-over cost of \$8160 (\$53 480 - \$ 55 320) that is required to construct the new retaining walls is quite small, the extra tasks incurred that are required to construct the new chalets, out of the control of Awesome Landscapes, is where the remaining \$9740 (\$17 900 - \$8160) lies.

Awesome landscapes have worked very hard through the procurement and implementation phases of the project to have the contingency profit sitting at 19.22%. With no extra funding provided, their contingency profit would be dropped to 15.97%.

Although section 4.5 of the project plan states that it is a fixed price contract, meaning the funds provided will be the same regardless of any project extensions, variations in scope, or increases in cost of labour, procurement or purchases; To continue a strong relationship with Massive Eco-Developments along with securing future work the company, Awesome Landscapes could seek funding of the \$9740 only and absorb the costs of the construction of the retaining walls only. This would assist with the cashflow issues that Sam Ng is concerned about also.

19. Complete the following Audit Template with the standards determined in the previous question (Case Study Question 18). This will be given to an internal auditor to audit the financial processes at various points along the project.

Guidance: Complete only the fields highlighted in yellow. Do not complete the 'Assessment' and 'Comment' fields under 'Audit of Management of Project'.

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Quality Audit Template		
Project Name: <i>Cascade Peak Chalets Landscaping Project</i>		
Prepared by: Zach Van Hunnik		
Date:		
Project Manager: <i>Sam Ng, Awesome Landscapes</i>		
Project Phase:	Overall Project Status:	
Audit Date:	Audit Number:	Audit Leader:
Audit Team:		
Goal(s) of This Specific Audit: To evaluate the financial processes at various points along the project		
Audit of Management of Project:		
1. Are invoices being checked against original quotes and being paid on time?	Assessment:	Comment:
2. Are payments being received on time as per the payment calendar/schedule?	Assessment:	Comment:

3. Have cashflow deficit problems been identified and adjusted due to the change in scope?	Assessment:	Comment:
4. Have all procurement and expenditure costs as per quoted figures in provided quotes been updated due to the change in scope?	Assessment:	Comment:
5. Have all of the staff salaries/wages budgets been allowed for due to the change?	Assessment:	Comment:
6. Are all processes being followed to gain extra funding from changes within the project?	Assessment:	Comment:
7. Has all financial reporting been completed and on time?	Assessment:	Comment:
8. Are all invoices being sent out on time?	Assessment:	Comment:
9. Have all financial changes been reported and approved correctly to the required stakeholders?	Assessment:	Comment:
Overall Assessment of Management of Project:		
Recommended Action(s)/Lessons Learned Regarding Management of the Project: 1. 2. 3.		

Additional Audit Comments:			
1.			
2.			
3.			
Have you attached additional material(s)?			☐ ye ☐ n
Name(s) of attachment(s):			
1.			
2.			
Audit Report Submitted To:			Date:

20. Sam has provided you with the following audit from a previous project (landscaping the new Cascade Peak Shopping Centre). Evaluate the audit report below and answer the following questions:
- What was the cause of the unsatisfactory results?
 - What action would you recommend to prevent the issue coming up again in this project?

- As per the overall assessment section, it states that tasks being communicated to the supervisor do not have the level of detail required by the site supervisor. In particular detailed plans are not provided with the task briefs. Some delays in commencing tasks have been experienced as the site supervisor has awaited clarification from the project manager. - Sam Ng is to prepare task briefs in enough time to add the required level of detail and are to be supplied with all relevant attachments such as detailed plans. Sam Ng could hold weekly face to face meetings to ensure the site supervisors have all their required information. Prior to the meetings being held, Sam could ensure all required information has been emailed to the site supervisor to review.
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Project Name: <i>Cascade Peak Chalets Landscaping Project</i>		
Prepared by: <i>Sam Ng</i>		
Date: <i>17 August 2015</i>		
Project Manager: <i>Sam Ng, Awesome Landscapes</i>		
Project Phase: <i>Implementation</i>	Overall Project Status: <i>On schedule</i>	
Audit Date: <i>17 August 2011</i>	Audit Number: <i>26</i>	Audit Leader: <i>Sam Ng</i>
Audit Team: <i>Sam Ng, John Cowley, Ann Deak.</i>		
Goal(s) of This Specific Audit: <i>To evaluate the communication and reporting processes.</i>		
Audit of Management of Project:		
1. Are tasks being communicated to site supervisor in a reasonable amount of time?	Assessment: Satisfactory.	Comment:
2. Are tasks being communicated to site supervisor of sufficient detail?	Assessment: Not satisfactory.	Comment: Tasks only being communicated as per Gantt chart. Site supervisor having to seek clarification regularly on requirements of tasks.
3. Are tasks being communicated by the site supervisor to the team members and contractors done in a reasonable amount of time?	Assessment: Not satisfactory.	Comment: Timing of communication can be improved if there wasn't the need for clarification of the details of the tasks.

4. Are tasks being communicated by the site supervisor to the team members and contractors of sufficient detail?	Assessment: Satisfactory.	Comment:		
Overall Assessment of Management of Project: Tasks being communicated to the supervisor do not have the level of detail required by the site supervisor. In particular detailed plans are not provided with the task briefs. Some delays in commencing tasks have been experienced as the site supervisor has awaited clarification from the project manager.				
Recommended Action(s)/Lessons Learned Regarding Management of the Project: 1. Project manager to prepare task briefs in enough time to add the required level of detail. 2. Task briefs are to be supplied with all relevant attachments such as detailed plans.				
Additional Audit Comments: 1. 2. 3.				
Have you attached additional material(s)?				
<table border="1"> <tr> <td data-bbox="209 1339 1182 1464"> Audit Report Submitted To: Kim Nguyen </td> <td data-bbox="1182 1339 1439 1464"> Date: 24/08/2015 </td> </tr> </table>			Audit Report Submitted To: Kim Nguyen	Date: 24/08/2015
Audit Report Submitted To: Kim Nguyen	Date: 24/08/2015			

21. The quality plan is very weak on cost management. Write a Cost Management Plan (of 200 – 300 words) for managing the quality of the financial processes while the project is in progress.

Guidance: Your Cost Management Plan must cover the following quality objectives and criteria.

- a. Meeting with contractual requirements.
 - b. Paying invoices on time.
 - c. Ensure invoices are sent out in time.
 - d. Ensuring financial reporting is done on time.
 - e. Include a calendar of when payments are likely to be due.
 - f. Comparison of actual cash flow against projected cash flow.
-

COST MANAGEMENT PLAN

Meeting with contractual requirements

Massive Eco-development Corporation is paying a fixed sum of \$550,000. The project budget as per this project plan is \$462 153. This sum covers all required tasks set out in the Project Plan to deliver Phase 1 – Phase 3 of the Cascade Peaks Chalets Landscaping Project. Awesome landscapes management must monitor the progress and project milestones outlined in Clause 3.2 as the project and communicate these key dates to all staff as there is no allowance for variance in these dates.

Invoicing

Paying invoices on time

The Contract Administrator is responsible for advising the project manager and payroll officer of invoices to pay. The contract administrator is to create an easy to use spreadsheet with receival date and payment date to ensure all invoices are paid on time to avoid any loss in productivity.

Raising Invoices and cashflow

Awesome Landscaping will raise an invoice on the first working day, following the due date of each progress payment. The terms of all invoices are 28 days from date of invoice. All cash flow calculations are based on the funds being paid on the final day of the terms of the invoices. The project manager is responsible that all invoices are sent out on time to avoid delays in payment and assist with any cashflow deficit problems.

Funding payments from Massive Eco-Development Corporation are to be due as follows and adhered to in order to control cashflow deficit:

Phase of the project:	Expected payment date:	Payment	Proportion	Amount (pre-GST)
Commencement of Phase 1	1 October 2016	Payment 1	50%	\$275,000
Completion of phase 1	1 October 2016	Payment 2	20%	\$110,000
Completion of phase 2	1 February 2017	Payment 3	20%	\$110,000
Completion of phase 3	1 April 2017	Payment 4	10%	\$55,000
		TOTAL	100%	\$550,000

Financial Reporting

A financial report must be completed, **monthly** by Awesome Landscapes management, or immediately after a change request has been completed. If a month elapses following a change request or previous report, another report needs to be completed. The report must be documented in the project plan and status reports, which will be communicated to Awesome Landscapes senior management with reasoning for any discrepancies along with a rectification process.

WORKBOOK CHECKLIST

When you have completed this workbook, please ensure you have completed all parts of it:

- ☐ **Written Questions**
 - ☐ **Part 1 – Project Scope**
 - ☐ **Part 2 – Project Time**
 - ☐ **Part 3 – Project Cost**
 - ☐ **Part 4 – Project Quality**
- ☐ **Case Study**

IMPORTANT REMINDER

Students must achieve a satisfactory result to ALL assessment tasks to be awarded COMPETENT for the unit relevant to this subject.

To award the student competent in the units relevant to this subject, the student must successfully complete all the requirements listed above according to the prescribed benchmarks.

End of Document