VIA AFRIKA DIGITAL EDUCATION ACADEMY

Advanced Course, Part 2

Mindset Change for lecturers in the 4IR – Implementing a Mindset Change Culture

CLASS NOTES

Via Afrika is a B-BBEE **Level 1** Provider.

basic education

Department:
Basic Education
REPUBLIC OF SOUTH AFRICA

In partnership with the Department of Basic Education.

Via Afrika

Our Teachers. Our Future.

Advanced Course, Part 2

Mindset Change for lecturers in the 4IR – Implementing a Mindset Change Culture

Class Notes

Via Afrika

Our Teachers. Our Future.

Please read the following important information

1. You can download and print the Class Notes for personal use, but you may not share them.
2. Once you have watched all the videos and completed all the quizzes, reflections, activities and assessments successfully, you can download your certificate and print it.

Contents

Outcomes and content 1
Session overview 2
Theory – A project plan for maintaining Mindset Change in the 4IR on your campus 3
What is a project plan? 3
The Iron Triangle 6
Scope management 7
Time management 11
Cost management 14
Procurement management 18
Quality management 19
Risk management 21
Implementing your plan 22
Monitoring and evaluation 23
Practice – Prepare your own project plan 25
Appoint an approval authority, a project manager, and a project team 25
Define the objective and name the project 26
Set the timeframes and reporting guidelines and decide on What, How, When and Who 28
Monitoring and controlling scope changes 32
Dealing with changes to the schedule 34
Risk management, budgeting, monitoring and evaluation 36
Implement your project plan 44
Steps to implement your plan 44
Making the project's change last 44
Project Plan Template 46
Final Assessment 57
Acknowledgements 61
VADEA at a glance 64

Outcomes and content

Outcomes of the session

By the end of the session, the participant will:

- have a basic understanding of project management concepts (project life cycle, project scope management, project time management)
- understand the components of an effective Mindset Culture Implementation Plan
- have written a draft of their own Mindset Culture Implementation Plan
- be ready to implement a Mindset Culture Plan at your institution

Content of the session

This session will focus on:

- project management theory and practice
- phases and processes of any project's lifecycle
- project scope management
- project time management
- components of an effective implementation plan
- drawing up a project implementation plan
- implementing a Mindset Change Culture

Session overview

Welcome to the **Advanced Course, Part 2 of Mindset Change for lecturers in the Fourth Industrial Revolution (4IR)**. In Part 1 of the advanced course, we focused on **Managing the Mindset Change Momentum**. In Part 2 of the Advanced Course, our focus will be on **Implementing a Mindset Change Culture**.

For this session, you will do several practical activities. Most of these activities will be in video format. The activities will guide you to complete your own project implementation plan. The Project Plan Template is printed at the back of these Class Notes. You can also download the Project Plan Template in Microsoft Word format from the Vadea platform.

We'll often ask you to make notes. You can do this in your Class Notes, or in an additional notebook, or on your electronic device.

Theory – A project plan for maintaining Mindset Change in the 4IR on your campus

What is a project plan?

Projects: a definition

The Project Management Institute, a globally recognised leader in project management theory, defines a project as a 'temporary endeavour undertaken to create a unique service, product, or result'.

Because a project is temporary, it means that it must have a start time, and an end time. It must be unique. It must use resources (which could be money, people, and/or time). There are stakeholders involved. And there must be a clear and achievable objective.

Projects have been undertaken for thousands of years. Think, for example, of the construction of the pyramids in Egypt. This would have required extensive project management! Think of the resources that would have had to be calculated, the different people involved in the process, and the unique product – the pyramids – that resulted from this project. The construction of these monuments meets all the requirements of a project as defined earlier.

The project life cycle

Any project can be divided into three distinct phases. These phases are:

1. The **initiation phase** covers the start of the project and involves activities like obtaining approval from a manager to start a project.
2. The **intermediate phases** involve planning for the work that will need to happen, and then actually doing that work.
3. The **final phase** involves wrapping up the project and includes activities like reporting on findings during the project.

Elements in project implementation

- Prepare the project implementation plan
- Finalise the project implementation plan
- Implement the plan
- Monitor and evaluate the plan
- Close the project

Components of an effective project implementation plan

- Project scope management
- Project time management
- Project cost management
- Project quality management
- Project risk management
- Project procurement management
- Monitoring and evaluation

The project management process

Initiating processes

Initiating processes focus on getting the necessary authorisation to start with a new project (or a new phase within a project). This is about making sure that all stakeholders have the same vision for the project (or phase) and that everyone is on board. This will also be where scope, budget, and schedules are defined.

Planning processes

Once a project or phase has been initiated, planning starts. This involves determining everything that will be required for the project's objectives to be achieved. This is usually where a lot of the project management documentation for a specific project is drawn up. For example, this is where the project plan, or implementation plan, which we're going to develop later in this session, will originate.

Executing processes

The executing processes are the doing processes. This is when the activities that were identified in the planning processes are performed. Most of the actual work will happen during this part of the process and most of the project's resources will be spent during the executing processes.

Monitoring and controlling processes

Unlike the other processes, the monitoring and controlling processes take place alongside the other processes. These processes' function is to analyse and evaluate (or monitor and control) the project as it happens. This will allow the team to make sure that the project stays on track and makes provision for changing the project plan if necessary.

Closing processes

The closing processes' function is to conclude all the activities within a specific phase, or for the project as a whole. Think of this process as the things that will happen once the project is completed: reflecting on lessons learned, writing reports, officially signing off on a project as complete.

The project vision

Any project will start with a vision. Earlier in this course, we developed an example of a vision for a college campus where people are powerful 4IR agents with a strong Change Mindset. We will use this as a sample during our theoretical discussion, and then it will be over to you as we develop your own specific project together.

Please see the vision for your campus as the big chunk – the project is the smaller chunk that you will be able to achieve within the constraints of the Iron Triangle. You might be lucky, and the two will match; but for most projects, the campus vision is too big and too expensive – the project vision brings it down to a real and achievable objective within a specific period and with particular budgets.

> On our campus, the lecturers and students are developing even more knowledge and skills to work effectively in the Fourth, and even the Fifth, Industrial Revolutions.
>
> They embrace change and the opportunities it brings with an ever-strengthening Change Mindset.

The example of a campus vision developed during Part 1 of the Advanced Course.

Writing the project vision

The campus vision is the 'big chunk'. It must now be broken down into smaller chunks. When you set a project vision, you must ensure that it is SMART.

- S Specific
- M Measurable
- A Attainable
- R Relevant
- T Timely

Here is an example of a bigger vision that was broken down into a smaller objective (or project vision).

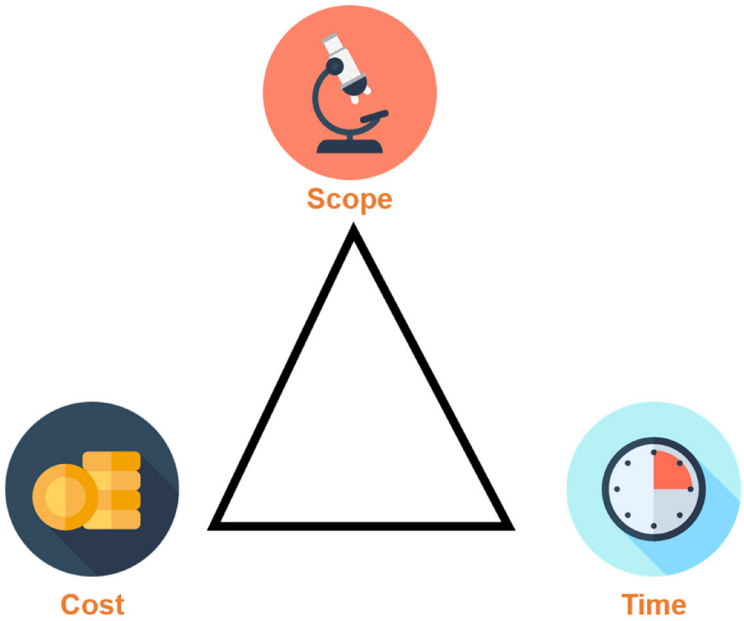
> On our campus, the lecturers and students are using the skills and knowledge they learned in carefully identified training courses within 6 months of the start of the project.

An example of a project vision.

The Iron Triangle

With any project, there are three key elements that we need to always keep in mind. These are:

1. Scope
2. Cost
3. Time



The Iron Triangle.

These three elements are often referred to as the Iron Triangle. These three elements each play a key role in how the project will take shape.

Scope refers to what the objectives of the project are. What will be included in the project? In other words, scope is a clear definition of what the project will deliver.

Time refers to a schedule. In other words, by when does the project need to be completed?

Cost refers to just that – how much the project will cost. In other words, how many resources and how much of each resource can be allocated to the project. These resources can include money, time, human capital, hardware, buildings, etc. Essentially, they include anything that will cost something for the project to happen.

In an ideal world, all three elements of the Iron Triangle will receive the attention they need. But in practice, at least one of the three elements will always have to be fixed, and the other two will have to be managed to make sure that the fixed element is accounted for.

There is a fourth element to the Iron Triangle, which is a result of how the other three elements are managed, and this is **quality**. Sometimes, the quality of the project is the most important. In these instances, scope, cost, and time might have to be readjusted to ensure that a project of the highest possible quality is delivered.

Scope management

Project scope management describes how best to manage the scope requirements of a project. We have defined scope as what the deliverables of the project will be; what we want the project to achieve.

Your project implementation plan is where you formalise **why** it is important for you to have an official, authorised approach to scope management. So, why is it important? Here are some reasons:

- Projects require a lot of resources – time, money, and people. If we don't have a clear idea of what we want the project to deliver, these resources could be spent on doing work that isn't necessary.

- Knowing exactly what the scope of the project is means we can develop a clear way to evaluate whether the project is successful. We can measure it against the project scope.
- Once we know what the project scope is, we can get a more realistic idea of how long the project will take to complete. This way, we can plan more successfully and not disappoint the stakeholders involved in the project.
- Should we have to change the scope while we're already busy with the project, it is important to have clear instructions on how to manage this change so that we don't disrupt the project too much.

What falls into the project scope?

Project scope management is not about what the end-product can do; it's about **how** that product is developed.

In this section of your implementation plan, you will write down exactly what falls into the project scope. This will be a detailed description of the project outputs.

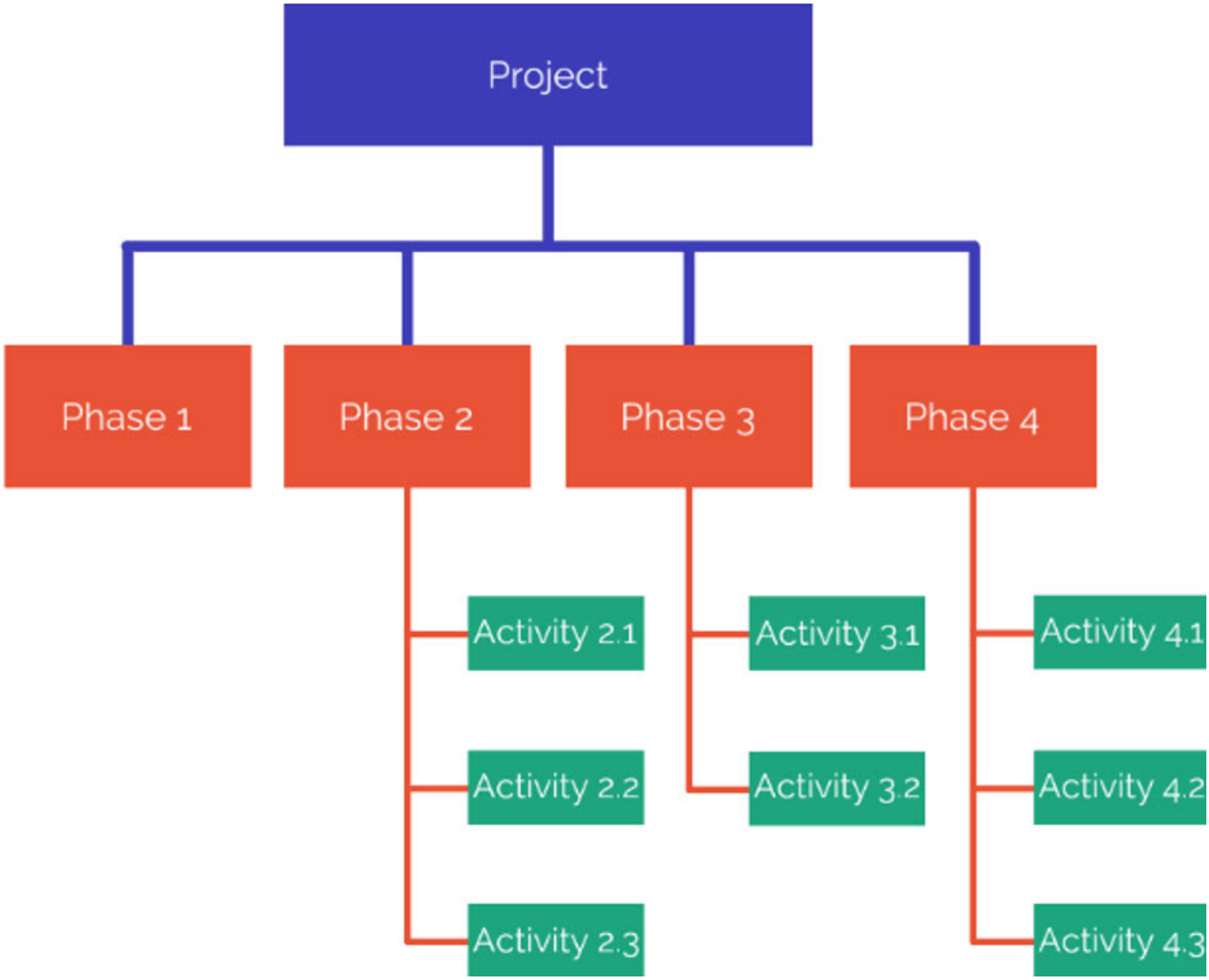
Project scope and **product** scope are not the same thing.

- Product scope refers to the specific features of a product. For example, a telephone that needs to be able to connect to Wi-Fi.
- Project scope refers to what needs to happen during the project lifecycle to develop such a phone – planning, research, technical work, product research and development, and so forth.

When you define the scope of your project, always be as clear and complete as possible. Remember, we have already defined the vision of the project; we are now identifying the activities we need to complete to achieve that vision.

The work breakdown structure

A very useful tool to use for this part of your project plan is the work breakdown structure, or WBS. The name says exactly what it is: it's a breakdown of each piece of work that needs to happen for the project to be successfully completed.



A basic work breakdown structure

This is a basic WBS. The orange blocks indicate the phases of the project. The green blocks are the work activities that need to be completed to deliver the outcomes of the correlating orange block.

Essentially the WBS is a way of visually representing all the work that needs to be done, in a logical and ordered way, to complete the project.

You'll see that if we take each of these work activities and list them in order, we will have a very clear idea of the project's scope.

To do a WBS, you start by identifying the higher-level activities before going into too much detail. That's the orange blocks in the example. Think of these as the broader categories of work that need to happen. You can then fill in the detailed activities for each of those categories (that will be the green blocks). You learned about chunking up and down previously – that work was to prepare you for this.

Changes to scope

Not everything always goes as we initially think, and changes happen. We account for this in the 'changes to scope' part of the project implementation plan. This is where you will list any approved changes to your project's scope once you have started the implementation.

Monitoring and controlling scope changes

The monitoring and controlling of scope changes part of your project scope management plan is critically important. It outlines the specific processes that you need to follow to make sure that your project scope remains on track. Importantly, it also clearly outlines the correct process to follow if you need to change your project scope.

You may, for example, stipulate that any changes to the scope need to be requested in writing and submitted to your approval authority (for example, the principal of your college). Only once the approval authority has signed off on a scope change request can the scope be changed.

But why would you change the scope of a project after it has been defined? Well, you could realise half-way through the project that your project objective doesn't include everything you need (or perhaps it includes too much), and you need to change it.

Time management

The second component of the Iron Triangle that we will be looking at, is time. Any project has a set start and finish time. This means that it must be completed in a set timeframe. This could be anything from a week to five years, depending on the scope of the project.

Developing a schedule

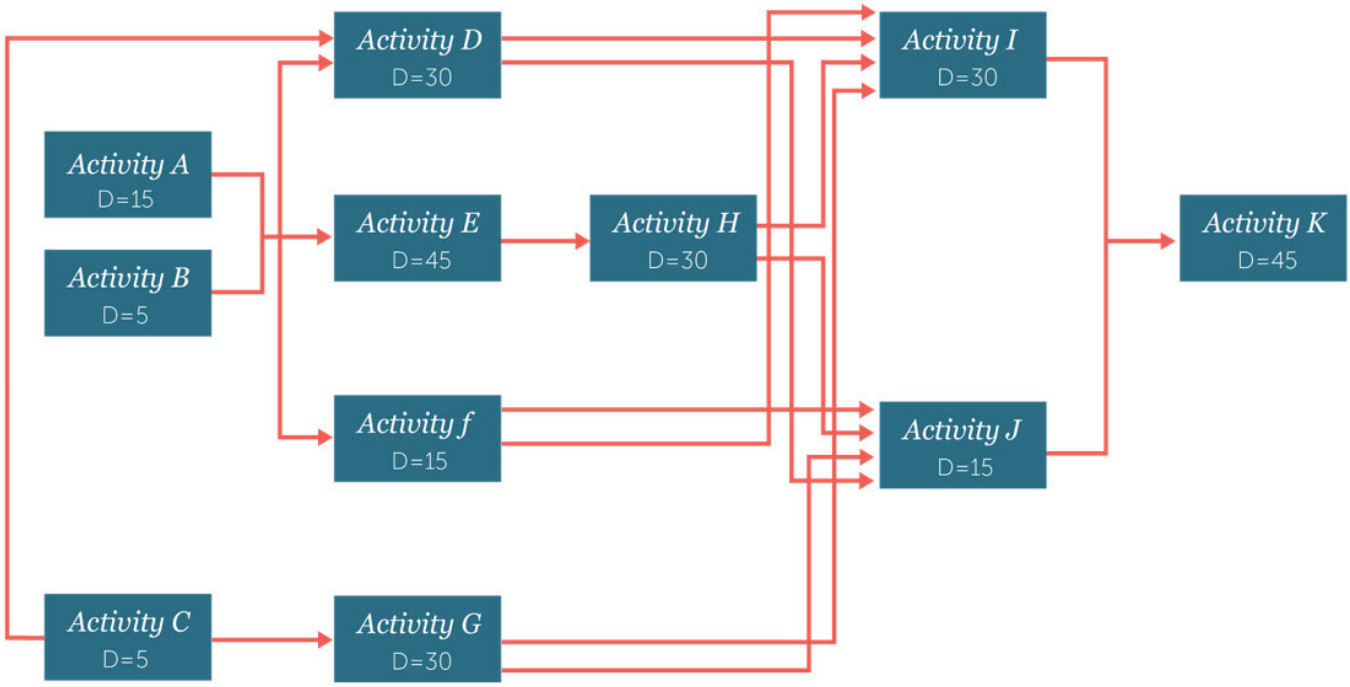
The most important thing you will develop as part of project time management is your actual schedule. The schedule is more than just a date by which the project must be completed. To ensure that your project is as successful as possible, you need to monitor every piece of work required to complete the project successfully.

The best way to do this is to assign a specific duration to each activity you identified in your WBS. In this way, you can have an exact idea of how long the different tasks in your project will take, so you can give a realistic completion date for your project.

You start off by listing all the activities you identified in your WBS and indicate how long each activity will take.

Now you can start to develop your schedule. At this point, you will know exactly which activities will need to be completed, and how long each activity will take to complete. You now collate all that information, and the result is a project schedule.

The project schedule can range from relatively simple to very complex, depending on how many activities need to be completed, what resources are required, and so forth.

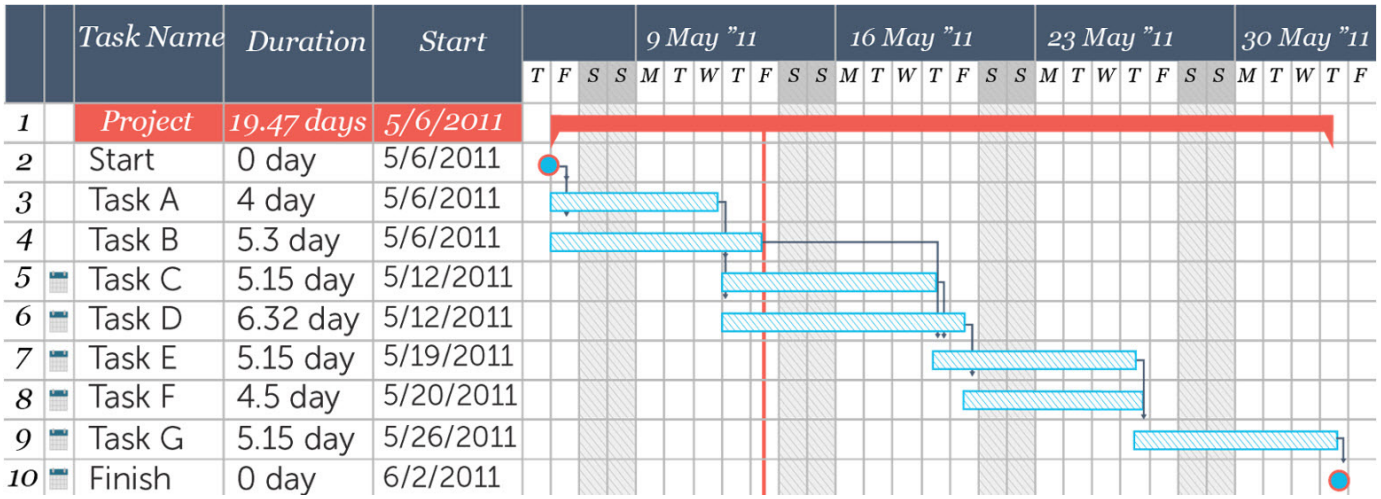


A network diagram.

Look at this network diagram. You will notice a lot of activities, arrows, and a D= in each block.

- The blue activity blocks are the activities we identified using our WBS.
- The red arrows show the relationships between the activities. For example, you will see that both Activity A and Activity B must be completed before Activity E can start, but Activity C can start at the same time as Activities A and B.
- Lastly, the D= indicates the work period that each activity will take. In this example, the work period used is days, so Activity A will take 15 days to complete, Activity I will take 30 days, and so forth.

The network diagram, along with information from the WBS, is used to create the final project schedule, which is called a Gantt chart. Here is an example of a Gantt chart.



	Task Name	Duration	Start
1	Project	19.47 days	5/6/2011
2	Start	0 day	5/6/2011
3	Task A	4 day	5/6/2011
4	Task B	5.3 day	5/6/2011
5	Task C	5.15 day	5/12/2011
6	Task D	6.32 day	5/12/2011
7	Task E	5.15 day	5/19/2011
8	Task F	4.5 day	5/20/2011
9	Task G	5.15 day	5/26/2011
10	Finish	0 day	6/2/2011

A Gantt chart.

- The first column shows us the task names. Here you will list every activity included in your WBS.
- The second column shows how long each individual activity will take. Notice the red cell. This shows how long the entire project will take to complete.
- The third column shows the start date of each activity. Notice that the very last activity, Finish, takes 0 days and will start on 2 June. This is when the project will be finished.
- The calendar shows when which activity will take place. Notice that some activities happen simultaneously like Task A and B, Task C and D, and Task E and F. You will have determined all these sequences in an earlier process, and you're now only displaying that information in an easy-to-use way.

Changes to the schedule

As with scope management, it is also important to identify the process you will follow when your schedule must change. This section of your project plan will formalise the process that you need to take when adjustments to your schedule take place.

Cost management

Any project will cost something. To ensure the highest possibility of success for your project, it is critical that these costs are managed, and that they fall within a predetermined budget. Cost is part of the all-important Iron Triangle.

What is the difference between cost and budget? Simply put, cost refers to the resources required to complete a specific activity, where budget is the total amount of money we have available for the project.

But which comes first – the cost or the budget? The answer is complex.

- Sometimes the budget, or the total available money, comes first – then you need to chop and change your costs to make sure they fall within that budget.
- It is, however, also possible that sometimes the costs can come before the budget. If this happens, you will submit a list of all the costs you foresee, and a total budget can be made available for that. This is the bottom-up technique we spoke of earlier.

Determining project costs

Budgeting should always be part of your project implementation plan and is a time-consuming task that requires a lot of thinking and research. That's why it's necessary to include it in during the early planning phase of your project's lifecycle.

The best way to determine the costs of your project (and subsequently the budget you will need to implement your project) is to assign a cost to each activity in the WBS. You will then get at least two quotations from suppliers for each item (product or service). The approval authority will make the final decision as to which supplier will be used. The total cost cannot exceed the budget.

Phase	Activity	Cost
Purchase hardware	Estimate necessary amounts	R0
	Buy computers	R20 000
	Buy tablets	R35 000
	Buy desks	R10 000
Total cost for phase		**R65 000**
Prepare classroom	Remove old furniture	R1 000
	Assemble new furniture	R1 000
	Install hardware and cables	R2 000
Total cost for phase		**R4 000**
Finalise IT lab	Clean up	R500
	Install software	R2 000
Total cost for phase		**R2 500**
Total cost for project		**R71 500**

An example of a project costing.

You will see that not all activities have a cost assigned to them. (You must indicate this as R0). That is because sometimes your project will require activities that don't require a product to be bought (for example, a computer) or a service to be rendered (for example, furniture removal). Keep that in mind when drawing up your budget.

In this example, you will see an estimate of what the total cost of the project will be. But this amount may not be the final amount in the approved budget. The approved budget could be a bit more, to allow for unforeseen expenses, or it could be less – which means you'll have to save money to stick to your budget.

But how do we determine what these costs must be? There are specific estimation techniques which we can use to get to an accurate a cost estimate as possible. Let's look at two of these techniques now.

Analogous estimating

Analogous estimating refers to estimating costs on historical data. So, for example, let's say you converted one room into an IT lab last year for R50 000, you could estimate that this year it will cost R55 000, allowing for a 10% price increase all-round.

Analogous estimating is easy and straight-forward, but you can use it only if you have a previous project to base your estimation on. So, if you're doing a specific kind of project for the first time, this method won't be of any help.

Bottom-up estimating

Bottom-up estimating is done by finding out exactly how much each activity in your project will cost, and then you add it all up to get to the total cost. This is a time-consuming process because you will have to get quotes from different vendors, and you will need to have a very clear idea of each expense that your project is going to have, but it is a very accurate way of estimating your project's cost.

Of course, any estimate is just that – an estimate. It is almost inevitable that there will be some kind of variance to the project budget, especially in more complex projects. Therefore, we need to formalise our project cost management in our implementation plans.

Project cost management in the implementation plan

Project budget

The first thing to include in your implementation plan under project cost management, is the breakdown of your project budget. You completed a preliminary cost estimate earlier. Use the space provided in the Project Plan Template to write down the final project budget. Remember to include a breakdown of what each activity will cost.

Roles and responsibilities

Once the project budget has been finalised, it is necessary to identify the specific roles and responsibilities that belong to different stakeholders in relation to project cost management. The most important roles and responsibilities to assign are these.

- **Develop the budget:** The person/s responsible for developing the final budget.
- **Authorise the budget:** The person/s responsible for authorising the final budget.
- **Monitor the budget:** The person/s responsible for continually monitoring expenses against the signed off budget, to ensure that overspending doesn't occur.

- **Confirm changes to the budget:** The person/s responsible for authorising any increases in the budget, should unexpected expenses arise during the life cycle of the project.

Reporting format

Consistent and insightful reporting is a key element of successful project implementation. A good project implementation plan details how reporting on cost management happens and includes the following reporting information.

- **Who will do the reporting:** Most likely the project manager.
- **Who they will be reporting to:** The person/s responsible for authorising the budget, and any potential changes to it.
- **What they will report on:** How much money has been spent on which activities in the project to date.
- **What their reports will be measured against:** Reports should be measured against the final, authorised project budget.
- **What format their reports take:** This could be face-to-face meetings, written reports, presentations, or a combination of all three.
- **How frequently they report:** Depending on the specific project's needs, this could be once a week, once every two weeks, or once a month.

Variance reports

When the actual cost on a project's budget is exceeded or is less than budgeted for, we refer to it as a cost variance.

Variance reports refers to the processes you put in place when costs exceed budget. This section of the implementation plan needs to outline the steps you will take if such a variance occurs. For example, how will it be reported on, by whom, and to whom?

It should also include detail on allowed variance on the budget. For example, you could include in this section that your project budget has an approved cost variance of 2%, so if the costs don't exceed that 2%, you won't need to adjust the project cost management plan.

Change control

As with project scope management and project time management, it is important to define what the process will be when changes to the budget need to be made. This section should outline what needs to be done, and by whom, to request official changes to the project budget.

Changes to the budget will usually arise from either variances in activity costs, as discussed above, or from unforeseen expenses that were not included in the original project budget.

Procurement management

Procurement refers to products and services you need to obtain from people or companies other than staff members at your institution. It is important that, before you start your project, you know exactly how you will manage this entire process. For example, you might have to put out tenders for services and products required, rather than being able to simply buy them.

In this part of your project implementation plan, you outline the exact procurement needs of your project. That is, you list what it is you will need to procure for your project. You can split these up between products and services.

Project procurement management in your implementation plan is divided into three steps.

1. The first step involves Identifying procurement needs. This will be done by working through your WBS and budget to check exactly what you need. You are drawing up a shopping list really.
2. The second step involves managing the procurement process. Procurement is a process that can easily be abused by corrupt individuals. It is therefore essential that the management of the procurement process is done well. You must outline everything you will procure – your procurement needs, including products and services – and how you will manage the procurement process. You will also be guided by the regulations that cover procurement in your institution.
3. The third step is to identify who is responsible for managing the process and who is going to be responsible for controlling the process.

Quality management

You will remember that quality sits in the middle of the Iron Triangle, which is made up of scope, time, and cost. Now that we've dealt with how to manage each of those three elements, let's take a closer look at how we need to manage quality when drafting our project implementation plans.

The key thing to keep in mind when it comes to project quality management is knowing what to measure the quality of your project against. You need to look at what industry standards are. For your specific project, the industry standard will be determined by looking at other learning institutions where similar projects have been implemented. You will have to identify what it is from these projects that you would like to duplicate, and then determine how you will make sure that your project meets, or exceeds, the same level of quality.

Approach to project quality management

This part of your project implementation plan should outline your general approach to quality management. It should include information on:

- expected standards
- the priority that quality should take in relation to the Iron Triangle (cost, scope, and time), and
- roles and responsibilities of the people involved in the project's quality management

Expected standards

You must know what to measure the quality of your project against and consider what expected standards are.

There are often local or international benchmarks. Think for example of the standards expected by the South African Bureau of Standards and what they do to ensure quality.

There might be research that points you to specific standards or that you can draw standards from.

Or you might find that you can look at similar projects that have been implemented elsewhere, and see what you can do to equal, or better the quality.

Whichever approach is taken though, it is important that you know what you will to measure your project's quality against.

The priority of quality

What is the priority that quality should take in relation to the other elements of the Iron Triangle for your project? It might seem obvious that quality should always be number one on your list of priorities, but sometimes it is necessary for quality to take a back seat to other aspects. For example, if you have a limited budget, you might not have the means to buy everything you want your project to have. Or you might have a very tight project deadline, which could mean that you can't achieve what you need in the time you have. This is where the Iron Triangle really plays a part in all of this.

Roles and responsibilities

Who will assess quality?

- The project manager?
- A senior person in the institution?
- An external evaluator?
- A combination of these?

Monitoring and controlling quality

Much like earlier sections of the implementation plan, this section identifies what the processes for monitoring and controlling quality in your project are.

Monitoring the quality refers to the processes you will put in place to make sure that the quality of your project stays on track throughout the duration of your project. This will include activities like regular audits and reporting on the project quality.

Risk management

Risks, in a project context, are things that might happen but won't necessarily happen. The point of project risk management is to identify these potential issues and to determine how you will manage this problem if it does arise.

It isn't a record of all the difficult things that you know will happen in the project; it is specifically for events that aren't 100% guaranteed to happen.

The key output of the project risk management part of your project plan is the risk register. The risk register shows five things.

1. What the risk is
2. What the likelihood of the risk occurring is
3. What we can do to keep the risk from occurring
4. What will happen if the risk does in fact occur
5. Who is responsible for monitoring and controlling the risk

You can develop the risk register in a table that looks like this. It covers all the aspects we have discussed.

Risk register				
Risk	**Likelihood of risk**	**Action to prevent risk from occurring**	**Action plan for risk**	**Person responsible**

Implementing your plan

Once you have written up your project implementation plan you must implement your plan.

The project implementation plan you have developed is essentially your roadmap of how to implement your project. You have covered all the key areas you will need to be aware of to make a success of your project.

You have identified the following key areas.

- What you need to achieve in project scope management.
- The timeline for each activity in project time management.
- The resources you will need in project cost management.
- How you will go about procuring products and services in project procurement management.
- The quality needs of your project in project quality management.
- How you will manage any risks in project risk management.

When it comes to implementing your plan, you will need to draw from all these sections in your implementation plan.

- Your scope will tell you what each activity needs to include.
- Your schedule will determine when things need to happen.
- Your budget will show you how much you can spend on each activity.
- Your risk register and your approach to quality management will lead you to completing the project successfully.

Monitoring and evaluation

In the risk register we identified some potential pitfalls for a project. Now, let's look at some tools we can use to make sure that nothing goes wrong during the implementation of our project. Now, of course that is an idealistic statement: it is completely natural, and almost 100% certain, that things might go wrong in your project implementation. And even if they don't go wrong, they might not go completely right.

What can we do to minimise the impact of things not going according to plan? The two key words here are **monitoring** and **evaluation**. You will have come across these concepts a couple of times already; your implementation plan has a monitoring and evaluation section for every knowledge area. We spoke about how we would monitor project cost management, project time management, and so forth.

Let's start by identifying what this monitoring and evaluation system should do. At its core, this system tells us **what** should be monitored and evaluated, by **whom**, and **when**.

It can be as simple as a list of things to monitor and evaluate, with dates and people responsible for each one, and it can be as complex as an entire document similar to your implementation plan. The level of complexity of your monitoring and evaluation system will rely on the specific needs of your project.

This system should ideally be set up during the planning phase of your project. That way, you can make sure that roles and responsibilities are evenly spread out and clear from the get-go, and that you don't fall into the trap of 'I thought someone else was doing that!'

Remember, monitoring takes place **during** implementation, and evaluation takes place **after** implementation. In other words, you monitor specific activities in your project implementation, and you evaluate the success of the different outcomes of your project.

The monitoring system

- What do we need to assess?
- Who needs what kind of information?
- Who is responsible for monitoring what?
- What are we learning from monitoring?

The evaluation system

- Evaluate project objectives.
- Evaluation is done once only, and at the end of the project.
- Create a Lessons Learned document

Reflection 1: What have I learned?

Reflect on what you have learned during this theoretical part of the session. Do you feel ready to continue to the practical implementation of the theory? If you feel unsure about any element of the work, go back to the videos and rewatch them.

Quiz 1	
Say if each statement is TRUE or FALSE.	
1	The Iron Triangle refers to quality, cost and time.
2	Breaking the objective into sub-objectives, and the sub-objectives into tasks, is also called a work breakdown structure.
3	There are six components in an effective project implementation plan.
4	There is no difference between cost and budget.
5	Potential project risks are recorded in a network diagram.

Practice – Prepare your own project plan

In this part of the session, you will do several practical activities. These activities are explained in detail in the videos on the Vadea platform. Watch each video and complete the activities.

You will now also have the opportunity to use the Project Plan Template. The template is printed in these Class Notes, and you can make notes in here as you go along, or you can download the Project Plan Template in Word format from the platform and complete the project plan in there.

We hope you have fun!

Appoint an approval authority, a project manager, and a project team

Watch the video for Topic 2, Lesson 1 (Appoint a project manager and team) on the Vadea platform and complete the following activities. You can make draft notes below but remember that your final answers will have to be added to your Project Plan Template.

Activity 1: Step 1 – Identify an approval authority and elect the project manager

_____

_____

_____

_____

_____

Activity 2: Step 2 – Identify the project team

Define the objective and name the project

Watch the video for Topic 2, Lesson 2 (Define the objective and name the project) on the Vadea platform and complete the following activities. You can make draft notes below but remember that your final answers will have to be added to your Project Plan Template.

Activity 3: Step 3 – Define the objective

Activity 4: Step 4 – Name the project

Reflection 2: Your vision, objective, and what could go wrong – a pre-mortem

You have developed a vision for your institution, and now you had to make sure that it was not too vague, too broad, or too aspirational. You extracted a single objective from your broad vision and used that to create your project vision or project objective.

Were you able to decide on one aspect of your broad vision to turn into an achievable objective?

Is your objective specific and does it contain criteria for success?

You learned all about the theory of project management earlier in this session, and now you must put it into practice. Do you feel ready to do that?

Think of the project your team is about to do. What could go wrong? Make a list of at least five things that could go wrong to share with the whole group. Remember: this could go wrong – what can we do to prevent it?

Set the timeframes and reporting guidelines and decide on What, How, When and Who

Watch the video for Topic 2, Lesson 3 (Set the timeframes and reporting guidelines, decide on What, How, When and Who) on the Vadea platform and complete the following activities. You can make draft notes below but remember that your final answers will have to be added to your Project Plan Template.

Activity 5: Step 5 – Set the timeframes

Activity 6: Step 6 – Set the reporting guidelines

Activity 7: What, How, When, Who

Step 7.1 Break the objective into sub-objectives

Step 7.2 Break the sub-objective into tasks

Step 7.3 Set due dates per task

Step 7.4 Place tasks in the order the must be completed and add in start dates

Step 7.5 Allocate tasks

Monitoring and controlling scope changes

Reflection 3: Approach to monitor and control scope changes

Refer to the video for Topic 1, Lesson 2 (The Iron Triangle: scope, cost, and time) where we dealt with the theoretical aspects of project scope management. Remember, scope refers to what the objectives of the project are. What will be included in the project? In other words, scope is a clear definition of what the project will deliver, and how much (or how little) it will deliver. Your scope will tell you what each activity needs to include. Project scope management is **not** about what the end-product can do; it's about **how** that product is developed.

During Steps 7.1 to 7.3 above, you applied this practically when you prepared your WBS.

Now, reflect on the following: **Not everything always goes as we initially think, and changes happen.** We account for this in the 'changes to scope' part of the project implementation plan. This is where you will list any approved changes to your project's scope once you have started the implementation.

The monitoring and controlling scope changes part of your project scope management plan is critically important. It outlines the specific processes that you need to follow to make sure that your project scope remains on track. Importantly, it also clearly states what the correct process to follow would be should you need to change your project scope.

Please prepare a reflection document, where you outline what your approach will be to monitoring and controlling any scope changes. Look at the WBS you developed during Steps 7.1-7.3.

Consider where scope changes might be required.

_____

_____

_____

_____

_____

_____

Decide what the process will be to get approval for any changes in scope. Will there be a written request to the approval authority?

Will scope changes only be allowed once it has been signed off by the approval authority?

What other processes can be put in place to ensure your project remains on track?

What else?

Dealing with changes to the schedule

Reflection 4: Changes to the schedule

Refer to the video for Topic 1, Lesson 3 (Time management) where we deal with the theoretical aspects of project time management. Here, we look at scheduling and how to assign a specific duration to each activity in the WBS. This information is then collated into a project schedule, in the format of a network diagram. The information in the network diagram is then used to create a linear schedule, which will show you when each activity will be complete, as well as when the project will be finished. The best way to do this, is to create a Gantt chart. In Lesson 3, you look at what a Gantt chart tells us.

During Activity 7, you developed a project schedule.

Now, reflect on the following: What if your schedule must change? We account for this in the 'changes to the schedule' part of the project implementation plan. This is where you will list any approved changes to your project's schedule once you have started the implementation. As with scope management, it is also important to identify the process you will follow when your schedule must change. This section will formalise the process that you need to follow when adjustments to your schedule should take place.

Please prepare a reflection document, where you outline what your approach will be to any changes in the project schedule.

Decide what the process will be to get approval for any changes in schedule. Will there be a written request to the approval authority?

Will schedule changes only be allowed once it has been signed off by the approval authority?

What other processes can be put in place to ensure your project remains on track?

What else?

Risk management, budgeting, monitoring and evaluation

Watch the video for Topic 2, Lesson 5 (Risk management, budgeting, monitoring and evaluation) on the Vadea platform and complete the activities. You can make draft notes below but remember that your final answers will have to be added to your Project Plan Template.

Activity 8: Step 8 – Prepare the risk register

What risks do you face?

_____

_____

_____

What are the likelihood of the risk occuring?

_____

_____

_____

What actions can you take to prevent the risk from occuring?

_____

_____

_____

If it does occur, what actions will you take?

_____

_____

_____

Who is the person responsible for overseeing the management of each risk?

_____

_____

_____

_____

Reflection 5: Identify procurement needs

Refer to the video for Topic 1, Lesson 4 (Cost and procurement management) where we deal with the theoretical aspects of cost and procurement management.

Procurement refers to products and services you need to obtain from people or companies other than staff members at your institution. It is important that, before you start your project, you know exactly how you will manage this entire process. For example, you might have to put out tenders for services and products required, rather than being able to simply buy them.

First, you must identify procurement needs. In this part of your implementation plan, you outline the exact procurement needs of your project. That is, you list what it is you will need to procure for your project. You can split these up between products and services.

You will list all the products you will need to procure (like desks, computers, tablets, and software) as well as services (installation of telephone lines and training, for example).

Please prepare a reflection document, where you outline your procurement needs. Make a list of products and services you will require.

Products	**Services**

Reflection 6: Procurement management

It is important to outline how you will manage procurement. Here you need to state whether you will require different companies to bid for a product or service, whether you need a certain number of quotes before you can place an order, and so forth.

Prepare a reflection document where you consider the following in terms of procurement management.

What do we know?

_____

_____

_____

_____

_____

_____

What do we need to find out?

_____

_____

_____

_____

_____

How will we manage the procurement process?

_____

_____

_____

_____

_____

_____

Activity 9: Step 9 – Prepare an initial budget

Reflection 7: Expected standards

Refer to the video for Topic 1, Lesson 5, where we deal with the theoretical aspects of expected standards, and quality management.

You will remember that quality sits in the middle of the Iron Triangle, which is made up of scope, time, and cost. Now that we've dealt with how to manage each of those three elements, let's take a closer look at how we need to manage quality, and complete this part of our implementation plans. The key thing to keep in mind when it comes to project quality management is knowing what to measure the quality of your project against. That is, you need to look at what industry standards are. For your specific project, the industry standard will be determined by looking at other learning institutions where similar projects have been implemented. You will have to identify what it is from these projects that you would like to duplicate at your institution, and then determine how you will make sure that your project meets, or exceeds, the same level of quality.

Prepare a reflection document where you consider the following in terms of expected standards for your project. Consider the following questions.

What do we know?

_____

_____

_____

_____

_____

_____

What do we need to find out?

_____

_____

_____

_____

_____

_____

What are our expected standards?

Reflection 8: Quality management

Refer to the video for Topic 1, Lesson 5, where we deal with the theoretical aspects of quality management. Much like earlier sections of the implementation plan that you have already completed, this section identifies what the processes for monitoring and controlling quality in your project are. Monitoring the quality refers to the processes you will put in place to make sure that the quality of your project stays on track throughout the duration of your project. This will include activities like regular audits and reporting on the project quality and will be used together with the industry standards you identified earlier.

Prepare a reflection document where you consider priority that quality will take in your project, and what approach you will use to monitor quality. Consider the following questions.

What is the priority of quality for our project?

What do we know about how to approach quality monitoring?

What do we need to find out?

What will our approach be to monitor quality?

Activity 10: Step 10 – Monitoring

Activity 11: Step 11 – Evaluation

Implement your project plan

Steps to implement your plan

1. Get buy-in and authorisation from your Approval Authority
2. Finalise the budget
3. Implement the plan and monitor it
4. Close the project
5. Evaluate the project
6. Celebrate your successes!

Making the project's change last

Having put so much time and effort into the project, we must make it work. Any project is going to bring about change, and as you have learned, unless you have a Change Mindset, chances are you are not going to be able to respond effectively to the change. Anyone who has done this course and then goes out to make change by implementing projects is going to run into people who battle to deal with change effectively. We have covered techniques that will help you when working with such people. But it is also worth considering how to make a project's change last.

Research has shown that these three factors ensure lasting success of a change project.

Provide strong, consistent leadership

When there is a defined person who is the champion of a change, people can go to them for clarity, as well as to get feedback throughout all aspects of the change. This is also a way to develop staff by having them step up intentionally to lead change initiatives.

Measure successes (and failures)

It is our hope that all change will lead to phenomenal results and wild success. When that doesn't occur, we tend to look where to place blame and to condemn people for failures. A different, and healthier approach is to measure what happens because of the change – either success or failure. Giving people permission to fail as well as the expectation to succeed will remove unneeded stress.

Manage people's emotions

This isn't a new idea, but it isn't practised enough. We want people to act rationally and not emotionally because we're uncomfortable when people get emotional. However, if you don't meet the emotional reality of people, then the rational piece of why a change will work will never take hold. Make sure that you consistently check in with the emotions of your team, and the institution at large. As you've seen throughout this training, change is an emotional thing and if people's emotional needs are met, they will be more likely to commit to the success of your project.

Project Plan Template

It is time to complete your final project plan. Here is your Project Plan Template. Remember, you can also download a copy of this template in Microsoft Word format from the Vadea platform.

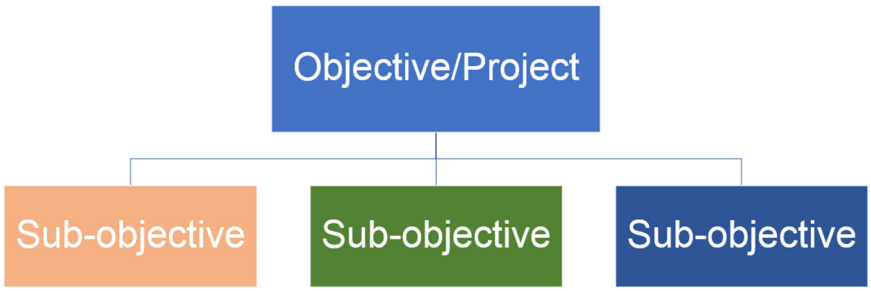
Overview

Project name	
Project manager	
Approval authority	
Project team	
Helpers	
Project vision/objective	
Start date	
Completion date	

Project time management

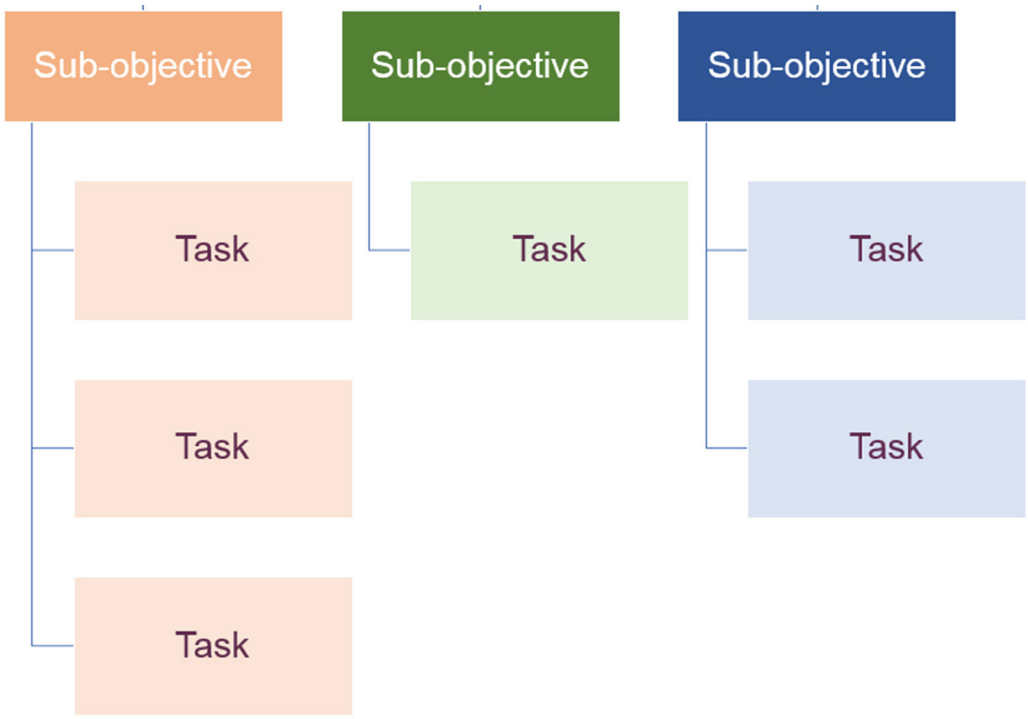
Break the objective into sub-objectives

Use this structure as a guideline.



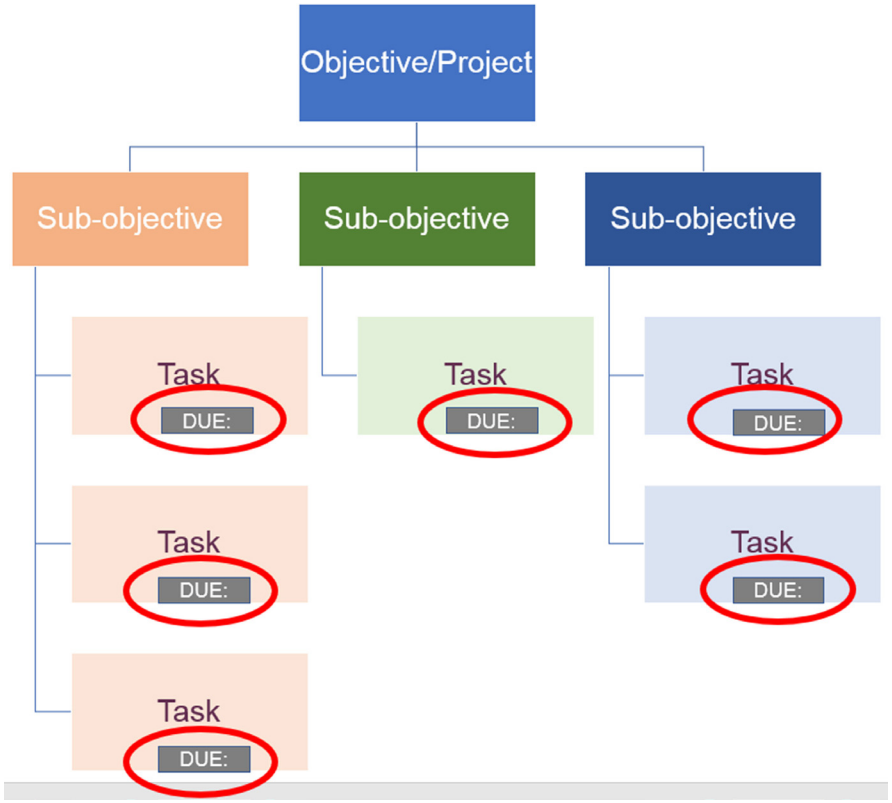
Break the sub-objectives into tasks

Use this structure as a guideline.



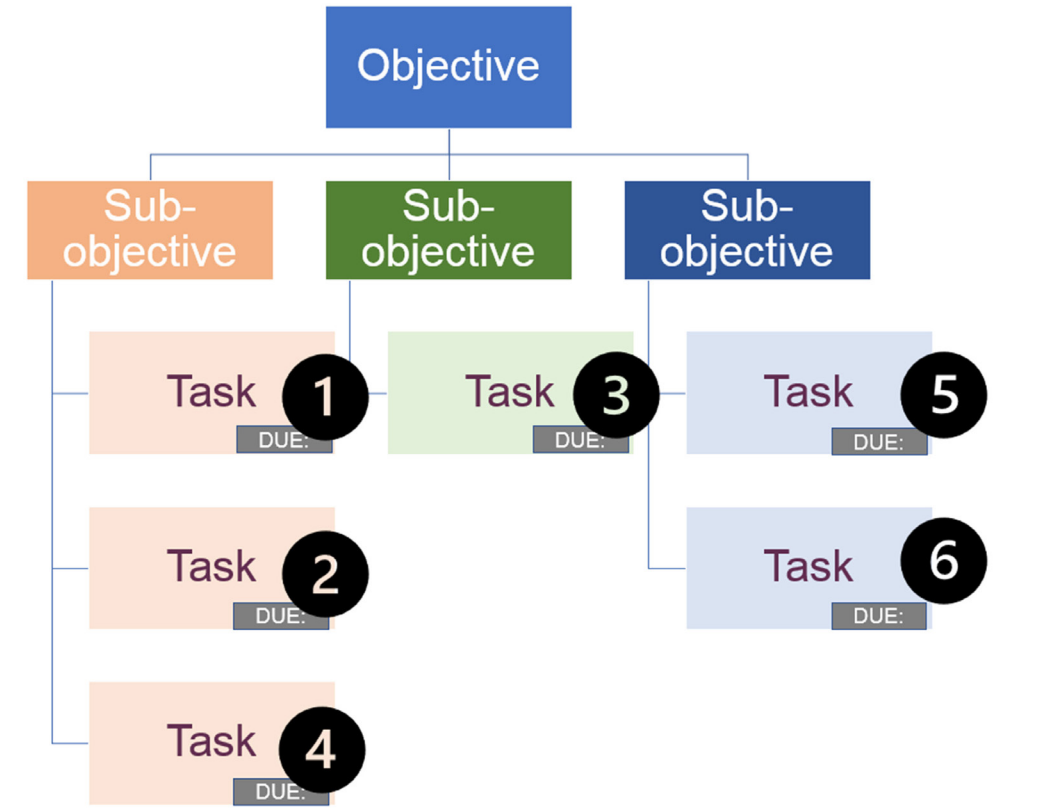
Set due dates per task

Use this structure as a guideline.



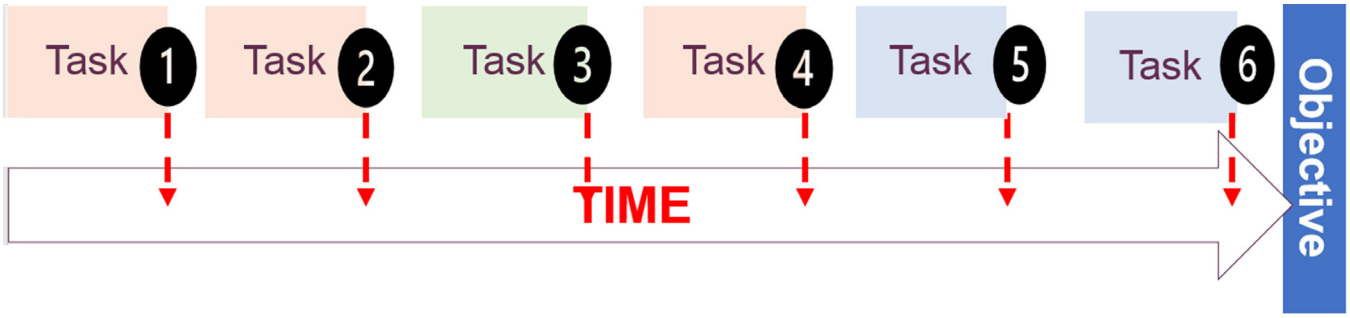
Order of completion of tasks

Use this structure as a guideline.



Determine start and end-dates, and allocate tasks to team members

Use this structure as a guideline.



PERSON	TASK
A	1, 3
B	2
C	4,5,6

Reporting

Who and to whom?	
What?	
Measured against?	
Format	
Frequency	

Project scope management

Consider where scope changes might be required.	
Decide what the process will be to get approval for any changes in scope. Will there be a written request to the approval authority?	
Will scope changes only be allowed once it has been signed off by the approval authority?	
What other processes can be put in place to ensure your project remains on track?	
What else?	

Project risk management

Prepare a risk register in the following template.

Risk	Likelihood of risk	Action to prevent risk from occurring	Action plan for risk	Person responsible

Project procurement management

Identifying procurement needs	
List of products	**List of services**

Procurement management	
What we know	
What we need to find out	
How will we manage the procurement process?	

Project cost management

Create a budget and include it in your plan

Consider the following before you create your budget.

Who will develop the budget?	
Who will authorise the budget?	
Who will monitor the budget?	
Who will confirm changes to the budget?	

Project quality management

Expected standards	
What we know	
What we need to find out	
What are our expected standards	
Quality	
What is the priority of quality for our project?	
What do we know about how to approach quality monitoring?	
What do we need to find out?	
What will our approach be to monitor quality?	

Monitoring and evaluation systems

Monitoring	
What format will the monitoring report be in?	
How often will it be done?	
Who will be the recipient of the monitoring report?	
What follow-up mechanisms will there be?	
Evaluation	
Who will do the evaluation?	
What objective will the project be evaluated against?	
What will happen to the report?	

Evaluation

Evaluating your project plan	
Project scope management	**Y/N**
Importance of scope management: The project plan includes at least two reasons why scope management is important.	
Approach to monitor and control scope changes: There is a logical process for monitoring and controlling scope, based on the parameters of project.	
What falls into the project scope: There is a work breakdown structure (WBS) that is structured in a logical way. Activities are clearly broken down into different phases, and no activities are left out of the WBS.	
Project time management	
There is a detailed final schedule. All activities identified in the WBS are included. The schedule shows how long each activity will take, when each activity will start, when each activity will end, and when the project will end.	
Changes to the schedule: There is a logical process for monitoring and controlling changes to the schedule, based on the parameters of project.	
Project cost management	
Final project budget: The budget has a reasonable cost associated to every activity, and each activity in the WBS is included in the budget.	
Roles and responsibilities: All relevant roles and responsibilities have been suitably allocated.	
Reporting format: The reporting format is logical and practicable.	
Variance responses: Appropriate processes have been identified.	
Change control: Appropriate processes have been identified.	

Project quality management	Y/N
Industry standards: Relevant industry standards have been included. Evidence of research into similar projects is present.	
Quality priority: Quality has been prioritised accordingly.	
Roles and responsibilities: All relevant roles and responsibilities have been suitably allocated.	
Approach to be used to monitor and control quality: Appropriate processes have been identified and elaborated on accordingly.	
Project risk management	
Risk register has been completed with evidence of understanding of risks and risk mitigation.	
Project procurement management	
Identifying procurement needs: Procurement needs match up to activities identified in the WBS and have been classified appropriately as either products or services.	
Managing the procurement process: Appropriate processes have been identified and elaborated on accordingly.	

Final Assessment

Complete the Final Assessment digitally on the Vadea Learning Platform to earn your badge and certificate.

Indicate the ONE correct response for each question.	
1	The Iron Triangle refers to cost, scope, and time.
a	True.
b	False.
2	The WBS shows the relationship between activities.
a	True.
b	False.
3	A Gantt chart shows the budget of the project.
a	True.
b	False.
4	The specific features of a product are referred to as product scope.
a	True.
b	False.

Final Assessment (continued)	
Indicate the ONE correct response for each question.	
5	Things that must happen during the project life cycle to ensure that a specific product or service is delivered, are referred to as product scope.
a	True.
b	False.
6	WBS is short for work breakdown schedule.
a	True.
b	False.
7	Budget refers to the resources required to complete a specific activity.
a	True.
b	False.
8	Budget refers to the total amount of money we have available for the project.
a	True.
b	False.
9	Monitoring takes place during project implementation, and evaluation takes place after implementation.
a	True.
b	False.
10	Monitoring the quality refers to the ____ you will put in place to make sure that the quality of your project ____ throughout the duration of your project. This will include activities like ____ and reporting on ____ and will be used together with ____ you identified earlier.
a	regular audits, the project quality, the industry standards, processes, stays on track,
b	regular audits, the project quality, processes, stays on track, the industry standards
c	processes, stays on track, regular audits, the project quality, the industry standards
d	processes, stays on track, the industry standards, regular audits, the project quality,

Final Assessment (continued)

Indicate the ONE correct response for each question.

11	Risks, in a project context, are things that ____ happen but ____ happen. The point of project risk management is to ____ and determine how you will manage ____ if it does in fact arise.
a	this problem, might, identify potential issues, won't necessarily,
b	might, won't necessarily, identify potential issues, this problem
c	this problem, won't necessarily, identify potential issue, might
d	identify potential issues, this problem, might, won't necessarily

Study the risk register below and then answer Questions 12 to 15.

Risk register for JPS College Tablet Lab Implementation

Risk register					
	Risk	**Likelihood of risk**	**Action plan to limit likelihood of risk occurring**	**Action plan for risk**	**Person responsible**
A	Late delivery of the tablets for opening.	100%	Order early. Monitor	Delay opening	HW
B	Brackets will break off desks	10%	None needed	None needed	HW
C	Lecturers would not like to teach with tablets.	50%	Training	Train in advance	HW

12	In Row A, which statement is most true?
a	The risk is too silly to include.
b	The likelihood of risk is too high.
c	The action plan for risk is not good.

Final Assessment (continued)	
Indicate the ONE correct response for each question.	
13	In Row B, which statement is most true?
a	The risk is absurd.
b	The likelihood of risk is too high.
c	The action plan for risk is poor.
14	In Row C, which statement is most true?
a	The risk does not belong in this risk assessment.
b	The likelihood of risk is too high.
c	The action plan to limit likelihood is reasonable.
15	What is the correct order? a Monitor the project b Elect a project manager and project team c Compile and implement the plan d Close the project e Obtain buy-in and authorisation from your project sponsor f Celebrate your success
a	a, b, c, d, e, f
b	f, d, a, b, c, e
c	e, b, c, a, d, f
d	d, e, f, a, b, c

Acknowledgements

Images

All images sourced at:

- http://www.pixabay.com and released under Creative Commons CC0 into the public domain: https://creativecommons.org/publicdomain/zero/1.0/
- Freepik/freepik.com, Premium licence (Unlimited use without attribution)

Via Afrika

Our Teachers. Our Future.

Via Afrika
40 Heerengracht, Cape Town,
8001
PO Box 5197, Cape Town, 8000

www.viaafrika.com

VADEA AT A GLANCE

IMPLEMENTING DIGITAL EDUCATION IN SCHOOLS FROM A CHANGE MANAGEMENT MINDSET

LEVEL 1

Session 1: Education is changing - so what?
Session 2: Making myself adapt-able to change
Session 3: The mindset change model for digital education implementation

LEVEL 2

Session 1: The role of the change facilitation team
Session 2: Working with the stakeholders - dealing with change
Session 3: Working with the stakeholders - skills assessment and planning

LEVEL 3

Session 1: Developing the implementation plan
Session 2: Implementing the implementation plan
Session 3: Making change stick

TEACHING FOR THE FOURTH INDUSTRIAL REVOLUTION

Session 1: Getting to the Fourth Industrial Revolution
Session 2: Augmented Reality (AR)
Session 3: Virtual Reality (VR)
Session 4: Big Data
Session 5: Artificial Intelligence (AI)
Session 6: Coding
Session 7: Robotics
Session 8: Genready for the 4IR
Session 9: Other 4IR Technologies and Applications

ANDROID COURSES

KNOW AND USE YOUR ANDROID TABLET DEVICE

Session 1: All about Android tablet devices
Session 2: Making contact with the world
Session 3: My Android tablet device is mine!
Session 4: There's an Android app for that
Session 5: Finding it on the internet
Session 6: Making the Android tablet device work for you - files
Session 7: Making the Android tablet device work for you – calendars and data management
Session 8: Making the Android tablet device work for you – eBooks and eReaders
Session 9: Taking the Android tablet to school

SOCIAL MEDIA ON ANDROID TABLET DEVICES

Session 1: Introducing social media
Session 2: Creating your social media accounts
Session 3: Social media in the classroom – Useful or just fun?
Session 4: Don't forget the other social media
Session 5: Facebook in the classroom
Session 6: Twitter in the classroom
Session 7: A look at YouTube
Session 8: YouTube in the classroom
Session 9: Blogging in the classroom

GOOGLE AND GOOGLE APPS ON ANDROID TABLET DEVICES

Session 1: The Google Apps package and Google Drive
Session 2: Google Docs
Session 3: Google Calendar and Google Slides
Session 4: Google Hangouts
Session 5: Creating my own teaching and learning content
Session 6: Google Apps that will open a new world to your learners
Session 7: Streamline your class with Google Forms
Session 8: Google Sheets
Session 9: New course coming!

DIGITAL LEARNING IN SCHOOLS FOR ANDROID USERS

Session 1: Why eLearning?
Session 2: Getting technical
Session 3: Management and usage of ICTs in schools
Session 4: Content for tablet devices
Session 5: Apps for teachers for demonstrations and content creation
Session 6: Online assessment tools
Session 7: Learning management systems
Session 8: Games teach too
Session 9: The gamification of education

WINDOWS COURSES

KNOW AND USE YOUR WINDOWS TABLET DEVICE

Session 1: All about Windows tablet devices
Session 2: Making contact with the world with my Windows tablet device
Session 3: My Windows tablet device is mine!
Session 4: There's a Windows app for that
Session 5: Finding it on the internet
Session 6: Making the Windows tablet device work for you - files
Session 7: Making the Windows tablet device work for you – calendars and data management
Session 8: Making the Windows tablet device work for you – eBooks and eReaders
Session 9: Taking the Windows tablet device to school

SOCIAL MEDIA ON WINDOWS TABLET DEVICES

Session 1: Introducing social media
Session 2: Creating your social media accounts
Session 3: Social media in the classroom – Useful or just fun?
Session 4: Don't forget the other social media
Session 5: Facebook in the classroom
Session 6: Twitter in the classroom
Session 7: A look at YouTube
Session 8: YouTube in the classroom
Session 9: Blogging in the classroom

MICROSOFT FOR WINDOWS TABLET DEVICES

Session 1: Introducing Microsoft Office 365 education and OneDrive
Session 2: Microsoft Word and Microsoft Outlook
Session 3: Microsoft Powerpoint
Session 4: Microsoft OneNote
Session 5: Skype and Yammer
Session 6: Microsoft Forms and online assessment apps
Session 7: Office mix and blended learning
Session 8: Microsoft Excel
Session 9: Office sway and the Microsoft educator community

DIGITAL LEARNING IN SCHOOLS FOR WINDOWS USERS

Session 1: Why eLearning?
Session 2: Getting technical
Session 3: Management and usage of ICTs in schools
Session 4: Content for Windows tablet devices
Session 5: Apps for teachers for demonstrations and content creation
Session 6: Online assessment tools
Session 7: Learning management systems
Session 8: Games teach too
Session 9: The gamification of education

USING YOUR LAPTOP TO MAKE A REAL DIFFERENCE IN YOUR TEACHING

Session 1: Your first laptop
Session 2: Producing written documents (using Microsoft Word) Part 1
Session 3: Producing written documents (using Microsoft Word) Part 2
Session 4: Producing written documents (using Microsoft Word) Part 3
Session 5: Processing numerical data (using Microsoft Excel) Part 1
Session 6: Processing numerical data (using Microsoft Excel) Part 2
Session 7: Preparing presentations (using Microsoft PowerPoint)
Session 8: Keeping things together (using Microsoft OneNote)
Session 9: Managing files
Session 10: Connecting with the world
Session 11: Using a display device with your laptop
Session 12: Making it work with JUST ONE LAPTOP

TEACHING ONLINE

Session 1: Foundations of online teaching
Session 2: Teaching synchronously
Session 3: Teaching asynchronously
Session 4: Using Microsoft Teams to communicate your message
Session 5: Teaching synchronously with Microsoft Teams
Session 6: Teaching effectively in a hybrid classroom

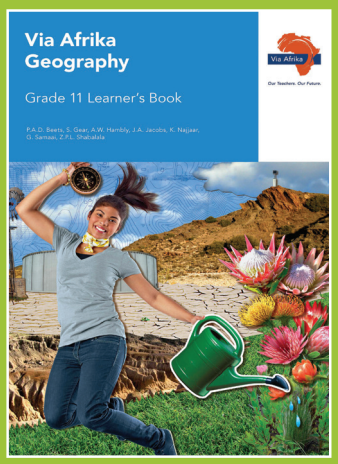
STUDENT WELLNESS

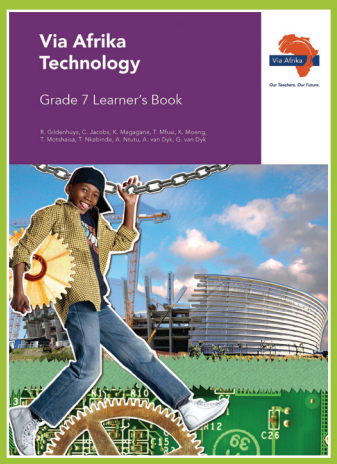
Course 1: A mindset for success
Course 2: Stress and me
Course 3: Stress, me and others

Please note that this course has been designed for students and not for teachers.

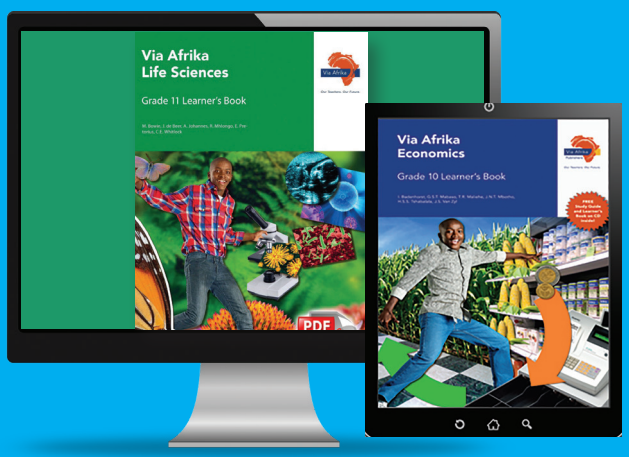
WHAT ELSE WE DO

CAPS approved printed books Grades 1 - 12





Also available in digital formats with exciting enhancements like videos and interactive assets for PC and tablet devices.



Online social emotional learning courses for students at www.VAstudent.online

Course 1: A mindset for success for students
Course 2: Stress and me for students
Course 3: Stress, me and others for students