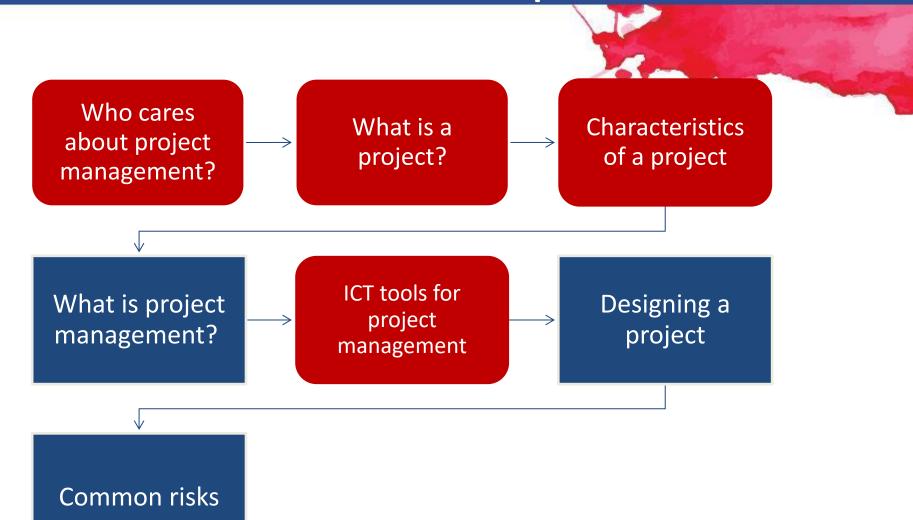**E-LEARNING**

Level 3

WA8: Projects

3.19 Use project management skills to accomplish implementation of a low-risk simple project

LO3.57 Demonstrate ability to define, design and implement a simple low-risk project; entering, editing and updating information on project tasks and resources. Select and use appropriate processes and tools to display and report on project status.

Route Map

```
┌─────────────────┐      ┌─────────────────┐      ┌─────────────────┐
│   Who cares     │      │                 │      │ Characteristics │
│ about project   │ ───► │  What is a      │ ───► │  of a project   │
│  management?    │      │   project?      │      │                 │
└─────────────────┘      └─────────────────┘      └─────────────────┘

┌─────────────────┐      ┌─────────────────┐      ┌─────────────────┐
│ What is project │      │  ICT tools for  │      │  Designing a    │
│  management?    │ ───► │    project      │ ───► │    project      │
│                 │      │  management     │      │                 │
└─────────────────┘      └─────────────────┘      └─────────────────┘

┌─────────────────┐
│  Common risks   │
│                 │
└─────────────────┘
```

Whoa!

Why should an Administrator care about project management?

Who cares about project management?
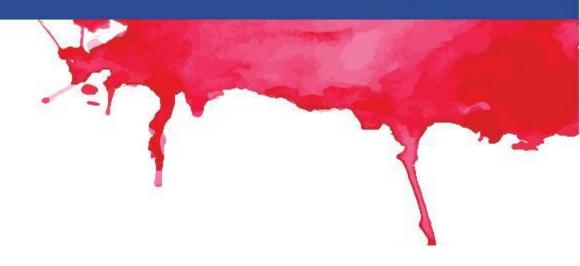
Recent studies in the corporate environment clearly demonstrate that more than 50% of employees undertake tasks that require knowledge and skills in Project Management.
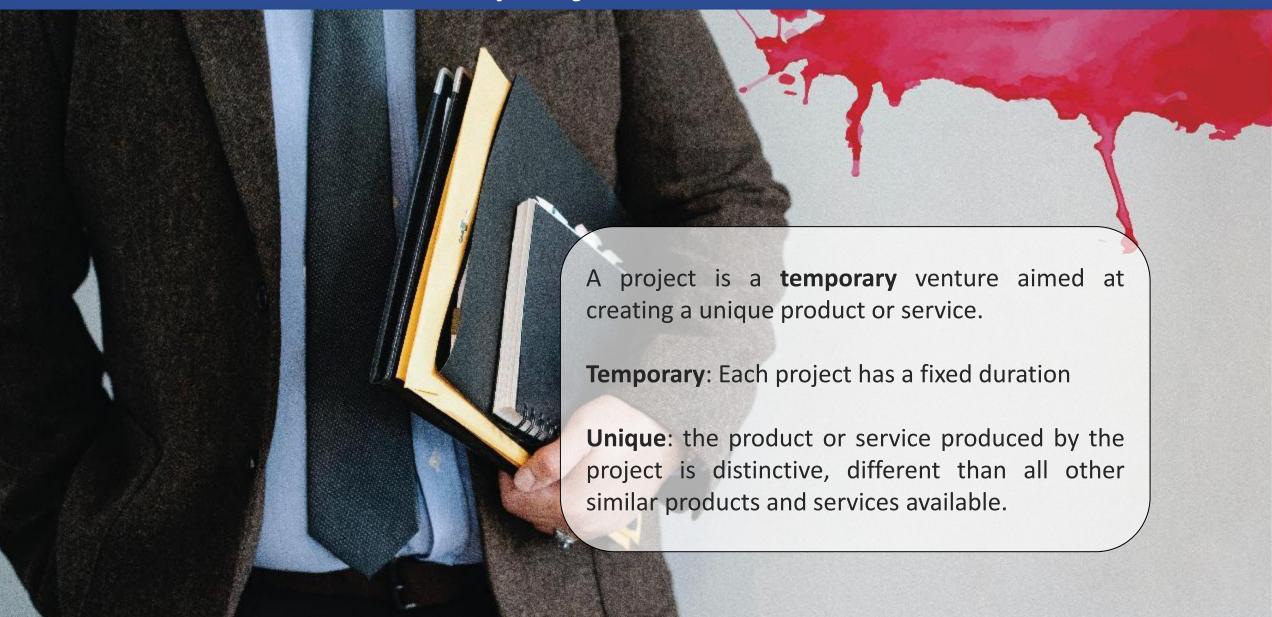
A defined sequence of events with a predetermined **starting** and **ending** point
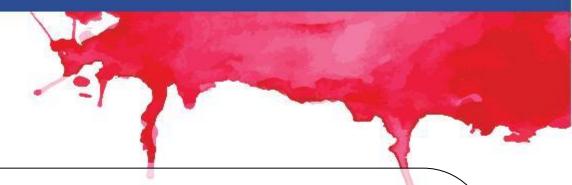
A project is a **temporary** venture aimed at creating a unique product or service.

Temporary: Each project has a fixed duration

Unique: the product or service produced by the project is distinctive, different than all other similar products and services available.
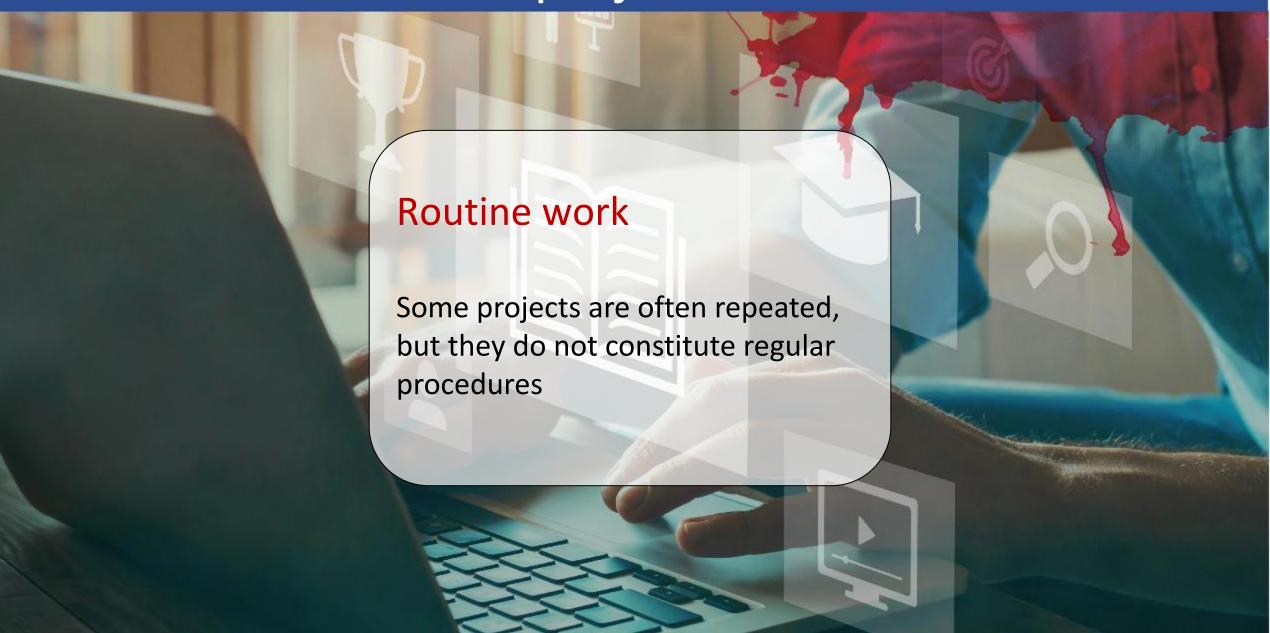
Project is the endeavor in which human resources, machinery, funds and raw materials are organized in a novel way, towards the aim of undertaking a specific task, with given specifications, and explicit cost and time constraints in order to produce a beneficial change, which is clearly defined through quantitative and qualitative methods.

Organizing tasks towards the achievement of a predefined goal, which requires resources, effort and coordination in a design!
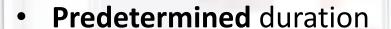
Routine work

Some projects are often repeated, but they do not constitute regular procedures

- **Predetermined** duration
- It aims at a **predetermined** and **measurable** result.
- It consists of a series of **interrelated** tasks.
- It requires **resources** of a different kind.
- There is a finite budget (it has financial limits).
    — If we did not care about **when** something should be completed and **how** much it should cost, then we would not need Project Management.

Characteristics of a project

- Resourced from various sources.
  - A project can be implemented within the framework of the organization's day-to-day practice or as a separate venture; however, it always needs its own resources (time, material, funds, machines, etc.).
  - Working with the predetermined resources is vital to the success of a project.
- Each project requires teamwork and creates something that did not exist before.
  - Therefore, the explicit objectives must be known to everyone involved.
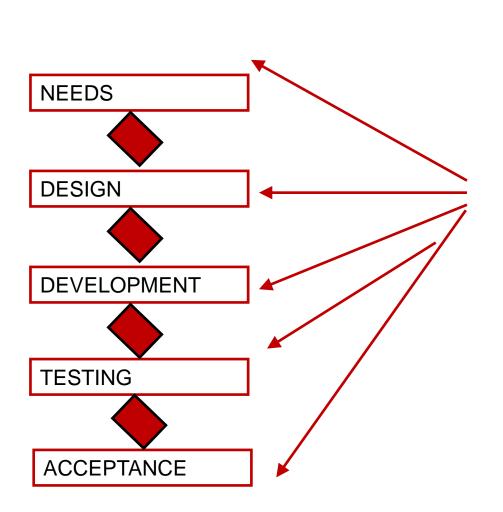
What is project management?

Project Management is the application of knowledge, skills, tools and techniques in the execution of project activities in order to meet the requirements and expectations of the participants.

- Adopt a step-by-step approach
- Take small and cheap decisions early
- Provide a clear definition of the project objectives
- Decide on measurable goals
- Clarify roles and responsibilities
- Adopt simple procedures for decision-making and communication

- Transition from one phase to another is usually accompanied by deliverable(s)
- Many times, a phase begins before the previous one is approved and finalised
- The life cycle of a project usually determines the following:
  - What are the deliverables of each phase?
  - Who is involved in each phase?
  - How is each phase monitored and controlled?

Project scope

- The project's scope:

  - explains the boundaries of the project

  - establishes responsibilities for each team member

  - sets up procedures for how completed work will be verified and approved.

- The relevant documentation may be referred to as a scope statement, statement of work (SOW) or terms of reference
- The scope statement also provides the project team leader with guidelines for making decisions about change requests during the project.
- The better the project has been "scoped" at the beginning, the better the project team will be able to manage change.
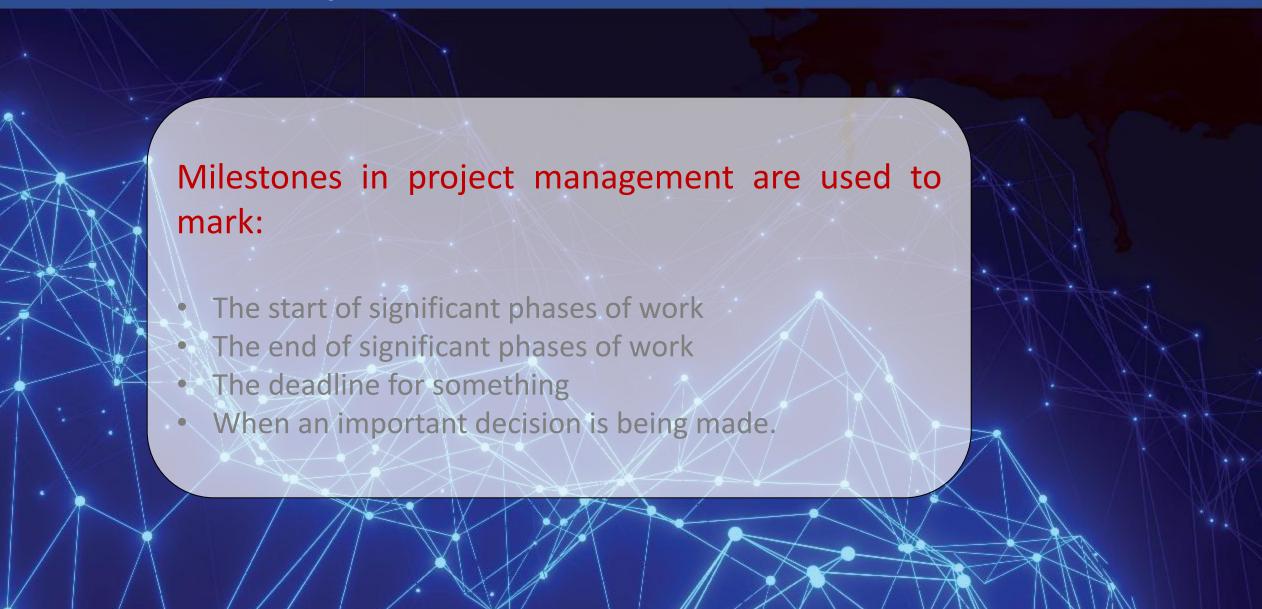
The main function of the project structure is to define standards that the team will use during the project. These include communication standards, documentation standards, and change control procedure standards. Program Management takes the lead in defining the project structure.

Project milestones

Milestones in project management are used to mark:

- The start of significant phases of work
- The end of significant phases of work
- The deadline for something
- When an important decision is being made.

Resources are required to carry out the project tasks.

They can be:

- people,
- equipment,
- facilities,
- funding,
- etc.
- The lack of a resource is a constraint on the completion of the project activity.

Resource scheduling, availability and optimisation are considered key to successful project management.

Project constrains

- Scope
- Schedule
- Budget
- Quality
- Resources
- Risks

- Project constraints simply mean that project teams always work under some limitations and restrictions. Project Management involves balancing these limitations for successful completion of Project.

Procedures
- Launch
- Design
- Implementation
- Monitoring and evaluation
- Closing

Is it a project?

E-EUPA_LO_3.57_M_001

Key (simple) project documents

Document 1: The Project Charter
- Objectives
- Products/deliverables
- Rationale

Document 2: The Plan
- List of activities
- Scope
- Tasks
- Timeline
- People
- Possible risks

Document 3: The Progress Report
- On a regular basis
- Budget monitoring
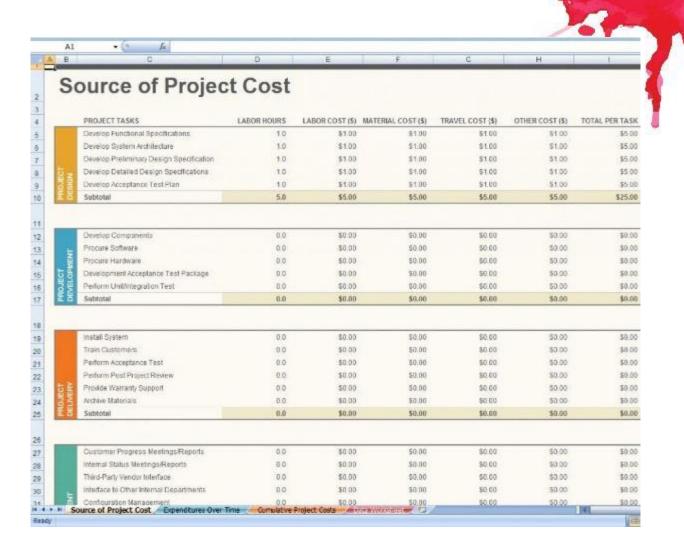- Progress monitoring (activities, deliverables, delays, etc.)

Creating Task lists

To Do List

Project: [Project Name]

Project / Task	Status	Priority	PICK	Due Date	Owner	Notes
Task Name 1	Planning	high	Easy / Low Value	12/15/19	Jack	Some notes about Task 1
Task Name 2	Approved	normal	Easy / High Value	12/11/19	Jill	Some notes about Task 2 thas are long enough to span two different
Task Name 3	Pending Review	low	Hard / Low Value	12/13/19		

Creating Budgets

Stakeholders

- Persons or organizations involved in the project or whose interests may be affected as a result of the implementation or completion of the project

- They may also affect the objectives and results of the project

- The project management team is required to identify stakeholders and determine what are their needs and expectations and to control how they may influence the project.

Stakeholders

- A web-based, free of charge, project management application.

- Projects are represented by boards, which contain lists (corresponding to task lists). Lists contain cards (corresponding to tasks). Users can be assigned to cards. Users and boards can be grouped into organizations.

- It supports iPhone, Android and Windows 10 mobile platforms.

- Cards accept comments, attachments, votes, due dates and checklists.

- Users may organize projects through the utilization of boards, lists and cards, which form a custom-made data hierarchy that facilitates effective management of projects, jobs and tasks.

- It has a variety of uses.

Watch the following video.

[Boost your productivity with Trello - YouTube](#)
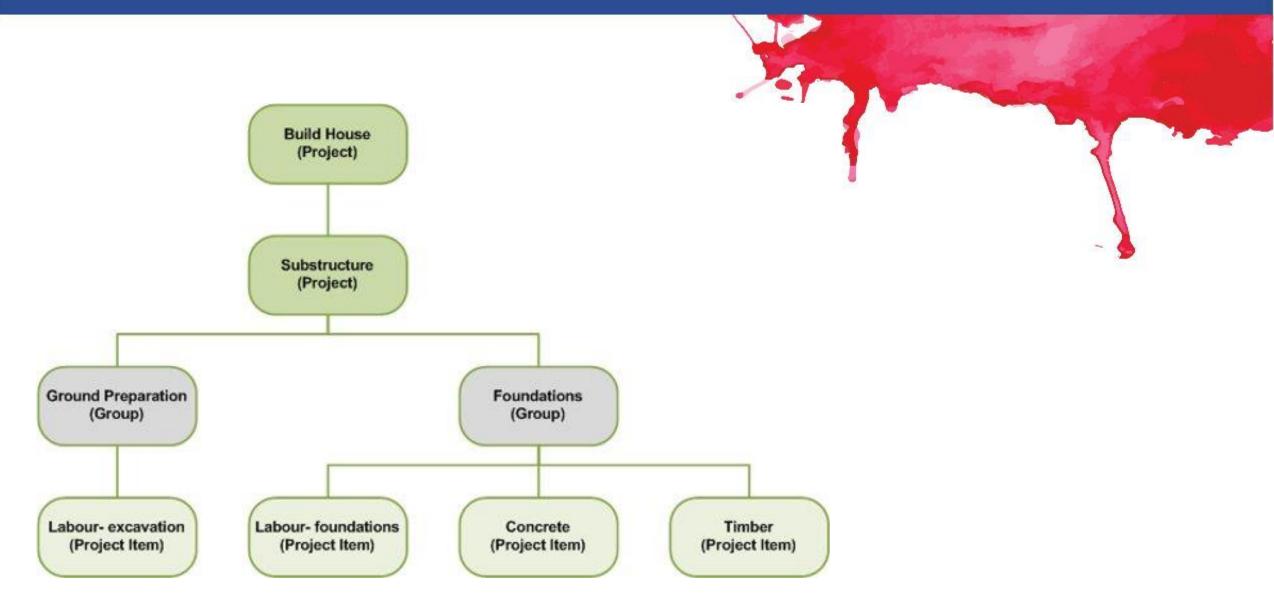
- Microsoft Project is a **project management software product**, developed and sold by Microsoft.
- It can be used in developing a plan, assigning resources to tasks, tracking progress, managing the budget, and analyzing workloads.
- Resource definitions (people, equipment and materials) can be shared between projects using a shared resource pool.
- Each resource can have its own calendar, which defines what days and shifts a resource is available.
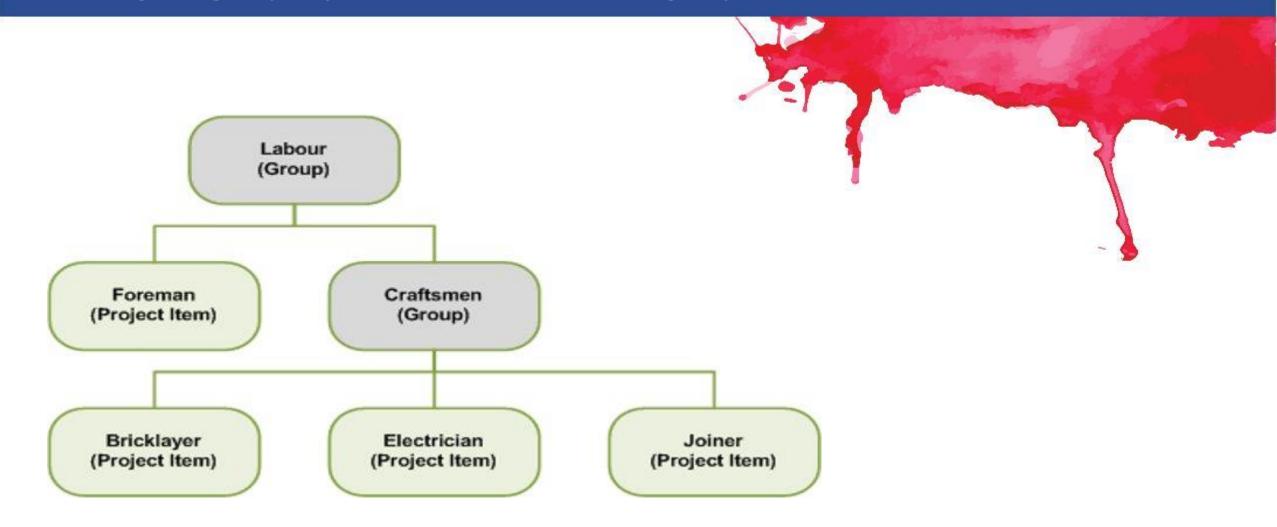
Designing a project, groups*
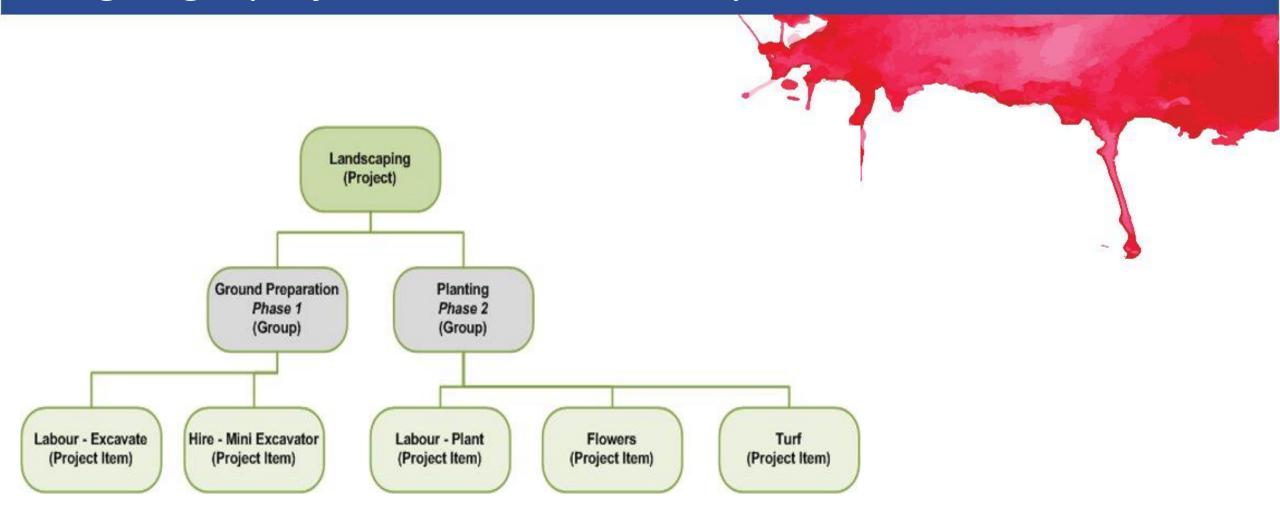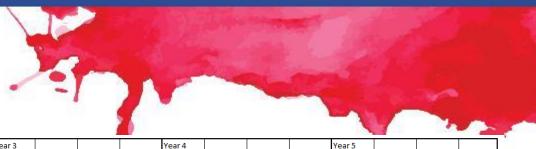
Designing a project, Gantt chart
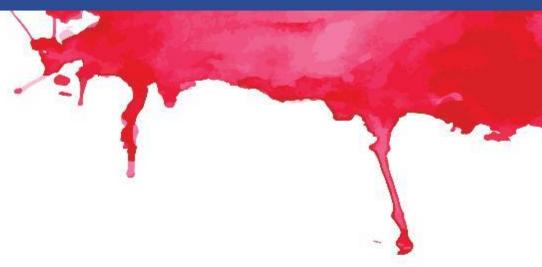
Task	Year 1 Q1	Q2	Q3	Q4	Year 2 Q1	Q2	Q3	Q4	Year 3 Q1	Q2	Q3	Q4	Year 4 Q1	Q2	Q3	Q4	Year 5 Q1	Q2	Q3	Q4
Research and Development																				
Develope Proof of Principle	X	X	X	X	X	X	X	X												
Development of Measuring device and components							X	X	X	X										
Expand product developement									X	X	X	X	X	X	X	X	X	X	X	X
Prototype development									X	X	X	X								
Business Development																				
business plan tuning	X	X	X	X	X	X	X	X												
Attain Office Space			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hire a manager									X	X	X	X	X	X	X	X	X	X	X	X
Hire lab research technician									X	X	X	X	X	X	X	X	X	X	X	X
appoint board of directors									X	X										
Health care certification															X	X				
Prototype Validation										X	X	X								
Funding																				
Research funding GeekStarter (AITF)	X	X	X	X	X	X	X	X												
South Venture Business Plan Competition	X	X	X	X																
Chinook Entrepreneur Challenge	X																			
Scientific Research and Experimental Development (SR&ED) tax incentive program		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
Industry Research Assistance Program (IRAP) Funding			X	X	X	X	X	X	X	X										
AITF Voucher Program 1					X	X														
NERC Industry Driven Collaborative R&D Program					X	X	X	X	X											
Explore Kickstarter Program (100,000)						X														
AITF Voucher Program 2							X	X	X	X										
Private Investment 1 (500,000)							X	X	X	X	X	X								
Private Investment 2 (2,00,000)												X	X	X	X					
Intelectual Property																				
Prior art and Partentabilit searches	X	X	X	X	X															
Research and Meet with Patent Firms	*					X	X	X												
Obtain Patent for Process and Technology Innovations								X	X											
File patents on new Developments									X	X	X	X	X	X	X	X	X	X	X	X

*initated process ahead of schedual

Gantt chart

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Risk Category: Schedule

- Schedule not realistic, only "best case".
- Important task missing from the schedule.
- A delay in one task causes cascading delays in dependent tasks.
- Unfamiliar areas of the product take more time than expected to design and implement

Risk Category : Requirements Risk

- Requirements have been base lined but continue to change.
- Requirements are poorly defined, and further definition expands the scope of the project
- Specified areas of the product are more time-consuming than expected.
- Requirements are only partly known at project start
- The total features requested may be beyond what the development team can deliver in the time available.
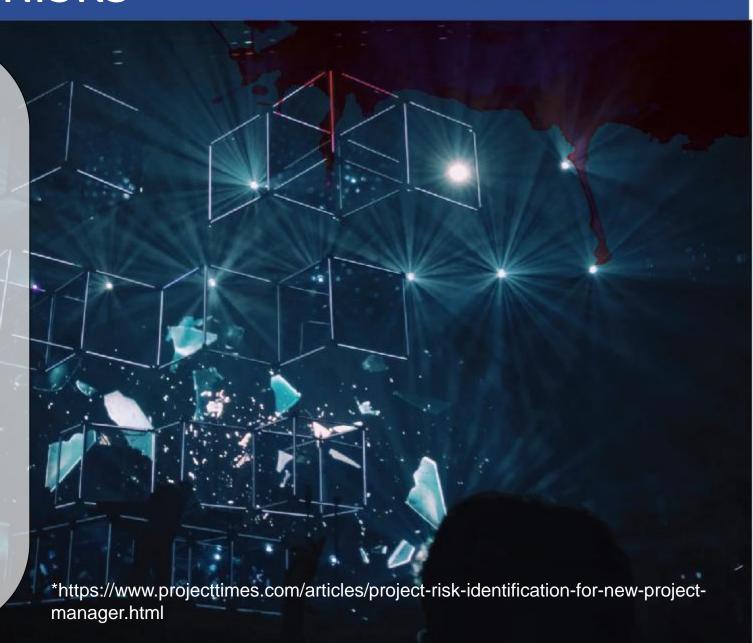
Risk Category: Project Management Risk

- Project Management has little authority in the organization structure and little personal power to influence decision-making and resources

- Priorities change on existing program

- Project key success criteria not clearly defined to verify the successful completion of each project phase.

- Projects within the program often need the same resources at the same time

- Date is being totally driven by need to meet marketing demo, trade show, or other mandate; little consideration of project team estimates

Risk Category : Product/Technology Risk

- Development of the wrong user interface results in redesign and implementation.
- Development of extra software functions that are not required (gold plating) extends the schedule.
- Requirements for interfacing with other systems are not under the team's scope.
- Dependency on a technology that is still under development lengthens the schedule.
- Selected technology is a poor match to the problem or customer

COMMON RISKS*

Risk Category : Customer Risk

- Customer insists on new requirements.
- Customer review/decision cycles for plans, prototypes, and specifications are slower than expected.
- Customer insists on technical decisions that lengthen the schedule.
- Customer will not accept the software as delivered even though it meets all specifications.
- Customer has expectations for development speed that developers cannot meet.

*https://www.projecttimes.com/articles/project-risk-identification-for-new-project-manager.html

Risk Category: Human Resources & Contractors Risk

- Critical development work is being performed by one developer
- Some developers may leave the project before it is finished.
- Hiring process takes longer than expected.
- Personnel need extra time to learn unfamiliar software tools, hardware and programming language.
- Contract personnel leave before project is complete.
- Conflicts among team members result in poor communication, poor designs, interface errors and extra rework.
- Personnel with critical skills needed for the project cannot be found.
- Contractor does not deliver components when promised.

*https://www.projecttimes.com/articles/project-risk-identification-for-new-project-manager.html

Question 1

- Define what is a project and what is not a project

Question 2

- Describe basic project management principles

Question 3

- Describe different processes for effective project management

Question 4

- List ICT and other tools and their use for entering and displaying project information and reporting on the project status
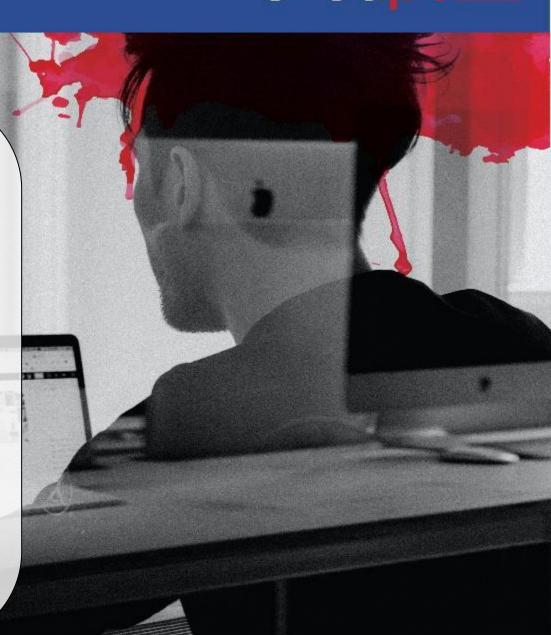
Question 5

- Define risk and list examples of risks occurring in project management

- Recent studies in the corporate environment clearly demonstrate that more than 50% of employees undertake tasks that require knowledge and skills in Project Management
- Project is the endeavor in which human resources, machinery, funds and raw materials are organized in a novel way, towards the aim of undertaking a specific task, with given specifications, and explicit cost and time constraints, in order to produce a beneficial change, which is clearly defined through quantitative and qualitative methods.
- Organizing tasks towards the achievement of a predefined goal, which requires resources, effort and coordination in a design!

WELL DONE!

You have completed Unit 3.19

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Personnel