

# 13.8 Project Management

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# Objectives

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UNDERSTAND WHY PROJECTS ARE OFTEN SUB-DIVIDED INTO TASKS AND ALLOCATED TO TEAMS.

DESCRIBE THE CHARACTERISTICS OF A GOOD TEAM, E.G. LEADERSHIP; APPROPRIATE ALLOCATION OF TASKS; ADHERENCE TO STANDARDS; MONITORING; COSTS; CONTROL.

# Project

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A SHORT OR FIXED TERM ACTIVITY THAT USES A TEAM OF INDIVIDUALS WITH DIFFERENT SPECIALISED SKILLS TO ACHIEVE A SPECIFIED OBJECTIVE.

A PROJECT MANAGER IS IN CONTROL, THERE MAY BE TEAM LEADERS.

THE PROJECT IS BROKEN INTO SMALLER TASKS.

A PROJECTS HAS: AN OBJECTIVE, A TIME PERIOD, A BUDGET, A GROUP OF PEOPLE WHO WORK TOGETHER JUST FOR THE SPECIFIED TASK.

# Duties of the Project Manager

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PLAN THE PROJECT AND CHOOSE THE STAFF;  
ANALYSE ANY RISKS INVOLVED;  
MONITOR THE PROGRESS OF EACH TEAM;  
CHANGE SCHEDULES IF PROGRESS IS  
FAST/SLOW;  
REPORT TO SENIOR MANAGEMENT PROGRESS;  
CONTROL THE PROJECT BUDGET INCLUDING  
STAFF SALARIES;  
RUN PERFORMANCE CHECKS;  
ACT AS THE LINK BETWEEN SENIOR  
MANAGEMENT, TEAM LEADERS, AND STAFF.

# Teamwork

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A TEAM WILL BRING A WIDE RANGE OF SKILLS AND EXPERIENCE IN DIFFERENT AREAS.

THIS MAY BE POSSIBLE WITHIN AN ORGANISATION, BUT COULD BE BROUGHT IN FOR THE PARTICULAR PROJECT.

OUTSIDE BODIES ARE CONTRACTORS, AND ARE PAID JUST FOR THE JOB THEY DO. THEY ARE EXPENSIVE BUT HAVE GREATER EXPERTISE.

# Team

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LEADERSHIP: INSPIRE AND MOTIVATE STAFF,  
KNOW EXACTLY WHAT IS REQUIRED.

TASK ALLOCATION TO APPROPRIATELY  
TALENTED PERSONNEL, WHO ARE THE BEST  
FOR THE JOB AND CAN WORK WITH OTHERS,  
POSITIVE ATTITUDE.

STANDARDS TO BE ADHERED TO, PROCEDURES  
AND DOCUMENTATION, ON TIME.

MONITORING, COSTING AND CONTROLLING /  
REVIEWING THE PROJECT TO ENSURE ALL  
ASPECTS ARE RUN PROPERLY.

# Cost

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COST TO BE ESTIMATED AT THE ONSET OF THE PROJECT, HARDWARE, SOFTWARE AND STAFF.

DECISION WHETHER TO PROCEED OR NOT BASED ON THE ESTIMATE.

BUDGET TO BE MADE FOR THE VARIOUS STAGES AND TIME ALLOCATED. THE GREATEST COSTS ARE USUALLY THE STAFF, THEREFORE TIME LIMITS ARE CRITICAL.

CONTINGENCY ALLOWANCE NEEDED FOR ANY UNFORESEEN PROBLEMS OR DELAYS.

# Standards

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USE OF DATA, AND HOW IT IS ENCODED AND  
TRANSFERRED,  
DATA TO BE COMPATIBLE WITH HARDWARE  
AND WITH DIFFERENT PROGRAMS.

# Control

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MONITOR WHAT HAS BEEN DONE WITH THE PLAN.

AT STAGES COMPARE TIMESCALE, COSTS, AND QUALITY.

IF IT IS RUNNING LATE, EARLY IDENTIFICATION CAN LEAD TO MEASURES TO RECTIFY IT.

THIS USUALLY LEADS TO MORE COSTS, I.E.

ALLOCATING MORE STAFF, BUT THERE COULD BE GREATER COSTS IF THE PROJECT IS COMPLETED LATE.

# Schedule

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PLAN A SCHEDULE OF TASKS AND TIMESCALE.  
GOOD CO-ORDINATION BETWEEN TEAM  
LEADERS AND THE PROJECT MANAGER.  
KEEP TO THE BUDGET, MONITOR AND KEEP  
RECORDS.  
USE SOFTWARE TO ASSIST WITH CONTROL.  
TIME MEASURED ON A GANTT CHART, OR  
CRITICAL PATH ANALYSIS (CPA).

# Critical Path Analysis (CPA)

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TO FIND THE MINIMUM TIME FOR THE COMPLETION OF A PROJECT USE CPA.

THE CRITICAL PATH IS THE SEQUENCE OF ACTIVITIES THAT TAKE THE LONGEST TIME FROM BEGINNING TO END.

CALCULATED ON TIME NOT ON IMPORTANCE OF TASK, ANY DELAY WITHIN THE CRITICAL PATH WILL CAUSE THE WHOLE PROJECT TO BE DELAYED.

# Critical Path

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BREAK THE PROJECT INTO ITS COMPONENT ACTIVITIES.

ARRANGE THE ACTIVITIES INTO A LOGICAL SEQUENCE KNOWN AS A NETWORK DIAGRAM. ESTIMATE THE TIME LENGTH OF EACH ACTIVITY. IDENTIFY EACH PATH THROUGH THE NETWORK AND CALCULATE THE TIME FOR EACH PATH, THE LONGEST IS THE CRITICAL PATH.

THE CRITICAL PATH IDENTIFIES THE ACTIVITIES THAT ARE CRITICAL TO THE TIMING OF THE WHOLE PROJECT.