



Plan and organise work

RIIBEF201D

- The process of creating and maintaining a plan; and
- Thinking about the activities required to create a desired goal on some scale.
 - Choosing a destination
 - Evaluating alternative routes
 - Deciding the specific course of the plan



- People make wildly overconfident projections but fail to notice their abysmal track record in predicting.
- People cannot solve the core problem of uncertainty; they have no idea what the future holds.
 - How to tackle over-confidence?
 - How to overcome uncertainty?



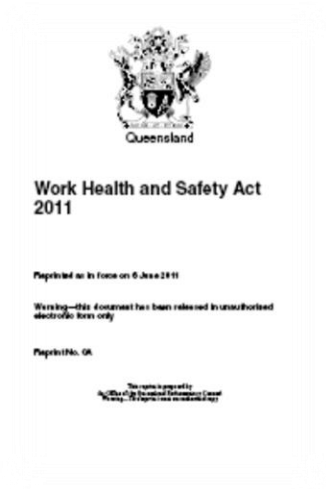
- Businesses ask four questions:
 - Where are we today in terms of our business?
 - Where are we going?
 - Where do we want to go?
 - How are we going to get there?
 - Strategic Plans
 - Long-term Plans
 - Short-term Plans
 - Operational Plans
 - Specific Plans
 - Standing Plans



- Project management as its principal form of planning.
- Project management is the method used to plan, organise, source and manage resources to achieve the specific goals of the project.
- A large number of organisationally independent firms are involved in construction projects.
- The different parts of the construction project lifecycle.



- Regulatory and Legislative Requirements
- Guidance Documents
- Manufacturer Specifications and Instructions
- Other Workplace and Organisational Requirements



- Fair Work Ombudsman
- Induction Training



- A typical day at a construction site starts with a toolbox meeting.
- Daily work plan drawn up by the supervisor / foreman.
- Organising the daily routine.
- Whilst these instructions are being communicated, it is important to remain patient, listen and to recheck any areas of uncertainty.
- Actions should clearly be understood.
- Prepare to write down what is required.



- List the tasks in the order that they need to be done; always find out the deadline.
- Concentrate on one task at a time; always try to complete the task currently being undertaken unless something urgent comes up.
- List the activities that always need to be done; these are called 'routine' tasks, such as daily maintenance and servicing of equipment.
- Use a checklist as a reminder of what needs to be done.
- Set goals on a regular basis.
- Write down what steps are required to achieve these goals.
- Work out how long a task will take and allow the time to do it.



- What do I want to do? (Objectives)
- What results do I expect? (Targets)
- What is the best way of doing it? (Methods)
 - Once a goal has been identified, work backwards establishing the steps necessary to achieve the goal.
 - Be specific regarding the steps required to reach the goal.
 - Follow those steps exactly.
 - Be prepared to make adjustments to planning where necessary.
 - Visit goals and plans on a daily basis.
 - Monitor progress on a weekly and quarterly basis.
 - Enlist the help and encouragement of others where appropriate.



- In a perfect world everything would always go according to our best thought out plans, however, this is rarely the case.
- Fortunately, steps can be taken to minimise this:
 - After the plan is completed ask: "What can go wrong?"
 - Consider all the risks that could turn the plan into a total disaster.
 - Study the list of risks and eliminate any that are well outside the range of reason to occur.
 - Group those risks that are left into clusters of similar or like causes.



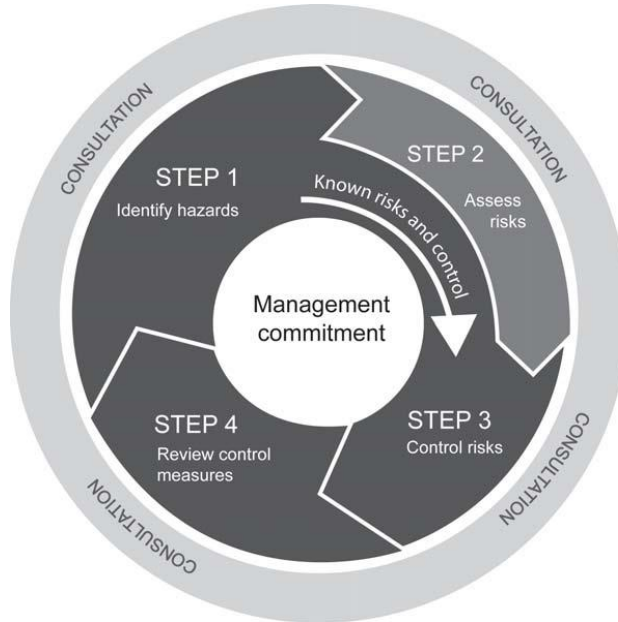
- Now decide how to proceed with the remaining risks:
 - Some risks may be able to be accommodated; this would require an adaptive plan.
 - What steps would need to be implemented to live with them comfortably or to minimise their effects?
 - For other risks it may be possible to ensure that they don't occur; a preventative plan could be devised to stop them from happening.
 - The remaining risks would require a contingency plan; one that specifies actions to be taken if they occur.

- There will be times however, when it may be necessary to use judgement in deciding which tasks should receive priority.
 - Decide what has to be done and when it has to be done by.
 - Think about all the things that might stop prevent the job from getting done.
 - Think about all the ways that the job could be done.

- Of all the ways of doing the job, select the way that best suits the situation and looks like giving the least problems.
 - List tasks – Number them in order of importance and order task is to be done.
- Check to make sure that everything that has to be done is included in plans.
- Start the plan. If things are not going right, make changes to the plan but the changes must be written down.
 - Juggling Tasks – break the task into smaller parts.

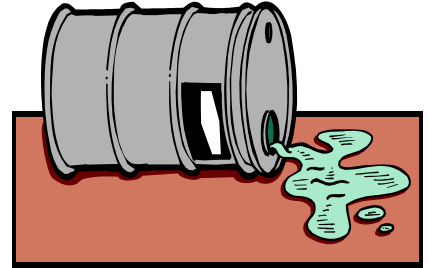
- Inspect and prepare work areas
- Co-ordinate with others

- There are four basic steps in the workplace health and safety risk management process:
 - Identify hazards
 - Assess risks that may result because of the hazards
 - Control Risk (includes deciding on and implementing controls)
 - Monitor and review the effectiveness of measures
- At every stage of the process consultation should occur.



• Identify Hazards

- What to look for
- How to look for hazards
- The risk associated with each hazard and the risks



- Assess Risk - Risk Assessment
- For each of the risks:
 - Determine the likelihood of an incident occurring at your workplace, bearing in mind existing control measures;
 - Determine the consequences of an incident occurring at your workplace, bearing in mind the existing control measures;
 - Combine your likelihood and consequence estimates to rate the risk.



- Use the following descriptive scale to nominate the likelihood of an incident occurring at your workplace.

Likelihood	
Very Likely	Could happen frequently
Likely	Could happen occasionally
Unlikely	Could happen, but rarely
Very Unlikely	Could happen, but probably never will.

- The Effectiveness of Existing Control Measures
- Determining Consequences

Consequences			
Extreme	Major	Moderate	Minor
Death or permanent disability	Serious bodily injury	Casualty treatment	First aid only / no lost work time

- Rate each risk.
- The level of risk, or 'risk score', is determined by the relationship between likelihood and consequence.
- This relationship can be represented using a matrix, as shown on the following slide.

Extreme

High

Medium

Low

Consequences

A: Death or Permanent Disability
B: Serious Injury
C: Lost Time Injury
D: Casualty Treatment
E: First Aid

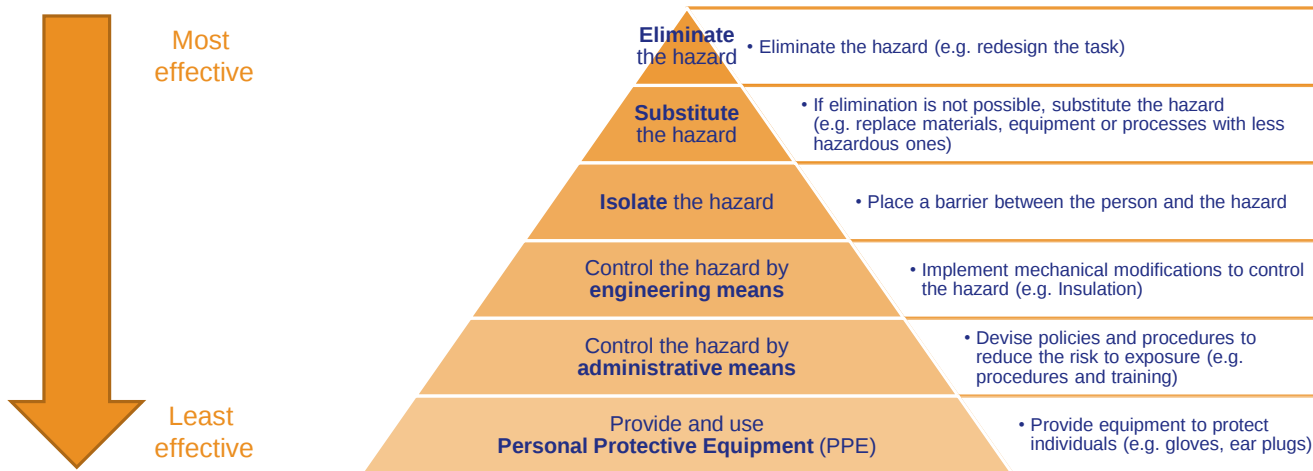
Likelihood

1: Very Likely
2: Likely
3: Possible
4: Unlikely
5: Very Unlikely

Matrix	A	B	C	D	E
1	E	E	H	H	M
2	E	H	H	M	M
3	H	H	M	M	L
4	H	M	M	L	L
5	M	M	L	L	L

- Prioritise risks based on their risk score. Remember, the risk scores are useful for comparison purposes ONLY.
- When risk scores for all risks in the workplace are compared, the resulting ranking will be a guide to the order in which the risks should be addressed.
- Note: All Risks must be controlled. There is no such thing as a minor risk.

- Control risks, select controls
- Deciding on control measures to manage exposure to identified risks.



- Start at the top of the list and work your way down:
 - Firstly, try to eliminate the hazard.
- If this is not possible, prevent or minimise exposure to the risk by one or a combination of:
 - Substituting a less hazardous material, process or equipment.
 - Redesign equipment or work processes
 - Isolating the hazard (note: these measures may include engineering methods);
 - As a last resort, when exposure to the risk is not (or cannot be) minimised by other means:
 - Introduce administrative controls
 - Use of appropriate personal protective equipment.

- This step also involves putting selected control measures in place at your workplace.
 - Developing work procedures
 - Communication
 - Provide training and instruction
 - Supervision
 - Maintenance



- Ensure that you have a basic knowledge and understanding of the meanings of signs, barricades and symbols used to communicate safety on a construction site.
- In Australia there are four basic categories of signs:
 - Regulatory signs (prohibition, mandatory, limitation or restriction types);
 - Hazard signs (danger and warning types);
 - Emergency information signs (exits, equipment, first aid types); and
 - Fire signs (location of fire alarms and fire fighting equipment).

- These signs can also be found in smaller form as danger, safety or lockout tags.
- Consider and plan carefully for the placement of signage and barricades.
- Also you must plan for and ensure that any mandated requirements for safeguarding site and non-site personnel are followed.



- Determine appropriate path of movement
- Setting out the site



- Tools, equipment and plant should always be used according to manufacturer user manuals, which include information about the following:
 - Functions of the equipment
 - Basic and special features
 - Maintenance
 - Occupational health and safety issues (WHS)
 - Instructions on use

- Some organisations will have training manuals or policy and procedures manuals that must be read prior to use.
 - Safe Work Method Statement (SWMS)
 - Job Safety Analysis (JSA)
 - Safety Data Sheets (SDSs).



- The WHS Regulation 2011 sets out the requirement of a Supplier to:
 - Provide a copy of a current SDS to the person conducting a business or undertaking (PCBU); and
 - Provide a copy of an SDS when requested by certain people.



- The WHS Regulation 2011 sets out the requirement of a PCBU to:
 - Obtain an SDS of a hazardous chemical from the manufacturer, importer or supplier;
 - Keep a register containing a list of all hazardous chemicals used at the workplace and put a copy of any SDS obtained in the register;
 - Take reasonable steps to ensure the SDS is not changed other manufacturer or importer; and
 - Keep the SDS close to where the chemical is being used.

- What must a safety data sheet contain?
- What must a safety data sheet state about the chemical?
- It is important that everyone in the workplace knows how to read and interpret a SDS.
- In respect of SDS and labels, employers and self-employed persons must:
 - Ensure a label is fixed to a hazardous substance container
 - Ensure warnings are given about enclosed systems containing hazardous substances.



- Many areas in construction related to environmental requirements are mandated by legislation and require strict compliance.
- You must ensure that you follow workplace procedures to ensure compliance with environmental requirements.
- It is up to your employer to ensure that the workplace meets any legislated environmental requirements.
- It is up to you to ensure that you have a basic understanding of environmental requirements and that you comply with any legislation and organisational procedures to ensure its protection.



- Legislation at the federal level applies to the nation as a whole and typically is designed to ensure that Australia meets international treaty obligations to protect the national heritage.
- The federal government also sets standards to ensure products, services and systems are safe, reliable and consistently perform the way they were intended to.



- Aboriginal cultural heritage
- Environmental protection
- Work health and safety
- Common local government sustainability responsibilities will include:
 - Waste disposal and recycling
 - Building planning and permits
 - Implementing by-laws that govern the above



- An effective EMP should ensure:
 - Application of best practice environmental management to a project
 - The implementation of a project's environmental impact assessment (EIA) including its conditions of approval or consent
 - Compliance with environmental legislation, and
 - The environmental risks associated with a project are properly managed



- Typical environmental issues include:
 - Erosion and sedimentation
 - Water quality
 - Groundwater
 - Air quality
 - Flora and fauna
 - Rehabilitation
 - Indigenous heritage
 - Non-indigenous heritage
 - Noise and vibration
 - Waste
 - Hazardous materials
 - Traffic

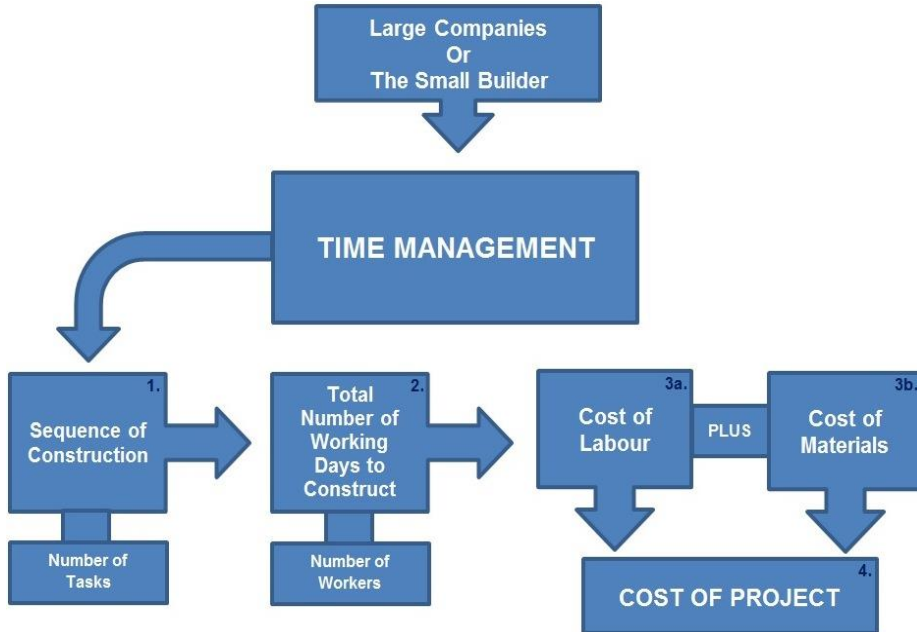
- Show the most suitable, practical and economical method of carrying out the work, consistent with the available resources.
- Provide continuous productive work for all the operative employed and reduce unproductive time to a minimum.
- Assist with the organisation and control of the work by prior examination of all its aspects and, by the early consideration of possible difficulties, ensure smooth and continuous progress on the site or in the workplace.



- Provide accurate information relating to material delivery dates, the building up of the labour force, the daily or weekly financial expenditure on labour and materials, and the quantity and capacity of plant required.
- Provide at any time during the course of the contract a simple and rapid method of measuring the progress that has been made for the supervisor's own information.
 - This can assist when preparing claims for progress payments for work completed to date.
- Contribute factual data for use in future estimating and planning.

- A general plan of action showing the sequence in which operations are to be carried out.
- What activities can be carried out concurrently (at the same time).
- The estimated length of time each operation will take to complete.
 - The stages to which building work should have progressed before each trade or sub- contractor can commence, and the time they each will require to complete their work.
 - The appropriate dates for the delivery of materials or products from off-site trades and special mechanical equipment to the site.
 - The planned overall total contract time and completion date for the project.





- Commercial sector
 - Earthworks
 - Excavating, filling and compacting, testing, dewatering, preparation and finishing car parking and access road works.
 - Footings and foundations
 - Excavating, boring, piling.
 - Drainage
 - Stormwater, sewerage.
 - Structures
 - Assembly of precast components post tensioning in-situ and precast components.

- Commercial sector

- Formwork

- Building, erecting, stripping formwork to on-ground and suspended floors, walls, beams and column.

- Steelwork

- Positioning, fixing, jointing structural steelwork

- Reinforcement

- Bending, placing, fixing fabric and rod to footings, floors, walls, beams and columns.

- In-Situ

- Cast/built/poured in its final position.

- Concrete

- Placing, compacting, finishing concrete to suspended floors, beams and columns.

- Residential Sector

- Earthworks

- Excavating, filling and compacting, and testing

- Footings and Foundations

- Excavating and pouring strip footings.

- Plumbing and Drainage

- Excavating, laying and connecting plumbing and drainage pipe work.

- Formwork

- Building, erecting, stripping floors and stair formwork, edge beams and rebates

- Reinforcement

- Bending, placing, fixing fabric and rod to footings, slabs on ground, suspended slabs and stairs.

- Concrete

- Placing, compacting, finishing concrete suspended slabs and slab-on-ground.

- Arrange services
- Contact sub-contractors
- Materials
- Arrange suppliers for materials and approximate delivery dates
- Setting out of the site
- Excavations
- Concrete heights for slab, pad or strip footings
- Bricklayer
- Electrician

- Carpenter
- Telephone
- Plumber
- Insulation
- Roofer
- Plasterer
- Inspection
- Drainer
- Floor sanding
- Floor and wall tiles
- Painter
- Telecom installation
- Brick cleaner
- Clean up site
- Final inspection

- Complete work documentation and/or reports to meet enterprise requirements.
- Relevant work documentation and/or reports may include:
 - Shift reports
 - Handover briefs
 - Time cards
 - Other relevant records
- One important administrative task that you will be expected to perform is completing forms in accordance with organisational policies and procedures and government legislation and regulations.



- Ensure that you have identified and followed any rules or formats that apply to the documentation you are handling.
- You will also need to ensure that you have determined any authorisations and permissions.
- After you have completed any documentation check your information thoroughly.
- If you are unsure how to fill out forms or complete documentation, always ask – don't guess.

- Understanding work process improvements; what is a work process?
- Analyse the work request and ask questions:
 - How big is the hole?
 - What is the location of the hole?
 - What equipment is needed?
 - What is the size of the workforce required?
 - Refer to and check specifications
 - Identify if there are any legal requirements
 - Contact Dial-Before-You-Dig
 - Complete SWMS, JSA and any other relevant documentation
 - Work processes will also vary in importance and complexity.



- However all work processes, no matter how important, complex or routine are vital to the desired outcome/goal.
 - Equally all steps and decisions involved in the work process are vital.
- Work processes may be “owned” either singly by an individual or shared by a team of individuals who “own” elements of the overall process.
 - In either case there is one individual who is ultimately responsible for controlling the work process, for example the supervisor or leader.
- Process improvement means making things better and requires a problem solving approach rather than blaming others for failures and problems.

- What process should be selected for improvement?
 - What resources are required for the improvement effort?
 - Who are the right people to improve the selected process?
 - What's the best way to learn about the process?
 - How do we go about improving the process?
 - How can we implement the improved process?
-
- Workers have a much closer experience of the problems that surface on a construction site because they are directly affected by them.

- The first part of the model for improvement is to ask the following questions:
 - What are we trying to accomplish? (goal)
 - How will we know that a change is an improvement? (measurement)
 - What changes can we make that can lead to an improvement? (ideas for change)
- The second part of the model offers a way to approach and break down change into manageable components, testing each small part to make sure the work process is improving.
 - PDCA – 4 Step model for carrying out a change.



- Procedures for safe completion of activities.
- Safe location of tools and equipment.

