

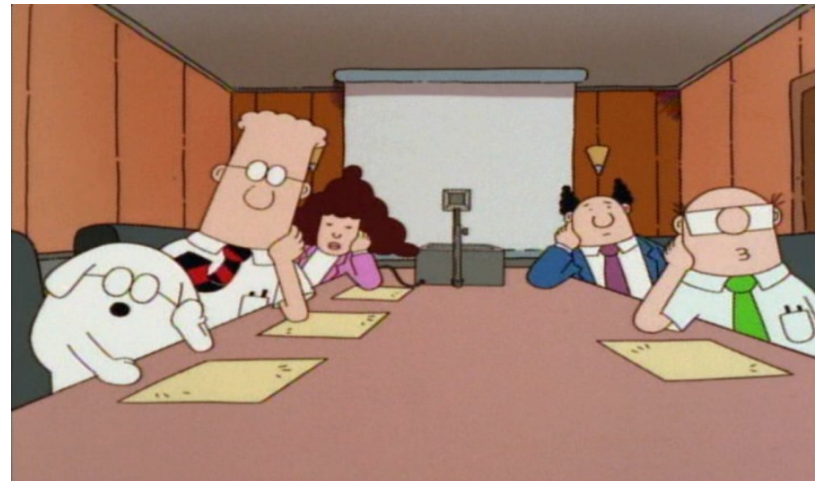
*Welcome Folks!*  
**PROJECT MANAGEMENT**  
**THREE-DAY COURSE**  
by Dr Jim Young PMP  
Director SkillPower Ltd

These slides (published here as Parts One and Two) are typical of those shown during a generic project management programme. Students also receive comprehensive workbooks.

# PART ONE

# Housekeeping

- Toilets
- Cell phones
- Emergencies
- Room temperature
- Attendance register
- Training materials
- Timings and catering



## Trainer's Profile : Jim Young

- Born in Invercargill. New Zealand
- Schooled in Reefton and Hokitika, New Zealand
- Attended Duntroon Military College, Australia
- Served in NZ Army
- Manager Transpac Ltd (road transport)
- Director SkillPower Ltd (project management)
- Lives Lower Hutt with wife and daughter
- Contact: [jim\\_young@xtra.co.nz](mailto:jim_young@xtra.co.nz) and [www.skillpower.co.nz](http://www.skillpower.co.nz)



# Introductions

- Name, job and organisation?
- Involvement / familiarity with project management?
- Learning expectations?
- Something further about yourself - family, interests...?

Who are you?

Where are you from?

What do you already know?

Why are you here?

Porkies permissible!

Or maybe you're a workaholic?  
Check out quiz at page 529

# Programme Overview

TIME	DAY ONE	DAY TWO	DAY THREE
9:00	Project management basics	A busy day when we analyse the project conception and development phases, practising various tools and techniques – WBS, estimating, network diagrams, Gantt charts, resource scheduling, pre-empting problems, and trade-off analysis.	Project execution and finish phases.
10:30			Team project planning and presentation exercise.
10:45	Team project exercise		
12:30			
1:15	Project lifecycle and framework		
2:45			
3:00	Essential people skills		
4:30			Finish-up Administration

# Some Terminology

- **A project** is a temporary endeavour undertaken to create a unique product, service or result. PMI
- **Project management** is the use of leadership, planning and control techniques to achieve the project goal, within the parameters of:
  - scope (work)
  - time (schedule)
  - cost (budget)
  - quality (specifications)and to the satisfaction of stakeholders.

# Project Success

- **Level One** – “project management” success, whereby the desired **output or outputs** are delivered as per project parameters (eg, a new building), which is of primary concern to project managers. The project parameters are considered to be within our control.
- **Level Two** – “project” success, whereby the outputs create the desired **outcome or outcomes** (results or changes), which is of primary concern to project sponsors (eg, the building is functional given its purpose).
- **Level Three** – “business” success, whereby the outcome creates the desired value-adding **benefit or benefits**, which is of primary concern to project sponsors and the business (eg, the building contributes to business success). Operational management aims to optimise the benefits.

# Sydney Opera House

With its graceful sails dominating Sydney Harbour, the Sydney Opera House, designed and largely built by Jorn Utzon, is arguably one of the most recognised buildings in the world.



Yet, from a project objectives' perspective, it was a spectacular failure. When construction started in 1959, it was estimated to cost \$7 million, and take four years to build. It was finally completed in 1973 for over \$100 million:

*about 1500% over budget  
some 300% behind time*

# Unsuccessful IT Project

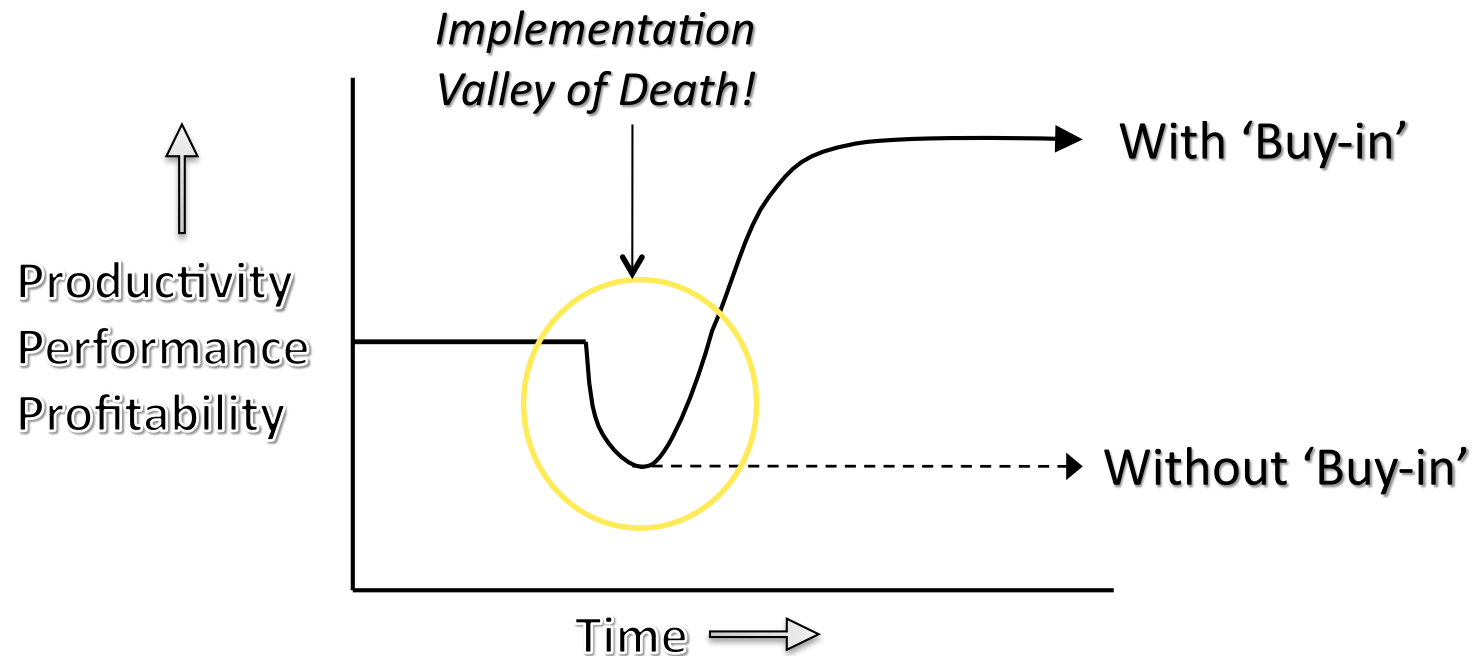


However, some projects seem to be unsuccessful at all three levels. The troubled Novopay or “no pay” project as we might call it, is our Ministry of Education’s unpopular payroll venture, undertaken by relative newcomer, Aussie contractor Talent2. Novopay is New Zealand’s largest payroll project to date. The project has been plagued with widespread and ongoing transition problems. It’s also way behind schedule, over-spent, not working properly and definitely not user-friendly, which is a bad combination, but not uncommon for large complex IT projects.

I think it’s also fair to say that our local teaching fraternity do not relish change and have a very low whinge threshold, which has me wondering if a lack of teacher commitment has contributed to this unsuccessful roll out.

# Project Commitment

## Change/Sigmoid Curve



# Project Deliverables

Projects produce deliverables (outputs). These remain at project completion and include:

- Hardware such as a building, bridge or piece of equipment.
- Software such as a document, report or instruction.
- Interim deliverables, which are either hardware or software component items.

Final deliverables have their own life cycle (product life cycle) during when the benefits (outcomes) that justified the investment are typically realised (or sometimes not).



# Project Benefits

*Projects are undertaken to realise one or more of the following generic benefits:*

- Retain customers and/or gain new customers.
- Increase revenue and/or market share and/or share value.
- Reduce and/or avoid costs.
- Improve employee satisfaction, morale and motivation.
- Comply with legislation.

# Examples of Projects

(additional to those listed at pages 37-38 textbook)

- Undertaking a mine rescue
- Establishing Super Wellington
- Selling state assets
- Having a coroner's inquest
- Getting out of Afghanistan
- Organising a rock concert
- Travelling world on the dole
- Completing an audit
- Prosecuting a criminal
- Staging a theatrical production
- Reinstating smacking
- Stocktaking mineral deposits
- Holding a wreath-laying ceremony
- Emigrating to Aussie
- Fixing a leaky stadium
- Mining the Coromandel
- Raising the GST rate
- Reforming drug laws
- Holding a garage sale
- Robbing a bank
- Running an election
- Arranging a boxing tournament
- Sythesising artifical life
- Undertaking a hikoi
- Belt-tightening our public service
- Establishing an orphanage
- Refurbishing the office
- Liquidating a business

# Types of Work and Characteristics

## Operations (business-as-usual)

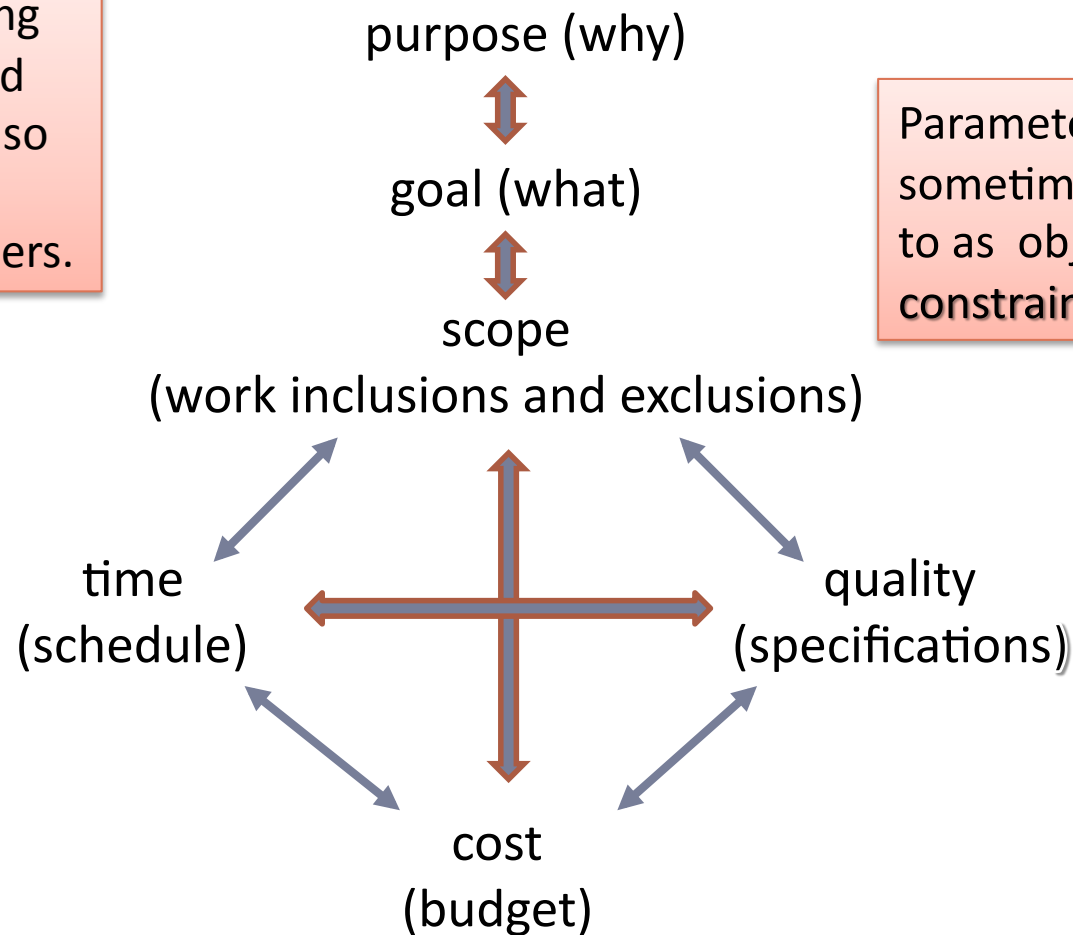
- Safe
- Ongoing
- Repetitive
- Stable
- Easy to measure
- Established
- Maintains status quo
- Process-focused
- Evolutionary
- Continuous improvement
- Harmony

## Projects (non-routine)

- Risky / Uncertain
- Finite
- Unique
- Dynamic / Changing
- Hard to measure
- Innovative
- Causes change
- Progress-focused
- Revolutionary
- One chance to succeed
- Conflict

# The Project's Parameters

To an increasing extent *Risk* and *Benefits* are also recognised as basic parameters.



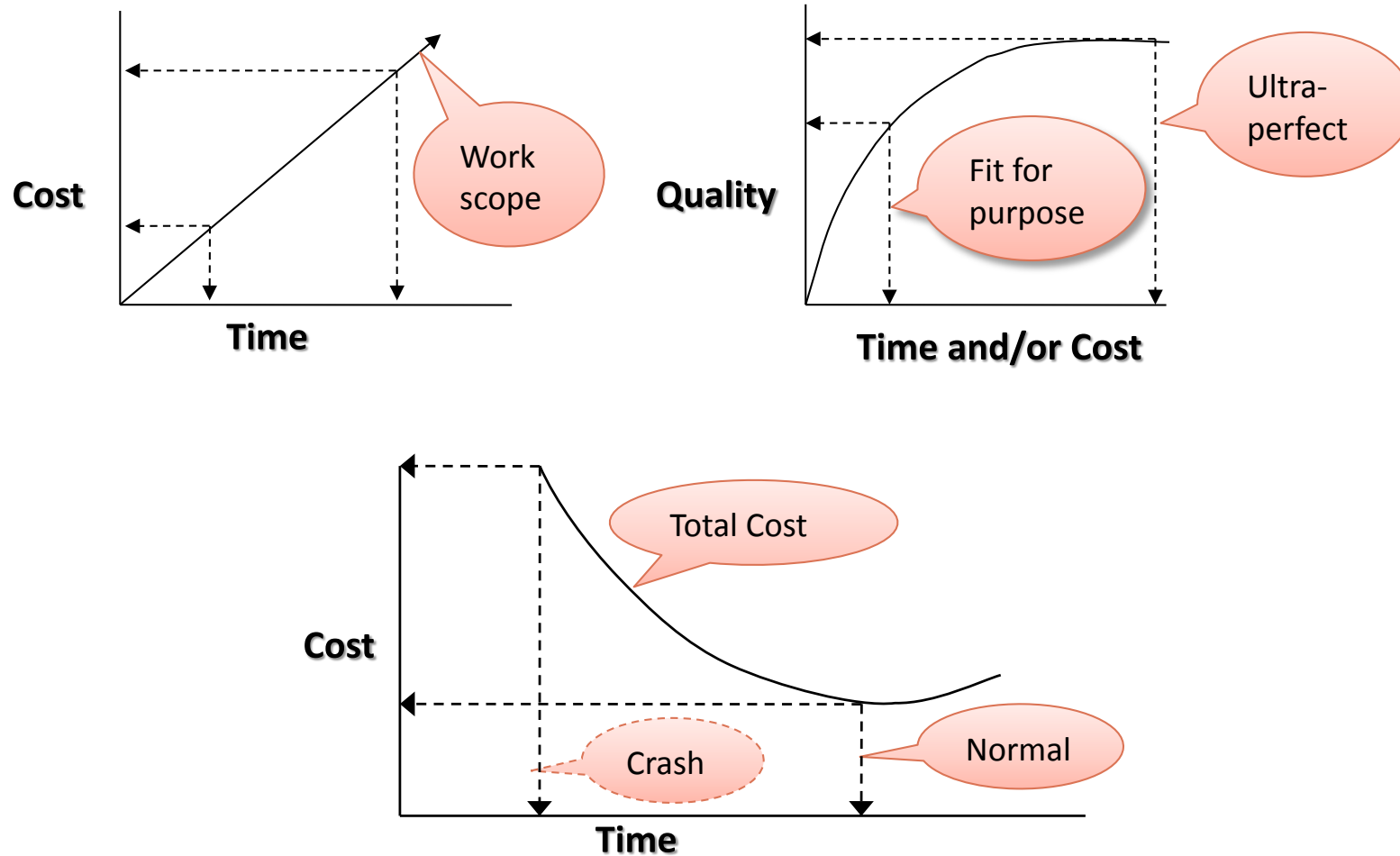
Parameters are sometimes referred to as objectives or constraints.

# Project Parameters

The more clearly and precisely these targets are defined, the greater is the chance of hitting them.

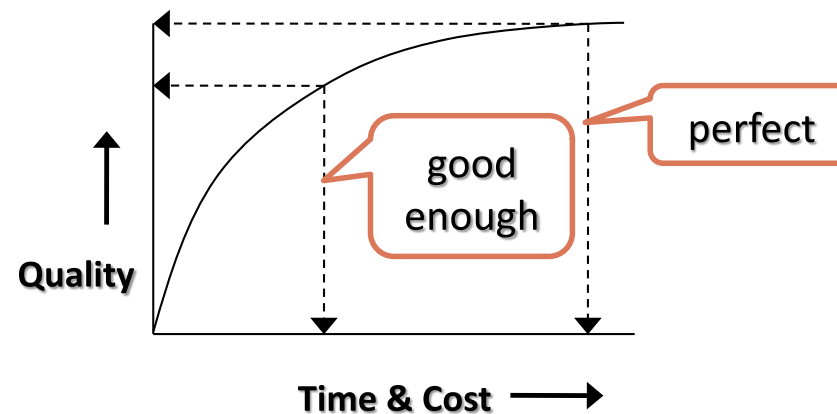


# Parameter Relationships



# Quality Standards

Deliverable quality is prescribed by specifications set by our client/customer.



Specification Types	Example - Quality Grade for a Match	
	Good Enough (Fit for Purpose)	Perfect (Gold-plated)
Design	<i>Match to be 6-10 cm long.</i>	<i>Match to be 8 cm long.</i>
Performance	<i>Match to burn for 8-12 seconds.</i>	<i>Match to burn for 10 seconds.</i>
Functional	<i>Match to light birthday cake candles.</i>	<i>Match to light all candle types.</i>

## Example Specification

**Deliverable quality is defined by client-set specifications, which are hopefully precise, unambiguous and definite.**

### ***Specifications: Ball-Point Pen***

<b>Specification Type</b>	<b>Grade - Good Enough (Fit for Purpose)</b>	<b>Grade - Perfect (Gold-Plated)</b>
<b>Design</b>	<b>18 to 20 cm long</b>	<b>20 cm long</b>
<b>Performance</b>	<b>Write for 50-60 metres</b>	<b>Write for 60 metres</b>
<b>Functional</b>	<b>Write on paper</b>	<b>Write on all materials</b>



# Quality

If, for example, our project is to design and manufacture *a white 100 litre LPG container that will withstand 500 psi*, then a quality container will meet these expectations. Some further points:

- Where performance would not be adversely affected, use off-the-shelf components rather than one-off specially manufactured items to save cost, reduce lead-times and help ensure future availability.
- Where possible specify with figures in preference to adjectives and adverbs – that is, be precise and measurable:
  - Rather than “light” better to state “not more than 10 grams.”*
  - Rather than “quickly” better to state “not less than 10 kilometres per hour.”*
- Where performance would not be adversely affected, to help minimise cost and time, provide a range rather than a single figure – that is, allow some latitude or tolerance:
  - Rather than “100 grams” better to state “95 – 105 grams.”*
  - Rather than “50 metres per second” better to state 45 – 55 metres per second.*

# Prioritising Project Parameters

Rank	Score	Parameter	Cost	Quality	Time	Scope
		Scope				
		Time				
		Quality				
		Cost				

Some project parameters are usually more important than others. If all parameters are non-negotiable the project is usually over-constrained. The project 'driver' is the top parameter. Knowing the driver helps us better manage our project through trade-offs. We should agree parameter priorities with our client and/or sponsor.

# Parameter Priorities

An alternative and more simple approach to prioritising project parameters is to use this table. In this example, project scope and quality must be the last parameters to be compromised by risk, which might be accomplished by increased project duration and/or cost.

Parameters	Vital	Important	Desirable
Scope	✓		
Time			✓
Cost		✓	
Quality	✓		

# Christchurch Rebuild Project

## Fletcher-Challenge Christchurch Repair Work Assessment Criteria – Relative Importance

<b>Health and Safety</b>	<b>34%</b>
<b>Customer Satisfaction</b>	<b>25%</b>
<b>Quality</b>	<b>21%</b>
<b>Value for Money</b>	<b>12%</b>
<b>Timeliness</b>	<b>8 %</b>

# Cardboard Cathedral Slab

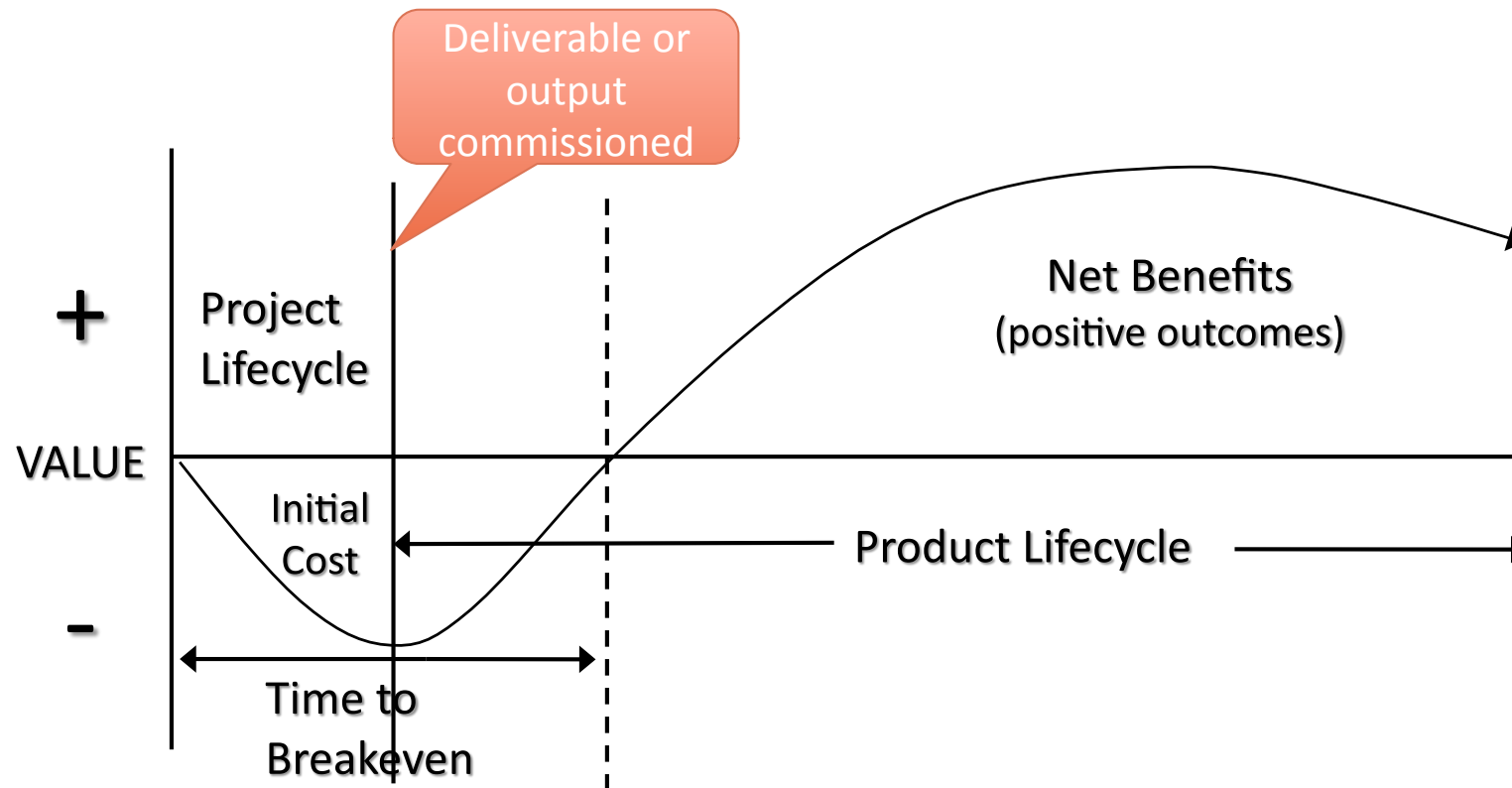




# The Cardboard Tubes



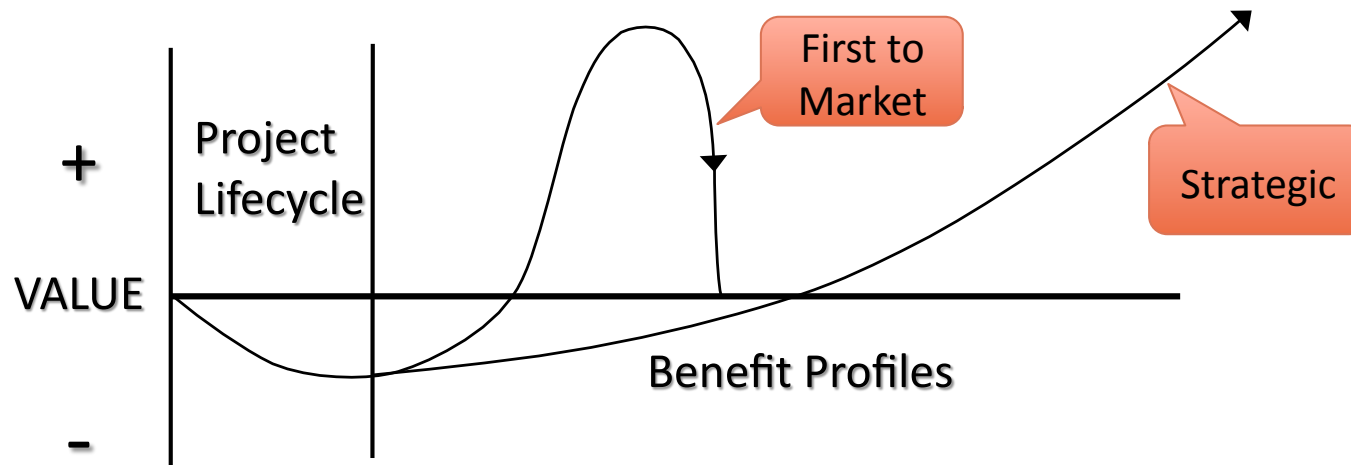
# Project and Product Lifecycles



$$\text{PROJECT VALUE} = \text{BENEFITS} - \text{INVESTMENT (COST)}$$

# Whole-of-Life Project Costs and Benefits

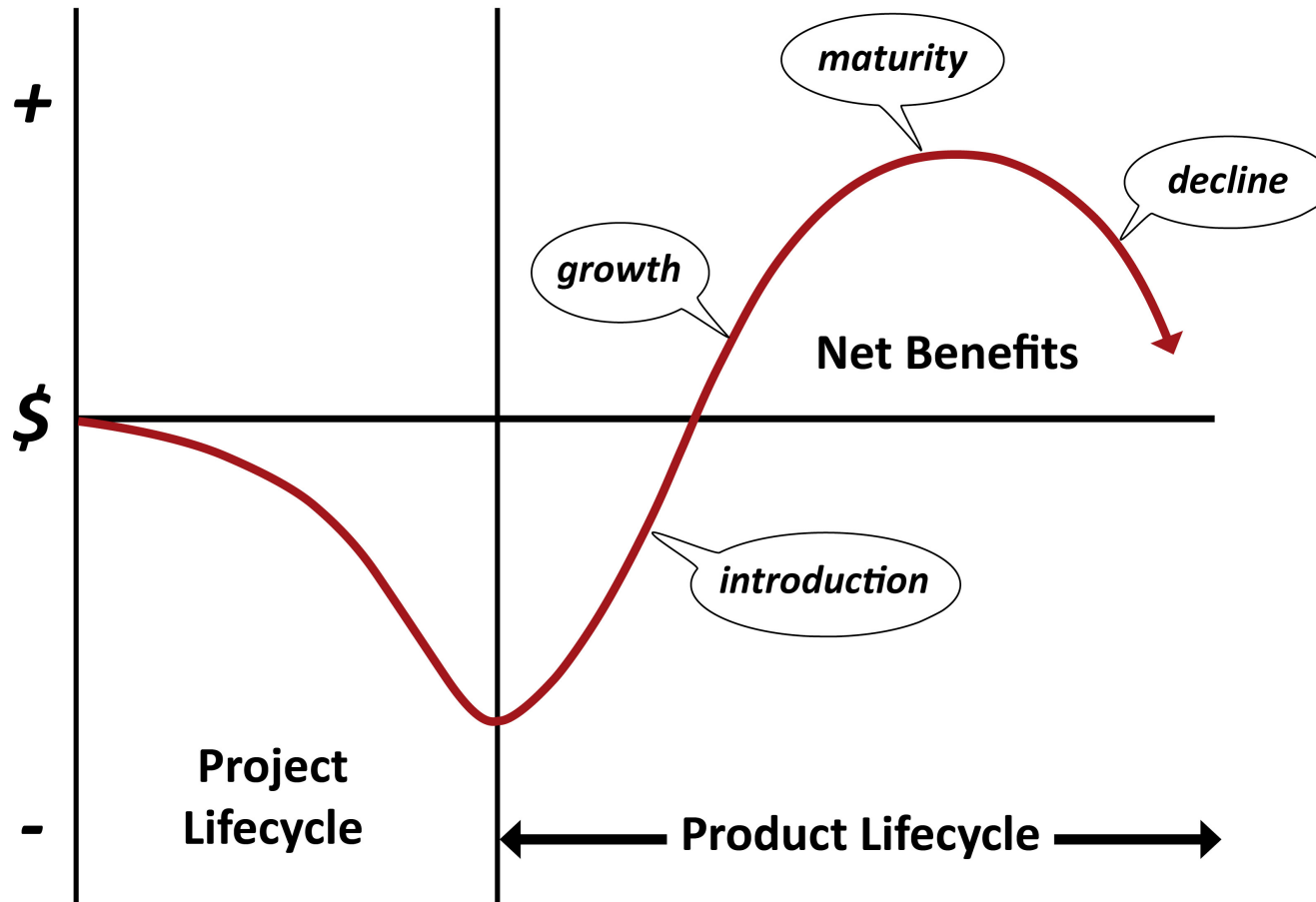
- Tangible (quantifiable) and intangible (qualitative)
- Immediate, intermediate and longer-term
- Direct and indirect
- Likely and less likely (business risk)





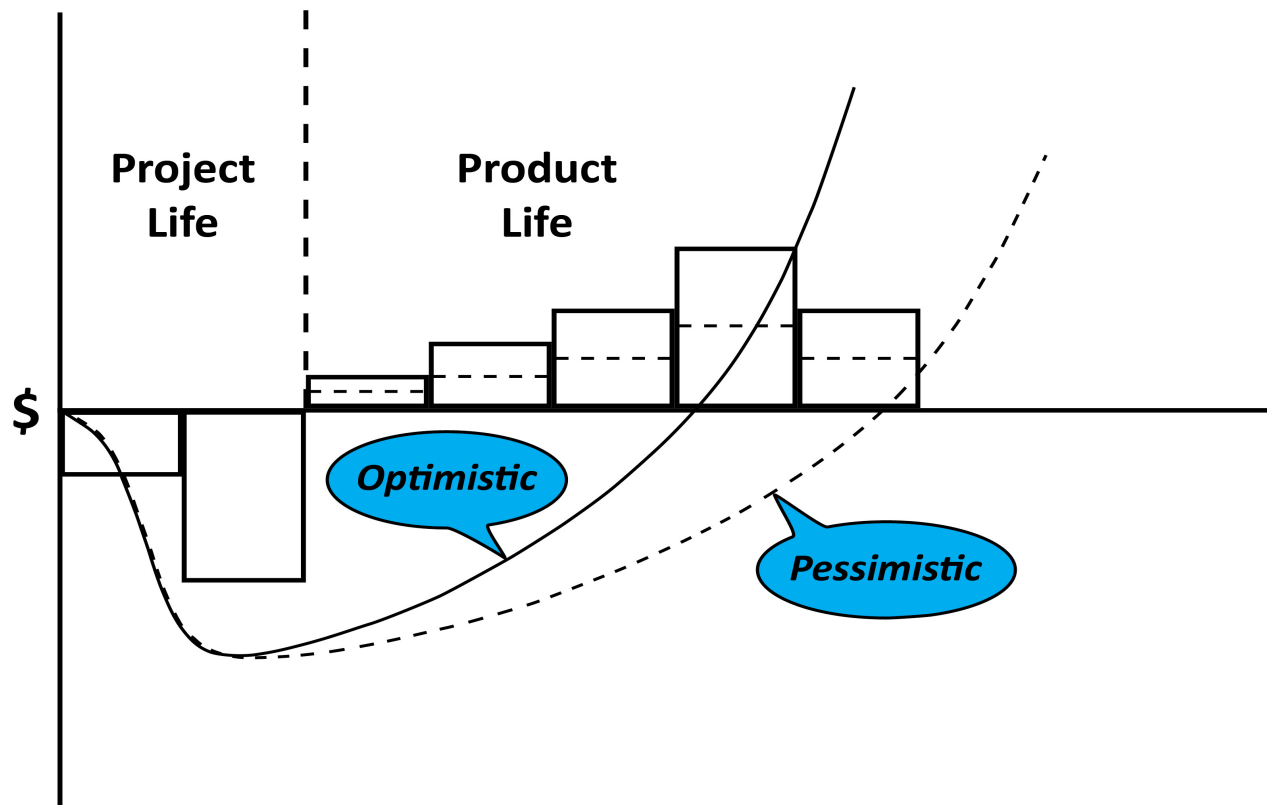
# Product lifecycle

Project benefits are realised during the lifecycle of the deliverable.



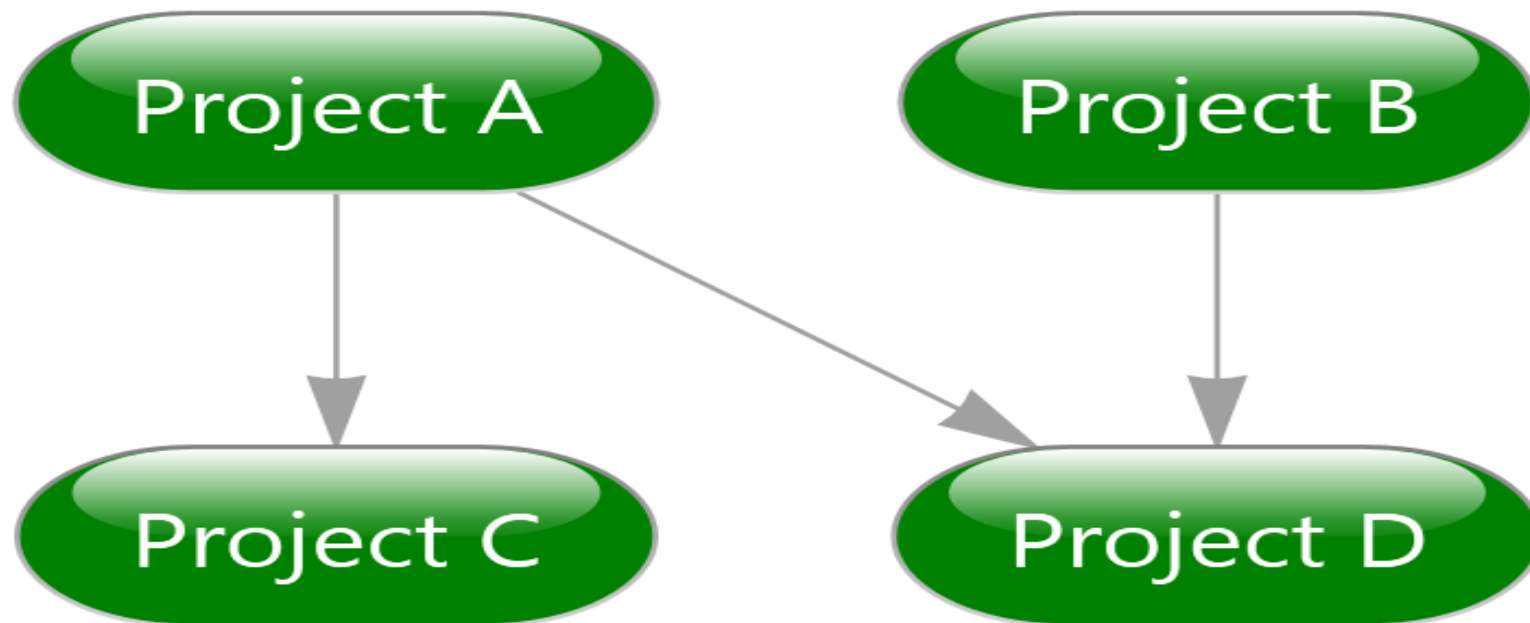
# Probabilistic cash flows

In this example, the breakeven point might be about three years after product launch (best case scenario) or up to five years (worse case scenario) depending on project management proficiency, market circumstances and NPV discount rates.

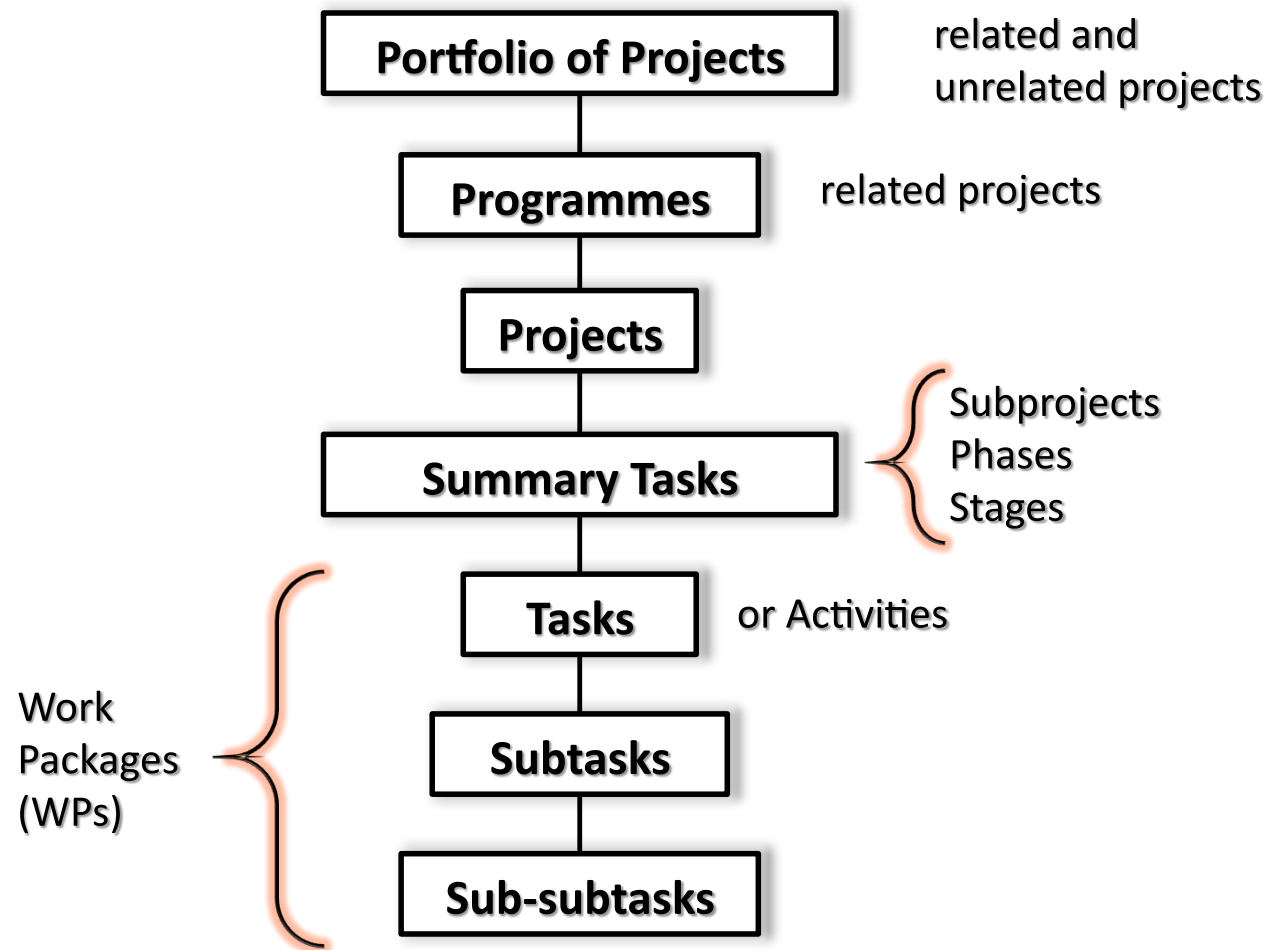


# Programme

A programme consists of related projects. There are various opinions about the difference between a programme and a project, but generally a programme is much larger and does not have a completion date – it's on-going.

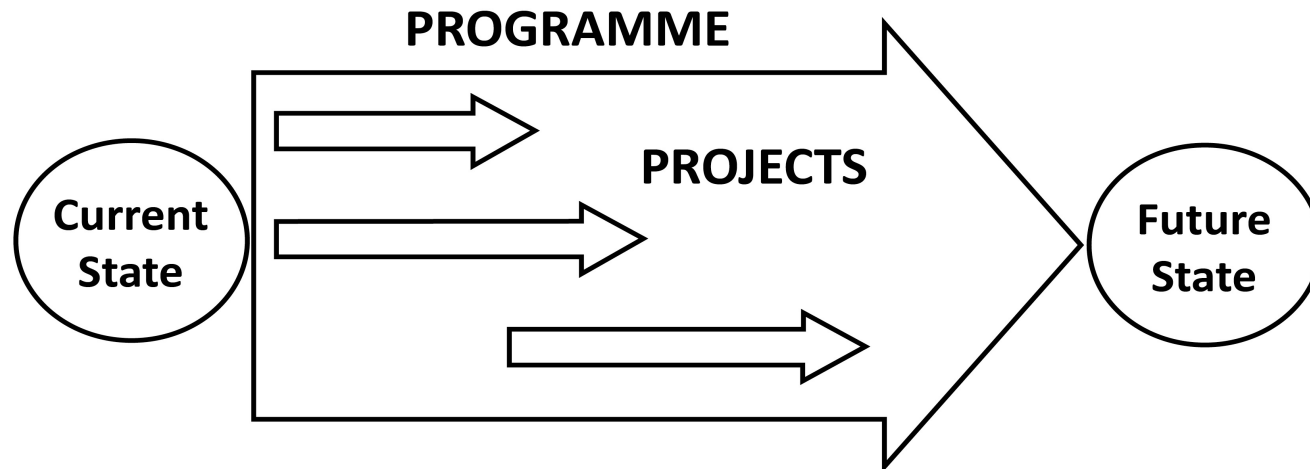


# Hierarchy of Project Work

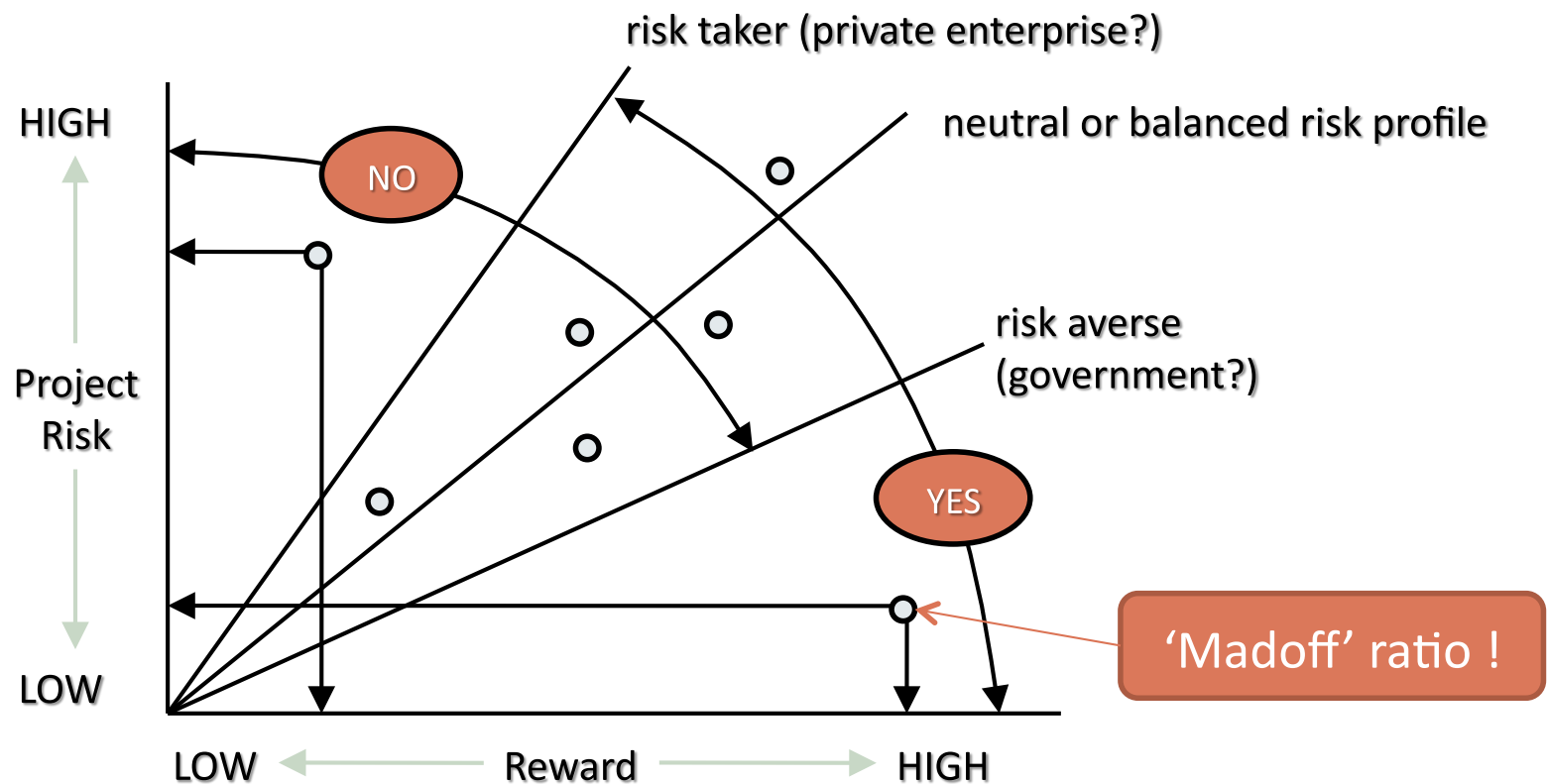


# Programmes and Projects

The programme manager is concerned with risks that impact programme objectives and the inter-dependency of the projects that comprise the programme (eg, shared resources), otherwise the same risk management principles and processes apply at both project and programme levels.



# Project Risk/Reward Profiles



# Some Project Management Challenges

- Unrealistic or poorly defined goal, parameters and assumptions
  - Demanding stakeholders
  - Client /customer uncertainty
  - High risk endeavour
  - Plenty of issues (actual problems)
  - Scope creep (or gallop!)
  - Unrealistic estimates
  - Variations (authorised changes)
  - Variance (actual versus planned performance)
- Think “INCIS” !

## Even More Challenges!

- Unhelpful organisation culture / values
- Miscommunications
- Project given low priority
- Business-as-usual work continues or has priority
- Inert governance
- Funding and resource shortfalls
- Lack of formal authority
- Inexperienced team and poor teamwork
- Hidden agendas
- External constraints beyond our control



# External Constraints

- P Politics
- E Economics
- S Social & cultural
- T Technology
- L Legislation
- E Environment & sustainability
- C Competition

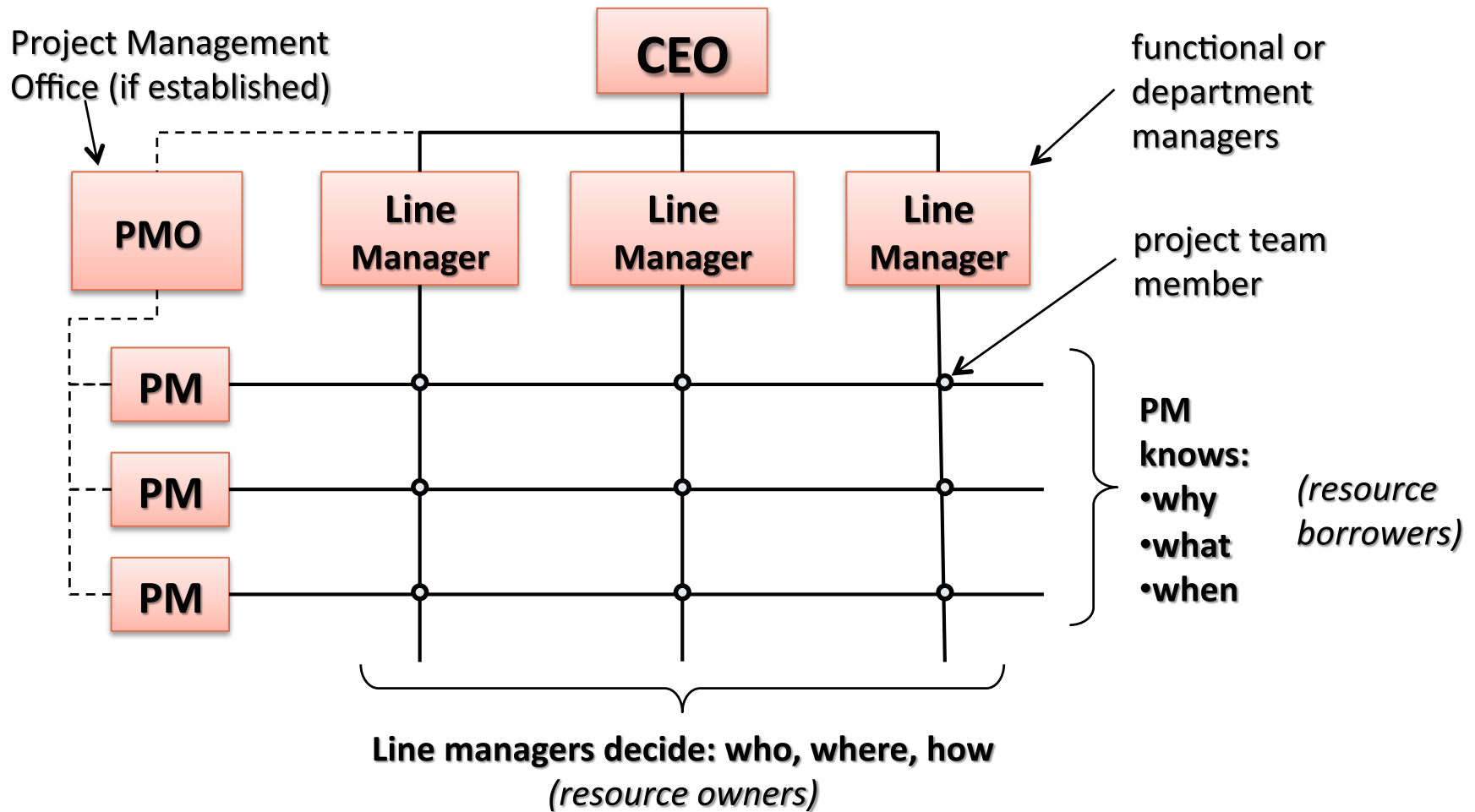
# Why be a Project Manager?

*Given these challenges, why be a project manager?*

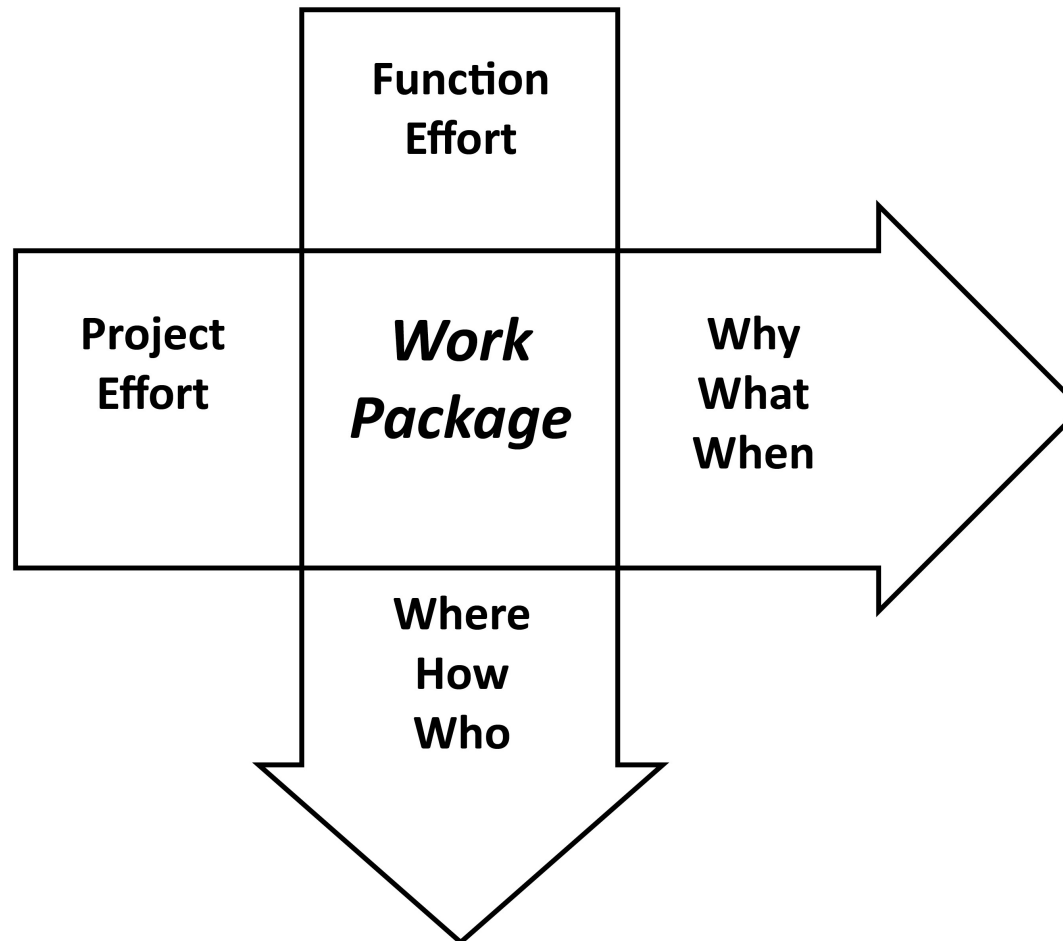
The answer is simple: the ability to see the fruits of your efforts. Not very many people can see an idea that was scratched on the back of a napkin come to fruition as a useful product. It is rewarding to see the fruits of one's labour.

While people on the project team see individual components that are part of the end result, the project manager sees how all of the pieces fit together. And although project managers may complain about the problems they're having while working on a project, they always seem to ask for another to manage once it's over.

# Matrix Organisation Project Responsibilities




# Matrix Interface

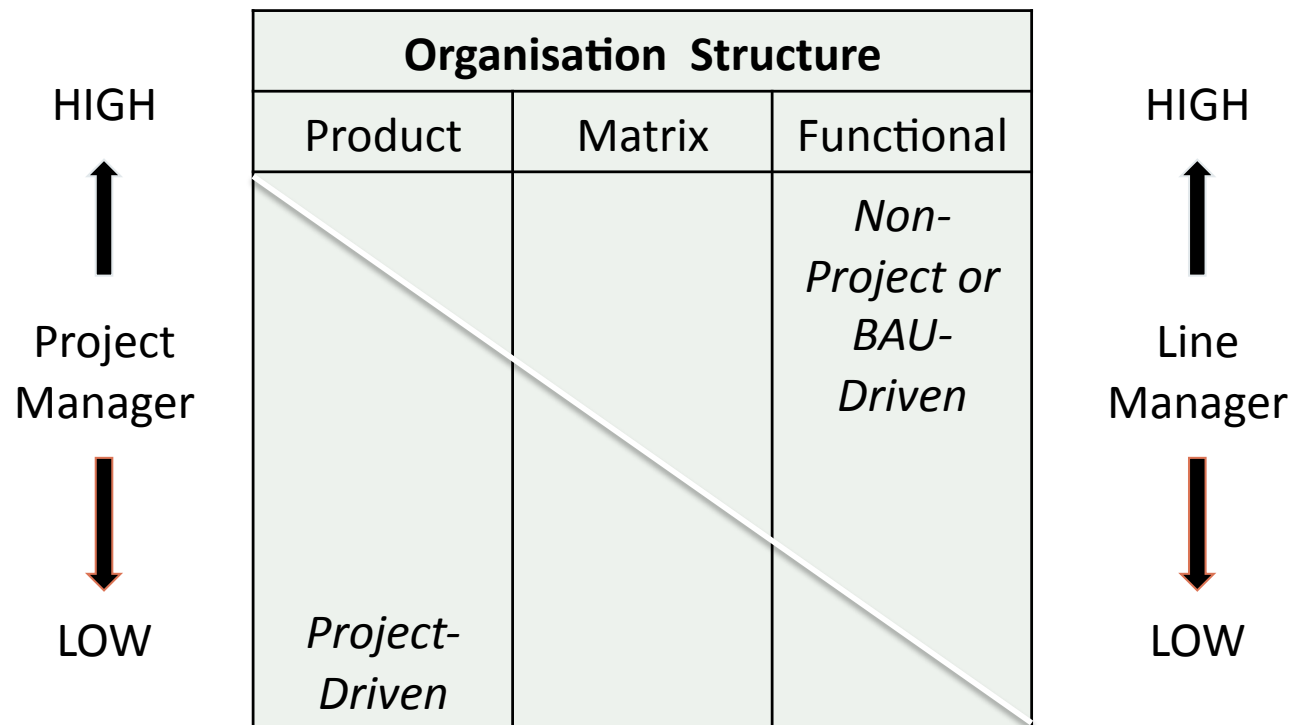


# People's Performance

Altitude = Aptitude + Attitude (+ Availability)

		Aptitude	
		High	Low
Attitude	Good	 <i>(empower)</i>	<b>coach</b> <i>(educate)</i>
	Bad	<b>counsel</b> <i>(encourage)</i>	<b>FIFO</b> <i>(eradicate)</i>

# Relative Influence & Authority



Line Managers = Functional Managers = Resource Managers

If project work exceeds BAU work, then functional departments exist primarily to resource projects.

# Matrix Line Managers

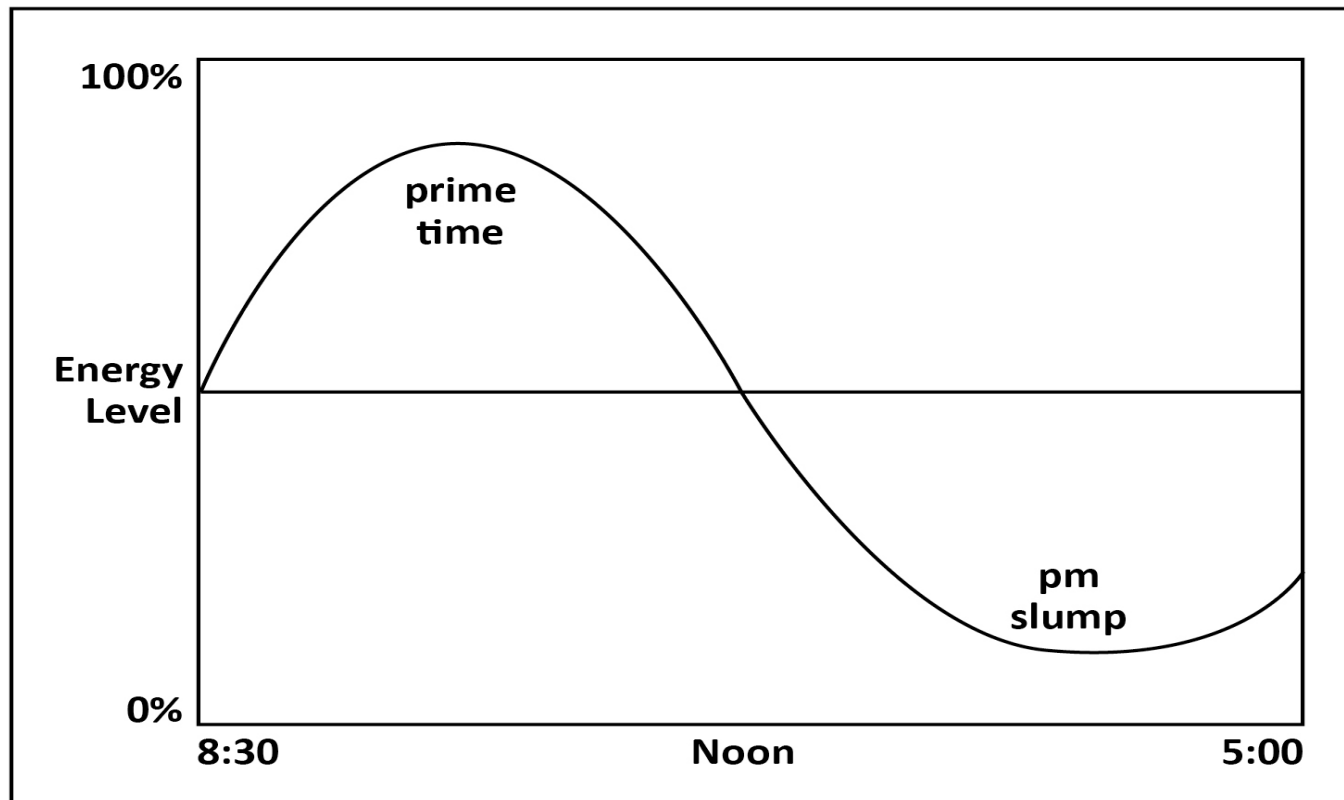
The PM has the right to request specific HR resources, but the final decision typically rests with the line managers because:

- They also need to resource business-as-usual work and other projects
- All requests for resources from project managers are 'top priority'
- Project priorities and plans are liable to change
- Even after resources are assigned resources cannot be guaranteed.

Empathy for the line manager's situation should help ensure realistic requests, more effective communication, and less conflict.

# Use Prime Time

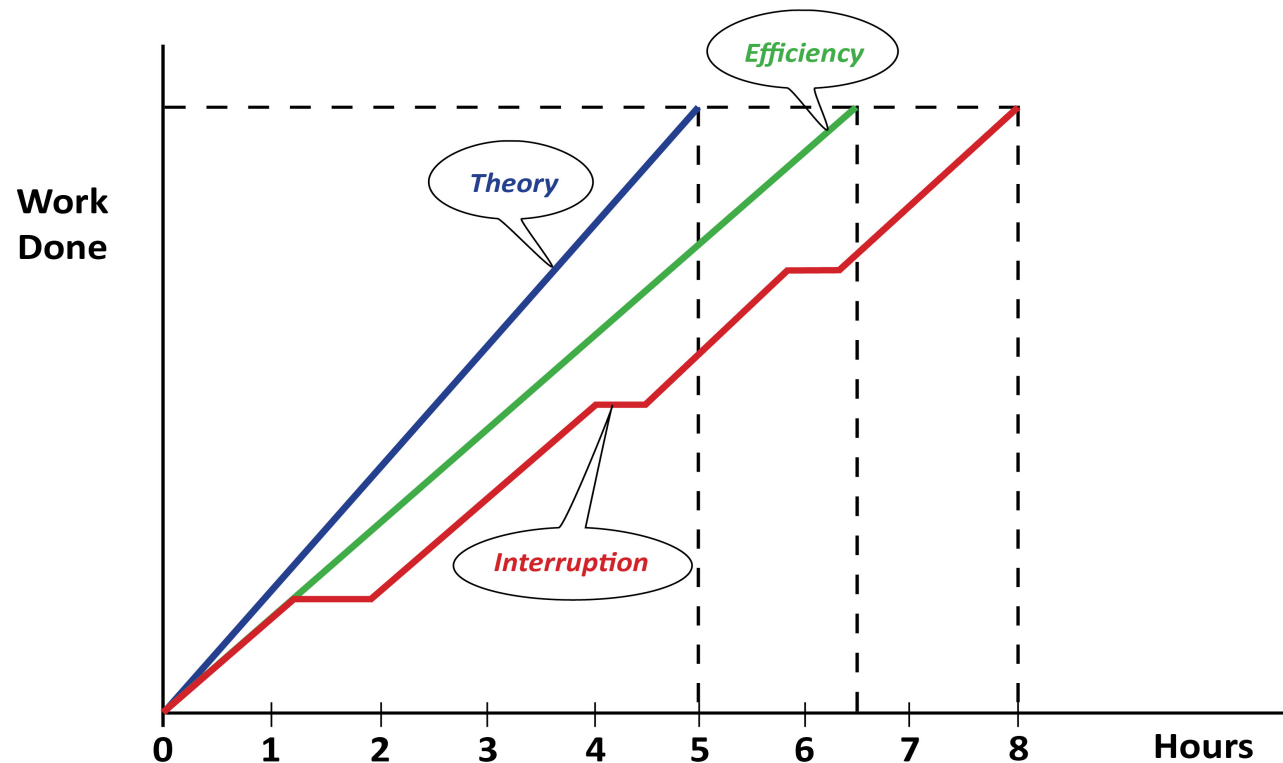
If you have both project and business-as-usual work, it is usually better to schedule the more demanding project work for that time of day when your energy levels are highest, assuming you have such personal scheduling flexibility.



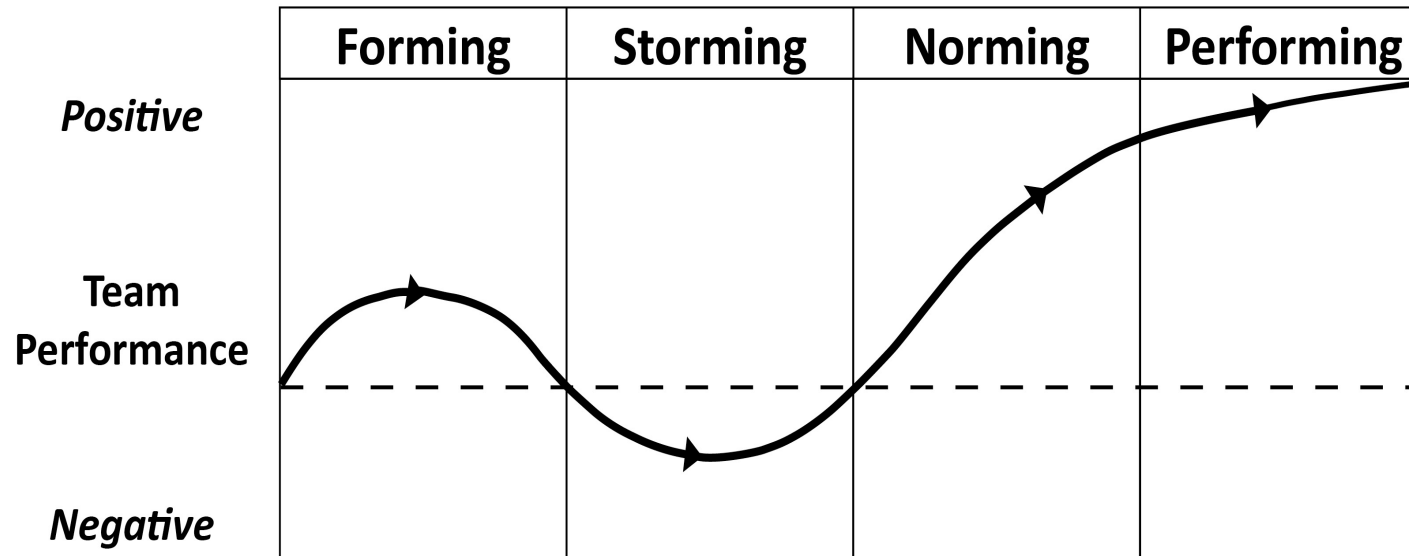


# Individual Productivity

This graph shows that in a typical 8 hour workday we do about 5 hours of productive work. Also, productivity often diminishes as the day proceeds. Thus, if we work part-time on projects, it is better to schedule project work for the morning and BAU work for the afternoon wherever possible.



# Project Team Productivity



This classic team-building process may be at risk when members:

- have hidden agendas and different motivations
- lack social skills (emotional intelligence)
- are not always available (BAU commitments)
- are not needed at the same time project (work schedule)
- are geographically dispersed (distances and time zones).

# Key Project Stakeholders

**Client** – owns project (might also be the customer)

**Customer** – uses project deliverables

**Sponsor** – works for the business, owns and updates project business case, ensures timely project funding, removes obstacles to project manager's success, and chairs the project steering committee if established

**Project Manager** – works for the sponsor, leads project team and manages stakeholders and project through its lifecycle to produce final deliverable(s) within specified parameters

**Line Manager** – provides resources and may manage project deliverable(s)

**Steering Committee** – if established, provides support and guidance

**Performing Organisation** – provides the people who do the work

# Link Them Up

## PEOPLE

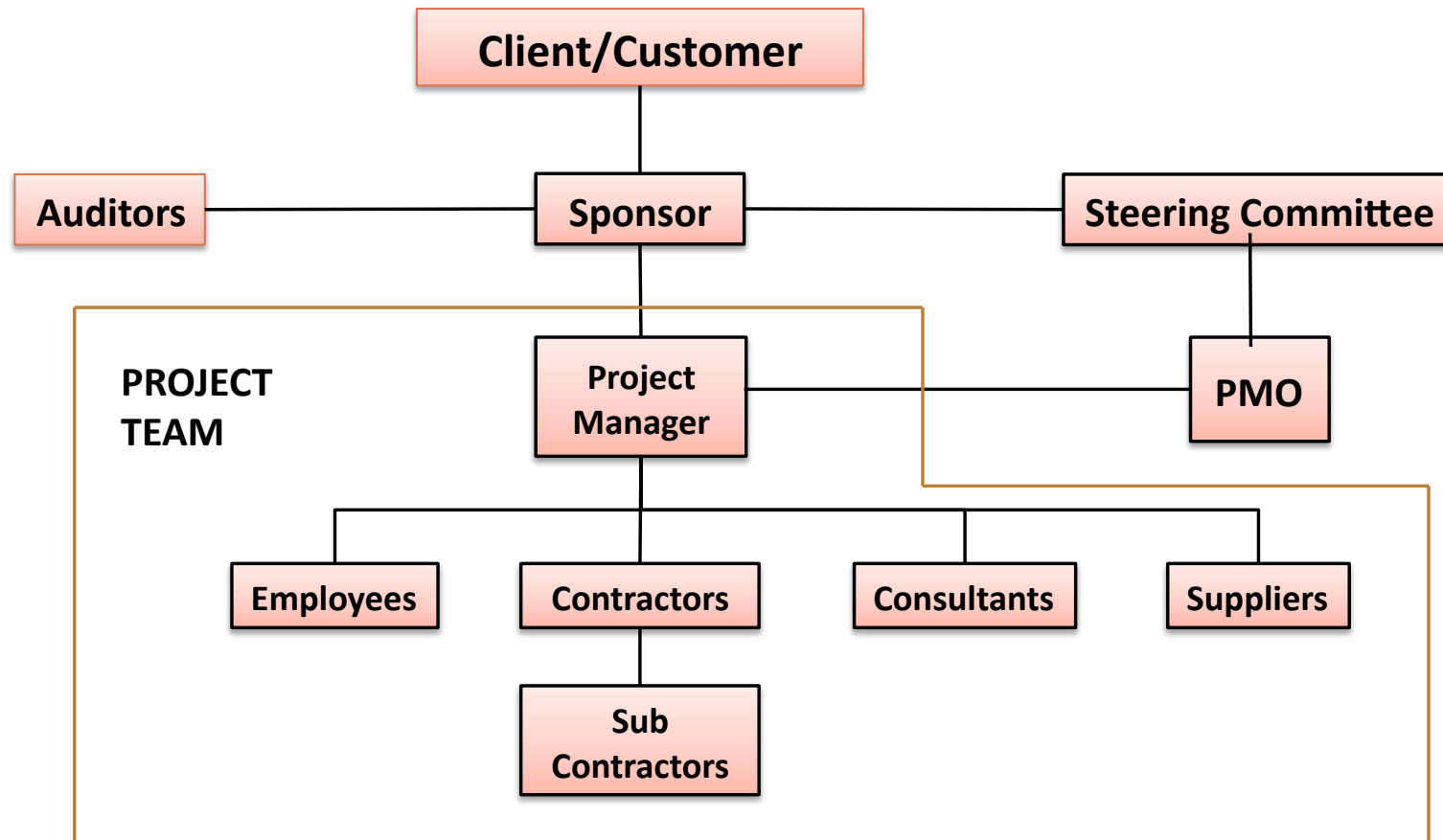
Project Manager  
Project Team  
Project Sponsor  
Steering Committee  
Project Auditor  
Project Consultant  
Customer

## JOBS

Reviews  
Directs  
Advises  
Drives  
Delivers  
Funds  
Uses



# Project Organisation



# Project Sponsor's Job

There is no standard job description, but key responsibilities typically include:

- Authorises and champions the project.
- Approves the business case and changes to it.
- Appoints the project manager and provides higher-level direction.
- Chairs the project steering committee.
- Approves the project charter, plan, major variations and final report.
- Ensures resources are available.
- Resolves escalated issues.
- Monitors project progress.
- Ensures benefits are realised.

# Project Manager's Job

**While there's no standard job description, the following are mostly applicable:**

- help the sponsor prepare project business case
- prepare the project charter or assist sponsor to do so
- be accountable to sponsor and client for project success
- define project scope with the client – inclusions and exclusio
- recruit team members
- lead project team
- manage external contracts and contractors
- negotiate resource needs
- prepare project plan or lead its preparations
- assemble project team, with agreement of line managers, and enable their performance



## Project Manager's Job cont'd...

- define responsibilities and performance targets for each team member
- arrange project procurement contracts
- regularly communicate with stakeholders
- regularly assess client's satisfaction
- continuously identify and manage risk
- regularly monitor and manage project progress
- resolve or escalate project issues
- manage project scope and control change (variations)
- make adjustments (schedule, resourcing, scope) necessary to achieve time, cost and quality objectives (re-baselining)
- manage cash flow and budget



# Project Manager's Job – even more!

- maintain project files
- monitor project risk and issue logs
- produces the project deliverable(s) on time, to budget, and to agreed quality standards
- periodically report project status to key stakeholders
- manage project closure
- inform line managers about team members' performance
- arrange for approval of project deliverable(s)
- prepare a post-project evaluation report that includes lessons learned
- may participate in benefits realisation reviews (product evaluation) after project completion/product launch.

*So you're a plain talker, even tempered, risk averter, obstacle remover, bottom-line focussed, morale building team leader.*

# Project Management Office

Larger organisations may establish a project management office responsible for such things as:

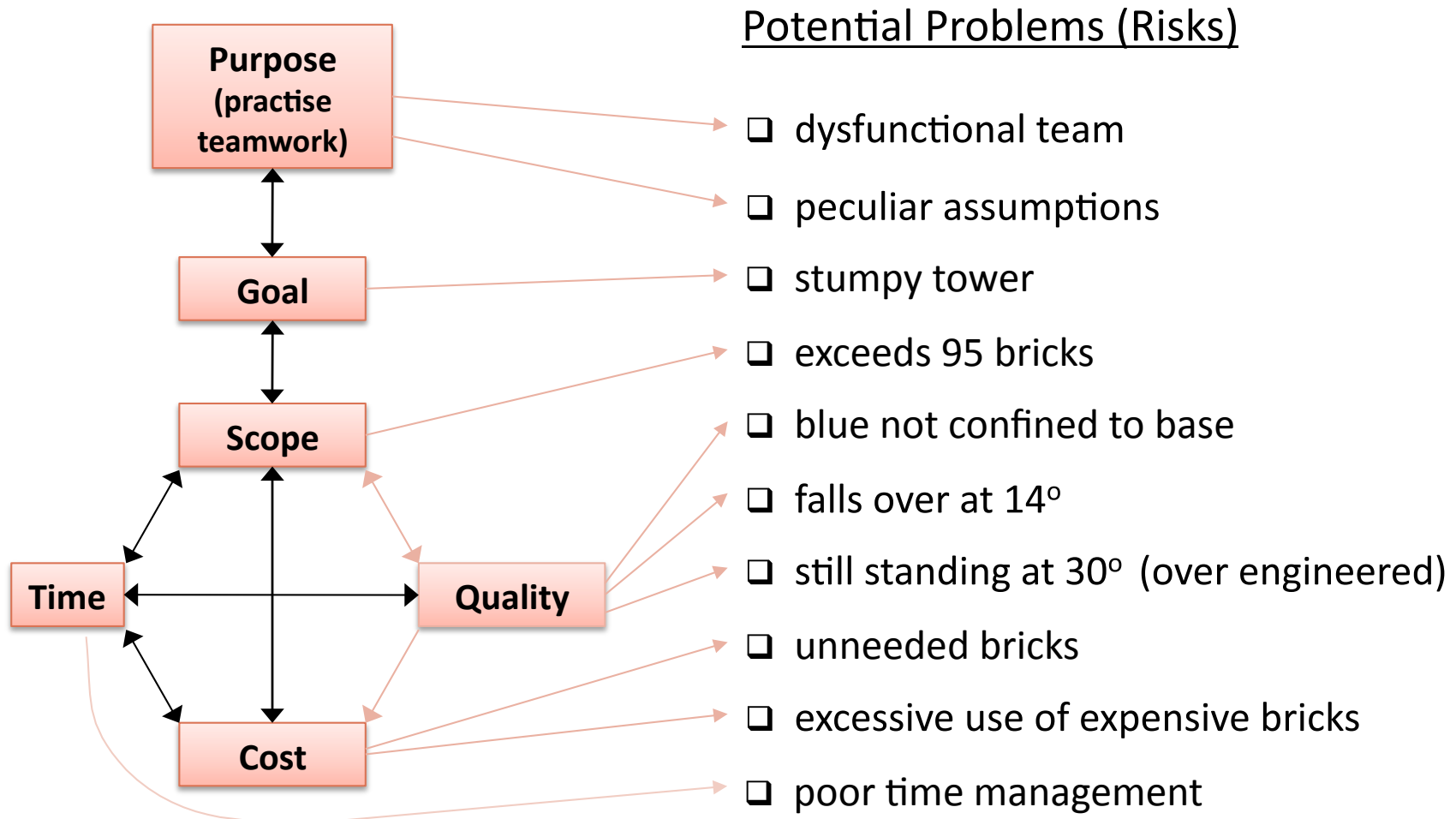
- Develop and own the organisation's project management methodology.
- Coordinate major projects and their resourcing across the organisation.
- Disseminate best practice and provide project management training.
- Maintain a pool of trained project managers.
- Maintain project data and files.
- Arrange project auditing.
- Provide secretariate services for project steering committees.

# Project Team Members

Team members include employees, contractors, consultants and suppliers who are typically responsible to the project manager to:

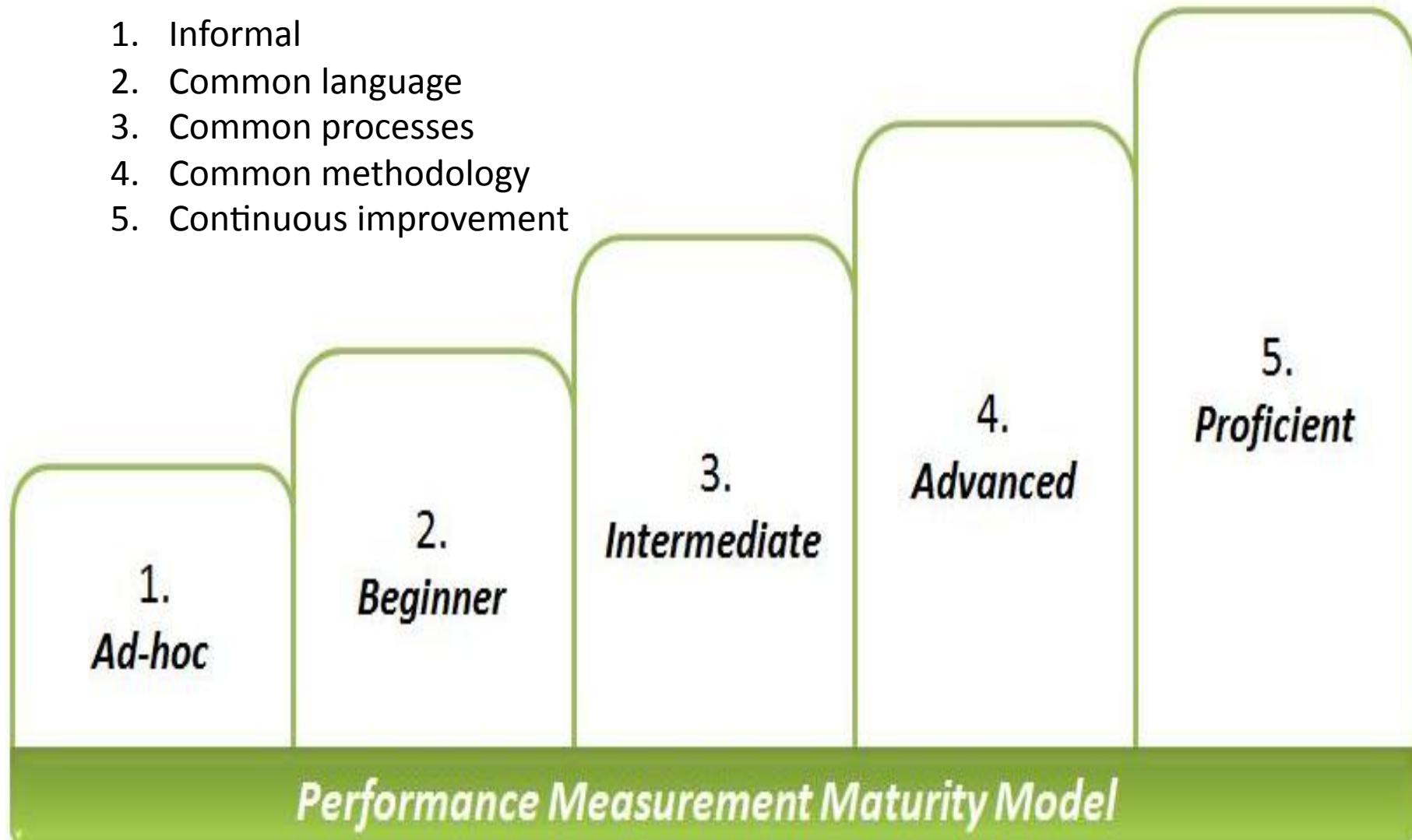
- Complete delegated or contracted work packages on time, within budget and to required standards of quality.
- Manage work, risks and issues and regularly report progress.
- Work cooperatively with other team members.

# Sky Tower Challenge

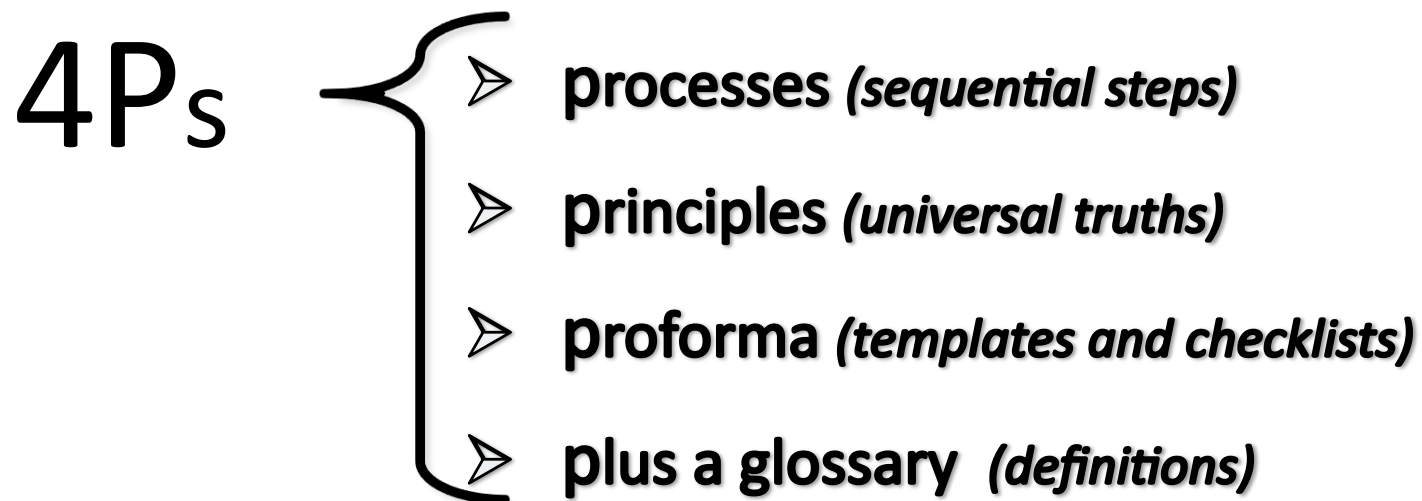


# Project Management Maturity Model

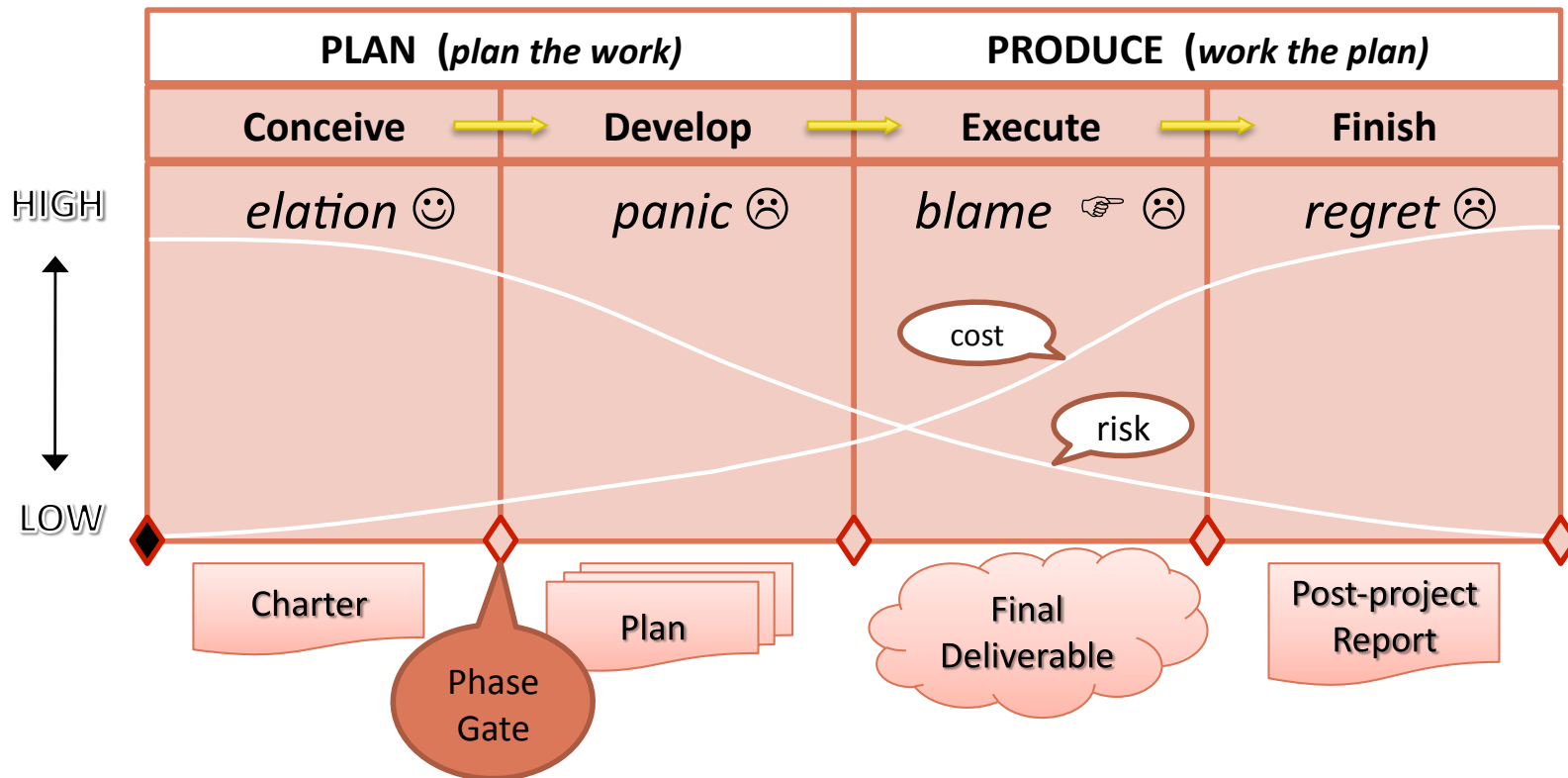
1. Informal
2. Common language
3. Common processes
4. Common methodology
5. Continuous improvement



# Project Management Methodology Components

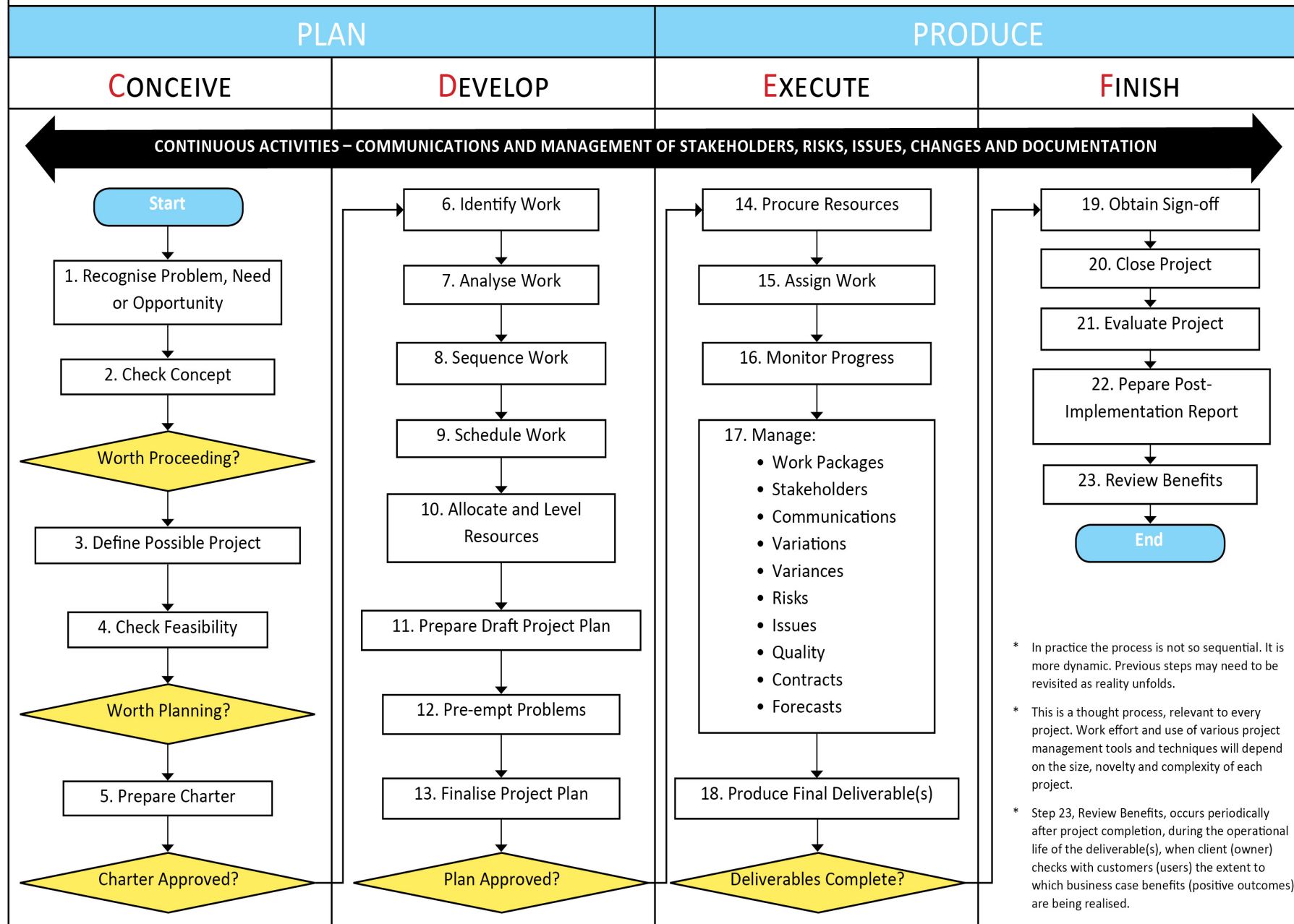


# 'CDEF' Project Management Lifecycle



CDEF phases may be overlapped and/or compressed. It's important that we have a single owner for our methodology to avoid continuous local 'improvements'. The framework owner is often the Project Management Office (PMO) if established, otherwise a functional department, but not necessarily IT.

# GENERIC CDEF PROJECT MANAGEMENT LIFECYCLE



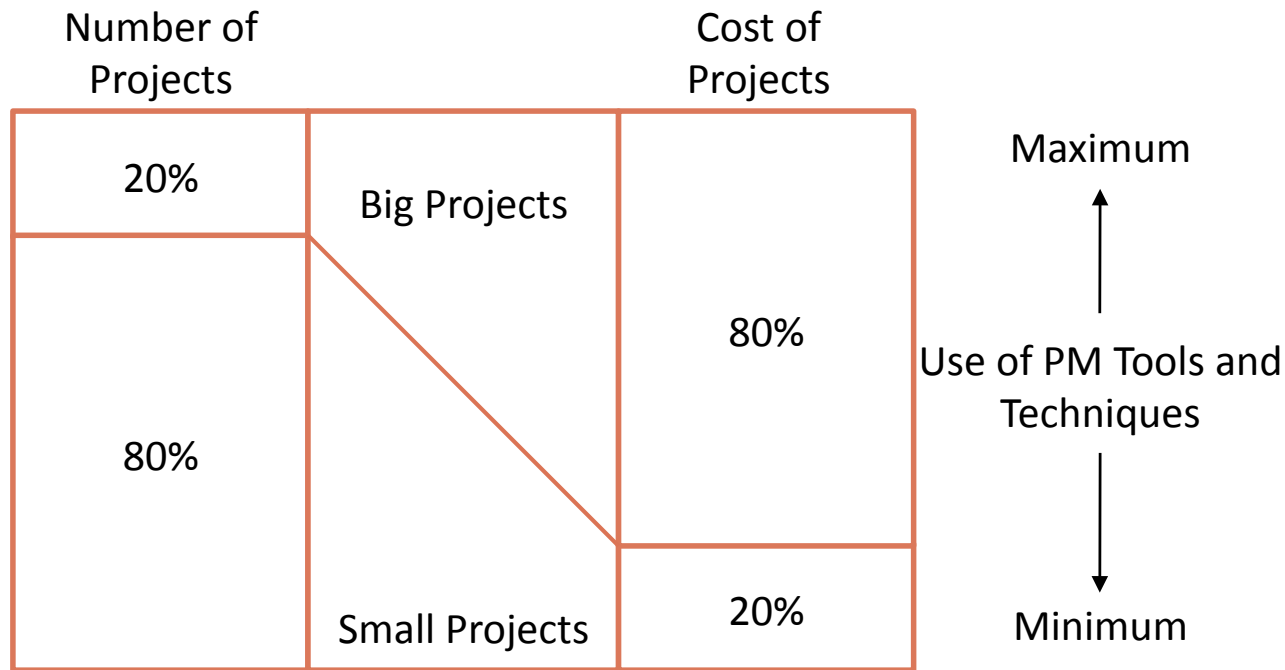


# Why have a standard framework?

- A common language helps ensure effective communication
- Helps manage risk, and ensures everything is done and in right sequence
- Reduces learning time and guides newcomers
- Limits procrastination/complacency
- Ensures measurable progress and a predictable output (deliverable)
- Enables comparisons/bench-marking
- Impresses client and other stakeholders
- Provides a basis for continual improvement

# Framework Application

The framework phases and steps are relevant to all projects, although for small projects these steps might require very little effort or any serious use of project management tools. And most projects are small. The use and resultant value of the various specialised project management tools and techniques at each step will depend largely on the project's size and complexity.



# Project Management Principles

**While these may not guarantee success, we ignore them at our peril:**

- Develop a solid business case that justifies the investment.
- Have sound governance that provides clear direction and effective support.
- Clearly define the project deliverable(s) and negotiate realistic constraints.
- Involve key stakeholders early and often.
- Apply a disciplined approach from project conception to finish.
- Pre-empt problems and address issues promptly.
- Break projects into manageable chunks.
- Delegate what we don't need to do personally, remove obstacles to team members' success, and recognise good performance.
- Check progress regularly and take timely corrective action.
- Learn from each project.

# PM's Sources of Influence

## **De Jure (legal)**

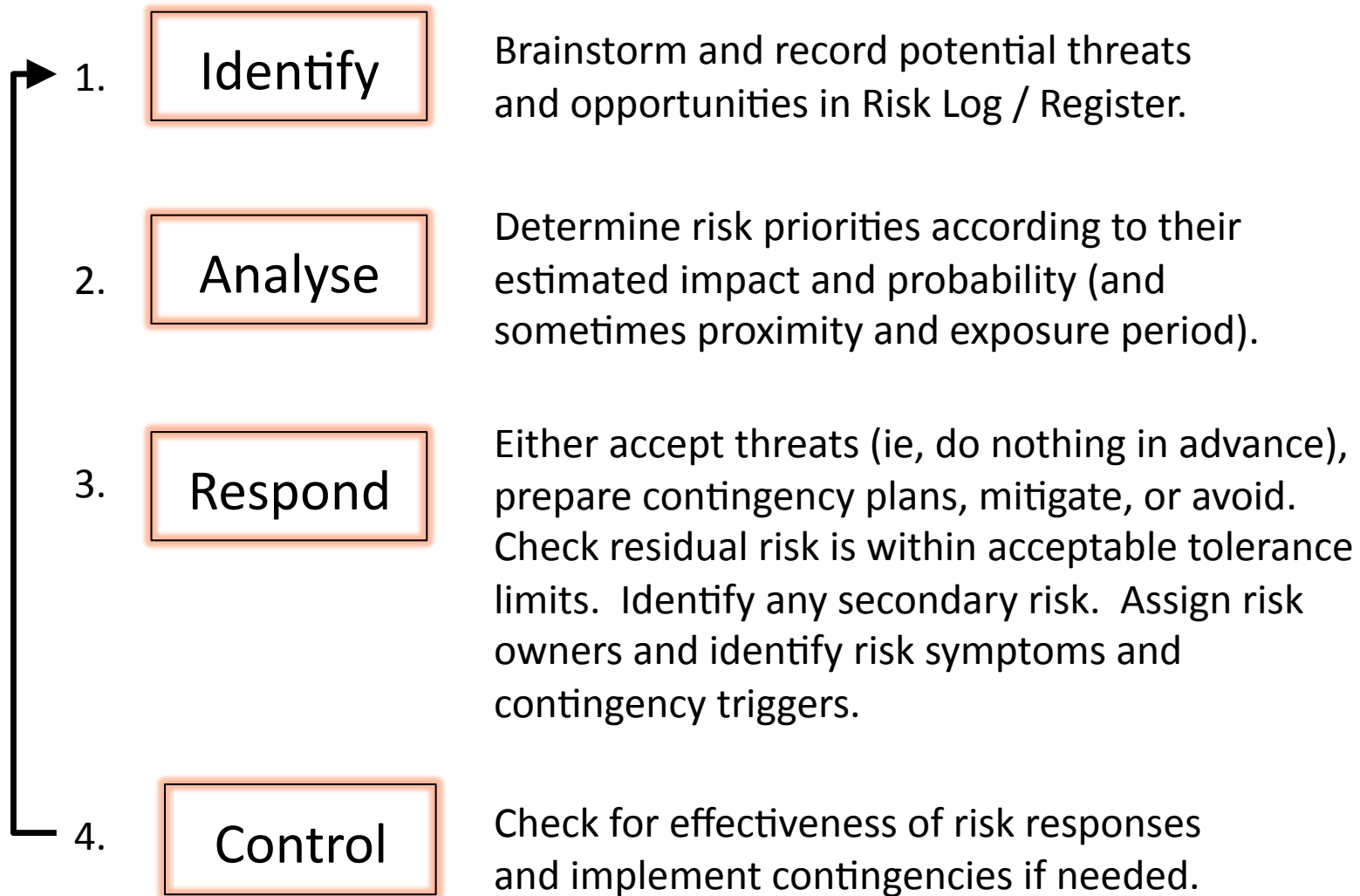
- legitimate formal authority conferred by project charter
- ability to report and reward performance
- ability to punish or remove privileges

## **De Facto (earned)**

- personal appeal – mana, charisma, trust, honesty, loyalty, interest
- social capital/personal relationships
- expert knowledge, skills and a history of success
- access to useful information
- referent authority – identifies with powerful supporters

Alternatively, sometimes expressed as “POWER”, where the letters stand for sources of authority - Personality, Official, Whip, Expertise and Referent.

# Basic Risk Management Process



# Qualitative Risk Analysis

		Impact		
		H	M	L
Probability	H	1	3	6
	M	2	5	8
	L	4	7	9

The matrix might have more divisions – 5 x 5 also common, whereas any more suggests unrealistic precision.

# Risk Log or Register

This is the key risk management tool usually in excel spreadsheet format, the contents of which might include any or all of the following column headings:

- Risk ID
- WBS Reference
- Threat or Opportunity
- Risk Description
- Risk Type or Category
- Date Identified and By Whom
- Parameter(s) Impacted
- Untreated Probability
- Untreated Impact (cost and time)
- Risk Rating, Score or EMV
- Type or Category of Response
- Description of Response
- Risk Trigger
- Residual Impact (cost and time)
- Residual Probability
- Residual Rating or Score
- Risk Owner
- Risk Review (date and status)

*Only one risk log for each project, it should be readily accessible, each risk is entered as a new line item, and secondary risks are included as new risks.*

# END OF PART ONE