National Treasury Workshop

Application workshop (Day 1)

Standard for Infrastructure Procurement and Delivery Management (SIPDM)

Office of the Chief Procurement Officer

Provincial and Local Government Infrastructure, Intergovernmental Relations

national treasury
Department:
National Treasury
REPUBLIC OF SOUTH AFRICA

CESA
Consulting Engineers South Africa

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Credits
2 ECSA CPD credit

SIPDM Application Workshop (Day 1) outline

Session 1	**Procurement basic processes and systems** • Group discussion on what are the perceived current shortcomings in the procurement and delivery of infrastructure • The scope, coverage and location of the SIPDM within the legislative framework • Generic procurement systems • Differences between procurement of infrastructure and other categories
Session 2	**Governance / quality management oversight arrangements** • Governance and quality management concepts • Control framework for the delivery of infrastructure • Control framework for infrastructure procurement
Session 3	**Procurement and delivery management** • Delivery management • Delivery management strategy • Framework agreements • Procurement routes • Procurement strategy • Linkages with value for money

Change in thinking re procurement

WORLD BANK GROUP

Introduction

Under the new procurement framework, there **are four key innovations** to help businesses and country clients:

1. Needs and risks of a project are analysed through a Project Procurement Strategy for Development (PPSD). This analysis enables the borrower to **have a strategy on how best to engage with bidder**. The analysis will ensure that procurement processes are fit for purpose, allow choice, and are appropriate to the size, value, and risk of the project.

2. Value for Money has been introduced as a core procurement principle in all procurements financed by the World Bank. **This means a shift in focus from the lowest evaluated compliant bid to bids that provide the best overall value for money, taking into account quality, cost, and other factors as needed.**

3. The approach to **resolving procurement-related complaints has been significantly improved** with capacity to promptly respond to any concerns during the procurement process. **A standstill period has been introduced** - a pause between identifying who should win the contract and actually awarding them the contract so that other bidders can voice any concerns before a contract is actually legally formed and awarded.

4. The World Bank will be **more involved in contract management of procurements with high value and high risk** to ensure the **best possible outcomes** and that **problems are resolved quickly**.

New Procurement Framework and Regulations for Projects After July 1, 2016

Core procurement principles:

1. Value for money
2. Economy
3. Integrity
4. Fit for purpose
5. Efficiency
6. Transparency
7. Fairness

Governance:

1. Accountability
2. Conflict of interest
3. Eligibility
4. Complaints and contract related communications
5. Non-compliance

Change in thinking re procurement

The National Planning Commission's National Development Plan 2030: *Our future – make it work* suggests that the design of a procurement system that is better able to **deliver value for money, while minimising the scope for corruption** needs:

- differentiate between the different types of procurement which pose different challenges and require different skills sets
- adopt a strategic approach to procurement above the project level to balance competing objectives and priorities rather than viewing each project in isolation
- build relationships of trust and understanding with the private sector
- develop professional supply chain management capacity through training and accreditation
- incorporate oversight functions to assess value for money

NPC identified a number of shortcomings in the SCM system, namely:

- the "**emphasis on compliance by box-ticking makes the system costly, burdensome, ineffective and prone to fraud**", and
- "procurement systems tend to focus **on procedural compliance rather than value for money,** and place **an excessive burden on weak support functions**."

When the winds of change
blow, some people
build walls and
others build windmills.
-Chinese proverb

Group discussion on what are the perceived current shortcomings in the procurement and delivery of infrastructure?

Sometimes,
in the winds of change,
we find our true direction.

Standard for Infrastructure Procurement and Delivery Management (SIPDM)– key definitions

infrastructure delivery: the combination of all planning, technical, administrative and managerial actions associated with the **construction**, supply, **refurbishment**, **rehabilitation**, **alteration**, **maintenance**, **operation** or disposal of **infrastructure**

infrastructure procurement: the procurement of goods or services including any combination thereof associated with the acquisition**, refurbishment**, **rehabilitation**, **alteration**, **maintenance**, **operation** or disposal of **infrastructure**

Procurement: the process which creates, manages and fulfils contracts

infrastructure:

- immoveable assets which are acquired, constructed or which results from construction operations; or
- moveable assets which cannot function independently from purpose built immoveable assets

alteration: changing, extending or modifying the character or condition of infrastructure

construction: everything that is constructed or results from construction operations

maintenance: the ***combination of all technical*** and ***associated administrative actions*** during an item's ***service life to retain it*** in a state in which it can satisfactorily perform its required function

operation: combination of all technical, administrative and managerial actions, other than maintenance actions, that results in the item being in use

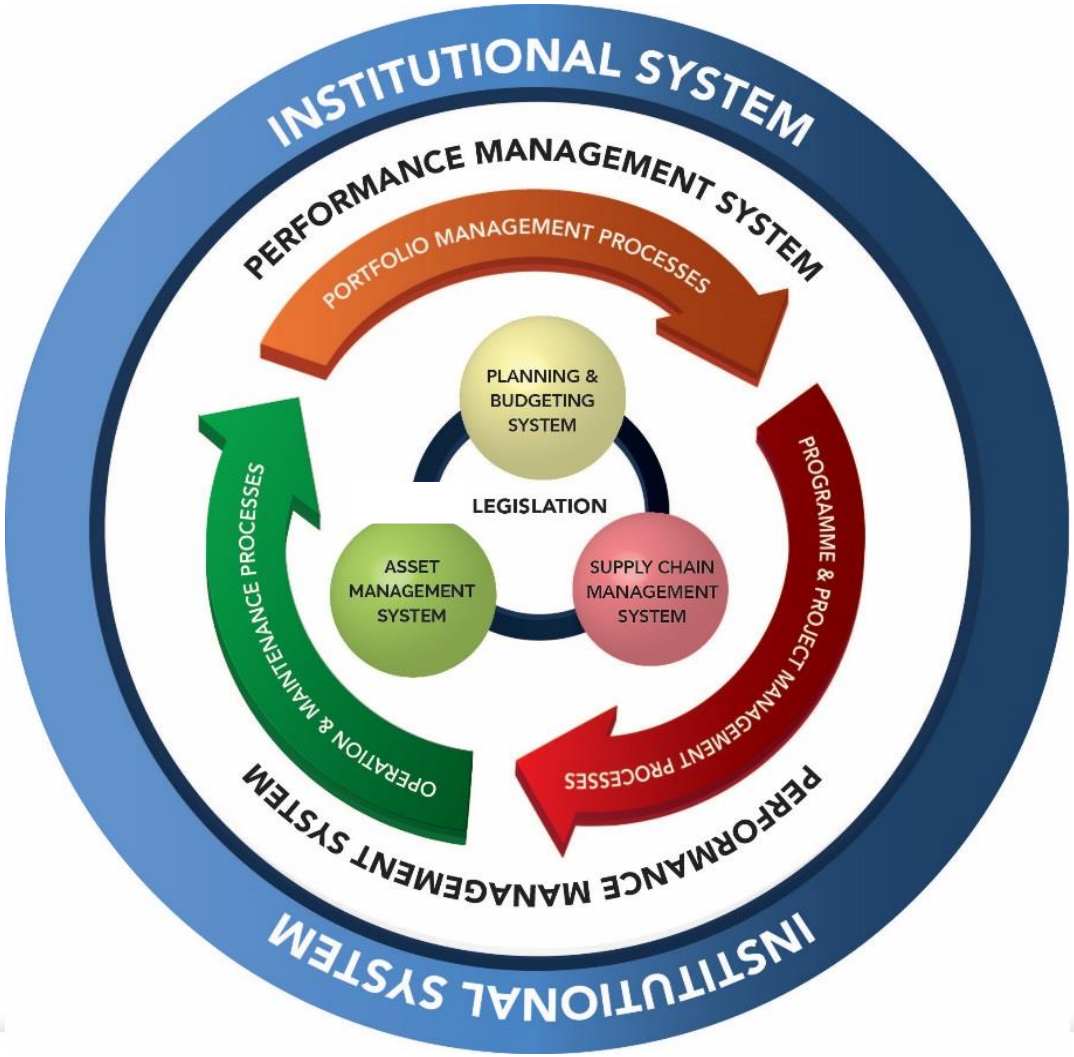
refurbishment: modification and improvements to existing infrastructure in order to bring it up to an acceptable condition

rehabilitation: extensive work to bring infrastructure back to acceptable functional conditions, often involving improvements

What is the SIPDM's coverage?
The **planning, design and construction, supply, refurbishment, rehabilitation, alteration, maintenance, operation or demolition of infrastructure**, including the procurement of goods and services necessary for a new facility, as delivered, to be occupied and used as a functional entity. This cover the SCM for Infrastructure.

Government's Infrastructure Delivery Management System (IDMS)

4.1



IDMS comprises three core systems:

- a planning and budgeting system
- a supply chain management system
- an asset management system

Infrastructure procurement and delivery management

These core systems:

- have forward and backward linkages
- are located within portfolio, programme and project management and operation and maintenance processes

Collectively these processes and systems, together with a performance management system, establish the institutional system for infrastructure delivery

Standard for Infrastructure Procurement and Delivery Management (SIPDM) – scope

The scope, coverage and location of the SIPDM within the legislative framework

This standard prescribes:

- a control framework for the planning, design and execution of infrastructure projects, the tracking of such projects and the monitoring of performance
- a control framework for infrastructure procurement
- requirements for the following matters as applied to infrastructure procurement and delivery management:
  - institutional arrangements;
  - demand management;
  - acquisition management;
  - contract management;
  - logistics management;
  - disposal management;
  - reporting of supply chain management information;
  - regular assessment of supply chain management performance; and
  - risk management and internal control
- minimum requirements for infrastructure procurement

Standard ***does not apply*** to

- the storage of goods and equipment following their delivery to an organ of state which are stored and issued to contractors or to employees of that organ of state
- the disposal or letting of land
- the conclusion of any form of land availability agreement;
- the leasing or rental of moveable assets
- public private partnerships; and
- the provision of municipal services by means of external mechanisms referred to in Chapter 8 of the Municipal Systems Act.

Standard ***includes the procurement of goods and services necessary for a new facility*** as delivered to be occupied and used as a functional entity

Infrastructure procurement is defined in the SIPDM ***as the procurement of goods or services including any combination thereof associated*** with the acquisition, refurbishment, rehabilitation, alteration, maintenance, operation or disposal of infrastructure

What precisely does the Standard for Infrastructure Procurement and Delivery Management regulate?

The SIPDM regulates the following:

- the decision making process associated with procurement and the planning, design and execution of infrastructure projects through control frameworks and policies associated with the assigning of responsibilities for approving or accepting deliverable associated with a gate (control point) or the authorising of a procurement process or procedure;
- aspects of delivery management
- procurement processes, methods and procedures; and
- procurement documents.

Aspect regulated	Instrument used to regulate delivery management
Control framework	Gateway reviews
Institutional arrangements	A suitable infrastructure procurement and delivery supply chain management policy to implement the standard An agency agreement between organs of state which includes a service level agreement
Demand management	Service life plans and infrastructure plans, link to a **Control budgets**
Acquisition management	***Implementation plans for new infrastructure*** or the rehabilitation, refurbishment or alteration of existing infrastructure ***Annual procurement plans*** for work other than for new infrastructure or the rehabilitation, refurbishment or alteration of existing infrastructure
Contract management	**Reporting** on information obtained from **administering a contract in accordance with the provisions of the contract**
Logistics management	Suitable arrangements for the free issue of material
Disposal management	Establishment of disposal committees to decide on how best to demolish, dismantle or dispose of unwanted, redundant or surplus materials, plant and equipment.
Reporting of supply chain management information	Reporting to the relevant treasury on high value procurements, awards of contracts other than those recommended by a committee and annual reports
Regular assessment of the SCM performance	***Annual performance report*** Risk registers
Risk management and internal controls	Use of gates to authorise activities or commencing with next process, confirm compliance with requirements and, if necessary, to take corrective action

Standard for Infrastructure Procurement and Delivery Management (SIPDM)

Constitution of the Republic of South Africa

217. Procurement.-(1) When an organ of state in the national, provincial or local sphere of government, or any other institution identified in national legislation, contracts for goods or services, it must do so in accordance ***with a system which is fair, equitable, transparent. competitive and cost-effective***.

Public Finance Management Act

38 (1)(a) The accounting officer for a department, trading entity or constitutional institution / 51(1)(a) An accounting authority for a public entity must ensure that …….

(iii) an appropriate ***procurement and provisioning system*** which is fair, equitable, transparent, competitive and cost-effective;

(iv) a system for properly evaluating all major capital projects prior to a final decision on the project;

SCM Regulations (Chapter 16A)

Issued as an instruction in terms of Section 76(4)(c) of the PFMA and is applicable to:

- a national or provincial department as defined in the PFMA
- a constitutional institution entity as listed in schedule 1 of the PFMA
- a public entity as listed in schedules 2 and 3 of the PFMA
- any organ of state which implements infrastructure delivery projects on behalf of another organ of state

Implementation date – 1 July 2016 or before

SIPDM does not require any change in Regulations to be implemented

Municipal Finance Management Act

112. (1) The supply chain management policy of a municipality or municipal entity must be fair, equitable, transparent, competitive and cost-effective and comply with a prescribed regulatory framework for municipal supply chain management, which must cover at least the following . .

SCM Regulations 3(2)

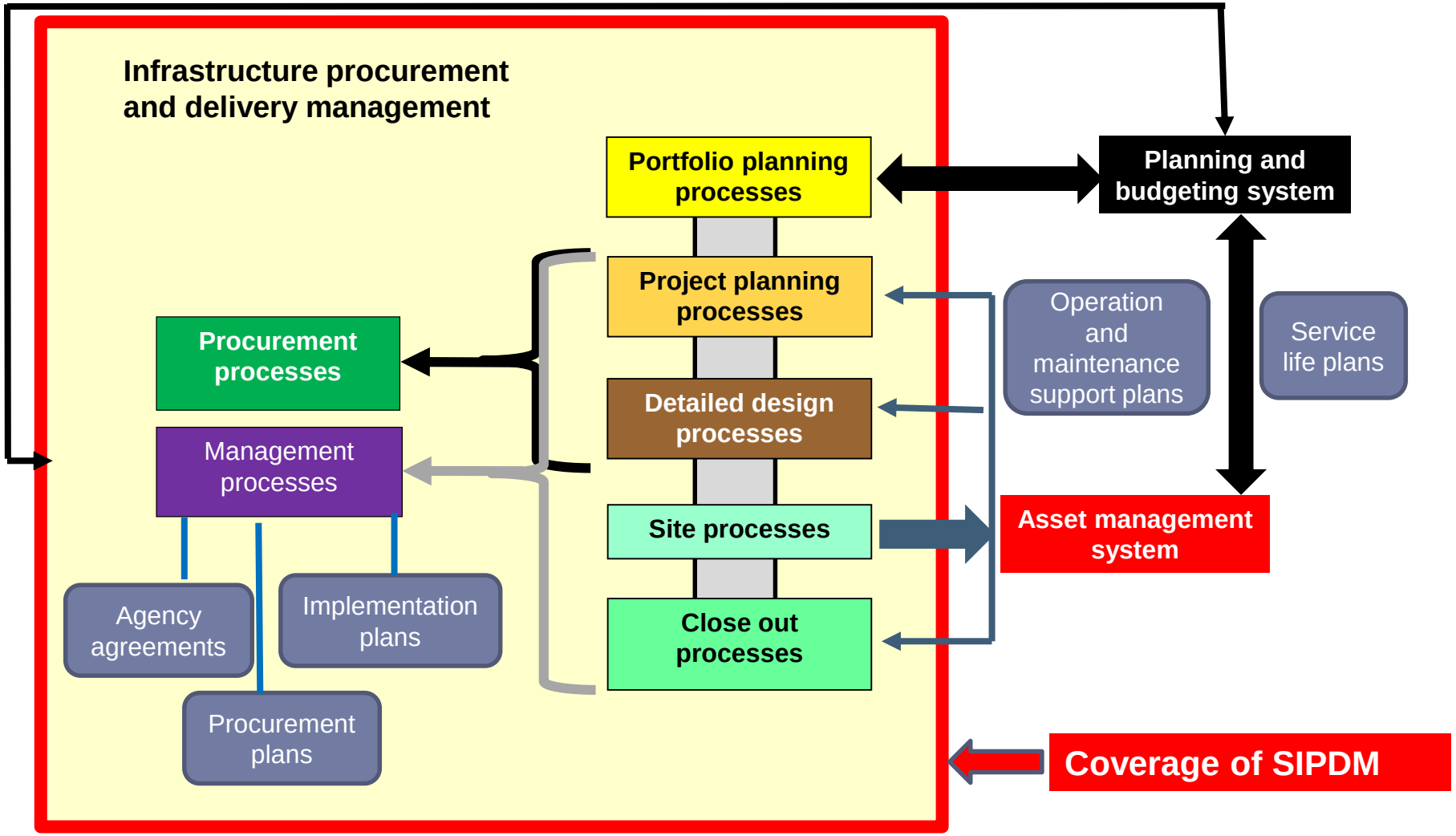
The accounting officer may for purposes of subregulation (l)(a) make use of any Treasury guidelines determining standards for municipal supply chain management policies. . . . . The accounting officer must report any deviation from the guideline standard to the National Treasury and the relevant provincial treasury.

Standard also forms an integral part of the Model SCM Policy for Infrastructure Delivery Management which has been issued as a Treasury guideline determining a standard for municipal supply chain management policies in terms of Section 168 of the MFMA in support of Regulation 3(2) of the MFMA Supply Chain Management Regulations

Applies to an municipality or a municipal entity whose council or board of directors adopts the guideline standard for SCM policies

Implementation by 1 July 2017

Coverage of SIPDM



Asset management and planning and budgeting are covered by other pieces of legislation

Concepts for procurement

Constitution of the Republic of South Africa
217. **Procurement**.-(1) When an organ of state in the national, provincial or local sphere of government, or any other institution identified in national legislation, contracts for goods or services, it must do so in accordance with a **system** which is fair, equitable, transparent. competitive and cost-effective.

A **system** is an established ***way of doing things and provides order*** and a platform for the methodical planning of a way of proceeding. Systems are underpinned by:

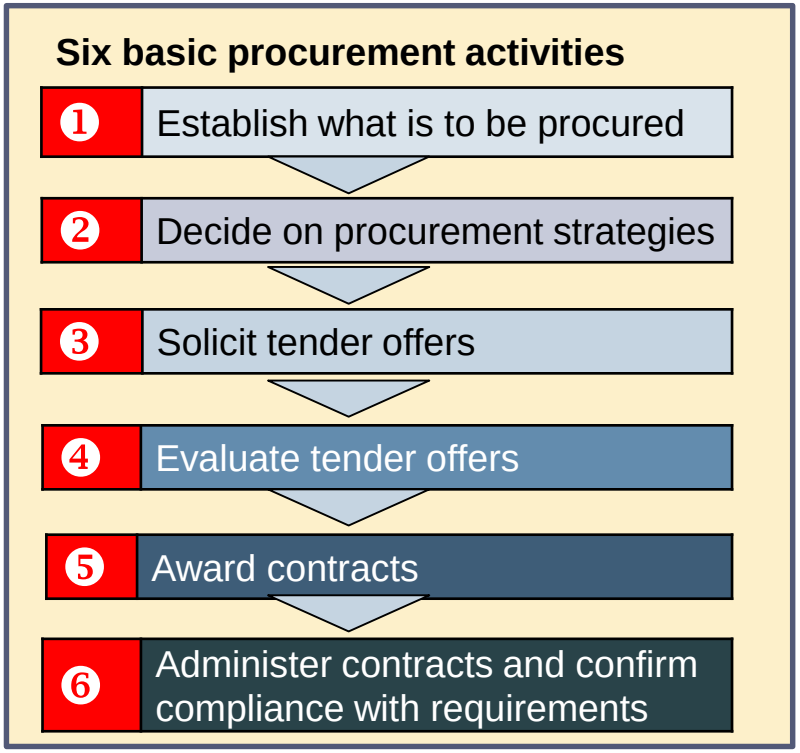
- **processes** - a succession of logically related actions occurring or performed in a definite manner which culminates in the completion of a major deliverable or the attainment of a milestone;
- **procedures** - the formal steps to be taken in the performance of a specific task, which may be evoked in the course of a process; and
- **methods** - a documented, systematically-ordered collection of rules or approaches

Procurement is the process which creates, manages and fulfils contracts. Procurement commences once a need for goods and services of any combination thereof has been identified and it ends when the goods are received and the services are completed. There **are three phases** to the procurement process, namely:

- a **planning phase** during which decisions are made as to **what, where and when** goods and services are required, which procurement route is to be pursued and what is the number, type, nature and timing of the required contracts;
- an **acquisition phase** during which contracts are entered into following the execution of a selection procedure; and
- a **contract management** phase during which compliance with requirements, changes in requirements and risk events which manifest during the execution of contracts are managed.

Procurement activities and system requirements

Generic procurement systems



SIPDM requires that ***procurement be undertaken in accordance with all applicable legislation and the relevant requirements of SANS 10845 parts 1 to 4***

These 6 basic activities are generic to all types and categories of procurement.

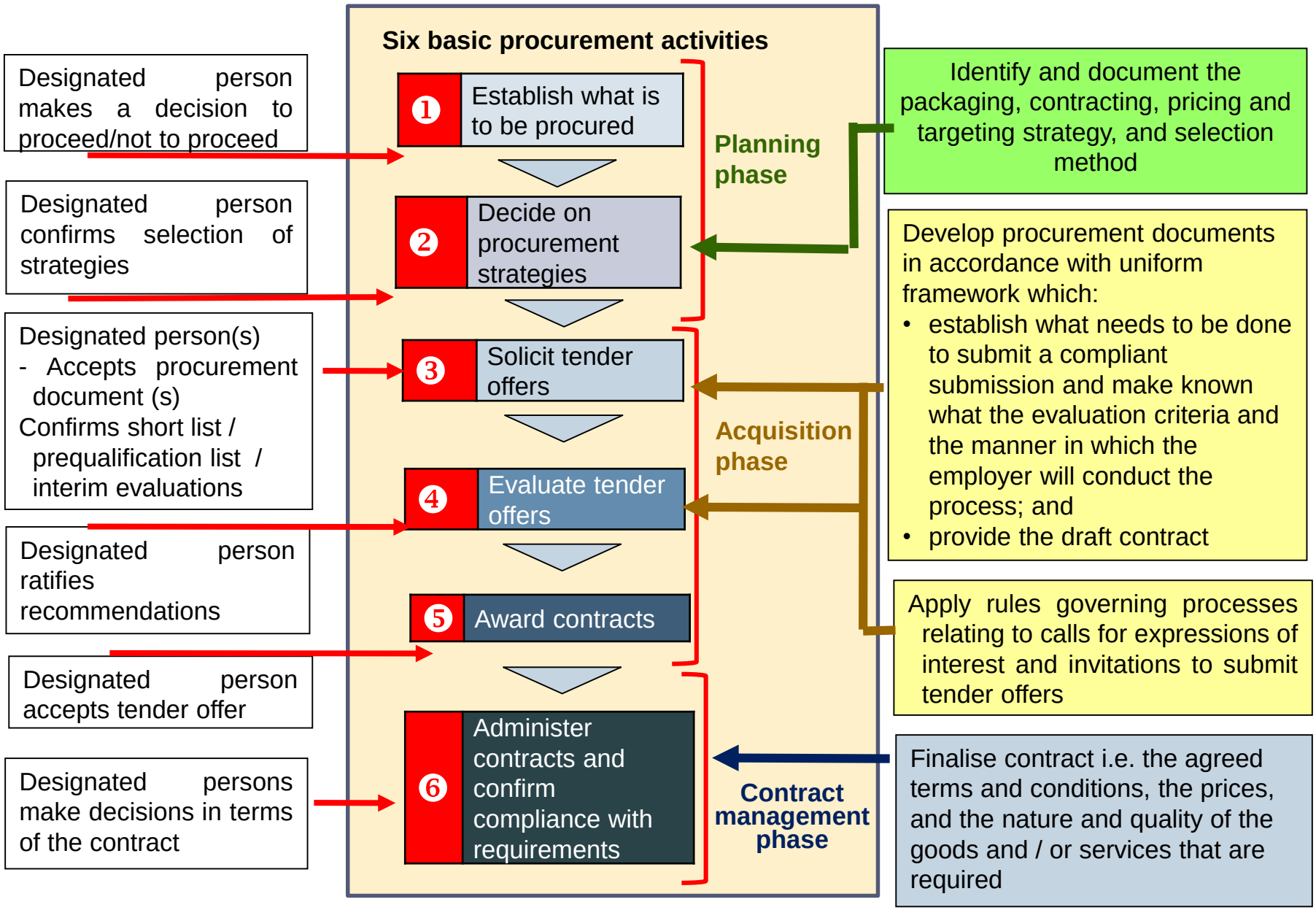
Procedures and methods used in conjunction with policies guiding the selection of options and the application thereof are required to implement these procurement processes.

Procurement documents are needed to:

- **communicate to tenderers** a procuring entity's procedures and requirements up to the award of a contract
- **establish the basis for the contract** that is entered into with the successful tenderer.

Governance or quality oversight arrangements linked to the milestones need to be put in place to manage and control procurement processes.

Procurement activities and system requirements



SANS 10845 Parts 1 to 4

SANS 10845 standardizes

- Procurement processes, methods and procedures
- Procurement documents
- Procurement policy (aspects)

The CIDB Standard for Uniformity in Construction Procurement had similar coverage

Note: SANS 10845 is an adoption of ISO 10845 which is based on the CIDBSFU. The CIDB SFU (May 2010) was fully aligned with ISO 10845. Changes introduced via CIDB SFU (July 2015) not supported

The objective of the **SANS / ISO 10845 series** of construction procurement standards (Parts 1 to 4) is to provide a **generic and standard set of processes, procedures and methods** for a procurement system that is **fair, equitable, transparent, competitive and cost effective** and which may, promote objectives additional to those associated with the immediate objective of the procurement itself.

SANS 10845-1 describes generic procurement processes around which an organisation can develop a procurement system and establishes generic methods and procedures that are used in **soliciting tender offers and awarding contracts**.

Procurement documents communicate a procuring entity's procedures and requirements relating to procurement processes up to the award of a contract and establish the basis for the contract that is entered into with the successful tenderer.

SANS 10845-2 establishes a uniform format for the compilation of calls for expressions of interest, tender and contract documents, and the general principles for compiling procurement documents for supply, services and engineering and construction works contracts, at both main and subcontract levels.

SANS 10845-4 establishes what is required for a respondent to submit a compliant submission, makes the evaluation criteria known to respondents, and establishes the manner in which the procuring entity conducts the process of calling for expressions of interest.

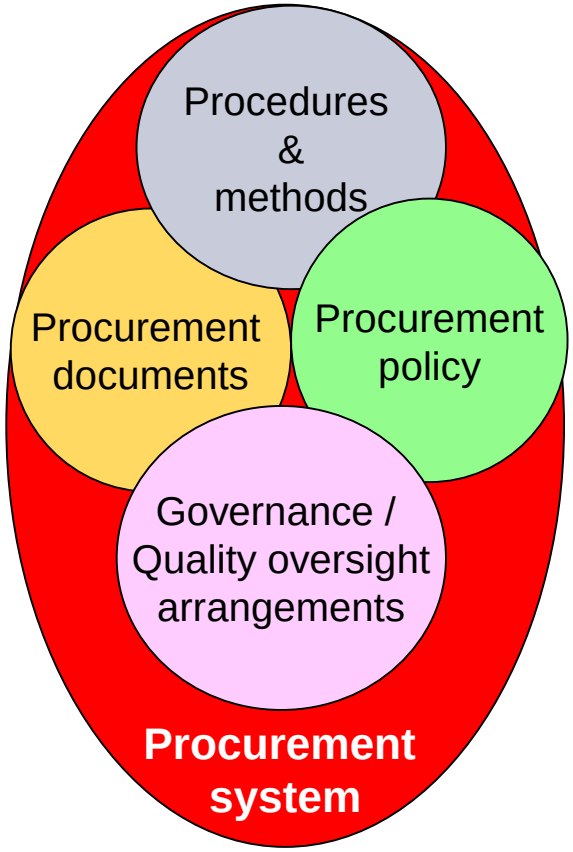
SANS 10845-3 establishes what a tenderer is required to do to submit a compliant tender, makes the evaluation criteria known to tenderers, establishes the manner in which the employer conducts the process of offer and acceptance, and provides the necessary feedback to tenderers on the outcomes of the process.

SANS 10845-2 enables SANS 10845-3 and SANS 10845-4 and standard forms of contract to be readily referenced in procurement documents.

Elements of a generic procurement system

A procurement system comprises:

- rules and guidelines governing procedures and methods
- procurement documents which include terms and conditions
- governance / quality oversight arrangements to manage and control procurement
- organisational policies e.g.
  - the usage and application of particular procurement procedures
  - procedures for dealing with specific procurement related issues
  - secondary procurement goals and procedures
  - the assignment of responsibilities for the performance of activities



SANS 10845 parts 1 to 4 are applicable to all types of contracts i.e. supply, services and engineering and construction works contracts. Although the title of the SANS 10845 series of standards suggest that these standards apply only to procurement within the construction industry, these standard are sufficiently generic to be applied to the procurement of goods and services in other categories of procurement and sectors of an economy. Methods and procedures best suited to particular categories of procurement need to be identified from the generic procurement system.

Although the methods and procedures **are generic to different categories of procurement** there are very different characteristics between different categories of procurement.

Differentiating between procurement categories

Differences between procurement of infrastructure and other categories

Characteristic /consideration	General goods and services for consumption	Infrastructure
Satisfying the business need	The business need is commonly achieved through the production of a specification, which then forms a requisition for the procurement of goods or services	The business need is frequently satisfied though multiple contracts which need to be procured and managed in such a way that the anticipated benefits are progressively realised
Demand management	The demand is determined and managed through inventory / bin levels or the frequency of the required service	Demand is determined and managed during the **planning phase** through: • service life plans which are based on an assessment of current performance against desired levels of service or functionality, which reflect cost estimates of life cycle activities, and • infrastructure plans which provide a credible forecast of current demand and net demand for services or requirements for functionality over a period of time. Demand is proactively managed through the **planning, acquisition and contract management** phases through the setting and monitoring of control budgets Projects are delivered against established norms and standards which are designed to yield value for money

Differentiating between procurement categories

Characteristic /consideration	General goods and services for consumption	Infrastructure
Risks	Risks are relatively low as they are typically linked to the ability of the supplier / contractor to timeously supply the required goods or to provide the required service to the standard demanded by the purchaser or employer within the tendered amount.	Risks are high due to uncertainties at the start of a contract which include economic circumstances, human behaviour, natural events, weather, inherent site conditions, political circumstances, community unrest, technology and technical issues, management activities and controls and individual activity. Risks can also manifest in commercial and legal relationships and weak clients as well as in the difference between estimated quantities at tender stage and final quantities at the completion of the works and the manner in which contractors are compensated for risk events for which they are not responsible for.

Risk (ISO Guide 73) is the "*effect of uncertainty on objectives.*"

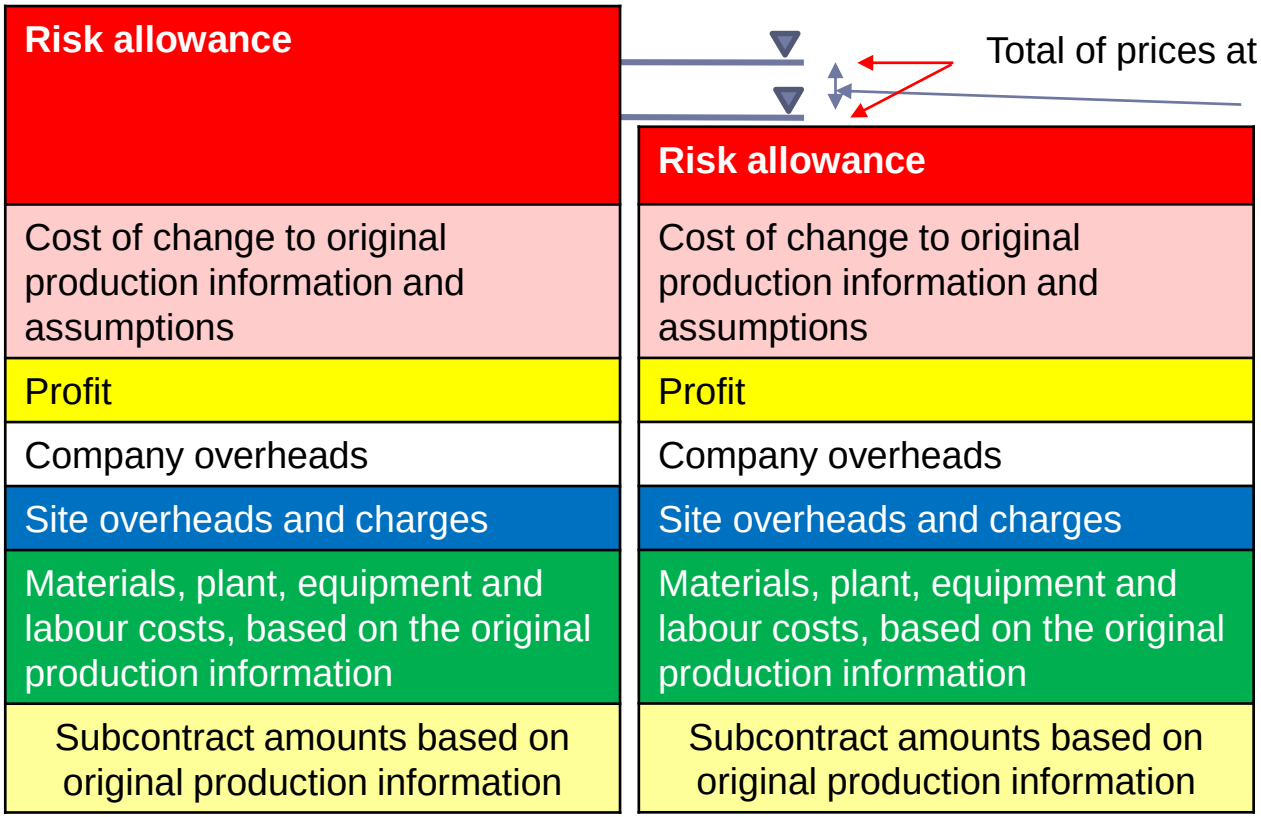
A more expansive definition of risk is the deviation, positive or negative, from the expected on an organisation's objectives arising from the deficiency of information relating to the understanding of an event, its consequence or likelihood.

Contractors need to assess two types of impacts of changes in production information, namely:

- direct impacts (material, labour, equipment etc);
- secondary impacts (disruption, cumulative impact, productivity loss, knock-on impact or ripple affect)

Dealing with risk in infrastructure related contracts

Risk taking is necessary in infrastructure projects. Risk management is all about identifying the salient risks, **assessing their likelihood and deciding on how best to manage the project in the light of this information.** Good practice is to assign risk to the party best able to manage it or enter into collaborative arrangements which enable risk to be proactively managed by both parties
The parties to a contract face choices on how to deal with the inherent project risks. Risks can be transferred or accepted. In some instances, insurances can be taken out to cover risks.



Option 1: risks transferred to the contractor

Option 2: risks shared between the client and the contractor

The focus in the distribution of risk is on **the payment and responsibility for the cost of the event**, should it materialise. The contractor tries to limit liability in contracts to a foreseeable figure. The client needs to bear in mind that increasing the risk borne by the contractor inevitably increases the price of the contract.

Differentiating between procurement categories

Characteristic /consideration	General goods and services for consumption	Infrastructure
Final contract price of contract	Final contract price typically equates to the quantum of goods or services which are consumed multiplied by the agreed rate	The final contract price in works contracts equates to the sum of the initial contract price for work which is known, the cost of changes in scope of contract (variations) to enhance quality performance or to address shortcomings which can impair performance, the amount of contract price adjustment for inflation provided for in the contract and the cost of risk events that materialise in the execution of a contract for which the contractor is not responsible.
Budget, contract price and purchase order value	Contract price is commonly adjusted to fit budget or the budget reduced to the contract amount when it is known. The purchase order amount typically equals the contract price which in turn equals the budget.	The budget needs to include contingences to fund changes in the scope of contract (variations) to enhance quality performance, or to address shortcomings which can impair performance, and risk events for which the contractor is not responsible. The purchase order amount may need to be adjusted to enable contingencies to be accessed. The budget, the amount due in terms of the contract and the purchase order amount are rarely the same.

Final contract price of infrastructure contract

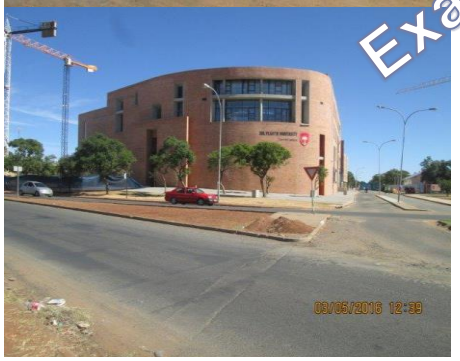
= initial contract price for work which is known + changes in scope of contract (variations) to enhance quality, performance or to or address shortcomings which can impair performance + contract price adjustment for inflation in terms of the contract + the cost of risk events that materialise in the execution of a contract

Differentiating between procurement categories

Characteristic /consideration	General goods and services for consumption	Infrastructure
Conditions of contract	Conditions of contract describe the rights and obligations of the parties and commonly lack agreed procedures for the administration or management of the contract. Frequently a contract or a service level agreement is negotiated after the evaluation of tenders, based on the tender submission. Variations to in or modification of the terms of the contract can only be made except by written amendment signed by the parties concerned.	Conditions of contract provide terms that collectively describe the rights and obligations of contracting parties and the agreed procedures for the administration of their contract. A standard form of contract or standard contract is used. Such contracts provide fixed terms and conditions which are not varied. This is necessary to allocate risks to the parties and to provide the methodology by which adjustment to both the prices and the time for completion can be made for changes in the scope of work and for risk events for which the contractor is not at risk. This enables: • tenderers to take into account the allocation of risks and how the contract will be administered in their tender submissions, • enables tenders to be evaluated on a comparative basis, • reduces risk pricing and • compensates contractors for the occurrence of risk events for which they are not at risk without amending the contract.

Differentiating between procurement categories

Characteristic /consideration	General goods and services for consumption	Infrastructure
Interdependencies and interfaces between contracts	Interdependencies and interfaces between contracts are rare as the procurement commonly involves off the shelf products or readily available commodities or standard, well defined and scoped services	There are several interfaces and interdependencies between contracts as works (products) are developed or maintained on a site. A supply chain frequently needs to be contracted and mobilized to provide the necessary professional services, manufacture and / or supply materials, products, components and assemblies, provide the necessary equipment and labour to provide the works and to manage the implementation of the project.



Sol Plaatje University (Kimberley (SIPS 14))– 2014,2015 and 2016 intakes

Summary of contracts:

- 23 professional service framework contracts
- 5 construction framework contracts
- 5 supply framework contracts
- Plus several non-framework agreements

Interconnected contracts with dependencies

Differentiating between procurement categories

Characteristic /consideration	General goods and services for consumption	Infrastructure
Procurement	The acquisition of goods or services	The process which creates manages and fulfils contracts
Value for money (cost effectiveness)	Reducing the cost of resources used for an activity or increasing output for a given input or minimising input for a given output while maintaining quality and achieving the intended outcomes from the output	The optimal use of resources to achieve intended outcomes

Focus
- on optimising resources within an activity to improve outcomes
- choice of goods and productivity of service for a particular transaction

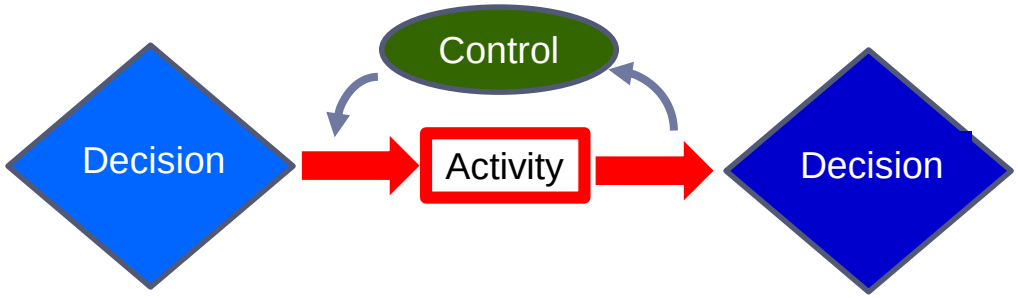
Focus:
- on optimising resources across the entire supply chain from inception to completion to improve outcomes
- Integration of timing and outputs of the delivery team
- management of risk throughout the whole supply chain
- trade offs between options to achieve project outcomes

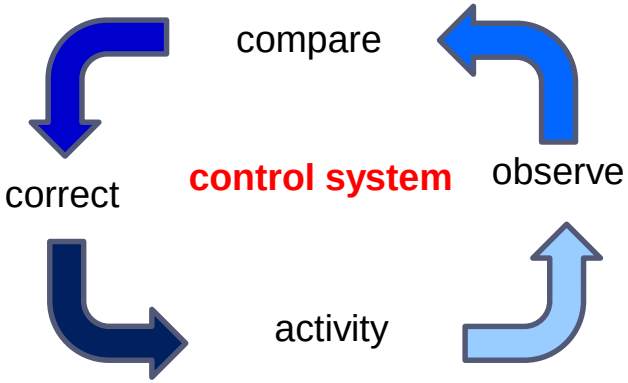
Control system

Focus needs to be on the realisation of client objectives

For a project to progress meaningfully, its objectives and their achievements must be closely allied to its decision structure

Governance and quality management concepts





The purpose of **a control system** is to regulate work in relation to its changing context

The control system involves the comparing of progress against objectives and taking some corrective action where necessary:

- taking steps to change the performance of the activity to bring it closer to what was planned; or
- changing the plan so that it more closely reflects the changed situation brought about by the departure from the plan

Hierarchy of decisions

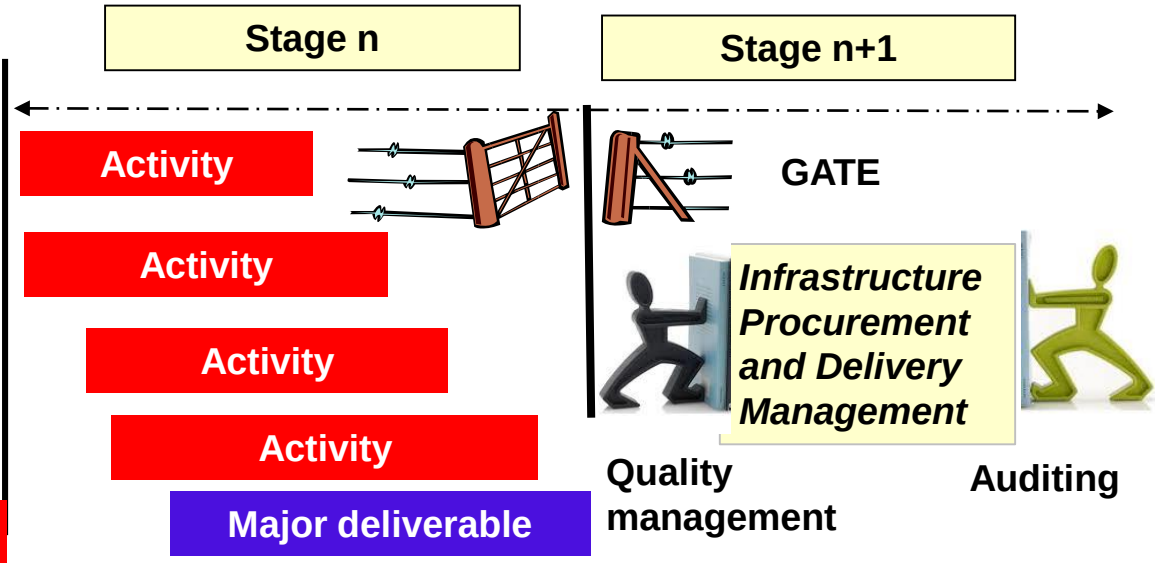
Policy decisions are the major constraints on any project and determine the framework within which the project takes place. They set the objectives for the projects
Strategic decisions deal with matters impinging on the project and are concerned with implementing the client's policy within the regulated framework for projects
Tactical decisions are concerned with the deployment of resources and the management of the project on a day to day basis.
Operational decisions relate to decisions made within a components of an activity

Control frameworks -concepts

A gate is a point in the infrastructure life cycle where a **decision** is required before proceeding from one **stage** to another
Decisions need to be based on information that is provided
A gate provides assurance that an infrastructure project

- Remains within agreed mandates
- Aligns with the purpose for which it was conceived
- Can progress successfully from one phase to the next

A gate is a decision point but also risk / quality oversight control and audit point



Concepts relating to conformity based on ISO 9000

Requirement – need or expectation that is stated, generally implied or obligatory

Nonconformity – non-fulfilment of a requirement

Conformity – fulfilment of a requirement

Preventative action – action to eliminate the cause of potential nonconformity or other undesirable potential situation

Corrective action – action to eliminate the cause of a detected or other undesirable potential situation

Correction – action to eliminate a detected nonconformity

Deviation permit – permission to depart from the originally specified requirements

Release – permission to proceed to the next stage of a process

Work flow (planning)

Stage 0	Project initiation
Develop an initiation report which outlines the high level business case together with the estimated project cost and proposed schedule	
Gate 0	**Accepted project initiation report**

Control framework for the delivery of infrastructure

Portfolio planning processes

Stage 1	Infrastructure planning
Develop an infrastructure plan which identifies and prioritises projects and packages against a forecasted budget over a period of at least 5 years	
Gate 1	**Approved infrastructure plan**

Stage 2	Strategic resourcing
Develop a delivery and / or a procurement strategy. which, for a portfolio of projects, identifies the delivery strategy in respect of each project or package and, where needs are met through own procurement system, a procurement strategy	
Gate 2	**Approved delivery and / or procurement strategy**

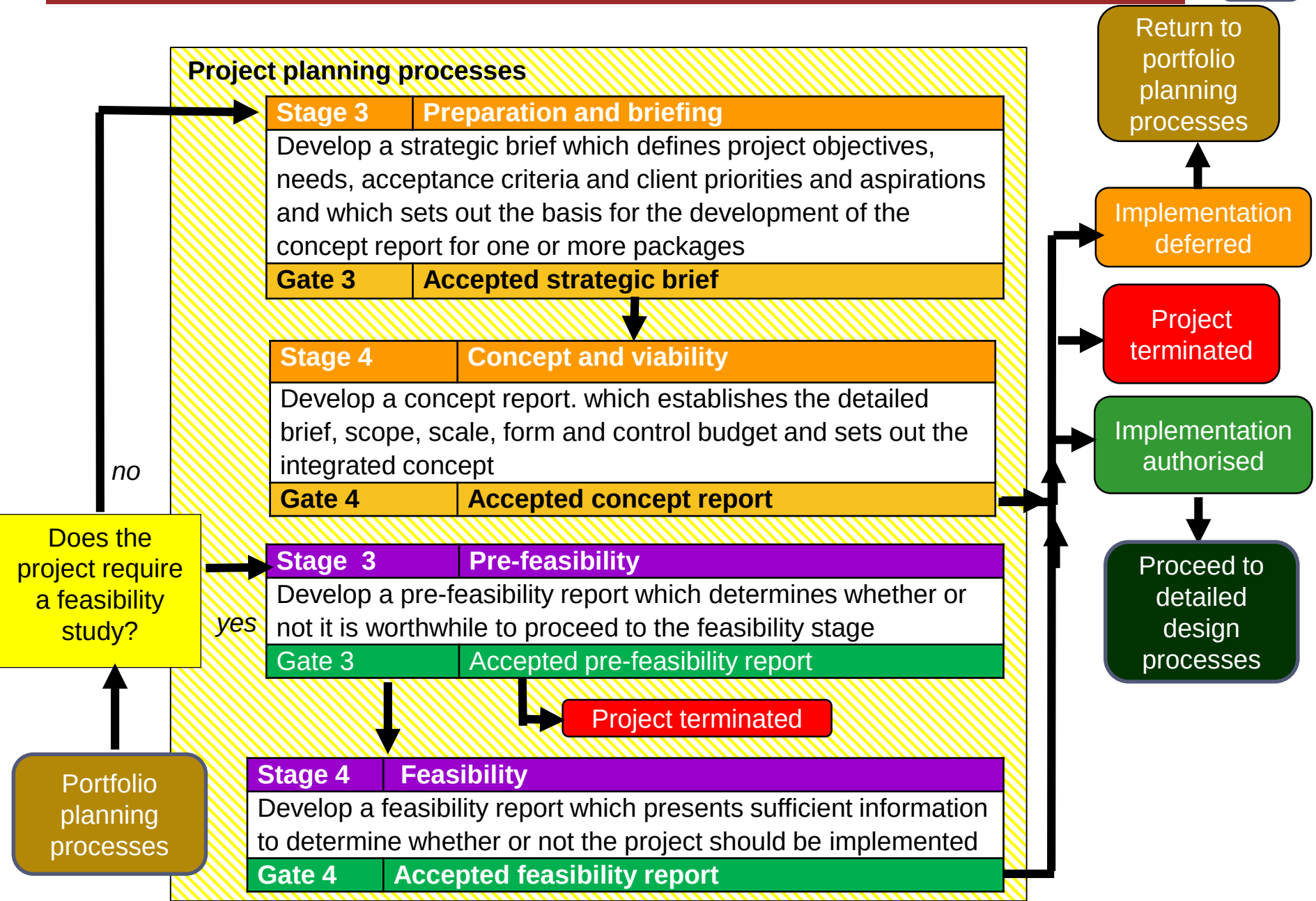
Is the work for the provision of new infrastructure or the rehabilitation, refurbishment or alteration of existing infrastructure?

yes → Proceed to project planning processes

no → Proceed with procurement

Information flow

Work flow (planning)



Work flow (implementation)

Implementation authorised

Detailed design processes

Stage 5	Design development
Develop a design development report which develops in detail the approved concept to finalise the design and definition criteria, sets out the integrated developed design and contains the cost plan and schedule for one or more packages	
Gate 5	**Accepted design development report**

Stage 6:Design document -ation

Stage 6A	Production information
Produce the production information which provides , the detailing, performance definition, specification, sizing and positioning of all systems and components enabling either construction (where the constructor is able to build directly from the information prepared) or the production of manufacturing and installation information for construction	
Gate 6Â	**Accepted production information**
Stage 6B	**Manufacture, fabrication and construction information**
Produce the manufacture, fabrication and construction information produced by or on behalf of the constructor, based on the production information provided for a package which enables manufacture, fabrication or construction to take place	
Gate 6B	**Accepted manufacture, fabrication and construction information**

Site processes

Stage 7	Works
Complete the works so that it is capable of being occupied or used	
Gate 7	**Issued completion / delivery certificate**

Stage 8	Hand over
User / owner takes over works complete with record information	
Gate 8	**Record information and hand over certificate**

Close out processes

Stage 9	Package completion
Correct notified defects and settle outstanding monies	
Gate 9	**Defects certificate (works only), final payment certificate and close out report**

Gates 3 and 4

major capital project: an infrastructure project or a series of interrelated infrastructure projects on a single site having an estimated cost, including those required for new facilities or systems to become fully operational, above a prescribed threshold

Portfolio planning processes	Stage 0: Project initiation	Gate 0
	Stage 1: Infrastructure planning	Gate 1
	Stage 2: Strategic resourcing	Gate 2

Is the project a major capital project where the expenditure exceeds R1,5 billion (Schedule 2) or R1,0 billion (other organs of state) or R250 million per annum for a minimum of three years (other organs of state)? Is the project **not** a building project with or without related site works or a process-based, somewhat repetitive or relatively standardised project where the risk of failing to achieve time, cost and quality objectives is relatively low?

no

yes

Stage 3: Preparation and briefing	**Project planning processes**	Gate 3	Stage 3: prefeasibility
Stage 4: Concept and viability		Gate 4	Stage 4: feasibility

yes

Is the acceptance for a project comprising a number of packages which are to be delivered over time?

no

Design development processes	Stage 5: Design development	Gate 5
	Stage 6: Design documentation	Gate 6

Output-based specifications define the client's functional requirements for the proposed project. Such specification usually do not attempt to address how those outputs might be achieved or address all the issues covered by a strategic brief for a package

Stages of delivery linked to contracting strategy

National Treasury	
Stage	**Description**
0	Project inception
1	Infrastructure planning
2	Strategic resourcing
3	Preparation and briefing or Pre-feasibility
4	Concept and viability or Feasibility
5	Design development
6	Design documentation
7	Works
8	Handover
9	Closeout

The level of detail contained in a deliverable associated with the end of each stage needs to be:

- sufficient to enable informed decisions to be made to proceed to the next stage; and
- such that it can be used to form the basis of the scope of work for taking the package forward in terms of the selected contracting strategy

Management contractor	Contract under which a contractor is responsible for planning and managing all post-contract activities, including, if required, any design of the works or portion thereof, and for the performance of the whole of the contract
Design and construct	Contract in which a contractor designs the works based on a brief provided by the client and constructs it (Design is integrated with construction and is managed by the contractor)
Develop and construct	Contract based on a scheme design prepared by the client under which a contractor finalises the production information and constructs it (The final design details are integrated with construction and are managed by the contractor)
Design by employer	Contract under which a contractor undertakes only construction on the basis of full designs issued by the employer (Design is a separate function to construction and is managed by the client or his implementer)

Comparisons of stages of delivery

National Treasury		ECSA		SACQSP, SACAP, SACLAP		SACPMP	
Stage	**Description**	**Stage**	**Description**	**Stage**	**Description**	**Stage**	**Description**
0	Project inception						
1	Infrastructure planning						
2	Strategic resourcing						
3	Preparation and briefing or Pre-feasibility	1	Inception	1	Inception	**1**	Inception
4	Concept and viability or Feasibility	2	Concept and viability (preliminary design)	2	Concept and viability	**2**	Concept and viability (concept design)
5	Design development	3	Design development (detailed design)	3	Design development	**3**	Design development
6	Design documentation	4	Documentation and procurement	4	Documentation and procurement	**4**	Documentation and procurement
7	Works	5	Contract administration and inspection	5	Construction	**5**	Construction
8	Handover						
9	Closeout	6	Close out	6	Close out	**6**	Close out

Stages of delivery – comparisons

National Treasury		ESKOM (PLCM)		PetroSA		Transnet	
Stage	**Description**	**Description**			**Description**	**Description**	
0	Project inception	Opportunity pipeline			Framing / opportunity identification	**FEL-1**	**Concept**
1	Infrastructure planning	Pre-project planning*					
2	Strategic resourcing						
3	Preparation and briefing or Pre-feasibility			FEL-1	Pre-feasibility / identify and select	FEL-2	Pre-feasibility
4	Concept and viability or Feasibility	Concept		FEL-2	Feasibility / definition	FEL-3	Feasibility
5	Design development	Definition		FEL-3	Design and plan / develop	FEL-4	Execution (no gates)
6	Design documentation	**Execution**	Finalise solution	-	Implementation and execution		
7	Works		Implement	-			
8	Handover		Commissioning and handover		Operations and handover		
9	Closeout		Close project	-		-	Finalise (close out)

FEL = Front end loading also referred to as pre-project **planning** (PPP),

Gates focus on planning – stages 3 and 4 are not repeated for packages

*Linear process – not updated annually and only for a particular project

Gateway reviews

Control framework

- requires decisions to be made on information developed during a stage before proceeding from one stage to the next
- enables independent reviews to be undertaken on the information upon which decisions are to be taken

This enables reviews to be undertaken –

- review of Stage 4 (Concept and viability)
- review of Stage 5 (Design Development)
- review of Stage 8 (Handover)

End of planning stage – go / no go decision required

Design development report – what is intended to be delivered

Record information – what was delivered

Organ of state	Estimated cost inclusive of VAT
National department	R 100 million
Provincial department or metropolitan municipality	R 100 million
Municipality other than a metropolitan municipality	R 50 million
Major public entity	R 500 million
National government business enterprise Provincial government business enterprise	R250 million
Other	R 100 million

All major capital projects having an estimated capital expenditure greater than or equal to a prescribed values shall have a gateway review of the stage 4 deliverable (concept report or feasibility report) prior to acceptance of the deliverable

Review team (not less than three people who are not involved in the project associated with the works) is led by a professional engineer, professional quantity surveyor or professional architect
Relevant treasury may nominate additional persons to serve on the team

Code red – poses significant risks
Code amber – minor risk
Code green – aspects given adequate consideration

Relevant treasury may initiate a review of any of the end of stage deliverables

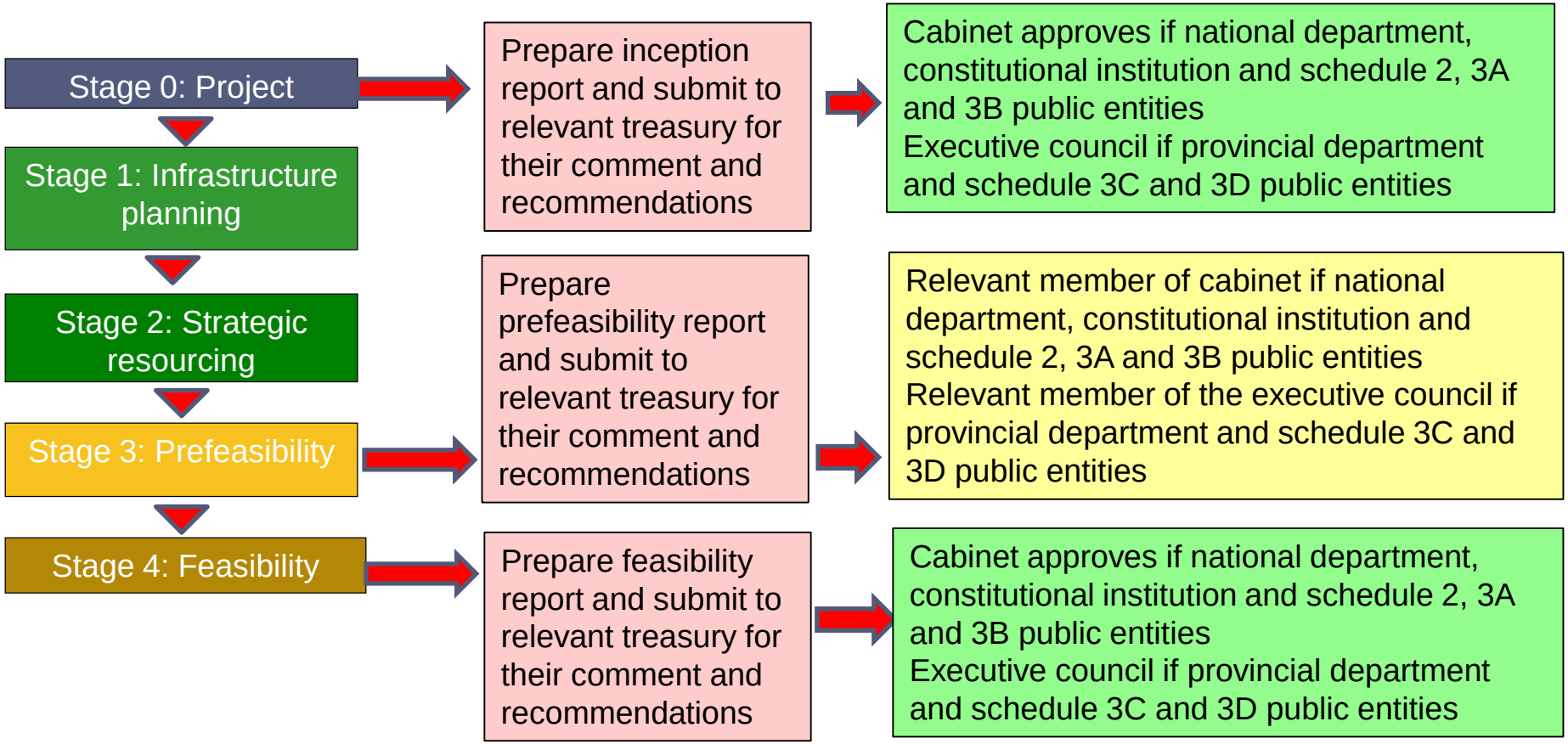
Focus :

- Deliverability
- Affordability
- Value for money

Approval of high value major capital projects

Applies where value of projects exceeds:

- national and provincial departments and constitutional institutions > 7.5 billion
- Major public enterprises, national government enterprises, provincial government business enterprise and other public entities > R 10 billion or > 4% of organ of state's total assets or > 2% of organ of state's revenue in latest audited financials



Control frameworks - outcomes

SIPDM 13.2 Internal control measures

The gates in the control frameworks provided in section 4 shall be used, as appropriate, to:

a) authorise the proceeding with an activity within a process, or commencing with the next process;
b) confirm conformity with requirements; or
c) provide information which creates an opportunity for corrective action to be taken

Suitable templates shall be used to record the approval or acceptance of documents at the gates provided in the control framework established in section 4.

Standard for Infrastructure Procurement and Delivery Management requires that organisational policy needs as a minimum to:

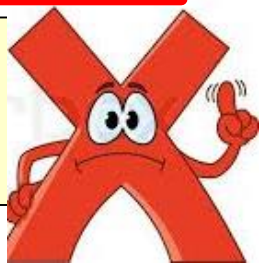
- assign responsibilities for approving or accepting deliverables associated with a gate in the control framework or authorising a tender process;
- establish committees which are required by law or equivalent quality management and governance arrangements;
- establish delegations for the awarding of a contract or the issuing of an order . . . . .

Principles

- Align with organisation's SCM policy which allocate responsibilities to those who are best placed to make a decision
- Minimise signatures
- Include SIPDM requirements so that precise requirements are understood

NOTE: Can combine projects, contracts and orders into a single form where it makes sense.

Large SOE requires for a contract completion certificate for a works contract **6 officials** to sign as recommended and **8 approval signatures** including a group executive!



Recommended by:

Accepted by:

Recommendation not always necessary

Approvals and acceptances at gates

Form no	Title	Person assigned the responsibility for approving or accepting deliverable
G0	Acceptance of the project initiation report	. . . accepts the initiation report
G1	Approval of the infrastructure plan	. . . approves the infrastructure plan
G2	Approval of the delivery and / or procurement strategy	. . . approves the delivery and / or procurement strategy
G3(PR)	Acceptance of the prefeasibility report	. . . accepts the pre-feasibility report
G3(SB)	Acceptance of the strategic brief	. . . accepts the strategic brief
G4(FR)	Acceptance of the feasibility report	. . . accepts the feasibility report
G4(CR)	Acceptance of the concept report	. . . accepts the concept report
G5	Acceptance of the design development report	. . . accepts the design development report
G6A	Acceptance of the production information	.. . accepts the parts of the production information requiring acceptance which are identified when the design development report is accepted
G6B	Acceptance of the manufacture, fabrication and construction information	. . accepts the manufacture, fabrication and construction information
G7	Certification of completion / delivery	The contract manager certifies completion of the works or the delivery of goods and associated services
G8	Acceptance of handover	. . . accepts the hand over
G9	Acceptance of the close out report	The **contract manager** or supervising agent certifies the defects certificate in accordance with the provisions of the contract The **contract manager** certifies final completion in accordance with the provisions of the contract . . . . accepts the close out report

Strategic level?

Executive level?

Operations level?

"approve" = "officially agree to"
"" accept" = "receive as adequate, valid, or suitable""

Implementation templates

Form no	Title
G0	Acceptance of the project initiation report
G1	Approval of the infrastructure plan
G2	Approval of the delivery management and / or procurement strategy
G3(PR)	Acceptance of the prefeasibility report
G3(SB)	Acceptance of the strategic brief
G4(FR)	Acceptance of the feasibility report
G4(CR)	Acceptance of the concept report
G5	Acceptance of the design development report
G6A	Acceptance of the production information
G6B	Acceptance of the manufacture, fabrication and construction information
G7	Certification of completion / delivery
G8	Acceptance of handover
G9	Acceptance of the close out report

Insert logo

Insert data

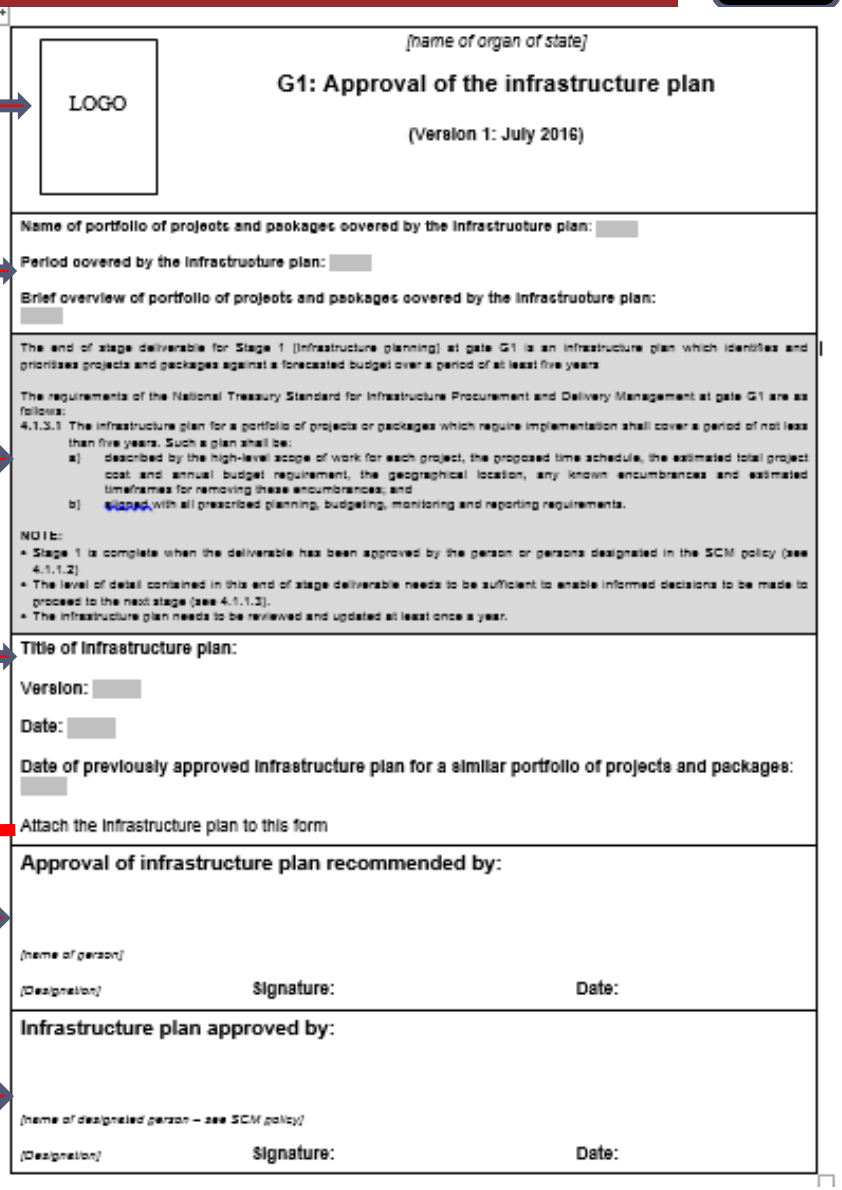
Read SIPDM requirements for stage in shaded area

Insert data

Attach end of stage deliverable

Person making recommendation to accept / approve signs

Person designated in SCM policy signs acceptance / approval



[name of organ of state]

LOGO

G1: Approval of the infrastructure plan

(Version 1: July 2016)

Name of portfolio of projects and packages covered by the infrastructure plan:

Period covered by the infrastructure plan:

Brief overview of portfolio of projects and packages covered by the infrastructure plan:

The end of stage deliverable for Stage 1 (infrastructure planning) at gate G1 is an infrastructure plan which identifies and prioritises projects and packages against a forecasted budget over a period of at least five years

The requirements of the National Treasury Standard for Infrastructure Procurement and Delivery Management at gate G1 are as follows:

4.1.3.1 The infrastructure plan for a portfolio of projects or packages which require implementation shall cover a period of not less than five years. Such a plan shall be:

a) described by the high-level scope of work for each project, the proposed time schedule, the estimated total project cost and annual budget requirement, the geographical location, any known encumbrances and estimated timeframes for removing these encumbrances; and

b) aligned with all prescribed planning, budgeting, monitoring and reporting requirements.

NOTE:

- Stage 1 is complete when the deliverable has been approved by the person or persons designated in the SCM policy (see 4.1.1.2)
- The level of detail contained in this end of stage deliverable needs to be sufficient to enable informed decisions to be made to proceed to the next stage (see 4.1.1.3).
- The infrastructure plan needs to be reviewed and updated at least once a year.

Title of infrastructure plan:

Version:

Date:

Date of previously approved infrastructure plan for a similar portfolio of projects and packages:

Attach the infrastructure plan to this form

Approval of infrastructure plan recommended by:

[name of person]

[Designation] **Signature:** **Date:**

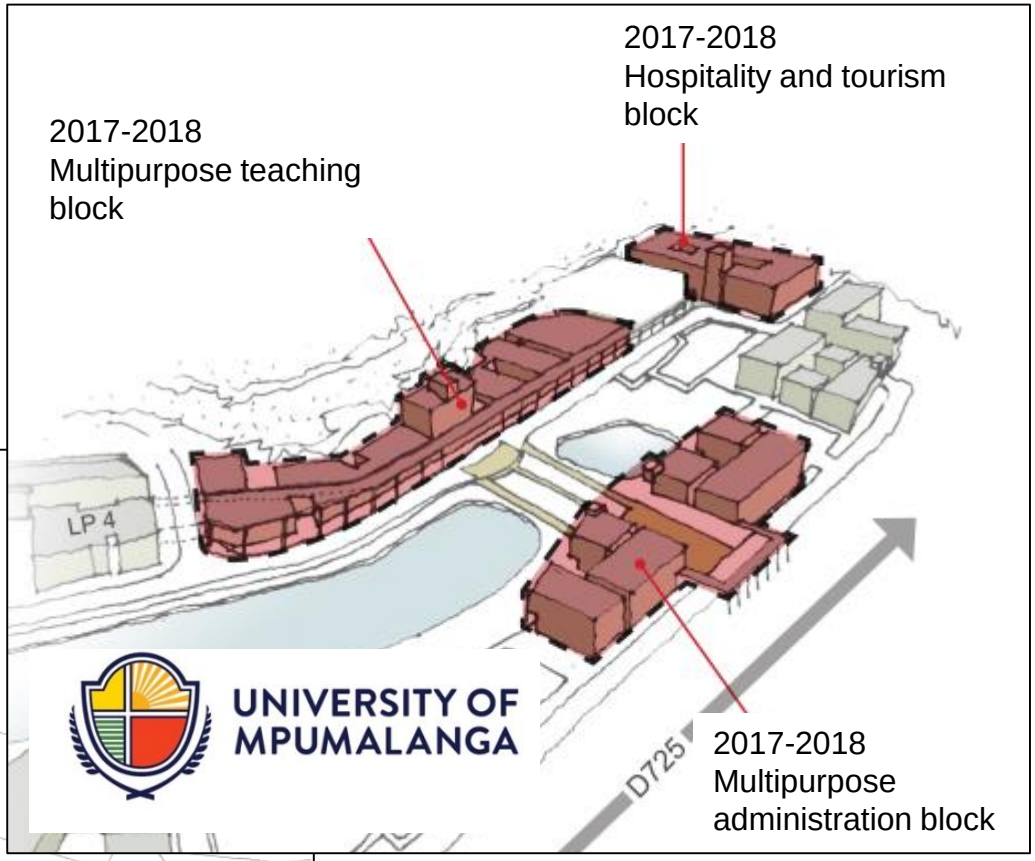
Infrastructure plan approved by:

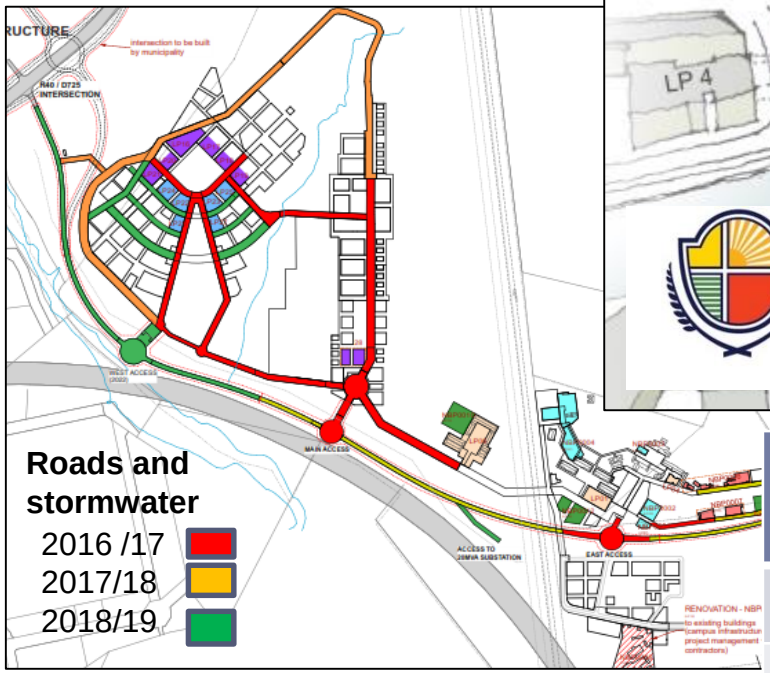
[name of designated person – see SCM policy]

[Designation] **Signature:** **Date:**

Infrastructure plan (stage 1)

End of stage deliverable:
An **infrastructure plan** which identifies and prioritises projects and packages against a forecasted budget over a period of at least five years





5 Year Implementation plan	2016 /17	2017 /18	2018 /19	2019 /20	2020 /21
Building x x xx	xxx	xxx			
Building y y y y		xxx	xxxx		

Strategic brief (stage 3)

End of stage deliverable:

A **strategic brief** which defines project objectives, needs, acceptance criteria and client priorities and aspirations, and which sets out the basis for the development of the concept report for one or more packages

L008:Hospitality and tourism centre with academic and support facilities

- Project objective / site and locality / site context
- Site photographs
- Design response / design assumptions / design strategy
- Early concept: mass model development
- Early concept: section segment analysis
- Early concept: 3D sketches
- Constraints / risk assessment / organisational structure
- Acceptance criteria / output criteria
- Materiality
- Client accommodation schedule per briefing
- Space use categories and area schedule
- Space use summary and efficiency
- Design development: layout plans
- Design development: sections
- Design development :elevations

Current concept

Illustration of relationship between Building L008 and L0011

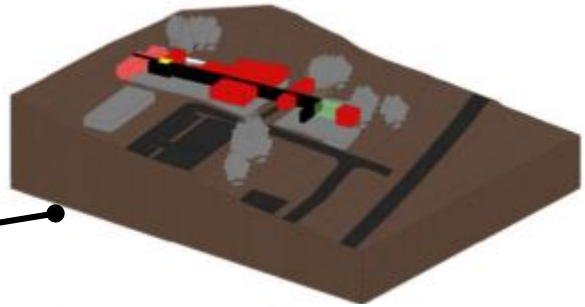


Plate 1:
Service yard with storage and office
Main circulation spine
Teaching kitchens with restaurant kitchens, lounge and bar

Eastern aspect
April 10:00am shadow

SUSTAINABLE TIMBER SHADE DEVICES

Sustainable timber shade devices

Also have a control budget

Concept report (stage 4)

End of stage deliverable:

A **concept report** which establishes the detailed brief, scope, scale, form and control budget, and sets out the integrated concept for one or more packages

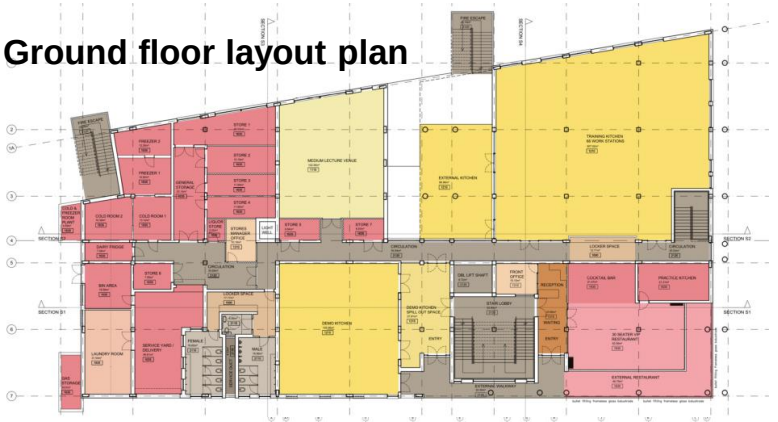
L008:Hospitality and tourism centre with academic and support facilities

- Project objective / site and locality / site context
- Site photographs
- Design response / design assumptions / design strategy
- Early concept: mass model development
- Early concept: section segment analysis
- Early concept: 3D sketches
- Constraints / risk assessment / organisational structure
- Acceptance criteria / output criteria
- Materiality
- Client accommodation schedule per briefing
- Space use categories and area schedule
- Space use summary and efficiency
- Design development: layout plans
- Design development: sections
- Design development :elevations

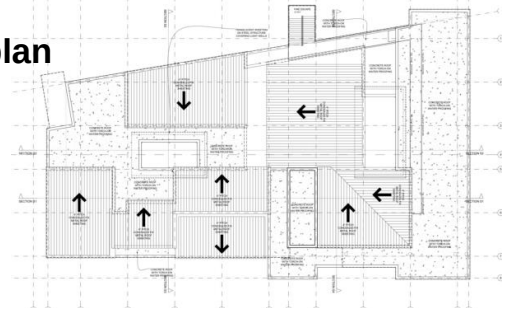
Current concept

Also have a control budget

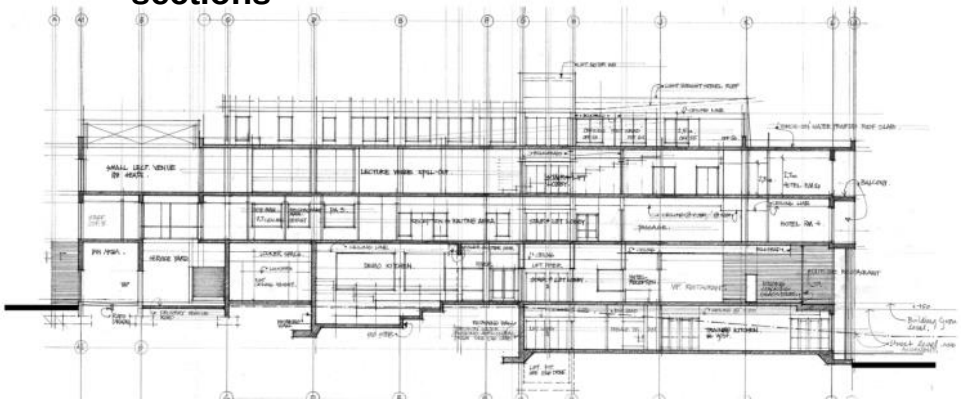
Ground floor layout plan



Roof layout plan



sections



Concept report (stage 5 and 6)

End of stage deliverables:
Stage 5: Design development
A design development report which develops in detail the approved concept to finalise the design and definition criteria, sets out the integrated developed design, and contains the cost plan and schedule for one or more packages
Stage 6A Production information:
Production information which provides the detailing, performance definition, specification, sizing and positioning of all systems and components enabling either construction (where the constructor is able to build directly from the information prepared) or the production of manufacturing and installation information for construction
Stage 6B Manufacture, fabrication and construction information:
Manufacture, fabrication and construction information produced by or on behalf of the constructor, based on the production information provided for a package which enables manufacture, fabrication or construction to take place

Note: Outline specifications need to be in sufficient detail to enable a view to be taken on the operation and maintenance implications of the design and the compatibility with existing plant and equipment

Design development report – what is intended to be delivered

Record information – what was delivered

Stage 5: Design development

Stage 8: Handover

[name of organ of state]

Logo

G5: Acceptance of the design development report

. . . . .
. . . . .

Acceptance of the design development report recommended by:
We the undersigned recommend the acceptance of the abovementioned design development report subject to the attached:
•**conditions, if any; and**
•**portions of the production information or manufacture, fabrication and construction information** that is developed during Stage 6 (Design documentation) being submitted for acceptance prior to their issue to the contractor or acceptance by the contract manager, respectively.

Control framework for infrastructure procurement

Stage 2	Strategic resourcing
Gate 2	Approved delivery and / or procurement strategy

Framework agreement in place?

no

yes

Framework agreement activities and gates

Activity 1: Establish what is to be procured

Permission to start process / proceed — PG1

Activity 2: Decide on procurement strategies

Approval of strategies — PG2

Activity 3: Solicit tender offers

Approval of procurement documents — PG3

Confirmation of budget — PG4

Activity 4: Evaluate tender offers

Authorisation to proceed with next phase — PG5

Activity 5: Award contract

Approval of tender evaluation recommendations — PG6

Acceptance of offer — PG7

Activity 6: Administer contract and confirm compliance with requirements

PG8 Approval for:
A – waiving of penalties / damages
B – referral of disputes
C – changes to price or time above a margin
D – exceeding authorised price or time
E – cancelation or termination
F – contract amendment

PG8 A-F

Control framework for infrastructure procurement

Procurement gates

Activity		Sub-Activity (see Table 3 of the standard)		Person assigned responsibility to do take key action
1*	Establish what is to be procured	1.3 PG1	Obtain permission to start with the procurement process	[designated person e.g. project director or programme manager]
2*	Decide on procurement strategy	2.5 PG2	Obtain approval for procurement strategies that are to be adopted including specific approvals to approach a confined market or the use of the negotiation procedure	[designated person e.g. project director]
3	Solicit tender offers	3.2 PG3	Obtain approval for procurement documents	Procurement documentation committee
		3.3 PG4	Confirm that budgets are in place	[designated person e.g. programme or financial manager]
4	Evaluate tender offers	4.2 PG5	Obtain authorisation to proceed with next phase of tender process in the qualified, proposal or competitive negotiations procedure	[designated person]
		4.7 PG6	Confirm recommendations contained in the tender evaluation report	Tender committee [or bid adjudication committee]
5	Award contract	5.3 PG7	Award contract	Authorised person
		5.5 GF1	Upload data in financial management and payment system	[designated person]

* Applies only to goods and services not addressed in a procurement strategy developed during stage 2 (strategic resourcing) of the control framework for the management of infrastructure delivery

Procurement gates (continued)

Activity		Sub-Activity		Person assigned responsibility to do take key action
6	Administer contracts and confirm compliance with requirements	6.4 PG8A	Obtain approval to waive penalties or low performance damages.	[designated person]
		6.5 PG8B	Obtain approval to notify and refer a dispute to an adjudicator	[designated person]
		6.6 PG8C	Obtain approval to increase the total of prices, excluding contingencies and price adjustment for inflation, or the time for completion at the award of a contract or the issuing of an order up to a specified percentage	[designated person or designated persons]
		6.7 PG8D	Obtain approval to exceed the total of prices, excluding contingencies and price adjustment for inflation, or the time for completion at award of a contract or the issuing of an order by more than 20% and 30%, respectively	[accounting officer or accounting authority or, depending upon the value, a appropriately delegated authority]
		6.8 PG8E	Obtain approval to cancel or terminate a contract	Authorised person
		6.9 PG8F	Obtain approval to amend a contract	Authorised person

Contract manager must apply the provisions of the contract – higher authority required to waive amounts

Those actively involved in the project should not be empowered to initiate disputes

Designation	Specified percentage increase	
	Prices	Time
Contract manager	2%	5%
Project director	10%	20%
Accounting officer's / authority's delegate	20%	30%

Example

Those responsible for a portfolio of projects need to be alerted to these overruns

Accounting officer / authority or their delegate

Control templates for infrastructure procurement

Templates for procurement gates and approvals	
A1	Approval to apply the negotiated procedure
A2	Approval to apply the confined market procedure
PG1	Permission to start the procurement process
PG2	Approval of the procurement strategy
PG3	Approval of the procurement document
PG4	Confirmation of the budget
PG5	Authorisation to proceed to the next phase of the procurement process
PG6	Approval of tender evaluation committee recommendations
PG7	Acceptance of offer
PG8A	Approval for waiving of penalties / damages
PG8B	Approval for referral of disputes for resolution
PG8C	Approval for increases in the total of the prices or time for completion up to a specified percentage
PG8D	Approval for increases in the total of the prices or time for completion above a specified percentage
PG8E	Approval to cancel or terminate a contract
PG8F	Approval for an amendment to the contract
Annex-ure A	Procurement documentation review report

Templates for framework agreement gates	
FG1	Confirmation of reasons for not inviting quotations from amongst contractors having the same scope of work
FG2	Approval of the procurement document
FG3	Confirmation of budget
FG4	Authorisation for the issuing of an order
Annex ure A	Procurement documentation review report for an order

Template for financial system gate	
FS1	Financial data associated with a contract or an order issued in terms of a framework contract

Managing contingencies

ISO 6707-2, *Buildings and civil engineering works – vocabulary – Part 2: Contract terms*

Contingency sum – sum of money budgeted for or included in a contract to cover construction work **that can be required but cannot be foreseen or predicted with certainty**

Provisional sum – sum of money that is included in a contract for work **that is foreseen but cannot be accurately specified at the time that the tender documents are issued**

Cost control – technique of financial management that involves monitoring cost in relation to the project budget

14.5.9 Budgetary items

14.5.9.1 Provision for budgetary items in procurement documents shall as far as possible be avoided. Assumptions should rather be stated in the pricing data so that they can be priced and adjusted in terms of the contract, should these assumptions be incorrect. Where unavoidable, estimates of the likely costs may be included in the contract to cover identified work or services to be performed by a subcontractor appointed in terms of the contract.

14.5.9.2 No provision for contingencies or price adjustment for inflation shall be made in the pricing data or included in the contract price at the time that the contract is awarded or an order is issued.

Contingencies are not owned by the contract but are spread across the programme!

The stepped approach to approvals encourages the development of alternative ways of dealing with cost overruns

SIPDM requirements at Gate 8C and 8D

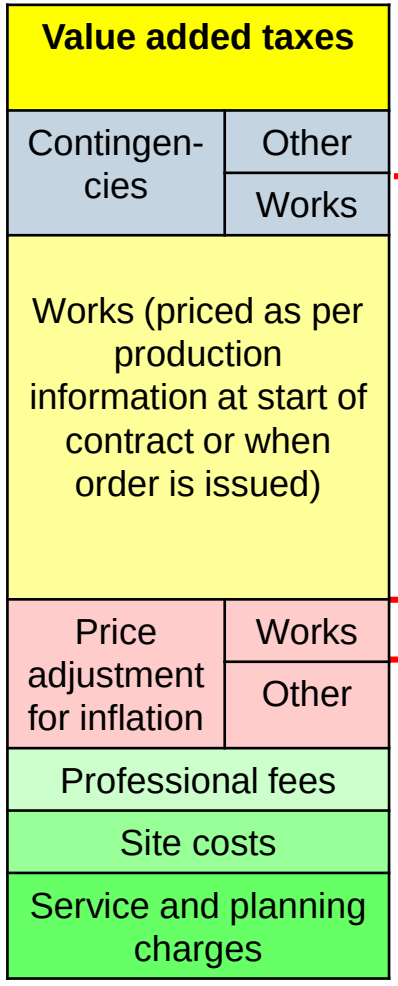
Control budget
(managed by project manager or programme manager)

What is the control budget?

What is due in terms of the contract?

What are the financial controls?

Step wise management of contingencies

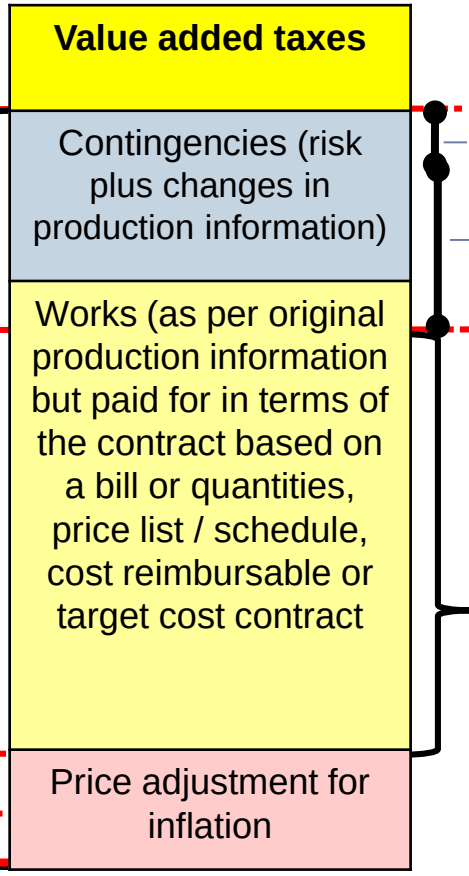


Portion 1 of budget overrun requiring approval

Amount due in terms of the contract

Budget for works

Portion 2 of budget overrun (not part of approvals)



> 20% approved as per procurement gate 8D and included in the annual report

≤ 20% approved as per procurement gate 8C

Total of the prices at the start of the contract or order

Amount due in terms of the engineering and construction contract
(managed by the contract manager)

Uploading of financial data

LOGO

[Name of Employer / Purchaser]

FS1: Financial data associated with a contract or an order issued in terms of a framework contract

. . . . . .

. . . . . .

Financial data associated with the contract or order

Component	Rand	Total
Total of the prices at the award of the contract or the issuing of the order	R	
Estimated price adjustment for inflation	R	
Contingency provision (%)	R	
Subtotal		R
Vat		R
Total of the prices		R

Recommendation for uploading on the financial system made by:

[name of person]

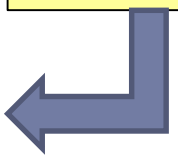
[Designation] **Signature:** **Date:**

Acceptance for uploading made by:

[name of designated person – see SCM policy]

[Designation] **Signature:** **Date:**

Approvals at gate 8C and gate 8D required to authorise the increasing of this this amount



Demand management through control budgets

Demand management: **6.6** Costs shall be proactively managed through the setting and proactive monitoring of control budgets for projects through the project planning, detailed design and site processes.

- **G0**: Project initiation
- **G1**: Infrastructure planning
- **G2**: Strategic resourcing
- **G3**:Preparation and briefing
- **G4**: Concept and viability
- **G5**: Design development
- **G6**: Design documentation
- **G7**:Works
- **G8**: Handover
- **G9:** Package completion

Budgeting – first estimate

Strategic brief includes:
- establish the **control budget** for the package, ownership costs and schedule for the package or series of packages

Concept report includes:
- establish the feasibility of satisfying the strategic brief for the package or series of packages within the **control budget** established during stage 3 and, if not, motivate a revised control budget

Design development report includes:
- confirm that the package or series of packages can be completed within the **control budget** or propose a revision to the **control budget**

Control budget may need to be adjusted to account for tender price at start of works and during the execution of the works to release contingencies which are not required

control budget: the amount of money which is allocated or made available to deliver or maintain infrastructure associated with a project or package, including site costs, professional fees, all service and planning charges, applicable taxes, risk allowances and provision for price adjustment for inflation

Changes delivery culture from "**pay for what is designed** / pay as you go" to "**deliver infrastructure within an agreed budget**"

What differentiates construction works from other categories?

Delivery management

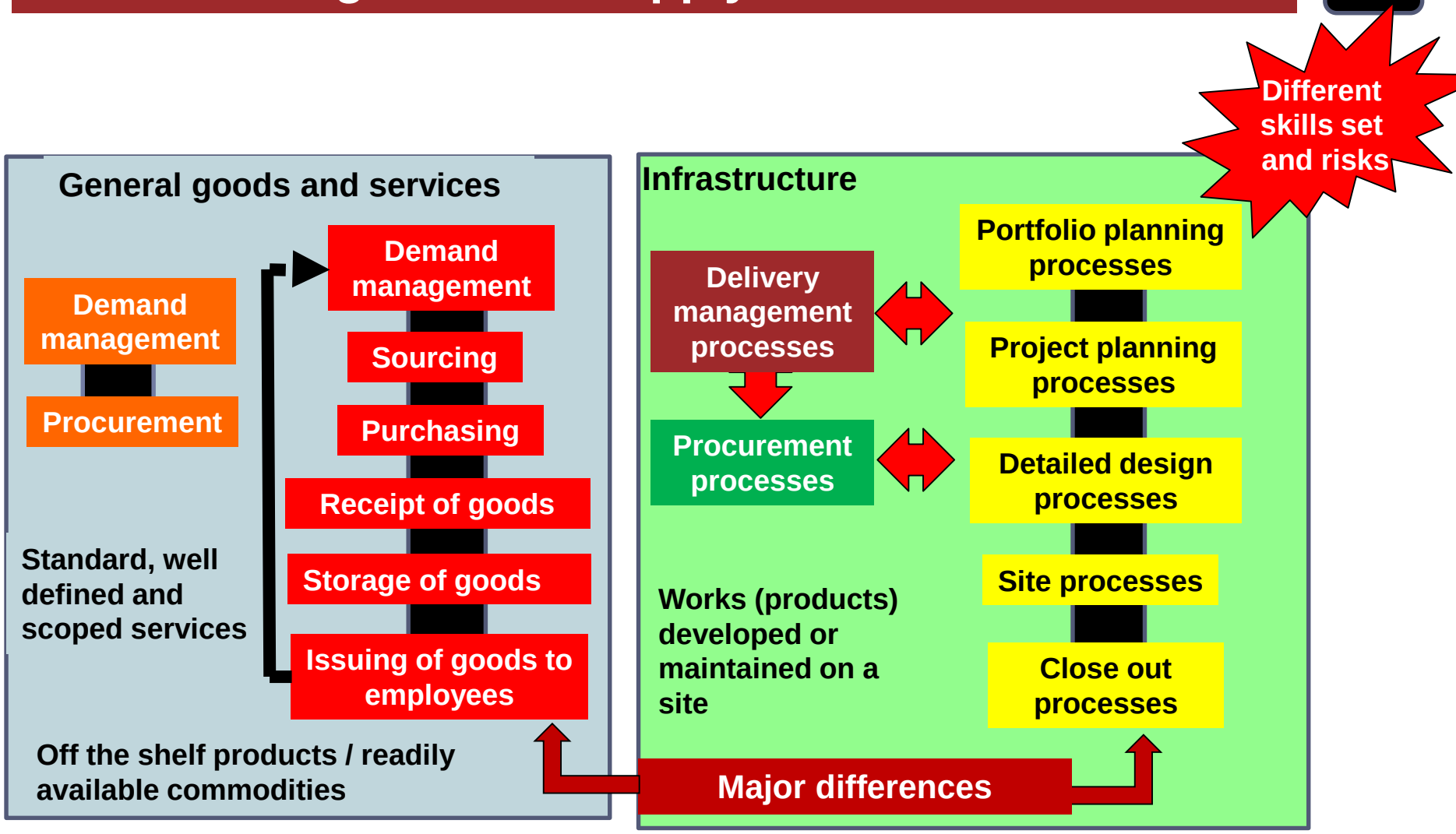
Infrastructure in the form of construction works may be purchased as existing functional entities or as a completed product. In most instances the acquisition of new construction works requires that products be developed on a site necessitating the procurement and delivery management of a network of suppliers, including subcontractors. Similarly, procurement and delivery management is required to alter, refurbish or rehabilitate existing construction works.

Delivery management is the organisation, administration, and supervision of processes which when combined into a comprehensive plan, provides the business and technical functions needed to successfully achieve the required project outcomes.

Procurement and delivery management outcomes in construction works projects are sensitive to the decisions made during the planning, design and execution of such projects as well as during procurement processes. Procurement yields the necessary resources to delivery projects while delivery management deals with the management of projects which collectively delivery strategic objectives and realise anticipated benefits.

Rigorous governance and quality management arrangements are required to create the business value and to minimize the risks associated with the delivery of new construction works and the alteration, refurbishment or rehabilitation of existing construction works so that objectives can be achieved with reasonable assurance and minimal surprises

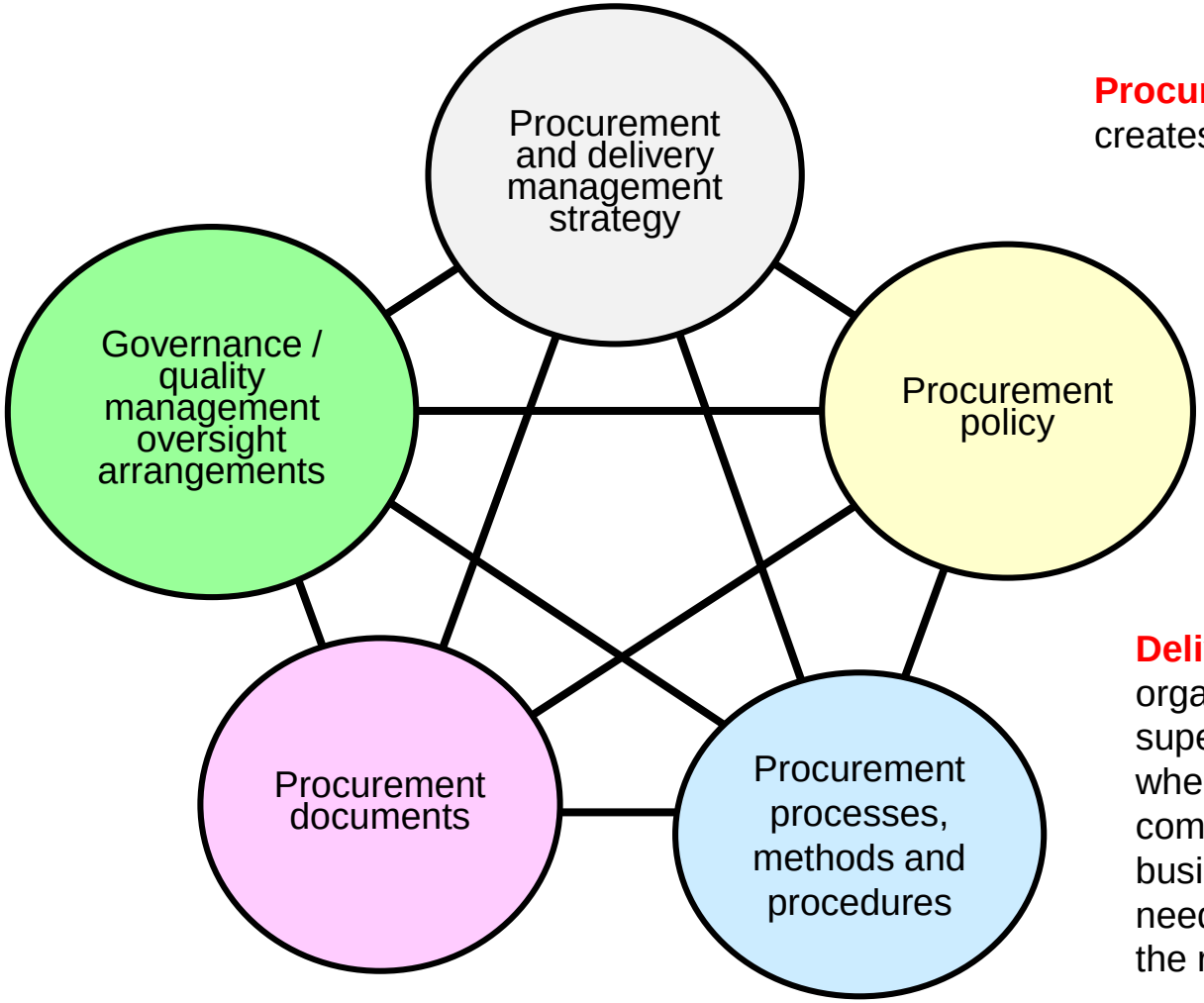
Differentiating between supply chains



Goods and services consumed by officials in the discharge of their duties

Infrastructure is required for officials to perform their duties or create or maintain economic infrastructure which provides improvements or efficiencies in services, production or export capabilities

Procurement system for infrastructure



Procurement is the process which creates manages and fulfils contracts

Delivery management is the organisation, administration, and supervision of processes which when combined into a comprehensive plan, provides the business and technical functions needed to successfully achieve the required project outcomes.

Role players in the delivery of infrastructure

Client team

Client

As **sponsor** initiates, commissions and pays for the project, owns the business case and leads the project

As **implementer**

- oversees
  - management of scope;
  - programmes to realise specific benefits;
  - projects which progress implementation;
  - budgets and cash flows;
  - procurement of implementation resources;
  - the payment of contracted persons and the accounting for expenditure;
  - compliance with legislation;
  - etc.
- provides client direction to and accepts the outputs of the delivery team
- leads engagements with stakeholders and utilities
- etc

Delivery team

Project manager – delivers the development and implementation of the project

Design team – integrates client's requirements into workable solutions

Supply team (manufacturer and constructor)– manufacture or provide new infrastructure or rehabilitate, refurbish or alter existing infrastructure

Support services – provide professional support services in areas such as health and safety, environmental compliance, cost control, geotechnical investigations, traffic studies etc.

Stakeholders

Treasury – budgets for and controls financial expenditure

Custodian - the caretaker of infrastructure throughout its lifecycle

End user – the beneficiary of the business case

Affected communities – the communities that are impacted upon by the projects

Regulators and utilities – have interfaces with the works

Delivery team (common roles and responsibilities)

One person may perform more than one role / function

Project manager delivers the development and implementation of the project and administers professional service contracts on behalf of the client

Procurement leader oversees the development of the procurement documents and manages the procurement process

Health and safety agent assumes statutory responsibilities imposed by the Construction Regulations and leads health and safety risk management compliance processes

Project leader leads and directs the design team in a non-technical role including the monitoring and integration of the activities, development and maintenance of a schedule, monitoring of progress and facilitation of the client acceptance of an end of stage deliverable

Manufacturer / Constructor manufactures or provides new infrastructure or rehabilitates, refurbishes or alters existing infrastructure

Lead designer establishes and refines the design approach or solution so that it achieves the required standards and is co-ordinated within the project team

Supervising agent confirms that the works are proceeding in accordance with the provisions of the contract

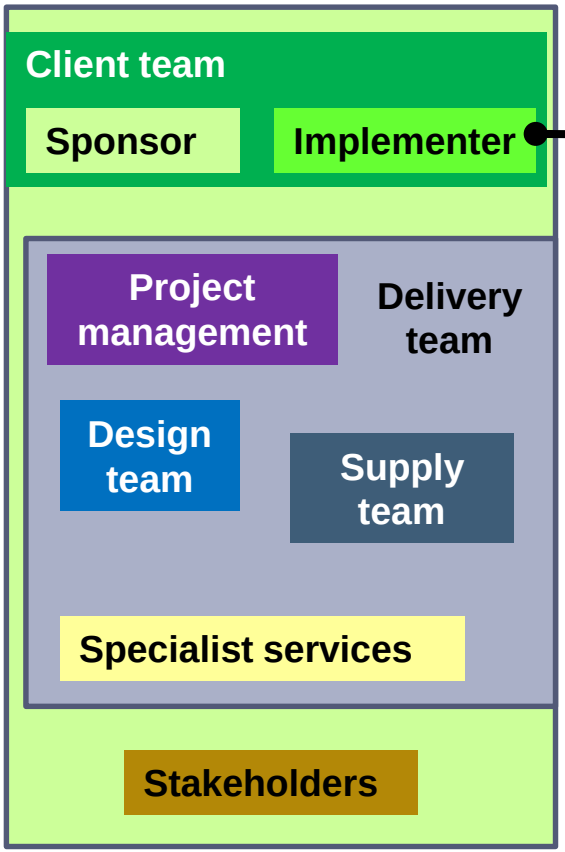
Cost controller provides independent and impartial estimation and control of the cost of constructing, rehabilitating and refurbishing infrastructure

Contract manager administers a contract or an order on behalf of the employer

Designer provides design or conditional assessment services

Delivery management options

Delivery management strategy

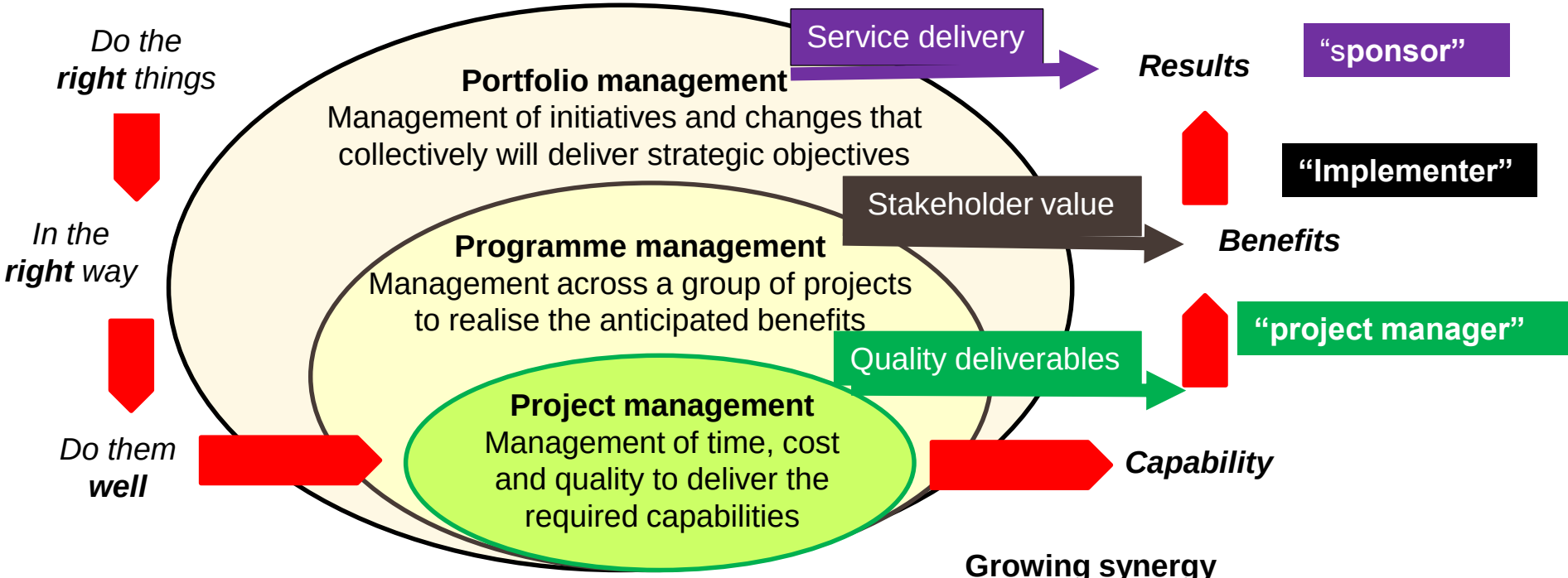


Delivery management responsibilities are usually assigned to a **delivery manager.**

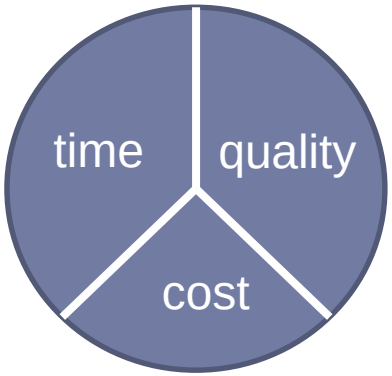
A **delivery manager:**

- sets the team up for successful delivery and removes obstacles or blockages to progress; and
- directs the project in such a manner that the value that is expected at the end of the project is achieved

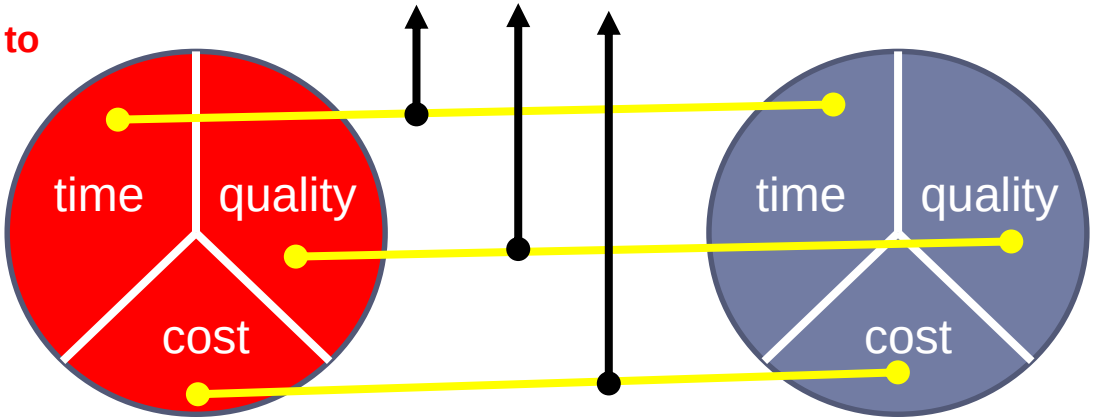
Project, programme and portfolio management



Project management is the **application of knowledge, skills, tools and techniques to project activities to meet project requirements**



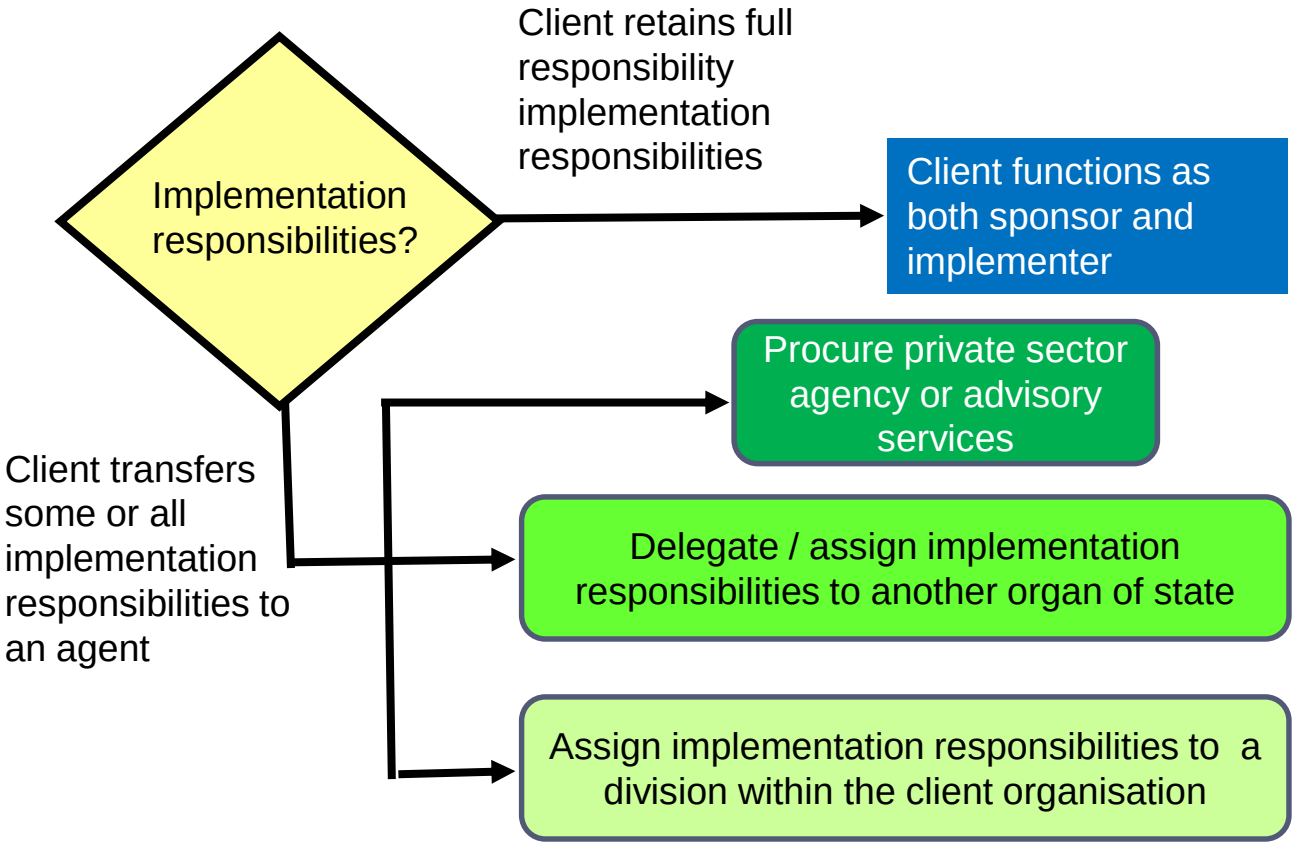
Growing synergy



Programme management is the process of managing multiple ongoing projects

Delivery management routes

A client needs the resources to perform the implementation function

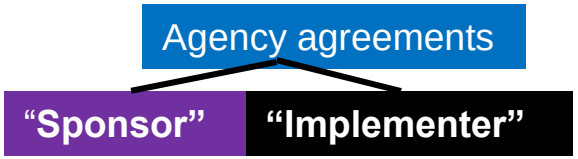


Institutional arrangements (agency agreement)

5.2 An agency agreement shall be entered into between organs of state where responsibilities for implementation are assigned or delegated. Such an agreement shall:

- establish principles and requirements relating to the recovery of costs associated with the rendering of the service, claims for payments made on an agency basis including the release of retention sums, the settling of claims for payment and the documentation required to accompany such claims; and

- include a service delivery agreement which as relevant sets out at least the following:



  - overall aims, objectives and priorities;
  - governance structures;
  - reporting requirements;
  - the scope of the services to be performed by the implementer during each financial year;
  - the projects and packages which are included in the infrastructure plan which are to be delivered and the time frames for doing so;
  - the roles and responsibilities of the parties to the agreement, including requirements for the engagement and management of stakeholders;
  - delegations to the implementer to accept end of stage deliverables on an agency basis;
  - contributing resources including human resources; and
  - dispute resolution procedures.

5.3 The agency agreement shall be reviewed annually and amended or revised as necessary.

5.4 The implementer's supply chain management system shall be used to procure goods or services or any combination thereof for infrastructure covered by the agency agreement

Framework agreements

framework agreement: an agreement between an organ of state and one or more contractors, the purpose of which is to establish the terms governing orders to be awarded during a given period, in particular with regard to price and, where appropriate, the quantity envisaged

order: an instruction to provide goods, services or any combination thereof under a framework agreement

14.3.4 Orders:

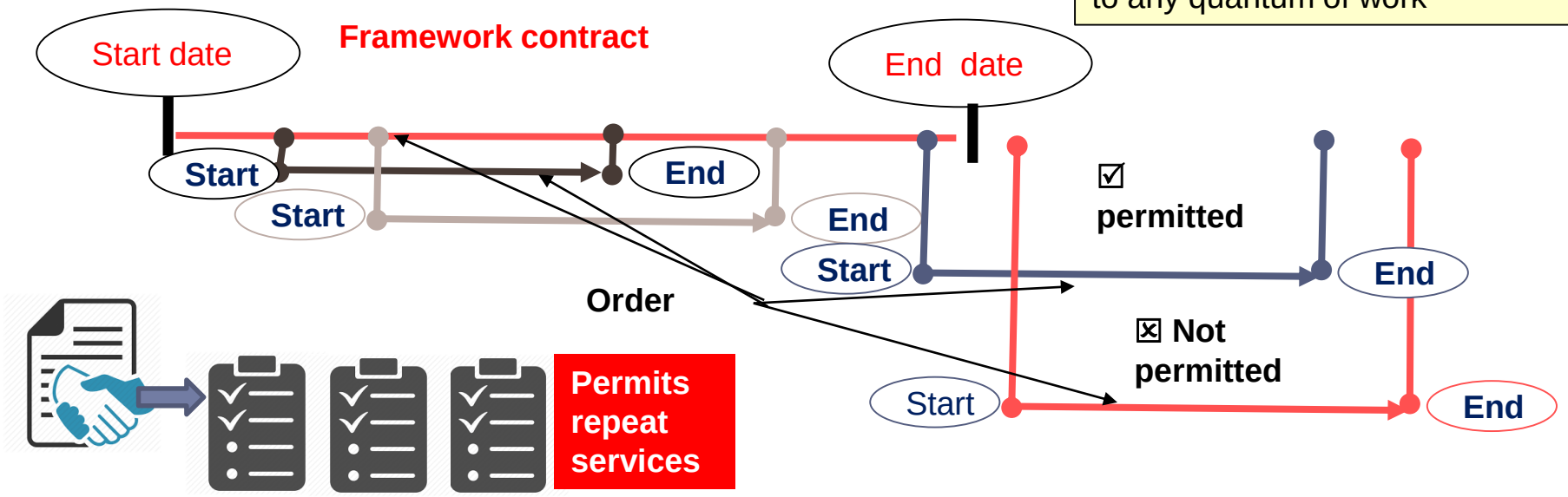
- shall cover only goods or services or any combination thereof, **falling within the scope of work** associated with the agreement;
- may **not be issued after the expiry of the term of the framework agreement**; and
- may **be completed even if the completion of the order is after the expiry of the term**

Framework agreements

Dictionary definition

- *Sum of money for which something is purchased*
- The *actual cost of acquiring something calculated according to some specific measure* or *an estimate of what the transaction is worth*

Allows the employer to procure on an as-instructed basis (call offs) over a set term without committing to any quantum of work



Shift in thinking regarding works

Current paradigm

Client appoints a professional team to design the works

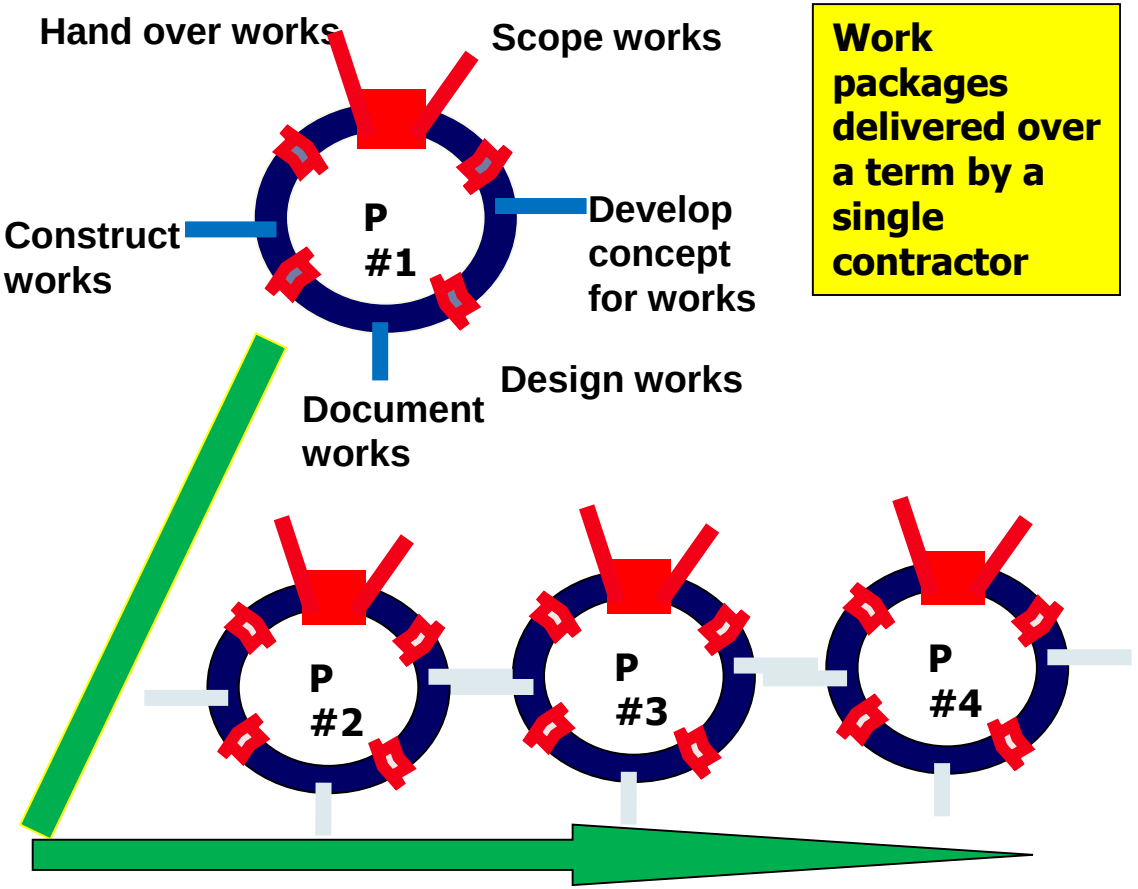
Open tenders are called once the production information has been finalised by the professional team

(production information which provides the detailing, performance definition, specification, sizing and positioning of all systems and components **enabling either construction** (where the constructor is able to build directly from the information prepared) **or the production of manufacturing and installation information for construction**)

Contractor prices the production information

Contractors are contracted on the basis of a bills of quantity for a single project (which may or may not include budgetary items to cover aspects of the works which have not been finalised)

Procuring a particular works



Work packages delivered over a term by a single contractor

Procuring a construction service over a period of time

Short-term "hit-and-run" relationships focused on one-sided gain

⇨ **Culture change**

Long-term relationships focused on maximising efficiency and shared value

Principles associated with the putting in place of framework agreements

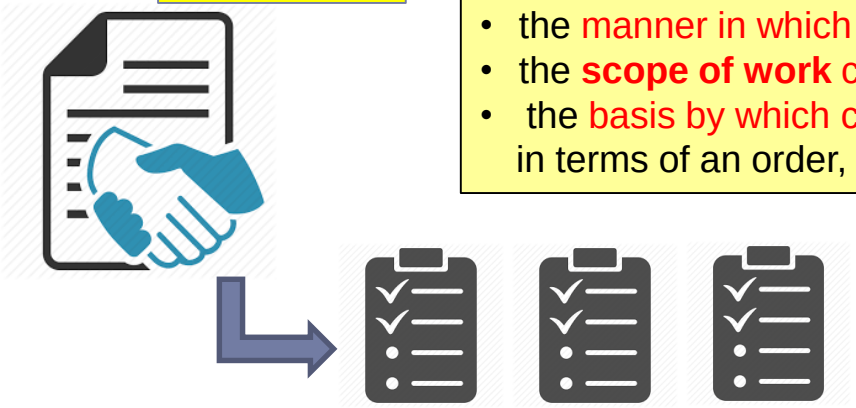
14.3.1a) Framework agreements may be entered into with contractors by inviting tender offers to **enter into a suitable contract** for the required work, using stringent eligibility and evaluation criteria to ensure that **contracts are entered into with only those contractors who have the capability and capacity** to provide the required goods, services or works

14.3.2 The **term of a framework agreement is** not to exceed:

- **three years** in the case of all organs of state other than a major public entity, a national government business enterprise or a provincial government business enterprise; or
- **four years** in the case of a major public entity, a national government business enterprise or provincial government business enterprise

14.3.3 Framework agreements that are entered into are **not to commit an organ of state to any quantum of work beyond the first order**, or **bind the employer to make use of such agreements** to meet its needs. The employer **may approach the market** for goods or services or any combination thereof, whenever it considers that **better value** in terms of time, cost and quality may be obtained.

Zero value contract



Framework agreements that are entered need to set out:

- the **terms** which are applicable for the term of the contract;
- the manner in which **orders** are instructed;
- the **scope of work** covered by the agreement; and
- the basis by which contractors will be **remunerated** for work performed in terms of an order, if and when such an order is issued.

Value created through issuing of orders which are read together with the framework contract

Framework agreements covering the same scope of work

Clause **14.3.1b)** permits a limited number of framework agreements to be entered into based on projected demand and geographic location

Can have one framework agreements for a defined scope Ideally not more than 3 but certainly not more than 5

14.3.5 The issuing of orders with a number of framework contractors covering the same scope of work may be made **with and without requiring competition** amongst framework contractors. Where competition is required amongst framework contractors, it needs to be conducted in a non-discriminatory manner such that competition is not distorted.

14.3.6 Competition amongst framework contractors for orders need to take place where there is **no justifiable reason for issuing an order to a particular framework contractor** such as:

a) the framework contractor provided **the most economical transaction** when the financial parameters included in the contract are applied and has the capacity to deliver;
b) the required goods, services or works **cannot technically or economically be separated from another contract or order** previously performed by a specific contractor;
c) the service or works being instructed **are largely identical to work previously executed** by that contractor;
d) the value of the order is less than the threshold for the **quotation procedure**;
e) the **schedule** for delivery necessitates that each of the framework contractors be issued with orders on a continuous basis; or
f) capacity to execute the order;

The inviting of quotations from amongst framework contractors covering the same scope of work is not the default option.

Used only where there are no justifiable reasons for not doing so

NB only enter into a limited number of framework agreements covering the same scope of work

Use of a framework agreement by another organ of state

Use of an organ of state's framework agreement by another organ of state

An organ of state may request in writing to make use of one or more framework contracts entered into by another organ of state. Such a request, signed by the accounting officer or accounting authority of that organ of state, shall:

a) outline the scope and anticipated quantum of work associated with the work that is required;
b) provide a motivation for the use of the framework agreement; and
c) detail the benefit for the state to be derived from making use of the framework agreement.

The accounting officer or accounting authority may approve a request made to make use of the organ of state's framework contract, conditionally or unconditionally, if:

a) the framework agreement was put in place following a competitive tender process;
b) confirmation is obtained that the framework contract is suitable for the intended use and the required goods, services and works fall within the scope of such contract;
c) the framework contractor agrees in writing to accept an order from that organ of state;
d) the organ of state undertakes to pay the contractor in accordance with the terms and conditions of the agreement; and
e) the term of the framework agreement does not expire before the issuing of the required orders.

Can include the following in the contract:

10.1	The Employer is: a) XXXX as represented by . . . . . . Address . . . . . ; or b) YYYYY as named in and represented by the person as stated in a Package Order.

Control framework for framework agreements

Stage 2	Strategic resourcing
Gate 2	Approved delivery and / or procurement strategy

Framework agreement in place?

no

yes

Is there more than one framework contract covering the same scope of work?

no

Issue order

yes

Are there justifiable reasons for not inviting quotations?

yes

Confirmation of reasons for not inviting quotations

FG1

no

Invite quotations from all framework contractors

Activity 1: Establish what is to be procured

PG1

Activity 2: Decide on procurement strategies

PG2

Activity 3: Solicit tender offers

PG3

PG4

Activity 4: Evaluate tender offers

PG5

PG6

Activity 5: Award contract

PG7

Activity 6: Administer contract and confirm compliance with requirements

Approval of procurement documents

FG2

Confirmation of budget

FG3

Authorisation for issuing of order

FG4

PG8 Approval for:

A – waiving of penalties / damages

B – referral of disputes

C – changes to price or time above a margin

D – exceeding authorised price or time

E – cancelation or termination

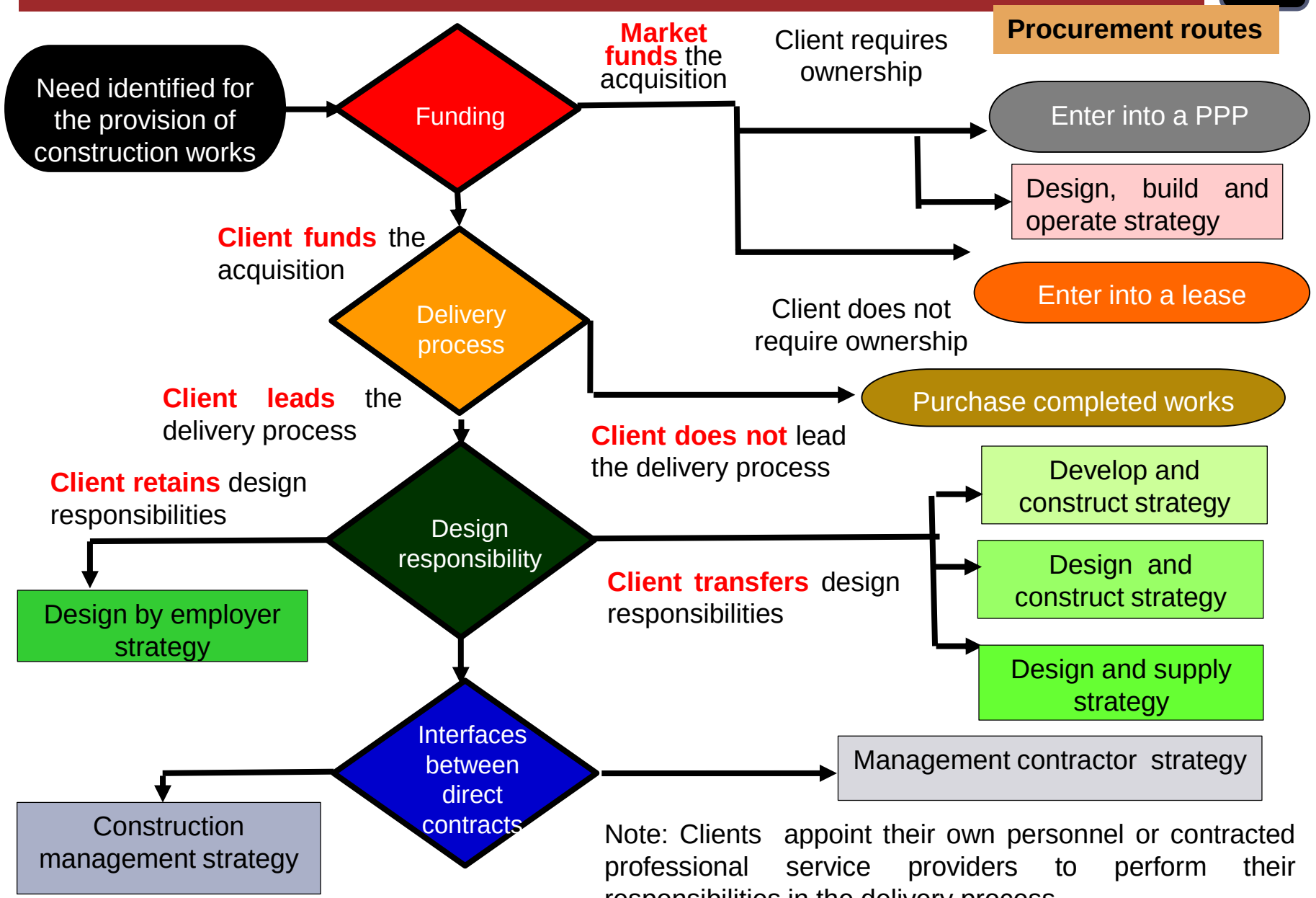
F – contract amendment

PG8 A-F

Framework gates

Activity		Key action	Person assigned responsibility to perform key action
1 FG1	Confirm justifiable reasons for selecting a framework contactor where there is more than one framework agreement covering the same scope of work	Confirm reasons submitted for not requiring competition amongst framework contractors or instruct that quotations be invited	*[designated person]*
3 FG2	Obtain approval for procurement documents	Grant approval for the issuing of the procurement documents	*[designated person]*
4 FG3	Confirm that budgets are in place	Confirm that finance is available so that the order may be issued	*[designated person e.g. programme manager or financial director]*
6 FG4	Authorise the issuing of the order	If applicable, review evaluation report and confirm or reject recommendations. Formally accept the offer in writing and issue the contractor with a signed copy of the order	Authorised person

Common procurement route



Note: Clients appoint their own personnel or contracted professional service providers to perform their responsibilities in the delivery process

Procurement strategy

Organization of work packages into contracts

How to secure financial offers and to remunerate contractors

How to solicit tender offers

Procurement strategy is the
- **packaging**
- **contracting**
- **pricing**, and
- **targeting**

strategy and **procurement procedure** for a particular procurement

Nature of the relationship between the parties

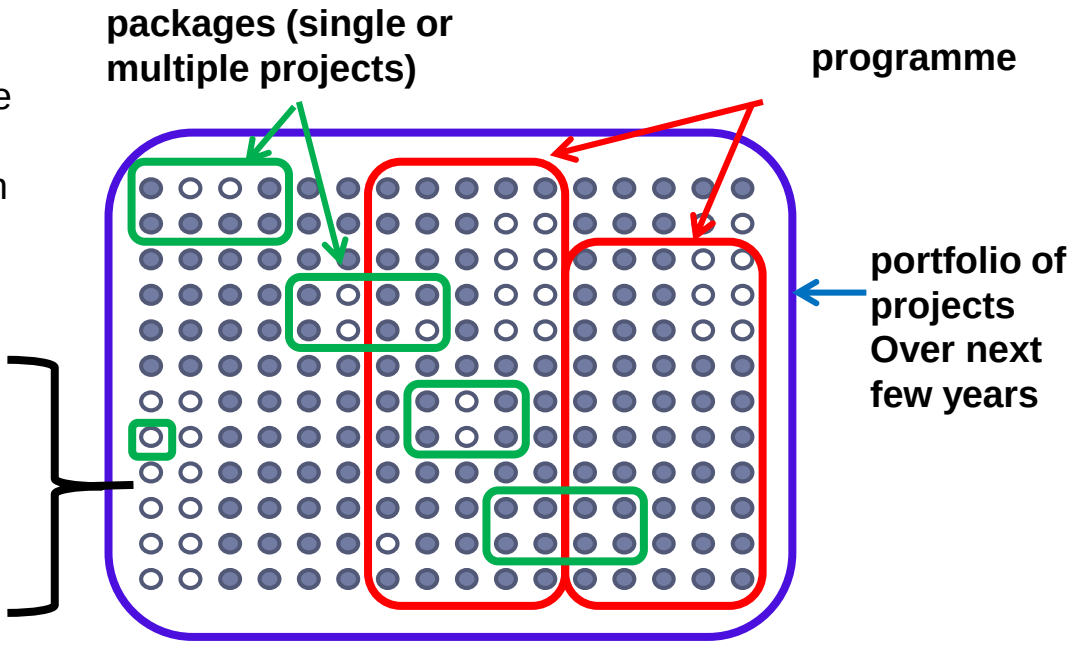
Procedures for promoting secondary procurement objectives

There are a number of different approaches to procurement each of which can result in different outcomes. **Procurement strategy** is all about the choices made in determining what is to be delivered through a particular contract, the procurement and contracting arrangements and how secondary procurement objectives are to be promoted.

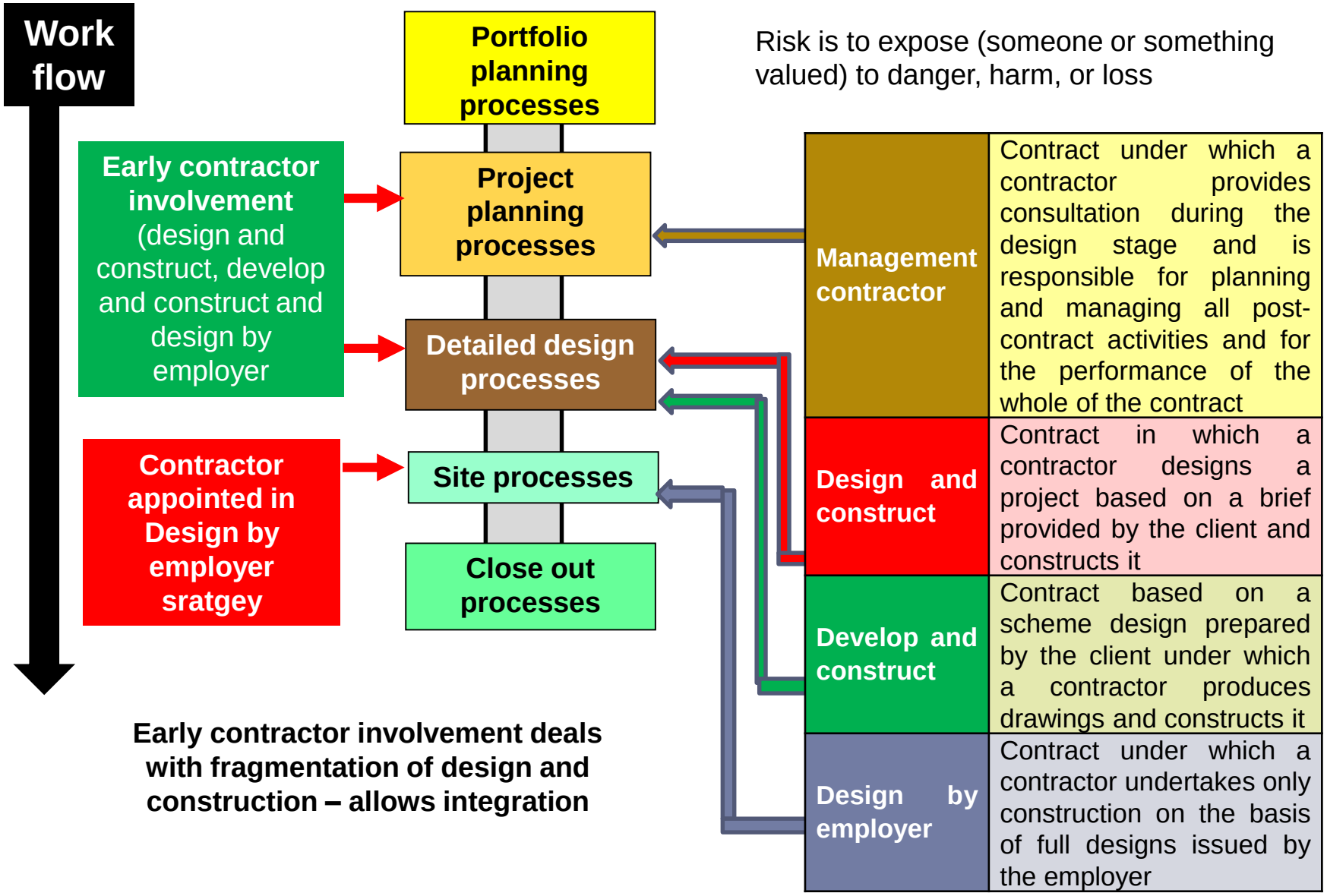
Package = works which have been grouped together for delivery under a single contract or a package order issued in terms of a framework agreement

○ Maintenance project

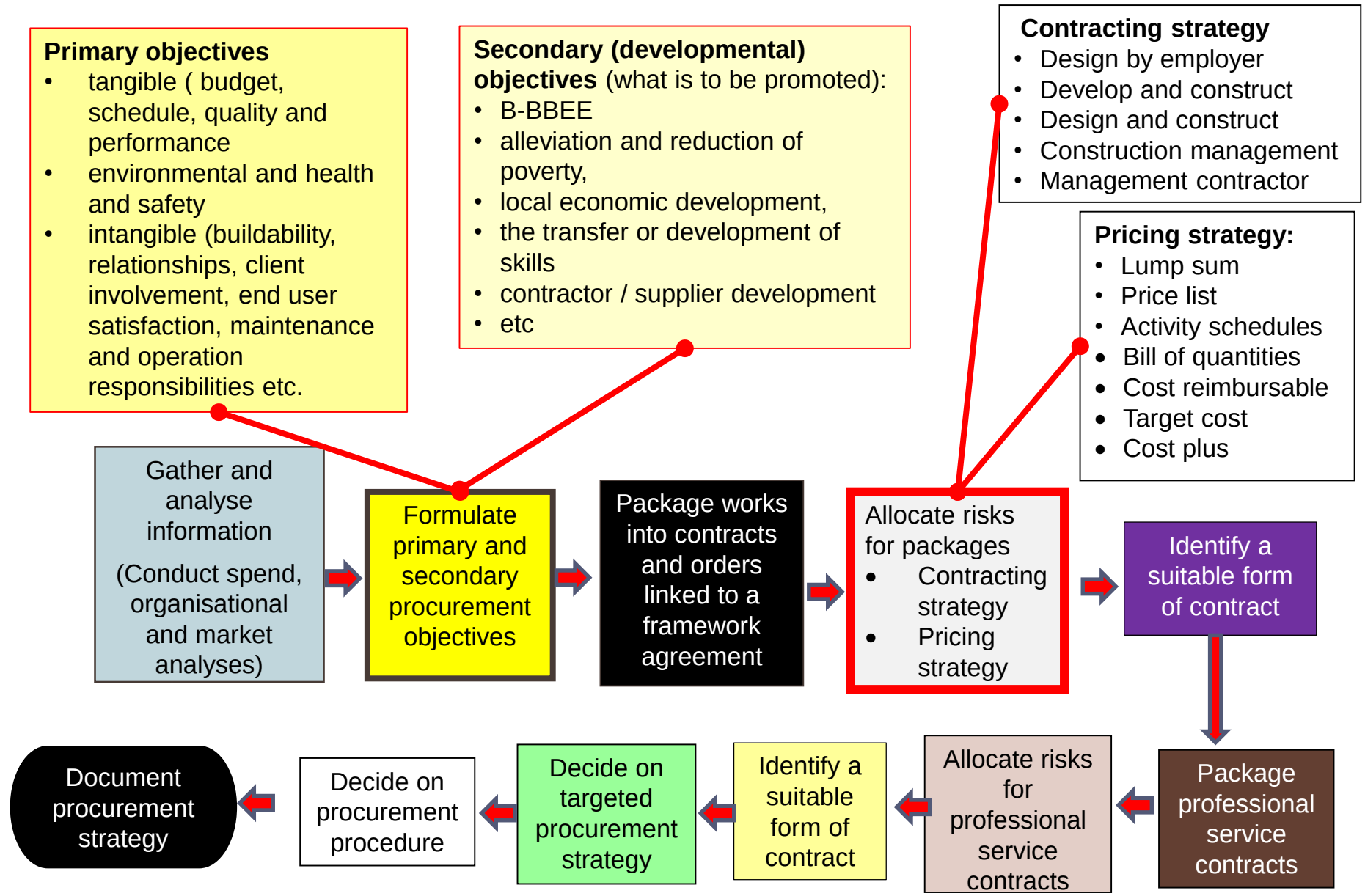
● Construction project



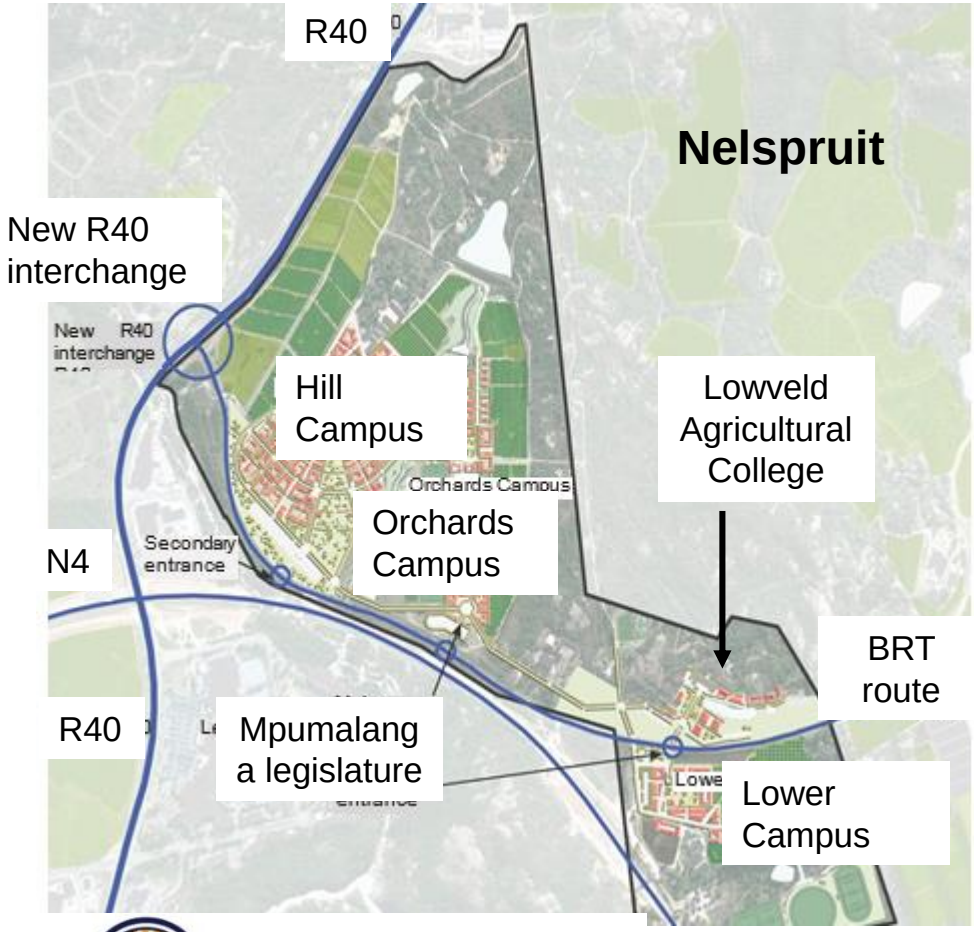
Allocation of responsibilities (risks) between Employer and Contractor



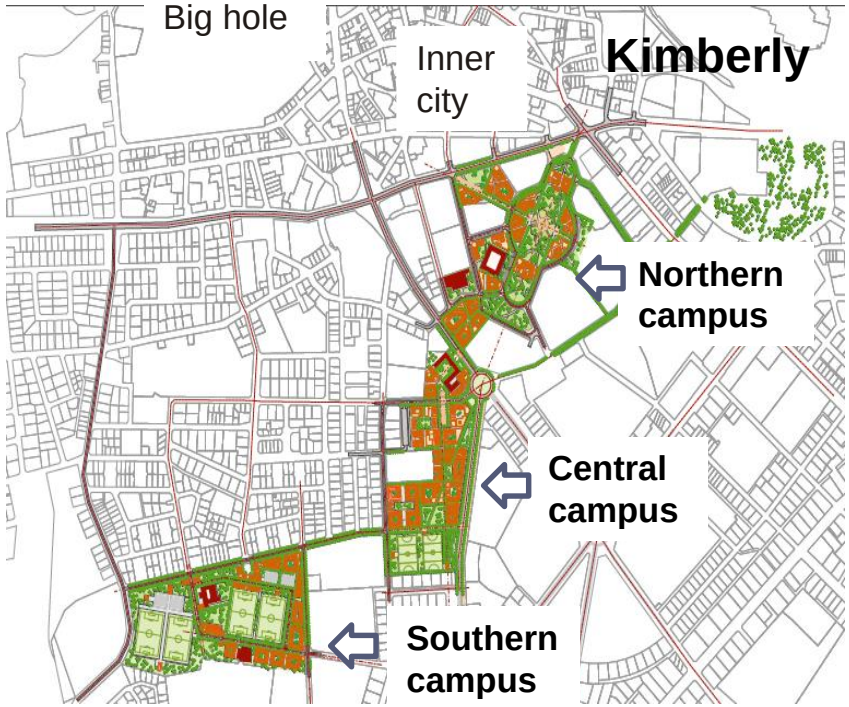
Framework for developing a procurement strategy



Case study – new universities (SIPS 14)



- Client = DHET (sponsor)
- Implementing agent
  - University of the Witwatersrand (Nov 2011 – 31 March 2016)
  - Sol Plaatje University and University of Mpumalanga



UNIVERSITY OF MPUMALANGA

Pilot project

Wits adopted and implemented the draft National Treasury Standards for a Construction Procurement System and an Infrastructure Delivery Management System issued for public comment during November 2012 implemented (i.e. the base documents for the SIPDM)

Case study – budgets and timelines

- Wits appointed to project manage and resource the spatial and physical planning and development for two new universities – November 2011
- Interim university councils appointed – July 2013
- President announces seats for universities – September 2013
- **First intake of students** – January 2014
- Final university council appointed – August 2014
- **Second intake of students** – January 2015
- **Third intake of students** – January 2016
- Wits hands over the management of the project to the new universities' staff – 31 March 2016

No procurement before seats announced!

Financial year	R m
2011/12	R50 m
2012/13	R81,3 m
2013/14	R117,1 m
2014/15	R 383 m
2015/16	R 1.32b
2016/17	R1.3b

Client team

DHET – initiates, commissions and pays for the project

Wits Director Campus Planning and Development /
DHET project management core team (full time and part time contracted resources)

- Programme manager
- Project manager
- Spatial development planner
- Engineering infrastructure specialist
- Procurement specialist
- Social development facilitator
- ICT specialist

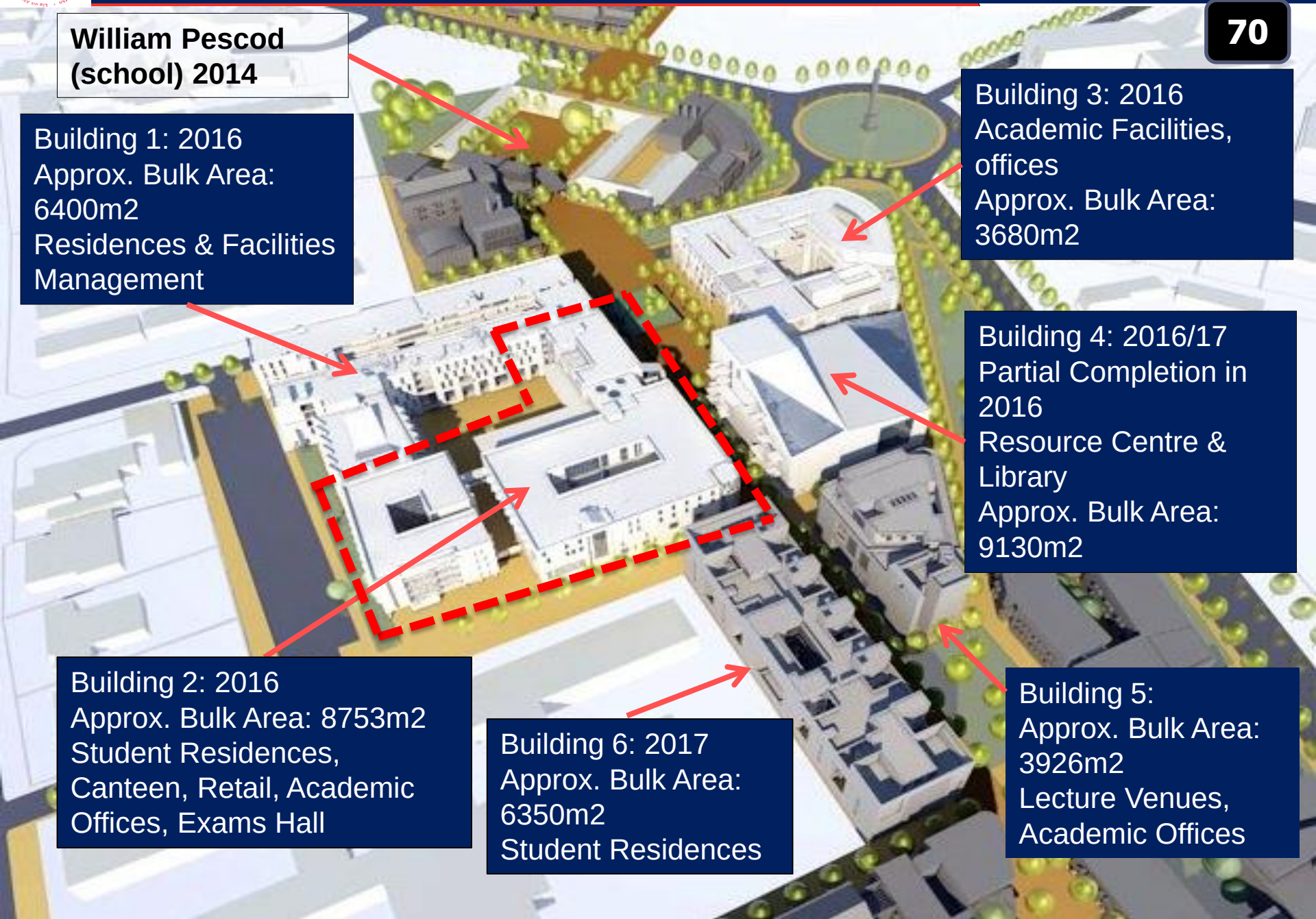
Delivery team

Project manager – delivers the development and implementation of the project

Design team – integrates client's requirements into workable solutions

Supply team (manufacturer and constructor)– manufacture or provide new infrastructure or rehabilitate, refurbish or alter existing infrastructure

Sol Plaatje University – Central Campus

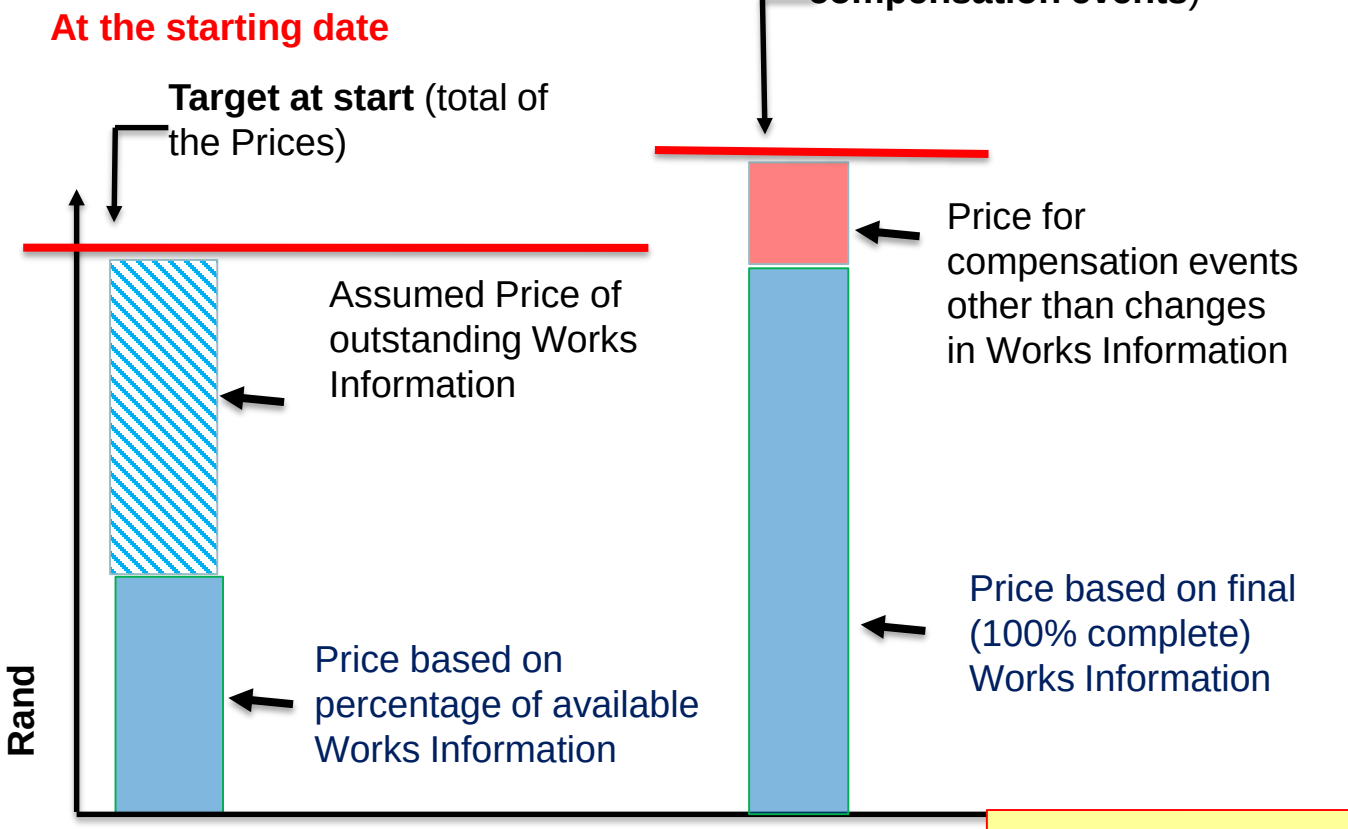


Sol Plaatje University – Central Campus

Aerial View of Construction Site

Sol Plaatje University – Central Campus

Fast track construction – target contract



Construction commenced during last half of October 2014 when about 30% of the Works Information was complete
5% contingency

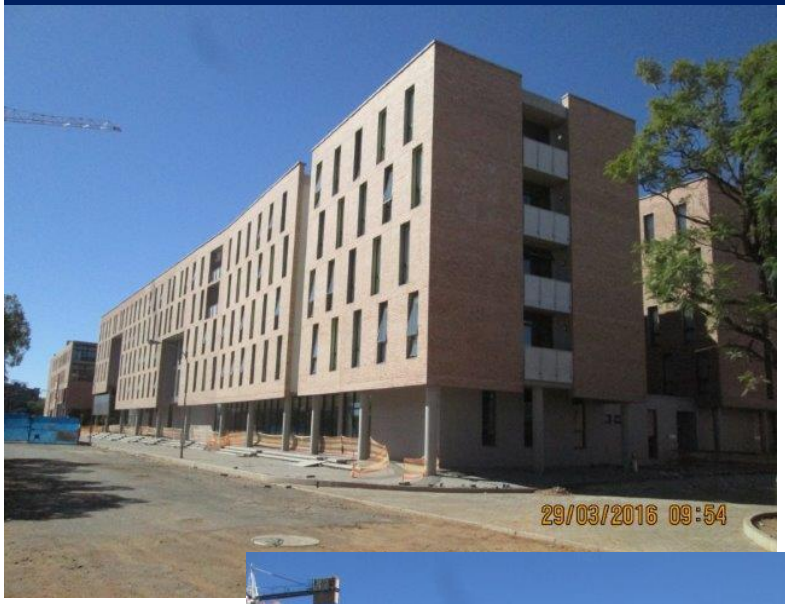
Kimberley
Contractor 1: R195m
Contractor 2: R184m
Contractor 3: R142m

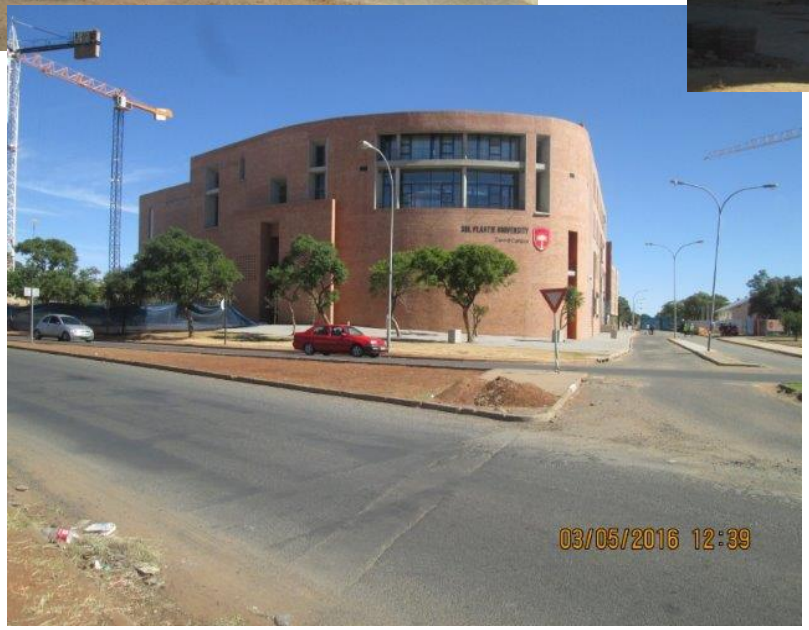
Nelspruit
Contractor 1: R172m
Contractor 2: R 92m

DHET has established cost norms for academic buildings based on the assignable space i.e. the amount of space that can be used for people or programmes.

Professional fees ~16%
All projects delivered within the control budget very close to the cost norms in time for 2016 academic year save where a structural failure occurred

Buildings completed for the start of the 2016 academic year





On time within budget and to the right quality

This was achieved within the constraints of the public sector SCM constraints!

Value for money concept

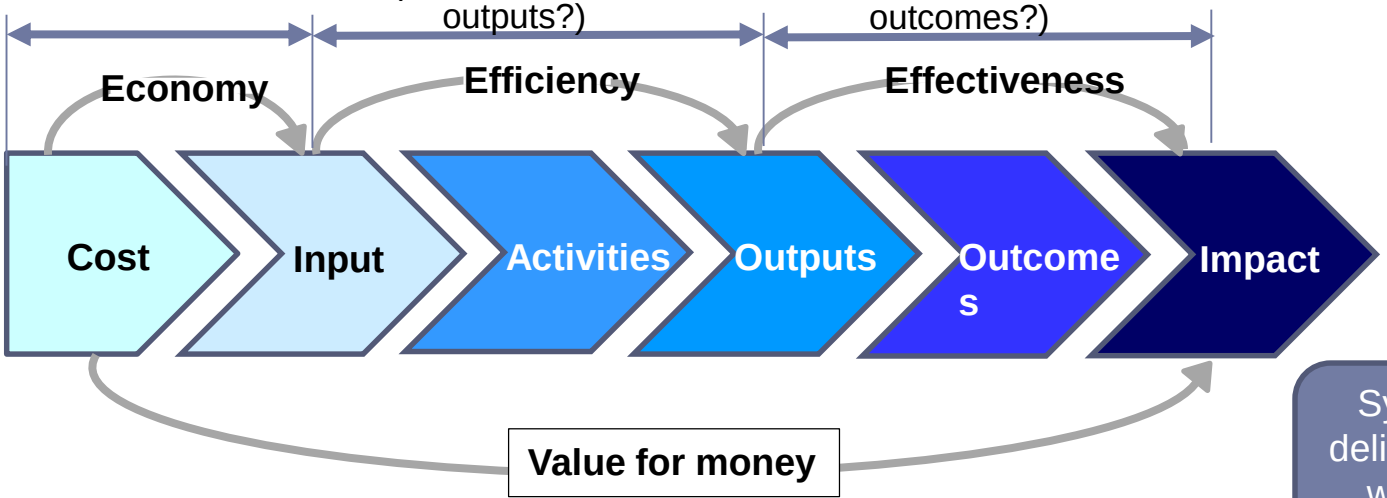
Value for money may be regarded as **the optimal use of resources to achieve the intended outcomes**. Value for money is about striking the balance between three "E's" economy, efficiency and effectiveness" whilst being mindful of a fourth "E" – equity.

Linkages with value for money

Planning
(what inputs are required to achieve a desired outcome?)

Implementation
(how well are inputs converted into outputs?)

close out
(how well do outputs achieve desired outcomes?)



Gap between what is planned and what is delivered puts value for money for a project at risk

System designed to deliver value for money whilst reducing the scope for corruption

Equity Considerations
(what can be leveraged through projects)

Standard for Infrastructure Procurement and Delivery Management:

- Provides a control framework for the planning, design and execution of infrastructure projects
- Provides a control framework for infrastructure procurement
- Establishes minimum requirements for supply chain management and infrastructure procurement

Organs of state need to establish their SCM policies which assign responsibilities for approving / accepting deliverables and provide delegations for awarding contracts and issuing orders

SIPDM provides tools and techniques for performance improvement in delivering value for money

Value for money concept

Economy
(what inputs are required to achieve a desired outcome?)

Negatively impacted on by:
- **optimism bias** - the human mind's cognitive bias in presenting the future in a positive light; and
- **strategic misrepresentation** – behaviour that deliberately underestimates costs and overestimates benefits for strategic advantage usually in response to incentives during the budget process.

Efficiency
(how well are inputs converted into outputs?)

Positively impacted upon by procurement strategy and tactics
Negatively impacted on by the inability to:
- manage risk, multiple projects against an annual budget, interference and scope creep
- create an enabling environment within which delivery is to take place

Effectiveness
(how well do outputs achieve desired outcomes?)

Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6	Stage 7	Stage 8	Stage 9
Infrastructure planning	Strategic resourcing	Preparation and briefing	Concept and viability	Design development	Design documentation	Works	Handover	Package completion
Portfolio planning		**Package planning**		**Detailed design**		**Site**		**Close out**
Planning				**Implementation**				

Gateway review of major capital projects

Control budget set

Outturn cost

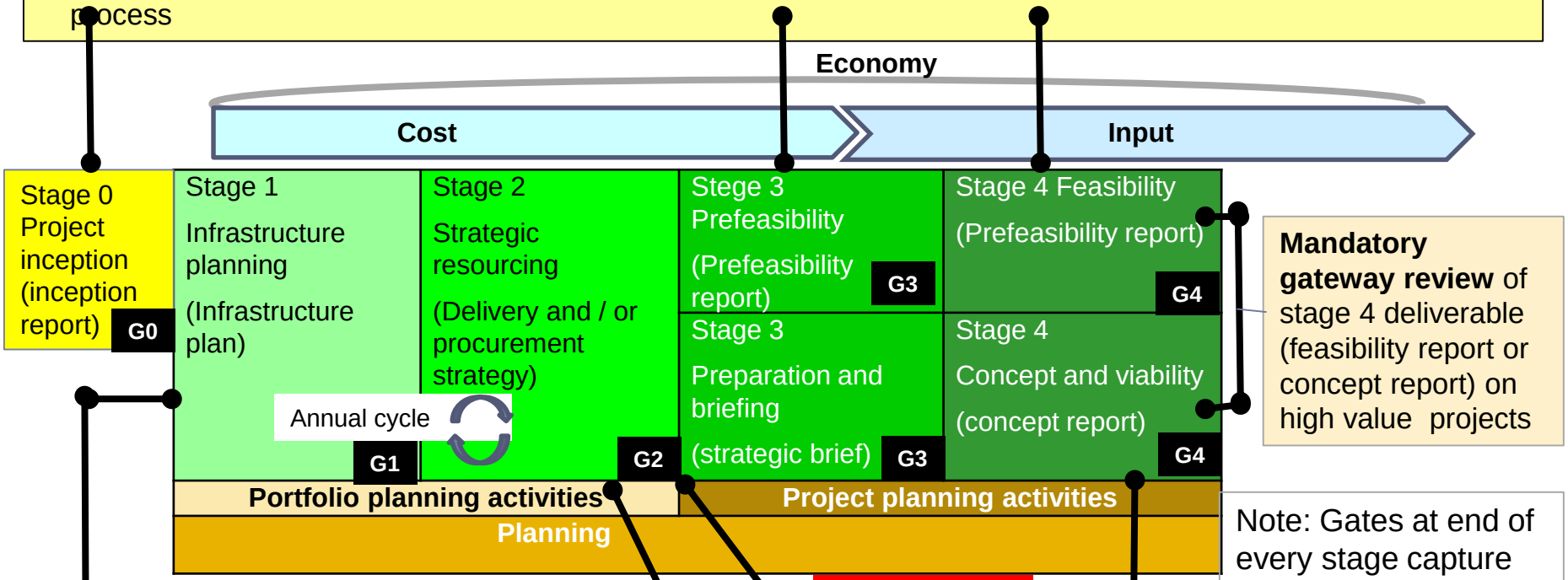
Value for money (optimal use of resources to achieve the intended outcomes)

SIPDM establishes an enabling environment within which to implement procurement strategies and tactics and manage risks

Control framework for planning

Approval of high-value national and provincial major capital projects

- Cabinet or the executive council approves inception report (stage 0) and feasibility / concept report (stage 4)
- Minister or the MEC approves prefeasibility report
- Relevant treasury makes recommendations / comments which are taken into account during the approval process



Mandatory gateway review of stage 4 deliverable (feasibility report or concept report) on high value projects

Demand managed through:

- service life plans based on an assessment of current performance against desired levels of service or functionality which reflect life cycle costs
- Infrastructure plans which summarise infrastructure plans and provide a credible forecast of current and net demand for services or functionality

Preliminary control budget set during stage 3

A strategic approach to delivery and procurement above the project level

Confirm control budget set at end of stage 4

Note: Gates at end of every stage capture time, cost and scope as projects are progressively developed.
These gates not only form part of a quality management system but also provide an auditable system

Questions

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

SCHOOL OF CONSTRUCTION ECONOMICS & MANAGEMENT

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Queries - Email: cpo@treasury.gov.za

More information
http://ocpo.treasury.gov.za/About_Us/Strategic_Areas/Pages/Infrastructure-Procurement.aspx

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