



higher education
& training
Department:
Higher Education and Training
REPUBLIC OF SOUTH AFRICA



Collaboration through framework agreements

Dr Ron Watermeyer

DEng (Wits), Hon.FSAICE, FICE, FIStructE, FSAAE

Core member of the DHET MIF Support Team

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What is collaboration?

The action of working with someone to produce something

Collaboration is the process of two or more people or organizations working together to complete a task or achieve a goal.

Collaboration between individuals is relatively common but transitioning this to collaboration between organisations is more complex

Organisational dimension

Relational dimension

Collaboration skills enable people within an organization (or outside an organization) to engage with each other productively and efficiently.

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What is procurement ?

Procurement is the process which creates, manages and fulfils **contracts**

There are commonly 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, how the market is to be approached 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.**

Standard forms of contract can be drafted around significantly different objectives and principles e.g.

master – servant relationship or **collaboration between two experts**

Conditions of contract are *“terms that collectively describe the rights and obligations of contracting parties and **the agreed procedures for the administration** of their contract”.*

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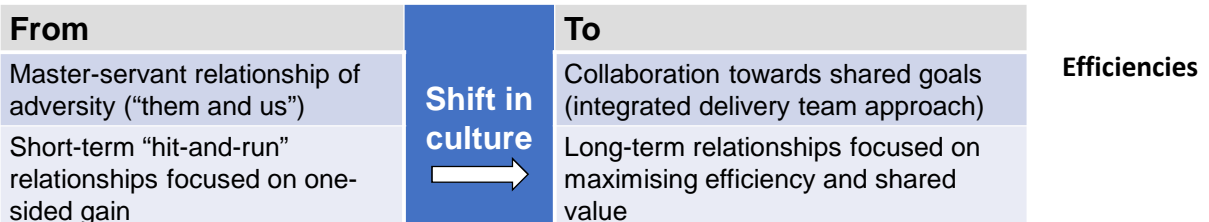
Why collaborate in contracts?

ISO 31000 defines risk as the *“effect of uncertainty on objectives.”*

A “collaborative approach” allows the parties to negotiate both value-and-cost efficient solutions in relation to these risks..



Risk taking is necessary in infrastructure. 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.**



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Collaborative contracting

Collaboration works by softening the boundaries between the parties and then integrating their capabilities, functions and activities to produce a better outcome for all. Integration does not occur naturally

Important collaborative contracting tools

- Framework agreements/contracts
- Target cost contracts

Collaborative contracting – collaboration towards (integrated delivery team approach / risk sharing) (us)

- **Open book approaches** to the costing of changes due to risk events
- **Pricing structures** that align payments to results and **reflect a balanced sharing of performance risk**
- Deal with delays and disruptions efficiently and effectively, based on the belief that **collaboration** and **teamwork** across the whole supply chain optimises the likely project outcomes

Collaborative working **is not a solution in itself**. It is a structured means of **enhancing team performance and value-added returns from investment**

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Traditional contracting

Process of delivery

Portfolio planning processes

Contract planning processes

Detailed design processes

Site processes

Close out processes

Appoint discipline specific consultants on a percentage of construction fee basis

Consultant designs the works
Tenders called for to appoint a contractor using a bill of quantities

Contractor constructs the works

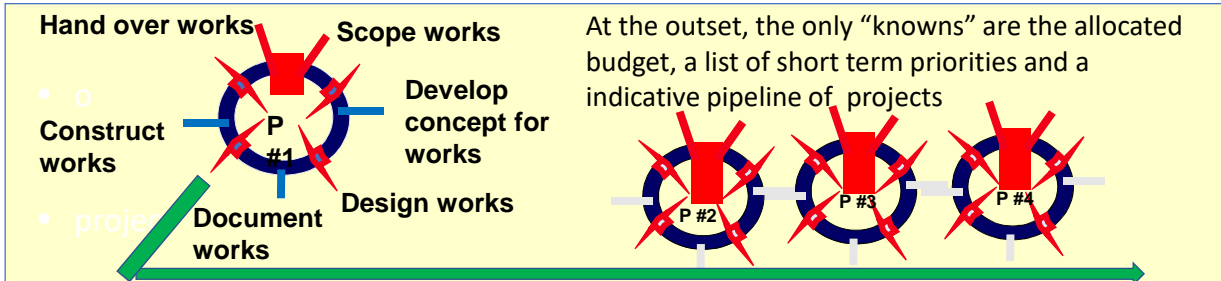
Satisfied with time, cost and quality outcomes?

Traditional contracting – master / servant relationship (adversarial) (them and us)

- seeks to “**off load**” considerable risks on the supply chain through standard prescriptive terms
- Transfer of **risk is priced** by contractors and incorporated into their tender sums

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Long term relationships



At the outset, the only “knowns” are the allocated budget, a list of short term priorities and a indicative pipeline of projects

Key question: How do you translate “unknowns” to “knowns” within a procurement system so that the work can be priced?

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Price based pricing strategies

- Contractor's prices build up :
- General items
 - Construction (work) content
 - Overheads
 - Risk allowance
 - Profit

Lump sum – fixed amount for the works

Price list - Lump sum with Client at risk for changes in quantities

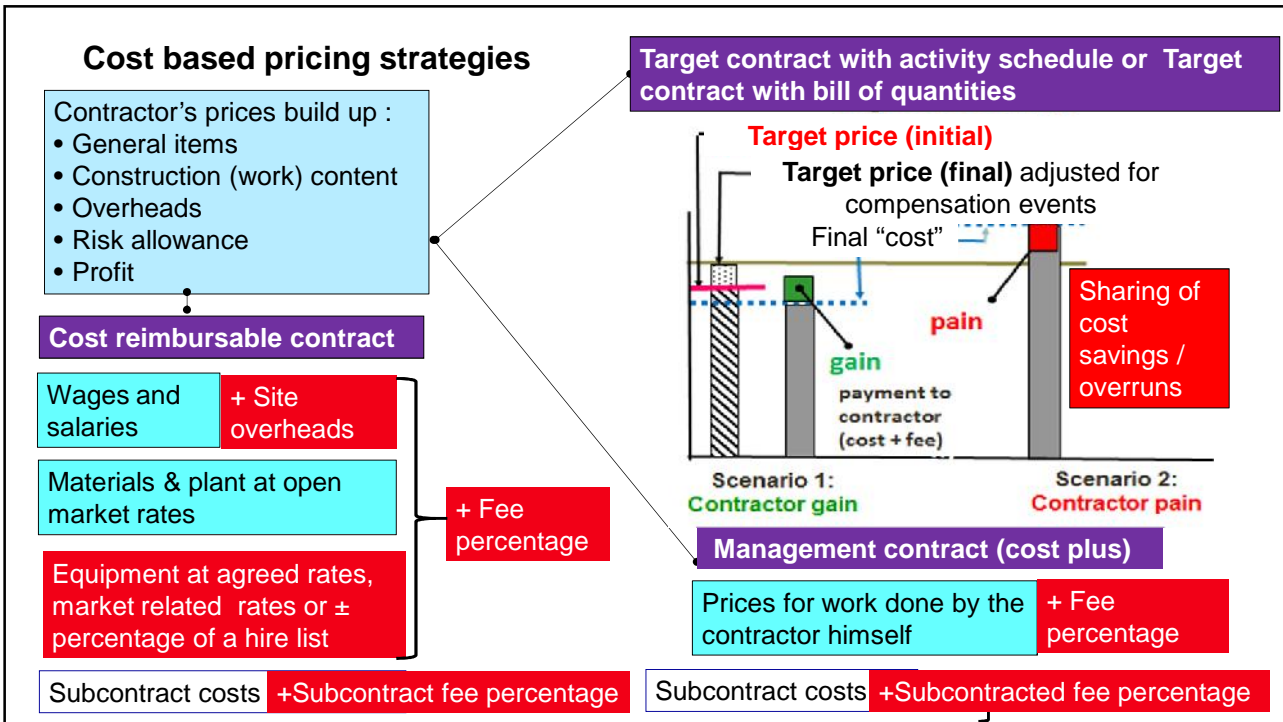
Activity schedule - programme linked to lump sums for activities

Item No.	Programme Reference	Activity description	Price	TIME IN WEEKS:										
				W1	W2	W3	W4	W5	W6	W7	W8	W9		
1		Establish Site, Set Out...		█										
2		Excavation			█									
3		Foundation Concrete & Brickwork.				█								
4		Superstructure					█	█	█					
5		Roof						█	█					
6		Services (1 st , 2 nd , Final)				█								
7		External Works								█	█			
8		Finishing and cleaning										█	█	
9		Hand over to client												█

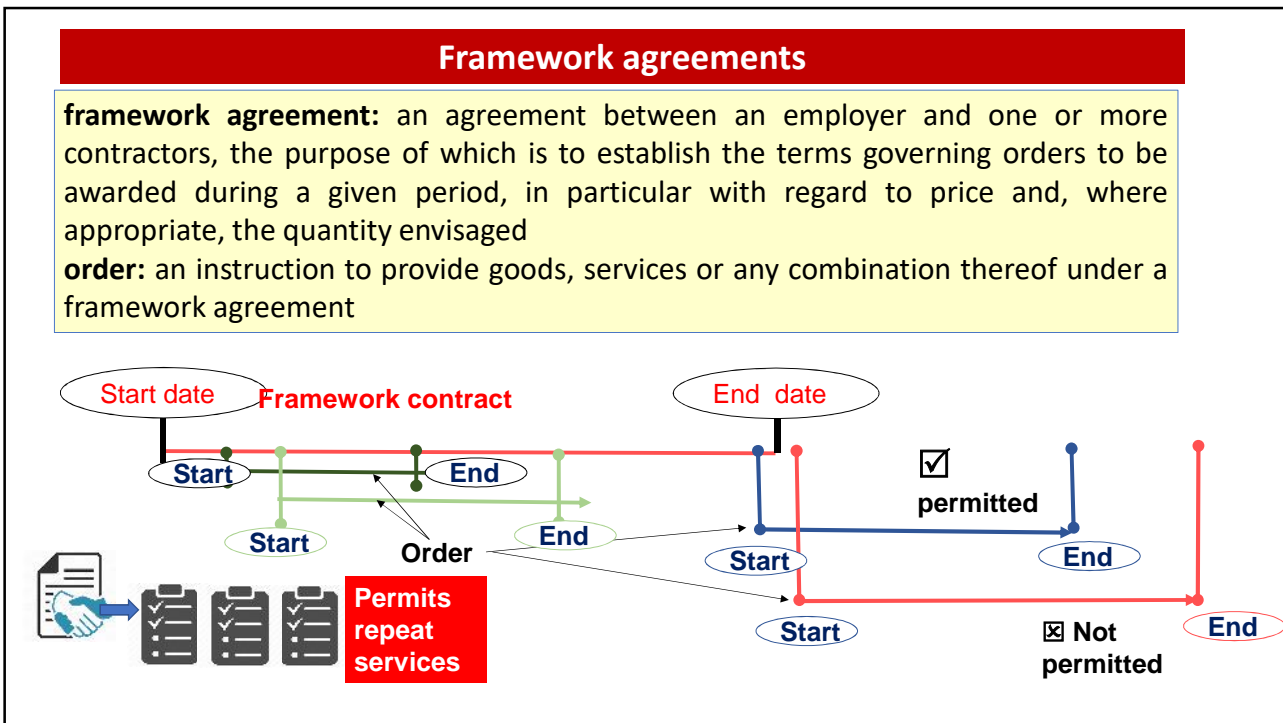
Bill of quantities - based on a standard system of measurement (Client at risk for items not measured or in accordance with system of measurement and changes in quantities)

Item No.	Description	Unit	Quantity	Rate	Total

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Framework agreements

Differences between a term contract and a framework agreement

A **term contract** is a contract that **enables the employer to order work over a fixed term at agreed rates**. Term contracts have **a contract value** at the time that they are awarded. Those who administer these contracts **are authorised to instruct the required work over the term of the contract**.

A **framework contract** has **no value at the time of its formation**. Framework contracts **frequently have no fixed rates**. Consequently the terms of the contract may **have to be applied in order to arrive at a price** for an order. Authorisations are therefore required to issue orders.

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Wits capital projects programme

- Started 2007
- Refurbishment of old buildings and construction of new buildings
- Wide deviations between intended and achieved outcomes in the first two projects (30% over budget in one case) created a need to change to an innovative and more fit for purpose procurement approach
- Switched strategy to design by employer with early contractor involvement (framework contracts with target contract with activity schedule)

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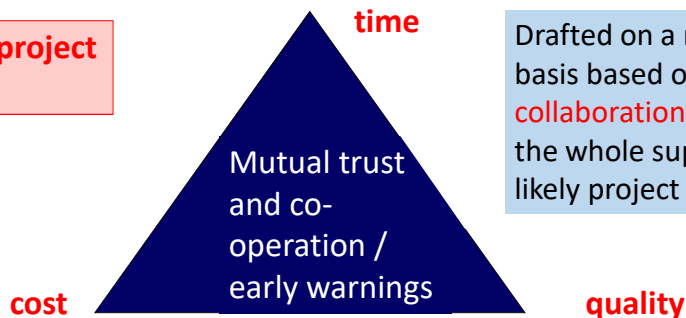
FNB Building (R 81m)

Traditional approach – design by employer and bill of quantities (no strategy)

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NEC3 Engineering and Construction Contract – early warnings

Absolutes of project management



Drafted on a relational contracting basis based on the belief that **collaboration** and **teamwork** across the whole supply chain optimises the likely project outcomes

The Contractor and the Project Manager give an **early warning** by notifying the other as soon as either becomes aware of any matter which could

- increase the total of the Prices,
- delay Completion,
- delay meeting a Key Date or
- impair the performance of the works in use.

Early warnings trigger risk reduction meetings

NEC style of contracting is that of discussion at the time rather than argument later

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NEC3 Family of contracts – compensation events

Compensation events are events which, if they occur, and do not arise from the Contractor's fault, entitle the Contractor to be compensated for any effect the event has on the **Prices** and the **Completion Date** or a **Key Date**

Contractor is required to submit to the Project Manager a **comprehensive programme for acceptance** and to **regularly update it**

A delay to the Completion Date is assessed as the length of time that, due to the compensation event, **planned Completion** is later than planned Completion as shown on the Accepted Programme

The changes to the Prices are assessed as the **effect of the compensation event upon**

- the actual **Defined Cost** of the **work already done**,
- the forecast **Defined Cost** of the **work not yet done** and
- the resulting Fee.

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Package #1
Start January 2009
Chamber of Mines - fourth quadrant (R70 m)

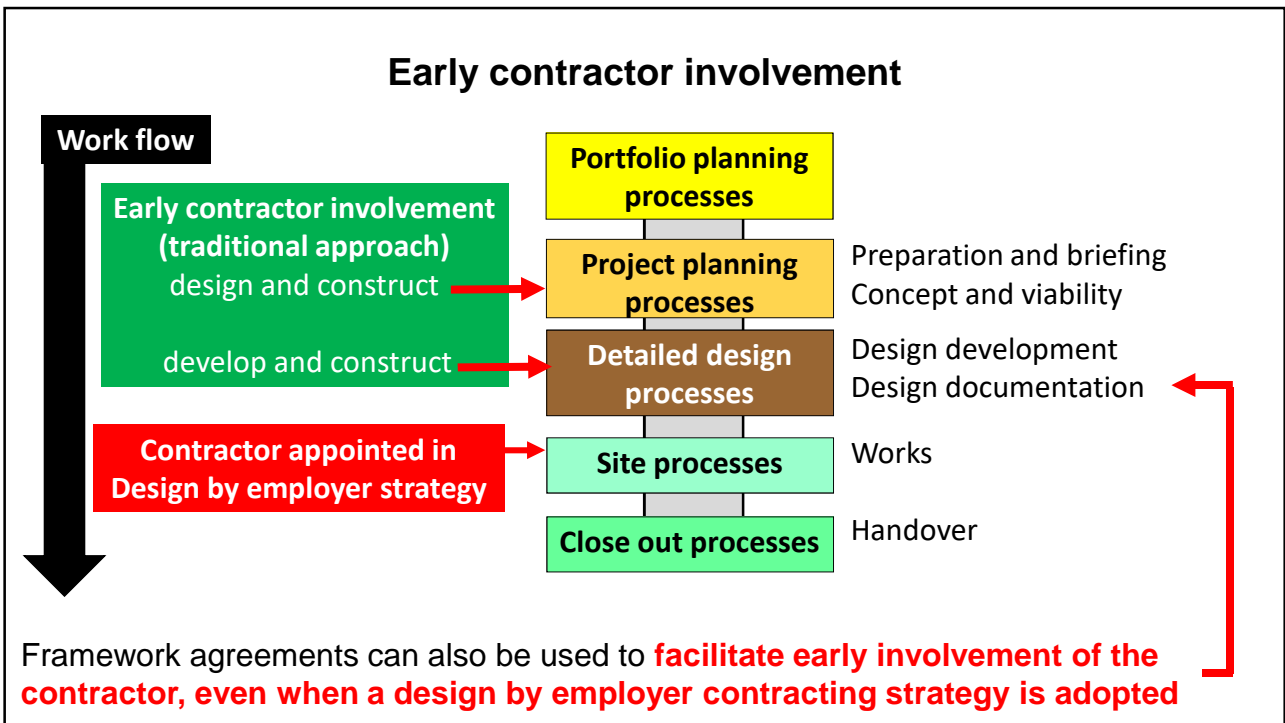
Package #2
Start November 2009
Undergraduate Science Centre- phase 1 (R178 m)

Package #3
April 2010

Package #4
Start October 2010
Refurbishment of Chamber of Mines - (R45m)

Same contractor but different design teams etc

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Capital programme outcomes

Overall outcomes achieved

- Total expenditure of ~R1.5 billion on 40+ projects (ignoring smaller projects) over a period of ~6 years
- Most projects delivered on time for the start of the academic year
- Total cost overrun < 6% (successful delivery within 6% of the control budget for R1.5b portfolio of projects)

Key contributors to the successful outcomes

- Having a team with the **right skills and chemistry**
- Strong client who **drives the process**
- Shift from traditional procurement approach to **relationship and value-based (collaborative) approach**
- **Bold procurement innovations** - Framework contracts, Early contractor involvement, Target contracts, Activity schedule pricing strategy, NEC contracts
- Integrated supply chains based on a **philosophy of teamwork**
- **Active cost management** – control budget, cost control and value engineering involving the whole team

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New universities – Sol Plaatje University (Kimberley) and University of Mpumalanga (Nelspruit)



September 2011	Final report on the establishment of the New Universities submitted to the Minister of Higher Education and Training
November 2011	Department of Higher Education and Training (DHET) appoints Wits University to manage development of two new universities in the Northern Cape and Mpumalanga
August 2013	Minister established the two public universities in accordance with the Act
February 2014	Both universities commenced their first academic year (169 students at UMP and 124 at SPU)
February 2016	Project had delivered 16 new buildings within budget, as well as a range of renovated buildings, providing academic and residence space for the 2016 enrolment of 1255 students at Nelspruit and 700 students at Kimberley

Appointment of Wits as implementing agent for the two new universities was made on the back of notable performance in delivering the Wits Capital Projects Programme

28 months from political decision to first student intake !

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New universities – Sol Plaatje University (Kimberley) and University of Mpumalanga (Nelspruit)

SOL PLAATJE UNIVERSITY

SPU

Budgets



2011/2012 R 50.0 m

2012/2013 R 81.3 m

2013/14 R 117.1 m

2014/15 R 373.4 m


2015/16 **R 1.26 b**

UNIVERSITY OF MPUMALANGA

UMP

2016/2017 ~ R 1,3 b




New universities take over responsibility for budget execution


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Delivery of facilities for 2014 and 2015

Took over old Provincial Legislature building in Kimberley and the Lowveld Agricultural College in Nelspruit



Refurbishment of buildings

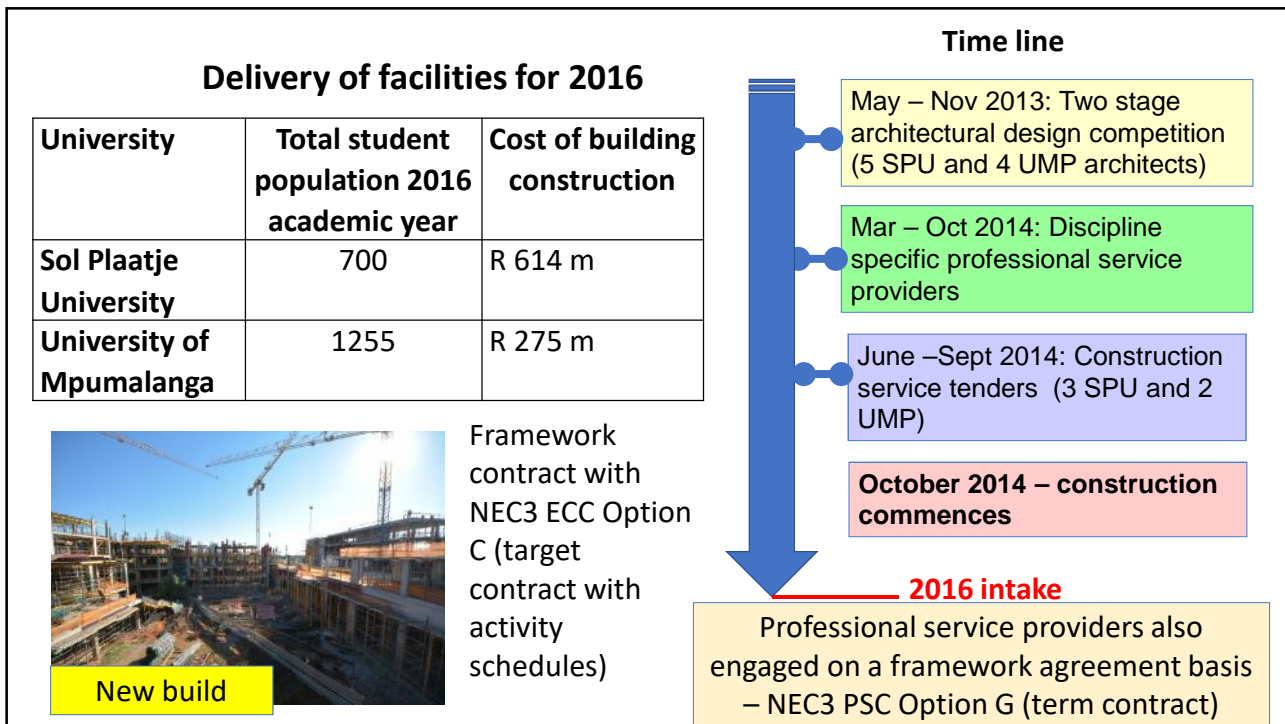


Bought a block of flats and a hotel in Kimberley

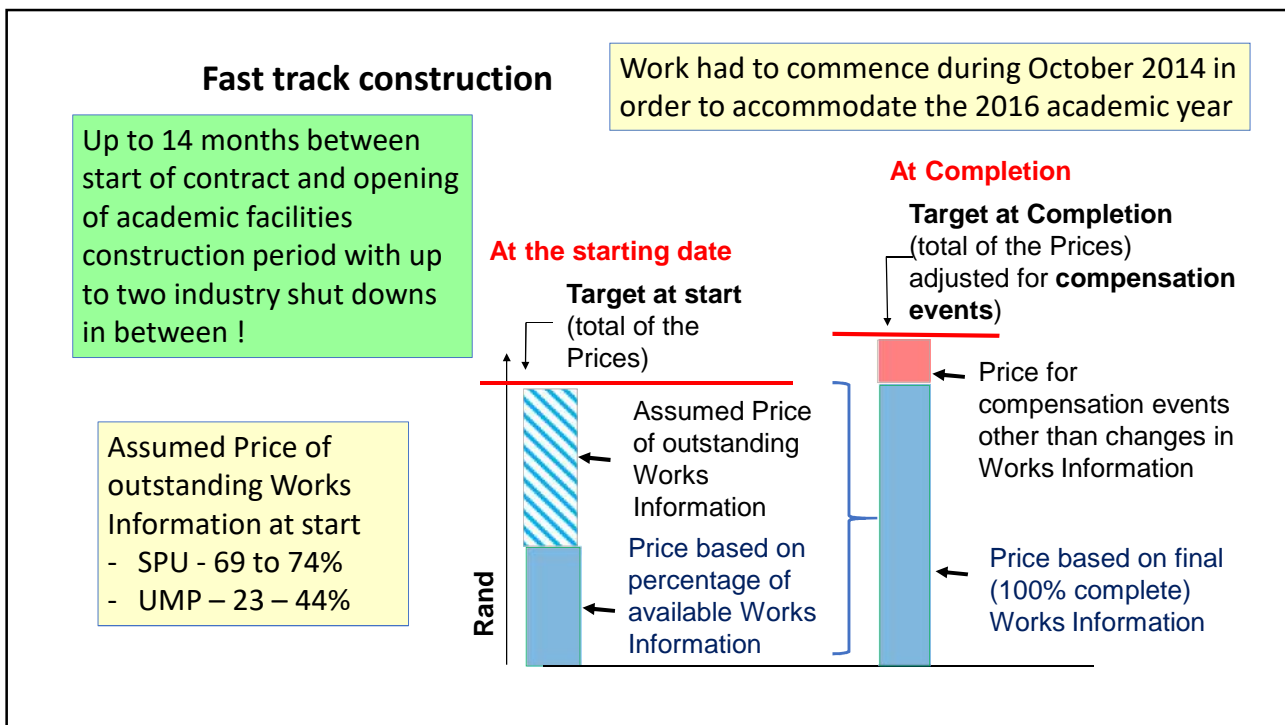
New build required for 2016

University	Total student population for academic year		Cost of building construction
	2014	2015	
SPU	127	337	R86 million
UMP	151	828	R27 million

Framework agreements with NEC3 ECC Option F (management contract) (cost plus)



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Outcomes - cost

Sol Plaatje University	Work package	Target price at the start with allowance for inflation	Final target price	Price for Work Done to Date at Completion	Client gain (+) / pain (-)	Cost to client
	C001	R 185 m	R184 m	182	+R 1 m	R 183 m
C002	R 1990 m	R208 m	198	+ R 5 m	R 203 m	
* Services between buildings	C003	R 145 m	149	154	- R3 m	R 152 m
	CX01*	R 78 m	78	74	+ R 2 m	R 75 m
	Totals	R 607 m	620	608	+ R 6 m	R 613 m

Completed 5,3% below DHET cost norm; average professional fees for buildings – 14,1%

University of Mpumalanga	Work package	Target price at the start with allowance for inflation	Final target price	Price for Work Done to Date at Completion	Client gain (+) / pain (-)	Cost to client
	L001	R 79 m	R 82 m	R 79 m	+ R0,6 m	R 79 m
L004	R39 m	R 40 m	R 43 m	- R1.5 m	R 40 m	
L006	R 152 m	R 159 m	R 156 m	+ 0.2 m	R 156 m	
	Totals	R 270 m	R281 m	R 277 m	- R 0.8m	R 276 m

Completed 3,4% below DHET cost norm 15,7% ; average professional fees for buildings – 15,7%

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Planned versus actual Completion

Work package	Starting date for order	Completion Date		Planned calendar days	Actual calendar days	Percent variance
		When order issued	When order completed			
Sol Plaatje University						
C001	13 October 2014	15 January 2016	2 March 2016	460	508	+10,4%
C002	13 October 2014	15 January 2016	5 July 2016	460	602	+30,9%**
C003	13 October 2014	15 January 2016	8 April 2016	460	544	+18.3%
CX01*	27 April 2015	15 January 2016	20 May 2016	264	390	+47,8%
University of Mpumalanga						
L001	1 November 2014	15 December 2015	5 February 2016	410	462	+13%
L004	27 June 2014	18 February 2016	24 March 2016	237	272	+15%
L006	27 October 2014	17 November 2015	2 February 2016	387	464	+20%

* Services between buildings ** Structural failure resulted in a 2,5 month delay

Facilities for 2016 academic year were complete ahead of start although Completion was delayed

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Quality outcomes



C001 - Finalist Higher Education & Research– World Architectural Festival (2017) Received a commendation
 Finalist in Southern African Institute of Steel Construction (Commercial Architectural Category) – wind driven louvres and bespoke multi-coloured vertical louvres

The following documents can be obtained from www.wits.ac.za/ipdm

- Client guide for improving infrastructure project outcomes
- New Universities Case Study Close Out Report

Facilities ready for students at start of 2016 academic year

This was achieved within the constraints of the public sector procurement system

Development targets for contractors

KPI	Definition of KPI	Target
contract local participation goal	Percentage of contract amount which represents payments to: a) local people for wages and salaries b) local enterprises for Equipment, Plant and Materials and local Subcontractors	30% minimum
B-BBEE spend goal	B-BBEE procurement spend expressed as a percentage of the Contractor’s total procurement spend	60% minimum
contract local direct employment goal	Percentage of the number of equivalent person days worked by people who are local people	30% minimum
contract skills development goal	Number of hours of skills development opportunities towards nationally accredited learning outcomes	250 hours per Rand m spend



Low performance damages applied in each order

Can increase / change from order to order as client is not locked into a particular goal or target

Attaining secondary objectives

Option	SPU		UMP	
	Days	Learners	Days	Learners
Method 1 (occupational qualification)	8 774	176	10 194	99
Method 2 (trade qualification)	5 585	57	7 473	160
Method 3 (national diploma)	3 329	16	2 636	18
Method 4 (professional registration)	2 165	5	1 381	14
TOTAL	19 853	254	21 684	291

Outcomes achieved

- 254 learners provided with 19 853 hours of structured workplace learning at SPU; 291 learners with 21 684 hours at UMP;
- percentage expenditure on local resources amounted to 38% at SPU and 73% at UMP
- on average, 63% of people employed on the site were local with 10% of the workers being women and 75% being young people
- the weighted B-BBEE spend amounted to 78% at SPU and 89% at UMP

Conclusions - lessons learned

Target cost contracts and management (cost plus) contracts where they are linked to **framework agreements** and **early contractor involvement**, can be used as an effective tool to:

- Fastrack delivery of projects
- Scale up delivery
- Deliver projects / programmes incrementally
- Deliver on empowerment objectives
- Deliver value for money

Smaller / local contractors able to tackle projects as:

- Payment is cash positive and not one month in arrears
- Performance bond value is reduced as it based on the order value rather than the total value

However, as with all projects, strong

- client leadership
 - client governance
 - a client delivery management team
- is a **perquisite** to successful project outcomes

Health warning!

Collaboration is hard work