

Addressing the Industry Skills Shortages

CapCoR
AsAc

RPF Feedback

13/14 May 2009, George



Capacity Coordination for Roads (CapCoR)

RPF sponsors meeting – May 08

RCB Capacity Building Workshop – October 08

RCB Capacity Building Task Group – November 08

RCB Capacity Building Task Group – January 09

RPF May 08 - Resolution #1

That the sponsors of the RPF should continue to pursue the establishment of a Roads Engineering Coordinating Body (RECOB – **now CapCoR**) in support of the Roads Coordinating Body (RCB) and RISFSA

RPF May 08 - Resolution #5

The RPF resolves to create and mandate an education and training task group in order to communicate the industry needs to the various industry training bodies, and actively co-ordinate and participate on these various bodies in order to achieve a set of qualifications that are in line with the needs of the country. This will be achieved by actively engaging as industry with ECSA, CETA, SAQA and others at their committee levels

RPF Sponsors meeting – May 08

- All sponsors were supportive of a coordinating body
- Should ideally be the responsibility of DoT to coordinate with inputs from the private sector
 - LS/BV asked to engage with DoT
- Should ideally be funded by DoT
 - Possible agency
- If DoT could not drive it the private sector would consider alternative options through the RPF sponsors

Feedback from the Workshop of 13 Oct 08

- Proposal was welcomed by DoT/RCB
- DoT gave an in-principle agreement to the formation of a coordinating mechanism for skills development in the sub-sector in support of RCB and RISFSA
- Seen as joint initiative between the public and private sector
- Steering Committee established
 - Jointly chaired (JM and LS)
 - Equal representation from RCB and RPF sponsors
 - Develop a joint business/establishment plan
 - Ultimately an agency of DoT but short term establishment needs further discussion
- First meeting of SCom 26 November 2008

Steering Committee meeting

26 November 2008

- Name changed to Capacity Coordination for Roads – **CapCoR**
- Draft business plan discussed
- Strategic Thrust Areas agreed with detailed operations in each area (*not presented here*)
- Four options for Organisational Structure and Establishment considered
 - Line department of DoT wholly funded by DoT
 - Agency of DoT funded through the DoT budget
 - PPP with equitable contribution from the public and private sector managed by a Board (**preferred option**)
 - An organisation fully funded and run by the private sector with mandate from DoT
- Draft business plan revised and sent to DoT for input in December 2008
- Next SCom meeting arranged for 28 January 2008

CapCoR Strategic Trust Areas

**Capacity
Coordination
for Roads
(CapCoR)**

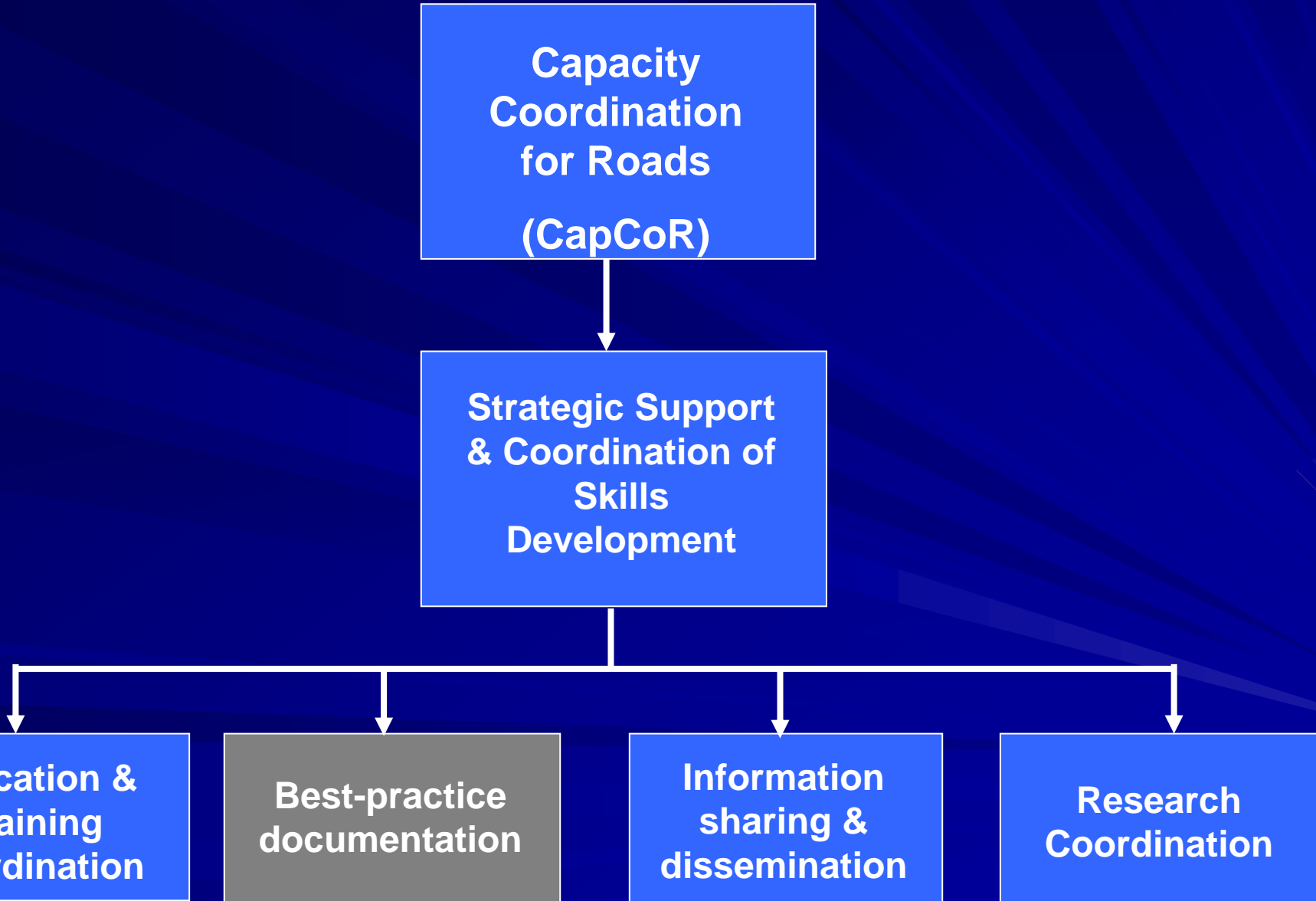
**Strategic Support
& Coordination of
Skills
Development**

**Education &
Training
Coordination**

**Best-practice
documentation**

**Information
sharing &
dissemination**

**Research
Coordination**



CapCoR Mandate

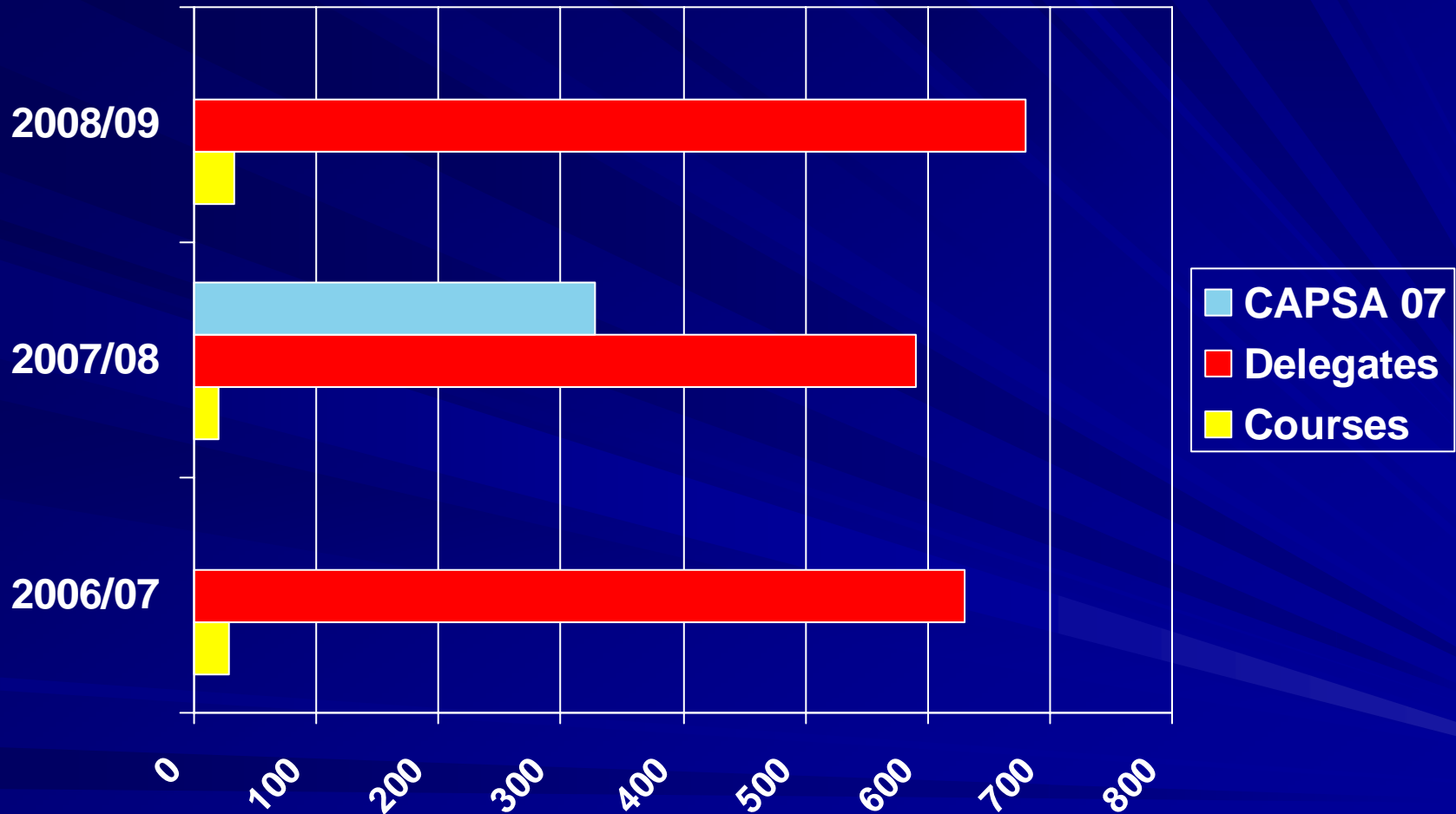
- **Strategic coordination of human capital development in the road sector in line with the RISFSA document with alignment of the road sector initiatives to the broader skills development initiatives driven by the Government's Joint Initiative in Priority Skills Acquisition (JIPSA);**
- **Coordination of education and qualifications at tertiary levels through the SAQA/CETA/CHE/DoE/ECSA/SAICE structures;**
- **Information sharing and dissemination for continued professional development;**
- **Coordination and management of best-practice documentation, standards and specifications in support of RCB initiatives;**
- **Coordination of research activities in support of best-practice;**

Progress in 2009

- Meeting of 26 January postponed by DoT
- DoT discussed the business plan internally
 - Continue to support the need for CapCoR in support of RCB
 - Falls within the Human Resource Directorate
 - Funding constraints in the short term
 - Capacity constraints to drive the initiative
- Best option for private sector to drive and fund the initiative in the short term
 - RPF to write to the D-G for a mandate to drive the initiative

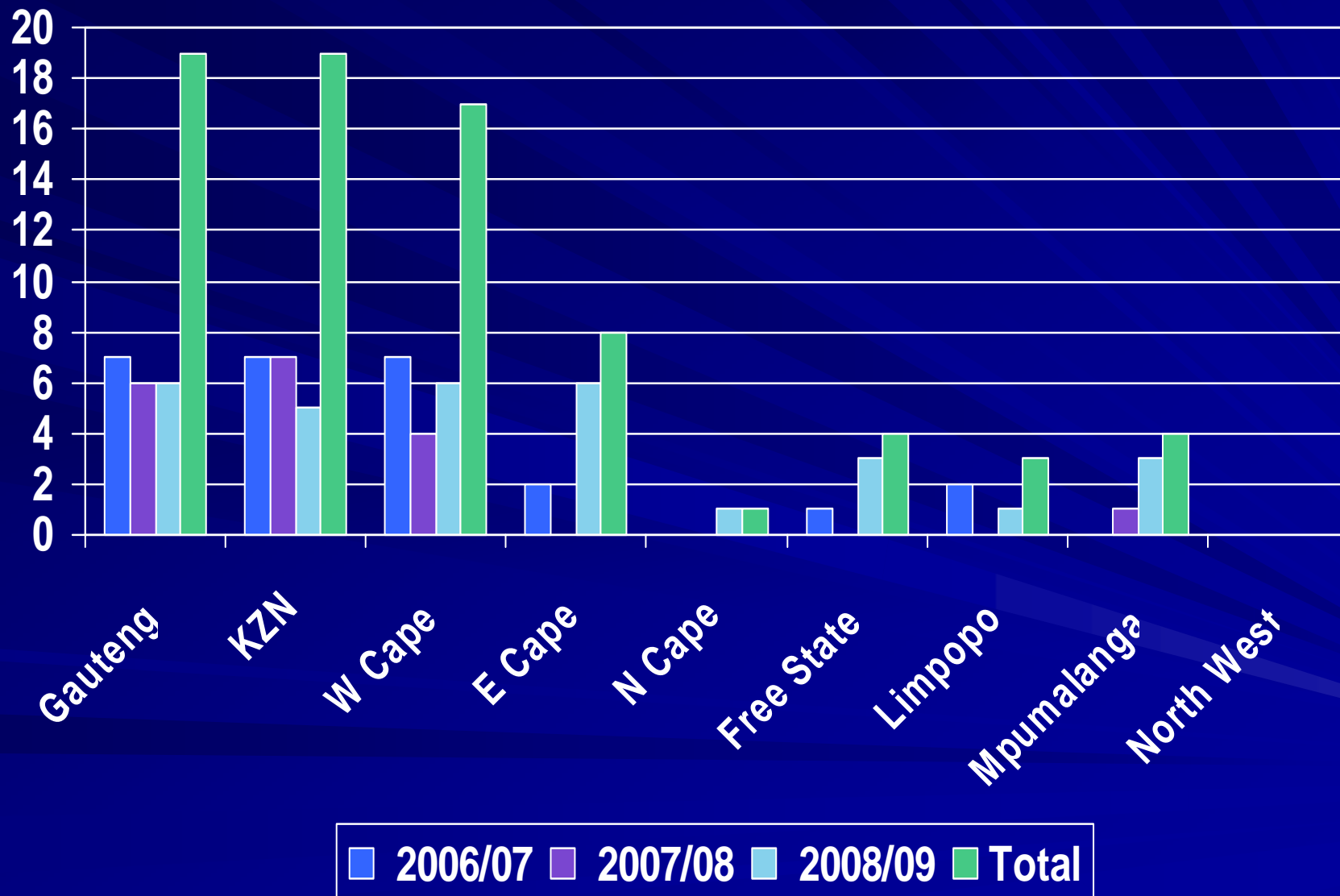
AsAc initiatives to address the skills shortage

Summary of Activities



NB – 22 students for 4 x P Eng modules not included

Geographic Breakdown of Courses



Pavement Engineering Course

- Pilot course started 1 September 2008
- PPP with GDPTRW
- ES contracted as course manager
- Gautrans funding the presentation of the course
 - TUT accreditation?
 - Credits for current BTech
 - Post-graduate Diploma in Highway Engineering
 - Speaking to SAQA/DoE/CHE
- AsAc, CSIR and private sector mentorship
- Includes a concrete module & LIC
- 22 students (5 from GDPTRW)
- Challenge to duplicate the course in other parts of the country
- Gautrans support?

Business Plan for 2009/12

- Matrix or “road map” of skills needs developed
- Restructuring of activities in line with matrix to promote growth and sustainability
 - Six technical pillars
 - NQF 1 – 10
 - Accredited skills programmes (yellow)
 - CPD courses (light blue)
 - HET (orange)
 - Train-the-trainer? (red)
 - Other (grey)

NQF Level	Design & Const of Seals	HMA Design, Manuf & Pav	Pav Eng	Rd Asset Mngmnt	Materials	HSE
10						
9			Masters in Eng Tech			
8			PG Diploma Pavement Engineering		QMB	
7	Acc Design & Const of Seals	Acc Design of HMA			Intrp of test reslt	Bit Bndrs for Rds
6	Mod 1: Seals invstgtn & design Mod 2: Seal Const mngmnt	Mod 1: Overview of HMA practice Mod 2: Advncs in HMA practice Mod 3: Sustnble asphalt practice Mod 4: HMA des	Low volume sealed roads Warrants & labour opt Appropriate Standards	Rd network asset mngmt		Nuc Gauge
5				Rd Condtn assessmnt		
4				Maint msrs & technqus	BitSafe	
3	Bind dist op	Paver op	Cncrlr emp	MTC: All modules		
	Roller operator: Milling machine operator					
2	LIC seals			Maint & repair		
1						

CETA Accredited Skills Programmes

- **Interface with CETA**
 - Rest of industry ignoring them
 - Accreditation issue
 - AsAc certificate could suffice
- **Registered training provider to run accredited skills programmes**
- **Modules for classroom component**
 - Can be CPD registered
- **Additional work place training for accreditation (defined by Skills Programme)**
- **Assessors need to be trained**
 - B Pearce being trained
 - Recommendations for others
- **Support from client bodies?**

Portfolio of CPD courses

Technical Pillar	Course name	Duration (days)	Presenter(s)	Actions	CPD status
Design & Construction of Seals	Module 1: Seal investigation & Design	3	G Van Zyl	Current Construction, Application and design of seals course to be divided into 2 modules	New application
	Module 2: Seal Construction Management	4	G Van Zyl	Current Construction, Application and design of seals course to be divided into 2 modules	New application
HMA Design, Manufacture & Paving	Module 1: Overview of HMA	2	J Wise	Modification of the current Manufacture, Application & Construction of HMA	New application
	Module 2: Advances in HMA practice	1	J Wise G James	New course to be developed	New application
	Module 3: Sustainable Asphalt Practices	1	H Marais	New course to be developed	New application
	Module 4: HMA Design	3	B Verhaeghe E Denneman	No changes to the existing course	Registered
Pavement Engineering	Low volume sealed roads, warrants for upgrading and labour optimisation	3	G Van Zyl L Sampson	New course to be developed	New application
Road Network Asset management	Road Network Asset management	-	-	No actions. Covered by other service providers	-
Materials	Bituminous Binders for Roads	2	P Myburgh	Intro to Bitumen notes need to be modified and updated in line with the latest edition of Sabita manual 2	New application
	Quality Management of Bitumen	3	Various	To be presented again in 2010	Registered

Post-Graduate Qualifications

- **SAQA/DoE restructuring of generic engineering qualifications**
 - 3 streams (Engineer, Technologist & technician)
- **Current P Eng course ideally sits as a Post-graduate Diploma in Pavement Engineering at NQF 7/8**
 - TUT will currently give credits for a B Tech
 - Further discussions with TUT & SAQA
 - Registration with DoE, CHE & SAQA
 - Distant Learning for presentation nationally and regionally
- **Masters in Engineering Technology – Pavements at NQF level 9**
 - CPEE collaboration
 - Distant learning
 - Fills a gap with Universities of Technology
 - Stellenbosch University support the approach

Train-the Trainers

- Need to provide quality training at lower NQF levels
- Vocational certificate includes roads elective unit standards
- Presented at FET colleges
- Inexperienced lecturers
- Train-the-trainers not cost effective
- Develop a comprehensive set of quality AV material on basic road materials, construction and maintenance
- Supported by notes or a text book
- Build on existing Sabita AV material
- Should be a industry sponsored initiative

Conclusion

- **For CapCoR to become a reality it needs to be private sector driven**
 - RPF sponsors need to reconvene
- **The AsAc training and education matrix could provide a framework for mapping the needs for the broader road sector**
 - Current service provider and tertiary institution offerings could be plotted on the matrix
- **Gap analysis of courses and qualifications for the sector**
- **Better understanding of current capacity and needs still required**
- **Training at NQF levels 1 – 4 still a problem**

Final Question

- Would client bodies support in principle the development of accredited skills programmes?
 - Eg Accredited Surface Seal designer or and Accredited HMA designer

...And Very Finally

Today's inspirational message to practitioners:



Never annoy a guy who owns his own digger