



The Ability of the education system to rise to the challenge



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Background and context

- Enrolment planning process for the 2006-2010
- Role of HE in national human resources and research priorities
- Enrolments matched to available resources
- Focus on improving graduation and success rate



Enrolment Planning

- Increase in headcounts from 752 000 in 2006 to 813 000 in 2010
- Annual growth of 1.8 percent
- Field 2005 2010
- Set 27% 29%
- Bus 33% 33%
- Ed 14% 13%
- Hum 26% 25%

Enrolment planning

- The size and shape of HE system up to 2010 is already determined
- Improved graduation and success rate central to DOE's planning forecasts
- Graduation increase from 120 000 in 2005 to 150 000 by 2010
- All fields professions to be serviced by these numbers





Engineering

- B Engineering and Bsc degrees require a minimum of 4 years
- Total enrolments in 2005 (7 faculties) were 11 200; graduates 1482
- Increase in enrolments by at least 1800 to a total of 13 000 by 2010
- Projected increase by at least 500 by 2010
- Significant increase in graduation to be realised after 2010

STRATEGIES

- ❑ Multiple strategies required to meet engineering skills:
- Improving engineering throughputs in higher education
- Improved throughput through the candidacy phase leading to professional registration





Strategies....

- Retention of engineers within industry and in higher education
- Recruitment of engineers living abroad
- Importation of engineers

Improving Engineering throughputs in HE

- Investment by DOE to selected universities in 2006 to increase pass and graduation rates (R48 m and additional R439m for the period 2007-2009)
- NSFAS, private sector and government departments investing more resources
- Improved student selection
- Academic support for students
- Academic development leading to improved programmes, curricula and learning
- Bursaries



Improved candidacy phase leading to professional registration

- About a third of engineers graduating from universities go on to register as candidates with Engineering Council
- Few candidates achieve professional status within the minimum period of three years
- Development of a pool of mentors and supervisors
- Employers to provide structured work-place learning and experience



Retention of Engineers

- Skills shortage – retention engineering skills
- Employers in the private, public sector and the HE system
- Management and retention of current stock of engineering skills –national priority for all affected
- Attention to be paid to:
 - Increasing the number of engineering lecturers
 - Academic salaries



Retention of engineers

- University retirement
- Cooperate incentive and reward systems, career-path and transformation and retirement policies
- Creating an enabling and attractive environment for engineers in the public sector
- Re-employment and deployment of retired professionals



Recruitment of South African abroad

- Global shortage of skills – SA to compete actively acquire skills
- Initiatives to ensure that they are linked to job opportunities in SA





Importation of engineers

- Enrolment plan – impact after 2010
- New graduates require guidance and work experience before they are fully competent
- Need to import skills in short supply



Conclusion

- How well positioned is HE system to meet the higher-level skills demands for our growing economy
- All high level skills
- Systems approach to planning
- Outcomes –long terms consequences for sustainable growth and development for SA
- We have HE system with finite carrying system – look at alternative
- Good will from the sector