




www.mintek.co.za

History of Technical Investigations

- 1934 : Mineral Research Laboratory Established
- 1934-1944 : Andalusite, Vermiculite, Apatite Recovery, Industrial Diamonds, Refractory Gold Ores
- 1944-1954 : Uranium Ore Processing, Ion Exchange Technology
- 1954-1964 : Electrolytic Manganese Metal, Uranium Refining, Solvent Extraction and Flotation Technology Development
- 1964-1974 : Pyrometallurgy Research Group Established, UG2 Investigations Starts, Certified Reference Materials,
- 1974-1984 : Carbon in Pulp, Base Metals Process Development, Alternative UG2 Smelting Technology
- 1984-1994 : PGM Recovery from float tails, DC Smelting Technology Commercialised
- 1994-2004 : Ferronickel Smelting, Cyanide Laboratory, Copper Heap Bioleaching, Project AuTEK, Biomedical Programme
- 2004-2009 : Nanotechnology Centre, Hydrogen and Fuel Cell Centre, ConRoast Technology, Diamond Provenance Centre





Mintek Executive Committee

Chairman of the Board

CEO

Deputy CEO

Finance Director

General Manager

Deputy General Manager

Technical Director

Highlights Year Ended March 2009

Total income up 7.9% to R423 million
 Expenditure increase held at 2%
 Staff turnover reduced to 15%

Mintek celebrated its 75th anniversary

Increase in projects for uranium, iron ore, nickel,
 steady demand for work on PGMs

Highlights Year Ended March 2009

2006/07	Fruitless and wasteful expenditure (late VAT returns)
	Material corrections made by AG to financial statements
	Emphasis of Matter – weak internal controls
2007/08	Inadequate internal controls over project management system
	Emphasis of Matter – fraudulent payments of R3.6m over the past 2 years
	Qualified Audit Report
2008/09	Unqualified Audit Report

Measuring Knowledge

- A patent represents the output of a research process
- However, **NOT ALL** inventions are patented, and **NOT ALL** patents are equal
 - only a subset of inventions are brought to market
 - therefore, only a subset of inventions is patented

patented inventions NOT in use

NOT in use

patented inventions IN use

inventions IN use

MINTEK

World-Wide Presence

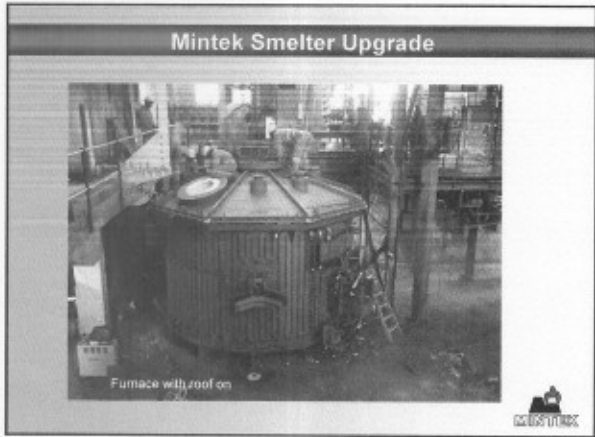
- South
- Africa
- America North
- Americas South
- Australia/Mexico
- Europe
- Research/Development/Manufacture
- Commercial/Industrial
- Commercial/Industrial/Research/Development

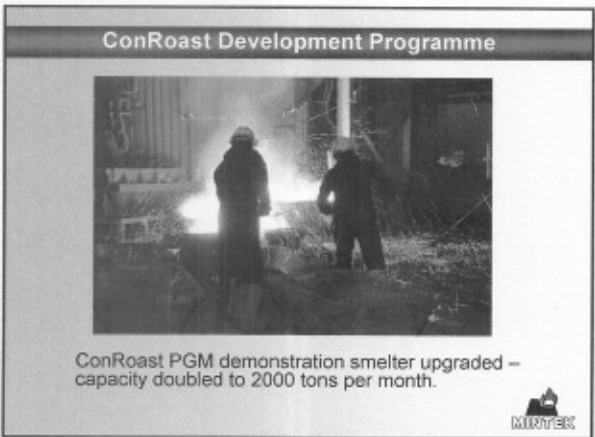
MINTEK

Mintek Smelter Upgrade

3MW furnace shell arriving at Mintek

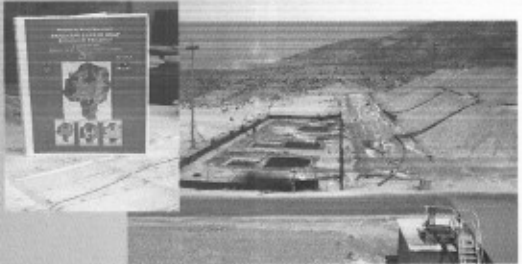
MINTEK






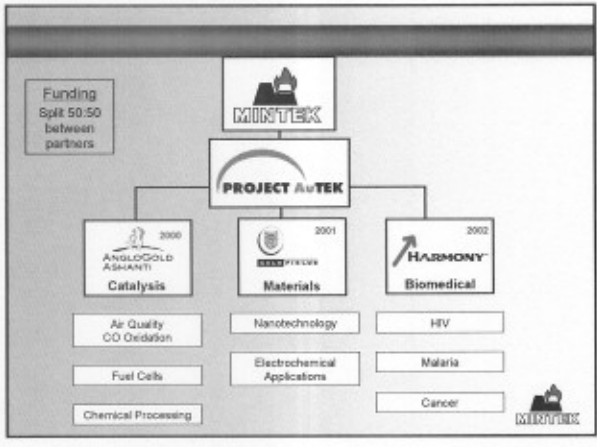


Bioleaching Feasibility Study



Feasibility study completed for a commercial copper heap-bioleach project for NICICO in Iran







AuTEK Biomed Consortium



<p>International Ties</p> <ul style="list-style-type: none"> Germany Belgium Sweden Slovenia Spain Italy UK USA COST World Gold Council 	<p>Other</p> <ul style="list-style-type: none"> NECSA CANSA SAMI PCDDP CBT SARIMA SHARP 	<p>Local Universities</p> <ul style="list-style-type: none"> Cape Town Johannesburg KwaZuluNatal Pretoria Western Cape Witwatersrand
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Gov Support & Recognition



Industrial Partner



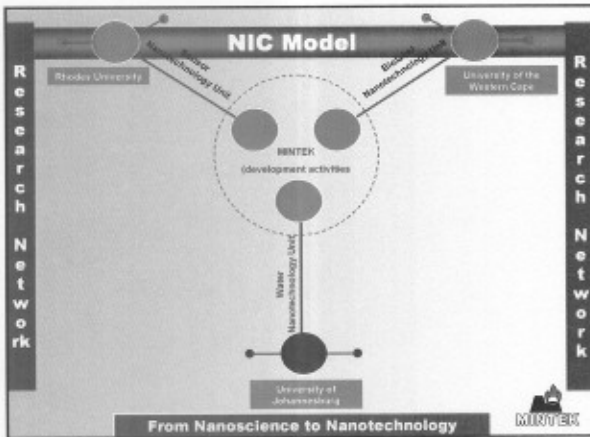
AuTEK –New Industrial Uses For Gold



Eight anti-HIV compounds submitted to the National Institute of Health (USA) for further screening
 Project begun on nanoscience-based systems for water treatment



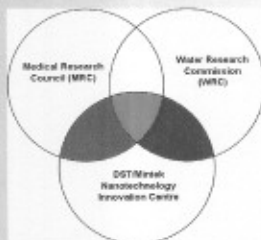
NIC Model



From Nanoscience to Nanotechnology




Development Platform



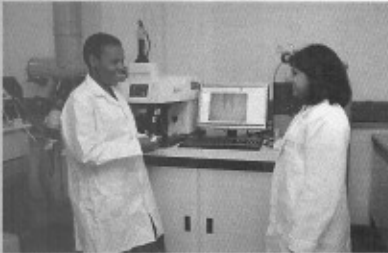
• Outlined in the National Nanotechnology Strategy
 Development platform with public facilities and resources

DST/Mintek NIC


- Collaboration an integral part of the DST/Mintek NIC
- University stakeholders included in the decision-making Steering Committee
- Forms part of University strategy
- Matching of expertise to the objectives of the centre/university
- University stakeholders are in turn networked with other universities
- A national and international web of activities focused on the research platforms




Diamond Provenance




Project with the SADPMR to investigate the origins of rough diamonds (in support of the Kimberley Process)





HySA Flagship Programme




Competence Centers

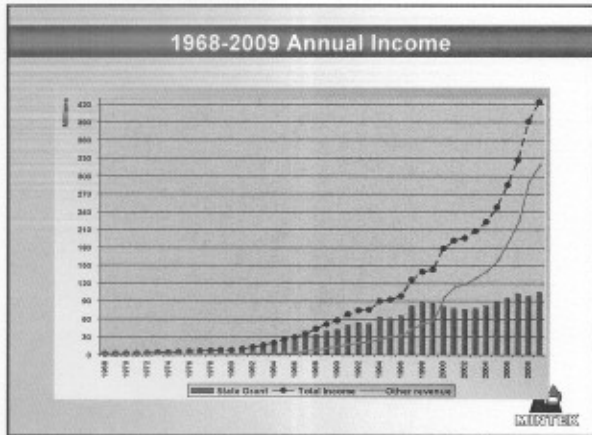

 Mintek &
University of Cape Town


 University of Western Cape


 CSR &
Northwest University

Goal: By 2020 South Africa to supply 25% of future global fuel cell market with PGM catalysts, fuel cell stacks and components, and fuel cell systems





Financial Summary

	R million	
	2009	2008
Income	425.096	391.116
Core funding	105.777	118.131
Earmarked funding	40.590	28.448
Own income	278.731	244.537
Expenditure	(386.328)	(378.184)
Staff costs	(216.432)	(210.093)
Overheads and operating expenditure	(169.896)	(168.091)
Surplus	38.767	12.932

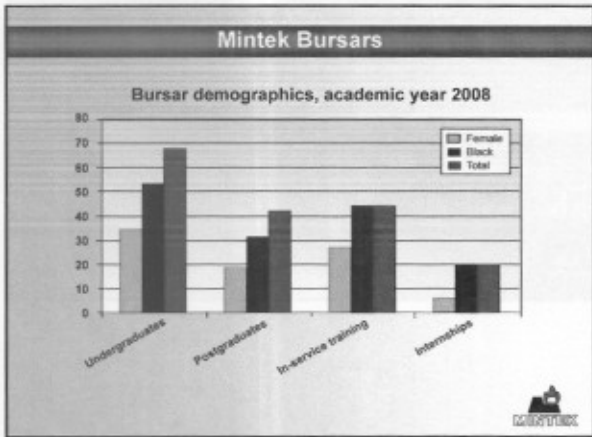
Financial Perspective - Revenues

Objective	Actual 2007/8	Target 2008/9	Actual 2008/9
Financial Sustainability			
Parliamentary grant	R98.5m	R104.8m	R105.8m
Earmarked funding	R35.7m	R34.8m	R40.0m
Commercial	R228.2m	R242.6m	R243.0m
Sundry income	R28.6m	R9.0m	R33.4m
Total income	R387.9m	R391.1m	R425.1m
Overhead efficiency			
Ratio of overhead cost to total cost	38.8%	30%	30.55%
Ratio of salaries to total expenditure	61.2%	60%	56%
Governance and Controls			
Qualifications by AG in AFS	1	0	0
Value of fraudulent payments	R0m	R0m	R0m

Costs			
	Actual	Actual	Budget
	2007/2008	2008/2009	2008/2009
Staff costs	140 473	204 777	178 386
Labour brokers	33 388	11 656	16 000
Bursaries	6 016	6 739	8 400
Operating costs	162 975	151 785	165 137
Depreciation	15 332	15 500	14 000
Total actual expenditure	378 184	390 457	381 923

Learning & Growth Perspective			
Objective	Actual 2007/8	Target 2008/9	Actual 2008/9
Scientific Output			
Total scientific documents	599	No target	690
Documents per person-year	4.00	No target	2.05
Strategic alliances with other S&T bodies	11	No target	14
Projects with external collaborators	14	18	23
HR Development			
Masters and PhD researchers	55	88	65
Postgraduate bursars	41	70	62
Undergraduate bursars	39	40	32
Trainees and Interns	50	76	63
Knowledge Retention			
Professional staff turnover	25.0%	18.0%	15.3%

Internal Business Perspective			
Objective	Actual 2007/8	Target 2008/9	Actual 2008/9
Quality, Environment, Safety, & Health			
ISO 9001, 14001, OHSAS 18001 certification	✓	✓	✓
Work-related fatalities	0	0	0
Lost time injury frequency rate	0.8	< 1.0	0.8
Incidents of environmental non-compliance	0	< 1.0	0
Transformation			
% Black researchers & managers	39.1%	54.4%	67.5%
% Woman researchers & managers	33.9%	36.1%	38.1%
% Black trainees & interns	98%	98%	97%
% Female trainees & interns	41%	50%	49%
% Disabled employees	1.1%	1.2%	1.1%
% BEE Procurement Spend	17%	22%	17%



Concluding remarks



