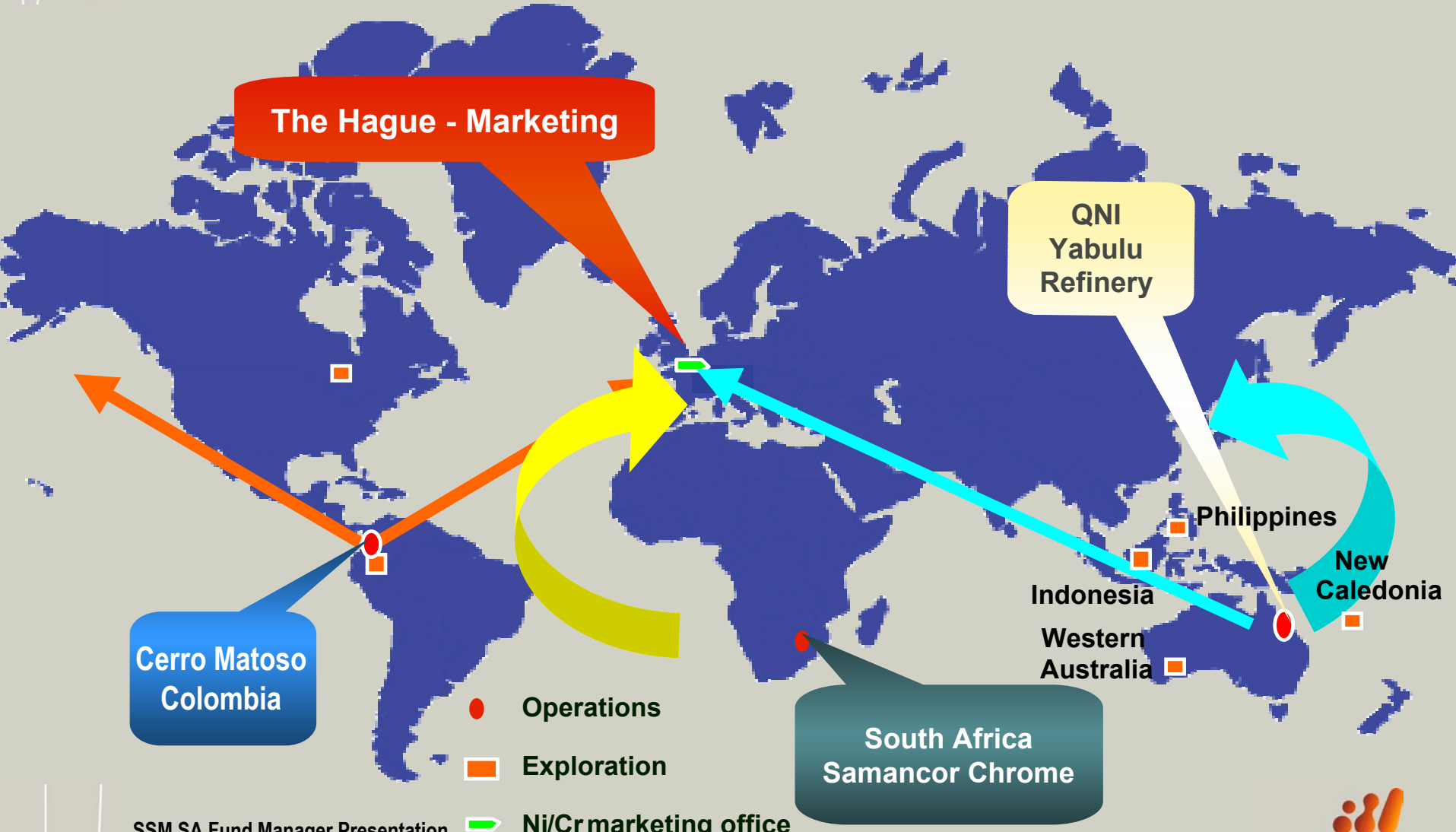
Stainless Steel Materials

South African Fund Manager Presentation : June 2003

Dr Chris Pointon – President, Stainless Steel Materials Customer Sector Group

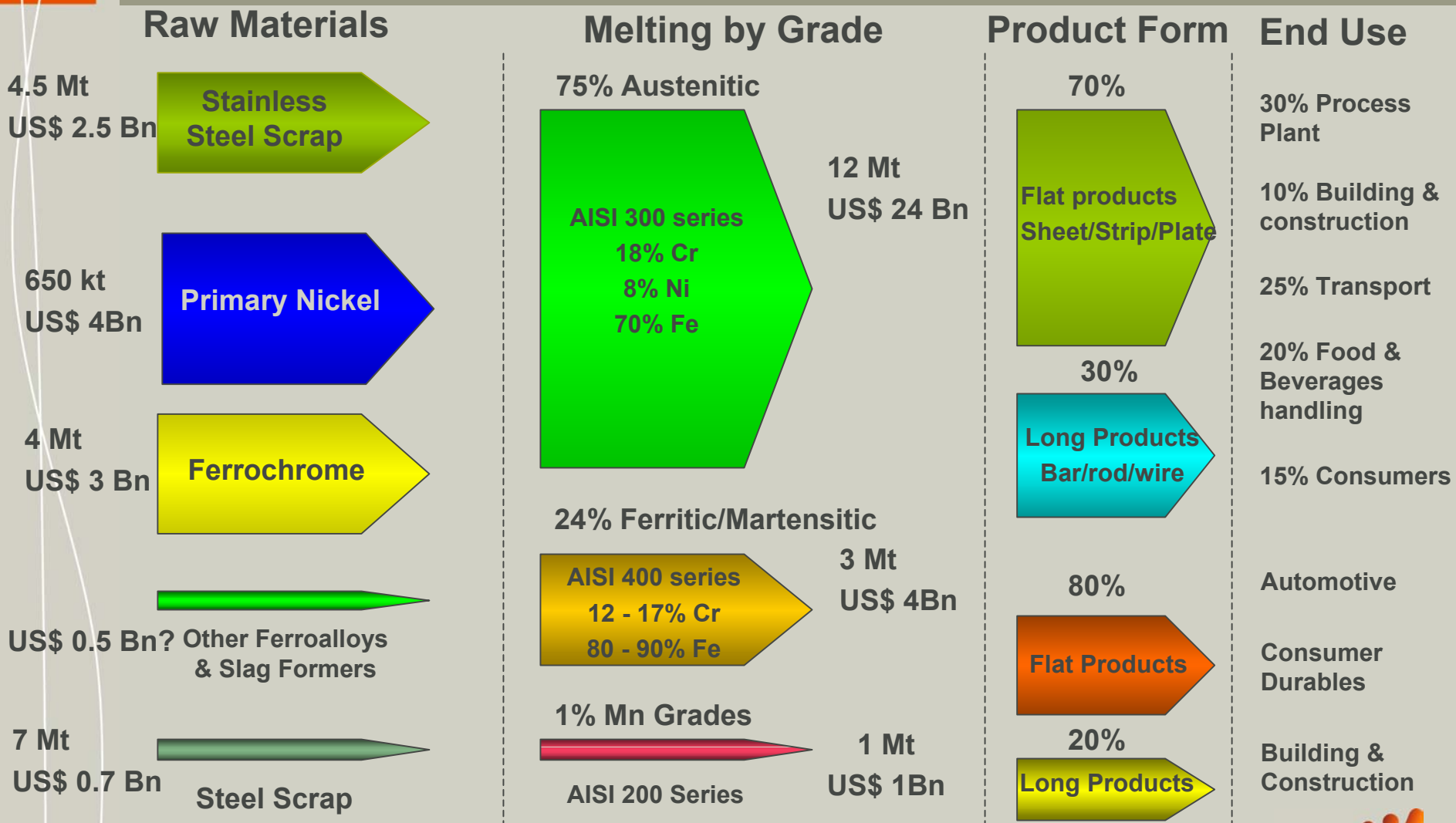
bhpbilliton

SSM already has a established production and marketing presence



bhpbilliton

Stainless Steel Value Chain

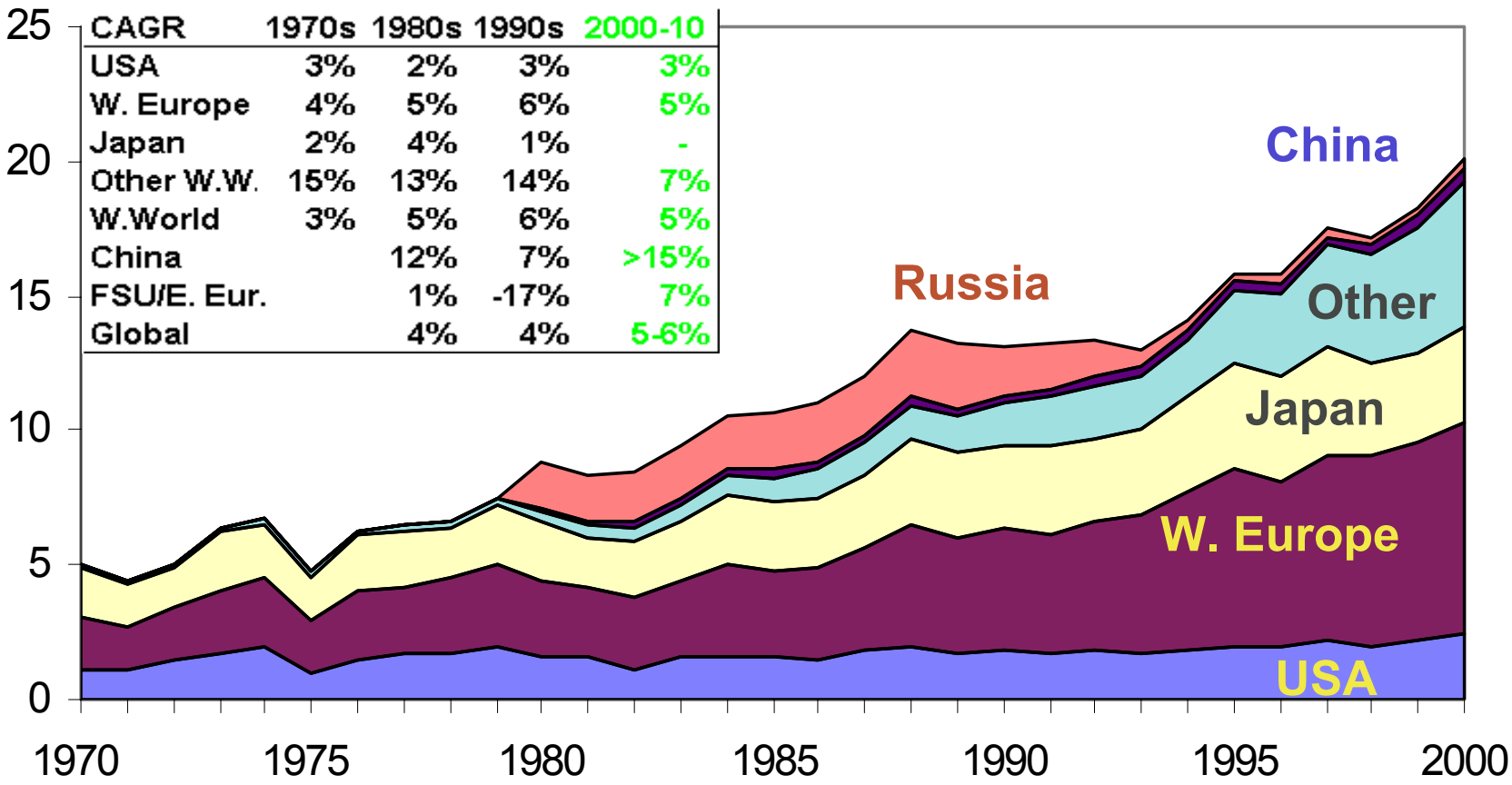


bhpbilliton

Stainless Steel is the fastest growing major use of metals, and will continue to grow strongly

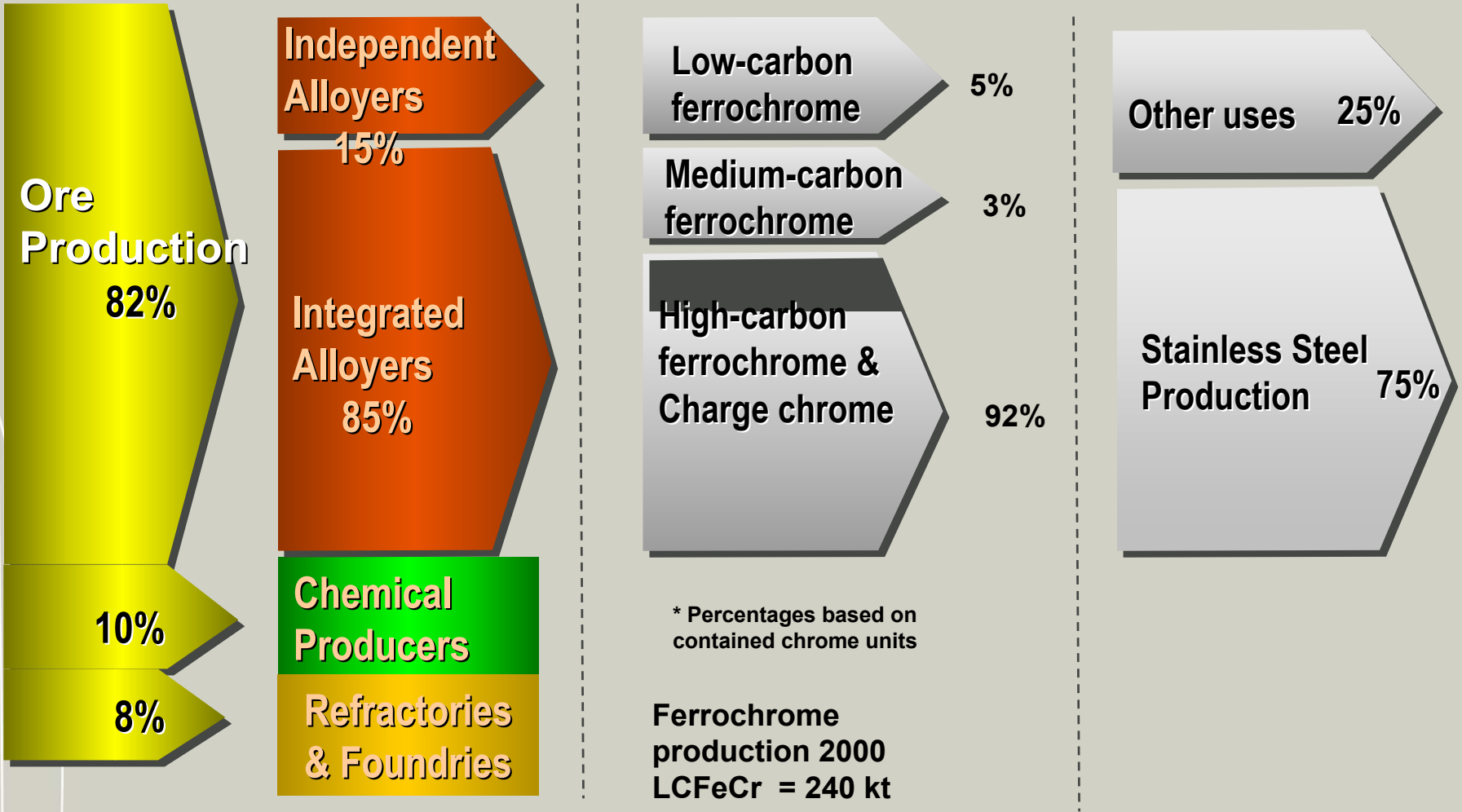
Stainless Slab Production – million tonnes

CAGR	1970s	1980s	1990s	2000-10
USA	3%	2%	3%	3%
W. Europe	4%	5%	6%	5%
Japan	2%	4%	1%	-
Other W.W.	15%	13%	14%	7%
W.World	3%	5%	6%	5%
China		12%	7%	>15%
FSU/E. Eur.		1%	-17%	7%
Global		4%	4%	5-6%



bhpbilliton

Chrome Value Chain – >80% of ore converted to FeCr, and 75% of FeCr used in stainless steels



* Percentages based on contained chrome units

Ferrochrome production 2000
LCFeCr = 240 kt
MCFeCr = 140 kt
HCFeCr = 4900 kt

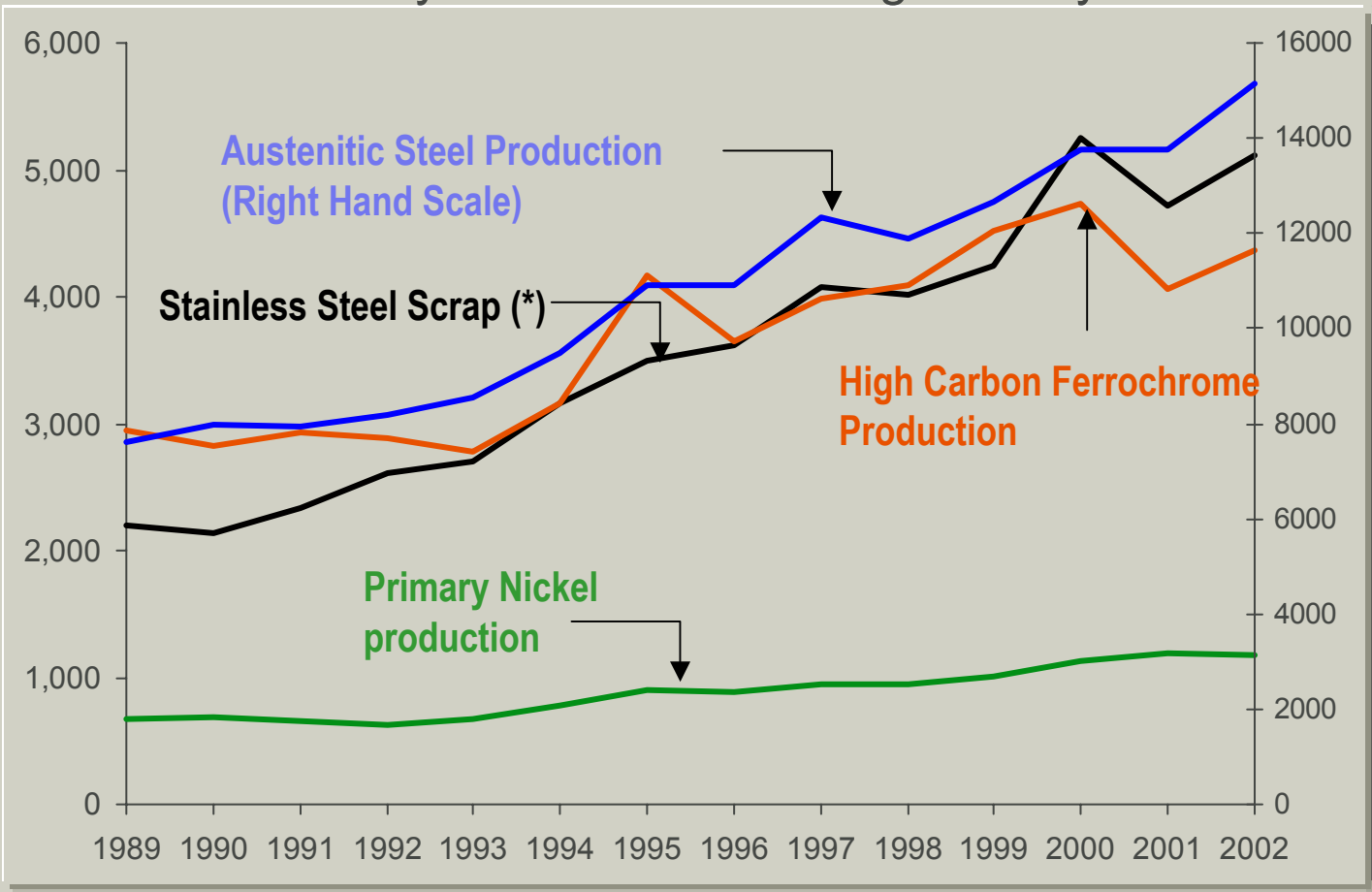
Total = 13 Mtpa

Source: Samancor

bhpbilliton

Austenitic Stainless has maintained a strong growth trend. Primary Ni and FeCr inputs will grow proportionately faster as scrap supply is constrained

Primary Growth - Rising to 5%pa
Secondary Growth - Exceeding Primary

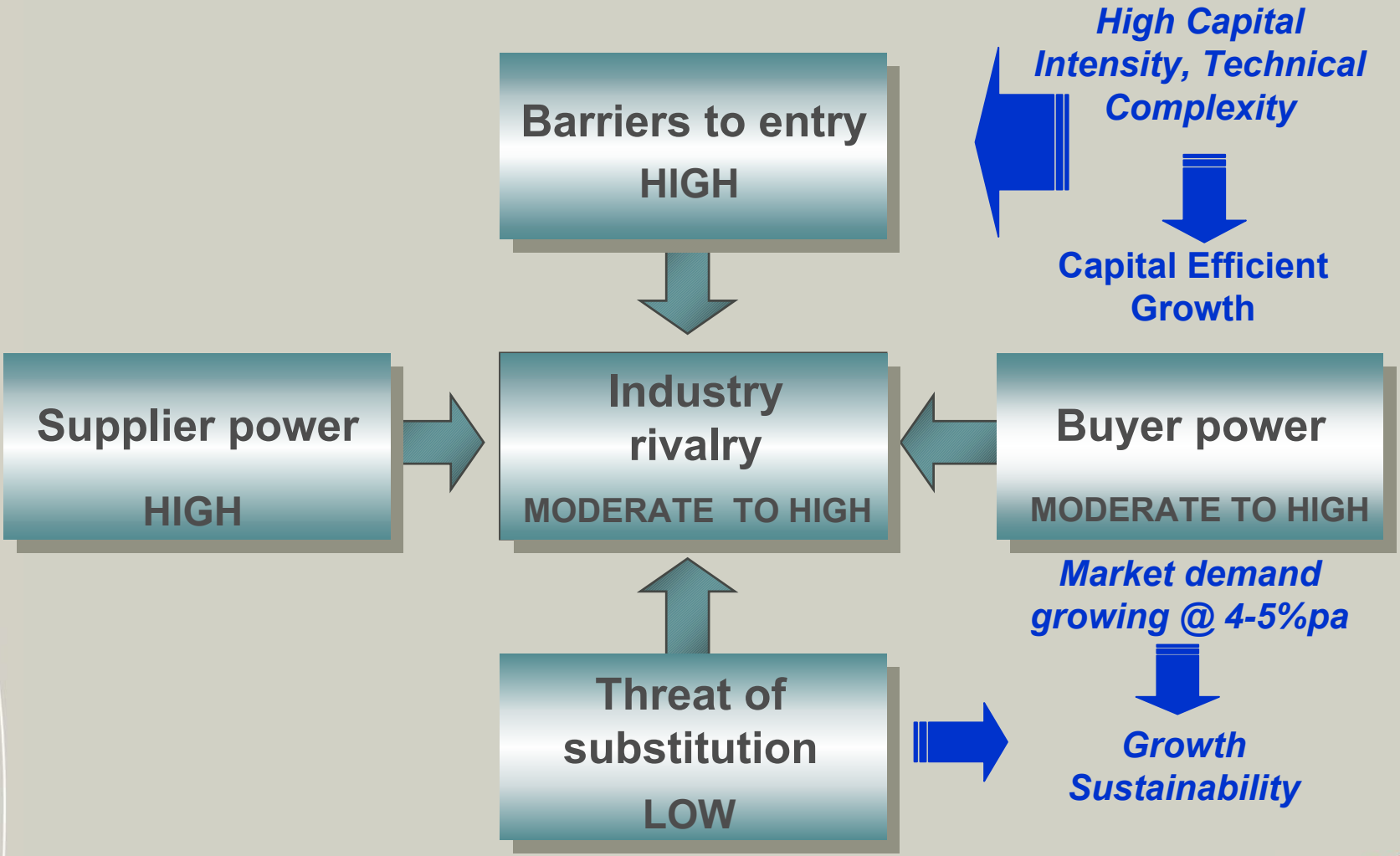


	CAGR 1989-2002	Projections 2003-2010
Austenitic Steel Production (Right Hand Scale)	5.4%	>5%
Stainless Steel Scrap (*)	6.7%	>4.5%
High Carbon Ferrochrome Production	3.1%	>5.0%
Primary Nickel production	4.4%	>5%

Note: * Excludes internal scrap

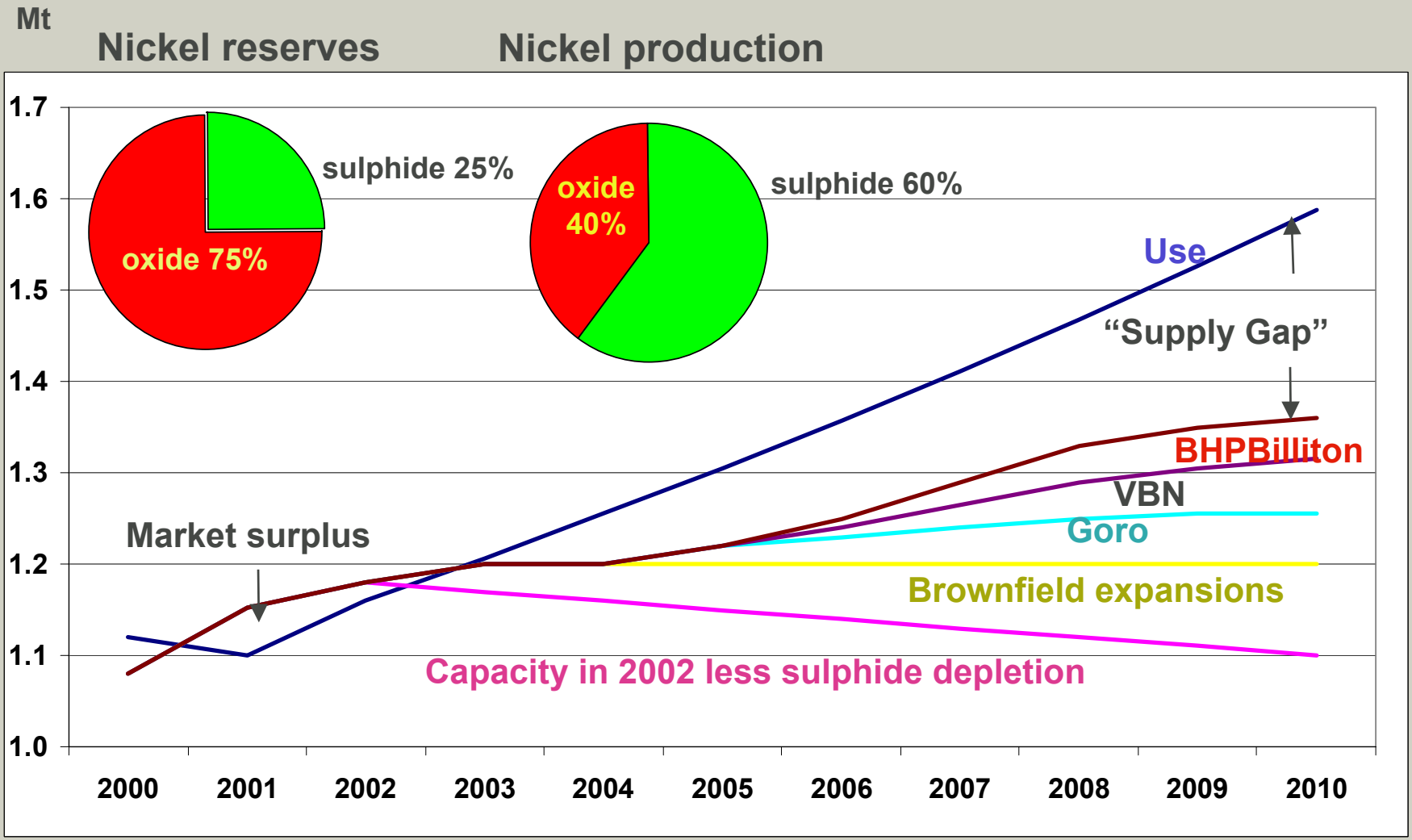
bhpbilliton

The primary nickel supply business has high financial and technical barriers to entry



bhpbilliton

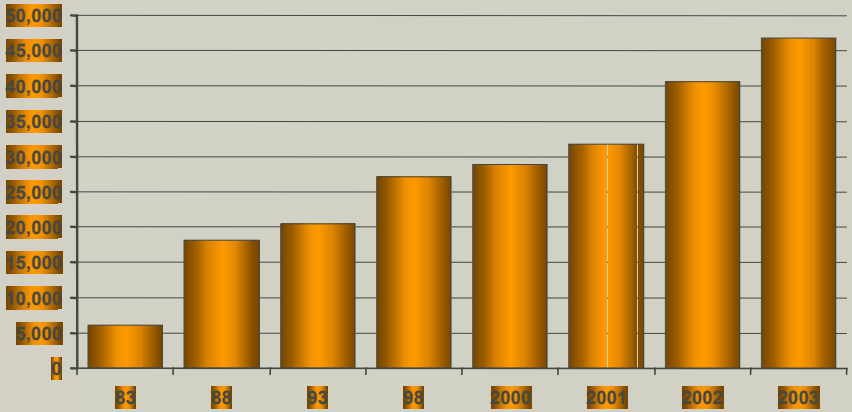
A primary nickel supply gap is set to emerge over the present decade. Only three major projects at Feasibility. Lead times for new projects are 7-10 years. The majority of current production is from sulphide mines, but most new nickel projects will be from laterite ores.

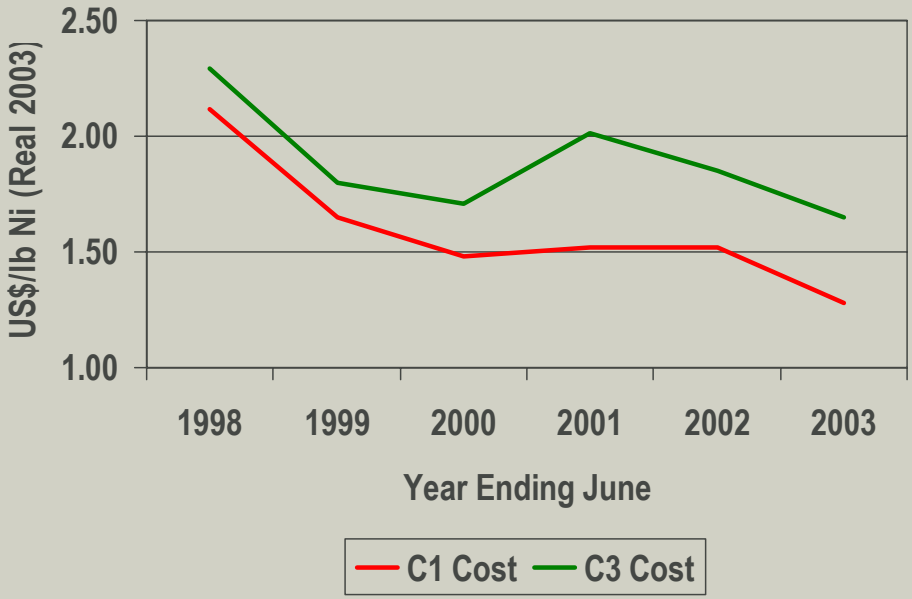


bhpbilliton

Cerro Matoso Project – Colombia – 99.8% Ownership

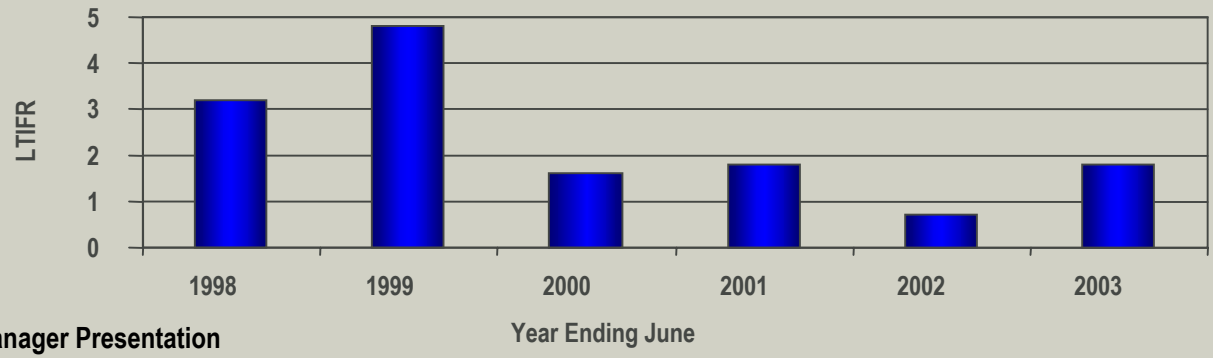
Production History





Reserves : 46.9Mt @ 1.93% Ni
Resources : 65.4Mt @ 1.75% Ni
NB based on 1.1% Ni cut-off

Lost Time Injury Frequency Rate



bhpbilliton

The QNI strategy

Stabilise Yabulu operation

- Zero harm
- Catch-up maintenance.
- Commence installation of modern management practices.

Utilities due for completion in FY04

Optimise Yabulu margins

- Incremental value-added product development.
- Incremental Ni and Co production increases:
  - YOI quick payback project suite
  - LGSO strategy
- Cost reduction initiatives:
  - Small group projects
  - Capitalise on gas at Yabulu site
  - Best management practices, particularly Maintenance
- Establish own mine for up to one third of ore supply.

In Progress

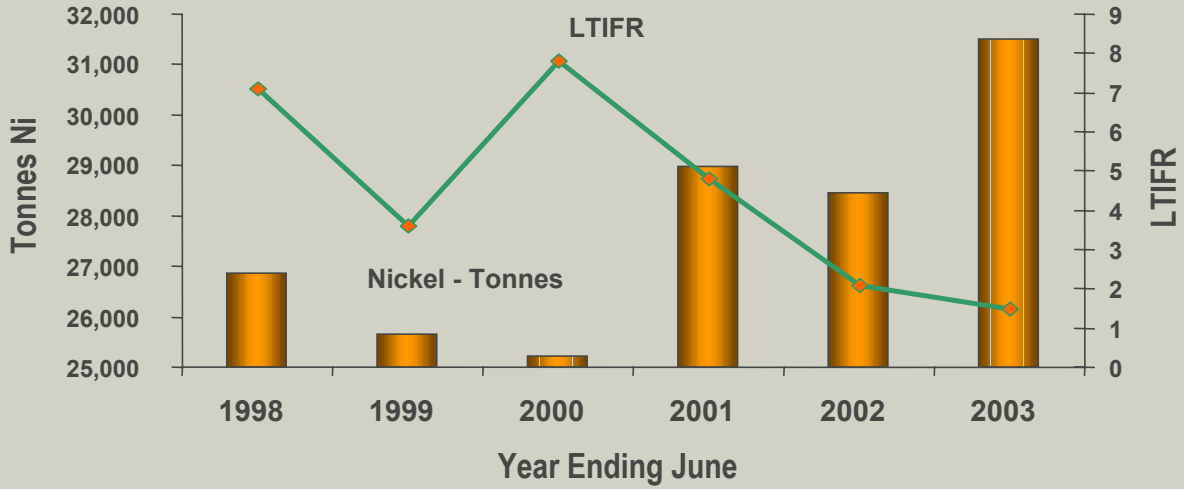
Ore processing plants at world class orebodies with expansion of refinery part of Yabulu

- **Phase I:** Concurrently develop Ravensthorpe and Yabulu Extension Projects.
- **Phase II:** Develop 2nd Ore Processing project at suitable orebody with no further expansion of Yabulu

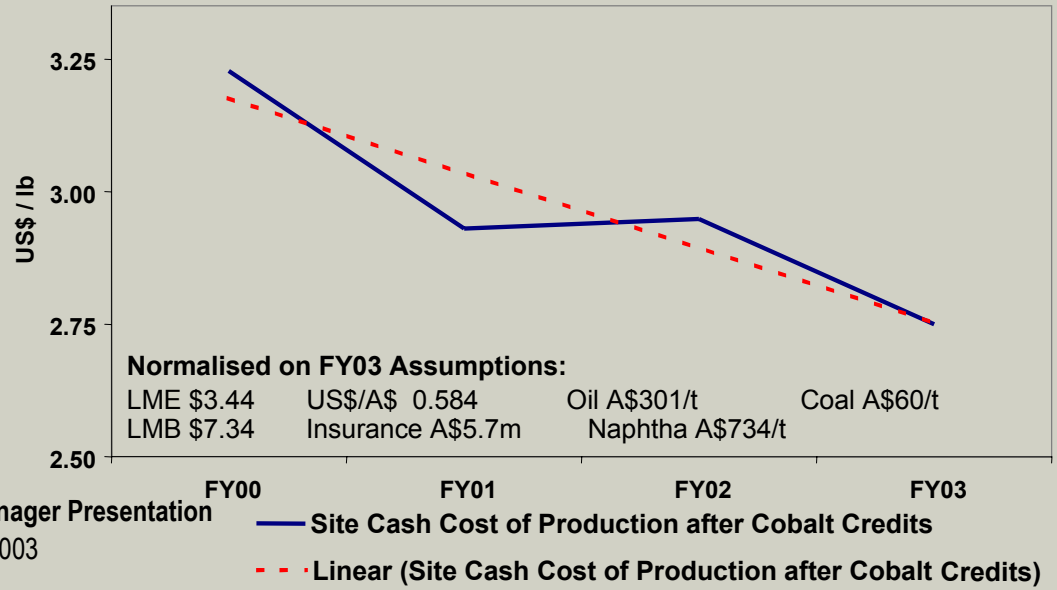
Feasibility Study

bhpbilliton

QNI Yabulu – Australia - 100% Ownership

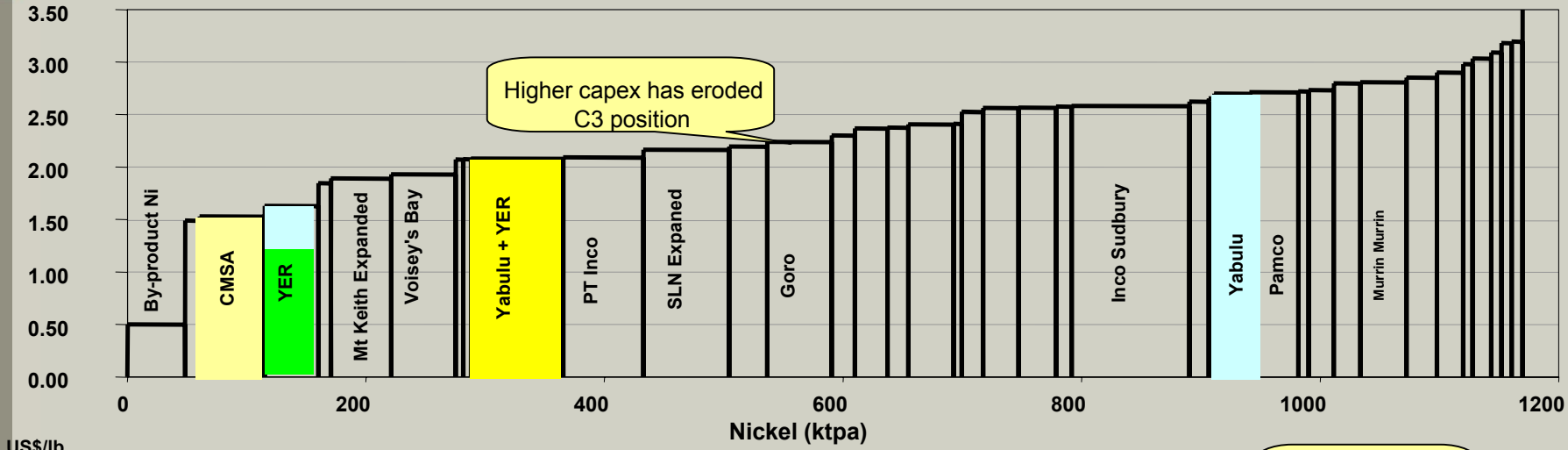


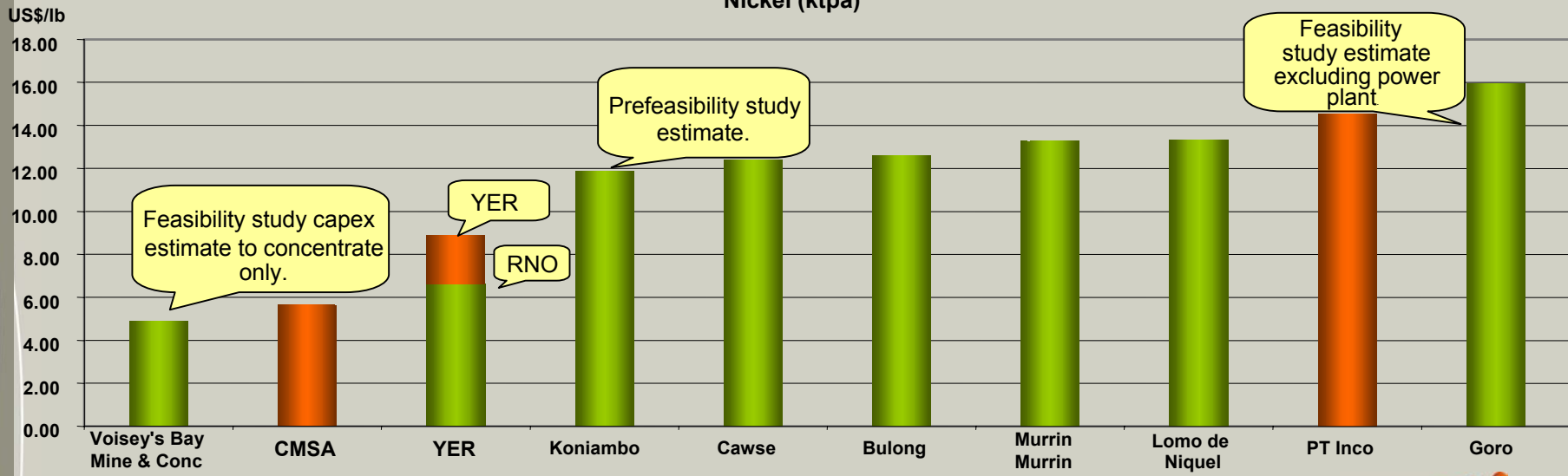
Yabulu Site Cash Cost of Production after Cobalt Credits



bhpbilliton

YER nickel project benchmarks well and enhances the competitiveness of Yabulu Central Refinery





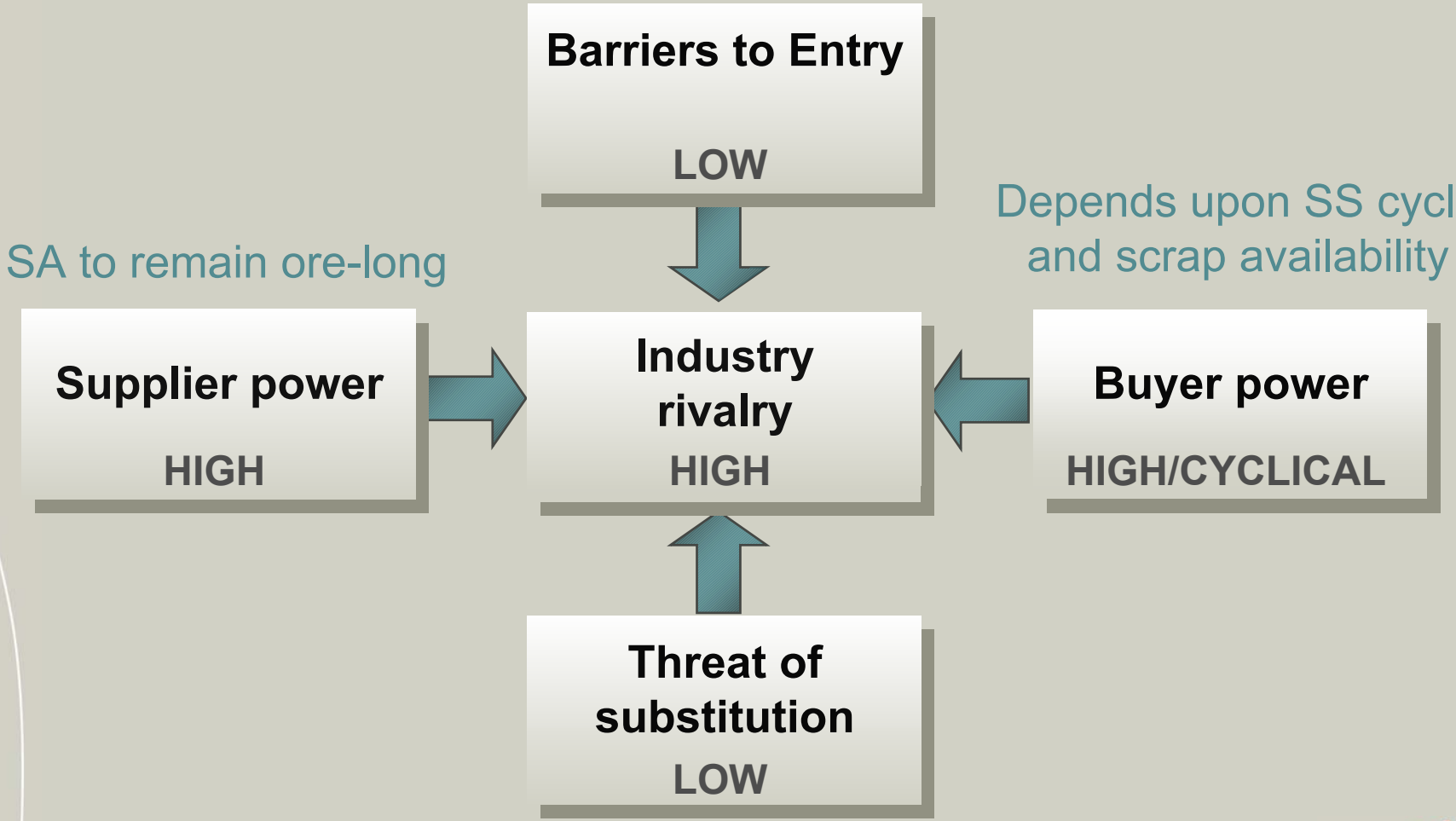
Greenfield & Brownfield Capacity per lb

(excludes working capital & inflation)

bhpbilliton

The FeCr industry has high internal rivalry, low barriers to entry, but growth is strong and there is no substitute, except for scrap

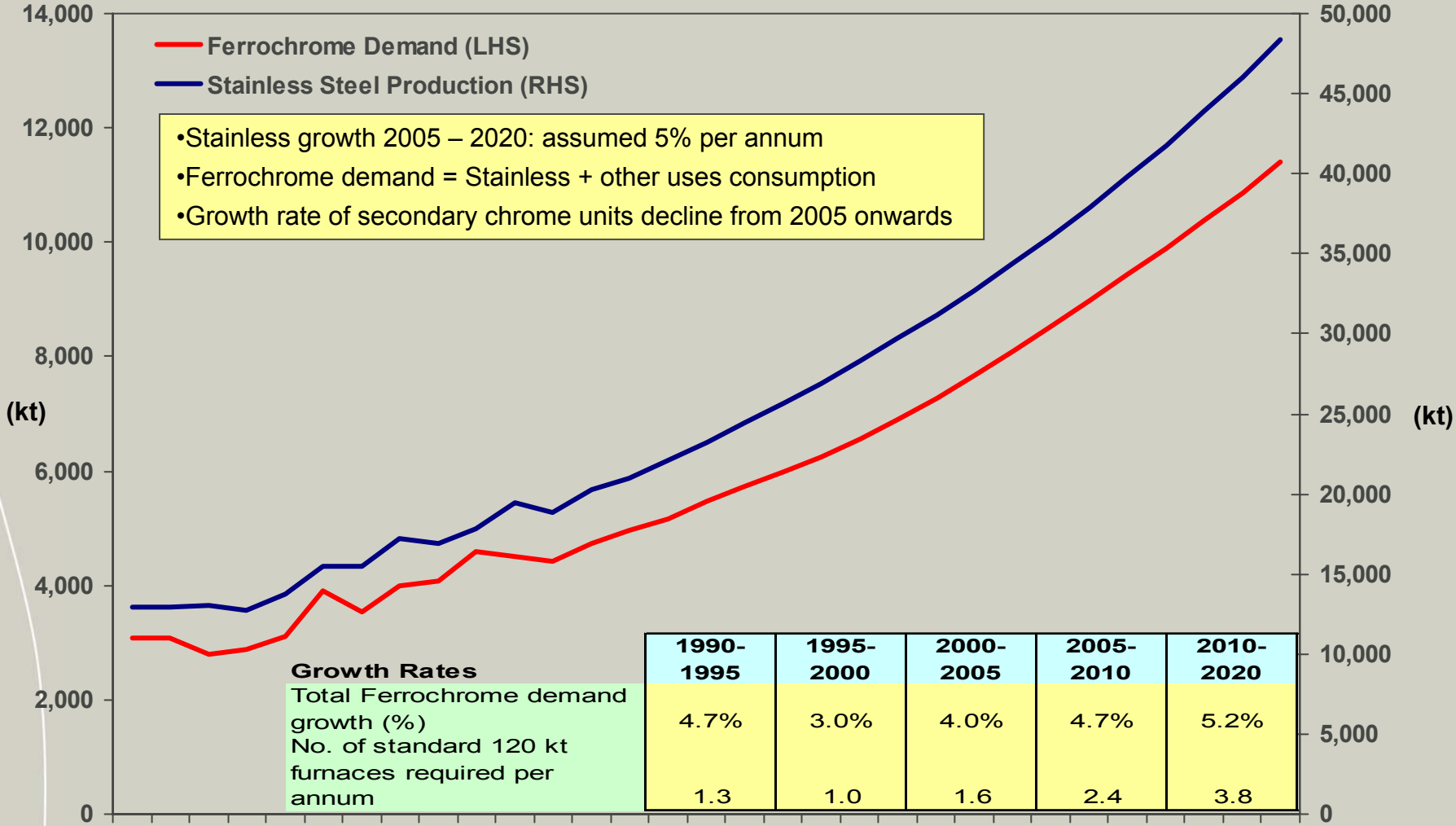
Low capital cost per tonne FeCr capacity



No substitute for Cr, but scrap cyclical

bhpbilliton

Ferrochrome demand growth outlook is robust – supply side is thus the issue

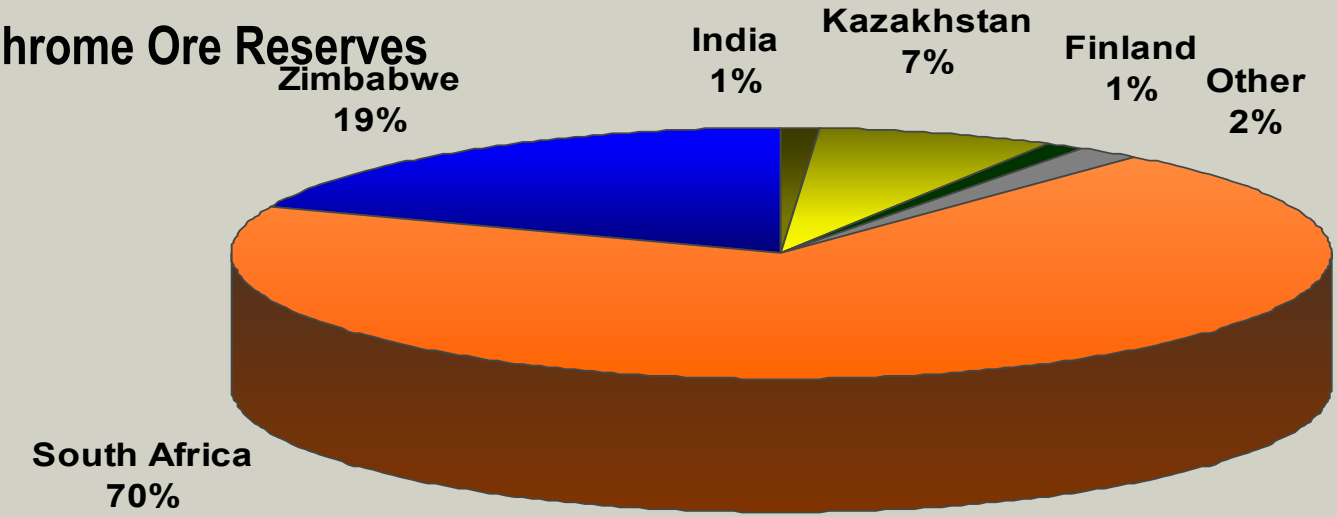


Growth Rates	1990-1995	1995-2000	2000-2005	2005-2010	2010-2020
Total Ferrochrome demand growth (%)	4.7%	3.0%	4.0%	4.7%	5.2%
No. of standard 120 kt furnaces required per annum	1.3	1.0	1.6	2.4	3.8

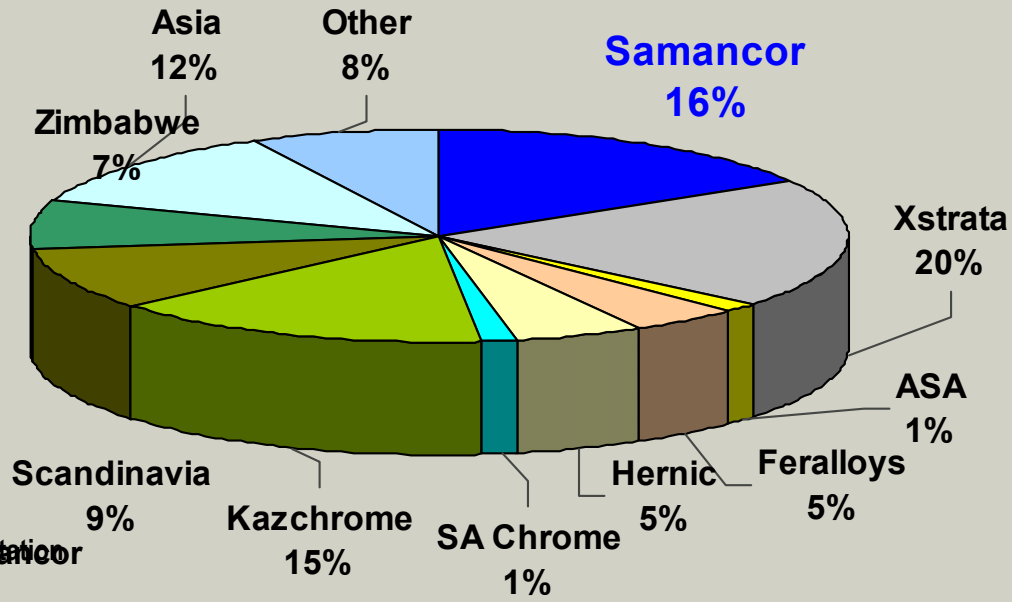
bhpbilliton

South Africa dominates the primary FeCr sector and will have the major share of future expansions

World Chrome Ore Reserves



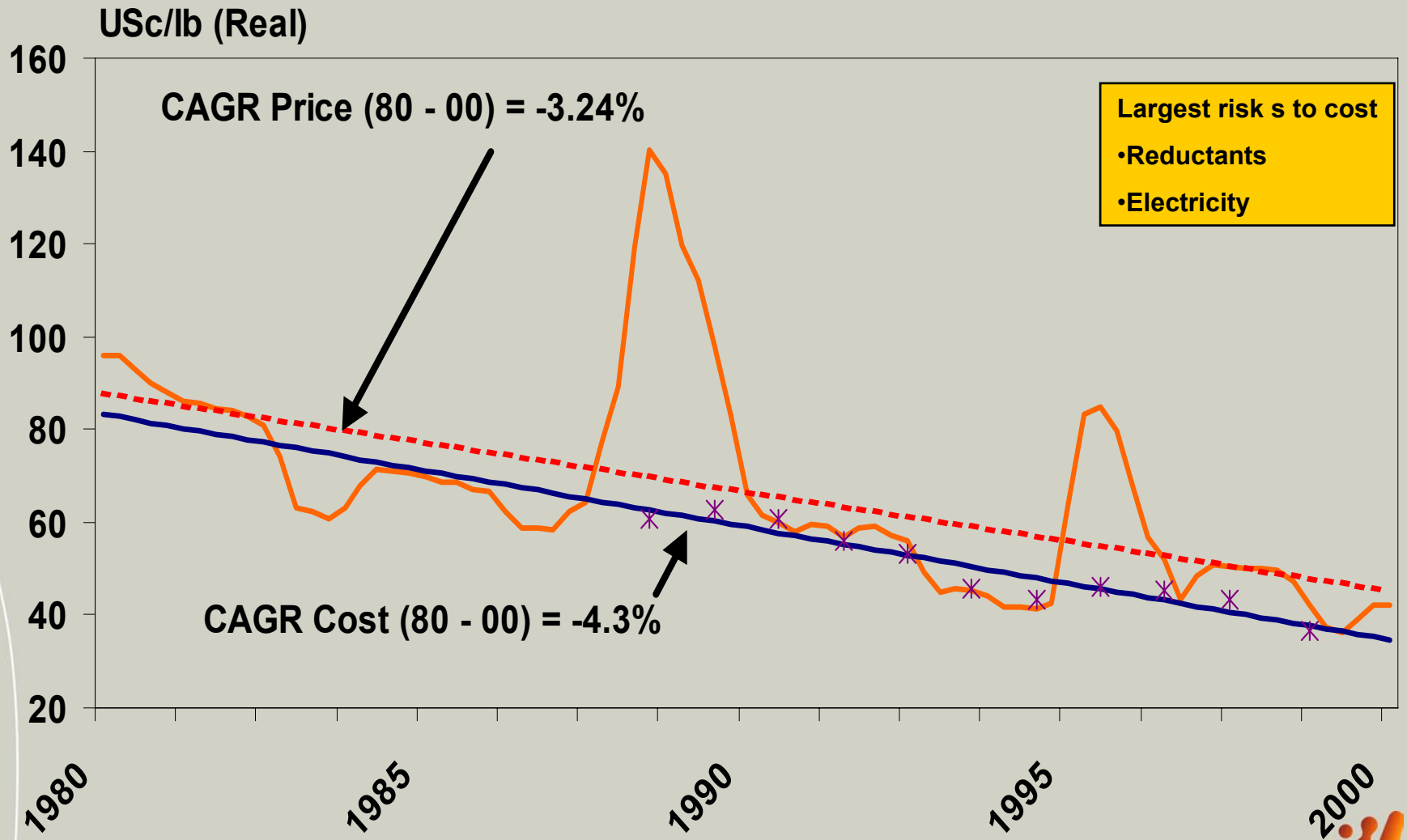
World Primary Chrome Supply



Source: Samancor

bhpbilliton

Ferrochrome falling price trend is a continuing challenge to the industry



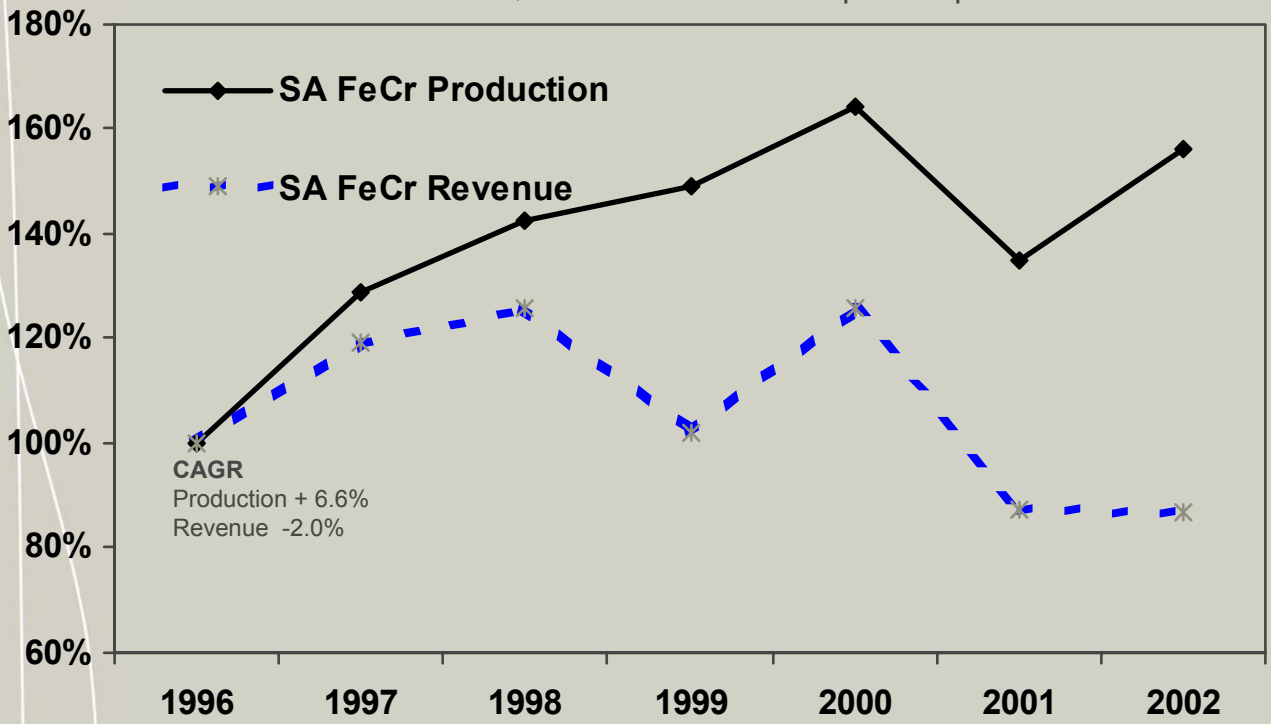
Source: CRU, Samancor Analysis

bhpbilliton

South Africa has failed to create industry discipline for FeCr growth, and has exported most of the value of its dominant supplier position

Index SA production and Revenue (1996-2002)

Revenue in real US$ based on CRU US Import list price – 50-55%



- SA Accounted for the 100% of net increase in FeCr world capacity since 1995 (1.53Mt)
  - Xstrata 620 kt
  - Hernic 260 kt - new entrant
  - SA Chrome 230 kt – new entran
  - Assmang 200 kt
  - Samancor 160 kt
  - ASA 60 kt – new entrant
- SA has been the price setter in the industry in the past 7 years
- But the total revenue to SA industry declined in real terms since 1996

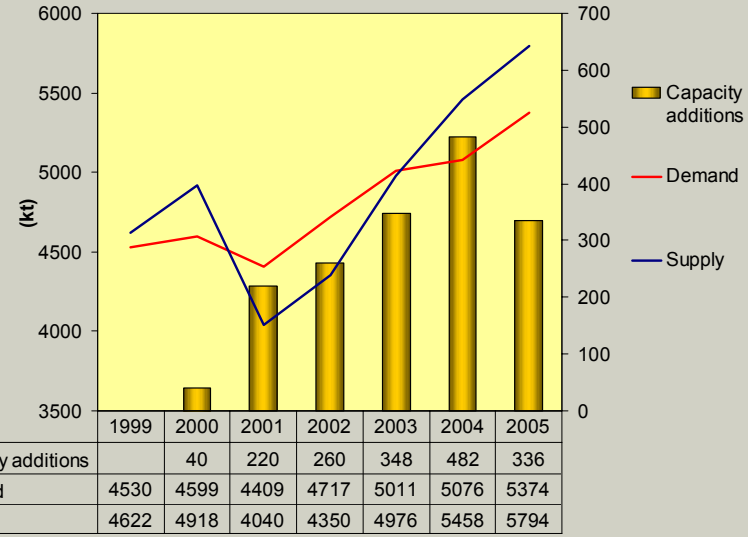
bhpbilliton

BEE and the Ferrochrome business

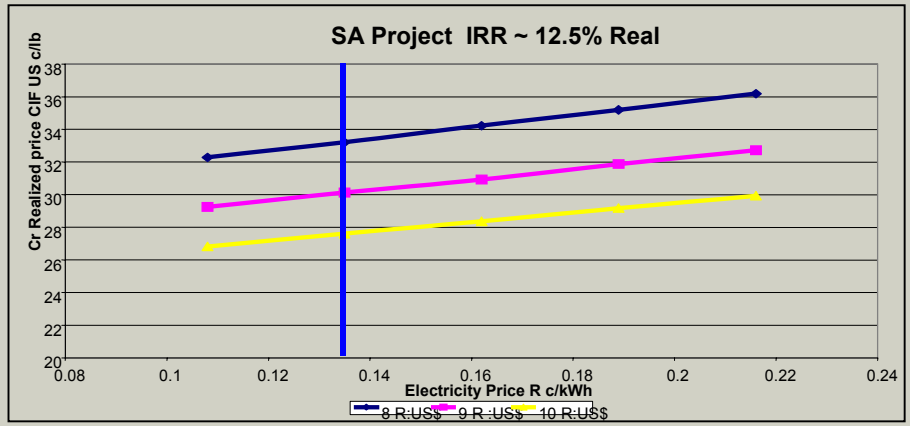
- The historic trend in SA capacity growth will continue. Entry barriers will be lower, as producers will not be able to retain unutilised resources.
- However, costs will rise - Rand, reductant costs, increased electricity prices, social obligations for South African producers.
- Will HDSA participation in FeCr Smelters be profitable?

  Hence HSDA business focus will likely center on:

  - Procurement
  - Mining and ore preparation
  - Community development
  - New smelting where there is a genuine low cost position

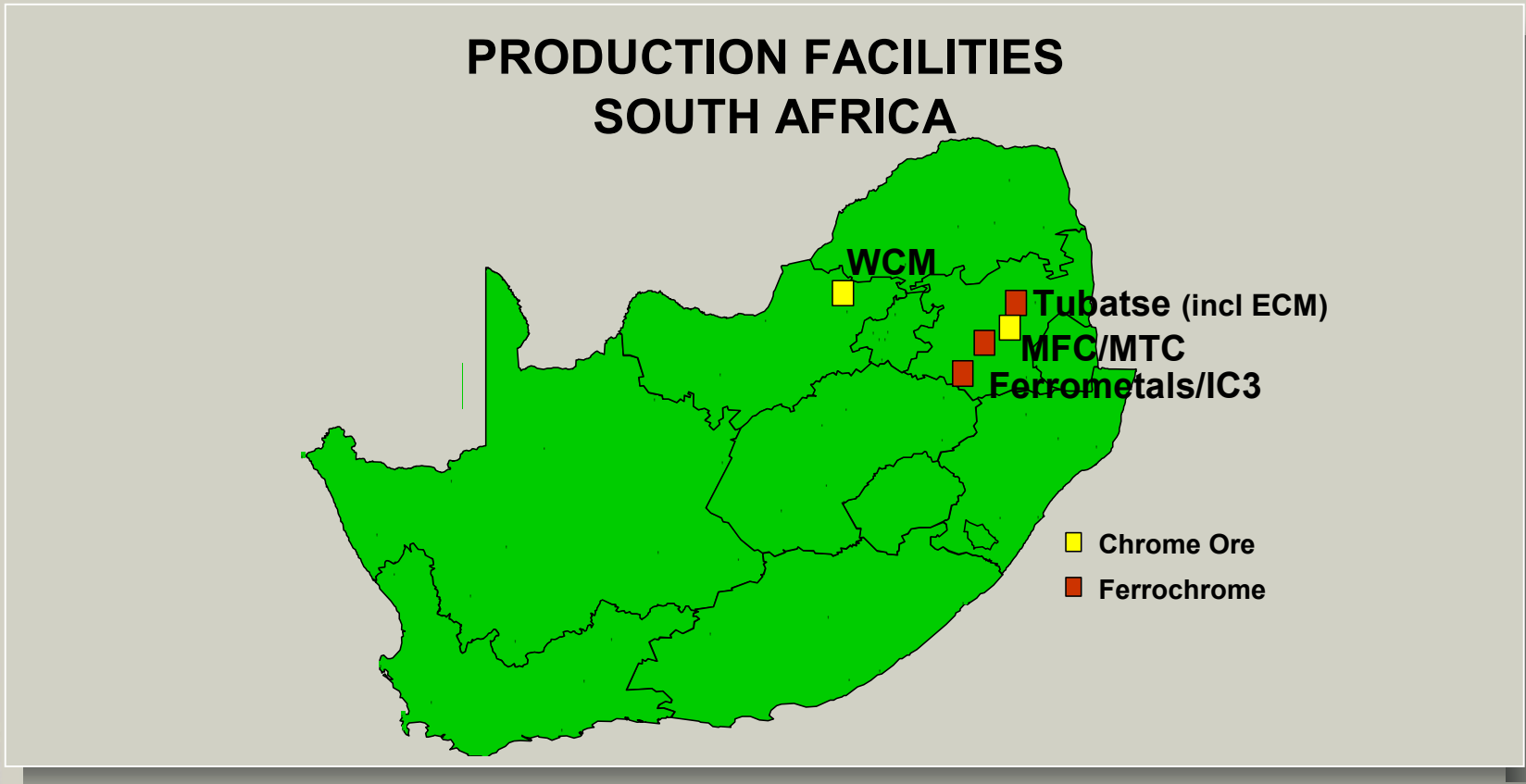


	1999	2000	2001	2002	2003	2004	2005
Capacity additions		40	220	260	348	482	336
Demand	4530	4599	4409	4717	5011	5076	5374
Supply	4622	4918	4040	4350	4976	5458	5794



bhpbilliton

Samancor Chrome (60% Ownership) : a Turnaround Asset



Reserves : 40Mt @ 42.4% Cr
Resources : 570Mt @ 43.3% Cr
NB based on 38% Cr cut-off

bhpbilliton

Restructuring of Chrome Division by a 3 Horizon Strategy

Manufacturing mindset to reposition chrome at the bottom of the cost curve

- Zero harm
- People lynchpin everything.
- Eliminate waste.
- ETG, furnace and mine stability, Procurement & contractor management, maintenance, GSAP&MES, Six Sigma.
- Site specific cost reductions.

Optimise value chain through prudent investment

- Understand future customer requirements.
- Implementing high IRR capacity creep projects at the works.
- Rationalise the mines with the value chain as the driver.

Reposition in Future Industry Context

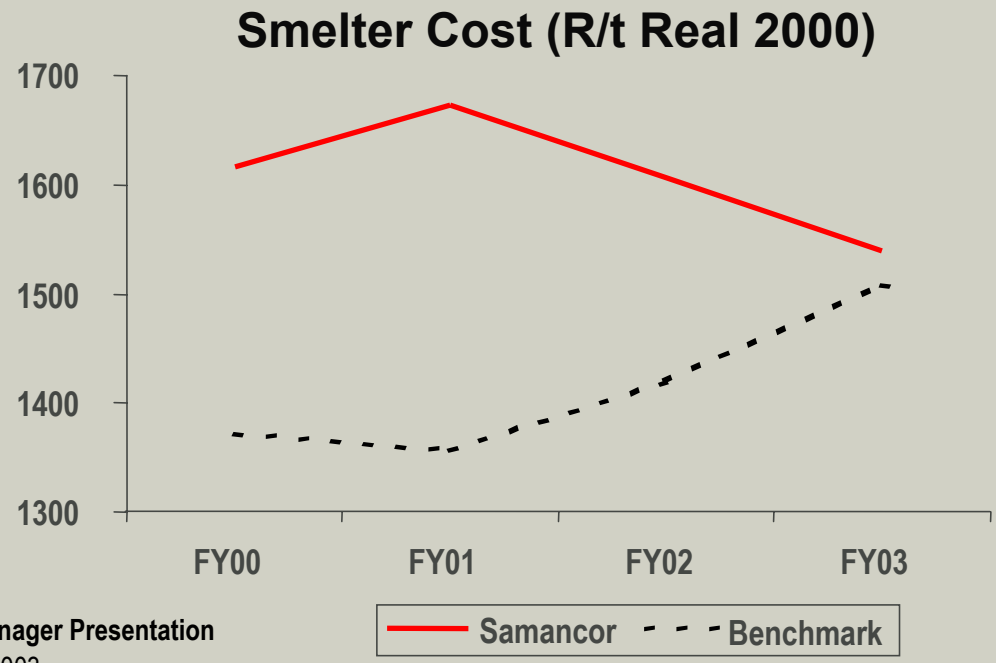
- Understand emerging industry dynamics.
- Understand SA Government approach to FeCr industry.
- Understand new product requirements in advance of the rest of the producers by working with customers.

•Increasing business maturity
•Improving market / production interface

bhpbilliton

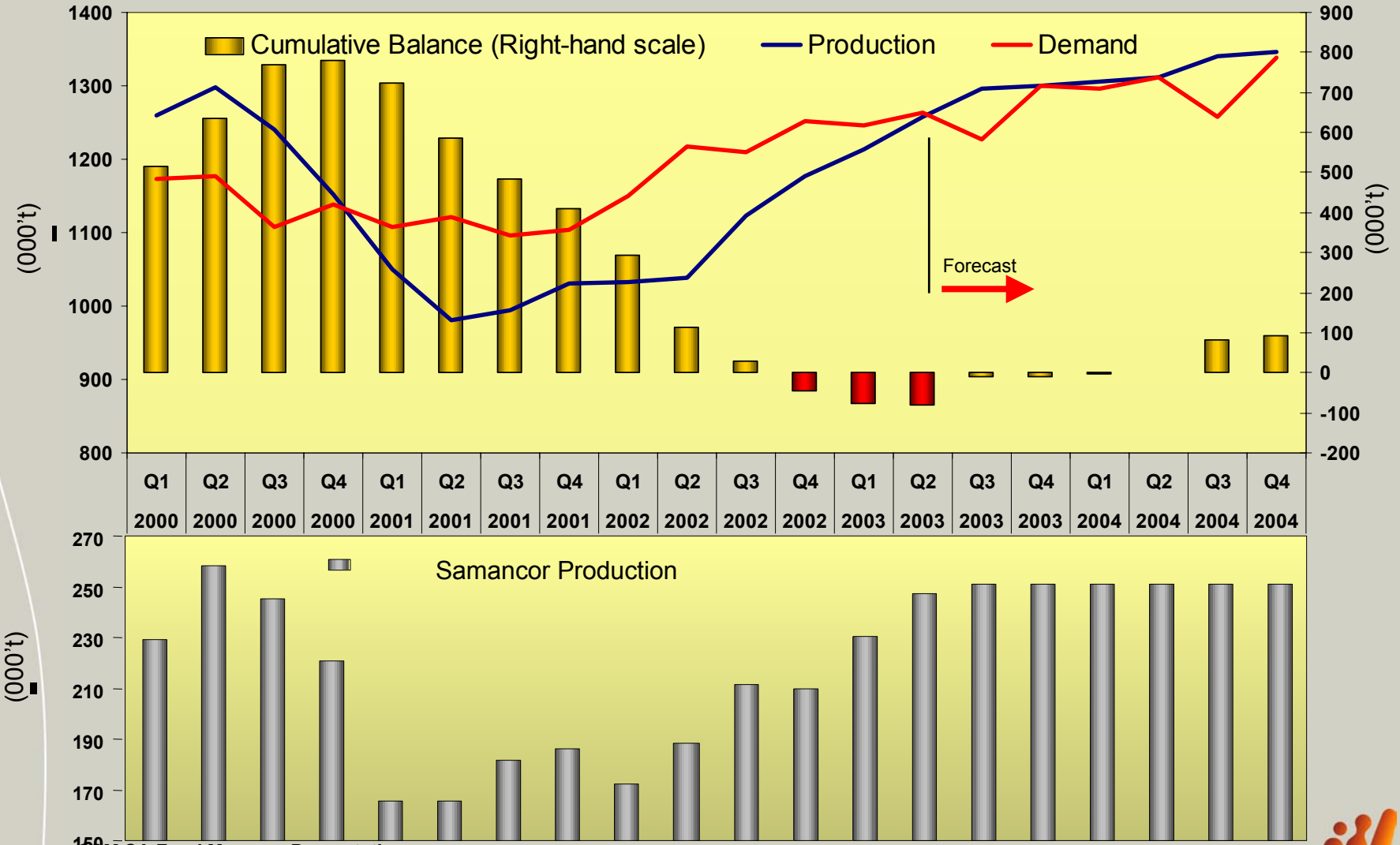
Variable cost drivers + results against benchmark show positive trends.

Cost Driver	FY00	FY01	FY02	FY03
SEC (k/Wh/ton)	3.98	4.08	3.79	3.90
Ore (t/t)	2.43	2.58	2.54	2.49
Reductant (t/t)	0.64	0.65	0.63	0.64
Cr Recovery (%)	79.24	72.23	74.1	76.51
Cr content (%)	51.3	51.1	50.9	50.9



bhpbilliton

Supply and demand balance – Samancor production



bhpbilliton

Conclusion

- Stainless steel – the highest growth major use of metals – provides a strong market for primary FeCr and Nickel
- A looming nickel supply gap is becoming apparent, a result of high entry barriers and inadequate returns on capital in 1990s
- SA will provide new FeCr capacity to meet the strong, but volatile, demand growth
- Uncontrolled FeCr capacity growth in SA has led, and may continue to lead, to significant value transfer to overseas customers.
- For Samancor Chrome, cost-efficiency is key, as input costs in SA are likely to increase
- BHP Billiton is a mature nickel producer, customer-focused with options for further capital-efficient growth