



Aluminium

Arvid Moss  
Sector President, Metal Products



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**Metals segment**

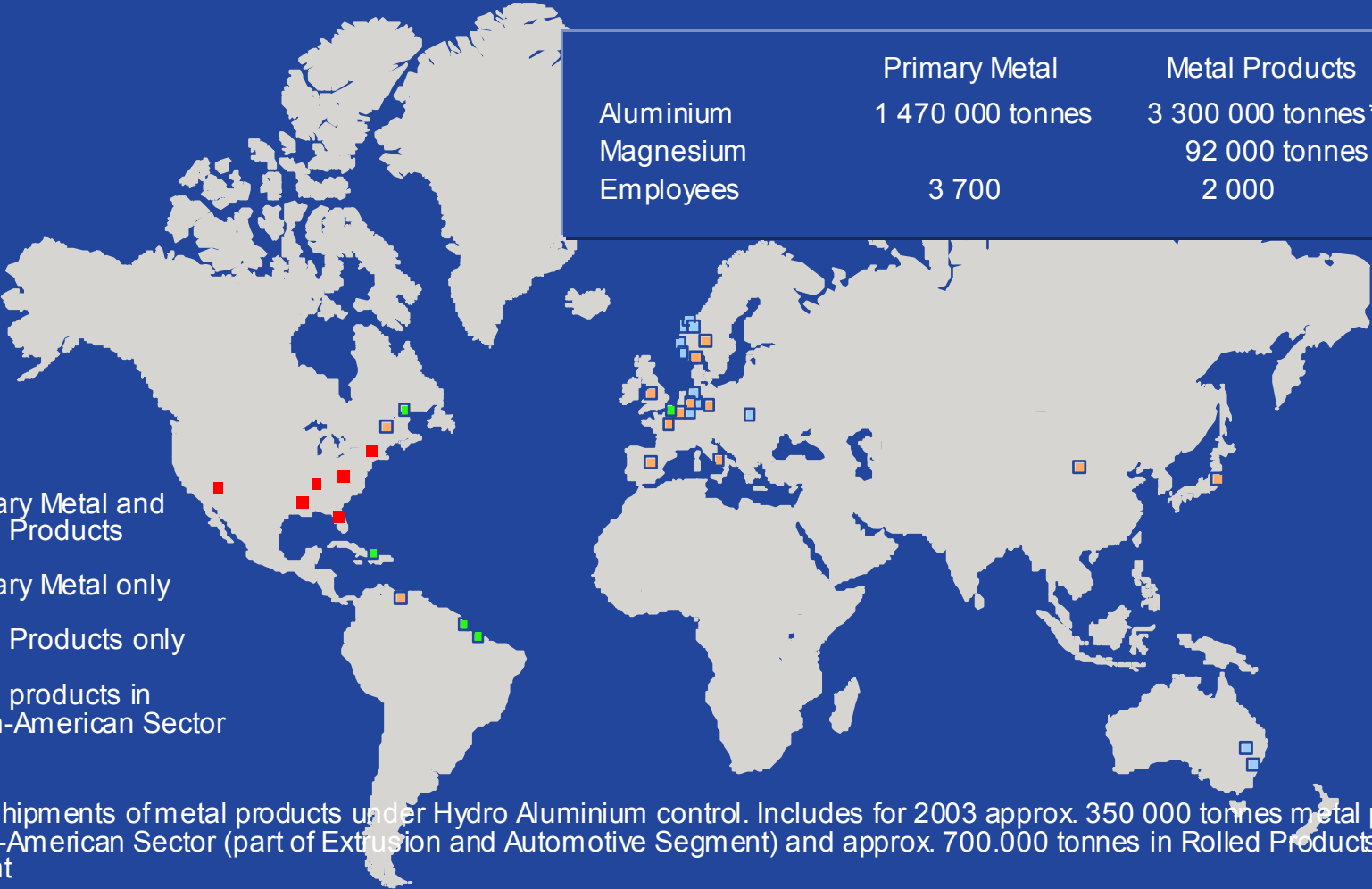
# Main messages

- Increasing equity alumina production at lower cost
- Improving primary system
  - Cost improvement in progress for “in-the-market” smelters
  - Portfolio changes to improve cost
- Expanding profitable metal products system
  - The preferred supplier in Europe
  - Achieving attractive profitability
  - Growing globally – well positioned as more metal will travel

# Metals segment – 2003

	Primary Metal	Metal Products
Aluminium	1 470 000 tonnes	3 300 000 tonnes *
Magnesium		92 000 tonnes
Employees	3 700	2 000

- Primary Metal and Metal Products
- Primary Metal only
- Metal Products only
- Metal products in North-American Sector

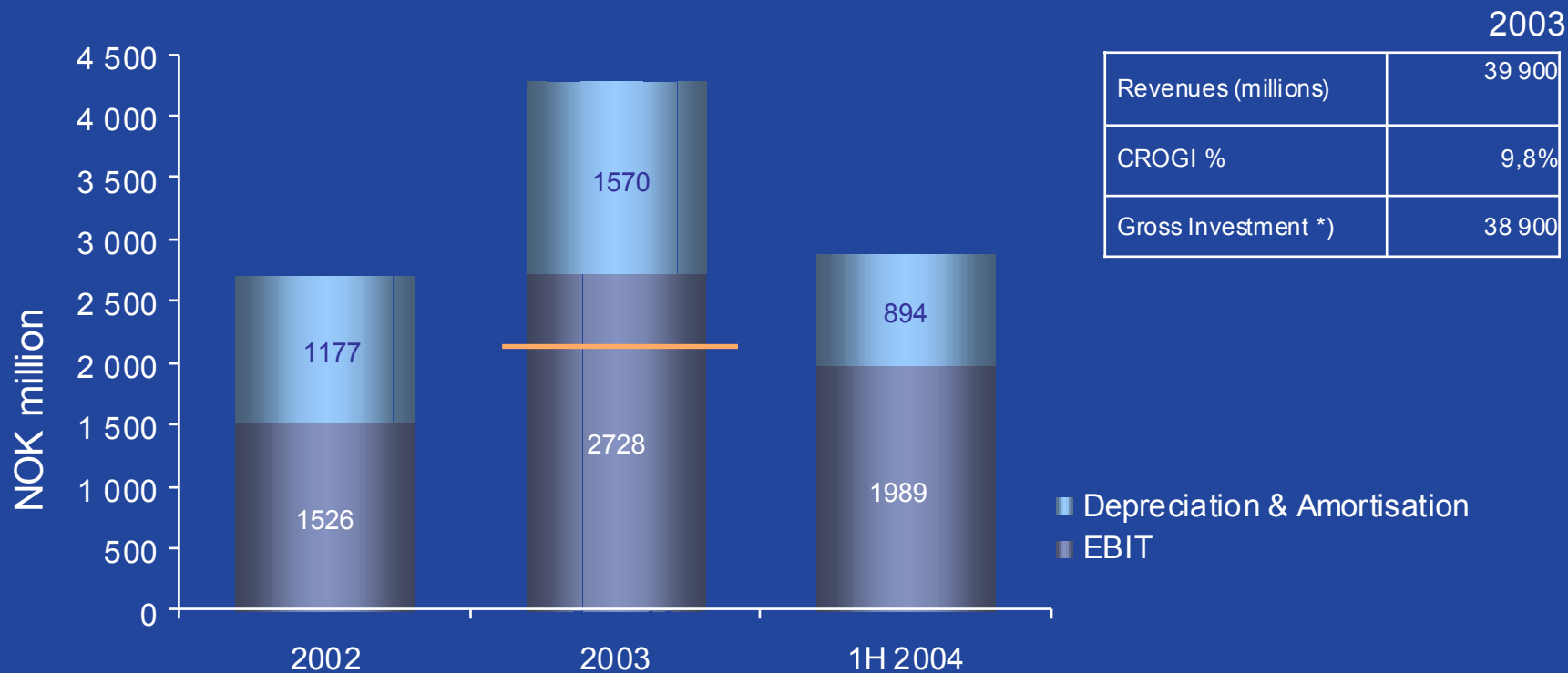


\* Total shipments of metal products under Hydro Aluminium control. Includes for 2003 approx. 350 000 tonnes metal product in North-American Sector (part of Extrusion and Automotive Segment) and approx. 700.000 tonnes in Rolled Products Segment



# Metals segment: EBITDA

## EBIT and EBITDA 2002 – 2004



2003	
Revenues (millions)	39 900
CROGI %	9,8%
Gross Investment *)	38 900

EBITDA 1H 2003

\* Gross Investment by 31.12.2003



# Delivering on our commitments – Primary Metal

## What we said

### Delivery (operational):

- Cost reductions.  
Best practice sharing
- Low capital intensive capacity increases

### Direction:

- Improve relative cost position in production
- Portfolio improvements
- No greenfield projects

## What we have done

- Total fixed cost increased approx 1 %, while production increased 8%
- Increased volume with 35 000 tonnes - positive result effect of approximately NOK 175 million 20 000 tonnes in pipeline

- Alouette II and Sunndal 4  
Closure of Søderberg decided
- Alpart partnership restructured. Alumina plant in Germany sold  
Alunorte 1<sup>st</sup> expansion complete. Alunorte 2<sup>nd</sup> expansion in progress  
Long term alumina supply contract with Comalco

# Primary metal production – key value drivers

Achieve competitive edge through...

## Sourcing

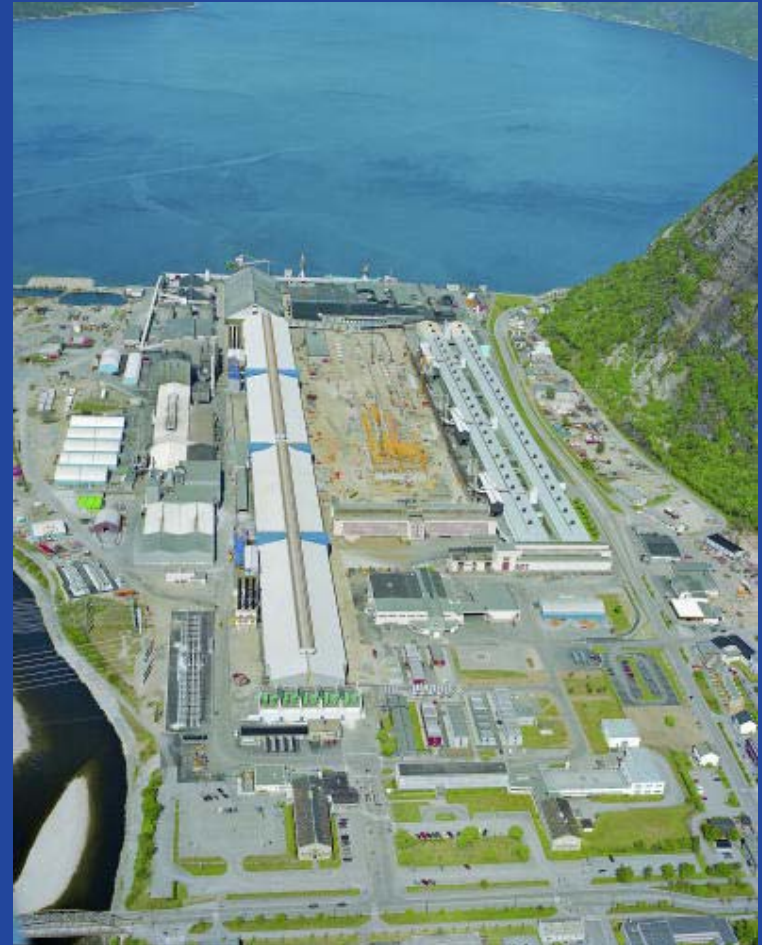
- Alumina
- Power
- Carbon

## Production

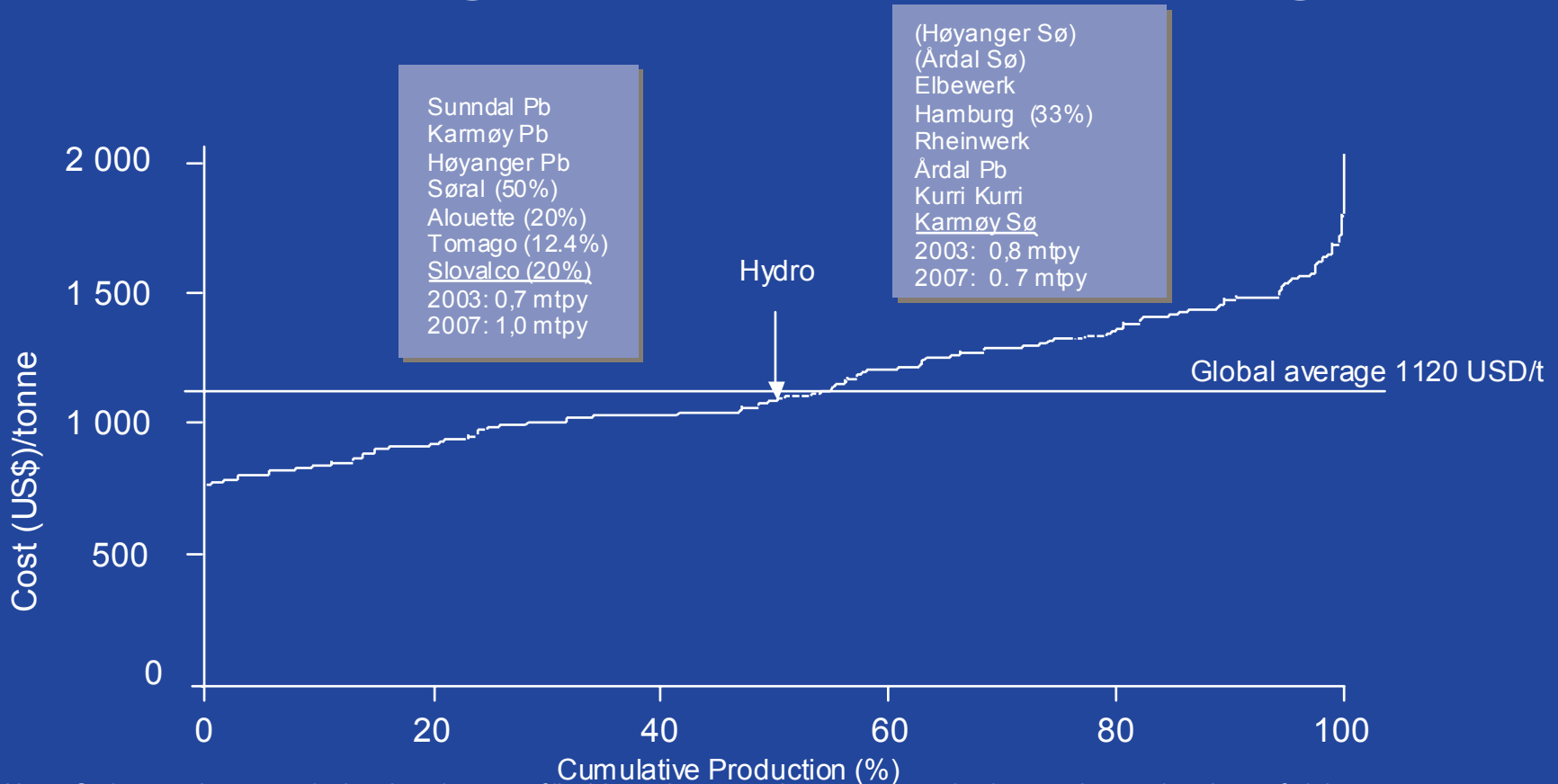
- Continuous cost reductions and operational excellence
- Asset quality and favourable operating locations
  - Market proximity or low cost operating climate

## Technology leadership

- Optimising existing operations
- Low CAPEX and environmental leading for expansions
- Project Management excellence



# Cash operating cost 2003 – world ranking

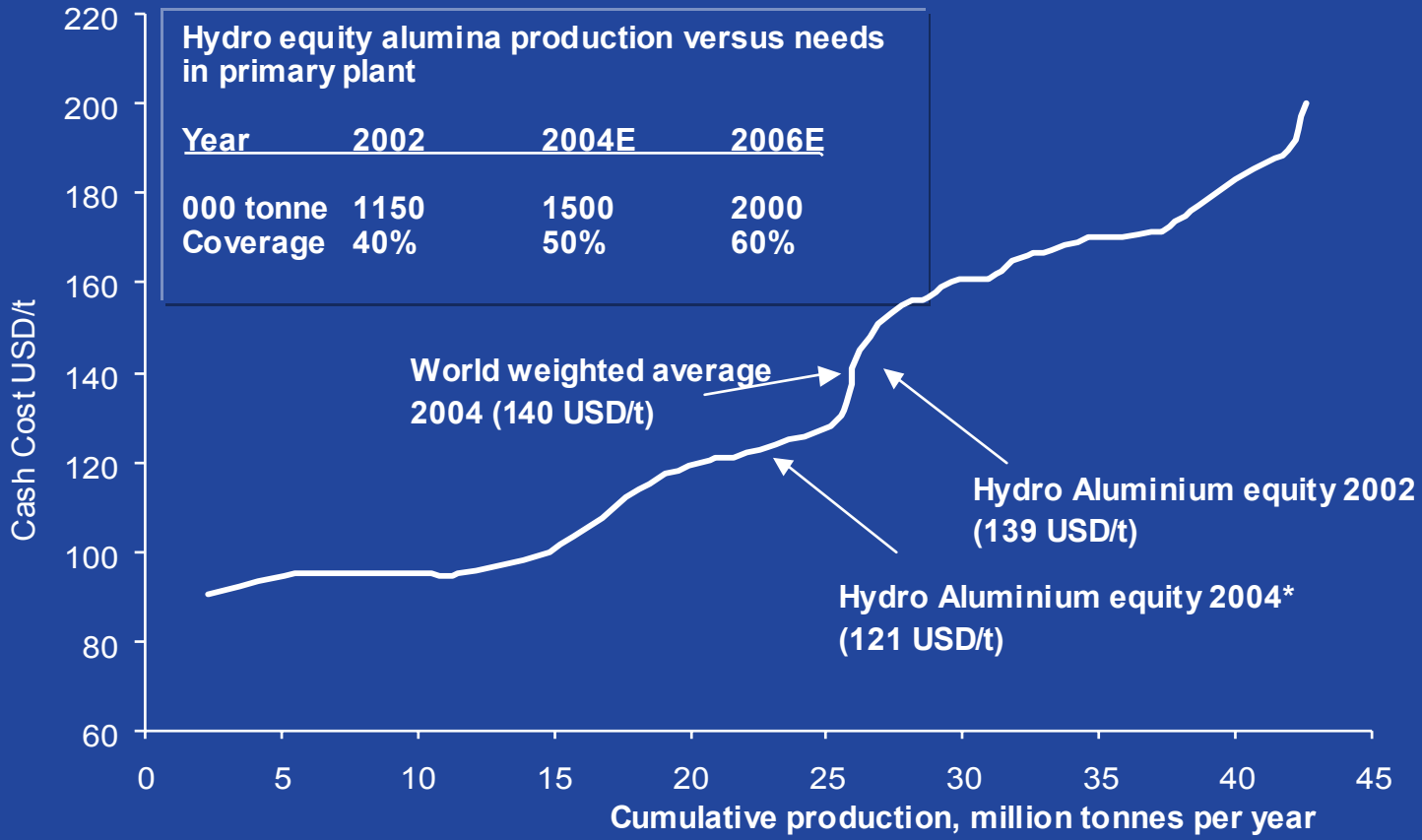


Note: Cash operating cost calculated as the sum of liquid metal cost, casthouse cost, casting losses, site overhead cost, freight cost, interest on work in progress, margin cost and head office cost.

Source: CRU. Assumptions LME 2003: USD 1423. USD/NOK 2002: 7.16. 28 mill. tonnes costed. Position of Hydro Aluminium smelters: Hydro Aluminium actual cost



# Increasing equity alumina at lower cost



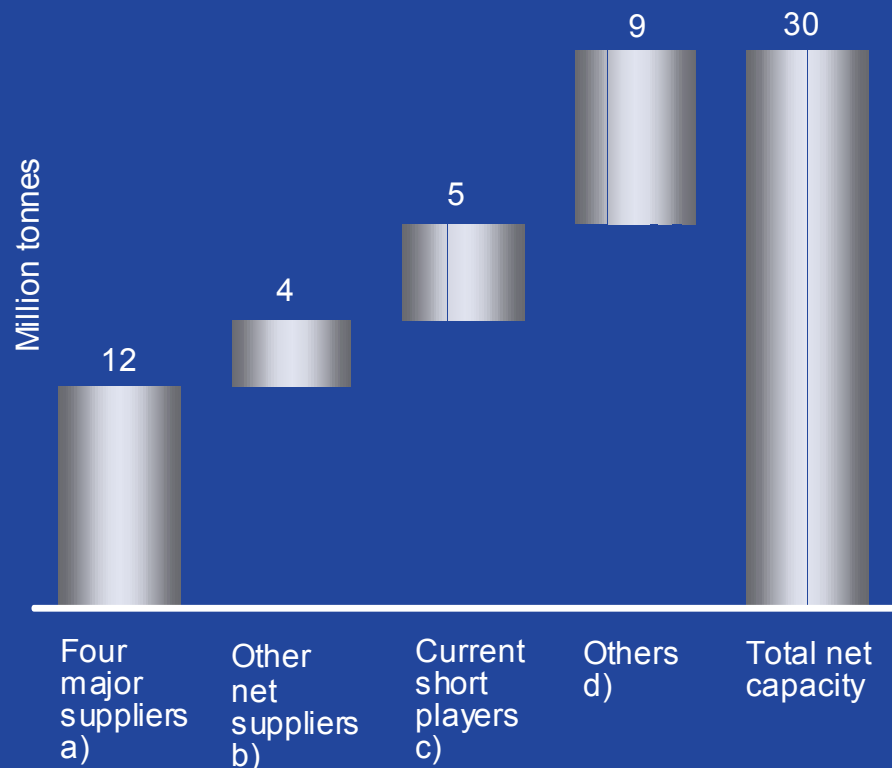
\*After sale of alumina plant in Germany. Bauxite to Alunorte at cost. Including bauxite levy Alpart  
 Source: CRU: Major Western World Refineries (43 mill tons, i.e 80% of world production). Hydro Aluminium estimates. 2006E = Year end speed





# Alumina market balance should improve – attractive long term contracts possible

Potentials for increased production globally  
2004-2012



- Capacity potential above expected demand
- Continue mix of medium and long term contractual and equity supply of alumina
- Equity: Evaluate opportunities
  - Alunorte brownfield
  - Alpart debottlenecking
  - Other asset opportunities

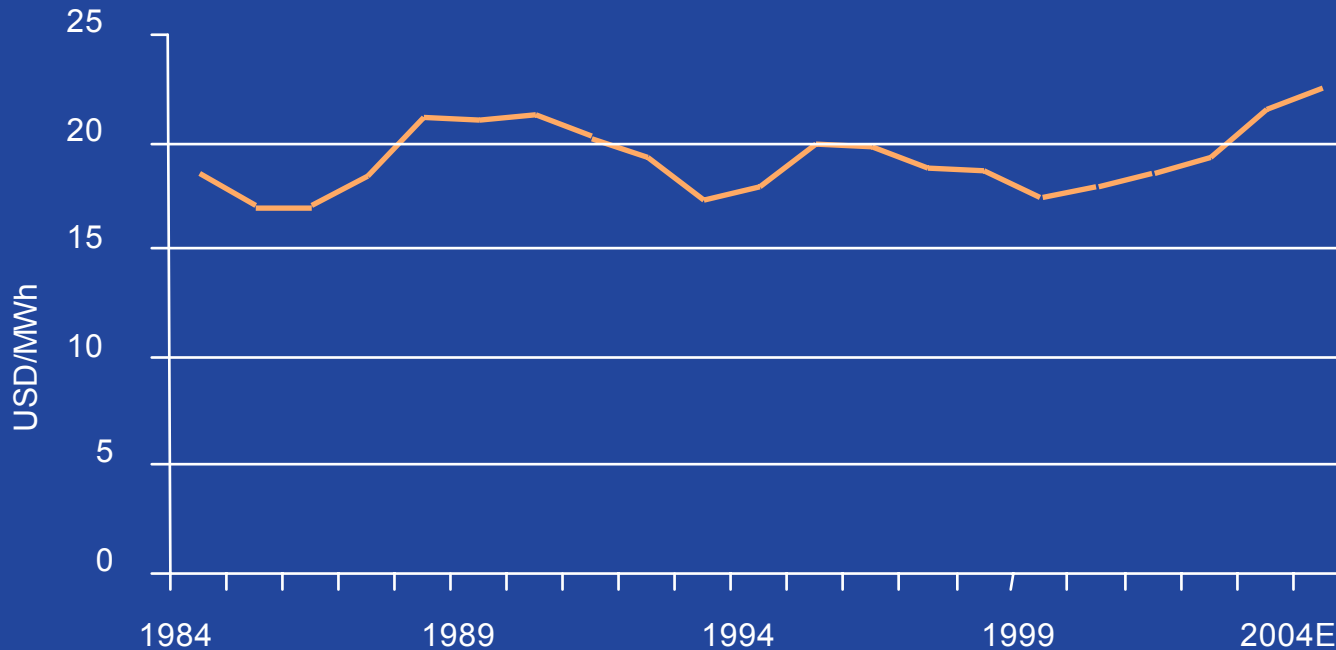
- a) Alcoa, BHP Billiton, Comalco, CVRD
- b) Glencore, CVG, Nalco, Sterilite
- c) Alcan, Hydro Aluminium, Rusal
- d) Others (China and several smaller projects)



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# Global power prices trend upward

Average power price to aluminium smelters-world wide  
Nominal values



- **Hydro Aluminium after 2006**
  - Increased power cost Norway - compensated by Aluimprover
  - Increased power cost Germany - negotiations ahead

Sources: CRU, Hydro Aluminium



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# Improving primary system

## Continuous cost reductions

- 2004 – 2005
  - Norway: demanning 800 employees (Aluimprover)
  - Potentials being evaluated in Germany
- 2006-2007
  - Closure of Søderberg capacity in Årdal and Høyanger, 70 000 tonnes
    - Expected demanning 280 employees
    - No net book value at time of closure

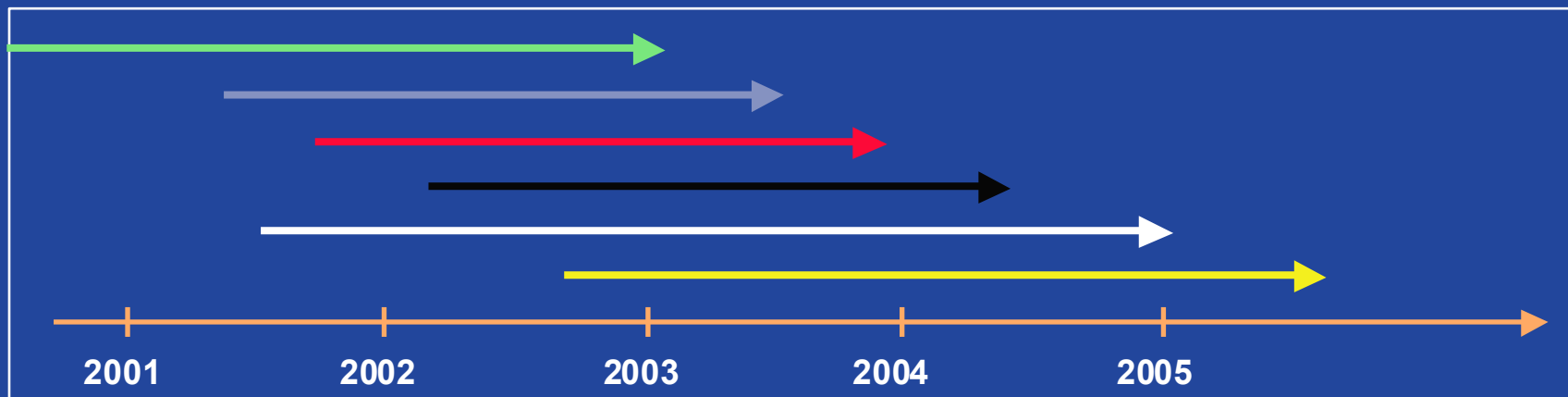
# Improving primary system Portfolio changes

Share of production in smelters above 350 000 tonnes annual capacity

- Western World
  - 2002: 24 %
  - 2007E: 40 % (20 % above 500 000 tonnes per year)
- Hydro Aluminium
  - 2002: 4 %
  - 2007E: 30 % (10 % above 500 000 tonnes per year)
- Hydro moves closer to average

# Improving primary system Project excellence

- **Alunorte I (+ 900.000 tonnes per year)**
  - USD 325 /tonne
  - Final cost approx. 80% of CEP
  - On time. Accelerated start up
- **Slovalco (+ 37.500 tonnes per year)**
  - On time and budget
- **Aluchemie Carbon (+ 108.000 tonnes per year)**
  - On time and budget
- **Aardal Carbon (+ 108.000 tonnes per year)**
  - On time. Final cost approx. 85% of CEP
- **Sunndal IV (+ 258.000 tonnes per year)**
  - USD 3 100 per tonne Aluminium
  - On time and budget. Accelerated start up
- **Alouette (+ 300.000 tonnes per year)**
  - On time and budget.



# Priorities Primary Metal

## Improve relative cost position

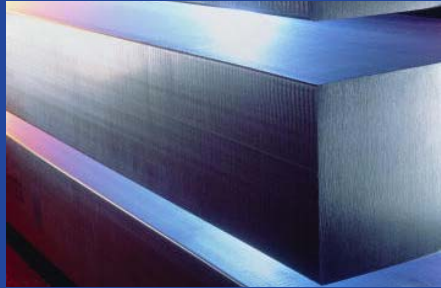
- Continue to pursue improved alumina position
- Improving primary system
  - Continuous cost reductions and operational excellence
  - Deliver on investment projects
  - Portfolio changes to improve cost

# Expanding profitable metal products system

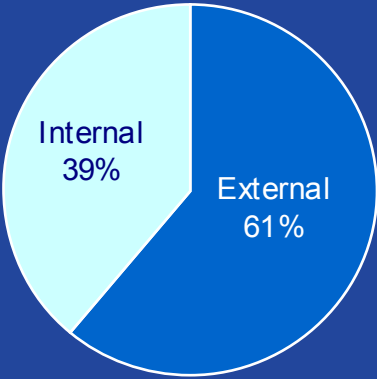




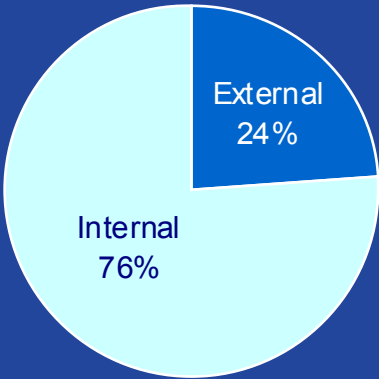
# Metal Products market portfolio 2003



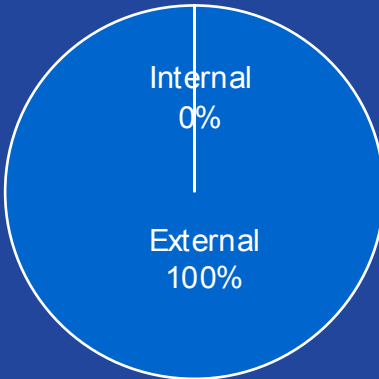
Extrusion Ingot



Sheet Ingot



Foundry Alloy



# Delivering on our commitments – Metal Products

## What we said

### Delivery (Operational):

- Cost reductions and best practice sharing
- Maximize throughput
- Keep investments at a minimum

### Strategic:

- Short-term improve and utilize European assets fully
- Strengthen leading positions in Foundry alloys
- Develop Asian markets and establish aluminium foothold in China

## What we have done

- Fixed cost per ton reduced
- Volume up 16% on last year
- Done (CAPEX only 4% of Gross Assets)

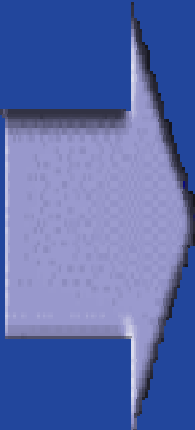
- 100% utilization currently
- Done in Europe – 50% volume increase from 2003
- Expansion in process

# Metal Products - Key value drivers

Achieve superior returns on capital through...

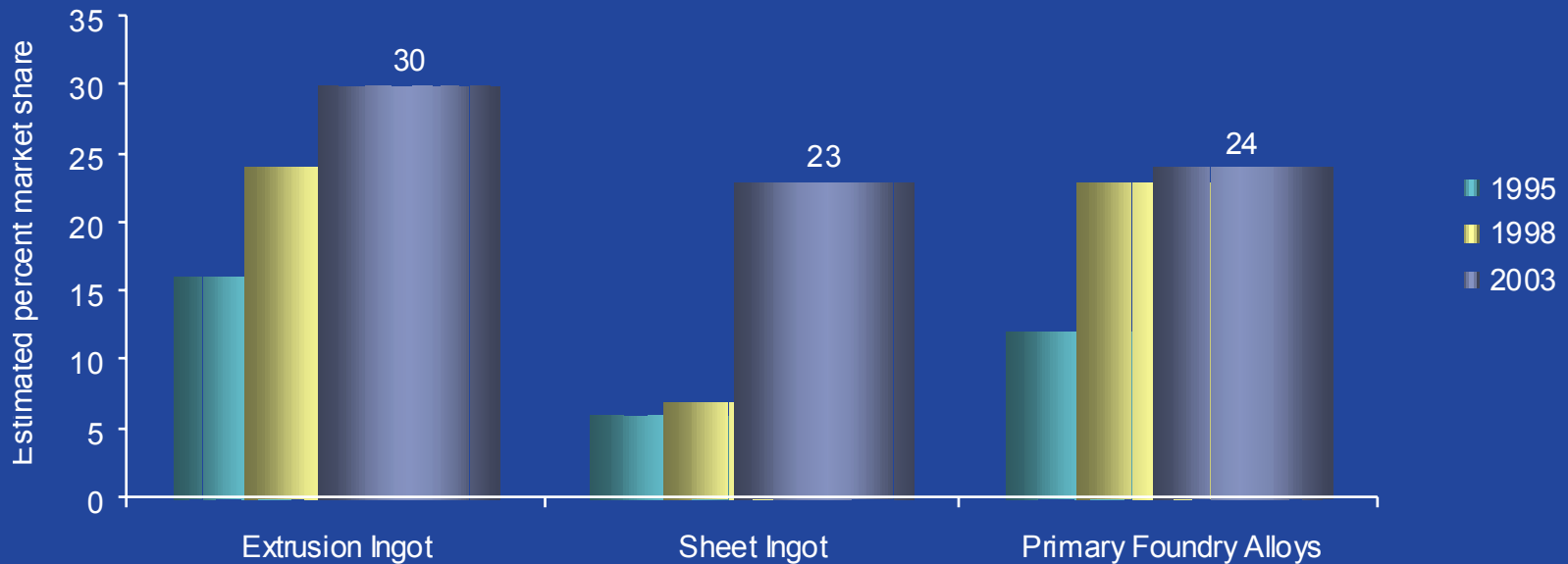
- Offering additional value to customer
- Optimised and streamlined operations
  - Primary casthouses
    - Maximize capacity utilisation. Long series
  - Remelters close to market
    - Optimize logistic costs. Shorter series
  - Continuous learning across system from internal benchmarking.
- Optimised metal flow (own primary, external primary, ingot, scrap recycling)

# De-commoditize



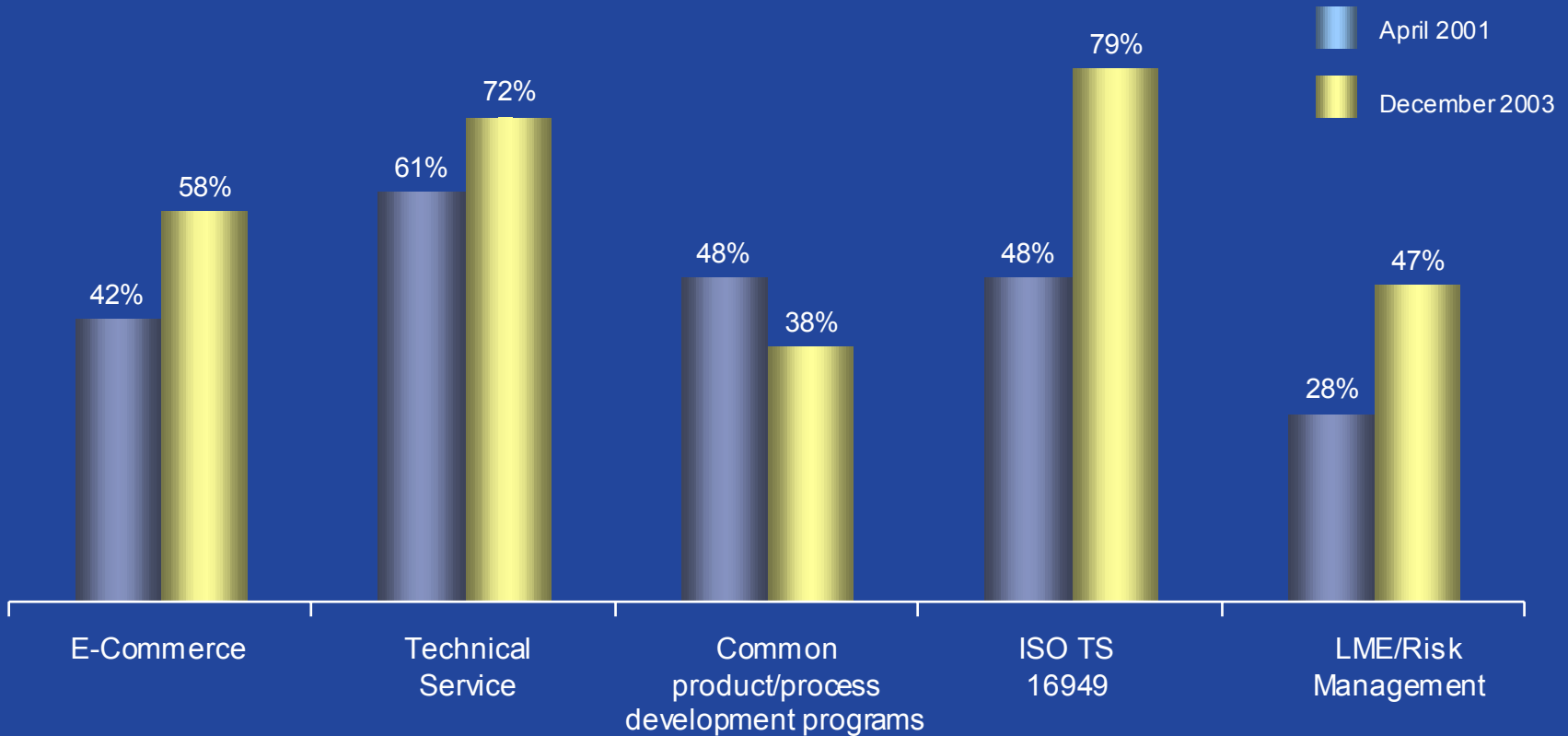
# Strong market pull based on business model and value proposition in market place

## Europe



# Customers clearly see a value in additional services

"Which kind of additional services would add value for your business?"



Source: PIMS – interviews 2004, primary foundry alloy customers

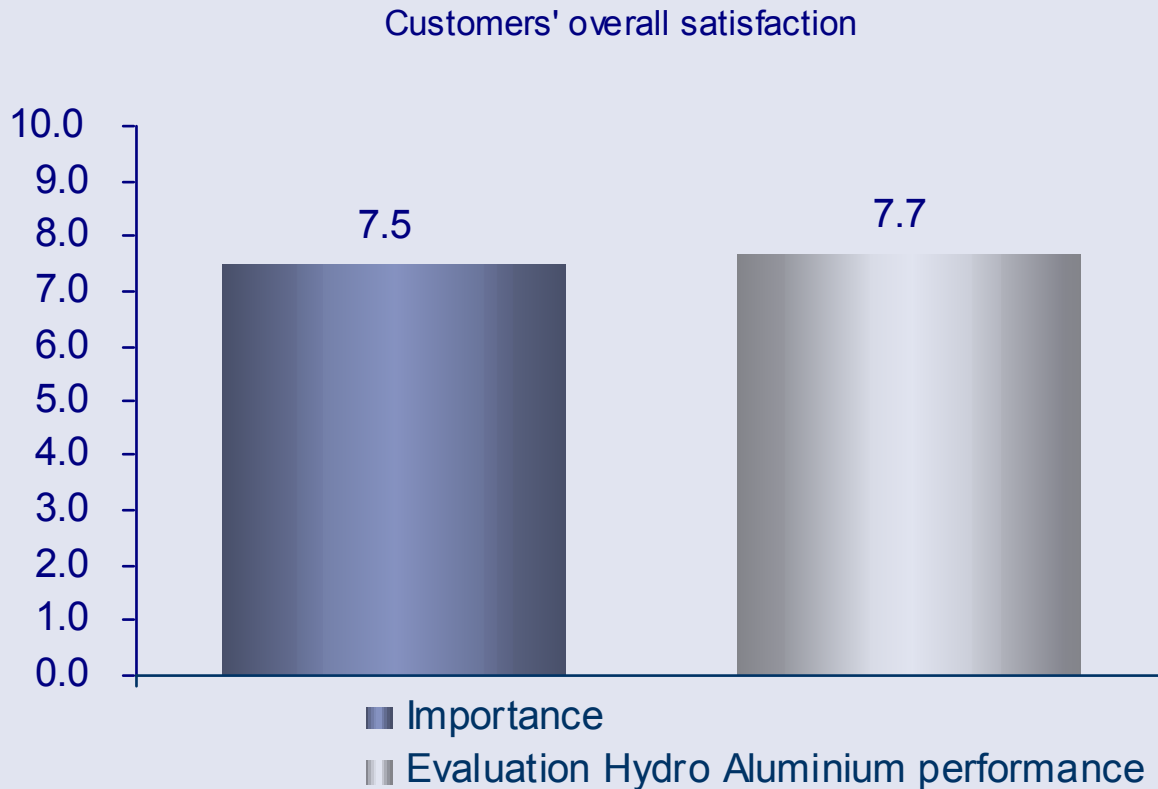
# A valuable Hydro Billet Plus service concept

Value for our customers

Value for Hydro Aluminium

Excellent/  
perfect

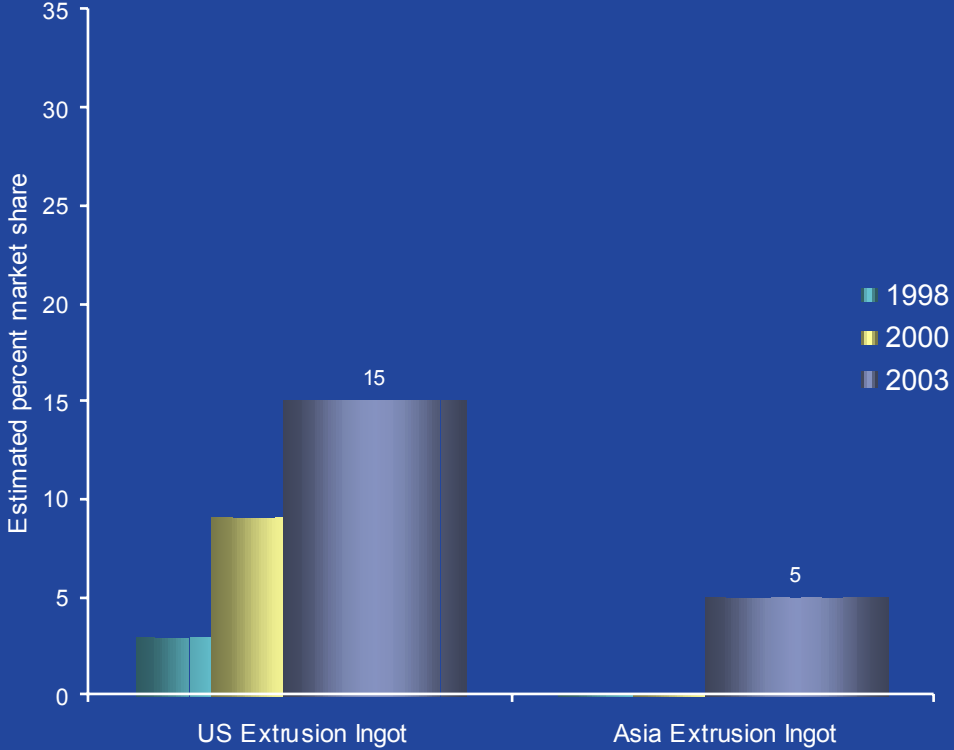
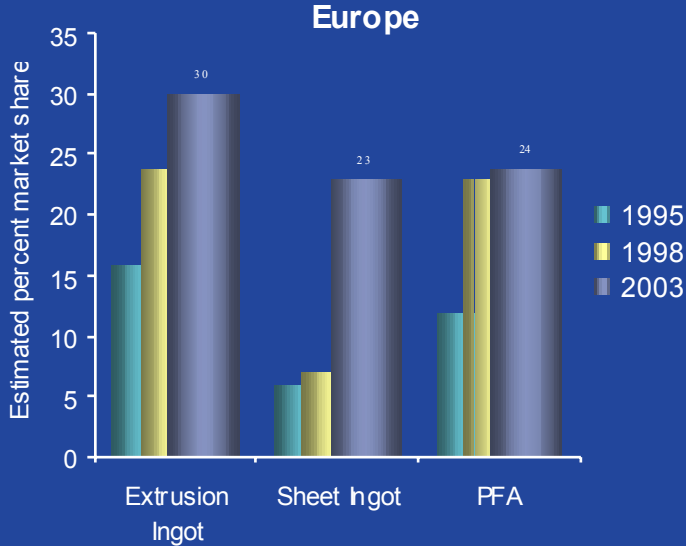
Absolute  
inadequate



Source: PIMS  
Europe Ltd.2004



# Rolling out the concept in North America – Asia next



# North American market restructuring – opportunity in extrusion ingot

Extrusion ingot market structure



## The situation:

- Shortage of primary
- Smaller players in trouble
- Securing scrap a major challenge

## Our response:

- Contribute to reshaping
- Expanding service concept
- Upgrading to facilitate additional scrap sources
- Exploring potential additional greenfield remelt facilities

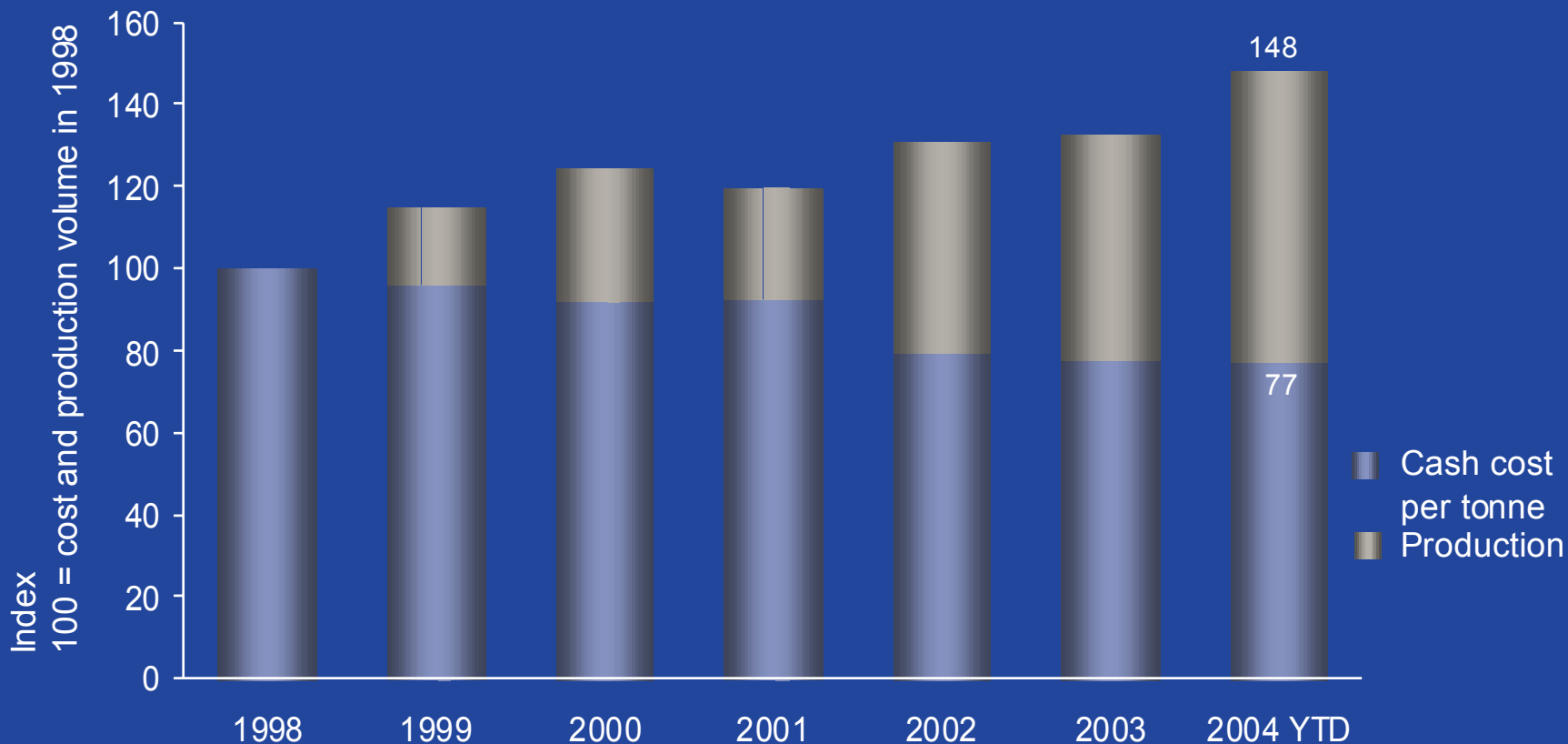


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# Optimizing casthouses

## Increased volume and lower cost in operations

Karmøy 2003 ~ 261 000 tonnes per year



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# Hydro Aluminium electrolysis metal 2004



# Global system with third party partners metal

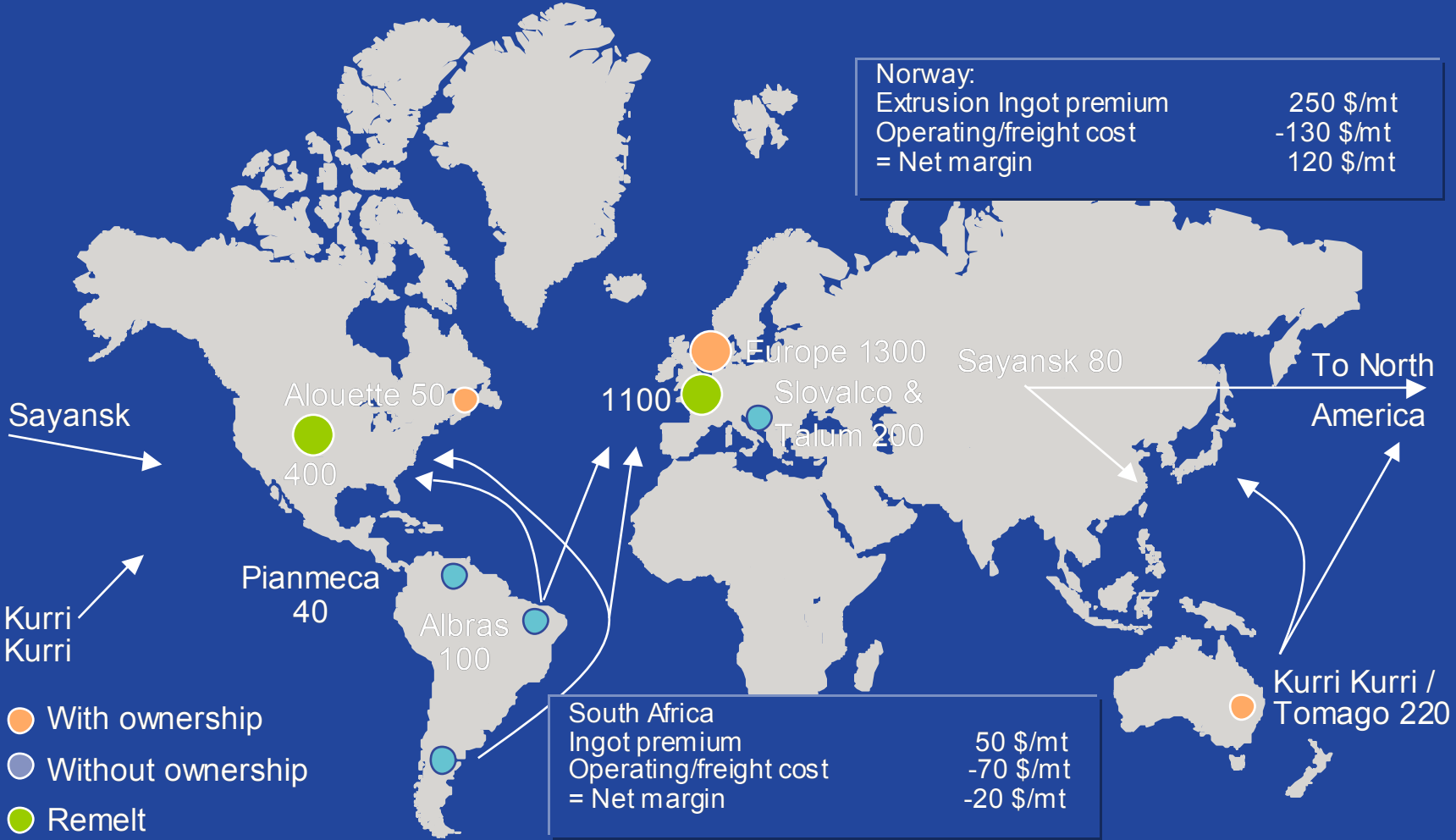
## Metal flows 2004



# Remelters in the markets create flexibility



# Hydro well positioned when more metal will travel in the future





# Priorities Metal Products

## Expanding profitable metal products system

- Enhance value of unique customer service concept
  - Lead in Europe - strengthen positions in the US and Asia
- Operational concept - technology, logistics, system optimization
  - Cost reductions and best practice sharing
- Growing globally – well positioned as more metal will travel
  - Continue to utilize European assets fully
  - Expand global sourcing network for metal products and ingot – capital discipline
  - Expand in scrap recycling in Europe and the US

# Forward-looking statements/ use of non-GAAP financial measures

In order to utilize the “safe harbor” provisions of the United States Private Securities Litigation Reform Act of 1995, Hydro is providing the following cautionary statement: This presentation contains certain forward-looking statements with respect to the financial condition, results of operations and business of the Company and certain of the plans and objectives of the Company with respect to these items. By their nature, forward-looking statements involve risk and uncertainty because they relate to events and depend on circumstances that will occur in the future. The actual results and developments may differ materially from those expressed or implied in the forward-looking statements due to any number of different factors. These factors include, but are not limited to, changes in costs and prices, changes in economic conditions, and changes in demand for the Company's products. Additional information, including information on factors which may affect Hydro's business, is contained in the Company's 2003 Annual Report on Form 20-F filed with the U.S. Securities and Exchange Commission.

With respect to each non-GAAP financial measure Hydro uses in connection with its financial reporting and other public communications, Hydro provides a presentation of what Hydro believes to be the most directly comparable GAAP financial measure and a reconciliation between the non-GAAP and GAAP measures. This information can be found in Hydro's earnings press releases, quarterly reports and other written communications, all of which have been posted to Hydro's website ([www.hydro.com](http://www.hydro.com)).





Aluminium

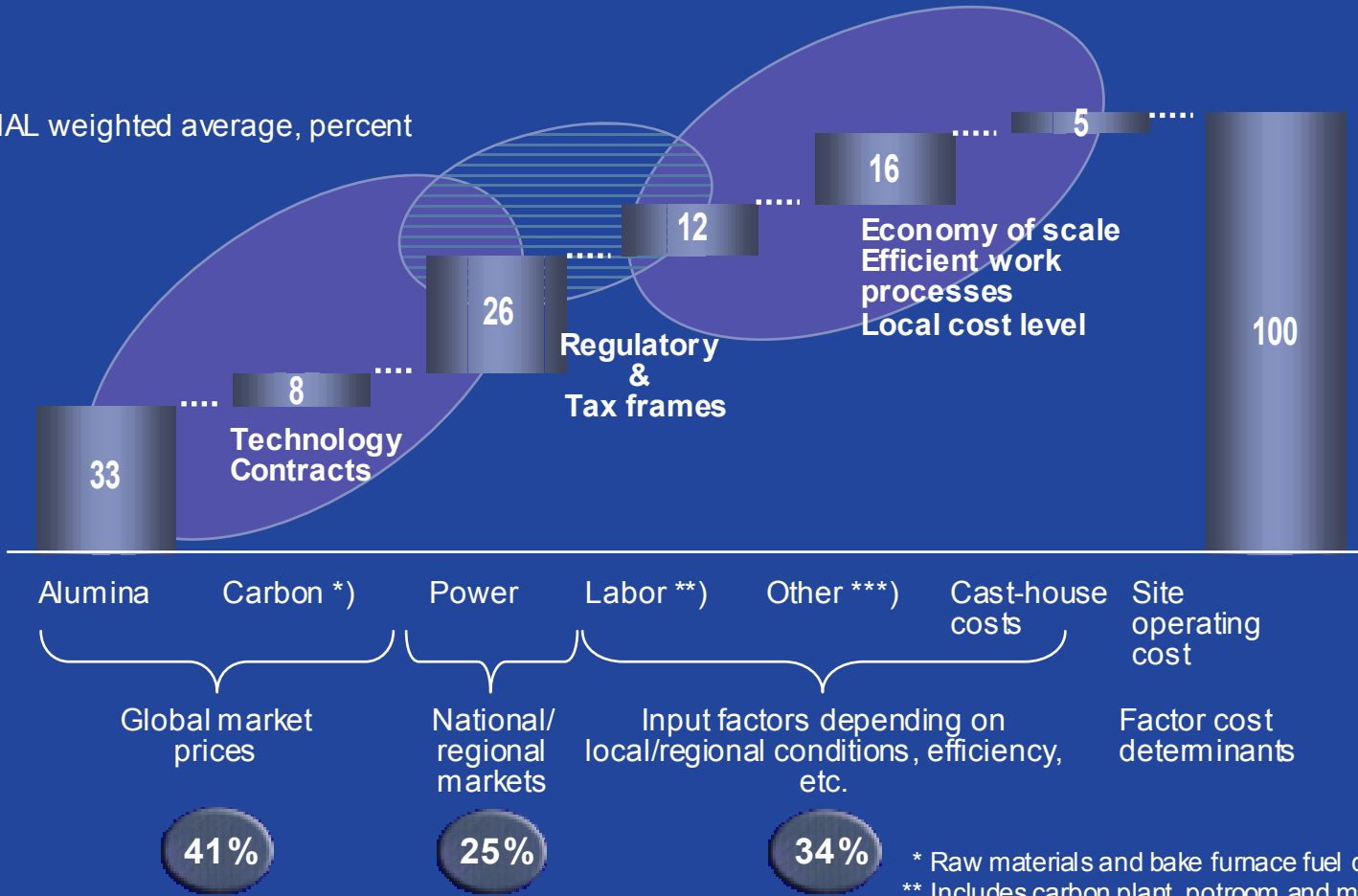
# Appendix



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# Breakdown of Primary Metal average site operating cost position

HAL weighted average, percent



Source: CRU cost model for Hydro Aluminium 2003

\* Raw materials and bake furnace fuel costs  
 \*\* Includes carbon plant, potroom and maintenance labor costs  
 \*\*\* Relining cost, capital replacement cost, administrative cost



# Aluminium price

3 months LME price, average per quarter

USD/tonne



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