



Ma'aden Aluminum Project

Ma'aden, Alcoa,
and the
Kingdom of Saudi Arabia
in the
regional and global aluminium industry

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- **The new Aluminum JV Project**
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- **The Project Status**

Ma'aden Aluminum Project

MA'ADEN

- **Government investment in infrastructure** to promote diversification facilitates growth of minerals industry and downstream opportunities.
- **Well positioned for growth** as Saudi Arabia expands into new industries to take advantage of **abundant mineral resources** and well **advanced infrastructure**.





Ma'aden Aluminum Project

Evolution of Ma'aden

1997~1999

Beginning



1997
Established

2000~2002

Gold Development



1999
50% of Baleden
interest in SCPM

2003~2006

Mining Law & Railway



2007~2008

Capitalization



2009~2010

Expansion & Growth





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Completed IPO
50% share public

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**2009
Aluminum Joint Venture
with ALCOA**

ECA with SWCC

**Today
Publicly traded company
(CAP SR.9,25B
With aspiration for
massive growth**



Ma'aden Aluminum Project

Ma'aden

CURRENT BUSINESS

Gold & Base
Metals Company

Phosphate
Company

**Aluminum
Project**

Industrial
Minerals
Company

Other Business



Ma'aden Aluminum Project

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5 operating gold
mines

SABIC JV - Mine,
Ammonia, DAP plant

Alcoa JV - Mine,
Refinery, Smelter, Rolling
Mill

Magnesite, kaolin,
garnet, et al.

Sahara JV EDC &
Caustic Soda

JV: 74.9%  25.1% 



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Strategic intent

To create a commercially, socially, and environmentally viable primary aluminium industry meeting local and international needs.

Ma'aden Aluminum Project

KSA MAP



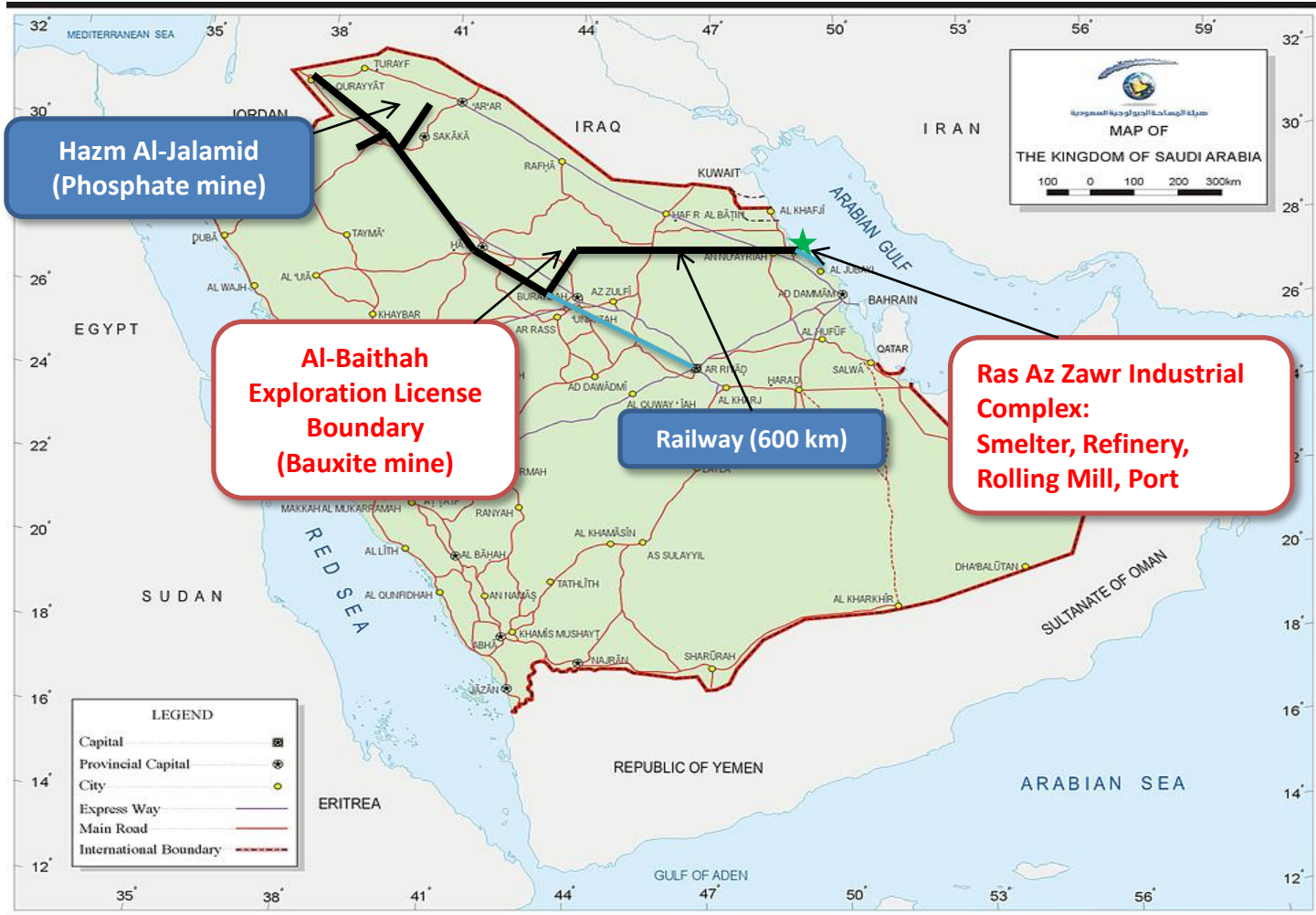
Ma'aden Aluminum Project

Ras Az Zawr The future for the minerals Industry in KSA



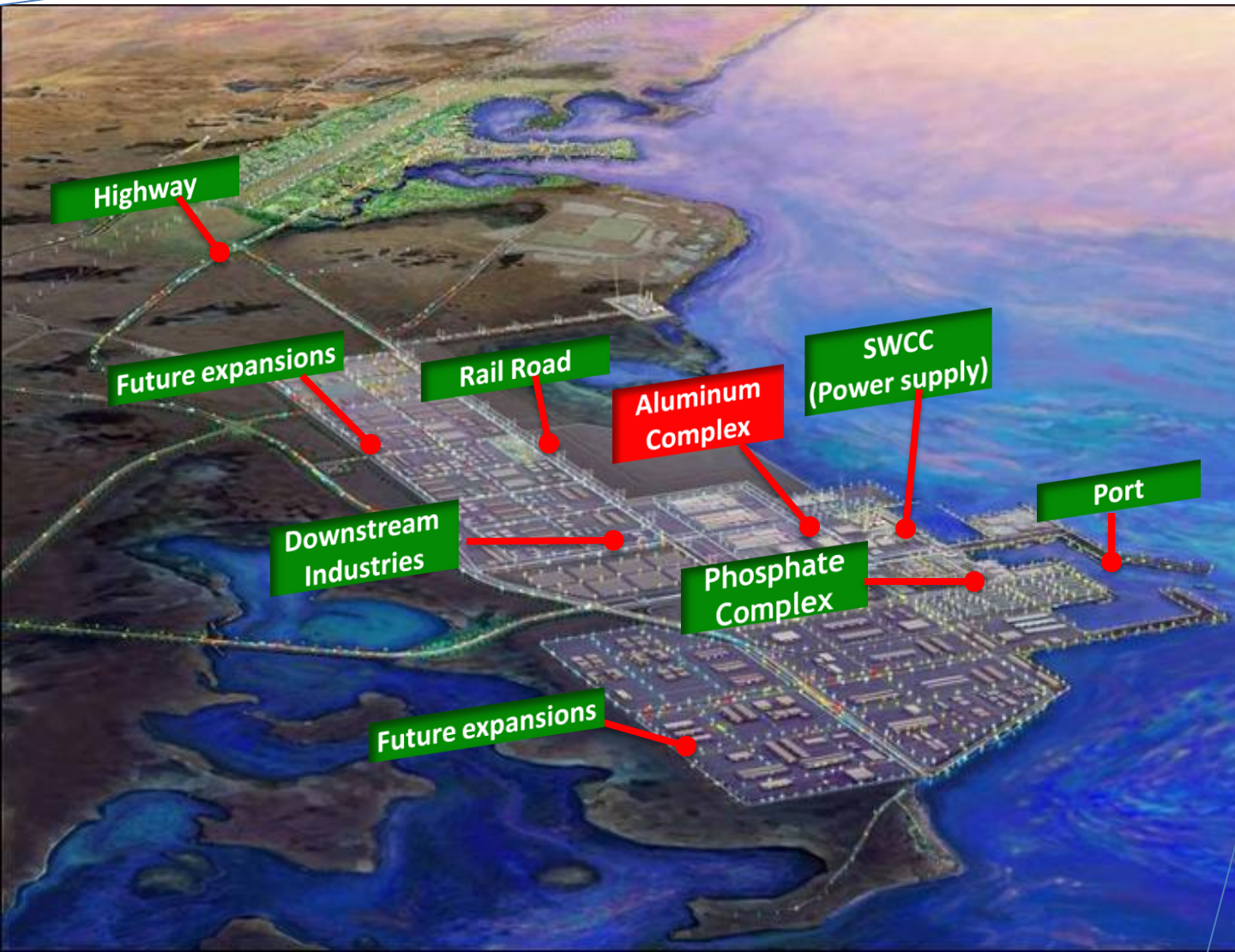
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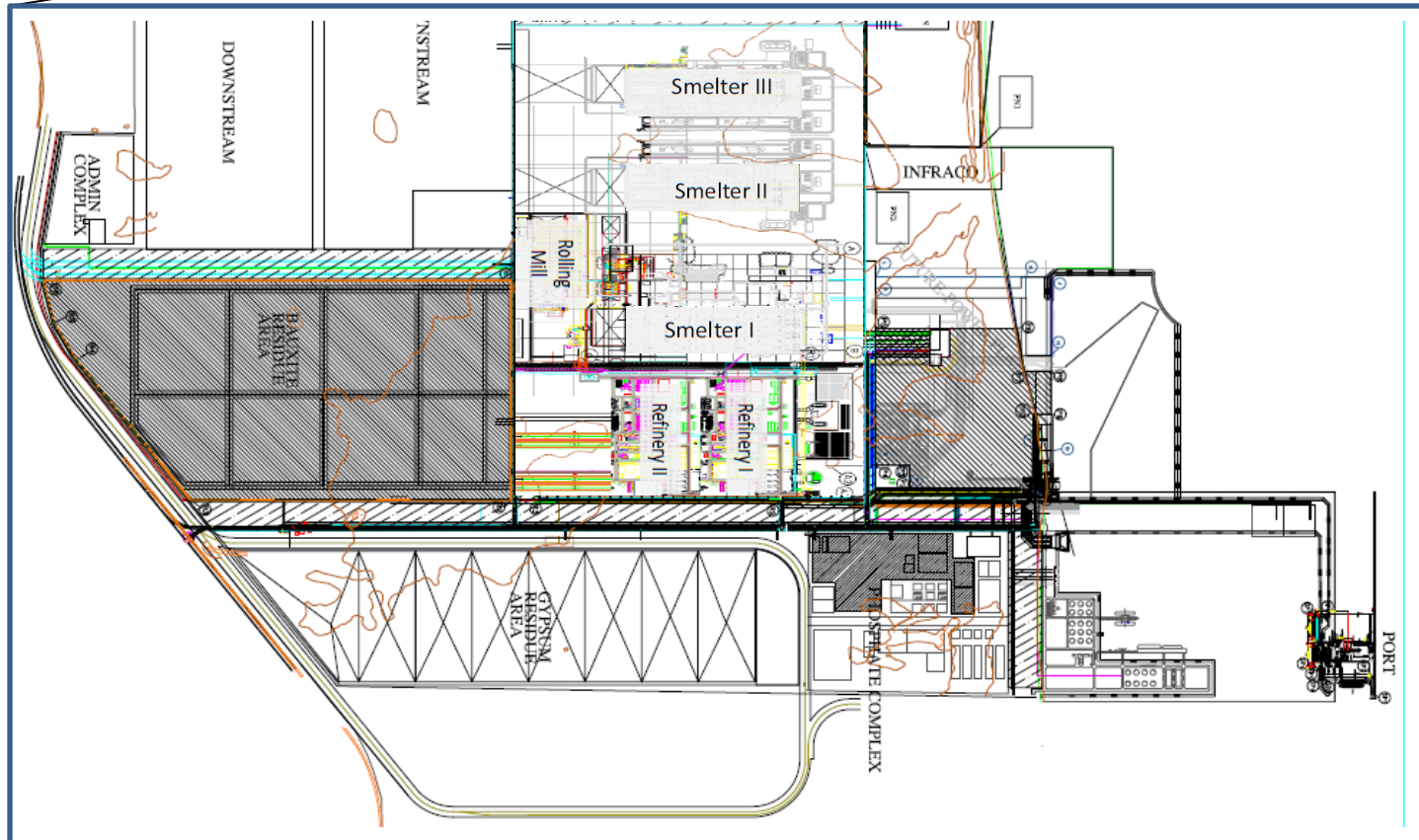
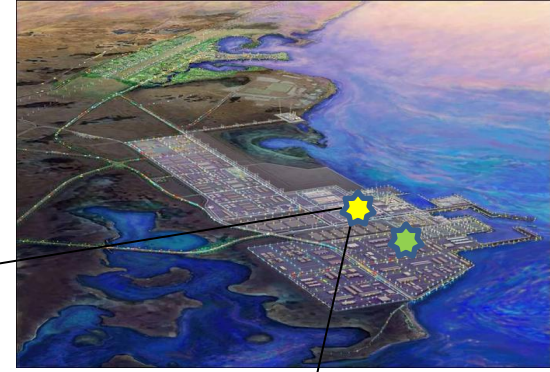
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Aluminum Complex



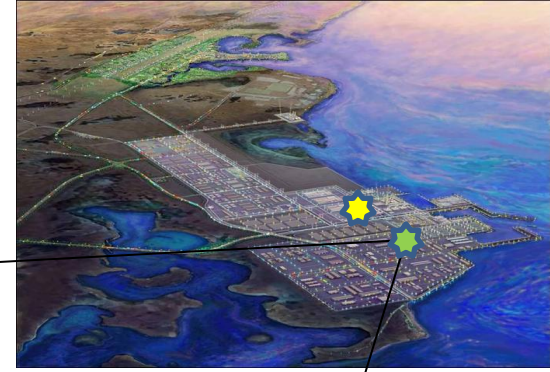
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Phosphate Complex



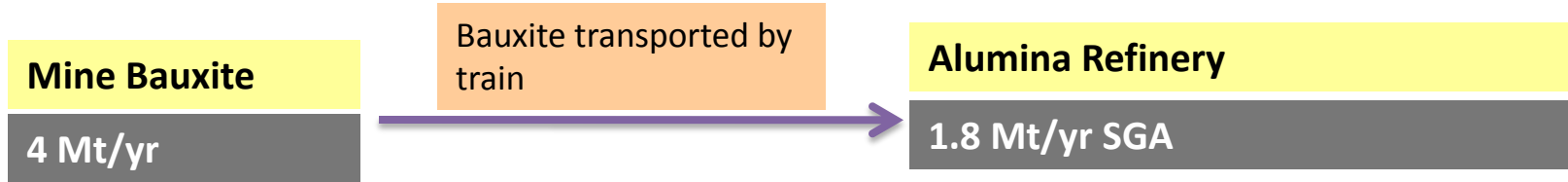
Ma'aden Aluminum Project



Aluminium Project Block Diagram

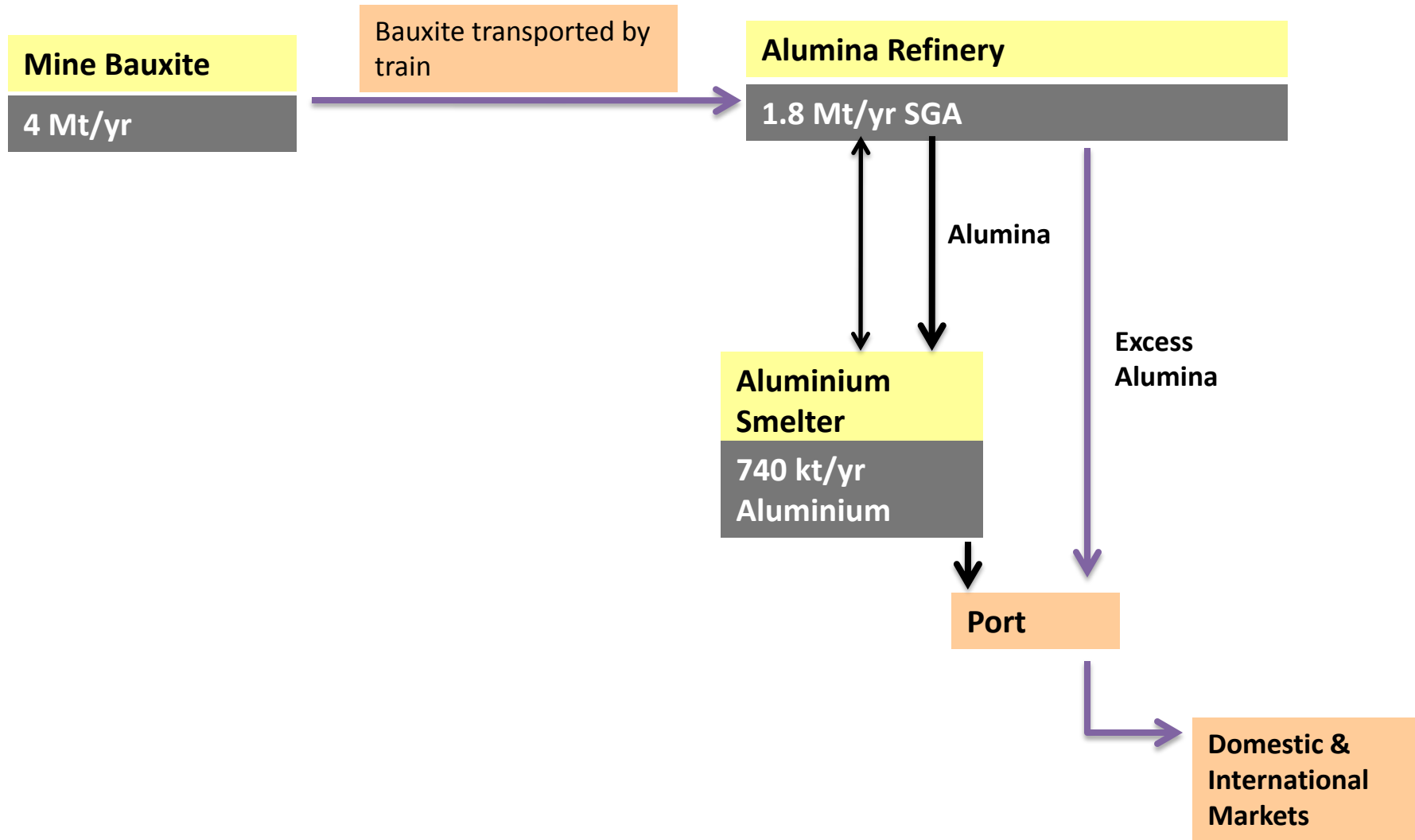


Ma'aden Aluminum Project



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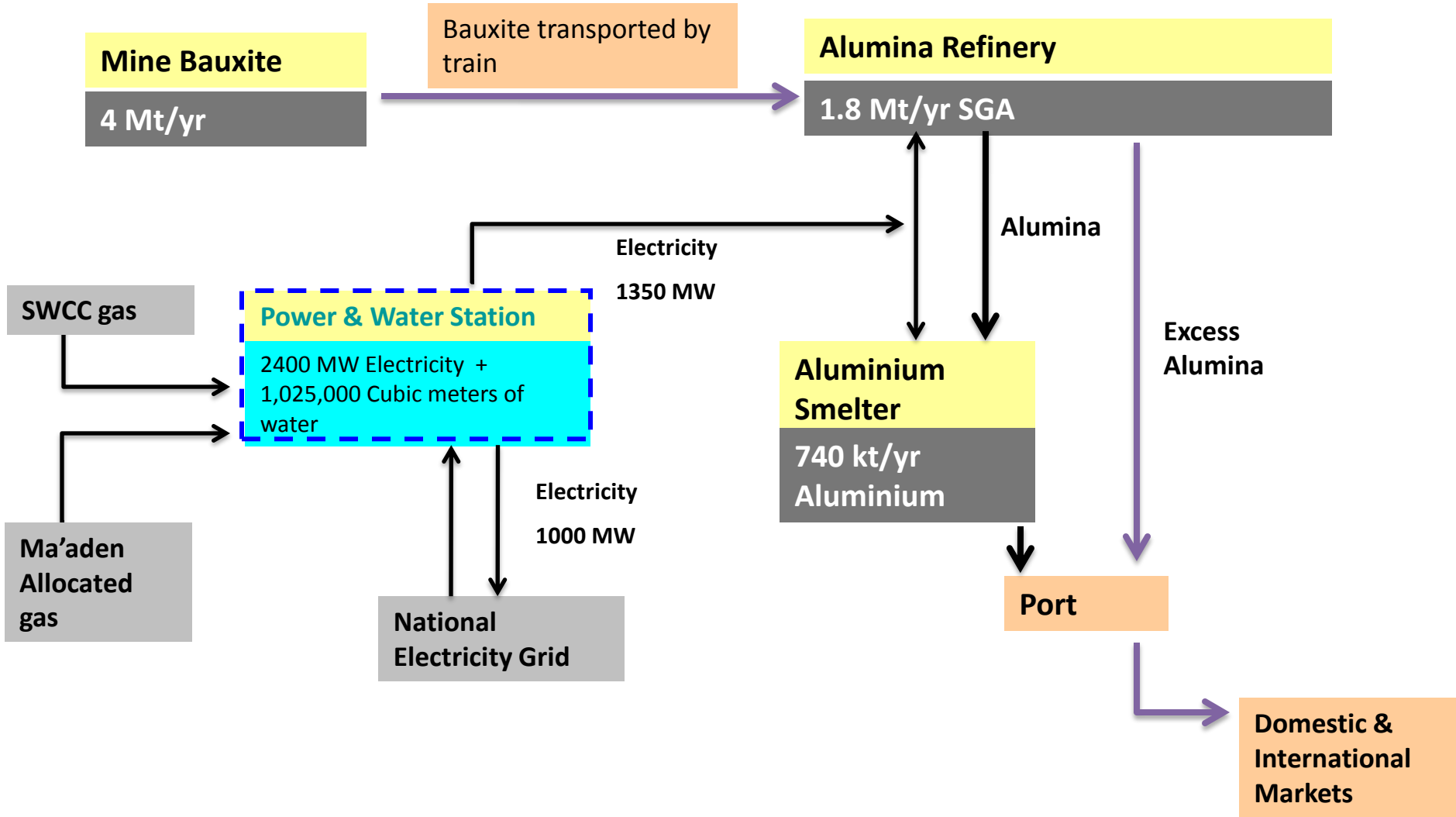
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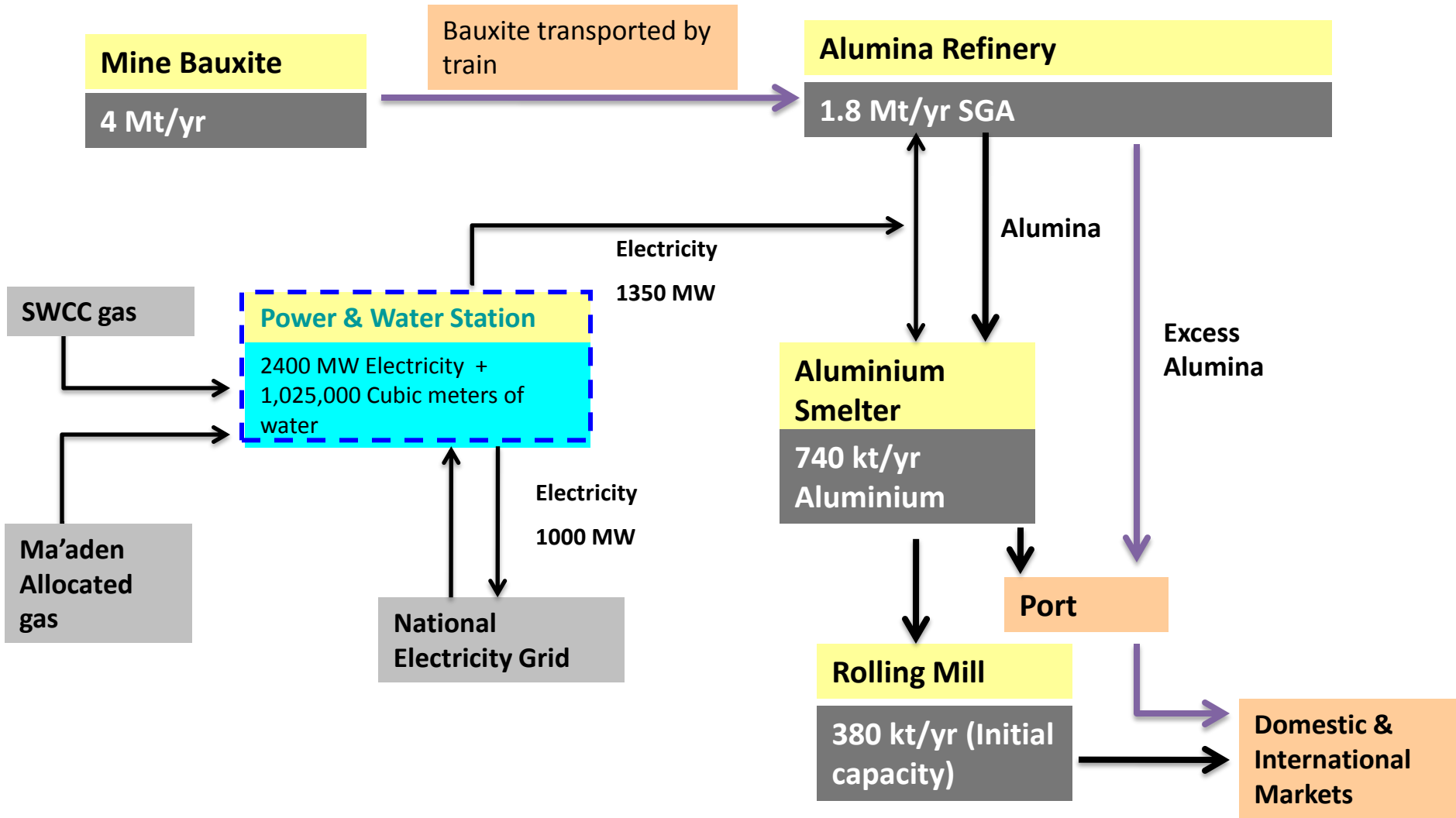


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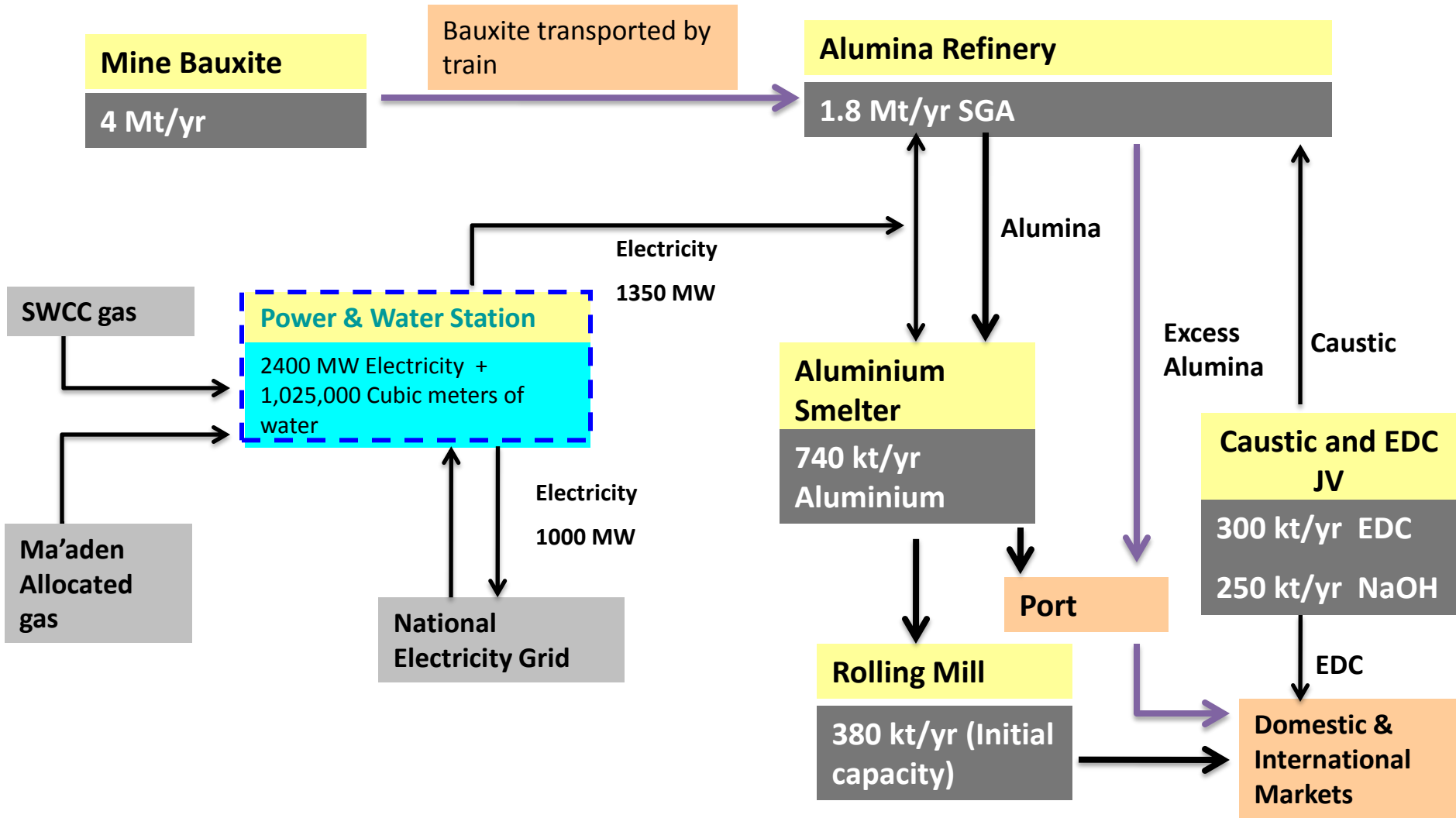
Ma'aden Aluminium Project



Project Block Diagram ... Fully Integrated



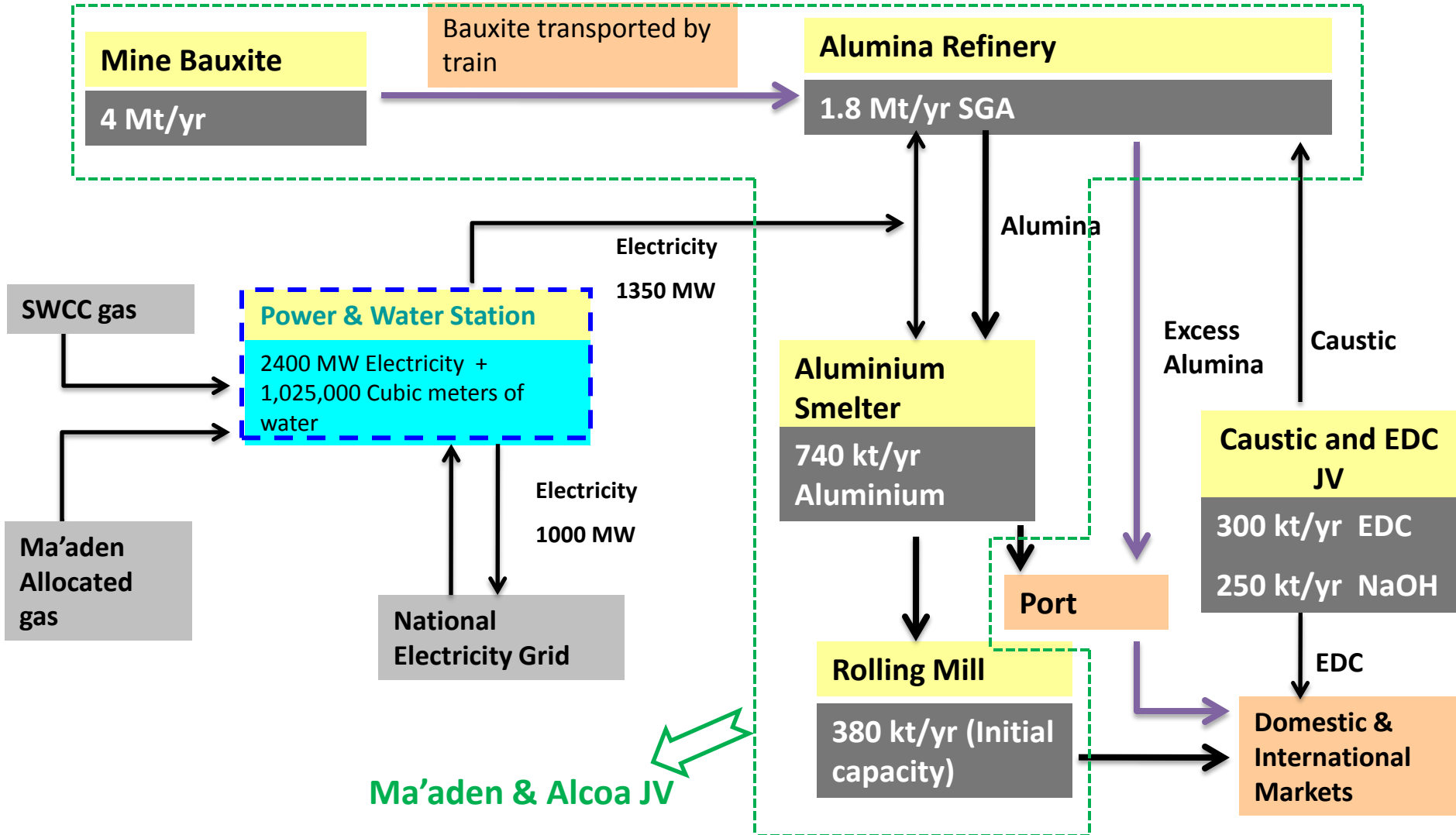
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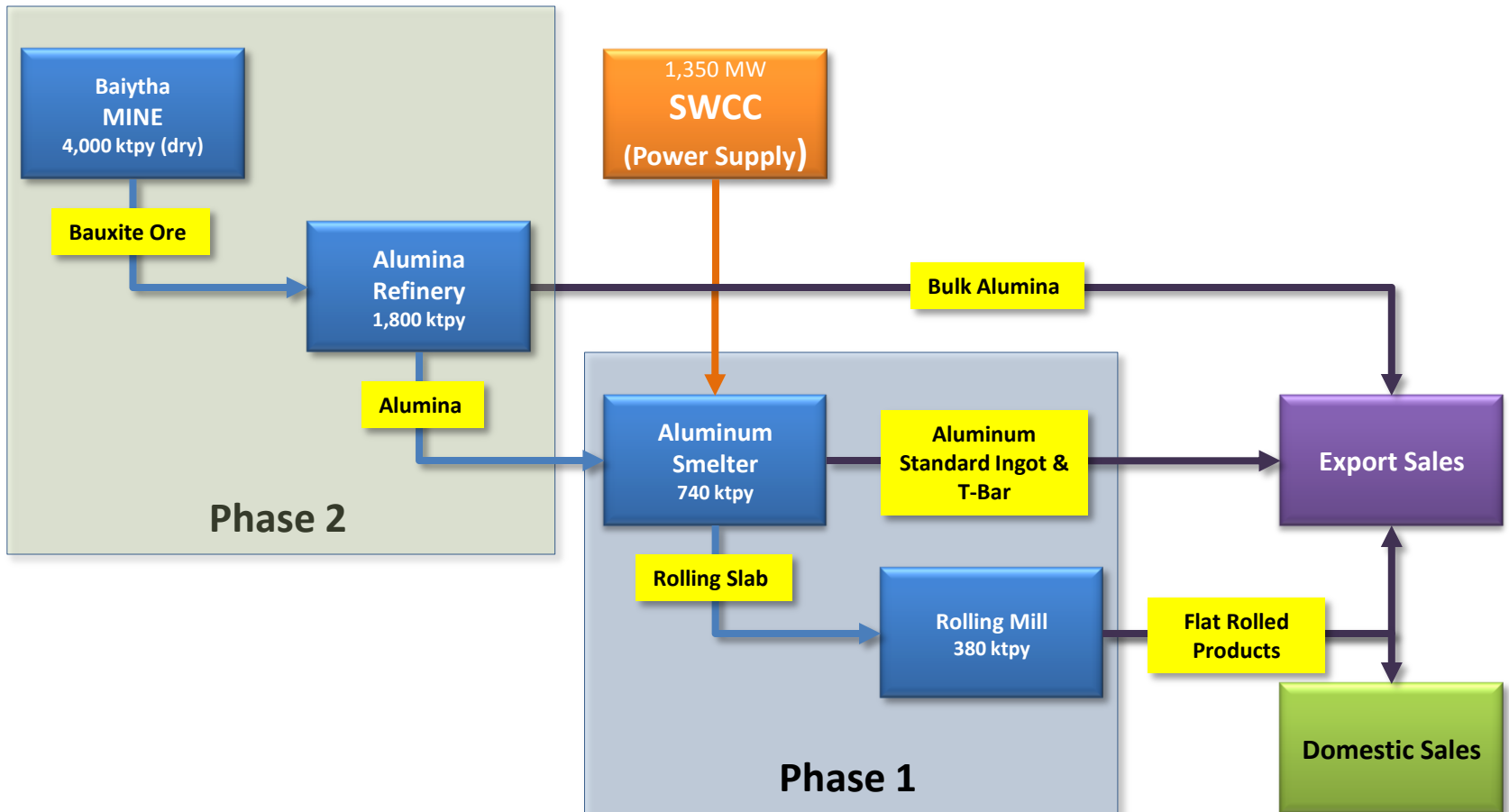


Ma'aden Aluminum Project



Ma'aden Aluminum Project

One Project - Two Phases





Ma'aden Aluminum Project

Scope and timelines

- Bauxite reserves at Al Ba'ithah: 4 million mtpa. (600 km by rail)
- Raz as Zawr complex includes
 - Alumina refinery: initially 1.8 million mtpa
 - Aluminum smelter with Integrated casthouse: initially 740,000 mtpa
 - Rolling mill: initial capacity 380,000 mtpa
- First production:
 - Early 2013-smelter and rolling mill
 - Early 2014- mine and refinery.
- Designed for significant expansion

Ma'aden Aluminum Project

Products:

Primary aluminum is cast into semi-fabricated products. **The product mix to be produced from the current Integrated Casthouse in Ras Az Zawr project is:**

- **50 % as Slabs (Can Sheet Ingots)**



To be converted into flat rolled products in the adjacent Rolling Mill.

- **50 % as**

Standard Ingots



Remelted and alloyed by end-user

T- Bar Ingots



Remelted and alloyed by end-user

Billets



Extruded for construction industry and automotive components

The RAZ casthouse will also remelt aluminum scrap.

Ma'aden Aluminum Project



Saudi Railway Company

- Longest Worldwide (1,500km)
- Overall performance for mineral line is 97%
- Expected completion date is Dec. 2010



Port Development

- 23 Km² Area
- Six Berths
- Expected Completion date is Nov. 2010



Minerals Industrial City

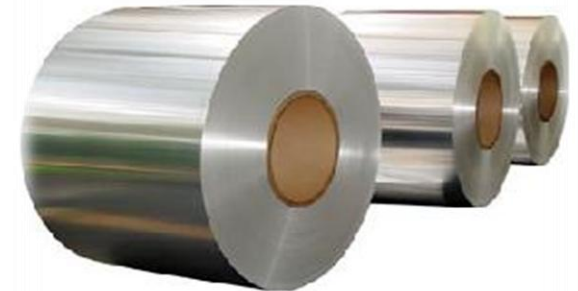
- Strategic metals & minerals industry clusters
- Center of excellence
- RC support and management

Government commitment to world class infrastructure



Ma'aden Aluminum Project

Ma'aden Alcoa joint venture



- * **Lowest end of aluminum production cost curve**
- * **Fully integrated complex**
(Mine / Refinery/ Smelter/ Rolling Mill)
- * **First rolling mill in region supplying food grade can sheet.**
(Bottles on table are a harbinger of the future!)
- * **Foundation for Saudi Arabian downstream development**
- * **Major catalyst for significant new business and employment opportunities**



Ma'aden Aluminum Project

Current Status:

- October 2009: SWCC, MA'ADEN and SEC to establish Joint Power & Desalination Plant at Ras Az Zawr (RAZ).
- September 2010: \$2.4 billion contract was awarded to a group consisting of Siemens AG, Al-Arrab Contracting Co. and Shandong Electric Power Construction Co. to build a power plant in RAZ
- December 2009: Ma'aden and Alcoa Forge Partnership to develop facilities at the lowest end of the aluminum production cost. Capital investment is expected to be approximately SAR40.5 bn (\$US10.8 bn)
- May 2010: Contracts Signed to Start Work on integrated Saudi Aluminium complex with total value of \$453m

Ma'aden Aluminum Project

Current Status:

- June 2010: The JV breaks ground for the Smelter and Middle East's most technologically advanced aluminum rolling mill move into construction phase.





Ma'aden Aluminum Project

Current Status:

- August 2010: The JV awards key equipment contracts for Middle East's first can sheet rolling mill. Total value of the contracts awarded above amounts to approximately **\$US277m**



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Early 2013 .. Saudi Aluminum is in the market



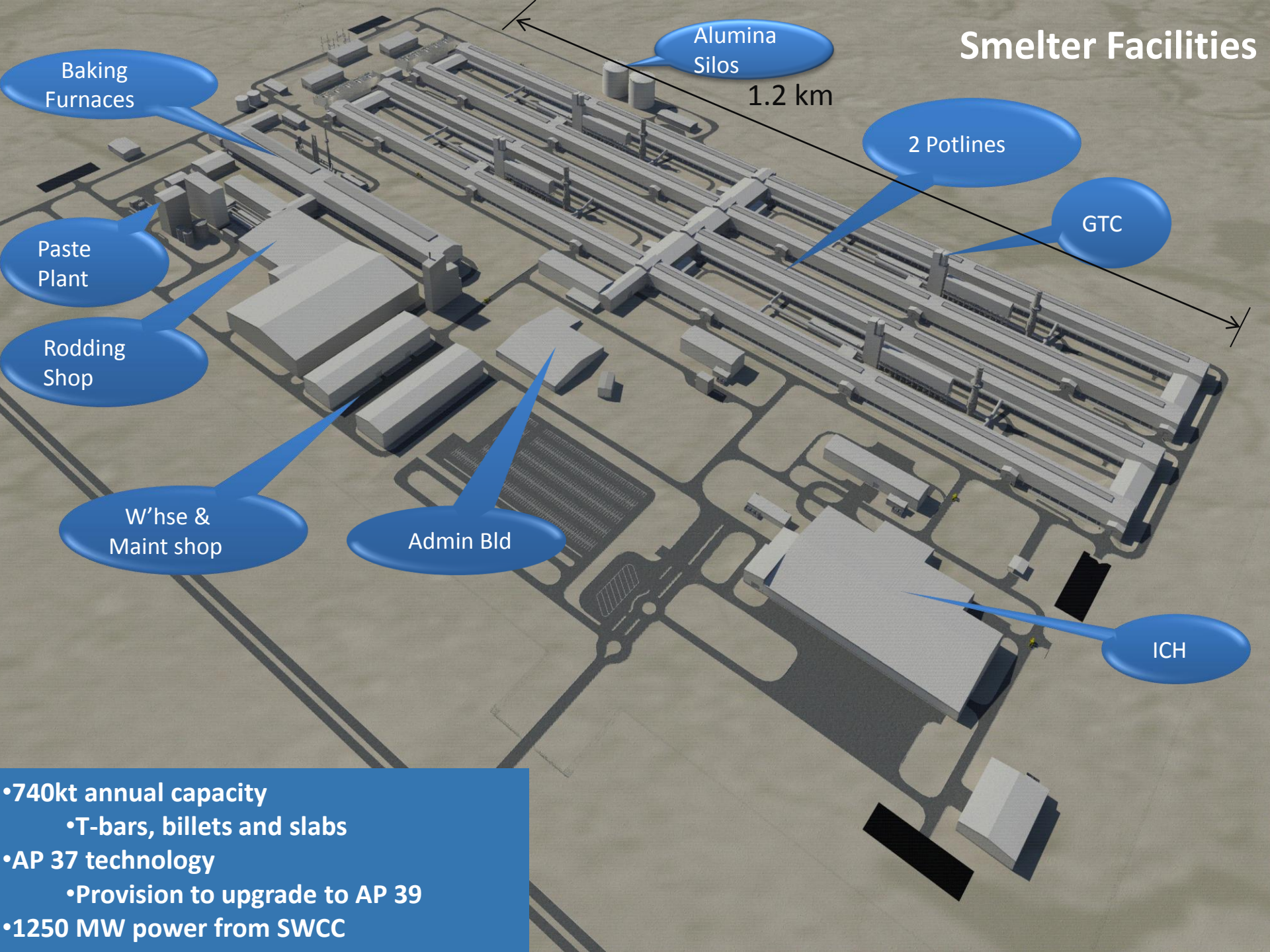
Ma'aden Aluminum Project

Thank you



Ma'aden Aluminum Project

Back up Slides



Smelter Facilities

1.2 km

Baking Furnaces

Alumina Silos

2 Potlines

GTC

Paste Plant

Rodding Shop

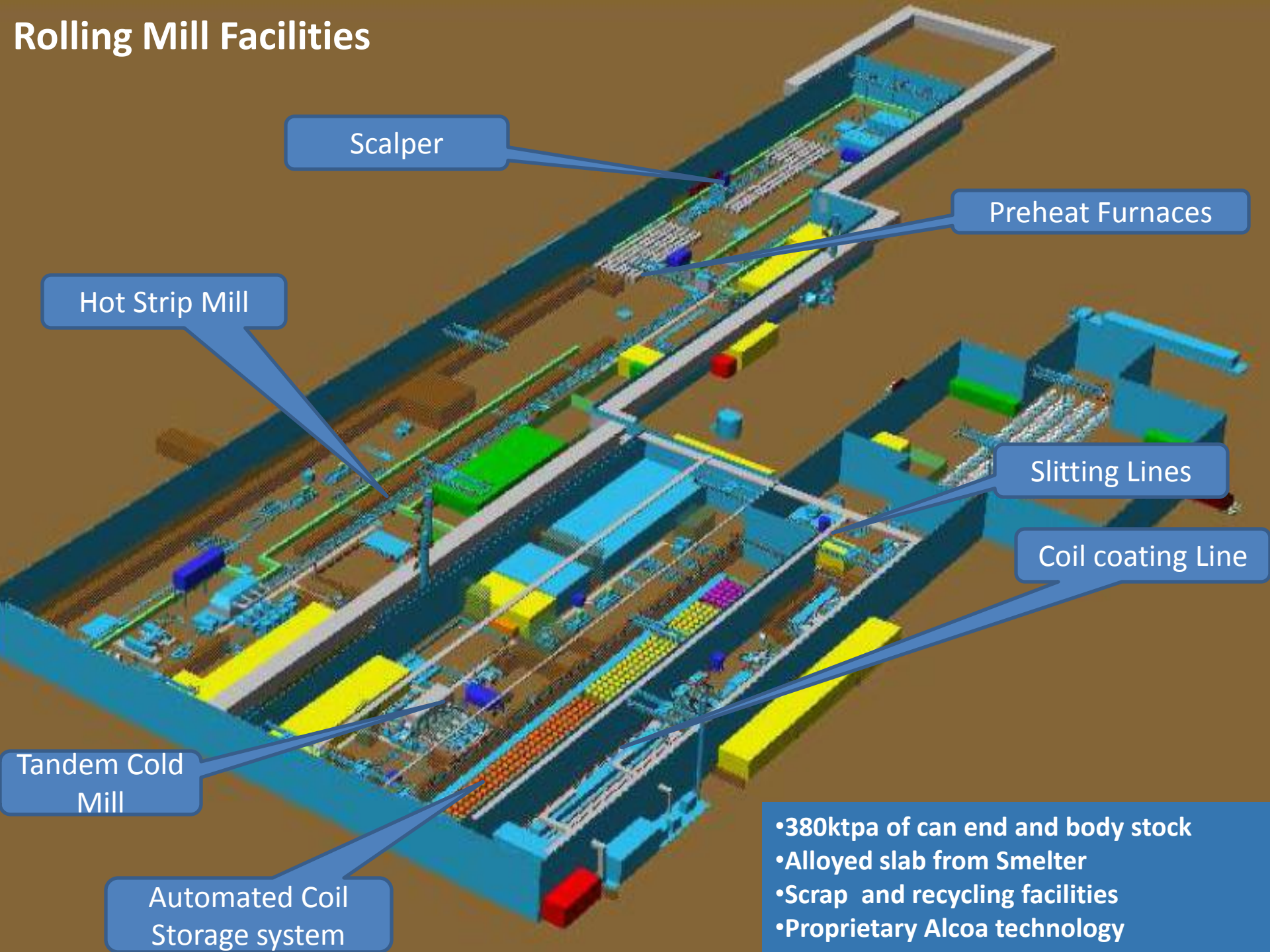
W'hse & Maint shop

Admin Bld

ICH

- 740kt annual capacity
 - T-bars, billets and slabs
- AP 37 technology
 - Provision to upgrade to AP 39
- 1250 MW power from SWCC

Rolling Mill Facilities



Scalper

Preheat Furnaces

Hot Strip Mill

Slitting Lines

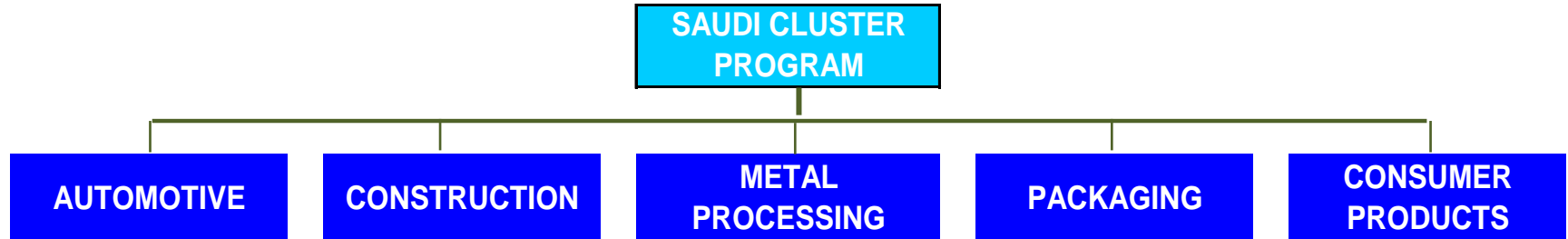
Coil coating Line

Tandem Cold Mill

Automated Coil Storage system

- 380ktpa of can end and body stock
- Alloyed slab from Smelter
- Scrap and recycling facilities
- Proprietary Alcoa technology

Ma'aden Aluminum Project



- Cluster development program will enable development of downstream industries by offering plastics, base metals as well as highly skilled work force to attract global investment to the Kingdom.
- Automotive, Construction, Metal Processing, Packaging and Consumer products have been identified for development.
- In addition RAZMIC has allocated site for special development of Automotive and metals fabricators, which will add to growth of demand for Aluminum.