



SURGE IN INDIAN STEEL INDUSTRY : CHALLENGES OF INPUT SECURITY

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PREAMBLE

Indian steel industry has entered the high growth phase...& Ministry of Steel, Government of India, is foreseeing a huge steel market of ahead (by 2020)

Here, the thought process begins on some crucial issues

What about the supply side?....is the expected supply of steel products going to match the demand by 2020? If it is so,

A very important issue arises.....

Input security !! How secured India is with respect to availability of steel-makers' inputs. Without this, where will we land up?....

What needs to be done to bring the success for Indian steel industry in future years to come ?

.....
This presentation deals with these queries

Conclusions

This presentation, through its enquiry, would be reaching the following conclusions.....

By 2020, a demand of around 180 Mt seems attainable.....

The supply side also indicates a positive response as per the proposed brown field and green field projects

Demand – supply analysis of steel industry's inputs suggests scarcity on account of almost all the major steel industry inputs.....

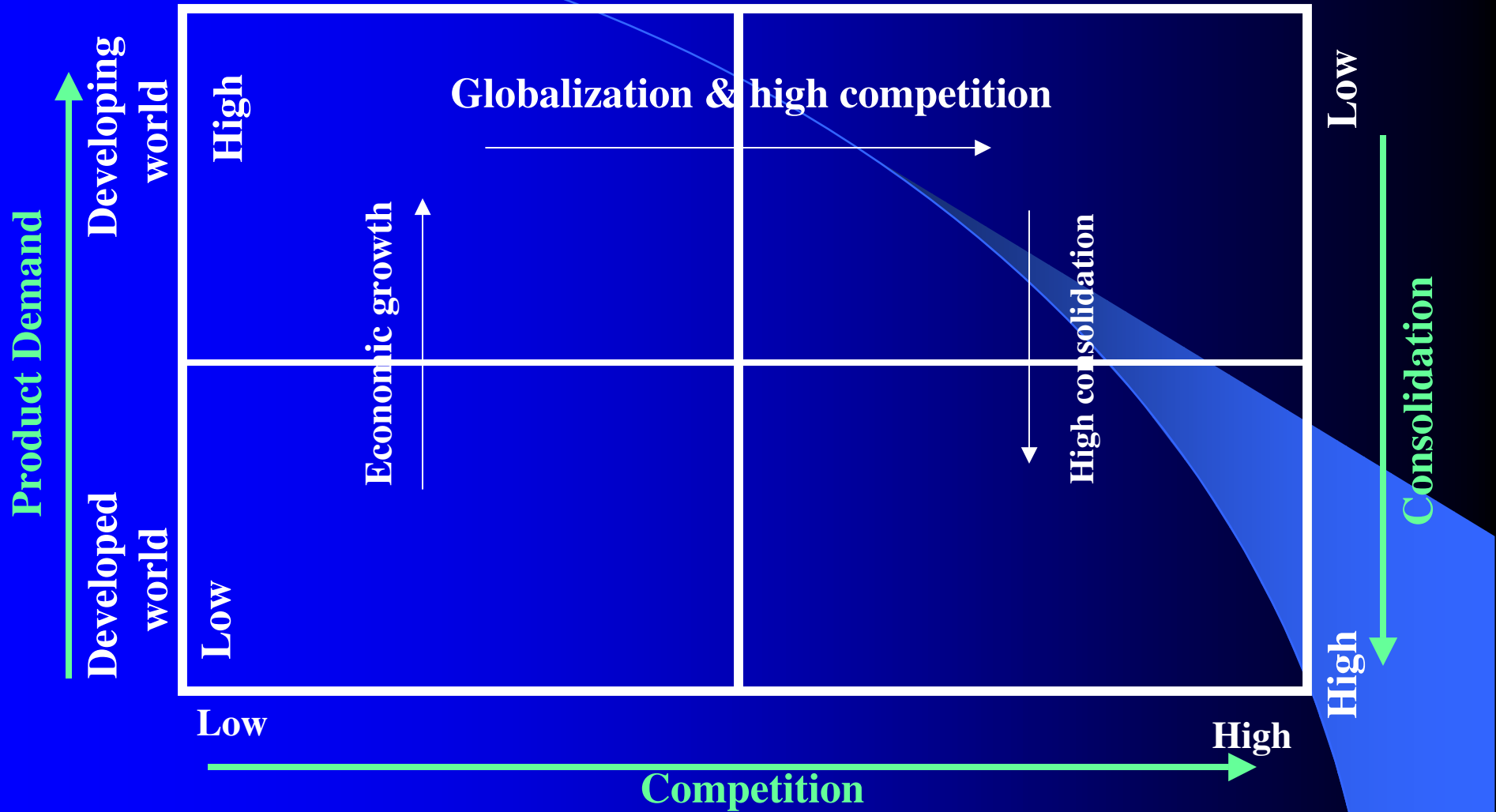
Indian steel industry does not seem to have much input security

..iron ore, coking coal, power, natural gas, water, land, human capital, engineering & consultancy etc. etc.....

..... Unless meticulous Strategic Planning is done, meeting even a conservative domestic demand, by 2020, will be a distant reality.....

WE ARE AT THE ROCK BOTTOM OF THE SEA.....

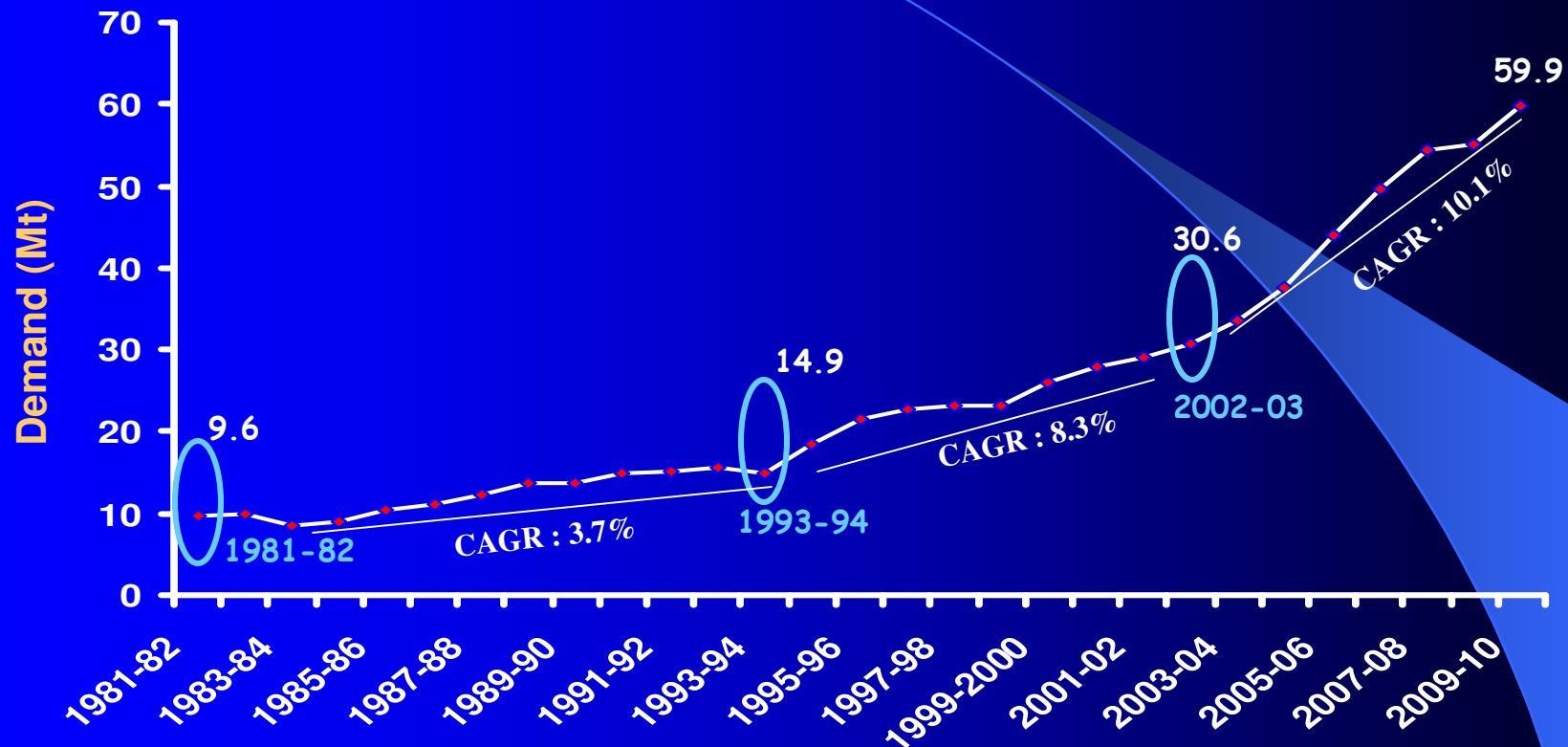
Changing dynamics of global steel market



Economic growth caused shifting of steel demand from developed world to the developing world
High globalization and competition leading to high consolidation in the global steel market

THE DEMAND SIDE

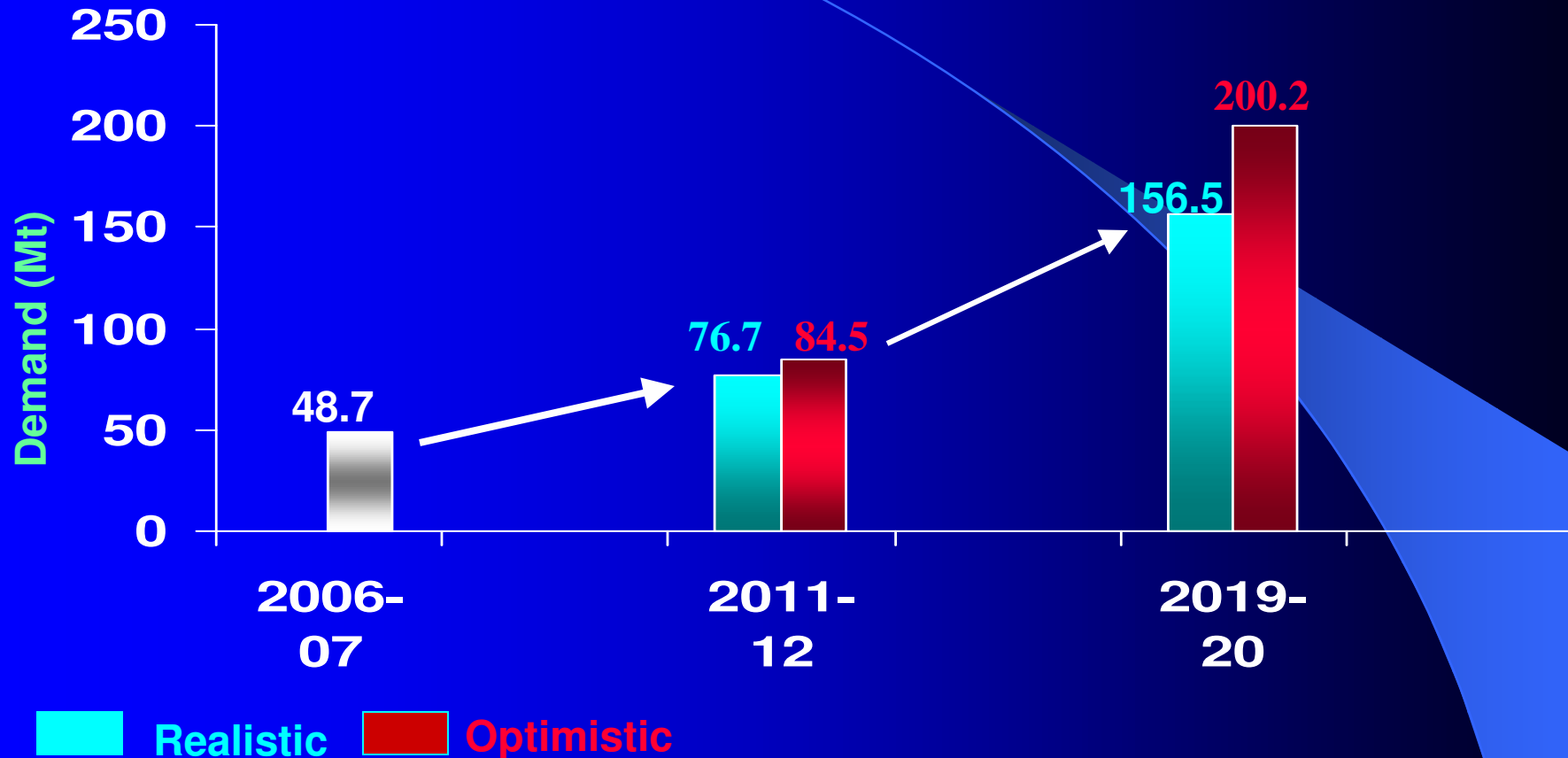
Pattern of finished steel consumption in India 1980-81 to 2009-10



There is a dip in 1993-94 and significant up-turn since 2002-03 in the Pattern of steel consumption in India

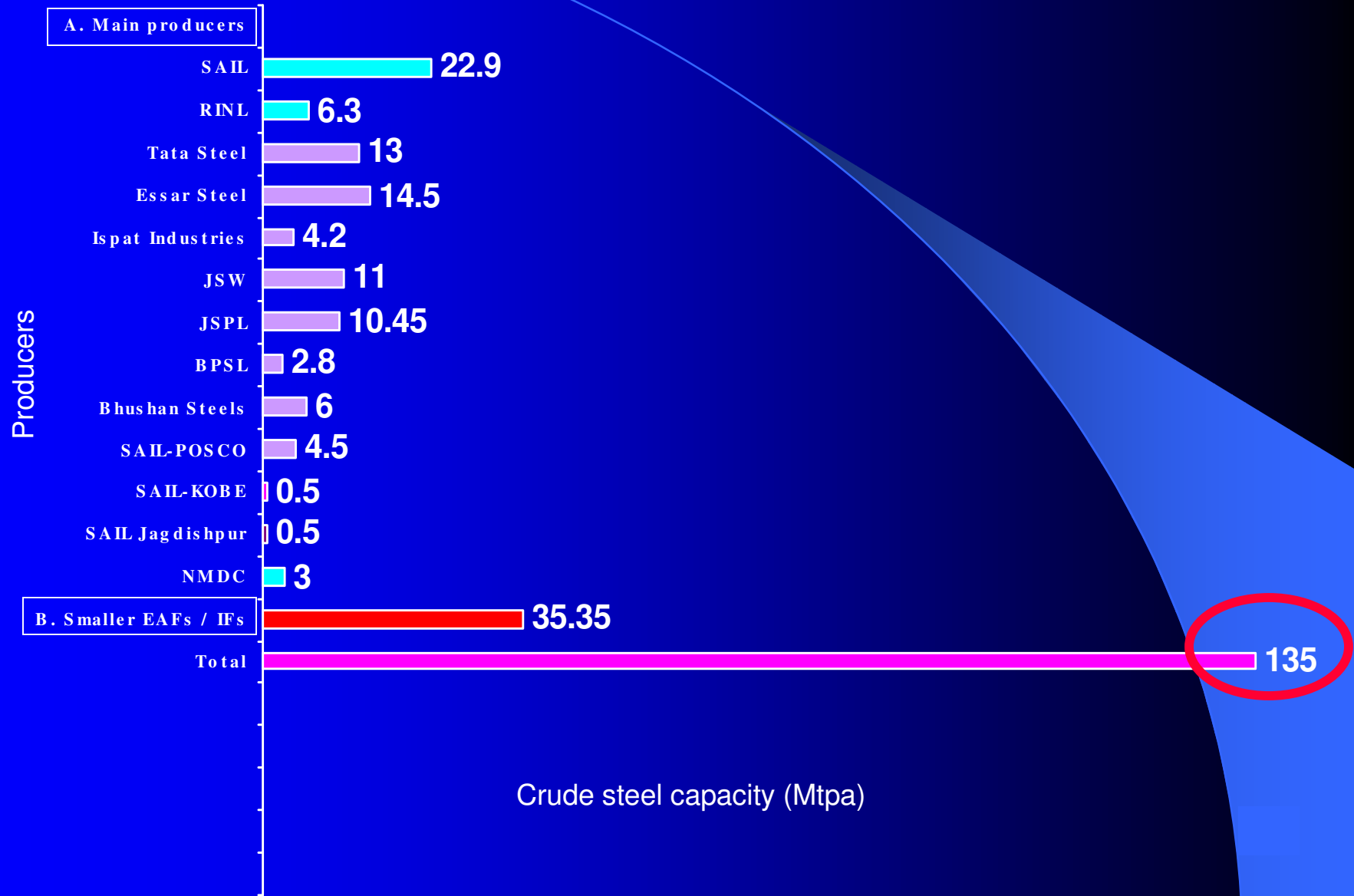
Forecasts on finished steel demand in India

....."India, a Tiger awoken".....



Demand projections were made using econometric modelling technique. Separate demand functions were fitted to historical data for all major categories of steel products. The best fitted models (selected on the basis of R^2 and t-test of the parameters) were used for making projections. Category-wise demands were added to obtain the total demand.

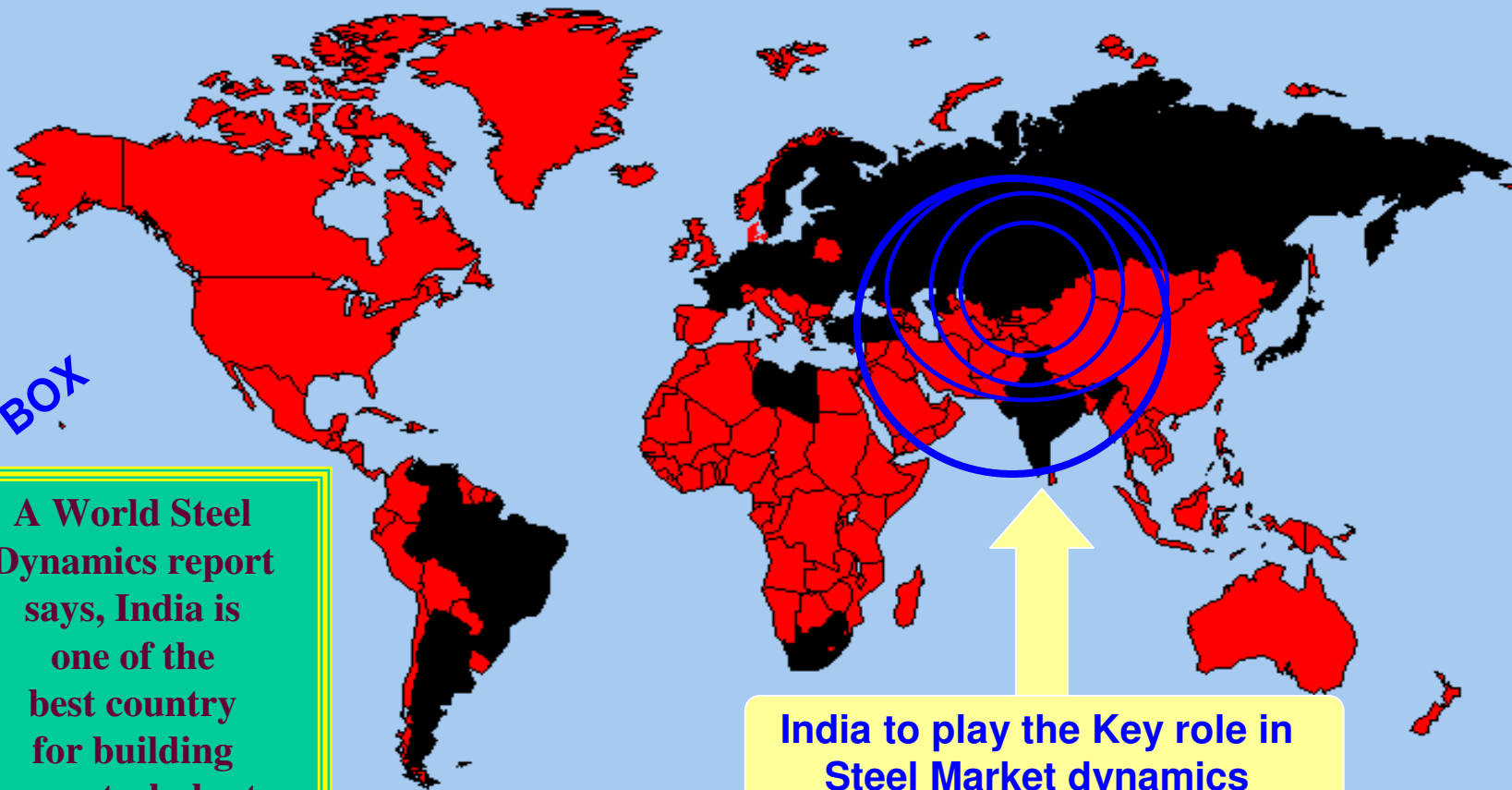
Producer-wise crude steel capacity in India...by 2015-16 this is likely to increase further by 2019-20...



International Forecasters say...

India emerging as a big player in global steel market

Global community also says,"yes" ...
India, the tiger awaken....



NEWS BOX

A World Steel Dynamics report says, India is one of the best country for building new steel plant

India to play the Key role in Steel Market dynamics

Buoyant supply & demand side ahead....

(Iron and Steel Statistics Bureau)

Now the problem begins.....Achieving the high target production generates huge demand for steel-makers' inputs and the issue of input security crops up...??!!!.....

Mining Infrastructure

**Iron ore
Coking coal
Limestone
Dolomite etc.**

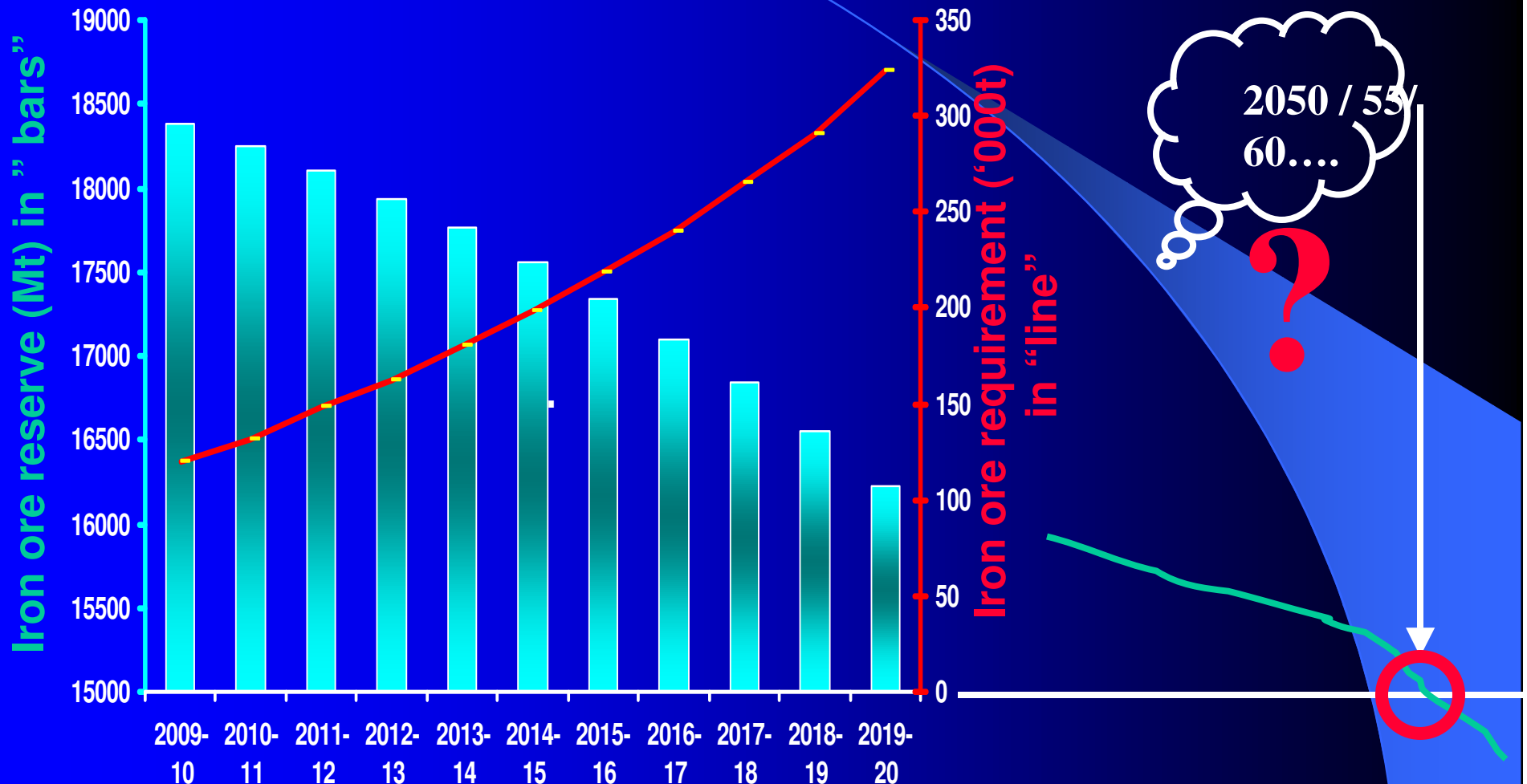
External Infrastructure

**Power, natural gas
Water
Railways
Roads
Ports
Human capital
Engineering &
Consultancy etc.**



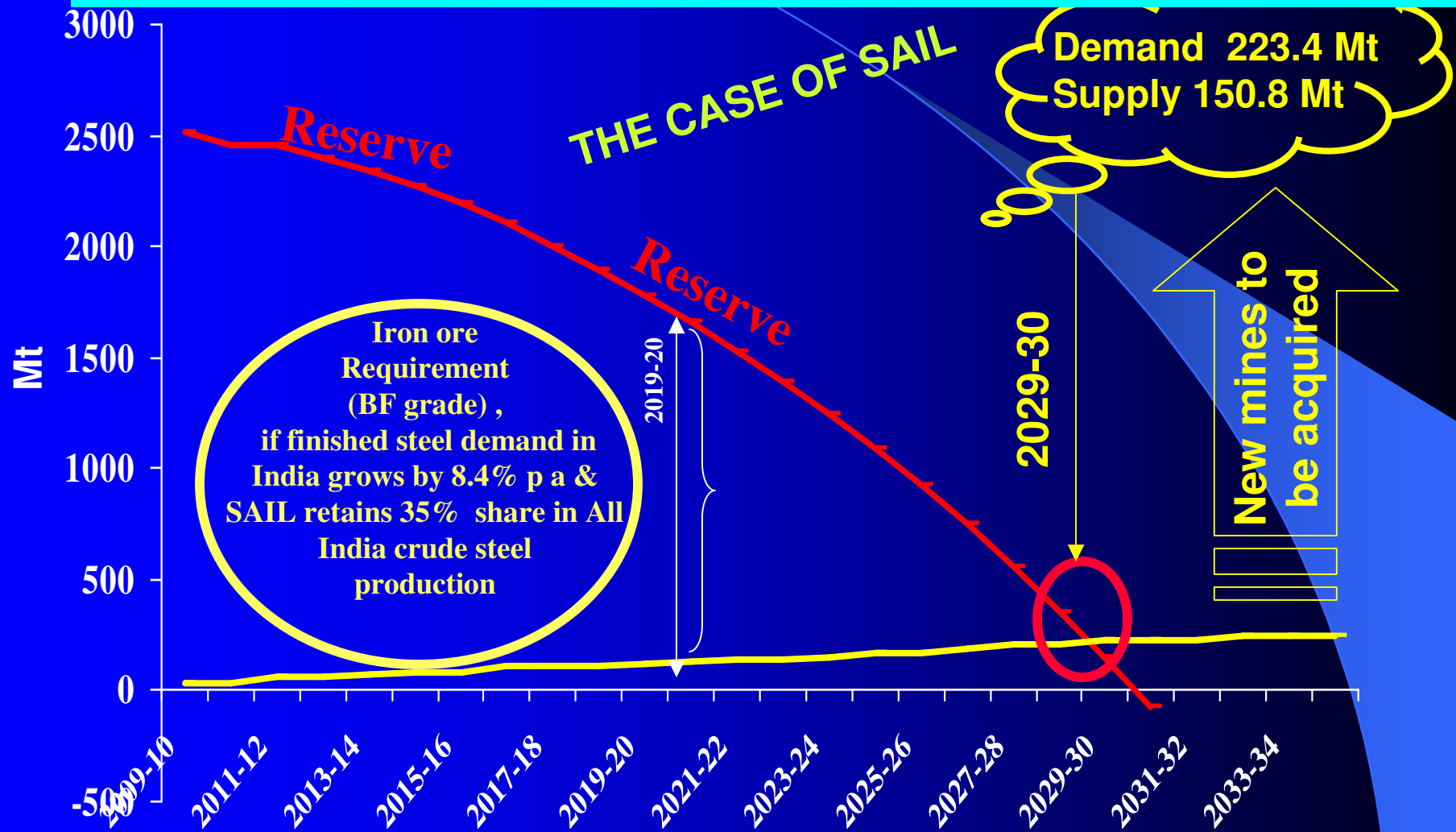
A demand – supply analysis of the inputs... is needed.....

Iron ore poses the first challenge...the situation is not very healthy.....



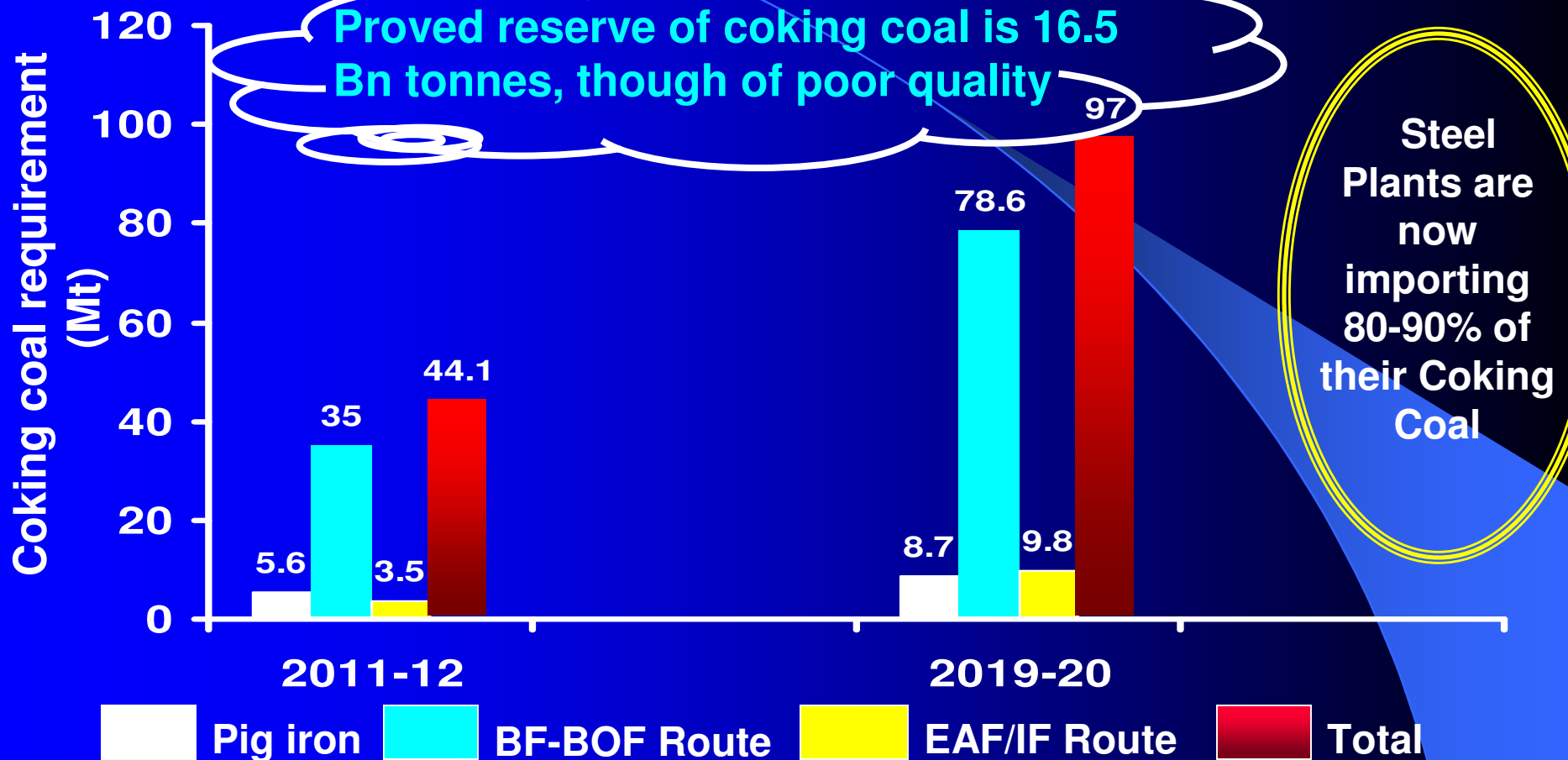
Fast exploration required...with host of new techniques...otherwise;.....

SAIL may have deficits in iron ore by 2029-30 unless it acquires new mines.....or, enters into long-term contracts with mining companies for acquisition of mines in India & abroad.....



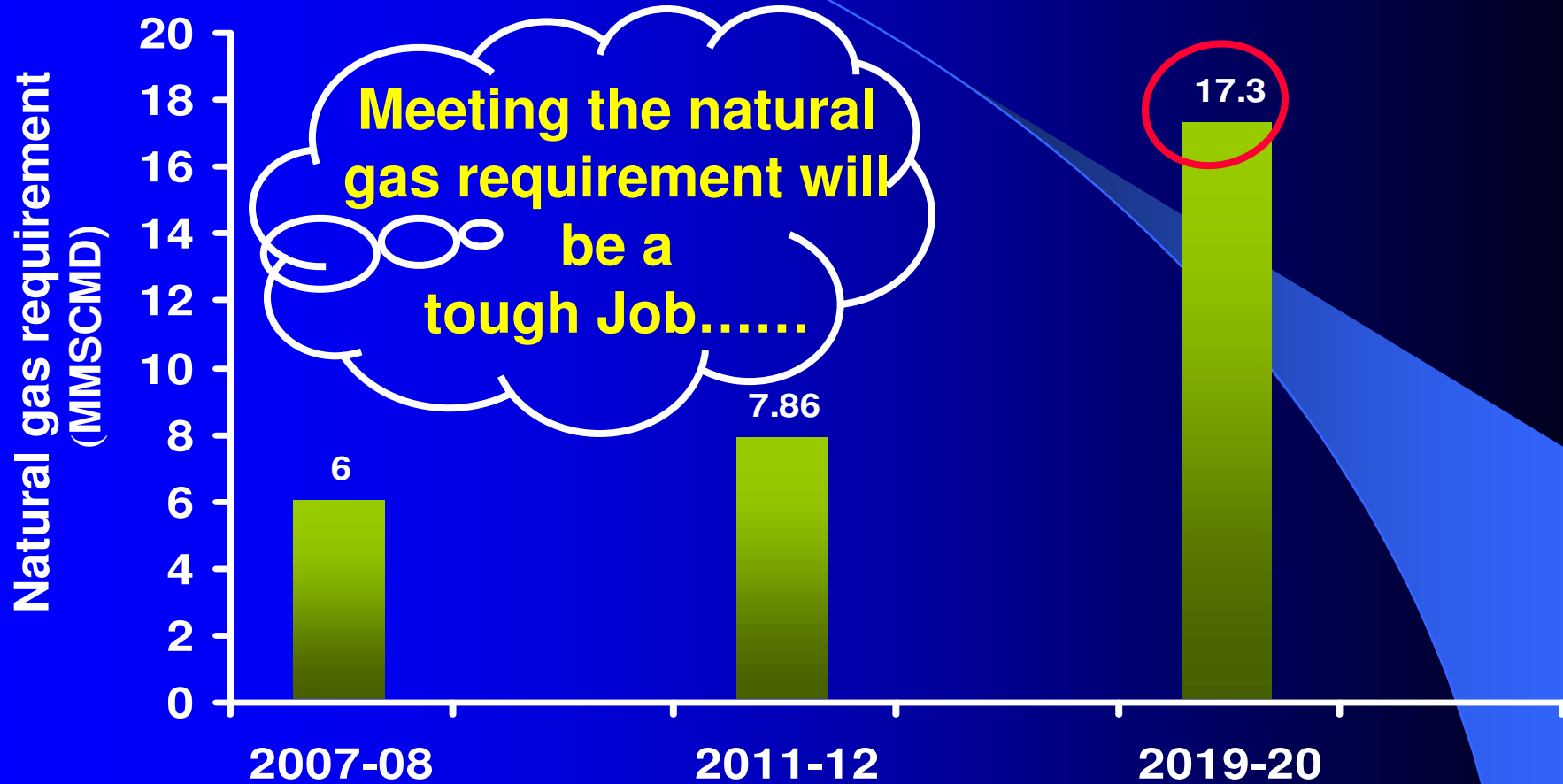
Requirement of iron ore and depletion of captive reserve....?

Coal requirement is quite high to achieve target steel production...



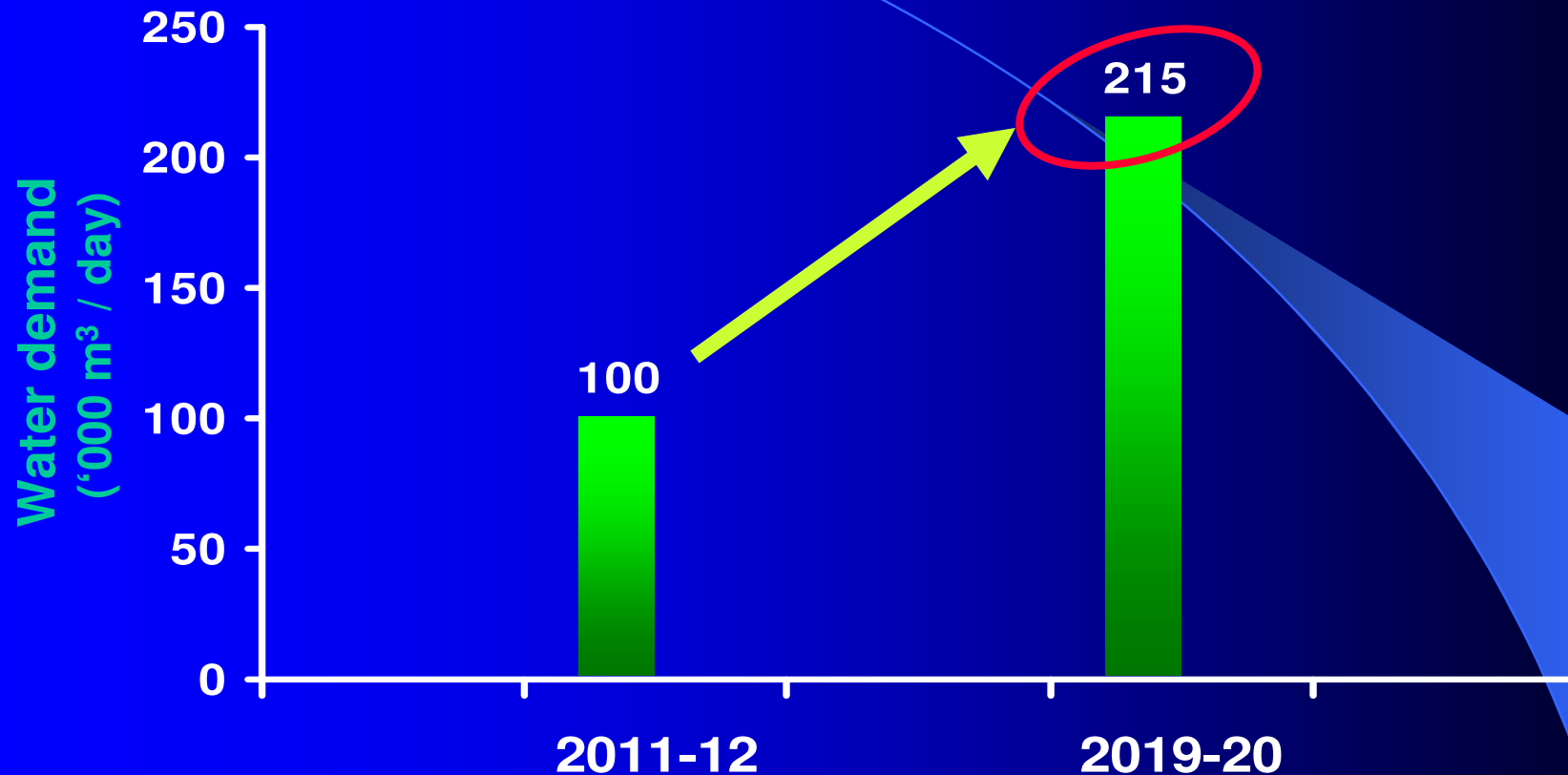
Demand for non-coking coal in steel industry : 25Mt by 2011-12, 50Mt by 2019-20... Non-coking coal is abundant (proven reserve 79 Bn tonnes).... But availability of the desired quality for production of DRI is restricted.....we are still importing Non-coking coal

Natural gas demand will soar due to increase in production of steel products from EAF /IF route.....& sponge iron industry....



Present supply : 111 MMSCMD; it is likely to increase to 192.4 MMSCMD by 2011-12 & then, at All India level, there will be a deficit of 88 MMSCMD....Extensive exploration efforts needed...

Alarming situation in case of water infrastructure.....



**Present water resource potential : 1123 Bn cubic meter
National Perspective Plan envisage increase in utilizable
water by about 200 Billion cubic meter**

Challenges are many....Land.....Human capital..... Engineering & Consultancy.....etc.

**Availability
of Land**

Land acquisition

**Engineering
& Consultancy
Services**

**Heavily
constrained**

**Availability
of
Human Capital**

**Even the best
Metallurgical
Engineer is now
in IT sector**

Meticulous Strategic Planning is needed.....

Iron Ore

- Gradual reduction in iron ore exports
- Exploration to be accorded highest priority with necessary incentive & removal of various legal and procedural constraints
- Adoption of latest technology for beneficiation
- Priority in allocation of mines to the existing steel plants without captive mines

Coal

- Indigenously available coal need to be blended with imported coal to make these more suitable for metallurgical operations
- Acquiring mines overseas
- Indian steel-makers may enter into long-term contracts with coal majors
- Alternative technologies like coal tar injection, PCI into BF to reduce dependence on imports

Meticulous Strategic Planning required.....

Natural gas

- More efforts on exploration of natural gas Strengthening & expanding the distribution network

Power

- More deepening of the power sector reform
- Capacity built up by promoting captive power plants, through incentives / tax breaks and by removing various procedural constraints
- Small producers may be encouraged to pool their efforts as consortium for such activities

Meticulous Strategic Planning required.....

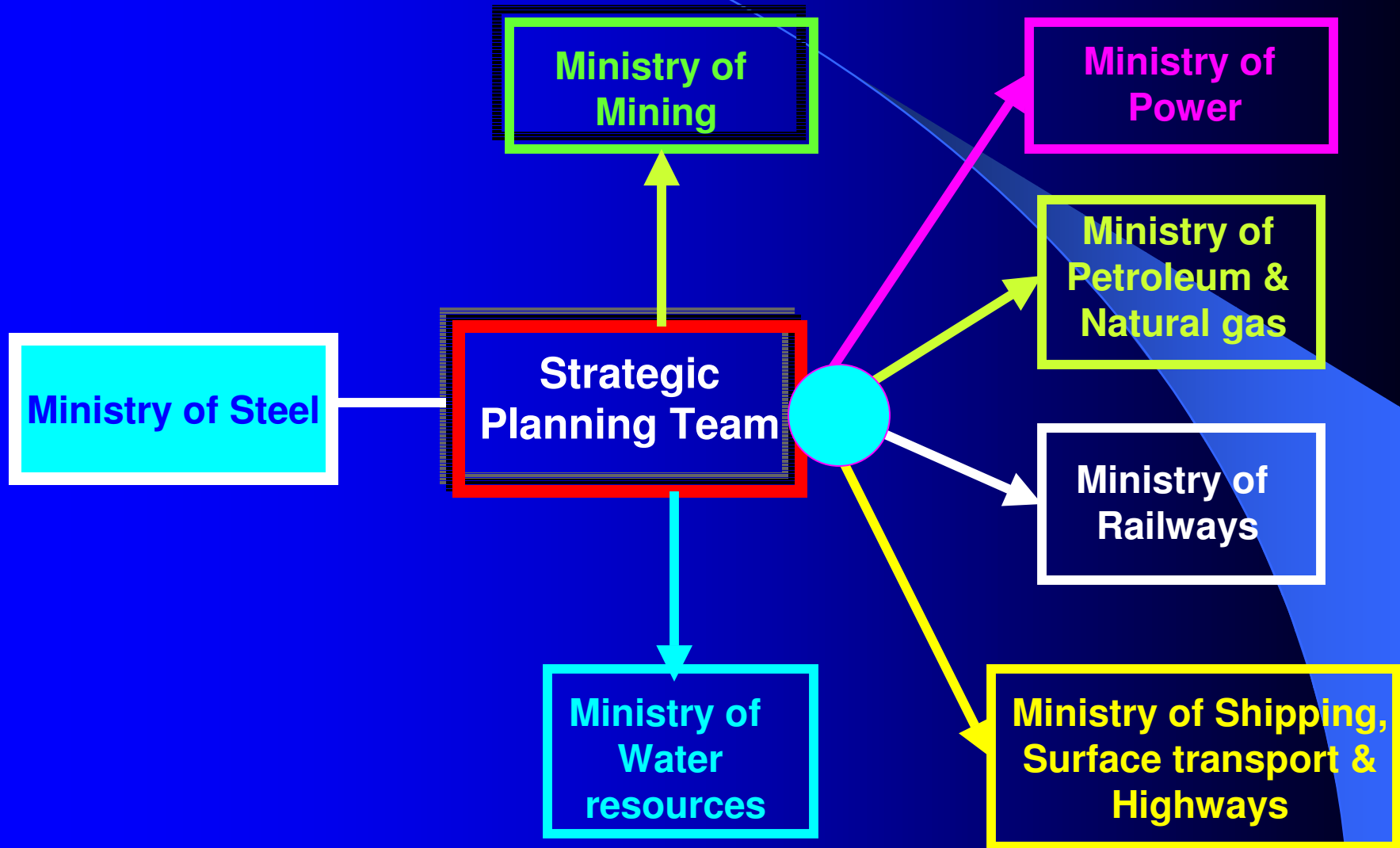
Human capital

- Increase in salary
- Extensive man-hunt through visits to the standard engineering institutes
- Better training

Engineering & consultancy

- More private initiatives
- Collaboration with foreign consultancy organizations
- More R&D effort

Strategic Planning is required, in an integrated Framework combining various ministries.....



.....thought process to bring success for Indian steel industry is on.... as

**.....for every day there is a tomorrow
& tomorrow never dies.....**

.....so is the thought process.....