Laplace Conseil View on the Future of the Global Steel Industry

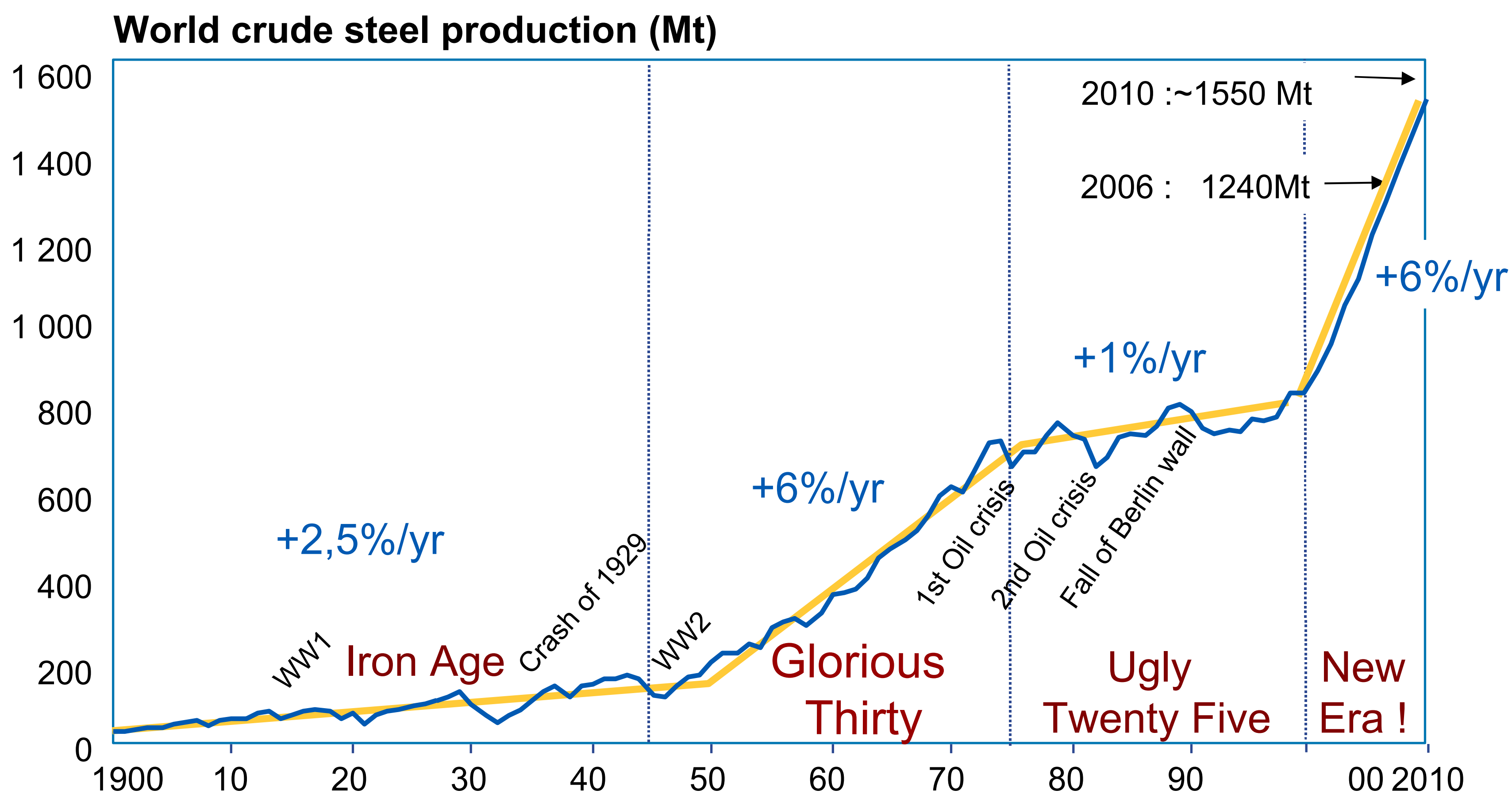
Agenda

- New steel dynamics
  - Global prospects for steel
  - Impact of China on global market equilibrium
  - Prices implications

- Racing for leadership
  - Global integration
  - Metallic sourcing strategy

- Laplace Conseil Presentation

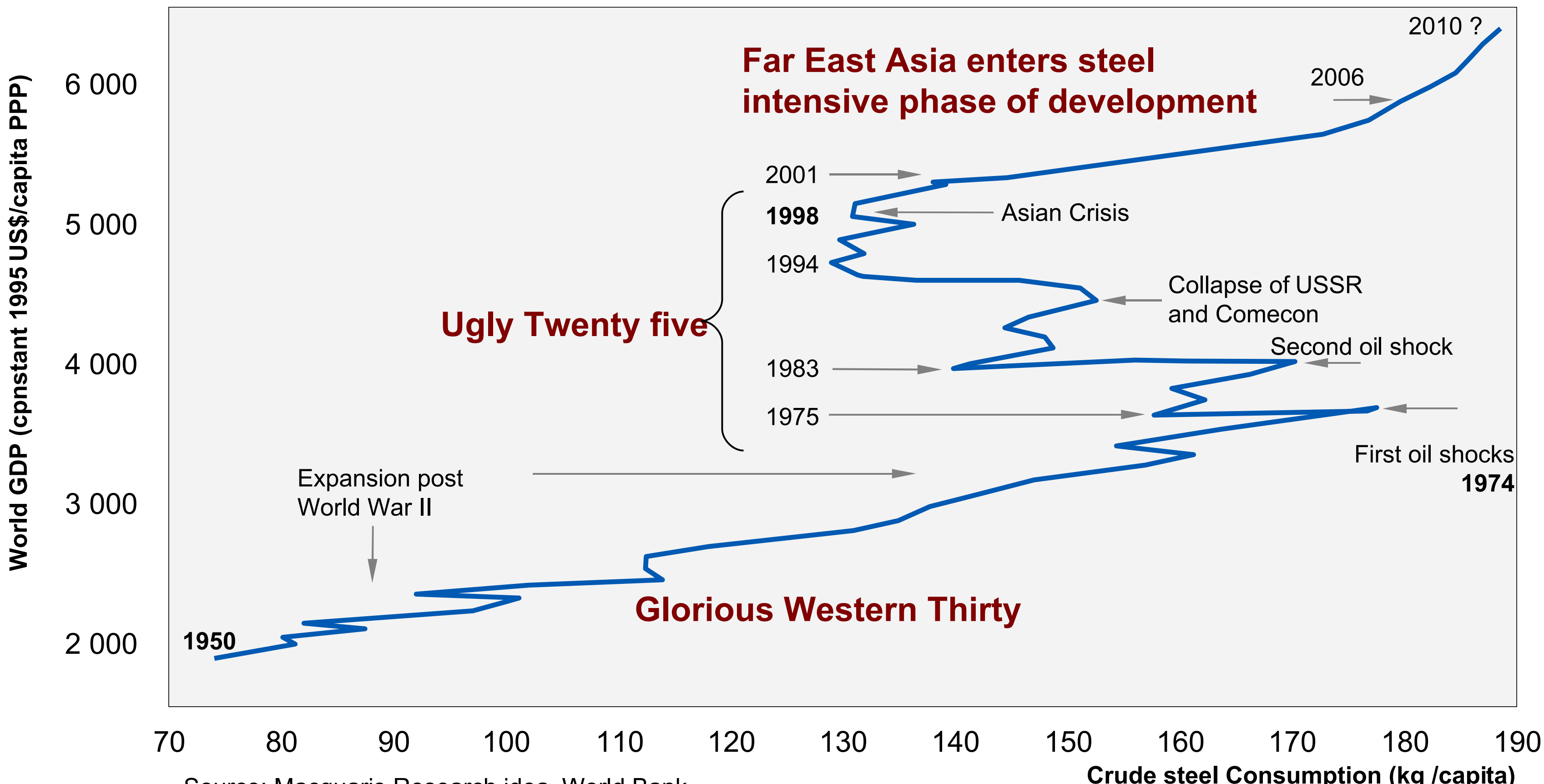
Since the beginning of this century, the steel industry has entered a new era



Source : Steel Statistical Yearbook, IISI, Laplace Conseil analysis

World steel consumption evolution underlines the increasing role of Asia

World Steel consumption and (constant GDP per capita, 1950-2010)



Source: Macquarie Research idea, World Bank,
US Bureau of the Census and IISI data, Laplace Conseil analysis

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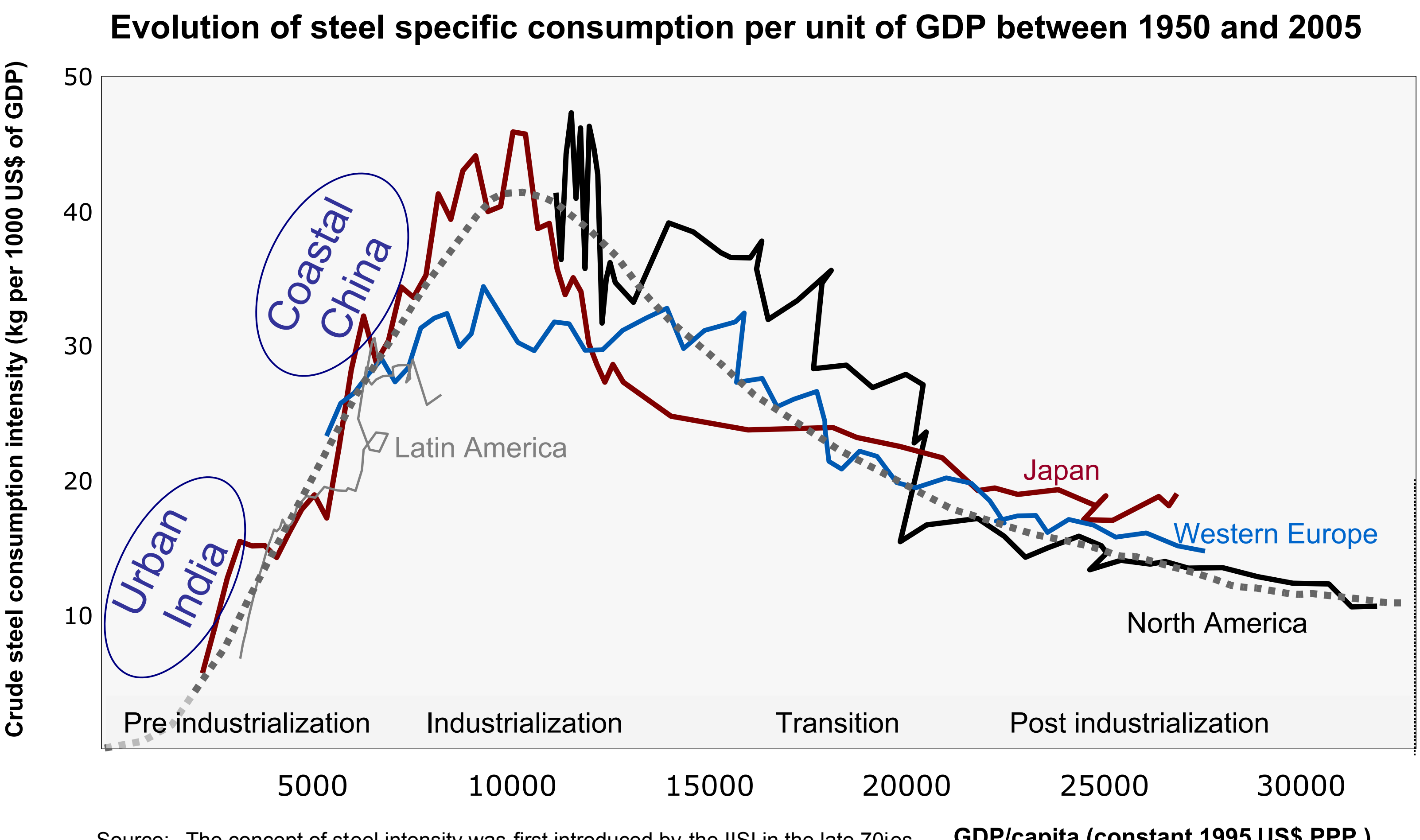
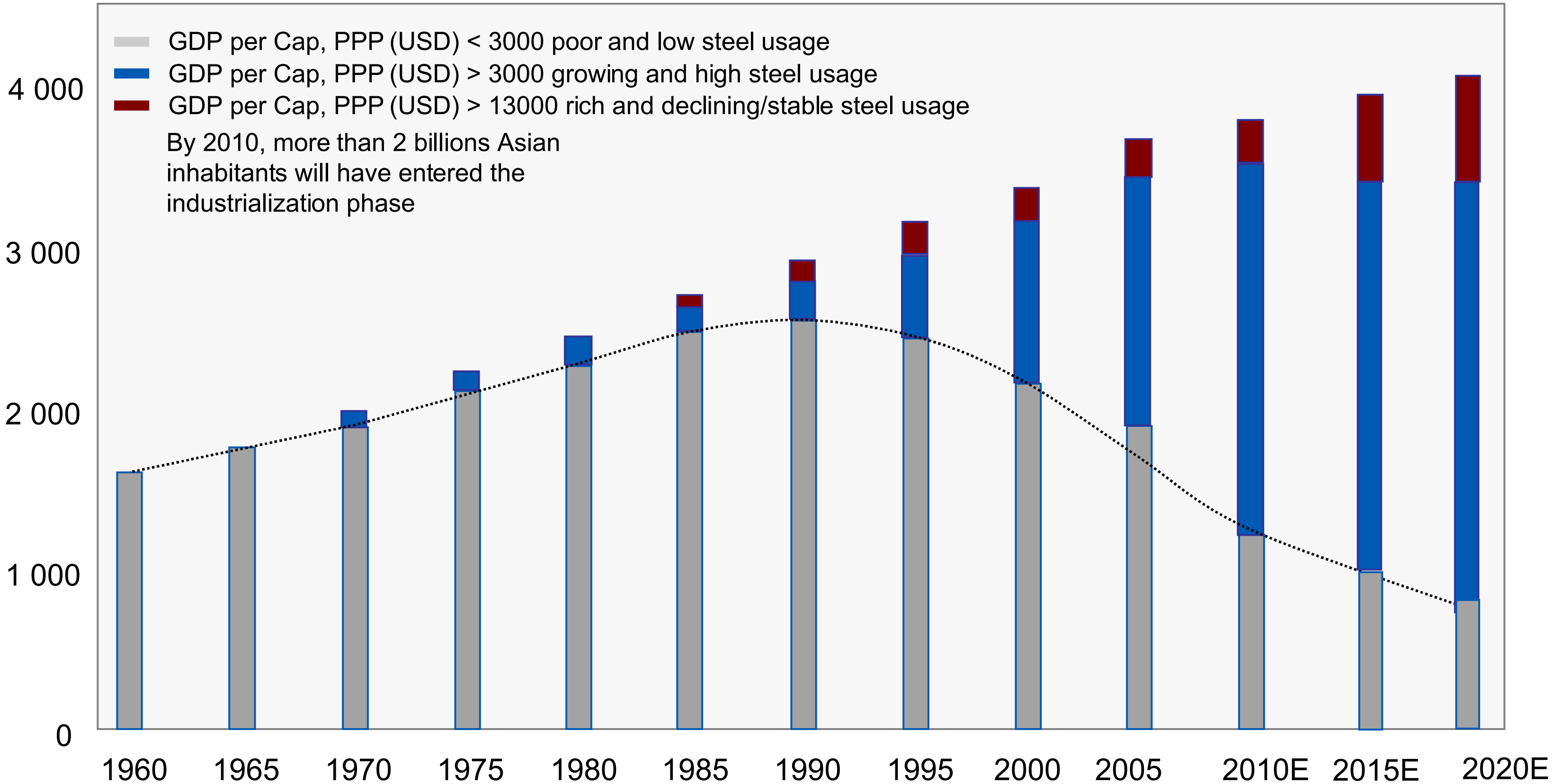
Steel consumption is predictably determined by stage of economic development



Source: The concept of steel intensity was first introduced by the IISI in the late 70ies. Data are from OECD (constant GDP PPP), World Bank and the IISI

Since 1990, the share of Asian population entering the industrialization phase has increased sharply

Economic Development of Asian populations (Million inhabitants)



Source: World Bank, Laplace Conseil analysis

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All other major economies experienced long period of exponential growth, until…

Evolution of major steel producing regions 1950 - 2005

Country Region	Population (industrialized)	Exponential growth period	Annual growth rate	Cause of trend rupture	Trigger	Outcome
USA	280	1945 - 1975	1,70%	Post industrial transition	1st oil shock	major importer
EU 15	390	1945 - 1975	5,80%	Post industrial transition	1st oil shock	Stable production export threatened
Japan	125	1945 - 1975	12,60%	Post industrial transition	1st oil shock	Stable production export threatened
Latin America	500/250	1950 - 1980	7,00%	inflation mismanagement	2nd oil shock	Growth halved to 3%
URSS/CIS	260	1945 - 1990	6,7% then 3%	Systemic collapse	Berlin Wall	Consumption loss 70% World largest exporter
Korea & Taiwan	70	1965 - 1998	9,80%	Post industrial transition	Asian crisis	Outcome dependent on China
China	**1250/350**	1978 - 2000 **2001 - ?**	6,5% **22,4%**	**?**	**??**	**???**
India	**1050/150**	1992 - 2000 **2001 - ?**	5,1% **8,7%**	**?**	**??**	**???**

Source: IISI,World Bank, Laplace Conseil analysis

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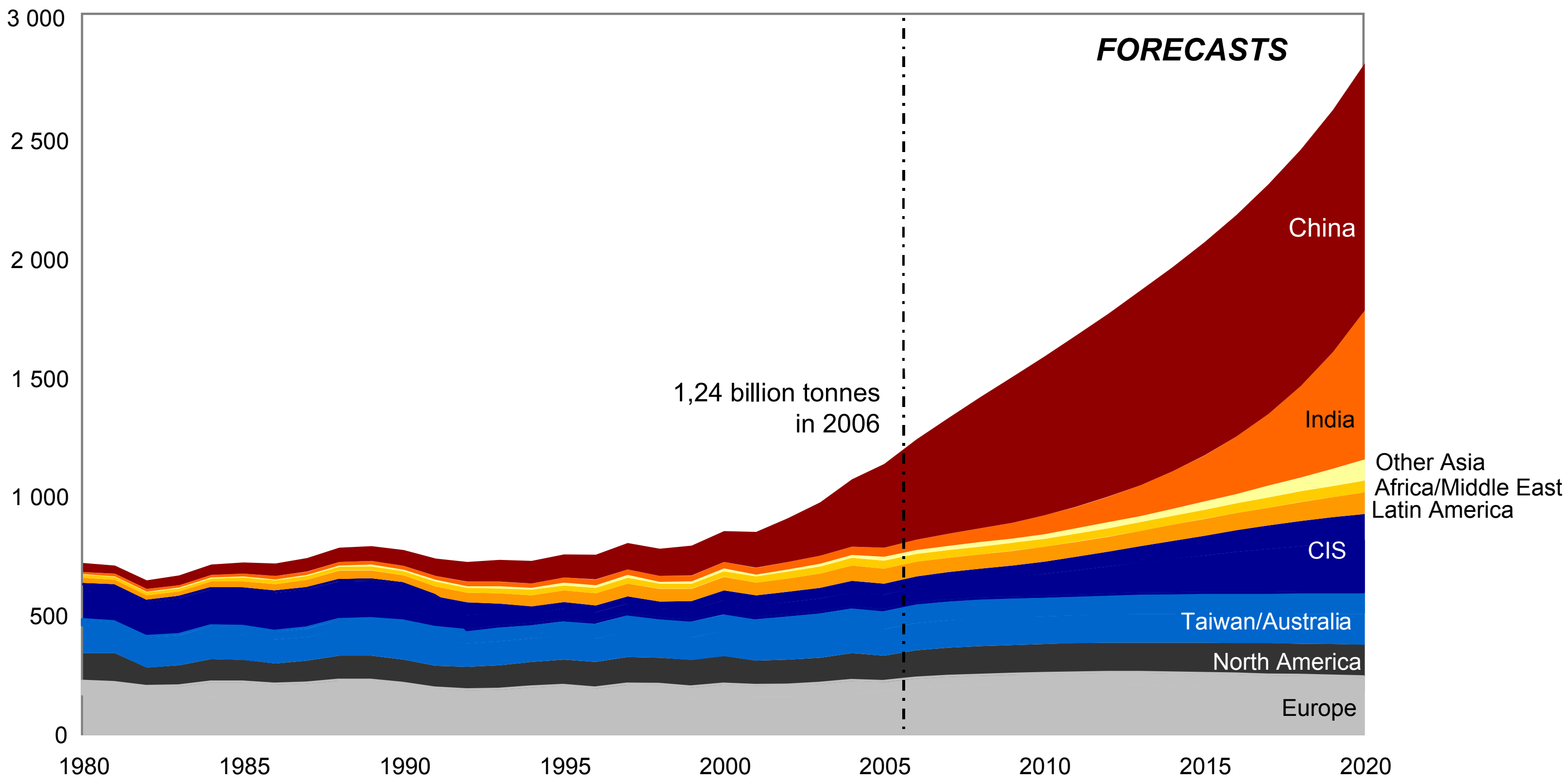
Summary of trends and drivers of steel demand

	Probability by 2020
• The new consumers in Asia and transition economies pull global steel demand by 4 to 6 % per year *for 20 to 30 years*	50 %
• The world economy "muddle through" with renewed shocks and cycles but the system remains resilient. Steel grow by 2 to 4% per year with substantial fluctuations	30%
• Major disruptions, in part caused by a growing gap between "have and have not" (energy shortage, environment catastrophe, major terrorist outbreak) trigger recession in developed economies and halt progress in developing world. Steel return to mid 2000's level, then remains more or less constant with large cycles	20%

By 2020, steel production in China and India will exceed steel production in developed countries

Crude steel production 1980-2020f (Mt)



Source : IISI, Laplace Conseil analysis

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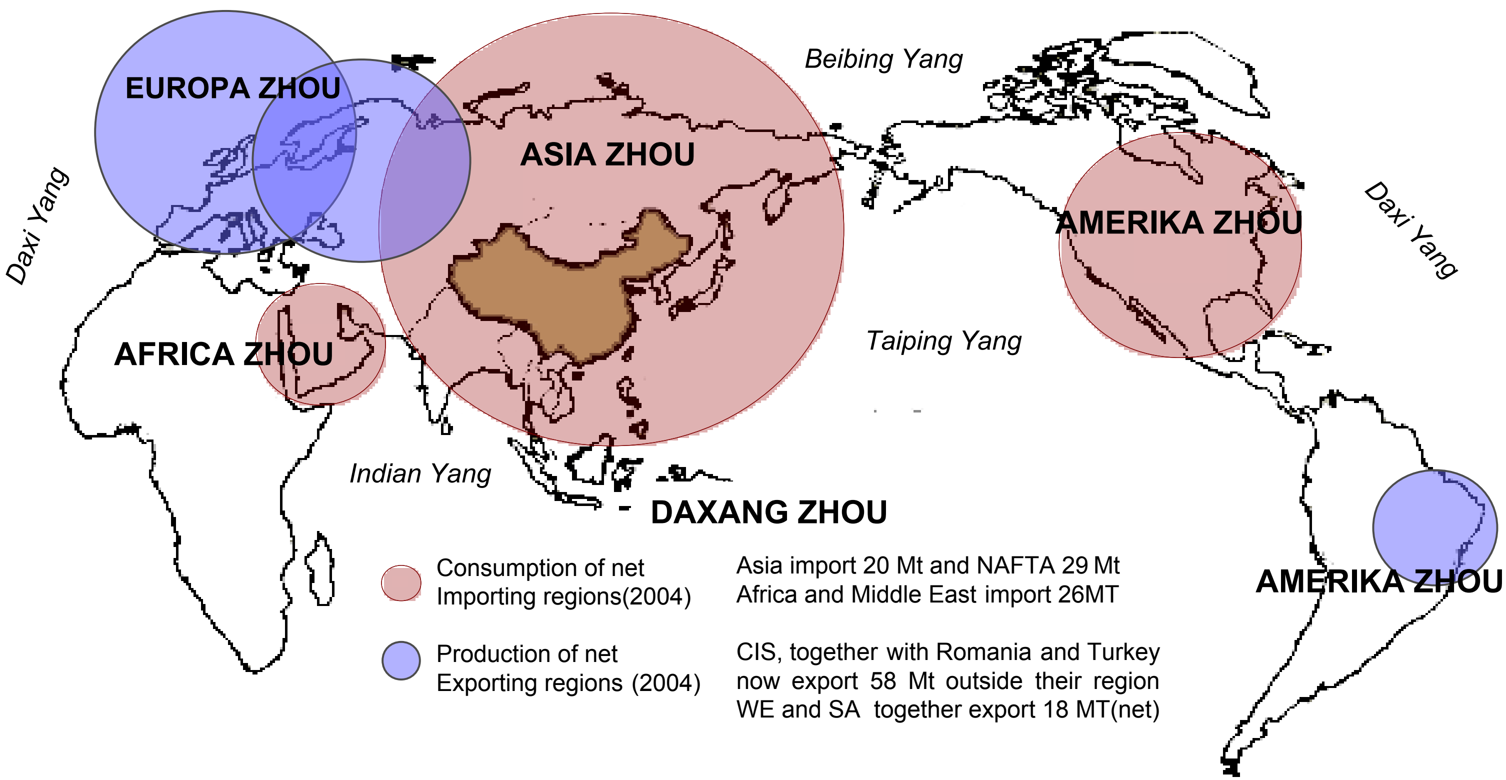
The growth of Asia imposes to consider the steel world from a new vantage point

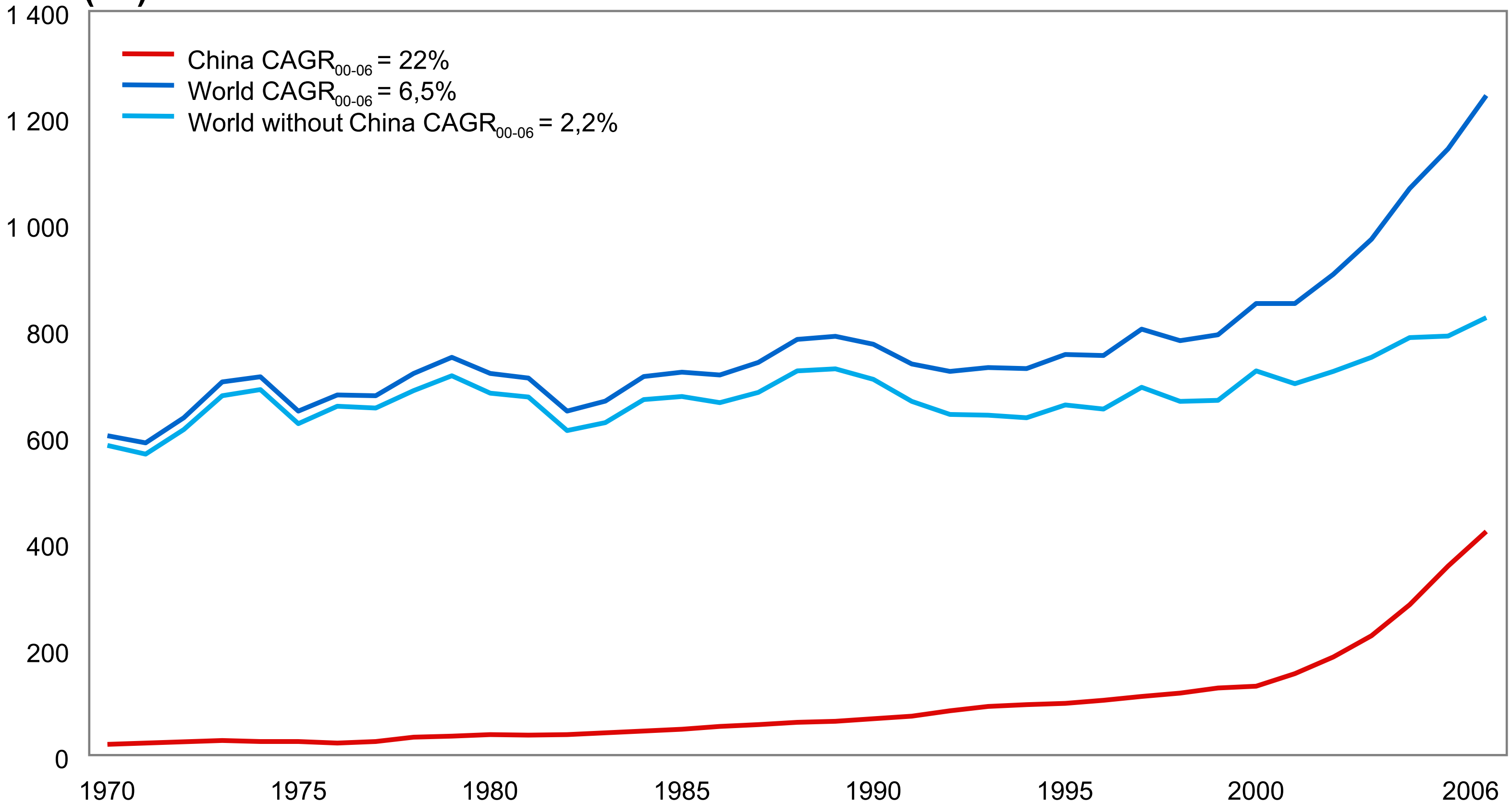
The Steel World from an Asian perspective



Source: PR China contemporary Atlas, quoted in Strategic Atlas (Chaliand and Rageau), IISI data, Laplace Conseil analysis

From 2000-2006, world production grew at 6.5% a year. Without China, it would have grown at 2,2%.

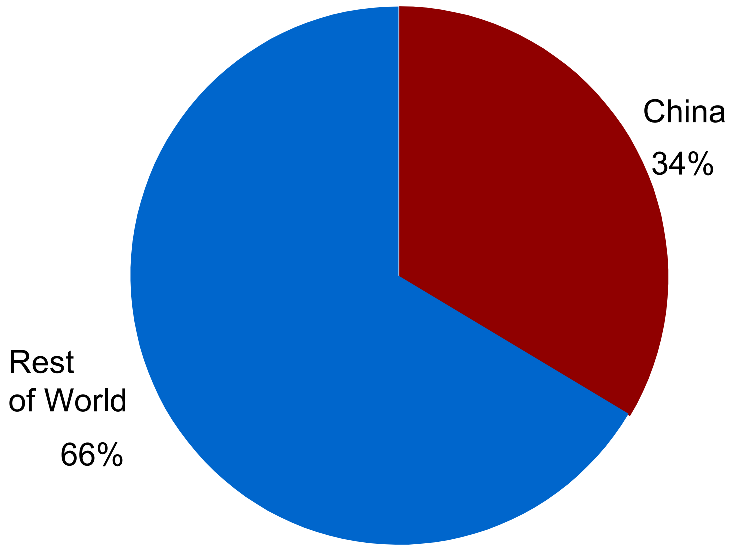
World crude steel production & impact of China (Mt)



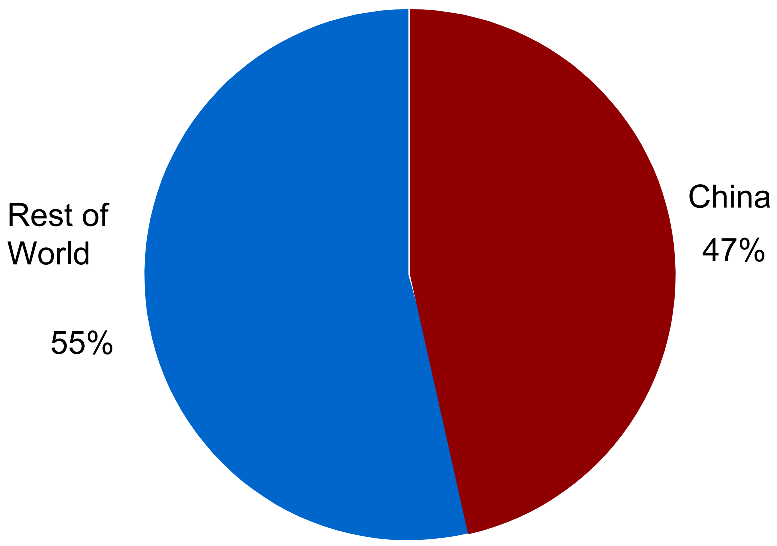
Source: IISI; Laplace Conseil analysis

China accounts for 34% of world steel production and 47% of world cement production

2006 Steel Production
100% = 1,2 Billions tons



2006e Cement Production
100% = 2,5 Billions tons



Source: IISI, Cembureau, Laplace Conseil Analysis

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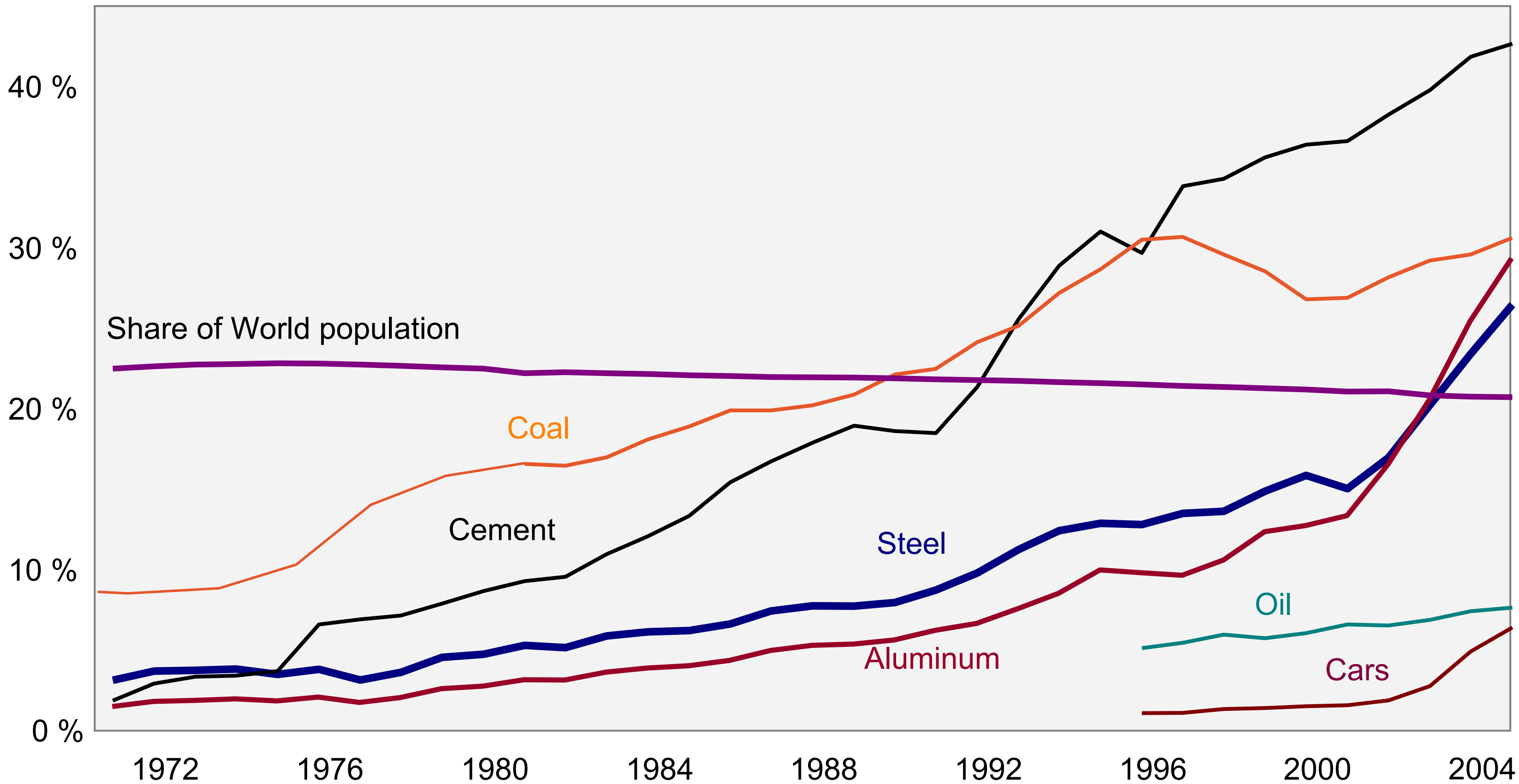
China consumption is growing rapidly for all metals and minerals

China's share of global raw material and intermediate goods consumption (%)



Source: industry associations, China Metals, Laplace Conseil Analysis

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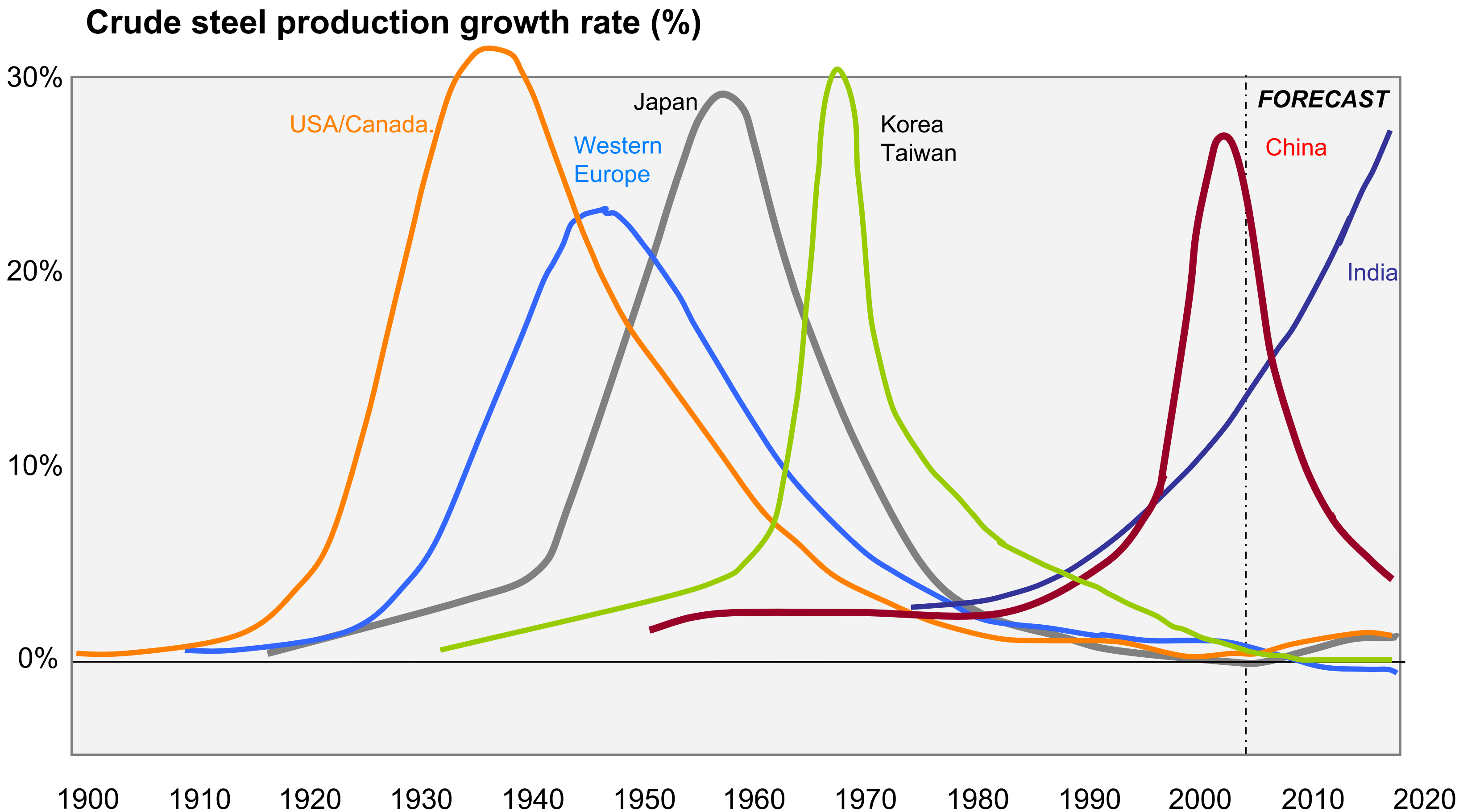
China current evolution is similar to the one experienced by developed economies in the past.



Source: IISI, USGS, Laplace Conseil analysis

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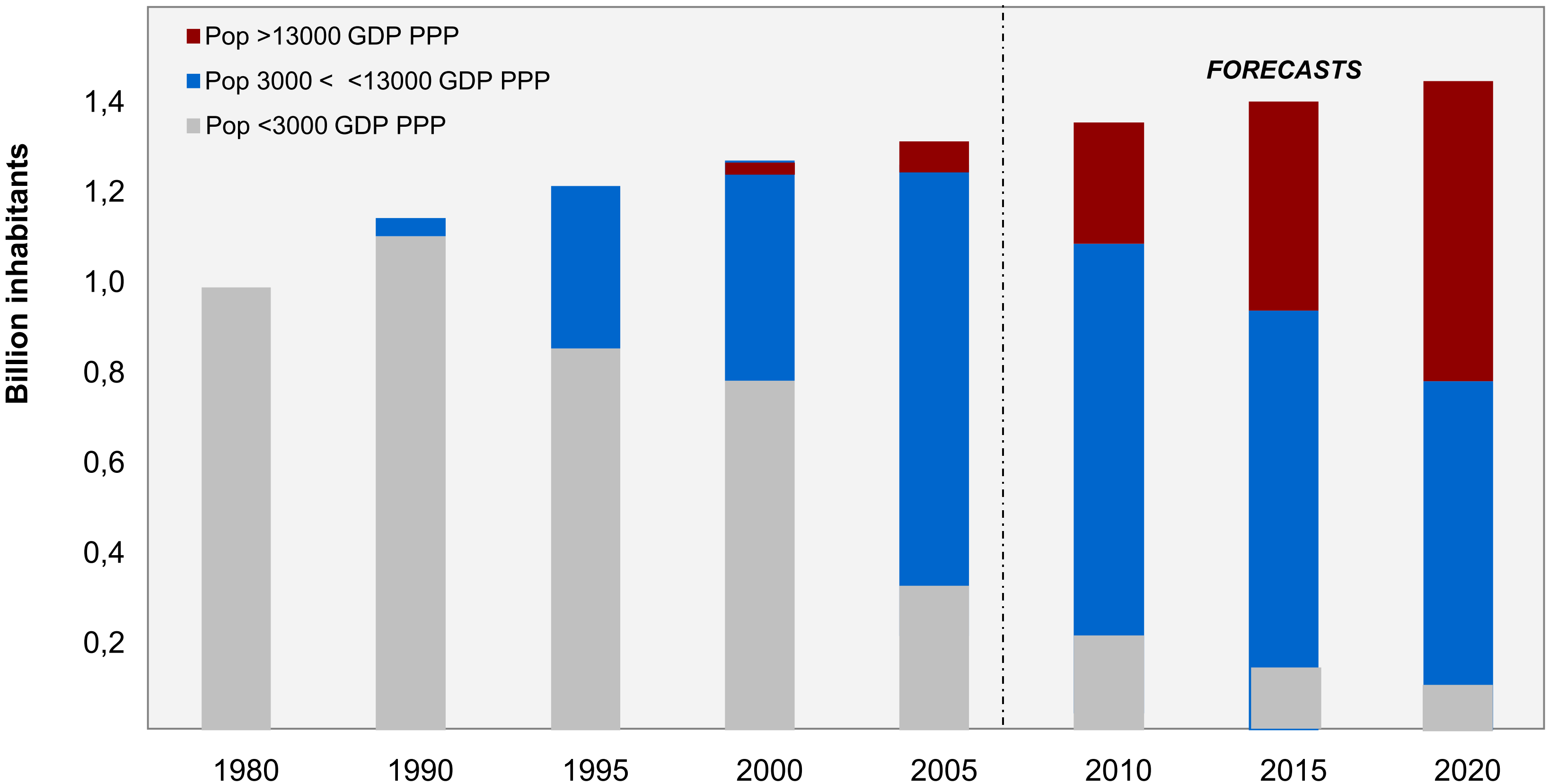
By 2020, 600 million Chinese out of 1,45 billion are expected to reach 13 000 $ GDP PPP/capita

China GDP PPP/capita evolution (current international $)



Source: World Bank; Goldman Sachs BRICs Report; Economist Intelligence Unit, Laplace Conseil analysis

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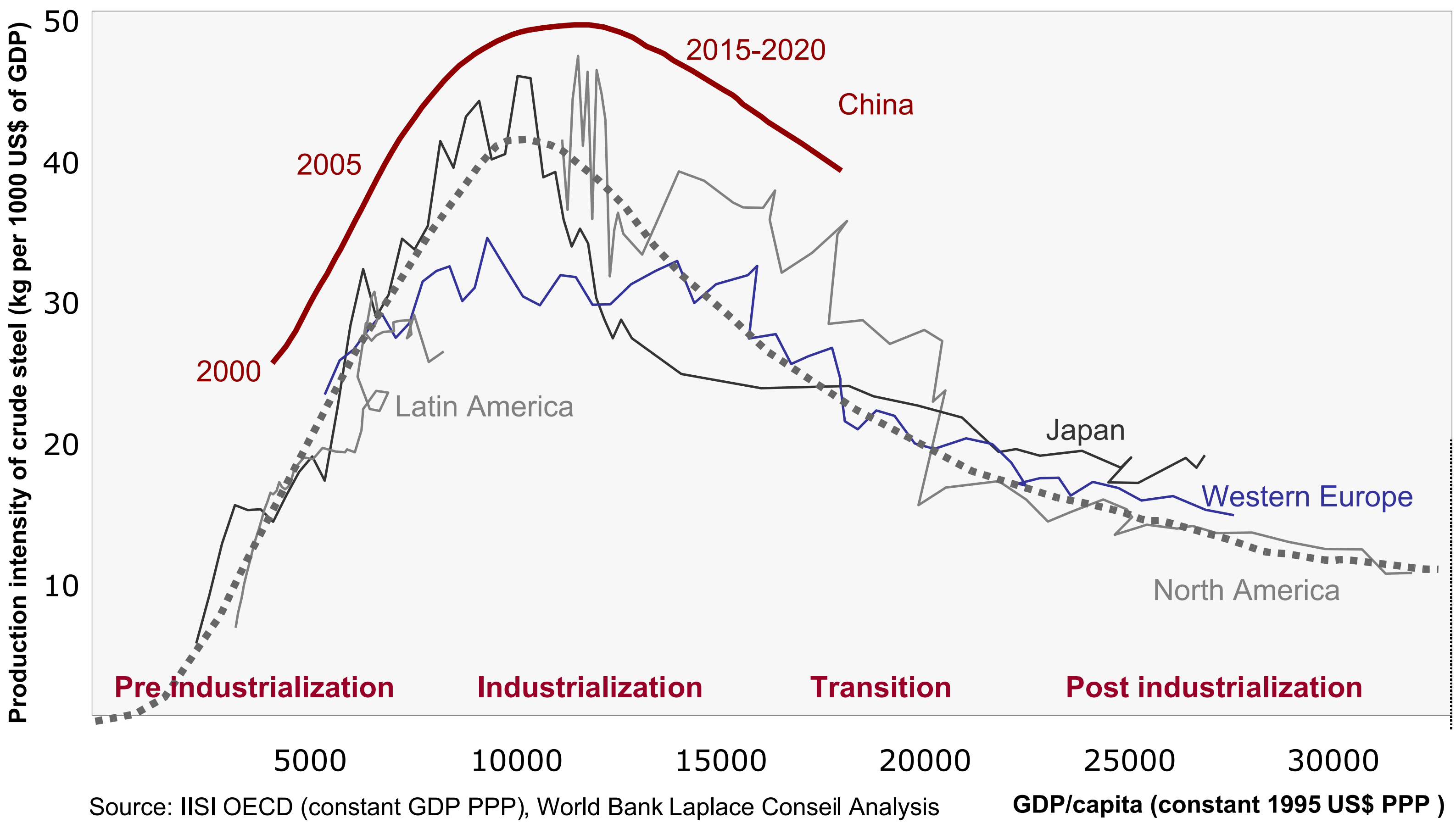
China steel intensity curve is expected to peak in 2011-12 at 50 Kg per 1000 US$ of GDP

China steel specific production per unit of GDP forecasts



Source: IISI OECD (constant GDP PPP), World Bank Laplace Conseil Analysis

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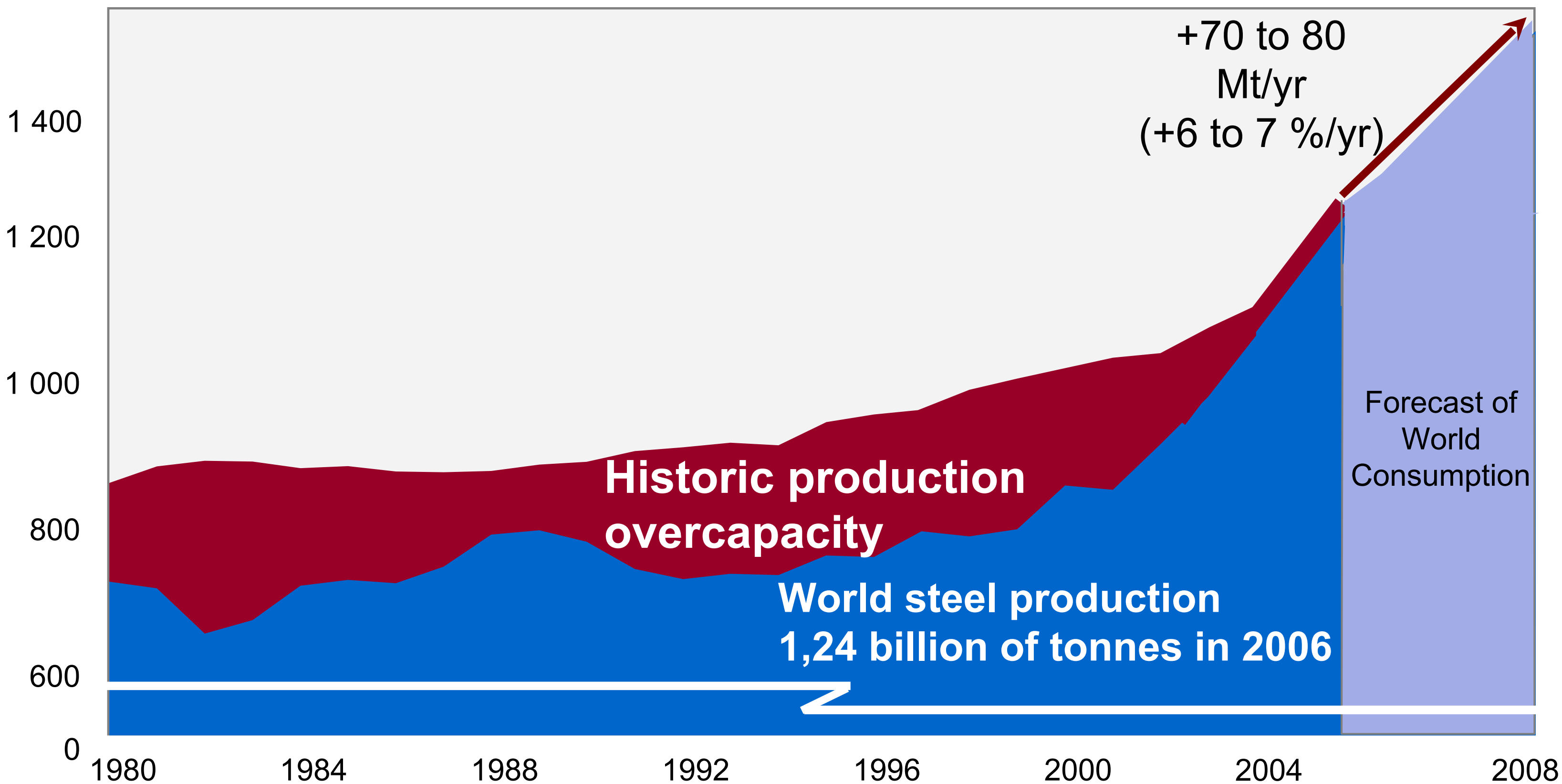
The growth of Chinese steel demand has eliminated all residual overcapacity

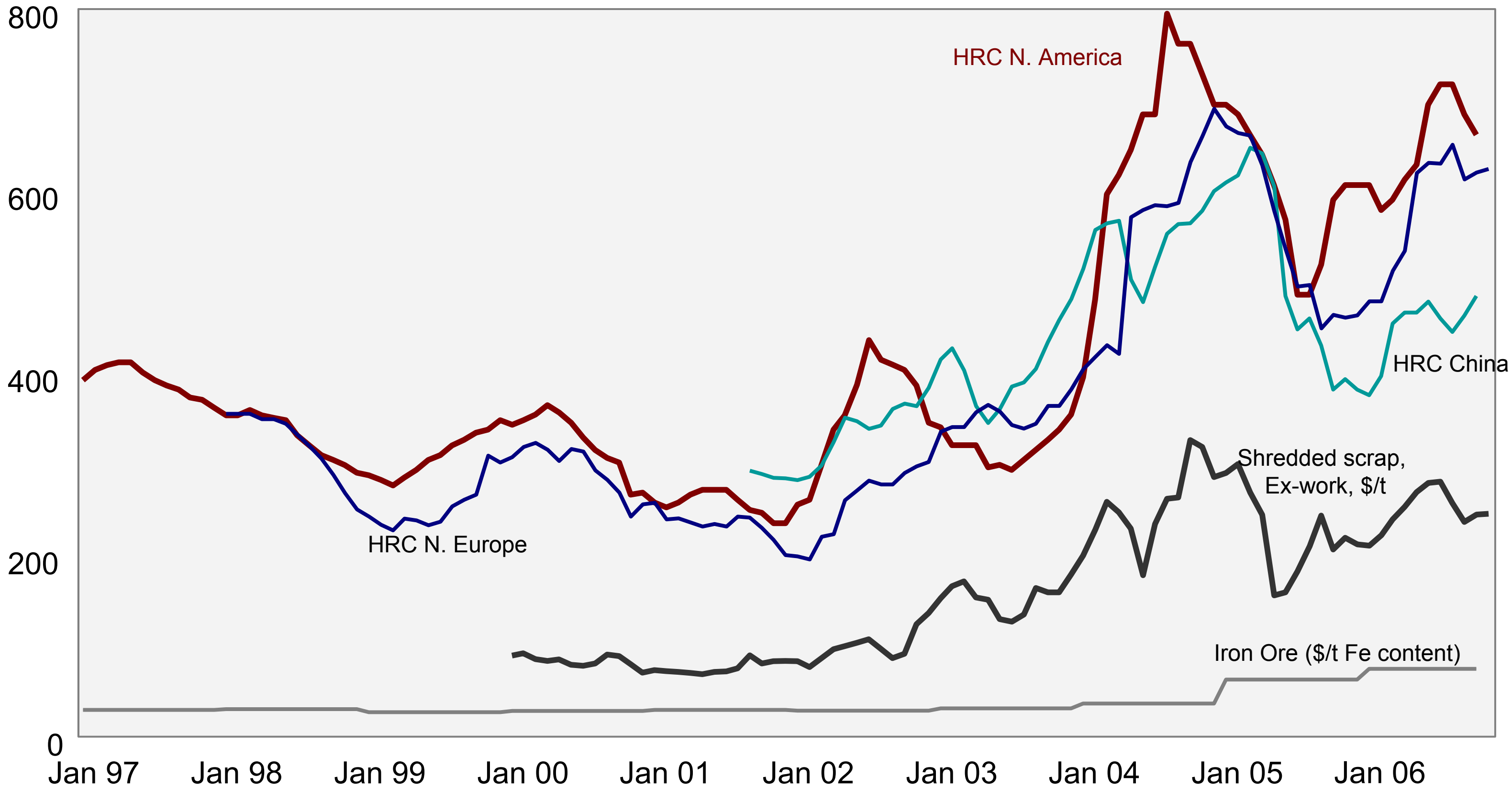
Evolution of global steel consumption overcapacity (Mt)



Source: IISI, Laplace Conseil analysis

Global steel prices demonstrate impact of new paradigm and raw material increases

HRC and raw materials prices ($/t)



Source: Steel Business Briefing, Metal Bulletin, AMM, Laplace Conseil

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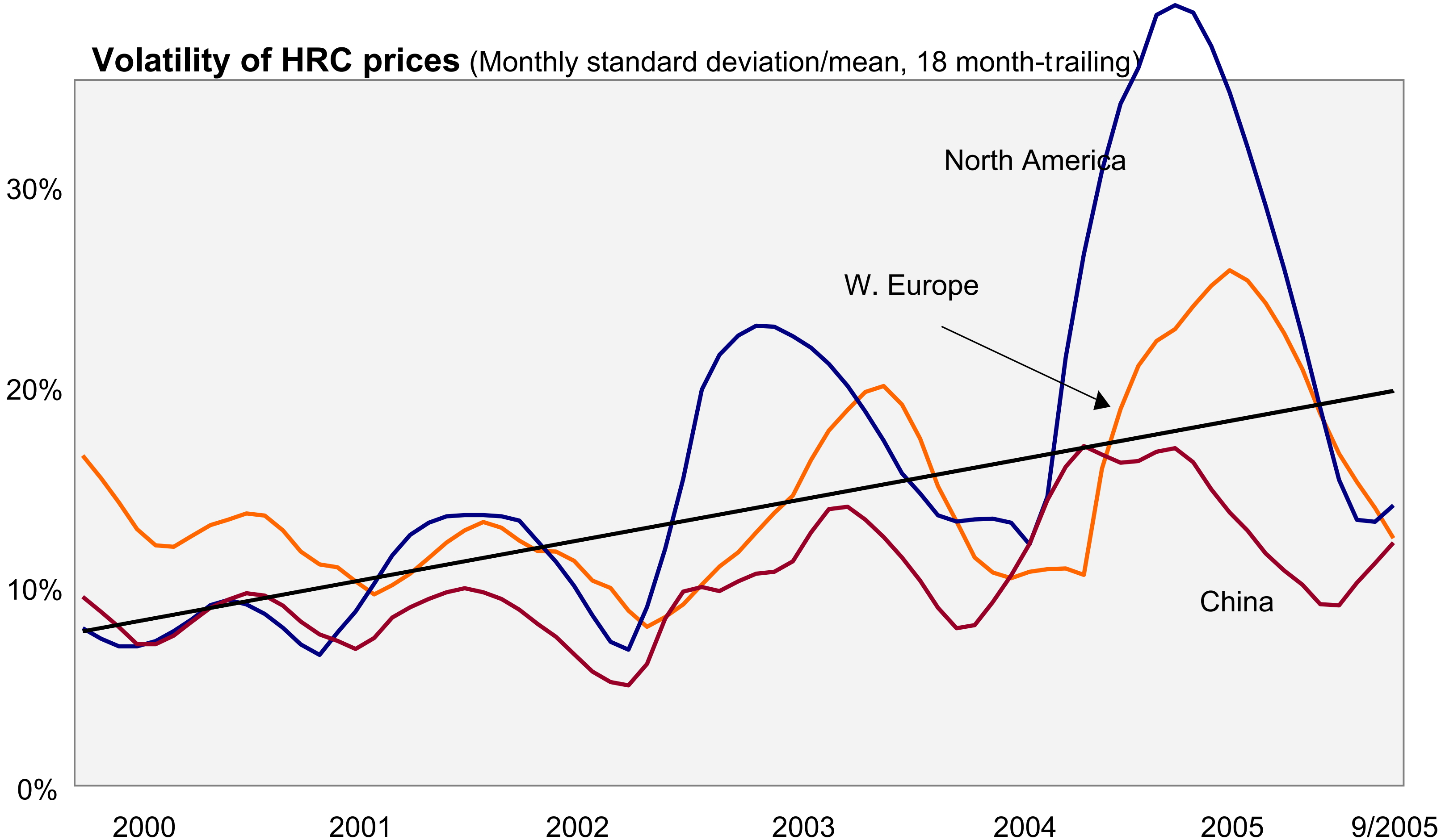
Price volatility has doubled, more in US



Source: CRU, Steel Business Briefing, Laplace Conseil analysis

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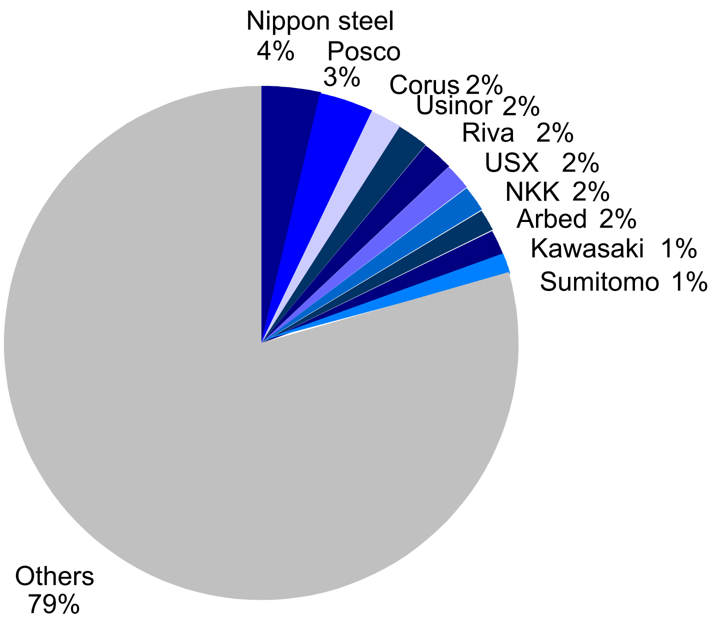
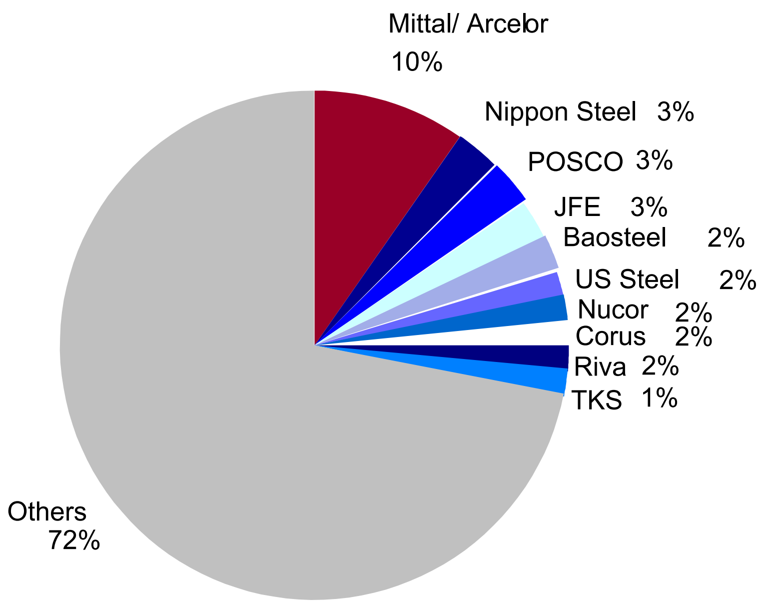
The steel industry is still fairly fragmented

Top Ten Steelmakers market share
1995 = 752 Mt



Top Ten Steelmakers market share
2006e = 1233 Mt



Source: IISI, Laplace Conseil Analysis

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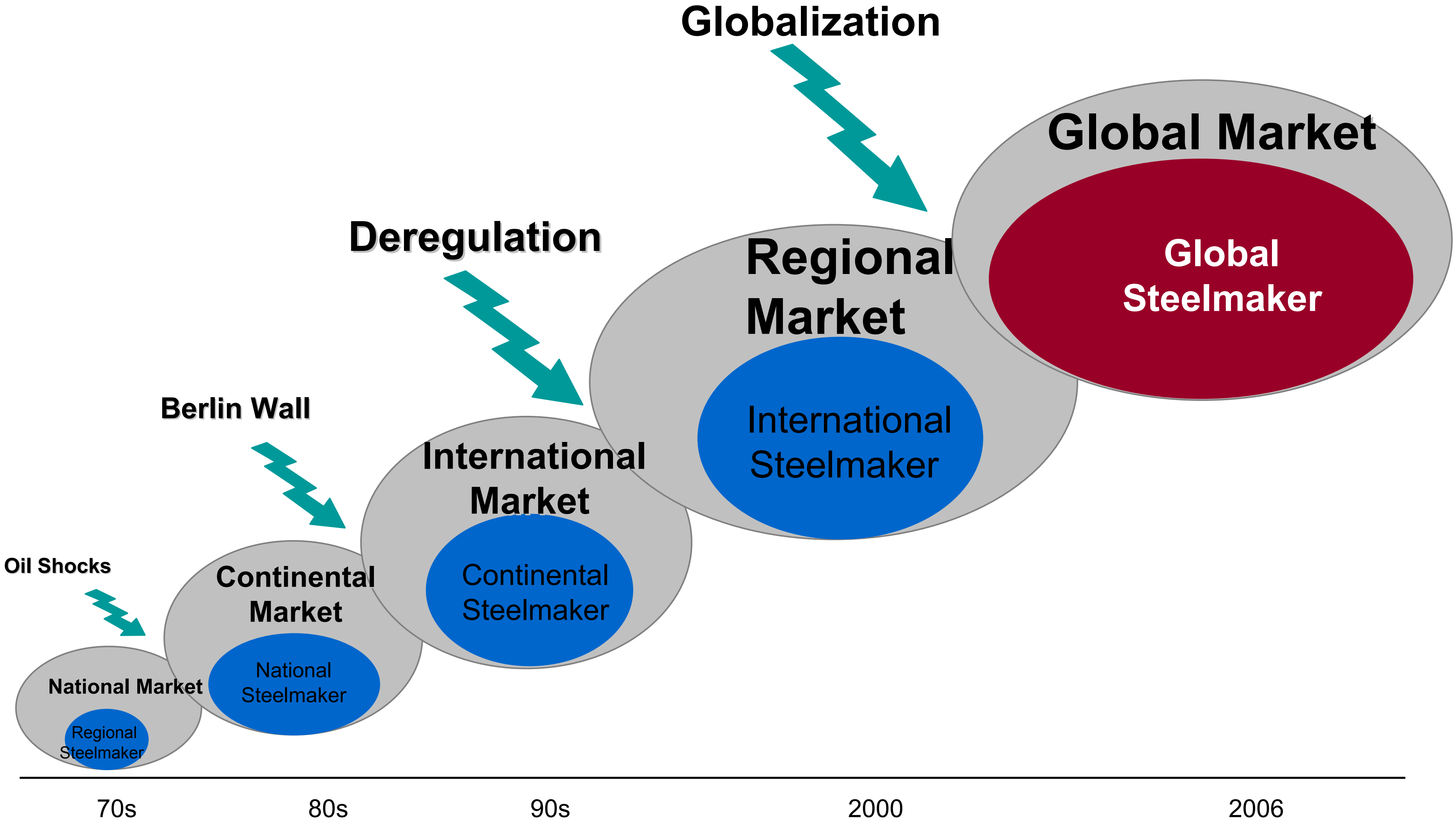
Arcelor Mittal is creating a new model: the global steelmaker



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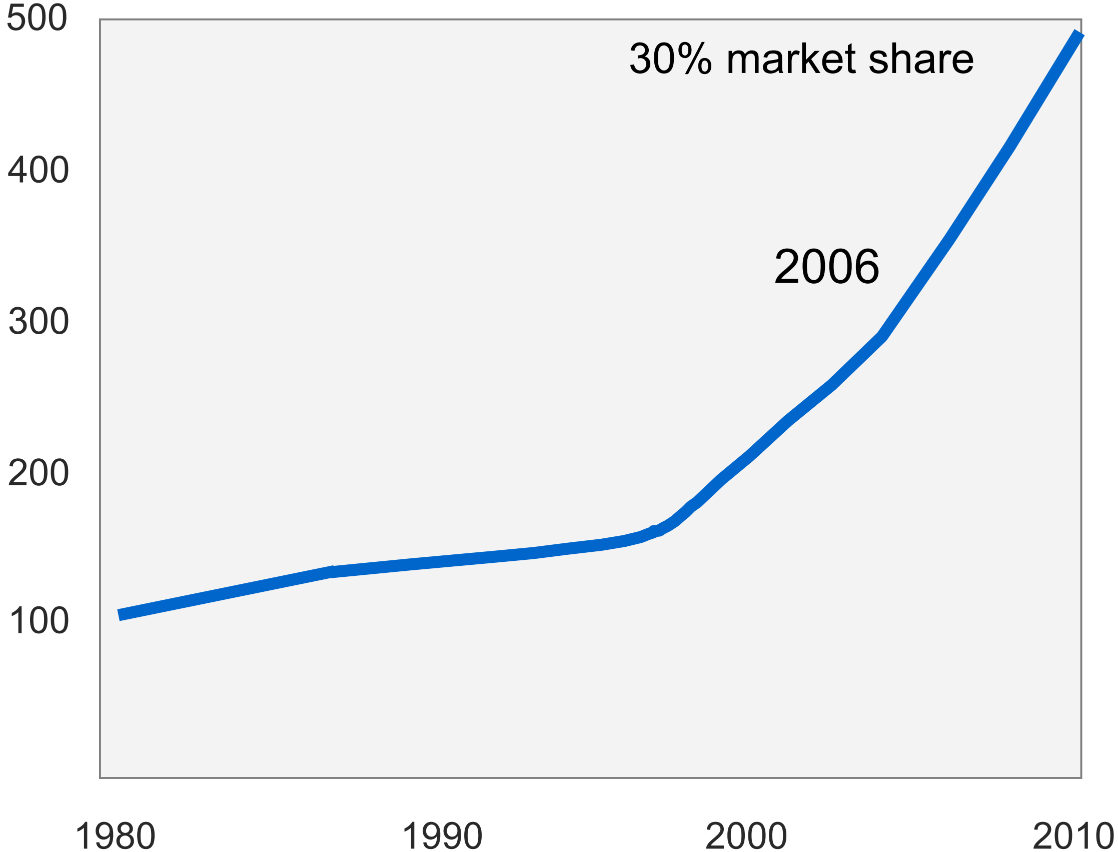
Leaders' strategies broadly follow four physical growth models

Merger of Peers	Arcelor, Mittal, Thyssen, Corus
Acquisition for restructuring	Riva, Duferco, Sidenor
Internal Growth	Nucor
Asian Consolidation	Baosteel, Anben, Wugang, JFE

In 5 years time, the cumulative production of the top ten steel leaders may reach 500 Mt

Cumulative production top 10 steel companies (Mt)

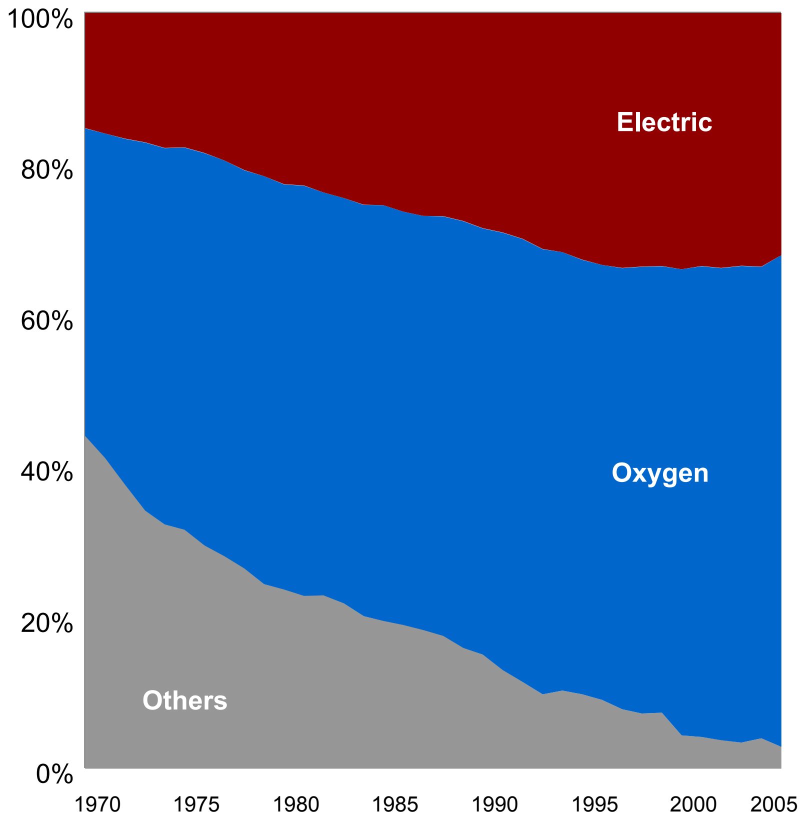


Source: Laplace Conseil estimates

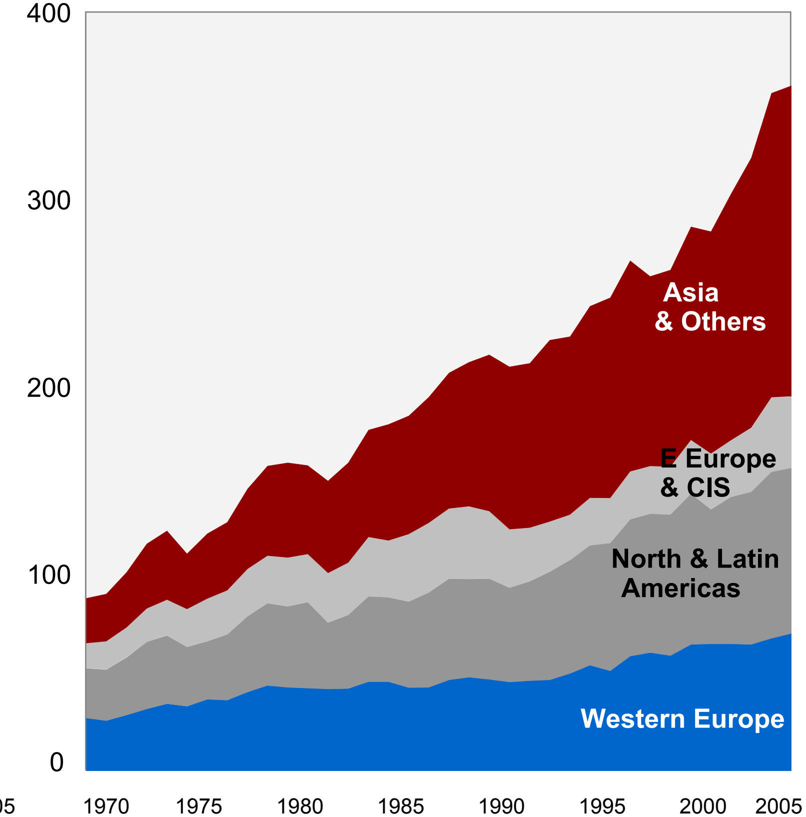
In five years time, the average size of the leaders might be around 50 MMT, up from 35 MMT in 2006 .

In the last 25 years, electric arc furnaces (scrap or DRI) took a growing share of the market

Crude Steel Production by Process (%)



EAF Crude Steel Production (Mt)



Source: IISI , Laplace Conseil Analysis

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Flexible metallic sourcing strategy will be key for successful risk management.

Iron sourcing strategy	**Who bear the economic cycle risk ?**
Traditional integrated: Iron ore and coal	Mostly, the steel maker
Traditional mini mill: scrap and electricity	First, the original scrap owner, then the steel maker
New flexible mill scrap, pig iron, DRI	Mostly the suppliers of the raw materials

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Laplace Conseil objective is to add sustainable economic value to our client's businesses with innovative, tailored, pragmatic solutions.

- **Laplace Conseil** was founded in February 1995 by Marcel Genet, an international consultant with 15 years of prior experience as a senior partner within McKinsey & Company, where he headed the Firm's worldwide steel practice.
- **Mission**: As a change catalyst, we develop and apply innovative solutions that enable our clients to add sustainable economic value to their business in the interests of their shareholders, clients and employees.
- **Clients**: Our clients are large global companies operating in the metals and minerals industries, in particular **Steel, Aluminum, Cement and Mining**. We also conduct projects for the consumers of these materials, such as automotive, packaging, construction and manufacturing. In addition to Europe, 40% of our projects are conducted in Asia, Eastern Europe, North America and Latin America.
- **Network**: We are leveraging our expertise through a global network of specialized consulting firms with whom we have conducted several joint projects:
    - **China**: Fortune Consultancy, led by Jason Xu
    - **Japan**: Tokyo Management Consultant, led by Masatake Ushiro
    - **India**: Madras Consulting Group, led by Shanker Gopalkrishnan
    - **Ukraine and Russia**: Marat Shinkarev
    - **North America**: First-River, led by James Moss and Toni Taccone
    - **Europe**: JSW Consulting GmbH, 6-24 Consulting, Implementa,…

Our missions for our clients concern strategy, market development, operations improvement and risk management.

- **Strategy**
  We have helped several clients develop and implement their strategy for growth, geographic expansion and sometimes restructuring. For these projects, we work closely with internal client teams as well as external advisors (investment banks, auditors, experts) when necessary to provide a complete framework from initial opportunity scoping, due diligence to post merger implementation.

- **Market development**
  With our unique mix of international partners and dedicated internal consultants, we are able to provide rapid, precise and efficient market analysis for assessing market opportunities. Most of our work in this area is conducted in Asia and particularly in China.

- **Operations improvements**
  Since the mid-eighties, Marcel Genet and his team have refined a particularly effective method - Delta - for engineering fast turnaround in industrial and commercial operations. Ex-post audits have proven the method's effectiveness which rests on management commitment and large client teams.

- **Risk Management**
  Marcel Genet is a recognized expert in several aspects of financial risk management. Laplace Conseil has been selected by the LME to assist in investigating the feasibility of launching Steel Future contracts.