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A sustainable steel industry

Ian Christmas, Director General

Key Facts – worldsteel today

- **Headquarters in** Brussels**, second office in** Beijing.
- 156 Members**:**
  - 59 Regular (production > 1.8 mmt)
  - 46 Associate (production < 1.8 mmt)
  - 51 Affiliate (Regional and National Associations and Steel Research Institutes)
- **Membership HQs are located in** 47 **countries.**
- 19 **of the world's** 20 **largest companies are members.**
- worldsteel **members produce around** 85% **of the world's steel.**

Steel in a modern world

- Steel is essential for sustainable development
- Steel is key to infrastructure, energy delivery, transportation, housing, construction and vital consumer goods
- >40% of steel is internationally traded
- >50% of today's production is in developing countries and the figure is growing
- Energy-intensive (~ 1.9 t CO_2/t)
- Common technology – freely available

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Principles of our approach to climate reduction

- To have the greatest impact on the problem – substantive reduction in global emissions
- All major steel producing countries are engaged in this process
- We should work within the UNFCCC framework
- Respect principle of common but differentiated responsibilities
- Avoid market and competition distortions
- 4 building blocks involves actions by the industry and policy implications for governments

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1. Commitment to reduce CO_2/t

- CO_2/t is an intensity measure which is common to all steel producing countries
- Every steel company needs to know its current footprint to enable it to identify improvement potential
- We now have common methodology, definitions and boundaries agreed
- Similar and comparable to APP data collection
- 3 process routes: BF/BOS, EAF, DRI/EAF
- Distinction between Scope 1 and Scope 2 emissions

Data Collection System

- Site-by-site
- Strictly confidential - (not disclosed to competitors)
- Open to all steel companies - (not just worldsteel members)
- 2/3rd worldsteel members already collected
- Reporting by region and national associations
- Benchmarking ⇨ target setting
- Global coverage
  (9 countries >90% total emissions globally)

Climate Action

2. Technology Transfer

- Promotion of current best practice worldwide in medium-term
- Drawing on lessons from APP programmes
- Some of the best plants in the world are in developing countries
- Maximisation of scrap recycling. Steel is 100% recyclable and steel created 100 years ago can be recycled today and used in new products and applications
- Technology is freely available through the internet and best practise handbooks

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Policies to assist Technology Transfer

- CDMs or other financial incentives which do not distort fair competition
- Adoption of APP-type approach
- Identification of barriers to adoption of best practice

3. Breakthrough Technology

- Radical lower CO_2/t technologies need to be researched and developed
- Carbon capture and storage needs to be developed
- Major R&D programmes by steel industries
- Pilot plants
- Major new investments in new technology after 2020

Policies to support R&D

- Major expenditure (hundreds of millions of dollars) on long-term breakthrough technology cannot be supported by industry alone and also requires government funding
- Already major support in EU and Japan

4. Steel Solutions

- The most important contribution of steel will be in reducing the carbon footprint of all aspects of the economy:
  - Transport, rail and shipping
  - Construction and housing
  - energy generation (wind turbines etc)
  - Consumer goods and electrical motors
  - Automotive
  - Infrastructure and bridges

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Policies to promote Energy Efficiency in Society

- Use of LCA approach
- Building codes
- Promotion of use of steel by-product (slags) in cement and aggregates
- Vehicle fuel efficiency targets

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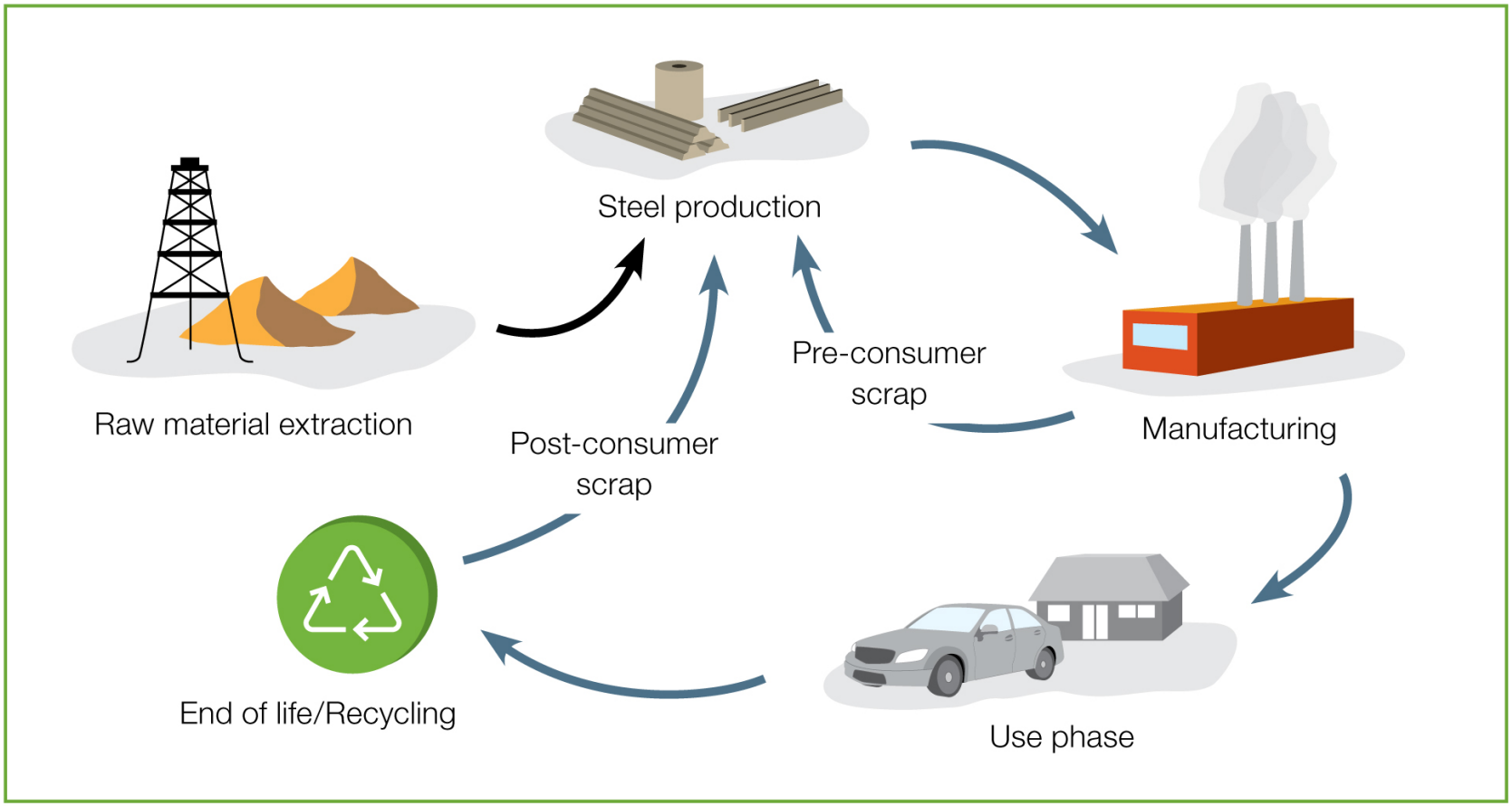
The steel life cycle



Why LCA is key

- There is an increasing focus on Life Cycle Thinking and Life Cycle Analysis in legislation and voluntary initiatives
- Determine the true holistic impact of products and services on the environment over its full life
- Avoid ‘shifting the burden’ from one phase to another
- Used as an aid in material choice in product design
- Provide steel industry data to customer requests
- To determine the areas for greatest environmental improvement potential
- Is particularly appropriate for global issues such as climate change

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