



ArcelorMittal

# Annual review 2015: Structural resilience

"We have three clear imperatives for long-term success. The first is a strong balance sheet; the second an efficient asset base producing quality products capable of delivering enhanced levels of returns; and the third is strong sustainability credentials."

**Lakshmi N Mittal**

Chairman and CEO of ArcelorMittal

## Message from our Chairman and CEO

Lakshmi N Mittal



Dear stakeholders,

Welcome to ArcelorMittal's annual review. This year we have attempted to take a first step towards integrated reporting, explaining the company's ability to create not just financial value but also social, human and environmental value.

### 2015: a tough year for commodities

2015 was a very difficult year for commodities globally – and that includes of course the steel and mining industries. Since 2008, the steel and mining industries have been faced with a chain of headwinds that have consistently impacted our profitability. The situation further deteriorated throughout 2015 with a convergence of factors resulting in a 2.2% contraction in global apparent steel demand; this is the first time we have seen negative apparent steel demand growth since 2009. We are living in extraordinary times where the only certainty is volatility and unpredictability. Global growth forecasts for 2016 have recently been downgraded by the OECD. The emerging market crisis continues, particularly in Brazil and Russia with only India out of the original BRICS managing to report higher growth prospects. Although China continues to report healthy growth levels by any other standard, it is clear its transition to a more consumer-led economy is causing particular challenges for the steel and other manufacturing industries where China has invested in massively expanding its own production base to a level where there is now considerable over-capacity. Then there is the increasing tension and instability in the Middle East and the resultant migrant crisis. The picture may be somewhat brighter in the developed world, but even there the picture is not entirely calm. Europe, which has recovered to some extent from its crisis point in 2011 – 2012, has to face the migrant challenge head-on and furthermore has been unsettled by the possibility of the United Kingdom leaving the EU. And the dissatisfaction of the US electorate, despite the US economy remaining robust, is evident from the emergence of non conventional candidates in the run-up to the presidential elections that will take place later this year.

In terms of the direct impact on the steel and mining industries, in 2015 we faced an even lower pricing environment for both raw material and steel prices with significant pressure on steel spreads – the differential between the raw material basket and steel price – particularly in the latter half of the year. Increasing levels of imports forced the price of steel down to very low levels, with trade tariffs slow to be implemented. As a result ArcelorMittal group Ebitda for 2015 reduced by 18.4% to \$5.2 billion. Shipments remained relatively robust at 84.6 million tonnes, a decrease of 0.6%. Due largely to a number of required non-cash accounting charges, we reported a net loss of \$7.9 billion. Irrespective of the non cash elements, this is undoubtedly a sobering and disappointing result. But I must highlight our success in considerably reducing the cash requirements of the business throughout the year and reducing net debt to \$15.7 billion at the year end. This is a considerable achievement in such difficult operating conditions.

Nevertheless this is the lowest level of Ebitda that ArcelorMittal has reported since its creation and we are not satisfied with this level of performance. We have continually been adapting the business since 2008 and indeed on many levels have made excellent progress. But more often than not the gains we have made have been offset by further deterioration in the external environment. It is clear that we are facing a structural change, not simply a prolonged down-cycle. This type of environment requires a management team to take a long and hard look at the business and ensure they have adapted appropriately to the operating conditions and have a business model and strategy in place that can create value in the short and longer term. We have done exactly that.

### Improving performance and driving long-term sustainability

Steel remains a vital material for the world and over the long-term demand will continue to grow as emerging markets continue their, albeit not straightforward, path towards increasing prosperity. This year we are expecting a return to apparent steel demand growth of between 1 and 1.5%. Against that backdrop what is the optimum model for a steel company to position itself for both the short-term difficulties and the longer-term growth?

For ArcelorMittal, there are two clear imperatives which we believe are the foundations of long-term success. The first is to have an efficient asset base producing quality products – both in steel and mining – that is capable of delivering enhanced levels of returns; and the second is to have a strong balance sheet. We announced on the occasion of our full year results a roadmap to achieving this via a \$3 billion capital raise and a new five-year strategic plan Action 2020.

The capital raise was structured by way of a rights issue to prevent our existing shareholder base from being diluted. The Mittal family has taken up its full rights. Following its completion, and taking into account the \$1 billion proceeds from the sale of Gestamp, the company will have a healthy net debt to Ebitda ratio of 2.2X.

Action 2020 is the key to unlocking long-term improved performance from our company. The target is to reach an Ebitda per tonne level of greater than \$85 by 2020 which would deliver \$3 billion of structural Ebitda improvements on an annual basis and support greater than \$2 billion of annual free cash flow generation. Each segment has its own set of unique actions to contribute to this group-wide target but they are constructed upon an underlying philosophy of ensuring we maintain and grow market share based on an optimised asset base, grouping assets appropriately to ensure maximum operational efficiency and rigorously reducing and controlling costs across the board. The size and scale of our business today means that the opportunity set is considerable as is reflected in our ambitious but fully achievable targets.

Action 2020 is based on the current economic environment and does not factor in any improvement in the pricing environment either. To the extent that we see the introduction of trade tariffs, or the reduction of capacity in China as now announced by the central government, there will be further upside potential.

**\$5.2bn**  
2015 Ebitda

**1-1.5%**  
2016 apparent steel  
demand forecast

**2.2x**  
Net debt to Ebitda  
ratio

**>\$85**  
2020 Ebitda per  
tonne target

## Safety and our sustainability credentials

It is also important to have strong safety and sustainability credentials. We are living in an environment not only of economic volatility but also social and environmental change. The global population is expected to grow by a further one billion by 2025. More and more people are moving to cities in an expectation of more opportunities and a better quality of life. And as emerging markets continue to grow increasing investment in infrastructure will become essential. At the same time 2015 marked the important COP21 meeting in Paris that was broadly regarded as a success and marked a new global commitment to transitioning to a lower carbon economy, even if the path may not be entirely clear or straightforward. These trends throw up complex new challenges. Growth is positive but will result in increasing carbon emissions at a time of political determination to achieve the opposite. A billion more people on the planet will put increased pressure on natural resources such as water and the need to manage them wisely. These trends will not disappear, and the impact businesses have on such matters will come under enhanced scrutiny. Companies that are well prepared for these changes will have a strong competitive advantage. At ArcelorMittal we can see the increasing importance our customers and other stakeholders are putting on sustainability issues. It is important that we can convincingly demonstrate to these stakeholders that these issues matter for us as well and that they are integrated into the way we do business.

Safety has been our first priority since the creation of ArcelorMittal and remains an ever present challenge and a critical area of focus. Our lost time injury frequency rate improved to 0.81, from 0.85 in 2014. This is an encouraging result, although we clearly have more work to do in order to reach our target of zero injuries and fatalities. It is a daily challenge and relies on rigorously ensuring a safety focussed culture is implemented everywhere we operate and not only within our own employee base, but also with our contractors.

Safe healthy quality working lives for our people is the first of our ten sustainable development outcomes that are designed to ensure we are preparing and adapting to social and environmental trends more broadly. The outcomes are listed in full in the sustainable development section of this report. Of course some outcomes are more easily achievable than others. For example we have a strong position when it comes to the development of products that promote the sustainability agenda. Our high strength steels for the automotive sector are the most obvious example, but we are also developing innovative and transformational products for the white goods, construction and alternative energy industries. Our R&D team is continually pushing the boundaries of what steel can achieve. We are also showing leadership when it comes to supply chain transparency, signing up as a founder member of the new Responsible Steel Initiative designed to develop sustainability standards in the supply chain. The discussions are still in their infancy but we are pleased to be a leading contributor to the debate.

It is fair to say that when it comes to reducing our carbon footprint we have a tougher challenge. The chemical process for making steel requires using carbon to extract oxygen from iron-ore – therefore it should not be surprising we are a significant emitter of CO<sub>2</sub>. We are transparent about this as is reflected by our 99C ranking in the 2015 carbon disclosure project. The steel industry has done a lot to reduce emissions over the years; but we are coming close to what is technically possible. Steel is the most used material in the world on account of its longevity, versatility, flexibility and affordability; therefore it is unrealistic to think that it can be replaced in significant volumes by other materials. It also benefits from being infinitely recyclable and is therefore a genuine contributor to a circular economy (the concept of extracting maximum value from materials whilst in use, then recovering and regenerating them at the end of their useful lifecycle); important factors we believe should also be taken into account in legislation. Current systems that are on the surface designed to incentivise emissions reduction will not achieve their aim due to the global nature of the steel-making industry. Therefore we believe an approach is required that takes into account both the global nature and chemical process of steel-making and offers a real platform from which to incentivise new and potentially transformational technologies based on a fair and level-playing field.

## Outlook and priorities for 2016

Of course sustainability starts with profitability and that is why delivering successfully on Action 2020 is so important to us. We must have a strong level of profitability in order to be able to invest adequately in areas such as R&D, environmental improvements and energy efficiency that will boost our long-term sustainability credentials.

We know that 2016 will be another very tough year for our industries. Our focus is to make good progress with the implementation of Action 2020, remain cash flow positive and of course to target improved safety performance. Given the external environment, we have worked very hard to reduce the annual cash requirements of the business. In 2016, we are targeting a further reduction of \$1 billion, which will lower the level of Ebitda we need to generate in order to be free cash flow positive to \$4.5 billion. We are expecting Ebitda for 2016 to be in excess of \$4.5 billion, assuming no improvement in operating conditions. Although this is less than 2015 we continue to be confident in our own actions and cautiously optimistic that the worst is behind us in terms of the pricing environment. The very low price environment experienced in the second half of the year was essentially caused by the oversupply in China. However at this price level China's steel industry lost a minimum of \$10 billion of cash in 2015 according to China's Iron and Steel Association. This level of losses is not sustainable even in China and indeed we have started to see an improvement in Chinese steel spreads since their third quarter lows. Furthermore we have started to see positive rulings on the introduction of trade tariffs in various markets where we operate and expect further positive momentum in this regard throughout the remainder of the year.

In the longer-term we will have to wait to see what action China takes with regards to its significant over-capacity. However I am again cautiously optimistic that based on what the central government has stated and laid out in its most recent five year plan and given the real requirement for banking, labour and environment reform, we will start to see some movement in this regard in due course.

In the meantime our focus remains on doing everything within our means to deliver on our strategy and make ArcelorMittal a more efficient, more resilient and more profitable business that can create value even in these turbulent markets and that is well positioned to benefit from any upturn in the external environment.

## Engaged and committed workforce

A critical enabler of our ability to succeed is of course our workforce. In February this year thousands of steel industry employees took to the streets in Brussels in a co-ordinated effort to raise their concerns about potential legislation that could impact the future sustainability of steel-making in Europe. This highlighted very strongly the alignment of our people from very senior management to those working on the shop floor. It also highlighted the value creation ability of the steel-industry beyond pure profitability; profit will always be important, indeed critical, but through job creation, the payment of local taxes, the investment in research and development and the development of new products the industry is also demonstrating its ability to create real social, human and environmental value.

In conclusion, on behalf of the Board of Directors, I would like to thank our executive management team and indeed all our employees as well as our stakeholders across the globe for their ongoing support. We are operating in extraordinary times but I remain confident that provided we can deliver on everything I have outlined above, ArcelorMittal has the ability to create considerable value for our stakeholders in both the short and long term.



**Lakshmi N. Mittal**

Chairman and Chief Executive

Our focus for 2016 is to make good progress with the implementation of Action 2020, remain cash flow positive and of course to target improved safety performance

Why do you think ArcelorMittal has the appropriate financial strength to prosper in any market conditions?

Aditya Mittal  
CEO ArcelorMittal Europe and Group CFO



Dear stakeholders,

While it is difficult to present our 2015 financial results in a positive light given the significant headline loss, we have made significant progress in strengthening our balance sheet in recent years and ensuring we have a firm financial footing from which to return to a path of measured, sustainable growth.

In particular, it is important to recognise that the underlying cash flow performance of the group in 2015 was resilient. This reflects our progress in reducing the cash needs of the business, something that will continue in 2016, ensuring that even in this extremely challenging environment we expect to generate positive free cash flow.

This, together with our strengthened balance sheet, leaves us very well positioned to implement our new five-year strategic plan, Action 2020. In time this plan will support higher levels of cash flow and provide the Board with the discretion to invest, return capital to shareholders or further reduce debt.

It is worth pausing to reflect on the notable progress we have made in restoring our balance sheet strength. As recently as 2008 our net debt stood at \$32 billion. Following our successful \$3 billion rights issue and the \$1 billion from the sale of our minority stake in Gestamp, on a pro-forma basis, it is \$11.7 billion. During this period we have navigated the business first through the effects of the global economic crisis, then the Eurozone crisis, and we are now dealing with slowing growth globally and most critically considerable overcapacity in China and its impact on global steel pricing.

The improvements that we have achieved have been made possible through a relentless focus on financial discipline and capital allocation. We have successfully reduced costs through asset optimisation, workforce rationalisation and by driving efficiencies. And we have curtailed spending by acutely analysing investment

**\$11.7**  
billion net debt on  
pro-forma basis

decisions in order to ensure that capital expenditure is allocated in a manner that meets stringent return on capital criteria.

Over the past four years, there has been a \$2.6 billion reduction in our annual cash requirements. In 2015 alone, we reduced cash requirements by \$1.2 billion. This was achieved by significantly lowering capital expenditure by investing only in projects that secure and grow our position in higher-margin markets, and a lower net interest expense made possible by the significant inroads we have made into reducing net debt in recent years. We expect to make further progress in 2016, cutting our annual cash requirements by another \$1 billion as a result of further reductions in capital expenditure, lower net interest and suspending the dividend for the 2015 financial year.

**\$1.2**  
billion reduction in  
cash requirements

Given the highly challenging environment and the need to preserve cash, suspending the dividend was a necessary decision for the Board to take. The Board intends to maintain the dividend suspension until our net debt to Ebitda ratio falls below 2 times.

It is important to place our financial results in context. A substantial portion of our net loss consisted of impairment charges, many of which were in our mining segment. This is very much a sector-wide issue that is necessary due to the decline in iron ore prices we have witnessed over the past two years. We also booked a \$1.3 billion exceptional charge as a result of the rapid decline in global steel prices in 2015. Excluding these exceptional charges and other non-cash items our net loss was \$0.3 billion, which, while still a disappointing result, is a fairer reflection of our performance in the year.

This is reflected in the resilient cash flow performance in 2015. Delivering a cash flow neutral result was a respectable achievement given the headwinds faced during the year. The steps we have taken to further reduce cash requirements mean that we have lowered the level of Ebitda we need to generate to be free cash flow breakeven in 2016 to \$4.5 billion. Given we have guided to Ebitda of greater than \$4.5 billion, that means we should be free cash flow positive in 2016.

**>\$4.5bn**  
2016 Ebitda forecast

Looking across our segmental performance in 2015, all of our steel businesses suffered due to the fall in international steel prices driven by the unsustainably low-price environment in China. Despite this, our **Europe segment** displayed resilience, generating Ebitda marginally above that achieved in the previous year, which is ongoing evidence of the benefits of our European asset optimisation programme. Conditions in the USA were very tough, with demand impacted by a significant inventory build-up at the end of 2014. We know we need to improve our performance in **NAFTA** and our planned optimisation of downstream assets, combined with an anticipated increased contribution from AM/NS Calvert, has an important role to play in delivering that improvement.

In **Brazil**, domestic market demand was very weak due to the severe recession the country is experiencing, but a weak domestic currency boosted our Brazilian operations' export competitiveness, helping to sustain volumes. Conditions were also challenging for our **ACIS segment**, with domestic market weakness impacting results. The combination of trade tariffs and a more competitive iron ore supply contract will support performance improvement in South Africa, while currency devaluation in the CIS region alongside operational efficiency gains will deliver progress.

Finally, our **mining segment** performed well when you take into consideration the fact that iron ore prices fell to their lowest levels since spot pricing was introduced. It proved successful in reducing costs by 20%, above the 10% target we set at the start of the year.

**20%**  
reduction in mining  
costs

There is no doubt that market conditions will remain challenging in 2016. However, I am confident that the actions we have taken provide us with a very solid platform on which to deliver the targets we have set in our Action 2020 plan and return the group to sustainable profitability.

As recently as 2008 our net debt stood at \$32 billion. Following our successful \$3 billion rights issue and the \$1 billion from the sale of our minority stake in Gestamp, on a pro-forma basis, it is \$11.7 billion.

**Aditya Mittal**

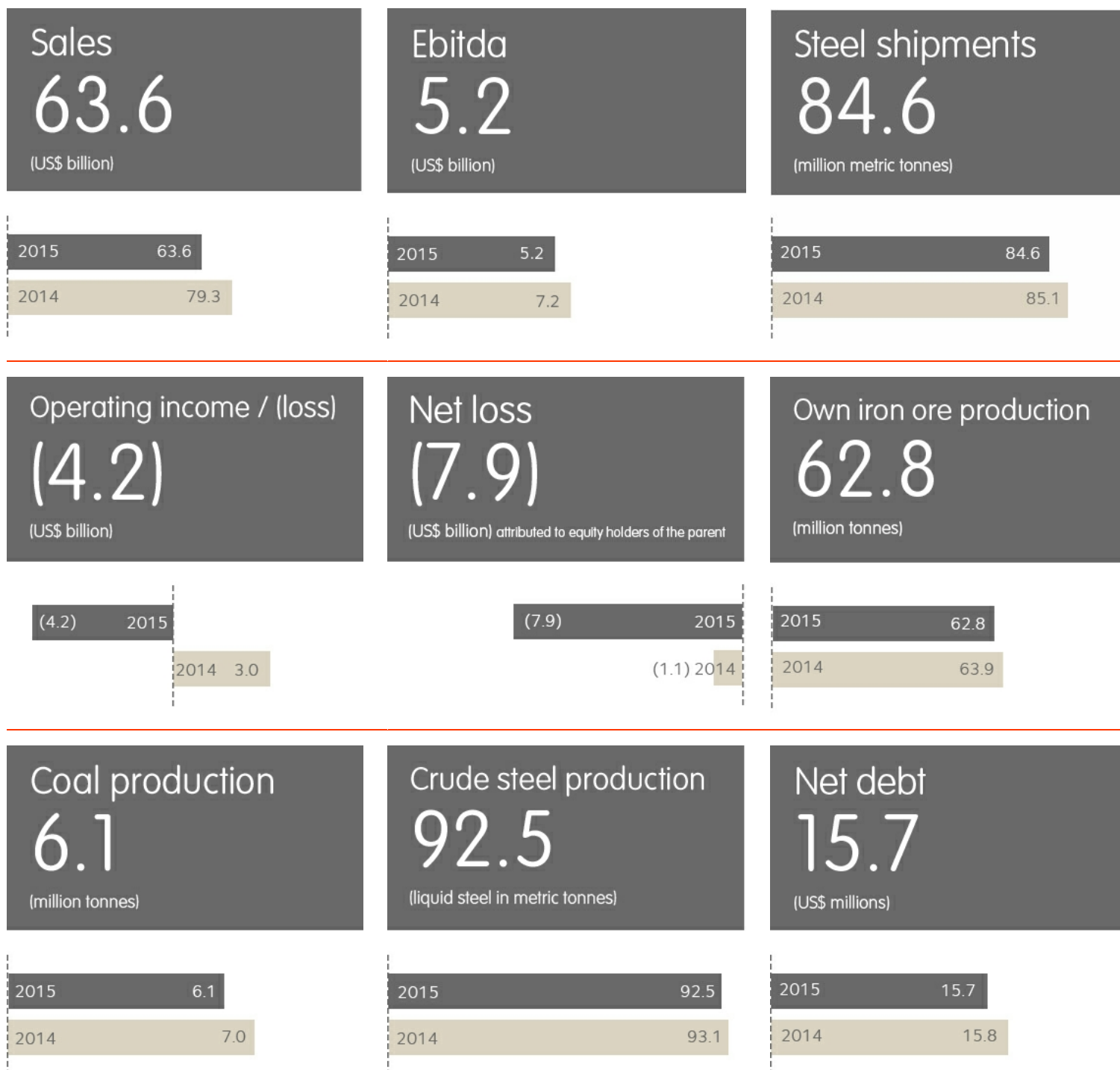
CEO ArcelorMittal Europe and Group CFO



## Performance summary

2015 was a very difficult year for the steel and mining industries, and there is no doubt that these are challenging times. But we are confident that ArcelorMittal is taking all the right actions and has the right assets, the right strategy and the right balance sheet to deliver on the targets identified and cement our position as the world's leading steel company.

**Lakshmi N Mittal**  
Chairman and CEO



[See our full SD performance table for 2015](#) >

[See the non-financial value we create in our infographic](#) >

## Action 2020

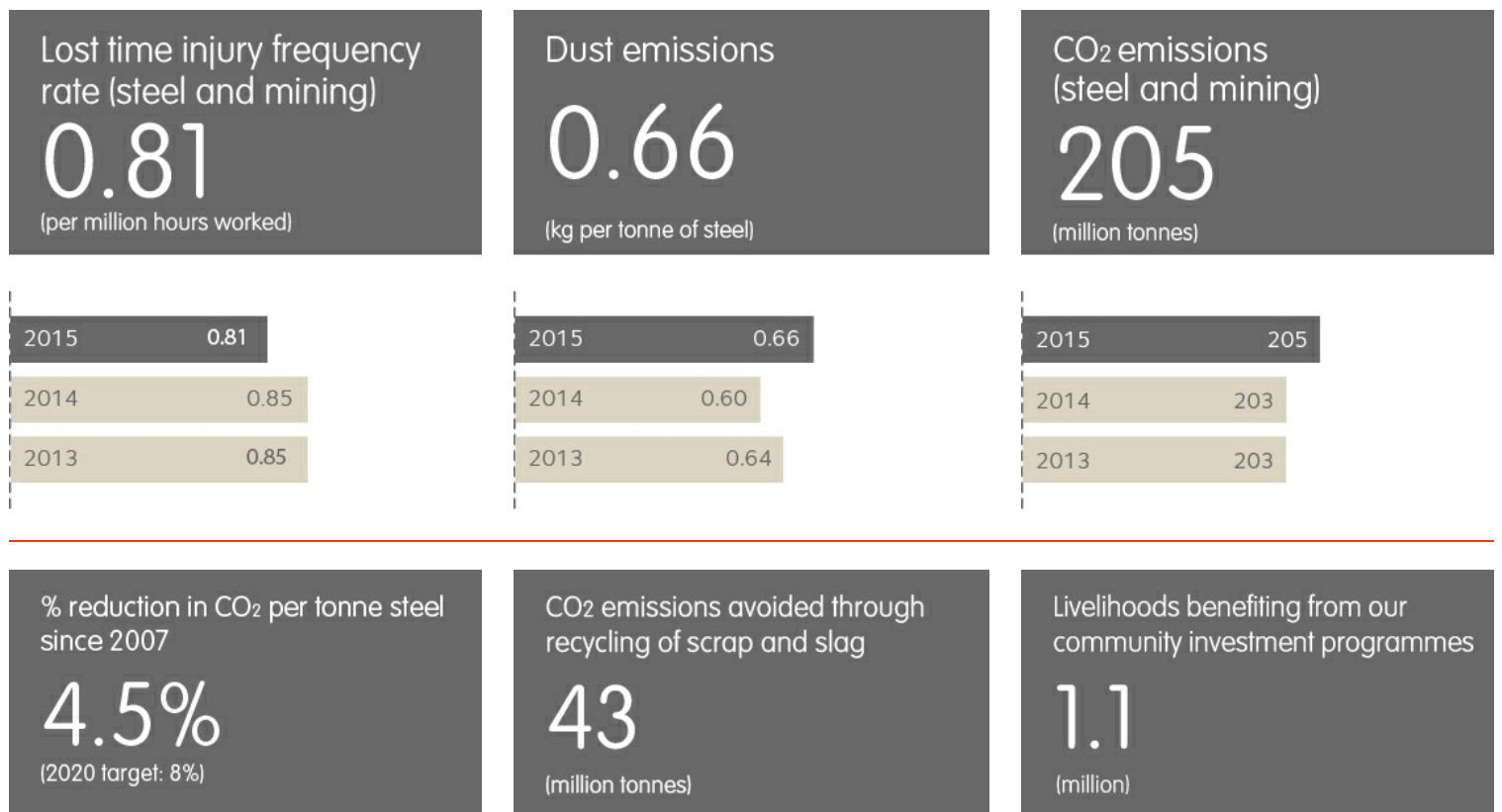
Our Action 2020 plan represents a strategic roadmap for each of our main business segments which seeks to deliver \$3 billion of structural Ebitda improvements and annual free cash flow in excess of \$2 billion by 2020.

[Read more >](#)

## Sustainable development performance

The challenges of 2015 have made it even clearer to us that our sustainability outcomes are vital to ArcelorMittal's long-term success. If we manage issues well, we can open up new commercial opportunities, be competitive, build trust, and pre-empt possible problems. 2015 was a mixed year for our sustainability performance but we made some real progress in some areas.

[Read more about developments in 2015 >](#)



## 2015 Highlights

### January

ArcelorMittal Europe – Long Products wins an award from the German steel construction industry for the development of ‘CoSFB-Betondübel’, an innovative concrete dowel technology, part of the design of the floor beam system CoSFB (Composite Slim-Floor Beam). This technology is already being used in projects in Luxembourg and France.

### February

Our Gijón plant in Spain secures a contract to supply 23,000 tonnes of heavy plate steel for the construction of an offshore wind farm in the Baltic Sea. The wind farm will help save nearly 600,000 tonnes of CO<sub>2</sub> emissions a year and will power more than 350,000 households.

### March

ArcelorMittal receives General Motors’ Supplier of the Year award for the second consecutive year at the automaker’s 23rd annual ceremony held in Detroit, USA.

### April

We announce a \$20 million investment over the next five years in our 12th research and development centre. The new centre in Tubarão, Brazil will focus on innovations for the automotive, energy, construction, machinery and white goods industries.

### May

ArcelorMittal and the Steel Authority of India Limited, India’s leading steel company, sign a Memorandum of Understanding to set up a steel manufacturing facility as a joint venture in India, which will offer technologically advanced steel products to India’s rapidly growing automotive sector.

### June

ArcelorMittal supplies 10,345 tonnes of steel for an ambitious project to construct a 57-storey skyscraper in a record-breaking 19 days in Changsha, China. The HISTAR® beams used are supplied by our long products plant in Differdange, Luxembourg.

### July

ArcelorMittal, LanzaTech and Primetals Technologies announce a partnership to construct a breakthrough €87 million fuel production facility in Ghent, Belgium. It will be Europe’s first-ever commercial scale production facility to create ethanol from waste gases from steelmaking.

### September

ArcelorMittal receives the Clinton Global Citizen Award for our effective response to the Ebola crisis in West Africa, particularly our foundation of the Ebola Private Sector Mobilisation Group.

### October

The World Steel Association recognises our work in developing the 10 sustainable development outcomes with the 2015 Steelie award for excellence in sustainability.

### November

ArcelorMittal Ostrava is the sole winner of the Czech Ministry of Industry and Trade’s Energy and Environmental Award for reducing its air emissions using state-of-the-art dedusting technology in 13 projects across every part of the steelmaking process.

### December

ArcelorMittal Kryvyi Rih wins the all-Ukrainian ecological competition ‘Environmental Quality and Safety’ for the eighth time, recognising its ongoing efforts to reduce the site’s environmental footprint.

# Our business

ArcelorMittal is the world's leading steel and mining company, with 209,000 employees across 60 countries and an industrial presence in 19. We are the leader in all major global steel markets – automotive, construction, household appliances and packaging – with safety as our number one priority.



## Group strategy

ArcelorMittal's success is built on our core values of sustainability, quality and leadership, and the entrepreneurial boldness that has empowered our emergence as the first truly global steel and mining company.

[Read more about our group strategy >](#)



## 10 sustainable development outcomes

We are committed to leading the way in which steel contributes to creating high quality, sustainable lifestyles all over the world.

[Read more about our 10 outcomes >](#)

## Market leader in steel

ArcelorMittal is the world's largest steel producer. Steel shipments for the year ended December 31, 2015 totalled 84.6 million tonnes. We operate through four segments:

- **NAFTA** (North American Free Trade Agreement area): the largest producer of steel in North America
- **ACIS** (Africa and CIS region): the largest steel producer in Africa, a significant steel producer in the CIS region, with a growing presence in Asia, including investments in China and India
- **Brazil**: the largest producer of steel in South America
- **Europe**: the largest steel producer in the EU, with significant operations in France, Germany, Belgium, Spain, Luxembourg, Poland, the Czech Republic and Romania

Our broad range of products, together with our distribution network and research and development (R&D) programmes, enable us to build strong relationships with customers, which include many of the world's major automotive and appliance manufacturers. We are also a strategic partner to several of the major original equipment manufacturers through long-term contractual relationships.



## Steel operations



**Facilities**

- Flat
- Long
- Flat and long
- Pipes and tubes

### NAFTA

- Burns Harbor, Indiana
- Gary, Indiana
- New Carlisle, Indiana
- Riverdale, Illinois
- Cleveland, Ohio
- Columbus, Ohio
- Hamilton, Ontario
- Weirton
- Conshohocken
- Coatesville
- Jackson, Mississippi
- Calvert
- Brampton
- Woodstock
- London
- Shelby
- Marion
- Monterrey
- Georgetown, South Carolina
- Celaya, Guanajuato
- Contrecoeur, Québec
- East Chicago, Indiana
- Lázaro Cárdenas

### Brazil

- Vitória
- São Francisco do Sul
- Barquisimeto
- La Victoria
- Matanzas
- Point Lisas
- Costa Rica
- João Monlevade
- Cariacica
- Piracicaba
- Juiz de Fora
- Villa Constitución

### Europe

- Bremen
- Gent
- Charleroi
- Geel; Genk
- Bottrop
- Liège
- Dudelange
- Dunkirk; Mardyck
- Desvres
- Mouzon
- Montataire
- Florange
- Basse-Indre
- Le Creusot
- Châteauneuf; Saint-Chamond
- Saint-Chély d'Apcher
- Fos-sur-Mer
- Lesaka
- Etxebarri, Bilbao
- Sagunto
- Piombino
- Avellino
- Eisenhüttenstadt
- Zdzieszowice
- Świętochłowice
- Kraków
- Frýdek Místek
- Skopje
- Galati
- Tallinn
- Hautmont
- Vitry
- Chevillon
- Karvina
- Roman
- Lasi
- Hamburg
- Duisburg
- Esch-Belval; Differdange;
- Rodange; Schifflange
- Gandrange
- Bergara; Olaberria; Zumárraga
- Zaragoza
- Warsaw
- Hunedoara
- Zenica
- Asturias (Avilés & Gijón)
- Ostrava
- Sosnowiec; Chorzow

### ACIS

- Saldanha
- Vanderbijlpark
- Aktau
- Annaba
- Kryviy Rih
- Vereeniging
- Newcastle
- Temirtau



### World-class mining business

With our global portfolio of 14 operating units with mines in operation and development, we are one of the largest iron ore producers in the world. Our main mining products are iron ore lump, fines, concentrate, pellets, sinter feed, coking coal, pulverised coal injection (PCI) and thermal coal. In the year ended December 31, 2015, ArcelorMittal mines and strategic contracts produced 73.7 million tonnes of iron ore and 6.29 million tonnes of coking coal and PCI.

Our iron ore reserves are estimated at 4.3 billion tonnes and total coking coal reserves are estimated at 265 million tonnes or 133 million wet recoverable tonnes. These long-life reserves provide a measure of security of supply and an important natural hedge against raw material volatility and global supply constraints.

### Mining operations



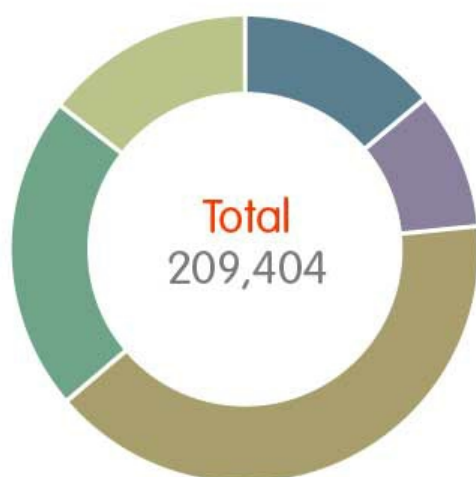
#### Iron Ore

- Hibbing, Virginia, Minnesota
- Kryvyi Rih
- Lazaro Cardenas (Las Truchas)
- Lisakovsk, Kentobe, Antasu, Atansore
- Minatitlán (Peña Colorada)
- Mont-Wright, Quebec (ArcelorMittal Mines Canada)
- Obregon, Sonora (Volcan)
- Prijedor
- State of Minas Gerais (Andrade)
- State of Minas Gerais (Serra Azul)
- Annaba
- Yekepa (Liberia)

#### Coal

- Karaganda
- Princeton, West Virginia

## Our employees and where they work



Segment	Number of employees at 2015
● NAFTA	28,861
● Brazil	19,816
● Europe	83,825
● ACIS	45,291
● Mining	30,047
● Other	1,564

Full-time equivalent (excludes others)

## R&D

R&D provides the technical foundation for our sustainability and commercial success, and we believe our R&D capabilities lead the industry. In 2015, we invested \$227 million in R&D, and opened a new facility in Brazil. We maintain strong academic partnerships with universities and other scientific bodies, and work closely with customers to develop new steel products and solutions. We employ over 1,300 people in our global R&D centres.

In R&D, we focus on three main areas:

### Maintaining the competitiveness of steel – especially in automotive

Automotive contributed 19% of sales in 2015. We have been pioneering Advanced High Strength Steels (AHSS) grades and manufacturing processes that help customers create lighter yet stronger vehicles, and meet demanding new targets for fuel economy. With each new product, we develop the accompanying technology our customers need to use it efficiently, and give them a detailed lifecycle analysis of the environmental footprint of the product from manufacture through use to final disposal and recycling, including CO<sub>2</sub>. This work was shortlisted for a World Steel Association Award in the Excellence in Life Cycle Assessment category in both 2014 and 2015.

### Creating niche products to grow non-auto segments

Construction contributed 18% of direct sales in 2015. Our R&D strategy is to deliver similar breakthrough advances to those we have achieved in automotive since 2010. In 2015 we made an important breakthrough for line-pipe and offshore markets, testing a new cooling technology at our Burns Harbor plant in USA. We will launch phase two in 2016, and introduce it at our European sites in the coming years.

### Improving our steelmaking processes

Creating unique processes helps us sustain our competitiveness, and, in 2015, we deployed a record 202 innovative technical solutions. Our most significant was the industrialisation of a revolutionary coating technology in partnership with CRM Group in Liège, Belgium. We are investing €60 million in a new production line for this technology at the Kessales plant in Liège, through our subsidiary Arceo, S.A..



## Group strategy

ArcelorMittal's success is built on our core values of sustainability, quality and leadership, and the entrepreneurial boldness that has empowered our emergence as the first truly global steel and mining company.



Acknowledging that a combination of structural issues and macroeconomic conditions will continue to challenge returns in our sector, we have adapted our footprint to the new demand realities, intensified our efforts to control costs and repositioned our operations to outperform our competitors.

Against this backdrop, our strategy is to leverage four distinctive attributes that will enable us to capture leading positions in the most attractive areas of the steel industry value chain, from mining at one end to distribution and first-stage processing at the other:

- Global scale and scope
- Unmatched technical capabilities
- Diverse portfolio of steel and related businesses, particularly mining
- Financial capability

## Three themes

### Steel

We look to expand our leadership role in attractive markets and segments by leveraging our technical capabilities and our global scale and scope. These are critical differentiators for sophisticated customers that value the distinctive technical and service capabilities we offer. Such customers are typically found in the automotive, energy, infrastructure and a number of smaller markets where ArcelorMittal is a market leader. In addition, we are present in, and will further develop, attractive steel businesses that benefit from favourable market structures or geographies. In developing attractive steel businesses, our goal is to be the supplier of choice by anticipating customers' requirements and exceeding their expectations. We will invest to develop and grow these businesses and enhance our ability to serve our customers.



Given the current environment, that investment will be highly disciplined. Commodity steel markets will inevitably remain an important part of ArcelorMittal's steel portfolio. Here, a lean cost structure should limit the downside in weak markets while allowing us to capture the upside in strong markets.



## Mining

ArcelorMittal is working to continue to create value from our world-class mining business. Mining forms part of the steel value chain but typically enjoys a number of structural advantages, such as a steeper cost curve. Our strategy is to create value from our most significant assets, through selective expansion/debottlenecking, by controlling cost and capital expenditure, and by supplying products that are highly valued by steel producers. ArcelorMittal's financial capability allowed us to continue to invest in key mining assets (notably ArcelorMittal Mines Canada), while the diversity of our steel and mining portfolio enables the mining business to optimise the value of its products in the steelmaking process. Our mining business aspires to be the supplier of choice for a balanced mix of both internal and external customers, while at the same time providing a natural hedge against market volatility for our steel operations.

## All operations

ArcelorMittal strives to achieve best-in-class competitiveness. Operational excellence, including health and safety, the number one priority, is at the core of our strategy in both steel and mining. We steadily optimise our asset base to ensure we are achieving high operating rates at our best assets. Our technical capabilities and the diversity of our portfolio of businesses underpin a strong commitment to institutional learning and continuous improvement through measures such as benchmarking and best-practice sharing. Innovation in products and processes also plays an important role while supporting overall competitiveness.



## Five key strategic enablers

Critical to implementing this strategy are five key enablers:

# 1

### A clear licence to operate

Many of ArcelorMittal's businesses are located in regions that are in the early stages of economic development. Practically all are resource-intensive. We recognise that we have an obligation to act responsibly towards all stakeholders. ArcelorMittal's commitment to sustainability is outlined in the [sustainability section](#). Sustainability is a core value that underlies our efforts to be both the world's safest steel and mining company and a responsible environmental steward.

# 2

### A strong balance sheet

In recent years we have made significant progress in reducing debt. Post its most recent actions, the Company now has a solid balance sheet and a platform to deliver on its strategic plans. In the currently foreseen environment the Company's priority for free cash deployment will be further strengthening the balance sheet until such time that the ratio of net debt to Ebitda declines to less than 2x, at which point the Board will consider restarting dividends to shareholders.

# 3

### A decentralised organisational structure

ArcelorMittal's scale and scope are defining characteristics that give us a competitive advantage. They also introduce complexity and the risks of inefficiency, bureaucracy and diffuse accountability. To manage these risks, we favour a structure in which the responsibility for profit and loss is focused on business units aligned with markets.

# 4

### Active portfolio management

Throughout our history, we have sought to grow and strengthen the business through acquisition. That remains the case. The acquisition of existing assets and businesses is typically seen as a more attractive growth path than greenfield investment. But we are also willing to dispose of businesses that cannot meet our performance standards or that have more value to others.

# 5

### The best talent

ArcelorMittal's success will depend on the quality of our people, and our ability to engage, motivate and reward them. As explained in outcomes [1](#) and [9](#), we are committed to investing in our people and ensuring a strong leadership pipeline. We will continue to improve our processes to attract, develop and retain the best talent.

## Action 2020

On February 5, 2016, we announced our Action 2020 plan, which represents a strategic roadmap for each of our main business segments. The Action 2020 plan is over and above our ongoing management gains plan (which targets cost savings relating to reliability, fuel rate, yield and productivity) and seeks to deliver real structural improvements unique to our business. The plan targets an improvement in our operating results of \$3 billion by 2020, based on current steel spreads and raw materials prices. We expect to generate improvements through a combination of cost optimisation, volume gains and product mix enhancement.

[Find out more >](#)

## Our 10 sustainable development outcomes

As the world's leading steel and mining company, we have a major contribution to make towards a more sustainable future. Our 10 sustainable development outcomes are a compelling, practical and demanding way to do this, from the way we make steel and use resources, to how we develop new products, and support our people and our communities.

[Find out more >](#)

# Action 2020

What does the new five-year strategic plan, Action 2020, involve? And what gives you the confidence that it will succeed?

Daniel Fairclough  
Vice president, corporate finance and head of investor relations



On February 5, 2016, we announced our Action 2020 plan, which represents a five-year strategic roadmap for each of our main business segments. Action 2020 is over and above our ongoing management gains plan and seeks to deliver real structural improvements unique to our business. It targets an improvement in structural Ebitda of \$3 billion and to deliver annualised free cash flow in excess of \$2 billion by 2020.

To put this into context in terms of where we are today, these numbers equate to generating Ebitda per tonne of steel produced in excess of \$85, and increasing shipments to 90 million tonnes by 2020. In 2015, our Ebitda per tonne was \$62, and we shipped just under 85 million tonnes of steel.

The plan is not dependant on an improvement in market conditions; our forecasts are based on current steel and raw material prices. Nor will it require capex – it is a series of internal actions to create value in each of our business segments.

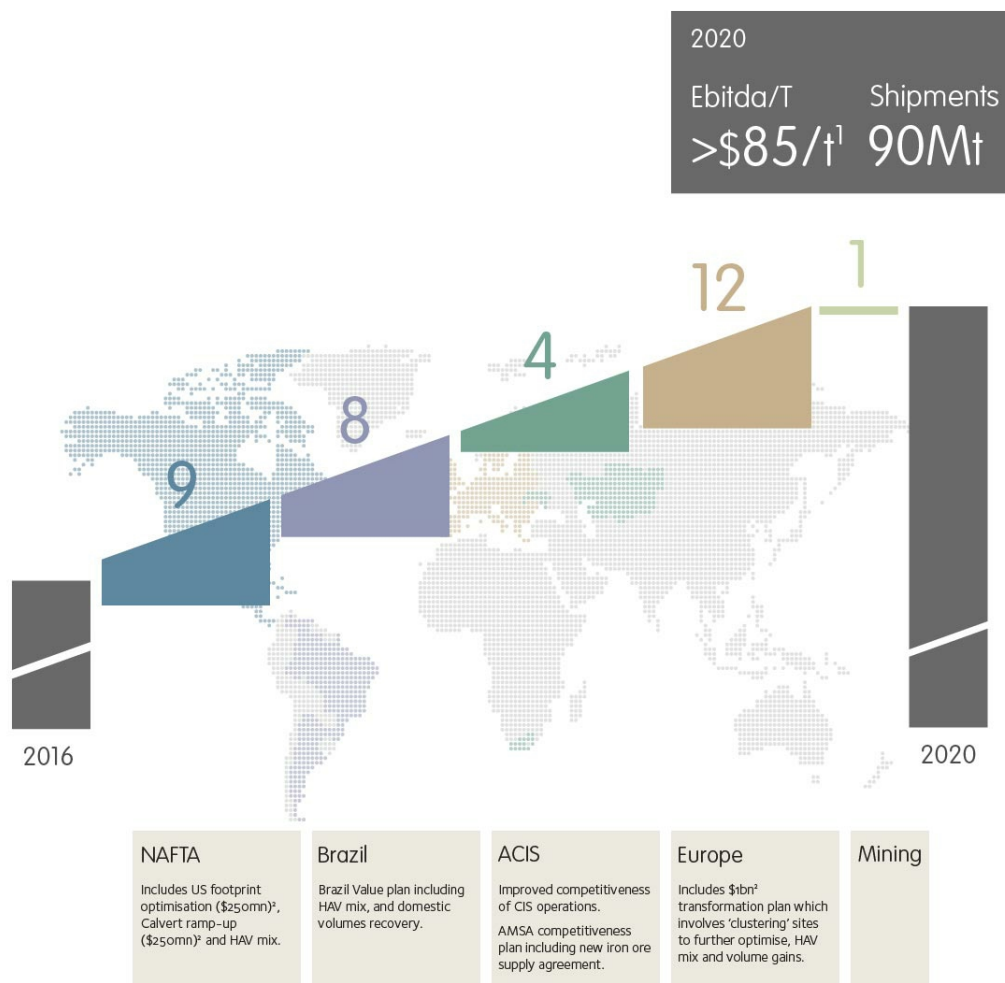
## Segment targets

Action 2020 outlines specific improvement targets for each of our operating segments and details what each segment plans to focus on in order for the group to meet its long-term profitability and cash flow targets. Each segment's plan is based on its operating profile, market dynamics and opportunity set. We understand our geographical locations very well and the potential that exists to adapt and improve.

**>\$2bn**  
annualised free  
cash flow by 2020

**\$3bn**  
structural Ebitda  
improvement by 2020

**90m**  
tonnes 2020  
shipment target



Some of the key segment initiatives included in the Action 2020 plan are:

- **NAFTA:** Our downstream footprint optimisation in the USA targets a minimum improvement of \$250 million in operating results. We intend to continue to ramp up our AM/NS Calvert steel processing facility to full capacity during 2016 and 2017 which we anticipate will deliver a further \$250 million improvement. Other projects are expected to boost the higher added value (HAV) product mix and generate further improvement.
- **Europe:** Our transformation plan involves the clustering of finishing sites to centralise certain activities and improve logistics and service, thereby removing substantial overhead. Together with an expected improvement in our product mix, with an increased proportion of HAV products, and volume gains, we are targeting a \$1 billion improvement in operating results over the period.
- **ACIS:** We plan to continue our strategic focus on operational excellence to deliver the volumes that will leverage the new competitive cost base we have in CIS, following currency devaluations; in South Africa we will continue to implement our improved competitiveness plan and will benefit from a new long-term iron ore supply agreement.
- **Brazil:** Our value plan over the next five years targets an improvement in our sales mix as a result a recovery of higher margin domestic volumes.

We believe Action 2020 is unique to ArcelorMittal; not every company can deliver this kind of value creation plan through internal actions. The uniqueness of the plan comes from our size and scale – single site operations for example would not have the opportunity to replicate something like the European transformation plan or the US asset optimisation.

Action 2020 is the key to unlocking long-term improved performance from our company. Each segment has its own set of unique actions to contribute to this group-wide target but they are constructed upon an underlying philosophy of ensuring we maintain and grow market share based on an optimised asset base, grouping assets appropriately to ensure maximum operational efficiency and rigorously reducing and controlling costs across the board.

**Lakshmi N Mittal**  
Chairman and CEO

# Market analysis and short term outlook

## Have steel and iron ore prices bottomed?

**David Clarke**  
Vice president, head of strategy and chief technology officer

## Market overview

Global GDP growth fell short of expectations in 2015, slowing marginally, to 2.5% year-on-year, from 2.7% in 2014 (2.5% in 2013) as deceleration in key emerging economies overshadowed a modest recovery in major developed countries in 2015. This deceleration was accompanied by further declines in commodity prices, subdued global trade, bouts of financial market volatility, and weakening capital flows.

Domestic demand in the United States was supported by robust consumption and investment, with the exception of the oil sector. US GDP growth in 2015 is estimated at 2.5%, the highest annual rate in the post-2008 crisis period, with automotive sales growing by over 5% year-on-year to a record of 17.4 million. Nominal construction spending increased by around 10% year-on-year, with strong growth in both residential and non-residential construction. The weakness in net exports is the result of the strong dollar and softness in external demand, particularly from large emerging markets.

European Union (EU) GDP growth picked up in 2015 to around 1.8%, as domestic demand strengthened and eurozone exports were supported by euro depreciation. EU automotive sales grew by 9% year-on-year in 2015 to 13.7 million, their highest level since 2009. Activity firmed in Spain, but France and Italy lagged, while growth slowed in the United Kingdom remained stronger than the Eurozone average.

In China, GDP growth slowed in 2015 to an estimated 6.9%, while Brazil and Russia took a turn for the worse as a result of global and domestic headwinds, and the weakness in oil and other commodity prices. In South Africa, chronic power supply bottlenecks are a major factor behind weak growth. In contrast to other major developing countries, growth in India remained robust, buoyed by strong investor sentiment and the positive effect on real incomes of the recent fall in oil prices.

Global industrial production growth slowed to 1.5% year-on-year as production in OECD countries eased to just 0.9% year-on-year in 2015. Global apparent steel consumption (ASC) is estimated to have fallen by 2.2% year-on-year, mainly due to the slowdown in China. However, Chinese demand estimates are subject to change, due to significant revisions to steel production estimates to account for under-reported output by

**2.5%**  
2015 global GDP  
growth



Chinese mills. Elsewhere, world-ex-China ASC fell by just 0.3%, as significant declines in CIS (-8%), NAFTA (-7%) and Latin America (-7%) were offset by growth in other regions, particularly EU28 (+3%), Asia ex-China (+5%) and Africa & Middle East (+4%).

## Steel production

After declining sharply during 2009 to 1.2 billion tonnes, world crude steel production grew robustly each year to 1.65 billion tonnes in 2014, driven by rapid Chinese growth. In 2015 it fell for the first time since 2009, by 2.8%, to 1.62 billion tonnes, as steel consumption in developed and key emerging markets declined. Depressed demand and the availability of low-priced imports forced many producers across the world to curtail output.

The slowdown in China in 2014 and 2015 exposed the excess capacity issues faced by the steel industry, as Chinese producers increased export volumes to compensate for falling domestic demand. Chinese exports soared by 72% over the past two years, rising to a record 112 million tonnes in 2015. China accounted for 49.5% of global steel production in 2015, despite production declining by 2.3%.

Apart from China, almost all major steel producing regions also recorded a decline in production. EU28 steel output decreased by 1.8% to around 166.2 million tonnes, and North American by 8.5%. In the CIS, output fell by 4.3% as a recession lowered domestic demand and overwhelmed increased international competitiveness from weaker domestic currencies. South America saw a 2.5% decline in production as Brazilian steel demand faltered by around 15% due to economic issues facing the country. In India, however, production increased by 2.6%, while in Australia/New Zealand, production rose 4.6%.

## Steel prices

International steel prices in 2015 were materially impacted by the domestic and export price of Chinese steel. At the start of the year, Chinese domestic steel spreads – the difference between the Chinese domestic hot rolled coil (HRC) price and the international raw material price basket – remained at reasonable levels, with a first quarter average of \$146 per tonne (/t). However, as the price of Chinese steel began to fall to unsustainably low levels, Chinese spreads fell below \$120/t in May 2015, leading to a second quarter average of \$125/t.

At the start of 2012, when Chinese HRC spreads had previously dropped below \$120/t, they took approximately four months to recover back to that level. In 2015, however, the spread decline continued, reaching an average level of \$87/t in the third quarter, before rising marginally to an average of \$93/t in the fourth quarter. This dynamic impacted steel prices across the world considerably, with steel prices in 2015 following the trend set by Chinese HRC spreads.

Below we outline the steel price evolution over the year for the main markets.

Steel prices for flat products in Europe remained relatively stable in euro terms during the first quarter of 2015, against 2014 fourth quarter averages, despite continuous erosion of raw material costs. In Northern Europe, the HRC price improved slightly between January and March, to an average of €405-413 (\$458-467) per tonne, and in Southern Europe to €395-404 (\$446-456) per tonne. Economic conditions remained good in Europe during the second quarter of 2015, with strong bookings in industry and auto. Despite this, steel prices weakened on a monthly basis from April to June, due mainly to pressure from imports, and continued to weaken for the rest of the year, reaching, in the fourth quarter, €325-335 (\$357-368) per tonne in Northern Europe and €293-304 (\$322-333) per tonne in Southern Europe.

The United States had a mixed year. 2015 started positively with consumer confidence in February at its highest since 2007. The steel market was nevertheless challenging, due to high inventories and buyers' caution in placing orders. A strong dollar continued to encourage imports during the first quarter of 2015. Domestic prices declined, especially during February and March, following declines in Scrap #1 Busheling, which fell from \$369 per gross tonne in January to \$255 per gross tonne in March. Spot HRC prices during the first quarter

**1.62bn**  
tonnes world crude  
steel production

**\$87**  
per tonne Q3 Chinese  
HRC spread

dropped from a \$631/t average in January to \$531/t in March, for a quarterly average of \$578/t. The second quarter had a weak start, with declining scrap prices rolling over into April and HRC bottoming at \$491-503/t, before stronger underlying demand helped prices reach \$502-510/t in May. Scrap #1 Busheling reached an average of \$266 per gross tonne for the second quarter of 2015, supporting HRC price improvement to \$507-514/t in June, for a quarterly average of \$500-509/t.

Despite the consumer confidence index increasing in August and steel consumption being sustained by strong auto sales, prices started weakening again during the third quarter, as US prices realigned to those globally, and scrap prices failed to provide cost support. Demand for both scrap and finished steel during the fourth quarter remained weak due to destocking, and Scrap #1 Busheling fell to \$167-180 per gross tonne, pushing the HRC spot price down to \$421-438/t.

In China, 2015 began with increased uncertainty due to a change in export rebate policy and the government's efforts to implement anti-pollution regulation, which affected producer costs and possible cuts to capacity. The steel market remained depressed in the first half due to declining real estate demand, but production was sustained by exports, which surged from March onward. Domestic prices continued their accelerated decline, and spot HRC was down to \$357-362/t VAT excluded, during the first quarter, and continued to weaken, finishing the year at \$250-252/t, VAT excluded.

Long products saw resilient demand in Europe in early 2015, and a slight increase in scrap price gave support for improvement on commodity pricing, despite pressure from Russia and Ukraine. Buyers became more hesitant towards the end of the first quarter as the scrap price weakened. Medium section prices, however, saw some improvement from January to March with a quarterly average of €512-522 (\$577-589)/t. Rebar prices, on the other hand, were impacted to a greater degree by scrap fluctuation, and declined to an average range of €413-422 (\$466-476)/t. The European Central Bank's lending survey at the beginning of the second quarter sustained a take-off for construction investments, thus demand continued to be solid from April to June. Prices began to drop in the third quarter, as pressure on scrap from international markets resulted in scrap prices dropping, impacting commodity offers. The year ended with medium sections at €474-486 (\$519-532)/t, and rebar prices at €366-374 (\$401-410)/t.

## Raw materials

The spot markets for iron ore and coking coal have been in a downward price trend since the first half of 2014. In 2015, this trend gained momentum with a slower growth rate in China, recession in developing economies such as Brazil and Russia, and continued robust seaborne supply from major miners. Since the beginning of 2014, the iron ore and coking coal prices decreased by 61% and 37% respectively (Platts Q4-2015 vs. Q1-2014). As for pricing mechanisms, since 2012 quarterly and monthly pricing systems have been the main type of contract pricing mechanisms, but spot purchases also appear to have gained a greater share of pricing mechanisms as steelmakers have developed strategies to benefit from increasing spot market liquidity and volatility. In 2015, the trend for using shorter-term pricing cycles continued, with the spot market remaining liquid and driven by Chinese demand.

## Outlook for 2016

Overall, we expect the market to stabilise in 2016. In the US, underlying demand continues to expand and due to the expected absence of a further destock in 2016, we expect ASC in the US to grow by 3% to 4%. In Europe, we expect the pick-up in underlying demand to continue, but apparent demand to grow modestly at 0% to 1%, since the high level of imports in the fourth quarter of 2015 have raised inventory levels particularly in Southern Europe. We expect demand in Brazil to decline further, albeit more slowly, as the economy remains mired in recession. With the ongoing recession in Russia impacted by weak oil prices, we expect demand in CIS to decline 5% to 6%, while in China, we expect it to decline around 1%, as a result of ongoing weakness in the real estate sector.

**61%**  
iron ore price decline  
since beginning of  
2014



## Long-term sustainable development outlook

As the world's largest steel and mining business, the contribution we make to the long-term prosperity of the world's population is as substantial as it is vital.

The short-term market outlook for our industry is subject to change year on year, but the really long-term challenges remain the same. By 2050 we'll be living in a world of more than nine billion people with growing lifestyle expectations, six billion of them in cities. Yet the resources to support those lifestyles will all be in acute demand, from land and water, to energy and food.

In short, the world must find solutions for the unintended consequences of growth – reducing CO<sub>2</sub> emissions and pollution, and ensuring a wider, shared prosperity. The question is, what role can and should business play in finding these solutions? Expectations of companies are rising, and milestones like the COP21 climate agreement in Paris and the launch of the UN Sustainable Development Goals last year reinforce this.

At the start of 2015 we committed to pursuing **10 sustainable development (SD) outcomes** in the long term. These capture both the value our steel can add, and the issues we know we need to address, both as a business and as an industry. Conversations with our **stakeholders** over the year have reinforced our belief that these are the material sustainability issues we must focus on to help create long-term value both for them and for us. There are some areas in which we increasingly realise we have a leading role to play.



**9bn**  
forecast 2050 global  
population

## Driving sustainable economies and lifestyles

We believe that steel has a big part to play in a global economy that will enable the emergence of sustainable lifestyles ([outcome 2](#)) and infrastructure ([outcome 3](#)). The specialist steels we develop with sustainable development in mind will be an increasingly important way to create value, like aiding fuel economy in the automotive market, enabling buildings that are good for the climate and for our health, and enhancing the efficiency of energy generation. Our award-winning R&D team is developing new ways to make and use steel, and our portfolio of innovative processes and products will be key to our long-term ability to create value. At the same time, steel is already a vital component of modern society – it is in everything from cars to washing machines, and from buildings to bridges.

Equally important – now and in the future – is the value we, as a company, provide to society. For example, steel employs over eight million people worldwide, and in our company alone we have a workforce of over 250,000 employees and contractors. For every job in steel, many more jobs are supported in our supply chain, meaning that around a million further livelihoods are supported by ArcelorMittal's business<sup>1</sup>. Our local energy provision from our steel mills to the cities where we operate ([outcome 6](#)), and our development of a pipeline of talented scientists and engineers ([outcome 9](#)) are just two other examples of how we contribute to society. We need to measure and share better the value of all these contributions, as outlined in our SD [outcome 10](#).

<sup>1</sup> For example, [the German Steel Institute published in 2011 finds an employment multiplier of 6.7](#).

## Carbon and the circular economy

Circular thinking is essential to the notion of sustainable modern lifestyles and a low-carbon future. Because it is a renewable material, which can be easily and infinitely recycled once it's produced, steel is ideally placed to support a growing population and a planet with diminishing resources. Last year nearly 37 million tonnes of CO<sub>2</sub> were avoided through the recycling of scrap. But the circular economy is wider than recycling. It's also about reusing everything – not just our steel products but also by-products like waste gases and slag ([outcome 4](#)). We see a low-carbon future in which the blast furnace could become a 'hub' of useful by-products for both communities and industry.

There are big opportunities here – our pioneering partnership with [LanzaTech](#) aims to convert waste carbon gases into aviation fuel, for example. It may also be possible to turn carbon into plastic, which would sequester it entirely. These ideas are at the very early stages, but we are evaluating these and other new technologies that may help us reduce our carbon footprint, both for their technical and commercial viability.

Other by-products of steelmaking already have valuable uses: slag, for example, can be used for cement, as roadstone or fertilizer. We enabled the avoidance of 6 million tonnes of CO<sub>2</sub> emissions by the reuse of our slag in the cement industry last year.

We expect to see this broader perspective on the steel industry's contribution growing in importance in the years to come. We already know, for example, that when you look at the carbon emissions from steel both during production and in use, it has better credentials than either aluminium or concrete. What we need to do is understand steel's potential contribution to a low-carbon economy more fully, so we can communicate it better to the wider world.

The more progressive companies are looking at new business models too, some of which share the usage of products through leasing or other similar arrangements. We're already doing this – for example, in Luxembourg, our sheet piling products for use in retaining walls are highly effective, but they are more expensive than some alternatives, so we lease them instead. This makes them more affordable, and allows us to reclaim and re-use

**8m**  
global steel workforce

**37m**  
tonnes CO<sub>2</sub> avoided  
through scrap  
recycling

the steel at the end of its useful life. We've also developed innovative products for the construction industry which make it possible to dismantle buildings, so the steel can be easily recovered. There's more on this in [outcome 3](#), products that create sustainable infrastructure.

### Building customers' trust in our standards

One big opportunity comes from understanding stakeholders' expectations and managing the business accordingly. Environmental performance has never been more important, and supply chain management is in the spotlight in relation to social issues too, such as human rights. Consumers want products with the right specification, for the right price, and which have been sourced and produced in the right way, and our customers look to us to help them do that.

We're being open with our customers about the sources and production processes we use, from our coking coal from Mozambique, to tin from Indonesia. This approach has made a big difference to some of our most important customers.

But this approach needs to be consistent across the whole value chain, and the whole steel industry. Other industries – timber, diamonds, and fishing, for example – already have worldwide third-party certification schemes; as customer expectations rise, steel, and other similar materials, will have to do the same. The value in the long term is clear: objective validation of the sustainability credentials of our products compared to alternatives, and one set of standards across the world, rather than the proliferation we're often dealing with at the moment, which costs both time and money to manage.

In order to build supply chains that our customers trust ([outcome 7](#)), we're taking a leading role in developing the schemes needed, not only for steel products, but also for raw materials in our supply chain. That's why we joined the steering boards for Responsible Steel and the Initiative for Responsible Mining Assurance in 2015. This work is at a very early stage, but we want to help shape and develop the agenda.

### Producing steel more sustainably

But there's no avoiding the big issues here, which centre on the steel production process itself: we need to find ways to make the light, strong steels the world needs while being a responsible energy user that creates a lower-carbon future ([outcome 6](#)), and a trusted user of air, land and water ([outcome 5](#)). We also need to do this in a way that provides safe, quality lives for our workforce ([outcome 1](#)), and helps us become an active and welcomed member of the community ([outcome 8](#)).

There's no simple answer to these challenges. The steel industry has already made substantial improvements in its environmental performance and energy use – the amount of energy needed to make each tonne of steel has gone down by 60% in the last 50 years, and the European steel industry – including our own plants – has reduced its carbon footprint by 25% since 1990. No-one has yet made the breakthroughs that could stop us being a carbon-intensive industry, but as our LanzaTech partnership demonstrates, we're working hard in this direction.

**25%**  
carbon footprint  
reduction in European  
steel industry

# Risk factors

Understanding our risks and managing them effectively is essential for our sustainability and long-term success.



Good risk management is about having the right measures and systems in place to recognise, manage and mitigate our risks, in light of our responsibilities to all of our stakeholders. Here we list the key risks and uncertainties to our business, our financial condition, the results of operations, our reputation or prospects. For full details, [download](#) the risk section from our 20-F.

## Global economy and the mining and steel industry

- Excess capacity, oversupply and destocking cycles in the steel industry and in the iron ore mining industry have in the past, are currently and may continue in the future to weigh on the profitability of steel producers, including ArcelorMittal.
- Protracted low steel and iron ore prices, and further decreases in steel and iron ore prices, would have an adverse effect on ArcelorMittal's results of operations.
- Volatility in the supply and prices of raw materials, energy and transportation, and volatility in steel prices or mismatches between steel prices and raw material prices could adversely affect ArcelorMittal's results of operations.
- ArcelorMittal's business and results are substantially affected by regional and global macroeconomic conditions. Recessions or prolonged periods of weak growth in the global economy or the economies of ArcelorMittal's key selling markets have in the past had and in the future would be likely to have a material adverse effect on the mining and steel industries and on ArcelorMittal's business, results of operations and financial condition.

## Competition

- Developments in the competitive environment in the steel industry could have an adverse effect on ArcelorMittal's competitive position and hence its business, financial condition, results of operations or prospects.
- Unfair trade practices in ArcelorMittal's home markets could negatively affect steel prices and reduce ArcelorMittal's profitability, while trade restrictions could limit ArcelorMittal's access to key export markets.

- Competition from other materials could reduce market prices and demand for steel products and thereby reduce ArcelorMittal's cash flows and profitability.

## Regulation

- ArcelorMittal is subject to regulatory and compliance risks, which may expose it to investigations by governmental authorities, litigation and fines, in relation, among other things, to its pricing and marketing practices or other antitrust matters. The resolution of such matters could negatively affect the Company's profitability and cash flows in a particular period or harm its reputation.
- ArcelorMittal's business is subject to an extensive, complex and evolving regulatory framework and its governance and compliance processes may fail to prevent regulatory penalties and reputational harm, whether at operating subsidiaries, joint ventures or associates.
- ArcelorMittal is subject to strict environmental laws and regulations that could give rise to a significant increase in costs and liabilities.
- Laws and regulations restricting emissions of greenhouse gases could force ArcelorMittal to incur increased capital and operating costs and could have a material adverse effect on ArcelorMittal's results of operations and financial condition.
- ArcelorMittal is subject to stringent health and safety laws and regulations that give rise to significant costs and could give rise to significant liabilities.

## Finance

- ArcelorMittal has a substantial amount of indebtedness, which could make it more difficult or expensive to refinance its maturing debt, incur new debt and/or flexibly manage its business.
- ArcelorMittal's level of profitability and cash flow currently is and, depending on market and operating conditions, may in the future be, substantially affected by its ability to reduce costs and improve operating efficiency.
- ArcelorMittal is a holding company that depends on the earnings and cash flows of its operating subsidiaries, which may not be sufficient to meet future operational needs or for shareholder distributions and lossmaking subsidiaries may drain cash flow necessary for such needs or distributions.
- Changes in assumptions underlying the carrying value of certain assets, including as a result of adverse market conditions, could result in the impairment of such assets, including intangible assets such as goodwill.
- The Company's investment projects may add to its financing requirements and adversely affect its cash flows and results of operations.
- ArcelorMittal's results of operations could be affected by fluctuations in foreign exchange rates, particularly the euro to U.S. dollar exchange rate, as well as by exchange controls imposed by governmental authorities in the countries where it operates.

## Taxation

- ArcelorMittal's ability to fully utilise its recognised deferred tax assets depends on its profitability and future cash flows.
- The income tax liability of ArcelorMittal may substantially increase if the tax laws and regulations in countries in which it operates change or become subject to adverse interpretations or inconsistent enforcement.

## Mining

- ArcelorMittal's mining operations are subject to risks associated with mining activities.
- ArcelorMittal's reserve estimates may materially differ from mineral quantities that it may be able to actually recover; ArcelorMittal's estimates of mine life may prove inaccurate; and market price fluctuations and

changes in operating and capital costs may render certain ore reserves uneconomical to mine.

- Drilling and production risks could adversely affect the mining process.
- ArcelorMittal faces rising extraction costs over time as reserves deplete.
- ArcelorMittal has incurred and may incur in the future operating costs when production capacity is idled or increased costs to resume production at idled facilities.
- ArcelorMittal's greenfield and brownfield investment projects are inherently subject to financing, execution and completion risks.

## Joint ventures

- ArcelorMittal faces risks associated with its investments in joint ventures and associates.

## Personnel

- A Mittal family trust has the ability to exercise significant influence over the outcome of shareholder votes.
- The loss or diminution of the services of the Chairman of the Board of Directors and Chief Executive Officer of ArcelorMittal could have an adverse effect on its business and prospects.

## Pensions

- Underfunding of pension and other post-retirement benefit plans at some of ArcelorMittal's operating subsidiaries could require the Company to make substantial cash contributions to pension plans or to pay for employee healthcare, which may reduce the cash available for ArcelorMittal's business.

## Employment

- ArcelorMittal could experience labour disputes that may disrupt its operations and its relationships with its customers and its ability to rationalise operations and reduce labour costs in certain markets may be limited in practice or encounter implementation difficulties.

## Emerging markets

- ArcelorMittal is subject to economic policy, political, social and legal risks and uncertainties in the emerging markets in which it operates or proposes to operate, and these uncertainties may have a material adverse effect on ArcelorMittal's business, financial condition, results of operations or prospects.

## Operational disruption

- Disruptions to ArcelorMittal's manufacturing processes could adversely affect its operations, customer service levels and financial results.
- Natural disasters or severe weather conditions could damage ArcelorMittal's production facilities or adversely affect its operations.

## Insurance

- ArcelorMittal's insurance policies provide limited coverage, potentially leaving it uninsured against some business risks.
- Product liability claims could have a significant adverse financial impact on ArcelorMittal.

## Litigation

- ArcelorMittal is currently and in the future may be subject to legal proceedings, the resolution of which could negatively affect the Company's profitability and cash flows in a particular period.
- U.S. investors may have difficulty enforcing civil liabilities against ArcelorMittal and its directors and senior management.



## Cyber security

- ArcelorMittal's reputation and business could be materially harmed as a result of data breaches, data theft, unauthorised access or successful hacking.

# Sustainable development

Sustainable development is about understanding and being ready for the material issues facing our business that arise from long-term environmental and social trends.



Our 10 sustainable development outcomes are designed to describe in simple language what we must strive to look like as a business if we are to obtain the most value from addressing our material issues. This approach is underpinned by a commitment to transparent good governance.

By embedding the 10 outcomes throughout the company, we are able to focus better on how we can avoid business disruptions, find new ways to create value and enable society to do the same.

## The 10 outcomes we need

### 1. Safe, healthy, quality working lives for our people

We want our workforce to be safe and healthy, committed to our success, and to carry out our business with integrity. We want a workplace where diversity is valued and every individual is respected and developed to their full potential.

What we did in 2015 >





## 2. Products that accelerate more sustainable lifestyles

We want our steel to become the material of choice for the designers and manufacturers of consumer products, because it's strong, durable and innovative, and its robust sustainability credentials over its full lifecycle are widely understood and recognised.

What we did in 2015 >

## 3. Products that create sustainable infrastructure

We want our steel to become the first-choice material for public bodies who commission and approve construction projects, and the firms that design and build them, because they know that steel is part of the answer for a low-carbon circular economy, and not part of the problem.

What we did in 2015 >



## 4. Efficient use of resources and high recycling rates

We want to be acknowledged for using resources in the most efficient and effective way, so that we are creating significant value for our customers and shareholders as well as for the environment.

What we did in 2015 >

## 5. Trusted user of air, land and water

We want our stakeholders to trust us to share the vital resources of air, land and water because we operate responsibly and transparently, demonstrate that we understand and want to improve our environmental impacts and work in collaboration with partners and local communities to protect and enhance the natural resources we all rely on.

What we did in 2015 >



## 6. Responsible energy user that helps create a lower-carbon future

We want our stakeholders to trust that we are making a positive contribution to a lower-carbon future because we are cutting our energy use and carbon emissions, and developing innovative new products that help our customers and other industries do the same.

What we did in 2015 >

## 7. Supply chains that our customers trust

We want our customers to trust that we live up to their standards, both in our own steel and mining business, and in our supply chain.

What we did in 2015 >



## 8. Active and welcomed member of the community

It is important that we are welcomed as good neighbours that actively engage and listen to local stakeholders, and make a positive contribution to more resilient and thriving communities through both our day-to-day operations and through thoughtful, well-targeted investments.

What we did in 2015 >

## 9. Pipeline of talented scientists and engineers for tomorrow

We need to be building a strong pipeline of talented and well-trained engineers, scientists and technicians, both for our own future and to provide the skills that, as a whole, 21<sup>st</sup> century society needs.

What we did in 2015 >



## 10. Our contribution to society measured, shared and valued

We want to be able to show the value of the contribution we make to society, and we need our stakeholders to understand and appreciate it.

What we did in 2015 >

All underpinned by transparent good governance

## Creating value for society

In our sustainable development framework, outcome 10 requires us to ensure our contributions to society are measured, shared and valued. Below we present our first attempt to do this at a corporate level by summarising the value we created for society in 2015 in our own adaptation of the integrated reporting framework.



The integrated reporting framework developed by the IIRC includes 6 capitals: human, social, intellectual, natural, manufactured and financial. In this first step towards integrated reporting, ArcelorMittal reports the value we create for society against the four capitals above as a simplified version of the IIRC structure. We report against financial capital elsewhere in our annual review. Unless stated otherwise, data refers to 2015.

## About this review

### Developments in our reporting

Our reporting needs to evolve to reflect the fact that our 10 outcomes are becoming increasingly embedded across the business. It also needs to remain fair, balanced and understandable. This annual review brings together key elements of our financial reporting with reporting against our 10 sustainable development (SD) outcomes. It draws on some elements of integrated reporting indicated by the International Integrated Reporting Council, but it is merely the first step on our journey towards integrated reporting, rather than being an integrated report in itself.

This review is aimed at all the audiences who would previously have read our annual review and our sustainable development report. It may not include the level of detail of either financial or non-financial reporting that stakeholders have been used to in the past, which is why we have included clear links to the 20-F for detailed financial information, and to the sustainability section of our website where ongoing narrative reporting on our 10 outcomes can be found throughout the year.

It should be noted that we will continue to report against key performance indicators for both financial and non-financial data annually in this review.

### GRI

We continue to report against the Global Reporting Initiative's G4 guidelines across our reporting landscape – including this Annual Review, our ongoing online narrative reporting, and our local sustainability reports – and you can find details in our [GRI index](#). We consider many aspects within the G4 guidelines to be material to our national stakeholders, and most meaningfully reported within our [local sustainable development reports](#), which are also produced in line with the GRI guidelines.

### UN Global Compact

We have supported the United Nations Global Compact since 2008. This Annual Review serves as our Communication on Progress of our implementation of the ten UN Global Compact principles.

### Assurance

This is the seventh year that our sustainable development reporting has received [independent assurance](#).

### Reporting format

We believe that online reporting is the most practical and efficient way to communicate with the widest number of stakeholders. We provide this website for those who wish to browse online, and we have a pdf download function for each page or section for those who prefer to download, print and read the review offline.

### Local reporting against the 10 outcomes

We have for some time aimed to ensure we report to stakeholders meaningfully on the issues that matter to them and to us. Part of delivering this ambition is for our operations to publish local sustainable development reports against the 10 outcomes in line with GRI G4. Almost all of the countries in which we have major operations are already publishing sustainability reports, which can be accessed on our main [website](#).

Irrespective of whether they produce a sustainable development report, this year all countries will publish a leadership message on sustainable development and, where they are demonstrating best practice, highlight a case study of their achievements. This will evolve over time to include local sustainable development performance data.

For further information please see also:

- [Scope, boundaries and methodologies](#)
- [Reporting principles](#)
- [Assurance statement](#)
- [GRI index](#)

## Scope, boundaries and methodologies

This review is for all our stakeholders. It brings together the key elements of our financial reporting and our reporting against the [10 outcomes](#).

This annual review covers ArcelorMittal and its significant operating subsidiaries, excluding joint ventures and associates where we do not have operating control, except for those noted below. A list of these subsidiaries, joint ventures and associates can be found in note 2.3 within our Form [20-F](#) filed with the US Securities and Exchange Commission.

All data is reported for the period from 1 January to 31 December 2015. Our reporting cycle is annual, and the previous annual review and sustainable development report were published in April 2015.

### Financial data – basis of presentation

Financial information has been extracted from the consolidated financial statements. The consolidated financial statements have been prepared on a historical cost basis, except for available-for-sale financial assets, derivative financial instruments, biological assets and certain assets and liabilities held for sale, which are measured at fair value less cost to sell, inventories, which are measured at the lower of net realisable value or cost and the financial statements of the Company's Venezuelan operations, for which hyperinflationary accounting is applied (see [note 2.2.2](#) of our Form [20-F](#)). The consolidated financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) and as adopted by the European Union and are presented in US dollars with all amounts rounded to the nearest million, except for share and per share data.

### Non-financial data – methodologies

The non-financial indicators against which we report are calculated using company guidelines, referred to as the '[basis of reporting](#)'. This document lays out the methodologies we use to calculate our social and environmental data. The majority of our health, safety and environmental data is disclosed separately for our steel and mining operations. Other data, unless otherwise stated in the basis of reporting document, covers both our steel and mining operations.

In accordance with GRI G4, the boundary of each material aspect has been stated in the [GRI index](#) accompanying this report, referring to the stage in the value chain for which it is material.

The boundary of operations that our non-financial data covers is dependent on the materiality of the aspect concerned. For example, our health and safety data reflects all our sites, whereas data on our environmental emissions covers only our industrial operations, since we believe this is where our material impacts lie. More details on the boundary for each outcome are provided in our [GRI index](#) and in our [basis of reporting document](#).

### Changes to scope and boundaries in 2015

We continue to report against the same GRI indicators as in 2015. In addition, we report our greenhouse gas emissions by scope according to guidelines agreed by the Worldsteel Association.

Our 2015 performance data excludes the following sites from our organisational perimeter from the date on which they were idled: Indiana Harbour long carbon (USA); Georgetown (USA); Point Lisas (Trinidad & Tobago). Kusbass mines (Russia) were excluded following their sale in December 2014.



## Forward-looking statements

This review may contain forward-looking statements that represent the expectations, beliefs, plans and objectives of ArcelorMittal's management regarding its financial and operational performance in 2015 and beyond, and assumptions or judgements based on such performance. Future performance expectations are forward-looking and accordingly involve estimates, assumptions, judgements and uncertainties. A number of factors may cause actual results or outcomes to differ materially from the expectations of our management. These risk factors are set out in the [risk section](#), with further details in the Form [20-F](#), filed each fiscal year with the US Securities and Exchange Commission.

[See our GRI index](#) >

## Reporting principles

We support the reporting principles set out in the GRI G4 guidelines. For defining report content, these are: stakeholder inclusiveness; sustainability context; materiality; and completeness. For defining report quality, these are: balance; comparability; accuracy; timeliness; clarity; and reliability.

This table sets out how our 2015 annual review responds to each element of the GRI G4 reporting principles.

### Category – content

Principle	What it means	Our response
Stakeholder inclusiveness	The report should identify its stakeholders and explain how the reporting organisation has responded to their reasonable expectations and interests.	See ' <a href="#">Transparent good governance</a> ' for details on our stakeholders.
Sustainability context	The report should present the organisation's performance in the wider context of sustainability.	See ' <a href="#">The big picture</a> ' for ArcelorMittal's sustainability context, and ' <a href="#">Long-term sustainability outlook</a> '.
Materiality	The report should cover aspects that: <ul style="list-style-type: none"> <li>• reflect the organisation's significant economic, environmental, and social impacts; or</li> <li>• would substantively influence the assessments and decisions of stakeholders.</li> </ul>	See ' <a href="#">Long term sustainability outlook</a> ' and ' <a href="#">Sustainability</a> '. To see how we arrived here, refer to ' <a href="#">Our materiality story</a> '.
Completeness	The report should include coverage of material aspects and their boundaries, sufficient to reflect significant economic, environmental and social impacts, and to enable stakeholders to assess the organisation's performance in the reporting period.	Our coverage of material topics is explained in the <a href="#">scope, boundaries and methodologies</a> section.

## Category – quality

Principle	What it means	Our response
Balance	The report should reflect positive and negative aspects of the organisation's performance to enable a reasoned assessment of overall performance.	Throughout our report we identify both the challenges and the opportunities that we face, including open discussion of the disruptions to our business that have occurred during the year. We also report fully on the same key performance indicators as last year, regardless of whether performance has improved or declined.
Comparability	The organisation should select, compile and report information consistently. The reported information should be presented in a manner that enables stakeholders to analyse changes in the organisation's performance over time, and that could support analysis relative to other organisations.	We have brought together financial and non-financial reporting for the first time in this annual review. Nonetheless, we continue to report the same financial and non-financial data as reported in our 2014 annual review and SD report, and we include the 2014 comparative figures.
Accuracy	The reported information should be sufficiently accurate and detailed for stakeholders to assess the organisation's performance.	We explain our methodology for calculating performance in our <a href="#">basis of reporting document</a> . Deloitte Audit has provided limited assurance for certain environmental data, as set out in <a href="#">their assurance statement</a> .
Timeliness	The organisation should report on a regular schedule so that information is available in time for stakeholders to make informed decisions.	We report financial and non-financial data annually through this annual review and our Form 20-F.
Clarity	The organisation should make information available in a manner that is understandable and accessible to stakeholders using the report.	We have created this annual review as a microsite with options to download and print information as required.
Reliability	The organisation should gather, record, compile, analyse and disclose information and processes used in the preparation of a report in a way that they can be subject to examination and that establishes the quality and materiality of the information.	We explain our methodology for calculating performance in our <a href="#">basis of reporting document</a> . Deloitte Audit has provided limited assurance for certain environmental data, as set out in <a href="#">their assurance statement</a> .

[See our GRI index](#) >

## Assurance statement

We believe that independent assurance leads to quality and process improvements, and reassures readers and ArcelorMittal's management that the information we publish is accurate and material, and therefore contributes to building trust and credibility with key stakeholders.

In 2015 we asked our group auditors, Deloitte Audit, to provide limited assurance on the following sustainability performance indicators, in accordance with the International Auditing and Assurance Standards Board's International Standard on Assurance Engagements – Revised (ISAE3000 Revised):

- CO<sub>2</sub>e emissions per tonne of steel
- CO<sub>2</sub>e emissions (steel)
- Primary energy consumption (steel).

For the past seven years, we have sought external assurance on our lost-time injury frequency rate and incorporated feedback from our assurers to strengthen our systems over this time. In 2015, in order to maximise the value from the assurance process, we decided to ask our own internal assurance team to assure our lost-time injury frequency rate data.

Deloitte Audit provides an independent third-party [assurance statement](#). This assurance covers the specified data as contained in the [Factbook](#) and the SD performance page of our [website](#).

[See our GRI index](#) >

# Operating results

It has been a very tough year for our industry, and throughout 2015 we have focused on reducing costs and adapting the business to remain competitive.

[Read our full operating results](#) >

Sales

63.6

(US\$ billion)

Ebitda

5.2

(US\$ billion)

Steel shipments

84.6

(million tonnes)



Own iron ore production

62.8

(million tonnes)

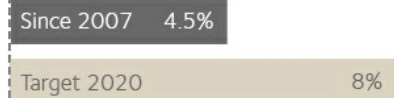
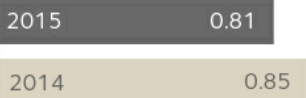
LTIFR

0.81

(Lost time injury frequency rate)

% reduction in CO<sub>2</sub> per tonne steel since 2007

4.5%



## Overview of results

2015 was a very difficult year for the steel and mining industries. Although demand in our core markets remained strong, prices deteriorated significantly during the year as a result of excess capacity in China. Throughout the year we have rigorously focused on implementing a series of measures aimed at reducing costs and ensuring the business is adapted for these tough market conditions. As a result of these measures we succeeded in ending the year with net debt slightly below the end of 2014 despite lower Ebitda.

Regrettably we saw a disappointing net loss which includes non-cash impairment charges on our mining assets as a result of the very considerable fall in the iron ore price. Our mining business is fully focused on adapting to this low-price environment and has reduced cash costs by 20% compared with an initial target of 10%. A further 10% is targeted for 2016.

Segment	Sales for the year ended December 31. <sup>1</sup>		Operating income for the year ended December 31. <sup>2</sup>	
	2015 (in \$ millions)	2014 (in \$ millions)	2015 (in \$ millions)	2014 (in \$ millions)
NAFTA	17,293	21,162	(705)	386
Brazil	8,503	10,037	628	1,388
Europe	31,893	39,552	171	737
ACIS	6,128	8,268	(624)	95
Mining	3,387	4,970	(3,522)	565
Others and eliminations	(3,626)	(4,707)	(109)	(137)
<b>Total</b>	<b>63,578</b>	<b>79,282</b>	<b>(4,161)</b>	<b>3,034</b>

1. Amounts are prior to inter-segment eliminations (except total) and sales include non-steel sales.

2. Other and eliminations to segment operating income reflects certain adjustments made to operating income of the segments to reflect corporate costs, income from non-steel operations (e.g. energy, logistics and shipping services) and the elimination of stock margins between segments.

## Outlook

Looking ahead, although we have started to see a recovery in Chinese steel spreads from 2015 lows, 2016 will be another difficult year for our industries. It is clear that China has a challenge to restructure its steel industry for a lower-growth economy but we are somewhat encouraged by recent comments concerning capacity closures. Until this situation is fully addressed the effective and swift implementation of trade defence instruments will be critical and we expect to see more positive rulings in this regard during the year.

Reducing net debt remains an important priority and given market conditions it is prudent to take proactive steps to accelerate progress. We announced the sale of our minority shareholding in Gestamp for \$1 billion and our intention to raise \$3 billion through a rights issue, now successfully completed.

## Action 2020

Our priority is to ensure we deliver on our financial targets and strategic projects. In February 2016 we announced a new strategic plan for the period to 2020 following a detailed analysis of performance improvement potential across the group. Action 2020 targets an improvement in structural Ebitda of \$3 billion and to deliver annualised free cash flow in excess of \$2 billion by 2020.

[Read more >](#)

## NAFTA

Like all our operations, our NAFTA segment is facing a tough world steel market, with global overcapacity, a strong dollar and a flood of imports weakening prices to unsustainable levels. Meanwhile, a downturn in iron ore prices resulted in a lower contribution from captive iron ore mining assets. Sales were \$17.3 billion, down from \$21.2 billion in 2014, and Ebitda was \$891 million, against \$1.2 billion in 2014.

[Read more >](#)

## Brazil

Brazil, which makes up most of this segment, is in the midst of a deep recession, arguably the most significant economic downturn the country has experienced since the 1930s. As a result, conditions in the Brazilian steel industry were very challenging in 2015, with apparent steel consumption falling by over 15%. Our sales for the year were down 15.3%, at \$8.5 billion, with Ebitda down 33.3% at \$1.2 billion.

[Read more >](#)

## ACIS

2015 was a very challenging year for ACIS. Lower global steel prices and weak demand across the region resulted in lower prices, offsetting the benefits of operational efficiencies. Sales were down 25.9% at \$6.1 billion, while Ebitda was down 49% at \$317 million.

[Read more >](#)

## Europe

Despite Europe's modest economic recovery, and an increase in demand for steel, greater volumes of low-priced, unfair imports, particularly from China, kept prices low. Our sales were down 19.4% at \$31.9 billion, although lower prices were marginally offset by an increase of steel shipments of 2.6% at 40.7 million tonnes. Ebitda was up slightly at \$2.4 billion, thanks to our strategy of running assets full and focusing on our franchise businesses.

[Read more >](#)

## Mining

2015 was a very challenging year, with the iron ore price falling nearly 40% and hitting the lowest level since spot pricing was introduced in 2008. Sales were \$3.4 billion, down from \$5.0 billion the previous year, while Ebitda was down 65.3% at \$462 million. Iron ore shipments were down 2% at 62.4 million tonnes, although 40.3 million tonnes were shipped at market price, up 1.4% on the previous year.

[Read more >](#)

## Sustainable development performance

The nature of some of the issues we faced in 2015 made it even clearer to us that our 10 sustainable development outcomes, underpinned by transparent good governance, are vital to the company's long-term success. Check our comprehensive data table outlining how we made progress against our outcomes last year.

[Read more >](#)

# Sustainability review

Last year ArcelorMittal adopted 10 sustainable development outcomes. Why was that an important step for the company and how did you embed the outcomes in 2015?

Dr Alan Knight  
General manager, corporate responsibility

## 2015: an overview

The nature of some of the issues we faced in 2015 made it even clearer to us that **our 10 sustainable development (SD) outcomes**, underpinned by transparent good governance, are vital to the company's long-term success. We are taking a more proactive, positive, and collaborative approach with our stakeholders, on climate change and with how we communicate about sustainability, and we have made some real progress in 2015.

Having launched our 10 SD outcomes in April, we talked to external stakeholders about the value of this long-term approach, and found widespread support for it.

We were very pleased to receive the **Steele award** for excellence in sustainability 2015 from the World Steel Association, in recognition of all the work we've done to develop our 10 outcomes, and the thinking and collaboration that went into them.

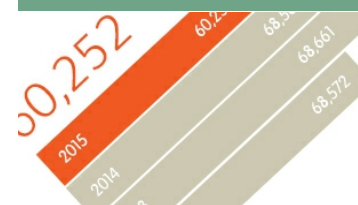
## Customers

Developments in 2015 reminded us of the value of getting our stakeholder relationships right. Discussions with a number of key customers on aspects of our supply chain – tin from Indonesia, coking coal from Mozambique, and iron ore from Brazil – demonstrated the value of transparency in building trust. They also led us to understand just how our customers' expectations are likely to develop in the coming years. This is why, under **outcome 7**, we are looking into building a common sustainability standard for steel, and so a supply chain that our customers trust. Partnerships with our customers also yielded some clear recognition for our contributions to sustainability, such as an award from PSA Citroën for developments in our Fortiform® range of steels.

## Climate change

The climate change convention in Paris towards the end of 2015 helped us shift our focus from policies that just

### 2015 performance



See how we did in 2015 with our comprehensive data table.



look at the CO<sub>2</sub> emissions of steel production, to the broader contribution steel is making to a lower-carbon future. We need to recognise how our products reduce the emissions of our customers, such as in the automotive industry, and that steel can be endlessly recycled in a low-carbon way.

Yet ArcelorMittal has a significant carbon footprint, because CO<sub>2</sub> is not simply a by-product of energy use as it is in other industries. It also comes from the use of coke in the chemical process of making steel – you can't make primary steel without it.

So, reducing our carbon footprint presents a real technical challenge. In July, we announced a partnership with **LanzaTech** and Primetals Technologies to explore the conversion of our waste gases into fuel. We haven't yet made the breakthrough that will stop us being a carbon-intensive industry, but the LanzaTech partnership demonstrates that this is something we want to do.

In 2015, we began work on a broader roadmap for how we can contribute to a low-carbon future. This will map the potential for CO<sub>2</sub> reductions through both continuous improvements in **energy efficiency** and new technologies, the contribution of our **products** and our **by-products**, even our waste gases and the **energy** we generate for local communities around our plants.

As part of this roadmap, we aim to work with policymakers to find mechanisms that could help the entire steel industry develop viable carbon-reduction technologies. We have some concerns that localised emissions trading schemes, for example in Europe, will only displace steel production from the affected market to other parts of world where there is no price on carbon. However, we believe that with the right policies and incentives, steel can and will make a significant contribution to creating a low carbon economy.

## Environment

Last year we continued to make important achievements in both energy efficiency and air emissions. For example, in 2015 we saw the completion of no less than 13 environmental investment projects at our plant in Ostrava, Czech Republic designed to reduce our air emissions. But these improvements have yet to have an impact on our environmental performance, which in 2015 showed slight deterioration in a number of areas. The major factor influencing this was market demand: due to the slowdown in the construction industry, we produced relatively less long steel products from our electric arc furnaces and more from our blast furnaces. In blast furnaces, emissions are generally higher because more primary materials are used. And yet this is where we are producing the specialised steel society is demanding – as well as the by-products and the energy exports that benefit other stakeholders, as explained in this report.

Despite difficult economic conditions, we allocated \$176 million to environmental and energy investments over the year – but just as important was our work to strengthen stakeholder relations to become a trusted user of air, land and water under **outcome 5**, for example in Ukraine, Liberia and the USA.

The rupture of another mining company's dam in Brazil showed how damaging environmental pollution can be when things go wrong. And, since that company was one of our suppliers, it showed us how important it is to manage our supply chain proactively. It also reinforced the value of the work we were already doing to carry out structural assessments and improvements to dams at our own mining sites.

## Ebola

It was a huge relief to all of us at ArcelorMittal to see a cessation in new cases of Ebola in West Africa. Following the work we did in founding and supporting the Ebola private sector mobilisation group (EPSMG), we were able to share what we've learned about partnership and the role of the private sector in combatting society's issues at a number of important conferences and think tanks. We were immensely proud to receive a **Clinton Global Citizen**

**Award** for this work, in September 2015. This type of approach will be key in tackling the UN Sustainable Development Goals and it's already proving valuable in the face of other challenges such as the Zika virus in **Brazil**. One of the biggest learnings from Ebola was the need for flexibility: the EPSMG was extremely effective, but it was never a formalised structure, rather an alliance of organisations who worked together in the best way to address whatever problems arose.

## Embedding the 10 outcomes

Looking inside the business, we made some good progress on embedding our 10 SD outcomes across ArcelorMittal. Our SD team had many detailed discussions with business leaders across the Group, based on performance 'dashboards' which set out the issues and progress in each market.

We now have senior corporate sponsors for each outcome, who encourage collaboration across the business, and convene key people to develop our thinking on each issue. And for each outcome, we are developing more in-depth explanations of how we can achieve each outcome, and part of that will be how to measure success.

## Strengthening our sustainability reporting

As we begin to appreciate how the 10 outcomes are adding value to our business, so we are beginning our journey towards integrated reporting. This year, we have taken our first step, by enabling our stakeholders to access our reporting on the 10 outcomes from within this Annual Review both at a group level, in the 10 outcome sections here, and in our reporting on each of our segments. At the same time, we have created a continuous reporting hub on the [sustainability pages](#) of our website to enable people to follow events throughout the year, not only with items of news and blogs relating to sustainable development, but also a quarterly message from our leadership.

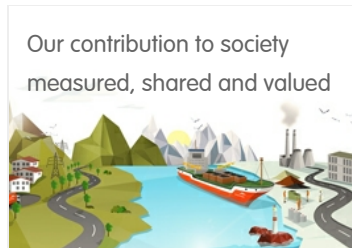
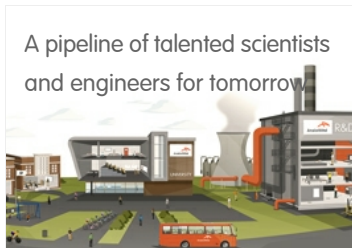
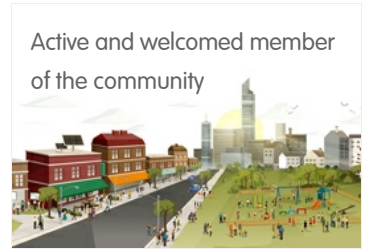
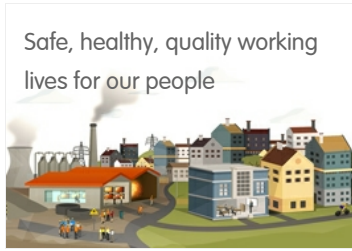
At the same time, we've developed a roadmap for our local sustainability reporting, with guidance and templates for the 20 countries that produce local reports. This will help us report consistently and effectively against the 10 outcomes to local stakeholders in every country where we have major operations – a key part of our commitment to meaningful transparency. Increasingly the content of these reports will feature on the sustainability pages of our website.

## Looking ahead

If we manage these challenges well, we can open up new commercial opportunities, be competitive, build trust, and pre-empt potential problems. But if we don't, we face the risk of business disruptions, a damaged reputation, and erosion of our licence to operate. That's why we have to get on the front foot.

In 2016 we will be integrating sustainability more deeply into the business, and embedding the 10 outcomes into every unit's thinking and business planning. We will look at the kind of targets we need to set to achieve our outcomes, and how to measure the contributions we make to society in the process. We want to end the coming year with a much clearer view of how the outcomes align with our corporate strategy, and we want to be taking a leadership stance on the sustainability agenda for business.

10 outcomes



# Safe, healthy, quality working lives for our people



## The outcome we need

We want our workforce to be safe and healthy, committed to our success, and to carry out our business with integrity. We want a workplace where diversity is valued and every individual is respected and developed to their full potential.

## Why this is important for ArcelorMittal

Every company says its people are its greatest asset, and they say it because it's true. We've built our success on our people's commitment and talent, and we want every one of them to have a rewarding career. Our working culture is rooted in integrity, diversity, strong values, and open, honest communication.

## Our approach

Our remuneration policy links part of the bonuses of both our executives and our managers to our lost-time injury rate and the number of fatalities in the part of the business where he or she works. And, uniquely in our sector, we have a global Joint Health and Safety Committee with our unions, which involves people at every level, from shop floor to plant manager.

Lost time injury frequency rate (steel)

**0.82**

(per million hours worked)

2015	0.82
2014	0.91
2013	0.91

By far our highest priority under this outcome is safety. We know that mining and steelmaking can be hazardous, and that gives us an even greater responsibility to keep our people safe and healthy. And yet despite the work we've done and are still doing, our safety rate is not as good as it should be. We don't want any fatalities at our sites, or any injuries that result in lost time, hence our group-wide Journey to Zero programme. We know the best way to achieve this is by creating a culture of shared vigilance in which everyone understands the possible risks, takes responsibility for themselves and their colleagues, and speaks up if they spot a potential hazard.

This outcome is sponsored at group level by Ricardo Garcia, vice president of human resources and IT for ArcelorMittal South and Central America. He is working to ensure that all the issues relating to our workforce are brought together in our strategic planning, that we learn from each other, and benchmark ourselves against the best. With over 209,000 employees in more than 60 countries, this is a huge task, but a vital one, and Ricardo is passionate about developing a more creative, effective, and happier workplace. He has identified five key strategic areas of focus: safety, health, employee relations and engagement, employee development, and diversity and inclusion. Much of this work is being done through the local HR and health and safety councils, and at group level through the global Joint Health and Safety Committee.

## Key developments in 2015

### Safety

It is extremely distressing that we had 27 deaths at our sites in 2015, despite all the safety work we've done, both with our own employees and our 45,000 contractors. We have managed to improve our injury rate, measured as the lost-time injury frequency rate, or LTIFR, and this has now fallen from 3.3 incidents per million hours worked in 2007, to 0.81 in 2015. The industry average is 1.39<sup>1</sup>. But that's not enough if we can't prevent fatalities, so we now have three major initiatives under way.

The first is the Courageous Leadership campaign on safety, which has already made a significant difference in our mining business, and was extended to our steelmaking plants in Ukraine and Kazakhstan in 2015, following a particularly alarming year for safety in those countries. A similar programme, called Take Care, was launched in our European steel plants at the end of the year.

The second initiative is the formalisation of a new leading indicator of safety performance, which logs and reports accidents and near misses, so that we can take prompt action and pre-empt possible problems before they occur.

And finally, we've launched a new scheme for our contractors. Reaching them on a consistent basis is tough, given that they may only work for us periodically, and the personnel are constantly changing. Our site managers now have to record the amount of time they spend on safety with this group, with a priority on high-risk activities.

Our principal company-wide safety programme, Journey to Zero, started in 2007, and it's one reason why our LTIFR has improved greatly since then. In total, 148 of our sites have now operated for more than five years without a single lost-time injury, like our Tubular Products Vitry mill in France, and our Frýdek-Místek mill in the Czech Republic. This proves that a goal of zero can be achieved.

The Journey to Zero includes safety leadership and awareness programmes, workshops, training sessions and ongoing employee communications, from regular shop floor audits, to 'safety moments' at the start of a shift, to the monthly review. It's also about sharing best practice and learning from good ideas in other parts of the business. In 2015, health and safety training increased from 9 to 14 hours per head, making up 27% of our

Lost time injury frequency rate (mining)

0.74

(per million hours worked)

2015 0.74

2014 0.56

2013 0.63

Absenteeism rate (steel)

2.78

(%)

2015 2.78

2014 2.33

2013 2.48

Absenteeism rate (mining)

0.95

(%)

2015 0.95

2014 1.19

2013 1.24

Managers that are female

11

(%)

2015 11

2014 10

2013 13

total average training provision for each employee.

This work is designed to support our rigorous framework of safety policies, procedures, and monitoring systems. All accidents are investigated and group's Management Committee members review all fatalities and cascade the lessons learned throughout the company.

% reduction in CO<sub>2</sub> per tonne steel since 2007

4.5%

Since 2007 4.5%

Target 2020 8%

<sup>1</sup>Worldsteel, based on 2014 data.

## Health

If safety is our number one priority, health comes a close second. The Journey to Zero has a health component as well as a safety focus, and aims to encourage healthy lifestyles and foster wellbeing, both at work and at home. There are specific initiatives on smoking, drug and alcohol use and exercise, and programmes to support employees with problems such as obesity, stress and fatigue. Our plant at Ostrava, Czech Republic, provides a good example of the sort of activities that take place across the group: a year-long quit-smoking campaign finished in 2015, and was marked by the removal of all the smoking areas at the site.

As well as an annual health and safety day, we also run a health week at every site every year, and around 191,000 people took part last year. We've also been working with our European Works Council on the occupational health risks in our coke plants, with a particular emphasis on those employees who might be at risk as a result of exposure to polycyclic aromatic hydrocarbons, or PAH. By working together, we've developed a plan to tackle this issue. Individual plants will be developing specific plans during 2016.

Some health issues are to do with what's happening locally. For example, in [Brazil](#), we are working hard to protect our employees from the Zika virus; in [Ukraine](#), we provided mental health support to 237 employees returning from active military service; and in West Africa we played a pivotal role in mobilising the resources of the private sector to combat Ebola, for which we received a Clinton award in 2015.

## Employee development

To help employees chart their personal and professional progress, 96% of exempt employees took part in a performance review process with their line manager in 2015. This increased from 95% in 2014, thanks to our online performance management tools. We're proud to run a wide range of development programmes through the ArcelorMittal University. Over the years, this has grown and developed, and now offers a huge range of online and classroom training courses across leadership, management, functional, technical and professional subjects. We invested a total of \$54 million on training and development in 2015, and our employees received an average of 58 hours of training. We also opened a new university campus in Temirtau, Kazakhstan, offering both steelmaking and mining training, and new leadership programmes were launched. Our annual Learning Week, designed to inspire our workforce with the number of training options available to them, involving 43,500 employees at more than 130 sites last year.

## Succession planning

We continued to invest in our talent through our global employee development programme, which helps us spot people with potential, and manage the succession for key roles as part of our overall workforce planning process. The latter is particularly important in our industry, where many senior managers are approaching retirement age, and we risk losing important knowledge.

To help employees chart their personal and professional progress, 96% of exempt employees took part in a performance review process with their line manager in 2015, an increase of 1% thanks to our online performance management tools. Meanwhile, 80% of our open leadership positions were filled by internal people that had been identified in succession plans – 5% more than in 2014. We are pleased with this result, since it shows that we are successfully developing our pipeline of leaders. This had an impact on the turnover rate amongst our leadership, which was just 2.6% in 2015 out of a population of 1,600 compared with 3.1% in 2014.

## Developing young talent

As well as leadership development programmes we offer mentoring, and the senior-junior programme at our R&D centre in Asturias, Spain, is a great example of enabling the next generation of leaders to learn from those with more experience. We want to encourage more young people to seize the chance of a career in steelmaking and mining, and especially young women. We offer apprenticeships and run a wide range of educational initiatives to attract the best students in school to study science, technology and maths. There's more on this under [outcome 9](#).

## Employee relations and engagement

We know that hard times for the steel industry can mean very hard times for our employees. That makes it all the more important to communicate openly and honestly, especially when we're forced to make difficult decisions. Our people have been hugely supportive throughout the challenges of the last few years since the credit crisis, and we have done our best to engage with them positively, and treat them with respect and understanding.

## Speak Up!

We also listen to them. Every two years we run a survey across the whole business to ask for feedback, gauge morale, and spot emerging issues. This Speak Up! survey covers everything from how people see the opportunities for professional development, to their understanding of where the company is going. It's anonymous, and it's well used – 82% took part in 2015. Of these people, 69% feel positive about working for us, which is broadly the same as two years before. Given the challenges we're dealing with, we think this is a pretty good result.

## Reputation survey

We also run a reputation survey in individual countries, which canvases the opinions of a wide range of stakeholders, including employees. In 2015, over 1,200 employees were surveyed in eight countries – Brazil, USA, South Africa, Kazakhstan, India, France, Belgium and Germany. We were pleased to see that we are consistently well-rated among our own people, especially in relation to what we do on health and safety. On the other hand, employee engagement is not as strong across the board as we would like it to be – there's a clear opportunity, for example, to engage our people more on our products, and the contribution they make, both economically and in terms of sustainability.

## Working with our unions

We pride ourselves on productive working relationships with our unions. In the current environment we are working hard to gain their support and understanding as we renew our collective bargaining agreements. 90% of our employees are covered by such agreements<sup>2</sup>. In 2015 we had 23 formal consultations with the European Works Council. We work hard to avoid strikes. Last year we saw no strikes that lasted more than a week.

<sup>2</sup> Covers all major sites.

## Diversity and inclusion

We value diversity enormously – after all, we work in more than 60 countries with employees from many more.

Our policies cover every aspect of diversity and inclusion, but gender is a particular priority for us – we'd like to achieve a better balance of men and women. We want to be an employer of choice for talented women, and we have a number of programmes in place now to support this, including personal development and mentoring, and a high-profile 'women in leadership' programme at the ArcelorMittal University. In 2015, 135 women took this course. At present, three of our 11 main Board directors are women, and 11% of our managers across the world – up 1% from the previous year. In **Europe** the picture is more positive: 13.1% of the region's managers and above are women. Looking at leadership more broadly, women make up 17.5% of those in the region who lead a team.



## Performance at a glance

Metric	Unit	2015	2014	Management comment	Status
Lost-time injury frequency rate (steel and mining)	Per million hours worked	0.81	0.85*	Improvement overall but deterioration in mining.	✗
Fatalities	Number	27	23	Distressing situation has prompted three major new initiatives.	✗
Accident severity	Per thousand hours worked	0.08	0.08	No change.	○
Operations certified OHSAS 18001	%	97	97	No change.	○
Absenteeism rate	%	2.48	2.17	Improvement in mining offset by deterioration in some key countries.	✗
Training provided per employee	Average hours	58	50	Clear increase in health and safety training in absolute and relative terms. Highest ever provision of training hours - 12 million in all - both online and offline.	●
Strikes > 1 week's duration	Number	0	2	N/A	●
Employees covered by collective bargaining agreements	%	90	-	N/A	○
Managers and above that are women	%	11	10	Gender focus becoming more visible in leadership development and succession planning initiatives.	●

Key: ● met target/improved; ○ progress neutral ✗ did not meet target/deteriorated

\*Assured by Deloitte Audit

# Products that accelerate more sustainable lifestyles



## The outcome we need

We want our steel to be the material of choice for the designers and manufacturers of consumer products, because it's strong, durable and innovative, and its robust sustainability credentials over its full lifecycle are widely understood and recognised.

## Why this is important for ArcelorMittal

Everyone wants a more sustainable future, but few want to give up the benefits of our modern lifestyles to achieve it. Steel has an important part to play in squaring that circle, providing lightweight, energy-efficient and recyclable products for everything from domestic appliances, to cars, to food packaging. And with the power of innovation, we can do even more. It's what our customers want, and what our investors, regulators and other stakeholders expect.

Years of successful innovation have put steel at a real advantage here. The challenge is to stay ahead of the curve, and be much more effective in communicating how steel can help make modern lifestyles more sustainable. Most people don't realise, for example, that the production of a tonne of steel produces a lot less CO<sub>2</sub> than either aluminium, magnesium or carbon fibre.

## Steel's competitive advantage

Our pioneering lightweight steels can help the automotive industry, for example, by reducing the weight of cars, which cuts their carbon emissions. This is vital, given the tightening of environmental regulations across the world, including in Europe, the USA, and more recently China and elsewhere. The packaging industry faces its own version of these challenges, with a particular emphasis on reducing waste to landfill, and steel's recyclability is a major advantage here. As a result, our customers are starting to make choices based on social and environmental credentials, where price and quality are comparable. We can turn all these factors into

competitive advantage.

## Lifecycle thinking

Another big area for us is 'lifecycle thinking'. It's vital that industry, governments, regulators and consumers think about products and components in terms of their entire lifecycle, not just the initial production phase, because it's the full impact that counts – and steel comes out well ahead of other products like cement and aluminium. We've developed a deep expertise in lifecycle analysis, or LCA, where we work to the criteria set out in the ISO14040/44 environmental standard. We have five R&D people focusing on this area, and they've conducted over 50 detailed assessments of products and processes in recent years.

This outcome is sponsored at group level by Greg Ludkovsky, vice president of global R&D.

## Key developments in 2015

### Automotive

Automotive is a key sector for us as a business, accounting for 19% of sales by value in both flat and long steel products.

### Improving fuel efficiency

We launched our S-in-Motion® range of strong more sustainable steel solutions back in 2010, and the portfolio grows every year. Because of the high strength of the steels involved, less steel is needed, so these solutions improve the fuel efficiency of vans, pickup trucks, cars, light commercial vehicles, hybrids, and electric vehicles. The new Opel Astra is a typical case in point: the vehicle weighs 200kg less than the previous version, and 38% of this weight reduction comes from the ultra-high-strength steels we have supplied. This means that over the lifetime of the vehicle, our steel will save an estimated one tonne of CO<sub>2</sub><sup>1</sup>.

We launched 17 such automotive products in 2015, and currently have around 100 more in development.

<sup>1</sup>Calculation based on 38% of the three-tonne CO<sub>2</sub> reduction resulting from a 200kg vehicle weight reduction, over a lifetime mileage of 200,000km.

### Partnering with customers to create new products

Many of our new products are the result of longstanding partnerships with some major carmakers. We start working with these customers right at the beginning of the process to design a new model, which can be up to seven years before the first cars are made. Our R&D teams work alongside our customers' designers, to assess exactly what a new model's needs are, and how we can supply components that will maximise its safety and performance, while minimising its environmental impact. We also take into account their preferred method of production, which has implications for the sort of steel they need.

We constantly see examples of how this creates value. To cite just one, in 2015 we worked with PSA Peugeot Citroën to develop a new steel product, Fortiform® 1470, making sure it met their expectations, and it went on to win the Value Creation award at their 2015 Best Supplier Awards. It is now being tested in industrial conditions. The partnership continues, and the new products we're now developing give Peugeot confidence that they'll be able to meet the increasing demands of environmental regulation, while cutting another 100kg per car by 2020.

### New generation of press-hardenable high-strength steels

During 2015 we also completed the trials of our new generation of advanced high-strength steels, Usibor® 2000 and Ductibor® 1000, and both are now going into commercial production. They could reduce the weight

Lifetime CO<sub>2</sub> savings estimated for each Opel Astra produced using our ultra-high-strength steels

1  
(tonnes)

“Thanks to our co-operation, ArcelorMittal's steel solutions are progressing well. It is win-win for ArcelorMittal, for PSA, our vehicles, and our customers.”

**Louis David**  
Material master expert in vehicle design,  
PSA Peugeot Citroën

of a typical car by a further 10% to 20%, on top of the 16% already achieved from S-in motion® since 2010. They're already being used by car designers in the US, Europe, and Japan, for new automotive programmes planned for 2017 and 2018 production.

We're continuing to invest in the production capacity we need to make third-generation ultra-high strength steels at our sites in Liège and Ghent, Belgium, and at AM/NS Calvert, USA. Investment is also going into new Usibor® production at VAMA, China, Sagunto, Spain and Vega do Sul, Brazil.

## Packaging and appliances

Steel is a key element of food packaging, because it's strong, light, and durable. It's also incredibly easy to recycle. The steel cans used in food packaging have to be coated to avoid corrosion and protect the product inside. In the past, this has been done by applying a layer of chromium or plastic lacquer, but both present health issues either to workers involved in their production, or to the consumer – in the case of the lacquers, it's the presence of bisphenol A. Both forms of coating are in the process of being banned in the EU, and faced with this challenge, we're making a virtue of necessity and using this as a spur to innovation. For the last 15 years, we've been working with our packaging competitors, suppliers and customers to develop new coatings that avoid the need to use either chromium or bisphenol A.

## New organic coating range

Turning to domestic appliances, we supply sheet steel for washing machines, fridges, cookers and hi-fi equipment, which are pre-coated for durability, hygiene, and water resistance, and the sheets can also offer designers particular textures or colours. In 2015 we launched a range of products called Estetic® Casa, which have coatings made from organic components, and we also stepped up production of our new Solfer®CA steel range, which can be used to enamel domestic appliances.

R&D investment

227

(million \$)

# Products that create sustainable infrastructure



## The outcome we need

We want our steel to become the first-choice material for public bodies who commission and approve construction projects, and the firms that design and build them, because they know that steel is part of the answer for a low-carbon circular economy, and not part of the problem.

## Why this is important for ArcelorMittal

The world needs a low-carbon, more sustainable future. A key part of this will be high-quality infrastructure and modern, energy-efficient buildings. Steel can help: it's strong, flexible, durable, and can be infinitely recycled with no loss of quality.

## Increasing pressure for green and 'healthy' building credentials

The green credentials of buildings are in the spotlight as never before. Certification schemes like **BREEAM** and **LEED** evaluate just how sustainable a building is, from its energy and water use, to the recyclability of its materials, and from the design stage right through to refurbishment or demolition. Governments and municipalities are supporting the same agenda by offering tax breaks and incentives for sustainable development and construction, and many companies include these criteria when looking for new space to rent or buy.

The health impacts of building products for those who live, work and learn in them are also rising up the agenda, with the emergence of Health Product Declarations in Europe.

## The advantages of steel

We see these developments as a huge commercial opportunity for our industry. We are supplying and

developing high-quality components that help buildings save energy, and thereby CO<sub>2</sub> emissions, both in construction and in use. And if the value chain is assessed in its entirety, the more advantages steel has: if buildings' carbon emissions are assessed right through to the demolition phase, steel does increasingly well, given its outstanding recyclability.

## Circular thinking

With the renaissance in modular building design in recent years, these benefits can be extended further. Modular buildings are not only quick to erect and so a cost-effective approach to construction, but the component parts can be dismantled and re-used, which could mean enormous CO<sub>2</sub> emissions savings. This circular thinking has encouraged architects to look at the sustainability benefits of the modular approach to building design and they are finding that steel is ideally suited for this. Modular design is now being used in everything from holiday homes, to schools, offices, and even **skyscrapers**.

The commercial potential of circular thinking lies not only in product design but the business model. Where a component can be re-used, it can be leased – and this is far more viable where its use is short-term. Leasing can reduce the upfront costs for customers, and guarantee the full environmental benefits of re-use at the end of the component's initial life.

As for outcome 2, this outcome is sponsored at group level by Greg Ludkovsky, our vice president for global R&D.

## Key developments in 2015

### Sustainability assessments

We talk elsewhere about lifecycle analysis, or **LCA**, and how important it is in making an objective assessment of the true sustainability of a material like steel. This approach is now integral to international accreditation standards such as ISO14040/44, and it's a requirement of the EU's Environmental Product Declarations, or EPDs, for construction products. In recent years, we've developed a real expertise in this highly technical field, and our team has completed over 50 separate studies across our construction, automotive, packaging and industrial products, as well as assessing our own production processes. Three more of these were completed in 2015 including a solar roofing pilot from our Phoster R&D project. The other two are outlined below.

### First certified LCA study in North America

The EPD we completed for roll-formed steel cladding, roofing and flooring panels was the first in the North American construction market. We were the first steel company in the region to obtain third-party certification for an LCA study and this will be available to architects and designers looking to improve the sustainability credentials of their buildings through LEED v4 certification. This latest version of LEED raises the bar significantly in terms of a building's environmental performance. Having done the LCA study helps us get ahead of the curve. Several other ArcelorMittal construction products, such as Solar Wall® and our insulated steel panels, will qualify for additional LEED v4 credits.

### New LCA tool for buildings

Our Steel in Modern Construction initiative employs the principle of lifecycle thinking across our whole portfolio of building products. In 2015, our global R&D team developed this new tool to assess the sustainability impacts of these products over the whole life of a building, scoring each against 16 social, environmental and economic indicators. We used it for the first time on an office building developed to European standards. New products will be added to the tool as they're introduced, including the steels developed in the Phoster project for use in solar power, and Magnelis® a metallic coating that provides superior resistance to corrosion. We'll start using the tool more widely in 2016.

Lifecycle studies since 2005

51

## Greener steels

The steel we use in construction products like roofing and facades is enhanced with a combination of metallic and organic coatings. This gives long-lasting protection from environmental corrosion, while also looking attractive. We can save our customers time, energy and money by applying these coatings ourselves, and that also gives us the opportunity to improve the products' sustainability credentials at the same time.

Last year we launched the Granite® Quartz range of steel panels for building facades, and Estetic® Bio Air products for ceilings, internal panels, and doors, as part of our Nature range of steels for construction. Estetic® Bio Air uses coatings which are free of chromates and heavy metals, and are derived only from plant-based resin, which means they don't emit volatile organic compounds, or VOCs, which can be harmful to health. We want to take this technique further, and apply it to a new generation of low-VOC coated products for use in both the construction and appliance industries.

## Modular buildings

During 2015, we worked on both domestic and commercial modular buildings.

### New modular 'b home' in Spain

One of these is the 'b home' system, in which we collaborated with Baragaño, a Spanish architect, who developed the design. We now have the first b home on our R&D site in Asturias, Spain. The units are made as steel modules at our production site in Aviles, then assembled on-site into homes or offices, thus reducing waste, speeding up construction times, and avoiding some of the health and safety risks usually associated with building work. The units are highly energy-efficient, and their design means the entire building can be picked up and moved with virtually no negative environmental impact. They also meet all the demands of Spain's Technical Building Code.

### Modular skyscraper in China

We also played a part in the record-breaking modular construction of a 57-storey skyscraper in just 19 days, in Changsha, China. Using a modular construction technique based on a central 'tree', 90% of the skyscraper was built with prefabricated sections.

We supplied over 10,000 tonnes of high-strength HISTAR® steel beams, and also helped the construction company determine the quickest, safest and most efficient method of construction. The building will provide 800 apartments and office space for 4,000 people. And, if there's ever a need to take it down, it will be almost as quick and easy to do so as putting it up, while all the steel parts can be re-used.

This innovative approach won the building company a Council on Tall Buildings and Urban Habitat Innovation Award.

## Clearing the air: new products for indoor environments

The air we breathe may look clear but it also can be filled with invisible gases known as volatile organic compounds (or VOCs). Not only can these have a direct negative effect on our health but they are also an important contributor to global warming through the effect on the composition of our earth's atmosphere. VOCs come from a multitude of sources – one example is as a by-product of painting and coating operations.



Governments and regulators clearly want more done to eradicate VOCs, with new legislation in France, Belgium and Germany in the last year. The specific challenge here is that VOCs evaporate into the air at comparatively low temperatures, which makes them a particular problem indoors, and even more so in poorly ventilated areas, where they can concentrate up to ten times more than normal.

The steel used for a building's structure is not a problem for indoor environments, since the bare or metallic coated steels used emit no VOCs. Our focus has been on the pre-painted steels that are used in internal facades. After three years of detailed research, work with a consortium of partner companies and universities, and the financial support of the French government, our plant in Montataire, France, has started producing a pioneering new pre-painted steel which emits extremely low levels of VOCs, and is specially designed to be used indoors. It's a great example of the value that working together across different sectors can bring to the development of genuinely innovative products.

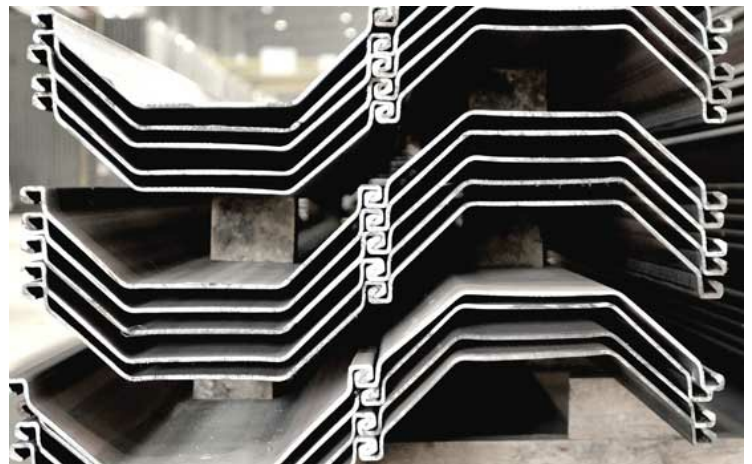
The new steel, Estetic® Bio Air, was launched in late 2015. It's completely free of chromates and heavy metals, and features a coating made entirely of plant-based resin. The aim is to use the product in ceilings, walls and partitions, and also in spaces that need to be especially clean, such as medical or forensic facilities. Estetic® Bio Air has already been awarded green certifications in Germany and Belgium, and has France's A+ label for interior air quality, as well as its own Health Product Declaration.

Looking ahead, we plan to use the same coating system for all the products in our Estetic® range. This will involve building the capacity of our specialist suppliers to apply the same process to other products and so enable us to meet the rising demand for green steels that we anticipate.

## Steel goes circular: re-using sheet piles

We see the emerging circular economy as a major commercial opportunity for us, as well as a significant contributor to a more sustainable future. In Europe, for example, [McKinsey](#) estimates that only 5% of the value of raw materials the global economy uses is recovered through recycling. Imagine the impact if the other 95% could be recovered too.

The challenge is that it's often easier and cheaper to throw products away and start again, rather than repair or re-use them.



This is as true of domestic appliances like washing machines as it is of components for infrastructure or construction. So what's the solution? One answer, certainly, is for customers to rent or lease products, rather than buy them. And we're testing the opportunity with one particular product – the sheet pile.



Sheet piles are used in construction, to provide earth or water retention in the foundations of buildings, roads, tunnels, or seawalls. Generally made from recycled scrap, they can also, like all steel products, be fully recycled, saving 1.29 tonnes of CO<sub>2</sub> for every tonne of steel made. Because of this, high-strength steel sheet piles already offer a more sustainable alternative to concrete. The lease model takes this one step further, since the sheet piles can be re-used rather than recycled once the customer has finished their construction project. It means that, rather than selling the sheet piles, we can offer our customers their availability for a period of time. It's a win-win for everyone: a reduced short-term cost for the customer, a stream of recurrent revenue for us, and a significant benefit for the environment in the long term.

# Efficient use of resources and high recycling rates



## The outcome we need

We want to be acknowledged for using resources in the most efficient and effective way, so that we are creating significant value for our customers and shareholders as well as for the environment.

## Why this is important for ArcelorMittal

In steelmaking, resource efficiency takes two forms: making the steelmaking process more efficient by re-using its by-products, both solids and waste gases; and utilising more scrap from steel that's already been used. Both are important factors in making the production that underpins modern living more sustainable.

### By-products

Making new steel via the blast furnace route means converting iron ore into steel using coking coal and limestone. This results in a number of useful by-products such as slag and oily mill sludge. Finding ways to re-use these by-products is an obvious win-win: if we re-use them within our steelmaking process, we reduce the amount of virgin inputs we need and so cut our raw material costs as well as our environmental impact. And where we sell them for use in other industries, again we create additional value in these ways.

Our blast furnace mills therefore produce far more value than simply steel. They make slag, which can be used as fertilizer by farmers or in cement-making, and greenhouse gases are reduced in both cases. They also provide heating and power for neighbouring communities from their waste gases. And, waste gases can also be used for making chemicals, plastics, fuels and more, and we are currently testing the potential for this. One example is our partnership with [LanzaTech](#).

## Recycling scrap

At the end of its useful life, steel is ideally suited to being recycled, since it doesn't lose its physical properties in the process, even if alloys are mixed into the scrap. Some scrap is used in the blast furnace process, but scrap is ideally suited to the electric arc furnace route to steelmaking. Here steel can be produced entirely from scrap, without the need for iron ore or coke. Newer steel industries in emerging economies have been built using electrical arc furnaces. Some 30% of the steel we produce globally comes from scrap, and we're one of the world's biggest recyclers.

The integration of scrap back into steelmaking supports a circular economy. In fact 87% of the world's obsolete steel is recycled. But we have to wait for more scrap to become available to meet our needs. At present in Europe, for example, there's only enough scrap to meet half of the region's demand. There's another resource efficiency challenge in steelmaking: to reduce the off-cuts of steel our customers generate when they manufacture their products – like car doors – from our steel. The potential for our industry to cut carbon emissions by working with our customers to produce less of this 'pre-consumer scrap' has been highlighted by Professor Julian Allwood at the University of Cambridge. Just how resources flow from one phase in the steel lifecycle to the next is something we are looking at with a number of leading universities.

This outcome is sponsored at group level by Carl de Mare, vice president of emerging technology development, and he will lead efforts to explore the opportunities to create value from efficient resource use, both within our steelmaking process and in relation to other industries.

CO<sub>2</sub> avoided through the recycling of scrap

6.1

(million tonnes)

## Key developments in 2015

### Improving recycling

Making a tonne of steel from scrap in an electric arc furnace avoids the emission of 1.29 tonnes of CO<sub>2</sub>, since it removes the use of coke and uses less energy. But availability, quality and price are all issues: scrap is in short supply which puts pressure on the quality and competitiveness of the scrap supply versus iron ore. So at the moment, we need to use scrap where it makes most technical sense – where its impurities from other materials in the recycled scrap are easily accommodated – typically in construction and infrastructure products. In 2015 we used 28.1 million tonnes of scrap, avoiding nearly 37 million tonnes CO<sub>2</sub>. This represents a slight reduction on previous years, resulting from a drop in our production from electric arc furnaces, which we consider to be caused by the slowdown in the construction industry. Overall, however, some 30% of our crude steel globally is still produced from scrap.

In the longer term, as more steel comes to the end of its useful life and more and more scrap is available, we need to ensure not only that its quality is better, but also that we increase our capacity to recycle scrap in our production processes. We're working with several customers, industry groups and universities on these issues. For example, we're helping to create an authoritative source of data on steel stocks, and recovery and recycling rates across the world, and we're working to improve the quality of the scrap recovered from vehicles by dismantling cars before they are shredded. This work will help us identify where there are obstacles to improving scrap supplies, what these are, and where there is the greatest potential for us to create value.

### Re-using by-products

We re-use the by-products of steel wherever we can in our own processes, and we have a dedicated R&D team that uses a proprietary tool called ROMEO to assess the value of different ways to do this, both in terms of cost savings and environmental impact. Since we launched ROMEO in 2009, it's been used in about 20 different technical projects, with around \$40 million of cost savings. In 2015 it was used at Belval, Luxembourg, to evaluate the re-use of dust and sludges in the electric arc furnace; at Bremen, Germany, for a slag re-use project; and at Fos, France, to consider the value of treating several by-products using rotary hearth furnace

technology. There are new projects planned for 2016 at Differdange, Luxembourg, and Dunkerque, France.

If we can't find a use for them, we sell our by-products to other sectors. Slag has long been used as a component for roadstone, and in the building industry. In agriculture, we know it's making a significant impact on crop yields and in 2015 we measured this in [Ukraine](#). Although there was a fall in demand for blast-furnace slag from the cement industry in 2015, all in all we ensured nearly 16 million tonnes was re-used and recycled, including 8 million tonnes of it to the cement industry, which avoided 6 million tonnes CO<sub>2</sub> alone.

CO<sub>2</sub> avoided through the reuse of slag in the cement industry

**6.1**  
(million tonnes)

## Circular economy

The concept of a circular economy rests on retaining the value of resources in the economy, rather than discarding them. So for us, it's about finding ways to re-use everything – not just our steel products but also our by-products like waste gases and slag.

During 2015 we set up a working group to look at the circular economy, which will go beyond recycling and re-using by-products to take a wider perspective on the commercial opportunities on offer, and what stakeholders are expecting from us in this area.

We were very pleased to be ranked ninth out of 52 in the league table of companies assessed by the Dutch Association of Investors for Sustainable Development (VBDO) in its [2015 study](#) on the circular economy, Benchmark of Circular Business Practices. They cited our track record on recycling, as well as our investment in lifecycle analysis and our dedicated R&D team working on the re-use of residues from the steelmaking process.

Our partner in the project to convert waste gas into fuels, [LanzaTech](#), won the Circular Economy Entrepreneur award at The [Circulars](#), the world's leading circular economy awards programme.

## Performance at a glance

Metric	Unit	2015	2014	Management comment	Status
Scrap recycled	million tonnes	28	31	Decrease appears to be due to reduced electric arc furnace production, resulting from the slowdown in the construction industry	✗
CO <sub>2</sub> avoided from scrap recycling	million tonnes	37	40		✗
Production residues and by-products re-use (steel)	%	79	81	Reduction is due to the fall in market demand from cement industry for slag.	✗
Production residues and by-products re-use (mining)	%	10	10	No change	○
BF Slag re-used	million tonnes	16	18	Reduction is due to the fall in market demand from cement industry for blast furnace slag.	✗
– of which BF slag sold to cement	million tonnes	8	11		✗
CO <sub>2</sub> avoided from slag used in cement	million tonnes	6	8		✗

Key: ● met target/improved; ○ progress neutral ✗ did not meet target/deteriorated

## Fertile thinking: farmers benefiting from steel slag

As a major by-product of our industry, slag has long been sold by steelmakers for use in construction, but its use in agriculture has been less well known. In Ukraine, we have been researching its value to farmers to improve soil properties and crop yield.

One of the main reasons why farmers need fertiliser is to reduce the amount of acidity in the soil.



It might seem counter-intuitive, but steel slag has exactly the right chemical composition to do this. Slag has been used in agriculture for some time, notably in the USA, Germany, and France, and it has proved both effective and cost-efficient. Now, technicians at our Kryvyi Rih site in Ukraine have been exploring new ways to sell slag as a fertiliser or soil improver.

The first thing we needed to do was to build a good understanding of what properties farmers are looking for. This enabled us to ensure that the slag we deliver has the best possible combination of minerals, such as calcium oxide, phosphate, magnesium and sulphur – these trace elements support plant growth.

An external research study in Ukraine in 2015 looked at field trials using slag. It showed that corn, beetroot, barley and sunflowers harvests were 230% higher. Importantly, the study also demonstrated that slag represents no threat to the natural fauna and flora.

“More widespread use of steelmaking slag in agricultural applications will allow society to solve several important issues at once,” explains Evgeniy Shidlovskiy, chief technical officer at ArcelorMittal Kryvyi Rih. “It will allow us to eliminate substantial steelmaking wastes, and will allow farmers to optimise the pH levels in their soil, cut costs and improve their harvests.”

Given the importance of agriculture to the Ukrainian economy, this is a win-win for everyone.

**More widespread use of steelmaking slag in agricultural applications will allow society to solve several important issues at once.**

**Evgeniy Shidlovskiy**

Chief technical officer at ArcelorMittal Kryvyi Rih

# Trusted user of air, land and water



## The outcome we need

We want our stakeholders to trust us to share the vital resources of air, land and water because we operate responsibly and transparently, demonstrate that we understand and want to improve our environmental impacts and work in collaboration with partners and local communities to protect and enhance the natural resources we all rely on.

## Why this is important for ArcelorMittal

### Growing expectations

Our neighbours are acutely sensitive to changes in the quality of the resources that we share with them. Mining sites cover large tracts of land, and need a lot of restoration work after a mine closes. Steelmaking requires large amounts of water, though this shouldn't have negative impacts where water availability is high, and the quality of the water discharged is managed appropriately. Other aspects that need constant management include dust, noise, vibration, and the risk of soil pollution.

We are operating in the context of a rising world population and increasing demands on the planet's finite natural resources. 'Natural capital' as it's often now called is a key focus of the new UN Sustainable Development Goals. Regulators, customers, investors and other groups all expect much more information about exactly what companies' emissions and impacts are, and are demanding ever higher standards. A case in point is the [Industrial Emissions Directive](#) in Europe, which aims to protect the environment through advocating the use of [best available techniques](#) in industry. There has also been new legislation on biodiversity in France, and changes to the Forest Code in Brazil.

It's important we get these things right, because when we don't, our business is disrupted, our reputation damaged, and our licence to operate threatened. On the other hand, making sure we do get it right is

increasingly important to our customers. Company procurement policies now include more stringent sustainability criteria, and we are seeing a growth in the number of product certification schemes that audit a company's responsible management of resources.

## A challenge and an opportunity

Biodiversity is an issue for us across the whole business, but especially in mining. Some of our mining sites are in sensitive and protected areas, like the Liberian rainforest or the Arctic tundra of Baffinland, while steel mills are often in urban areas. Some of our steel sites are very large, but only use a small proportion of that land for our operations. Some 55% of our 3,367 hectares in Tubarão, Brazil, for example, and 22% of Dunkerque, France's 450 acres, are devoted to green spaces. In some countries the issue is the vast number of local endangered species (as in Liberia), while in others there are fewer species but these are internationally important (as with polar bears and narwhals in Baffinland). If we damage rich and pristine natural landscapes, we will rightly face criticism, especially in environmentally-sensitive areas.

We're increasingly finding that international bodies are looking to companies like ArcelorMittal to set and observe high environmental standards in emerging countries where these issues are not high on the national agenda. This is yet another example of a sustainability challenge that is also an opportunity: to demonstrate our support for local stakeholders' interests, contribute valuable scientific insights, and improve our relations with governments and regulators in a tangible way. Our biodiversity work in Liberia and our Sustain our Great Lakes programme in [North America](#) are great examples of this.

## Developing our stakeholders' trust

Certification schemes for our products are one way that is available to us to demonstrate that we are using resources responsibly; we also need to build trust in more informal ways, by showing people that we understand the emissions we make, and that we're doing everything we can to minimise them. Whenever we develop a new mine or steel plant, we carry out detailed environmental impact assessments beforehand, and establish an environmental management plan. This covers both the operational life of the site, and what will happen to the land when the site eventually closes. 98% of our steel operations comply with the environmental management standard ISO 14001, and we're working towards that in mining too.

Honest, transparent, two-way communication is a big part of that, and the only real way to build long-term trust. We monitor our use of air, land and water at all our production sites, and we publish information on this in line with Global Reporting Initiative guidelines on our website, and in our local sustainable development reports. It's also important that we work alongside our communities, NGOs and other groups to protect the natural habitats we all depend on.

**This outcome is sponsored at group level by Karl Buttiens, who has worked on environmental aspects of our operations for more than 20 years, and is the head of environment across ArcelorMittal.**



## Key developments in 2015

### Air

#### Investing in technology

Air quality is one of the most immediate issues for our local communities, so it has always been a major priority for us. After an extensive investment programme, our dust emissions per tonne of steel have steadily fallen since 2010, but in 2015 we saw a slight increase again. This is partly due to the increase in the share of blast furnace production last year, and partly because those new de-dusting facilities installed in 2015 have yet to impact on the yearly data. Overall the reduction since 2010 is nonetheless 21%. We observe a similar evolution for NO<sub>x</sub> and SO<sub>x</sub>: a reduction of 11% and 24% respectively over the same period. During 2015, we allocated over \$99 million to further air-related environmental improvement projects and we expect our emissions to improve further in the coming years.

We are planning the installation of a significant project to improve dust controls at the Zenica plant in Bosnia & Herzegovina, using the best available technology. Meanwhile our R&D team is working with a number of partners to test new filter technologies which could reduce both dust and other emissions, such as SO<sub>x</sub> and NO<sub>x</sub>, and we have small-scale pilot projects under way at our sinter plants in Gijón, Spain, and Dunkerque, France.

#### Stakeholder trust

Being open with our stakeholders about this issue is key. In Ukraine, for example, we display real-time air emissions in a digital display outside our Kryvyi Rih steel mill. Over recent years we have learned how important it is to listen and respond honestly and constructively, and how much progress can be made if we do. Even where we've invested heavily in solutions to limit our emissions, or our plants are not the main cause of air quality problems, people will only believe that if they trust what we say. You can read more about the benefits of this approach in the case study on [Ostrava](#).

There's more on our approach to air quality on [our website](#).

### Land

#### Shared value on our sites

In 2015 we set up a network across our sites to discuss issues relating to natural capital for our operations. These issues are not new to us, but we are redoubling our efforts to address them in the face of increasing regulations designed to protect these vital habitats. We want to look at ways to combine our commercial and sustainability objectives through the 'greening' of our sites: in Tubarão, Brazil, for example, we've planted more than a million trees, and this green belt has helped reduce dust emissions. Here we have also helped the local community to cultivate fish and make honey on our non-production land. This helps maintain the livelihoods of people in rural areas and contributes to improving relations with local communities.

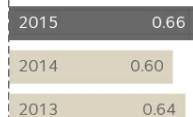
#### Conserving natural capital

We continued to invest in the Baffinland Mary River Project, which is located in the Canadian Arctic. Stewardship for the surrounding natural environment has been and will continue to be a priority for the project, given the sensitivity of the region. A huge amount of environmental assessment work was done before the project began, in conjunction with people locally, and we are continuing to carry out extensive stakeholder consultations. Our mining operation in Liberia is also in an environmentally-sensitive region, and we are funding major biodiversity projects as part of our investment in the local area, so we can make a positive impact and compensate for the loss of biodiversity resulting from mining operations. There is more detail on both Liberia and Baffinland in our [Mining](#) segment report.

#### Dust emissions

# 0.66

(kg per tonne of steel)



#### NO<sub>x</sub> emissions

# 1.18

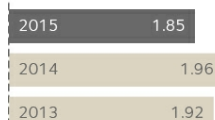
(kg per tonne of steel)



#### SO<sub>x</sub> emissions

# 1.85

(kg per tonne of steel)



## Managing our tailings dams

The rupture of the tailings dam at Samarco mine in Brazil, owned by Vale and BHP Billiton, was one of the biggest environmental disasters for the mining industry in many years. In mining, tailings are the residues left over when ore has been processed, and dams are constructed to ensure the waste remains stable. In 2012, we commissioned an independent structural assessment of our own tailings dams, and by 2014 these had been carried out in Ukraine, the USA, Mexico, Brazil, Kazakhstan, Canada, and Bosnia. Last year, we commissioned follow-up third-party audits in Mexico, Brazil, Kazakhstan and Ukraine, and as a result we allocated over \$44 million in investments to improve our management of tailings in those countries. New audits in Canada and the USA will follow in 2016. As a result of this work we have established a new corporate standard for how we monitor these dams, and a task force to ensure that we follow up these audits with the right actions to ensure the dams' continued stability.

There's more on our approach to land management on [our website](#).

## Water

We have two water-related issues: the amount of water we use and how we reduce it; and how we manage our wastewater, so it doesn't cause a problem with pollution.

### Reducing the amount we consume

Water resources under strain can take different forms. Whilst in some parts of the world we must respond to excessive water supplies – Liberia, for example, frequently suffers floods – in others a lack of water is the pressing issue. Brazil has had a severe drought since 2013, and in 2015 we had to respond quickly to a severe water shortage at Tubarão, and managed to cut water use by 30% in just 15 days. There's more on this in the [Brazil](#) segment section.

Where water resources might come under strain, steel plants are designed not to rely on groundwater or municipal water sources. In fact, the water we withdrew from groundwater sources made up just 0.4% of our water intake in 2015. Steel plants are also designed to treat and recycle water – often thousands of times, so that actual volumes used are far higher than those withdrawn.

Where the availability of water is not an issue, such as around the Great Lakes, our water withdrawal is much higher since the steel plants located there are not designed to recycle water. These figures influence our data at global level, and so our consolidated water data does not give a meaningful picture of how well we manage water as a scarce resource. 2015 is a case in point. Due to an increase in extraction at our NAFTA sites on the Great Lakes, our water intake across all sites in 2015 increased 3% over the previous year, to 24 cubic metres per tonne of steel produced.

Most of the water we withdraw is also discharged, and only a small amount is lost to evaporation: our net consumption of water in 2015, across the world, was 5.1 cubic metres per tonne. We've disclosed information on our water use to the Carbon Disclosure Project since 2010, and our local sustainable development reports give more specific detail at local level.

We need a lot of water, but it doesn't have to be of drinkable standard. So we are also looking at alternative sources, such as seawater, rainwater, and the re-use of wastewater from local water treatment plants.

### Treating wastewater

The regulations governing the quality of discharge water are becoming stricter, and we need to ensure we comply. The best ways to do that are to use less water in the first place, to monitor its quality, and to find

more environmentally-friendly ways to deal with the discharge.

In steelmaking, we use water for cooling and cleaning, and the wastewater that's generated must be treated before discharge because of the pollutants it contains. In many plants we recycle water numerous times in our processes, and so it is typically treated numerous times too to avoid corrosion of our equipment. This means that when we discharge it, it may actually be cleaner than when we first extracted it. We also use a lot of water to dampen down dust in mining.

The environmental team at our global R&D centre in Asturias, Spain, has been looking at a number of different approaches to treating pollutants in the waste water from our blast furnaces, assessing and testing them from a technical, economic, environmental, and safety perspective. As a result, we've now developed two new processes that both cut the costs of wastewater treatment and reduce the use of hazardous chemicals in the process.

There's more on our approach to water on [our website](#).

## Performance at a glance

Metric	Unit	2015	2014	Management comment	Status
Environmental and energy capital expenditure	\$m	176	375	In line with reduction in capex given difficult operating context	✗
Industrial operations certified to ISO 14001 (steel only)	%	98	98	3 steel sites remain to be certified	○
Air (see note)					
Dust emissions (steel)	kg/tonne of steel	0.66	0.62	Increase due to increased share of production from blast furnaces. Improvements expected following environmental investments.	✗
NO <sub>x</sub> (steel)	kg/tonne of steel	1.18	1.15	Due to the quality of raw materials (mainly at sinter plants)	✗
SO <sub>x</sub> (steel)	kg/tonne of steel	1.85	1.96	Reduction largely due to improvement in sulphur content of raw materials used in sinter plants	●
Total dust emissions (mining)	thousand tonnes	5.1	5.3	Reduction in line with reduced mining production	●
Total NO <sub>x</sub> (mining)	thousand tonnes	16	17		●
Total SO <sub>x</sub> (mining)	thousand tonnes	9	13		●
Land					
Production residues to landfill/waste (steel)	%	8	6	Increase due to reduced market demand for slag	✗
Production residues to landfill/waste (mining)	%	36	33	Increase mainly due to start of Mary River production	✗
Water					

Metric	Unit	2015	2014	Management comment	Status
Water intake (steel)	m <sup>3</sup> water per tonne of steel	24.0	23.3	Increase largely due to higher water withdrawal from the Great Lakes by our NAFTA sites. NB Groundwater withdrawal makes up 0.4% of our global water intake and fell 33% in 2015.	<input type="radio"/>
Water net consumption (steel)	m <sup>3</sup> water per tonne of steel	5.1	4.7		<input type="radio"/>

Key:  met target/improved;  progress neutral;  did not meet target/deteriorated

Note: ArcelorMittal reports dust, NO<sub>x</sub> and SO<sub>x</sub> emissions per tonne of steel produced as a more meaningful indicator than the absolute volumes generated.

## Getting on the front foot in Ostrava: dealing with dust

Our steel plant in Ostrava, in the Czech Republic, is a major source of employment for the local area. In the past it was also one of the major contributors of dust emissions in the city, and our reputation with local stakeholders suffered greatly as a result.

By 2012, the steel plant was compliant with EU regulations, but ArcelorMittal committed to going further.



We began a focused and wide-reaching programme of stakeholder engagement, strengthening our relations with local residents, experts and government. In 2014, we began an extensive investment programme worth in excess of CZK3 billion (\$130 million) with generous support from the European Union. Once complete in 2016, this investment will bring our air emissions far below EU limits.

As part of this programme, no less than 13 environmental projects in 2015 applied state-of-the-art de-dusting technology to every part of the steelmaking process there, meaning that overall dust emissions – both those ducted through our flues and diffuse dust – will fall by around 500 tonnes a year. The site emitted 0.3kg of dust for each tonne of steel it produced in 2015, compared to our global average of 0.66kg/t.

As part of our stakeholder engagement in recent years, we also joined a group of experts to understand the broader problem of air quality in Ostrava and the role of the steel industry within it. In October 2015, a three-year 'fingerprint' study of the sources of air pollution for local residents, led by the Ostrava Public Health Authority, was published, with the support of the Environment Operation Program and the Regional Authority of the Moravian-Silesian region. The predominant sources of pollution, making up 80% of pollution for residents, were found to be the transport system, adjacent countries, and in winter the local heating system. Only around 10% of local pollution comes from the metals industry of Ostrava.

At the end of 2015 our work was acknowledged by an award from the Czech Ministry of Industry And Trade, for the significant improvements we had made to our environmental footprint. This was important recognition for us. But we know how vital it is to retain the trust of the local community, and this is something we continue to work on.

# Responsible energy user that helps create a lower-carbon future



## The outcome we need

We want our stakeholders to trust that we are making a positive contribution to a lower-carbon future by cutting our energy use and carbon emissions, and developing innovative new products that help our customers and other industries do the same.

## Why this is important for ArcelorMittal

The world's efforts to tackle climate change took an important step forward in December 2015, with the COP21 agreement signed in Paris. Secretary-General Ban Ki-Moon has emphasised that business has a leading contribution to make. As in other industrial sectors, the steel sector recognises the need to reduce its carbon footprint – whatever its size. But importantly, we must also continue to enable our customers to cut their own emissions through our product innovations and encourage end-users to buy products which are 100% recyclable at the end of their useful life – something that steel can firmly offer. It is clear that public policy needs to create the economic incentives to do all of this.

## Steel's contribution to a lower-carbon world

Steel can offer a lot to a low-carbon world. It's not just that less CO<sub>2</sub> is emitted in its production than alternative materials such as aluminium; it's not only that it is infinitely recyclable unlike concrete; nor even simply that steel is used in the safe, efficient, durable everyday products that modern life demands. Today's specialist steels are providing the solutions that make everything from construction to cars more carbon-efficient. Our electrical steels, for example, improve the efficiency of electric vehicles, and our high strength steels mean less is needed – making vehicles more fuel-efficient and buildings less carbon-intensive. So a critical advantage of steel is that, over its entire lifecycle, less CO<sub>2</sub> is emitted than with other materials, such as concrete and aluminium<sup>1</sup>.

When we produce a tonne of steel in a blast furnace, it's not just the metal product that we create, but also energy, heat and solid by-products for the local economy. Some of these are re-used within our steel mills; others are exported –such as slag for making concrete and roads, and heating for local communities. We're not only a massive consumer of energy and resources, but we also recover and generate huge amounts too, as we explain below.

<sup>1</sup> See, for example, the [results](#) of an LCA study of road bridges by Beco (part of Ernst & Young)

## Steel's carbon challenge

Making substantial reductions in the CO<sub>2</sub> emitted during steel's production is a very real challenge for the industry, since the coking coal used in steelmaking isn't burned simply for energy: it is used to create a chemical reaction to reduce iron ore, and this process creates both carbon monoxide and carbon dioxide. Primary steel simply can't be made without coke. Developing truly transformational technology to reduce carbon emissions from this part of the steelmaking process – by switching to reductants other than coke – is both hugely difficult and costly. Nor will it significantly reduce the CO<sub>2</sub> intensity of steel, since it involves losses both in energy efficiency and by-products recovery. So the creation of CO<sub>2</sub> will continue to be an integral aspect of steelmaking in the future: what we are focussing our research on is how to avoid this CO<sub>2</sub> being emitted. Carbon capture and storage has not proved to be as feasible as people had hoped, but there are new ideas coming through now, where we still capture the carbon and use it to create useful products like plastics and aviation fuel.

Given the importance of this outcome for our future, we have two co-sponsors who are championing it at group level – Armelle Jouet, head of energy in our chief technology office, and Carl de Mare, vice-president of emerging technology development.

## Key developments in 2015

We have two important challenges: firstly, to improve the energy and carbon performance of the steelmaking process; and secondly, to communicate better about what kind of public policy frameworks we need to make such carbon reductions in the steel industry feasible. Both were key areas for 2015 and will continue to be in 2016.

### Improving our energy and carbon performance

Together with the industry as a whole, we have worked hard to improve the carbon performance of our steel plants. Having established a target in 2007 to cut our emissions by 8% for each tonne of steel by 2020, we have put huge efforts and investment into reducing carbon through our energy use, and into researching new technologies.

## Energy management

In practical terms, we continue to make our processes more energy efficient, and have R&D experts in every region dedicated to finding new ways to save energy – for example by finding the best ways to re-use our waste gases. Combining energy management systems with detailed plant-by-plant audits and site-level energy champions, we identify new ideas that can be shared by all our steel plants, especially opportunities to save energy at low or zero upfront cost. We involve our employees in these efforts, drawing on their direct experience on the shop floor.

In 2015 we undertook a number of projects that will improve the energy efficiency of our processes. For example, we introduced projects at our Gijón site in Spain and at Zenica in Bosnia & Herzegovina to optimise the use of our blast furnace gases, which should avoid the emission of 180,000 tonnes of CO<sub>2</sub> per year. Most of our European steelmaking sites are certified to the ISO50001 energy management standard, and we're extending this to the Americas. There's more detail on our energy achievements in the [regional](#) segment reports.

We try to capture energy where it could otherwise be wasted. In 2015, whilst we consumed 2,205 million gigajoules (GJ) of primary energy, we recovered 25% of this through the reuse of our waste gases internally and exported 29,000GJ as heat, steam or electricity. A good example is at our plant in Tubarão in Brazil, which in 2015 generated 2,850 GWh electricity from its waste gases. This was enough both for its own consumption and to export 332 GWh to the grid –supplying the equivalent of about 150,000 homes a year.

## Renewable energy

We're also investing in generating renewable energy. In Karnataka, India, we're seeking permission for a solar power plant of up to 600MW, which would be our biggest renewable energy installation to date, and would also generate vital power for the surrounding region. To date we only have a small number of renewable energy installations on our sites, due to the constant load required at our steel plants. In 2015, we consumed 5,235GJ of electricity from renewable sources across our sites.

We have a state-of-the-art R&D facility at Maizières, France, where we run a low-impact steelmaking programme in collaboration with a number of leading research institutes, and with the support of the French Agency for Environment and Energy Mastering. As part of this programme, in 2015 we opened an advanced new testing plant at Dunkerque, France, alongside our existing steel plant.

This new test plant is unlike any other in the world. It's exploring how to use a high-temperature gas, made from the waste gases we already generate in the steelmaking process, within the blast furnace infrastructure. The prize could be very substantial: it could turn a waste by-product into a partial replacement for coal, and at the same time create new ways to optimise the energy and electricity balance of our plants. But we are far from achieving a realistic industrial solution, and we are at very early stages, so neither its scalability nor its success can be guaranteed.

## Re-using CO<sub>2</sub>

Other aspects of our low-impact steelmaking programme include a means of converting our waste carbon gases into products such as methanol, ethanol, acetate, as well as the possibility of injecting CO<sub>2</sub> into minerals to create products for the construction industry. We are exploring ideas like these through our partnership with [LanzaTech](#). We will review progress of the whole low-impact steelmaking programme by the end of 2016, in order to determine its future direction.

## CO<sub>2</sub> performance

The CO<sub>2</sub> intensity of our steel is influenced by a combination of factors, some of which are outlined above. In

Energy intensity

23.9

(GJ per tonne of steel)

2015	23.9
2014	23.8
2013	23.7



the end, however, the most significant influence is the share of our steel production from the blast furnace (BF) route vs the electric arc furnace (EAF) route. The EAF route is focused on long products, often destined for the construction industry, while the BF route is often integrated in large scale steel plants that make flat steels for use in automotives, appliances and other end-user products. Last year, due to the slowdown in the construction market, we made less EAF and more BF steel and as a result – despite improvements in the carbon efficiency of many BF plants – we saw our average emissions per tonne of steel increase slightly to 2.14 tonnes CO<sub>2</sub>. If we look at the steel plants we operated in 2007 and still operate today, the carbon intensity of the steel we make in those plants has followed a downward trajectory. In this way, we have achieved a 4.5% reduction in CO<sub>2</sub>/tonne steel since 2007, and are on track to meet our target of 8% by 2020. In 2016 we are developing a low-carbon roadmap – [see towards a carbon strategy](#).

Our entire carbon footprint in 2015 across our steel and mining operations was 205 million tonnes. This is made up of our Scope 1, 2 and 3 emissions in accordance with Worldsteel Association methodology\*.

Further information about how we calculate our carbon intensity, our carbon target, and our CO<sub>2</sub> footprint by scope 1, 2 and 3, see our [Basis of Reporting](#).

CO<sub>2</sub> emissions  
(steel and mining)  
**205**  
(million tonnes)

2015	205
2014	203
2013	203

\*See Worldsteel CO<sub>2</sub> Emissions Data Collection, User Guide, Version 7 available [here](#).

## Building optimum public policy frameworks

Breakthrough technologies may hold some promising ideas, but they are in the very early stages. Their development and implementation can take more than a decade, and their adoption will only become a reality if the economics are right. The challenge is not only technical; it is also about having the right policies to ensure the technology is commercially viable. For policy frameworks to really work for climate change and economic growth, they need to facilitate rather than hamper industry's contribution. We don't believe that emerging policies in Europe will be able to do this.

## Global not regional

For public policy to help drive a reduction in CO<sub>2</sub> from steel production, we need a reliable carbon pricing system that is globally consistent and free from extensive regional variation. A regional price will not reduce global carbon emissions since the market will go to where the steel is cheaper, and so steel will simply be imported from other countries that apply a lower price on carbon – a process that is known among climate experts as ‘carbon leakage’. What the world needs is carbon reduction, not carbon leakage: this is, and will continue to be, our message to policy makers.

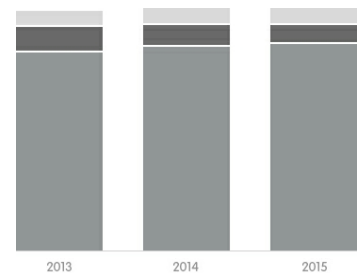
## Working with stakeholders

In order to get public policy frameworks working to deliver substantial carbon reductions from the steel industry, it’s clear that there is a lot more to do to ensure our stakeholders have a full understanding of what’s involved, and that there is a balanced and objective debate. We need to move away from the defensive stance that’s often been taken in the past, to a more positive approach. We need to focus on what we can contribute through our products, and our innovation, and through what we can offer to the policy debate. We need to learn from other industries, such as renewable energy, what alternative policy instruments other than a price on carbon could be used to finance the decarbonisation of an industry. We think this approach will create more constructive discussions and we’ll be able to achieve more in the long run.

In the run up to the COP21 climate change convention in Paris, we talked to investors, governments, and NGOs about the reality of steel’s carbon story, rather than the misconceptions, and our Chairman and CEO also wrote to key global investors on the subject.

## Towards a carbon strategy

Since the end of the convention, our COP21 working group has been making plans for 2016. There are three key actions here. The first is to continue to talk and listen to our stakeholders about steel’s role in the low-carbon agenda and to ensure a balanced understanding of the issues at stake. The second is to draft a low-carbon roadmap for steel, identifying areas where CO<sub>2</sub> emissions could be cut, using both existing and new technology. At the same time, the right regulatory frameworks need to be developed to support each step of the way. And finally, we will continue to publish more information about how we use, emit, re-use, and avoid carbon, as we shift to an ongoing narrative approach for our sustainable development reporting on our website in 2016.



Million tonnes CO <sub>2</sub> e	2013	2014	2015
● Scope 1	169	174	176
● Scope 2	21	17	16
● Scope 3	13	15	13

## Performance at a glance

Metric	Unit	2015	2014	Management comment	Status
Primary energy consumption (steel) *	million GJ (PJ)	2,205	2,221	Despite fall in the share of electric arc furnace production, total energy consumed fell due to energy efficiency improvements, as well as decrease in total steel produced.	●
Energy intensity (steel)	GJ/t liquid steel	23.9	23.8	Reduction represents real energy efficiency improvements, especially in NAFTA.	✘
Total CO <sub>2</sub> e emissions (steel and mining)	million tonnes	205	203	Changes this year are primarily due to the increase in blast furnace and fall in electric arc production, following the slowdown in the construction sector. Energy efficiency achievements are more easily seen in the energy data.	✘
Scope 1 CO <sub>2</sub> e (steel and mining)	million tonnes	176	174		✘
Scope 2 CO <sub>2</sub> e (steel and mining)	million tonnes	16	17		●
Scope 3 CO <sub>2</sub> e (steel and mining)	million tonnes	13	15		●
Total CO <sub>2</sub> e emissions (steel)*	million tonnes	198	195		✘
Total CO <sub>2</sub> e emissions (mining)	million tonnes	7	8	This is in line with fall in mining production.	●
CO <sub>2</sub> emissions per tonne*	tonnes CO <sub>2</sub> per tonne of steel	2.14	2.09	Actual carbon intensity increased due to the higher share of blast furnace production.	✘

Key: ● met target/improved; ○ no progress made; ✘ did not meet target/deteriorated

\* denotes this data was assured by [Deloitte Audit](#).

## Towards a circular economy breakthrough: Our partnership with LanzaTech

This is a partnership to build the first plant in Europe to use the waste gases from steelmaking to produce ethanol on a commercial basis. This fuel generates 84% fewer greenhouse gas emissions than fossil fuels, and the plant will produce enough every year to run half a million cars. Every tonne of ethanol produced will reduce overall CO<sub>2</sub> emissions by 2.3 tonnes and displace eight barrels (1 tonne) of gasoline.



The chemistry behind it is simple: steelmaking produces carbon monoxide as a waste gas, which is usually burned off, and CO<sub>2</sub> is produced as a result. Finding uses for this waste gas, however, is much more of a challenge. Most steel plants use it to heat and power the production process, but where that doesn't use all of it, the rest is burned off. LanzaTech's pioneering new technology can recycle those waste gases and turn them into ethanol. This breakthrough recently earned LanzaTech the US Environmental Protection Agency's Presidential Green Chemistry Award, the top award of its kind in the country and a Circular Economy award at the World Environmental Forum.

Construction of the €87 million flagship pilot project, which will be at our steelmaking site in Ghent, Belgium, has commenced and will start operations by 2017. It is too early to know whether this will prove successful on a commercial and scalable basis, but we are excited to be partnering with LanzaTech on this project.

# Supply chains that our customers trust



## The outcome we need

We want our customers to trust that we live up to their standards, both in our own steel and mining business, and in our supply chain.

## Why this is important for ArcelorMittal

This outcome is both a sustainability challenge, and a commercial opportunity. It's a challenge because supply chains are getting far more complex, whilst both customers and consumers are asking for more information about where products are sourced and how they're made. New certification standards are evolving to help meet this need, and more of our customers are including social and environmental measures in their procurement criteria. We're also seeing more customers undertaking lifecycle analyses to verify what their suppliers tell them, and to meet standards for their own customers. We see this as a sign that sustainable development is becoming far more than lip service across our markets, and will increasingly become the basis of added value for our products.

## More rigorous standards

Increasing stakeholder expectations and the tightening of legislation, with new measures such as the UK Modern Slavery Act, and the EU's conflict minerals legislation, are having an impact on supply chains, especially on the sourcing of raw materials. Companies can now be held to account – whether legally or in the court of public opinion – for failings outside their direct control that happen further along their supply chain. These risks must therefore be fully understood, and actively managed.

## Opportunities from certification

Such developments are also an opportunity for us. We can open up new markets by demonstrating to our

customers and other stakeholders that we understand and manage the environmental and social issues in our own and our suppliers' operations; we can enhance our relationships with our customers by addressing their concerns; and we can help improve standards across the whole of our supply chain, which is good for everyone.

For these reasons, we are taking a leading role in creating a global sustainability certification scheme for our steel products, Responsible Steel. And to assure the social and environmental standards in our supply chain, we are also working to develop a certification scheme for the mining industry led by the Initiative for Responsible Mining Assurance.

## Going beyond our Code for Responsible Sourcing

We have had a Code for Responsible Sourcing since 2010. This has helped us communicate our standards to our suppliers, and drive improvements in their systems. But to identify those issues that need deeper exploration, we need to do more. Some of this is down to the sheer scale and complexity of the challenge – we spent more than \$46 billion last year on suppliers across more than 60 countries with very different regulatory frameworks.

We want to be far more proactive – anticipating customers' needs, identifying emerging trends, and taking pre-emptive and positive action to reduce risk and drive up standards. The case of the [tin working group in Indonesia](#) is a great example.

This outcome is about far more than procurement. It is about how we can demonstrate to our customers that we are managing the issues that matter to them, thereby building their trust. [In recognition of this, it is sponsored by Brian Aranha, executive vice president, head of strategy, technology, R&D, commercial coordination and marketing, and global automotive.](#)

## Key developments in 2015

### Cross-functional collaboration

Last year was about preparing the ground for more ambitious work on our supply chain. We established a cross-functional supply chain working group, including representatives from purchasing, environment, compliance, sales, mining and corporate responsibility. This group has been running workshops to take stock of our work to date, identify key environmental and social risks in our supply chain, and plan what we need to do to make significant progress, including learning from what other industries have done.

### Determining our key risks

As a result, we've established that the most significant environmental and social risks in our procurement activities lie in our raw material supply chain. This includes iron ore, solid fuels (largely coking coal), what's known as 'ferroalloys', and base metals such as zinc, tin, aluminium, and nickel. The issues here relate to human rights, ethics and compliance, and environmental impact.

One example of how we are responding to such risks is our direct participation in the [Tin Working Group](#), led by the Dutch NGO IDH (the Sustainable Trade Initiative). This multi-stakeholder group is focused on improving the social and environmental impacts of informal tin mining in Indonesia.

### Progress in certifying our products

During the year we had in-depth and very valuable discussions with some of our key customers to understand what their priorities are, the issues that concern them, and how they see the whole area of product certification evolving.

On the one hand, we saw further pressure to certify our products against a range of standards. We gained certification for our rebar products for the UK market from the Sustainable Constructional Steel scheme run by CARES. And right at the end of the year we heard that the Long Products division of ArcelorMittal Europe had achieved the prestigious BRE Environmental & Sustainability Standard, BES 6001, for its entire portfolio of products, from construction bars to train rails.

On the other hand, our conversations with our customers have reinforced the value of the decision we made to take roles on the steering boards for Responsible Steel and the Initiative for Responsible Mining Assurance. These will give us a platform to help our two industries move towards global sustainability standards.

In the meantime, we are devising a detailed framework of relevant sustainability standards for our own products that would ensure our customers are confident we are addressing their key concerns. We plan to test the new sustainability framework internally in 2016.

## Managing our supply chain

Continuing our usual work with our Code for Responsible Sourcing, we screened all our new suppliers in 2015 against the criteria of the Code, and did more detailed assessments of 424 core and strategic suppliers of raw materials, operating and industrial products, spare parts and land logistics. Of these, 73 flagged up issues that needed action and we are working with the firms concerned to address them. This has involved conversations with suppliers to discuss how they can make improvements in their systems, and already we have seen positive results: some suppliers are working towards certification against the ISO 14001 environmental standard, while some are writing their own policies, and even sharing them with their own suppliers.

Core and strategic suppliers evaluated against our code for responsible sourcing

424



## Performance at a glance

Metric	Unit	2015	2014	Management comment	Status
Global procurement suppliers evaluated against our code for responsible sourcing	Number	424	181	Increase due to broader scope of supplier categories covered	●

Key: ● met target/improved; ○ no progress made; ✕ did not meet target/deteriorated

## Sustainable tin in Indonesia: the value of patience and partnership

Tin has hit the headlines quite a few times in the last few years – it's one of the metals covered by legislation on conflict metals, because much of it has been sourced in the past from the Democratic Republic of Congo or surrounding areas. However, tin is now the focus of our attention for a different reason, this time related to Indonesia, where we buy most of the tin we use to line steel cans for food packaging. So it's a concern for our packaging customers too.



Tin mining is a big part of the Indonesian economy, and the country badly needs both the jobs it provides and the investment in the surrounding community. But it has its issues: Indonesia has a large population of small-scale miners, many of whom work in conditions which are unsafe or environmentally unsustainable. We could have decided to buy our tin somewhere else, but we decided not to, believing that the right approach was to stay in Indonesia and help improve the industry, which could bring sustainable development benefits for local tin mining communities.

We know it's easier to make positive changes when companies and civil society work together, which is why we joined the tin working group led by the IDH sustainable tin [initiative](#). Other members include Tata Steel, Apple, Samsung, Sony, Blackberry, and Philips, as well as industry bodies and Friends of the Earth. The Working Group brings all these organisations together, and it's collaborating with governments, NGOs and the miners themselves to find a better way forward.

The issues here are social, environmental, and economic. They won't be solved overnight and the first steps are simply preparing the ground for change. A major piece of work was done in 2013 to assess the scope of the problems in the industry, and in 2016 we plan to launch a five-year plan for sustainable tin mining. This has taken a long time to achieve, because the issues are complex and relationships needed to be built first. But the long-term results will be better having done it this way, because it means that the leadership and ownership will come from local people.



# Active and welcomed member of the community



## The outcome we need

It is important that we are welcomed as good neighbours that actively engage and listen to local stakeholders, and make a positive contribution to more resilient and thriving communities through both our day-to-day operations and through thoughtful, well-targeted investments.

## Why this is important for ArcelorMittal

The concept of the 'good corporate citizen' is changing. Twenty years ago it was about philanthropy; ten years ago, it was corporate responsibility; now the focus is on social risks, social impact and 'shared value'. We've been actively engaging with our communities – and investing in them – for many years, so what we do has to evolve too.

## Understanding our impacts

The first thing we need to do is understand in detail what our community impacts are, both positive and negative – from land and water use, and air pollution, to taxes paid, and employment provided. The important point here is that our impacts will vary at different stages of a plant's operations, and we need to plan for that. One obvious example is ensuring that a mining site leaves a positive legacy when it finally closes, both in economic and environmental terms.

We also need to think about risk in different ways. Traditional approaches to risk management don't always pick up unforeseen social and other more intangible risks, like human rights issues, though these can have a huge and sometimes overwhelming impact on a company's reputation, assets and licence to operate.

## From investment to shared capital

Our approach to community investment needs to change too. We need to shift from focusing on the money we invest in projects, to looking at our activities in terms of shared social 'capital'. In other words, investments that minimise the negative (like work to reduce dust or noise pollution), and maximise the positive (like the development of local skills and using local suppliers). In the long run, after all, our business will only be resilient and thriving if our communities are too.

## Open and continuous communication

We need to adapt the way we engage with our stakeholders to make sure that we are developing trusted, two-way communication which encourages local stakeholders to tell us their concerns, and gives them confidence that we will listen. We need to do this continuously, not just when an issue arises, and if we make commitments, we need to keep them. There are many good practice guidelines in this area, and our investors and other stakeholders are increasingly insistent that we comply with them.

Across the group we have developed an excellent volunteer work culture that brings our employees and our host communities very close, building trust and friendship. These types of initiatives also enable us to use our skills to serve our communities.

This outcome is sponsored at group level by Bill Steers, general manager for communications and corporate responsibility for North America. He will drive and champion the shift to a more strategic approach to community relations.

## Key developments in 2015

### Creating value

The contribution we made to the 'social capital' of our local communities in 2015 was substantial: we employed 209,000 people across the world, many of them in highly skilled jobs, and often in remote communities where there are very few other employment opportunities. We employed a further 46,000 as contractors. We spent over \$46 billion on procurement, which includes not just large commodity suppliers but thousands of local firms in the 60 countries where we operate. And we paid \$936 million in income and local taxes, supporting public spending and economic growth. In our mining operations alone, we contributed \$73 million in royalties.

Paid in taxes, including income tax, local taxes and royalties

**936**  
(million \$)

### Dealing with stakeholder concerns

Yet our stakeholders have some very real concerns. It's become increasingly clear that it doesn't matter how much money companies spend on community projects if they don't get the basics right: in other words, we need to reduce the negative impacts that have an adverse effect on people's lives and erode their trust in us. The reputation surveys we ran with our stakeholders in eight countries in 2015 reinforced this: people make a clear distinction between community investment and community relations. They value the latter more, and therefore it has more impact on our reputation.

Direct economic contribution via wages and salaries, taxes, supplier payments, and investments

**63,297**  
(million \$)

So in dealing with issues such as community air quality at sites like the Tubarão mine in Brazil, and the Zenica steel plant in Bosnia & Herzegovina, the way we communicate is vital – namely being open about negative issues and our approach to finding a solution. An important practical component here is an effective grievance mechanism that's easy to use, gets prompt responses, and is equally accessible to every member of the community. We published community grievance guidelines in 2015, and we expect our local sustainability reports to include information about how these are being used by the end of 2016.

### Community land use

We are committed to respecting best practice in community land use and protecting indigenous peoples' rights.

This is part of our human rights policy. Our mining activities in Liberia have affected many local people through our use of land, and for this we have set up a resettlement and livelihood restoration programme. To ensure there is independent oversight of the compensation process, and any mediation that might be necessary, we have established a Mine Resettlement Coordination Committee, which includes representatives from our company, local authorities, civil society and local communities. Through our Community Liaison Department, we are talking directly to affected farmers about the company payment system, and helping reduce pressure on them. We have quarterly meetings with the Mine Resettlement Coordination Committee to ensure any grievances are dealt with properly. In 2015, we continued to compensate those affected by our mining activities for the loss of crops and land in Grand Bassa and Nimba Counties.

In addition, we have provided 300 farmers with initiatives to restore their livelihoods on alternative farming land, with demonstration projects and the distribution of improved seed varieties. We have also enabled 145 people to develop both their academic and their vocational skills; supported 100 children with access to education; and launched a literacy and financial numeracy and Village Savings Loan Association benefiting approximately 50 people.

All these initiatives are carried out in partnership with local NGOs, and we believe this will bring greater strength to the transparency and long-term effectiveness of the programme.

## Employee volunteering and community investment

Investing in our communities by supporting local projects is a vital part of our identity wherever we operate. In 2015, we spent a total of \$18.5 million on community projects and science-based education programmes, benefiting a total of 1.1 million livelihoods. There are more details on this in the [segment](#) sections of this report, and in our [local sustainable development reports](#).

Employee volunteering is a great example of shared value: it allows our own people to develop new skills while doing something that matters to them, and it makes a real contribution to local organisations. In 2015, 60 employees took part in our long-standing 'solidarity holidays', working with local employees and other residents on community projects. In the future, we want to focus as much as we can on skills-based volunteering, with sustainability in mind, where our people share their know-how and help develop those skills in other people and for future generations.

## Strengthening community relations

Taking all these issues into account, in 2015 we developed this outcome to focus on strengthening community relations. We looked specifically at our impacts and how we identify and manage them, and how we can do this better, shifting our focus away from project funding and towards the development of social capital and shared value. This outcome covers issues like safe and reliable jobs, community wellbeing, air quality, the criteria for good community consultation, and how we can contribute proactively to local economies.

Livelihoods benefiting from our community investment programmes across 20 countries in 2015

1.1  
(million)

## Performance at a glance

Metric	Unit	2015	2014	Management comment	Status
Total estimated economic contribution	\$ million	63,316	78,839	This reflects the <b>external context</b> of our industry in 2015	<input type="radio"/>
of which:					
Taxes to government	\$ million	936	954	Includes income tax, local taxes and royalties	<input type="radio"/>
Employee salaries, wages and pensions	\$ million	10,880	12,718	Our workforce reduced by 12,000 in 2015	<input type="radio"/>
Supplier and contractor payments	\$ million	46,569	59,062	This proportionate with our overall revenues	<input type="radio"/>
Capital expenditure	\$ million	2,707	3,665	Reduced as part of Action 2020	<input type="radio"/>
Other payments	\$ million	2,224	2,440	Payments to investors and creditors both fell in 2015.	<input type="radio"/>
Community investment spend (including outcome 9)	\$ million	18.5	17.1	More focus on <b>outcome 9</b> in 2015, but maintained overall levels	<input checked="" type="radio"/>
Beneficiaries from community investment projects	million	1.1	0.53	Restructure of community investment programme now established	<input checked="" type="radio"/>
Key: <input checked="" type="radio"/> met target/improved; <input type="radio"/> progress neutral <input checked="" type="radio"/> did not meet target/deteriorated					

## Collaboration on the Great Lakes

In North America, 11 ArcelorMittal facilities are located directly adjacent to the Great Lakes, an area of great natural significance, which supports many habitats and species. For many years, we have worked in various public-private partnerships and spearheaded stakeholder engagement to ensure the Great Lakes region is a global leader in land and water conservation.

Our key partnership is with Sustain Our Great Lakes (SOGL), a consortium of regulatory agencies and government environment services dedicated to the conservation of the region.



We are the sole corporate partner, and have invested \$5.6 million in SOGL since 2008, increasing our investment each year. So far, SOGL as a whole has provided nearly \$55 million in grants, which has been matched by local bodies, meaning that around \$110 million has been invested in total since the partnership began.

Being part of SOGL has created positive and helpful working relationships with a number of stakeholder groups, and ensures we have regular communications with important organisations such as the US Environmental Protection Agency, the US Fish and Wildlife Service, the National Oceanic and Atmospheric Administration and others. By supporting the environmental interests of the Great Lakes region, we are building trust with our stakeholders and demonstrating leadership in tackling the issues that matter to them.

The SOGL model has proved so successful that we've continued to work with SOGL's administrator, the National Fish and Wildlife Foundation, on a more localised model of the programme in the form of the Chi-Cal Rivers Fund. Specific to the Chicago and Calumet regions of Illinois and Indiana, Chi-Cal Rivers Fund has leveraged more than \$11 million in funding in this region since 2013.

Another good example is our Calumet Land Conservation Partnership with the Gaylord and Dorothy Donnelley Foundation. Together, we have invested more than \$1.5 million since 2013 to bring together not-for-profit organisations from Illinois and Indiana to work on land conservation issues around the region.

These partnerships demonstrate how working with others with the same goals achieves so much more than what we could do alone – a principle we follow when managing conservation at our own sites. Our facility in Burns Harbor, Indiana, for example, is adjacent to the Indiana Dunes National Lakeshore, and includes a rare habitat which we have been working to restore since 2011. As part of that, we have been opening our doors to the local community and teaching children about conservation. 'Mighty Acorns', a programme in partnership with the Dunes Environmental Learning Center, The Field Museum and the Shirley Heinze Land Trust, brings students to our site to take part in environmental conservation activities. Projects like these are really important in helping our communities understand how we are contributing to the local area, while bringing environmental thinking to the next generation.

# A pipeline of talented scientists and engineers for tomorrow



## The outcome we need

We need to be building a strong pipeline of talented and well-trained engineers, scientists and technicians, both for our own future and to provide the skills that, as a whole, 21<sup>st</sup> century society needs.

## Why this is important for ArcelorMittal

In the 21<sup>st</sup> century, huge global trends from climate change to the digital revolution are transforming how we live and work, and how business operates. One of the biggest of these is demographic change, and part of that is a significant generational shift: a large proportion of the engineering and technical workforce is moving towards retirement at the very point when the economy needs these skills more than ever. These jobs are well paid and intellectually demanding, but there's a growing shortage of people capable of doing them – the US Department of Commerce estimates that there will be more than 1.2 million unfilled jobs in this area by 2018.

## Adapting to an increasingly complex workplace

Industries like ours, and companies like ours, need qualified people for traditional engineering and technical jobs, and those with skills in new areas like lifecycle analysis, robotics, data analysis, nanotechnologies, circular economics, and 3D metallurgy. Everyone will need to have solid professional skills, but they'll also need to be able to adapt to change, exploit new technology, and thrive in an increasingly complex workplace. To do this well, such skills have to start at school – teachers need to foster creativity, and encourage curiosity.

## Working with schools and universities

This is why science and engineering education and training is the number one long-term priority for our community investment programme across the world. We're supporting schools and colleges with teaching aids and technological support, and we're sponsoring an extraordinary range of technical and maths-based activities,

from science fairs, to quizzes, to summer camps, site visits, and innovation competitions. We're working at university level too, with long-term partnerships with leading academic institutions such as the universities of Stanford and MIT in the USA, Cambridge in the UK, Lausanne in Switzerland, McMaster in Canada, and the China Central University.

## Attracting more women to the industry

We have two aims here: the first is to make a passionate case for careers in steel, both to young people in general, and to young women in particular. Our industry desperately needs a better gender balance, because without it, we're cutting ourselves off from some of the brightest and the best. But we also believe that one of the best ways to help our communities thrive is by helping people to acquire the skills of the future.

Our sponsor to champion this outcome at group level is Daniele Quantin, who heads up human resources at global R&D. She is already developing a strategic approach to this outcome, described below.

## Key developments in 2015

As with a number of other outcomes, we spent 2015 devising the best approach. This is especially important here, because our investment in this area – nearly \$8 million in 2015 – is necessarily for the long term. Our approach has four strands.

### Inspiring future scientists

The first is to inspire and encourage high school students – and especially young women – to take an interest in metallurgy or mining. In Ukraine last year, we provided 16 internships to university teachers to help supplement their theoretical knowledge with practical information about steelmaking, and the potential for rewarding and stimulating careers for their students.

We work to attract young scientists to our industry and test their ability through projects like ArcelorMittal Brazil's hugely successful Environment Award, which reached more than 200,000 students and 7,000 teachers across the country in 2015, and the new 'Le Prix des Innovateurs' that we launched in France.

### Learning by doing

Learning by doing is the second element, for young student scientists – hence the many internships we offer to give students a real taste of what steelmaking is about. For example, in Argentina, students are working on real projects across different departments, developing their own skills while helping us advance. Across all regions, we supported final year engineering students in long-term internships at our sites, giving them the opportunity to experience R&D and other functions at first hand – these are described in our segment reports.

### Twining senior and junior employees

Our third aspect is to 'twin' senior with more junior employees – essentially a more intense version of a mentoring programme. A good example is the schemes now under way at our global R&D facility in Asturias, Spain.

### Supporting external scientists

Lastly, we support scientists in their profession by providing scholarships for talented engineering students as well as laboratory time for research. Within global R&D alone we supported 50 PhD students in 2015, while our operations at Dofasco, Canada, also fund four research chairs at McMaster University.

PhD students sponsored in fields of science and engineering

50

(number)

## New ideas, new technology: interns in Argentina

In Argentina, a group of university students may be the next generation of steelmakers. Our Acindar steelmaking business has nearly a dozen students from the Universidad Tecnológica Nacional working as interns alongside our own R&D team. And 'working' is the right word: this isn't a job-shadowing exercise. The students are assigned to a specific department and given real problems to solve because we believe that their fresh eyes and focus on innovation will help us advance.



In steel production, for example, students are working at our plant on a quality project looking at a completely new way to detect defects in steel billets and how these appear in our rolled products. They have been mentored by steel veteran Luis Dutari, who's been at the steel plant for over 40 years. The students used digital technology and a specially-placed camera to photograph each billet as it rolls off the line, and measure its size and shape to ensure it is perfectly square. Any anomalies are automatically reported to the operator.

It's a great use of new technology, and it's improving quality across the whole range of products produced at the plant. It's also saving money, because the students are able to spot substandard billets at the earliest possible stage.

**After more than 40 years in this company, I feel that my mission is to transfer my knowledge and experience to younger professionals, who are eager to work in the steel industry.**

**Luis Dutari**  
Acindar, Argentina



# Our contribution to society measured, shared and valued



## The outcome we need

We want to be able to show the value of the contribution we make to society, and we need our stakeholders to understand and appreciate it.

## Why this is important for ArcelorMittal

Across the world, companies are increasingly expected to make more than a financial contribution – our stakeholders and communities want us to play a wider role locally, nationally, and internationally. With the adoption of the United Nations Sustainable Development Goals in 2015, conversations between global stakeholders are exploring how we can measure such contributions. Developments in reporting, and concepts such as ‘net positive’ and ‘shared value’, are all pointing towards the same goal.

For all these reasons, it’s vital that we develop better measures of the real long-term value we create through our operations, investments and products.

We’ve made the measurement of our contribution to society a separate outcome, so that it gets the detailed attention it needs. It’s also a key element of the approach to corporate reporting known as integrated reporting, encapsulated in the Integrated Reporting Framework, which covers both the financial and non-financial aspects of a company’s performance. This is gaining ground with investors, and we are taking the first steps towards integrated reporting with this annual review.

That said, measuring such contributions still isn’t easy, and many of the impacts are intangible, but there are also many significant contributions we make which can be evaluated, and which we haven’t yet communicated as well as we could, such as the tax we pay, and the infrastructure we invest in, especially around our mines.

Some of our businesses have already made considerable progress here, demonstrating the value of this kind of measurement and reporting. [South Africa's Factor report](#) is a good example.

This outcome is sponsored at group level by Henk Scheffer, head of group compliance, who is also responsible for coordinating the governance responsibilities of the group in Luxembourg. With these roles, Henk has a good understanding of the expectations of regulators and investors, and so, when it comes to our contributions to society, he is in a good position to oversee the evolution of how we report to these key stakeholders.

## Key developments in 2015

At the end of 2015 we set up a working group for this outcome to develop a consistent approach to assessing what we provide to society, and measuring our contribution. The challenge is to cover not only economic value but social and environmental contributions too, in all the countries we operate in.

### A reporting roadmap

In addition to our sustainability reporting at corporate level, nineteen of our country operations also produce a sustainability report, and we have this year outlined a roadmap for all our reporting to ensure we capture the value that our business creates for all our stakeholders. We have outlined 5 levels of reporting, from level 1 involving the initial steps of data collection and CEO engagement, to level 5, integrated reporting. This year at a group level we are taking a first step towards integrated reporting by updating stakeholders on the strategic importance of sustainable development in this Annual Review, and capturing the contribution we make to society, which we have shown in our [infographic](#). As part of our roadmap, we will also support our country operations to do the same in their national context.

### Focus on contribution, not activity

We want to provide stakeholders with less of a focus on what we did, and more on the contribution we have made – in other words, not inputs but outcomes. This means looking at the context in which we operate, for example, by looking not at the amount of steel we sold to the automotive industry, but how the special qualities of that steel helped reduce the CO<sub>2</sub> emissions from cars; or looking not at how much we paid our suppliers, but what the impacts were on the local economy of these relationships. For every job in steel, for example, there are many more indirect jobs supported in the supply chain. We aim to establish a group-level framework for this outcome in 2016, so that we can research our impacts and publish more data on them at both global and local levels. We have set the direction of travel for our local sustainable development reporting and we expect these reports to include an increasing volume of data on our contributions.

### Reporting on local impact

We have already made some good progress. In 2015, we began researching our second Factor report in South Africa, after the original 2014 report proved very valuable in helping us align our business decisions with the country's development priorities. For example, it mapped where we could contribute more to broad-based economic activity in the country through the development of local suppliers, and helped us to create an effective enterprise development plan. As a result, in 2015, we achieved full marks for enterprise development performance in our BBBEE (broad-based black economic empowerment) score, having received no points in 2014, and the report was featured as an example in the [WBCSD publication](#) on 'social capital decision-making'.

We also produced a [US factbook](#) with detailed information about our social contributions to our employees; and a [European factbook](#), which maps the geographical and market contributions of our steel from European sites.

### Measuring the sustainability value of our products

Another important aspect of this work is to measure the sustainability value of our products. Lifecycle analysis

Of our 19 local sustainability reports aligned with the Global Reporting Initiative

74  
(%)

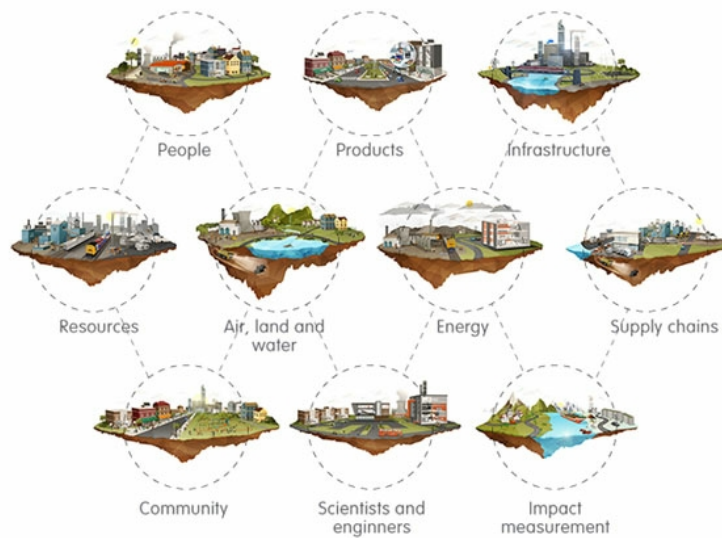
is a strong discipline within our business, and we are part of a circular economy research group at CIRAIG, an international network of lifecycle reference centres. We use this discipline to produce Environmental Product Declarations, as described in [outcome 3](#). For projects within global R&D that could lead to new products or processes, we've also developed a new tool to enable researchers to assess the potential contribution of their project to our 10 outcomes.

At a strategic level, we are taking part in a new Worldsteel Association product sustainability committee which aims to improve the ways in which we communicate the sustainability value of steel. This needs to be about more than environmental value, and for the past 18 months we have hosted a PhD student in our global R&D team to work on a methodology for evaluating the 'social value' of steel. This involves consulting stakeholders about the most important aspects of steel's value chain that should be considered within the scope of social value.

## Performance at a glance

Metric	Unit	2015	2014	Management comment	Status
<a href="#">Reporting roadmap level</a>	Level	4	3	Progress towards value reporting, for example in our <a href="#">infographic</a>	●
<a href="#">Local SD reports</a>	Number	19	20	Owing to local circumstances, Liberia did not report in 2015	✘
<a href="#">Local reports GRI</a>	%	74	55	We expect all reports to align with GRI in 2016	●

Key: ● met target/improved; ○ progress neutral; ✘ did not meet target/deteriorated



All underpinned by  
transparent good governance

Our 10 sustainable development outcomes focus on our material environmental and social trends. They are underpinned by a strong belief in transparent good governance.

## Why this is important for ArcelorMittal

Compliance with regulations is a core responsibility, but this alone is not enough. Organisations today must strive to create a positive culture in which everyone wants and knows how to do the right thing.

### Integrity

What we mean by integrity is summed up in three pillars: being honest and transparent; treating people with dignity and respect; and setting a good example. We expect all our employees to act with integrity in everything they do – from the way they treat colleagues to relationships with external stakeholders like our communities, our suppliers and our customers.

This commitment to integrity is supported by a comprehensive framework of **policies** in areas such as human rights, anti-corruption, and insider dealing, as well as a robust **code of business conduct**.

Our integrity is supported by the strong governance systems we have in place, explained in the **governance** section.

### Human rights

Respect for human rights encompasses a broad range of issues and we know this is an area of considerable interest to both our customers and investors.

Our policy draws from ArcelorMittal's existing policies and procedures, such as those dealing with communities,

security, human resources, procurement, and health, safety and the environment. When it comes to identifying and managing human rights issues, the processes are embedded into the relevant departments – human resources, purchasing, health and safety, security, compliance, environment, and community relations.

The language used to discuss human rights can vary enormously from context to context. We need to ensure such discussions are relevant and accessible to all our employees. This can be a challenge, particularly given the need to work across functions and countries on these issues. This is also true when we are engaging with host governments on human rights issues, and needs to be managed with sensitivity.

Our work on human rights is increasingly driven through the working groups for our individual outcomes, and country dashboard assessments against the 10 outcomes. For example, **outcome 1** covers human rights in relation to our employees, while in **outcome 7** we detail our work on conditions for tin miners in Indonesia.

## Confidential reporting of breaches

Both employees and other stakeholders can report any breaches of our policies and standards via the confidential whistleblowing facility on our corporate website. We also have confidential whistleblowing hotlines in 30 major countries of operation.

In addition, all our sites have a mechanism in place for complaints, disputes and grievances in line with our company standards.

*As our group compliance officer, Henk Scheffer drives the pursuit of transparent good governance across ArcelorMittal.*

## Key developments in 2015

### Ethics and integrity

Whilst four fifths of our employees have completed training in the code of conduct over the past three years, where we see particular compliance risks, we provide focused training. In 2015 we provided workshops in both Ukraine and Kazakhstan.

Our integrity project has been the main focus for us in 2015. Since integrity covers everything we do, everywhere, we've been reviewing the different ways in which we measure this, through stakeholder surveys, compliance reports and so on. The owners of our different policies and stakeholder surveys have been meeting regularly to share their results and identify trends. We are looking at ways to combine these measurements into a single system to monitor these non-financial aspects of the business.

It's important to make sure that we are carrying out due diligence on the recipients of our community investment contributions. So, in 2015, we updated our community contributions procedure, linked to our anti-corruption procedure, as guidance for our employees.

During 2015, there were 175 complaints received relating to alleged fraud, which were referred to and duly reviewed by the Company's Internal Assurance Department. Following review by the Audit & Risk Committee, none of these complaints was found to be significant.

## Human rights

Our human rights policy is based on the United Nations Guiding Principles for Business and Human Rights and is supported by training for all employees. We repeat general training for all employees every three years, and carry out more specific training for employees in areas of higher risk, specifically purchasing and security. In 2015, 81% of our employees were up to date with their training.

Of employees completed code of business conduct training

81

(%)

In 2015 we spent significant time engaging external parties to discuss how we assess risks related to human rights, and how we can act on them. This is an area of evolving good practice, and our continued role in co-chairing the CSR Europe Business and Human Rights Working Group allows us to share experiences and work with peer companies.

At group level, we had planned to complete some country-based human rights risk assessments in 2015, as we had done in 2012 and 2013. Instead, we decided to conduct a comprehensive review of the group's approach to human rights, and explore how we could embed human rights further into our SD outcomes and other processes. This work, coordinated by an external consultant, showed us how much progress we've made in raising understanding of human rights issues across the business, and that we have some of the management tools needed for ongoing due diligence. It also highlighted where we can improve, including how we can better identify social risks at site level, and how our 10 outcomes will support us to observe human rights principles.

In 2016, we'll be reviewing these findings across the different functions of the group and developing an action plan to make sure capitalise on the progress we have made so far, and continue to embed an effective approach to human rights into our business.

## Performance table

Metric	Unit	2015	2014	Management comment	Status
Employees trained on human rights	%	81	76	Active promotion of need for compliance training, in particular to embed a "tone at the top".	●
Employees trained on code of conduct	%	81	76		●
Employees trained on anti-corruption	%	80	82		✘
Operations with a local confidential whistleblowing system	Number	30	30	N/A	N/A

Key: ● met target/improved; ○ progress neutral; ✘ did not meet target/deteriorated

## NAFTA

Our NAFTA business includes flat, long, tubular, tailored blanks and mining operations in the USA, Canada and Mexico, where we employ around 29,000 people.



## Attracting girls, young women and minorities to science and technology careers in the USA

The USA is facing a dramatic disparity between the number of science and technology professionals it needs, and the number coming into the workforce: the Department of Commerce estimates that there will be more than 1.2 million vacancies by 2018.



At the same time, there is a serious gender imbalance in the students choosing careers related to science, technology, engineering and maths (STEM) subjects: only 24% of US engineers are women, and only 18% of those working in advanced manufacturing. Minorities are similarly under-represented, at only 12% of engineers and 15% in advanced manufacturing.

Our Girls and Minorities in STEM initiative, launched in 2014, addresses these gaps for key populations through funding a number of not-for-profit organisations working in this area. The programme began by identifying five organisations in Greater Chicago and Northwest Indiana that are engaging girls and minorities in STEM subjects – each one serving a specific population and age group. In 2015, we selected another two partners to work with.

Key to this programme is its long-term vision: we need to support people from school through to university and beyond. Our investment totals \$635,000 to date, including funding committed for 2016. Partners include the Girl Scouts of Greater Chicago and Northwest Indiana, Project SYNCERE, the Society of Women Engineers, Step Up, Embarc, Chicago Architecture Foundation and the YWCA of Metropolitan Chicago. These organisations supported more than 2,000 young people in the 2014–2015 school year through their programmes.

Nancy L. Wright, chief executive officer of Greater Chicago and Northwest Indiana's Girl Scouts troop, says that the partnership with ArcelorMittal "allows us to provide robust, immersive experiences in science, technology, engineering and math for girls who may not otherwise have these

opportunities. We spark an interest in the girls, who will no doubt become the game-changing workforce we need. We are grateful to ArcelorMittal for supporting our efforts to foster the brilliance of our girls, celebrate their potential, and invest in a better future for all of us.”

We spark an interest in the girls who will no doubt become the game-changing workforce we need.

**Nancy L. Wright**

Chief executive officer, Girl Scouts of Greater Chicago and Northwest Indiana

## Headline performance

Sales

17.3

(US\$ billions)

Ebitda

891

(US\$ millions)

Steel shipments

21.3

(million tonnes)

LTIFR

1.02

(Lost time injury frequency rate)

Number of employees

28,861

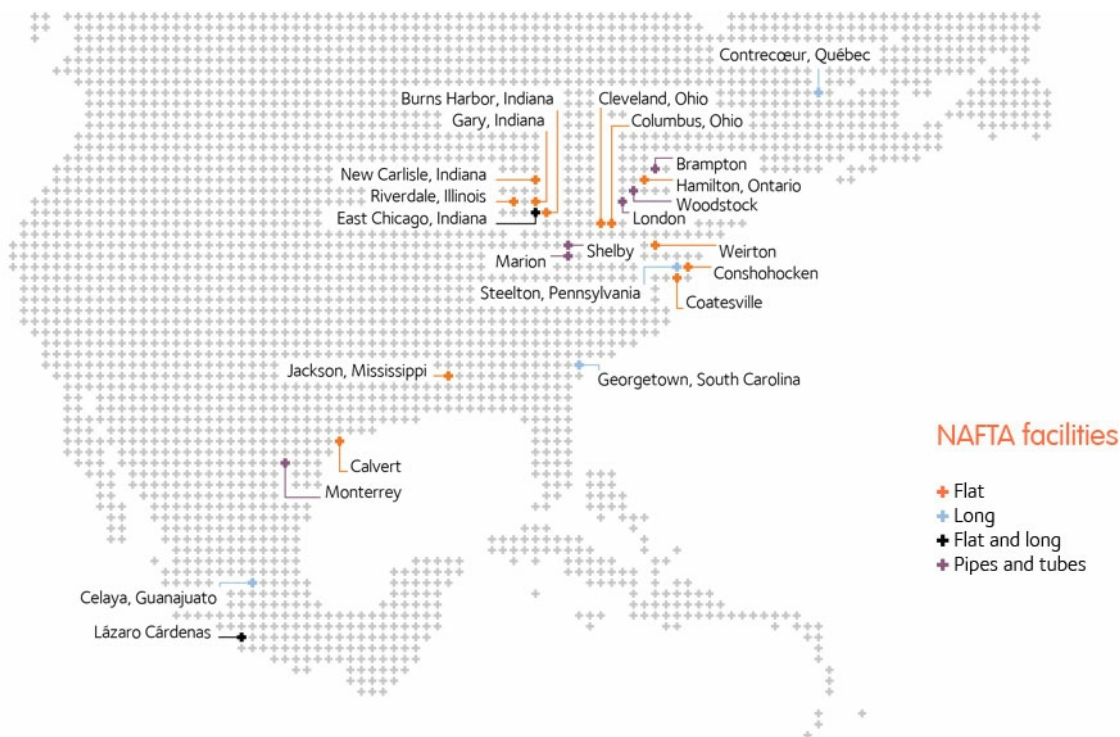
Number of local  
sustainability reports

3



## Our operations

NAFTA represents roughly a quarter of our steel shipments and revenue, and we have 101 offices, production facilities, commercial and mining operations across the region.



## Safety

Our team has worked very hard this year on safety, so it is with particular sadness that we have to report that we lost two colleagues in 2015, both in the USA. Our lost-time injury frequency rate (LTIFR) for employees and contractors improved to 1.02 compared with 1.13 in 2014, and we need to turn this good progress into success across the board to ensure we keep all our people safe at work. Wellbeing both inside and outside work is also important, and we were pleased that ArcelorMittal Dofasco won a Canada Award for Excellence in 2015, for the mental health section on our employee intranet.

John Brett, CEO of ArcelorMittal USA, said: "Regrettably, during 2015 our USA operations suffered two fatalities. While I am confident that we have comprehensive health and safety programs in our operations, which is reflected in the significant LTIFR improvements during the past several years, we also know that the tone is set at the top. It is dependent on our leadership and indeed employees at all levels to be increasingly vigilant and consistently take the necessary actions to demonstrate that safety is indeed our top priority. Nothing is more important than the safety of our workforce and our outcomes must always reflect that priority."

## 2015 operating environment

Like all our operations, our NAFTA segment is facing a tough world steel market, with global overcapacity, a strong dollar and a flood of imports weakening prices to unsustainable levels. Sales were \$17.3 billion, down from \$21.2 billion in 2014, and Ebitda was \$891 million, against \$1.2 billion in 2014. In the USA, a significant inventory build-up towards the end of 2014 led to negative apparent steel consumption in 2015, despite positive real steel consumption. Meanwhile, a downturn in iron ore prices resulted in a lower contribution from captive iron ore mining assets.

### A strong contribution from automotive

Our automotive franchise business was a bright spot for us, with the USA, Canada and Mexico all achieving retail sales records for new vehicles. The fall in fuel prices helped persuade consumers in the USA back to trucks and SUVs, with trucks capturing almost 58% of the market in 2015. Auto inventories continued to be well managed, with 63-day supply at the close of the fourth quarter, very near the ideal level for the industry.



### Promoting fair trade

We have fought hard to combat the threat of unfairly traded steel imports which are causing serious problems for our sector, working closely with industry associations in the USA and Mexico to bring cases to the attention of the relevant trade authorities. So far, we have had some success, but we expect better results from this work in 2016.

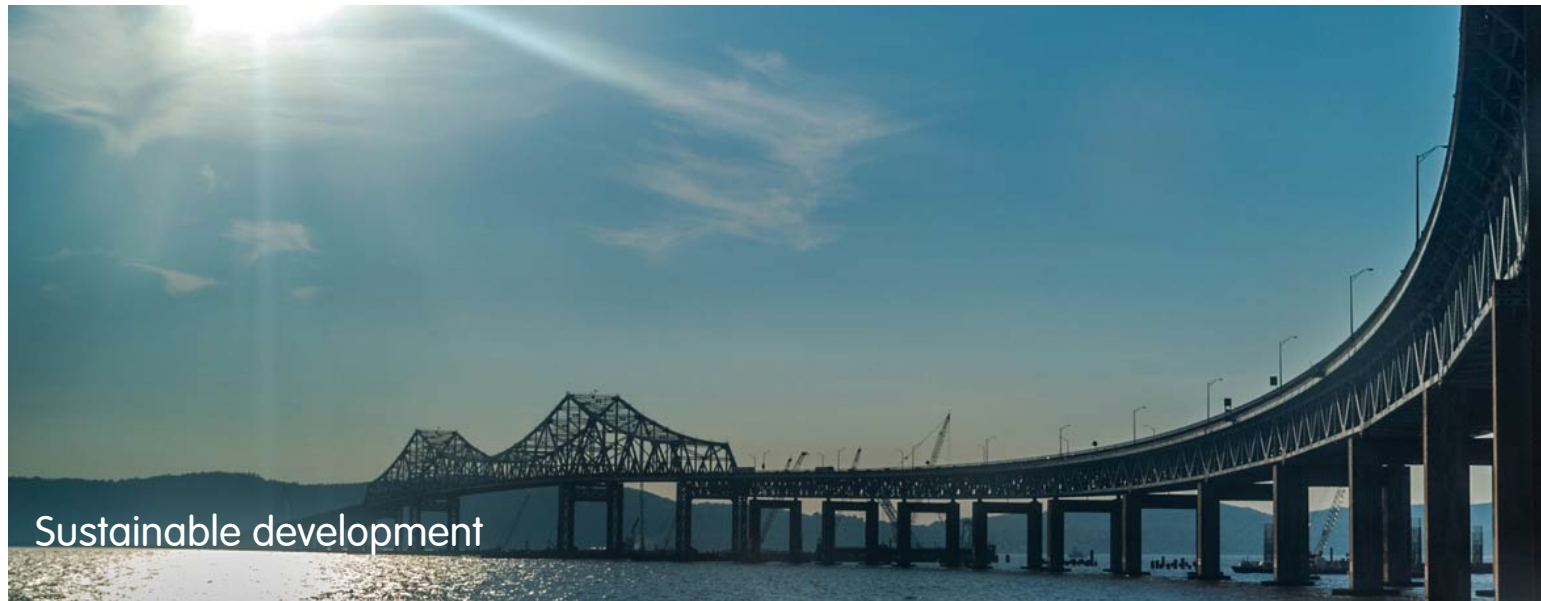
### Increasing our competitiveness

The tough market has highlighted the need to make our business as viable as possible in the short- to medium-term, and has led to some challenging circumstances. We were forced to close our long carbon business at ArcelorMittal Indiana Harbor and ArcelorMittal Georgetown, while many of our sites were asked to cut production and supplier costs. The business has responded well, however, with cost-saving programmes delivering results in the third quarter, although not enough to turn around the overall results for the year. Energy efficiency is a significant factor in cutting costs, as you can read about in the energy and carbon section below.

We're also in the process of renegotiating the collective labour agreement with the United Steelworkers union in the United States, and with their help, we hope to improve our cost base to ensure we remain a competitive business and a major employer. Our goal is to close the competitive gap and level the playing field relative to labour costs at other producers. In the interests of **securing safe, healthy, quality working lives for our people**, we are working hard to achieve an agreement that works for both parties, and is sustainable in the long run for all our stakeholders, including our employees.

### New leadership team

At the end of 2015, we announced the retirement of Americas CEO Lou Schorsch. We also unveiled a streamlined management structure in the Americas that promotes more direct accountability and drives optimum performance across the company. Jim Baske will lead all of North America, including AM/NS Calvert, but excluding the USA flat carbon operations which will be led by John Brett. Both CEOs will report directly to the group Chairman and CEO, Lakshmi Mittal.



## Sustainable development

### People

In the current circumstances, it's not surprising that last year's Speak Up! Survey showed that our employees feel less favourably towards us than they have done in past surveys. We'll continue to do what we can to support our employees through these difficult times, and offer them opportunities for development and training. ArcelorMittal employees also want to give back to the next generation, so we are emphasising the role of skills-based volunteerism in employee development, committing to double these kinds of volunteer hours in 2016.

### Product developments and R&D

On the product development front, we expanded our portfolio of steel products and solutions to meet market demand, most notably in ways that are **contributing to sustainable** lifestyles in the automotive and energy markets. At AM/NS Calvert, for example, we began producing Usibor® press hardenable steels to supply automakers in the southern USA and Mexico with solutions that use less steel to deliver the same strength and safety performance.

ArcelorMittal as a whole is playing a major role in creating sustainable infrastructure by supplying high performance plate steel for a project to upgrade the current Tappan Zee Bridge in New York. It is the largest transportation design and build project to date in the USA and one of the largest construction contracts in New York's history. All three of our plate mills – Burns Harbor, Coatesville and Conshohocken – are supplying high performance steel for the project.

In urban infrastructure, ArcelorMittal Dofasco is producing TagTough™, a product that is not only sustainable but aesthetically pleasing, as it is designed to resist graffiti paints that are both unsightly and erode infrastructure.

We also added new products to the line-up for the energy market. We found an interesting new application for our iCARE® Save electrical steel. A team of students at the University of Laval used it to maximise the power of a new car prototype, which went on to win several prizes at the 2015 Formula Student awards, including best self-made car and best newcomer, as well as second place for efficiency and fourth place overall.

### Trusted user of air, land and water

Results from our 2015 reputation survey showed that the favourability scores for our environmental record have started to slip, as people generally become more aware of the climate change agenda. We know we need to communicate more about what we're doing, so ArcelorMittal USA produced a comprehensive environmental video to showcase our progress in **air, land, water** and **energy** around the region. Projects like these help communicate steel's positive contribution to sustainability more consistently and compellingly to all our stakeholders, from governments to the media and other opinion-formers, as well as our own employees.

## Energy and carbon

We're aiming to cut our energy consumption by 1% a year over the next eight years as part of the US Department of Energy's 'Better Plants' initiative, which is in line with our outcome 6. In 2015, 25 energy projects came online in the USA which will save around \$35.7 million a year, and around 342,000 tonnes of CO<sub>2</sub>. We are continuing to look for more opportunities to save energy, particularly at low or zero upfront cost, drawing on the expertise of our employees on the front line. For example, a team supported by the local energy champion at Cleveland spotted a number of great energy-saving ideas that we expect will reduce the site's CO<sub>2</sub> emissions by 143,000 tonnes a year – over 3% of its carbon footprint. We are also investing in major projects that will reduce our CO<sub>2</sub> emissions, detailed below.

## Active and welcomed member of the community

Over the past eight years we've invested \$5.6 million in the [Sustain Our Great Lakes](#) programme. It is an important part of our commitment to becoming a [trusted user of land and water](#), and also to being a [welcomed member of the community](#).

Our sites also undertake broader community work as part of our commitment in outcome 8. Employee volunteering is an important part of this. For example, our mining colleagues in Sonora, Mexico, repaired wiring at a local elementary school in the town of Cedros, Rosario Tesopaco attended by children of some 60 families. Volunteers also repaired lamps, leaking toilets, sinks, and even the perimeter fence.

## Scientists and engineers for the future

Despite the difficult operating environment, we are continuing to look to the long term with our investment in the [next generation of scientists and engineers](#). Our plant at Dofasco, Canada has a long-standing partnership with McMaster University, funding four research chairs there and supporting a range of initiatives aimed at bringing the excitement of engineering and science to life for young people.

In Mexico, we provided 400 scholarships to students from elementary, middle and high schools, and 100 for university students, together with 161 internships in engineering. In the first year of a new partnership with the Lázaro Cardenas Institute of Technology and the Bécals of Televisa Foundation, we provided 95 scholarships to outstanding engineering students from different communities.



## Investments

We are making a number of investments in our business to increase capacity and efficiency.

AM/NS Calvert is a state-of-the-art hot strip mill, and we are investing \$40 million to increase slab staging capacity and efficiency, and achieve higher levels of productivity and utilisation. As part of this project, this year we completed improvements that will increase our capacity to produce higher added-value products including press hardenable steels such as our Usibor® range.

We completed phase one of the construction of a heavy gauge galvanizing line at Dofasco with phase two due for completion in 2016. This will allow Dofasco to produce an ever improving mix of higher added-value products for automotive, construction and industrial customers.

Finally, we made a number of energy-related investments in the NAFTA region. These included \$12.5 million for a boiler at Burns Harbor, Indiana, which will save around 111,000 tonnes of CO<sub>2</sub> a year, and \$4.2 million at Lazaro Cardenas, Mexico for converting boilers from oil to natural gas, which is expected to save nearly 27,000 tonnes of CO<sub>2</sub> a year.

## Outlook

2015 was a tough year for the steel industry and while steel consumption remained strong in the region, imports, while still high, slowed a little. Global excess capacity is still exerting downward pressure on pricing and we will have to be aggressive in our cost reduction and asset optimisation plans in the USA to ensure the sustainability of our operations in North America.

Specifically, improvement in NAFTA's performance in the medium to long term is anticipated to come from various initiatives as part of our Action 2020 strategic plan, namely footprint optimisation in the USA, a ramp-up of activity at AM/NS Calvert and further improvement in the product mix.

In 2016 we will further integrate our 10 sustainable development outcomes into both our steel and mining operations in the region, and demonstrate this through strengthened reporting in the Canada and Mexico, with an integrated report for the first time in the USA.

Jim Baske, executive vice president, CEO ArcelorMittal North America, commented: "While we will continue working through market challenges in 2016, we expect the actions taken during 2015 and the opportunities available for continuous improvement through our Action 2020 plan to provide a path toward greater sustainability in the segment. Demand for steel in the NAFTA segment is expected to remain positive in 2016, driven by continued strength in the automotive and construction sectors. With a foundation built on the knowledge and expertise of our workforce, we are confident that our distinctive assets and unique capabilities will meet these increasing customer demands."



“With a foundation built on the knowledge and expertise of our workforce, we are confident that our distinctive assets and unique capabilities will meet these increasing customer demands.”

**Jim Baske**

Executive vice president  
CEO ArcelorMittal North America

# Brazil

We employ 25,000 people across our flat and long production facilities, primarily in Brazil but also in Argentina, Costa Rica and Venezuela.

## People and communities: Preventing the Zika virus at ArcelorMittal Brazil

The Zika virus outbreak caught the world's attention when it was declared a global public health emergency by the World Health Organization in February 2016. Measures were already in place at ArcelorMittal Brazil to raise awareness and tackle the spread of Zika, but we knew that only a concerted effort would help protect our employees from a virus which remains relatively unknown.



At ArcelorMittal, we have seen at first hand the value of cross-sector collaboration to solve complex challenges. We pioneered the Ebola Private Sector Mobilisation Group (EPSMG) which included 100 companies, public bodies and NGOs from a wide range of sectors, and was widely recognised for its role in helping West Africa tackle the Ebola outbreak.

We used the same collaborative approach to Zika, knowing that working with municipal authorities, state government, and our own employees would be the most effective way to tackle the virus.

With 15,000 ArcelorMittal employees in Brazil, each with an average of two dependents, we launched a series of educational initiatives to help protect our staff and their families from Zika, Dengue and Chikungunya – diseases transmitted by mosquitoes.

To reinforce measures taken independently by the company – such as regular pesticide spraying and the addition of chlorine to residual water – we partnered with external environmental health teams and municipal government to perform regular risk assessments at our sites and exchange knowledge.

All our sites in at-risk areas were provided with Ministry of Health advice on how employees and contractors can protect themselves and their families via pamphlets, posters and TV screens.

A 45-day inspection of our premises by the Serra Zoonosis Control Centre and CIPA, Brazil's internal commission for the prevention of accidents, found a low risk of a mosquito infestation developing on any of our sites, and to date there have been no reported Zika cases among our employees and their relatives.

But as the virus spreads, tackling this challenge will require even greater efforts and vigilance. As stronger links between birth defects and pregnant women infected with the Zika virus emerged, for example, we launched a new initiative to provide monitoring for all pregnant women at our long carbon sites and our facilities at Tubarão, aiming to help women protect themselves from the virus during pregnancy.

We know the importance of collaboration: our health teams continue to work with regional and national stakeholders, including the municipal government and the municipal health secretariat, to build on our existing initiatives and find new ways to protect our people and the community against the virus.

## Operational performance

Sales

8.5

(US\$ billions)

Ebitda

1.2

(US\$ billions)

Steel shipments

11.5

(million tonnes)

LTIFR

0.62

(Lost time injury frequency rate)

Number of employees

19,816

Number of local  
sustainability reports

3

## Our operations

Our Brazilian operation is one of Latin America's largest steel producers, with production capacity in excess of 11 million tonnes, while the segment as a whole has a production capacity of nearly 14 million tonnes.



\* As at December 31, 2015, ArcelorMittal Point Lisas is currently idle





## Safety

It is with great sadness that we have to report that, despite an improvement in our lost-time injury frequency rate (LTIFR) from 0.89 to 0.62, we lost two people last year, one in each of our Brazilian flat and long carbon businesses. Our teams devoted considerable time and effort to training and safety programmes in 2015, but clearly we have to do more.

Jefferson de Paula, executive vice president, CEO ArcelorMittal South America Long, commented: "Losing two valued colleagues during the year is deeply concerning and unacceptable. We are committed to doing everything in our power to eliminate fatalities across our operations, and will continue our efforts to reduce the rate of severe injuries. However, it is pleasing to report a material improvement in our LTIFR in 2015, a rate that was less than half the global steel industry average rate of 1.39\*. This speaks volumes about the considerable time and effort that has been devoted to educating, training and trying to ensure that employees throughout the organisation always rigorously follow health and safety guidelines and procedures."

\*Latest available figure from the World Steel Association

## 2015 operating environment

Brazil, which makes up most of this segment, is in the midst of a deep recession, arguably the most significant economic downturn the country has experienced since the 1930s. GDP fell by 3.7% in 2015, driven by declining manufacturing output (which fell by 8% year-on-year) and weak consumer confidence and spending.

As a result, conditions in the Brazilian steel industry were very challenging in 2015, with apparent steel consumption falling by over 15%. Automotive manufacturing fell by 26%, nearly reaching levels that were last seen in 2009. And construction output is estimated to have declined by approximately 9% due to limited funding of new infrastructure projects and the continued fallout from the Petrobras scandal.

Our sales for the year were 15.3% down at \$8.5 billion, with Ebitda down 33.3% at \$1.2 billion. However, we are working hard on a number of efficiency programmes and capacity expansions that will help us improve profitability in the medium term.

The end of the year was particularly difficult for our Brazil team, with the government declaring a state of emergency as a result of the threat of the Zika virus. Our people are responding well, however, and are working hard to combat the disease through targeted campaigns at our plants.





## Sustainable development

### Energy and carbon

We have made great strides in reducing our **energy consumption** and hence carbon emissions. The most significant contribution in 2015 came from Tubarão, Brazil, where better control of raw materials for our blast furnaces, better operational control, and training resulted in savings of almost \$26 million a year, and 429,000 tonnes of CO<sub>2</sub>.

### People

The biggest challenge for our people in the Brazil segment this year – and our communities – was the threat of the Zika virus, carried by infected mosquitoes. The Brazilian government declared a state of emergency in Espírito Santo, where our Tubarão plant is located, and we have been working with local government both there and in Minas Gerais, where our Juiz de Fora plant is located, to do our bit to combat the disease. Key to this is raising awareness, and we have adapted materials developed by the Ministry of Health for all our employees, with information on the disease, its symptoms and methods of prevention. Sites with clinical centres are also providing guidance for employees and their families. We have carried out inspections on the shop floor to find possible danger areas where mosquitoes could breed, and we are currently working with regional and national stakeholders on further action plans for 2016.

### Active and welcomed member of the community

In 2015, Jefferson de Paula, executive vice president, CEO ArcelorMittal South America Long, was honoured by the Brazilian Academy of Human Rights for supporting social projects that help to promote social justice and conserve water. This was an important recognition of our strong and continued commitment to sustainable development in the region.

### Trusted user of air, land and water

Our 2015 reputation survey highlighted the importance of environmental issues to all stakeholders in this region, including our own people. Our innovation and commitments scored highly, after successes in water management and air quality in the last two years. But many stakeholders have a more negative view of our overall environmental track record, which in some cases may be the result of a misconception about the real source of specific pollution.

In Tubarão, for example, we comply fully with air emission regulations, and have worked hard to protect local air quality and minimise our emissions through filters, a green belt of trees surrounding the plant, and special programmes for the summer months when the winds are strongest. This work won us the Air Quality category in the 2014 Findes/Senai awards, and yet in 2015 we faced legal action to do more to address air quality because of the visibility of 'black dust' in the area. We are only one of several large industrial sites. We clearly need to consider not only the best technological solution,

but also how to ensure stakeholders have a more balanced and objective understanding of our contribution to local air quality. We can only do this by building trust through transparent two-way communications.

Water management continued to be a key issue in the region in 2015. Brazil has been coping with a significant drought since 2013, and last year we had to respond quickly to a severe water shortage at Tubarão, managing to cut our use by 30% in just 15 days. The plant now has a 98.3% re-use rate, and is one of our most efficient users of water. This work was recognised by a top 10 position in the Benchmarking Brazil award scheme.

The zero effluent programmes we have run at Piracicaba, Monlevade, Juiz de Fora and Cariacica over the past 10 years have seen good results in lowering our water intake. We're building on this work by looking at alternative sources of water, such as treated sewage water. At the same time, we are working to tackle water from a community perspective. In 2015 we initiated a partnership with NGO Instituto Terra to recover 5,000 water springs in rural areas of the Rio Doce water basin by 2020.

In Argentina, we have been working hard each year to increase the amount of water we recycle. In our Villa Constitución plant, all our water is now recycled and treated so it can be re-used for cooling. Also in Argentina, we have been finishing works related to the new liquid effluents treatment plant in our wires plant at La Tablada, including introducing a continuous monitoring system that allows us to take preventive and corrective action.

## Product developments and R&D

In mid-2015, we announced the establishment of our first research and development facility in South America, at our Tubarão site. We will be investing \$20 million over five years and the new research centre will focus on steel innovations for the automotive, energy, construction, machinery and white goods industries.



## Investments

We made a number of investments this year, focused on increasing capacity.

In the final quarter of 2015, we completed construction of a \$280 million new wire rod mill at Monlevade, Brazil, increasing annual capacity by 1.1 million tonnes of finished products.

Earlier in the year, we completed a project to expand rebar capacity at Juiz de Fora, from 50,000 to 400,000 tonnes per year. We are also investing \$100 million in rebar capacity at Acindar, Argentina, which we expect to complete in 2016, and which will increase capacity by 400,000 tonnes per year.

## Outlook

We expect economic conditions to remain weak in Brazil in 2016, although the weakness of the Brazilian real has boosted export competitiveness, and we expect that to continue in 2016. In the medium term, we should see some domestic recovery which, together with an increase in the contribution from higher added-value products (in line with our Action 2020 plan), should help us improve profitability.

We also expect to support performance through a closer focus on our 10 sustainable development outcomes – both Brazil and Argentina have completed the new SD dashboard assessments, and our senior leadership has reached agreement on the value of ‘sustainable thinking’, and how it can add to our performance and reputation.

Jefferson de Paula, executive vice president, CEO ArcelorMittal South America Long, commented: “There is no doubt that conditions in 2016 will remain extremely difficult domestically, although export markets will continue to offer some relief, aided by the ongoing weakness in the domestic currency. However, we believe Brazil offers strong potential in the medium to long term, and our focus on Action 2020 and our 10 outcomes will help us capitalise on that potential.”



“We believe Brazil offers strong potential in the medium to long term, and our focus on Action 2020 and our 10 outcomes will help us capitalise on that potential.”

**Jefferson de Paula**

Executive vice president  
CEO ArcelorMittal South America Long

## ACIS

Our ACIS segment employs over 45,000 people across our flat, long and tubular steel integrated production facilities in Kazakhstan, South Africa and Ukraine. ACIS also includes ArcelorMittal International, the worldwide sales network supplying ArcelorMittal products from over 30 mills outside their respective home markets.

## Fertile thinking: farmers benefiting from steel slag

As a major by-product of our industry, slag has long been sold by steelmakers for use in construction, but its use in agriculture has been less well known. In Ukraine, we have been researching its value to farmers to improve soil properties and crop yield.

One of the main reasons why farmers need fertiliser is to reduce the amount of acidity in the soil.

It might seem counter-intuitive, but steel slag has exactly the right chemical composition to do this. Slag has been used in agriculture for some time, notably in the USA, Germany, and France, and it has proved both effective and cost-efficient. Now, technicians at our Kryvyi Rih site in Ukraine have been exploring new ways to sell slag as a fertiliser or soil improver.

The first thing we needed to do was to build a good understanding of what properties farmers are looking for. This enabled us to ensure that the slag we deliver has the best possible combination of minerals, such as calcium oxide, phosphate, magnesium and sulphur – these trace elements support plant growth.

An external research study in Ukraine in 2015 looked at field trials using slag. It showed that corn, beetroot, barley and sunflowers harvests were 230% higher. Importantly, the study also demonstrated that slag represents no threat to the natural fauna and flora.

“More widespread use of steelmaking slag in agricultural applications will allow society to solve several important issues at once,” explains Evgeniy Shidlovskiy, chief technical officer at ArcelorMittal Kryvyi Rih. “It will allow us to eliminate substantial steelmaking wastes, and will allow farmers to optimise the pH levels in their soil, cut costs and improve their harvests.”



Given the importance of agriculture to the Ukrainian economy, this is a win-win for everyone.

More widespread use of steelmaking slag in agricultural applications will allow society to solve several important issues at once.

**Evgeniy Shidlovskiy**

Chief technical officer at ArcelorMittal Kryvyi Rih

## Operational performance

Sales

6.1

(US\$ billions)

Ebitda

317

(US\$ millions)

Steel shipments

12.5

(million tonnes)

LTIFR

0.54

(Lost time injury frequency rate)

Number of employees

45,291

Number of local  
sustainability reports

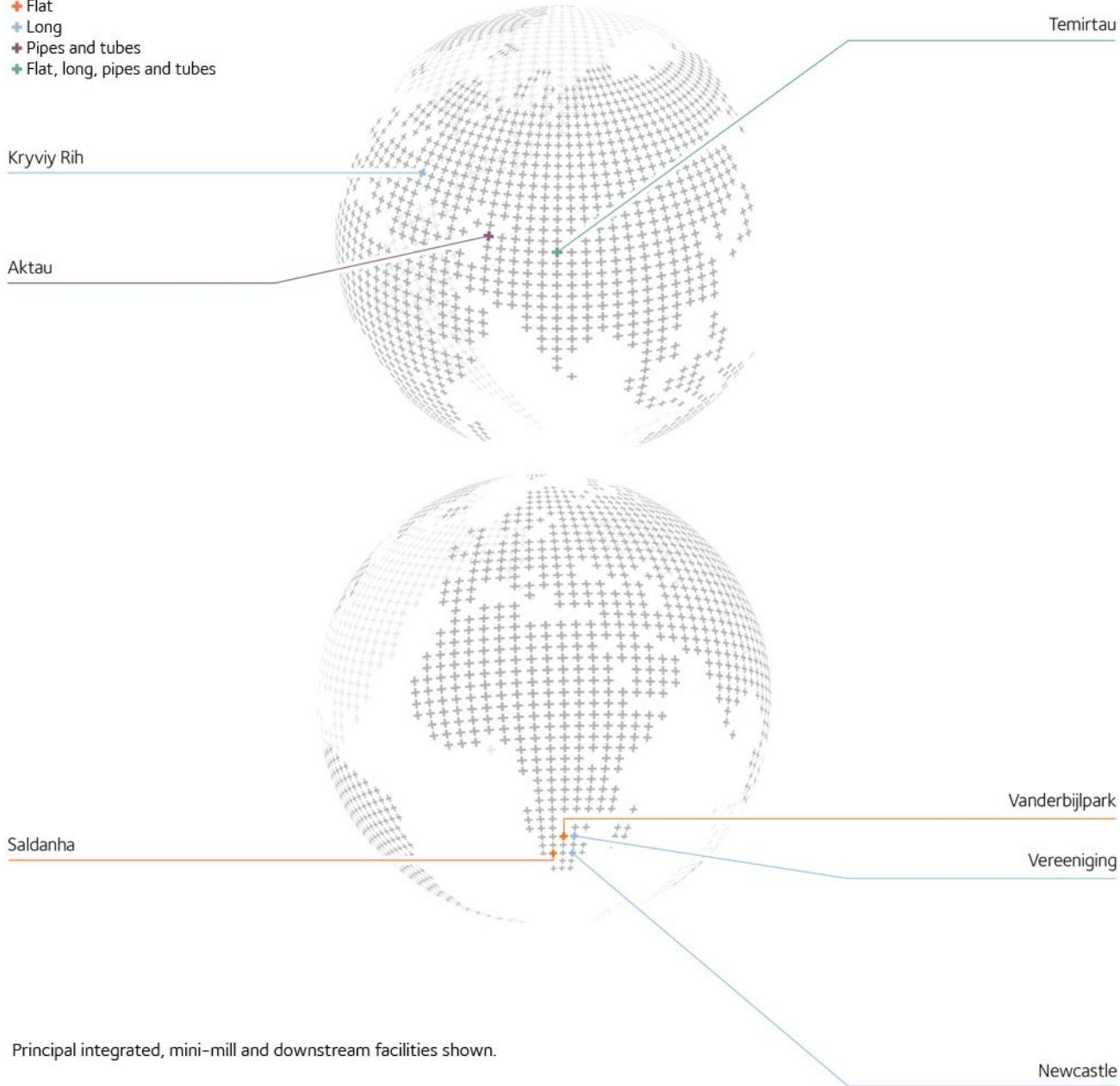
3

## Our operations

ArcelorMittal is the largest steel producer in Africa, a significant steel producer in the CIS region, and has a growing presence in Asia, including investments in China and India.

### ACIS facilities

- ✦ Flat
- ✦ Long
- ✦ Pipes and tubes
- ✦ Flat, long, pipes and tubes





## Safety

Tragically, 10 colleagues lost their lives in the ACIS segment in 2015. Our lost-time injury frequency rate (LTIFR) marginally worsened, from 0.49 in 2014 to 0.54 in 2015. Davinder Chugh, senior executive vice president, CEO ArcelorMittal Africa and CIS, said: "Health and safety performance in ACIS in 2015, particularly the number of fatalities that occurred, was unacceptable; we have to improve and eliminate fatalities. We need to ensure that all our people go home safely every day. This means changing the safety culture of our employees and our contractors, and our leaders are absolutely committed to this. We must do better in 2016; it is our number one priority."

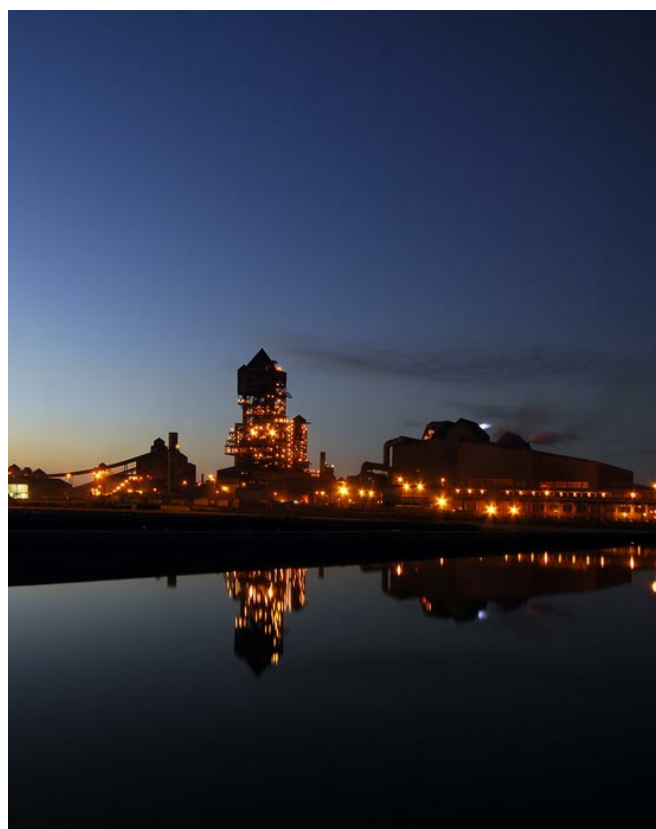
## 2015 operating environment

2015 was a very challenging year for ACIS. Lower global steel prices and weak demand across the region resulted in lower prices, offsetting the benefits of operational efficiencies. Sales were down 25.9% at \$6.1 billion, while Ebitda was down 49% at \$317 million.

Our Temirtau operations in Kazakhstan were exposed to adverse global market sentiment, decline in demand in Russia and the delayed devaluation of the national currency in comparison to other CIS countries. However, with a continual focus on cost savings, by the end of the year Temirtau had significantly improved its competitive position.

Our Ukrainian operations were marginally impacted by the ongoing geopolitical crisis in the east of the country, which blocked traditional supplies of raw materials and impacted shipments. Weaker demand for long products in Ukraine and CIS was also a challenge.

In South Africa, as in our NAFTA and Europe segments, the domestic market suffered from cheap imports from China, while the South African economy remained weak with no domestic growth. Our local management team has been working with the South African government on the issue of unfairly traded imports, and we expect the situation to improve in 2016.





## Operational efficiency

Our team in Temirtau, Kazakhstan has focused consistently on driving down costs, and by the end of the year had significantly improved their competitive position. In Ukraine, despite the many challenges, we performed reasonably well and we carried out a range of key repairs at our Kryvyi Rih plant which will enable us to increase production in 2016. We also invested in a pulverized coal injection project which will reduce energy costs.



## Sustainable development

### Quality working lives for our people

Our ACIS employees have been affected more than most by the challenging world steel market. It's been a very difficult year for our employees across the region, and we have been working hard to support them in a number of ways.

One of the biggest challenges has been the decision to close our steel mill at Vereeniging in South Africa. We are hoping to take on a number of employees affected at our Newcastle plant, and otherwise we are supporting people with one-to-one advice. Communicating openly and honestly about our future plans has been essential in this process, and we were pleased that the survey we ran with stakeholders in South Africa indicated that our people there generally see us favourably, and are positive about our industrial relations in particular. Our employees also told us that we need to combine short-term action to protect the economic viability of our plants, with effective longer-term plans to improve our environmental performance. Our **outcome 5**, to become a trusted user of air, land and water, is particularly relevant here.

In Kazakhstan and Ukraine, drastic currency devaluations have had consequences not only for our competitiveness but also for our people: our focus was on keeping plants running, and jobs open, even though salary levels were badly affected, which has understandably been very tough for those concerned. Our reputation survey results in Kazakhstan reflect this, with a lower-than-average favourability level, though we were pleased that the scores for health and safety were comparatively higher.

Our commitment to developing our employees was underlined in 2015 when we opened a new campus of the ArcelorMittal University at Temirtau, Kazakhstan, which will be providing training for more than 6,000 people a year from both our steel and mining businesses.

## Trusted user of air, land and water

As we expected, another issue highlighted in our 2015 reputation surveys in Kazakhstan and South Africa was our environmental performance. The age of many of our plants in these countries means that their air emissions are much higher than we want them to be. In Kazakhstan and Ukraine, our plants date back to the Soviet era, and all our stakeholders, including our employees, expect us to do more to bring these up to modern standards.

Our operations in the Ukraine are proud of the investments they have made in good relations with our communities. In 2015, Kryvyi Rih won the 14th All-Ukrainian ecological competition, Ecological Quality and Safety, supported by the Ministry of Ecology and Natural Resources. The award recognised the plant's use of technology to improve environmental performance. Our Ukraine plant has also measured the added value that our steel slag is providing to farmers when used as agricultural fertilizer, which you can read more about in the case study at the top of this page.

## Energy and carbon

Energy performance remains a priority, and is key to [outcome 6](#). In South Africa, high energy prices have had a dramatic effect on our costs, and partly for this reason, and partly to secure our supplies, we have started discussions with a utility company to co-invest in a new independent power plant near Saldanha. At our Termitau steel plant, we re-used residues from our tailing ponds as fuel in our power plant boilers at our steel mill in place of coal, saving 300,000 tonnes of CO<sub>2</sub> in 2015. And our plant at Kryvyi Rih began using biofuel made from cereal husks in the rotary kiln, an idea that came up in an energy innovation forum in July 2015.

## Active and welcomed member of the community

In South Africa, we made some improvements to our BBBEE (broad-based black economic empowerment) score including those elements relating to preferential procurement, enterprise and ownership. In 2015, we announced the creation of an employee share ownership programme and a plan to enable a black-empowered consortium to acquire a significant proportion of our issued share capital.

Communities in the Ukraine have all been deeply affected by the recent conflict. Some 500 of our employees were called up for active military duty in 2014 and 2015, of whom 16 tragically lost their lives. We have been doing what we can to offer returning soldiers the support they need to deal with the traumatic after-effects – providing medical examinations and mental health assessments to those returning from the front, and providing training to our managers, foremen and shop floor workers in how to recognise and deal with post-traumatic stress disorder.

## Scientists and engineers for the future

We are also working to build our [pipeline of talented scientists and engineers](#) for the future in ACIS. Our operations in Ukraine offered internships last year to 16 teachers from the local technical university, and another 60 teachers from 14 technical and educational institutions took part in the plant's learning week in September. One of our projects in Ukraine, to inspire young people to take up careers in engineering, is an annual 'hackathon', in which participants have 24 hours to develop an IT or automation idea into a prototype. The four best entrants were offered jobs at our plant.

## Transparent good governance

Engaging openly with stakeholders on environmental issues is key to gaining their trust. Our operations in Ukraine exemplify good practice here. At Kriviy Rih, we display daily air emissions figures on a public screen outside the steel plant. In recognition of our approach, we topped the Transparency Index published by Ukraine's Centre for Corporate Social Responsibility Development for the second year running. Assessed for our reporting, content, navigation, and availability of information, we scored 85%, the highest of any Ukrainian company.



## Investments

Overall, capital expenditure decreased from \$573 million in 2014 to \$365 million in 2015, a decline of approximately 36% caused by the extremely challenging operating environment resulting in a requirement to preserve cash across the segment. In South Africa only the most critical projects were financed while others were placed on hold.

Nonetheless, we have made some important investments which are directly related to our 10 outcomes. Major projects included blast furnace relines, basic oxygen furnace gas cleaning projects, sinter machine repairs and a mix of projects aimed at improving reliability and productivity, enhancing the product range, and addressing safety and environmental issues.

Kryvyi Rih invested 1.4bn hryvnas (\$64 million) between 2014 and 2015 to renovate 16 units to clean our gas emissions, and build nine new ones, so that the site can meet new environmental regulations.

## Outlook

We expect the market to remain challenging for the whole of ACIS in 2016, although a number of factors should help our performance. The tenge devaluation is helping to restore our Kazakh operations' competitiveness against its Russian peers. Also, the lifting of sanctions in Iran provides an opportunity for ArcelorMittal Temirtau in the Middle East. In South Africa, some recently imposed trade tariffs and a new iron ore supply agreement with Kumba Iron Ore should improve our performance.

All our plants will continue to work on operational efficiency – in Ukraine, for example, in the second half of 2016 we will benefit from lower costs as a result of running four blast furnaces, the increased use of pulverized coal injection and a new coke battery.

Davinder Chugh, senior executive vice president, CEO ArcelorMittal Africa and CIS, commented: "While we expect market conditions in 2016 to remain tough, we are taking a number of actions which, alongside currency benefits, should help us improve performance throughout the year. We will continue our focus on delivering the operational and reliability improvements required to produce steel safely and provide exceptional customer service."



"We will continue our focus on delivering the operational and reliability improvements required to produce steel safely and provide exceptional customer service."

**Davinder Chugh**  
Senior executive vice president  
CEO ArcelorMittal Africa and CIS

# Europe

Our Europe segment comprises flat and long operations across the continent, along with our Distribution Solutions business. Together these employ around 84,000 people.

## How will ArcelorMittal Europe contribute to Action 2020?

Aditya Mittal  
CEO ArcelorMittal Europe and Group CFO



## Towards a circular economy breakthrough: Our partnership with LanzaTech

This is a partnership to build the first plant in Europe to use the waste gases from steelmaking to produce ethanol on a commercial basis. This fuel generates 84% fewer greenhouse gas emissions than fossil fuels, and the plant will produce enough every year to run half a million cars. Every tonne of ethanol produced will reduce overall CO<sub>2</sub> emissions by 2.3 tonnes and displace eight barrels (1 tonne) of gasoline.



The chemistry behind it is simple: steelmaking produces carbon monoxide as a waste gas, which is usually burned off, and CO<sub>2</sub> is produced as a result. Finding uses for this waste gas, however, is much more of a challenge. Most steel plants use it to heat and power the production process, but where that doesn't use all of it, the rest is burned off. LanzaTech's pioneering new technology can recycle those waste gases and turn them into ethanol. This breakthrough recently earned LanzaTech the US Environmental Protection Agency's Presidential Green Chemistry Award, the top award of its kind in the country and a Circular Economy award at the World Environmental Forum.

Construction of the €87 million flagship pilot project, which will be at our steelmaking site in Ghent, Belgium, has commenced and will start operations by 2017. It is too early to know whether this will prove successful on a commercial and scalable basis, but we are excited to be partnering with LanzaTech on this project.

## Operational performance

Sales

31.9

(US\$ billions)

Ebitda

2.4

(US\$ billions)

Steel shipments

40.7

(million tonnes)

LTIFR

0.99

(Lost time injury frequency rate)

Number of employees

83,825

Number of local  
sustainability reports

8

## Our operations

ArcelorMittal is Europe's largest steel producer. Overall, we have more than 400 sites across Europe, with an industrial presence in 17 countries.

### Europe facilities

- ✦ Flat
- ✦ Long
- ✦ Flat and long
- ✦ Pipes and tubes



\* ArcelorMittal Bilbao has been idle for an indefinite time



## Safety

Our lost-time injury frequency rate (LTIFR) improved somewhat, from 1.09 in 2014 to 0.99 in 2015, but it is still far from where we want it to be. In Europe, 10 colleagues lost their lives in 2015, in Austria, Belgium, France, Romania and Spain. This is unacceptable.

In the final quarter of 2015, we introduced the most detailed, wide ranging health and safety programme we have ever launched in Europe. 'Take Care', which is targeted at shop floor employees and focuses on behaviour, will give each participant 20 days of training.

Aditya Mittal, CEO ArcelorMittal Europe and Group CFO, commented: "There were positives over the year – our site in Zaragoza, Spain, for example, reached a milestone of four years without a single LTI, while our joint-venture Sonasid reached three. But in a year in which we lost 10 employees, it is impossible to say that our health and safety performance was anywhere near acceptable. We must examine how our exemplary performance has been achieved and carry the lessons learnt

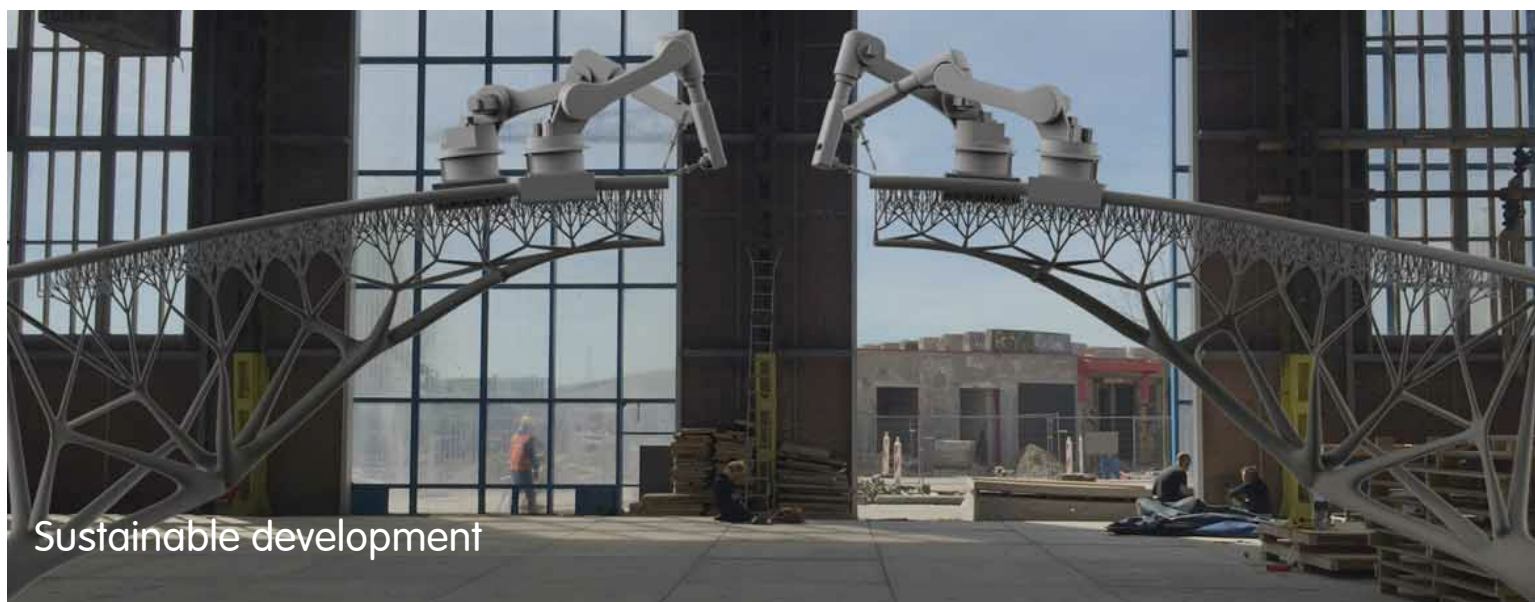
to other sites. I am encouraged by the early feedback from 'Take Care'; it needs to deliver progress because our performance must improve."

## 2015 operating environment

Despite Europe's modest economic recovery, and an increase in demand for steel, greater volumes of low-priced, unfair imports, particularly from China, kept prices down – average steel selling prices were 21.1% lower than in 2014. Our Europe segment's sales in 2015 were down 19.4% at \$31.9 billion, although lower prices were marginally offset by an increase of steel shipments of 2.6% at 40.7 million tonnes. Ebitda was up slightly at \$2.4 billion, thanks to our strategy of running assets full and focusing on our franchise businesses, such as automotive.

A continuing challenge for us in Europe has been the carbon emissions regulatory environment, discussed below in the energy and carbon section.





## Sustainable development

### People

We've been working hard to support our employees during these challenging times, ensuring we're communicating openly and honestly, especially when difficult decisions have to be made. So we were pleased to see generally positive results from our biennial 2015 Speak Up! survey. Our overall engagement score was up 3% at 62%, a fair improvement given the market challenges, while the biggest improvements were in our ratings for communications and health and safety. We still want to do better, and managers will be putting action plans in place in 2016 to respond to the feedback.

At the same time, we were really pleased that two of our steel plants won awards this year. Zenica in Bosnia-Herzegovina won a Justice and Solidarity award in competition with 130 companies in the Western Balkans. Organised by the Workers' Media Service, the award recognised the site's track record on health and safety, working conditions, and community investments, as well as industrial relations, especially in such a challenging business environment. Our Ostrava site in Czech Republic was named large Employer of the Year in the Czech Employer Club and Sodexo.

### Diversity and inclusion

Looking at gender balance, based on 44,000 of our employees, women account for 3.1% of our production jobs and 21.9% of office jobs. In management grades, 17.5% are women, with 13.1% on our management committees. We'd like to increase all these percentages, so we are setting up a Gender Diversity Council for Europe, and will establish measures to track progress. Our Polish business has already seen the benefits of this approach, having set up a women's council in 2009.

### Scientists and engineers for the future

We continued to run initiatives across Europe to attract young people to the steel sector, to encourage interest in engineering and metallurgy, and to partner with universities to support scientists in their work. All of these are essential for **outcome 9** – our pipeline of talented scientists and engineers for the future.

For example, our Ostrava site works with the local technical university on thesis and diploma work and joint R&D projects, and to provide engineering internships and plant tours for students and teachers. In Spain, our R&D facility sponsors an ArcelorMittal R&D Chair at Oviedo University, and in the UK we sponsor PhD students at the University of Cambridge to work on improving the sustainability of steel. In France, we launched 'Le Prix des Innovateurs', an innovation prize which rewards those who contribute to the future of the steel industry.

### Energy and carbon

With the EU Energy Efficiency Directive now in force, all our major sites in Europe have energy audits and most are certified to ISO 50001. In pursuit of operational efficiency and **outcome 6**, we achieved energy and carbon reductions at a number of our sites in 2015. Across all our blast furnace steel mills, energy efficiency improvements saved around €16 million and more than 150,000 tonnes of CO<sub>2</sub>. At Gijón, Spain and Zenica, Bosnia & Herzegovina, we



introduced a way of re-using blast furnace fuel mixed with natural gas as fuel, which saved 46,000 tonnes of CO<sub>2</sub> in 2015 – we expect to save 180,000 tonnes overall in 2016. Of course, energy efficiency isn't the only factor affecting our carbon footprint, but these achievements are an important contribution that should endure year on year.

In another significant milestone, we announced the pilot of a new, [interesting technology](#) to convert our waste gases into fuel at our Ghent site in Belgium.

With regard to carbon trading, we continued to argue for a global rather than a regional system in order to provide a level playing field across the global steel industry. A regional pricing system would simply lead to 'imports' of cheaper carbon from outside Europe, resulting in higher global emissions as steel production in many non-European countries creates a higher proportion of CO<sub>2</sub> per tonne of steel produced. A Europe-only system would also place European jobs at risk.

Many European steel plants already face a shortage of CO<sub>2</sub> allowances as a result of the European Emissions Trading Scheme (EU ETS). ArcelorMittal Europe will be short of allowances well before proposed changes to the EU ETS are implemented in 2020, which will reduce allowances further. We continue to argue that the most efficient European steel plants should be provided with free certificates at a realistic benchmark level, in order to encourage investment in low-carbon technologies.

## Trusted user of air, land and water

Our European sites are often in urban areas, so gaining the trust of local people in managing issues such as air quality has been one of our key challenges, reflected in [outcome 5](#).

In Ostrava, Czech Republic, we installed state-of-the-art technology to reduce dust emissions from coke ovens, blast furnaces and our sinter plants, building on the work we've been doing here since 2007. This was recognised by the Czech government with an award from the [Ministry of Industry and Trade](#). At Zenica, Bosnia and Herzegovina, we plan to introduce the latest hybrid dust filtering technology, a system that has never been installed in the steel industry on an industrial scale before. This will save us money, as well as ensuring that Zenica and other European plants meet their new emission standards.

## Product developments and R&D

We made a significant contribution to a low-carbon economy this year with a new contract for our Gijón plant to supply 23,000 tonnes of heavy plate steel for a new 350MW offshore wind farm in the Baltic Sea. It is one of the largest offshore wind power projects ever developed by a Spanish company, and will be able to meet the electricity requirements of more than 350,000 households in Germany. It will also help save nearly 600,000 tonnes of CO<sub>2</sub> a year.

Our high strength Histar® beams continue to add value to challenging construction projects, including a 57-storey modular building in Changsha, China, built in just 19 days. Produced at our Differdange, Luxembourg mill, these unique sections provide architects with the highest strength structural steel on the market.

In a different kind of innovation, we signed a two-year agreement with Dutch company MX3D – a pioneer in large-scale 3D printing – to develop the world's first 3D-printed bridge across the Oudezijds Achterburgwal canal in Amsterdam. Our steel wire rods will be used in a test project.

## Jean-Sebastien Thomas annual prize for innovation

Researching steel's contribution to sustainable development is high on the agenda for many of our European colleagues. This was highlighted by the work of our R&D colleague, Jean-Sebastien Thomas, who passed away suddenly at the end of 2014. Jean was instrumental in organising the annual Society and Materials conference, a high-profile event bringing together experts from different disciplines to share knowledge on measuring the social and environmental impacts of materials. In 2015, we launched an annual prize in his memory, for the most innovative paper presented at this conference.



## Investments

Our European plants are leading the company in the challenge of becoming **trusted users of air, land and water**, and we are continuing to invest to this end. In 2015, our site at Galati, Romania, began installing a state-of-the-art water station to save energy, reduce input costs, and use water more efficiently. This builds on the success of a three-year programme to reduce water consumption in Romania, which has seen our usage fall by 47%.

In 2015 we allocated €100 million for Gijón to refurbish and recommission existing coke oven batteries, to ensure we comply with environmental requirements. These batteries are expected to reach full capacity in 2019.

We have also been investing in our production sites, so that they can manufacture the new high-strength high-performance steels which offer significant structural and sustainability advantages to our customers. This includes a new €60 million coating line at Kessales, Belgium, which produces steels for the automotive industry, due to be operational in summer 2016. We have also invested €9 million in our Sagunto, Spain mill, to increase production capacity for our Usibor® range to meet automotive demand in southern Europe.

In infrastructure, we have invested €35 million at our plant in Belval, Luxembourg, to produce a new range of wider sheet piles that will be made of 100% recycled steel.

We are investing €90 million in various upgrade projects for 2016 in Krakow, Poland. These include restarting preparations for the relining of a blast furnace which will reach the end of its life in the summer, and projects to extend the plant's hot rolling mill annual capacity by 900,000 tonnes, and hot dip galvanised annual capacity by 400,000 tonnes.

## Outlook

We expect Europe's modest economic recovery to continue in 2016. The construction industry is expected to rebound after a disappointing year in 2015, while car sales are set to continue to grow in 2016, albeit at a slower rate. However steel prices are still being held down by low-priced imports, and we will continue to fight the threat of this unfairly traded steel. Our work to optimise assets and target a further \$1 billion of Ebitda improvements as part of the group's Action 2020 plan will therefore be very important in ensuring our Europe segment improves profitability in the short to medium term.

As a result, Europe will be well-positioned to make valuable contributions to sustainable lifestyles and infrastructure through our products, as well as lower carbon emissions and reduced pollution. Negotiating European policy that aids us rather than hinders us to achieve this will be crucial to our success in the region.

Commenting, Aditya Mittal, CEO ArcelorMittal Europe and Group CFO, said "Looking forward, European demand fundamentals remain robust, but we are yet to see a slowdown in imports, so conditions will undoubtedly remain challenging. Our focus remains on improving the quality and reliability of our assets, our customer relationships and service levels, and executing our Transformation Plan, which is central to improving our profitability and long-term sustainability."



“Our focus remains on improving the quality and reliability of our assets, our customer relationships and service levels, and executing our Transformation Plan, which is central to improving our profitability and long-term sustainability.”

Aditya Mittal

CEO ArcelorMittal Europe and Group CFO

# Mining

We employ more than 30,000 people in our mining operations in Brazil, Bosnia, Canada, Kazakhstan, Liberia, Mexico, Ukraine and the USA.

What steps have been taken in the mining business to mitigate the low iron ore price environment? And what more needs to be done?

Simon Wandke  
Executive vice president, CEO ArcelorMittal Mining



## The environmental impacts of iron ore: pioneering a lifecycle analysis model

The environmental impacts of our iron ore mining, as the very first step in steel production, are clearly important in understanding the sustainability profile of steel.

Our customers are keenly aware of this need and are looking to better understand the contribution of iron ore mining to the overall footprint of steel products.



Several carmakers, for example, are setting up schemes to evaluate the maturity of their suppliers when it comes to sustainability, and major certification programmes in the construction sector are rewarding products with visible data on their raw material extraction stage.

But iron ore environmental knowledge has been limited by the availability of reliable data. Until now, our company's lifecycle analysis (LCA) studies – key to understanding the potential environmental impact of a product throughout its entire lifecycle – have used general data from the mining sector. This data is provided by consultants or purchased databases, but can be unreliable.

That's why we embarked on a pioneering project to conduct the first lifecycle assessment of our iron ore operations – launching a study at our Peña Colorada mine in Mexico, which produces and sells pellets.

The assessment, developed in compliance with ISO 14040/44, produced a software model to provide environmental indicators beyond CO<sub>2</sub> emissions – which are already well reported – including primary energy demand, global warming potential, acidification (mainly caused by combustion processes, in particular coal power plants and on-site diesel engines), eutrophication (caused by phosphates and nitrates emissions), and photochemical ozone creation.

The resulting data covers both direct impacts (process) and upstream-related impacts including energy production. The software model was designed to be re-used and developed for other simulations to help build a lifecycle assessment for the company's entire iron ore operations.

Even at this early stage, the study has provided useful insight into the LCA of our iron ore operations. For example, looking at the LCA of hot rolled coil – a typical steel product – we know that pellet production makes a relatively small contribution to global warming, primary energy demand and the creation of ozone (respectively 3.16%, 4% and 3%). But, for acidification and eutrophication, the share is likely to be higher than what may have been assumed (8.5% and 10.9%).

Achieving LCA for the first time in mining is a major accomplishment because it paves the way for building a complete environmental profile of our steel products and how our mining operations factor into this – something we expect our customers will increasingly want to know.

## Operational performance

Sales

3.4

(US\$ billions)

Ebitda

462

(US\$ millions)

Own iron ore production

62.8

(million tonnes)

Iron ore shipped at market price

40.3

(million tonnes)

Coal production

6.1

(million tonnes)

LTIFR

0.74

(Lost time injury frequency rate)

## Our operations

We have a high quality, globally diversified portfolio of iron ore and coal mining assets, and are active throughout the whole mining value chain – from exploration and development, to the mining itself, concentration, pelletising, rail transportation and port operations.



### Iron Ore

- |   |  |   |
|---|--|---|
| <ul style="list-style-type: none"> <li>● Hibbing, Virginia, Minnesota</li> <li>● Kryvyi Rih</li> <li>● Lazaro Cardenas (Las Truchas)</li> <li>● Lisakovsk, Kentobe, Antasu, Atansore</li> </ul> | <ul style="list-style-type: none"> <li>● Minatitlán (Peña Colorada)</li> <li>● Mont-Wright, Quebec (ArcelorMittal Mines Canada)</li> <li>● Obregon, Sonora (Volcan)</li> <li>● Prijedor</li> </ul> | <ul style="list-style-type: none"> <li>● State of Minas Gerais (Andrade)</li> <li>● State of Minas Gerais (Serra Azul)</li> <li>● Annaba</li> <li>● Yekepa (Liberia)</li> </ul> |
|---|--|---|

### Coal

- Karaganda
- Princeton, West Virginia



## Safety

We are deeply concerned to report that three colleagues lost their lives in our mining operations this year, while our lost-time injury frequency rate (LTIFR) deteriorated to 0.74, from 0.56 in 2014. We have several sites exhibiting excellence in the business – in September 2015, our Andrade mine in Argentina celebrated an outstanding 23 years without an LTI. And earlier in the year, our Canadian pellet plant at Port Cartier won Canada’s occupational health and safety commission’s 2015 Health and Safety Grand Prix for the North Shore region of Quebec.

Our challenge, therefore, is to find a way of taking the excellent safety culture at these sites, embodied in our ‘Courageous Leadership’ programme, to all our mining operations. Courageous Leadership is about creating an environment in which we value our people above everything, in which we believe we can reach zero injuries, bring a positive attitude to work, eliminate risky behaviour, face challenges with determination, accept the responsibility of leadership, and have the courage to make the necessary commitment to complete the Journey to Zero – including speaking up when we see unsafe behaviour.

In 2015 we launched phase two of the programme, ‘Courageous Leadership ACTION’, which was developed to ensure that leaders at all levels have the correct systems, tools and personal skills to engage successfully with their teams on this vital subject.

Simon Wandke, executive vice president, CEO ArcelorMittal Mining, commented: “After six years of improvements in safety, we tragically lost three valued colleagues in 2015. The work we have done with our Courageous Leadership programme clearly did not go far enough, which is why phase two is so important in making sure we fully embed a culture of safety in all our mining operations. I am confident that this phase will help us do more to ensure the safety of all our people.”

## 2015 operating environment

In 2015, the iron ore price fell by nearly 40% and hit the lowest level since spot pricing was introduced in 2008. Sales were \$3.4 billion, down from \$5.0 billion the previous year, while Ebitda was down 65.3% at \$462 million. Iron ore shipments were down 2% at 62.4 million tonnes, although 40.3 million tonnes were shipped at market price, up 1.4% on the previous year.

With prices forecast to remain low for the foreseeable future, addressing our cost base to remain competitive was a key priority in 2015. So we shifted our focus from maximising value through increasing production volumes, to maximising returns from existing assets by improving productivity and efficiency. We made good progress, cutting our iron ore unit cash costs by 20%, ahead of our initial target of 10%.

The biggest driver of improvement remains our flagship iron ore operation, ArcelorMittal Mines Canada (AMMC). Shipments increased by 14.1% and production increased by 10.9% to 25.9 million tonnes. Cash costs at AMMC were below \$25 per tonne FOB in the final quarter of 2015, a truly world-class level. We expect to continue to increase volume at AMMC with minimal capex, and reduce costs still further.





## Sustainable development

### People

This time last year a massive issue for our people was the Ebola outbreak in Liberia, and what we were doing to help through the Ebola Private Sector Mobilisation Group. Thankfully the epidemic is now largely over, and in 2015 we took part in a number of high-profile conferences and think-tanks to ensure that all the learning is captured. We were very proud to receive a Clinton Global Citizen Award for the contribution we made.

In 2015 we launched the Speak Up! survey, and our mining segment had an impressive 90% response rate. It's a difficult time for our industry, which means it's a difficult time for our employees, so the survey allowed us to gauge levels of morale, and respond to specific concerns and questions. One thing that came out strongly was the importance of face-to-face communications between managers and employees, even more so in challenging times.

### Trusted user of air, land and water

**Outcome 5**, trusted user of air, land and water, is particularly critical for our mining operations given the impact they have on local communities, and we work hard to use natural resources responsibly. Nowhere is this more important than in areas of significant biodiversity.

Our operation in Liberia is in an environmentally significant region and we have been committed to the biodiversity of the area since we started mining in 2011, including investing in a number of environmental offset programmes. A key plank in this is our Biodiversity Conservation Programme, run in partnership with a number of local organisations, which addresses landscape issues in a holistic way. We report annually on its progress to our stakeholders.

We're proud of the contributions we've made here, and in 2015 we saw a rare and special honour for one of our ecologists, Wing-Yunn Crawley – a newly discovered species of butterfly has been named after her, and will now be called the 'Wing's Epitola'. Wing was also named one of the 100 most influential women in world mining.

Our joint venture at Baffinland, in the Canadian Arctic, is also in an area of environmental sensitivity. We're monitoring the impact of the mine, and working alongside the local Inuit people to ensure we protect the environment as the site is developed and jobs and infrastructure are provided for the local area. With the iron ore mine and port now fully operational, this is all the more important. Due to the high quality of the ore, no processing is required before shipping it to market, so the impact on the environment (as well as production costs) is kept to a minimum. Stewardship for the surrounding natural environment has been and will continue to be a priority for us in the area – and in 2015 we chaired two marine and two terrestrial environment working group meetings with various stakeholders.

### Ensuring the safety of our tailings dams

The collapse of another company's tailings dam at Samarco, Brazil, was a salutary reminder to our whole industry of the potential consequences when things go wrong, both for the environment and the community, and for the company concerned.

In 2012, we commissioned independent structural surveys of our dams in Ukraine, the USA, Mexico, Brazil, Kazakhstan, Canada, and Bosnia-Herzegovina, and since then, work has been carried out wherever the inspections detected the need for it. We commissioned follow-up reviews in 2015 in Mexico, Brazil, Kazakhstan, and Ukraine; and Canada and the USA will follow in 2016. We've also set up a task force to make sure this work stays on track.

## Energy and carbon

In 2015, our mining operations emitted 7 million tonnes of CO<sub>2</sub> equivalent. This represents 3.4% of our overall carbon footprint. In this context, it was important that last year we carried out our first environmental lifecycle assessment of iron ore pellet-making at our mine in Peña Colorada, Mexico. We believe this is one of the first such assessments ever done in the mining sector, and builds our knowledge of what proportion of the lifecycle impacts of steel – such as greenhouse gas emissions – are caused by our iron ore pellet process.

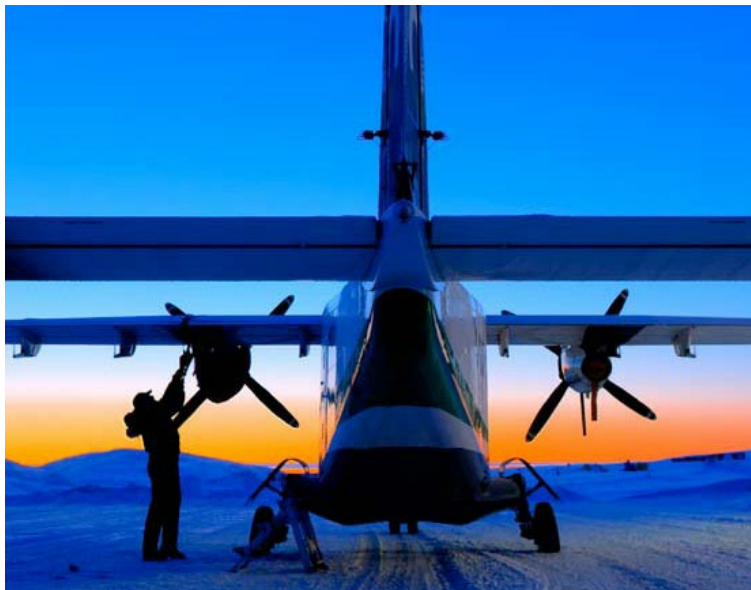
## Active and welcomed member of the community

Mining sites always have a big impact on their local communities – they provide jobs and infrastructure, but they are also big users of land and water, and can affect the quality of the air for local people.

The sustainability practices of the whole mining sector were under the spotlight for some of our stakeholders in 2015. A number of customers asked us about the social and environmental standards relating to the iron ore, coal, and tin we procure, as we explain in our section on [supply chains](#). We also received a number of enquiries from investors about our own mining activities, in particular the environmental impacts of a form of coal mining known as 'mountain top removal'. A small proportion of production at our Princeton West Virginia coal mining site uses this very specialised form of mining, which is authorised for use in the USA, and is therefore in line with our policies.

## Transparent good governance

Transparency continues to be a priority in our mining operations, both in terms of how we engage with stakeholders, and the information we publish. This is a critical aspect of becoming an active and welcomed member of the community – [outcome 8](#). Local stakeholder issues such as land ownership claims, our economic contributions, and environmental incidents are therefore reported in our country-level sustainability reports. For two years we have published our mining royalties at group level; this figure was \$73 million in 2015.



## Investments

During the year we allocated a total of \$54.7 million for capital investment projects across our mining business, to ensure our operations meet the necessary standards. This included investments in environmental improvements, notably seven new dust extraction systems at Kryvyi Rih, Ukraine.



## Outlook

Although low iron ore prices are set to continue we are clear on what we need to do to remain competitive in this difficult environment. Mining's contribution to the group's Action 2020 plan starts with a target to reduce iron ore cash unit costs by a minimum of a further 10% in 2016, and thereafter to continue to supply high-quality products within the group, and also a portion to the global steel industry.

We will do this by focusing on costs, running assets full where possible, accelerating and intensifying actions in those mines that are most affected, and continuing to improve overall equipment effectiveness to reach industry benchmark levels. But underpinning all these actions is the need to maintain our licence to operate. We must do better to provide a safe and healthy workplace for all our employees, and we must continue to develop strong relationships with our community and other stakeholders.

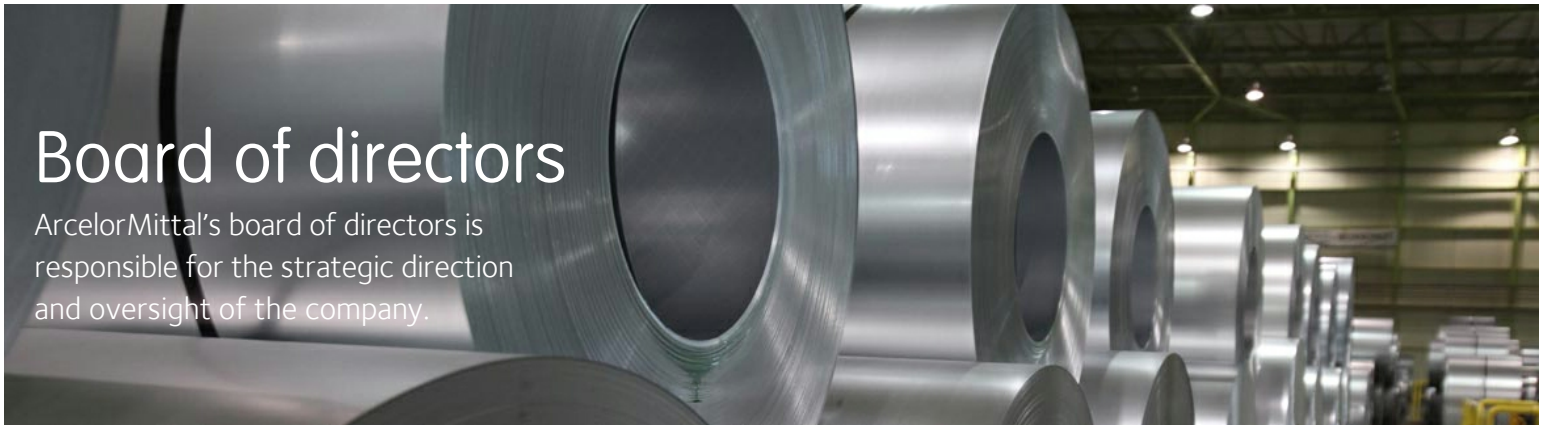
Simon Wandke, executive vice president, CEO ArcelorMittal Mining, commented: "We know 2016 will be another tough year, but it is important to realise that none of the challenges we are facing are specific to us but are being faced by all our competitors within the mining and wider natural resources sectors; no one is unaffected here. Against this backdrop, the resilient performance we have delivered so far and the progress we made in 2015, especially in reducing costs, give me confidence that we have what it takes to make further headway in 2016."



“The resilient performance we have delivered so far and the progress we made in 2015, especially in reducing costs, give me confidence that we have what it takes to make further headway in 2016.”

**Simon Wandke**

Executive vice president, CEO ArcelorMittal Mining



## Board of directors

ArcelorMittal's board of directors is responsible for the strategic direction and oversight of the company.

The Board has 12 directors, of whom 11 are non-executives and eight are independent. Lakshmi Mittal, Chairman and Chief Executive Officer, is the only executive director on the Board.



## Lakshmi N Mittal

Chairman and Chief Executive Officer

**Lakshmi N Mittal**, 65, is the Chairman and Chief Executive Officer of ArcelorMittal. Mr. Mittal started his career in steel in 1976 by founding Ispat Indo, a company that is still held privately by the Mittal family. He founded Mittal Steel (formerly the LNM Group) in 1989 and guided its strategic development, culminating in the merger in 2006 with Arcelor, to form ArcelorMittal, the world's largest steelmaker. He is widely recognised for the leading role he has played in restructuring the steel industry towards a more consolidated and globalised model.

Mr. Mittal is an active philanthropist and a member of various boards and trusts, including chairman of the board of Aperam and the boards of Goldman Sachs and Airbus N.V. (previously EADS NV). He is a member of the Foreign Investment Council in Kazakhstan, the World Economic Forum's International Business Council and the World Steel Association's Executive Committee. He also sits on the board of trustees of Cleveland Clinic in the USA.

In 1996, Mr. Mittal was awarded 'Steelmaker of the Year' by New Steel in the United States and in 1998 the 'Willy Korf Steel Vision Award' by World Steel Dynamics for outstanding vision, entrepreneurship, leadership and success in global steel development. He was named Fortune magazine's 'European Businessman of the Year 2004'. Mr. Mittal was awarded 'Business Person of 2006' by *The Sunday Times*, 'International Newsmaker of the Year 2006' by *Time Magazine* and 'Person of the Year 2006' by the *Financial Times* for his outstanding business achievements.

In January 2007, Mr. Mittal was presented with a Fellowship from King's College London, the college's highest award. He also received in 2007 the Dwight D. Eisenhower Global Leadership Award, the Grand Cross of Civil Merit from Spain and was named AIST Steelmaker of the year. In January 2008, Mr. Mittal was awarded the Padma Vibhushan, India's second highest civilian honour, by the President of India. In September 2008, Mr. Mittal was chosen for the third 'Forbes Lifetime Achievement Award', which honours heroes of entrepreneurial capitalism and free enterprise.

In October 2010, he was awarded the World Steel Association's medal in recognition of his services to the Association as its Chairman and also for his contribution to the sustainable development of the global steel industry. In January 2013, Mr. Mittal was awarded with a Doctor Honoris Causa by the AGH University of Science and Technology in Krakow, Poland.

Mr. Mittal is a citizen of India.



## Lewis B Kaden

Lead independent director

**Lewis B Kaden**, 73, is the Lead independent director of ArcelorMittal, a member of the Audit & Risk Committee, and chairman of the Appointments, Remuneration and Corporate Governance Committee. He has approximately 40 years of experience in corporate governance, financial services, dispute resolution and economic policy. He is currently Senior Adviser of TGG Group and the John Harvey Gregory Lecturer on World Organization at Harvard University.

Mr. Kaden was vice chairman of Citigroup between 2005 and 2013. Prior to that, he was a partner of the law firm Davis Polk & Wardwell, and served as Counsel to the Governor of New Jersey, as a Professor of Law at Columbia University, and as director of Columbia University's Center for Law and Economic Studies.

He has served as a director of Bethlehem Steel Corporation for ten years and is currently chairman of the Board of Trustees of the Markle Foundation and vice chairman of the Board of Trustees of Asia Society.

He is a member of the Council on Foreign Relations and of the Trilateral Commission, and is also moderator of the Business-Labor Dialogue. He is a Senior Fellow of the Moussavar-Rahmani Center on Business and Government at the Harvard Kennedy School of Government and Senior Fellow of the Program on Corporate Governance at the Center on the Legal Profession at Harvard Law School.

Mr. Kaden is a citizen of the USA.



## Tye Burt

Non-executive director

**Tye Burt**, 58, is a non-executive and independent director of ArcelorMittal and a member of the Appointments, Remuneration and Corporate Governance Committee. He was appointed President and Chief Executive Officer of Kinross Gold Corporation in March 2005, and held this position until August 1, 2012. Kinross is listed on the New York Stock Exchange and the Toronto Stock Exchange. Mr. Burt was also a member of the board of directors of Kinross.

Mr. Burt has broad experience in the global mining industry, specialising in corporate finance, business strategy and mergers and acquisitions. Prior to joining Kinross, he held the position of Vice Chairman and Executive Director of Corporate Development at Barrick Gold Corporation. He was President of the Cartesian Capital Group from 2000 to 2002; Chairman of Deutsche Bank Canada and Deutsche Bank Securities Canada; Global Managing Director of Global Metals and Mining for Deutsche Bank AG from 1997 to 2000; and Managing Director and Co-Head of the Global Mining Group at BMO Nesbitt Burns from 1995 to 1997, holding various other positions at BMO Nesbitt Burns from 1986 to 1995.

Mr. Burt is the Chairman of Urthecast Corp., a small Canadian TSX-listed company in the aerospace technology business. He is also the Chair and Principal at Carbon Arc Capital Investments Corp. and the Life Sciences Research Campaign Chair of the University of Guelph's Better Planet Project. Mr. Burt is a member of the Duke of Edinburgh's Award Charter for Business Board of Governors.

He is a graduate of Osgoode Hall Law School, a member of the Law Society of Upper Canada, and he holds a Bachelor of Arts degree from the University of Guelph.

Mr. Burt is a citizen of Canada.



## Jeannot Krecké

Non-executive director

**Jeannot Krecké**, 65, is a non-executive and non-independent director of ArcelorMittal. He started his university studies at the Université Libre de Bruxelles (ULB) in Belgium in 1969, from where he obtained a degree in physical and sports education. He decided in 1983 to change professional direction. His interests led him to retrain in economics, accounting and taxation. He enrolled in various courses, in particular in the USA.

Following the legislative elections of June 13, 2004, Mr. Krecké was appointed Minister of the Economy and Foreign Trade of Luxembourg on July 13, 2004. Upon the return of the coalition government formed by the Christian Social Party (CSV) and the Luxembourg Socialist Workers' Party (LSAP) as a result of the legislative elections of June 7, 2009, Mr. Krecké retained the portfolio of Minister of the Economy and Foreign Trade on July 23, 2009.

As of July 2004, Mr. Krecké represented the Luxembourg government at the Council of Ministers of the EU in the Internal Market and Industry sections of its Competitiveness configuration as well as in the Economic and Financial Affairs Council and in the Energy section of its Transport, Telecommunications and Energy configuration. He was also a member of the Eurogroup from July 2004 to June 2009.

On February 1, 2012, Mr. Krecké retired from government and decided to end his active political career in order to pursue a range of different projects. Mr. Krecké is currently the CEO of Key International Strategy Services. He is a member of the boards of JSFC Sistema, of East West United Bank, of China Construction Bank Europe, of Calzedonia Finanziaria S.A., Jan De Nul S.A. and Novenergia Holding Company S.A.

Mr. Krecké is a citizen of Luxembourg.



## Bruno Lafont

Non-executive director

**Bruno Lafont**, 59, is a non-executive and independent director of ArcelorMittal and a member of the Audit & Risk Committee. He began his career at Lafarge in 1983 and has held numerous positions in finance and international operations with the same company. In 1995, Mr. Lafont was appointed Group Executive Vice President, Finance, and thereafter Executive Vice President of the Gypsum Division in 1998. He joined Lafarge's General Management as Chief Operating Officer in May 2003, and held that post until December 2005. He was appointed Chief Executive Officer in January 2006, and Chairman and Chief Executive Officer in May 2007. In July 2015, Mr. Lafont was appointed co-chairman of the board of directors of LafargeHolcim and Honorary Chairman of Lafarge.

Mr. Lafont currently chairs the Energy & Climate Change Working Group of the ERT (European Roundtable of Industrialists) and the Sustainable Development Commission of the MEDEF (Mouvement des Entreprises de France), the French Employers' Association.

He is a member of the Executive Committee of the World Business Council for Sustainable Development (WBCSD) and a Board member of the AFEP (French large companies association). He is also a Special Adviser to the Mayor of Chongqing (China) and a board member of EDF.

Mr Lafont is a graduate from the Hautes Etudes Commerciales business school (HEC 1977, Paris) and the Ecole Nationale d'Administration (ENA 1982, Paris).

Mr. Lafont is a citizen of France.



## Vanisha Mittal Bhatia

Non-executive director

**Vanisha Mittal Bhatia**, 35, is a non-independent director of ArcelorMittal. She was appointed as a member of the LNM Holdings board of directors in June 2004. Mrs Mittal Bhatia was appointed to Mittal Steel's board of directors in December 2004. She joined Aperam in April 2011 and is its chief strategy officer.

Mrs Mittal Bhatia has a Bachelor of Sciences from the European Business School. She is also the daughter of Mr. Lakshmi N Mittal.

Mrs. Mittal Bhatia is a citizen of India.





## Suzanne P Nimocks

Non-executive director

**Suzanne P Nimocks**, 56, is a non-executive and independent director of ArcelorMittal and a member of the Appointments, Remuneration and Corporate Governance Committee. She was previously a director (senior partner) with McKinsey & Company, a global management consulting firm, from June 1999 to March 2010, and was with the firm in various other capacities beginning in 1989, including as a leader in the firm's Global Petroleum Practice, Electric Power & Natural Gas Practice, Organization Practice, and Risk Management Practice.

Mrs. Nimocks chaired the Environmental Committee of the Greater Houston Partnership, the primary advocate of Houston's business community, until December 31, 2010. She holds a Bachelor of Arts in Economics from Tufts University and a Masters in Business Administration from the Harvard Graduate School of Business.

Mrs. Nimocks is currently a board member for Encana Corporation, Rowan Companies Plc, and Owens Corning, all listed companies. Encana is a major natural gas exploration and production company; Rowan Companies provides drilling services for the oil and gas industry; and Owens Corning is a manufacturer of building products. In the non-profit sector, she chairs the board of directors of the Houston Zoo and serves as a Trustee of the Texas Children's Hospital.

Mrs. Nimocks is a citizen of the USA.



## Karyn Ovelmen

Non-executive director

**Karyn Ovelmen**, 52, is a non-executive and an independent director of ArcelorMittal and a member of the Audit & Risk Committee. She is the Executive Vice President and Chief Financial Officer of Flowserve, a leading provider of flow control products and services for the global infrastructure market, a position that she has held since June 2015. Most recently she also served as Chief Financial Officer and Executive Vice President of LyondellBasell Industries NV from 2011 to May 2015, as Executive Vice President and Chief Financial Officer of Petroplus Holdings AG from May 2006 to September 2010, and as Executive Vice President and Chief Financial Officer of Argus Services Corporation from 2005 to 2006. Prior to that, she was Vice President of External Reporting and Investor Relations for Premcor Refining Group Inc.

Mrs. Ovelmen also spent 12 years with PricewaterhouseCoopers, primarily serving energy industry accounts. She holds a Bachelor of Arts degree from the University of Connecticut, and is a Certified Public Accountant (CPA) of AICPA.

Mrs. Ovelmen is a citizen of the USA.



## Wilbur L Ross, Jr

Non-executive director

**Wilbur L Ross, Jr**, 78, is a non-executive and independent director of ArcelorMittal and a member of the Audit & Risk Committee. He is also the chairman of WL Ross Holding Corporation which is listed on NASDAQ. He is vice chairman of the Bank of Cyprus which is listed on the Cyprus and Athens Stock Exchanges, and is a director of Sun Bancorp (an 'over-the-counter', or OTC entity), and of Exco, which is listed on the New York Stock Exchange.

Mr. Ross has a number of non-profit affiliations. He is on the board of the Yale School of Management and the Harvard Business School Dean's advisory board.

He is chairman of the Japan Society and of the Economic Studies Council of the Brookings Institution, of which he is also a trustee. Mr. Ross is the president of the American Friends of the Magritte Museum and a member of the International Council of the Musée des Arts Décoratifs. He is also a trustee of the Palm Beach Retirement Funds, the Palm Beach Preservation Foundation and the Palm Beach Civic Association.

Mr. Ross is a citizen of the USA.



## Antoine Spillmann

Non-executive director

**Antoine Spillmann**, 52, is a non-executive and independent director of ArcelorMittal and a member of the Appointments, Remuneration and Corporate Governance Committee. He is the CEO and executive partner at the firm Bruellan Wealth Management, one of Switzerland's leading independent asset management companies based in Geneva, Switzerland. He spends most of his time defending the rights of shareholders and investors in quoted companies in Switzerland. He served for five years as vice president of the Swiss association of asset managers.

Mr. Spillmann is a non-independent board member of Bondpartners SA (BPL) and Leclanché SA. BPL is a Swiss financial services company founded in 1972, authorised under the law to trade securities and controlled by the Swiss Financial Market Supervisory Authority (FINMA).

BPL is also a member of the Swiss Bankers Association, member of the International Capital Market Association and associated member of the Swiss Stock Exchange. Leclanché is a 100-year-old Swiss company that develops and produces energy storage systems using large-format lithium-ion cells. The firm is quoted on the SIX Stock Exchange.

Mr. Spillmann studied in Switzerland and London, receiving diplomas from the London Business School in Investment Management and Corporate Finance.

Mr. Spillmann is a citizen of Switzerland.



## Narayanan Vaghul

Non-executive director

**Narayanan Vaghul**, 79, is a non-executive and independent director of ArcelorMittal as well as the chairman of the Audit & Risk Committee. He has over 50 years of experience in the financial sector and was the chairman of ICICI Bank Limited between 2002 and April 2009.

Previously, he served as the chairman of the Industrial Credit and Investment Corporation of India, a long-term credit development bank, for 17 years and, prior to that, served as chairman of the Bank of India and executive director of the Central Bank of India. He also served for brief periods as a consultant to the World Bank, the International Finance Corporation and the Asian Development Bank.

Mr. Vaghul has been a visiting professor at the Stern Business School at New York University and a board member of Mahindra & Mahindra. He is chairman of the Indian Institute of Finance Management & Research and is also a board member of Wipro, Piramal Healthcare Limited and Apollo Hospitals.

Mr. Vaghul was chosen as a Businessman of the Year in 1992 by *Business India*. He also received a Lifetime Achievement Award from the *Economic Times*. In 2009, he was awarded the Padma Bhushan, India's third highest civilian honour.

Mr. Vaghul is a citizen of India.



## Michel Wurth

Non-executive director

**Michel Wurth**, 61, is a non-independent director of ArcelorMittal. He joined Arbed in 1979 and held a variety of functions before joining the Arbed Group Management Board (GMB) and becoming its chief financial officer in 1996. The merger of Aceralia, Arbed and Usinor, leading to the creation of Arcelor in 2002, led to Mr. Wurth's appointment as senior executive vice president and CFO of Arcelor. He became a member of ArcelorMittal's Group Management Board in 2006, responsible for Flat Carbon Europe, Global R&D, Distribution Solutions and Long Carbon Worldwide, respectively. He retired from the GMB in April 2014 and was elected to ArcelorMittal's board of directors in May 2014.

Mr. Wurth holds a law degree from the University of Grenoble, France, and a degree in political science from the Institut d'Études Politiques de Grenoble as well as a Master's of Economics from the London School of Economics, UK. He is also doctor of laws honoris causa of the Sacred Heart University, Luxembourg.

Mr. Wurth has served as chairman of the Luxembourg Chamber of Commerce since 2004. He is also non-executive chairman of Paul Wurth S.A. and of BIP Investment Partners and non-executive director of BGL BNP Paribas S.A., of SMS Group and of Brasserie Nationale. Paul Wurth S.A. is controlled by SMS Group, a leading equipment and engineering supplier for the steel and non-ferrous metal producing industry. BIP Investment Partners is a Luxembourg-based company, mainly invested in private equity; BGL BNP Paribas is a Luxembourg bank, majority owned by BNP of France; and Brasserie Nationale is a privately-owned brewery based in Luxembourg.

Mr. Wurth is a citizen of Luxembourg.

# Senior management

Our executive officers are responsible for the implementation of the company strategy, overall management of the business and all operational decisions.

ArcelorMittal's CEO and CFO work closely with a team of seven executive officers to manage the business, supported by a management committee of senior leaders from across the company.



## Lakshmi N Mittal

Chairman and Chief Executive Officer

**Lakshmi N Mittal**, 65, is the Chairman and Chief Executive Officer of ArcelorMittal. Mr. Mittal started his career in steel in 1976 by founding Ispat Indo, a company that is still held privately by the Mittal family. He founded Mittal Steel (formerly the LNM Group) in 1989 and guided its strategic development, culminating in the merger in 2006 with Arcelor, to form ArcelorMittal, the world's largest steelmaker. He is widely recognised for the leading role he has played in restructuring the steel industry towards a more consolidated and globalised model.

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Mr. Mittal is a citizen of India.





## Aditya Mittal

CEO ArcelorMittal Europe and Group CFO

**Aditya Mittal**, 39. Prior to the merger to create ArcelorMittal, Mr. Aditya Mittal held the position of President and Chief Financial Officer of Mittal Steel Company from October 2004 to 2006. He joined Mittal Steel in January 1997 and has held various finance and management roles within the company. In 1999, he was appointed Head of Mergers and Acquisitions for Mittal Steel. In this role, he led the company's acquisition strategy, resulting in Mittal Steel's expansion into Central Europe, Africa and the USA. Besides M&A responsibilities, Mr. Aditya Mittal was involved in post-integration, turnaround and improvement strategies. As Chief Financial Officer of Mittal Steel, he also initiated and led Mittal Steel's offer for Arcelor to create ArcelorMittal, the first 100 million tonnes plus steel company.

In 2008, Mr. Aditya Mittal was awarded 'European Business Leader of the Future' by CNBC Europe. In 2011, he was ranked 4th in the '40 under 40' list of Fortune magazine. He is a Young Global Leader of the World Economic Forum, a board member at the Wharton School and a board member at Iconiq Capital.

Mr. Aditya Mittal holds a Bachelor's degree of Science in Economics with concentrations in Strategic Management and Corporate Finance from the Wharton School in Pennsylvania, USA. Mr. Aditya Mittal is the son of Mr. Lakshmi N Mittal.

Mr. Aditya Mittal is a citizen of India.



## Brian Aranha

Executive vice president, head of strategy, CTO, R&D, CCM and global automotive

**Brian Aranha**, 60, is executive vice president, head of strategy, CTO, R&D, CCM and global automotive. He is also in charge of automotive joint ventures in China and India.

Mr. Aranha joined Dofasco in 1979 as a member of the company's research and development department. In 1989, he was appointed to the American Iron & Steel Institute (AISI) in Washington, D.C., and in 1991, he was part of a Canadian consortium conducting a study for the World Bank on restructuring the Polish steel industry.

In 1992, Mr. Aranha returned to Dofasco as project manager responsible for the delivery improvement team. In 1993, he was appointed general manager of quality systems and became purchasing assistant director in 1998.

Mr. Aranha took on the role of director of the automotive business in 2001, a position that he held until being named vice president of commercial in 2003. He took up additional responsibilities as vice president of NAFTA automotive, after its integration into ArcelorMittal in 2007. He moved to Flat Carbon Europe in 2008 as chief marketing officer of industry.

Mr. Aranha holds a Bachelor of Applied Sciences and Engineering from the University of Toronto.

Mr. Aranha is a citizen of Canada.



## Jim Baske

Executive vice president, CEO ArcelorMittal North America (excluding ArcelorMittal USA)

**Jim Baske**, 56, is executive vice president, chief executive officer (CEO), ArcelorMittal North America (excluding ArcelorMittal USA). His career began in 1981 at LTV Steel. He then joined Copperweld Corp. as vice president of operations in 2002. Copperweld is now part of the Tubular Products division of ArcelorMittal.

In 2006, Mr. Baske was appointed vice president of the Dofasco Tubular Products mechanical division. He then became director of mechanical tubular products, leading facilities in Poland, Czech Republic, Romania, Kazakhstan, and the USA.

In 2009, Mr. Baske was responsible for all the tubular products facilities in North America. In his most recent role, he was chief executive officer ArcelorMittal North America Flat Rolled.

Mr. Baske holds a Bachelor of Civil Engineering from the Rose-Hulman Institute of Technology in the United States. He also completed executive management programmes at the University of Virginia Darden School of Business and the University of Pennsylvania Wharton School of Business.

Mr. Baske is a citizen of the USA.



## Henri Blaffart

Executive vice president, group head of HR and corporate services

**Henri Blaffart**, 61, is executive vice president and has been a member of the Management Committee of ArcelorMittal since April 2013. He is head of group human resources (HR) and, in addition to his role, he also took responsibility for corporate services (including legal, capital goods, shipping, communication and corporate responsibility, IT council) in January 2014. Since June 2015, he has been responsible for the joint venture ArcelorMittal Tubular Jubail (AMTPJ). He is also chairman of the board of AMTPJ.

Before 2013, Mr. Blaffart was head of HR for the company's Flat Carbon Europe segment and a member of the segment Management Committee, a position he took up in April 2010. Previously, he was chief executive officer (CEO) of ArcelorMittal Lorraine in France, having first been head of primary for the same operation.

Henri joined the group in 1982 as strategy and research and development (R&D) Director in Liège, Belgium. He has held a number of other positions in the company including R&D director for construction and CEO of the former Arcelor's research division.

Mr. Blaffart qualified as a civil engineer at the University of Liège, Belgium and holds a master's degree in general management from the Ecole d'Entreprise pour le Perfectionnement au Management in Belgium.

Mr. Blaffart is a citizen of Belgium.



## Davinder Chugh

Senior executive vice president, CEO ArcelorMittal ACIS

**Davinder Chugh**, 59, is CEO of ArcelorMittal ACIS, and is responsible for Kazakhstan, South Africa and Ukraine. He has over three decades of experience in the steel industry in general management, materials purchasing, marketing, logistics, warehousing and shipping. Mr. Chugh was previously a senior executive vice president of ArcelorMittal, and has been responsible for shared services since 2013. Before this post, he served as the CEO of Mittal Steel South Africa until 2006.

Mr. Chugh worked in South Africa from 2002 following the acquisition of Mittal Steel South Africa (ISCOR) and was involved in the turnaround and consolidation of the South African operations of ArcelorMittal. He also served as director of commercial and marketing at Mittal Steel South Africa.

Mr. Chugh was vice president of purchasing in Mittal Steel Europe until 2002, where he consolidated procurement and logistics across plants in Europe.

Between 1995, when he joined Mittal Steel, and 1999, he worked as general manager (purchasing) of Hamburg Steel Works and as general manager (purchasing) of Mittal Steel Germany. Prior to joining Mittal Steel, he held senior positions at the Steel Authority India Limited in New Delhi, India. He holds a B.Sc. (Physics Honors), an LLB and an MBA.

Mr. Chugh is a citizen of India and of the UK.



## Jefferson de Paula

Executive vice president, CEO ArcelorMittal South America Long

**Jefferson de Paula**, 57, is executive vice president, Chief Executive Officer (CEO) ArcelorMittal South America Long and is also a member of the group's Management Committee.

With a career spanning over 32 years in the steel business, Mr. de Paula joined the group in 1993 and has held several positions including CEO of Long Carbon Americas; CEO Long Carbon South Division Europe; Chief Operating Officer (COO) of Sections, Rails, Piles, Special Sections Long Carbon Europe; Executive Director of ArcelorMittal Argentina (Acindar); COO ArcelorMittal Argentina (Acindar); and Plant General Manager at ArcelorMittal Vitória (Brazil) plant.

Mr. de Paula is also a member of the boards of ArcelorMittal in Argentina and Trinidad & Tobago as well as chairman of the advisory board of BBA (ArcelorMittal's wire drawing joint venture with Bekaert in Brazil). Mr. de Paula also serves as member of the FIEMG (State of Minas Gerais Industry Federation) Strategic Advisory Board.

Mr. de Paula is a citizen of Brazil.



## Geert Van Poelvoorde

Executive vice president, CEO ArcelorMittal Europe Flat

**Geert Van Poelvoorde**, 50, is executive vice president, chief executive officer (CEO), ArcelorMittal Europe Flat Products, with additional responsibility for the ArcelorMittal Europe purchasing platform. He is also President of Eurofer. Mr. Van Poelvoorde started his career in 1989 as a project engineer at the Sidmar Ghent hot strip mill, where he held several senior positions in the automation and process computer department. He moved to Stahlwerke Bremen in 1995 as senior project manager.

Between 1998 and 2002 Mr. Van Poelvoorde headed a number of departments, and in 2003 he was appointed director of Stahlwerke Bremen, responsible for operations and engineering.

In 2005, he returned to ArcelorMittal Gent to take up the position of chief operating officer (COO) primary. In 2008 he became CEO of ArcelorMittal Gent with direct responsibility for primary operations. He was appointed CEO of the Business Division North within Flat Carbon Europe in 2009 and, since January 2014, CEO, Flat Carbon Europe.

Mr. Van Poelvoorde graduated from the University of Ghent, Belgium, with a degree in civil engineering and electronics.

Mr. Van Poelvoorde is a citizen of Belgium.



## Simon Wandke

Executive vice president, CEO ArcelorMittal Mining

**Simon Wandke**, 57, is executive vice president and CEO of ArcelorMittal Mining. He has over 30 years' experience in the international mining and minerals industry and joined the company in January 2011 as chief commercial officer. Mr. Wandke's career began in 1981 at BHP Billiton, where he held positions in mines in Australia and Indonesia and other commercial offices globally rising to VP level. In 2002 he joined Destra Consulting Group LLC as a Partner. In 2006 he was appointed chief marketing officer and a member of the core team to list Ferrexpo plc in 2006 and, until joining ArcelorMittal, was based in Hong Kong, Switzerland and the UK.

Simon is a graduate of the Australian Institute of Company Directors with a Diploma in Company Directorship. He also holds a Graduate Diploma in Corporate Finance from Swinburne University, Australia, as well as a B.A., Psych, Marketing (Commerce) from the University of Melbourne, Australia.

Mr. Wandke is a citizen of the UK and Australia.



# Group structure

ArcelorMittal is a holding company with no business operations of its own. All of ArcelorMittal's significant operating subsidiaries are indirectly owned by ArcelorMittal through intermediate holding companies.

The following table identifies the principal subsidiaries of ArcelorMittal, listed by reporting segment and location.

Name of Subsidiary	Abbreviation	Country
<b>NAFTA</b>		
ArcelorMittal Dofasco Inc. <sup>1</sup>	ArcelorMittal Dofasco	Canada
ArcelorMittal Mexico S.A. de C.V.	ArcelorMittal Mexico	Mexico
ArcelorMittal USA LLC	ArcelorMittal USA	USA
ArcelorMittal Las Truchas, S.A. de C.V.	ArcelorMittal Las Truchas	Mexico
ArcelorMittal Montreal Inc. <sup>2</sup>	ArcelorMittal Montreal	Canada
<b>Brazil and neighboring countries ("Brazil")</b>		
ArcelorMittal Brasil S.A.	ArcelorMittal Brasil	Brazil
Acindar Industria Argentina de Aceros S.A.	Acindar	Argentina
<b>Europe</b>		
ArcelorMittal Atlantique et Lorraine S.A.S.	ArcelorMittal Atlantique & Lorraine	France
ArcelorMittal Belgium N.V.	ArcelorMittal Belgium	Belgium

Name of Subsidiary	Abbreviation	Country
ArcelorMittal España S.A.	ArcelorMittal España	Spain
ArcelorMittal Flat Carbon Europe S.A.	ArcelorMittal Flat Carbon Europe	Luxembourg
ArcelorMittal Galati S.A.	ArcelorMittal Galati	Romania
ArcelorMittal Poland S.A.	ArcelorMittal Poland	Poland
Industeel Belgium S.A.	Industeel Belgium	Belgium
Industeel France S.A.	Industeel France	France
ArcelorMittal Eisenhüttenstadt GmbH	ArcelorMittal Eisenhüttenstadt	Germany
ArcelorMittal Bremen GmbH	ArcelorMittal Bremen	Germany
ArcelorMittal Méditerranée S.A.S.	ArcelorMittal Méditerranée	France
ArcelorMittal Belval & Differdange S.A.	ArcelorMittal Belval & Differdange	Luxembourg
ArcelorMittal Hamburg GmbH	ArcelorMittal Hamburg	Germany
ArcelorMittal Gipuzkoa S.L.	ArcelorMittal Gipuzkoa	Spain
ArcelorMittal Ostrava a.s.	ArcelorMittal Ostrava	Czech Republic
ArcelorMittal Duisburg GmbH	ArcelorMittal Duisburg	Germany

#### Africa and Commonwealth of Independent States ("ACIS")

ArcelorMittal South Africa Ltd.	ArcelorMittal South Africa	South Africa
JSC ArcelorMittal Temirtau	ArcelorMittal Temirtau	Kazakhstan
PJSC ArcelorMittal Kryvyi Rih	ArcelorMittal Kryvyi Rih	Ukraine
ArcelorMittal International Luxembourg S.A.	ArcelorMittal International Luxembourg	Luxembourg

#### Mining

ArcelorMittal Mines Canada Inc.	ArcelorMittal Mines Canada	Canada
ArcelorMittal Liberia Ltd	ArcelorMittal Liberia	Liberia
JSC ArcelorMittal Temirtau	ArcelorMittal Temirtau	Kazakhstan
PJSC ArcelorMittal Kryvyi Rih	ArcelorMittal Kryvyi Rih	Ukraine

<sup>1</sup> As of January 1, 2016, the business formerly carried on by ArcelorMittal Dofasco Inc. is now carried on by ArcelorMittal Dofasco G.P.

<sup>2</sup> As of January 1, 2016, the business formerly carried on by ArcelorMittal Montreal Inc. is now carried on by ArcelorMittal Long Products Canada G.P.

# Corporate governance

Integrity and reputation are key to good corporate governance at ArcelorMittal.



Good corporate governance goes beyond regulatory requirements and extends to the commitment of individual employees to be good corporate citizens. As stated by our Chairman and Chief Executive Officer, Lakshmi Mittal, integrity and reputation are key assets that must be preserved at all times.

We are committed to applying best practice standards in corporate governance, in our dealings with shareholders and other stakeholders, and with respect to transparency and quality of disclosure and reporting. We aim to take the interests of all our stakeholders into account and engage with them on a regular basis. We continually monitor legal requirements and best practice in the USA, the European Union and Luxembourg to make improvements to our corporate governance standards and procedures when necessary.

## Governance structure

ArcelorMittal is a public limited liability company (société anonyme) incorporated in Luxembourg. It is governed by a board of directors in accordance with the requirements set out in the company's articles of association. The board of directors sets the company's strategy and the implementation of this strategy is delegated to a group of executive officers, headed by the only executive board director, Lakshmi Mittal, our Chairman and CEO.

Our board of directors comprises a large majority of independent directors, with eight independents out of a total of 12 members. To ensure proper checks and balances are in place, a lead independent director – who presides over the independent directors – sets the agenda for board meetings with the Chairman and leads the independent directors in executive sessions, which take place before every board meeting. Our lead independent director is Lewis B Kaden.

Our Appointments, Remuneration and Corporate governance committee comprises four directors, all of whom are independent. Our Audit & Risk committee has five directors, all of whom are independent.

## Code of business conduct

A reputation for honesty and integrity is key to our success. Our code of business conduct applies to all directors, officers and employees of ArcelorMittal and its subsidiaries worldwide.

[Read our full corporate governance report.](#) >

## **Independent assurance report on selected environmental performance indicators published in the Fact book 2015 of ArcelorMittal, Société Anonyme, for the year ended 31 December 2015**

To the Management of  
ArcelorMittal, Société Anonyme  
24-26, boulevard d'Avranches  
L-1160 Luxembourg  
Grand-Duchy of Luxembourg

### **Objectives and scope of work performed**

This report has been prepared in accordance with the terms of our engagement letter dated 15 February 2016 to provide limited assurance on selected environmental performance indicators (the "Indicators") published in the Fact book 2015 of ArcelorMittal, Société Anonyme, (the "Company", "ArcelorMittal" or "Group") for the year ended 31 December 2015 (the "Report").

The selected environmental performance indicators under our assurance scope and marked with a "\*" on the Sustainability Performance pages of the Report, are the following:

- Primary energy consumption (steel)
- Total CO<sub>2</sub>e emissions (steel)
- CO<sub>2</sub>e emissions per tonne of steel

The Indicators have been defined following ArcelorMittal's Basis of Reporting (<http://annualreview2015.arcelormittal.com>) and they have been selected by the Management of the Company.

### **Responsibility of the Management of the Company**

The Management of the Company is responsible for the preparation of the Report in accordance with ArcelorMittal's Basis of Reporting and for the information and statements contained within it. The Management is responsible for determining the Company's sustainability objectives and for establishing and maintaining appropriate performance management and internal control systems from which the reported information is derived.

### **Our Independence and Quality Control**

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, as adopted for the audit profession in Luxembourg by the Commission de Surveillance du Secteur Financier ("the Code"). The Code is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Deloitte Audit applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

## Responsibility of the Réviseur d'entreprises agréé

Our responsibility is to conduct a limited assurance engagement solely on the Indicators selected by the company and draw conclusions on the work we performed.

We carried out our procedures on the Indicators in accordance with the International Standard on Assurance Engagements 3000 (Revised) "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information" ("ISAE 3000 Revised"). To achieve limited assurance the ISAE 3000 Revised requires that we review the processes, systems and competencies used to compile the Indicators on which we provide limited assurance. This is designed to give a similar level of assurance to that obtained in the review of interim financial information. It does not include detailed testing of source data or the operating effectiveness of processes and internal controls.

In order to draw our conclusion on the Report, we undertook the following procedures:

- Interviewed a selection of ArcelorMittal senior management who have operational responsibility for corporate responsibility matters, including the group Corporate Responsibility team, data owners and those with operational responsibility for sustainability performance related to the selected Indicators
- Visited eight sites across the world to review the systems to capture, collate and process source data for the Indicators listed above. The sites visited to examine relevant 2015 data and processes were:
  - Termitau (ArcelorMittal Temirtau), Kazakhstan
  - Saranskaya (ArcelorMittal Temirtau), Kazakhstan
  - Tubarão (ArcelorMittal Tubarão), Brazil
  - Burns Harbor (ArcelorMittal Burns Harbor ), United States
  - Gent (ArcelorMittal Belgium), Belgium
  - Aviles-Gijon (ArcelorMittal Spain), Spain
  - Fos-sur-mer (ArcelorMittal Méditerranée), France
  - Dabrova Górnicza (ArcelorMittal Poland), Poland
- Obtained an understanding through inquiries, analytical reviews, observation and other applicable evidence gathering procedures on a sample basis on the key structures, systems, processes, procedures and internal controls relating to
  - the selected key performance indicators
  - collation, aggregation, validation and reporting of performance data for the selected Indicators.

## Limitations

The scope of our work has been limited to the aforementioned selected Indicators. Our conclusion below covers therefore only these Indicators and not all indicators presented or any other information included in the Report.

# Deloitte.

The process an organisation adopts to define, gather and report data on its non-financial performance is not subject to the formal processes adopted for financial reporting. Therefore, data of this nature is subject to variations in definitions, collection and reporting methodology with no consistent, accepted standard. This may result in non-comparable information between organisations and from year to year within an organisation as methodologies develop.

The accuracy and completeness of the information disclosed in the Report are subject to inherent limitations given their nature and the methods for determining, calculating or estimating such information. Our independent assurance report should therefore be read in connection with the Company's definitions of indicators as included in the Basis of Reporting document, which is available on <http://annualreview2015.arcelormittal.com>.

A limited assurance engagement is substantially less in scope than a reasonable assurance engagement and consequently does not enable us to obtain assurance that we would become aware of all significant matters that might be identified in a reasonable assurance engagement. Accordingly, we do not express an audit opinion.

## Conclusion

Based on the procedures performed and evidence obtained, we are not aware of any material amendments that need to be made to the assessment of the selected environmental performance Indicators, marked with a "\*" on Sustainability Performance pages of the Report, for them to be in accordance with ArcelorMittal's Basis of Reporting.

For Deloitte Audit  
*Société à responsabilité limitée*  
*Cabinet de révision agréé*



Nicolas Hennebert, *Réviseur d'entreprises agréé*  
Partner

26 April 2016

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