



ArcelorMittal

Annual review 2016: Sustainable progress

Welcome to our integrated annual review. In 2016, we significantly strengthened our financial position and delivered materially improved results. We also looked to the longer-term, launching a five-year strategic plan, Action 2020, while further embedding sustainable development throughout our business to ensure long-term value creation for all stakeholders. 2016 was a year of sustainable progress for ArcelorMittal.

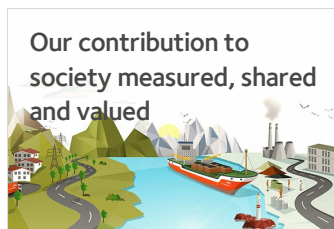
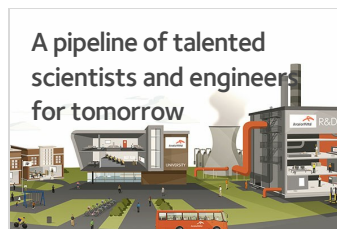
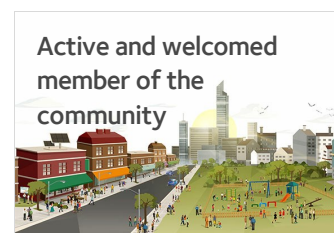
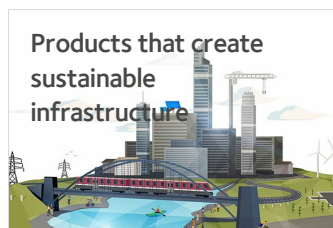
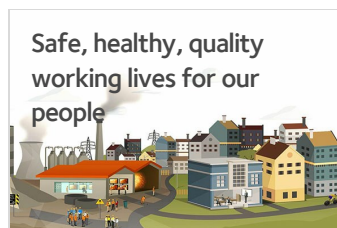
Lakshmi N Mittal
Chairman and CEO of ArcelorMittal

Sustainable development

We are committed to leading the way in which the world views steel, and to championing steel's role in creating high quality, sustainable lifestyles for people...

Our 10 outcomes

Our 10 sustainable development outcomes are designed to describe in simple language the business we need to become if we are to address our material issues in a way that brings the optimal value to all stakeholders. This approach is underpinned by a commitment to transparent good governance.



Our sustainable development framework

The 10 outcomes form the basis of our framework. This aims to shape a consistent approach to social and environmental trends across our operations, and to optimise the value we can gain from this long-term perspective, while giving each part of the business the flexibility to make the 10 outcomes relevant to their local circumstances.

A leadership agenda across the business

Each of our 10 outcomes has a sponsor at senior management level who champions the outcome, provides direction and brings together key people to guide us on how to achieve it. Our sponsors work with experts from across the company to tackle strategic issues for each outcome. For example, Carl de Maré, sponsor for **outcome 4**, convenes an expert hub made up of technical, R&D, sustainability and market-oriented specialists, who together have reviewed site-level performance, and are designing core objectives for the outcome. And in November 2016, Greg Ludkovsky, sponsor for outcomes **2** and **3**, announced a new **Sustainability Innovation tool** that would enable all new R&D projects to be filtered against criteria driven by the 10 outcomes.

Understanding stakeholder expectations

Assessing the expectations of our stakeholders is a key part of this framework at site and country level, and at regional and global levels too. This means not only talking to our stakeholders, but listening, learning and responding as well. This is essential, and we have seen important value created when we have understood and responded to our stakeholders' expectations – and, when we have failed to manage expectations, our business has suffered disruptions. Every two years, we undertake a Speak Up! survey of employees and, in individual countries, we've commissioned external 'reputation surveys' consulting a range of stakeholders.

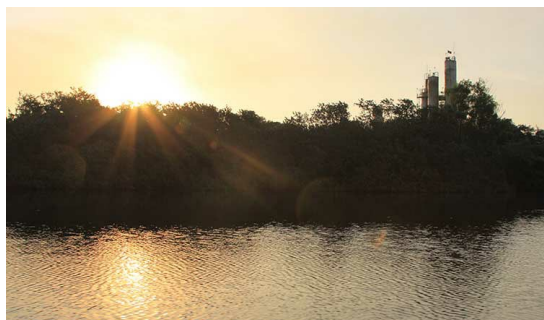
Site-based assessments for world-class standards

Our stakeholder-centric approach is a key component of our site-based assessment process structured around the 10 outcomes. During 2016, we completed a dashboard assessment seven of the outcomes, which has enabled us to map the issues that could cause disruptions to, or create opportunities for, our business, and assess the maturity and progress of our operations against each outcome. Together, these dashboards enable us to spot trends in the business, and enable sites and countries to share best practice and exchange any lessons learned. These assessments are an important means of preparing each of our sites to be ready for certification against ResponsibleSteel™, the emerging global multi-stakeholder-driven standard.

Seizing the value chain opportunity through certification

We are driving the development of ResponsibleSteel™, a global certification standard for steel.

[Read more](#)



Stakeholder relations

Find out more about how we engage with our stakeholders.

[Read more](#)

Stakeholder expectations on climate change

In 2016, we listened extensively to stakeholders on the expectations they have of ArcelorMittal on climate change.

[Read more](#)





How does steel contribute to the circular economy, and what is ArcelorMittal doing to address its carbon challenge?

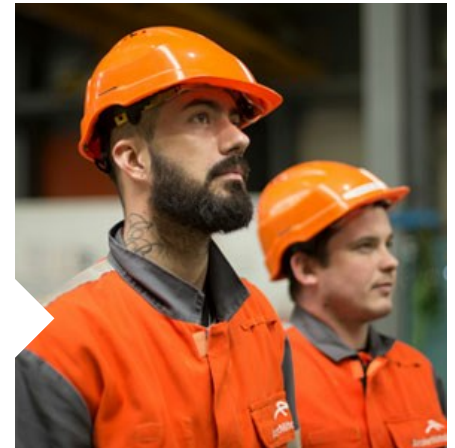
Alan Knight
General manager, corporate responsibility

Embedding and building on our 10 outcomes

With growing expectations from our customers in 2016, we continue to develop some important initiatives aimed at positioning our business at the forefront of sustainability within our sector. Our Sustainability Innovation tool, our Lanzatech project and ResponsibleSteel™ are all aimed at creating long-term value for stakeholders.

This work is underpinned by our progress on embedding the 10 outcomes, which entered their second year in 2016. The most important success has been the cross-business discussion they have inspired. Each outcome has a corporate-level sponsor who hosts detailed conversations with experts from across the company on the risks and opportunities each outcome creates. Virtually all our major countries of operation now publicly report on corporate responsibility and sustainable development under the 10 outcomes.

Our dashboard assessment process for a number of outcomes was targeted at country or site level, and has enabled us to draw up a series of strategic objectives to ensure that we optimise our progress towards each outcome. Our plan for 2017 is to prepare three of our sites for assessments under our related work stream – ResponsibleSteel™.



Sustainability: the driver of our innovation

Our new sustainability innovation tool aims to ensure all new research projects are designed with sustainable development in mind.

We're serious about championing steel's role in creating the high quality, sustainable lifestyles we want the world to be living in the future. Central to this is innovation – and we are putting our best brains behind developing the processes and solutions that will make this possible. In December 2016, we announced our Sustainability Innovation (SI) tool, which will ensure that all research projects are designed using the lens of sustainable development – any project that doesn't meet these criteria will not go forward.

Design principles aligned with the 10 outcomes

We have always considered sustainability – particularly environmental – criteria as part of our innovation thinking, but what's changing is that sustainability criteria will formally become part of the core design principles of a research project, rather than being something we assess towards the end. Greenhouse gas emissions remain a core focus, but the criteria go further to include all the social and environmental trends identified in our 10 outcomes.

The first phase of implementation includes testing the SI tool on six programmes across three areas – process, automotive, and construction solutions.

Highlights of our new SI tool

- Assessments cover all key social and environmental trends identified in the 10 outcomes
- Researchers identify the sustainability benefits/costs compared with current technology
- Results are based on ratings given for questions aligned with the 10 outcomes and, for emissions, kg of CO₂ equivalent
- Researchers can see sustainability impacts they may not be aware of, and the potential to improve them as their projects develop
- Our methodology and assumptions will be peer reviewed

Steel, ethanol and the low-carbon economy

ArcelorMittal's progress in carbon capture and utilisation technologies could give steelmakers a new role in supporting a lower-carbon future.

However great our efforts to improve our energy efficiency and reduce our emissions, we cannot escape the reality of chemistry. We need carbon to make the steel that will help build a world in which people can live quality lives. Reducing the impact of the carbon we use is one of the greatest challenges facing our industry.

Finding ways to extract value from CO₂

The search goes on for effective new carbon capture and storage (CCS) technologies that



“As the grandfather to three grandchildren, it is critical to me to think about their lifestyle, and their children's lifestyle. We are preparing solutions, not only for today and tomorrow, but for years to come.”

Greg Ludkovsky

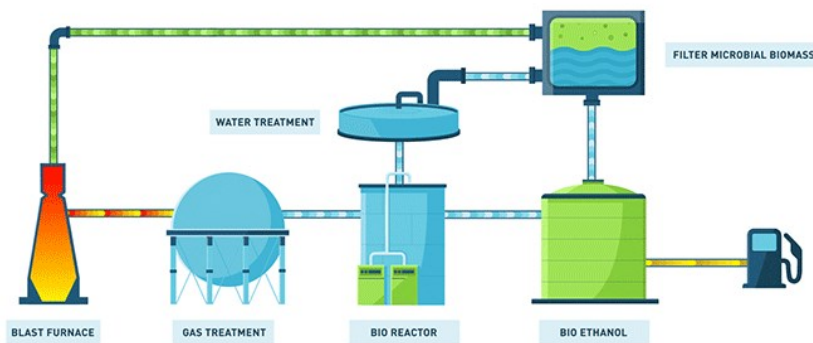


can lock away carbon from CO₂ so that it never enters the atmosphere. Like scientists, governments and businesses all over the world, we urgently want this search to succeed. But alongside that search, there is also an urgent need to develop carbon capture and utilisation (CCU) technologies. Unlike CCS, which treats CO₂ as waste, CCU converts it into commercially viable products such as bio-oils, chemicals, plastics and fuels. These can be used in place of products made from fossil fuels, with the net effect of reducing greenhouse gas emissions. In effect, by getting more value from the carbon we use, CCU could help the economy as a whole use less carbon – and so reduce the emissions that cause global warming.

Industrial demonstration of fuel for the future

How does this affect ArcelorMittal? We've been exploring the possibilities of CCU for several years, because we believe it could help steel play even more of a role in a circular economy than it does today. And while it is still at a relatively early stage, the progress we've made so far is encouraging. In 2016, we overcame some regulatory hurdles to ensure the commercial viability of the world's first industrial-scale demonstration of a new CCU technology. This was a project we first announced in 2015, but we have now improved the project design, substantially increasing the scale of the project.

As part of a long-term partnership agreement with innovation firm LanzaTech, we will begin to construct a full-scale production facility to create ethanol from carbon-intensive waste gases produced during steelmaking at our Ghent plant in Belgium. The technology is remarkable: using waste carbon monoxide as feedstock, microbes discovered by LanzaTech excrete high-grade ethanol which can be blended for use as a liquid fuel.



This demonstration project will be larger than we originally anticipated, and is now designed to produce some 63,000 tonnes of ethanol per year. With production due to commence in 2019, this project will support the European Union's target to derive 10% of transport fuel from renewable sources by 2020. When blended 10% with conventional fuel, our annual biofuel production will fuel the equivalent of one million cars.

We are already ordering some of the first components needed to embark on the project, and expect to announce further details later in 2017.

Renewable energy for 21st century lifestyles

Biofuel has an important role to play in many people's vision of a lower-carbon economy. It is a very efficient way to substitute fossil fuels while retaining the technologies that sustain 21st century lifestyles - especially air and land transport. Unlike the first-generation biofuels currently on the market, typically made from crops, the process we have developed with LanzaTech produces none of the pressures on agricultural land which have led in some places to deforestation or to competition with food-growing.

The key input is the carbon monoxide waste gas from our blast furnace, which is produced as a by-product from steelmaking, and otherwise would have been burnt to release CO₂. Although conversion to ethanol requires some processing, the resulting product will still displace 80% of the CO₂ that would be emitted from the fossil fuel it replaces.

In November 2016, the European Commission took an important step and officially indicated that, under the Renewable Energy Directive 2, liquid ethanol produced from industrial carbon waste would be recognized as 'advanced' biofuel - a form of renewable energy - since its use displaces carbon emissions from fossil fuels. If the project is a technical success, this regulatory recognition will forge the way for us to expand this technology on a commercial basis.

Our partnership with LanzaTech is not the only CCU project we are pursuing - we are also exploring other techniques for producing chemicals and raw materials, some of which are described in [outcome 6](#). We have to be realistic - the LanzaTech project is still at a pilot stage - but nonetheless, we are optimistic about its future.

“Renewables can and should be used for power generation, but for liquid fuels and chemicals we still need a source of carbon. Today we have a choice as to where that carbon comes from: fresh fossil or reused carbon emissions. Through our partnership, ArcelorMittal continues to demonstrate their leadership in making the transition to a lower carbon economy.”

Jennifer Holmgren

CEO of LanzaTech

Seizing the value chain opportunity through certification

Alan Knight describes customers' growing interest in the assurance of their supply chain for steel and raw materials, and talks about progress on certification through ResponsibleSteel™ and IRMA.

Our customers want to know that the steel they buy – and the raw materials it's made from – will stand up to scrutiny with regards to all suppliers in that value chain observing the law, human rights and social and environmental standards. It's an important responsibility, and one which is core to our business and sustainable development strategies. As well as being the right thing to do, it helps make our value chain more resilient and reduces our exposure to risk, including to our reputation.

But can it be more than a responsibility? Are people outside our business really interested in our sustainability standards and how we manage our supply chain? Could a responsible value chain be a business advantage?

The answer to all these questions is 'yes' – and it is growing louder all the time.

Customers seeking value chain assurance

Supply chain scrutiny is increasing. Consumers want to know the story behind the goods they buy, which means the people who make them – our customers – want to know those stories too. Many customers have their own sustainability agenda, and most are becoming subject to increased regulatory and reporting requirements. That means interest is growing across all sectors – as we describe in [outcome 7](#) of this report.

A clear way to meet this growing demand is by having a set of independent assurance standards against which products are measured and certified. Certification schemes exist across a range of industries, among the most best-known being the Forest Stewardship Council (FSC). But they don't exist for mining or steel – yet. That is about to change.

IRMA and ResponsibleSteel™

In 2016, certification standards came a step closer in both mining and steel, thanks to the industry working together on many fronts. IRMA (Initiative for Responsible Mining Assurance) is working towards a pilot of its standard for Responsible Mining in 2017. Building on existing standards, such as those developed by the International Organization for Standardization, the ResponsibleSteel™ standard aims to take into account all the material issues for our industry, including environmental, human rights and community considerations as well as principles of transparency and management.

We've played a key role in these developments, having a seat on the boards of both organisations. We'll be field-testing ResponsibleSteel™ at three of our plants in 2017. We've played this role because we see certification standards as good for our customers, good for our business, and good for the people in our supply chain and their environment. They are an effective way of supporting progress towards Sustainable Development Goals, such as goal 6 to ensure the availability of clean water, goal 8 to secure decent work for all



“ We welcome the initiative from the steel sector to create a credible and reliable certification system. ”

Dr Alexander Nick

Head of Sustainability Strategy and Management, BMW Group

and goal 12 to develop responsible patterns of production and consumption. More broadly, standards are also good for the steel industry as a whole, as its products compete against other materials.

Steelmaking and raw materials supply chains are complex, so we don't expect instant results or a path that is always smooth. But we do think the path has been identified – and we want to lead the way.

10 outcomes

<p>Safe, healthy, quality working lives for our people</p> 	<p>Products that accelerate more sustainable lifestyles</p> 	<p>Products that create sustainable infrastructure</p> 	<p>Efficient use of resources and high recycling rates</p> 
<p>Trusted user of air, land and water</p> 	<p>Responsible energy user that helps create a lower-carbon future</p> 	<p>Supply chains that our customers trust</p> 	<p>Active and welcomed member of the community</p> 
<p>A pipeline of talented scientists and engineers for tomorrow</p> 	<p>Our contribution to society measured, shared and valued</p> 		

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