



ArcelorMittal

2018 Sustainable development report

ArcelorMittal in Luxembourg

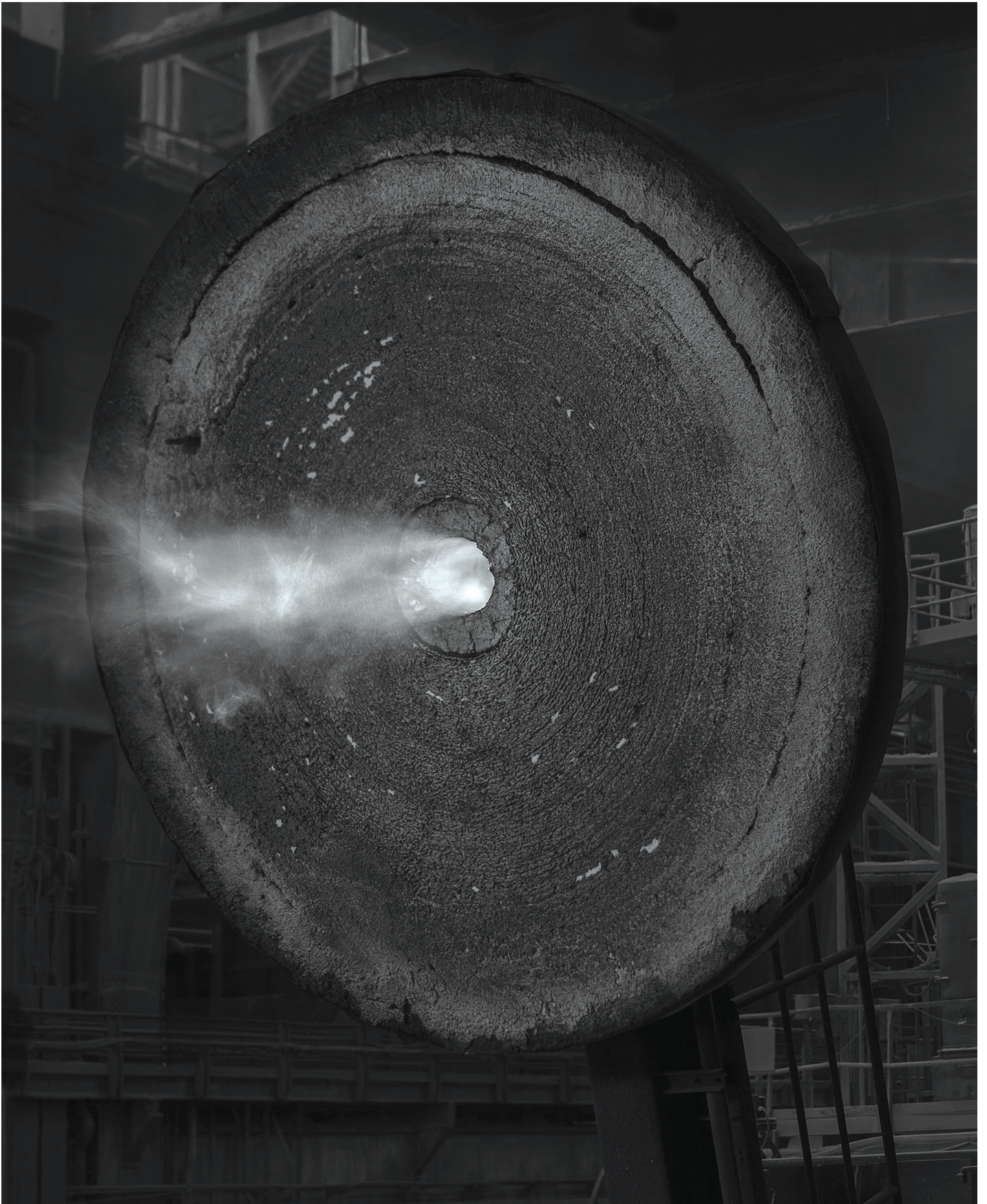
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About the report

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This report presents the achievements and performances of the ArcelorMittal Group in Luxembourg in 2018 in terms of Sustainable development and follows on from the report published in July 2018 on the results we achieved in 2017. The Dudelange site was removed from the scope of the 2018 report. The report covers all activities in the period 1 January to 31 December 2018, corresponding to the ArcelorMittal SA Group's financial year. This report is published annually. The next publication will be issued in 2020 and will concern the achievements and performance of 2019. This report has been prepared in accordance with the GRI Standards: core option.

The report contains forward-looking statements which represent the expectations, beliefs, forecasts and objectives of ArcelorMittal Management for the financial and operational performance of ArcelorMittal in 2018 and beyond, as well as assumptions or judgements based on such a performance. Forecasts of future performance are forward-looking and consequently involve estimates, assumptions, judgements and uncertainties. Many factors may give rise to a discrepancy between the actual results and Management forecasts. All of our publications, as well as a French version of this report, are available at <http://luxembourg.arcelormittal.com>. In the event of discrepancy between the French and English versions, the French version shall prevail. The ArcelorMittal Group 2018 integrated annual review is also available at <https://corporate.arcelormittal.com/> for further information.



Natural gas burner at the Belval steel plant to heat or hold the steel ladles at temperature before sending them to continuous casting. © Ezio D'Agostino

Message from the Management



Michel Wurth
Chairman
ArcelorMittal
Luxembourg



Roland Bastian
Vice-President
ArcelorMittal
Luxembourg

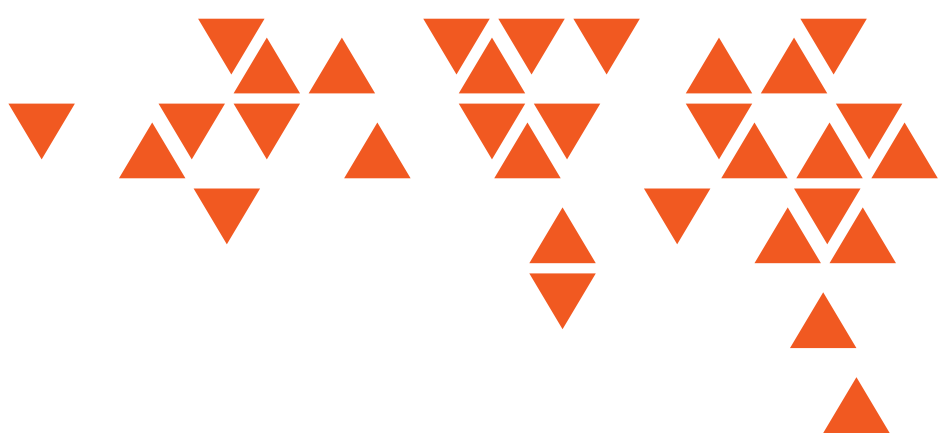
ArcelorMittal's commitment as a "Socially Responsible Company" is becoming stronger every year. An example of this is the recent publication of our first Climate Action Report, which sets out the foundations of a roadmap to achieve the Paris agreement's climate objectives.

Structured around 10 outcomes defined by the Group which cover the various aspects of our activities that have an economic, social and environmental impact, ArcelorMittal in Luxembourg is also pursuing the professionalisation of its local CSR approach.

Why? Because acting in symbiosis with our environment is the best guarantee of ensuring a sustainable economic performance and continuing to engrave the Luxembourg steel industry in the DNA of the Grand Duchy.

ArcelorMittal in Luxembourg launched a comprehensive process in 2017 to reinforce its CSR strategy. A materiality matrix was drawn up in 2018, taking as its starting point expectations and challenges identified directly from our stakeholders (customers, suppliers, employees, media, public authorities) through a series of targeted interviews, as well as a complementary, in-depth analysis of our impacts. This work identified six priority topics on which we need to concentrate our efforts and action plans. Consequently, we carried out a maturity analysis on these themes and reinforced our system of governance to strengthen our change management.





Our commitment to produce safe, sustainable steel is reflected first and foremost in our attention to the health and safety of our employees and subcontractors.

However, after a remarkable after a remarkable performance in 2017 on our sites in Luxembourg, in 2018, we were saddened by a fatal accident involving a colleague from a subcontractor company at our Belval site. This accident is a painful reminder that remaining vigilant about the choices we make in our working environment, in all circumstances and throughout each and every day, is the best way to promote our own safety and that of our colleagues. In this regard, ArcelorMittal Luxembourg is part of the "Vision Zero" concept sponsored by the UEL (Union of Luxembourg Enterprises) and the AAA, which aims to eradicate workplace accidents.

In addition to our very comprehensive measures, including a range of procedures and performance controls and compliance with various standards, groundwork is needed on the attitudes of all our personnel. It is in this spirit that the "Take Care" training programme was conceived, with the first stage completed in 2018. This programme encourages everyone to be aware of their responsibilities and to develop a team spirit in the workplace. This process is not easy to entrench: for the employees, it involves assuming a share of responsibility; for the management, it means accepting the transfer of part of its authority by empowering team members. The progress should be both individual and collective.

The production processes and the applications of the products we manufacture in Luxembourg illustrate our desire to firmly connect our activities to the logic of sustainable development. Our HISTAR® 460 beams, produced in Differdange, have been instrumental in the construction of Vietnam's tallest tower, Landmark 81. These beams offered a 30% weight saving compared to traditional steel and significantly reduced CO₂ emissions and the resources required for production. In Bissen, steel fibres are produced to reinforce the concrete used in public transport infrastructures that contribute to a considerable reduction in traffic levels. Sheet piles from Belval has been extensively tested in Eemdijk, Utrecht province, to improve the design of the dykes that protect the Netherlands from flooding. The advantages of reusing our sheet piling have also been modelled by our R&D team in Esch-sur-Alzette using a new analysis tool in order to emphasise the dynamics of the circular economy to our customers.

Despite our acknowledged commitment to social responsibility, which in 2018 resulted in the renewal of our ESR (socially responsible company) label by the INDR (Luxembourg Institute for Sustainable Development and Corporate Social Responsibility) for a further three years, and which is also expressed by our faithful support of various associations working in the social, educational and environmental spheres, there remain questions about the future of European and Luxembourg steelmaking.

For several years, ArcelorMittal has informed its stakeholders of the threats faced by our sector of activity. Among the main problems affecting the European steel industry are overcapacities from China which doesn't align with the market economy status, tariff barriers imposed on steel exported to the United States, massive imports of low-cost steel to Europe from countries that are not required to enforce the same social and environmental standards as European producers; and price increases for scrap metal, the main raw material used in our Luxembourg electric arc furnaces. These issues cause strong market disruptions and create a scissor effect that encumbers the capacity of European players to invest in technological solutions that could significantly reduce the environmental impact of steel activities both in Europe and around the world. More than ever before, there is a pressing need to establish a level playing field.

Our successes in 2017 in the field of CSR would not have been possible without the commitment of our staff to whom we owe our thanks. In 2018, we were able to maintain a quality social dialogue with our employees' representatives, which is one of the keys of our success to face the challenges of the future and the current difficult context. For this reason, the company and its employees will have to remain open to change and work to successfully transform the way we operate.



For more information on the ArcelorMittal Group's strategy, go <http://corporate.arcelormittal.com>

Overview of the Group

ArcelorMittal worldwide

ArcelorMittal is the world's leading steel and mining company, with a presence in 60 countries and an industrial footprint in 18 countries. Guided by a philosophy to produce safe, sustainable steel, we are the leading supplier of quality steel in the major global steel markets including automotive, construction, household appliances and packaging, with world-class research and development and outstanding distribution networks.

Through our core values of sustainability, quality and leadership, we operate responsibly with respect to the health, safety and wellbeing of our employees, contractors and the communities in which we operate. For us, steel is the fabric of life, as it is at the heart of the modern world from railways to cars and washing machines. We are actively researching and producing steel-based technologies and solutions that make many of the products and components people use in their everyday lives more energy efficient.

We are one of the world's five largest producers of iron ore and metallurgical coal. With a geographically diversified portfolio of iron ore and coal assets, we are strategically positioned to serve our network of steel plants and the external global market. While our steel operations are important customers, our supply to the external market is increasing as we grow.

Recognised for its commitment to Sustainable development, ArcelorMittal has been a member of the FTSE4Good index since 2007; this measures the performance of companies meeting globally recognised corporate responsibility standards. Since 2005, ArcelorMittal has also participated in the CDP

(Carbon Disclosure Project), an independent, not-for-profit organisation that invites companies to measure and disclose their impact on the environment and natural resources. The Group has also been part of the United Nations Global Compact since 2003 which identifies 10 key principles that define the corporate values to be implemented in business practice. In 2018, we supported the recommendations of the Task force on Climate-related Financial Disclosures (TCFD), in respect of which our 2018 Climate Action Report represented an initial response. ArcelorMittal is also a member of the World Steel Association (worldsteel) and European Steel Association (EUROFER).

In 2018, ArcelorMittal had revenues of \$76.0 billion and crude steel production of 92.5 million metric tonnes, while own iron ore production reached 58.5 million metric tonnes.

290

million dollars; the amount invested by the ArcelorMittal Group in research and development in 2018.

48

percent of the steel produced by ArcelorMittal in 2018 comes from its European facilities.

160

countries where ArcelorMittal markets its range of products for the automotive, household appliance, construction and industrial machinery sectors.



To find out more about the ArcelorMittal Group, please visit <http://corporate.arcelormittal.com>



GRI 102-2 | GRI 102-3 | GRI 102-6 | GRI 102-7

ArcelorMittal in Luxembourg

ArcelorMittal is the leading private-sector industrial employer in the Grand Duchy of Luxembourg with 3.794 employees at the end of 2018. The products manufactured by ArcelorMittal in Luxembourg enjoy international recognition and have been chosen for many major projects.

ArcelorMittal's global headquarters in Luxembourg City host the Group's central functions. Around 800 employees ensure the Group management through Human Resources, Finance, Procurement, Sales, Investments, Sustainability, etc.

ArcelorMittal operates from nine locations in Luxembourg, including five industrial steel production and processing sites, a logistics platform and an electricity distribution centre. The steel produced is mainly delivered to customers in the construction, general industry and agriculture sectors.

The **Long Products** segment produces light, medium and special sections, rails, heavy beams and sheet piles.

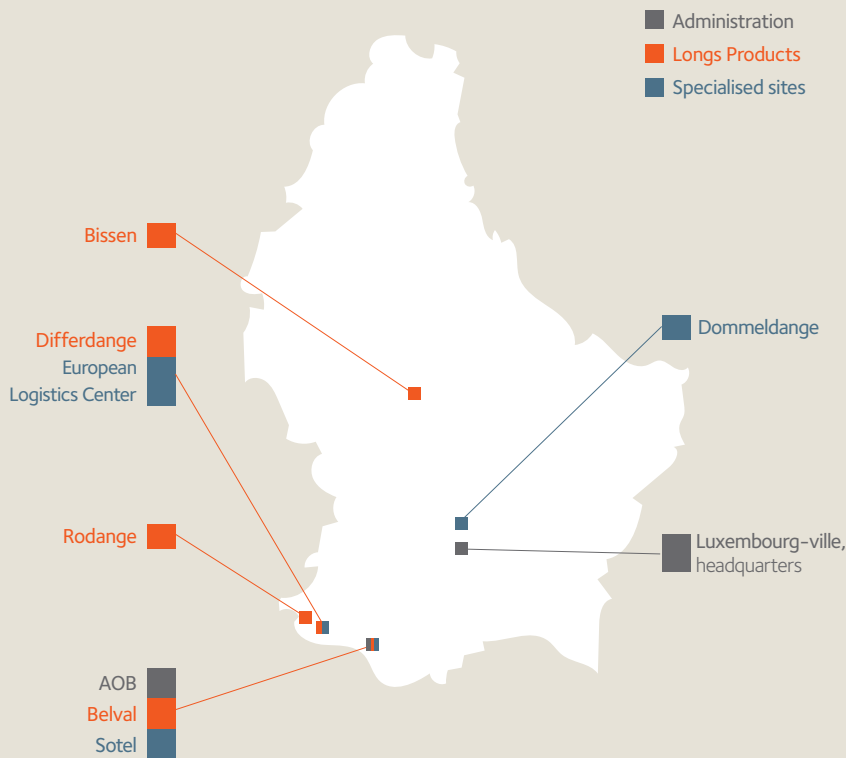
In Luxembourg, **Long Products** are produced at the **Belval** site which features an electric arc furnace with a continuous casting line as well as two rolling mills – a Medium Section Mill to produce medium beams and Mill 2 for sheet piles. The site is the global leader in the

production of large sheet piles which is used to construct quay walls, dykes, underground car parks, tunnels, bridges and roads. Designed to fit together without welding or screwing, the sheet piles retains soil or water, either temporarily or permanently.

The **Differdange** site also has an electric arc furnace and continuous casting. Its Grey Mill specialises in rolling heavy beams (Jumbo beams in particular) and sheet piles. Differdange currently produces the tallest (1.108 mm) and heaviest (1.377 kg/m) beams in the world. The Quenching and Self-Tempering or "QST" process allows beams of exceptional quality to be produced: HISTAR® beams. Combining high yield strength with excellent resilience and welding properties, and also offering significant weight savings, these beams are used in skyscraper construction.

The rolling mill at **Rodange** (Mill A) produces special sections and in particular different types of rail for travelling cranes and tram tracks.

Our sites in Luxembourg



Five industrial sites :
Rodange, Differdange, Belval, Bissen, Dommeldange

Two administrative sites :
Luxembourg-ville, AOB (Esch-sur-Alzette)

One logistic site :
ArcelorMittal European Logistics Center (AMCLE)

Sotel :
Electricity distribution for industrial sites.

The **Bissen** plant joined the Long Products segment in 2018. This wire drawing mill dates back more than a century and specialises in the production of wire, metallic and non-metallic wire coatings, wire for fencing and the agricultural sector, as well as metal fibres for the construction industry.

ArcelorMittal also has a **Research and Development** centre specialising in heavy long products at **Esch-sur-Alzette** in Luxembourg.

Among the **specialist sites**, **Dommeldange** is a mechanical workshop which includes centres of excellence in engineering, welding, machining and assembly, serving the Belval and Differdange plants in particular. The **European Logistics Centre** is a central storage site for

beams for the ArcelorMittal distribution network, Downstream Solutions, and also offers logistics services for deliveries to Luxembourg plants. Finally, Sotel delivers power to the main ArcelorMittal plants in Luxembourg.

It should be noted that following the European Commission's ruling that various European assets should be sold to allow ArcelorMittal to purchase the Italian producer Ilva, the Dudelage site, which specialises in hot-dip and electro-galvanised sheet for the construction, automotive and general industry markets, was sold to Liberty House.

ArcelorMittal in Luxembourg is also a joint and equal partner with the Luxembourg state in **Agora**, an organisation established in 2000. Agora's mission is to design and develop a modern urban neighbourhood on a 120-hectare brownfield site at Belval. This project is well advanced and has set a global standard in the redevelopment of former industrial sites. In 2016, Agora was also entrusted with the task of regenerating a 62-hectare brownfield site at Schiffflange.

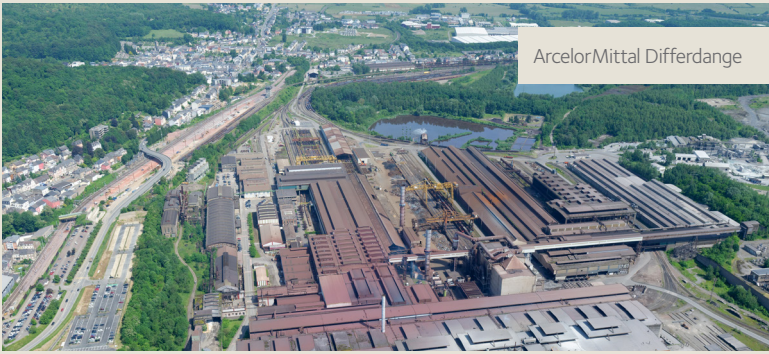


To find out more about the ArcelorMittal Group in Luxembourg, please visit <http://luxembourg.arcelormittal.com>

ArcelorMittal Belval



ArcelorMittal Differdange



ArcelorMittal Rodange



ArcelorMittal Bissen



ArcelorMittal AOB



ArcelorMittal Dommeldange



GRI 102-7 | GRI 102-12 | GRI 102-13

ArcelorMittal Luxembourg is a founding member of IMS (Inspiring More Sustainability), a network that supports organisations in their commitment to Corporate Social Responsibility by promoting dialogue with their stakeholders.

At the end of 2018, ArcelorMittal Luxembourg's Socially Responsible Enterprise (ESR) label was renewed by the Luxembourg Institute for Sustainable Development and Corporate Social Responsibility (INDR) for a period of three years. This label is recognizing that a company promotes a genuine culture of Sustainable development.

Finally, all the steel produced in our Luxembourg sites has the right to bear the "Made in Luxembourg" label, a trademark registered in 1984 as the result of an initiative of the Luxembourg Ministry of Foreign Affairs, the Chamber of Commerce and the Chamber of Trades. The trademark identifies products and services as originating in Luxembourg.



2,228,000

tonnes of crude steel produced in our Luxembourg plants in 2018, an increase of 2.6% compared to with 2017.

Steel produced in Luxembourg: the main stages

1 Cleaning the scrap

First of all, scrap metal, the main raw material, is sent to the scrapyard. Measuring equipment installed at the site entrance detects any radioactive sources.

Approximately 15% of scrap comes from internal recycling and the rest is bought from stockholders or scrap dealers. The scrap originates from various sources: offcuts from processing industries (automotive), used consumer goods (scrapped cars, household appliances, food and drinks cans), and steel from building demolitions. The quality of the scrap is key to the quality of the steel produced. All loads are thus checked to remove any elements that are likely to change the characteristics of the final products, such as steriles (i.e. materials not containing iron). The scrap is then sorted for quality.

2 Melting the materials

The baskets of scrap arrive at the electric arc furnace, where the teams prepare the injections and blends required for melting. Melting is achieved using the radiant energy of the electric arc, supplemented by the combustion heat of natural gas burners and the addition of anthracite.

The steel is refined by blowing oxygen and lime is used to form a slag. Undesirable impurities in the scrap are captured as they form oxides under the action of the oxygen and bind to the lime. The injection of coal makes the slag foam, which protects the upper part of the vat from electric arc radiation and improves energy transfer to the steel bath.

The furnace's smoke collection filters, combined with a quenching and activated carbon injection system, allow the most stringent environmental standards to be respected.

3 Grading

The steel is "graded" in the ladle furnace, in other words refined by the addition of alloys to provide the mechanical properties specified by the client.

The homogenisation of the steel bath is achieved by mixing with argon, an inert gas that does not react, even at high temperatures. Desulphurisation is carried out at the same time.

The steel ladle is maintained at temperature throughout the process by the passage of a three-phase alternating current between the steel and three electrodes, introduced directly into the steel bath.

7 Finalising orders

After cooling, the product is straightened, cut into commercial lengths and prepared before shipping to the customers or intermediate users.

6 Rolling the steel

A rolling mill is an industrial plant that reduces the thickness of the steel and shapes the product into beams, angles or sheet piling.

5 Reheating the steel

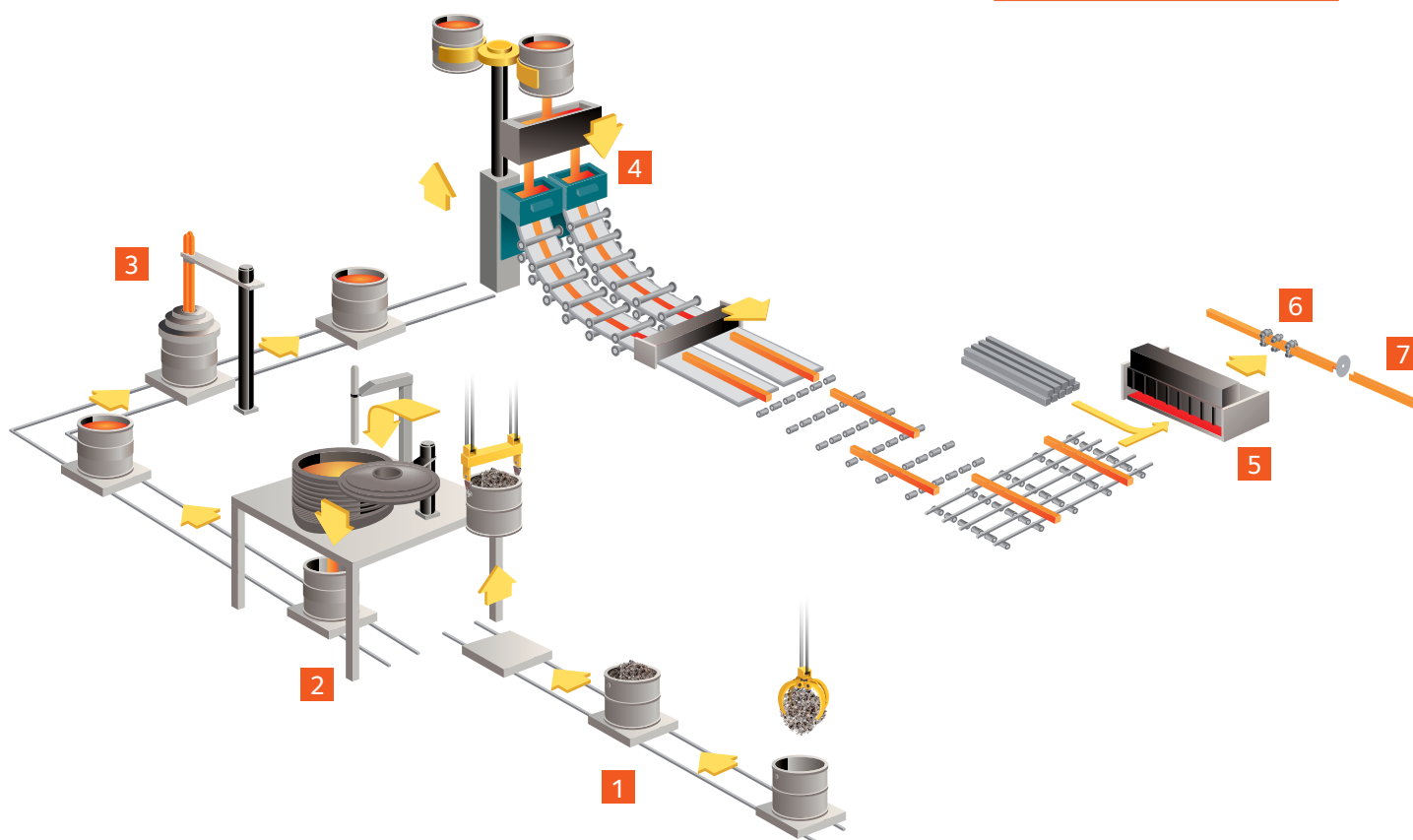
Every rolling mill includes a reheating furnace to heat up hot or cold semi-finished products. Rolling must be carried out hot for quality and productivity reasons. The steel, brought up from 1250 to 1300 °C, is progressively transformed through the rolling between two rolls to refine its grain and achieve the mechanical properties sought by customers.

4 Casting the steel

In continuous casting, the steel is cast into an ingot mould, starting to solidify on contact with the mould which is cooled using water. The skin thickness reaches about ten millimetres. The steel is oxy cut to the length required by the rolling mills at the output of the unit.

95

percent of the steel used in the manufacture of our finished products in Luxembourg is recycled. Steel is infinitely recyclable without losing its properties.



For further information, please consult the ArcelorMittal Luxembourg > Our Products section of our website at <https://luxembourg.arcelormittal.com/>

Strengthening our Sustainable development strategy

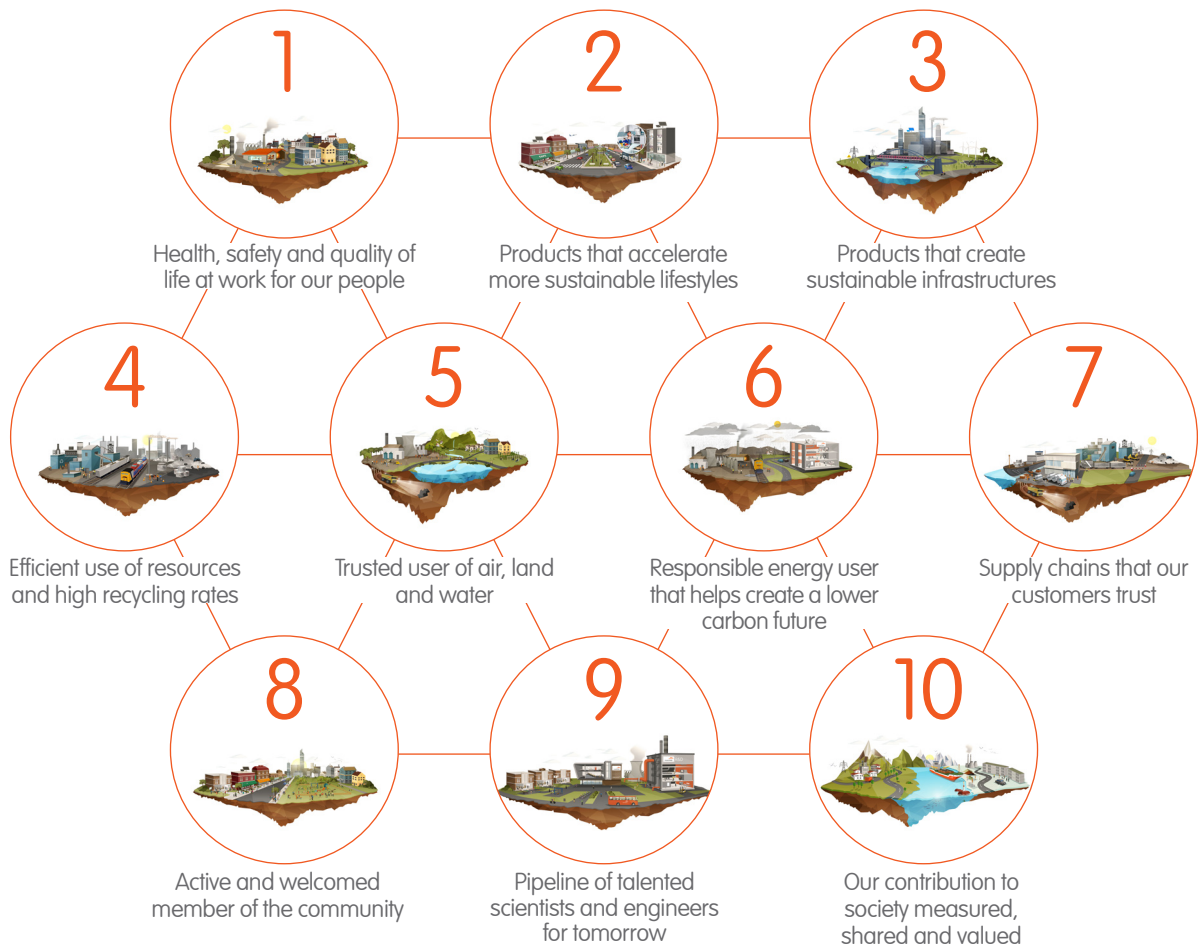


ArcelorMittal has published Sustainable development Reports since 2010 to facilitate transparency about its activities in Luxembourg. In 2015, we adopted the approach that had been implemented by the Group as a whole which features 10 outcomes that are based on the impacts and priority expectations of ArcelorMittal's main stakeholders around the world, supported by a transparent corporate governance.

These ten outcomes have been structuring our approach and actions as we seek the continuous improvement of our performance.

A Sustainable development Committee was set up in 2015 to guide the approach in Luxembourg. The Committee brings together top executives and managers of industrial sites and calls on the services of a number of internal experts.

In order to make our Sustainable development approach more professional, in 2017 the Committee decided to carry out an in-depth analysis in order to determine the material subjects considered as having a significant environmental, social or economic impact and influencing the assessment or decisions of our stakeholders.



Assisted by the consultancy KPMG Luxembourg, ArcelorMittal in Luxembourg conducted an impact assessment and consulted its major internal and external stakeholders. The materiality analysis identified six priority topics:



Three subjects were also identified as important to ArcelorMittal and its stakeholders:

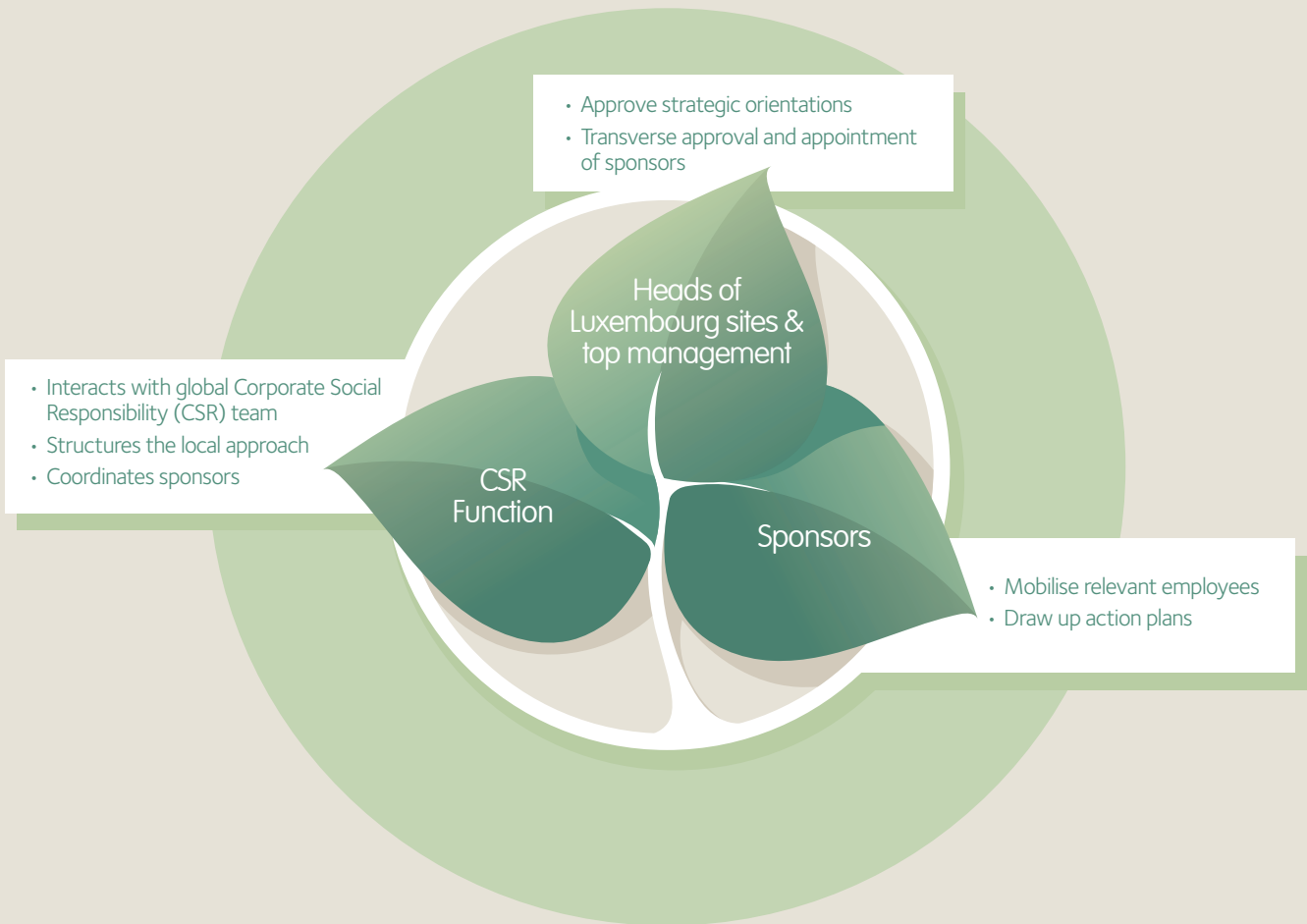


 A note on the methodology of the materiality analysis is provided on page 74

Approved at the end of March 2018, the analysis was then completed over the year by a work conducted on the performance status of each material subject in conjunction with the relevant experts. This offered insights into:

Our strengths and weaknesses	Our opportunities and threats
Our performance indicators and objectives	Our main internal points of contact as well as our degree of actionability in Luxembourg

In this way, it is our objective to make CSR a genuine management tool that must be supported by more efficient governance. A system of sponsors for each material topic has been defined to bring together the various sector experts and to encourage change.



This must be implemented in 2019 and accompanied by the adoption of an action plan to fill gaps in existing systems.

We are also gradually tailoring our approach, which we want to be more integrated, by embarking on a reflection on the monetisation of our externalities, both positive and negative. This would allow the tangibility of the economic,

environmental and social benefits of our CSR approach to be better perceived.

The correlation table below shows our existing commitment to the topics identified as material. As a responsible enterprise, ArcelorMittal in Luxembourg also contributes to the United Nations' Sustainable Development Goals for 2030.

Outcomes	1	2	3	4	5	6	7	8	9	10
Innovation	●	●	●	●	●	●	●	●	●	●
Operational performance	●	●	●	●	●	●	●	●	●	●
Competitiveness	●	●	●	●	●	●	●	●	●	●
Environmental compliance	●	●	●	●	●	●	●	●	●	●
Greenhouse gases & other emissions	●	●	●	●	●	●	●	●	●	●
Employees Health & Safety	●	●	●	●	●	●	●	●	●	●
Circular economy	●	●	●	●	●	●	●	●	●	●
Rehabilitation of industrial sites	●	●	●	●	●	●	●	●	●	●
Economic value generated and distributed	●	●	●	●	●	●	●	●	●	●



Good health & well-being	●	●	●	●	●	●	●	●	●	●
Clean water & sanitation	●	●	●	●	●	●	●	●	●	●
Affordable & clean energy	●	●	●	●	●	●	●	●	●	●
Decent work & economic growth	●	●	●	●	●	●	●	●	●	●
Industry, innovation & infrastructure	●	●	●	●	●	●	●	●	●	●
Sustainable cities & communities	●	●	●	●	●	●	●	●	●	●
Responsible consumption & production	●	●	●	●	●	●	●	●	●	●
Climate action	●	●	●	●	●	●	●	●	●	●
Life below water	●	●	●	●	●	●	●	●	●	●
Life on land	●	●	●	●	●	●	●	●	●	●
Peace, justice & strong institutions	●	●	●	●	●	●	●	●	●	●
Partnership for the goals	●	●	●	●	●	●	●	●	●	●

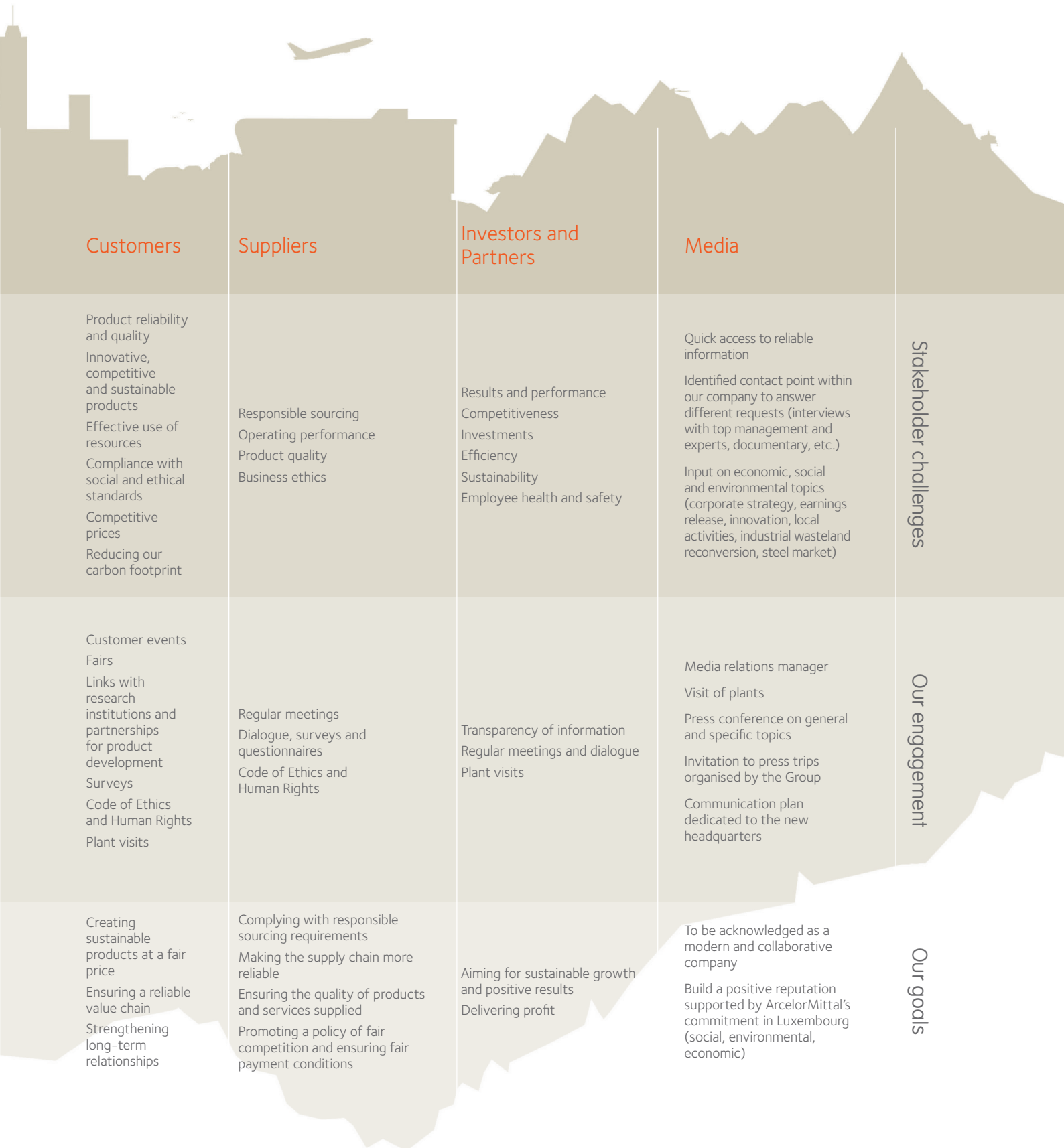
Ensuring transparent governance

Dialogue with our stakeholders

Our actions for Sustainable development only make sense if they reflect both our challenges and those of our stakeholders. This implies a perfect knowledge of our interlocutors and the direct and indirect influence that we exert. Genuine engagement methods already exist as shown by the mapping below, ranging from information to the inclusion of certain stakeholders in our governance process.

Our key stakeholders were consulted at the end of 2017 in the scope of our materiality analysis in order to better determine our economic, social and environmental impacts and their influence. We are now consolidating our relationships and commitment to some stakeholders in order to better work together on common issues identified as priorities.

	Employees and trade unions	Local communities	Government, Administrations and Public Authorities
Stakeholder challenges	<ul style="list-style-type: none"> Safety Health and well-being Working conditions Remuneration Career development Attracting high potential employees and developing skills Work-life balance Operational excellence Environment Employee engagement 	<ul style="list-style-type: none"> Community engagement processes Environmental concerns Social and economic development Attracting high-potential employees Donations Innovation 	<ul style="list-style-type: none"> Competitiveness Investments Employee management Environmental engagement Social engagement Climate change Changes in environmental regulations
Our engagement	<ul style="list-style-type: none"> In-house magazine, intranet and brochures, posters, TV screens, special offers for employees, etc. Organising internal & external events Team building Volunteering Team meetings Conferences and thematic campaigns Training and learning ArcelorMittal Luxembourg S.A. Board of Directors under shared management with the directors representing the employees and unions 	<ul style="list-style-type: none"> Common projects and long-term cooperation with communities Communication on the development of our activities and responses to questions Strengthening links with communities Regular meetings and dialogue with communities 	<ul style="list-style-type: none"> Attendance at conferences Regular discussions and meetings Plant visits Participation in trade missions and official visits
Our goals	<ul style="list-style-type: none"> Ensuring a safe, attractive working environment Valuing our employees as they are central to our company Promoting social harmony 	<ul style="list-style-type: none"> Maintaining close, trusting relationships with communities Supporting local and regional economic development 	<ul style="list-style-type: none"> Promoting a level playing field in trade Contributing to growth through taxes, contributions and product innovation



Our performance in 2018

Our performance is monitored using key performance indicators which aim to reflect the specific nature of our activities. These are intended to evolve to reinforce the emphasis on the strategic priorities identified in our materiality analysis.

1 Safe, healthy, quality working lives for our people

		2016	2017	2018
Lost-time injury frequency rate	GRI 403-2			
Number of injuries resulting in lost time of more than one day, suffered by our own staff, our sub-contractors and our temporary staff during a 12-month period, per million hours worked.				
		1.4	0.2	0.56
Number of fatalities	GRI 403-2	1	0	1
A fatality occurred in the Belval site on December 3. A subcontractor fell down during repairing work on the steel workshop roof.				
Number of OHSAS 18001 certified sites				
The norm sets out the organisational requirements for the occupational Health and Safety management system.				
		7 out of 9	7 out of 8	6 out of 7
Sotel is not certified.				
Number of employees	GRI 102-7			
at 31 December 2018 in headcounts				
		4105	4055	3794
The Dudelange plant is out of the reporting 2018 scope.				
Total training hours				
for our employees, temporary employees, and subcontractors				
		134 246	149 822	129 477
More efforts have been made in 2018 to develop specialized training. In the same way, sharing of practices and co-development are as much as possible privileged rather than theoretical concepts: this mode of learning guarantees a fast and concrete professional use of the skills on the ground. Eventually, new themes are regularly proposed aligned with our concrete and realistic "toolbox" approach for a greater operationality.				
Number of young people welcomed by our Luxembourg entities				
gathering apprentices, interns and international work experience volunteers				
		214	209	219
Number of training courses offered to all employees	GRI 404-2	373	404	414
The increase in the number of training courses offered is due to requests for more "field" oriented training, centered on technical topics required by sectors (thermography, Security Laser, Machinery Safety, etc.). It is also justified by the development of new mandatory training in Health & Safety (Driver recycling, rolling and stationary scaffolding, etc.). Finally, four new modules focused on the well-being were added (Sharing of practices, Collective dynamics, Persuasion & Influence and Efficiency & Authority).				
Percentage of employees covered by a collective agreement*	GRI 102-41 GRI 102-48	77%	76%	74%
Total number of employees who have taken parental leave, by gender	GRI 401-3	34 12 men, 22 women	77 43 men, 34 women	93 63 men, 30 women

*The 2016 and 2017 data were not correct in the previous report.

		2016	2017	2018							
Number of employees who have left the company in the year following their return to work after parental leave, by gender	Women	2	1	3							
	Men	0	0	2							
Percentage of working day lost due to social disputes		0	0	0							
Total number of employees by employment contract and by gender	GRI 102-8	Female	Male	Total	Female	Male	Total	Female	Male	Total	
		Fixed-term contract	11	84	95	17	82	99	14	68	82
		Permanent contract	492	3 518	4 010	493	3 463	3 956	502	3 210	3 712
	Total	503	3 602	4 105	510	3 545	4 055	516	3 278	3 794	
	Full-time	396	3 551	3 947	391	3 480	3 871	378	2 873	3 251	
	Part-time	107	51	158	119	65	184	138	405	543	
Total	503	3 602	4 105	510	3 545	4 055	516	3 278	3 794		
Total number of employees by gender	Women	503	510	516							
	Men	3 602	3 545	3 278							
Total number of employees by age	<30	33	234	267	39	242	281	48	248	296	
	30/50	366	2 290	2 656	341	2 008	2 349	356	1 985	2 341	
	>50	104	1 078	1 182	130	1 295	1 425	112	1 045	1 157	
	Total	503	3 602	4 105	510	3 545	4 055	516	3 278	3 794	
Total number of employees by nationality	Nationalities	%	Nationalities	%	Nationalities	%					
	French	52	French	54	French	54					
	Luxembourg	22	Luxembourg	21	Luxembourg	18					
	Belgian	10	Belgian	10	Belgian	10					
	Portuguese	4	Portuguese	4	Portuguese	4					
	Italian	2	Italian	2	Italian	2					
	German	2	German	2	German	2					
	Indian	1	Indian	1	Romanian	1					
	Spanish	1	Spanish	1	Indian	1					
	45 other	6	51 other	6	Spanish	1					
				55 other	5						

2 Products that accelerate more sustainable lifestyles

3 Products that create sustainable infrastructures

Research & Development expenditure

Amount in k€ - R&D center of Esch/Alzette

3 393	2 932	3 271
-------	-------	-------

The level of R&D expenditure remains stable, the slight increase in 2018 is merely a fluctuation in the complete purchase cycle for the research activity carried out with our academic partners.

4 Efficient use of resources and high recycling rates

Tonnes of materials used in the production process (scrap, used tyres, lime, etc.)

GRI 301-1

2 563 101	2 581 998	2 674 883
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Percentage of by-products recovered per tonne of waste generated

GRI 306-2

88.4 %	88.1 %	81.2 %
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Quantity of operating waste such as black slag, calamine, etc. from steel production, returned to a recovery process rather than a disposal process.

		2016	2017	2018
Percentage of recycled materials in the production of crude steel casting	GRI 301-2	95.0%	95.1%	95.1%
Proportion of scrap and used tyres put into the furnace during steel production. Scrap represents the vast majority of it.				
Tonnes of recycled scrap	GRI 301-1	2 431 665	2 453 033	2 541 268
Tonnes of CO ₂ avoided due to using scrap in comparison with an integrated route (blast furnaces)		3 161 165	3 188 942	3 303 649

5 Trusted user of air, land and water

Dust emission (g/tCS)	GRI 305-7	9.8	8.00	8.00
Grammes per tonne of crude steel (tCS: tonne Crude Steel)				
Water withdrawal (m3/tCS)	GRI 303-1	0.59	0.65	0.34
Cubic meter per tonne of crude steel (tCS: tonne Crude Steel)				
The evolution of the total water withdrawal is due to the reduction of the piped water withdrawn.				
Surface water	GRI 303-1	0.13	0.14	0.07
Piped water	GRI 303-1	0.24	0.30	0.00
The more intense rainfall in 2018 has reduced the ponctual use to the piped water.				
Ground water	GRI 303-1	0.22	0.21	0.27
NOx emissions (g/tCS)	GRI 305-7	256	357	264
Grammes per tonne of crude steel (tCS: tonne Crude Steel)				
The measurements are taken at given moments in time and therefore results may vary depending on production conditions and levels.				
SOx emissions (g/tCS)	GRI 305-7	72	97	101
Grammes per tonne of crude steel (tCS: tonne Crude Steel)				
The measurements are taken at given moments in time and therefore results may vary depending on production conditions. SOx emissions can arise from using coal – whose quality can vary - in the electrical arc furnace. Consequently, emissions are a combination both of the quality and of the consumption of these products.				
Water discharge (m3/tCS)	GRI 306-1	0.60	0.62	0.57
Cubic meter per tonne of crude steel (tCS: tonne Crude Steel)				
Percentage of waste disposed of in landfills	GRI 306-2	12%	11.5%	18.1%
Our main industrial waste is white slag. We are currently investigating potential recycling methods to help us recover it.				
Fines received for non-compliance with environmental legislation and regulations	GRI 307-1	0	0	0
Amount and number of non monetary fines				

6 Responsible energy user that helps create a lower carbon future

Energy consumption (GJ/tCS)	GRI 302-3	9.3	9.15	8.68
Gigajoules per tonne of crude steel (tCS: tonne Crude Steel)				

		2016	2017	2018
CO₂ emissions per tonne of crude steel (kg CO ₂ /tCS) Kilogram per tonne of crude steel (tCS: tonne Crude Steel)	GRI 305-4	318	310	300
Direct emissions (Scope 1 set by the GreenHouse Gas protocol) corresponding to the CO ₂ directly emitted by the furnaces	GRI 305-1	195	185	179
Indirect emissions (Scope 2 set by the GreenHouse Gas protocol) corresponding to the CO ₂ emitted to generate the energy consumed: electricity and heat (hot water, steam)	GRI 305-2	81	82	77
Other indirect emissions (Scope 3 set by the GreenHouse Gas protocol) corresponding to CO ₂ emissions from products used in our workshops such as quicklime and industrial gases (oxygen, nitrogen)	GRI 305-3	42	43	44
ISO 14001 certified facilities The standard covers environmental management. It is based on the principle of continuous improvement in environmental performance by controlling the impact associated with company activities.		5 out of 9	5 out of 8	4 out of 7
Our Belval, Differdange, Rodange and Bissen sites are certified.				
ISO 50 001 certified facilities The standard covers energy management.		3 out of 9	4 out of 8	3 out of 7
Our Belval, Differdange and Rodange sites are certified.				

7 Supply chains that our customers trust

Sourcing via local suppliers amount in k€

GRI 102-9 | GRI 102-10 | GRI 102-48

		79 820 000	66 490 000	77 830 000
Electricity	Germany	8%	14%	4%
	Belgium	17%	24%	7%
	France	75%	62%	89%
The "usual" annual breakdown is approximately 85% in France and 15% in Belgium for Sotel customers. During the 2018 summer, the risks of shortages in Belgium leading to possible load shedding and the Belgian network operator's request to all players to propose actions to help reduce costs and stabilize the network led us from September 2018 to switch almost all of our Belgian supplies to France. In the same context, a few small charges were transferred to the Creos network from Germany. The Dudelange plant was removed from 2018. This data covers the Belval, Differdange, Rodange, Dommeldange, Bissen sites, European Logistic Center and our administrative site in Esch-sur-Alzette.				
Gaz	Germany	0%	0%	0%
	Belgium	100%	100%	100%
	France	0%	0%	0%
These data cover the sites of Belval, Differdange, Rodange, Dommeldange, Bissen sites, the European Logistics Center and our administrative site in Esch-sur-Alzette.				
Total Electricity and Gaz	Germany	6%	9.6%	2.5%
	Belgium	39%	48.6%	38%
	France	55%	41.8%	59.5%
Transport & logistics	Luxembourg	59.5%	61.3%	62.2%
	Belgium	28.4%	26.3%	26.5%
	Germany	2.2%	2.5%	2.2%
	Austria	6%	5.4%	3.9%
	France	2.5%	1.8%	1.8%
	Others	2.4%	2.7%	3.4%
These data cover our Belval, Differdange, Rodange, and AMCLE sites. Note in 2018, a change in calculation of this data: until 2017, the figures were based on transport billing. In 2018, a new approach has been introduced, which takes into account the tonnes shipped in the period of the year and the provisions made for these transports. This data is more precise in terms of tonnes transported. The figures for 2016 and 2017 have been reconstructed on this basis.				

7 Supply chains that our customers trust

		2016	2017	2018
Number of suppliers assessed for their environmental and social impacts	GRI 308-2 GRI 414-2	76	52	53
All our suppliers have acknowledged the ArcelorMittal Code for Responsible Sourcing. Each year, we assess more deeply a sample of suppliers.				

8 Active and welcomed member of the community

		2016	2017	2018
ArcelorMittal Luxembourg donations	GRI 203-1 GRI 102-48	391 000	313 500	363 050
Amount in € representing the projects sponsored, including STEM projects.				
The evolution is due to the participation to the Occupational Health and Safety Forum organised by the Union of Luxembourg Companies (UEL, Union des Entreprises Luxembourgeoises) which varies one year to another. Moreover, we have included from 2018 our sponsoring to the Galerie Schlassgoart, the CNA (National Audiovisual Center) and national archives; the 2016 and 2017 figures have been reconstructed on this basis.				

9 Pipeline of talented scientists and engineers for tomorrow

		2016	2017	2018
Amount invested in STEM (science, technology, engineering, mathematics) projects	GRI 203-1	175 000	177 500	172 500

10 Our contribution to society measured, shared and valued

		2016	2017	2018
ArcelorMittal's economic contribution to Luxembourg	GRI 201-1	520 912 879,8	488 716 729,3	490 086 755
Payroll (pay and employer contributions) allocated to ArcelorMittal employees in Luxembourg, and expenditure to our suppliers and subcontractors in Luxembourg for their services.				

Ensuring transparent governance

	2016	2017	2018
Number of complaints received by the Internal Audit service These complaints relate to internal shortcomings identified by employees anxious concerned to uphold ArcelorMittal's reputation for honesty and integrity.	2	1	4

The four complaints related to the non-compliance with our code of business conduct. They have been investigated and found to be ungrounded.

	2016	2017	2018
Percentage of employees trained in the Code of Business Conduct The ArcelorMittal Code of Business Conduct provides a set of guidelines to be followed by all employees when conducting their business. The aim is to uphold ArcelorMittal's reputation for honesty and integrity in its management practices as well as in all business transactions.	77.3%	84.0%	93.7%

Code of Business Conduct training is compulsory and valid for a period of three years. After this time, all the employees must renew their training certificate. To have all the certificate up to date, we have to anticipate employee turnover, re-validation restrictions for training and long-term absences. To this end, a new training management system was developed in 2015 to improve the traceability of online and face-to-face training. In 2016, the gradual implementation of this tool, along with the permanent monitoring of the teams in charge of the training, allowed to improve the results which are in constant progression.

	2016	2017	2018
Percentage of employees trained in Human Rights ArcelorMittal has published a comprehensive policy on Human Rights, in order to coordinate the group's efforts as a whole, focusing on the priority areas identified.	91.2%	91.9%	92.7%

Human Rights training is compulsory for some functions and all the management since September 2016 and valid for a period of three years. After this time, all the employees must renew their training certificate. To have all the certificate up to date, we have to anticipate employee turnover, re-validation restrictions for training and long-term absences. To this end, a new training management system was developed in 2015 to improve the traceability of online and face-to-face training.

Safe, healthy, quality working lives for our people

Safety

Our objective is to provide our employees and subcontractors with a working environment in which they can carry out their tasks in complete safety. This is our number one priority. The Zero Accident objective is an integral part of our corporate culture and is a daily issue for our teams and management. ArcelorMittal's sites in Luxembourg are mainly industrial locations that consist of particularly complex environments. The activities undertaken in these large infrastructures involve many different safety challenges. ArcelorMittal has set itself the ambitious target of being the world's safest steel and mining company.



	2016	2017	2018
Lost-time injury frequency rate Number of injuries resulting in lost time of more than one day, suffered by our own staff, our sub-contractors and our temporary staff during a 12-month period, per million hours worked.	1.4	0.2	0.56
Number of fatalities	1	0	1
Number of OHSAS 18001 certified sites The norm sets out the organisational requirements for the occupational Health and Safety management system.	7 out of 9	7 out of 8	6 out of 7

Our journey to a culture of safety

Safety management is based on different pillars upon which we construct a strong internal culture:

1. Safety organisation

A corporate team concentrates on Health and Safety management at all sites and defines the main lines of the safety approach on the basis of feedback from the ground. A manager is responsible for safety at each site and coordinates a network of safety representatives assigned to the various areas of the main sites of Belval, Differdange, Rodange and Bissen. A number of committees meet regularly to ensure that information flows to and from each level. Their mission: to analyse potential risks and actual accidents and then implement preventive measures.

2. Performance control, standards and procedures

International standards, are regularly audited by independent bodies, particularly in the context of OHSAS 18001 and, more recently, ISO 45001 certifications. ArcelorMittal also has its own safety standards: Fatality Prevention Standards (FPS), based on audits conducted on the ground. Structured in six levels, the sites must improve year on year in order to achieve excellence level 5:

- **Belval:** level 5
- **Differdange:** level 1 – 36 questions open
- **Rodange:** level 1 – 32 questions open

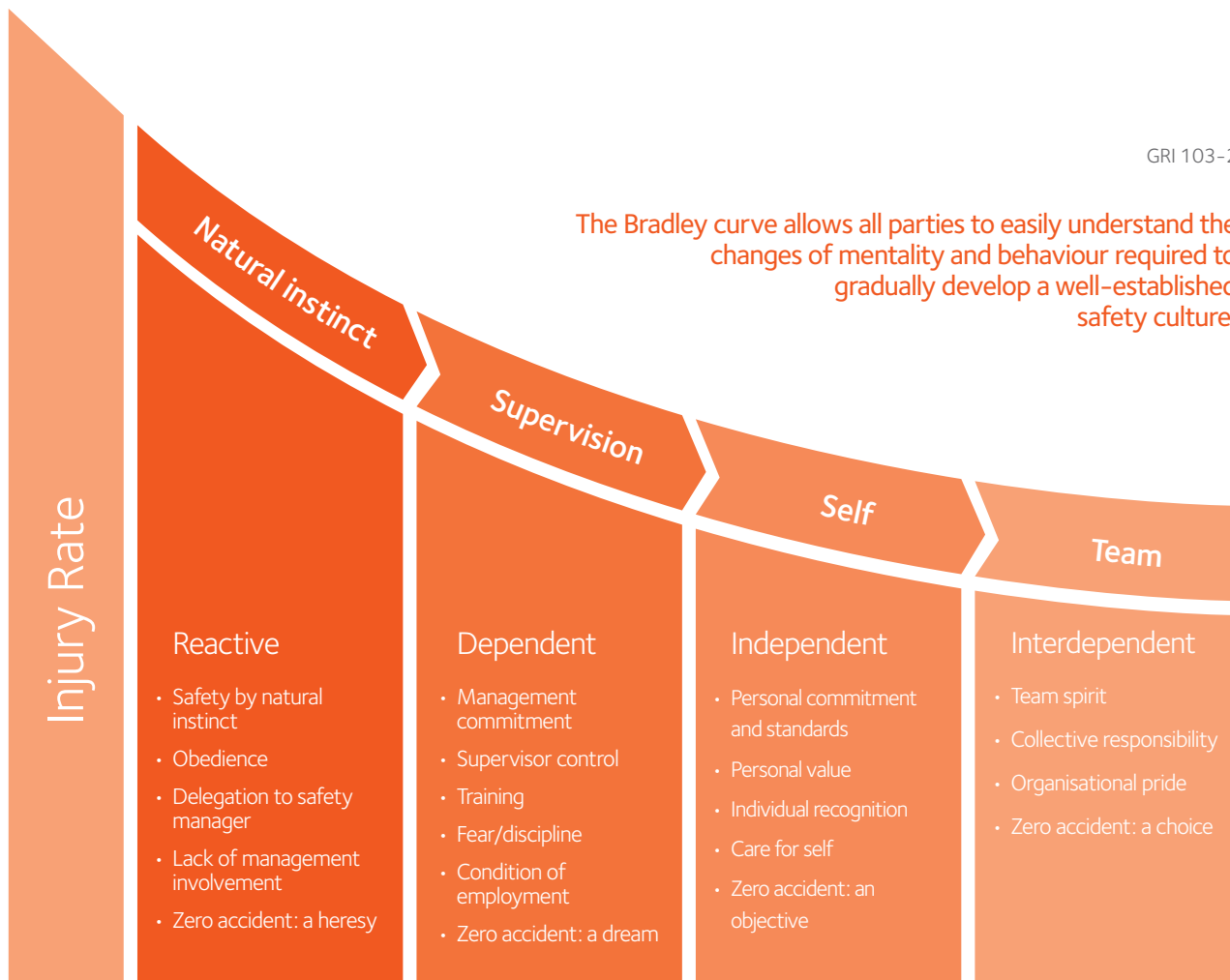
- **Bissen:** level 3 – 9 questions open
- **AMCLE:** level 1 – 40 questions open

3. Awareness, training and collective mobilisation programmes

Training plays a key role in building a culture of safety. It consists of a technical training component, in particular concentrating on the riskiest operations such as working at height, electrical maintenance and handling, and also involves a training component on social skills.

In fact, creating a culture of safety aims, above all, at addressing all the ways of acting and thinking that are widely shared by all those in an organisation, from the management to the staff on the shop floor. Associated with the Bradley curve, the maturity of this culture varies in ArcelorMittal's various sites in Luxembourg:

- **Belval:** independent stage
- **Differdange:** independent stage
- **Rodange:** independent stage
- **Bissen:** independent stage
- **AMCLE:** dependent stage
- **Dommeldange:** interdependent stage



Take Care, a 10-year health and safety programme which will be deployed in three phases at all ArcelorMittal operational sites in Europe, has the objective of distributing information that is key to changing attitudes and behaviour. The first phase, focusing on self-awareness, consolidation on the ground and the sustainability of improvement, was implemented in Belval, Differdange, Rodange, Bissen and Dommeldange in 2017. This first phase concluded at all these sites in 2018.



Robin Paulmier
Head of Corporate Health & Safety
ArcelorMittal

"When we talk about safety, we often think about tools: KPIs, dashboards, Fatality Prevention Standards, audits, etc. These tools are essential, but safety is much more than that. Safety is about behaviours, mindsets, culture. We must constantly strengthen the leadership of the hierarchy line, which represents the most important leverage in changing this culture. We must also develop the participation of all, by listening and helping those who are physically confronted to risks on the ground and who often have the best ideas for solutions. This is how we will use our tools effectively to drive progress forward."



The second phase is set to commence in 2019 over two days and will focus more on active participation, from the "me" to the "us", in order to reach the "Interdependence" stage of the Bradley curve based on a collective approach.

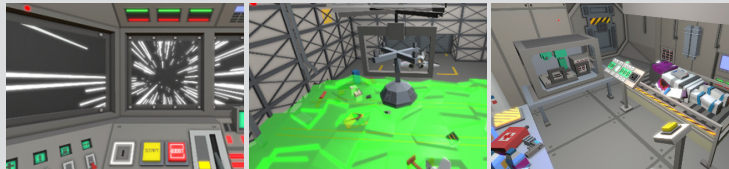
In total there will be 20 days of training.

In addition to the Take Care training, a range of initiatives were developed by the Luxembourg sites in 2018 to improve the maturity of the safety culture.

Following the "Maturity Project", a multidisciplinary approach established at the end of 2013 aimed at sustainably improving health and safety performance, the Belval site focused specifically on the concept of culture in 2013. It then developed the "Maturity Culture" programme in 2016 in order to identify and raise awareness of the key components for improvement. In 2018, the site continued its communication initiative on the "seven ingredients for success" and began introducing safety performance books based on the principle of self-assessment, allowing everyone to observe their own day-to-day safety behaviour. After an initial phase of introducing the reports, a points deduction system was defined for the entire site. A certain number of points are deducted by the management for every basic safety lapse (failure to wear personal protective equipment, harnesses, etc.). The system also allows points to be gained by carrying out safety actions or improvements.

The safety culture – permanent vigilance

Every year the Health & Safety Day brings ArcelorMittal employees and subcontractors together. In 2018, they were invited to reflect on moments of inattention and breaches of the safety rules that are sometimes accepted, with consequences that can be serious or even fatal. The slogan used was: "This time could kill you", illustrating the risks of a lapse in concentration or ignoring a safety rule. Among the main activities of this edition of the Health & Safety Day was the escape game organised by the Belval site. Employees were offered a virtual experience of risks that could be anticipated every day, by means of a simulation of an alien invasion. This required constant vigilance and discipline in order to escape from a space station unharmed by choosing the safest route! In Differdange, virtual reality was used to assess whether employees suffered from vertigo. The Bissen site turned to a theatre piece to raise awareness of the risks of loading operations.



Safety management also involves cross-departmental collective mobilisation approaches including continuous improvement programmes such as 5S (*Seiri, Seiton, Seiso, Seiketsu, Shitsuke*), WCM (World Class Manufacturing) and GESIM (Federation of Steel and Metallurgical Enterprises). These programmes focus on optimising the working environment and are the subject of ongoing efforts at all our industrial sites.

Safety culture, shared vigilance

Establishing a safety culture evidently means sharing ways of acting and thinking. ArcelorMittal is developing initiatives in order to increase day-to-day collective mobilisation, in particular among its suppliers.

With this in mind, a "surprise" exercise was organised at the Belval steelworks to check the responsiveness and knowledge of the supplier HARSCO during an emergency situation in a confined space. During an operation to clean the ladle furnace cover, one of our employees was in attendance to carry out an audit; this individual then simulated illness in order to test the subcontractor. This type of test is carried out several times a year on different suppliers or our staff in various departments, and facilitates improved control of the environmental, social and economic risks associated with our on-site activities.

The fatal accident at the Belval site in 2018 illustrates that efforts in this area must continue.



A "glocalised" safety approach

Over the years, the mechanical workshop in Dommeldange has developed a preventative approach adapted to the specific nature of its activities. With standards and tools such as FPS and Take Care training common to the whole ArcelorMittal Group, the site continued to implement its approach based on three main pillars in 2018:

- The 5S programme such that employees can evolve in a controlled, reliable working environment;
- Autonomous Maintenance, one of the foundations of TPM (Total Productive Maintenance), such that employees can develop their skills and improve their autonomy when they detect anomalies;
- HIRA (Hazard Identification Risk Assessment) at workstations, conducted by and for employees. More than 900 risks are analysed and/or reassessed every year. All risks that have been assessed as having a potential for fatal accidents have been eliminated by means of modifications or investment. The remainder are subject to incremental corrective measures.

The safety and reliability of the working environment are treated in an integrated way with a single prevailing theme: prevention is economically, socially and environmentally less costly than cure. Mindfulness and shared vigilance had led to 1,930 days without an accident involving work stoppages by the end of 2018, a situation that the site intends to make sustainable.

20

firefighters visited our Belval site in July 2018 as part of our collaborative approach to safety. They took the opportunity to learn more about our working environment by inspecting the steelworks, as well as gaining information on our manufacturing processes, major risks, REX (Report on the Return of Experience) and, of course, our various fire-fighting facilities.

Health

As is the case for safety, the health and well-being of our employees and subcontractors are priorities. Our staff and subcontractors spend a significant amount of time in the working environment and it is essential that everyone feels at ease there. The company focuses on strengthening our employees' sense of belonging in order to improve cohesion and stimulate initiative.

Prevention is at the heart of our approach

The steel industry has specific working conditions that our Health Department manages in a proactive, multidisciplinary manner. The work in three eight-hour shifts and the stresses of the working environment mean that continuous improvement is always sought by our team, which consists of:

- Two doctors,
- Eleven nurses,
- A psychologist,
- A welfare worker,
- A dietician,
- An ergonomist,
- Six workplace health representatives.

Some team members have also added knowledge of relaxation techniques and dietary skills in recent years. The team's work is structured around improving working conditions, preventing industrial risks, monitoring the health of the whole workforce, including temporary workers and some subcontractors depending on their exposure to risks and the frequency of their intervention, as well as responding to medical emergencies.

The team's main concerns relate to the steel industry environment and include sleep management, legionella and chemical risks, addiction, noise, optical and ionising radiation, electromagnetic fields and psychosocial risks. Preventative approaches, in particular based on training and everyday awareness, are favoured in an

environment of continuous, sustainable improvement. These approaches are founded on increasing interactivity in order to encourage the adoption of desirable outcomes and best practices.

The management of psychosocial risks (PSR), brought about by work activities or generated by work organisation or relations, is becoming an increasingly important issue in a rapidly changing world. PSR can result from an imbalance between an individual's perception of the constraints of their working environment and their own resources to deal with them (stress, burnout), as well as from harassment, conflict or violence against employees by individuals external to the enterprise. As well-being in the workplace and professional



GRI 103-1 | GRI 103-2

efficiency are complementary, since 2011 ArcelorMittal Luxembourg's Health Department has been systematically assessing the perception of professional stress during regular reviews, in this way producing diagnostic and monitoring indicators. The department has also developed a wide-reaching training and care programme for all levels of PSR prevention:

- Primary, to avoid the development of psychosocial risks;
- Secondary, to be in a position to react to recognised psychosocial risks (poor stress management, burndown, burnout, harassment, post-traumatic stress);
- Tertiary, in order to support an employee upon return to work following a case of the poor management of PSR.

In addition to training and workshops, the Health Department offers a range of prevention services. A dedicated contact platform is available 24/7*, as is a psychological support unit aimed at preventing post-traumatic stress. The department also carries out personality assessments – to determine the correspondence of the work with psychological needs – teaches relaxation techniques, and provides multidisciplinary care (doctor, psychologist, welfare officer, nurses, ergonomist) for any employee who displays symptoms of poor stress management. A new training course in individualised management was also introduced in 2018 within the scope of primary prevention. Led by occupational doctors, this training has been aimed at managers on the ground. The focus has been on offering everyday support, assisting participants

in adapting their management style to the personalities of their interlocutors, better respecting differences and complementarity, identifying each other's strengths, valuing and recognising the early signs of stress and knowing how to respond appropriately. Furthermore, a new twice-monthly permanence has been established by a psychologist specialising in the management of psychological stress in relation to PSR. This offers employees who are encountering difficulties the opportunity for individual consultations with a neutral, independent psychologist. These consultations help individuals experiencing problems to gain insight into their professional or private situations, offering pragmatic advice and determining the most appropriate assistance to resolve or improve matters, while respecting professional confidentiality.

Personalised responses

The Occupational Health Department has been working to optimise its approach in terms of ergonomics for several years. In 2017 an approach was defined and thoroughly analysed to allow employees to be actively involved in improving their working environments. As a result of the support of our ergonomist and a nurse trained in ergonomics, a three-step approach was then tested consisting of the analysis of the workstation, the environment (noise, vibration, lighting, etc.) and the working group in order to gather and adapt the operators' ideas and proposals in accordance with the options available.

An "à la carte" training course on actions and posture was developed by our ergonomics nurse in 2018.

This was rolled out to the production departments to allow improved adaptation and response to needs on the ground in terms of postural constraints. The day-long course held in the participants' working environment includes theoretical and practical parts. This allows advice to be illustrated in a concrete manner while reflecting on previously identified problems.

The theoretical part provides:

- A definition of musculoskeletal pain (anatomy, acute or chronic pain);
- Information on good posture (lifting, repetitive movements, awareness of warming up);
- Advice on healthy living (nutrition, stress management, physical activity).

At the end of the theoretical part, participants complete a questionnaire to identify the ergonomic stresses encountered at the workstation. The practical part is then carried out in situ and includes:

- An analysis of the job based on the questionnaire completed in the morning, supplemented by the identification of practical exercises to implement the elements of the theoretical part;
- Exercises in practical handling;
- Introducing the concept of warming up before starting work or beginning a heavy physical activity.

Administrative functions are continuing to benefit from the "ergo check" conducted by our ergonomist who studies and advises on the working environment or area and also offers an action and posture training course for mixed groups.



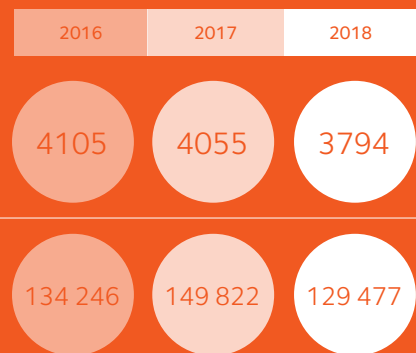
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GRI 103-1 | GRI 103-2

Training & personal development

Maintaining a good dynamic within any company depends on commitment, recognition and the prospect of personal development for staff. Our employees and the talented young trainees joining us expect a Group such as ours to encourage career progression through a wealth of projects, professional development opportunities and helpful contacts.

Our objective is to enable our employees to grasp the opportunities afforded them in order to thrive within the global business that is ArcelorMittal. We believe that success is not due to the organisation itself but rather to the people within it. We are convinced of the need to support and facilitate the development of every individual and to enhance the skills and expertise of those working with us at every level. Finally, we endeavour to nurture diversity within our teams and establish exemplary social dialogue with our employees.



Number of employees

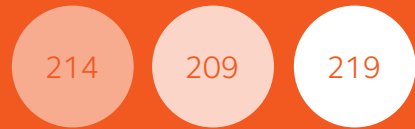
at 31 December 2018 in headcounts

Total training hours

for our employees, temporary employees, and subcontractors

2016	2017	2018
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Number of young people welcomed by our Luxembourg entities gathering apprentices, interns and international work experience volunteers



Number of training courses offered to all employees



Percentage of employees covered by a collective agreement



Total number of employees who have taken parental leave, by gender



Number of employees who have left the company in the year following their return to work after parental leave, by gender



Percentage of working day lost due to social disputes



Total number of employees by employment contract and by gender

	Female	Male	Total	Female	Male	Total	Female	Male	Total
Fixed-term contract	11	84	95	17	82	99	14	502	516
Permanent contract	492	3 518	4 010	493	3 463	3 956	68	3 210	3 278
Total	503	3 602	4 105	510	3 545	4 055	82	3 712	3 794
Full-time	396	3 551	3 947	391	3 480	3 871	378	2 873	3 251
Part-time	107	51	158	119	65	184	138	405	543
Total	503	3 602	4 105	510	3 545	4 055	516	3 278	3 794

Total number of employees by gender



Total number of employees by age

	Female	Male	Total	Female	Male	Total	Female	Male	Total
<30	33	234	267	39	242	281	48	248	296
30/50	366	2 290	2 656	341	2 008	2 349	356	1 985	2 341
>50	104	1 078	1 182	130	1 295	1 425	112	1 045	1 157
Total	503	3 602	4 105	510	3 545	4 055	516	3 278	3 794

Total number of employees by nationality

Nationalities	%	Nationalities	%	Nationalities	%	
French	52	French	54	French	54	
Luxembourg	22	Luxembourg	21	Luxembourg	18	
Belgian	10	Belgian	10	Belgian	10	
Portuguese	4	Portuguese	4	Portuguese	4	
Italian	2	Italian	2	Italian	2	
German	2	German	2	German	2	
Indian	1	Indian	1	Romanian	1	
Spanish	1	Spanish	1	Indian	1	
45 other	6	51 other	6	Spanish	1	
				55 other	5	
	4 105	100	4 055	100	3 794	100

People at the heart of performance

Training is a key factor in developing the skills, versatility and employability of staff in order to meet today's needs while anticipating the requirements of tomorrow. With this in mind, ArcelorMittal supports a wide range of training and development methods in order to support the transition to Industry 4.0 – theoretical and practical training, online and lecture room programmes, seminars, conferences, tutoring, coaching, etc.

Our training policy revolves around eight themes: the integration of new employees, adaptation to the workplace, leadership management, steel industry professional skills, non-steel industry skills, health and safety and languages. The policy is supported by a specific process:

- Identification and analysis of training needs;
- Establishing training plans;
- Implementing training;
- Training evaluations;
- Follow-up and continuous improvement.

Training is thus structured around three main areas: health & safety, technical skills and management.

Our slogan is "Acquiring knowledge in order to identify, evaluate, anticipate and minimise risk". The health and safety of our staff and subcontractors is a genuine priority at the very heart of the daily concerns of our industrial reality. This approach involves the commitment of everyone, every day, to do everything possible to achieve the required level of excellence in terms of results. Training supports this ambition by providing a knowledge of risks and facilitating the learning of appropriate behaviours. Exemplary conduct, communication, transparency, involvement and discipline, together with know-how and social skills, are essential in the field of health and safety. The process to renew various authorisations continued in 2018, as well as the development of solutions to comply with the evolution of regulatory requirements and best practice.

The provision of technical skills is essential to ArcelorMittal's complex

and continuously evolving environment and is at the heart of its twin-tracked dynamic. The first track is that of industrial progress, advancing the company's performance in response to market needs and technical advances, while the second track is that of social progress, allowing the professional development of all involved, in addition to increasing experience levels. Work continued on updating and improving technical skills in 2018 while reinforcing the versatility required for certain roles.

The challenges of management on the ground that are at the heart of the company's collective performance include: commitment; self-awareness for improved communication and work with others; diagnostics and problem-solving tools; the capacity to generate and support change; the ability to be part of a process of continuous improvement; and shared responsibility. Training provides the necessary elements to establish an operational toolbox for managers on the ground, and offers the link between, on the one hand, individual competence and its implementation in the service of value creation and progress and, on the other hand, the organisation's constraints and continuous development. This toolbox was reinforced in 2018 in line with our commitment to continuous improvement.

In a collaborative approach, our activities are conducted while interfacing with all internal actors (site managers, human resources, operational services, union representatives, etc.) and external actors (training entities, state representatives, professional chambers, professional federations, etc.).

Buongiorno!

The Partner Safety Induction (APS-Lux) application is a programme of training and tests that checks knowledge of health, safety and environmental matters. An Italian version of the programme was added to the five existing versions in 2018, namely French, German, English, Portuguese and Polish. The wide choice of languages reflects the diversity of our Group and ensures that all the parties involved (ArcelorMittal staff, subcontractors and relocated or newly recruited staff) have the necessary knowledge before starting work at Belval, Differdange, Dommeldange, Rodange or the European Logistics Centre. APS is renewed annually for ArcelorMittal staff and subcontractors and every six months for temporary staff.



Digital technology at the heart of learning

ArcelorMittal dedicates a week every year to celebrating and encouraging learning in all its forms. The various activities available to staff in 2018 included the opportunity to learn more about the concepts of the smart factory and Industry 4.0, as well as discovering the latest developments in online recruitment, the intricacies of social networks and the socio-economic trends that are influencing the employees of the future. Issues relating to digital technology were also raised, such as data protection and the "radical transparency" often sought by our stakeholders, clients, local communities and investors in particular. Digital technology serves and reinforces the momentum for Sustainable development in our industry. From apps that assess building profiles to big data allowing product traceability, passing more broadly via social networks which, through their scope and speed of information, encourage companies to better control their impacts within their value chain: digital technology is transforming the way we act and think. ArcelorMittal's industrial sites in Luxembourg have also benefited from a range of customised activities. These have included virtual reality workshops to raise awareness of safety and quality issues, thus illustrating the effectiveness of digital technology for training on the ground. Participants in meetings have also been invited to share their experiences of digital technology and its advantages and the challenges for the industry.

180

people gathered for the launch of IDCN (International Dual Career Network) in Luxembourg, a non-profit association consisting of companies, NGOs and academic institutions that aims to facilitate the job-seeking activities of the partners of expatriates and offer a pool of talent for member companies wanting to recruit. As a founding member, ArcelorMittal hosted the first IDCN event at its offices in Luxembourg City in November 2018. The event brought together key players from the employment market such as Amazon, the British Chamber of Commerce, the European Investment Bank (EIB), the European Stability Mechanism (ESM), Ferrero and PwC as well as ADEM (Luxembourg Employment Agency).

Products that accelerate more sustainable lifestyles

One of the ways in which we support Sustainable development is to offer products that favour environmentally friendly lifestyles around the world.

In this regard, we have developed environmentally friendly coatings that protect against corrosion for a variety of applications, from agricultural fencing to marine equipment. We also supply highly effective products that facilitate the development of public transport.



Research & Development expenditure

Amount in k€ - R&D center of Esch/Alzette

2016

2017

2018

3 393

2 932

3 271

Environmentally friendly coatings in our gardens

Launched a few years ago, the PVC-free *Nature* coating produced by our Bissen plant performs a lot better than traditional protective finishes while being more environmentally friendly.

Nature copes very well with complex environments (saline atmospheres, sand abrasion, chemical aggression, extreme sun & cold, wind, etc.), preventing cracking, peeling or chipping, thus protecting fencing for many years. Unlike PVC, this coating does not involve emissions of VOCs (Volatile Organic Compounds). In addition, it can prevent PVC drying out, thus avoiding the diffusion of pollutants into the air. *Nature* is a high-performance coating

offered solely by ArcelorMittal in Europe and is also fully recyclable.

In line with the Group's objectives and environmental standards, the Bissen site offers sustainable, environmentally friendly products. In particular it supplies Leroy Merlin, the leading DIY store in France, with Luxor®, Forte® Medium, Palma® and Yucca® fencing that feature a *Nature* coating. ArcelorMittal, the only supplier of roll fencing to Leroy Merlin, dispatched the equivalent of 1.000 lorries of domestic fencing between 2017 and 2018. The Group is committed to developing and improving access to products that better respect the environment.

The development of public transport

ArcelorMittal Bissen provided the steel fibres used in the construction of the tunnels of the first phase of the Doha metro in Qatar, which was inaugurated in October 2018. Supplies continue to be dispatched as work on this first-class transport network progresses.

It was in 2015 that ArcelorMittal WireSolutions signed three contracts to supply 21.500 tonnes of steel fibre for the Doha metro, strengthening ArcelorMittal's position as the leader in the supply of steel fibre for the

tunnels sector. When completed, the metro, operated by Qatar Rail with an investment of 32 million euros, will be one of the most advanced underground systems in the world. The 300 km of track and 98 stations of this world-class transport network are scheduled to be ready for the FIFA World Cup Qatar 2022.

Bissen's steel fibres will be used in the construction of three lines: Red Line South, Red Line North and Golden Line.

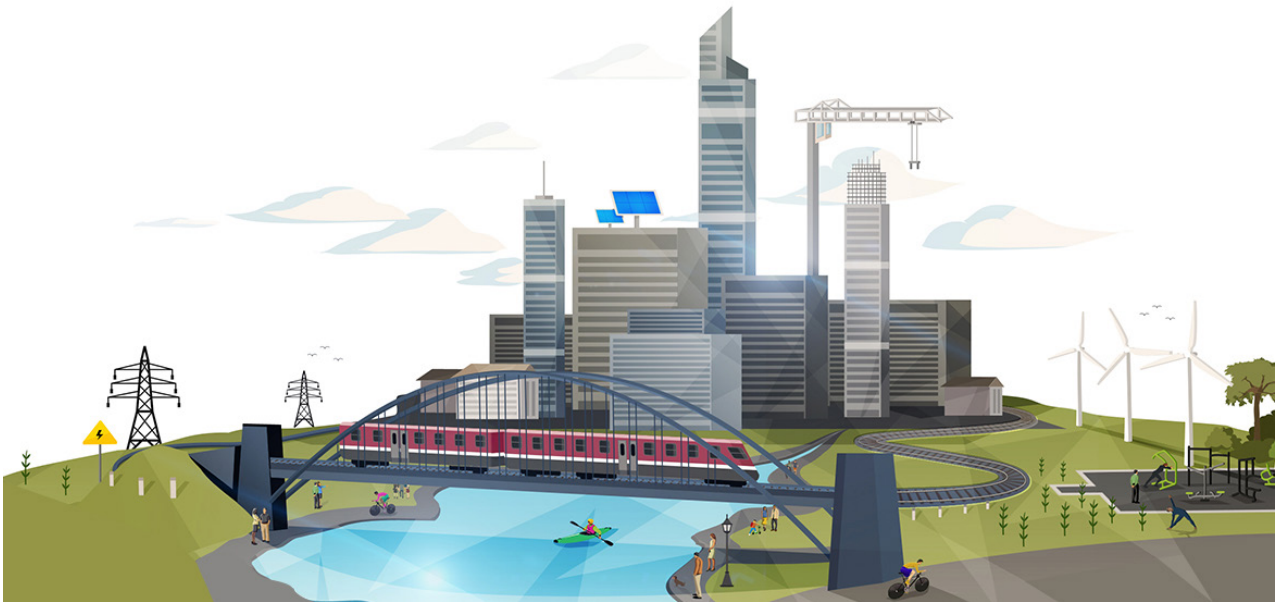
12

football pitches or 98.000 m² represent the size of Amazon's new logistics centre, opened in Illescas, Spain, in 2018. ArcelorMittal Bissen supplied the steel fibres incorporated into the facility's flooring, a key factor in the sustainability of the centre. High-performance flooring is essential to the construction of a functional, versatile, long-lasting industrial building. The floor must be able to bear all loads and accommodate all technologies. Robots slide serenely down the aisles of Amazon's new centre, transporting orders. Our TAB-Floor™ steel fibre-reinforced paving solution produces jointless flooring with optimal electrostatic properties in order to eliminate interference for robots, maximise movement and avoid major maintenance operations. In addition to these multiple advantages, the use of this solution offers significant reductions in carbon emissions compared with traditional reinforcement techniques.



Products that create sustainable infrastructures

People throughout the world are increasingly aware of the environmental performance of the products and services they use. One of ArcelorMittal Luxembourg's contributions to Sustainable development is to design innovative solutions for structures that are built to last.



Research & Development expenditure

Amount in k€ - R&D center of Esch/Alzette

2016

2017

2018

3 393

2 932

3 271

An alternative approach to construction: Steligence®

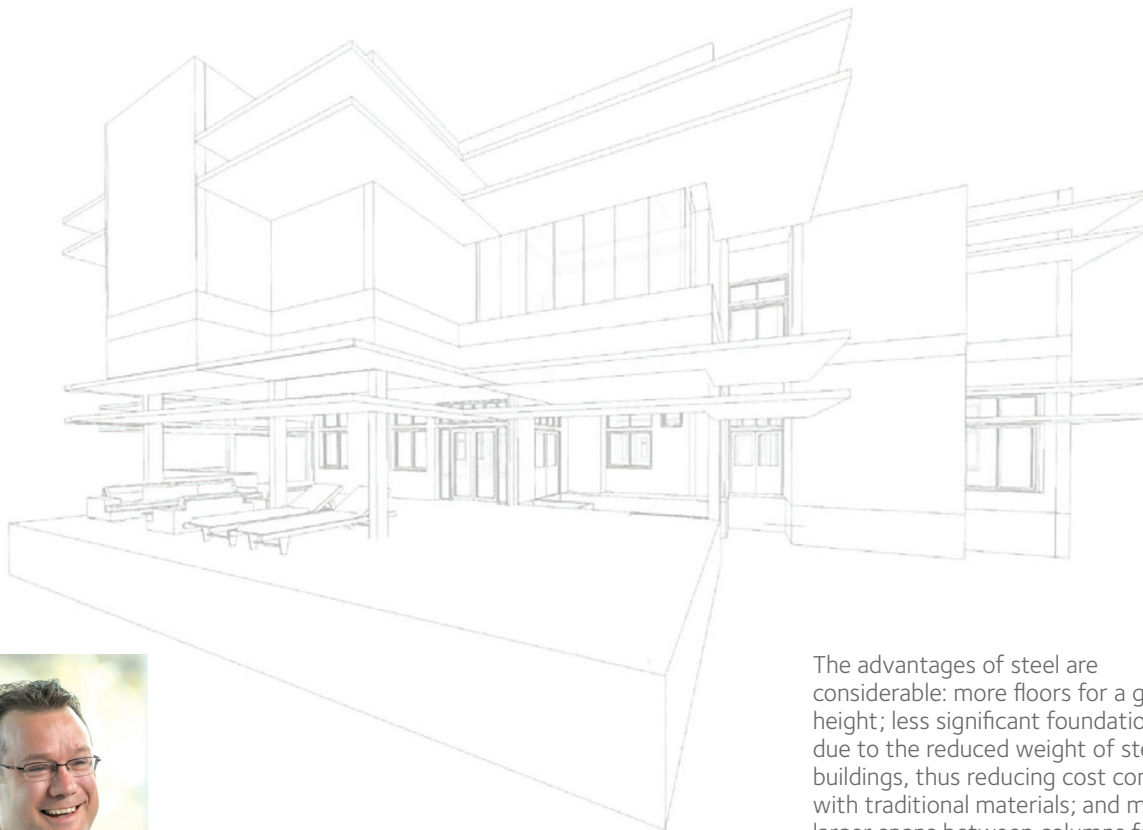
A disruptive concept for the use of steel in construction was unveiled in June 2018. Steligence® facilitates a future generation of high-performance buildings and construction techniques, leading to a more sustainable life cycle for buildings.

The concept is based on the idea that buildings are holistic entities

where all aspects of design must be considered in an integrated manner, as part of a whole. This entails improved dialogue between the various specialist disciplines of architecture and engineering, recognising not only the need for expertise, but also for efficient cooperation between professionals. Steligence® involves the use of the best steel technologies available and the modularisation of

steel components, generating efficiency gains in the design, construction and configurability of buildings compared with traditional construction methods.

Furthermore, as steel is infinitely recyclable, Steligence® means that, right from the design phase, architects can emphasise the life cycle, recyclability and reusability of buildings and their components.



Professeur Olivier Vassart
CEO ArcelorMittal Steligence®

"We must adopt a holistic vision... and explore materials with a fresh perspective, creating a building composed of complementary elements, optimising the interaction between each component."

The advantages of steel are considerable: more floors for a given height; less significant foundations due to the reduced weight of steel buildings, thus reducing cost compared with traditional materials; and much larger spans between columns for greater flexibility in interior design. In addition, buildings designed according to the Steligence® philosophy will be easier to assemble (and potentially dismantle) and therefore faster to build, resulting in significant efficiency gains for the construction sector. Modular designs for steel structures may also allow components to be reused rather than recycled, giving steel a significant advantage considering the tightening up of building performance regulations and the development of the circular economy.

Stelgence® : 10 economic, environmental and social benefits

Stelgence® is a science-based methodology that offers solid evidence of its effectiveness:

- **Optimal space and height.** The use of Angelina® beams and CofraPlus 60 compact floors greatly reduces the building height, resulting in an average cost saving of 11% across facade, stairs and core elements.
- **Lighter weight foundations.** The use of steel structures, which weigh less than half their concrete equivalents, can result in an average saving on foundation costs of 39%, like-for-like.
- **More flexible office space.** Angelina® beams make it possible to have uninterrupted spans from one façade of the building to the other. The resulting reduction in the number of columns makes it easier to reconfigure office layouts, thus optimising rental values.
- **Speed of construction.** Premium quality steel solutions using façade-to-façade spans can be installed twice as quickly as the concrete equivalents for 8 by 8 m spans, saving up to 24% on construction costs.
- **Reduced cost of ownership.** The total cost of property ownership, taking into account all the economic benefits, is at least 15% lower when using traditional materials – when all components of the concept are applied.
- **Lower environmental impact.** With comparatively lower environmental impacts and higher recycling rates than other building materials, steel is the first choice for sustainable construction. Steel enables access to the green building market with consequent increases in property value.
- **Higher sustainability ratings.** Buildings using ArcelorMittal steel solutions attain higher levels of certification in building rating schemes such as BREEAM and LEED than those built with traditional materials.
- **Improved comfort.** Steel buildings offer a more comfortable environment for their users due to optimised thermal behaviour during hot weather.
- **Reduced site traffic.** Steel requires fewer site deliveries than comparable materials resulting in less traffic congestion and consequently a reduced impact on the urban environment.
- **Greater creativity.** Steel cladding solutions offer an unparalleled choice of creative, attractive finishes, significantly improving the urban landscape.



The benefits of the Stelgence® philosophy are explored in detail in an independent, scientific, peer-reviewed white paper published at the end of 2018 and available at <https://stelgence.arcelormittal.com/>

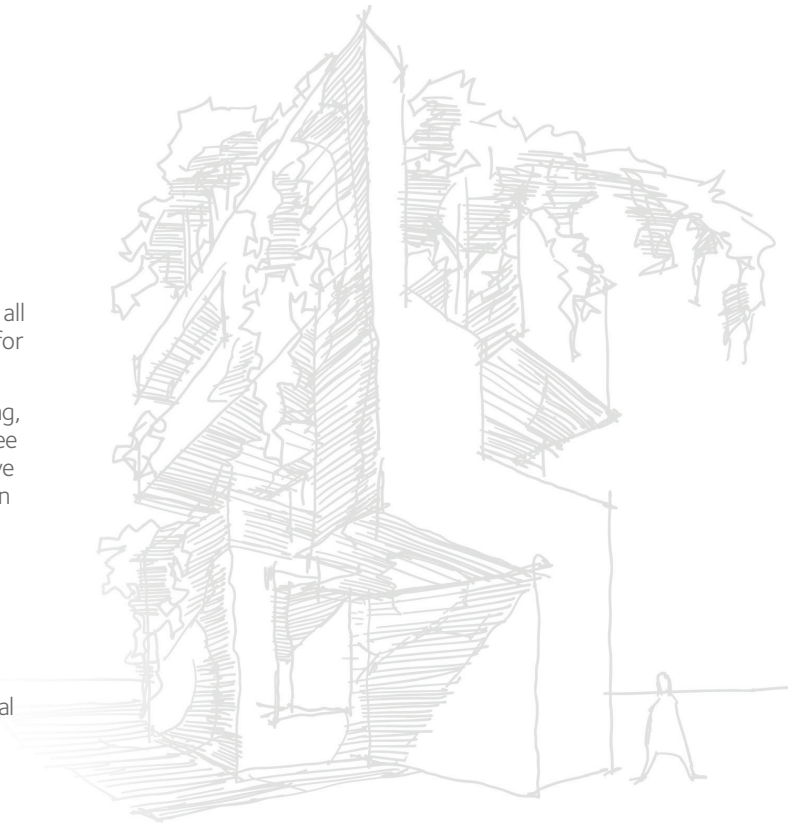


Professor Pierre Engel
in charge of the construction of ArcelorMittal's
corporate headquarters in Luxembourg

"It's a holistic, science-based solution to building, designed to address every challenge faced by the global architectural, engineering and real estate community."

Luxembourg steels contribute to bringing this approach to life, in particular through:

- **HISTAR steels®** featuring high strength and low alloy content, which significantly reduces weight and saves time in the fabrication process. HISTAR® combines strength with toughness at low temperatures and outstanding weldability. The Quenching and Self-Tempering (QST) thermomechanical treatment allows all HISTAR® grades to offer improved guaranteed values for yield strength over the whole range of section sizes.
- **Angelina®** castellated beams are lightweight, long-spanning, structural elements enabling the design of vast column-free spaces. They present an efficient, cost-effective alternative to trusses and open-web joist systems, combining function with flexibility, integrating technical installations and optimising the weight-height or load-weight ratio.
- **HD-sections** are hot-rolled, wide-flange structural steel profiles used in the construction of buildings, bridges, machinery and nearly any type of general or special structure. The hot-rolled H-shape structural beams of the HD 400 series are very easy to connect due to the identical measurement between the flanges.



Continuously improving construction techniques

When using Jumbo beams for construction, heavy plates are also used to locally reinforce and stiffen the structure. Generally sourced externally, these could however be easily sold with the beams if available in the appropriate thickness and grade. In fact, as the plates are generally welded to the H beams, offering them in a grade fully compatible with the QST sections would eliminate or at least considerably reduce the need for preheating.

New flat sections of considerable thickness (Web Tailor Made, WTM), produced at the Differdange site from 2018, are now available in 65 and 77mm thicknesses. This combination of Jumbo beams and WTM gives engineers the maximum choice to optimise the strength and stiffness of columns, trusses and girders, thus achieving the most effective cross section possible.

- **Cofraplus®** floor decks are trapezoidal steel sheets with open ribs and specific embossment to ensure composite action with the concrete used in floor constructions. This product offers significant weight, time and cost savings. Its ease of handling and flexibility of use make it suitable for almost all projects and renovation work, and it is also fully recyclable at the end of a building's life.



HISTAR® steel from Luxembourg used in the construction of Vietnam's highest tower

Ho Chi Minh City, Vietnam's fastest growing urban economic area, will soon be complemented by Landmark 81. This 81-storey residential structure will offer a high-quality living environment, combining extraordinary views with a maximised surface area thanks to 3,600 tonnes of HISTAR® 460 sections produced by ArcelorMittal Differdange.

A new addition to the city's skyline

Measuring 462 metres, Landmark 81 will be one of the tallest residential buildings on earth. Commissioned by property developer Vingroup, the building was designed by architectural firm Atkins, with structural engineering by Arup and construction by Mace and Coteccons. The tower will make a statement in a prime location in Ho Chi Minh City facing the Saigon River.

Optimum for heavy loads and fire protection

The composite design of concrete and HISTAR® steel, produced at the Differdange plant, is ideal for bearing heavy loads. The concrete walls contain multiple Jumbo beams acting as vertical columns to carry the building's weight. The concrete surrounding the steel columns also acts as fire protection.

More floor area thanks to HISTAR®

A key advantage of HISTAR® steels is an increase in saleable floor area. Vietnam is one of the few countries in the world where developers have to sell the net area instead of the gross area. Inserting HISTAR® sections into the walls enables the construction company to reduce the wall width freeing up additional saleable area at prime cost.

In total, three lots of HISTAR® sections have been delivered to the steel fabricator QH Plus. Landmark 81 was partially opened in 2018, with construction scheduled to be completed in 2019.

30

percent weight saving achieved using HISTAR® 460 steel produced in Differdange compared to traditional steel. Consequently carbon emissions and the consumption of resources are significantly reduced.

Sheet piles from Luxembourg, a sustainable solution

ArcelorMittal has been working on improving its range of sheet piles for several years by developing lighter, wider, stronger profiles. Different methods can be used to temporarily or permanently retain earth or water when building quay walls, dykes, underground car parks, tunnels, bridges or roads. Steel sheet piles is particularly suitable for most of these excavation projects because it is designed to interlock without welding or screwing, making it easy to recover after use.

It is the sustainability of this solution that contributed to the granting, in 2018, of an Environmental Product Declaration (EPD) for the sheet piles produced by our electric arc furnaces in Luxembourg. An EPD is a document providing information on the environmental impacts of each stage of the product life cycle (production, transport, use, recovery). The EPD is based on a life cycle assessment (LCA) and is certified by an independent body. The EPD assists architects and project managers in gaining sustainable building certifications such as LEED (Leadership in Energy and Environmental Design) and BREEAM (Building Research Establishment Environmental Assessment Method).

Furthermore, two tools developed by the Research & Development (R&D) team at Maizières-lès-Metz

are now available and have been used by our Esch-sur-Alzette R&D team dedicated to long products. These are the LCA tool and the transport tool, developed on the basis of the certified environmental data available from our various EPDs.

The LCA tool defines a methodology and measures the environmental footprint (carbon emissions, consumption of resources and waste generation) of sheet piles in various reuse scenarios. Several factors are considered such as the properties of the product and the different uses to which it will be integrated. The tool demonstrates, in particular, the importance of considering the value of using the product and the utility of sheet piles rental, a service offered by ArcelorMittal.

The transport tool provides information on the environmental impact of the transport of the products to the construction site. Indeed, the EPDs of our products include the production (supply and transport of raw materials, manufacturing), assembly, use (maintenance, consumption of building's resources, etc.) and end-of-life phases (demolition, transport, processing, etc.). The life cycle analysis does not consider the transport phase of products leaving our plants for dispatch to customers due to the great variability of data and the complexity of multimodality (type of equipment used, loads, etc.). The transport tool now gives customers and our internal teams the option to better track carbon footprints depending on the means of transport used.

25%

reduction of global warming potential for sheet piling solutions compared to concrete solutions. This was the conclusion of a comparative study carried out by our R&D team in 2018. The comparison was made by the application of the Steligence® philosophy to a quay wall project.

Sheet piles from Luxembourg protect the Netherlands from flooding

Our R&D, marketing and sales teams participated in a project funded by the Dutch government to improve dyke design.

Exploring an innovative, economic solution for safety

The Netherlands is a low-lying country protected from the sea by dykes and dunes. Dykes have been reinforced for decades to prevent flooding and

keep the country dry. As the safety requirements have become more stringent along with increased loads, one third of Dutch dykes no longer meet the required standards.

Macro-instability is one of the most frequent causes. This can happen when a high-water level pushes against the embankment. This causes soil saturation and loss of stability, leading to the collapse of part of the dyke wall. When

there is a lack of space around a dyke due to agriculture, reinforcements are required to prevent macro-instability. Walls made of steel sheet piles are an optimal solution because they are very strong and do not require any widening works, thus reducing the concerns of local residents.

Given the increasing challenge to safety, the government wants to combine innovation with cost reduction.

Participating in the government study team

In order to study how the design standards for sheet piles could be optimised, the Dutch government decided to fund dyke tests in Eemdijk in the province of Utrecht.

The tests aimed to improve understanding of the interaction between soil and sheet piles. A multidisciplinary team at ArcelorMittal contributed to the design process and the Belval plant provided the sheet piles.

In addition to the steel quality, the choice of the sheet piles profile was particularly crucial for a successful test. All the sheet piles dimensions were subject to rigorous testing to ensure an accurate mapping of the

profile characteristics. Additional tensile tests were conducted to determine the precise mechanical characteristics.

This project, part of the Flood Protection Programme (HWBP), has gained international attention, ranging from the US Army Corps of Engineers to representatives from South Korea and China.

Installation and process tests

An oval dyke was constructed at the Eemdijk test site over six months in 2018. The dyke was 5 metres high, 60 metres long and 40 metres wide and was fitted with measuring equipment to provide feedback about the soil-structure interaction. The

dyke was completely removed after the tests. The tests were conclusive and allowed an in-depth analysis of the exceptionally elastic and plastic behaviour of the steel sheet piles.

A 20-30% saving of steel

The dyke ultimately collapsed; but only after having been subjected to an extreme load. All the results of the various tests conclude that steel sheet piles walls are an extremely strong, practical solution for dyke reinforcement. Projects currently cost an average of 15 million euros per kilometre of dyke. It is estimated that the updated design rules could reduce the steel requirement by 20-30%.





© shutterstock.com

Hundred-year-old bridges

The SBRI European research project (Sustainable Steel-Composite Bridges in Built Environment) was published in 2018; the results are more than positive.

Bridges are of vital importance to the global infrastructure. There is an urgent demand for sustainable structures, as the design of bridges in terms of life cycle analysis must allow a working life of more than 100 years. Turning from methods of

analysis that are based on immediate profitability to analysis that is based on profitability throughout the life cycle is a significant move given the increasing importance of bridge maintenance, rehabilitation and renewal, as well as the rapid growth in traffic volumes on bridges. The SBRI project by RFCS (Research Fund for Coal and Steel) adopted a comprehensive approach by combining environmental, economic and functional analysis. The results obtained illustrate the many advantages of steel and have

served as the basis for European recommendations on the design of sustainable bridges. Two design manuals were conceived, written and translated into 11 languages. These were distributed to a dozen seminars held all around Europe. Ergonomic, intuitive software has been developed as part of the project. This calculates the LCA (Life Cycle Assessment) and LCC (Life Cycle Cost) of bridges and compares alternative solutions by means of a multi-criteria decision-making analysis.

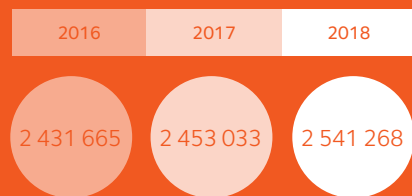
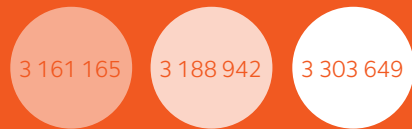
Efficient use of resources and high recycling rates

The main advantage of steel is that it is infinitely recyclable which allows us to reduce consumption of iron ore and coal – finite raw materials. The responsible use of these finite resources in our production processes is an essential issue, as are waste management and the development of products that can be reused and not just recycled.



	2016	2017	2018
Tonnes of materials used in the production process (scrap, used tyres, lime, etc.)	2 563 101	2 581 998	2 674 883
Percentage of by-products recovered per tonne of waste generated <small>Quantity of operating waste such as black slag, calamine, etc. from steel production, returned to a recovery process rather than a disposal process.</small>	88.4 %	88.1%	81.2%
Percentage of recycled materials in the production of crude steel casting <small>Proportion of scrap and used tyres put into the furnace during steel production.</small>	95.0%	95.1%	95.1%

Tonnes of recycled scrap

Tonnes of CO₂ avoided due to using scrap in comparison with an integrated route (blast furnaces)

The circular economy, an integrated approach

By developing the holistic approach needed for the circular economy, ArcelorMittal engages all the stages of the life cycle of its products in order to reduce its environmental footprint as much as possible. Reduce, recycle and reuse are the overarching themes for designing, producing, using and managing the end-of-life, in collaboration with our stakeholders.

Most of our products from Luxembourg and our construction solutions are first and foremost designed to be as close to the cradle-to-cradle approach as possible. Our HISTAR® steels from the Differdange site, which combine considerable weight savings with strength, as well as the latest generations of sheet piles from Belval, allow a reduction of the quantities of materials required, and thus the energy needed for production, and also reduce the time involved in handling and assembly. The advantages of our products are clearly communicated in the EPDs (Environmental Product Declarations). These are based on life cycle analyses (LCA) and certified by an independent body, and were obtained by our HISTAR® steels and sheet piles in 2017 and 2018. The new Steligence® concept, launched in 2018, also aims to develop innovative construction solutions, facilitating a future generation of high-performance buildings and construction techniques, thus creating a more sustainable life cycle for buildings.

[Find out more on this topic on page 37.](#)

The environmental efficiency of the production process is an issue that we work on every day at our plants. A first major step towards greater efficiency in Luxembourg was the switch to electric arc furnace production in 1997, which led to a 55% reduction in energy consumption, a 97% reduction of particulate emissions and a 50% reduction of water consumption compared with the integrated route. Some 95% of our steel production comes from recycling scrap metal. Steel is infinitely recyclable without a loss of quality which considerably reduces the need to use new resources. As it has become more difficult to make efficiency gains, we have made consistent efforts to reduce our impact by introducing the latest generation of equipment and innovative techniques. This has included a project to harness the energy dissipated in the fumes from the reheating furnace of the Belval Rolling Mill 2. The project is managed by SUDCAL and since 2018 has supplied an urban heating network in the Belval's Agora neighbourhood. Furthermore, emissions of particulates are being gradually reduced by focusing on transport resources and new processes. Water is used in a closed circuit; and ultimately treated and reused. Consumption has been progressively reduced.

[Find out more on emissions, water and energy management on pages 51 et 53.](#)

The issue of waste is addressed in three different ways: prevention, recycling and disposal. Some 80% of our operating waste (by-products)

is reused. Of the 180kg of waste generated per tonne of steel produced (tCS: tonne crude steel), black slag (electric arc furnace slag, 100kg/tCS) accounts for the majority, along with calamine from rolling mills (44kg/tCS). The black slag is used for road construction while calamine is reincorporated into the steel production cycle as a replacement for iron ore. White slag is disposed of in landfills but is the subject of many studies to determine possible means of recycling.

In addition to the ease of their transport, handling and construction, our products encourage reuse. Our Belval sheet piles contributes to the rental model developed to promote the concept of use rather than consumption. Sheet piles is used at least 10 times in rental cycles over a 15-year period, and 100% of the sheet pile is recycled at the end of its life. This model allows the customer to reduce project costs and physical stock levels while benefitting from a broad range of options. Furthermore, design using modular steel components encourages the configurability of buildings, thus increasing the potential uses of premises (homes, offices, retail areas). Angelina® castellated beams produced in Differdange make uninterrupted spans of up to 13 m possible. The resulting reduction in the number of columns makes it easier to reconfigure office layouts, thus increasing the possible uses. Launched in 2018, the Steligence® concept reinforces the holistic approach required for a circular economy in the construction sector.

Our waste management

Considering our core business, the main waste comes from the production process (by-products) at our major sites in Luxembourg: Belval, Differdange and Rodange. Our approach to continuous improvement has three strands: prevention, recycling and disposal.

Prevention is first and foremost about limiting the production of waste, particularly by-products, by optimising the performance of the installations. For example, continuous maintenance operations are undertaken to prevent oil leaks as much as possible.

Recycling consists of capitalising on the specific properties of the waste generated by our production processes to turn it into a raw material. Waste relating to processes (personal protective equipment, packaging, etc.) has been reduced and is collected selectively for reuse or disposal by recognised methods. The decision on whether by-products should be recycled internally or externally is based on the use value of the material. If the use value is higher than its exchange value, internal recycling is preferred. The ROMEO system (Recycling Optimisation Model for Economic and Environmental Optimisation) also helps to determine the best treatment route. The ROMEO system analyses the behaviour of our various industrial tools around the world, such as electric arc furnaces and sinter plants. It simulates the effect of using a by-product to supply various facilities in terms of actual cost, productivity and atmospheric emissions. The model thus allows for more efficient decision-making, taking into account both economic and environmental factors to value by-products. Scenarios to improve the recycling of our waste can thus be identified.

Internal recycling is chosen for calamine (a layer of iron oxides produced on the surface of steel parts subjected to high temperatures). This waste product forms during continuous casting and when semi-finished products pass through the reheating furnaces of our rolling mills. Calamine is reinjected to partially replace metals.

A long-term partnership to value historical stocks of slag from Luxembourg blast furnaces

The former steel plants of the Fensch Valley and south Luxembourg functioned for years using blast furnaces, generating significant quantities of slag. This slag is now being recovered. In 2018, a long-term agreement was concluded with our historical customer and partner CLOOS, based in Esch-sur-Alzette, to supply the construction market in the Greater Region. Slag can be recycled for use in the public works sector, meaning that less natural stone has to be extracted from quarries, reducing pressure on the local aggregates market. CLOOS prepares and markets crystallised slag and will utilise Luxembourg's historical stocks until the supply is exhausted, planned in 2022.

A further five million tonnes of slag from ArcelorMittal's site in Florange in France has also been sold to CLOOS for recycling over the next 10 years. Close collaboration between the French and Luxembourg authorities, on environmental regulations in particular, has led to the following measures in Florange:

- the introduction of regular quality control of the raw material dispatched;
- the relocation of the company SOPSID (a service provider to Florange which now has a facility at the stock of crystallised slag);
- continuous monitoring of the stability of the slag heap walls, agreements with transport companies, and a new service contract with SOPSID.



Marc Fixaris

ArcelorMittal European Purchasing Organisation – By-Products Sales

"This work leads to complementary activities within the local economic fabric and secures a flow of recycled materials for the next ten years, while contributing to the dynamic of a circular economy".



GRI 103-1 | GRI 103-2

When internal recycling is not appropriate, external recycling channels are chosen. One of our main industrial waste products is black slag, an impurity expelled from the electric arc furnace when scrap metal is melted. This is temporarily stored in storage centres commonly called 'slag heaps' before being used in road construction.

Finally, some 18% of operational waste, such as white slag from ladle furnaces and sludge from rolling mills is disposed of in accordance with the strict environmental standards described in Outcome 5 of this report, p 48. Dedicated research projects on this issue continued in 2018.



Find out more on the topic in the Outcome 5 on page 50.

Processes to improve our economic and environmental efficiency

The new Manufacturing Execution System (MES) for production monitoring at the Belval mill, based on PSI Metals' standard solution, was commissioned in 2018, after a thorough testing and stabilisation phase in collaboration with manufacturing operators.

The system covers the production flow from the loading of the scrap baskets to the transfer of the semi-finished products to the storage hall, and manages production in the electric arc furnace, ladle furnace and continuous casting. It is responsible for production planning, monitoring production and consumption, product traceability, production optimisation models, quality control and performance and equipment management.

With its advanced features and automation, the new MES system will bring in additional savings on manufacturing costs. The digital management of "manufacturing recipes" to guide and control the steel and semi-finished product manufacturing process will in particular improve consumption, quality and overall yield. Enhanced equipment management, process traceability, real-time trend graphs of a range of process variables and checklists will contribute, among other things, to optimising overall production.

Replacing a customised system that has evolved over 20 years to cope with the complexities and unique features of our activities with a market product that offers its own standards has been a genuine challenge. Production engineers and operators, IT engineers and our partner PSI have worked in

close coordination to harvest all the expected benefits. The optimisation of processes and change management, in particular by means of training, continues and is contributing to our transformation to the Industry 4.0.

4,937

pairs of gloves recycled at the Rodange site in 2018 as the result of a reuse initiative launched in 2016. Gloves are used in significant quantities at the plants. Instead of throwing gloves away and using new ones, a company washes the gloves which are then returned to the teams for reuse. Three to five washes are possible for certain types of gloves, with analyses carried out by an approved laboratory to check that the protection level of standard gloves is maintained. With some 125.000 pairs of gloves being consumed each year at the Belval, Differdange and Rodange sites, the environmental and financial potential is significant.

Trusted user of air, land and water

Over several years, the prospect of climate change has made us aware of our responsibility to protect the air, water and land. Furthermore, our stakeholders want us to improve the environmental footprints of our sites. All our efforts therefore focus on pursuing our activities with a greater respect for nature, entailing improvements of our processes.



	2016	2017	2018
Dust emissions (g/tCS) Grammes per tonne of crude steel (tCS: tonne Crude Steel)	9.8	8.00	8.00
Water withdrawal (m3/tCS) Cubic meter per tonne of crude steel (tCS: tonne Crude Steel)	0.59	0.65	0.34
Surface water	0.13	0.14	0.07
Piped water	0.24	0.30	0.00
Ground water	0.22	0.21	0.27
NOx emissions (g/tCS) Grammes per tonne of crude steel (tCS: tonne Crude Steel)	256	357	264
SOx emissions (g/tCS) Grammes per tonne of crude steel (tCS: tonne Crude Steel)	72	97	101
Water discharge (m3/tCS) Cubic meter per tonne of crude steel (tCS: tonne Crude Steel)	0.60	0.62	0.57
Percentage of waste disposed of in landfills	12%	11.5%	18.1%
Fines received for non-compliance with environmental legislation and regulations Amount and number of non monetary fines	0	0	0

Soil and biodiversity management: a complex balance

The impact we have on the soil depends mainly on our management of hazardous products and waste at our operating sites, as well as on the regeneration of former industrial sites that have not been subject to contemporary environmental standards.

Our products and waste are classified into three categories at our operational sites: non-hazardous, hazardous and toxic. Depending on their classification, they will be subject to appropriate management measures in line with our internal procedures, the ISO 14001 international standard and national and European regulations such as REACH (Registration, Evaluation, Authorisation and Restriction of Chemical substances) for the storage, handling, use and recovery stages. As described by Outcome 4 on page 45 of this report, 80% of our operating waste is recovered. The majority of this waste, black slag, is temporarily stored in storage centres, commonly called 'slag heaps'. These are located on impermeable ground that acts as a barrier to groundwater. All runoff water is collected and treated by ArcelorMittal. The nature of this authorised waste and its storage conditions are defined by regulations and regularly monitored by the competent local authorities which conduct water analyses and inspections. Chemical analyses are carried out on a regular basis to ensure the reliability of the structure; the quantity of the outputs from the plants is also carefully monitored. The slag is graded by a specialist subcontractor so that it can be utilised in various ways including public works. The quality of the by-products is managed from the production stage by means of temperature control, cooling and breaking down.

The remaining 20% of the operational waste is either stored while awaiting new recovery solutions as technology advances or transferred to approved landfill sites run in compliance with European regulations that ensure the appropriate treatment of the materials.



© shutterstock.com. Alpine newt

This differentiated management approach aims to maximise the potential for reuse.

Environmental analysis are carried out at former industrial sites being rehabilitated in order to identify the nature of the soil, subsoil and ground water. Storage centres are examined in particular in order to clean them up and make them as safe as possible for rehabilitation projects. The storage centres are mainly composed of considerable amounts of slag from blast furnaces – the integrated route was only replaced by electric arc furnaces in Luxembourg in 1997. The slag can be recovered and sold to the cement industry as described by Outcome 4 of this report on page 46. Any remaining material is sent to processing units.

Particular attention must be paid to the many species of plants and animals that have repopulated our sites over

the years. Indeed, biotope studies are required for any sale, rehabilitation or construction project; this involves an external expert being commissioned by the operating company to identify all the species and habitats present. The location is studied in depth for a period of up to one year, summer and winter, day and night. A biotope study offers information on the habits of the different species present, their diets and breeding periods. Experts then propose solutions to comply with the legislation: every protected species must be provided with an alternative ideal habitat that is sufficiently large for the animal to thrive. Protected species populate our former sites, from alpine newts on the Mondcange storage centres to redstarts identified at Lentille Terres Rouges and woodlarks at Ehlerange. For more information on the environmental processes carried out during a rehabilitation project, please refer to Outcome 10 on page 66.

3

hectares or 30.000 m² is the minimum area required for a pair of woodlarks to thrive, while a lizard population requires 1,44 hectares.

Finally, it should be noted that the Luxembourg Nature and Forestry Department (ANF) has partnered with ArcelorMittal to manage sites located in protected areas of national and community interest as the result of a renewable five-year lease signed in 2017. ArcelorMittal has made various sites located in Natura2000 zones in Differdange, Dudelange and Esch-

sur-Alzette available to ANF. These sites are subject to ANF management and habitat action plans, including a plan for calcareous grasslands and several action plans for species such as woodlarks and smooth snakes. Within the scope of the 2017-2021 national nature protection plan, and more particularly the national biodiversity strategy, several sites

of high ecological value belonging to ArcelorMittal in Luxembourg, including former open-cast mines, benefit from ANF's expertise in environmental management. Formally industrial sites, these areas have now been reclaimed by nature. The objective is to preserve the biodiversity supported by these spaces while enhancing their ecological potential through extensive agriculture.

Water management

Water is a vital resource for our industrial sites, which are built near watercourses. Water has two main functions: on the one hand, cooling the facilities subjected to the high temperatures of steelmaking, and on the other hand, removing steel particles that are detached from the finished products by the rolling process and that must be recovered.

Water is managed in the same way for both these uses at our main sites in Belval, Differdange and Rodange. We take measures to address both water consumption and water treatment. The cooling ponds at our sites contain large volumes of reserve water. These ponds are mainly supplied by rainwater flowing through our sites plus occasional additional volumes of surface and groundwater required to compensate for the phenomenon of evaporation. Water is pumped from the ponds to our facilities by means of a large network of pipes. Once used, the water flows to the settling systems for treatment. These systems are mechanical installations, subject to maintenance and monitoring, which facilitate the extraction of materials suspended in the water as well as traces of hydrocarbons. The water is returned to the ponds and will be reused – our sites operate in a closed circuit. Maintenance was carried out on these settling ponds in 2018 to optimise their operation.

Emissions management

Our industrial facilities produce four main types of emission: CO₂, NO_x (nitrogen oxides), SO_x (sulphur oxides) and dust (diffuse). The treatment of emissions from our steel plants is achieved by extracting the fumes produced inside the electric arc furnace and present in the premises where the furnace is located.

The fumes produced during melting in the electric arc furnace are extracted by the main dust removal system. The fumes are extracted through openings in the furnace covers and directed to post-combustion chambers which burn the residual gas. They are then cooled to 260 degrees Celsius and transferred to the spark separator to eliminate any sparks that could lead to a fire in the fabric filters. There is an injection of activated carbon before the fumes are input into the filter chamber, mainly to capture dioxins. Finally the filters significantly reduce the particles in suspension in the fumes before they are discharged through the chimney.

Another important factor in managing diffuse emissions is ensuring that powdered materials, such as the lime and anthracite

that is used with scrap metal to produce steel at our facilities, is transported in sealed containers.

Two extraction systems are located in the ceiling of the electric arc furnace building to remove the diffuse emissions produced during melting. These emissions are subject to the same treatment as those captured in the electric arc furnace. They are collected by the main dust removal system and pass through the spark separator, then being subject to the injection of activated carbon before being directed to the filters.

ArcelorMittal conducted significant maintenance in 2018 to maximise the operation of all the components of the filtering systems.

Finally, NO_x and SO_x emissions are mainly caused by the combustion of the natural gas used in the melting process in the electric arc furnace. The main means of controlling emissions is by improving burner technology and adjusting the system. ArcelorMittal mobilised its employees throughout 2018 to ensure that adjustments were optimised and also implemented a campaign to replace the burners.



Find out more on CO₂ emissions on page 52.

Responsible energy user that helps create a lower carbon future

With its heavy production processes, the steel industry is a major energy consumer. Energy efficiency is therefore a key issue, both in terms of environmental efforts to be part of the energy transition as well as in terms of the costs for the company.



	2016	2017	2018
Energy consumption (GJ/tCS) Gigajoules per tonne of crude steel (tCS: tonne Crude Steel)	9.3	9.15	8.68
CO₂ emissions per tonne of crude steel (kg CO₂/tCS) Kilogram per tonne of crude steel (tCS: tonne Crude Steel)	318	310	300
Direct emissions (Scope 1 set by the GreenHouse Gas protocol) corresponding to the CO ₂ directly emitted by the furnaces	195	185	179
Indirect emissions (Scope 2 set by the GreenHouse Gas protocol) corresponding to the CO ₂ emitted to generate the energy consumed: electricity and heat (hot water, steam)	81	82	77
Other indirect emissions (Scope 3 set by the GreenHouse Gas protocol) corresponding to CO ₂ emissions from products used in our workshops such as quicklime and industrial gases (oxygen, nitrogen)	42	43	44
ISO 14001 certified facilities The standard covers environmental management. It is based on the principle of continuous improvement in environmental performance by controlling the impact associated with company activities.	5 out of 9	5 out of 8	4 out of 7
ISO 50 001 certified facilities The standard covers energy management.	3 out of 9	4 out of 8	3 out of 7

As a steelmaker, our major environmental impact lies in our energy consumption and the consequent carbon emissions. Our means of action focus on reducing consumption and the sources of energy used. Our emissions are also subject to strict monitoring.

ArcelorMittal is subject to the European Union Emissions Trading Scheme (ETS). We declare our emissions every year on the basis of measurements and calculations audited and validated by an approved European body. Every process that may generate the slightest amount of CO₂ is studied in great detail, from the

quantities of consumables to assessing the accuracy and changes of stock levels, including traceability, chemical analyses, calculation methods, etc.

In Luxembourg, ArcelorMittal is currently focusing on reducing energy consumption in order to reduce its emissions. Several projects have led to a reduction of both the energy consumed in our ecosystem and at our facilities.

The Sudcal project, launched in June 2018, aims to recycle the energy dissipated in the fumes from the reheating furnace of the Belval Rolling

Mill 2 in order to supply an urban heating network in the Belval's Agora neighbourhood. This project is managed by the company SUDCAL. The solution consists of using the fumes output from the reheating furnace of the sheet piles rolling mill at approximately 400 °C to heat water by means of an exchanger. This water is then used by the neighbouring district's heating network. This solution allows SUDCAL to benefit from an easily available energy source, which had previously been overlooked, thus reducing the energy consumption and consequent carbon emissions involved in hot water production.

A range of actions was introduced to our sites in 2018. A new maintenance approach has been developed at Rodange, making use of innovative energy management tools. Among other things, this has optimised the standby time of installations and improved productivity in order to reduce the energy required to produce a tonne of finished product.

New equipment has also been introduced to the Differdange continuous casting plant, including springs that can withstand very high temperatures, meaning that less energy is required to maintain the entire infrastructure at a high heat. Natural gas burners have been replaced at the Belval site in order to improve energy efficiency. The heating curve of the reheating furnace of the Belval sheet pile rolling mill has been reviewed to further identify the optimal time to reheat semi-finished products and identify variations in the furnace. The loading temperature of the Belval TMB rolling mill has also been increased in order to reduce the energy required for reheating. These adjustments are subject to a wide range of variables such as production flow, external temperature, the grade of the steel, etc.

70%
of the heating requirements of the Belval district are satisfied by SUDCAL, equivalent to consumption by 4.000 houses, while complying with the strictest environmental standards.

The ArcelorMittal Group's commitment

ArcelorMittal is committed to reducing its emissions and achieving carbon neutrality in Europe by 2050. The Group relies on three levers:

- Clean power used as the energy source for hydrogen-based ironmaking, and longer term for direct electrolysis ironmaking, and also contributing to other low-emissions technologies.
- Circular carbon energy sources including bio-based and plastic wastes from municipal and industrial sources and agricultural and forestry residues.
- Fossil fuels with carbon capture and storage (CCS) enabling the continued use of the existing iron and steelmaking processes while transforming them to a low-emissions pathway. This shift would require national and regional policies to create the necessary large-scale infrastructure network for the transport and storage of CO₂.



Find out more about the 2018 ArcelorMittal Climate Action Report, the first response to the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD), at <https://corporate.arcelormittal.com/>

414
MWh (Megawatt hours) saved per year by the introduction of LED bulbs to the Dommeldange site in 2018 (a 60% saving). In addition to saving energy, this step has significantly improved working conditions for the staff and is beneficial in terms of our number one priority, health and safety, because of the appropriate, neutral, natural lighting with improved colour rendering. Lighting levels have been established zone by zone, depending on the activities conducted and the identified needs, following a lighting engineering study that specified appropriate resources and optimum positioning.



Supply chains that our customers trust

Our customers' basic expectations are for high-quality products delivered to the right place at the right time. In addition to meeting these expectations, ArcelorMittal Luxembourg is aiming to ensure that its logistics chain, both upstream and downstream of production, complies with environmental, social and ethical standards. These standards reinforce the need for the traceability of our products – something that our customers increasingly require, particularly in the construction and automotive industries which are facing ever stricter regulation.



Sourcing via local suppliers Amount in k€

		2016	2017	2018
Electricity		79 820 000	66 490 000	77 830 000
	German	8%	14%	4%
	Belgium	17%	24%	7%
	France	75%	62%	89%
Gaz		28 970 000	31 288 000	38 471 000
	German	0%	0%	0%
	Belgium	100%	100%	100%
	France	0%	0%	0%
Total Electricity and Gaz		108 790 000	97 778 000	116 301 000
	German	6%	9,6%	2,5%
	Belgium	39%	48,6%	38%
	France	55%	41,8%	59,5%
Transport & logistics		109 994 031	111 563 186	116 842 669
	Luxembourg	59,5%	61,3%	62,2%
	Belgium	28,4%	26,3%	26,5%
	German	2,2%	2,5%	2,2%
	Austria	6%	5,4%	3,9%
	France	2,5%	1,8%	1,8%
	Others	2,4%	2,7%	3,4%

Number of suppliers assessed for their environmental and social impacts

76

52

53

Making our value chain more reliable

Since 2010, our Code for Responsible Sourcing, developed in partnership with our customers, suppliers, peers and NGOs, has set our minimum requirements in terms of Health & Safety, Human Rights and Ethical and Environmental Standards in respect of our suppliers.

ArcelorMittal evaluates the main suppliers to its industrial sites in Luxembourg on an annual basis. These evaluations allow us to analyse our suppliers in greater detail thus guaranteeing deliveries that meet environmental, social, economic and ethical requirements.

In 2018, we further developed this tool although the themes evaluated remained similar. The evaluation criteria include:

- The conformity of deliveries to the requirements (quantity, quality, technical specifications, nature of customer-supplier relations, etc.);
- Responsible supply on-site (compliance with health & safety procedures, management of environmental impact, compliance with the relevant specifications, etc.);
- Responsible supply (management of health & safety, environment, human resources, human rights and ethics, etc.);
- The respect of deadlines;
- Commercial potential (competitiveness).

Several actors participate in these evaluations, from the buyer to the user and including the on-site stores that receive the goods. The sample to be evaluated is determined as a function of:

- The cost involved and the number of orders;
- The rating from the previous campaign;
- The strategic position of a supplier (whether a single supplier, directly related to the plant's strategy, product with a key impact on quality, etc.).

The 2018 evaluation campaign took into consideration 53 suppliers. Of these, 18 received a rating of 4 or under. The buyer is then responsible for meeting a supplier to request an action plan; subsequently, feedback on the implementation of the plan is required. The buyers are available to the suppliers to offer recommendations.

ResponsibleSteel™, towards a sustainable value chain

ArcelorMittal played a leading role in developing ResponsibleSteel™ in 2018, the steel industry's first global multi-stakeholder certification initiative.

ResponsibleSteel™ was created in 2015 as a non-profit organisation to ensure a more responsible future for the steel industry. It currently has 22 members including steel producers, automotive manufacturers (BMW Group and Daimler), financial actors such as HSBC, industry organisations and NGOs. To achieve its mission it will establish the first global programme of certification and standards for the entire steel value chain, from mining to production processes, via sales and distribution. The certification standards will cover the following areas:

- Climate change and greenhouse gas emissions;
- Responsibility for water and biodiversity;
- Human rights and employment law;
- Local communities and corporate integrity.

The initiative will officially launch its certification standards following a rigorous accreditation process that is scheduled to be completed by the end of 2019.

Active and welcomed member of the community

Our activities in Luxembourg have a significant impact on the local and national communities in which we operate. We sponsor projects which promote sustainable community programmes and thereby support long-term economic and social development. To establish its integrated Sustainable development approach, ArcelorMittal focuses on initiatives and associations that relate to our core activities and significant impacts, in this way maximising the creation of shared value. We also encourage our employees to become more involved in local community life.



2016	2017	2018
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ArcelorMittal Luxembourg donations

Amount in € representing the projects sponsored, including STEM projects.



Encouraging vocation, forging the talents of tomorrow



Jonk Entrepreneuren Luxembourg a.s.b.l.

This association promotes entrepreneurship and creativity among young people in Luxembourg through a partnership between the worlds of business and education. Young people are introduced to professional life and entrepreneurial culture by means of a range of programmes. In particular, ArcelorMittal supports the mini-enterprise competition, which invites young students to create and then manage real miniature companies, with the help of volunteer advisors from the business world, with a particular focus on business ethics.



Association da Vinci a.s.b.l. Luxembourg

Association da Vinci a.s.b.l. Luxembourg brings together engineers, architects, scientists and representatives from the business world. ArcelorMittal in Luxembourg supports the *Wëssensatelier Lëtzebuerg* which promotes various experiences to stimulate young people's interest in science and technology.



ArcelorMittal also supports several associations in the Greater Region in which our employees are active in order to reinforce its local commitment. A project by *Jeunesses Scientifiques de Belgique* is one of seven projects supported; in 2018 it funded a summer camp and purchased equipment to build a weather station in the municipality of Uccle in Brussels. The youngsters involved in the project learned about a range of scientific issues and gained knowledge of global warming. They also participated in a project to observe supernova stars in collaboration with the *Observatoire Centre des Ardennes* and the *SETI Institute*.

Creating a sustainable ecosystem



natur&ëmwelt

natur&ëmwelt Fondation Hëllef fir d'Natur is an association that was established in 1982. Its main areas of activity are the acquisition and management of nature reserves; information and awareness-raising campaigns on safeguarding nature and biodiversity; scientific studies and research; forest conservation; and conducting national, interregional and European projects with the main objective of preserving and restoring the natural environment. The approach is simple: raising awareness and providing advice; conducting practical actions for the protection of nature and various species; conservation, renaturing and maintaining rare and threatened biotopes; data collection and scientific research.

ArcelorMittal in Luxembourg has been supporting *natur&ëmwelt* Fondation Hëllef fir d'Natur since 2011 by means of *natur&ëmwelt mobil*, a van equipped to deliver educational workshops. Communication and awareness-raising activities have been reinforced by the provision of new awareness cards on nature protection and by the purchase of special teaching materials. There are two major themes this year: ponds and their biodiversity, and meadow and grassland flowers.



IMS

ArcelorMittal in Luxembourg supported the 2019 edition of the Luxembourg Sustainability Forum organised by IMS (Inspiring More Sustainability), a network of Luxembourg enterprises committed to corporate social responsibility (CSR). Our company is a founding member of IMS.



Kockelscheuer Nature Festival – The foundation's exhibition stand on ponds and meadows.



UNIVERSITÉ DU LUXEMBOURG
University of Luxembourg

ArcelorMittal in Luxembourg supports the Chair in Steel and Façade Engineering at the University of Luxembourg with a view to facilitating joint research projects. The objective is to improve the competitiveness of steel not only for the benefit of industry, but also for customers and the environment. In particular, the research aims to reduce steel's environmental footprint, thus contributing to sustainable steel solutions.



INDR

ArcelorMittal in Luxembourg supported the 2018 edition of the Workplace Health and Safety Forum, organised by the Union of Luxembourg Enterprises (UEL) through its National Institute for Sustainable Development and Corporate Responsibility (INDR). Organised as part of the World Health & Safety day and incorporated into the VISION ZERO national strategy, the Forum offered a unique platform for enterprises wanting to share their experiences and good practices or to discover the latest developments in risk prevention.

Encouraging inclusion



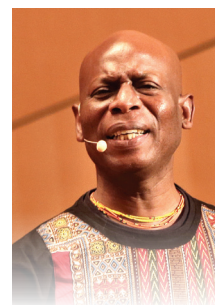
La Fondation EME

The Foundation "Ecouter pour Mieux s'Entendre" - "Listening for Better Understanding" is an initiative of the Philharmonie. It aims to provide people who are generally excluded from cultural life with access to music. This access is a legitimate need, and any effort to make music more available is positive in terms of social justice.

In 2018, ArcelorMittal in Luxembourg was a partner in the "Bara II" project, conceived in collaboration with the Lycée Technique du Centre (Kirchberg annexe), the Fondation EME and the musician Robert Bodja. The project is aimed at the students of the Lycée Technique du Centre, mainly consisting of newcomers to the country (legal immigrants). It offers participants the opportunity to make their own instruments from recycled materials and then learn to play.

La Main Tendue

This association provides a structure to support and listen to children, adolescents and adults who have been victims of physical, psychological or sexual violence. Its mission is to provide these individuals with support, information and a listening ear with a guarantee of confidentiality. The project supported by ArcelorMittal focuses on prevention workshops for young people (aged 8-15) on a range of topics such as divorce, self-esteem, non-violent communication, sexual abuse, suicide and the dangers of the Internet.



Robert Bodja

"Music is a universal language upon which we rely in order to develop the efficient communication needed for integration."

Special Olympics Luxembourg

Special Olympics Luxembourg is a sports federation for all individuals with an intellectual disability in Luxembourg. Its aim is to promote physical and sporting activities for this population by organising training and national and international sporting events. In 2018, rather than supporting the country during the Special Olympics, which take place every four years, ArcelorMittal in Luxembourg chose instead to directly support the table tennis team, one of Luxembourg's flagship sports, for the 2018/2019 season.

The following organisations were supported by ArcelorMittal to promote employee volunteering:

A ta portée. A music school that aims to provide children with cognitive impairments with access to music and the opportunity to learn to play an instrument. Help is also offered in maximising academic performance through teaching adapted by the MéloDys method, based on the proven effects of music on neural circuits.

RYSE. This organisation helps young refugees find their place in society and enter employment. Mentors help refugees aged under 30 to discover opportunities to unleash their potential and realise their dreams.

Passerell. Assists the integration of refugees by establishing tandem relationships that link a refugee to a volunteer. Workshops and cultural outings subsidised by ArcelorMittal Luxembourg promote the values of openness and sharing.

Kanner-Jugendtelefon (KJT). An online platform offering psychological support and help for English-speaking parents and children living in Luxembourg. Operating on the basis of anonymity, KJT offers a listening ear and support for young people. The service is easy to access and presents no barriers.



Alexandre Labignette
Senior Legal Counsel – ArcelorMittal
and a volunteer at Passerell

"We promote concerts, exhibitions, meals, walks and themed workshops as opportunities to reinforce intercultural links and offer a constructive response to the challenges of immigration."

Preserving local cultural heritage

Le Cercle des Amis de Colpach

The "Emile and Aline Mayrisch" prize was created in 2005 by Annette Schwall-Lacroix, President of Cercle des Amis de Colpach (Colpach Friends' Circle) and Joseph Kinsch, the former Chairman of Arcelor. The prize is supported by ArcelorMittal and aims to promote the "spirit of Colpach", characterised by openness to cultural trends and the promotion of understanding between the peoples of Europe. Awarded every four years, the prize is open to researchers, students, journalists and other authors resident in Germany, Belgium, France or Luxembourg. Entries concern the history, politics, economics, social life and/or culture of the Franco-German-Belgian-Luxembourg region.

Association Galerie Schlassgoart a.s.b.l.

Established by Arbed in 1993 and accommodated in the Centenary Pavilion in Esch-sur-Alzette, the Schlassgoart Gallery promotes art and artists from Luxembourg and further afield. As a non-profit organisation, the Schlassgoart Gallery is not a commercial art gallery. Potential buyers and exhibiting artists deal with directly each other, the latter benefiting from favourable exhibition conditions, thanks in particular to the sponsorship of ArcelorMittal in Luxembourg.



ESR Label, an awarded CSR approach

In 2015, ArcelorMittal in Luxembourg submitted to the new evaluation procedure of this unique Luxembourg label, which thoroughly reviews a company's Sustainable development strategy, its systems of governance, the social and environmental dimensions of its activities as well as the corresponding impacts. As a consequence of the results of the audit conducted by independent experts, the company was then given recommendations and an improvement plan.

Three years later, our company has improved on key points – strategy and the environmental approach – taking into account the complexity of our organisation and the nature of our impacts. Among the good strategic practices identified is the materiality analysis. This provides a detailed prioritisation of ArcelorMittal's Sustainable development challenges at a local level, specific to Luxembourg.

Pipeline of talented scientists and engineers for tomorrow

Science, Technology, Engineering and Mathematics (STEM) subjects represent the future for our company, and more specifically that of our Group. By investing in the development of these disciplines, ArcelorMittal in Luxembourg is guaranteeing its capacity for product and process innovation. STEM subjects reflect the company's competitiveness and as such represent an issue of major importance.



2016	2017	2018
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Amount invested in STEM (science, technology, engineering, mathematics) projects



Our commitment to making our innovation capacity sustainable

The challenges facing heavy industry in terms of Sustainable development and Industry 4.0 mean that knowledge and know-how must be developed significantly and there is also a vital need for talented individuals in the future.

ArcelorMittal in Luxembourg has been forward-looking and worked particularly hard on cementing links between schools and business in 2018. The "Discovery Day" project was born from this dynamic in which we welcomed renowned engineering schools from the Greater Region to our sites for a day. The main objective was to showcase our facilities and products and to develop solid collaborations with future talented individuals. Eight events were organised in 2018, and these had a genuine impact on our recruitment strategy, visibility and attractiveness to students. Young talents from ENIM (Ecole Nationale d'Ingénieurs de Metz, France), Henallux (La Haute Ecole de Namur-Liège-Luxembourg, Belgium) and HTW SAAR (Hochschule für Technik und Wirtschaft des Saarlandes, Germany) had the opportunity to join us on site to discover our working environment and corporate culture and to interact with our staff.

162

students involved

Ages : 18-25

90%

of the students attending gained their first impressions of heavy industry as a result of their visit

70%

of the students attending left with a positive view of the challenges of steel industry professions and the prospects for career development, internal mobility and job security.



"I hadn't been interested in this type of industry, but after the visit, I want to find out more."

Claire

a first year Electromechanics student at Henallux

"It's a dynamic, innovative company that I would really love to join."

Arthur

a first-year student in the Electrical Engineering and Industrial Informatics Department (GEII) at IUT Henri Poincaré in Longwy

314

students welcomed to our Luxembourg sites as part of two new initiatives to promote STEM subjects and the steel industry.

152

students involved

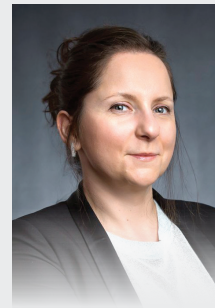
Ages : 15-18

In the same vein, a further in-house project was launched in 2018: InductionDay@ArcelorMittal, when over 150 secondary school students visited the site over two half-days. This activity aimed to inspire, motivate and above all assist young people in choosing the right direction and offered an insight into daily professional life. This win-win approach offered us the opportunity to promote the range of professions and careers available at ArcelorMittal while informing the students of what is required in terms of professional, linguistic and inter-personal skills.

Our participation in local career-inspiration initiatives

In accordance with its Sustainable development strategy, ArcelorMittal is involved in various initiatives to develop STEM talent in Luxembourg.

ArcelorMittal staff at the Research & Development Centre in Esch-sur-Alzette shared their experiences with students from Lycée Michel-Rodange and Athénée de Luxembourg during the "Researchers at School" programme organised by the FNR (Fonds National pour la Recherche) in March 2018. The objective was to introduce young people to the world of research and offer them more information about the research sector in Luxembourg.



Teodora Bogdan

Senior Research Engineer at the Esch-sur-Alzette R&D Centre

"From my experiences at school and university to my current position, I was able to interact with the students and answer the questions that I had asked myself at their age."

Our teams were also involved in a range of activities by Jonk Entrepreneuren in 2018, including Engineering Trainee Days; Job Shadow Days; the Hello Future roadshow organised from January to June 2018 by Fedil in partnership with the Chamber of Commerce, Luxinnovation and the Luxembourg government; as well as the Luxskills competition. The objective of all these activities was to promote industrial professions to young people of all backgrounds.

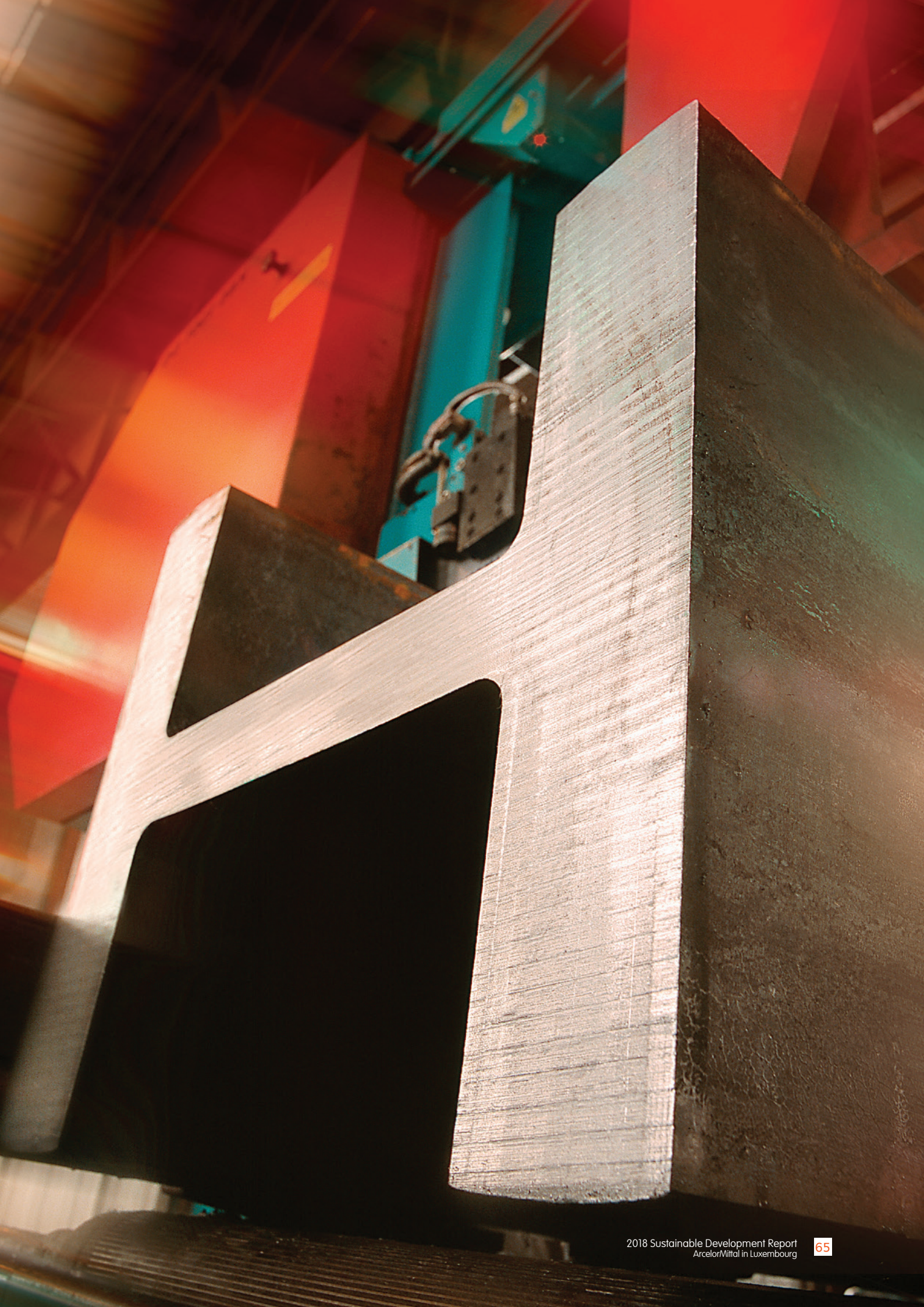
Our training department also welcomed young people from various high schools for information sessions and site visits, from the Lycée Technique Emile Metz in Dommeldange, Lycée Guillaume Kroll in Esch-sur-Alzette, Lycée technique Matthias Adam in Pétange, Lycée de Belval and the Lorraine UIMM training centre in Yutz. These were great opportunities to showcase our professions, our company and all its expertise.

Developing an inspiring and innovative industrial ecosystem

ArcelorMittal has supported the University of Luxembourg since 2010 and is one of its main partners through the Chair in Steel and Façade Engineering. The Chair promotes the training of the next generation of talent, from bachelor's to PhD level, and also facilitates joint research projects.

The Chair focuses on the research and development of efficient, sustainable steel solutions for high-tech buildings, as well as composite steel materials and glass. Façades are a key element of modern buildings. Construction technology,

ventilation and climate control all have a role to play in a building's consumption of resources and energy. In order to reduce energy consumption, the basic structure, technology and façades must complement each other. This is the very essence of the work carried out by researchers overseen by the Chair, which revolves around several key issues: the building envelope, glazing system, intersection between the building structure and the façade system, durability of façades, modular construction and material flows, steel/concrete composite solutions, etc.



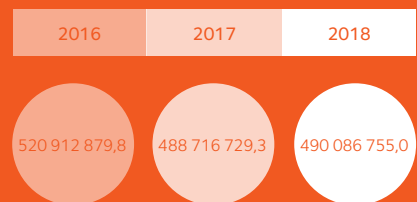
Our contribution to society measured, shared and valued

ArcelorMittal demonstrates its commitment to Luxembourg by its industrial plants in the country and headquarters in Luxembourg City. The company is a key social and economic player, provides employment for local subcontractors, and is a major taxpayer.



ArcelorMittal's economic contribution to Luxembourg

Payroll (pay and employer contributions) allocated to ArcelorMittal employees in Luxembourg, and expenditure to our suppliers and subcontractors in Luxembourg for their services.



Industrial rehabilitation: a shared, sustainable creation of value

Industrial activities are changing in the light of innovation and progress in economic, social and environmental terms. Today's infrastructures are more digitalised and less labour intensive; there is a transition to Industry 4.0 and a third industrial revolution is definitely under way. In addition to our company's responsibility to support our employees in achieving higher added value operations, we must also regenerate our former industrial sites to contribute, in a different way, to the development of our region.

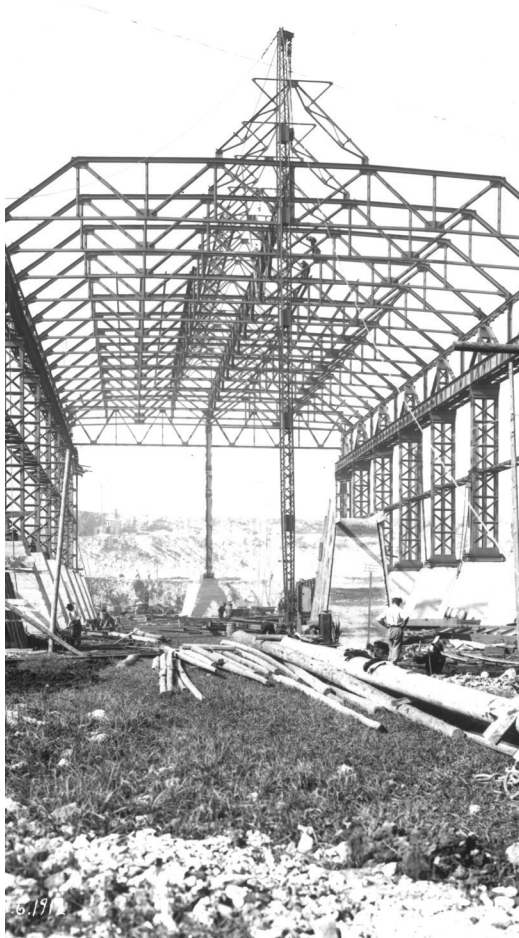
Consequently, we are involved in industrial reconversion projects both through the company Agora and directly with property developers.

Agora, a company established in 2000 with the Luxembourg State as an equal partner, is responsible for the rehabilitation of the largest industrial wastelands in Luxembourg. The projects undertaken include the development of the urban district of Belval on a 120-hectare site shared by the municipalities of Esch-sur-Alzette and Sanem incorporating university facilities,

housing, shops and office space. Agora is now in charge of the feasibility study to redevelop the former industrial site at Esch-Schifflange.

The rehabilitation process consists of the following stages:

- **Preliminary studies and feasibility analyses** in order to limit risks and evaluate potential so that the right decisions can be made;
- **Civil engineering and development** by means of geophysical surveys, safety plans, soil remediation proposals and advice on the reuse of existing plots and buildings;
- **Planning and construction** to develop innovative urban projects that prioritise people and their new lifestyles;
- **Marketing and commercialisation** in order to guide and evaluate urban planning and architectural processes and then to communicate the added value of the solutions to stakeholders, from investors to local residents.



Esch-Schifflange: a pilot rehabilitation project

Agora was given responsibility for regenerating 62 hectares of industrial wasteland at the Esch-Schifflange site in 2016. A feasibility study was carried out with the input of over 100 independent experts. In addition to an assessment of the site in ecological and historical terms, expert analysis involved more than 1,000 soil samples, surveys of watercourses and biotopes, as well as technical, urban and macroeconomic studies. The results, available at www.agora.lu, were presented in September 2017 and served as a basis for drawing up technical and urban planning recommendations for the site's regeneration.



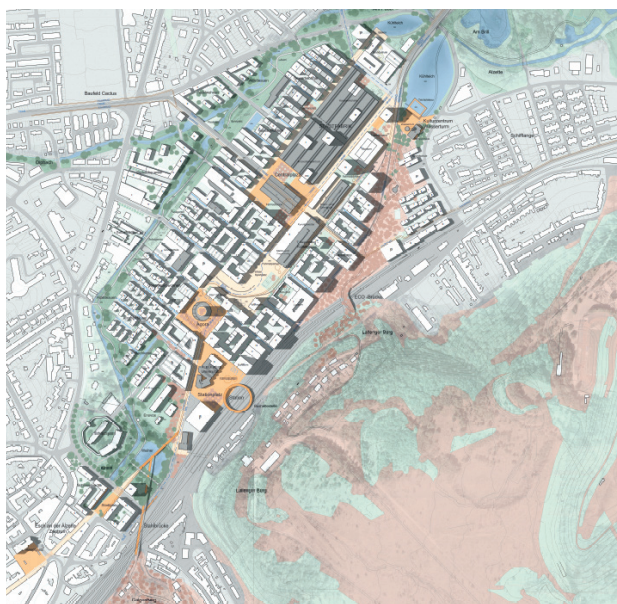
Josy Roll

Maintenance Foreman at the former steel plant at the Schifflange site

"I have dedicated a significant part of my life to the steel industry and I now look after the site to coordinate the dismantling activities and deal with the many film and photo shoots. It is with nostalgia, but above all with serenity, that I am following the sustainable redevelopment of the site."

A "Quartier Alzette" design workshop was held in 2018 in order to create an urban layout and landscape that was designed for and by humans. The guiding principles of this workshop have provided guarantees for the sustainability of the future project:

1. **Responsibility:** contribution to the development of regional cohesion;
2. **Innovation:** development of visionary, innovative concepts for mobility and sustainability;
3. **Flexibility:** high-quality locations and flexibility in the use of building plots;
4. **Diversity:** a range of functions guaranteeing a vibrant, attractive urban district over the long term;
5. **Unique features:** attractive landscaped areas and urban public spaces contributing to a high quality of life;
6. **Identity:** functional and visual conservation of certain elements of industrial culture;
7. **Opportunity:** renaturing and enhancing the Alzette and Dippach rivers;
8. **Complexity:** connection south-eastwards towards the Esch-sur-Alzette town centre and northwards to Schiffflange;
9. **Strategy:** definition of the development phases to ensure a rapid start.



Four international teams were selected by an expert committee to participate in a seven-day design workshop at the site of the former steel plants in April 2019. The teams were all very diverse; they consisted of urban planners and landscape architects as well as experts in transport, sustainability, ecology and urban sociology. This intensive week was dedicated to collaboration, with the organisation of a participatory workshop for citizens to allow consultation about the new neighbourhood with the four teams.

Four very different projects were presented to the committee composed of 26 voting members, including the State, the municipalities of Esch and Schiffflange, Agora and ArcelorMittal. The concept presented by the COBE team from Copenhagen, comprising Urban Agency and Urban Creators from Denmark together with Luxembourg's Luxplan, was adopted by a large majority.

The design presents a Quartier Alzette development that is well connected and integrated into existing structures. The conservation of the site's industrial and natural heritage is a central feature of the planning. The unique nature of the topography, with plateaus at different elevations, has been taken into account with sensitivity and interactivity. The connection with Esch and Schiffflange is reinforced by a cultural focus that traverses the entire development area, playing the genuine role of a social catalyst while preserving the district's independence. The design envisages a closely connected development suitable for pedestrians with optimum integration into its environment. Find out more about the initiative at www.quartieralzette.lu

Agora will finalise an economic feasibility study in 2020 on the basis of this urban and architectural concept as well as a detailed feasibility study.



Frank Vansteenkiste
President of Agora

"All the plans were of outstanding quality, reflecting the diversity of the profiles gathered in each team. This regeneration project is intended as a pilot and catalyst for good practice in Luxembourg."

The rehabilitation of industrial sites can also be managed directly by our teams, in collaboration with independent verification bodies, using similar methodological guidelines:

1. A historical analysis to trace the evolution of activities;
2. Soil and water analyses;
3. A study of surrounding nature and forests, as well as protected species;
4. The stakeholders engagement, from municipalities to investors and local residents, in order to create a genuine ecosystem and encourage the identification of all parties;
5. Heritage conservation in collaboration with the department for national monuments and sites. Most of our sites contain listed buildings;
6. The developer's vision and the proposed added value;

7. The choice of developer depending on previously established economic, environmental and social criteria respecting the principles of Sustainable development;
8. Verification of the appropriate respect of these criteria during the execution of the project.

An example of a current regeneration is the 10.5-hectare Rout Lëns project (located at Lentille Terres Rouges) by the property developer IKO, which recently unveiled the guidelines for its development project. These are based on the public consultations held by IKO as well as on the recommendations of ArcelorMittal. The area will be carbon neutral and is set to include housing, public facilities (schools, clinics, sports centres, etc.), offices, shops and local services while enhancing the industrial and natural heritage.



GRI 103-1 | GRI 103-2

The steel industry, a destination for continuing investment

Steel is infinitely recyclable and offers significant benefits in the construction of a circular, sustainable economy.

Steel is the basis of innovative construction solutions and part of an ever-growing ecosystem in Luxembourg. Reinforcing this ecosystem and enhancing synergies was the subject of a conference entitled "Luxembourg: country of innovative steel products for the construction sector", held in November 2018 in conjunction with the OAI (Order of Architects and Consulting Engineers) and the da Vinci Association and honoured by the presence of HRH Prince Guillaume and his son HRH Prince Paul-Louis. In addition to its new Steligence® construction concept, ArcelorMittal is continuing to invest in state-of-the-art infrastructure to facilitate a transition to Sustainable development.

Among the investment of the sum of €43.58 millions in Luxembourg in 2018, a record for the Differdange plant was notable. The world's largest roller straightener was inaugurated at Differdange, together with a host of new

equipment for the finishing line for investment exceeding 35 million euros.

Finishing is an important part of the quality chain for Differdange's high-added value products. These products feature in iconic buildings around the world – from the One World Trade Center in New York to the Shanghai Financial Center. After passing through the electric arc furnace, continuous casting and rolling mill, beams are reinforced by the QST process (Quenching and Self-Tempering), then straightened, cut to commercial length, marked and shipped. This affords several advantages:

- The regularity of beam straightness and geometric tolerances;
- The speed of shipment;
- Improved reliability of delivery;
- Improved appearance of sections;
- Heavy sections that are considered reference products by architects and structural engineers around the world.



Augustine Kochuparampil
CEO Long Products Europe, addressing customers gathered for the inauguration of the new finishing line in Differdange

"The Differdange mill is one of the 'jewel' assets of Long Products Europe and it supplies world-class Jumbo beams across the world. My team and I are very happy to welcome you to commemorate the installation of the world's largest roller straightener for sections in the Differdange mill – a moment of great pride for all of us. We are confident that with this investment, the Differdange mill will continue to serve your needs and provide the best products and service."

750

tonnes of steel recycled in our Luxembourg electric arc furnaces in 2017 after the dismantling of the Esch-Schiffange bridge which dated back to 1927. The bridge had been used when supplying the Esch-Schiffange plant with liquid steel from the blast furnaces in the surrounding area. Following the switch to electric arc furnaces, the site has been supplied by the Belval plant. The steel from the obsolete bridge will be used to produce new structures. ArcelorMittal, conscious of its role in Luxembourg's cultural heritage, produced a video in 2018, available on its website <https://luxembourg.arcelormittal.com>.

Ensuring transparent governance

All our stakeholders, employees, customers, suppliers and local communities should be treated with dignity and respect. Compliance with the law and ethical standards is fundamental to ArcelorMittal and the company aims to set an example.



Prevention is at the heart of our governance

Four information campaigns were held in 2018 in addition to online training courses on compliance and ethics. The first of these campaigns dealt with conflicts of interest while the remaining three responded to the new GDPR legislation (General Data Protection Regulation).

The latter three campaigns were tailored to the degree of exposure of employees to the challenges of respecting personal data and varied in the technicality and

exhaustiveness of their content, raising awareness among the target audiences in an optimum manner.

These campaigns generally consist of two types of material, the first being letters addressed to employees containing a significant amount of information including definitions, principles and recommendations for application, the second being posters in order to draw attention and make an impression.

A conflict of interests may occur when an employee has two different interests that are in opposition - a personal interest and a professional obligation.



Glossary

Angle:

L- or V-shaped metal profile.

Beam:

I- or H-shaped hot-rolled steel product.

Continuous casting:

Continuous solidification method used on molten metal. The liquid metal flows continuously into a mould that has been cooled sharply. A layer of solidified metal then forms which is taken up as it leaves the mould by a device called a segment where it is supported and continues to cool until all the metal has solidified. The bar is then cut to the appropriate length. Continuous casting facilities have one or more strands.

Electric arc furnace plant:

Electric arc furnaces are used to produce steel from scrap melted using electricity, in contrast to the cast iron sector (blast furnace – converter) where it is produced from iron ore.

Electro galvanisation:

This is an electro galvanising (zinc coating) technique. The steel section is coated in a zinc layer by electrolysis, by means of an electric current.

Flat steel:

Any steel that has been rolled into a thin sheet. Flat steel is mainly used in the manufacture of outer coverings for household appliances, motor vehicles and ships.

Hot-dip galvanising:

Hot-dip galvanising is a technique used to coat a section of steel with zinc or a zinc-based alloy, by soaking it in a bath. The coating makes the product more corrosion-resistant.

Long steel:

Any steel that has a relatively small cross-section and a relatively large length. This includes railway tracks, I-beams, concrete reinforcing bars and sheet piles. Long steel is mainly used in construction.

Lost-time injury frequency rate:

This is the number of injuries with lost time of more than one day per million hours worked.

Rolling mill:

Manufacturing facility designed to reduce the thickness of a material while giving it a very specific section (see also 'Long steel' and 'Flat steel'). This deformation is obtained by continuous compression as the metal passes between two rollers rotating in opposite directions.

Sections:

Profiled (sectioned) material is one that has been given a profile, or specific shape.

Sheet pile:

Profiled pile designed to be beaten into the ground or into sediment and which connects to neighbouring piles through lateral veins called 'locks' or 'claws'. Sheet piles are mainly used for retaining walls, quay walls, cofferdams and waterproof screens.

Wire-drawing Mill:

Plant specialising in wire drawing, i.e. reducing the section of a metal wire via mechanical traction, by passing it through the holes of a die.

Grievance mechanism for our external stakeholders

ArcelorMittal has introduced national and local grievance mechanisms for managing complaints from external stakeholders. Complaints should be made:

by calling:

(+ 352) 4792 1

by mail to the following address:

ArcelorMittal
Country Management Luxembourg
24-26, boulevard d'Avranches
L – 1160 Luxembourg

par email to:

contact.luxembourg@arcelormittal.com

ArcelorMittal Belval & Differdange:

Belval site, telephone:

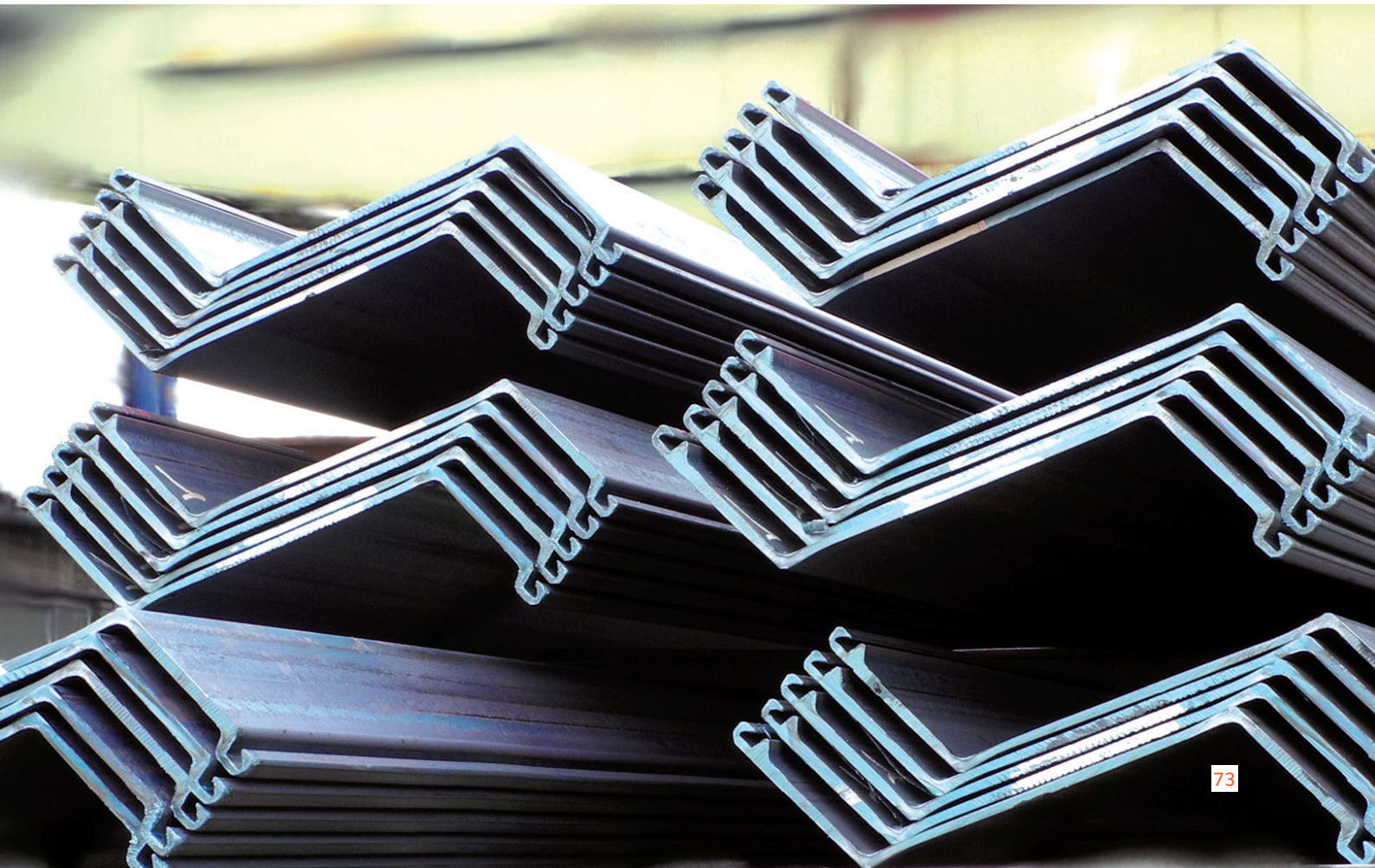
(+352) 8002 2014

Differdange site, telephone:

(+352) 8002 4282

ArcelorMittal Rodange & Schifflange, telephone:

(+352) 5019 2300



Materiality methodology note

In order to carry out the materiality analysis, ArcelorMittal in Luxembourg, assisted by the consultancy KPMG Luxembourg, proceeded with the following three major stages from October 2017:

Identifying

In the first stage, ArcelorMittal in Luxembourg defined the objective and scope of its analysis of materiality. The scope of the study thus included all 10 sites to date located in Luxembourg.

Following this, and in accordance with the reporting principle of the sustainability context of the GRI standards, ArcelorMittal in Luxembourg identified a list, as exhaustive as possible, of aspects that could have an economic, social and/or environmental impact. This list was subsequently reduced, retaining only the 28 most relevant topics.

Prioritising

During the second stage, ArcelorMittal in Luxembourg's Sustainable development Committee ranked the subjects according to the following six criteria: financial impact, regulatory impact, investors confidence, customers loyalty, employees satisfaction and reputation. The same weighting was applied to each criterion. Furthermore, according to the principle of stakeholder inclusion, ArcelorMittal in Luxembourg identified its principal stakeholders from government and public administration, local communities, employees, the media, suppliers and customers. It then conducted qualitative interviews with 11 of them to discuss the list of identified subjects.

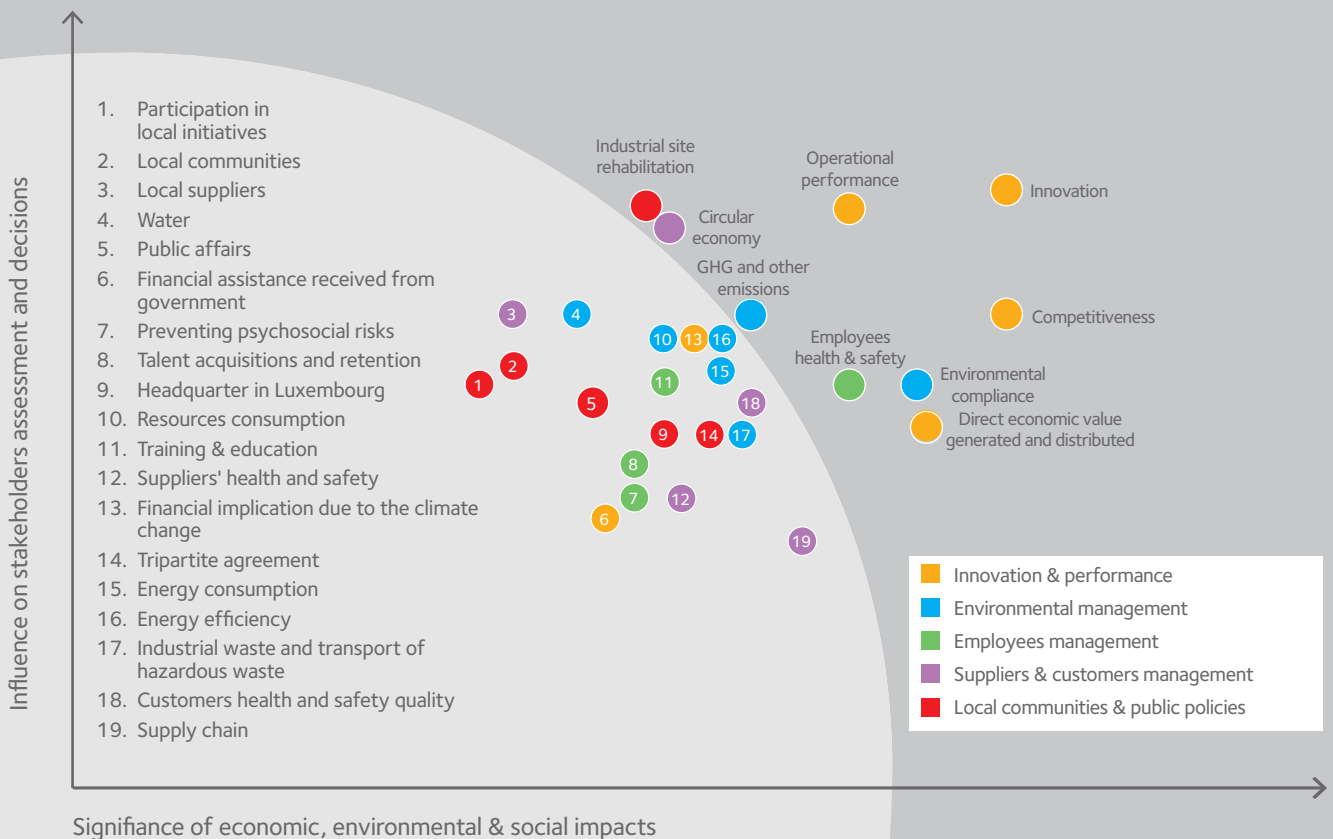
These subjects were then classified according to their influence on stakeholders; each of them was weighted in the same manner.

Validating

In the final stage, a materiality matrix was drawn up highlighting the subjects considered to be material.

The materiality threshold was established by the Sustainable development Committee according to the importance of the subjects. The matrix was validated at the end of March 2018.

Materiality matrix



Definitions of the topics of the matrix

Direct economic value generated and distributed

Value generated: revenue generated.

Value distributed: employee wages and benefits paid, operating costs such as payments for contract workers, payments to providers of capital, payments to government, community investments, etc.

Financial implications due to climate change

Financial implications due to either physical, regulatory or other risks and opportunities due to climate change.

Financial assistance received from government

Financial assistance received from government such as tax relief and tax credits; subsidies; investment grants, research and development grants, and other relevant types of grant; awards; royalty holidays; financial assistance from Export Credit Agencies (ECAs); financial incentives; other financial benefits received or receivable from any government for any operation.

Competitiveness

Competitiveness in relation for instance to commercial dumping, mergers or anti-competitive behaviors (trust, and monopoly practices, etc.) as well as to the strategic action plan 'Action 2020' related to cost optimization, mix products and higher volumes.

Innovation

Innovation in relation for instance to R&D to develop new products, to better recycle materials and products as well as to improve energy efficiency of current products.

Operational performance

Operational performance linked to efficient process and infrastructures set-up to avoid production downtimes/shutdowns.

Resources consumption

Resources consumption such as input materials used (renewable/non-renewable) to manufacture the organization's primary products.

Energy consumption

Energy consumption within the organization and outside the organization (renewable/non-renewable).

Reduction of energy consumption (during manufacturing process, transportation, etc.).

Energy efficiency

Reductions in energy requirements of products

Water

Use of water to manufacture products, water sources significantly affected by withdrawal of water
Water recycled and reused.

GHG and other emissions

GHG emissions reductions.

Evolution of the EU emissions trading system.

Management of other emissions: emissions of ozone-depleting substances (ODS), Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions.

Industrial waste and transport of hazardous waste

Waste generated by type and disposal method (including the significant spills).

Hazardous waste transported (local treatment, imports, exports, including international shipments).

Environmental compliance

Significant fines and non-monetary sanctions for non-compliance with environmental laws and/or regulations.

Compliance with environmental management system (ISO 50001, ISO 14001).

Products in compliance with environmental standards (locally and internationally).

Employees' health and safety

Workers representation in formal joint management-worker health and safety committees.

Injuries, occupational diseases, absenteeism, work-related fatalities, risk level.

Health and safety topics covered in formal agreements with trade unions.

Preventing psychosocial risks

Psychosocial risks related to all aspects of work design, management of work, social and environmental context, which may have the potential to cause psychological or physical harm (work-related stress, burnout, diseases).

Training and Education

Trainings offered to employees and programs for upgrading employee skills and transition assistance programs.

Employees receiving regular performance and career development reviews.

Promotion of education (partnership with universities, training organisms).

Talent acquisition and retention

Finding, acquiring, assessing, and hiring candidates to fill roles that are required to meet company goals.

Strategy or ability to retain its best employees and hence maintain a low turnover.

Local suppliers

Procurement budget used for significant locations of operation that is spent on local suppliers.

Supply chain

Supply chain linked to procurement of raw materials, production & storage and expedition of manufactured products.

Circular economy

Looking beyond the current take-make-dispose extractive industrial model, a circular economy aims to redefine growth, focusing on positive society-wide benefits. Underpinned by a transition to renewable energy sources, the circular model builds economic, natural, and social capital. It is based on three principles: design out waste and pollution, keep products and materials in use, regenerate natural systems.

Suppliers' health and safety

Injuries, occupational diseases, work-related fatalities and risk level.

Customers' health and safety

Assessment of the health and safety impacts of product and service categories.

Incidents of non-compliance concerning the health and safety impacts of products and services.

Tripartite agreement

Tripartite agreement following "Lux2016" and socioeconomic compliance (significant fines and non-monetary sanctions for non-compliance with laws and/or regulations in the social and economic area).

Local communities

Operations with significant actual and potential negative impacts on local communities, local community engagement, impact assessments, and development programs, sponsoring, pro bono.

Public affairs

Public relations efforts of a firm that are associated with government agencies, mass media, and public interest and pressure groups.

Headquarter in Luxembourg

Global headquarters of ArcelorMittal located in Luxembourg.

Participation in local initiatives

Participation in Luxembourg clusters (materials and manufacturing cluster, cluster for logistics).

Participation in national reflexions such as the "Third Industrial Revolution", the INDR's Label, IMS Luxembourg.

Industrial sites rehabilitation

Agora project, reconversion of industrial sites (Belval, Schiffflange).

GRI content index

This report has been prepared in accordance with the GRI Standards: core option.

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To our readers and stakeholders

In order to better understand your expectations and concerns on the subject of Sustainable development for our future publications, we would be grateful if you could complete this questionnaire.

1. To which stakeholder group do you belong?

<input type="checkbox"/> Employees	<input type="checkbox"/> Suppliers	<input type="checkbox"/> Media
<input type="checkbox"/> Staff representatives & unions	<input type="checkbox"/> Local residents (around ArcelorMittal sites)	<input type="checkbox"/> Companies
<input type="checkbox"/> Management	<input type="checkbox"/> Local communities	<input type="checkbox"/> Other, please specify:
<input type="checkbox"/> Competitors	<input type="checkbox"/> Government, public authorities & administrations	_____
<input type="checkbox"/> Investors	<input type="checkbox"/> Associations & NGOs	_____
<input type="checkbox"/> Customers	<input type="checkbox"/> Professional associations	_____

2. Based on your perceptions and expectations, evaluate the importance for ArcelorMittal to report on the following topics:

Tick the appropriate box – ranking from:	Not important	Important	Very important	Critical
Innovation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Competitiveness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environmental compliance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economic value created and distributed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Operational performance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health & safety of employees	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Greenhouse gases & other emissions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Circular economy	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Rehabilitation of industrial sites	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Participation in local initiatives	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Relations with local communities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Local suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Public affairs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Tick the appropriate box – ranking from:

	Not important	Important	Very important	Critical
Financial assistance received by governments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Preventing psychosocial risks	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Talent acquisition & retention	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Headquarters in Luxembourg	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Consumption of resources	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Training & education	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Health & safety of suppliers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Financial implications due to climate change	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tripartite Agreement	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy consumption	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Energy efficiency	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Industrial waste and transport of hazardous waste	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Customers' health & safety & quality	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Supply chain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Based on this report, do you consider ArcelorMittal's Sustainable development approach to be relevant and transparent?

Completely agree Agree Disagree Completely disagree

4. Would you like to be more engaged in ArcelorMittal in Luxembourg's Sustainable development approach?

Yes No

5. How would you like to be engaged?

I would like to be better informed through awareness-raising initiatives such as themed conferences and training.

I would like to be consulted (workshop, survey, etc.) in order to share issues and expectations.

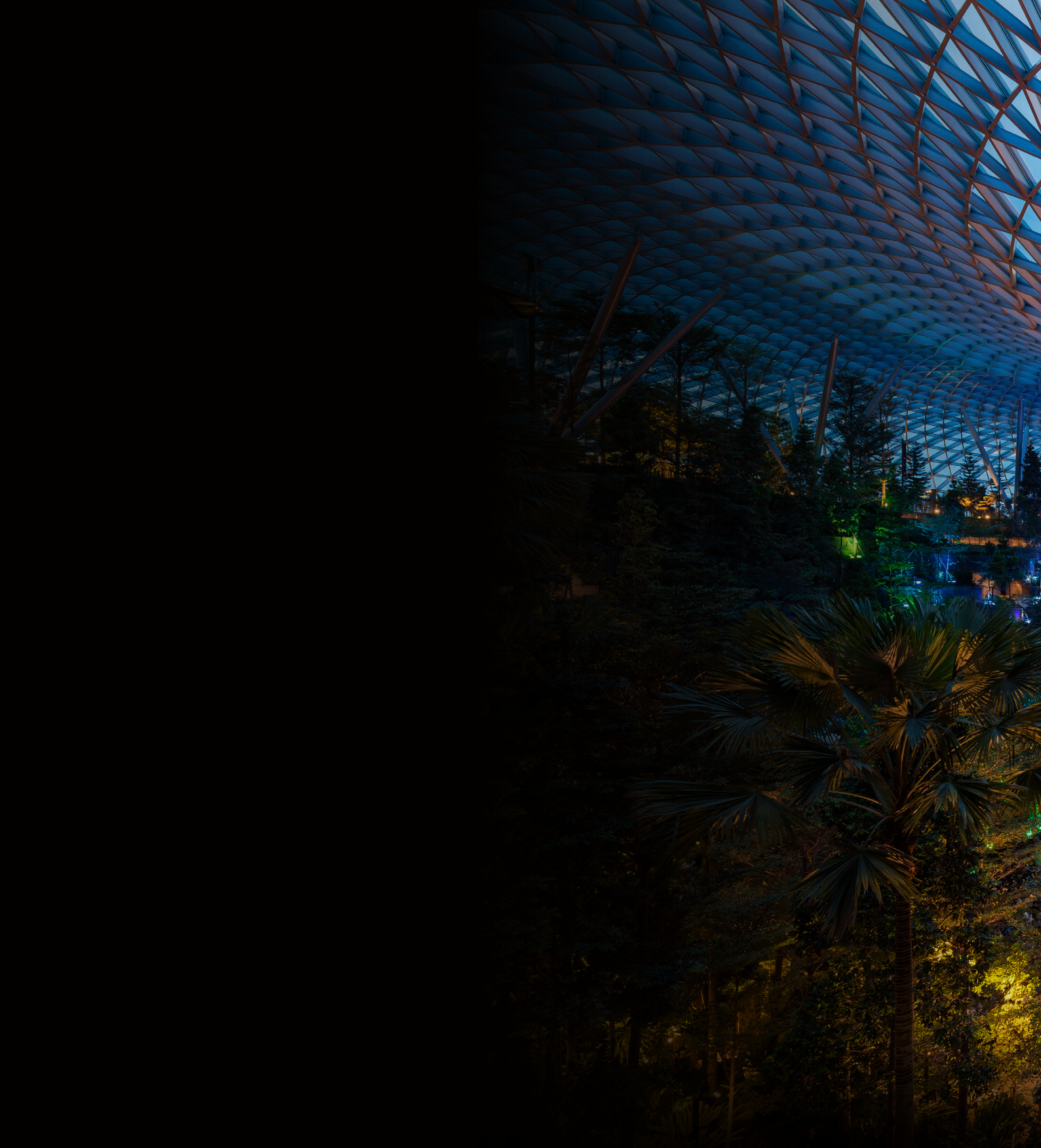
I would like to assist in the setting up of projects with ArcelorMittal in order to respond to both my challenges and the ones of ArcelorMittal.

Thank you for taking part in this questionnaire, please email it to us at contact.luxembourg@arcelormittal.com or post to ArcelorMittal – Country management | 24-26 boulevard d'Avranches | L-1160 Luxembourg





Landmark 81, Vietnam's tallest tower, completed the skyline of Ho Chi Minh City in 2018 thanks to the sections HISTAR® 460 produced by ArcelorMittal Differdange.



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Should you have any questions on the Sustainable development Report 2018
- ArcelorMittal in Luxembourg, please contact:

ArcelorMittal

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*Inaugurated in 2019, Jewel
Changi Airport, Singapore,
features HISTAR® 460 beams
from ArcelorMittal Differdange.
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