



# Sustainable Molymet

Second Sustainability Report  
/ 2019



GRI [102-1, 102-3, 102-5]

### Identification of the Company

Business name: Molibdenos y Metales S.A.

Trade name: MOLYMET

Legal address: Camino Nos a Los Morros N°66,  
Nos, San Bernardo, Chile.

R.U.T./ ID Number: 93.628.000-5

Type of company: Open Joint Stock Company  
(Sociedad Anónima Abierta )

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GRI [102-53]

### We are interested in your opinion

To communicate your suggestions and comments  
on this Sustainability Report, you can write to  
**[sustentabilidad@molymet.cl](mailto:sustentabilidad@molymet.cl)**

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# Molybdenum: an ally for sustainability

Molybdenum is a metal element with unique characteristics in terms of strength, durability and tolerance to high temperatures. While it is mainly added to steel, its properties are also valued when added to other metals and chemicals for various purposes. Due to its high level of importance, it is used in different industries such as transport, energy generation, agriculture, medicine, electronics, chemistry, aeronautics, and construction, among others.

At Molymet we are leaders in the processing of molybdenum and rhenium, with a worldwide share of 35% and 70% respectively. Chile, Peru, Mexico, the United States and Canada are our main sources of supply. Our products are used by customers on all five continents.

# Sustainable Molymet

We want to continue strengthening our position, progressively increasing our processing capacity, focusing on efficiency, continuous process optimization and innovation, and constantly seeking new business opportunities for these strategic metals.

Sustainability is in our DNA. Because we know that each action counts, Molymet's commitment extends beyond guaranteeing clean production, ensuring that the relationship we have with our environment reflects a sustainable culture.

# Contents

01

02

03

04

05

06

07



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GRI [102-14, 102-23]

# Letter from the CEO



The accelerated transformations that the world has experienced in recent years lead us to project a challenging and diverse future in terms of the economic, social, environmental and ethical demands that citizens are making on companies today. It is a fact that people are taking an unprecedented global role, with companies playing a central position in the co-construction of a society with sustainable human development.

At Molymet, we genuinely believe that sustainability is a necessary and relevant driver of change, and we take it as a strategic challenge that all our decisions and actions are framed in this line, which translates into the creation of a Corporate Sustainability Strategy that will be one of our main focuses during 2020.

It is our belief that the principles of transparency, consistency and innovation are key to the sustainability of the business and for the second consecutive year we are voluntarily communicating the Sustainability Report that presents our vision and sustainable management, responding to the commitment taken by the leaders of the Company.

Our leading position in the molybdenum and rhenium production world market has been achieved thanks to the core pillar of support from our collaborators, allowing us to give identity, body and heart to our culture.



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This is why, during 2019, we developed our Molymet Purpose "To create value for the evolution of humanity, through products developed by people who think about the wellbeing of the planet", which was defined through a collaborative-creative work process, reflecting the feelings of more than 300 Molymet collaborators and subsidiaries.

In order to contribute our skills and talents to Molymet, training in global sustainability trends, technology and management methodologies are fundamental and that is why all levels of the Company have participated. Assuming that the challenges of transformation are ongoing, preparing and understanding them is strategic and everyone's responsibility.

Due to the nature and magnitude of our business, the environment that allows us to carry out our actions is one of the most relevant challenges for Molymet, being a conscious and responsible actor in the protection of the environment, active in its care, conservation and collaboration to minimize our environmental impacts.

We are proud to declare that in 2019 we were able to process one third of the world's molybdenum with an increasingly limited environmental impact, investing also in technologies to reduce water and energy consumption, both resources of high risk and impact. In alliance with the communities we are a part of, we undertake the challenge of generating a collaborative and constructive dialogue towards a relationship of shared dreams.

People are no longer alone in their day-to-day work, and technology is a great companion in this construction of the world. It is for this reason -and because it is a necessary ally in our constant search for an efficient and sustainable operation- that we started down the path to the Digital Transformation within the challenging framework of the 4.0 Industry of which we must be part. This together with investments in diverse projects lead us to continue with the readjustment that we are experiencing and looking for as a Company. Furthermore, we started to implement the LEAN methodology, which has allowed us to focus our evolution towards continuous excel-

lence, with collaborative solutions in the long term, allowing us to move forward in the widest range of sustainability.

Being responsible for our actions today is a commitment that makes us proud and gives a new meaning to the work of each one of us. Creating value and meeting the needs of our various stakeholders is the key to contributing to our humanity's development. At Molymet we face this challenge with responsibility and conviction, connecting with people and institutions that are also doing it at a global level, through the constant exchange of knowledge and aligning with national and international agreements -such as the Sustainable Development Goals-, in order to manage precise actions that allow us to contribute to the evolution of a fair, equitable, peaceful and sustainable humanity for this and future generations.

**John Graell**  
CEO

## 2019 Milestones

01.

We are building our Corporate Sustainability Strategy through a plan of social awareness and the implementation of various actions.

02.

We process 30% of the world's molybdenum with a low environmental impact, reusing water and energy as well as recycling scrap metal.

03.

We defined our Purpose as a Company.

04.

We began the process of implementing the LEAN Management philosophy.

05.

We started on the path towards the digital transformation of our facilities and processes, with a view to Industry 4.0.

06.

We started the environmental evaluation for modernization project for the gas train of the MolymetNos plant, allowing to reduce SO<sub>2</sub> emissions by 35%.

07.

We carried out an Advanced Environmental Citizen Participation process to inform the community the modernization project of gas treatment and roasting plants of MolymetNos.

08.

We implemented an investment plan focused on sustainability, mainly to control and reduce emissions at MolymetNos.

09.

During 2019 we had no lost time injuries at Molynor and Molymet Germany.

10.

The third production line at our subsidiary Molymet Germany came into operation, increasing the capacity of processing metallic molybdenum.

11.

Our subsidiary Molymex celebrated its 9th anniversary with the distinction of Socially Responsible Company by the Mexican Center for Philanthropy<sup>1</sup>.

12.

We launched a new sustainable initiative called Zero Solid Industrial Waste aimed at reducing the generation of solid industrial waste.

<sup>1</sup> This distinction is awarded for the company's efforts in social responsibility issues, covering the areas of quality of life, links with the community, business ethics and the environment, in which continuous improvement has been demonstrated.



# Our 2019 Report





GRI [102-45, 102-49, 102-50, 102-51, 102-52, 102-54]

# Our 2019 Report

In this second Sustainability Report, we report on Molymet's value creation strategy for our stakeholders, the way we manage operations, and the economic, environmental, social and ethical impacts during the period from January 1 to December 31, 2019.

In addition -and unlike Report 2018<sup>2</sup>, which only communicated the management in Chile- we have decided to deepen the reporting showing the management of our facilities in Chile, Mexico, Belgium and Germany.

We have developed this report, following the guidelines and principles of the Global Reporting Initiative (GRI), working on all the topics indicated in this document, in accordance with the essential option of the GRI 2016 Standards.

GRI [102-44, 102-46]

# Definition of reportable content

Based on the 2018<sup>3</sup> materiality update, we defined 16 material themes for our Company, which are divided into the areas of: governance, economic, social and environmental impact.

Material issues are those topics that reflect the major impacts of our operations and that are of greatest importance to our stakeholders.

<sup>2, 3</sup> For more information on materiality 2018, see the first Sustainability Report on pages 124-126 at <https://molymet.com/wp-content/uploads/2020/01/Reporte-de-Sustentabilidad-2019.pdf>





GRI [102-47]

# Materiality Matrix

01. Governance	Ethical Management
02. Economics	Investments and projects * Innovation and development *
03. Social	Employment Training and education Gender equity Health and Safety Work relations * Supplier Evaluation Community Relations
04. Enviromental	Biodiversity Energy Water Effluents Emissions Raw materials, materials, reuse and recycling*

\* Topics added through the 2019 materiality update.











# Commitment to the Sustainable Development Goals (SDGs)

In this report -and because of our commitment to international agreements on sustainability issues- we explain Molymet's contribution to the Sustainable Development Objectives in each materials' topic, highlighting the efforts that contribute to the fulfillment of each of these objectives.

<sup>4</sup> To review the goals of the SDG check:  
<https://www.un.org/sustainabledevelopment/>





	Quality education	4.4	Our employees receive 25,400 hours of training per year on various subjects. We contribute to the strengthening of the education of the communities where we are located.
	Gender Equality	5.1	We have a non-discrimination by sex statement in our Recruitment and Selection Policy.
		5.5	We joined PROhumana's Gender Alliance. We maintain 13% women on our staff.
	Clean water and sanitation	6.3	Our subsidiaries MolymetNos and Molymex do not discharge effluents, while those that do have efficient pre- discharge treatment systems.
		6.4	Four of our five subsidiaries recirculate water, thereby reducing the extraction of this resource.
	Affordable and clean energy	7.a	The molybdenum we process is a sustainable material that is used in the construction, aeronautics, automotive, electrical and medical industries, among others.
	Decent work and economic growth	8.2	We are making progress in the creation of 5 innovations that add value to our stakeholders.
		8.4	We have a Corporate Environmental Policy committed to reducing our impacts.
		8.5	We have no salary discrimination.
		8.8	Three of our subsidiaries have certified their Health and Safety Management System.
	Industry, innovation and infrastructure	9.5	We invest USD 1.2 million in innovation.
	Reduced Inequalities	10.3	There is an express statement of non-discrimination in our Recruitment and Selection Policy.
	Responsible consumption and production	12.2	We generate new and innovative ways to reuse our waste.
		12.4	We promote projects to reduce emissions of pollutants into the atmosphere <sup>5</sup> .
		12.5	We recycled 46 thousand tons of waste.
	Life on land	15.5	With our subsidiary Molynor we are committed to protecting the <i>Gaviotín chico</i> in the region of Antofagasta, Chile.
	Peace, justice and strong institutions	16.5	We have a Crime Prevention Model.
		16.6	We have carried out our Sustainability Report for the second consecutive year.

<sup>5</sup> See material topic: Emissions.





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# We are Molymet





GRI [102-4]

## Our subsidiaries



**MolymetNos**, located in San Bernardo Santiago, Chile



**Molynor**, located in Mejillones, Antofagasta, Chile



**Molymex**, located in Cumpas, Sonora, Mexico



**Sadaci**, located in Ghent, Belgium



**Molymet Germany**, located Bitterfeld, Germany





# Sustainability:

## Permanent commitment for Molymet

Molibdenos y Metales S.A. was founded in 1975 with the visionary idea that the Company would take on the production and sale of molybdenum oxide, and today plays a fundamental role in advancing towards a more sustainable development.

We are a Chilean company engaged in the processing of molybdenum concentrate and the sale of molybdenum products and by-products. Through our five subsidiary companies, we bring the benefits of molybdenum to the world.

Furthermore, as part of the Company we have 2 subsidiaries that contribute to sustainable management, the first one corresponds to Carbomet Energía S.A. with which we generate 10.7 MW<sup>6</sup> of clean energy through 2 run-of-river hydroelectric plants. The second subsidiary corresponds to Inmobiliaria San Bernardo S.A. with which we have 123 hectares of walnut trees dedicated to organic farming since 2012.

Molybdenum is a silver-grey metal, which does not exist in a pure state in nature and is used as a raw material for obtaining alloys.

About two thirds of this metal is used for this purpose, such as in stainless steel. In addition, it is used as a component of chemical products, among others.

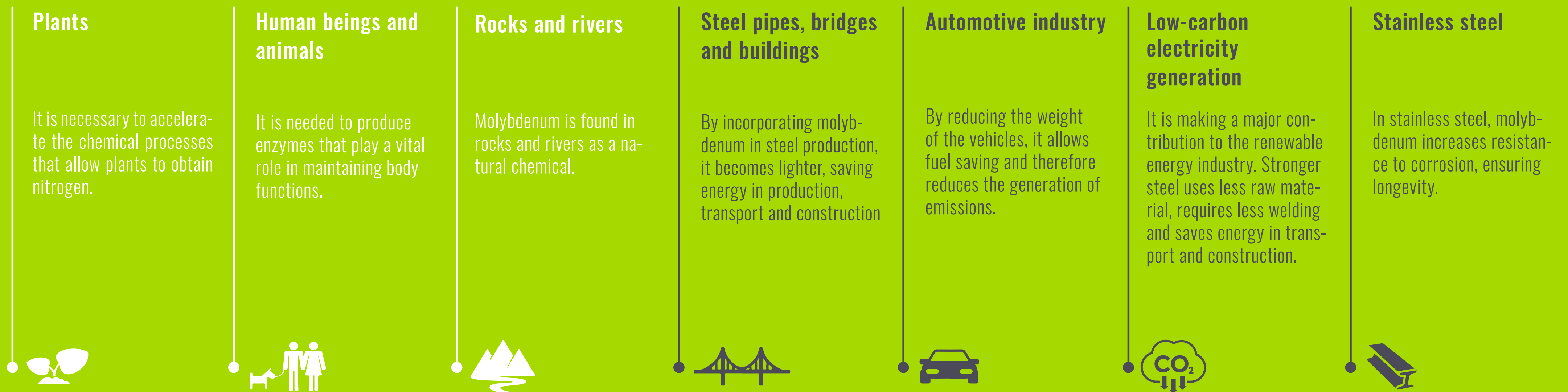
The main characteristics of molybdenum are its durability and resistance, being a material that extends the useful life of structures submitted to corrosive environments, reduces the size of pieces and parts without losing its properties, and improves the performance of elements submitted to high temperatures, among other benefits.

<sup>6</sup> The energy generated is injected into Chile's National Electrical System (SEN).





## Molybdenum: an essential element for life and sustainable development.



For more information on Molymet's history, shareholding and corporate structure, we invite you to visit our website: [www.molymet.com](http://www.molymet.com) and the 2019 Annual Report.





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# Value creation model

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We are the leading company and world reference in the molybdenum and rhenium industry. As a team we are deeply committed to meet the needs of each customer, through our constant availability and the continuous excellence in our standards.

We are proud of our history and we are motivated by cultural development and public welfare, so we transform strategic metals into a valuable ingredient in the progress of humanity.

## Our mission

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We work to strengthen our global position in the molybdenum and rhenium market through efficient, flexible processing capabilities, continuous process optimization, innovation and the pursuit of new business opportunities in strategic metals.





## Our Corporate Purpose<sup>7</sup>

**To create value for the evolution of humanity,  
with products developed by people who think  
about the planet's wellbeing.**

Our essence as a Company has always been present since our beginnings: creation, vision of future, responsibility. Sustainability allows us to test that essence in order to serve the times in which we are living as a society, times of uncertainty, but also of great

opportunity to positively transform our environment, contributing our capacity for innovative solutions the world requires to bequeath a better place to future generations.

<sup>7</sup> The Corporate Purpose was defined with the active participation of more than 300 collaborators.





GRI [102-16]

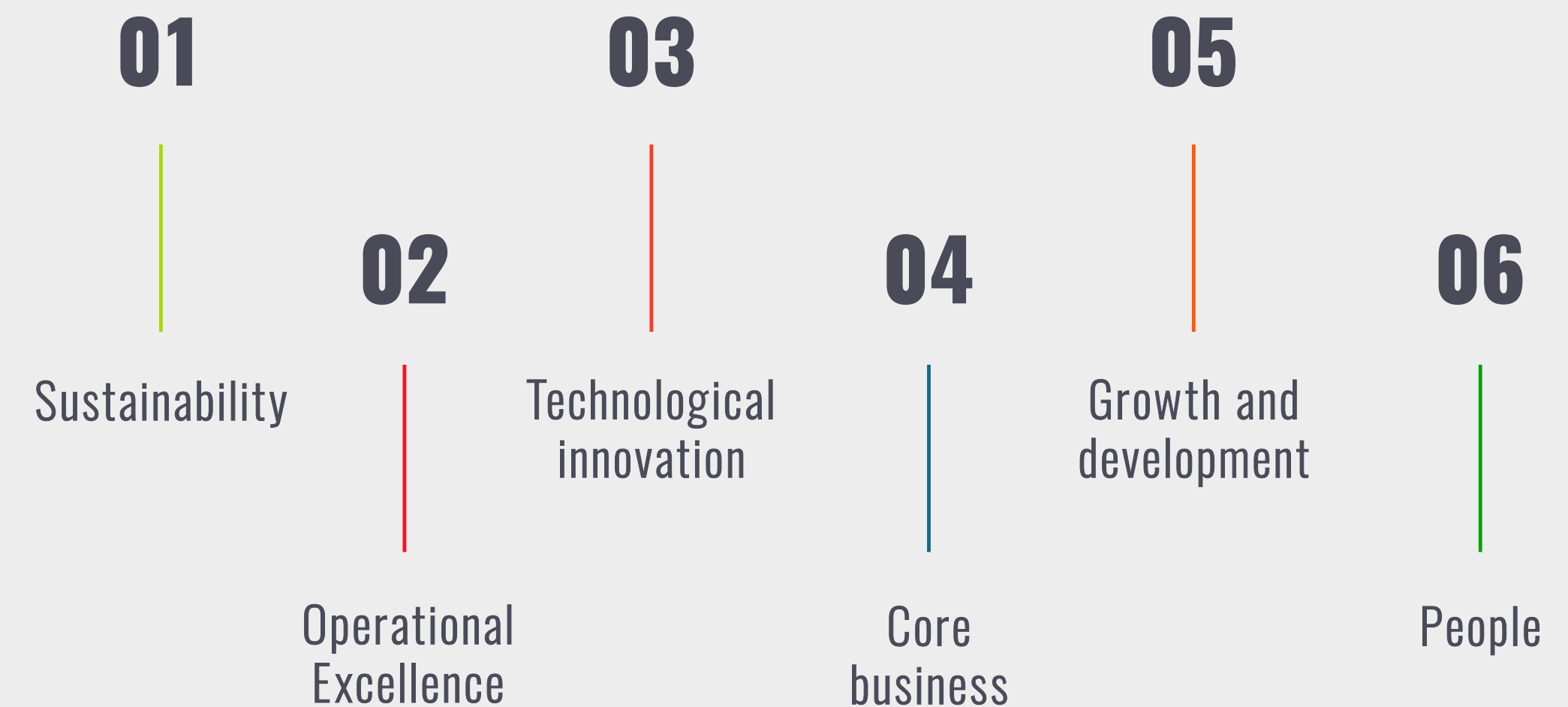
## Our values

Our task can only be achieved with solid organizational values. Therefore, we work every day with honesty, equity and integrity, with the guiding principles of transparency in the rendering of accounts to our shareholders and to society in general, adherence to the principle of legality, respect for international standards of behavior, and the promotion of and respect for human rights.



## Strategic pillars of our management

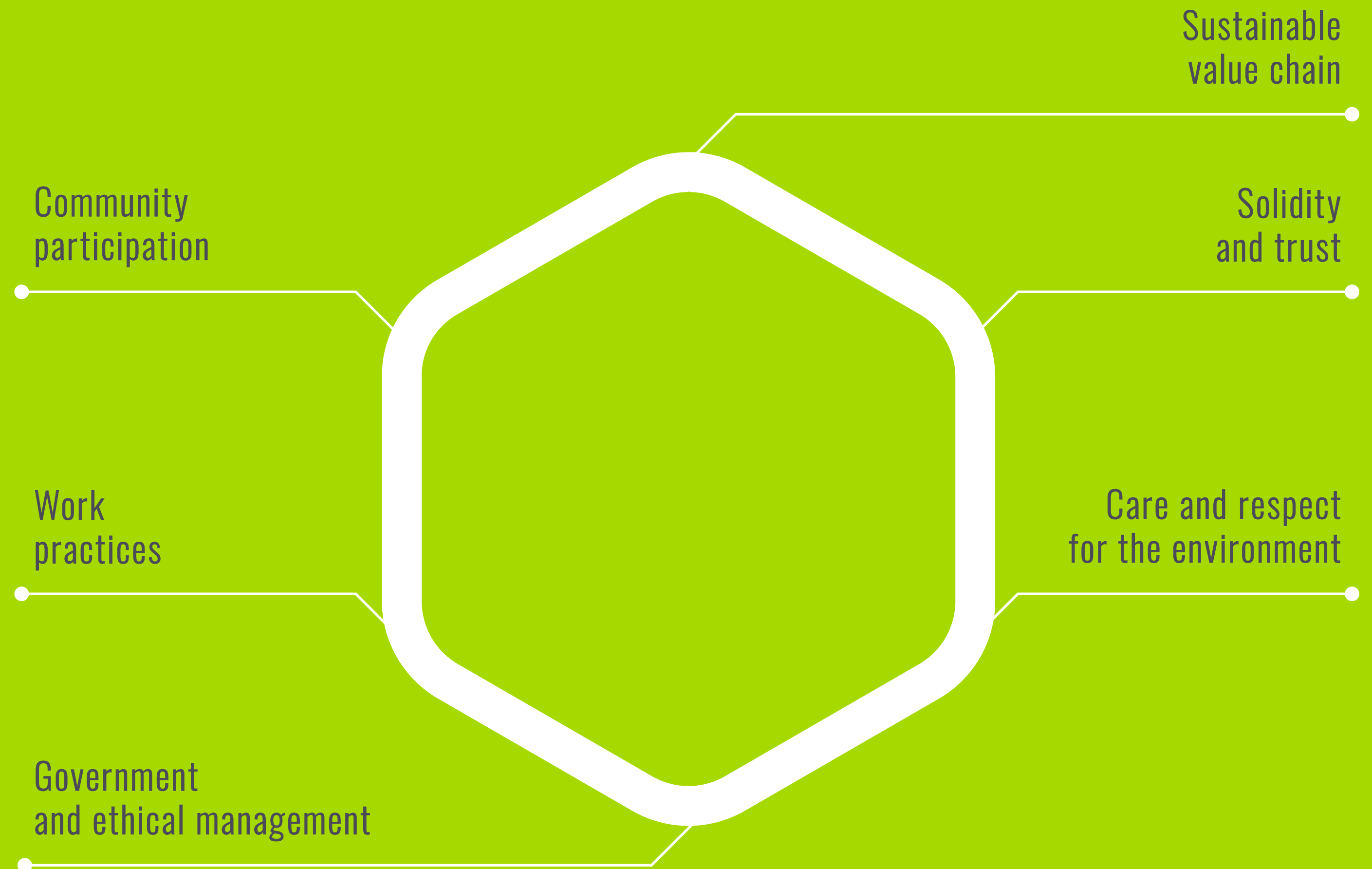
We have six pillars that guide our management and show us the way forward.





## Our focus on sustainability

Our business bases its sustainable management on six focal points, which guide our economic, social and environmental performance.





# Geographical diversification

We have production operations in four countries and commercial offices in seven nations. Our products are used by customers in the aerospace, chemical, electronics and steel industries, mainly in the European, Asian and North American markets.

- Production plants
- Commercial offices



## Production plants

- |   |  |
|---|--|
| 01   Molymex<br>Cumpas, Sonora, Mexico                            | 04   Sadaci N.V.<br>Ghent, Belgium               |
| 02   Molynor Industrial Complex<br>Mejillones, Antofagasta, Chile | 05   Molymet Germany GmbH<br>Bitterfeld, Germany |
| 03   MolymetNos<br>San Bernardo, Santiago, Chile                  |  |

## Commercial offices

- |   |  |  |
|---|--|--|
| 01   Molibdenos y Metales S.A<br>San Bernardo, Santiago, Chile    | 04   Molymet Corporation<br>Miami, USA                     | 07   Molymet Trading S.A.<br>San Bernardo, Chile       |
| 02   Molymet do Brasil Repres. e Serv. Ltda.<br>Sao Paulo, Brazil | 05   Molymet Services LTD<br>Guilford, United Kingdom      | 08   Molymet Peru Trading Company S.A.C.<br>Lima, Peru |
| 03   Molymex S.A. de C.V.<br>Hermosillo, Sonora, Mexico           | 06   Molymet Beijing Trading Company LTD<br>Beijing, China |  |

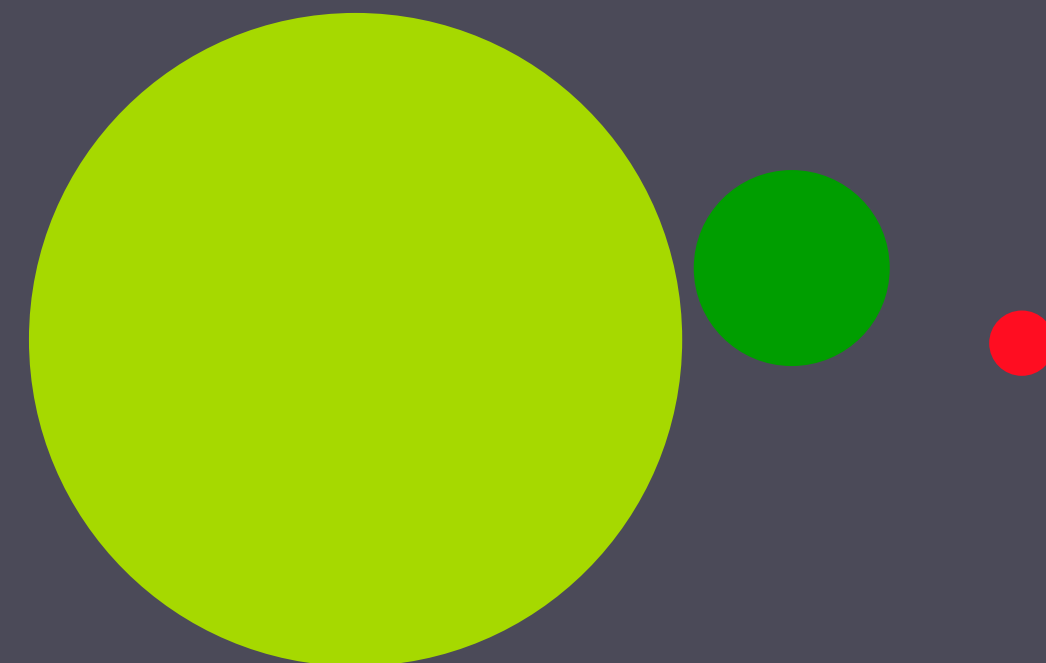




# Economic performance

Income

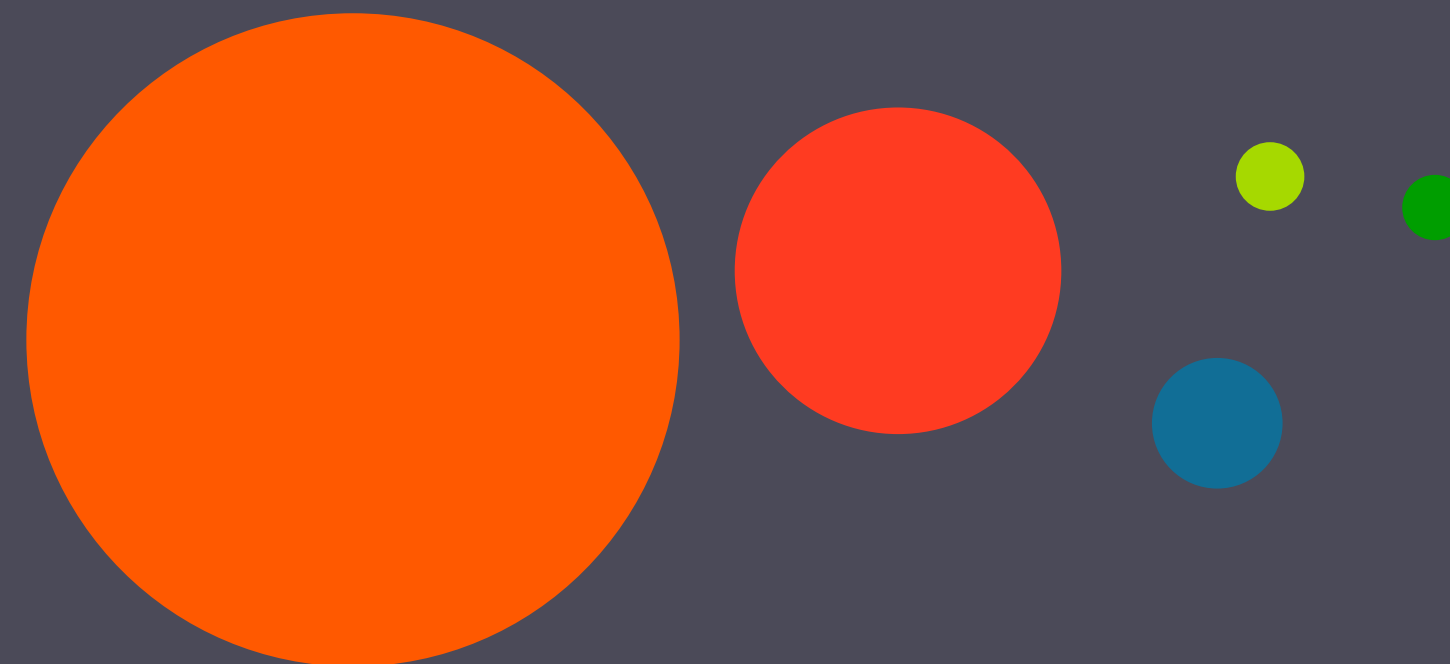
1,170 MMUSD



• Income	1,170 MMUSD
• Operating Margin	158 MMUSD
• Net Profits	63 MMUSD

EBITDA

135 MMUSD



• Stock Market Value	1,405 MMUSD
• Heritage	733 MMUSD
• EBITDA	135 MMUSD
• Net Debt	78.8 MMUSD
• Capex	62 MMUSD





Natural Capital	Social and Relational Capital	Intellectual Capital
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2.7 million cubic metres of water	2,962 suppliers	5 projects at the Corporate level
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990,006 GJ of energy  
177,330 GJ of non- conventional renewable energy

Production Capacity

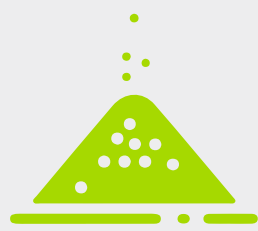
Production Plants		
MolymetNos (Chile)	86 million pounds	de Mo
Molynor (Chile)	60 million pounds	de Mo
Sadaci (Belgium)	33 million pounds	de Mo
Molymex (Mexico)	29 million pounds	de Mo
Molymet Germany (Germany)	2.5 million pounds	de Mo



People

1,338 Collaborators  
(13% women, 87% men)

What we do



We process molybdenum concentrate

Roasting of molybdenite from copper mining

42.6%

On behalf of third parties

57.4%

On our own

185 customers in 45 countries



4

Countries with productive operations

7

Countries with commercial offices

1,170 millions of dollars

Economic value generated

Created Value

Molybdenum

Durability, strength and ability to withstand corrosion and high temperatures.

Uses of our molybdenum

More efficient, safe and durable alloys for:

- Megaconstructions
- Environmental care
- Automotive industry
- Oil and gas industry pipelines
- Fertilizers, catalysts, lubricants, etc.

Products

155 MMLb Molybdenum oxide in its technical and pure grades  
77.8 MMLb Ammonium perrenate  
75.3 KLb Metallic rhenium  
34.4 MMLb Ferromolybdenum  
2.1 MMLb Molybdenum metal  
2.6 MMLb Molybdenum Dioxide

By-products

140,260 Ton of Sulfuric acid  
3,157 KLb Copper cement  
503 KLb Copper cathodes

35%

Global share of the Molybdenum market

70%

Global share of the Rhenium market

41% Recirculation of water in our processes  
45,974 Tons of recycled waste  
64.2 GJ Energy saving  
25,400 Hours of training  
40% Resident collaborators in the commune where we are located  
197.11 KUSD In community investment





GRI [102-40, 102-42, 102-43]

# Our stakeholders

At Molymet we interact with different interest groups in the performance of our activities. We define 5 priority groups among them.



GRI [102-12, 102-13]

# Alliances and partnerships

We partner with the following organizations in Chile and around the world:

Chile	Europe	Mexico
<ul style="list-style-type: none"><li>• Association of Industrial Chemical Industries of Chile (ASIQUM)</li><li>• Mejillones Industrial Association (AIM)</li><li>• Society for Industrial Promotion (SOFOFA)</li><li>• Association of Industries of San Bernardo (AISB)</li><li>• Foundation for the Sustainability of the <i>Gaviotín chico</i></li><li>• PROhumana Gender Alliance</li><li>• PROhumana Business Network</li><li>• Chilean Mexican Integration Chamber (CICMEX)</li><li>• Chilean American Chamber of Commerce (Amcham Chile)</li><li>• Global Compact Network</li></ul>	<ul style="list-style-type: none"><li>• International Molybdenum Association (IMOA)</li><li>• Euroalliance (Europe)</li><li>• Essencia (Belgium)</li><li>• European Powder Metallurgy Association (Germany)</li><li>• Federal Association of Energy Consumers (Germany)</li><li>• Professional Association of raw materials and chemical industry. Berufsgenossenschaft Rohstoffe und chemische Industrie (Germany)</li><li>• Chamber of Commerce and Industry Halle-Dessau Industrie- und Handelskammer Halle-Dessau (Germany)</li></ul>	<ul style="list-style-type: none"><li>• Association of Miners of Sonora (AMSAC)</li><li>• National Chamber of the Transformation Industry (CANACINTRA)</li><li>• Employers Confederation of the Mexican Republic (COPARMEX)</li><li>• Sonora Mining Cluster</li><li>• College of Public Accountants of Sonora</li><li>• Mexican Institute of Financial Executives (IMEF)</li><li>• Public Safety Committee of the Municipality of Cumpas, Sonora</li><li>• State of Sonora Hazardous Materials Management Committee</li><li>• Association of Environmental Safety Professional (APSA)</li></ul>



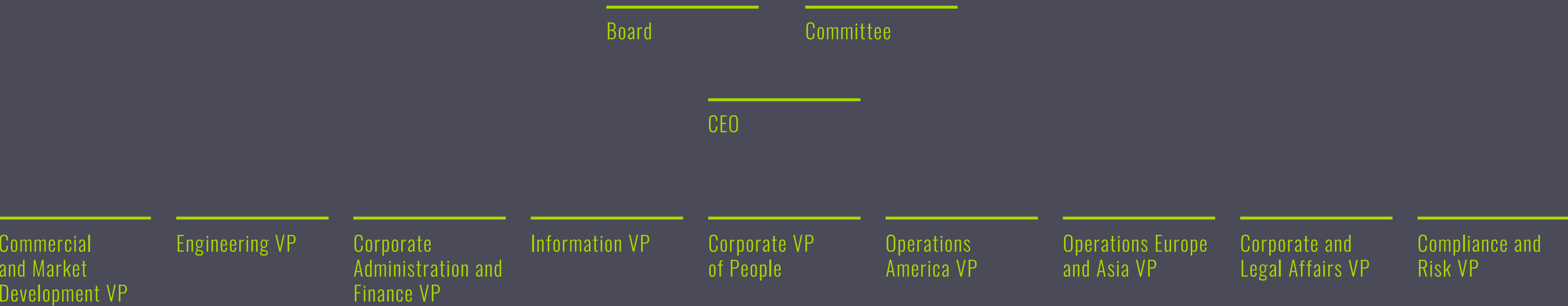


GRI [102-18, 102-22, 102-23, 102-24]

# Governance

## Corporate Governance<sup>8</sup>

Our Board of Directors is responsible for defining policies and strategies, as well as supervising the management of our company's business. This body delegates part of its faculties on the main executives and acts through the CEO, to whom nine Vice-President report.



<sup>8</sup> For more information on Molymet's history, shareholding and corporate structure, we invite you to visit our website: [www.molymet.com](http://www.molymet.com) and the 2019 Annual Report.





# Our commitments to sustainability

Sustainability influences all of our decisions, by always evaluating the greatest social, environmental, ethical and economic contribution. In order to strengthen our action, we have defined commitments for the coming year.

Commitments we fulfilled in 2019	Commitments we maintain from 2019	Commitments 2020
We developed the Corporate Sustainability Strategy	Implementing the Corporate Sustainability Strategy	Improve the integrated waste management system, aiming at the zero waste challenge
We created the Corporate Sustainability Committee	Continue to strengthen the bond with our communities	Implement a digital system to manage business risk and compliance
We carried out a Training Plan on Sustainability, Diversity and Gender Equity	Develop and disseminate a new Code of Conduct	Design the 2020 Inclusion Plan
We recertified our responsible conduct through ASIQUIM	Define sustainability indicators	Position Sustainability on Molymet's Strategic Agenda
We evaluated the feasibility of building a windmill in Sadaci	Certify SA8000 on working conditions	

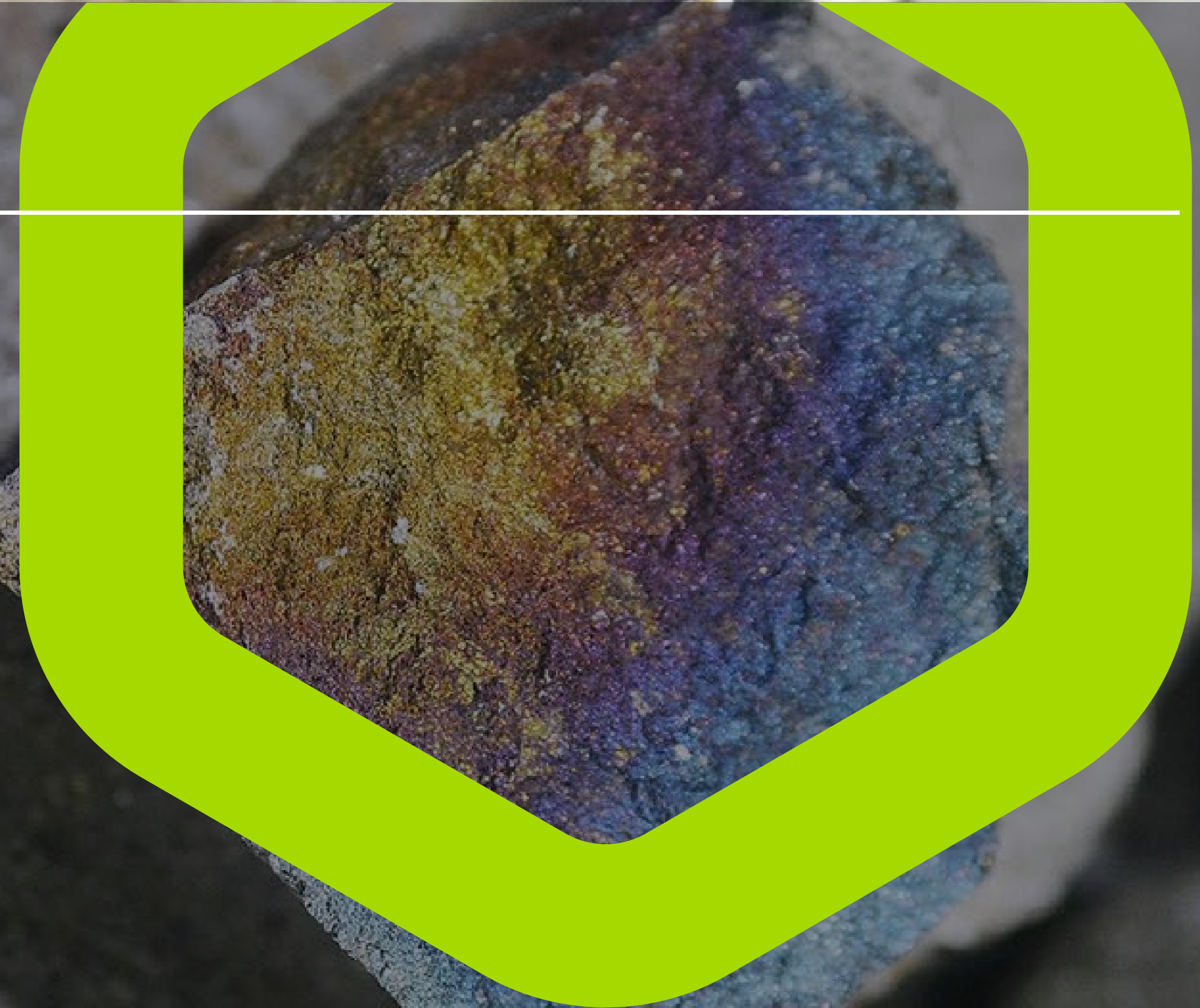




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• 03

# Continuity of our business





# The Molymet Principles

Knowing that integrity is the cornerstone of our prestige and position in the marketplace, our work is guided by a series of policies, principles and mechanisms that give continuity and impartiality to our DNA.

03





GRI [205-1, 205-3]

All allegations received were investigated and appropriate action was taken in accordance with our Policy for the Prevention of Money Laundering, Terrorist Financing, Receiving stolen property and Brivery Offences.

All of Molymet's activities are carried out, recorded and controlled in strict compliance with the law, policies, standards and procedures that apply to our work. We provide the necessary mechanisms for our stakeholders to express their doubts and to report any behavior contrary to our principles. The complaint platform guarantees the anonymity and confidentiality of the information and is managed autonomously by the Corporate Vice President of Compliance and Risk, to ensure its investigation, conclusion and compliance with action plans or disciplinary measures, as appropriate in each particular case.

In 2019 we started searching for advisors to develop our Code of Conduct at the corporate level. During this same period we began the process of recertifying our Model for the Prevention of Crime, Money Laundering, Terrorist Financing, Receiving stolen property and Bribery.

GRI [102-11, 102-17, 205-1, 205-2]

## Evaluation and ethical training

Considering that ethical management is one of the focuses of sustainability at Molymet, we conduct orientation sessions for all our employees in order to guide them in our company's way of being and doing business.

During 2019 we analyzed 80%<sup>9</sup> of the business units in Chile, which corresponds to 50% of our company's total.

In addition, there is work done in the framework of internal audits associated with ethical compliance at the level of collaborators, contractors and suppliers, considering the differences that exist in the application of their regulations.

*In Chile, the procedures for managing conflicts of interest between directors and, in general, with the company, are set forth in Law No. 18,046 on Corporations and in the transactions between related parties.*

*We evaluate 80% of the business units in ethical processes.*

<sup>9</sup> We evaluated 5 of the 8 business operations and identified that the main risks are (1) Breaches and offences associated with Act No. 20,393, (2) Fraud, (3) Conflicts of interest and (4) Probity.





# Comprehensive risk management

## - We recertified our CPM

Crime Prevention Model in Chile.

At Molymet we have a Comprehensive Risk Management System for our processes, led by the Corporate Vice President of Compliance and Risk, to anticipate and deal preventatively with the identification, control and reduction of situations that may affect our sustainability and reputation.

To do this, we use a matrix that allows us to map the main risks, aimed at maintaining operational continuity.

In the reported period, we also worked on risk self-management. To this end, we first carried out a survey from the operational to the

administrative level, identifying those critical risks and raising awareness among all employees of their impact and probability of occurrence, in order to internalize them within the daily work.

Secondly, we made a change in the way we manage the risks raised, as each area became responsible for managing and generating appropriate controls. The Corporate Vice President of Compliance and Risks will be responsible for auditing procedures internally. Finally, the model involves constant monitoring of risks, which are dynamic and very diverse.





Featured cases:  
Welfare of People

We strive to deepen our ethical  
management system

In our subsidiary Molymex we work on the deepening of the corporate ethical guidelines and their adaptation to the local reality. Since 2006, we count with a Conflict of Interest Policy that is complemented with a Code of Ethics, which must be read and signed by all collaborators.

During 2019, and in accordance with the integrity of our organization, we carried out a campaign in Molymex to disseminate values to reinforce the behaviors on which we are based. The values disseminated were: Integrity, Innovation, Excellence, Sustainability, Confidentiality and Transcendence.



Dissemination of values,  
Molymex

In addition, we launched a specific mailbox for Moly-mex collaborators, designed to provide an internal communication channel that allows for complaints, suggestions or congratulations from our collaborators, providing a good working environment, to promote satisfaction and commitment to the Company.



GRI [103-1, 103-2, 103-3]

# Investments and projects

## Investments with an impact

To obtain superior results and create sustainable economic value for our shareholders and investors, Molymet generates investments aimed at optimizing production processes and creating contributions to society.

We seek industrial development through the strengthening of our processes, sustainability and digitalization, incorporating technologies that will allow us to initiate the path towards Industry 4.0. The digital transformation will be our ally to achieve this and has been our focus during 2019 in our facilities and processes.

	Corporate	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Total amount of investment (KUSD)	1,380	16,523	6,282	4,685	28,069	4,896
Number of investments made	225	1,761	411	223	45	5

The amount of investments in the community during 2019 corresponds to 197,11 KUSD.





## Featured cases: Continuous Excellence

### More efficiency and less impact

During this period we made a series of investments in each of our subsidiaries with the aim of improving our efficiency and reducing our environmental impact.

At MolymetNos we invested 4.4 MMUSD in the implementation of technology to reduce unpleasant odors, to improve the capture of ammonia, new systems for cleaning roasting gases, among others. This means improving operational efficiency and reducing environmental and social impacts.

At Molynor we invested 5.1 MMUSD in the acquisition and installation of a second filter in the ferric chloride leaching plant to ensure operational continuity, increasing the current capacity available in roasting with the resulting increase in the production of clean molybdenite.

In Molymex we invested 250 KUSD in the acquisition and installation of a new fan that optimizes the gas handling in the sulfuric acid plant, this facilitates the preventive maintenance of the equipment and also reduces the risk of SO<sub>2</sub> emissions due to possible malfunctioning.

At Sadaci we have invested over 50 MMUSD in the Purox Plant project, which will allow us to increase the production capacity of metal molybdenum, using the best technology.

We invested 9.2 MMUSD in the third production line at Molymet Germany, increasing the molybdenum metal manufacturing capacity by approximately 50%.



Planta Purox, **Sadaci**

We started this project in May 2018 and during 2019 we completed the equipment installation process.



# Innovation and development

- 1.2 MMUSD

of investment in innovation

- 5 projects

of innovation at the corporate level

As a global Company, we are characterized by the constant generation of innovative processes that allow us to optimize our competitiveness and develop products that meet the specifications of our diverse customers in the molybdenum industry.

The Research and Development Management is the governance structure in charge of leading the open innovation processes, both at a corporate level and in each of our subsidiaries. In addition, we have a Digital and Innovation Committee<sup>10</sup> responsible for taking on the strategic challenges of the business.

Our Corporate Intellectual Property Policy incorporates the highest standards in the protection, management and enforcement of both our own and third party intellectual property rights, with the aim of promoting innovation and technological development, facilitating the transfer of technology within and outside the Company, as well as safeguarding the knowledge developed.

We have an Intellectual Property Committee made up of the CEO, the Manager of Research and Development and the Vice President of Corporate and Legal Affairs, who analyze compliance with the Intellectual Property Policy and the guidelines and directives in accordance with it.

<sup>10</sup> The Committee is led by the Vice President of Information and comprises the Vice Presidents of Operations, Engineering and Compliance and Risk, as well as the Managers of Digital Transformation, Excellence, Information Technology and Innovation and Development.





• 03

# We have an innovative vision<sup>11</sup>

To sustain our leadership in the molybdenum and rhenium industry, we count on the internal talent and innovative thinking capabilities to generate scientific development and a sustainable business. Additionally, we maintain continuous improvements in all procedures, supported by a base of innovation, research and adoption of new technologies.

This open approach to innovation management, which we have incorporated as a Company, has allowed us to generate value for our stakeholders, by including their perspective in the search for solutions that incorporate technological advances, product innovation and process improvements.

During 2019, the Intellectual Property Policy was modified in order to establish, as a general policy of Molymet, an incentive to innovation.

- 01. Arsenic removal from copper concentrates
- 02. Production of molybdenum and rhenium metal powders
- 03. Development of lithium compounds in projects co-financed with Corfo<sup>12</sup>
- 04. Production of molybdenum compounds and other elements to improve the chemical and physical properties of materials
- 05. Development of high-purity molybdenum products for special applications
- 06. Patent for the lifting of the shaft of the roasting furnace in Sadaci, for which they have received a state subsidy

Additionally, our subsidiaries generate their own process innovations and projects to improve efficiency and production, recognizing the existing strategic value for the Company in the field. Such is the case of Molymex, which encourages each of its collaborators to propose an annual innovation initiative. Thus, in 2019, 108 innovative proposals were generated, 19 of which were implemented and range from simple ideas to very disruptive ones.

<sup>11</sup> To learn more about corporate innovation you can go to: <https://molymet.com/idi/>  
<sup>12</sup> Economic Development Agency of Chile.



# The avantgarde of molybdenum

At Molymet, we are constantly working to find new innovation and development solutions for different industries, including those that traditionally do not use molybdenum. We actively participate with IMO<sup>13</sup> to find new uses for molybdenum<sup>14</sup> and rhenium<sup>15</sup>, among which we highlight the manufacture of prostheses and orthoses in medicine, high performance semiconductors in the electrical industry, the production of hydrogen, anodes for ion and lithium batteries, replacement of plastics and generation of clean or renewable energy such as solar and wind power.

High density metal molybdenum powder



<sup>13</sup> To learn more about IMO check: <https://www.imoa.info/index.php>  
<sup>14</sup> To learn more about the uses of molybdenum check: <https://molymet.com/mo-re/#world-mineral>  
<sup>15</sup> To see about the Rhenium Market Development Program at Molymet check: <https://molymet.com/idi/desarrollo-de-mercado/>





GRI [102-10]

**Featured cases:  
Transformation for the wellbeing of people**

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Sustainable solutions

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In 2019 we developed a solution that allows the removal of arsenic from complex copper concentrates (between 2% and 8% arsenic content) generating very stable and environmentally friendly arsenic compounds as a by-product.

The Management of Research and Development located in the municipality of San Bernardo, Chile, designed and built a pilot plant to test this solution, which will enter into operation in the first quarter of 2020.

Molybdenum and rhenium powder:  
unique in the world

---

Solving the needs of our customers is what drives us and that is why we are always looking to develop new products and solutions that fit their needs. During this year, we made a molybdenum and rhenium alloy in a metallic powder format, which did not exist in the market and which is very much desired by manufacturers of parts that use the technologies of Injection Molding, Powder Metallurgy and Additive Manufacturing.





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• 04

# Our environmental performance





GRI [103-1, 103-2, 103-3, 304-4]

# Biodiversity

• 2,577 Ha

protected areas in  
Antofagasta, Chile.

• 1 species

protected

• 04

Our subsidiaries -which operate in different parts of the world- are constantly striving to take care of the biodiversity where they operate, aligning themselves with Molymet's integral sustainable vision. In order to manage our impact on biodiversity, we consider the different geographical contexts. Those plants that can generate a greater impact on the environment work with external verification companies that measure the degree of compliance with the commitments acquired in terms of reduction and control.

In the areas near Molynor, there are 2 protected areas, which correspond to nesting sectors of the *Gaviotín chico*, an endangered species. These zones cover a total of 2,577 hectares of protected areas. During 2019, we invested USD 49,500 to conserve the species through contributions and management with the Foundation for the Sustainability of the *Gaviotín chico*, of which we are founding partners and part of the Board of Directors. The work of the companies that participate in the foundation is oriented to the follow-up of the commitments acquired in RCA that are directly related to the protection of the *Gaviotín chico*.



Egg monitoring of the *Gaviotín chico*





GRI [304-3]

# We protect biodiversity

• 04

At Molymex we reforested 2,000 trees within our facilities, an initiative that will increase by 10% by 2020.

Our subsidiary Sadaci is located in an industrial area, so it has no impact on protected areas. However, we have been careful to protect the green areas inside and outside the plant. We sponsor the Eco<sup>2</sup> project that creates buffer zones with green areas, in conjunction with the authorities, industry, farmers and neighbors in the area.

On the other hand, since 2005 we have a plantation of walnut trees<sup>16</sup> of 123 hectares in the MolymetNos Plant, which has been certified as organic agriculture since 2012 and which is maintained until today thanks to the certification granted annually by Eco-cert. This plantation not only represents an important green lung in the municipality, but also provides temporary and permanent work to several people from the local community.



<sup>16</sup> For more information on the organic walnut plantation, please review the 2018 Sustainability Report on pages 34 and 35.





# Green areas by subsidiary

Total Green Areas

• 04



	MolymetNos	Molynor	Molymex	Sadaci
Hectares of green areas	123	0.075	18.9	4.3
Hectares of reforestation	-	-	18.9	1.5
Amount of investment in green areas in USD	150,000	49,500	16,259	7,400

Note 1: Molymet Germany has no green areas  
 Note 2: The 0.075 Ha of Molynor only correspond to the surface of green areas extended during the year 2019, i.e. in addition to those already existing and does not take into account the total green areas of Molynor



GRI [102-10, 103-1, 103-2, 103-3, 302-4]

# Energy

• 04

Molymet is committed to making rational and efficient use of energy, without affecting the quality of the product and preferring more environmentally friendly fuels, in order to reduce the impact. In this challenge, we are guided by the Corporate Energy Policy that regulates our actions and encourages the development and implementation of programs aimed at improving the processes that require the consumption of these resources.

We acquired 100% of Compañía Auxiliar de Electricidad del Maipo S.A., generating

**171,170 GJ**

of renewable energy through run-of-river hydropower.

The subsidiaries as a whole achieved a reduction in energy use of:

**64.2 GJ**

Through projects of optimization in the use of compressed air, acquisition of high energy- efficient equipment and replacement of luminaires.





GRI [302-1]

# Energy consumption

990 thousand GJ

Total energy consumption at Molymet

Energy consumption by source and by subsidiary (in GJ)

Energy Sources	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Diesel	73,075	47,354	3,506	3,495	275
Liquefied petroleum gas (LPG)	8,212	28	41,373	6,975	-
Liquefied natural gas (LNG)	273,256	-	-	-	18,785
Total non-renewable fuel	354,544	47,381	71,879	67,470	19,060

Renewable energy consumption

- MolymetNos171,072 GJ
- Molynor137 GJ
- Molymet Germany6,121 GJ

Other fuel sources	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Electricity	177,638	66,627	41,875	132,728	10,804
Heating	-	-	-	-	-
Other fuel sources total	177,638	66,627	41,875	132,728	10,804



GRI [302-3]

# Energy consumption

• 04

Energy intensity

Source of emission	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Total consumption (GJ)	532,181	114,009	113,754	200,198	28,864
Molybdenum production (MMLbMo) <sup>17</sup>	60.4	38.8	28.5	42.1	3
Consumption/Production	8,810	3,101	3,991	4,755	9,955

<sup>17</sup> Molymet considers as total molybdenum the oxide productions coming from the roasting and oxidation processes (ACC) of concentrates.





## Featured cases: Superior Standards

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### Voluntary audits

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At Sadaci we have voluntarily adhered to the Energy Policy Agreement stipulated by the authorities, which consists of establishing goals and plans to reduce energy consumption and CO<sub>2</sub> emissions.

This voluntary agreement defines a goal for us to make annual audit plans to reduce energy consumption and CO<sub>2</sub> emissions to the environment. We have invested more than 15 KUSD in this task, which has helped us to achieve efficiency and reduce environmental impact.

### Windmill: A sustainable energy solution

---

During the last few years, the Belgian authorities have promoted plans for the promotion and use of renewable energies due to recent international agreements on climate change. Due to its relevance, at Sadaci we studied different alternatives and decided to implement the windmill system for the sustainable energy supply of our plant, with a generated energy of 11,270 MWh and an investment of 309 KUSD. This will allow us to provide 1/3 of the required electricity in the form of renewable energy. The construction of this project will be completed in 2021.



GRI [103-1, 103-2, 103-3]

# Water

• 04

In accordance with our guidelines, we place special emphasis on the efficient use of the water required for our production and we minimize its consumption. For this purpose, in our subsidiaries we measure the amount of water used through flow meters that indicate the degree of compliance with the parameters established by the regulations and standards of each country.

GRI [303-1, 303-3]

## Water extraction and consumption

In accordance with the activities carried out by our Company, water is used mainly for the productive process of concentrate conditioning, cooling, steam production, osmosis and irrigation. This water is obtained from different sources, which are detailed below:

**MolymetNos**

We obtain our water supply from two sources: the drinking water service network and groundwater from three wells.

**Molynor**

We have a reverse osmosis desalination plant, which allows us to capture the water needed for its production processes and general services from the sea.

**Molymex**

We have two wells for water extraction, which is used for the transformation process of molybdenum sulphide to molybdenum oxide.

**Sadaci**

We carry out the extraction through surface, underground and rain water.

**Molymet Germany**

We are supplied with water by the local supply plant.





GRI [303-3]

# Water extraction and consumption

· 2.5 million m³/year

Molymet water extraction



● 04

Source (in m³/year)	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Surface water	-	-	-	1,670,680	3,252
Groundwater	226,047	-	121,921	333	-
Sea water	-	311,903	-	-	-
Produced water <sup>18</sup>	-	-	-	-	6,342
Third-party water <sup>19</sup>	141,997	-	-	18,361	829
Total	368,044	311,903	121,921	1,689,374	10,423

<sup>18</sup> It corresponds to third party industrial waters.

<sup>19</sup> Corresponds to municipal water suppliers, municipal wastewater treatment plants.



GRI [303-5]

# Water consumption

• 04

	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Water consumption (m³/year)	597,755	121,727	121,921	1,689,374	6,342
Molybdenum production (MMLbMo)	60.4	38.8	28.5	42.1	3
Water consumption / molybdenum production	9,896	3,140	4,278	40,128	2,114





# Recirculation

We know that water is a valuable resource, which is why all our subsidiaries have water recirculation processes that allow for its reuse and decrease its consumption, which means less extraction of the resource for our operations.

• We recirculate

41%  
of the water

Water quenching towers,  
MolymetNos



	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Volume of recirculated water (m <sup>3</sup> /year)	405,694	58,170	27,405	557,493	0
Percentage of recirculated water	67.8%	48%	22.5%	33%	0%





GRI [103-1, 103-2, 103-3]

# Effluents

• 04 - 1.2 million m<sup>3</sup>/year

Water discharge at Molymet

At Molymet we perform water discharges in three of our five subsidiaries, assuming the commitment to return the treated water with the quality required by the regulations of each of the countries where we operate.

GRI [303-2, 303-4, 306-1, 306-3, 306-5]

# Water and effluent discharge

MolymetNos

We do not discharge process or domestic water. All effluents are treated in treatment plants for subsequent reuse.

Molynor

The only discharge is brine, which is the product of the operation of the reverse osmosis desalination plant. This discharge is monitored on a monthly basis.

Molymex

We do not discharge water because it is treated to be entirely used for irrigation of green areas, such as the walnut orchard.

Sadaci

We discharge into the Ghent-Terneuzen canal after treatment by the liquid industrial waste (LIW) purification plant.

Molymet Germany

All treatment of the water we discharge is done by the local sewage plant, according to German ordinance.





GRI [303-4]

# Water discharge in m³/year

Souce	Molynor	Sadaci	Molymet Germany
Surface water	-	1,530,343	-
Groundwater	-	333	-
Sea water <sup>20</sup>	163,010	-	-
Third-party water	-	18,361	7,171
Water from third parties transferred to other uses	-	114,510	-
Total	163,010	1,663,547	7,171

Note: At MolymetNos and Molymex we do not discharge water.

<sup>20</sup> Brine produced in the reverse osmosis process discharged into the sea.



# Featured cases: Superior Standards

We seek to reduce the wastewater load

At Sadaci we renew the cyclones and optimise the production processes in the roaster in order to recover as much dust as possible. With this improvement we avoid the load of pollutants in our wastewater treatment plant.

Sadaci, Belgium





GRI [103-1, 103-2, 103-3]

# Emissions and climate change

## • 04

We confirm our commitment to implement preventive measures, control and reduction of environmental impact. To this end, our Environmental Policy, based on current legislation and international standards, guides our actions towards the care and protection of the atmosphere, promoting the mitigation of climate change.

- Our SO<sub>2</sub> emissions are:

# 63%

less than what is established by the current permits.

Gas scrubbing plant,  
**Molymex**



GRI [305-1, 305-2]

# Our Carbon Footprint

• 73.6 K Ton eq of CO<sub>2</sub>

• 04

Emissions in the 2019 period

To control our impacts, we measure our carbon footprint and constantly seek to improve processes, reducing greenhouse gas emissions.

At Molymet we measure Scope 1 and 2, i.e. our direct and indirect impacts on the atmosphere. However, we have the future challenge of considering scope 3, to achieve a complete analysis.

Carbon footprint in Ton CO<sub>2</sub> eq

Source of emission	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Direct emissions (Scope 1)					
Liquid gas consumption	15,412	2,121	1,585	3,589	1,386
Diesel consumption	5,560	2,828	2,066	259	20
Total direct emissions	20,972	4,949	3,651	3,848	1,406
Indirect emissions (Scope 2)					
Electricity generation	19,294	7,236	4,551	5,899	912
Total indirect emissions	19,294	7,236	4,551	5,899	912





GRI [305-7, 307-1, 413-2]

# Measurement of other air emissions

Our emissions, which we measure and control periodically and rigorously, are far below the limits allowed by the regulations of the countries in which we operate, reinforcing our commitment to protect air quality, which is a permanent challenge for our Company.

• 04

## Other emissions in Kg

Emissions	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
NO <sub>x</sub>	16,590	5,300	1,870	3,038	0
SO <sub>2</sub>	360,942	270,000	194,300	97,200	0

During the reporting period, we had a non-monetary sanction for unpleasant odors at MolymetNos.



# We contribute to the decarbonization of the economy

At Molymet we contribute to the decarbonization of the economy through the introduction of molybdenum as a sustainable material. Steels containing molybdenum and rhenium are often used in high-wear environments, where maintenance or frequent replacement would be complex and costly. In addition, they use less raw material, require less welding and save energy in transport and construction, contributing to the reduction of greenhouse gas emissions worldwide.

In the energy industry, high-strength steel with added molybdenum is used to manufacture pressure pipes for hydroelectric generation. In photovoltaic generation, molybdenum allows for lower costs and increased resistance, producing sustainable infrastructures with less impact on the environment.

Molybdenum is also used in the manufacture of catalysts, which are part of gas cleaning systems, allowing the reduction of emissions and thus the impact on the environment.



Solar panels, **Molynor**





## Featured cases: Transformation for the well-being of society

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### Emissions reduction

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At MolymetNos we modify the energy source used for the pyrometallurgical process of a toaster, by incorporating liquefied natural gas as a substitute fuel for oil. This allowed us to make the energy matrix more flexible, being able to operate with lower cost fuel and lower emissions of polluting elements into the environment.

In addition, an investment plan for the control and reduction of emissions was carried out during the year, through the purchase of new equipment and new engineering designs.

### Teamwork with the community

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At Sadaci, we conducted an action plan to reduce fugitive dust and emissions in the plant and its surroundings. This initiative implied an investment of 24 KUSD and seeks to promote education in the community about the implementation of emissions reduction. Some activities considered wetting of roads to avoid dust emissions, implementation of additional green areas around the plant, collection of hay from farmers, reduction of outdoor slag storage, among other initiatives that allowed us to reduce environmental claims and concerns of neighbors, and raise awareness among them regarding air pollution.



GRI [301-1]

# Raw materials and supplies

• 04

For our production processes the raw material is molybdenite concentrate.

Raw materials by subsidiary in millions of pounds	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Molybdenite	60.6	38.7	35.8	56.6	4.1

In addition, we require various materials in each of our subsidiaries, which are used in both product manufacturing and packaging. Some of them are acid, lime, pallets, plastics, cardboard, sacks, metal cans, among others.





GRI [306-2]

# Waste management



of non-hazardous waste was recycled in **SADACI**

· **46 k ton**  
of waste were recycled

• 04

At Molymet we implement integrated management programs for hazardous and non-hazardous waste, focused on promoting reduction, reuse, recycling and energy recovery.

Types of waste in Ton	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Hazardous Waste	1,981	75	10,624	526	6
Non-Hazardous Waste	128,509	824	60,823	26,221	36
Total	130,491	899	71,447	26,747	42



GRI [306-2]

Waste by disposal method in tons	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Final disposal and authorized landfills	128,121	884	0	224	-
Recovery	-	-	2,860	-	6
Treatment	1,818	-	2,635	-	-
Reuse	-	-	10,838	112	6
Recycling	552	15	43,354	2,027	26
Composting	-	-	3,978	196	-
Energy recovery	-	-	7,764	-	4
Secondary Raw Material	-	-	-	24,184	-
Total	130,491	899	71,447	26,753	42





At Molynor we recycle scraps from external companies which are used in the copper cementing process. While the scrap generated



Composting, **Molymex**

inside our facilities is sent to recycling companies.

At Molymex we conduct recycling campaigns, involving the community with the aim of raising awareness about the management of domestic waste. At the plant, of the total waste generated, 67% is treated on site and 33% by authorized companies. Hazardous waste is converted into heat energy inside the Roasting Furnace and non-hazardous waste is used for the generation of compost and recycling.

## Circular economy



Sulfuric acid storage tanks, **Molymex**

At Molymet we receive molybdenite concentrates from copper mining and produce molybdenum and rhenium products in addition to a wide range of marketable products which, when reused, do not end their useful life as waste but continue to contribute to the processes, generating a virtuous circle. Examples of this are sulphuric acid, copper cement, copper electrolyte, among others.

In this line and in accordance with global trends, the circular economy is an approach that we are strategically and permanently

evaluating, looking for a reduced loss of resources such as gases, steam, water, among others. In 2019 our focus was the analysis of studies that would allow us to reduce the use of ammonia in industrial processes.

We have worked on new actions that allow us to make liquid and solid industrial waste products of greater added value and reduce the environmental impact as much as possible.



## Featured cases: Transformation for the well-being of Society

### At MolymetNos we work with local recyclers

On November 28, the first removal of recoverable waste was carried out by recyclers from the San Bernardo municipality. From that date onwards, they have provided us with the service of transporting plastic, paper and cardboard to the recycling plants authorized by the health authority.

With this we follow the guidelines of the National Policy of Local Recyclers of the Ministry of Environment of Chile, and provide opportunities to entrepreneurs in the area.

In December, recycling containers for glass, plastics, paper and cans were installed in the administrative building and in three other plant sectors.

### At Molymex we recover 90% of our waste together with the local community

Thanks to the efforts made with the Mexican environmental authority and our collaborators, we have managed to prevent 90% of our waste from reaching sanitary landfills, thus achieving an important challenge and reducing environmental impacts. To do this we took measures such as recovering waste in the roasting furnace, reusing packaging waste, making compost from solid urban waste and recycling PET plastic.

As for composting, we use food waste, paper, cardboard, soil and animal manure provided by the

community, which after 4 months of treatment serves to improve the soil and replace some fertilizers.

During the year we have generated 300 kg of compost with the local schools and 80 tons within the Company, demonstrating successful results in the relationship with our neighboring communities.







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- 05
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# Our collaborators





# Employment

# 1,338

Molymet's  
collaborators

• 05

The value of people and the conviction that they are the main driver to achieve our purpose is translated into a daily and permanent job so that the experience of working at Molymet becomes highly motivating.

GRI [102-8, 405-1]

## Our team

### Employees by position in each subsidiary

Position	MolymetNos*	Molynor	Molymex	Sadaci	Molymet Germany	Total
Executive	42	6	5	8	7	68
Administrative	432	20	31	37	14	534
Operator	302	194	101	97	42	736
<b>Total</b>	776	220	137	142	63	1,338

### Employees by gender in each subsidiary

Gender	MolymetNos*	Molynor	Molymex	Sadaci	Molymet Germany	Total
Man	678	194	116	127	47	1,162
Woman	98	26	21	15	16	176
<b>Total</b>	776	220	137	142	63	1,338

\*Note: MolymetNos includes people from the Corporate area.





Employees by age in each subsidiary

Age	MolymetNos*	Molynor	Molymex	Sadaci	Molymet Germany	Total
Under 30	99	46	19	23	11	198
Between 30 and 50	505	147	104	70	29	855
Over 50	172	27	14	49	23	285
Total	776	220	137	142	63	1,338

Note: the retirement ages are different in each country of operation. In Chile women retire at 60 and men at 65, in Mexico the retirement age is 65, in Belgium and Germany the retirement age is changing from 65 to 67 years old.

Diversity at Molymet

	MolymetNos*	Molynor	Molymex	Sadaci	Molymet Germany
Foreign persons	2%	6%	1%	4%	4%
People with disabilities	0%	1%	0%	0%	2%

Note: We currently do not have people with disabilities at MolymetNos, Molymex and Sadaci. In Chile, 1% of the staff of companies with more than 100 collaborators must be people in a situation of disability according to Law 21.015/2018.

\*Note: MolymetNos includes people from the Corporate area.



GRI [401-1]

# Rotation

2.02%

rotation rate during 2019

Each of our subsidiaries structures its workforce according to its needs and projections to achieve optimal performance. We always prioritize development and internal mobility and if we are unable to fill the gaps with our employees, we look for external talent. Our organization has talent mapping and succession plans, generating a talent management culture where the leaders of each area actively participate in conjunction with the Corporate Vice President of People to find the right talent and strategically position each person within the Company.

## Rotation per subsidiary

Rotation	MolymetNos*	Molynor	Molymex	Sadaci	Molymet Germany
Collaborators who joined the Company	104	45	16	24	14
Collaborators who left the Company	33	35	11	16	7
Rotation	1.53%	3.46%	1.65%	2.41%	3.03%

Note 1: The rotation was calculated as the sum of the annual allocation / sum of those who joined and left the Company.  
Note 2: Molynor executives are not considered in this calculation.  
\*Note 3: MolymetNos includes plant and corporate employees.





GRI [401-2]

# Benefits for our collaborators associated to Life and Health Insurance

Our employees have access to various benefits defined in each subsidiary according to the requirements and specificities that allow them to improve their well-being and quality of life, in line with the Company's guidelines.

Percentage of employees covered by life and health insurance benefits

Coverage of the benefit	Corporativo	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Life Insurance <sup>21</sup>	84%	56%	89%	100%	100%	100%
Complementary insurance <sup>22</sup>	84%	56%	89%	60%	-	-
Health Insurance <sup>23</sup>	84%	56%	89%	60%	100%	13%

<sup>21</sup> Life insurance in the case of Germany and Belgium is mandatory. In Mexico there are different types of life insurance, depending on the position and whether they are unionized. In Chile life insurance covers 500UF in case of death.  
<sup>22</sup> A benefit made up of contributions from employees and the Company, which is intended to reimburse the health expenses incurred by the member. In the case of MolymetNos, this benefit is separate for unionized employees (No. 1) and the rest of the employees. At Molymex, the insurance is 100% covered by the Company.  
<sup>23</sup> It consists of an insurance that covers medical care and accidents.



# Featured cases: Innovative Vision

## Center of Expertise (CoE)

The Centers of Expertise are areas of specialization of the Corporate Vice President of People who aim to propose and support the design and implementation of programs and strategies for people in terms of talent, communications, compensation and structures. The scope of this function is corporate, that is, it covers the corporation and all its subsidiaries in Chile and abroad, whether industrial and/or commercial.

## Pedaling to work

35% of Molymet Germany's employees travel by bicycle, which is why we have set up parking spaces protected against theft and rain.

The German tax system and the availability of low interest rates has generated a business model for the rental of bicycles that we at Molymet Germany have begun to use for the transportation of employees, investing 5 KUSD during 2019 to facilitate access to this type of transport.



Bicycle parking,  
**Molymet Germany**





# Training and professional development

## Attributes of the leader:

- We act with integrity
- We are responsible and passionate about what we do
- We are listeners, we are communicators
- We are reliable and we trust each other
- We work as a team

GRI [103-1, 103-2, 103-3, 404-2]

Talent is made up of people (individuals or teams) who make Molymet's profitability and growth possible and have proven to generate above-average value for our stakeholders, customers and collaborators. In addition, they have highly developed skills and deep/specialized knowledge that is visible and widely valued.

Identifying, attracting, developing, retaining and increasing your commitment is one of the most important challenges for companies, leaders<sup>24</sup> and the People area.

Identifying these people, developing them and properly managing their commitment is the most important challenge for the Company's leaders and managers. Leaders are responsible for knowing and un-

derstanding people management policies and procedures to efficiently manage their teams. In addition, they are responsible for aligning the team with organizational challenges and leading them towards achievement, encouraging the development, learning and commitment of each collaborator.

A team leader is challenged to be a role model, demonstrating consistent behavior, guided by the values and profile of the Molymet Leader, credibility and integrity, both in the performance of their duties and in their general behavior. His training is a fundamental part of our Company's strategy. In 2019 we prioritized working directly with them.

## - Our leader profile

Our leaders carry out their role ethically, ensuring truth and honesty in their actions. They are responsible, competent and fully aware of the business and the impact of their areas on the outcome. They are open to delivering and receiving information, generating fluent connections that create a sense of teamwork, in which each member is motivated and inspired to give the best of himself or herself. They do this by acting as they would in "their own company" and looking out for the interests of all stakeholders.

<sup>24</sup> A leader is anyone who occupies a position of headship.



GRI [404-1, 404-2]

In recognition of the importance of training and education to ensure a high-performance team, a process is carried out every year to identify the areas in need of training, with the aim of establishing training plans and development actions to provide the teams with the best training tools per subsidiary.

- 25,400hours.

of training we delivered to our collaborators in 2019.

MolymetNos*	We focus on corporate sustainability training programs. We also support our collaborators in carrying out diploma courses, specialization courses, English programs and mechanical maintenance courses.
Molynor	At Molynor we offer study leveling programs for employees who have not finished their schooling, courses in interpretation and techniques in integrated management systems, English classes and team building training systems for executives. In addition, we have a program of happy organizations (human factor) to improve organizational climate indicators and we offer training courses in sustainability.
Molymex	We have training programs related to leadership aimed at Company heads. In addition, we carry out the GPTW (Great Place to Work) workshops and the Psychosocial Risk Factor Policy dissemination program. On the other hand, Molymex Business University offers its employees the Molybdenum Transformation Professional Officer program.
Sadaci	We carry out training programs to the headquarters, according to the Quality Manual, which stipulates the necessary competences according to their particular functions. Within these activities, there are leadership courses and efficiency coaching, organizational change and safety training.
Molymet Germany	At Molymet Germany we develop training activities, with a marked emphasis on security issues, aimed at all our employees without distinction. We also carry out extensive training to promote the internal mobility of employees. In addition, we provide training in tax and control technology for operators, Lean management and industrial mechanics.

\*Note: MolymetNos includes plant and corporate employees.





GRI [404-3]

# Performance Management

100% of our subsidiaries

conduct a performance management process.

We permanently seek to promote a culture of feedback and meritocracy, providing employees with opportunities to dialogue openly and honestly about their own performance, in order to enhance the achievement of objectives and their own development.

• 05

Likewise, the Performance Management Process is intended to enable an alignment between the strategic objectives of the business and the individual goals.

Percentage of employees participating in the Performance Management process

Gender	Corporative	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany	Total
Man	100%	91%	100%	100%	84%	17%	81%
Woman	100%	89%	100%	100%	39%	88%	78%
Total	100%	91%	100%	100%	78%	35%	80%

Note: The Total values correspond to the percentage of collaborators who participate in the process with respect to the total number.



## Featured Cases

### Molymex Business University

Through Molymex Business University we provide the necessary concepts to employees and leaders so that they can bring together both the worlds of work and learning. The success of this educational program is the result of its focus on the knowledge of the Company's processes and the generation of innovations, creating an everyday culture within the working life of our employees.

Through our comprehensive training program "Molybdenum Transformation Professional

Officer", we incorporate 48% of employees into a comprehensive knowledge of the Company's work, developing skills and abilities. In 2019, 66 innovations were generated by the trainees of the Business University Molymex. Of the innovations mentioned, 13 have been successfully implemented and 53 are currently under development for implementation.



Training program, **Molymex**





# Gender equity

• 13%  
of our collaborators  
are women.

GRI [103-1, 103-2, 103-3, 405-1]

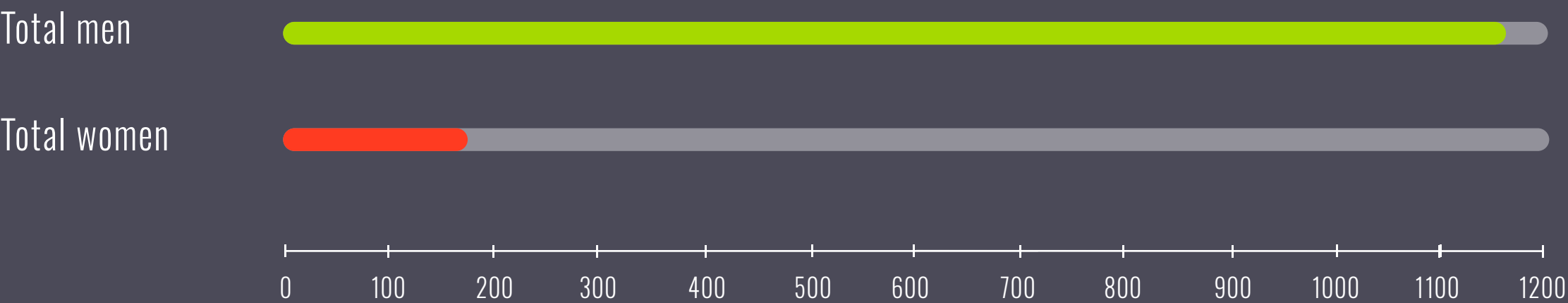
Our vision of the Company and society, together with our standards, establish that there can be no discrimination by gender.

Within the industry in which our Company operates there is an historical trend to form work teams mainly composed of men. Nevertheless, we have decided to make progress in gender equality in the coming years by increasing the number of women in our Company.

Number of women and men by branch

	MolymetNos*	Molynor	Molymex	Sadaci	Molymet Germany
Men	678	194	116	127	47
Women	98	26	21	15	16

\*Note: MolymetNos includes plant and corporate employees.



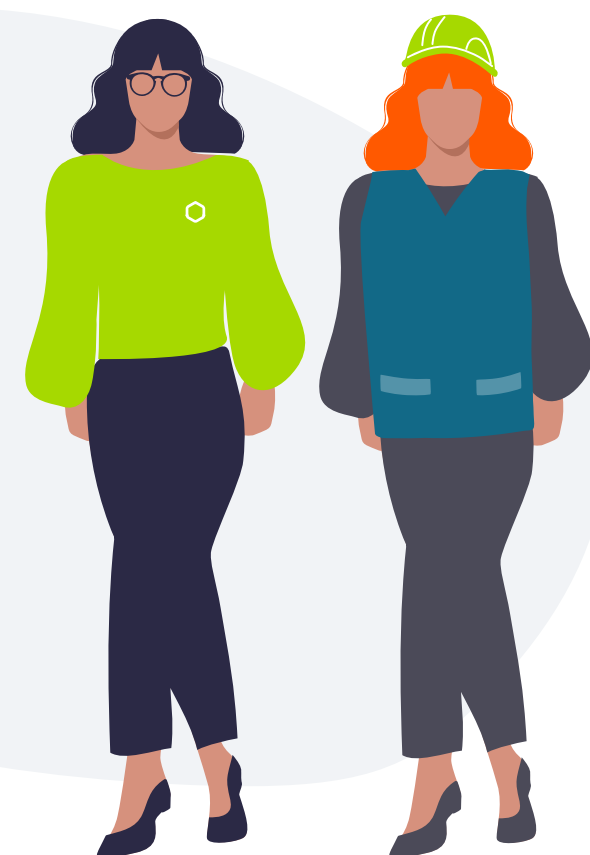
At Molymet we propose to increase the number of women and their participation in leadership positions.

12 women

were promoted to leadership positions during 2019.

42 women

were hired during 2019.



### New hires

	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany	Total
Women	27	8	2	2	3	42
Men	77	37	14	22	11	161

### Promotion of women to leadership positions

	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany	Total
2018	7	2	0	0	0	9
2019	8	3	0	1	0	12

Note: MolymetNos incorporates the Corporate area.





GRI [401-3]

Parental leave<sup>25</sup>

	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Persons entitled to take parental leave					
Women	5	1	0	3	0
Men	21	9	10	44	2
People who actually took parental leave					
Women	5	1	0	2	0
Men	0	0	10	5	0

Parental leave contributes to the greater integration of women into the working world, and in our Company all women who were entitled to maternity leave took it and returned to work at the end of that period. Meanwhile, not all fathers took their parental leave, which is a pending challenge for our Company.

<sup>25</sup> **Chile:** Parental leave is a 12-week leave, subsequent to the post-natal period, to which the working mother is entitled. In the case of the father, it can only be taken at the mother's choice, from the seventh week and at the end of the period. Consider that this leave only applies when both parents are workers.  
**Mexico:** The leave is 6 weeks before and 6 weeks after the birth. At the express request of the worker, with the prior written authorization of the social security institution's doctor, up to four of the 6 weeks' pre-birth leave may be transferred to post-birth leave. In the case of the father, the Federal Labor Act provides for 5 working days' paid leave for the birth of his children and likewise for the adoption of an infant.  
**Belgium:** Maternity leave is 15 weeks (or up to 19 weeks in the case of multiple births). Paternity leave is 10 days. In addition to this, employees may apply for other types of leave (e.g. parental leave in addition to maternity or paternity leave).  
**Germany:** Maternity leave 6 weeks before and 8 weeks after the date of birth. Parental leave can be up to 36 months (for each baby) and is possible for both the father and the mother, these can be divided into 3 shorter periods up to the child's 8th birthday. In most cases in Germany, the mother takes 12 months of parental leave and the father 3 months.



## Featured Cases

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### PROhumana Gender Alliance

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This initiative aims to sensitize our leaders to their own unconscious biases regarding gender equality in the workplace. During 2019 we implemented workshops and instances of debate and reflection on the importance of becoming aware of the unconscious biases regarding the opportunities for development and participation of women in the Company's work; we also applied the PROhumana Gender Equality Index through a qualitative evaluation to improve our management in this area.

### A female operator joins our team in Sadaci

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We started the path towards gender equity, where we took concrete actions by hiring more women in our Company. At the end of 2018, the first woman operator was hired at our Purox plant in Sadaci, which shows our progress at all levels of the organization.

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First female operator,  
**Sadaci, Belgium**





# Health and Safety

- 0 fatal accidents

were recorded in the reporting period.

- 1 accident-free year

at Molynor and Molymet Germany.



GRI [103-1, 103-2, 103-3, 403-1]

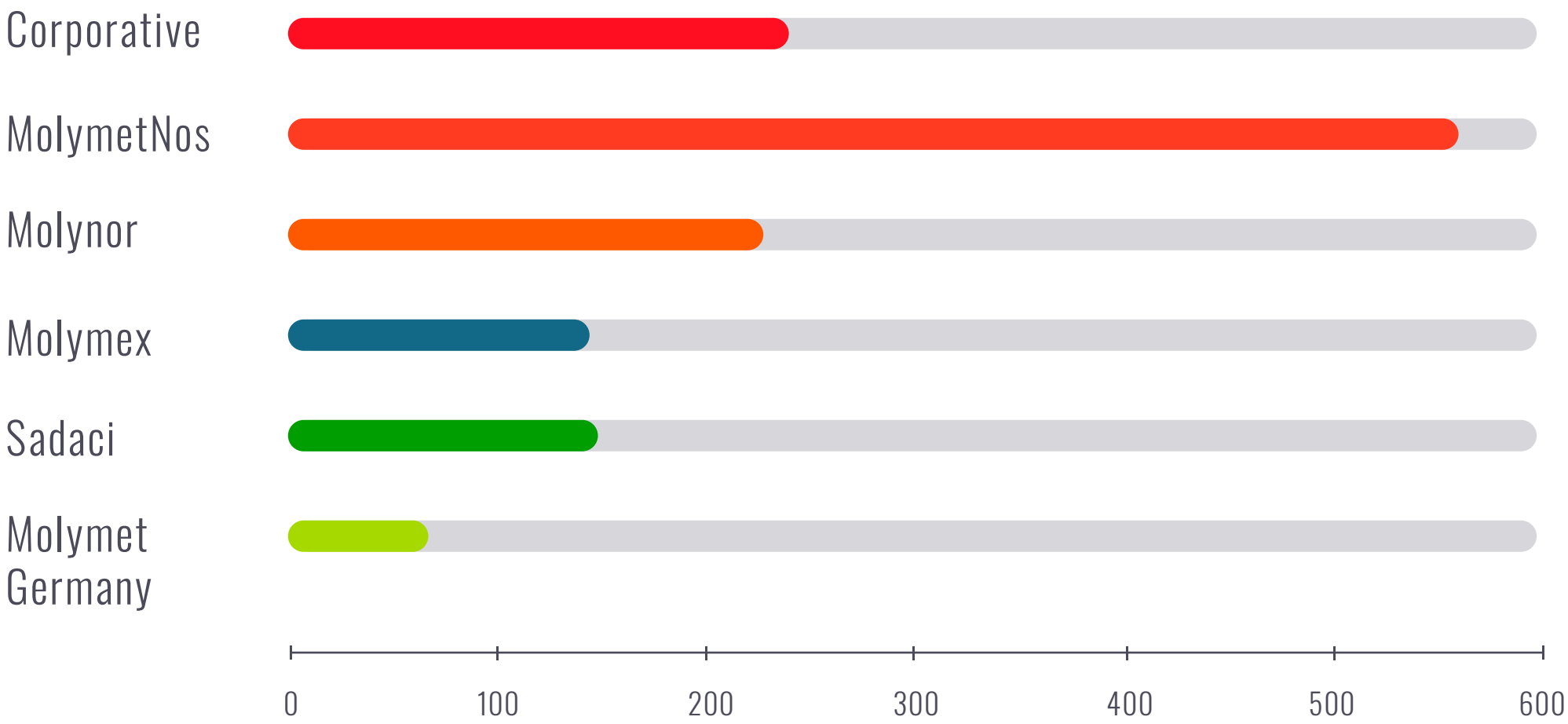
At Molymet we are committed to the health of our employees and to the highest safety standards, which is reflected in our concern for improving the well-being and quality of life of all the members of our Company, guided by our Occupational Health and Safety Policy.

With the goal of having zero accidents, we have a Health and Safety Management System that covers all employees and contractors, which is audited internally to ensure progress in this area and is subject to continuous improvement processes in order to guide, prevent, investigate, remedy and correct our system.

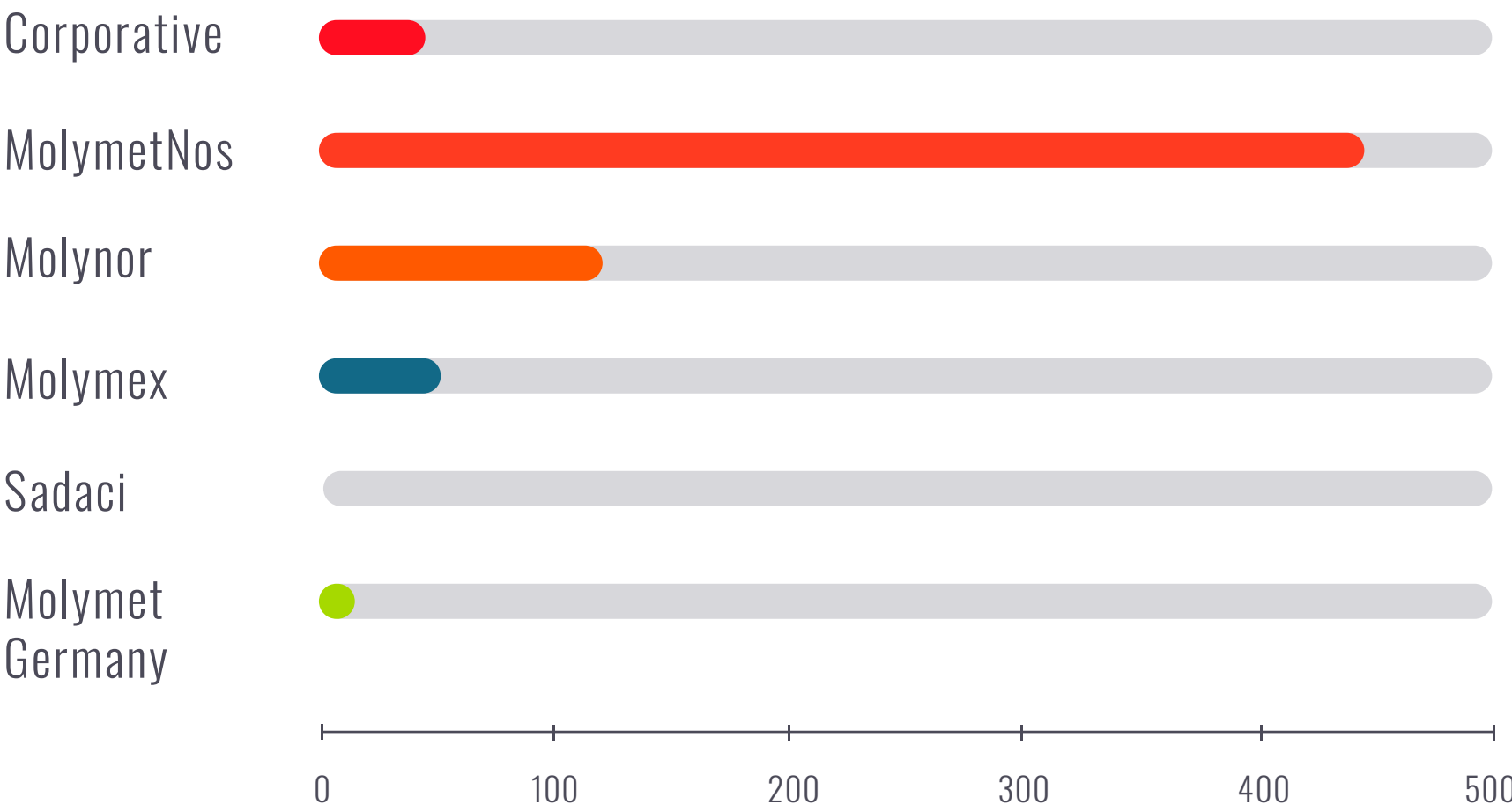


# Our collaborators

Number of collaborators



Number of contractors



Note 1: MolymetNos includes people from the Corporate area.  
Note 2: In Sadaci the number of contractors is not recorded, but will be report in 2020.





GRI [403-9]

We strive daily to develop an organizational culture based on self-care and individual responsibility for occupational health and safety, as we believe in the ability of each individual to protect his or her physical and psychological integrity. All employees are aware that sustainability also means getting to work and returning home healthy and safe. Therefore, we have implemented the best practices and safety standards in the industry.

Employee injury rate

	Corporativo	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Hours worked	378,000	1,040,147	430,081	334,514	201,891	116,083
Number of high-impact injuries	0	1	0	1	2	0
Rate	0	0.96	0.47	2.98	9.91*	0
Number of recordable injuries	0	10	10	6	11	0
Rate	0	9.61	4.68	17.93	54.48*	0

\*Note: Sadaci uses a different methodology to calculate the accident rate, which considers fewer working hours per recorded injury. This methodology will be unified in the next reporting period.



GRI [403-9]

Contractor injury rate

	Corporative	MolymetNos	Molynor	Sadaci	Molymet Germany
Hours worked	43,410	Unregistered	215,710	210,048	1,176
Number of high-impact injuries	0	0	0	7	0
Rate	0	0	0	33.33*	0
Number of recordable injuries	1	12	7	10	0
Rate	4.61	17.37	5.83	47.61*	0

\*Note: Sadaci uses a different methodology to calculate the accident rate, which considers fewer working hours per recorded injury.

Molymex does not count the working hours of contractors, but the results are 0 injuries.





GRI [403-4, 403-8]

To support the health and safety prevention work, our subsidiaries have Joint Hygiene and Safety Committees made up of employees elected by direct vote, who carry out programmed inspections in different areas, in order to evaluate the working conditions and propose improvements or corrections.

	MolymetNos <sup>26</sup>	Molynor	Molymex	Sadaci	Molymet Germany
Committee Name	Joint Hygiene and Safety Committee	Joint Hygiene and Safety Committee	Safety, Hygiene and Environment Commission	Committee on Prevention and Protection at Work (CPBW) <sup>27</sup>	Occupational Safety Council
Nº of employees represented on the Committee	577	211	137	142	6
Percentage of employees represented	100	100	100	100	10
Nº of participants collaborators	6	6	16	5	5
Nº of executive participants	6	6	0	5	1

<sup>26</sup> At MolymetNos we have four additional committees focusing on health and safety: (1) Joint Health and Safety Committee (contractor companies), (2) Contractor Committee, (3) Psychosocial Risk Committee, and (4) Joint Corporate Health and Safety Committee.

<sup>27</sup> Every month, members of the CPBW (Committee for Prevention and Protection at Work) can put a new item relevant to health and safety on the CPBW agenda. During the meeting they also discuss accidents, statistics, actions of the medical services and tasks of the prevention department.



GRI [403-5]

Molymet's Health and Safety Program is fundamentally oriented towards providing training to employees so that they can understand and evaluate the risks associated with the activity they perform, in addition to generating preventive actions.

We train employees in legal skills in order to comply with the safety protocols and technical standards that guide our operations. We also carry out activities to prevent risks and act appropriately in case of emergencies.

	Corporative	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Number of health and safety training activities	2	17	125	36	10	12
Percentage of employees who participated in training activities, in relation to the total	4%	98%	93%	84%	100%	100%
Hours of training	52	2,645	2,715	859	761	274





## Featured cases: Superior Standards

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### We integrated the standard ISO 45001

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At Sadaci, we managed to integrate the ISO 45001 standard, following the international health and safety standards. In order to obtain the certificate, we implemented changes in the Safety Management System, involving the leaders and integrating other processes of the Company, increasing the participation of collaborators, performing a context and stakeholder analysis, focusing on training and control of external processes.

### 1,545 accident-free days at Molymet Germany

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The high safety standard we maintain at Molymet Germany has resulted in 1,545 accident-free days. This is due to the strict adherence to safety rules and instructions, which leads to a continuous improvement of our operational processes.

We have an occupational safety team in which all departments participate and which organizes training in safety matters and the evaluation of accidents and risks. The implementation of a bonus system for accident-free days helps to maintain a high level of motivation for each employee to take care of themselves and their colleagues.



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GRI [102-41]

# Labor relations

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• All our subsidiaries have unions

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• 05

GRI [103-1, 103-2, 103-3]

Ongoing dialogue and communication are highly valued as a means of establishing trusting and long-term relationships in our Company. These negotiations can be direct or with a state organization that acts as an intermediary to achieve a transparent dialogue. Subsidiaries respond to the current legislation of each country in order to carry out the negotiations, which includes different processes.

## Unionization

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During 2019 we started working to strengthen the alignment and organizational commitment of our teams with the Company, which will translate into a Labor Relations Strategy that is aligned with Moly-met's culture and purpose.

In order to generate the strategy, we have defined a collaborative labor relations model, aligned with the Purpose, Strategic Agenda, Corporate and People Sustainability Strategy through the definition of a strategy that is consistent and integrated with Moly-met's culture.





GRI [102-41]

Unions in Molymet

	Molymet
Number of unions in the organization	5
Number of collaborators attached to the unions	603
Number of employees covered by collective agreements	467

Note: This data considers only MolymetNos, Molynor and Molymex, since the Belgian and German laws do not allow information on trade unions to be made available to the Company.

At Molymet we conduct our negotiations in an atmosphere of respect, fostering good communication to reach agreements that are convenient for both parties.

At MolymetNos we conducted negotiations with an organization of collaborators during 2019, which presented a legal strike of 38 days, and then signed a collective contract for 36 months, from 2019 to 2022.

At Molynor we also engage in collective negotiations, within the time limits set by law, with both unions. The first one with a collective contract valid between 2019 and 2021 and the second one between 2018 and 2021.

At Molymex, in accordance with the regulations, we have a collective negotiation process in which a third body participates, the National Union of Collaborators, which ensures the proper functioning of the negotiation and has offices in Mexico City for the implementation of the agreement. Negotiations are annual and in 2019 wages and benefits were negotiated.

At Sadaci and Molymet Germany we are governed by European Union laws which state that the data of union members is protected, and therefore the Company is not aware of such information. Negotiations are conducted every two years through union representatives.





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# Our relationship with suppliers and the community

• 06





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# Supplier evaluation

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Molymet operates with

• **2,962 suppliers globally**

GRI [103-1, 103-2, 103-3, 102-9]

At Molymet we work with the cross-cutting purpose of adding value to what we do, which is why we look for suppliers who share the value we place on excellence, the ethical vision that defines us, the focus on sustainable development, respect for labor rights, the privilege of local purchases and adherence to business practices.

In 2019 we implemented our new Purchasing, Services and Authorization Policy, aimed at homogenizing MolymetNos

and Molynor's criteria in these matters. The document confirms our adherence to high standards of ethics and integrity by suppliers and contractors, in addition to ensuring equal opportunities for contract awards.

In order to comply with all legal obligations and regulations imposed by the market in each country where we are present, we count on self-management tools that allow us to incorporate strategic partners to our value chain.

• 06



# Evaluate and improve

Our suppliers are a relevant stakeholder group for our operations, so during 2019 we sought to improve our procurement processes through changes in our Supplier Evaluation and Acquisition Policy and extraordinary measures to enhance relationships such as visits to our facilities and support for industry growth.

At Molymet we perform an annual evaluation of our suppliers in terms of quality, delivery opportunity and other issues. The result of this evaluation determines the supplier's continuance for the following year.

## Evaluation of suppliers on social criteria

	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
New Suppliers	179	134	1	125	29
New suppliers examined according to social criteria	179	134	1	42	0
Percentage (%)	100%	100%	100%	33.6%	0

Note: At Molymet Germany we do not evaluate based on social criteria.





Evaluation of suppliers on criteria related to social impact

	MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Total suppliers	1,300	279	330	804	249
Suppliers whose impact has been evaluated	197	271	28	42	80
Suppliers with negative social impact	6	3	0	0	0

Of the 279 suppliers that we worked with at Molynor during 2019, we evaluated 271 of them through the service conformity process. As a result, we agreed to make improvements with two of the three suppliers that had negative impacts with deviations in the supply chain and terminated the business relationship with the other for serious repeated non-compliance. At Molymex we evaluate the suppliers under contract on a monthly basis through an evaluation platform, and then we make the results transparent to them.

Currently, we do business with 330 suppliers, of which 94% are national and 60% are located in the regions of the State of Sonora.

At Sadaci, the evaluation of suppliers on environmental, health and safety issues did not show any negative social impact. Suppliers who join the Company for the first time are subject to a social evaluation before being contracted.

At Molymet Germany we perform supplier evaluations related to raw materials, packaging and supplies, calibration and testing services, laboratory test equipment and materials. New suppliers are subject to an evaluation of suitability through certification criteria, quality of product delivery, service, payment terms, delivery reliability, complaint handling, packaging and transport routes.



# Community relationships

## • Our 5 subsidiaries

make contributions to the community.

# 197.11 KUSD

We invest in surrounding local communities.

GRI [103-1, 103-2, 103-3]

At Molymet we value transparency, ongoing dialogue and ethical conduct as vital elements in long-term, trusting relationships with our stakeholders.

With a strong purpose of assuming the challenge of maintaining a fluid communication, we try to develop effective and pertinent channels, taking into account their particularities and our intention of demonstrating a sustainable behavior.

Our community management focuses on building relationships that are based on respect towards the interests of the communities and the territories in which we operate, considering their values and culture. We promote actions and programs that focus on local development, involving the community in the development of proposals to meet their interests and growth needs. To this end, we have a Community Relations Policy that guides the actions of each of our subsidiaries.



Anticipated Environmental Citizen Participation, due to Modernization project, **MolymetNos**





GRI [413-1]

# We work with our community<sup>28</sup>

We firmly believe that it is necessary to create spaces for participation, knowledge and reflection regarding the problems of the environment in which we operate, because we share the territory with various local actors where communication and interaction are fundamental for a fluid and profitable coexistence. Molymet actively participates in the articulation and management of initiatives, with specific work guidelines for the communities in which each of our facilities is inserted.

We care about sport, culture and education, but we also promote transparency in our actions. In this context, our neighbors can always get to know our facilities and be part of the development of the projects we carry out.



Educational visits to Domingo Matte School, Mechanics Specialty **MolymetNos**, San Bernardo, Chile

<sup>28</sup> To see more about Molymet's relations with its communities you can go to: <https://molymet.com/sustentabilidad/comprometemos-con-comunidades/>



GRI [413-1]

# Initiatives carried out with the community

MolymetNos	Molynor	Molymex	Sadaci	Molymet Germany
Training in project management	Grant fund for educational projects	We sponsor sports in the community	Support to schools through internships, visits, etc.	Delivery of samples and information on molybdenum to the local museum
Conferences and workshops on environmental education	Support for artistic activities in support of the community	Recycling campaigns in community schools	Awareness and free controls for the prevention of bowel cancer	Support to the voluntary fire brigade by financing activities and equipment
Educational visits to the facilities	Community support services	Support for schools through the "Rescuing Your School" program of the Ministry of Education and Culture (SEC)	ECO² Environmental Project to increase the vegetation buffer zone between the urban and industrial areas	Open weekend during the recreation day of the Chemical Industrial Park
Molymet Heritage Day		Guided tours of the plant		
Educational bicycle rides around the natural and cultural heritage of San Bernardo		Contribution to the Municipality of Cumpas to cover the needs of the community		
16 KUSD grant fund for neighbors of the municipality that hosts us		Molymex summer camp		





# Annexes

• 07



# GRI content index

Category	Code	Name	Page
GRI 102: General Disclosures 2016	Disclosure 102-1	Name of the organization	2
	Disclosure 102-2	Activities, brands, products, and services	14 and 20
	Disclosure 102-3	Location of headquarters	2
	Disclosure 102-4	Location of operations	13 and 20
	Disclosure 102-5	Ownership and legal form	2
	Disclosure 102-6	Markets served	20
	Disclosure 102-7	Scale of the organization	20 and 22
	Disclosure 102-8	Information on employees and other workers	63
	Disclosure 102-9	Supply chain	86





Category	Code	Name	Page
GRI 102: General Disclosures 2016	Disclosure 102-10	Significant changes to the organization and its supply chain	36
	Disclosure 102-11	Precautionary Principle or approach	28
	Disclosure 102-12	External initiatives	23
	Disclosure 102-13	Membership of associations	23
	Disclosure 102-14	Statement from senior decision-maker	5
	Disclosure 102-16	Values, principles, standards, and norms of behavior	18 and 27
	Disclosure 102-17	Mechanisms for advice and concerns about ethics	28
	Disclosure 102-18	Governance structure	24
	Disclosure 102-22	Composition of the highest governance body and its committees	24
	Disclosure 102-23	Chair of the highest governance body	5 and 24
	Disclosure 102-24	Nominating and selecting the highest governance body	24
	Disclosure 102-30	Effectiveness of risk management processes	29
	Disclosure 102-40	List of stakeholder groups	23



Category	Code	Name	Page
GRI 102: General Disclosures 2016	Disclosure 102-41	Collective bargaining agreements	83-84
	Disclosure 102-42	Identifying and selecting stakeholders	23
	Disclosure 102-43	Approach to stakeholder engagement	23
	Disclosure 102-44	Key topics and concerns raised	9
	Disclosure 102-45	Entities included in the consolidated financial statements	9
	Disclosure 102-46	Defining report content and topic Boundaries	9
	Disclosure 102-47	List of material topics	10
	Disclosure 102-48	Restatements of information	There wasn't
	Disclosure 102-49	Changes in reporting	9
	Disclosure 102-50	Reporting period	9
	Disclosure 102-51	Date of most recent report	9
	Disclosure 102-52	Reporting cycle	9
	Disclosure 102-53	Contact point for questions regarding the report	2





Category	Code	Name	Page
GRI 102: General Disclosures 2016	Disclosure 102-54	Claims of reporting in accordance with the GRI Standards	9
	Disclosure 102-55	GRI content index	92-98
	Disclosure 102-56	External assurance	There wasn't
GRI 103: Management Approach 2016	Disclosure 103-1	Explanation of the material topic and its Boundary	27-89
	Disclosure 103-2	The management approach and its components	27-89
	Disclosure 103-3	Evaluation of the management approach	27-89
GRI 205: Anti-corruption 2016	Disclosure 205-1	Operations assessed for risks related to corruption	28
	Disclosure 205-2	Communication and training about anti-corruption policies and procedures	28
	Disclosure 205-3	Confirmed incidents of corruption and actions taken	28
GRI 301: Materials 2016	Disclosure 301-1	Materials used by weight or volume	57
GRI 302: Energy 2016	Disclosure 302-1	Energy consumption within the organization	42
	Disclosure 302-3	Energy intensity	43
	Disclosure 302-4	Reduction of energy consumption	41



Category	Code	Name	Page
GRI 303: Water 2018	Disclosure 303-1	Interactions with water as a shared resource	45
	Disclosure 303-2	Management of water discharge-related impacts	49
	Disclosure 303-3	Water withdrawal	45-46
	Disclosure 303-4	Water discharge	49-50
	Disclosure 303-5	Water consumption	47
GRI 304: Biodiversity 2016	Disclosure 304-3	Habitats protected or restored	39
	Disclosure 304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	38
GRI 305: Emissions 2016	Disclosure 305-1	Direct (Scope 1) GHG emissions	53
	Disclosure 305-2	Energy indirect (Scope 2) GHG emissions	53
	Disclosure 305-7	Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions	54
GRI 306: Waste 2016	Disclosure 306-1	Waste generation and significant waste-related impacts	49
	Disclosure 306-2	Management of significant waste-related impacts	58-59





Category	Code	Name	Page
GRI 306: Waste 2016	Disclosure 306-3	Significant spills	49
	Disclosure 306-5	Water bodies affected by water discharges and/or runoff	49
GRI 307: Environmental compliance 2016	Disclosure 307-1	Non-compliance with environmental laws and regulations	54
GRI 401: Employment 2016	Disclosure 401-1	New employee hires and employee turnover	65
	Disclosure 401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	66
	Disclosure 401-3	Parental leave	74
GRI 403: Occupational health and safety 2018	Disclosure 403-1	Occupational health and safety management system	76
	Disclosure 403-4	Worker participation, consultation, and communication on occupational health and safety	80
	Disclosure 403-5	Worker training on occupational health and safety	81
	Disclosure 403-8	Workers covered by an occupational health and safety management system	80
	Disclosure 403-9	Work-related injuries	78-79



Category	Code	Name	Page
GRI 404: Training and education 2016	Disclosure 404-1	Average hours of training per year per employee	69
	Disclosure 404-2	Programs for upgrading employee skills and transition assistance programs	68-69
	Disclosure 404-3	Percentage of employees receiving regular performance and career development reviews	70
GRI 405: Diversity and equal opportunity 2016	Disclosure 405-1	Diversity of governance bodies and employees	63 and 72
GRI 413: Local communities 2016	Disclosure 413-1	Operations with local community engagement, impact assessments, and development programs	90-91
	Disclosure 413-2	Operations with significant actual and potential negative impacts on local communities	54
GRI 414: Suplier social assessment 2016	Disclosure 414-1	New suppliers that were screened using social criteria	87
	Disclosure 414-2	Negative social impacts in the supply chain and actions taken	87





