

Enabling a Healthier World

Lonza

Sustainability Report

2022



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Our Commitment to Sustainability



Dear Stakeholders,

It is my pleasure to report another positive year for sustainability across Lonza Group. During the last twelve months, we have enhanced our systematic approach to safety and sustainability. The leadership of our Environment, Social and Governance (ESG) efforts is with the Board of Directors and the Executive Committee that leads the overall implementation.

Since 2021, we have focused our activities on seven key sustainability areas aligned with the UN's Sustainable Development Goals (SDGs) and our material topics. These topics range from climate and water action to people development, gender equality and customer satisfaction metrics. We have assigned each SDG to a member of the Executive Committee (EC) and a Senior Program Manager, who are responsible for driving improvements across our business.

We measured progress against our sustainability targets throughout 2022 and I am pleased with the progress this year in key areas such as water management, supply chain responsibility, people development and gender equality.

Since this year, 25% of the company performance metric used to calculate bonuses is determined by progress against our ESG targets. This ensures that sustainability will remain an integral part of every employee's daily work and that sustainability achievements are recognized and rewarded as a core strategic pillar of Lonza's long-term success.

From mRNA vaccines against COVID-19 to antibody-drug conjugates for cancer treatment and cell and gene therapy innovations for novel treatments, our products continue to help our customers deliver for their patients and create real societal benefits. We know, however, that there remains a complex journey ahead to mitigate the environmental impact of our operations, as we continue to drive ambitious levels of growth across the company.

We are constantly working to improve our water intensity and circularity. We are also working to improve our energy footprint, buildings and operations, and the efficiency of the ecosystem that supplies our raw materials and services.

We continue to have high ambitions and high confidence to deliver with a decreased footprint across the supply chain. We know that this will not be a walk in the park and that challenges remain, such as defining a science-based roadmap to achieve net-zero targets and driving for Scope 3 reductions. We are actively seeking ways to achieve carbon neutrality before 2050. This report includes further examples of these initiatives.

We are confident that, through our sustainability program, we can steadily increase Lonza's contribution to society. By motivating and guiding our workforce, reducing our environmental impact and enhancing our customer experience, we will continue to fulfill our purpose of enabling a healthier world.

Best regards,
Pierre-Alain Ruffieux
Chief Executive Officer (CEO)

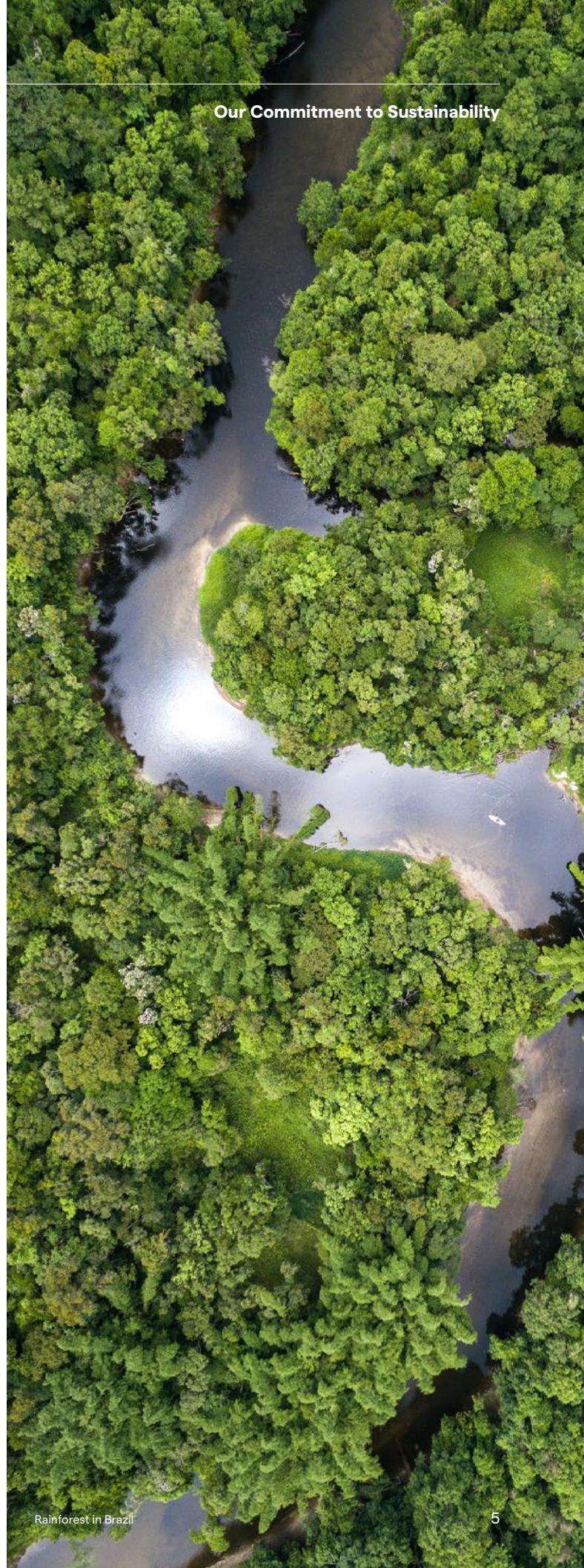
Our Journey

Safety and sustainability are essential elements of how we do business. We foster transparency and reporting in line with the Global Reporting Initiative (GRI) Standards, a globally accepted industry practice for tracking performance on a range of economic, environmental and social indicators.

Our 2022 Sustainability Report provides insights into our renewed commitments and performance relating to the most relevant sustainability topics for our business and our stakeholders.

We grouped sustainability initiatives around our material topics and selected key [Sustainable Development Goals](#) (SDGs). SDGs are the United Nations' global blueprint to achieve a better and more sustainable future for humanity. While the UN has identified 17 SDGs to address global challenges, we have selected seven SDGs around which to build our initiatives and matched each to our material topics (see GRI Index). This Environment, Social and Governance (ESG) framework will enable us to prioritize sustainability initiatives and create a meaningful program that is relevant to our business. It supports and guides us on our journey to develop a robust action roadmap for the mid- and long-term, while taking our existing targets and achievements into account. The success of our ESG program depends on individual and collective effort and is a pre-requisite to our overall success.

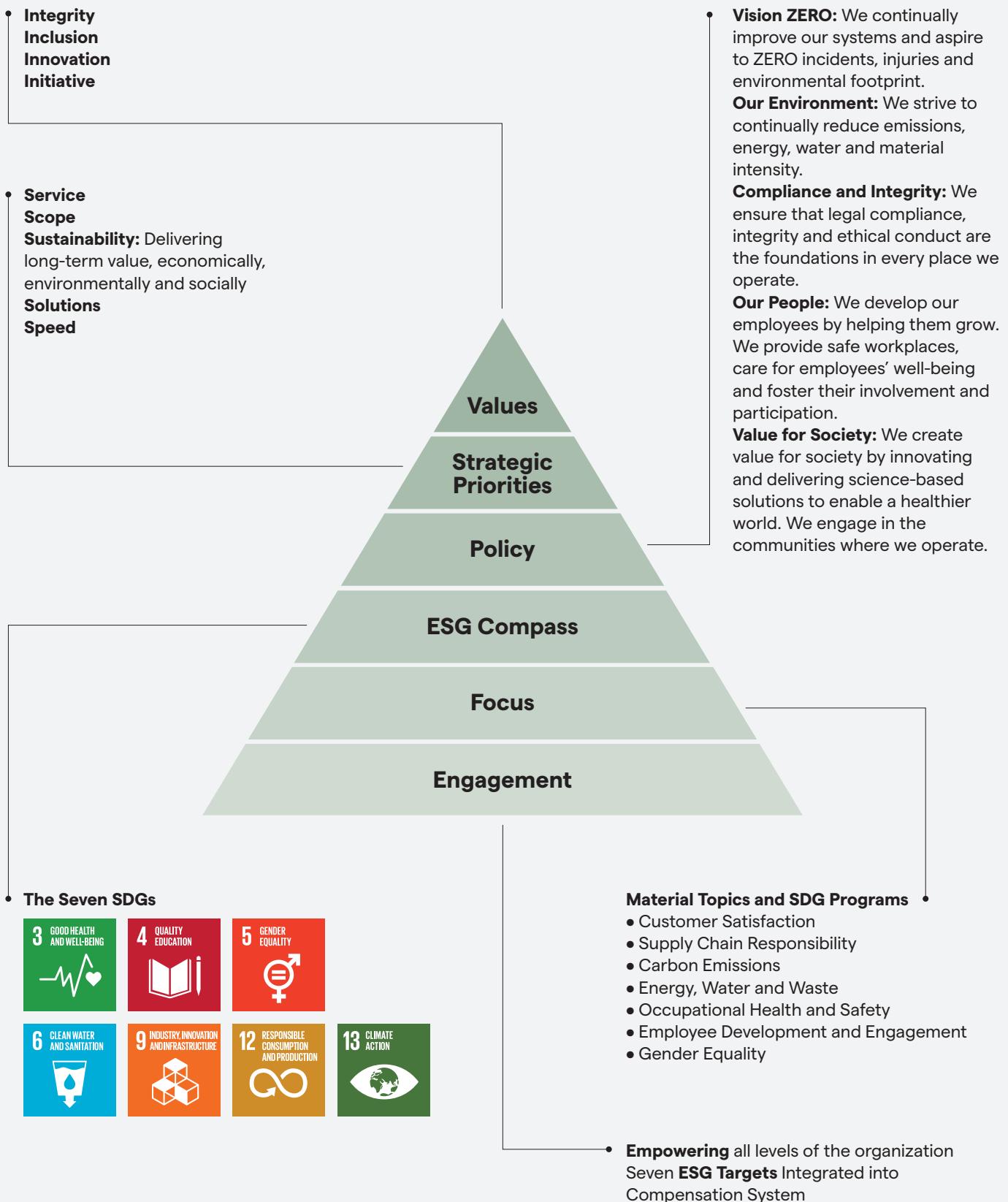
Each of the seven SDGs is directly assigned to an EC member, who, in turn, has nominated a Program Manager to develop an effective program around each goal. As of 2022, executive compensation is aligned with these SDGs and related metrics, with collective accountability. ESG metrics are also included in company performance measurements and reward and recognition allocations for the global employee community. For more information, please see the [Remuneration](#) section of our Annual Report.



Rainforest in Brazil

Our Sustainability Framework

Enabling a Healthier World in a Sustainable Way



Interpreting the Seven SDGs



Good Health and Wellbeing: We enable a healthier world by working with our customers to overcome some of the greatest challenges in patient treatment. We aim to achieve this with products, services and cutting-edge technologies that can help to save, extend and enhance lives. At the same time, the safety and wellbeing of our employees has always been a top priority, and a healthy and safe workforce contributes to our success. We also want to improve our overall contribution to ESG in society by investing in evaluating and improving internal governance for our ESG program and external reporting.



Climate Action: Based on scientific evidence, greenhouse gas (GHG) emissions contribute to global warming. This affects the climate globally, and impacts the planet, health and wellbeing. To enable a healthier world, we must take decisive steps to reduce our GHG emissions over the next decade and ultimately aim for net-zero GHG emissions by 2050. Our global site network collaborates to evaluate projects and share best practice on how to reduce emissions from fuel use, increase heat recovery and reduce waste. We are rolling out a program to fulfil our ambitions to procure and source all electricity from renewable sources by 2025 (where available) and we are introducing heat recovery and energy efficiency programs in our facilities and buildings.



Gender Equality: A diverse global employee community - which embraces differences in characteristics, preferences, perspectives, and beliefs - contributes to competitive advantage and community culture. As part of our effort to enhance our diverse workforce, we aim to improve the percentage of females in management roles. We have introduced sessions for hiring managers to drive awareness of our diversity objectives and the importance of removing obstacles that may inhibit the success and development of our female colleagues. We encourage the sharing of best practices internally and plan to expand initiatives to support females at all levels.



Industry, Innovation and Infrastructure: We continuously invest in innovation while further improving operational excellence. We are also creating vital, game-changing technologies, including gene editing and automated therapy manufacturing systems. We aim to embed sustainability into our organic growth and footprint expansion by design. To this end, we have implemented new standards for “sustainability by design”, aiming to reduce energy consumption for key utilities such as HVAC and water quality systems, as well as more efficient building envelopes and lighting.



Responsible Consumption and Production: We continue to reduce our environmental impact and have implemented programs to limit material consumption and waste generation. We aspire to source materials from responsible suppliers that meet strict compliance standards and have action plans in place to reduce their emissions, waste and natural resources in line with our expectations, alongside climate action plans that support our Scope 3 emissions reduction plan. A new Supplier Code of Conduct has been rolled out, and we are conducting in-depth risk assessments of our suppliers. We are also creating a roadmap to reduce the carbon footprint of our supply chain (Scope 3) and will engage suppliers to capture their efforts to reduce greenhouse gases.



Clean Water and Sanitation: Access to clean, plentiful and potable water is a basic human need and is critical to ensuring the quality of our products. We need to protect the water ecosystem to ensure that this is not contaminated by pharmaceutical substances or other pollutants. To aim for continual improvement, our sites conduct water risk and water balance assessments, and analyze water consumption and discharge quantity and quality. A network of representatives from each site also regularly share best practices for reducing and optimizing water consumption.



Quality Education: We recognize that our people are the cornerstone of our success and we want to see them grow. As we develop innovations in pharma, biotech and nutrition, we aim to increase partnerships and grow our contribution to the scientific community. Alongside investing in and collaborating with the communities in which we operate, we are working on better oversight of our internal educational programs to nurture the development of our employees. This visibility will help us improve governance and define next steps.

At Lonza, the seven SDG programs contribute to our societal value and ensure a long-term focus in our decision-making. The value we create for our stakeholders can be summarized as follows:

- To our employees: through ensuring fair remuneration, development, training, progression, and rewarding career opportunities
- To customers, healthcare partners and patients: through supplying therapeutic and health ingredients and drug products and co-innovating new therapies and technologies to enable better patient outcomes
- To suppliers and business partners: through employment and profits, fair relationships, leadership, and support in reducing their environmental footprint
- To shareholders: through increasing the value of their stockholding
- To society: through healthcare benefits, interaction in communities, volunteering, donations

It is difficult to quantify the external impacts of these value contributions besides the direct monetary value or the "cost" to create this value. Raw materials, air, energy, emissions and water must also be viewed as costs to society, as they use common resources. The same is true of infrastructure, such as our use of roads, education and transport. As a proxy to estimate the magnitude of the cost to society in relation to the value, we can monetize the impacts using our carbon footprint in terms of CO₂ equivalents for Scope 1, 2 and 3. We can then compare this to the net value added to our stakeholders (3,703 mio CHF), which is a proxy to estimate the value for society. If we assume a carbon price of 100 CHF, the result (the "cost" of creating this value) would be 235 mio CHF, which is a fraction (around 6%) of the value created for society.

SDG 3 Good Health and Wellbeing

"As a leading partner to the healthcare industry, we are well positioned to deliver meaningful change when it comes to Good Health and Wellbeing. Our focus on environment, safety, quality and 'right first time' enables us to best serve the planet, our employees, our customers, and their patients in enabling a healthier world."

Pierre-Alain Ruffieux
Chief Executive Officer



About Us

Founded in Switzerland 125 years ago in 1897, we are a leading strategic global partner to the healthcare industry. We work to enable a healthier world by supporting our customers to deliver new and innovative medicines that help treat a wide range of diseases. We achieve this by combining technological insight with world-class manufacturing, scientific expertise and process excellence. Our unparalleled breadth of offerings enables our customers to commercialize their discoveries and innovations in the pharmaceutical, biotech and nutrition markets.

We operate across five continents and our structure of four divisions has been designed to capture synergies and meet the needs of our global customers. More information on our business and markets is provided in the [Our Businesses](#) section of our 2022 Annual Report.

Economic Performance

We strive to create value for our shareholders, customers, employees, suppliers and communities. We distribute our derived economic value to various stakeholders through a variety of streams. These include employees through compensation and benefits, shareholders through share price appreciation and dividends, suppliers and service providers through raw material and service contracts, and society and governments through taxes and local community projects. Part of the earned value is retained in the company for further growth through innovation, strategic investments and bolt-on acquisitions. Our tax report/policy is available on our website. For further information, please see the [Financial Statements](#) section of our 2022 Annual Report.

Lonza's Business Divisions

Small Molecules	Cell & Gene
Biologics	Capsules & Health Ingredients

Net Value Added to the Various Stakeholders 2022		
Item	Million CHF	%
Total	3,703	100
To employees	2,139	57.8
To the company	992	26.8
To shareholders	228	6.2
To public authorities	251	6.8
To lenders	95	2.6
To non-controlling interests	(2)	(0.1)

We continue to focus on our growth trajectory by making targeted investments while optimizing our business and product portfolio. In 2023, we will prioritize the following key internal initiatives:

- Fully integrating material ESG measures and aligning of our ESG ambitions with compensation systems
- Continuing to focus on business continuity, alongside the health and safety of our employees
- Continuing levels of capital expenditure (CAPEX) investment to meet customer demand and deliver sustained growth
- Focusing on talent attraction, retention and development to support expansion and sustainable growth
- Establishing and strengthening systems and processes across our divisions, to optimize efficiency and delivery

Governance

In accordance with the law and the Lonza Articles of Association, the Board of Directors (Board) is the most senior management body of Lonza Group. The Board defines the strategic direction and is responsible for the supervision of the persons entrusted with the Group's management. The members of the Executive Committee (EC) are appointed by the Board. The EC is responsible for managing Lonza globally and for implementing policies and strategies as defined by the Board.

Lonza's Financial Performance 2022

6,223 mio.

Sales in CHF

1,995 mio.

CORE EBITDA in CHF

32.1

CORE EBITDA margin in %

11.4

ROIC in %

Echeveria elegans

Sustainability Governance Structure



Governance and oversight over sustainability and ESG is with the Board, headed by the Chairman of the Board, with specific aspects covered by the Board's committees (the Nomination and Compensation Committee, Audit and Compliance Committee, and Innovation and Technology Committee). While the Board acts as sponsor and overall owner of the ESG program, its implementation is the responsibility of the EC. The Board and its Committees review and endorse Lonza's sustainability efforts and reporting, including a regular update on Lonza's sustainability programs and selected key performance indicators, as well as regular updates on new regulatory and other developments relating to ESG which are of importance to our business and stakeholders.

The Sustainability and Risk Committee (SRC), led by the Lonza Group General Counsel and Company Secretary, manages identified material topics (as shown in the Materiality Matrix on page 15) and is responsible for sustainability reporting. Reporting to Lonza's Group General Counsel, the Head of Global Sustainability and the Head of Global Environment, Health and Safety (EHS) and their teams are responsible for proposing the corporate sustainability strategy and for the implementation and oversight of the Safety and Sustainability Policy. At a divisional level, sustainability representatives report to each Division Operations Head to support the implementation of ESG initiatives and divisional programs.

Sustainability governance at corporate level is assured by the SRC and the Safety and Sustainability Steering Board (SSSB). The SRC meets on a monthly basis and includes members from Global Sustainability, Ethics & Compliance, EHS, Corporate Responsibility and Enterprise Risk Management. Its responsibilities include the following:

- Defining Lonza's sustainability strategy implementation and alignment with global functions, e.g., Operations, Human Resources, Finance, etc.
- Providing leadership, driving awareness and engagement in sustainability
- Overseeing the running of programs aligned with the seven UN SDGs and supporting their Program Managers
- Serving as a link and source of dialogue between internal networks and external stakeholders
- Encouraging sharing of established best practice across divisions and functions

The SSSB deals with the operational aspects of safety and sustainability, and meets on a quarterly basis. It includes global management from EHS, Sustainability, Operations, Engineering, Procurement, HR, Corporate Responsibility and Enterprise Risk Management, as well as the Head of Group Operations (who is also an EC member). Its responsibilities include:

- Monitoring the EHS and sustainability performance of the business divisions and aligning corporate and divisional targets
- Identifying significant operational EHS and sustainability risks, emerging issues, regulatory developments and compliance matters
- Endorsing global EHS and sustainability procedures and standards and ensuring involvement of the business divisions
- Reviewing quarterly audit summaries and significant governmental enforcement notices, citations and actions to drive appropriate corrective actions and programs

We further enhanced our ESG agenda by working with the Board and Management to embed ESG targets into our compensation framework as of 2022. These targets include relevant material topics aligned with the seven SDGs. The Board and its Nomination and Compensation Committee are conducting an independent evaluation of Lonza's ESG program on an annual basis, with a direct impact on compensation and (if warranted) organizational practices and composition of the EC. At our Annual General Meeting, the feedback from our stakeholders and the election or re-election of each Board member provide good annual measures of the Board's evaluation by external stakeholders. The Sustainability Report is reviewed by the Nomination and Compensation Committee (NCC) and the Audit and Compliance Committee (ACC), with final approval by the Board of Directors.

Further details on Corporate Governance and the Group Structure can be found in the [Corporate Governance](#) section of our 2022 Annual Report.

Employee Community

17,494

Employees (FTE)
2021: 16,218

7.9%

Growth in employee population
2021: 15.2%

21%

Internal promotion rate¹
2021: 22.7%

28

Countries with employee presence
2021: 30

12.8%

Total turnover
2021: 12.7%

110+

Nationalities

Mainly from Switzerland, United States, China, and United Kingdom

Employee Community

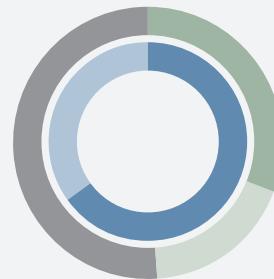
Our employee population continued to grow throughout 2022, to 17,494² colleagues by the end of the year. We focused on the onboarding, training and development of our new employees, while ensuring that colleagues who joined in a high growth period continued to feel supported to learn and develop – and to ultimately grow and stay at Lonza.

To support talent attraction and retention, we regularly analyze and monitor voluntary and involuntary turnover at a site, division, function and group level. Like for many other companies, 2022 brought challenges with a turnover rate of 12.8% (including voluntary and involuntary cases), similar to the previous year. The current turnover still leaves us positioned in the average range of our industry. We employ tools to analyze the reasons for turnover (such as our Lonza Exit Survey and Voice of Employee Survey) and also focus on initiatives to address the necessary changes.

Sustainable, lean, data-driven and technology-enabled solutions continued to improve our efficacy and consistency in 2022, enhanced with a focus on a leader-driven approach. This includes a new Leadership Framework to drive best-in-class leadership across the company, combined with additional and enhanced people dashboards to empower people managers with access to the relevant information to manage their team's success. Together, we believe that our new technology, digitization, automation, and best-in-class people managers will ensure sustainable performance into the future.

Full-time Employees

16,894

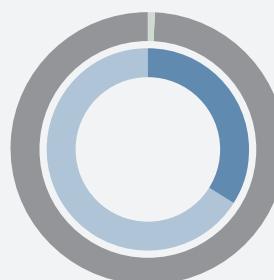


Americas (31%)
APAC (18%)
EMEA (51%)
Headcount

Male (65)%
Female (35 %)
Other (<1%)

Part-time Employees

820

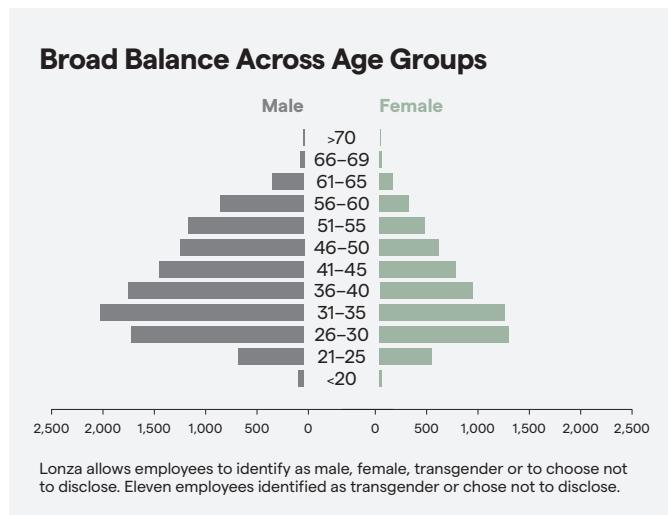
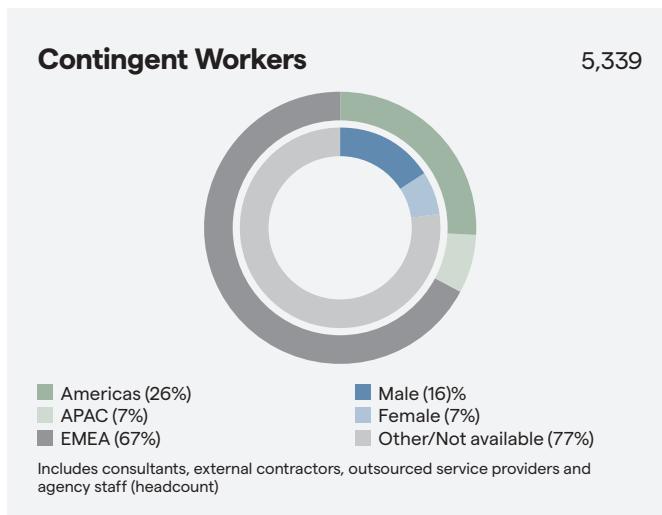
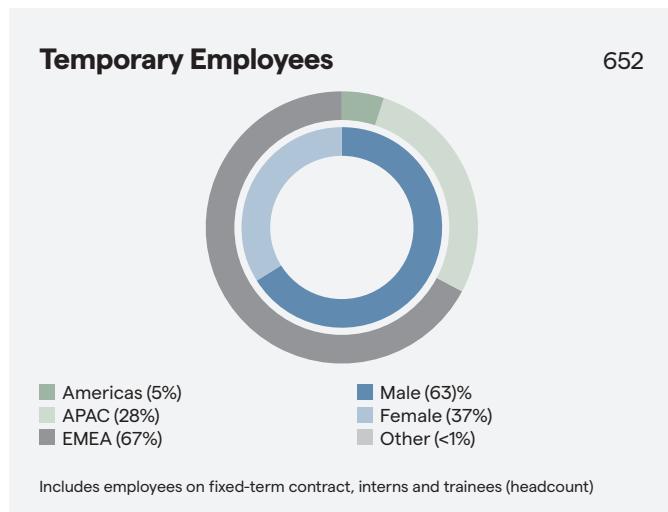
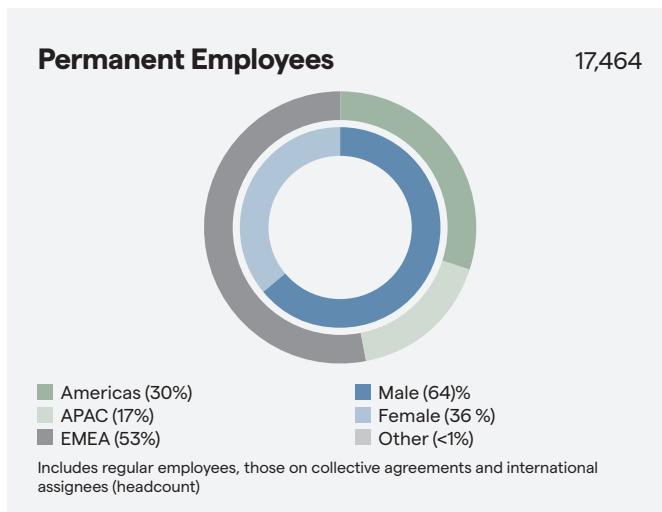


Americas (<1%)
APAC (1%)
EMEA (99%)
Headcount

Male (34)%
Female (66%)

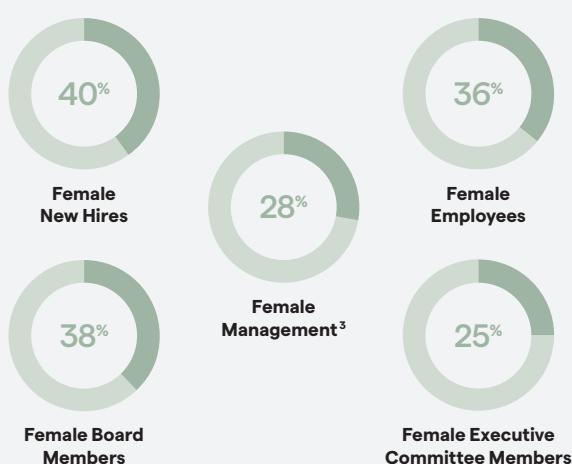
¹ Internal promotion rate scope and definition has been reviewed in the course of 2022 to align the Lonza definition to market practice. This ensures market comparability and amends the 2021 figure to 22.7%.

² Number in Full-Time Equivalents. Total employee headcount is 17,714, including temporary fixed-term contractors but excluding agency workers and consultants. The remaining statistics and numbers in this section refer to headcount.



Our Workforce

	2021	2022
Gender (headcount)		
Male	10,574	11,271
Female	5,839	6,432
Region (headcount)		
Americas	4,901	5,257
EMEA	8,534	9,352
APAC	2,983	3,105
Hires (headcount)	4,516	3,585
Hires by Region (headcount)		
Americas	1,504	1,282
EMEA	2,393	1,805
APAC	619	498
Total Turnover (%)	12.7%	12.8%
Total Turnover by Region (headcount)		
Americas	900	881
EMEA	693	958
APAC	310	351
Voluntary Turnover (%)	Managers	8.9% 11.1%
	Non-managers	11.4% 9.3%
Involuntary Turnover (%)	Managers	0.9% 2.2%
	Non-managers	2.0% 1.4%



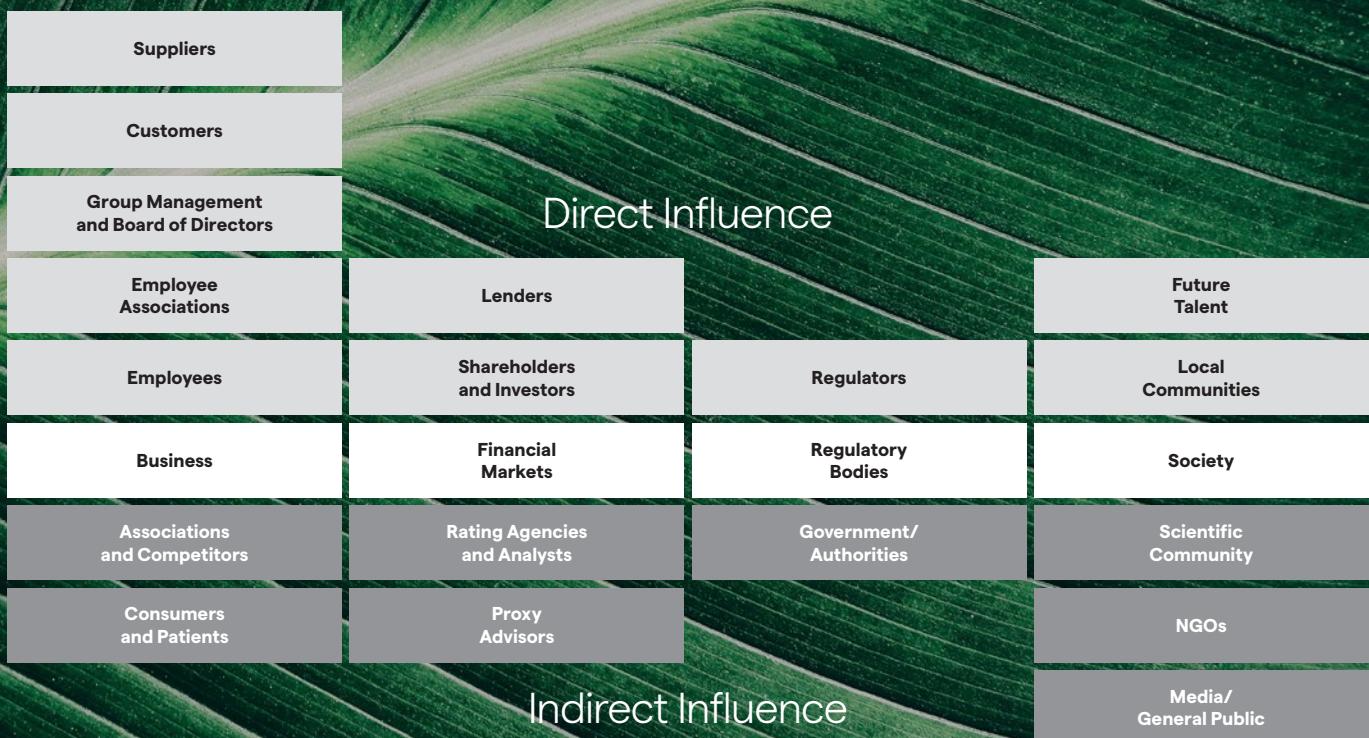
³ Reflects females at director level and above.

Our Stakeholders

We have identified relevant stakeholders who may have a vested interest in our performance and can directly or indirectly influence the direction of the company. These stakeholder groups are shown below. We perceive international bodies such as the United Nations as authorities, and the relevant agreements between states as a guideline for the industry. The SDGs guide and direct our corporate goals and approach to sustainability.

As part of the sustainability reporting process, the main stakeholder groups were categorized according to how the company may impact the stakeholder and how the stakeholder may impact the company. Results were verified with different stakeholders within Lonza (Management, Business Units, Human Resources, Legal, Investor Relations and Communications), alongside external benchmarks.

Our Stakeholders



Materiality

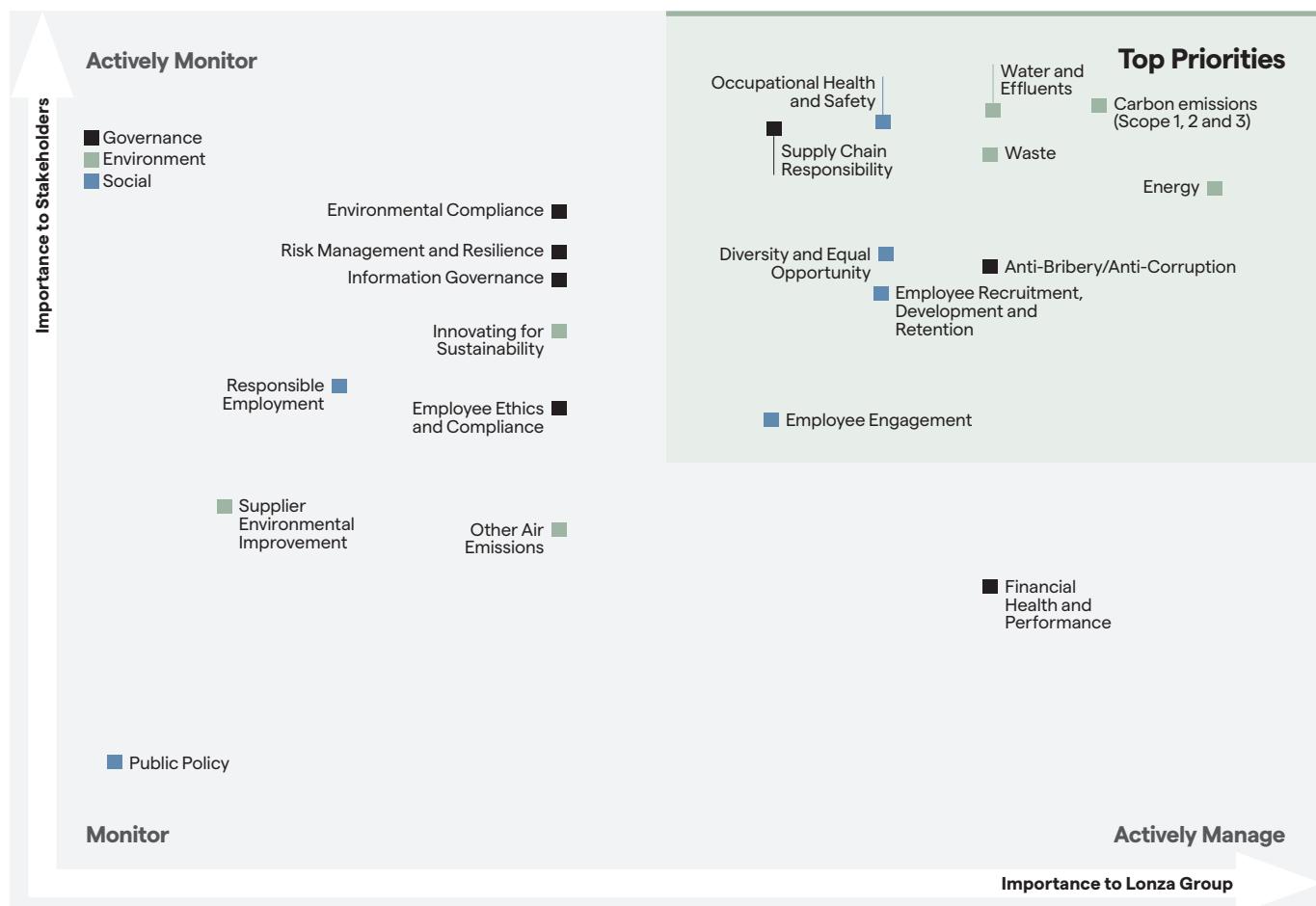
The most relevant stakeholder groups (or their proxies) were involved in the 2021 materiality process to better understand their specific requirements and priorities, specifically employees, customers, the scientific community, shareholders, financial analysts, Group Management and the Board.

The survey included topics listed in the GRI, as well as others considered relevant to our industry following a benchmarking assessment. The materiality mapping, as shown below, was based on:

- The main sustainability topics raised by our stakeholders
- Relevance to our business
- Actual and potential impacts (e.g. physical, reputational)
- Our potential to influence or impact the topic
- Significance or extent of the impact on our business

Our priorities were validated by the SRC and by Group Management. Further verification mapping was also undertaken using only input from external stakeholders, delivering similar results. This report focuses on highly material topics. The moderate and low-rated topics are not necessarily covered in our reports but are nonetheless monitored on a regular basis.

Newly identified topics and requirements from ESG regulations are also analyzed, prioritized and integrated based on their relevance. Our ongoing dialogue with stakeholders, especially with the sustainability experts of financial and proxy advisors, help us to refine our scope and identify new and additional material topics. We have also added an appendix following the Taskforce on Climate-related Financial Disclosures (TCFD) in our Sustainability Reports since 2021.



Stakeholder Engagement

Our entities regularly engage with their relevant stakeholders on a local level and incorporate their requirements for site development, though not necessarily in a formalized manner.

Regarding our people strategy, 2022 saw the development of leadership and employee sounding boards to take feedback on new HR initiatives and to help us identify pain points in our existing processes. These sounding boards have provided critical insights into focus areas within our people strategy and have already served to enhance our Workforce Lifecycle (see our People and Society section).

In 2022, the annual meeting of the European Works Council (EWC) took place in person with senior Lonza leaders including the CEO. It included an update on the business, Lonza's people strategy and other HR-related topics. Ad hoc sessions with its local representatives took place during the year to update members of the Council on people-related topics.

Around 50 virtual and face-to-face meetings took place with shareholders, key proxy advisors and rating partners discussing corporate governance, incentive compensation, sustainability and other relevant topics. We also maintain regular contact with our customers through our sales teams at a divisional level and through direct contact with group leadership.

As part of the annual sustainability reporting process, we specifically engage with selected internal and external stakeholder groups, so that we may include their views on material topics. We are also active on multiple social media platforms, which have proved to be valuable channels through which we can engage in conversation and receive feedback from individuals or groups.

Lonza Corporate Social Media Presence 2022

In 2022 we continued to increase our social media presence. These numbers show the number of followers as of 1 January 2023.

 **▲ 19%**
>240,000

 **▲ 17%**
>5,000

 **▼ -2%**
>53,000

 **▲ 30%**
>2,800

 **▲ 4%**
>7,900

As part of our global commitments to people and planet, it is important that we maintain open communication and engagement with the communities in which we operate. Our site in Visp (CH) has more than doubled in the past ten years, with approximately 5,000 full time employees now working at the site. It is a priority for us to manage this growth sustainably, delivering our planned expansions while remaining a good corporate citizen. In May 2022, we organized a public "Lonza Forum" with community and regional representatives, including local media. The event explored Lonza's vision for the Visp site and surrounding Upper Valais, and gave a platform for open discussion with the community about the impact of such growth upon local infrastructure, housing and mobility. Visp is an important part of our legacy, our present and our future, and we continue to involve the community in the latest developments at the heart of this key manufacturing center.

Associations

Lonza joined the [United Nations Global Compact \(UNGC\)](#) in 2009. We are committed to aligning our business and operations with these universally accepted principles of sustainable development. This encompasses the areas of human and labor rights, anti-corruption and environmental sustainability. Lonza is fully committed to implementing the UN Global Compact's Ten Principles. As of 2022, our communication on progress will be submitted in the online questionnaire on the UNGC platform, instead of being included within the Sustainability Report.

We have been a member of the non-profit business membership organization [Pharmaceutical Supply Chain Initiative \(PSCI\)](#) since 2019. The PSCI is a group of pharmaceutical and healthcare companies, which share a vision to achieve better social, environmental and economic outcomes. This includes:

- Fair and safe work conditions and practice
- Responsible business practice
- Environmental sustainability and efficient use of resources

The initiative aims to bring together the pharmaceutical industry to define, implement and champion responsible supply chain practice. It has developed a set of principles to deliver a more sustainable supply chain. We have embedded these principles in our Supplier Code of Conduct and we actively encourage our suppliers to follow them.

We are a member of various associations in the pharmaceutical and biopharmaceutical industry sectors, as well as in the wider business community. Associations may serve a variety of purposes, such as exchanging best practice, aligning on public policy issues or collaborating on advocacy activities. The following list shows some of those associations: [Scienceindustries](#), [SwissHoldings](#), [Biophorum Operations Group](#), [Drug, Chemical and Associated Technologies Association](#), [International Society for Cellular Therapy](#), [International Society for Pharmaceutical Engineering](#), [Parenteral Drug Association](#), [American Society for Quality](#), [Alliance for Regenerative Medicine](#), [Association A3P](#), [Together for Sustainability](#) and [Rx-360 Consortium](#).



Customer Satisfaction

Delivering a great customer experience is a priority across our business. We are incredibly proud to serve thousands of customers every year, in order to fulfill our purpose of enabling a healthier world.

During 2022, we ran our annual Lonza Promoter Score (LPS) survey for the third consecutive year. The survey is deployed across all four divisions to provide us with a quantifiable and consistent measure of customer engagement. LPS also forms a key component of our work towards SDG 3 (Good Health and Wellbeing) by measuring the satisfaction of our customers who deliver life-saving and life-enhancing medicines to patients.

The results reflect the progress of our customer-centricity initiatives. In alignment with the results of previous LPS surveys, the 2022 survey found that our customers continue to value our highly skilled employee community. From molecular biologists to process chemists and business support functions, our customers actively seek the expertise of our people to help solve their complex challenges. This feedback was consistent across our customer base, from large pharma – where our capabilities complement their internal resources – to smaller and emerging customers, who often do not have internal manufacturing expertise or assets.

In addition, our services and products were widely praised by our customers for their high quality. This ranges from our CDMO services – from early-stage clinical supply to large-scale commercial manufacturing – to our Bioscience and Capsule & Health Ingredients products. We are proud to supply a premium offering to the market, which is supported by high customer satisfaction levels and an understanding of our value proposition.

The continued progress against our customer ambitions shows that we are firmly on track to reach our goals. Our group vision to bring any therapy to life is underpinned by delivering a seamless customer experience, and we will continue to make this a priority in everything we do.

Customer Vision

Deliver a great customer experience, as recognized by our customers.

"Lonza has been a great partner in the development of our program for the past three-plus years. We value Lonza's commitment to our program and willingness to meet project deliverables by giving their 100%." (Small/Emerging Pharma)

"We work with a lot of CMOs / CDMOs, and there are few with the level of expertise, structure, and leadership of Lonza. Thank you for being so dependable, professional, and at the 'cutting edge' of the industry!" (Mid Pharma)

"Lonza is considered more than a supplier but more a collaborator – they are considered as almost part of the team." (Big Pharma)

"Lonza is a trusted partner and shows science and data-driven philosophies and approaches. The technical people on the floor are very knowledgeable." (Big Pharma)

Lonza Customer Satisfaction Survey 2022

>1,500
Responses

Responsibility

Every day, our products and services have a positive impact on the lives of millions of people. This is not only a great privilege, but also a great responsibility. The manner in which we achieve our business results is just as important as the achievements themselves. Responsible business is both an ethical and a commercial imperative.

Our focus on enabling treatments that prevent illness and support healthier lifestyles extends to our responsibilities across environmental, social and financial areas. Our people understand that to make real differences in our business and in the communities in which we operate, we must always act with integrity. Our culture and communities benefit globally and locally from our collective commitment to ethical business practices and sustainability in how we work to improve the quality of life.

We take an active and robust approach to provide value to all stakeholders through our work, our partnerships and our community involvement. We work to generate sustainable value for our stakeholders, communities, employees, customers, shareholders and suppliers around the world. We value inclusion which means being supportive, respectful and responsible toward others. Human rights aspects are being incorporated into our due diligence of suppliers and customers. We periodically evaluate how well our promises of integrity and inclusion are fulfilled in our workplace through assessments, surveys and evaluations of internal controls.

Risk Management

We apply the precautionary principle within a systematic risk management framework. Risk management is a process applied at both a micro and macro level – from the shop floor of a single site to the whole Group. Selected elements include:

- Job safety analysis, technical safety reviews of equipment
- Process hazard analysis, audits and inspections
- Site risk analysis, including fire safety, natural risk, and interruption risk
- Supply chain risk analysis
- Enterprise risk management (ERM) including ESG risks

Our ERM program is a critical element of our risk management and strategic planning activities and provides a mechanism and appropriate governance for risk management. It enables us to identify the most significant risks to our organization that impact value to our stakeholders, along with mitigation plans to minimize the probability and/or impact of negative risks. The risk identification process includes a specific focus on ESG risks, in particular those related to climate change.

The findings of our process are presented to and discussed annually with the EC, the Audit Committee and the Board. Some of the trends influencing the industry are viewed as opportunities rather than risks for companies in the healthcare industry such as ourselves. An increased focus on Environmental, Social, and Governance (ESG) topics, including climate change, geopolitical and macroeconomic shifts, as well as trends such as aging societies, growing populations and the increasing need for access to healthcare and medicines are considered in the company's enterprise risk assessment. An increasing growing focus on ESG topics – , as well as trends such as aging societies, growing populations and the increasing need for safe and abundant food – , are directly considered in our enterprise risk assessment and shape our global strategy. Alongside this, we also include incorporate climate, natural and environmental risks into our assessment.

For more information about ERM, see the [Financial Statements](#) section of our 2022 Annual Report.

Cybersecurity

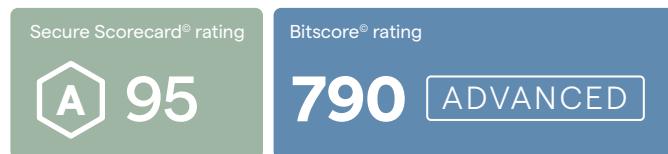
The security of information and data is a priority for our business. It enables us to maintain constant availability of our critical systems and to protect our information, including information entrusted to us by our customers and partners.

The Lonza IT Security Department is working to put appropriate technical, procedural and organizational safeguards in place for our information systems, including testing for potential security weaknesses. The department also provides training to our employees and contingency workers about how they contribute to the security of our information assets. The IT Security team's activities in 2022 included:

- Continued expansion and enhancement of governance and policy, based on international standards
- Implementing a robust, user-friendly and scalable security architecture including solutions and services
- Optimizing the security operations service, rapid response and risk awareness
- Minimizing possible business disruption and empowering associates to work securely and effectively in an internationally collaborative environment

Our IT security strategy includes implementing holistic, preventive, detective, and reactive IT security measures in line with the relevant risk levels. We also provide risk assessments, contribute to enterprise risk management and define security and IT control requirements for projects and risk remediation measures. Finally, we promote compliance with applicable laws and regulations in collaboration with Legal, Quality Assurance and other departments.

We run ongoing training and awareness initiatives on the subject of information security. Recent surveys indicate that more than 95% of our employees are aware of their critical role in protecting our information. New technologies and methods are being used to ensure this awareness remains high, without reducing the impact of the message.



Our information security ratings are above average for the industry and have been for more than a year. These ratings⁴ are provided by independent organizations based on a technical analysis of our assets and provide a snapshot of cybersecurity risk.

Data Protection

We take data protection seriously across our global network. Our guiding principle is the General Data Protection Regulation (GDPR), in addition to any national law of those countries in which we operate. Every employee commits to follow our Internal Data Protection Guidelines. These Guidelines are included in the annual Code of Conduct training, which all employees are required to complete.

The protection of our employees' and customers' personal data is critical to maintaining trust, reputation and license to operate. It has long been a focus for the Privacy Taskforce, meeting monthly to address concerns and developing issues. Taskforce members include our Data Protection Officer and dedicated members from across our divisions, sites and functions, including colleagues from the Legal, IT and Marketing Departments.

The privacy and cookie policies for our website are updated regularly to provide our customers and website visitors with optimal levels of choice and safety.

⁴ BitSight uses a credit rating style measurement to communicate IT Security Risk. BitSight Security Ratings are calculated on a scale of 250-900, with a higher rating indicating better security performance. Secure Scorecard uses a combination of data points and then applies proprietary algorithms to articulate an organization's security effectiveness into a quantifiable A-F score.

Measures and Activities to Enhance IT Security

	Preventive Measures	Incident Response	Testing
	<ul style="list-style-type: none"> Enhanced Technical Standards Various countermeasures in place to address modern threats 	<ul style="list-style-type: none"> Data Breach Response Plans Security Incident Response Plans Active Security Operations Center monitoring and Response team 	<ul style="list-style-type: none"> Penetration tests on critical externally facing websites Phishing and other active tests Compliance testing and assessments Vulnerability tests and mitigation
Training	Policy & Framework	Governance	
<ul style="list-style-type: none"> Security Fundamentals Data Privacy Periodic Awareness Updates, E-trainings, simulated phishing and on-site trainings 	<ul style="list-style-type: none"> Framework for IT Security & Compliance Technology Standards Processes and Procedures 	<ul style="list-style-type: none"> Active Internal Compliance committees with representatives from across the business Periodic Executive Committee and Audit & Compliance Committee briefings 	

Ethics and Compliance

Our culture is expressed through our values of Integrity, Inclusion, Innovation and Initiative. These guide how we behave in our daily work. We encourage each other to exemplify integrity through accountability, honesty, doing the right thing, and having the courage to speak up if something may not be right.

Our Code of Conduct provides behavioral guidance and expectations to help all colleagues understand that doing what is right every day matters. All colleagues and contract workers are required to complete the training annually, up to and including our EC and our Board. This includes a confirmation by our colleagues that they have read and understand the Code, which consists of requirements to follow not only our policies but also the laws governing our operations in the geographies in which we have a presence, as well as a signed integrity pledge. We target our web-based training for ethics and compliance courses at 100% completion. In addition, we work closely with site HR teams so that colleagues and contract workers without web access receive yearly Code of Conduct training and execute an integrity pledge.

Other global training topics beyond our Code of Conduct include anti-bribery, anti-corruption, discrimination and harassment, confidentiality and information security, conflicts of interest, fair competition (anti-trust), protection of assets, speaking up, unconscious bias, and workplace safety.

To support our focus on encouraging colleagues to speak up, we have a confidential reporting mechanism hosted by a third-party service provider that allows colleagues to voice concerns anonymously (if the law permits) 24 hours a day, seven days a week. Concerns regarding misconduct or potential misconduct may be raised by employees, contractors or others working with Lonza online, by phone, via email, post, or text message. In 2022, no concerns were raised to a level resulting in fines or other non-monetary sanctions of the company.

We respect international labor rights, which is set out in our human rights statement in our Code of Conduct. We also expect our suppliers to follow the human rights and labor requirements in our Supplier Code of Conduct. We have zero tolerance for the use of forced, bonded or child labor. We do not condone or tolerate the trafficking of people through force, coercion, fraud, sexual acts, involuntary servitude or slavery, nor do we allow other inhumane treatment, threats of physical punishment, or coercion.

Regulatory Compliance

We are committed to regulatory compliance and ethical behavior across all areas of our business and operations. As our industry is highly regulated, we are regularly inspected by various regulatory authorities, certification bodies and customers. Any findings during these inspections are addressed and used to support continuous improvement in the management reviews of Site Heads and their teams. Regular internal audits of different functions (e.g., EHS audit, loss prevention visits, quality audit) provide both oversight and governance.

In 2022, our sites underwent 36 health authority inspections. In line with the increase in commercial development and production and a growing service portfolio, the number of customer audits also continued to increase. Regular inspections and audits are a valuable feedback loop to support compliance across the company.

EHS compliance is also critical to our operations. Each site employs a management system approach, which includes regular information updates on legal changes and a compliance assurance mechanism with internal and external controls. Various sites have implemented a certified ISO 14001 system, which includes oversight of regulatory requirements. Additionally, we received assurance from a Swiss certification body that Lonza's Corporate EHS management system is fully aligned with ISO 14001 and ISO 45001 standard requirements.

In 2022, we recorded 11 environmental incidents across our network, which were largely due to wastewater permit exceedances, and seven process safety incidents, mostly related to contained spills. Any given fines are an indication of non-compliance and are reported into the environmental data system and assessed to identify the root causes.

Product Compliance

All our product manufacturing practices are highly regulated to ensure the required standards of quality and efficacy. All products must be evaluated, manufactured, labeled and used appropriately, to exclude health and safety risks for customers and end-consumers.

We also consider public perceptions, regulation and global chemical management initiatives such as the Globally Harmonized System (GHS) for the classification, labeling and packaging of chemicals.

We are predominantly involved in business-to-business transactions. We work to ensure that our customers can safely use our products for their intended purpose. Generally, our customers also have their own procedures and specialists to assess risks, and we aim to provide the foundation and necessary data to support the safe use of their products.

Product health and safety profiles are evaluated through systematic processes and procedures that are embedded in our organizational and business structure. We have experts in regulatory compliance and registration, dangerous goods and product classifications, toxicology, risk assessment and product stewardship, covering the regions and markets in which we operate. Potential hazards and risks associated with their intended use are clearly communicated to our customers via product labels, Safety Data Sheets (SDS) and technical communications.

Our processes for assessing and improving the health and safety impacts of our products remain a focus for growth and investment. This is particularly important as we continue to integrate newly acquired products and businesses into our stewardship and management structures.

Our product formulation expertise, regulatory assurance and global regulatory support provide distinct competitive advantages in a world of increasing registration, labeling and packaging requirements for chemicals. We have a team of more than 80 regulatory experts in Europe, the Americas and Asia Pacific who serve and support our business globally.

Relevant programs include the European Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) initiative, the US EPA Toxic Substances Control Act (TSCA) and California Safe Drinking Water and Toxic Enforcement Act (Proposition 65). In addition, other countries are launching similar regulatory schemes (e.g., China-REACH, Korea K-REACH and K-BPR, Turkey KKDIK and UK-REACH). These are ongoing efforts, and we strive to comply with requirements, including those related to REACH Substances of Very High Concern (SVHC).

The health and safety of our employees will always remain our top priority. During 2022, more than 700 substances were assessed or reassessed for their safe handling limits in relation to the risk of exposure to chemicals in the work environment.

Animal Testing

Wherever possible, we use validated alternatives to animal testing. We have developed alternatives, including the primary cell and media product lines in Bioscience Solutions, which can replace animal models in research and development labs.

However, many regulatory authorities continue to require animal testing to ensure the safe handling and use of products, especially in the development of health ingredients. In such cases, we carefully select independent contract laboratories that meet the highest ethical and quality standards and are accredited for animal welfare protection. All study protocols are approved by the institutional ethics board and the Institutional Animal Care and Use Committee (IACUC).

We continue to work with animals to produce LAL (Limulus Amebocyte Lysate) Assay, which is used in Quality Control (QC) tests to ensure that injected pharmaceuticals and implanted medical devices are free from endotoxins and safe for patient use. The blood of the North American Horseshoe Crab (*Limulus polyphemus*) is the only known natural source that can be used in this assay.

Blood is collected from crabs in a similar way to human blood donation and we follow best practice to safeguard their wellbeing. Crabs are collected close to shore after the main annual spawning period and are harmlessly marked to ensure they are used only once in any given season before being safely returned to the water.

We do everything we can to minimize the impact of our work on horseshoe crabs while pioneering the introduction of alternatives. In 2003, we developed the first animal-free endotoxin detection method, PyroGene® rFC Assay, which relies on a man-made recombinant form. We continue to see increasing interest from the industry in alternative approaches of this nature.

Anti-Bribery and Anti-Corruption

The importance of conducting business in an ethical and compliant manner is at the forefront of all of our interactions. We take a zero-tolerance approach to bribery and corruption and we are committed to acting professionally, fairly and with integrity at all times. We expect all employees, across all divisions and locations, to act with integrity every day. All colleagues are required to complete annual Code of Conduct training that contains anti-bribery and anti-corruption materials. Employees in relevant roles are required to take additional detailed training on anti-bribery and anti-corruption.

We frequently communicate key elements of our Anti-Bribery and Anti-Corruption Policy to supplement our training programs. Short videos, infographics and stories of misconduct are provided to colleagues to reinforce Lonza's expectations regarding compliance. As with all ethics and compliance policies, our Anti-Corruption and Anti-Bribery Policy is accessible in multiple languages on our intranet.

In addition, the Supplier Code of Conduct sets out our commitments to working against corruption and bribery. This applies to all our suppliers, as well as to any subcontractors or third parties that a supplier may engage in the performance of their contractual obligations. Currently, suppliers are required to implement internal measuring procedures, tools and indicators to guarantee compliance with the Supplier Code of Conduct principles. They are encouraged to report any violations via e-mail or the [Lonza Ethics Hotline](#).

Our Ethics & Compliance Group is charged with monitoring and promoting compliance with anti-bribery and anti-corruption laws. We conduct third-party due diligence checks and monitoring with an automated interface as part of our anti-bribery and anti-corruption efforts globally.

Lonza Ethics Hotline

The Lonza Ethics Hotline allows employees and stakeholders globally to report concerns anonymously (if allowed by their jurisdiction), including those related to ethics and compliance matters. All concerns are handled confidentially. On average, around four in ten incoming reports are substantiated. Root cause analysis and remediation measures are performed where appropriate on substantiated matters, and those found responsible for non-compliance or other violations may face disciplinary action (which may include termination of employment).

Lonza Ethics Hotline

	2020	2021	2022
Number of reports per 1,000 employees	12.5	13.9	13.7
% of reports which are only inquiries	29%	29%	28%
Substantiation rate	39%	38%	37%
Anonymity rate	25%	33%	22%

The Ethics & Compliance Group regularly conducts assessments of hotline submissions for trending and benchmark purposes. Data generated from these assessments are used to guide training and communications around geographies or business units, as well as to measure the effectiveness of existing training, policies or procedures. A review of hotline data has shown consistent utilization, although we observed minor levels of continued fluctuation in reporting related to the COVID-19 pandemic. This is similar to what has been observed by peer companies. A wide range of case submissions indicates an awareness and comfort in speaking up across all aspects of the business. An increasing tendency to use electronic methods for sharing concerns has also been noted. For example, people are using the web form four times more frequently than the hotline phone number to share concerns.

Each year, we benchmark our reporting data against other companies similar in size, industry, revenue and/or geographic location. Multiple data points (e.g., submission type, disclosure of the reporter, source of the report, etc.) are consistently reviewed to measure the effectiveness of the hotline and investigation. Our results were similar to, met, or exceeded benchmark standards in multiple categories, which further highlights the effectiveness of Lonza's Speak Up program. Areas that do not meet our expectations or benchmark information are addressed via targeted training and communications programs, as well as enhancements to the overall Ethics & Compliance program.

World's Most Ethical Companies Award

In 2022, we were recognized as one of the World's Most Ethical Companies by the Ethisphere Institute, a global leader in defining and advancing the standards of ethical business practices. For the second consecutive year, this recognition follows a comprehensive and robust review of our company's governance, leadership and reputation, environmental and societal impact, ethics and compliance program, and overall commitment to ethics. Structured by Ethisphere's proprietary Ethics Quotient®, the assessment process includes more than 200 data points, and serves as an operating framework to capture and codify the leading practices of organizations across industries and around the world.

The list distinguishes companies that influence society and the global business community to drive positive change. It also highlights companies working with partners and customers that operate with integrity.



Operations Assessed for Risks Related to Corruption

We conduct periodic assessments to identify corruption and bribery risks across business areas and geographies. Taking Lonza's material topics into consideration (based on our 2021 materiality assessments), risks relating to existing operations, future planned operations, suppliers and other interactions are categorized by likelihood and impact. This is completed internally with guidance from external experts. Where higher risks are identified, mitigation plans are developed and implemented as required.

In 2021, twelve risk assessments concerning business ethics issues were conducted and completed. Six of these assessments were globally focused, and six more were regional or site-specific. In 2022, another 13 additional risk assessments were conducted and completed. Of these, eight were global, and five were regional or site-specific. Any required remediation steps are implemented promptly upon review and completion of risk assessments. An ethics and compliance audit and assessment schedule and plan are created annually to evaluate program risks, develop appropriate remediation, and improve and further integrate ethics and compliance processes into business operations.

Supply Chain Responsibility

Lonza's supply chain remained resilient to several global challenges in 2022. Around the world, teams experienced supply shortages, including for single-use items and resins. Teams also faced challenges in securing sufficient capacity from building contractors to maintain momentum around the construction projects supporting our investment programs. At the same time, inflationary pressures mounted globally throughout the course of the year, in the key areas of energy, labor and freight pricing.

In response to these challenges, our procurement teams initiated several global programs. A cross-functional taskforce was established with Supply Chain, Manufacturing and Procurement, to coordinate supply issues and support business continuity. As a result, we experienced only marginal impact on production levels. For the investment programs, an initiative reviewed requirements early on, to reserve contractor capacity well in advance. Our response to mitigating inflationary pressures on our business included a focus on securing long-term agreements and a program to reduce avoidable expenditure.

SDG 12 Responsible Consumption and Production

"Our purpose to enable a healthier world comes with great responsibility. That responsibility extends not only to what we do, but also how we do it. We are committed to working together with our suppliers and partners on responsible consumption and production to reduce carbon footprint throughout the entire value chain."

**Christian Seufert, President,
Capsules & Health Ingredients (CHI)**



The teams also focused on the implementation of two key strategic programs. Firstly, we conducted an end-to-end review of procure-to-pay processes to streamline the purchasing journey. Secondly, we launched our Responsible Sourcing program to embed ESG principles and requirements within our procurement management processes. We worked with our suppliers to understand and adopt these requirements and principles. This approach will help drive sustainability and decarbonization across our value chain, in alignment with our ambitions under SDG 12 (Responsible Consumption and Production).

The breadth and diversity of our business are reflected in our supply chain, which involved approximately 15,200 suppliers in 2022. Approximately 1,600 are direct material suppliers ranging from basic chemicals and naturally derived materials such as gelatin, to high-end systems and consumables for biopharmaceuticals or specialized components for cell and gene therapy production.

Lonza Supplier Base

Supplier Location	% of spend	Number of Suppliers ⁵	% direct / % indirect
APAC	29%	>4,300	45% / 55%
EMEA	14%	>3,300	60% / 40%
Americas	57%	>7,500	27% / 73%

Management Approach

In order to manage supply chain complexity, our Procurement team includes category managers and site-based buyers, all focusing on procurement excellence. They develop and implement category strategies and manage the selection of suppliers and negotiation of terms on behalf of our divisions and enabling functions. This approach leverages synergies by bundling know-how and procurement spend. These specialists also reduce our exposure to supply risks by scouting, evaluating and driving technical innovation and digital solutions. All activities are designed based on the Procurement Policy, which outlines the fundamental principles of our procurement activity.

In 2022, a Responsible Sourcing team was assembled within the Procurement Excellence function, directly reporting to the Head of Procurement. The team is responsible for elaborating Lonza's Responsible Sourcing strategy and implementing supplier sustainability and decarbonization initiatives globally.

We also updated and expanded our Supplier Code of Conduct in 2022. The Code is available in all relevant languages. It covers areas of ethics (including anti-bribery, anti-corruption, and conflict minerals), labor and human rights (including child labor), health, safety, environment, governance and management systems. It is also integrated into electronic ordering systems and contractual terms throughout Lonza Group.

⁵ Numbers in this chapter concern indirect and direct spend as consolidated by the end of January 2023. Excludes out of scope spend, such as spend with intracompany, taxes, donations, pensions etc.

Responsible Sourcing

The new Responsible Sourcing program is aligned with the OECD Due Diligence Guidance for Responsible Business Conduct. Firstly, we developed a risk-based assessment which identified and evaluated prevailing risks in the supplier's country (country risk) and risks resulting from the supplier's sector (purchasing category risk). This includes environmental criteria (including climate and energy), social standards (including child labor) and health and safety. This process delivered an initial prioritization of suppliers for further evaluation.

In addition, the Scope 3 GHG emissions reporting (see Environment chapter) demonstrates that the top source of GHG emissions is purchased goods and services. In this context, we established a supplier decarbonization initiative to measure, manage and mitigate emissions in collaboration with suppliers over time.

Supplier Sustainability Initiative for Existing Suppliers

We use external sustainability evaluations to identify the ESG impacts of our suppliers. To implement good industry standards and the use of comparable data, we collaborate with peer companies and refer to industry initiatives.

Percentage of spend from suppliers covered by sustainability evaluations	2022
33%	

As examples, we are partnering with the Pharmaceutical Supply Chain Initiative (PSCI) and Together for Sustainability (TfS) Initiative. These associations aim to establish and harmonize supply chain oversight regarding governance and sustainability, enhancing supplier performance for pharmaceutical and chemical value chains.

As a PSCI member, we perform audits of our key suppliers, as well as undergoing audits by our customers. Our TfS membership unlocks access to a large number of assessment scorecards and audit reports carried out by selected, independent audit companies on behalf of TfS member organizations. We also work with EcoVadis for online supplier sustainability risk assessments and performance management.

We correlated these assessments to our own supplier base to identify ESG strengths and improvement areas. Based on the evaluation results, we work with each supplier to devise a Corrective Action Plan (CAP) and monitor progress until a re-evaluation takes place.

We recently received the silver medal for our own EcoVadis assessment. We achieved a higher score in sustainable procurement in this assessment than in previous years – an acknowledgment of our advanced management system for responsible sourcing.

Responsible Sourcing Framework



Supplier Sustainability Initiative Progress

	2022
Number of suppliers assessed for environmental impacts	2,434
Number of suppliers identified as having actual or potential significant negative environmental impacts	49
Percentage of suppliers identified as having actual or potential significant negative environmental impacts and with whom improvements were agreed upon as a result of assessment	41%
Number of suppliers assessed for social impacts	2,434
Number of suppliers identified as having actual or potential significant negative social impacts	33
Percentage of suppliers identified as having actual or potential significant negative social impacts and with whom improvements were agreed upon as a result of assessment	18%

Due Diligence Process on Anti-Bribery and Anti-Corruption of Suppliers

We operate an anti-bribery and anti-corruption (ABAC) due diligence process, in which we monitor for high-risk suppliers. This is operated by the Ethics & Compliance Group and integrated into the procurement supplier qualification and release process through our ERP system (SAP). Third parties in qualification are restricted in SAP until the due diligence process is complete. All third parties, regardless of their interactions with Lonza, are screened and continually monitored. This aims to ensure that we are notified if there is a change in status for any current supplier.

The screening process includes real-time corruption, trade sanctions, human rights, environmental and adverse media screening for all third-party suppliers, with increased due diligence for higher-risk third parties. For the latter, the process includes mandatory completion of a due diligence questionnaire and tailored anti-bribery, anti-corruption and competition law training. Results from the questionnaire are scored to determine a supplier's risk profile. Third parties with higher risk profiles are then reviewed and assessed further by the Ethics & Compliance Group, and additional diligence is completed as required. Complete due diligence is performed on a two-year automated cycle or an ad hoc cycle, depending on monitoring.

Supplier ABAC Due Diligence

	2022 ⁶
New suppliers screened for ABAC risk	100%
New suppliers identified as high-risk for ABAC	1.15%
New suppliers still undergoing ABAC due diligence (and thus blocked for payment)	0.15%

Due Diligence Process for the Responsible Sourcing of Minerals

We have established a cross-functional team and developed a comprehensive due diligence program and relevant practices relating to minerals commonly summarized under the term "3TG" (tin, tungsten, tantalum, gold – collectively known as potential

"conflict minerals"). Our due diligence process embodies the substantive components of the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas ([OECD Guidance](#)).

Our [Public Policy Statement](#) forms the basis of our due diligence program. It clearly communicates our expectations to our suppliers and promotes responsible sourcing of 3TGS. In 2022, we screened our direct purchased materials and surveyed relevant suppliers using the internationally recognized Conflict Minerals Reporting Template developed by the Responsible Minerals Initiative ([RMI](#)). Our screening did not identify any relevant mineral import above de minimis amounts requiring additional diligence. We continually work to improve our due diligence practices to ensure conflict-free sourcing of 3TGS.

Supplier Decarbonization Initiative for Existing Suppliers

To support our corporate climate action targets (see Environment Chapter), the Procurement team engages relevant suppliers to measure, manage and reduce their GHG emissions. In 2022, we kicked off an initiative focusing on top suppliers responsible for around 20% of total 2021 Scope 3 emissions. This initiative was launched in partnership with two pharmaceutical companies, and was supported by the participation of 60 shared suppliers across the three companies. The shared aim is to understand the climate action plans of suppliers, drive mitigation measures and share best practice across the supply chain.

We are also involved in industry-led initiatives to support emission reductions in the pharmaceutical value chain, including the PSCI Scope 3 Working Group and the Scope 3 Maturity Benchmark from the [Scope 3 Peer Group](#).

Training and Development of the Procurement Community

To support the continual training and education of our procurement professionals, we have launched a series of learning activities (eLearning, and in-house webinars) for all to remain up-to-date with the latest practices in Responsible Sourcing. These include⁷:

- Fundamentals on Lonza's policy around sustainability, attended by 93% of the target audience (159)
- Two external sustainability courses, which provide a step-by-step guide to implementing a sustainability program in the supply chain and linking it to everyday business activities, were attended by 53% of the target audience (167)

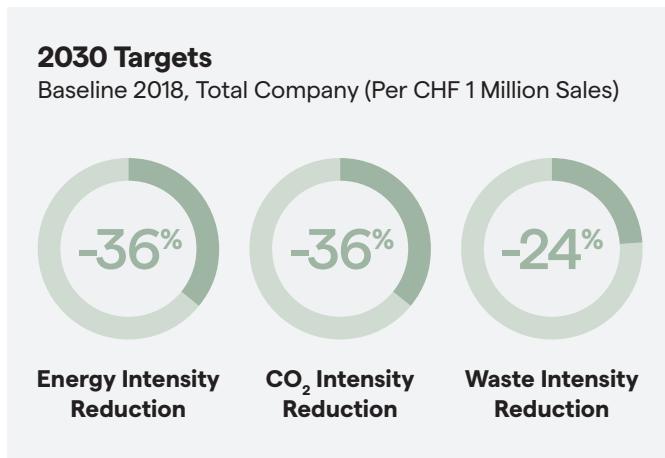
In addition, all purchasing experts were offered training in focal areas such as ESG assessments, climate change and GHG accounting. Finally, internal stakeholders in and beyond the purchasing department were introduced to the new Responsible Sourcing program through a targeted internal communications campaign and a dedicated webpage.

⁶ These numbers also include ABAC third-party monitoring to Arxada, our former Specialty Ingredients business, divested in 2021.

⁷ Figures refer to the audience that the training was assigned to, and do not include external contingent workers not employed by Lonza.

Environment

As a Group, we continually strive to reduce our impact on natural systems and the environment, with a specific focus on energy, greenhouse gases, water and waste. Our “Vision Zero” initiative aims to reduce workplace accidents, environmental and process incidents and strive to make meaningful improvements. Programs are developed at site level, in alignment with company priorities and goals. We build multi-year roadmaps to enable continuous improvement and follow-up, reflecting the type and impact of the operations over a number of years.



We have reported within the **CDP** framework since 2007. We also maintain reporting on other platforms, such as **EcoVadis**, to exchange sustainability data across the supply chain.

The targets are intensity targets based on million CHF sales to factor in Lonza’s continued growth. They also reflect our diverse and evolving product portfolio, which includes the manufacturing of pharmaceutical ingredients, medical capsules, food supplements, gene therapy and cell media, and the licensing of technologies and systems. Such diversity can be normalized with a financial denominator. Intensity targets can also be carried forward in the event of major acquisitions or divestments.

Performance improvement is the responsibility of the site network and operations management, reporting to the operational heads of the divisions. At a local level, operations, engineering and EHS departments are responsible for devising and developing multi-year rolling safety and sustainability roadmaps. These are designed to drive compliance, efficiency and safety at a site level, thereby helping reach our overall sustainability targets. Local goals are added according to the materiality analysis at the sites (such as for water consumption and air emissions).

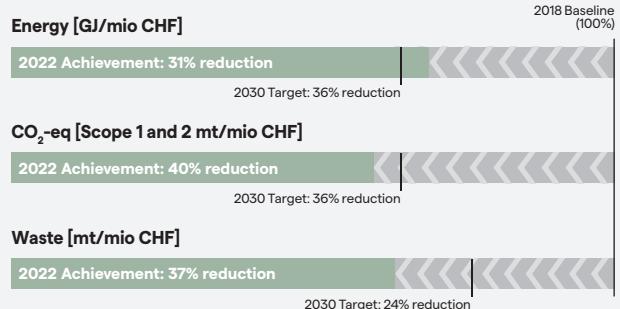
Energy use, CO₂ emissions, effluents, waste, water and emissions data are reported quarterly by each site to Corporate EHS and Global Sustainability. This vital information forms the basis for tracking our performance, revising reduction goals where required, and informing the design of potential capital expenditure projects to achieve major improvements in energy efficiency alongside other areas.

Our Progress in 2022

In 2022, 28% of the electricity we consumed was procured and sourced from renewable sources. We started a program to replace our traditional power mix with green electricity by 2025 by setting up virtual power purchase agreements (VPPAs) for new wind and solar developments, installing onsite capacity, or purchasing renewable energy certificates.

We are proud of our sustainability achievements so far, and we are committed to making further progress using our SDG framework, with higher ESG performance targets to accelerate momentum.

Our Progress in 2022



This year, we recorded a significant reduction in the intensity numbers. This was related to the substantial growth of our business without footprint increases, alongside efficiency gains. It is also a consequence of a technological shift from chemical production to biologics and higher-value compound synthesis. All environmental data relates to Lonza's continuing operations and excludes all data from our former Specialty Ingredients business (divested in 2021), which significantly reduced our absolute environmental footprint.

The reconfiguration of our business has resulted in a different and more volatile footprint-to-sales pattern. However, as the graph above shows, we have reached most of our 2030 milestones early. We are responding by resetting the 2030 milestones to 50% reductions in intensity from our previous targets of 36% and 24%.

New 2030 Targets

As we have mostly achieved the 2030 targets and with our commitment to the Climate Action, Water and Infrastructure SDGs, we are introducing higher ambitions relating to our environmental performance moving forwards.

Updated 2030 Targets

Baseline 2018, Total Company (Per CHF 1 Million Sales)



Energy

Energy consumed at sites for manufacturing or infrastructure processes is the largest contributor to our climate-relevant emissions. We therefore concentrate efforts to reduce GHG emissions on increasing energy-efficiency measures at our sites. We are continuing to work on a project to procure and source electricity from renewable sources by 2025 and – in doing so – de-couple electricity consumption and GHG emissions.

Our continuous improvement goals and processes encompass existing facilities, as well as CAPEX investments and new facilities. Our capital expenditure approval process includes a sustainability assessment of larger projects, in which a project must show its contribution towards the company's ESG targets. New "sustainability by design" standards have been implemented, aiming for more energy-efficient key utilities such as HVAC, and compressed air.

Since 2018, we have been working with a partner to analyze data for energy sourcing, contracting and supply and demand patterns, and to centralize data for all sites into one platform. This gives us a better understanding of how and where to further improve energy efficiency and cost management. Some sites have adopted an energy management system aligned with the ISO 50000 framework, which includes an energy team, policy, target setting and a rolling action plan.

By carefully monitoring more than 140 different measuring signals and 61,000 data-lines of a new HVAC system in one of our plants in Visp (CH) over a period of one year, our team of experts identified one malfunction and several opportunities to save energy by:

- avoiding heating during seasons with high outside temperatures
- reducing the absolute humidity in the supply air
- improving heat recovery efficiency.

The projected combined savings are estimated at over 1,200 MWh for the seven HVAC units that were investigated. The team is confident that it can be extended to the remaining 40 air handling units in the building, as well as other systems onsite and within the network. The savings are achieved as part of a continuous improvement approach and contribute directly to the reduction of our carbon footprint and increased energy efficiency.



Energy Consumption within the Organization

Fuels are necessary inputs for our manufacturing processes and are vital for utility generation such as steam, heating, cooling, ventilation, air compressors and pumps, air conditioning, refrigeration and transport. The major fuel we use is natural gas, followed by electricity and energy generated on site, mainly through the incineration of gaseous by-products, solvents and waste. Our total energy consumption has been slightly increasing since 2018.

	2020	2021	2022
Net Energy Consumption [TJ]	5,778	5,800	6,269

Lonza Energy Consumption 2022

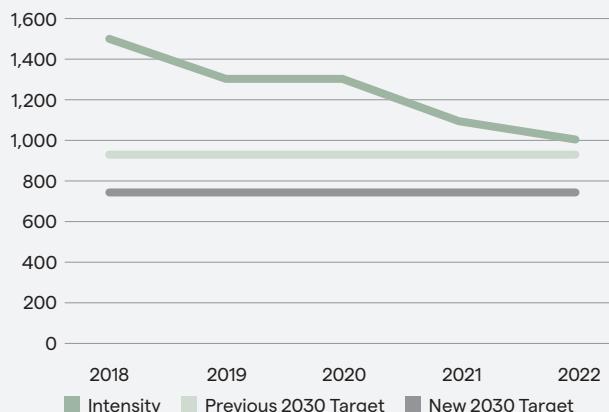
Net Consumption [TJ]	6,269
Diesel [TJ]	1
Fuel Oil [TJ]	27
Gasoline [TJ]	1
LPG [TJ]	6
Natural Gas [TJ]	2,867
Purchased Electricity Non-Renewable [TJ]	1,618
Purchased Electricity Renewable [TJ]	532
Renewable Electricity (On-Site) [TJ]	9
Self-Generated Energy (Waste, Processes) [TJ]	2,117
Purchased Steam [TJ]	1,590
Energy Produced for Others [TJ]	2,557
Biomass (Wood) [TJ]	58

Energy Intensity

In 2022, the energy intensity value was 1,007 GJ/mio CHF, decreasing by 31% compared to the 2018 baseline, highly exceeding our 2022 target of minus 12% of energy consumption per CHF million of sales and nearing our 2030 target of 36%. This decrease is driven by the transformation of our product mix from basic chemical synthesis to biologics, using bacterial and mammalian systems and higher-value compound synthesis. These processes are less energy intensive in nature. We also benefit from an increasing proportion of modern, energy-efficient buildings, assets and production technologies.

Energy Consumption Intensity

GJ/mio CHF



Sometimes it is important to question established processes to make progress. Our Nansha (CN) site noticed that the HVAC system of a packaging room did not need to run all day since it is only used for packaging on an intermittent basis. The site added a control button to upgrade the system to avoid energy waste and the safety risk of wet floors (caused by condensation). Ventilation with air conditioning now runs for one hour at a time before stopping automatically. This is set to deliver more than 90 MWh in savings per year.



Our site in Suzhou (CN) has introduced several initiatives to improve energy efficiency and reduce its carbon emissions. These include the installation of a 210 kW solar field on the roof, which will save over 130 tons of CO₂-eq per year. The team has also implemented a process to recuperate steam condensate for reuse as washing water and a heat recovery process to extract thermal energy from wastewater after operation. These projects will save over 1,500 tons of steam and 8,000 tons of water annually.



Water

Water is used for a variety of purposes across our business, including heat transfer and cooling, steam generation, washing and cleaning, sanitization, and as a product ingredient. It is a precious, vital and burdened natural resource of increasing importance and scarcity, which must be actively managed – especially in water-scarce locations.

Access to clean, plentiful and potable water is critical to ensuring the quality of our products. Our sites are not located in areas known for major water risks or scarcity. Nevertheless, we are taking multiple measures to minimize downstream effects and water withdrawal impacts on our communities and the local environment. Internal standards on water and wastewater include a water balance at a site level to optimize usage and limit losses, requirements to reduce water usage through asset optimization and process changes, and requirements to promote water recycling and the use of rainwater.

Water Withdrawal by Source 2022

Total Water Withdrawn [thousand m ³]	28,628
Groundwater Wells [thousand m ³]	2,778
Public Supply [thousand m ³]	4,140
Surface Water Bodies [thousand m ³]	21,710

SDG 6 Clean Water and Sanitation

"Water is a valuable resource, both for Lonza and the communities in which we operate. I am proud of the progress our teams have made on our path to reducing water consumption intensity. The level of employee engagement and motivation across our global network to make a difference is inspiring."

Gordon Bates,
President, Small Molecules Division



In addition, each site assesses local water risks and opportunities. Risks could include water scarcity, droughts or other supply limitations, discharge restrictions, emerging regulations, and risks associated with a direct discharge to natural water bodies or publicly owned wastewater treatment plants. Opportunities may include ways to improve water conservation and resource efficiency, ground and surface water protection, and discharge quality. Our sites are required to identify stakeholders to address water in their local basin and downstream. They are also encouraged to explore and address locally relevant water issues such as availability and quality.

In regions where freshwater is scarce, we may be exposed to water shortages or restrictions, water price volatility and a decline in water quality. To mitigate water-related risks, sites track their water balance and run water management programs to meet agreed reduction targets. Sites in water-stressed regions and geographies (such as India and Mexico) incorporate measures to optimize water consumption and management into their sustainability roadmaps.

Our site in Jakarta (ID) is in the Bogor area, known as the "Rain City", where flooding is a common occurrence during rainy season. In dry season, there can be challenges in accessing sufficient clean water. The site implemented a rainwater harvesting system capable of collecting more than 4,800 m³ per year. The system mitigates flooding and the harvested water is used in the cooling towers. This reduces demand for municipal water supply by more than 5% annually, which also helps ensure clean drinking water for the local community.



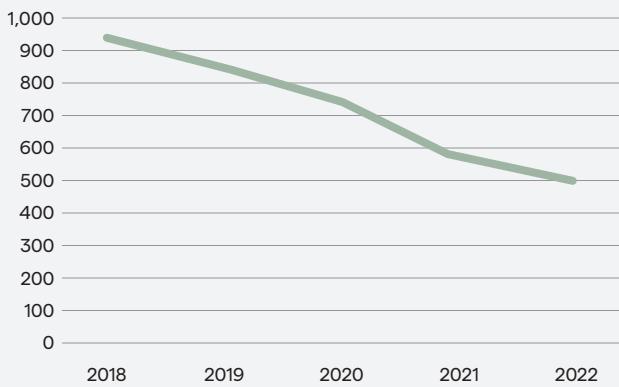
We monitor and measure both industrial water (which may be altered chemically and physically by the manufacturing processes) and non-contact cooling water (which is not altered, except for temperature), as well as other indicators of water source and output.

	2020	2021	2022
Industrial Water Used [thousand m ³]	3,266	3,078	3,090
Cooling Water Used [thousand m ³]	24,112	33,491	29,662

Each site is responsible for managing and optimizing its water balance, with targets for quantity and wastewater set at a site level. Globally, in line with our commitment to SDG 6 (Clean Water and Sanitation), we will build on the completed risk and opportunity assessment with a mid-term action plan to reach our ambition of halving our industrial water intensity by 2030.

Water Intensity

m³/mio CHF



Lonza Water Discharge 2022

Total Water Discharged [thousand m ³]	32,836
Water Discharged to Sewer [thousand m ³]	3,251
Water to Water Bodies [thousand m ³]	29,586

Water Discharge

Sites hold local permits and follow all local requirements related to water treatment and relevant wastewater discharge parameters, such as quantity and chemical limit values. In addition, following Lonza's waste and wastewater standard, sites handling Active Pharmaceutical Ingredients (APIs) – which are viewed as Lonza's substances of concern in this area – adopt a risk-based approach to wastewater discharge. This approach is based on current industry practice endorsed by the PSCI. It involves comparing the predicted environmental concentration (determined by mass balance or analytical means) with the predicted no effect concentration (PNEC). High-risk effluent is investigated in detail and a tailored approach is taken, which may include a change to the cleaning process, incineration of first rinse or an appropriate alternative method.

At many sites, industrial water is collected in tanks or reservoirs and treated in internal or external wastewater treatment facilities. It is tested according to local permits before being discharged into the sewage system or into a surface water body. Due to the diverse nature of requirements, we do not report on discharge water quality. The water emission parameters listed below are tracked at sites where the following emissions are material: heavy metals, nitrogen, organics (COD and TOC) and phosphorus. Other parameters are tracked in line with local regulations and the type of operation undertaken.

In 2022, our team in Nansha (CN) implemented 15 projects to reduce water consumption on-site. Examples include reducing electrical dialysis washing water to lessen wastewater discharge, reducing soft water consumption in a 90°C hot water system by recycling discharged water, and reducing wastewater from the cooling water system by increasing its concentration. Other projects involved increasing the concentration of products in some processes and reusing reverse osmosis drainage, air conditioning and vapor condensate. The estimated industrial water savings were more than 13,000 m³, and tap water savings of over 100,000 m³ during 2022.



Greenhouse Gas Emissions

Scientific evidence confirms that GHG emissions contribute to global warming. This is largely caused by the combustion of fossil fuels to provide energy. Energy generation, waste incineration and other industrial processes result in additional emissions, such as particulate matter (PM), nitrogen oxides (NOx), sulfur dioxide (SO₂) and volatile organic compounds (VOC). We continuously monitor and control such emissions to comply with statutory requirements and to reduce them beyond regulatory requirements.

GHG emissions are categorized into three groups: Scope 1 and Scope 2 cover emissions from our operations and energy use, while Scope 3 includes all other indirect emissions that occur in our value chain. Our GHG emissions result mainly from combustion processes for energy conversion (including incineration of waste).⁸ In this context, we focus on managing the total energy consumption, energy sources and waste.

To decouple GHG emissions from energy consumption, we strive to increase the proportion of renewable electricity (such as wind, hydro and solar). Our sites include energy efficiency and waste reduction measures in their roadmaps and also apply low-carbon energy alternatives, such as biomass. We have implemented “sustainability by design” standards for energy and water efficiency which enable us to build growth projects with best-in-class sustainable technologies. We also participate in research projects to evaluate carbon capture opportunities.

SDG 13 Climate Action

“We are committed to reducing our carbon footprint over the next decades, both from our own operations and from our supply chain. In 2022, we focused upon building robust processes and programs, laying strong foundations upon which to deliver our target of net zero GHG emissions by 2050.”

Maria Soler,
Head of Group Operations

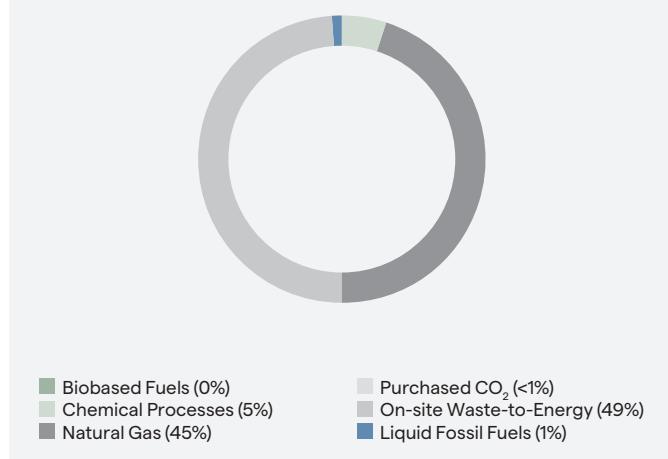
Scope 1 GHG Emissions

Scope 1 includes direct GHG emissions from sources owned or controlled by Lonza. Emission factors are used for calculating emissions from fuel combustion (CO₂, CH₄ and N₂O), including from company-owned vehicles. CO₂ and N₂O emissions from other on-site processes, such as chemical reactions or waste incineration, are directly measured, calculated or estimated by each site. Part of our Scope 1 emissions comes from on-site waste and waste gas incineration, which serves in our processes to treat final waste and produce energy.

Of the 160,000 tons CO₂-eq. from Lonza’s on-site waste incineration of solid wastes and fuel by-products, approximately 50% relates to waste incineration services performed at our site in Visp (CH) for two neighboring companies. However, due to the GHG Protocol accounting rules, these quantities are consolidated in our reporting.

	2020	2021	2022
Total Scope 1 Emissions [thousand Metric Tons CO ₂ -eq]	324	325	321

Lonza Scope 1 Emission Sources 2022



⁸ The GHG emissions from the operations of BioAtrium Ltd - Lonza's joint venture with Sanofi - are included in these numbers, since Lonza has operational control of the BioAtrium plant.

Scope 2 GHG Emissions

Scope 2 encompasses GHG emissions from purchased electricity and steam. At most of our sites, purchased electricity and steam consumption is metered directly on our own devices. In multi-occupant facilities, consumption is derived from the total to reflect our proportionate consumption.

We report Scope 2 GHG values using two methods: “location-based” and “market-based”. The “location-based” method reflects the total electricity consumption of the site, multiplied by local electricity grid average emission factors. The “market-based” method reflects emissions from electricity sources we have selectively purchased, including renewable or nuclear energy certificates and claims or green tariffs. Location-based values are used to track energy efficiency gains against our GHG targets. Efficiency in this context means producing higher output or achieving higher sales with the same amount of energy input and related emissions.

In addition to energy- and GHG-efficiency, we are striving to become carbon neutral within the next three decades. This continuing effort will include procuring renewable electricity to replace fossil fuel generated electricity in the coming years.

Total Scope 2 Emissions	2020	2021	2022
Location-based [thousand Metric Tons CO ₂ -eq]	222	223	230
Market-based [thousand Metric Tons CO ₂ -eq]	209	199	198

Our site in Puebla (MX) has joined our list of sites procuring 100% renewable electricity from wind and solar power. This achievement is the result of the site's commitment to environmental sustainability, alongside favorable regulatory conditions for renewable energy in Mexico.



Scope 3 GHG Emissions

Scope 3 includes GHG emissions from purchased goods and services, business travel, upstream and downstream transportation, waste disposal, employee commuting, etc. The Scope 3 categories and their relative importance were identified in an initial assessment using 2019 data. As of 2021, we began to quantify our Scope 3 GHG emissions on an annual basis.

	2020	2021 ⁹	2022
Total Scope 3 Emissions [Thousand Metric Tons CO ₂ -eq]	n.a.	1,733	1,792

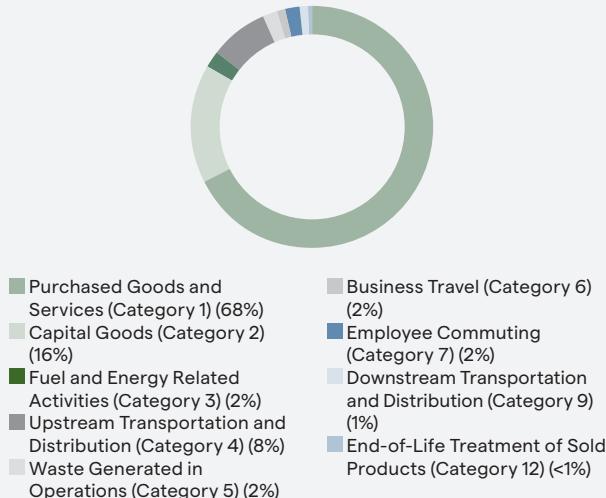
As generally observed in our industry, Scope 3 GHG emissions are considerably higher than Scope 1 and 2 GHG emissions. A significant proportion of our Scope 3 GHG emissions can be attributed to purchased goods and services and capital expenditure. Waste disposal and fuel- and energy-related activities (not included in Scope 1 and 2) also contribute, though to a lesser extent, as a significant amount of waste is incinerated onsite at our Visp (CH) site and those emissions are reported under Scope 1. Business travel, employee commuting and downstream distribution are all comparatively minor contributors to the total Scope 3 GHG emissions.

As a central element of our commitment to SDG 12 (Responsible Consumption and Production), we are creating a roadmap to reduce our Scope 3 GHG emissions. We have started engaging with some of our suppliers with the largest contribution to our GHG footprint to capture their ambitions and actions to reduce GHG (see Supply Chain Responsibility Chapter).

The underlying approximations rely on average industry data and thus carry some level of uncertainty. In this context, we will focus future efforts on improving data collection and analysis to ensure greater granularity and reduction action on the categories with the highest contribution.

⁹ 2021 data has been restated to reflect improvements in the data calculation process, methodology updates, and inclusion of category 12 for increased transparency.

Lonza Scope 3 Emissions 2022



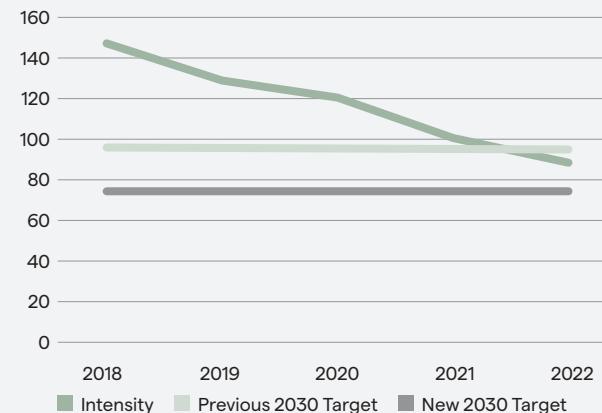
Calculations for the Purchased Goods and Services, Capital Goods and Upstream Transportation categories are based on spend data covering Q4 2020 to Q3 2022; all other data refers to Full-Year 2022. Upstream transportation (category 4) was previously integrated into the models for categories 1 and 2 and is now reported separately. Upstream leased assets (category 8) are included in Scope 1 and 2. Other categories are not integrated into the calculation because they are either negligible or the data collection and modeling are not feasible.

GHG Emissions Intensity

The carbon emission intensity values from Scope 1 and Scope 2 (location-based) decreased by 40% in 2022 (compared to the 2018 baseline) to 89 tons CO₂-eq/mio CHF, exceeding the 36% reduction target set in our long-term goal. The reduction effect is driven by the over-proportionate increase in sales and technology shifts. The absolute GHG emissions from our operations (Scope 1 and 2) saw a slight increase compared to 2021 (approximately 1%).

Greenhouse Gas Emissions Intensity

Scope 1 and Scope 2 location-based,
tons CO₂-eq/mio CHF



In addition to our intensity target and in line with our commitment to SDG 13 (Climate Action), we set internal targets on GHG emissions from our operations, aiming to achieve absolute reductions in line with a net zero target by 2050. Metrics for the contribution to this SDG are also linked to the incentive compensation framework.

Other Air Emissions

While our materiality assessment identified only GHG emissions as the priority, other emissions such as VOC and NOx are also important to our operations and are monitored to ensure compliance with local regulations. Continuous investment, technical improvements at emission points and emission control equipment contribute to the control and reduction of such emissions. Air impurity targets are included in site roadmaps where this parameter is material.

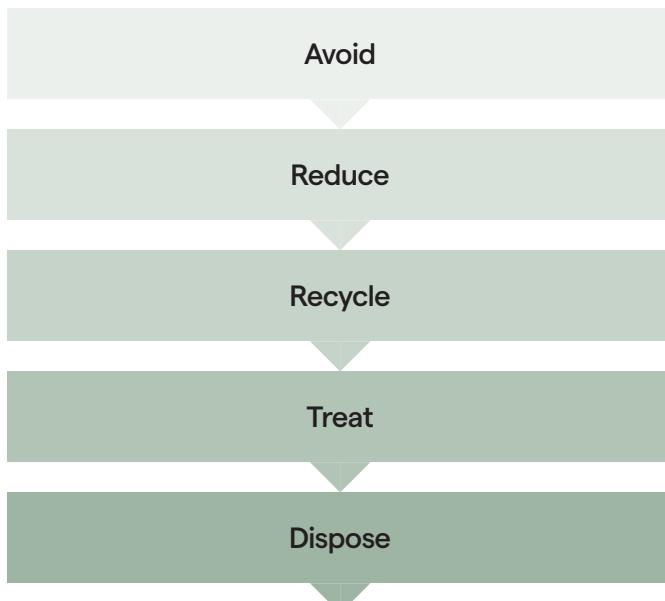
Lonza Total Air Impurities 2022

Total Air Impurities [t]	376
VOC [t]	129
NOx [t]	208
SO ₂ [t]	6
Particulate Matter [t]	34

Waste

As a company operating in the pharma, biotech and nutrition markets, including chemical production facilities for APIs, we strive to be transparent with stakeholders and local communities about how we manage waste and wastewater. Communities have a vested interest in waste and water discharge from production.

Each manufacturing site maintains a waste disposal operation tailored to relevant waste streams for the efficient and environmentally sound treatment and disposal of waste outputs. All sites are committed to our waste reduction principles and to treating and disposing of all waste materials (including wastewater) in full compliance with local regulations and international standards. The waste management system and performance at our manufacturing sites are both subject to regular inspections and audits.



Our sites carefully select their partners for waste transportation and treatment based on performance and capabilities in safety and sustainability. We operate our own waste and wastewater treatment facilities at specific locations, such as Visp (CH) and Nansha (CN).

We are committed to increasing the efficiency of input materials in production processes, including yield improvement, reworking out-of-specification production, and the re-use of ancillaries wherever possible.

At our site in Visp (CH) we continue our solvent recycling efforts. In 2022, the site regenerated over 9,000 tons of solvent and treated over 1,000 tons of contaminated water to reduce incineration.

We strive to reduce effluent by controlling and reducing water inputs and effluent pre-treatments. Final effluents are managed and controlled according to the parameters permitted by local authorities.

Waste Generation and Significant Waste-Related Impacts

Our goal is to reduce the environmental impact of our activities while meeting all quality and hygiene requirements. As a CDMO for the pharmaceutical industry, our influence is limited in relation to waste generated by customer-defined manufacturing processes and downstream user behavior. We therefore focus improvements upon our own operations.

The production technology and quality requirements for bio-pharmaceutical production have changed in recent years. Improved cleaning practices, and the use of single use technology (SUT) such as plastic bags and appliances instead of stainless steel reactors, are reducing water use from cleaning traditional vessels, but have increased SUT plastic waste. As this technology is relatively new, alternative disposal and recycling solutions are not broadly available, and therefore a local approach is favored. The SUT industry is yet to develop a recycling or take-back system for the items or develop reusable assembly parts that would allow users to reduce the burden.

The majority of our waste is managed by third parties that have been approved by the relevant authorities and our local sites. We are currently working to strengthen this practice by harmonizing contractual agreements and audits. We also have a waste recycling KPI for internal waste recycled or reused onsite (including closed loop), to help track and incentivize onsite circularity measures. Sites develop their own circular measures, such as increasing the number of recycling cycles of solvents, or using biomass waste as fuel.

Remediating Legacy Issues

Mercury Remediation

Our largest site in Visp (CH) continues to address legacy mercury pollution along a former wastewater discharge canal, on surrounding soils and other areas where sediments containing mercury were deposited. This issue dates back to when Lonza used mercury as a catalyst in chemical processes. Between the 1930s and the 1970s, before the construction of the wastewater treatment plant, the site discharged industrial wastewater containing mercury into the canal.

Since 2013, we have worked closely with local communities to finance and implement the required technical investigations in residential areas and agricultural zones between Brig-Glis and Niedergesteln (CH). Remediation works in the residential area started in 2017. By the end of 2022, 151 parcels of land in Visp, Raron and Brig-Glis (CH) were remediated, representing 91% of residential plots affected. Remediation works in the contaminated agricultural area started in 2021, with a first pilot remediation completed in Raron (CH) in September of the same year. In 2022, a second pilot remediation was completed in Visp (CH). This work is continuing in 2023 in both residential and agricultural areas.

We are working closely with the Swiss Canton of Valais, the municipalities and other relevant parties to resolve this challenging industrial legacy. Progress and updates on our remediation activities are published on a dedicated [webpage](#).

Old Gamsenried Landfill

The Gamsenried disposal site in Gamsen (CH) is owned and managed by Lonza and consists of an old and decommissioned area alongside a new and fully permitted disposal site. The latter is used for the disposal of waste incineration slag from the Visp site and the regional waste incineration plant. The older, decommissioned section was primarily used between 1918 and 1978 for landfilling lime hydrate and gypsum sludge. In this area, the current management approach includes detailed groundwater monitoring and pump-and-treatment of polluted groundwater at the edge of the landfill.

Detailed investigations identified the section of landfill that poses the greatest risk to the groundwater. To minimize risks to the groundwater during the foreseen remediation and to improve the safeguarding and containment of the old landfill, an extended hydraulic barrier will be installed within the next three to four years. Planning work and related hydrogeological investigations are currently underway, and related financial provisions were made in 2021.

GMP guidelines require us to work with qualified materials for our manufacturing processes. In our laboratories, this often means that we stock excess inventory to guarantee production and analysis and mitigate supply issues. Occasionally, this leads to excess materials that can no longer be used due to process or regulation changes. Our Geleen (NL) site investigated alternative uses to avoid discarding items such as unopened disposables, including syringes, pipettes and bottles. In 2022, the team donated more than 70,000 items of PPE and 200,000 disposables to local organizations they had identified, including schools and the local zoo. The donated items included reagents, microscopes, incubators, centrifuges, balances, PCR cabinets, furniture, and over 1,000 storage boxes.



Waste Generated

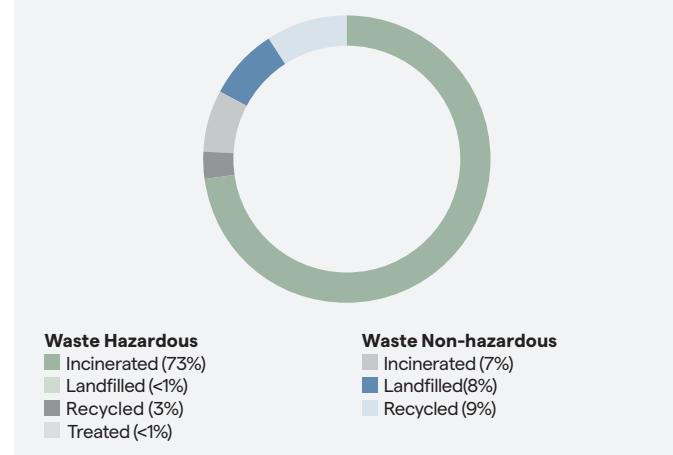
In line with our corporate reporting guidelines, we exclude construction, demolition, remediation and excavation waste from our sustainability reporting framework. Only production-related waste is tracked at a corporate level. Solvents - which are used as fuels at some of our sites - are reported as waste for fuel, even though they allow us to considerably reduce natural gas consumption.

Our sites and divisions are focusing on waste intensity reductions as part of their site plans and roadmaps. These are further supported by new guidance on waste management and minimization. A significant proportion of the increase in waste is due to the cleaning in the API production, generating large amounts of liquid waste which is incinerated to avoid contamination of water streams. The waste¹⁰ generated and disposed of by our continuing operations decreased by 1% compared to 2021.

In Visp (CH) and Nansha (CN), the energy generated in 2022 from incinerating waste solvents, by-products, and waste was more than 2,000 TJ. These replace the consumption of 58 million m³ of natural gas. Waste that is sent to landfill mainly consists of incinerator ashes and sludges.

	2020	2021	2022
Total Waste Disposed [Metric tons]	67,321	61,988	61,664

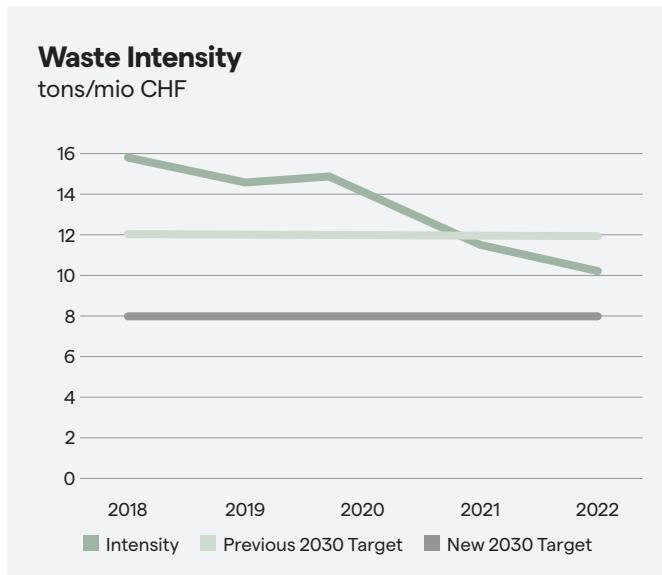
Lonza Waste Disposal by Destination 2022



¹⁰ Waste is defined as hazardous or non-hazardous by local legal definition.

Waste Intensity

In 2018, we defined a long-term global waste intensity reduction target of 24% by 2030. In 2022, with a focus on our continuing operations, we have overachieved this target with an intensity of 9.9 tons/mio CHF, and are therefore increasing our ambition to 50%. As the intensity chart shows, our performance continued to improve in 2022.



The amount of waste generated can fluctuate for several reasons, including the following:

- The use of SUT and additional cleaning practices to achieve the required product quality is expected to increase waste
- Changes in the product portfolio, which might include more or less waste-intensive products and production processes
- The temporary shutdown of production lines, e.g., for maintenance and optimization purposes
- The discarding of production batches as a result of quality issues

Our sites have been making progress with their projects and activities to decrease waste. Some examples are listed below:

- The reduction of waste intensity for several productions by pretreating contaminated wastewater to make it suitable for the wastewater treatment plant and to avoid sending it to incineration, e.g., the distillation of wastewater stream or active carbon treatment. In Visp (CH), this initiative avoided over 200 tons of CO₂-eq in 2022
- An increase in solvent recycling for several production lines, reducing the procurement of fresh solvents. Concurrently there has been a decrease in the amount of waste solvent incinerated
- Process optimization, such as the redesign of production processes, process streamlining and yield improvements

Innovating for Sustainability

We are committed to creating value for society by delivering innovative, science-based solutions for our customers in the healthcare industry. For an overview of our most important innovation activities, please refer to the innovation highlights, which are part of our divisional updates in the 2022 Annual Report.

As a strategic partner operating in the pharma, biotech and nutrition markets, business-to-business contract manufacturing forms a large proportion of our business. In this context, staying up-to-date with production technology and streamlining manufacturing processes is important in improving efficiency.

In line with our commitment to SDG 9 (Industry, Innovation and Infrastructure), we have developed and implemented a "Sustainable Design Standard". This standard highlights the best solutions for reducing energy consumption, GHG emissions, water consumption, waste production and total cost of ownership (CAPEX plus OPEX) for the useful life of an asset for the most common utilities. If it is not possible for a project to comply, an alternative solution and robust explanation must be given.

In our Small Molecules division, organic solvents play an important role in the manufacturing process. We continue to improve the efficient use, reuse and recycling of solvents. This reduces our environmental footprint by minimizing the consumption of fresh solvents and the amount of waste that is generated and treated. We also share best practice in this important area with some of our major customers. Other projects focus on waste streams with potential for optimization based on size and feasibility. In parallel, these projects reduce production downtime through waste disposal, de-bottlenecking and simplified logistics. In 2022, new projects included acetonitrile and toluene recovery by distillation. In total, projects implemented in the Small Molecules processes in Switzerland and China avoided 1,000 tons of wastewater being incinerated by treating it with other technologies, saving more than 200 tons of fuel-related CO₂-eq. In addition, we currently recycle 9,000 tons of solvents, saving approximately 38,000 tons of CO₂-eq per year by avoiding incineration and consumption of fresh solvents.

Another major project implemented in 2022 at our Visp (CH) site led to a considerable reduction in our water consumption footprint. The site collected and treated the groundwater from the groundwater barrier directly in the wastewater treatment pan. The water is now treated centrally by advanced oxidation processes and activated carbon and can be reused for steam production, reducing the water consumption footprint of the site by more than 300,000 t/year and the wastewater flow by 40 m³/h.

We strive to continually innovate for sustainability in research and development. In our Capsules & Health Ingredients (CHI) business, we remain at the forefront of plant-based hypromellose (HPMC) capsule innovation. In 2022, we launched the Capsugel® Enprotect® capsule. It is the first of its kind in enteric manufacturing technology, with a bi-layer and locking system suited to medications that do not tolerate additional coating processes such as solvent or heat. The capsule meets a pressing market need for an effective oral delivery solution for treatments that are easily degraded by acidic stomach conditions. This technology is fully integrated into our manufacturing facilities, reducing the number of steps in the manufacturing process for our customers. The Enprotect® capsule can be used for live biotherapeutic products, large molecules and small molecules.

SDG 9 Industry, Innovation and Infrastructure

"We continue to invest in sustainable growth projects, leveraging best-in-class green building techniques and technology to reduce carbon emissions and resource use. Our role as a CDMO is also helping us to reduce the environmental impact of our customers' supply chains."

*Jean-Christoph Hyvert,
President, Biologics*

Traditional mammalian seed train bioreactors operate in batch mode and fixed cell culture volume, reaching maximum biomass for transfer into the production bioreactor. Operating the seed bioreactors in perfusion mode allows for higher cell densities to be reached. In 2022, Biologics R&D completed the development of such a perfusion process and associated high-density production and purification processes. This improved batch titer and yield by approximately 30% compared to traditional fed-batch processes. According to our models, this intensification will decrease our environmental footprint by approximately 30% per gram of product compared to conventional fed-batch processes. In addition, the new intensified process introduces multi-column chromatography, improving purification resin utilization (e.g., Protein A) and reducing the need for this key reagent by approximately 50%. Additional waste reductions were implemented by improving our high-throughput purification development strategies for bispecific antibodies and other new molecular formats.

Our Small Molecules R&D team is innovating an electrochemistry process to eliminate burdensome metal waste from pharmaceutical manufacturing. Several pharmaceutically important chemical reactions still rely on stoichiometric amounts of metals, and in many cases, these include heavy metals such as lead and manganese, among others. The waste generated from these processes can be toxic, environmentally damaging and expensive to dispose of. To determine if its conventional lead mediator could be reliably displaced with an electrochemical approach, the team targeted a prominent reduction-oxidation ("redox") reaction. In collaboration with the University of Graz (AT), our team successfully developed a general and scalable procedure to achieve the anodic decarboxylative acetoxylation of amino acids in batch and continuous flow modes, completely eliminating the use of heavy metal. This innovation can prevent more than 1.5 tons of lead waste for every 1 ton of an average-size small molecule produced. The process also improves the sustainability performance of production by operating at only 40°C and requires relatively low electricity demand.



People and Society

All of our behaviors, activities, policies and practices support our purpose of enabling a healthier world. We do this by providing goods and services to our customers who deliver therapies and medicines to those who need them around the world. We also work to support and enable our employees, while giving back to the communities in which we operate.

Our people are central to the success of our business and we offer many opportunities for our employees to improve their skills, build on their experience and grow their careers. We provide them with safe workplaces, care for their wellbeing and encourage their involvement in creating a positive and inclusive working environment and culture.

We focus our support on those charitable and educational institutions that are aligned with our priority SDGs. We engage in a range of initiatives to deliver benefits to our many stakeholders, including the communities in which our employees and their families live. By cultivating relationships and engaging with people in our communities, we create sustainable value at a local level across our network.

Occupational Health and Safety

High occupational health and safety standards are the basis for assuring the safety, health and wellbeing of our people, our customers and other stakeholders who attend our sites.

We regularly monitor health and safety regulations, industry standards and other best practice to meet our obligations and aim for compliance through regular internal and external audits.

We also work assiduously to eliminate health and safety hazards and incidents, including those that result in injuries and illnesses affecting our people. We continue to focus upon our "Vision Zero" initiative, a program that has led to a considerable reduction in safety incidents. Ultimately we strive for zero workplace injuries, process incidents, or environmental incidents.

We have set site targets and are measuring safety corrective actions (safety CAPAs) which are generated by our colleagues. This program drives the identification and closure of safety-related observations and improvements across our site network. The initiative has moved the focus from a lagging injury-based metric to a leading indicator driving employee behavior and involvement. It resulted in more than 28,000 documented safety improvements in 2022, largely identified and corrected by our manufacturing workforce.



Labor practices and safe working conditions are the responsibility of site management, reporting to the respective Division Head of Operations. Site operations and EHS managers are accountable for the occupational safety process by setting and helping to achieve local targets. Ultimately, every employee contributes by identifying risks and unsafe conditions, observing safe behaviors and working safely at all times. Prioritizing safety is a condition of employment.

While our Safety and Sustainability policy defines high-level principles, our corporate EHS management system (fully aligned to ISO 45001 requirements) describes the essential administrative elements for successful EHS management. Examples include planning, compliance, training, incident investigation, performance reporting, emergency preparedness, inspections and audits, and management review.

Corporate EHS Standards establish additional requirements for managing specific EHS hazards or topics. Topics can include waste and wastewater management, contractor management, site security and business continuity planning, and critical safe work standards (such as confined space entry, personal protective equipment and fall protection).

Local EHS standards address both our corporate EHS expectations and local legal requirements. The standards guide our actions and clarify specific roles and responsibilities. Some sites are certified according to the occupational safety standard ISO 45001 or Responsible Care.

We regularly audit sites and locations – on average every three years – to aim for compliance with rules and regulations, technical integrity and effective management systems. We actively monitor our performance in occupational health and safety, and a monthly analysis report is distributed to all employees. These reports and subsequent activities are carefully tracked and measured, then global and local management adapt approaches accordingly.

Hazard Identification, Risk Assessment and Incident Investigation

Work-related hazards are addressed through hazard identification and reporting (including near-miss incidents), job safety analyses, site inspections and process hazard reviews. Site employees are trained to use these tools, and local and global EHS leaders collaborate with each site to ensure the workplace is safe and productive. The reporting of unsafe conditions and near-miss incidents is encouraged, with site-specific targets based on the number of corrective actions implemented to mitigate any identified potential hazards.

All incidents are investigated. A formal investigation and root cause analysis process, aligned with an internationally recognized methodology, is used for recordable injuries, as well as significant process safety incidents and environmental incidents. All employees are trained to stop and to refuse actions that they consider hazardous for themselves, their colleagues and/or the community and environment.

Occupational Health Services

Operating sites have processes in place to recognize, evaluate and control occupational health risks. Where required, we have supplementary medical surveillance programs. All sites also have a designated clinician or physician to administer medical surveillance and evaluate occupational injuries or illnesses.

In 2022 our Jakarta (ID) site achieved a remarkable milestone of 14 years without a lost time incident and, in recognition of this, received a 'Zero Accident Award' from the Indonesian government.



Worker Participation, Consultation, Communication and Training on Occupational Health and Safety

Worker participation is essential to address safety improvements and behavior. In many cases, sites have a safety committee integrated into the EHS council to oversee all safety-related matters. Additionally, all sites are required to conduct frequent safety meetings in all teams and escalate any identified safety concerns.

All sites are required to conduct safety training on hazardous materials (HazCom), critical safe work procedures, evacuation and process safety, among many others. As required in our EHS Management System, each site is required to establish and maintain a Safety and Sustainability Training Matrix and Plan, which includes a listing of required training topics, training frequencies and methods, either by job title or a similarly effective means. It integrates topics that reflect changes in site activities, risks and regulations.

Sites continue to implement our global Be A Safety Leader (BSL) initiative to create the best possible safety culture through the inclusion of all colleagues. BSL helps all employees understand how to actively contribute and lead the day-to-day process of ensuring safety within the working environment. Sites develop creative approaches to conducting hazard assessments, defining critical behaviors and providing coaching at all levels to support implementation.

Our site in Greenwood (US) has received the Plant Safety Award from the South Carolina Manufacturers Alliance for the fourth year in a row. The site has had no lost time injury for more than four years. The EHS team continues to drive this good safety performance with leadership support, promoting corrective actions to closure, daily visual safety inspections and thorough incident investigations.



Promotion of Worker Health

Lonza employees are fully committed to the critical importance of health, safety and injury prevention. They understand that investing in prevention, and employee health and wellbeing, pays dividends and ensures colleagues remain fully engaged. Health programs are managed at site level.

Prevention and Mitigation of Occupational Health and Safety Impacts

We continually monitor our operations to identify potential health risks to our employees. This includes (but is not limited to):

- Job and technical hazard assessments, e.g., ergonomic hazards
- Technical improvements
- Training and education
- Substance exposure monitoring for chemical exposures, according to the limit values set by the Corporate Toxicology group

Our products primarily support the healthcare industry. In addition to the required safety information, these products and their raw materials undergo extensive testing, registration requirements and instructions for use so that they can be used safely by customers and their patients.

Work-Related Injuries

Over the course of 2022, we recorded a total of 20 Lost Time Injuries, which is an increase compared to last year's number (13). The number of Recordable Incidents was 96 in the reporting year. All incidents are analyzed, identifying the most probable causes and corrective actions. The depth and detail of each investigation, the investigation method and the level of participation by local management, employees, and other functions, are commensurate with the nature and scale of the incident and its impact.

For all Lonza sites at the year	2020	2021	2022
Lost Time Injury Frequency Rate Per 1,000,000 worked hours	0.62	0.35	0.52
Recordable Incident Rate Per 200,000 worked hours	0.48	0.52	0.50

Most injuries recorded and analyzed in 2022 resulted from chemical contact, lifting, slips, trips, falls, sprains, and strains, which can be common in our industry. There were no injuries resulting from commuting incidents from transport organized by the company.

Lost Time Injury Frequency Rates (LTIFR) are calculated based on one million hours worked. Data represents the employed workforce and agency workforce in regular manufacturing processes. Work hours reported include direct employees and agency workers.

2022 Safety Performance

96

Recordable Work-Related Injuries

20

Lost-Time Work-Related Injuries

0.52

Lost Time Injury Frequency Rate
(Per 1 Million Hours)

2.5

Recordable Work-Related Injury Rate
(Per 1 Million Hours)

38

Million Hours Worked In 2022

Diversity and Equal Opportunity

We recognize and encourage an inclusive and diverse workforce and work environment and continue to embed this through our company values, one of which is Inclusion. Our Code of Conduct states that we do not tolerate any discrimination, harassment or bullying for any reason. This also applies to our business partners (both direct and indirect) throughout our supply chain.

Our Inclusion, Diversity and Belonging (IDB) Council aims to ensure a long-term, sustainable commitment to inclusion in which everyone within our workforce feels a sense of belonging.

Composed of volunteers across functions and countries, the IDB Council's role is to devise and manage IDB programs, as well as sharing knowledge and insights across our network. The Council is supported by a global community of IDB Ambassadors across our site network and grants sites the freedom to provide relevant support to their specific employee communities and cultural contexts. The Council and Ambassadors meet regularly to share ideas and experiences, facilitating knowledge sharing and the scale-up of local initiatives to our wider corporate context, where relevant. The Council is sponsored by a dedicated Steering Committee comprising senior leaders from Legal, HR and Communications to represent and advocate IDB at the Executive Committee and Board level.

In 2022, a variety of events were hosted, including global "Rise Up" events for all colleagues from across the global network to listen to internal and external perspectives on the uniquely female experience of the workplace and to explore mentoring opportunities. These meetings also provided a forum for the group to share and discuss specific challenges and opportunities for females in the workplace.

2022 also saw the acceleration of two of our elected SDGs within this space: SDG 4 (Quality Education) and SDG 5 (Gender Equality). Both SDG initiatives have measurable targets related to IDB, which are directly linked to the Lonza Bonus plan. The Quality Education program has created a roadmap for training. The program for Gender Equality is establishing initiatives to support strong female management and a future pipeline for sustainable action to 2035 and beyond.

SDG 5 Gender Equality

"We believe in equality and we promote Gender Equality through increased female representation in management. Equality is an advantage; it strengthens our employee value proposition and builds a culture of inclusion, diversity and belonging at work. Alongside our efforts to improve the percentage of females in management, we continue expanding initiatives to support females at all stages in their careers."

*Caroline Barth,
Chief Human Resources Officer (CHRO)*



Employee Recruitment, Retention and Development

We have a number of successful programs that support talent acquisition and recognition across our organization. Our global Talent Referral Program incentivizes our employees to refer friends and acquaintances for vacant positions across our business. This program resulted in more than 380 referral hires in 2022. We operate a cross-market online recognition program, BRAVO, to support and enable a positive and self-reinforcing company culture. Using this platform, more than 7,000 individual "thank you" messages and awards were sent across the business over the course of 2022.

Our focus in 2022 was supporting the growth of our employees, and we continued to enhance our leader-led approach in Talent Development:

- We launched our Lonza Leadership Framework: Care, Coach and Communicate
- We continued the Accelerated Management Development Program (AMDP) and Core Leadership Impact Program (CLIP) to provide our leaders with the necessary capabilities to perform their roles and make meaningful impacts across the company
- We maintained a focus on our wider employee community in the Learning and Development area by offering new and improved learning resources in 2022, with an enhanced offer on LinkedIn Learning, including bespoke Lonza learning paths available 24/7. Learning hours increased by 72% in 2022, with more than 3,000 hours registered in the last 90 days. We also enhanced mentoring opportunities to empower our employees to own their career development and pursue opportunities. Our 2022 Voice of Employee (VoE) survey indicated a strong positive response in this area, with employees scoring positive responses to both 'having the opportunity to learn and grow' (68%) and 'managers having meaningful conversations on career development' (65%)

SDG 4 Quality Education

"Investing in the development and upskilling of our employees is essential to the success of our growing, science-based company. Our mission is to promote and facilitate continuous learning by providing training programs and development opportunities that help our people grow."

*Philippe Deecke,
Chief Financial Officer (CFO)*



As part of our employee retention initiatives, we set priority on our Internal Promotion Rate (move to a higher position) (21%) and Internal Position Fill Rate (move to a different position at the same grading) (29.8%). Both figures trend in line with our industry peers, while we strive to continuously improve. In addition, rewards are reviewed and benchmarked annually to ensure our offering is competitive within the industry. They are also reviewed in line with employee feedback from our VoE survey. Key retention initiatives include:

- An enhanced Reward offering in 2022, with a structural change to our incentive plan, places a greater proportion of recognition on personal contribution as well as reflecting ESG indicators within wider company performance
- The introduction of a new employee share plan at key locations, which allows employees to buy Lonza shares at a discounted price and receive a free share for each one purchased after a three-year blocking period
- The launch of a Lonza Restricted Share Units Plan, allowing nominations of employees to receive restricted stock on a three-year holding period basis
- The offer of childcare support through local government schemes at a market level.
- Compensation for atypical working hours also follows local legislation and varies across our global site network. This includes – but is not limited to – additional annual leave, shift premiums, standby and call-out allowances and one-time recognition awards to compensate extraordinary efforts for special projects
- The launch of our Global Hybrid Work Policy allows flexibility for eligible employees to work remotely up to two days per week on a regular basis, with no formal approval process. Eligible employees are also empowered to 'Work from Anywhere' for up to 28 days in a rolling 12-month period on an international basis

The provision of equal pay at Lonza is a primary foundation of our global HR and Reward practices. We strive for our HR practices to fulfill equal and gender pay reporting requirements across our global network. This includes Switzerland under Art. 13a Gender Equality Act and the UK Gender Pay Reporting requirements. We continue to review pay equality across the employee population.

All of these initiatives align with the broader global People Strategy of Come, Stay, Grow and Make a Meaningful Difference. More detail on our People Strategy can be found in our [2022 Annual Report](#).

Performance Management

Our goal-setting process changed in 2022 with the new Lonza Bonus incentive plan, which requires each employee to set one behavioral goal and one business goal aligned to our strategic priorities. The performance review process is linked to our incentive plans, so employees feel rewarded for their efforts. The performance management process was reviewed in 2022 to ensure that it remains robust for the future.

The company performance goals have also been redefined to remove caps and limits for lower grades, create one global company performance metric and align a proportion of our company performance to our ESG targets.

Employee Engagement

Our Employee Value Proposition (EVP), "A Meaningful Difference", reflects how our colleagues work to fulfill our purpose of enabling a healthier world. This purpose is underpinned by our four core company values:

- Integrity
- Inclusion
- Innovation
- Initiative

Alongside these values, our purpose is supported by a focus on caring for our colleagues, our customers and our planet.

Our global Voice of Employee (VoE) employee engagement survey launched in 2021, and was successfully conducted twice in 2022. The data and insight help our leaders to understand how our employees are thinking and support an environment of listening and inclusion where retention and engagement can be actively supported. As a result, our Employee Engagement Index rose to 71 (a 2-point increase from 2021), and the 2022 survey received an overall response rate of 78% (compared to 65% in 2021).

Lonza Workforce Lifecycle

Attract, Select and Hire

Get the right people in the right place

Onboarding

Set team members up for success

Move or Advance

Activate career progression

HR Transactions

Own the HR practices
Encourage team members to 'self-serve'

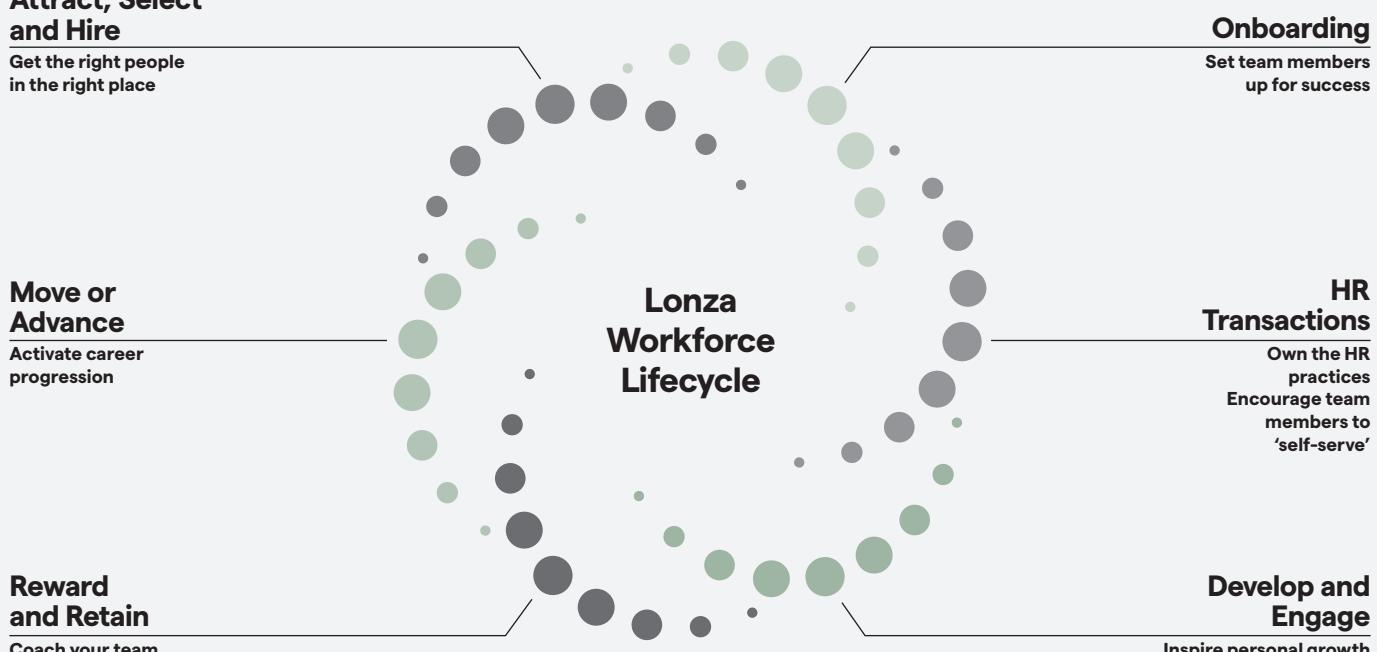
Reward and Retain

Coach your team

Develop and Engage

Inspire personal growth

Lonza Workforce Lifecycle



The survey outcomes were analyzed at a company, division, site and team level to allow managers across the business to understand and act on both general and specific needs. Areas of opportunity were identified at a manager level, and our people leaders have been given support to develop improvement programs to address local challenges.

One area which required additional action was around employee wellbeing. In 2022 we ran a pilot for a Lonza Wellbeing platform for all employees to allow for direct access to support and resources on health, wellbeing and lifestyle topics. Our learnings from this pilot will be pivotal to our 2023 wellbeing offering as our employee needs are now better understood around four pillars of wellbeing: mental, financial, physical and social. This is further supported by our ongoing Employee Assistance Program (EAP).

As part of our wider commitment to sustainability, we have formed a network of colleagues from our largest sites - with more than 100 employees - to share best practice and experiences for corporate responsibility. This team connects on a quarterly basis and representatives from each site share accounts of volunteer activities and other community engagement programs, such as those mentioned in pages 46 to 50.

Investing in Communities

Our Sponsorship Approach

In many of our communities, we take on multiple roles: as a neighbor, an employer, an economic contributor and a charitable sponsor of local non-profit organizations and educational institutions. While our financial donations are important, our greatest charitable contributions come from our colleagues who volunteer to support projects that are meaningful to our communities. We focus our charitable giving and volunteer activities on selected projects that align with our SDGs and where we feel that our contributions can make a significant difference, as shown in the examples below. We evaluate the recipients of any contribution to ensure they promote high standards of ethics and compliance and a low proportion of administration expenses.

As part of our 125 year anniversary celebrations in October 2022, we made a new global commitment to pledge a **volunteer day globally for every employee**.

This allows our people 'time back to give back' for a more sustainable future, something which connects with our employees' personal ambitions and priorities. This ongoing benefit will be available from 2023.



Good Health and Wellbeing Supporting Access to Healthcare

We provide support to Project HOPE's core mission fund. Project HOPE is a global health and humanitarian organization that provides direct healthcare services, equips clinics and hospitals, trains local healthcare workers, and delivers solutions that help people access the healthcare services they need. Project HOPE utilizes its funding to support those impacted by emergencies and natural disasters where the need is greatest, such as mothers and children, refugees and migrants.



Colleagues from our Porriño (ES) site participate in Tapones, a program led by the SEUR Foundation that raises funds from plastic cap recycling to finance medical and orthopedic treatments for patients unable to cover the cost.

Our Puebla (MX) site supports Una Nueva Esperanza, an organization that offers help to low-income families of children with cancer. Una Nueva Esperanza provides basic needs, such as food and shelter, financial support for healthcare costs, counseling, educational resources and recreational activities.



We continue to support various national and local organizations including the Swiss and American Red Cross. Our contribution to the American Red Cross supports disaster relief, including crises caused by severe weather events, enabling the organization to prepare for, respond to, and help people recover from such events. In addition, our support of the organization's blood services enables the collection, testing, typing, and distribution of blood products to those in need. We also contribute to the Swiss Red Cross' individual assistance program, covering healthcare costs for people in need.



Supporting Blood Donation in a Critical Time of Need

Colleagues from our Sagamihara (JP) and Houston, Texas (US) and Basel (CH) sites hosted blood drives this year. The Houston drives helped replenish supplies for the Gulf Coast Regional Blood Center which serves the Texas Medical Center, the largest medical center in the world.

Providing Food to Our Neighbors

Our Bend, Oregon (US) site supports the High Desert Food & Farm Alliance, an organization set up to address challenges associated with food access and production in the high desert region of Central Oregon.



Colleagues from our Tampa, Florida (US) site continue to support Feeding Tampa Bay - an organization that works to provide consistent access to nutritious food in order for students to excel, for parents to focus on their livelihoods, and for seniors to maintain a healthy life. Our volunteers support the organization by sorting food donations and packaging food bundles for those in need.



Raising Funds for Research

Our Morristown, New Jersey (US) site participated in the Leukemia & Lymphoma Society's "Light the Night" event for another year in 2022. The event raised money to help find cures for leukemia, lymphoma, Hodgkin's disease and myeloma and to improve the quality of life of patients and their families.



Colleagues from our Greenwood, South Carolina (US) site hosted a "Relay For Life" event in partnership with the American Cancer Society. This event raised funds for research, patient support and communications about cancer prevention.



For the sixth year in a row, colleagues from our Bornem (BE) site continued their participation in the 1000-Kilometer Fight Against Cancer annual bike event, with two teams of cyclists raising money for cancer research.



Colleagues from our Portsmouth, New Hampshire (US) site volunteered for and participated in a 5k race to benefit the Krampels Center, a non-profit organization whose mission is to support people living with brain injuries.



Gender Equality

Supporting Mothers in STEMM Careers

We have set an ambition to increase gender equality across the workplace. To support this, we contribute to the work of Mothers in Science (MiS), an international non-profit organization providing research and support for mothers working in Science, Technology, Engineering, Math and Medicine (STEMM) careers. MiS raises awareness of career obstacles faced by mothers working in STEMM fields and advocates for workplace equality and inclusion, providing resources for industry, academia and individuals. Our support continues to fund global research that addresses these challenges. It also supports the development of webinars and the expansion of its mentorship program, whereby mothers new to STEMM fields can be paired with volunteer mentors who have navigated the balance of motherhood and a career.



Since 2020, we have provided funding to Hand in Hand (HiH) India - a non-profit organization focusing on child labor elimination and education, access to healthcare, empowerment of women through livelihood creation and skill development, natural resource management, and solid waste management. We support the work of HiH's Green Friends, a growing team of workers who provide sanitation services to households in six states in India, facilitating the segregation of waste at source and ensuring proper disposal. More than 70% of Green Friends are women, and they are often the sole providers for their families. By supporting their employment and skills development, HiH provides them with wages and dignity in the workplace. Our support to HiH also contributes to the provision of medical equipment to local hospitals and medical services health camps, where the Green Friends can seek medical assistance. Our support also enables educational campaigns focusing on immunization, nutrition, anemia, personal hygiene and sanitation.



Our Walkersville (US) site supports the local Chamber of Commerce's S.H.E. (Strength, Heart and Equality) Week, an event where regional non-profits and businesses come together to support equality and the development of women in business through education, mentoring and economic opportunity.



Quality Education

Providing Support for Education in Science

Quality education is a priority for us, both within our own business and within the communities in which we operate. Various sites donate laboratory equipment and supplies to local schools and universities, including Puebla (MX), Walkersville (US), Geleen (NL), Porriño (ES), Portsmouth (US), and Houston (US). We also provide financial support, and colleagues give their time in support of STEMM educational programs. In Houston, we support the STEMM bus which brings a mobile laboratory to primary schools, and we provide scholarships for various universities, including for women in STEMM.

Our colleagues from Visp (CH) collaborated with Pfyn-Finges Nature Park in support of the Technical and Environmental project week, intended to support young people's developing an interest in technical fields.

Supporting Wider Education in our Communities

Colleagues from our Geleen (NL) site volunteered at a local zoological park. They refurbished the grounds, library and educational center and installed a picnic area.

In partnership with Astha Kunj, our Haryana (IN) site supported the development of a child care center that provides educational activities, arts and crafts, coaching and computer lessons to children in the Rewari district.

Colleagues from our Guangzhou (CN) and Nansha (CN) sites continued to join forces to provide resources and teach children at two regional primary schools. As part of our decade-long support of these schools, volunteers remain able to teach classes in public health, science, English as a foreign language, and sporting activities.

Our Walkersville (US) site supports the Student Homelessness Initiative Partnership of Frederick County, a non-profit organization that provides critical resources to homeless youth, including counseling, shelter and clothing. The organization seeks to provide early and consistent interventions and support to ease the impact of homelessness on children's education and wellbeing.

**Environment****Planting Trees and Keeping Communities Clean**

To celebrate Earth Day this year, all sites in our CHI division planted trees to make collective impact through collaboration and remind our colleagues about the importance of finding creative ways to protect the environment. The program was intended as a reminder that small actions can make a big impact.



Our Puebla (MX) site continued its tree planting initiative in a nearby reforestation area. In Houston (US), many colleagues continued to support Keep Pearland Beautiful, a local non-profit organization dedicated to protecting the environment and community in the area. The 2022 initiative included distributing trees for residents to plant. Volunteers from our Portsmouth (US) site also spent time cleaning local coastal areas to support the environment and its wildlife, together with the Blue Ocean Society, whose mission is to protect marine life in the Gulf of Maine through research and education.

In Porriño (ES), colleagues volunteered with Project Libera - a non-profit organization focusing on reducing environmental waste and developing innovative methodologies and tools to improve knowledge in different terrestrial, marine and river ecosystems.

Colleagues from our Visp (CH) site collected litter in public areas in partnership with the local community on World Cleanup Day 2022. This initiative is one of many projects identified and led by the site's Green Team, a passionate group of colleagues who have come together to support social and environmental projects at the site and in the community.



Industry, Innovation and Infrastructure

In 2022, we continued our annual support for Schweizer Jugend forscht (Swiss Youth in Science). This non-profit organization connects coaches with young people passionate about research to drive the development of scientific research in a wide variety of areas. This program supports the education of young people on their journey to becoming the next generation of scientific innovators.



SCHWEIZER JUGEND FORSCHT
SCIENCE ET JEUNESSE
SCIENZA E GIOVENTÙ

Our Visp (CH) site has partnered with the HES-SO Valais-Wallis, a university of applied sciences and arts, to develop joint competencies in the fields of education and research – particularly within biomanufacturing. This partnership supports the education of students and industry in the digitalization, automation and control of biotechnological processes and advances.





Appendix

About the Report

The reporting period is the 2022 calendar year. This is our fifth sustainability report following the principles of the GRI. We will continue to report on an annual basis. Our GRI Report 2022 is prepared in accordance with the GRI Standards for the period from 1 January 2022 to 31 December 2022.

The external auditor KPMG AG has been engaged by Lonza to provide independent assurance for selected KPIs disclosed in the Sustainability Report. KPMG AG's limited Assurance Statement is available at the end of this report.

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GRI Index and SASB Index

GRI standard	Disclosure	Page	Comments	SDG in focus	SASB*
GRI 1: Foundation 2021		52			
General Disclosures					
GRI 2: General Disclosures 2021	2-1 Organizational details		<p>Lonza Group Ltd is a public company, listed on the Swiss Stock Exchange (SIX) and with a secondary listing at the Singapore Exchange Securities Trading Limited (SGX-ST).</p> <p>Lonza Group Ltd Muenchensteinerstrasse 38 4002 Basel, Switzerland Tel +41 61 316 81 11 Fax +41 61 316 91 11 www.lonza.com</p> <p>For location of operations, please consult our website: https://www.lonza.com/about-lonza/company-profile/locations-worldwide.aspx</p>		
	2-2 Entities included in the organization's sustainability reporting		<p>The information in this report concerns all under Lonza Group Ltd operational control during 2022, including subsidiaries. Joint ventures are not included unless specifically mentioned.</p> <p>Financial reporting and accounting principles are available in the Notes to the Consolidated Financial Statements in the Annual Report 2022.</p> <p>Unless otherwise stated, the reporting boundaries for environmental data include the facilities for which we have operational control, own either the facility or significant relevant equipment, and where data is readily available and adequately representative. Facilities outside the reporting boundaries are smaller-sized leased facilities, laboratories, warehouses and office spaces with comparatively insignificant energy consumption.</p>		
	2-3 Reporting period, frequency and contact point	52			
	2-4 Restatements of information		If, in individual cases, a new form of presentation, calculation method or optimized data collection has led to other results for the previous years, then this is noted under the respective disclosures.		
	2-5 External assurance	52, 62-64			
	2-6 Activities, value chain and other business relationships		<p>Please visit our website www.lonza.com</p> <p>Significant changes to the organization and its supply chain can be found on pages 10-11 of our Annual Report 2022</p>		
	2-7 Employees	12-13			HC-BP-330a.1HC-BP-330a.2
	2-8 Workers who are not employees	13	Reported under the contingent workers' category.		HC-BP-330a.1HC-BP-330a.2
	2-9 Governance structure and composition	10-11			
	2-10 Nomination and selection of the highest governance body		Please see the Corporate Governance section of our Annual Report 2022		
	2-11 Chair of the highest governance body		Please see the Corporate Governance section of our Annual Report 2022		
	2-12 Role of the highest governance body in overseeing the management of impacts	10-11, 58-59			
	2-13 Delegation of responsibility for managing impacts	10-11			

Sustainability Report 2022

GRI standard	Disclosure	Page	Comments	SDG in focus	SASB*
General Disclosures cont.					
	2-14 Role of the highest governance body in sustainability reporting	10-11			
	2-15 Conflicts of interest	11, 20, 22			
	2-16 Communication of critical concerns	20-25, 59			
	2-17 Collective knowledge of the highest governance body	11	Please also see the Corporate Governance section of our Annual Report 2022		
	2-18 Evaluation of the performance of the highest governance body	11			
	2-19 Remuneration policies		Please see the Remuneration section of our Annual Report 2022		
	2-20 Process to determine remuneration		Please see the Remuneration section of our Annual Report 2022		
	2-21 Annual total compensation ratio		Information is confidential and not disclosed.		
	2-22 Statement on sustainable development strategy	4-5			
	2-23 Policy commitments	6, 22, 26, 40, 46			
	2-24 Embedding policy commitments	11, 22, 26-28			
	2-25 Processes to remediate negative impacts	20-28, 58-61			
	2-26 Mechanisms for seeking advice and raising concerns	22	Our Ethics & Compliance Group provides guidance in recognizing, understanding and complying with the laws and ethical standards that govern our business practices and activities. This is supervised by the Audit and Compliance Committee of the Board of Directors. In addition, we have the Lonza Ethics Hotline, operated by an external provider. The Lonza Ethics Hotline ensures concerns can be raised anonymously if preferred and where allowed by law. All concerns and reports where warranted, are investigated by our Ethics & Compliance Group and are finally reported to the Audit and Compliance Committee.		
	2-27 Compliance with laws and regulations		Only significant instances of non-compliance are compiled for consolidated reporting. There were no significant instances of non-compliance with laws and regulations during 2022.		
	2-28 Membership associations	17			
	2-29 Approach to stakeholder engagement	14-18			
	2-30 Collective bargaining agreements		In Lonza, there are no employee organizations and representatives on a global level. Therefore, we are not collecting specific information about collective bargaining agreements in affiliates. Generally, Lonza Group has a presence in countries where representation of employees is the rule, via work councils, unions and collective bargaining agreements. Local management is responsible for maintaining good labor relations according to legal requirements and agreements with unions, work councils and other employee- representing bodies. We respect these relationships and work with these parties in a mutually respectful manner. In addition to the country-specific employee representation, we have also established a European Work Council that holds regular meetings. This is designed to maintain a positive flow of information and communication. In the European Works Council, all European countries with more than 100 employees are represented by employee- nominated delegates: Belgium, France, Germany, the Netherlands, Spain, Switzerland, and the United Kingdom. The European Work Council is assisted and supported by a union secretary.		

GRI standard	Disclosure	Page	Comments	SDG in focus	SASB*
Material Topics					
GRI 3: Material Topics 2021	3-1 Process to determine material topics	14-15			
	3-2 List of material topics	15			
	3-3 Management of material topics		Compiled under each topic as per this table.		
Economic					
GRI 205: Anti-corruption 2016	1. Management disclosures	23-24		3, 12	HC-BP-510a.1 (losses not reported)
	205-1 Operations assessed for risks related to corruption	24-25			
	205-2 Communication and training about anti-corruption policies and procedures	23-24			
Supply Chain Responsibility	308-2 Negative environmental impacts in the supply chain and actions taken	25-27		3, 13, 5, 12	HC-BP-430a.1
	414-2 Negative social impacts in the supply chain and actions taken	25-27		3, 13, 5, 12	HC-BP-430a.1
Environmental					
GRI 302: Energy 2016	1. Management disclosures	29-30		13, 9, 12	
	302-1 Energy consumption within the organization	30	Note: Minor corrections were made to energy data from previous years, as some energy KPIs were double counting, as well as for improving the data split for the Visp (CH) site post divestment of our former Special Ingredients business		
	302-3 Energy intensity	30			
GRI 303: Water and Effluents 2018	1. Management disclosures	31-32	As per the GRI Standard, water stress in an area was assessed using the baseline water stress above 40% from the tool Aqueduct Water Risk Atlas, consulted in 2021. Some sites in the following locations were identified as per the above definition, most being low-water consumers: Mexico, India, China, The Netherlands, Belgium, UK, and US.	3, 9, 12, 6	
	303-1 Interactions with water as a shared resource	31-32			
	303-2 Management of water discharge-related impacts	31-32			
	303-3 Water withdrawal	31	The amount of Total Dissolved Solids in the water sourced is, in general, < 1000 mg/L.		
			Water Withdrawal 2022 [thousand m³]	Total from areas with water stress	
			Total Water Withdrawn	872	
			Groundwater Wells	372	
			Public Supply	500	
			Water Bodies	0	
			Note: Corrections were made to industrial water data from previous years as to only include water within the scope of Lonza's definitions		
	303-4 Water discharge	32	The amount of Total Dissolved Solids in the water discharged to water bodies is in general < 1000 mg/L. Water discharged to the sewer with Total Dissolved Solids > 1000 mg/L is 1,117 thousand m³. From that amount, 47 thousand m³ are from sites in areas with water stress.		
			Water Discharge 2022 [thousand m³]	From areas with water stress	
			Total Water Discharged	626	
			Water Discharged to Sewer	579	
			Water to Water Bodies	47	

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GRI standard	Disclosure	Page	Comments	SDG in focus	SASB*
Environmental					
GRI 305: Emissions 2016	1. Management disclosures 305-1 Direct (Scope 1) GHG emissions 305-2 Energy indirect (Scope 2) GHG emissions 305-3 Other indirect (Scope 3) GHG emissions 305-4 GHG emissions intensity 305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and other significant air emissions	33-35, 58-61 33 34 34-35 35 35	Note: Corrections made to emissions from onsite incineration and emissions from wastewater treatment using a more conservative approach based on measurements were made for previous years. Note: Minor corrections made to energy data from previous years also impacted Scope 2.	3, 13, 9, 12	
GRI 306: Waste 2020	1. Management disclosures 306-1 Waste generation and significant waste-related impacts 306-2 Management of significant waste-related impacts 306-3 Waste generated	36-38 36-38 36-38 37		3, 13, 12	
Social					
GRI 403: Occupational Health and Safety 2018	1. Management disclosures 403-1 Occupational health and safety management system 403-2 Hazard identification, risk assessment, and incident investigation 403-3 Occupational health services 403-4 Worker participation, consultation, and communication on occupational health and safety 403-5 Worker training on occupational health and safety 403-6 Promotion of worker health 403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships 403-9 Work-related injuries	40-42 41 41 42 42 42 42 42-43	We maintain an EHS Management System, which has been adapted to meet ISO 14001 and 45001 standards. This program applies to all locations and all employees.	3	
GRI 405: Diversity and Equal Opportunity 2016	1. Management disclosures 405-1 Diversity of governance bodies and employees	43 13		3, 5, 4	
Employee Recruitment, Retention and Development		44-45	Pages 30-33 of our Annual Report 2022	5, 4	HC-BP-330a.1
Employee Engagement		45-46	Pages 30-33 of our Annual Report 2022	5, 4	HC-BP-330a.1

* Sustainability Accounting Standards Board (SASB) – we have aligned our disclosures with the Biotechnology and Pharmaceuticals Sustainability Accounting Standard. As a Contract Development and Manufacturing Organization (CDMO), most of the SASB indicators do not apply.



Task Force on Climate-related Financial Disclosures (TCFD) and Climate Change Risk Management at Lonza

Natural and man-made factors are influencing the climate. The increase in greenhouse gas (GHG) emissions from human activities is accelerating climate change, which is causing an increase in average temperatures and a growing number of extreme weather events (droughts, floods, heavy storms, sea level rise, etc.). These events can have negative impacts such as food and water scarcity, land erosion, fires and damage to the built and natural environments. They could potentially affect our operations and our capability to provide the services and technologies needed to enable a healthier world.

We routinely evaluate the relevance and magnitude of risk categories, including climate-related risks, as part of our general business management, Enterprise Risk Management (ERM) program and Business Continuity Plan development. We strive to avoid, reduce or mitigate risks, all with anticipated negative impacts of defined magnitude. We also assess if general developments may present business opportunities.

Lonza aims to follow the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) to be transparent to our stakeholders. This document addresses disclosures in a framework that includes four pillars: Governance, Strategy, Risk Management, and Metrics and Targets. We aim to provide quantitative disclosures on climate-related topics in future as we continue to incorporate the TCFD recommendations into our business.

Governance

Board Oversight

Governance and oversight over Sustainability and ESG is with the Board of Directors (Board), specifically with the Chairman of the Board, with agreed elements to be covered by the Board's committees (Nomination and Compensation Committee, Audit and Compliance Committee, and Innovation and Technology Committee). While the Board acts as sponsor and overall owner of the program, the implementation is the responsibility of the Executive Committee (EC). The Board receives regular updates on climate-related risks as part of its oversight of the environmental,

social and governance (ESG) program, which are presented and discussed at their meetings. Lonza's climate-related targets and results are discussed several times during the year and at year-end in the context of sustainability reporting. The Board also has oversight of enterprise risks and opportunities that are identified through the company's ERM program, and which are reviewed annually.

Management Oversight

Senior management, and in particular the Lonza Executive Committee (EC), is responsible for continually monitoring the evolution of risks and opportunities and the risk mitigation progress in the organization. In order for risks to be managed at the appropriate level, the heads of the Business Units, Operational Units, Corporate Functions and Business Services Organizations provide adequate and timely reporting to the EC. The EC escalates the information about significant risks to the Board as appropriate.

In addition to this governance structure and under the leadership of the CEO, the EC is responsible for reviewing and approving the company's sustainability program and agenda, including climate, waste and energy targets. The EC and the Board receive a quarterly update on the status of our waste, energy and GHG target achievements.

Lonza's EC has direct oversight of and involvement in the ERM program. At the EC's direction, the Head of Corporate Responsibility and ERM is responsible for mapping and addressing all enterprise risks and opportunities, including those that are climate-related, as part of the ERM program. The EC's responsibility includes overseeing actions to reduce the likelihood of occurrence and the potential impact of negative risks and considering opportunities as part of longer-term strategy development. Annually, the EC reviews and assesses the ERM findings for reporting to the Board.

More details on Governance may be found in the corresponding chapters of this report, specifically on the Sustainability and Risk Committee (SRC) and the Safety and Sustainability Steering Board (SSSB), which coordinate the sustainability strategy and activities across the company, including climate change and climate-related measures.



Strategy

Lonza's purpose is to enable a healthier world. To achieve this purpose, we have defined five strategic priorities as focus areas. These guide our business activities and practices, to ensure that we capture and capitalize upon our unique points of differentiation.

Addressing the central focus area of sustainability, Lonza is committed to net-zero GHG emissions by 2050. Group and individual site roadmaps include concrete actions and projects to support achievement of the corporate goals and involve global functions. These include engineering for new infrastructure and growth investments, operations for efficiency improvements and procurement for supplier collaboration.

The Sustainability and Procurement teams work together to manage climate strategy and actions in the supply chain.

We have included several ESG targets in our Group incentive plan as of 2022. Among others, these include targets for achieving reductions in Scope 1, Scope 2 and Scope 3 GHG emission categories and water intensity.

Sustainability Roadmap

We are currently focusing on three fields: monitoring our progress against our 2030 sustainability targets, enhancing public disclosures regarding ESG topics and providing guidance and support for sustainability-related initiatives across our global site network. In addition, we have initiated a program to procure and source electricity globally from renewable sources by 2025, where available through power purchase agreements investing in additional production assets.

In 2020, we also initiated a program to evaluate and identify the main contributors to our value chain GHG footprint (also known as Scope 3), which stem mainly from the materials and services we purchase. We are engaging with the most relevant suppliers to collaborate on reducing our Scope 3 footprint.

We are reevaluating our sourcing strategy, taking into account availability of materials, logistics and risks for supply chain disruptions. We have also been strengthening the existing due diligence process for new and incumbent suppliers to identify and minimize the risks in our supply chain, e.g., for environmental, social and labor misconduct. As a member of the PSCI (Pharmaceutical Supply Chain Initiative), we are aligned with its principles and share supplier reports and audit results with the industry group. Key elements of our sustainability program are included in the Risk Management section below.

Risk Management

Our ERM program is a critical element of our strategic planning and provides a mechanism and appropriate governance for risk management. The program focuses on risks and opportunities that may affect the company's strategic and financial targets or impact the mid-term success of the business, as well as evaluating emerging risks that may impact our business over a longer-term horizon. The annual ERM process includes the following elements:

Lonza Enterprise Risk Management

Risk Identification	Trend Analysis	Calibration and Mitigation Planning	Reporting to Executive Committee	Reporting to Board of Directors
We identify risks during discussions with individual risk owners. The discussions include focus on ESG risks, including those related to climate change.	Our ERM team consolidates input, assesses the risks and maps probability and impact versus prior year.	We conduct calibration workshops with senior leadership teams and ensure appropriate mitigation measures are in place. Mitigation measure owners report status of their measures quarterly.	We report findings to the Executive Committee for evaluation and alignment with strategic planning.	We report top risks and mitigation plans to the Audit Committee and Board of Directors to ensure awareness and appropriate oversight.

Given the nature of our business, we believe probable climate risks that would materialize over the mid-term horizon are limited to site-specific natural disasters and extreme weather events, such as hurricanes, floods, wildfires, etc. These risks are managed by site business continuity plans (see below). Additional or Group-wide climate-related risks are unlikely to be material during this time horizon. We do not consider our business to be carbon intensive, natural or ecosystem resource intensive (land, marine) and it is not consumer goods oriented. Therefore, our current focus on analyzing and implementing climate-related scenarios remains at a production site level.

Outside of the ERM program, longer-term implications of climate change are relevant for site-level development planning, such as limitations to water availability, storm frequencies, wastewater disposal limitations, and flooding. The risk management of these implications is part of our ongoing work on our Business Continuity Plan, which covers issues including flooding and storm risks, which are assessed for all manufacturing locations. We have an overview of the individual risks at the sites and plans to mitigate substantial impacts. We intend to include long-term climate risk scenario planning within our risk management and business continuity management program.

Regulatory Risks

The main regulatory risks identified concern the potential revision of existing law and uncertainty of developing laws regarding carbon dioxide tax and other instruments and changing or new cap and trade systems. In the European Union, changes could increase the price of certificates and/or decrease the amount of free allowances granted. In other geographies, new carbon pricing policies are planned or are being implemented in the near future.

These changes could affect Lonza's operations directly or indirectly, leading to an increase in operating costs and additional management focus and efforts including monitoring, reporting and verification. In addition, due to the different speeds at which regional legislation is put in place, policy asymmetry is expected in the short and medium term.

For the moment, carbon pricing is not yet a decisive factor in the consideration regarding where we locate our activities. A further increase in fuel and energy costs is expected and recognized by the business strategies, and Lonza considers the risks as part of its annual ERM program. The energy price impact risks apply worldwide but to a varying degree, with more exposed operations in Europe. It is expected that energy efficiency regulations will become more stringent and increasingly be integrated into environmental legislation and vice versa. At the same time, planning will remain challenging as the volatility in political decision-making may increase.

It is difficult to estimate the financial implications of carbon taxes. Fuel and energy taxes, as well as regulations, could have a negative financial impact. The expansion of schemes into other legislations will require additional management focus, and efforts to align with suppliers will also take time and resources.

Many investments to reduce the carbon budget are not within traditional payback expectations of business expansions and are generally not routinely acceptable in the industry. Therefore, we are refining our standards for considering and approving these capital investments to allow a longer-term perspective of sustainability and cost benefits when making major capital investments.

Physical Risks

Extreme weather events, such as hurricanes, floods, droughts and fires, can seriously affect the company's operations, suppliers and supply chain processes. However, the additional contribution of adverse effects induced by climate change is uncertain, but we expect an increase in frequency.

As such risks are mostly site-specific, our manufacturing sites have contingency plans and backup systems in place and make informed decisions on the acceptable level of risk and the physical investments needed to address such risks as part of our business continuity planning.

Lonza sites require fresh water for manufacturing and also use water for cooling. Increased temperatures could reduce cooling capacity or quantitative limits on water intake (physically/by authorities). Water risks are local by nature, and therefore sites need to address local water risks as part of their business continuity plans and sustainability roadmaps.

As an example, exposure to risk of flooding at our Visp manufacturing complex in Switzerland has been drastically reduced with the completion of the correction in the river Rhone. The river bed now provides for almost full high water capacity. The multi-year regional project was financed and executed by the state and supported by public funding on a national level. A minor probability of flooding at our Visp site may still potentially lead to business interruption for a limited time. The risk is known and evaluated, and the necessary contingency plans exist and are ready to be activated.

Reputational Risks

At Lonza, our performance and value are also increasingly measured by our sustainability performance. Failure to achieve expectations could harm the company's reputation and potentially impact customer trust in Lonza as a supply partner. To provide transparency and accountability to our stakeholders, we began sustainability reporting according to GRI standards in 2018 and established comprehensive ESG targets at the beginning of 2019.

Our sites regularly engage with their relevant stakeholders on a local level. On a corporate and divisional level, we engage with customers to improve our sustainability performance, including joint projects and knowledge exchange. We are active on relevant social media channels to engage in discussion with our stakeholders and receive feedback from individuals and groups. Our ongoing dialogue with stakeholders, especially with the sustainability experts of financial and proxy advisors, helps us to refine our scope and identify other material topics.

We conducted materiality assessments to set priorities for our strategy and targets. The first materiality assessment was performed in 2018. We have reviewed the materiality assessment with a new focus as a dedicated pharma, biotech and nutrition business in 2021. In this assessment, we gathered input from various stakeholder groups, including colleagues, customers, the scientific community, shareholders, financial analysts, our management and Board, reflecting this new positioning and how we utilize it to influence our priorities and strategy.

Opportunities

Some innovation potential is unlocked through the introduction of energy efficient technologies, alternative project ideas and cooperation with external companies. For instance, we are using excess steam from an external waste incinerator to substitute fossil fuels at our production complexes in Visp (CH) and Colmar (FR). The installation of solar panels in various sites has been completed and is also being advanced; currently, five sites have installed photovoltaic panels. Energy reduction decreases costs and emissions, and the reduction in emissions also reduces the exposure to future carbon pricing schemes.

For some years, we have been working with a partner to analyze data for energy consumption, power contracting and supply and demand harmonization. This has given us a better understanding of improving energy efficiency and managing costs, and it also serves as a starting point for converting our electricity demand into renewable sources.

We measure our energy use on a regular basis. Energy use is reported quarterly into a centralized global data tool, and the data is analyzed by our global Environment, Health, Safety and Sustainability teams. This vital information forms the basis for updated reduction goals and investment projects planning to achieve major improvements in energy efficiency and other areas. Some sites have adopted an energy management system according to the ISO 50000 framework, which includes an energy team, policy, targets and a rolling action plan.

This engagement also aims for reduced exposure to future fossil fuel price increases and carbon costs. The opportunities are mostly managed on a local basis, so the cost savings have not yet been consolidated.

Metrics and Targets

We report on our direct and indirect GHG emissions (Scope 1, 2 and 3) and other data in the Environment section of this report and in our most recent response to the CDP climate questionnaire, which is publicly available.

We have now increased targets to reduce 50% of our GHG emissions (Scope 1 and 2 location-based), energy and waste intensity by 2030 (2018 baseline) by a million of sales per year. This increase was agreed upon, as we were already achieving our previous targets of 36% by 2030.

We also aim to purchase and source the electricity we consume globally from renewable sources by 2025, where available.

Several of our sites are investing in energy-efficient equipment, implementing projects to capture waste energy and installing on-site renewable energy equipment, like photovoltaic panels and biomass boilers.

As part of our strategy to decrease the footprint of our infrastructure, we are implementing "sustainability by design" standards specifically for energy and water efficiency, to build growth projects with best-in-class technologies for a low-carbon and low-resource infrastructure. We are also participating in research projects to evaluate carbon capture technologies.



Independent limited assurance report on selected quantitative sustainability information in Lonza Group Ltd's Sustainability Report 2022

To the Board of Directors of Lonza Group Ltd, Basel

We have undertaken a limited assurance engagement on Lonza Group Ltd's (hereinafter "Lonza") following selected quantitative sustainability information in Lonza's accompanying Sustainability Report 2022 for the year ended December 31, 2022 (hereinafter "Sustainability Information"):

Total scope 1 emissions	page 33
Total scope 2 emissions (location-based)	page 34
Industrial water intensity	page 32

Our assurance engagement does not extend to information in respect of earlier periods or to any other information included in the Sustainability Report 2022, Annual Report or any other Report, including any images, audio files or embedded videos.

Our Limited Assurance Conclusion

Based on the procedures we have performed as described under the '*Summary of the work we performed as the basis for our assurance conclusion*' and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Sustainability Information in Lonza's Sustainability Report 2022 is not prepared, in all material respects, in accordance with the Global Reporting Initiative (GRI) Standards.

We do not express an assurance conclusion on information in respect of earlier periods or to any other information included in the Sustainability Report 2022, Annual Report or any other Report, including any images, audio files or embedded videos.

Understanding how Lonza has Prepared the Sustainability Information

The GRI Standards have been used as criteria references for the Sustainability Information. Consequently, the Sustainability Information needs to be read and understood together with these criteria.

Inherent Limitations in Preparing the Sustainability information

Due to the inherent limitations of any internal control structure, it is possible that errors or irregularities may occur in disclosures of the Sustainability Information and not be detected. Our engagement is not designed to detect all internal control weaknesses in the preparation of the Sustainability Information because the engagement was not performed on a continuous basis throughout the period and the audit procedures performed were on a test basis.

Lonza's Responsibilities

The Board of Directors of Lonza is responsible for:

- Selecting or establishing suitable criteria for preparing the Sustainability Information, taking into account applicable law and regulations related to reporting the Sustainability Information;
- The preparation of the Sustainability Information in accordance with the GRI criteria;
- Designing, implementing and maintaining internal control over information relevant to the preparation of the Sustainability Information that is free from material misstatement, whether due to fraud or error.



Our Responsibilities

We are responsible for:

- Planning and performing the engagement to obtain limited assurance about whether the Sustainability Information is free from material misstatement, whether due to fraud or error;
- Forming an independent conclusion, based on the procedures we have performed and the evidence we have obtained; and
- Reporting our independent conclusion to the Board of Directors of Lonza.

As we are engaged to form an independent conclusion on the Sustainability Information as prepared by the Board of Directors, we are not permitted to be involved in the preparation of the Sustainability Information as doing so may compromise our independence.

Professional Standards Applied

We performed a limited assurance engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) *Assurance Engagements other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the International Code of Ethics for Professional Accountants (including International Independence Standards) issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality, and professional behavior.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements.

Our work was carried out by an independent and multidisciplinary team including assurance practitioners and sustainability experts. We remain solely responsible for our assurance conclusion.

Summary of the Work we Performed as the Basis for our Assurance Conclusion

We are required to plan and perform our work to address the areas where we have identified that a material misstatement of the Sustainability Information is likely to arise. The procedures we performed were based on our professional judgment. Carrying out our limited assurance engagement on the Sustainability Information included, among others:

- Assessment of the design and implementation of systems, processes and internal controls for determining, processing and monitoring sustainability performance data, including the consolidation of data;
- Inquiries of employees responsible for the determination and consolidation as well as the implementation of internal control procedures regarding the selected disclosures;
- Inspection of selected internal and external documents to determine whether qualitative and quantitative information is supported by sufficient evidence and presented in an accurate and balanced manner;
- Assessment of the data collection, validation and reporting processes as well as the reliability of the reported data on a test basis and through testing of selected calculations;
- Analytical assessment of the data and trends of the quantitative disclosures in the scope of the limited assurance engagement;

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- Assessment of the consistency of the disclosures applicable to Lonza with the other disclosures and key figures and the overall presentation of the disclosures through critical reading of Lonza's Sustainability Report 2022

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

KPMG AG

A handwritten signature in black ink, appearing to read "S. J." followed by a stylized surname.

Silvan Jurt

Licensed audit expert

A handwritten signature in black ink, appearing to read "C. Kaufmann".

Cyrill Kaufmann

Licensed audit expert

Zurich, 8 March 2023



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www.lonza.com

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