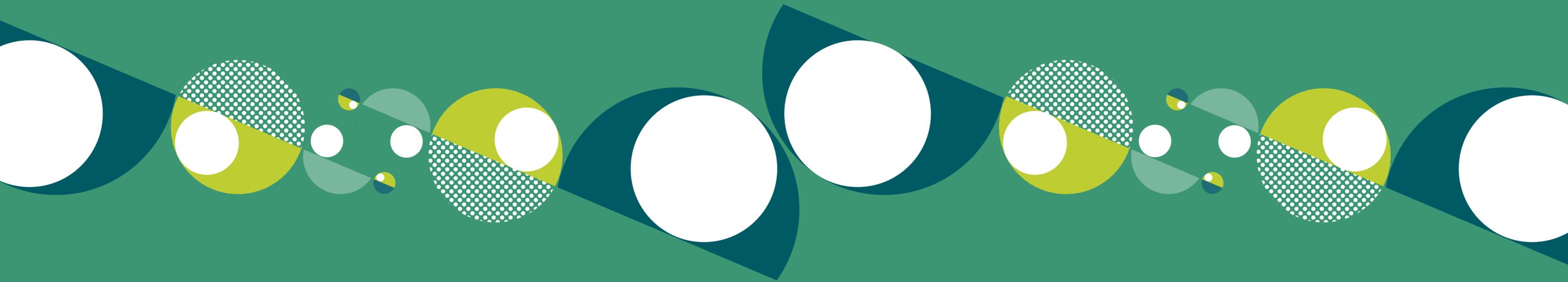


BIONTECH



**SUSTAINABILITY  
REPORT 2022**

**PROF. ÖZLEM TÜRECI, M.D.**  
Chief Medical Officer and Founder



**SEAN MARETT**  
Chief Business and  
Chief Commercial Officer

**PROF. UĞUR SAHİN, M.D.**  
Chief Executive Officer  
and Founder



“ **Our core values form the basis of everything we do: we are innovative, passionate and united. Throughout our work we are committed to being transparent, acting with integrity, protecting the environment and respecting human rights. These principles serve as the constant foundation for our work and, most importantly, for our very own expectations of ourselves.** ”

**SIERK POETTING, PH.D.**  
Chief Operating Officer



**RYAN RICHARDSON**  
Chief Strategy Officer



**JENS HOLSTEIN**  
Chief Financial Officer



## OUR VALUES



united



passionate



innovative

## A 21<sup>ST</sup> CENTURY IMMUNOTHERAPY POWERHOUSE



Fully integrated biotechnology company



Multi-platform strategy



Diversified product pipeline



Based on global social responsibility:

- Focused on high medical needs
- Democratizing access to novel medicine and technological innovation in healthcare

## FIGHTING AGAINST COVID-19

~**550** million doses  
of variant-adapted vaccines shipped<sup>1,2</sup>



~**2** billion doses of COMIRNATY<sup>®</sup>  
invoiced in 2022<sup>2</sup>



## INFECTIOUS DISEASE PROGRAMS

**4** Phase 1 trials initiated for mRNA vaccine candidates



## ONCOLOGY PIPELINE

**20** clinical programs in  
**24** ongoing clinical trials



<sup>1</sup> As of 16 December 2022.  
<sup>2</sup> Partnered with Pfizer.  
<sup>3</sup> Collaboration with University of Pennsylvania.  
<sup>4</sup> As of 31 December 2022.

## CLIMATE PROTECTION

On **1.5°C** pathway  
(submitted for SBTi validation)



## SOCIAL<sup>4</sup>

**4,692** employees from over **80** nations

Women in highest management level below Management Board **38%**

## FINANCIALS

Total revenues in 2022 financial year in €

**17.3** billion

Net profit in 2022 financial year in €

**9.4** billion

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## INTERACTIVE PDF

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## OUR PURPOSE

BioNTech was founded in Mainz, Germany, in 2008 with the understanding that each cancer patient's tumor is unique and the vision that each patient's treatment should be individualized. To turn this idea into reality, we have combined innovative research with cutting-edge technologies.

Our objective is to develop breakthrough therapies against cancer, infectious diseases and other serious diseases.

As a next-generation immunotherapy company, we are working to clinically prove the benefits of our treatment approach. Our COVID-19 vaccine is an important milestone. We are continuously expanding our collaborations, our team and our own manufacturing capabilities with the aim of providing individualized treatments to patients around the world.

We are accelerating the development of our diversified pipeline of next-generation immunotherapies, aspiring to improve the health of people worldwide by harnessing the full potential of the immune system. In addition to cancer, infectious diseases and other serious diseases, this includes autoimmune diseases, allergies and regenerative medicine.





**We could not have accomplished all our achievements without our employees.**

**Dear Reader,**

In developing novel medicines and introducing scalable technological innovation, we are driven by our vision to improve the health of people worldwide. We plan to accelerate the build-out of our oncology commercial capabilities in 2023–24 with the goal of commercial readiness in the United States, European Union and other selected regions to seek approval for multiple oncology products from 2026 onwards. Longer term, we see applications for our technologies in the fields of autoimmune diseases, inflammatory diseases, cardiovascular diseases, neurodegenerative diseases, and regenerative medicines.

This pioneering spirit, our research, and our innovative power are fundamental to developing innovative medicines as our most important and greatest social contribution to society. BioNTech was founded on this commitment 15 years ago, and it remains the foundation of our research and core business today.

We therefore rightly place such achievements at the very beginning of our third sustainability report:

- Our globally successful marketed COVID-19 vaccines, including the first-to-market Original/Omicron BA.4-5-adapted bivalent vaccine, have been making a significant contribution to people and societies worldwide.
- Our focus on addressing high unmet medical needs, especially through the development of potential cancer therapies and vaccines against some of the world’s most common infectious diseases.
- The introduction of our BioNTainer, a flexible container solution that provides turnkey mRNA production facilities for scalable, local vaccine production, aiming to facilitate equitable access to medicines in healthcare. The first six containers for the first BioNTainer arrived in Kigali, Rwanda, in March 2023.

These developments and our substantial growth – exemplified by our creation of approximately 1,500 new jobs in 2022 – are changing our organization and our stakeholders’ expectations. As the Management Board, we plan to continuously strengthen our research and core business through our sustainable development strategy.

We have reinforced our CSR team, built up sustainability resources in business units, and further developed sustainability competencies at the Supervisory Board, Management Board and management levels, as well as in our operations. We will continue to drive forward our efforts to integrate sustainability risks into our corporate risk management in 2023.

This sustainability report provides structured information on the development of our strategically most important sustainability projects in 2022.

Significant progress was made in our human rights and climate protection management. Information on business continuity and information security was added and expanded. In the chapter “Attractive Employer”, we describe how we create a culture and environment that promotes the full potential of all employees.

We could not have accomplished all our achievements without our employees. We deeply thank them for their passion and endurance, for their courage and will to overcome hurdles and obstacles, and for their strength and ability to make things happen. ● GRI 2-22

**Prof. Ugur Sahin, M.D.**  
*Chief Executive Officer  
and Founder*

**Sean Marett**  
*Chief Business and Chief  
Commercial Officer*

**Prof. Özlem Türeci, M.D.**  
*Chief Medical Officer  
and Founder*

**Jens Holstein**  
*Chief Financial Officer*

**Sierk Poetting, Ph.D.**  
*Chief Operating Officer*

**Ryan Richardson**  
*Chief Strategy Officer*



# 1.0 About BioNTech

## Developing a Next-generation Immunotherapy Company

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**For a better future:**  
We are always aspiring to deepen our understanding of the human immune system.



**4** GMP mRNA manufacturing facilities in Germany, with Marburg one of the largest mRNA manufacturing sites worldwide



**2022** acquisition announced of a GMP-certified manufacturing facility in Singapore to serve as the regional headquarters in Asia and expected to be fully operational by the middle of 2024



**30+** research programs



**Over 25** clinical stage product candidates (2021: 17)



First quality-assured BioNTainer for the first modular mRNA production facility in the African Union arrived in Rwanda in

**Q1 2023**



# 1.0 BioNTech

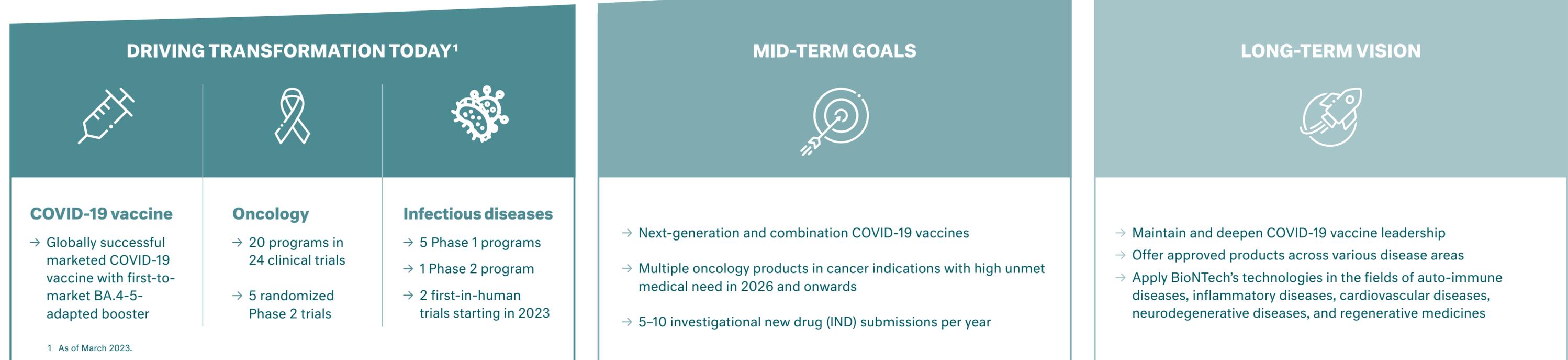
## 1.1 BUSINESS OVERVIEW

BioNTech is a global next-generation immunotherapy company pioneering novel medicines against cancer, infectious diseases, and other serious diseases. Since its founding in 2008, it has focused on harnessing the power of the immune system to address human diseases with unmet medical need and major global health burdens. The Company supports the United Nations Sustainable Development Goals (SDGs) and especially the third SDG: “Ensure healthy lives and promote well-being for all at all ages.”

BioNTech’s fully integrated model combines decades of immunology research, translational drug discovery and development, a technology-agnostic innovation engine, GMP manufacturing, and commercial capabilities. Together, these enable BioNTech to rapidly discover, develop and commercialize its marketed products and other vaccine candidates and therapies.

The Company has built a broad toolkit across multiple technology platforms, including a diverse range of potentially first-in-class therapeutic approaches. These include mRNA vaccines and therapeutics, cell and gene therapies, targeted antibodies and small

### Advancing Toward Realizing Our Vision



By 2030, we aim to be a multi-product global biotechnology leader, aspiring to address the world’s most pressing health challenges with pioneering, disruptive technologies delivered at scale.



molecule immunomodulators. This approach has led to a robust and diversified product pipeline across infectious disease and oncology, including COMIRNATY®, the Company's COVID-19 vaccine and first marketed product, as well as 25 clinical stage product candidates, and more than 30 research projects.

The Company's objective is to address diseases with high unmet medical need and enable individualized cancer treatment. This aligns with BioNTech's commitment to being a globally socially responsible company. Core to BioNTech's business practices is ensuring that people around the globe benefit from its efforts. To accomplish this, the Company is maintaining a focus on the objectives mentioned and democratizing access to novel medicine and technological innovation in healthcare.

In addition to its expertise in research and development, BioNTech's capabilities encompass the area of bioinformatics, which is key to delivering individualized therapies. The Company has developed a validated patient-centric bioinformatics process that enables complex algorithms to be applied to patient data in the context of drug manufacturing.

In 2022, BioNTech continued to advance its strategy to build world-leading capabilities in the AI-driven discovery of drugs and the development of next-generation immunotherapies and vaccines. During the year, the Company continued its ongoing, sustained investment and expanded its strategic partnerships in this area.

In January 2023, BioNTech SE and InstaDeep Ltd. ("InstaDeep") announced that they entered into an agreement under which BioNTech will acquire InstaDeep, a leading global technology company in the field of artificial intelligence (AI) and machine learning (ML). [📄 BioNTech to Acquire InstaDeep](#)

The acquisition aims at enabling BioNTech to incorporate rapidly evolving AI capabilities into its own technologies, research, drug discovery, manufacturing, and deployment processes.

#### Commercialization

BioNTech's first commercial product, COMIRNATY®, was the first-ever approved mRNA-based product, and, to the Company's knowledge, represents the fastest ever developed prophylactic vaccine from viral sampling to approval. As of December 2022, the Company's original COVID-19 vaccine product had been authorized or approved for emergency or temporary use or granted marketing authorization in more than 100 countries and regions worldwide. Our efforts have resulted in more than 4 billion doses shipped globally.

The COVID-19 vaccine development program was launched in late January 2020 in response to the COVID-19 pandemic. Under this program, strategic collaborations were entered into with two major pharmaceutical companies, Pfizer and Fosun Pharma, leading to the vaccine's first market approvals in December 2020. In 2022, the clinical development continued in an effort to obtain approvals for a broad population encompassing several age groups.

The mRNA-based COVID-19 vaccine is marketed under the brand name COMIRNATY® in the European Union, where BioNTech had its conditional marketing authorization converted to a full marketing authorization. Overall, BioNTech holds marketing authorizations in the United States, the European Union, the United Kingdom, Canada and other countries, as well as emergency use and equivalent approvals in the United States (together with Pfizer) and other countries. It also holds the marketing and distribution rights in Germany and Turkey. Pfizer holds marketing and distribution rights worldwide, except in Germany, China and Turkey, and Fosun Pharma holds the marketing and distribution rights in Mainland China, the Hong Kong Special Administrative Region (SAR), Macau SAR, and the Taiwan region.

BioNTech and Pfizer continued to expand their global vaccine manufacturing capabilities, structures and networks in 2022 to produce and distribute large volumes of high quality vaccine in good time. The companies were also able to leverage the synergies of their expertise in 2022. BioNTech's continued expansion of its manufacturing capabilities, combined with the mRNA manufacturing expertise it has acquired over nearly a decade, enabled it to play a significant role in the joint manufacture and distribution of the COVID-19 vaccine. Its manufacturing facility in Marburg, Germany, is now one of the largest mRNA vaccine production facilities in the world, with a capacity of three billion vaccine doses. In 2022, BioNTech and Pfizer also executed on their strategy to become the global market leader for the COVID-19 vaccine by introducing novel formulations, pediatric vaccines, and two Omicron-adapted bivalent vaccines against the BA.1 and BA.4/5 variants.



**BioNTech is a company built on the goal of saving the life of each individual patient.**

**PROF. UGUR SAHIN, M.D.**

Chief Executive Officer and Founder



Further detail on the collaborations, marketing rights, manufacturing operations, and facilities, as well as a full commercial, clinical development and regulatory update on BioNTech's and Pfizer's COVID-19 vaccine, can be found in BioNTech's Annual Report on Form 20-F for the year ended 31 December 2022, which is available on the BioNTech website in the [Investors section](#). ● **GRI 2-6**

### Progress on Strategic Objectives in 2022

In 2022, BioNTech executed on five key strategic objectives to strengthen its technology platforms, digital capabilities, and infrastructure through sustainable investments, strategic partnerships and tactical acquisitions to bring long-term value to patients and other stakeholder groups.

#### 1. Further COVID-19 vaccine launches

In 2022, BioNTech and Pfizer developed and launched two Original/Omicron-adapted bivalent vaccines, expanded the COMIRNATY® label to include pediatrics and other populations for primary and booster vaccination, converted conditional or emergency approvals to full marketing authorizations, and together invoiced sales of approximately 2 billion doses of COMIRNATY®.

#### 2. Accelerate pipeline development

BioNTech started five first-in-human clinical trials in oncology that include product candidates from the Company's off-the-shelf mRNA vaccine platform (FixVac), mRNA-encoded antibodies (RiboMabs), and targeted antibodies. It reported clinical data updates for multiple oncology programs. In infectious diseases, BioNTech started five Phase 1 clinical trials that include two next-generation COVID-19 vaccine candidates and vaccine candidates against shingles, malaria, and HSV-2 infection. [Pipeline & Products](#)

#### 3. Ramp-up of R&D investments

In 2022, BioNTech expanded its workforce by more than 1,500 new employees, ending the year with a total of 4,692 employees globally. It attracted top talent, including clinical and regulatory experts who are needed to rapidly advance the pipeline. The Company now has a diverse workforce representing more than 80 nations and has established subsidiaries across 5 continents.

#### 4. Pursue complementary acquisitions and collaborations

The Company announced multiple complementary acquisitions and collaborations, all documented in the Company's Annual Report on Form 20-F for the year ended 31 December 2022, and available on the BioNTech website in the [Investors section](#).

#### 5. Expand global organization

In 2022, the Company expanded its organization in Asia, Africa, the United States, Australasia and Europe and strengthened its overall R&D and production capabilities. BioNTech completed the construction of a plasmid DNA manufacturing facility in Marburg, Germany, acquired a GMP-certified manufacturing facility in Singapore, and broke ground on its first turnkey mRNA manufacturing solution, or BioNTainer, in Kigali, Rwanda. These BioNTainers are designed to enable decentralized and scalable vaccine production that can be tailored to local needs. With this solution, BioNTech aims to help improve vaccine manufacturing and access in Africa for Africa. ● **GRI 3-3**

#### Legal Structure

BioNTech SE was founded in 2008 as a spin-off from the Johannes Gutenberg University of Mainz. It is currently a limited company incorporated and domiciled in Germany and headquartered in Mainz. At the end of 2022, the BioNTech Group consisted of 33 wholly owned and indirect subsidiaries, with six locations in Germany as well as locations in the United States, Australia, Austria, China, Rwanda, Turkey, Singapore, and the United Kingdom.

In this sustainability report, "BioNTech", the "Group", the "Company", "we", "us", and "our" refer to BioNTech SE and its subsidiaries, except where the context requires otherwise.

The significant changes to the Group structure in 2022 were the following:

- In February 2022, BioNTech Innovation GmbH, Mainz, Germany, was established as a wholly owned consolidated subsidiary of BioNTech SE.
- In July 2022, BioNTech BioNTainer Holding GmbH, Mainz, Germany, was founded as a wholly owned consolidated subsidiary of BioNTech SE.
- In August 2022, BioNTech Rwanda Ltd., Kigali, Rwanda, was founded as a wholly owned subsidiary of BioNTech BioNTainer Holding GmbH, which is a wholly owned consolidated subsidiary of BioNTech SE.
- In September 2022, BioNTech Idar-Oberstein Services GmbH, Idar-Oberstein, Germany, was founded as a wholly owned consolidated subsidiary of BioNTech SE.

The full list of subsidiaries and parent companies, including an entity with significant influence over the Group, as well as comprehensive documentation on changes to the Group structure, are published in the Form 20-F for the 2022 financial year, which is accessible on the BioNTech website in the [Investors section](#). ● **GRI 2-1; GRI 2-2**



## Organizational Structure

### Management

The Company has a dual management system. The Management Board, as the managing body, currently has six members who are appointed and supervised by the Supervisory Board, which also approves major business decisions. The Supervisory Board is elected by the Annual General Meeting (AGM) and currently consists of six members. A more detailed overview of board practices is provided in Chapter [4.1 Responsible Governance](#).

At the Company's AGM in June 2022, BioNTech's shareholders voted to reappoint Helmut Jeggle as a member of the Supervisory Board and to appoint two new Supervisory Board members, Prof. Anja Morawietz, Ph.D., and Prof. Rudolf Staudigl, Ph.D. In a meeting that followed the AGM, the Supervisory Board re-elected Helmut Jeggle as its chairman. The terms of office of all three members will run until the 2026 AGM. For more details on the Company's board members, please refer to BioNTech's [website](#).

### Workforce

As of the 31 December 2022 reporting date, there were 4,692 employees, of which 2,304 were employed by BioNTech SE (31 December 2021: 3,138, of which 1,378 were employed by BioNTech SE). The average number for the year was 4,104 employees, of which 1,936 were employed by BioNTech SE (previous year: 2,694, of which 1,181 were employed by BioNTech SE).

**€17.3 billion**  
total revenues in financial year 2022

## 1.2 2022 FINANCIAL RESULTS

In the 2022 financial year, BioNTech's total revenues were €17.3 billion (2021: €19.0 billion).

For more details on the Company's 2022 financial results, please refer to BioNTech's Annual Report on Form 20-F filed with the SEC on 27 March 2023. This report is available on the BioNTech website in the [Investors section](#).

## 1.3 ECONOMIC CONTRIBUTIONS

BioNTech's financial results for the 2022 financial year, including its revenues and expenses for research and development, sales and marketing, and administration, are available in BioNTech's Annual Report on Form 20-F filed with the SEC on 27 March 2023. This report is available on the BioNTech website in the [Investors section](#).

Information describing BioNTech's community involvement can be found in [Chapter 3.0 Corporate Citizenship](#). ● [GRI 201-1](#)

BioNTech's economic performance is also reflected in the economic contribution made at its production sites. The following presents a few examples:

### Mainz

The city of Mainz, where the Company is headquartered, fell into debt in the mid-1980s, rising to a level of €1.3 billion by 2020. The corporate tax revenues generated from BioNTech turned this debt into a surplus for the city of €1.09 billion in 2021, instead of the expected loss of €36 million. In 2022, the city of Mainz was able to reduce its trade tax assessment rate from 440 to 310 percentage points and achieve an annual surplus of €790.7 million. The city plans to use its historically high tax revenue to advance Mainz's path to becoming a world-leading location for biotechnology,

cancer and aging research. To achieve this, it has designated 30 hectares of land for facilities for technology development and basic research in cancer and aging, with an additional 50 hectares being examined for further expansion. The state of Rhineland-Palatinate and the city of Mainz also plan to expand laboratory space at the TechnologieZentrumMainz. Altogether, 5,000 new jobs are expected over the next 10 years.

### Marburg

In the city of Marburg, BioNTech began full vaccine production at the beginning of 2021. The city raised corporate tax revenues by around €370 million that year, of which around €300 million were attributed to BioNTech. Marburg transfers approximately 70% of its tax revenues to the Marburg-Biedenkopf district in the wider Marburg region and the state of Hesse. Net of transfers, an estimated total of €300 million in trade taxes were able to remain in the city of Marburg in 2021, 2022 and 2023. Marburg intends to use the funds to make the city more socially, ecologically and economically sustainable by investing in energy-saving upgrades, expanding local public transportation, and undertaking other measures. In 2022, the city of Marburg was in a position to reduce its trade tax assessment rate from 400 to 357 percentage points.

### Idar-Oberstein

The city of Idar-Oberstein – the site of BioNTech's Innovative Manufacturing Services unit – like many municipalities in Germany, had accumulated debt in the low three-digit millions. In 2021, the city was able to repay a substantial portion of this debt, largely as a result of the corporate taxes levied on BioNTech's location. In 2022, the city also benefited from substantial tax revenues generated from BioNTech's operations, reflected by the city's budget, which showed a surplus of €60 million. A significant portion of this revenue goes to the Birkenfeld district in Rhineland-Palatinate via what is known as a "district levy" and will benefit the region. Tax revenues for the city of Idar-Oberstein for the 2022 financial year increased by around €200 million. This enabled the city's administration to present the



city council for the first time in decades with a 2022 budget without liquidity or investment loan requirements. The city's primary objective is to reduce its debt and position itself in a sustainable manner for the long term – particularly in consideration of future generations. As of 1 January 2022, the city of Idar-Oberstein reduced the trade tax assessment rate from 420 to 310 percentage points and the real property tax (Grundsteuer B) from 535 to 290 percentage points. • GRI 3-3; GRI 203-2



**Looking back at 2022, I'm proud of our team and what we have accomplished as we continue to translate our vision into strong performance as a company.**

**PROF. UGUR SAHIN, M.D.**

Chief Executive Officer and Founder

## 1.4 GROUP MANAGEMENT CSR

### CSR Governance

As a biotech company engaged in research and commercial manufacturing, BioNTech bears responsibility for how it conducts its business and the impact its activities have on the wider economy, people and the environment.

The overall responsibility for managing such impacts within BioNTech's corporate social responsibility (CSR) lies with the Management Board. It receives support from the CSR Steering Board, which is responsible for the strategic, group-wide management of CSR and sustainability topics. The CSR Steering Board consists of BioNTech's Chief Medical Officer, Prof. Özlem Türeci, M.D., and Chief Operating Officer (COO), Sierk Poetting, Ph.D., as well as 15 senior executives representing departments that are critical from both a business and CSR perspective. • GRI 2-12

BioNTech's CSR team is the driving force behind the systematic incorporation of CSR and sustainability into the organization, its processes, corporate culture and work practices. The CSR team reports directly to the COO and is responsible for preparing strategy proposals, analyses, decision papers and recommendations. It also coordinates the CSR issues for the BioNTech Group as a whole and ensures that the Group's operational development and sustainability reporting are addressed by cross-functional teams and work groups.

The operational management and CSR-related tasks are carried out by the designated departments and subsidiaries. The objective of CSR management is to anchor sustainability expertise for all material topics in the business units and departments. To achieve this, the following operational areas were strengthened in 2022:

→ In September 2022, the **Energy & Sustainability Projects (ESP) department** was set up as part of the BioNTech Site Service (BSS). One of its tasks is to implement the measures necessary

to reach the decarbonization targets at an operational level globally. BioNTech plans to increase the personnel in this department and provide it with the needed resources to achieve the climate protection targets set by the Management Board.

→ In the **Procurement Excellence department**, a dedicated team was established to oversee compliance and sustainability. This includes responsibility for procurement processes encompassing the selection, evaluation and development of existing and new suppliers. To this end, the Supplier Code of Conduct will be further refined and supplier assessments will be strengthened in the future by IT and platform-supported sustainability assessments.

→ In 2022, the **Cloud Center of Excellence (CCoE)** was formed within corporate IT. By leading and driving cloud adoption, CCoE's mission is to make innovative and modern IT infrastructures available at BioNTech. One key strategic goal of the CCoE is the reduction of the Company's IT carbon footprint. This can be achieved with cloud technologies, thanks to the more efficient and on-demand usage of hardware resources, as well as the strategic utilization of renewable energies.

All departments are supported by the CSR team, which is directly involved in all major CSR projects. • GRI 2-13

In 2022, in close consultation with the Management Board, the CSR team began a process of integrating sustainability-related topics into the risk management system. In this context, a plan was agreed with the Management Board to further strengthen the processes and systems used for collecting and processing sustainability-related data.



### Materiality Analysis

BioNTech conducted its last full-scale materiality analysis from late 2019 to early 2020. The Company identified its material CSR topics through a multistep, cross-functional process. First, relevant, stakeholder-oriented sustainability standards and benchmarks were screened and analyzed for their relevance to BioNTech. These included the GRI and SASB standards, the NASDAQ ESG Reporting Guide, the Pharmaceutical Supply Chain Initiative (PSCI), as well as competitor benchmarks.

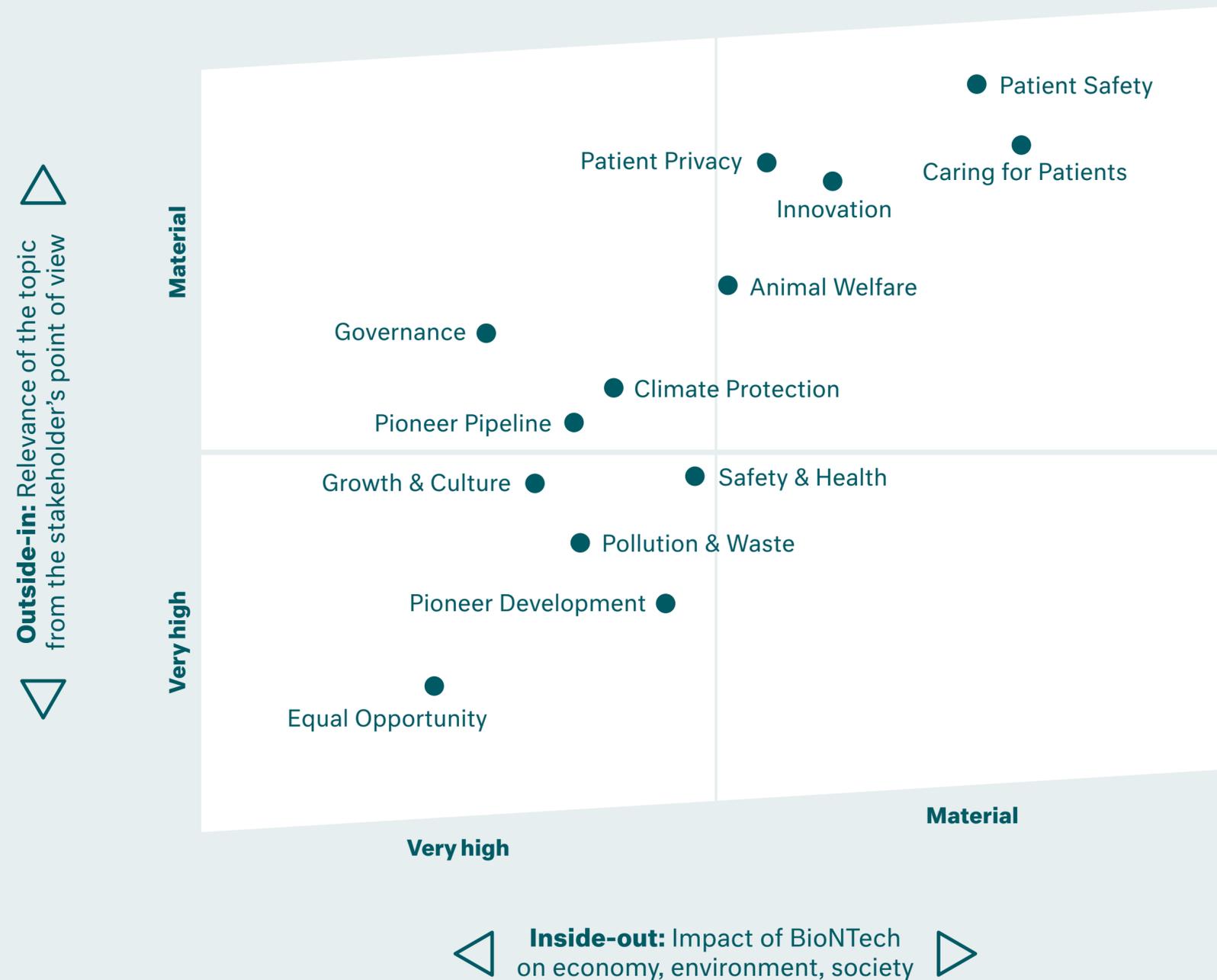
Building on this analysis, the Company conducted structured internal interviews with members of the Management Board and top executives in 2019. Starting with a comprehensive long list of relevant CSR topics, this process enabled BioNTech to define five fields of action, encompassing a total of 13 highly relevant CSR topics. Ultimately, the Company identified eight material CSR topics by focusing on two dimensions of the Global Reporting Initiative (GRI): the significance of the stakeholder perspective (“outside-in”) and the impact of corporate actions on the economy, environment and society (“inside-out”).

All of the topics mentioned in the materiality matrix have a very high importance for BioNTech. They are all fully formulated and thoroughly managed, except for the topic Caring for Patients (➡ Chapter 3.0 Corporate Citizenship). In prioritizing the topics, the Company assigned a higher importance to material topics in the areas of CSR regulatory and reporting due to their increased relevance.

At the time of the initial materiality analysis, the Company did not anticipate the development of a COVID-19 vaccine or the generation of commercial sales and profits in the 2020 financial year. Since the emergence of both of these factors, there has been a significant change in the expectations of stakeholders towards the Company as well as changes in the CSR management requirements in almost all areas of the Company.

### Materiality Matrix 2019/2020

To be reviewed in materiality analysis 2022/2023.



### Further Development of the Materiality Analysis

BioNTech carefully monitors changes in material topics and continues to manage and prioritize them according to regulatory developments and evolving stakeholder expectations. The year 2022 was of paramount importance for the development of EU regulations governing materiality analyses:

In November 2022, after a comprehensive consultation process, the EU Parliament adopted the Corporate Sustainability Reporting Directive (CSRD). The CSRD profoundly changes the scope and nature of corporate sustainability reporting. In terms of materiality, the CSRD requires its scope of companies to report from a double materiality perspective in compliance with the European Sustainability Reporting Standards (ESRS). Double materiality requires a look at both the impact of the outside world on a company (“financial materiality”) as well as the company’s impact on the outside world (“impact materiality”).

In late November 2022, the European Financial Reporting Advisory Group (EFRAG) submitted the first draft of the ESRS to the European Commission. The materiality analysis requirements contained in the draft have been significantly modified in terms of their scope. The European Commission is currently consulting with EU bodies and Member States on the draft standards and plans to adopt them as delegated acts in June 2023, making them mandatory in the EU. This will be followed by a scrutiny period by the European Parliament and Council.

### BioNTech’s Approach to Materiality

BioNTech will be required to apply the aforementioned CSRD and ESRS standards for the first time in the 2025 financial year for reports published as of 2026. With the recently introduced CSRD requirements, and specifically the double materiality requirement, BioNTech’s 2019/2020 materiality matrix requires an update to bring it in line with the new regulations.

The updates will need to take into account the Company’s changed business conditions since the commercialization of the COVID-19 vaccine. They will also need to incorporate the ESRS materiality requirements that were not yet fully clear at the end of 2022.

The changes to the BioNTech materiality analysis are being implemented over three phases. In the first phase (2021/2022), interviews were conducted with outside experts. In the second phase (2022/2023), an online survey was carried out with internal executives and experts. In the third phase, planned for 2023, a materiality analysis will be conducted in accordance with ESRS based on the outcomes in the first two phases. The aim is to complete the update of the materiality analysis no later than the first quarter of 2024.

#### Phase 1 (2021/2022): Expert interviews

Based on the conceptual and organizational preparations in 2021, 13 internationally recognized experts were interviewed (qualitative, half-structured interview of approx. 60 minutes) in early 2022 on the following topics:

→ **Responsible Governance:** Interviews were conducted with the head of corporate governance of a major German asset manager; a professor of business management specializing in capital markets, corporate management and sustainable finance; and a senior analyst and pharma expert from a global ESG rating agency

→ **Attractive Employer:** An interview was conducted with the chairperson of the board of the “Charta der Vielfalt” (Diversity Charter), a non-profit association focused on the promotion of diversity

→ **Environmental and Climate:** Interviews were held with experts from a European industry association; an international environmental activist and consultant; and a leading international industry- and NGO-sponsored climate protection initiative

→ **Human Rights and Supply Chain:** Interviews were conducted with global experts from the Pharmaceutical Supply Chain Initiative (PSCI), an independent European civil and human rights NGO; and with experts from econsense, the German sustainability forum of leading internationally active companies, of which BioNTech is a member

→ **CSR Management:** Interviews were held with an international expert from a German multinational chemical company; a professor of organization, strategy and leadership; and an expert from a global provider of business sustainability ratings

The interviewees were asked to identify the sustainability issues that would likely influence the Company significantly going forward and BioNTech’s greatest impact in terms of social, economic and ecological sustainability. The results of the interviews were evaluated using the qualitative approach of thematic clustering and presented in the Sustainability Report 2021 in the form of stakeholder statements.



**Phase 2 (2022/2023): Internal executive questionnaire**

In the second half of 2022, BioNTech’s executives and internal experts were asked to evaluate a shortlist of 15 sustainability topics as part of an online survey. The survey incorporated the CSRD requirement of double materiality by assessing the topics from both an impact and a financial materiality perspective.

The shortlist of potential material topics considered all of the relevant stakeholder-oriented sustainability standards, particularly the GRI standards, the ESRS draft, and the Sustainability Accounting Standards Board (SASB) disclosure topics for the biotechnology and pharmaceuticals industry. Sustainability ratings and industry benchmarks were also analyzed and integrated into the list.

The survey’s results indicate that some of the Company’s relevant and material topics from its 2019/2020 assessment will continue to be relevant in the future.

**Phase 3 (2023/2024): Double materiality assessment**

Based on the results of the expert interviews and the internal executive survey, a double materiality assessment is planned in accordance with the requirements of the CSRD and the ESRS standards. BioNTech will use the year 2023 to dive deeper into the relevant sustainability matters through consultations with internal experts as well as external stakeholders and experts. The aim is to further improve the Company’s understanding of its sustainability-related impacts as well as the financial effects associated with sustainability topics and describe them in a manner that aids stakeholders’ understanding of BioNTech’s sustainability performance and business outlook.

The Company’s CSR management program is to be updated in accordance with the assessment results. The results of the new, full-scale materiality analysis will be presented in the 2023 sustainability report.

In connection with this assessment, the Company plans to carry out a gap analysis of the CSRD and ESRS reporting requirements and a data readiness assessment. ● GRI 3-1; GRI 2-29

**Materiality Topics Relevant for 2022 Sustainability Reporting**

Given the status of BioNTech’s most recent materiality assessment, the Sustainability Report 2022 is still structured around the Company’s last full-scale materiality assessment of 2019/2020. ● GRI 3-2

As a result of this materiality assessment, BioNTech defined five fields of action, encompassing a total of 13 highly relevant CSR topics, of which 8 were identified as material. Although BioNTech will adjust its CSR strategy and management program to reflect the results of the ongoing 2022/2023 assessment, these results remain relevant and important to the Company.

**CSR Fields of Action<sup>1</sup>**

 <p><b>ACCESS TO NOVEL MEDICINE<sup>2</sup></b></p> <p><b>DEMOCRATIZE ACCESS TO NOVEL MEDICINE AND TECHNOLOGICAL INNOVATION IN HEALTHCARE</b></p>	 <p><b>CORPORATE CITIZENSHIP</b></p> <p><b>CARING FOR PATIENTS</b> Corporate Volunteering<sup>3</sup> Donations<sup>3</sup></p>	 <p><b>RESPONSIBLE GOVERNANCE</b></p> <p><b>PATIENT SAFETY</b> <b>PATIENT PRIVACY</b> <b>ANIMAL WELFARE</b> <b>GOVERNANCE</b></p>	 <p><b>ENVIRONMENTAL &amp; CLIMATE PROTECTION</b></p> <p><b>CLIMATE PROTECTION</b> Pollution &amp; Waste</p>	 <p><b>ATTRACTIVE EMPLOYER</b></p> <p><b>PIONEER PIPELINE</b> Pioneer Development Equal Opportunity Safety &amp; Health Growth &amp; Culture</p>
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<sup>1</sup> Material topics are marked bold. <sup>2</sup> New CSR Field of Action based on the 2021/2022 stakeholder dialogues. <sup>3</sup> Voluntary CSR topics outside of the materiality assessment.



# 2.0 Our Responsibility

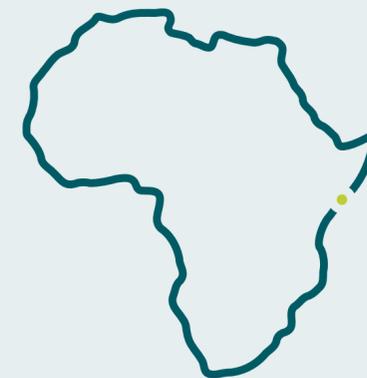
## Democratize Access to Novel Medicine and Technological Innovation in Healthcare

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2.3 Democratize Access to Novel Medicine & Technological Innovation in Healthcare	18

**For people everywhere:**  
We aim to improve healthcare worldwide through innovative medicines and technologies.

Strive to develop affordable medicines: BioNTech aspires to bring mRNA-based vaccines and therapies against cancer and infectious diseases to the African continent, if successfully developed and approved

**1.7 billion**   
doses of COMIRNATY® delivered to low- and middle-income countries in line with demand



**BioNTainer:**  
**6**   
containers  
= 1 module delivered to Rwanda in 2023

A BioNTainer is a clean room that BioNTech equips with turnkey mRNA manufacturing solutions.

Annual capacity of up to  
**3 billion**   
doses of mRNA drug substance at BioNTech Marburg

mRNA vaccine production in Marburg:  
**50,000**  steps  
from starting the batch to bulk filling

 **2,600** documents used  
to ensure the safety and quality of the production process in Marburg



# 2.0 Our Responsibility

## 2.1 VACCINE EQUITY: A CHANGING LANDSCAPE

Every country has been affected by COVID-19. As of the end of December 2022, there have been over 733 million confirmed cases of COVID-19 globally reported to the World Health Organization (WHO) and more than 6.8 million deaths, according to the WHO Coronavirus (COVID-19) Dashboard. [WHO Coronavirus \(COVID-19\) Dashboard](#)

### WHO's response to COVID-19 – 2022 Mid-Year Report

In its [2022 mid-year situation report](#) on its COVID-19 strategy, WHO draws a differentiated conclusion. The report states that considerable progress had been made on vaccine supply and that the pandemic was in retreat thanks to vaccinations, public health and social measures, and some infection-related immunity.

However, COVID-19 and new viral variants still pose a serious risk to global health. In particular, the World Health Organization points to the most vulnerable populations in many countries.

Nevertheless, in 2022, the general situation for countries had changed compared to 2021. “In 2021, failures of commitments to vaccine equity have been plainly evident, impeding the necessary global response to the pandemic and causing epidemiological, socio-economic, and ethical challenges. Today, despite remaining impediments to vaccination delivery, opportunities for all countries to achieve global vaccine coverage goals are largely being achieved”, states WHO in describing the situation in mid-2022.

Future pandemic developments, explains WHO, “remain uncertain.”

## ACHIEVEMENTS IN LIGHT OF THE EVOLUTION OF THE PANDEMIC

“Nearly every country has implemented COVID-19 vaccines and 12 billion doses have been administered globally resulting in WHO Member States reaching on average 60% of their populations. This massive and unprecedented COVID-19 vaccine deployment has led to major reductions in severe disease, hospitalization and deaths (...), allowing societies to re-open and averting an estimated 19.8 million deaths in 2021.

Global COVID-19 vaccine supply is now abundant with yearly manufacturing capacity of 11–16 billion vaccine doses, and ample volumes available for lower income countries through contracts and donations via the COVAX Facility, regional mechanisms, and bilateral approaches. For these countries, over \$3 billion in external financing has been allocated to support vaccine delivery including through substantial multi-partner technical support. Countries around the world have taken up the opportunity to protect ever larger shares of their populations using safe and highly effective vaccines. That protection includes booster doses, which are a critical part of sustaining protection, including against Variants of Concern.”

Source: WHO. [Global Covid-19 Vaccination Strategy in a Changing World, July 2022 update.](#)

## 2.2 BIONTECH'S CONTRIBUTION TO VACCINE EQUITY

BioNTech supports the 2030 Agenda for Sustainable Development of the United Nations and its 17 Sustainable Development Goals (SDGs). The Company is focusing particularly on its contribution to SDG 3, “Good health and well-being” and its related targets 3.3 (“Fight communicable diseases”) as well as 3.b (“Support research, development and universal access to affordable vaccines and medicines”). [website United Nations](#)

A key approach to vaccine equity taken by BioNTech in 2020 and 2021 was to significantly increase reliable production capacity for the COVID-19 vaccine early on.

### Production Facility and Know-How Hub in Marburg

The Company's production facility in Marburg, Germany, which was acquired from Novartis Manufacturing GmbH, is one of the largest mRNA vaccine production facilities in the world. This facility reached an annual capacity of up to one billion doses of mRNA vaccines in 2021. In 2022, annual production capacity was further increased to up to 3 billion doses of mRNA drug substance. BioNTech therefore believes it is well positioned to supply the quantities required by global market demand.



Marburg is BioNTech's central hub for the innovation and development of novel manufacturing solutions. Approximately €62 million has been invested in this facility since its acquisition. Marburg is not only a center of excellence in terms of facilities and devices but also a know-how hub with effective, advanced staff training. The Company has about 700 employees on site.

### Delivery to Low- and Middle-Income Countries

In 2022, BioNTech, together with Pfizer, continued its global COVID-19 vaccine leadership with the first-to-market Original/Omicron BA.4-5-adapted bivalent COVID-19 vaccine directed against both the original COVID-19 virus and the Omicron BA.4-5-adapted COVID-19 virus. The Company now has three commercial COVID-19 vaccine products on the market: the original COVID-19 vaccine and two Original/Omicron-adapted bivalent vaccines, Original/BA.1- and Original/Omicron BA.4-5-adapted bivalent vaccines, which are all referred to as COMIRNATY®.

Pfizer and BioNTech made a joint pledge to supply 2 billion doses to low and middle-income countries (LMICs) between 2021 and 2022 to support equitable access to medicines. The companies have together delivered approximately 1.7 billion doses of COMIRNATY® to LMICs in line with market demand.

### BioNTech's Pandemic Response Capability

The companies have developed a global COVID-19 vaccine supply chain and manufacturing network with over 20 key partners, which now spans five continents and includes more than 20 manufacturing and filling facilities. The aim is to further develop BioNTech's COVID-19 manufacturing network worldwide to and to establish and increase BioNTech's pandemic response capability globally.

### BioNTech's global vaccine manufacturing network

In November 2022, BioNTech's Singapore affiliate, BioNTech Pharmaceuticals Asia Pacific Pte. Ltd., entered into an agreement with Novartis Singapore Pharmaceutical Manufacturing Pte. Ltd. to acquire one of its GMP-certified manufacturing facilities.

The acquisition is part of BioNTech's expansion strategy to strengthen its global footprint in Asia. Supported by the Singapore Economic Development Board (EDB), the facility will serve as the Company's regional headquarters and become its first mRNA manufacturing facility in Singapore. The facility will create regional manufacturing capacities to support BioNTech's growing pipeline of mRNA-based vaccines and therapeutics across the Asia-Pacific region for both commercial and clinical scale. It also gives BioNTech the potential to expand production to other drug classes, such as cell therapies. The site will be a fully integrated mRNA manufacturing facility, bringing mRNA production capabilities for a range of drug substances and drug products. When fully completed, the facility is expected to have an annual production capacity of up to several hundred million doses for mRNA-based vaccines.



**We are becoming a multi-product, global biotechnology leader, addressing the world's most pressing health issues with pioneering, disruptive technologies delivered at scale.**

**PROF. UGUR SAHIN, M.D.**

Chief Executive Officer and Founder



## 2.3 DEMOCRATIZE ACCESS TO NOVEL MEDICINE & TECHNOLOGICAL INNOVATION IN HEALTHCARE

In advancing medicines and technological innovation, BioNTech's ambition to improve the quality of life for people worldwide is a driving force for the Company. As part of this effort, BioNTech continues to focus on addressing high unmet medical needs – especially through the development of cancer therapies and vaccines against some of the world's most common infectious diseases – and ensuring affordable access to innovations in healthcare.

Ensuring such access could be an intermediate step towards a new common understanding of vaccine equity. Vaccines could be produced regionally, on highly flexible medical and technological platforms, and with an appropriate level of democratic participation to address a region's most urgent diseases. BioNTech describes this vision as a democratization of access to novel medicine and technological innovation in healthcare. The Company's four principles – transparency, integrity, respect for the environment and human rights – and the UN Sustainable Development Goals (SDGs) guide BioNTech in the implementation of this vision. To achieve this, BioNTech is focusing on the following three fields of action:

### 1. Address Diseases with High Unmet Medical Needs

Infectious diseases remain among the leading causes of death and disability worldwide. In 2019, 13.7 million lives were lost to infectious diseases globally. LMICs continue to bear much of the burden of communicable diseases, including tuberculosis, HIV, malaria, neglected tropical diseases and hepatitis B. Climate change, rising population numbers, and global travel may all contribute to an increased risk of global infectious disease outbreaks.

BioNTech's goal is to advance and expand its infectious disease programs and pipeline while democratizing access to mRNA medicines. The following describes BioNTech's main trials and programs.

#### → Next-generation COVID-19 vaccines – BNT162b2 and BNT162b4

In July 2022, BioNTech and Pfizer initiated a randomized, active-controlled, observer-blind Phase 2 trial to evaluate the safety, tolerability and immunogenicity of a 30-µg dose of an enhanced spike antigen vaccine candidate, BNT162b5. This is the first of multiple vaccine candidates with an engineered design aimed at increasing the magnitude and breadth of antibody neutralization response to better protect against COVID-19.

In November 2022, BioNTech and Pfizer initiated a Phase 1 trial to evaluate the safety, tolerability and immunogenicity of a next-generation COVID-19 vaccine component, BNT162b4, dosed in combination with the Original/Omicron BA.4-5 adapted bivalent COVID-19 vaccine, which aims to enhance and broaden SARS-CoV-2 T-cell responses.

#### → COVID-19 – Influenza combination mRNA vaccine program – BNT162b2 + BNT161

In October 2022, BioNTech and Pfizer initiated a Phase 1 open-label, dose-finding trial to evaluate the safety, tolerability and immunogenicity of a combination of the COVID-19 and influenza mRNA vaccines in 180 healthy adults 18 to 64 years of age. The combination vaccine consists of BioNTech's Original/Omicron BA.4-5-adapted bivalent COVID-19 vaccine and Pfizer's quadrivalent modified RNA (modRNA) influenza vaccine.

In December 2022, BioNTech and Pfizer announced that the companies received Fast Track Designation from the U.S. Food and Drug Administration (FDA) for the mRNA-based combination vaccine candidate for influenza and COVID-19.

#### → Influenza vaccine program – BNT161

In 2018, BioNTech and Pfizer agreed to collaborate on an mRNA program in influenza. The aim is to develop an influenza vaccine based on BioNTech's suite of mRNA platforms to better address the burden of influenza and further reduce the yearly rates of severe outcomes, including hospitalization and death. WHO estimates that influenza is responsible for 290,000 to 650,000 deaths annually on a global scale (WHO 2023). The research collaboration ended in August 2021, and Pfizer now has the sole responsibility, authority and control of the development, manufacture and commercialization of all candidates and products.

In July 2022, Pfizer reported data from the Phase 2 clinical trial of BNT161 in subjects 65 years of age and older demonstrating the first evidence of substantial induction of strain-specific CD4+ and CD8+ T-cell responses. In September 2022, Pfizer initiated a Phase 3 clinical trial to evaluate the efficacy, safety, tolerability and immunogenicity of a quadrivalent modified RNA (modRNA) influenza vaccine candidate in approximately 36,000 healthy adults in the US.

#### → Malaria vaccine program – BNT165

Announced in July 2021, BioNTech's malaria vaccine program is working to develop a well-tolerated, highly effective mRNA vaccine with durable immunity to prevent blood-stage malaria infection, thereby reducing morbidity and mortality as well as onward transmission. The program also aims to develop sustainable vaccine production and supply solutions on the African continent.



In December 2022, the Company set out to develop a multi-antigen malaria vaccine candidate and initiated the first-in-human trial with BNT165b1, the first candidate from BioNTech's BNT165 program. This first clinical trial will evaluate the safety, tolerability and exploratory immunogenicity of the vaccine candidate BNT165b1.

WHO estimated that there were 247 million cases of malaria and 619,000 associated deaths in 2021 (WHO 2022). *P. falciparum* caused the majority of deaths in sub-Saharan Africa. Sub-Saharan Africa (SSA) carries the heaviest malaria burden, with an estimated 234 million cases (95%) and 593,000 deaths (96%) in 2021. Children under five years old represent the most vulnerable population due to a high risk of severe disease progression and chronic complications. [WHO on malaria](#)

#### → HSV-2 vaccine program – BNT163

In December 2022, BioNTech dosed the first subject in a first-in-human Phase 1 clinical trial evaluating BNT163 for safety, tolerability and immunogenicity. BNT163 is an HSV vaccine candidate for the prevention of genital lesions caused by HSV-2 and potentially HSV-1.

An estimated 491 million people aged 15 to 49 worldwide have an HSV-2 infection (2016 data, WHO 2022) with painful genital lesions. This poses an increased risk for meningitis and high levels of emotional distress. Once acquired, HSV persists life-long in the body with reoccurring symptomatic outbreaks. Moreover, an HSV-2 infection increases the risk of acquiring an HIV infection by approximately three-fold, and co-infections of HIV and HSV-2 increase the likelihood of transmitting HIV,

according to the National Institutes of Health. A vaccine has not yet been approved for the prevention of genital lesions caused by HSV. The HSV therapies currently available only reduce the severity and frequency of symptoms.

#### → Shingles vaccine program – BNT167

In January 2022, BioNTech and Pfizer announced a global agreement to develop the first mRNA-based shingles vaccine candidate. Under the terms of the agreement, the companies will leverage a proprietary antigen technology identified by Pfizer's scientists and BioNTech's proprietary mRNA platform technology used in the companies' COVID-19 vaccine.

In February 2023, BioNTech and Pfizer dosed the first subject in a Phase 1/2 clinical trial exploring the safety, tolerability and immunogenicity of BNT167 in up to 900 healthy volunteers ages 50 to 69. The Phase 1 clinical trial will help select the optimal mRNA vaccine candidate, dose level, dosing schedule and formulation for advancement to Phase 2 testing. Shingles is a debilitating, disfiguring and painful disease and is the chronic form of the varicella-zoster virus (VZV), which causes an initial chickenpox infection. The virus can lay dormant in human nerve cells and reactivate later in life due to stress or immunocompromised states, potentially leading to postherpetic neuralgia and, in rare cases, facial paralysis, deafness, and blindness. Globally, about 95% of individuals older than 50 years of age have been exposed to VZV, placing them at risk of developing shingles. While there are already approved shingles vaccines available, there is still an opportunity to develop an improved mRNA vaccine that potentially shows high efficacy, better tolerability and is more efficient to produce globally.

#### → Tuberculosis vaccine program – BNT164

BioNTech has been collaborating with the Bill and Melinda Gates Foundation since 2019 to develop vaccine candidates aimed at preventing tuberculosis infection and disease.

A clinical trial for the tuberculosis vaccine candidate, BNT164, is planned to begin in 2023. Tuberculosis is a worldwide leading cause of death due to infectious disease, and second only to COVID-19. In 2021, approximately 10.6 million people developed active tuberculosis, and 1.6 million people died from this disease. WHO estimates that 25% of the world's population is latently infected with *Mycobacterium tuberculosis*, named after the bacteria responsible for the disease. Approximately 5% to 10% of the individuals infected will go on to develop tuberculosis disease. [WHO on tuberculosis](#)

#### → Anti-bacterial programs

BioNTech R&D (Austria) GmbH is a wholly owned subsidiary of BioNTech SE focused on the development of novel anti-bacterial drugs to treat persistent bacterial infections. The subsidiary's development programs are based on the proprietary Lysin-Builder platform, which allows the targeted development of precision anti-bacterials. The development pipeline focuses on chronic bacterial infections where antibiotics fail to cure or destroy the natural microbiomes.



### 2. Strive to Develop Affordable Cancer Medicines

BioNTech aspires to bring mRNA-based cancer immunotherapies to the African continent if they are approved. This would be a highly relevant undertaking, as LMICs are disproportionately affected by cancer cases and deaths. By 2040, over 70% of cancer deaths are expected to occur in LMICs [website of WHO](#).

### 3. BioNTainer – A Sustainable, Scalable Solution for mRNA Manufacturing



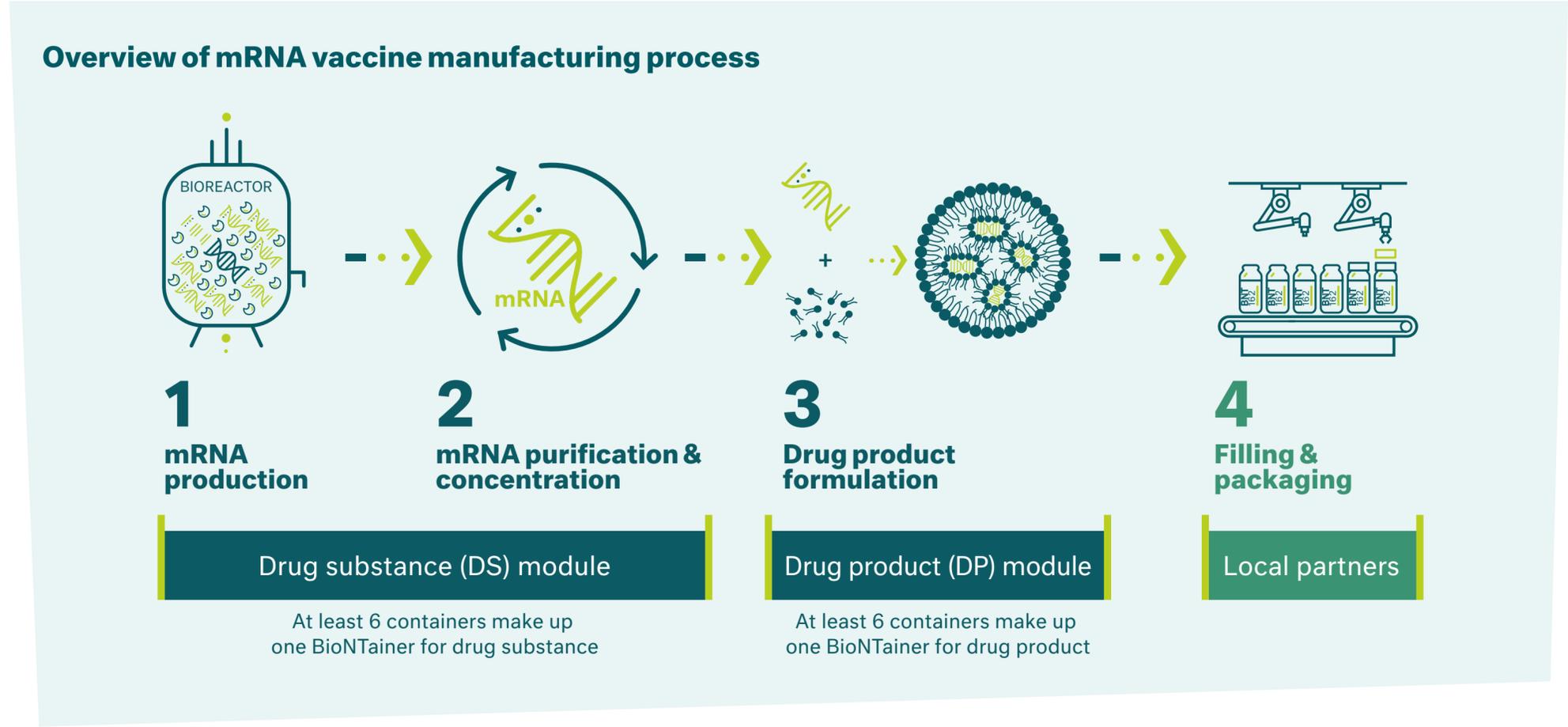
In February 2022, BioNTech presented its “BioNTainer”, a flexible container solution delivering turnkey mRNA manufacturing facilities for scalable, local vaccine production.

The BioNTainer was developed to ensure sustainable, equitable access to novel medicines, particularly in low-income countries and regions with limited infrastructure. Introduced in February 2022, the BioNTainer allows scalable vaccine production by developing and delivering manufacturing facilities based on a container solution that works as a “Plug & Play” approach with modular design, standardized equipment, and software components.

Each BioNTainer is a clean room equipped with state-of-the-art manufacturing solutions consisting of one drug substance and one drug formulation module. Each module is built from at least six ISO-sized containers. BioNTainers are equipped to manufacture a range of mRNA-based vaccines, including the Company’s COVID-19 vaccine, and can be tailored to regional needs. The plan is also to have the BioNTainers manufacture BioNTech’s investigational malaria

and tuberculosis vaccines if they are successfully developed, approved and authorized by the regulatory authorities. Capacity can be scaled up by adding further modules and sites to the manufacturing network.

Each BioNTainer is intended to become a node in a decentralized and robust end-to-end manufacturing network, aiming to offer greater independence and faster regional vaccine supply.



## GROUND BREAKING FOR BIONTAINER FACILITY IN KIGALI

In December 2022, the construction of the six ISO-sized shipping containers for the first BioNTainer was completed in Europe and underwent quality checks by BioNTech's experts. In March 2023, BioNTech reached the next milestone in establishing scalable mRNA vaccine production in Africa. The six ISO-sized containers for the first BioNTainer were flown to Kigali, Rwanda, where they were welcomed by Sabin Nsanzimana, M.D., Ph.D., the Minister of Health of Rwanda, and Sierk Poetting, Ph.D., Chief Operating Officer at BioNTech.

At the same time, BioNTech is continuing to build and develop a state-of-the-art manufacturing facility to produce mRNA-based drugs and product candidates in Kigali, Rwanda, after breaking ground in June 2022. The facility will initially house two sets of BioNTainers for bulk production of mRNA vaccines and is expected to become the first node in a decentralized and robust end-to-end manufacturing network in Africa.

BioNTech is also pursuing the development of facilities elsewhere in Africa and beyond. The vaccines emerging from this envisioned pan-African infrastructure will be intended for people residing in member states of the African Union in support of access to novel medicines.

The first BioNTainer is expected to begin operation 12 to 18 months after its installation, with an estimated initial annual capacity of up to 50 million doses of a BioNTech mRNA vaccine. The facility is expected to become a fully independent manufacturing entity and employ approximately 100 people by 2024, with roles across a range of disciplines. The operation of BioNTainers is planned to be almost (Scope 1 and 2) climate-neutral by adapting to local conditions using renewable energies and solar power systems on-site.



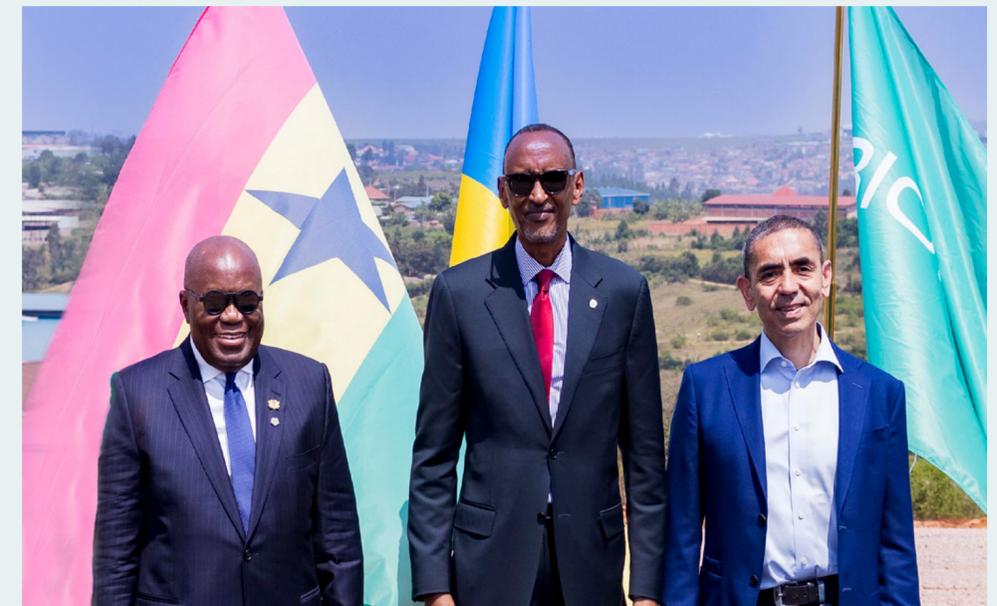
Sierk Poetting, Ph.D. and Sabin Nsanzimana, Ph.D., Minister of Health of Rwanda.



13 March 2023: First BioNTainer arrives in Rwanda.



June 2022: Ground breaking ceremony in Kigali, Rwanda.



Nana Akufo-Addo, President of the Republic of Ghana, Paul Kagame, President of the Republic of Rwanda, and Prof. Ugur Sahin, M.D., CEO of BioNTech in June 2022.

### Modern mRNA Vaccine Production Tailored to Local Needs

The fundamental concept behind the BioNTainer solution is to be able to set up a flexible container solution worldwide in a comparatively short time. Production is set up to meet high quality and product safety requirements and be almost climate neutral in terms of Scope 1 and 2 CO<sub>2</sub>e emissions.

One of the most critical parts of the manufacturing process is quality control, which includes all of the necessary testing of each batch of vaccine completed. BioNTech will help to ensure the identity, composition, strength, and purity, as well as the absence of product- and process-related impurities and microbiological contamination for each produced batch in partnership with local quality control testing labs.

BioNTech will work closely with the local authorities to ensure it complies with the relevant regulatory procedures of the national regulatory agencies in each partner country. It will also coordinate, where appropriate, with the relevant continental and international agencies, including WHO, Africa CDC, the African Medicines Agency (AMA), and the African Union Development Agency (AUDA-NEPAD).

BioNTech will initially staff and operate the facilities to support the safe and rapid initiation of the production of mRNA-based vaccine doses under stringent good manufacturing practices (GMPs) to prepare for the transfer of know-how to local partners to facilitate operation. Vaccines manufactured at African facilities are expected to be dedicated to domestic use and exported to other member states in the African Union at a not-for-profit price.



**Our infectious disease programs address diseases of high medical and global health need, many of which have no treatments or vaccines.**

**PROF. ÖZLEM TÜRECI, M. D.**

Chief Medical Officer and Founder



# 3.0 Corporate Citizenship

## Contributing to Our Communities

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### For our communities and beyond:

We embrace our responsibility as a corporate citizen and are committed to supporting our local communities and beyond through donations, sponsorships, volunteer activities and more.

1.1

million euros  
in donations for  
humanitarian aid in Ukraine



1.28

million euros  
in total donations  
in 2022



55

donation requests  
accepted, providing  
support



Increasing number of  
corporate volunteering  
activities worldwide

# 3.0 Corporate Citizenship

BioNTech is committed to corporate citizenship. It meets this responsibility by fully embracing the Company’s corporate citizenship concept, adopted by the Management Board in 2020. All of BioNTech’s active corporate citizenship activities – corporate volunteering, financial donations, in-kind donations, sponsorships and grants – are assessed using a strategic filter. This concept is based on three pillars (described below) and will be reviewed and further developed in 2023.

BioNTech’s corporate citizenship activities are strategically led by the Corporate Social Responsibility (CSR) team. Formal alignment on international corporate citizenship activities, and specifically with the activities in the United States, has taken place on a circumscribed scale in 2022. The respective teams continuously exchange information. As part of the revision of the corporate citizenship concept, the Company plans to formalize and adapt global coordination and alignment in 2023.

BioNTech is very cautious in its support of sponsorships, donations and grants. The awarding of sponsorships and grants is closely aligned between the CSR team and the Commercial, Medical Affairs and Corporate Communications teams.

The conceptual development of the material topic “Caring for Patients” was planned for 2021 and could not be conducted due to a reprioritization. The Company plans to review and reassess the topic in 2023 in the context of the global regulatory challenges in sustainability and the available human resources as well as against the background of a review of corporate citizenship activities.

● GRI 3-3

## BioNTech’s Corporate Citizenship Concept



**HEALTH-RELATED CAUSES**

**On a national and international level, activities must relate to those diseases which we aim to address with our investigational therapies and vaccines and innovative drug products.**



**REGIONAL CAUSES**

**On a local and regional level, BioNTech supports causes that are near its sites or affiliates on a case-by-case basis. This includes requests from BioNTech employees.**



**EXCEPTIONAL CAUSES**

**BioNTech supports exceptional causes, such as relief efforts in emergency and disaster situations or other circumstances.**



TELL US ABOUT:

CORPORATE  
CITIZENSHIP



**NATASCHA FRIMOR**  
Senior Director  
Internal Communi-  
cations & CSR

### WHAT WERE THE HIGHLIGHTS IN 2022?

“

After two difficult years in the pandemic, BioNTech was able to expand its corporate citizenship engagement in 2022.

I am pleased to say that not only the number of donations increased but also the number of corporate volunteering activities. In Mainz, for example, the Company organized a volunteer event for the holidays to support a homeless shelter next to its headquarters. It was great to see so many colleagues helping to prepare the Christmas celebration. To experience this right here in Mainz is encouraging. But it is also exciting to see the commitment of the US-based BioNTech colleagues in Gaithersburg and Cambridge, who are also dedicated to serving people in their local communities by volunteering during their workday. Our colleagues working at BioNTech US are a great example of how to be a good corporate citizen in the local community. We strive to offer this valuable experience to employees worldwide.

## INTERVIEW WITH NATASCHA FRIMOR

### WHAT WERE THE GREATEST CHALLENGES IN 2022?

“

BioNTech received the highest-ever number of external requests for support in 2022.

There is a great deal of work behind every single request. Sometimes we receive letters with very personal stories that touch us deeply. It was only with an expanded CSR team that we were able to adequately deal with our backlog of inquiries from the middle of the year. Thanks to the passionately working team, the processes have become more efficient over time. Today we give every inquiry the attention it deserves.

### WHAT ARE BIONTECH'S GOALS AND EXPECTATIONS FOR 2023?

“

In 2023, the Company intends to expand and strengthen the volunteering opportunities available to its employees.

Beyond this, it plans to launch a corporate framework as part of a new strategic corporate citizenship concept. Additionally, there will be an updated donation strategy to help allocate financial and in-kind donations. I am personally very pleased with the progress of BioNTech's corporate citizenship engagement over the past year, and eagerly look forward to driving several activities to fulfill BioNTech's role in society.



### 3.1 DONATIONS

A donation strategy was developed by the CSR team and approved by the Management Board within the context of the Corporate Citizenship concept. The donation policy defines what constitutes a donation and outlines the corresponding approval process. Donations must fall within the scope of the defined donation strategy and policy and are evaluated on an individual basis by the Compliance Advisory Committee. A revision of the global donation policy is planned for 2023.

All donations are evaluated according to the following requirements:

- Donations can be made to charitable or not-for-profit organizations but not to individual or for-profit entities. Donations cannot be made to healthcare organizations.
- Donations to public hospitals or clinics in developing countries (especially middle-income and low-income countries [MICs and LICs]) are acceptable under strict compliance scrutiny.
- Donations cannot be received by organizations that have a parallel (business) relationship with BioNTech.
- Donations cannot be made to organizations or any affiliated organizations that simultaneously provide services to BioNTech.
- Donations cannot serve the personal interests of any individual.
- Donations cannot directly/specifically serve the commercial interests of BioNTech.
- Donations can only be received by organizations that are appropriately registered or accredited under applicable local laws.

BioNTech donated a total amount of approximately €1.28 million in 2022; €20,600 were in-kind donations. This includes the donation of €1 million to UNO-Flüchtlingshilfe e.V., which is the partner of the UN Refugee Agency (UNHCR) in Germany. This donation was made to help with the humanitarian aid in Ukraine. A donation of €100,000 was given to the City Children Clinical Hospital no. 1 in the Ukrainian capital of Kiev.



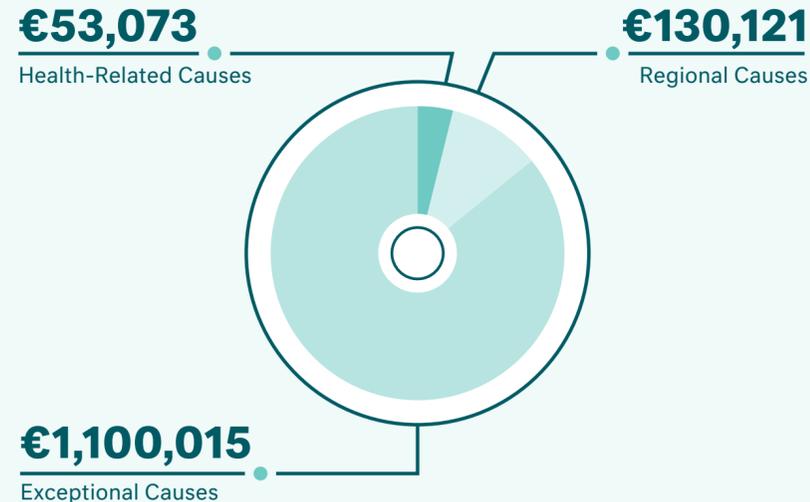
In February 2023, BioNTech donated €500,000 to the nonprofit organization Aktionsbündnis Katastrophenhilfe (Action Alliance for Disaster Relief) for humanitarian aid in the earthquake-affected regions of Türkiye and Syria. It also donated €500,000 to UNO-Flüchtlingshilfe for humanitarian aid in Ukraine.



BioNTech received a total of 225 donation requests documented centrally by the CSR team in 2022. A total of 55 of these requests were accepted. This data and the donation and sponsorship data are subject to a certain degree of uncertainty, as it cannot be ensured with reasonable confidence that all decentralized requests were forwarded to the CSR team.

#### Donations in 2022<sup>1</sup>

Amount of donations, including in-kind donations



<sup>1</sup> Due to ongoing system integrations as part of BioNTech's dynamic globalization, it is possible that some locally awarded donations have not been identified and included in this overview.

### 3.2 SPONSORSHIPS

Sponsorships are entered into with great care. Each application is meticulously examined and only accepted after a thorough review by the Compliance and the Legal department.

In 2022, BioNTech helped sponsor the Rhineland-Palatinate Day 2022 in the state capital of Mainz with a donation of €25,000. BioNTech’s CFO Jens Holstein and COO Sierk Poetting, Ph.D. were guest speakers at three discussions during the event, which was held on the city’s main square. Sierk Poetting spoke with Rhineland-Palatinate’s Climate Protection Minister Katrin Eder about the challenges of climate protection, followed by a discussion with the then-mayor Michael Ebling about BioNTech’s growth in the state capital. Jens Holstein presented BioNTech as one of the most attractive employers in Mainz as well as in the state of Rhineland-Palatinate.

Due to its special significance for the Company and its employees, BioNTech helped sponsor the Christopher Street Day (CSD) events in Mainz and Marburg in 2022 with donations of €3,000 each. The sponsorship signifies BioNTech’s commitment to the LGBTIQ+ community. As a global company, BioNTech stands for acceptance and equality of gender and sexual orientation. As a signatory of the Diversity Charter, the Company is committed to a prejudice-free work environment. BioNTech demonstrates this through its support of the local Christopher Street Day events, showing its colors, and announcing its commitment to focus more intensely on the areas of diversity, inclusion, equity and belonging.

At BioNTech’s sites in the United States, diverse corporate volunteering activities undertaken by BioNTech’s local staff often go hand-in-hand with minor sponsorships of local community organizations to support local charities.

BioNTech also sponsors scientific and medical-educational events in the healthcare sector as part of its area of business in Germany. Sponsorships of healthcare and patient organizations are consistently documented and monitored on BioNTech’s digital compliance platform. The platform can be used to assess compliance-related requirements and principles as well as BioNTech’s compliance with its transparency reporting obligations (see BioNTech’s [website](#)).



**We value volunteering because it gives us the opportunity for internal team building while showing our appreciation for our community.**

**ALLIX SANDERS**

Senior Scientist and member of the Gaithersburg CADETs (Culture AndEngagement Team)

### 3.3 VOLUNTEER WORK

Fewer restrictions associated with the COVID-19 pandemic allowed for more corporate volunteering activities in 2022. BioNTech’s employees from different sites worldwide participated in these activities, volunteering on projects during their workday to benefit their local communities. As a corporate citizen, BioNTech allows and encourages employees to participate in corporate activities. Generally, each employee has one workday a year available for corporate volunteering. For special situations, such as the vast flooding in Rhineland-Palatinate in 2021 or the widespread earthquake in Türkiye and Syria in 2023, the Management Board offered special arrangements for volunteers.

Corporate activities at BioNTech are still somewhat limited and generally at a local level. The Company is working on a corporate volunteer framework in the course of revising its corporate citizenship concept. Strategic corporate volunteering however has not been a reality until now due to other priorities and limited human resources. For this reason, the activities listed below largely reflect local engagement activities, initiated above all by employees in the United States. In 2023, BioNTech plans more volunteer activities in Germany and expects a greater number of employees to participate.



## BIONTECH'S EMPLOYEES SERVING THE SOCIETY

### Spotlights in the United States

- **Bikes Battling Cancer:** In Cambridge, employees participated in the Bicycles Battling Cancer fundraiser event and raised \$12,000 for the American Cancer Society.
- **Reading Buddies:** Employees in Cambridge were paired up with first, second and third grade students at local Cambridge schools. The Reading Buddies met with their partners weekly to bring books to life by reading them aloud.
- **Netpals:** The Netpals program in Cambridge pairs BioNTech employees with fifth graders from the local Kennedy-Longfellow School. The employees act as mentors teaching students about their work at BioNTech. This includes introducing the students to career paths in science, technology, engineering and mathematics (STEM) as well as promoting writing and computer skills.
- **College Mentoring:** Each semester, BioNTech US partners with the Cambridge Bunker Hill Community College (BHCC), located in Charlestown, Boston, to work with students pursuing their associate of science degree in biotechnology. Mentors from BioNTech US are matched with students to work on crafting the students' resumes, cover letters, among others.
- **Fall Clean Up:** In partnership with the Cambridge Department of Public Works, a group of BioNTech employees volunteered and planted a variety of bulbs in a newly created green space. The planted bulbs will provide a valuable habitat for pollinators and help maintain local ecosystems and produce natural resources for years to come.



On-site Kits for a Cause Assembly with the United Way

- **Glow Week:** In Gaithersburg, the BioNTech Culture Club organized a number of opportunities to get involved and help the local community as part of "Glow Week." For example, approximately 60 employees packed kits with the United Way of Central Maryland in support of several charitable causes, including for the homeless. There were also centralized corporate volunteer activities during the week, where employees could make their contribution at social institutions within their community.

### Spotlights in Germany

- **PRO BONO CAMP:** For a second consecutive year, German-speaking employees had the opportunity to take part in the PRO BONO CAMP organized by the [Haus des Stiftens](#) in 2022. Every year, the week-long digital knowledge transfer event brings committed employees from different companies together with representatives from nonprofit organizations. In webinars and a total of 464 one-on-one online coaching sessions, 556 volunteers provided free support to 583 nonprofits who benefited from the knowledge of corporate volunteers and the PRO BONO CAMP in general. All German-speaking BioNTech employees were invited to participate in up to two 60-minute sessions during their workday and offer their expertise in areas such as project management and strategy development. The feedback from BioNTech participants in 2022 was again very positive.
- **Support for the Homeless:** In November 2022, BioNTech celebrated the start of the Christmas season at [Thaddäusheim](#), an institution in Mainz for those who are homeless or at risk of becoming homeless. Over 40 employees located in Mainz prepared the event and spent time with the people living or spending time at Thaddäusheim due to their living situation. Nearly 100 BioNTech employees have registered for future activities in support of Thaddäusheim.

# 4.0 Responsible Governance

## Ensuring BioNTech's Resilience

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**For good relationships:**  
We act ethically and responsibly and take all stakeholder interests into account.



of variable Management Board remuneration linked to sustainability targets



Principles of animal welfare



Human Rights Officer appointed as of 1 January 2023

# 4.0 Responsible Governance

## 4.1 MANAGING RESPONSIBLE GOVERNANCE

The Management Board and Supervisory Board work together for the benefit of BioNTech. They pursue the objective of sustainable value creation, taking into account the interests of the shareholders, the workforce and other stakeholders associated with BioNTech. These principles demand not only legal compliance, but also ethically sound and responsible conduct.

All CSR-related corporate governance topics were assessed as material for the Company and for non-financial reporting. The Company and the persons acting on the corporate bodies of BioNTech are aware of their role in, and their responsibility to, society. Social and environmental factors may influence the Company's success. The Management Board and Supervisory Board act in BioNTech's best interest to ensure that the potential impacts as well as opportunities and risks associated with these factors on corporate strategy and operational decisions are recognized and addressed.

Detailed information about BioNTech's Management Board, Supervisory Board, compensation and board practices can be found in the Company's Annual Report on Form 20-F for the year ended 31 December 2022, which was filed with the SEC on 27 March 2023, and is available on the BioNTech website in the [Investors](#) section. Key documents for corporate governance are also available on BioNTech's website in the [Corporate Governance](#) section.

### Sustainability Performance and Variable Remuneration

At the Annual General Meeting of BioNTech SE on 22 June 2021, the Supervisory Board adopted a [remuneration system](#), which was approved by the shareholders at the Annual General Meeting 2021.

One component of total remuneration is the short-term variable compensation (Short-Term Incentive, STI), which is based on Company targets and sustainability targets. The STI is a performance-based cash bonus with a one-year assessment period. It amounts to a maximum of 60% of the annual fixed remuneration and depends on the financial and sustainability performance criteria (performance targets) of the BioNTech Group.

In 2022, the Supervisory Board resolved the following specific sustainability targets for the Management Board:

- Maintain the ISS ESG prime rating and improve the S&P ESG rating versus 2021
- Define an approach to measure employee satisfaction
- Set up vaccine manufacturing in at least one country in Africa (e.g., BioNTainer in Rwanda)

As a result, 20% of the variable compensation (STI) of the members of the Management Board of BioNTech SE for the 2022 financial year was linked to sustainability targets.

Detailed remuneration reports are available on BioNTech's website in the [Corporate Governance](#) section. ● [GRI 2-20](#)

### Board Practices

#### Two-Tiered Board Structure

BioNTech is a European public limited-liability company (Societas Europaea or SE; also referred to as a European stock corporation) headquartered in Germany. It has chosen a two-tiered structure, with a Management Board (Vorstand), Supervisory Board (Aufsichtsrat) and Annual General Meeting (Hauptversammlung) as the corporate bodies. The Management and Supervisory Boards are entirely separate and, as a rule, no individual may simultaneously be a member of both boards.

**THE MEMBERS OF BOTH BOARDS  
OWE A DUTY OF LOYALTY AND CARE  
TO THE COMPANY.**

The Management Board is responsible for the management of the business in accordance with the applicable laws, the Company's Articles of Association (Satzung), and the Management Board's internal rules of procedure (Geschäftsordnung). The Management Board also represents BioNTech in its dealings with third parties.



The principal function of the Supervisory Board is to oversee the Management Board. Additionally, the Supervisory Board is responsible for appointing and removing Management Board members, representing BioNTech in transactions between current and former members of the Management Board and the Company, and granting approvals for certain significant matters. The Management Board and Supervisory Board are solely responsible for and manage their own areas of competency (Kompetenztrennung). Therefore, pursuant to applicable law, the Company's Articles of Association and the internal rules of procedure, neither board may make decisions that are the responsibility of the other board. Members of both boards owe a duty of loyalty and care to the Company. In carrying out their duties, they are required to exercise the standard of care of a prudent and diligent businessperson. If they fail to observe the appropriate standard of care, they may become liable to the Company. In carrying out their duties, the members of both boards must take into account a broad range of considerations when making decisions, including the interests of the Company, its shareholders, employees, creditors and, to a limited extent, the general public. At the same time, the boards must respect the right of shareholders to be treated equally. Beyond these duties, the Management Board is also responsible for implementing an internal monitoring system for risk management purposes.

The Supervisory Board has comprehensive monitoring responsibilities. To ensure that the Supervisory Board can carry out its functions properly, the Management Board is required, among its other duties, to regularly report to the Supervisory Board regarding current business operations and future business planning (including financial, investment and personnel planning). The Supervisory Board and any of its members are entitled to request a special report from the Management Board on any matters concerning the Company, legal

and business relations with affiliated companies, and any business transactions or matters at affiliated companies that may have a significant impact on the Company's position at any time.

Under German law, BioNTech's shareholders generally have no direct recourse against Management Board and Supervisory Board members should they be believed to have breached their duty of loyalty and care to the Company. Apart from when the Company is unable to fulfill its third-party obligations, displays tortious conduct towards board members or other special circumstances, only the Company has the right to claim damages against the members of the Management Board or the Supervisory Board.

#### **Independence of Supervisory Board Members**

German law requires that the Supervisory Board consists of at least three members, whereas a company's Articles of Association may stipulate a higher number. The Supervisory Board of BioNTech currently consists of six members.

As BioNTech is not subject to co-determination, the members of its Supervisory Board are elected by the Annual General Meeting in accordance with the provisions of Council Regulation (EC) No 2157/2001 of 8 October 2001 on the Statute for a European company (SE) and the German Stock Corporation Act (Aktiengesetz). The majority of Supervisory Board members are not required to be independent under German law, the Company's Articles of Association (Satzung) or the Supervisory Board's rules of procedure. The Supervisory Board shall include what it considers to be an appropriate number of independent members, thereby taking into account the shareholder structure.

When assessing the independence of Supervisory Board members, consideration is given to the following: whether the respective Supervisory Board member was a member of the Company's Management Board in the two years prior to appointment; whether the member is maintaining or has maintained a material business relationship with the Company or one of the entities dependent upon the Company; whether the member is a close family member of a Management Board member; and whether the member has been on the Supervisory Board for more than 12 years – thereby taking into account the time as a listed company.

In the view of the Supervisory Board, all six members of the Supervisory Board – Helmut Jeggler, Prof. Christoph Huber, M.D., Michael Motschmann, Ulrich Wandschneider, Ph.D., Prof. Anja Morawietz, Ph.D., and Prof. Rudolf Staudigl, Ph.D. – are deemed independent. The Supervisory Board has also ensured that all of its members have sufficient time to exercise their mandates with the necessary regularity and diligence. For further information, see BioNTech's Declaration of Conformity of the Management Board and the Supervisory Board with the German Corporate Governance on BioNTech's website in the [Corporate Governance section](#).

The Supervisory Board's rules of procedure, however, require that the board has independent members with expertise in the fields of accounting, internal control processes and auditing. Ulrich Wandschneider, Anja Morawietz and Rudolf Staudigl fulfill these roles.

A full description of BioNTech's board practices can be found in the Company's Annual Report on Form 20-F for the year ended 31 December 2022, which was filed with the SEC on 27 March 2023 and available on the BioNTech website in the [Investors section](#).



TELL US ABOUT:

COMPLIANCE &  
BUSINESS ETHICS

# INTERVIEW WITH ESTHER PIETERSE

## WHAT WERE THE HIGHLIGHTS IN 2022?

“

We had several highlights this past year. For one, we launched an interactive compliance e-learning program for employees based on the BioNTech Code of Business & Ethics that is now available to our global workforce. The Code of Business Conduct & Ethics is the foundation for interacting with our employees and significantly important for them. We also expanded our executive compliance onboarding to strengthen our commitment to a culture of integrity among our BioNTech leaders, who act as role models for our staff. Last but not least, we were able to establish a compliance program in Rwanda, the location of the first BioNTainer abroad.

**ESTHER PIETERSE, PH.D.**  
Vice President Compliance  
& Business Ethics

## WHAT WERE THE GREATEST CHALLENGES IN 2022?

“

BioNTech is still growing by the day, expanding its workforce and setting up sites around the globe. It is now more important than ever to grow a community built on trust and a mutually shared understanding of our ethics at BioNTech. Extending our compliance culture to new locations has been and will continue to be our greatest yet most rewarding challenge.

## WHAT ARE BIONTECH'S GOALS AND EXPECTATIONS FOR 2023?

“

**Building global trust through seamless and effective compliance functions is an ever-changing task that will continue to play an important role in the future.**

In 2023, we plan to continue to roll out our compliance program to additional sites, such as our Singapore site. With our new locations, we need to ensure that all of our new employees are on board and address potential new compliance risks that can arise as a result of local legal specifications. Finally, we look forward to launching our newly developed manuals to guide our staff's interaction with healthcare professionals and organizations.



## 4.2 COMPLIANCE & BUSINESS ETHICS

### Management and Responsibilities

The Company has implemented a comprehensive compliance program comprised of three elements: prevention, detection, and response.



#### Prevention:

- Policies and procedures: All employees are bound by the Company's policies to act ethically and in compliance with the law. Clearly laid out procedures work to prevent actions that are not in line with regulations or the Company's values.
- Campaigns to reinforce strong ethical values: The compliance principles of integrity, transparency and responsibility are an essential part of the campaigns and supported by the tone at the top.
- Training and communication: Repeated exercises and thorough explanations make BioNTech's ethics and compliance rules accessible. The Company provides on-site training sessions as well as online videos and interactive virtual training.
- Third-party due diligence: The Company has established a risk-adequate third-party due diligence process that addresses potential anti-bribery and anti-corruption (ABAC) risks for third parties and planned business relationships.

#### Detection:

- Whistleblower channels, including a hotline ("Ethics Contact Point")
- Risk assessment and monitoring systems
- Internal investigations

#### Response:

- Disciplinary measures arising from investigations
- Remediation measures resulting from investigations and audits

The measures listed above are facilitated by a digital compliance platform, internally referred to as the BioNTech Best Practices Hub (BxP Hub). The BxP Hub offers a wide range of functions that support policies, training and monitoring activities. Through various modules, the BxP Hub captures interactions across various compliance topics, for example involving a transfer of value with representatives in the healthcare community, invitations to meals, the provision of business gifts, as well as potential conflicts of interest and any violations or concerns reported to the Ethics Contact Point.

● GRI 3-3

### Compliance Responsibilities

The overall responsibility for the compliance program lies with the Management Board. The Management Board provides the Audit Committee with regular reports on the operation of the compliance program. Measures to strengthen corporate compliance are regularly presented to and discussed by the CSR Steering Board.

In addition to the core responsibilities borne by the Compliance Department, BioNTech has set up a Compliance Advisory Committee (CAC) comprised of senior leaders representing different functions, such as Quality Assurance, Legal, Finance, Controlling, and Operations. The CAC addresses potential compliance risks in a concerted and cross-functional manner and plays a crucial role in the Company's Policy Governance model adopted in 2020. Under this

model, the CAC reviews and discusses new corporate policies and guidelines (apart from compliance policies) to ensure that they have been streamlined and examined in an interdisciplinary manner. All BioNTech policies and guidelines are rolled out through the BxP Hub.

It is each and every employee's responsibility to comply with Company rules, policies and applicable laws and to promote an environment free of corruption, discrimination, and harassment. The Company supports this by requiring new staff members to take part in compliance training as part of the onboarding process. Senior executives are also provided compliance training that is specifically tailored to the areas dealt with in their departments.

● GRI 2-16; GRI 2-24; GRI 2-25; GRI 2-26; GRI 205-2



**BioNTech strives to create an environment free of corruption, discrimination, and harassment.**

**ESTHER PIETERSE, PH.D.**

Vice President Compliance & Business Ethics

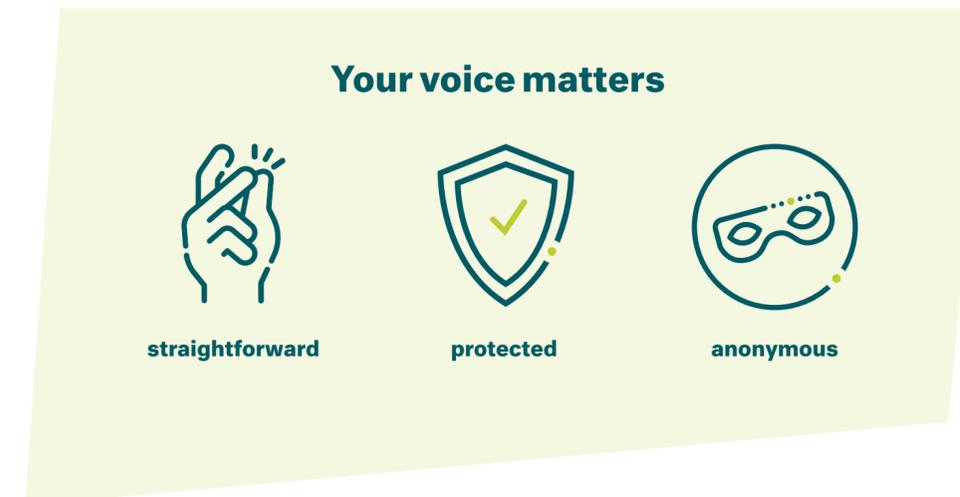


### Progress in 2022

In 2022, the compliance program at BioNTech continued to evolve, making significant progress in terms of team size, specialization, and content:

- **Compliance Department Structure:** Compliance & Business Ethics began as a team but has since evolved into an entire department reporting directly to BioNTech’s Chief Operating Officer. The Head of Compliance leads three teams specializing in the areas of Transparency Reporting, Compliance Operations, and Compliance Commercial. The Compliance Department added six new members in 2022, including a senior employee, to focus on global transparency reporting.
- **Speak Up Program:** Speak Up encourages employees to feel comfortable raising concerns about any potential misconduct (i.e., behavior, decisions, or incidents) that is not in line with
  - the laws, regulations, and industry codes applicable in the jurisdictions in which BioNTech operates;
  - BioNTech’s policies and guidelines, including the Company’s Code of Business Conduct & Ethics; and
  - any other internal and formalized rule or procedure.

In 2022, company-wide campaigns featuring on-site posters and training for line managers helped raise awareness of internal reporting channels. Taking individual responsibility includes raising concerns about potential misconduct. The mechanisms for doing this are specified in the Company’s Speak Up Policy. For example, employees can report to their line manager or to their line manager’s direct supervisor or higher. They can also notify the business function responsible for the process or regulation that was violated or bring their concern to the local management (board) or any member of the Compliance & Business Ethics department. A further option is to utilize BioNTech’s Ethics Contact Point (BioNTech’s Whistleblowing Tool) via the web or phone hotline. The key principles underlying these options are to protect the person making the report and ensure confidentiality, fairness and, if preferred, anonymity. Relevant concerns are communicated to the Management Board and/or Supervisory Board either individually or periodically on a statistical basis. ● GRI 2-16



Company registers all cases of legal and regulatory non-compliance, as well as regulatory and non-regulatory complaints concerning its marketing and selling practices, by taking preventive and adequate mitigation measures.

- **General Equal Treatment:** In 2022, the Company appointed two General Equal Treatment Officers – one female and one male – to ensure compliance with the German General Equal Treatment Act (Allgemeines Gleichbehandlungsgesetz – AGG). The AGG comprehensively defines discrimination from a legal perspective and supports BioNTech’s zero tolerance for any disadvantage or discrimination based on “race or ethnic origin, gender, religion or belief, disability, age or sexual orientation” (Section 1 AGG). In BioNTech’s Human Rights Policy, discrimination is interpreted more broadly. The policy specifies that “discrimination, favoritism, or harassment based on gender, political opinion, religion or belief, nationality, ethnic or social origin, age, sexual orientation, marital status, disability, physical appearance, health status or any other aspect of personal status” is not tolerated.

In addition to other options available to speak up, employees can contact the General Equal Treatment Officers for support with any of the abovementioned issues at any time. The importance of equal treatment and the two new roles within the Company are supported by the entire Management Board. These were addressed by the Chief Operating Officer in a global town hall session and communicated further in an intranet article. ● GRI 2-26



**Focus for 2022/23: Code of Business Conduct & Ethics**

The Company intends to publish a revised Code of Business Conduct & Ethics in 2023, taking into account the recent business and regulatory changes related, among others, to the restructuring of the Company's Management Board and the first market launch of a BioNTech product. With this update, the Company seeks to deepen stakeholders' trust by addressing their potential concerns due to legal, ethical, and societal challenges. The Code of Business Conduct & Ethics is published externally on BioNTech's [website](#) and serves as the foundation on how to comport oneself when working for or on behalf of BioNTech. The Code of Business Conduct & Ethics applies and is communicated internally to all BioNTech Supervisory Board members, Management Board members, directors of subsidiaries, and employees. It lays out standards and principles to help staff make ethical and right decisions in their daily work, for example, when interacting with business partners and the healthcare community (healthcare professionals, healthcare organizations, patient organizations and patients). In cases of non-compliance, employees may face a range of disciplinary measures, including termination of employment. ● **GRI 2-23**



**For BioNTech, it's simple: Bribery of anyone, at any level, at any organization is never acceptable.**

BioNTech Code of Business Conduct & Ethics

In 2022, the content of BioNTech's Code of Business Conduct & Ethics was conveyed to employees through a new, interactive online training and testing program, which was mandatory for the entire BioNTech staff, regardless of their role or location. In 360-degree virtual rooms, employees encountered everyday scenarios that covered relevant areas of BioNTech's Code of Business Conduct & Ethics, including but not limited to anti-discrimination and anti-harassment.



**Acting with integrity is non-negotiable for BioNTech.**

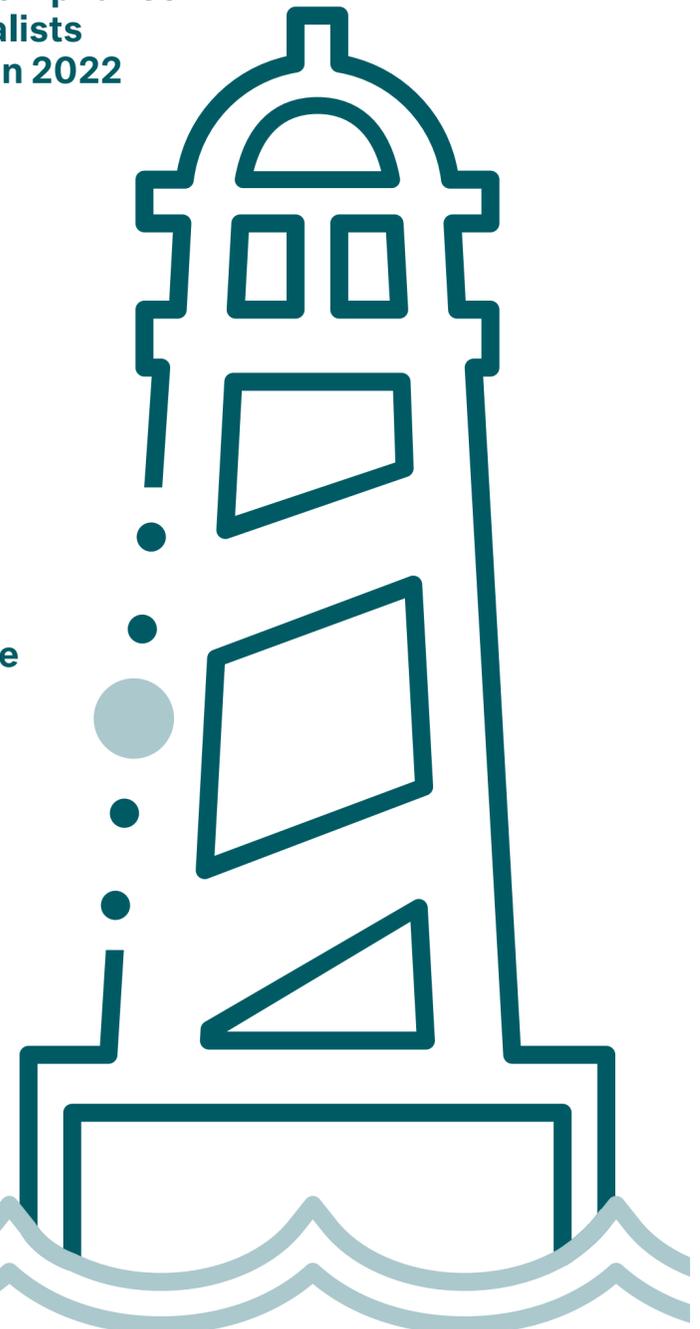
BioNTech Code of Business Conduct & Ethics

6

**new compliance specialists hired in 2022**

19

**active compliance trainings in 2022**



## COMPLIANCE PROGRAM

By the fourth quarter of 2022, BioNTech's compliance program comprised a total of 14 policies and guidelines, a selection of which are described below. • GRI 2-23

### 1 Conflicts of Interest Policy

BioNTech's Conflicts of Interest Policy establishes binding procedures for potential and actual conflicts of interest. The policy applies to the members of the Supervisory Board and Management Board, as well as to all directors and employees of the Company and of the Company's subsidiaries. Under the policy, all BioNTech representatives are required to disclose any actual, potential or perceived conflicts of interest. If the conflict is transactional in nature and involves a Management Board or Supervisory Board member, the respective board is required to consult with the Compliance and Business Ethics function for guidance and advice on managing the conflict of interest responsibly, transparently, and with integrity. • GRI 2-15

### 2 Anti-Bribery & Anti-Corruption

BioNTech is committed to eliminating all forms of corruption, including extortion and bribery. This commitment is underlined by BioNTech's support, communication on progress and the signed UN Global Compact. The Company has an Anti-Bribery and Anti-Corruption (ABAC) Policy in place and exercises a zero-tolerance policy towards passive or active, indirect or direct corruption and bribery. Each employee and any consultant providing services to the Company is obliged to sign the ABAC Policy and receive training. All contracts entered into with high-risk business partners (sales intermediaries, third parties acting on behalf of BioNTech) also include ABAC provisions. Although the Company does not yet systematically

assess its operations for corruption-related risks, it does track the number and nature of confirmed incidents of corruption. In 2022, there were no monetary losses resulting from legal proceedings associated with corruption and bribery.

• GRI 205-1; 205-3; SASB HC-BP-510a.1

### 3 Compliance Due Diligence Guideline

The Company has also established a third-party due diligence process that addresses potential ABAC risks with high-risk third parties or planned business relationships. For each compliance due diligence performed, the internal person responsible for the business relationship receives an assessment that outlines the potential risks identified and offers recommended mitigation measures to address those risks.

### 4 Business Gifts & Hospitality Guidelines

BioNTech introduced a business gifts and hospitality guideline in 2020, which was updated again in 2021 and 2022. The guideline prohibits giving business gifts to healthcare professionals (HCPs) and government officials. It also sets a threshold (maximum value) for gifts and meals in general and specifies other requirements that must be met when receiving or giving business gifts or providing meals. The guideline also outlines the types of entertainment that may not be provided or facilitated for government officials or HCPs.

### 5 Healthcare Interaction & Transparency Policies

By becoming a member of the Voluntary Self-Regulation for the Pharmaceutical Industry (Freiwillige Selbstkontrolle für die Arzneimittelindustrie e. V. – FSA) in 2021, BioNTech made a commitment to disclose all payments made to German healthcare professionals and organizations in accordance with the FSA Transparency Code. The Healthcare Transparency Policy sets internal requirements that must be met to ensure compliance with the respective external legal and industry code requirements. Apart from the transparency requirements, there is a Healthcare Interaction Policy that sets out specific requirements that must be complied with when interacting with the healthcare community. Having implemented an IT-based module for healthcare interactions, all interactions that involve a transfer of value must be submitted to the module for review by the Compliance department. In 2022, reflecting the Company's expansion, including its expansion in the US market, the Compliance department increased its efforts to inform employees about [healthcare transparency](#) in the US and specifically about the Physician Payments Sunshine Act. • SASB HC-BP-510a.2



## 4.3 HUMAN RIGHTS

BioNTech is a growing and evolving global company with operations and value creation in a wide range of countries worldwide. The Company has a responsibility to respect human rights in its operations and business relationships around the world. BioNTech recognizes this and is committed to avoiding causing or contributing to adverse human rights impacts. This is consistent with the Company's core values and the expectations of BioNTech's stakeholders. The Company also firmly believes that respect for human rights contributes to its long-term competitiveness.

### The Regulatory Framework

Driven by the UN Guiding Principles, many governments have developed National Action Plans (NAPs) for human rights due diligence by companies in recent years. Several countries have also launched their own laws and regulations.

Of particularly high relevance for BioNTech is the German Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations in Supply Chains (Lieferkettensorgfaltspflichten-gesetz – LkSG), applicable since 1 January 2023. On 23 February 2022, the EU Commission adopted a proposal for a directive on corporate sustainability due diligence. The proposal goes beyond the LkSG in many aspects, for example, in its scope of application, supply chain coverage, due diligence issues, and liability. BioNTech carefully monitors developments in corporate responsibility to respect human rights at a national, European and international level.

### BioNTech's Value Chain

From 2020 to 2022, BioNTech established a global supply chain and manufacturing network for the production of the COVID-19 vaccine. BioNTech's global COVID-19 vaccine supply chain and manufacturing network includes 20 production sites on 4 continents. In 2023 and beyond, the Company will continue to work to build or rent the laboratories, manufacturing facilities, and office space necessary for the Company's further expansion.

In addition to the German production sites, the Company plans to build its own fully integrated mRNA manufacturing sites in Asia and Africa with the capacity to produce hundreds of millions of doses of various mRNA-based vaccines.

Plans in Asia include the construction of a fully integrated mRNA manufacturing facility in Singapore, where BioNTech intends to establish its first regional headquarters in Southeast Asia. The manufacturing facility is expected to be fully operational by the middle of 2024 and is expected to create more than 100 jobs.

The Company has also designed and manufactured turnkey mRNA production facilities based on a containerized solution called "BioNTainer", which enables scalable vaccine production. Building on the BioNTainer concept, preparations for a planned production facility in Rwanda, Africa, have been underway since the summer of 2022. The production facility is expected to house the first BioNTainers and serve as the centerpiece in a decentralized and robust end-to-end production network in Africa. BioNTech is also pursuing the development of BioNTainer in Africa and beyond.

A full overview of BioNTech's manufacturing capacities is provided in the Business Overview in the Form 20-F filed with the SEC on 27 March 2023 and available the BioNTech website in the [Investors section](#).

### WHAT OUR STAKEHOLDERS TELL US

“

**A close description of the value chain and associated (social) risks should constitute an integral part of reporting.**

**PROF. ALEXANDER BASSEN**

Chair of Capital Markets and Management  
at the University of Hamburg



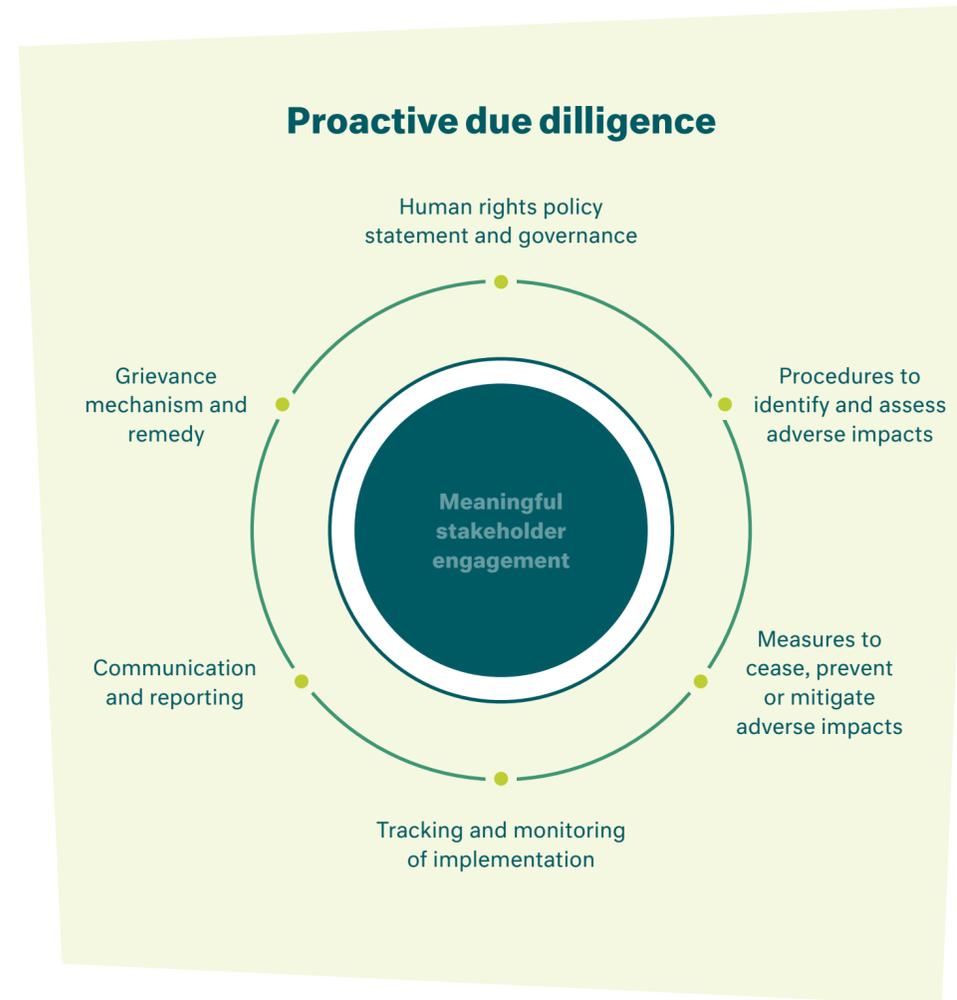
These developments in BioNTech’s supply chain require an appropriate risk analysis to identify human rights and environment-related risks in BioNTech’s own operations and its value chain. Continuous improvement in appropriate governance and management processes is necessary.

**Management Approach**

To ensure a solid and comprehensive approach to human rights, BioNTech has developed its strategies and commitments based, among others, on the following leading standards: the Universal Declaration of Human Rights; the UN Guiding Principles on Business and Human Rights; the UN International Covenant on Economic, Social and Cultural Rights; the UN International Covenant on Civil and Political Rights; and the International Labour Organization’s Declaration on Fundamental Principles and Rights at Work. Additionally, BioNTech is a signatory to the UN Global Compact, a United Nations-led initiative based on 10 principals in the areas of human rights, labor, environment and anti-corruption.

**2022: Preparing for Due Diligence Regulations**

In close cooperation with relevant departments, particularly Compliance, Procurement and Supply Chain Management, the CSR team has addressed human rights and environmental risks within a cross-departmental project to ensure compliance with the LkSG, which took effect on 1 January 2023. All of the measures are based on BioNTech’s proactive and continuous due diligence process, which will be further substantiated in 2023. The process is based on the [United Nations Guiding Principles on Business and Human Rights](#) (graphic).



**Gap Analysis and Risk Analysis**

In 2022, a human rights and environmental due diligence gap analysis was carried out for the Company, together with the relevant internal stakeholders. The purpose of the analysis was to assess the current due diligence approaches in place and identify any gaps in preparation for 2023. In this process, the responsibilities of the departments involved were defined for the implementation of the LkSG. Initial action plans to strengthen human rights due diligence were developed and agreed to, together with project managers and responsible executives.

An ad hoc human rights risk analysis was conducted by the CSR team for the Company’s major construction site in Rwanda, Africa, which includes the planned construction of BioNTech’s first mRNA BioNTainer production facility. As part of this analysis, global and local project management, the responsible executives in Germany and Rwanda, and a key supplier were involved. Research was conducted on possible country-specific human rights risks. This resulted in the development of concrete and pragmatic measures for internal stakeholders to ensure respect for human rights at the construction site.

An appropriate risk analysis in accordance with Section 5 LkSG to identify the human rights and environment-related risks in BioNTech’s own operations and in its supply chain is planned in 2023.

**Human Rights Officer (HRO)**

Following preparations with regard to the LkSG, human rights management was formally handed over to BioNTech’s Human Rights Officer (HRO), who was appointed by the Management Board with effect from 1 January 2023. The BioNTech HRO is responsible for all subsidiaries of the BioNTech Group and reports directly to the Chief Operating Officer as the designated Management Board member for human rights compliance. The appointment of the HRO does not relieve the Management Board of their duty of supervision and monitoring in terms of human rights compliance.

The HRO monitors human rights risk management which is expected to be performed operationally by the Company’s Risk Performance department in the future. In addition, he is responsible for the effectiveness of preventive measures, conflict management, and setting the Company’s human rights agenda. Finally, he is responsible for the annual report on the fulfillment of corporate due diligence obligations as specified in Section 10 (2) LkSG. Adequate staff support and a budget are available to the HRO, and the search for a full-time Human Rights Manager was initiated in the first quarter of 2023.

● GRI 3-3



**Human Rights Policy Statement**

An internal Human Rights Policy and a public [Human Rights Policy Statement 2023](#) were prepared in accordance with Section 6 (2) LkSG in 2022, approved by the Management Board, and published on BioNTech's website on 30 December 2022. The Human Rights Policy is supplemented by BioNTech's human rights commitments contained in its [Code of Business Conduct and Ethics](#) and by its [Supplier Code of Conduct](#).

The Human Rights Policy and Human Rights Policy Statement 2023 describe BioNTech's commitment, governance approach and current due diligence process as well as relevant human rights topics. The human rights due diligence process encompasses the following:

- **Risk Identification:** BioNTech commits to performing a proactive risk analysis to identify potential human rights and environment-related risks and incidents early on and mitigate them in a timely manner. The risk analysis will be deployed globally and in each country where BioNTech operates and to be updated on an annual or ad hoc basis to evaluate potential risks in case of significant changes to the Company's operations or business relationships. BioNTech also carries out ad hoc risk assessments when concerns related to human rights and environmental risk arise.
- **Grievance Mechanism:** BioNTech strives to identify and mitigate risks in its own operations and throughout its value chain and encourages all internal and external stakeholders to notify BioNTech of any concerns or potential risks related to human rights, environmental practices, products, corruption, or similar issues. These concerns may be reported to and handled by the responsible employee or department, for example, Internal Audit or Compliance & Business Ethics. Alternatively, the human rights

representative may be contacted directly. Concerns can be reported anonymously using BioNTech's "Ethics Contact Point" whistleblowing tool. BioNTech is committed to protecting all persons who raise concerns on reasonable grounds, regardless of which reporting channel was utilized. ● [GRI 2-26](#)

- **Preventive Measures:** The Company takes relevant preventive measures as part of standard operating procedures, particularly in the areas of safety, health and environment, and in clinical trials. In addition, BioNTech is strengthening human rights-related business functions by making adequate resources available. This includes providing the responsible employees with appropriate training and having external human rights experts on hand to support and advise them.
- **Remedies:** The risks and violations identified are carefully reviewed, weighed, and prioritized to derive the appropriate engagement level and course of action. BioNTech prioritizes the implementation of efficient and appropriate remedial actions to prevent, minimize and, ideally, end the extent of potential adverse impacts or violations.
- **Reporting:** BioNTech will publish an annual report addressing the identified human rights and environmental-related risks and potential due diligence violations according to international and national laws and standards. It also takes preventive and mitigation measures to remedy the potential risks and violations identified. Going forward, BioNTech will continuously refine and adapt the assessment and derived measures while assessing their impact and effectiveness. All documents related to BioNTech's fulfillment of its due diligence obligations are stored for a minimum period of seven years.

“

**We view our human rights due diligence as a process that we continuously adapt and improve. This is why we constantly challenge our own approach.**

**SVEN GRIEMERT**Director Corporate Social Responsibility  
and Human Rights Officer



**BioNTech holds itself accountable to prevent, identify and mitigate any adverse impacts on human rights within its operations and value chain.**

BioNTech's Human Rights Policy

### Human Rights in the Supply Chain

BioNTech's [Supplier Code of Conduct](#) defines its human rights and environmental-related expectations for its direct suppliers as part of the framework of existing procurement strategies and practices. The principles of conduct are based primarily on the Pharmaceutical Industry Principles for Responsible Supply Chain Management of the Pharmaceutical Supply Chain Initiative (PSCI).

Based on the findings of the gap analysis, the Procurement and CSR teams have been working closely together to adapt procurement strategies and practices. Adequate preventive measures with regard to due diligence in BioNTech's supply chain were defined in the fourth quarter of 2022.

An appropriate risk analysis for the supply chain will be carried out in 2023. Furthermore, a revision of the Supplier Code of Conduct is planned as well as the implementation of a digital supply chain platform in Procurement. This solution maps a comprehensive spectrum of sustainability risk management, providing Procurement with screening and mapping of supply chain risks, scorecards with actionable ratings, and improvement management. BioNTech is aware that digital solutions should be seen as just one of many measures and do not relieve the Company of its responsibility within its own operations and supply chain. ● [GRI 414-1 and GRI 414-2](#); [HC-BP-430a.1](#); [GRI 2-23](#)

## 4.4 BUSINESS CONTINUITY

### Business Continuity Management

The Business Continuity Management department works to ensure that BioNTech realizes its mission without any major interruption in order to protect human life, the health and safety of patients, as well as the Company's assets and reputation. The department's team is committed to making BioNTech highly resilient to disruptive events such as emergencies, crises and other significant business interruptions. For this purpose, BioNTech implemented a holistic Business Continuity Management System (BCMS) in 2021, which it continues to optimize.

The BCMS includes a Business Continuity (BC) policy and guideline encompassing different roles and processes. Taking an operational role, BioNTech's Global BC team is part of the Business Planning and Analysis (BPA) unit, with a Global BC Director reporting directly to the Chief Operating Officer (COO).

Within the team, an Associate Director, Global Emergency and Crisis Management, is responsible for implementing a holistic Global Crisis and Emergency Management System within BioNTech, which was initiated in November 2022.

The Global BC team is supported by local BC leads as well as a wider BC team of more than 200 members, including Function Heads, across all BioNTech locations. Providing adequate training to BC team leads and team members is a fundamental part of the BCMS to ensure continuous learning and progress. Given its importance for BioNTech's strategy and vision, Business Continuity is deeply integrated into the organization and frequently aligns with top management.



All local and global business continuity plans are established and maintained in line with the Company's growth. Plans include preventive as well as recovery strategies and are regularly tested and reviewed. BioNTech's IT infrastructure relies on an IT Disaster Recovery Plan that covers preventive measures based on the relevant standards, including data center and server management. All BC-relevant documents are centrally stored and protected through access restrictions. The BCMS is subject to the Plan-Do-Check-Act cycle (PDCA cycle), which is a four-step process for carrying out change and ensuring continuous improvement in the system.

All BC plans must be updated at least once annually, and the Global BC team ensures that BioNTech's new locations and business activities are appropriately integrated into the BCMS at all times. Using this approach, Business Continuity ensures that BioNTech and all its sites are adequately prepared for any disruptive event in the future.

● GRI 3-3

### CLIMATE TARGETS, CONSTRUCTION PROJECTS, AND THE 2022 GLOBAL GAS AND ENERGY CRISIS

To emphasize its commitment to sustainability, BioNTech made a pledge in February 2022 with regard to its own contribution to supporting the targets of the Paris Agreement, the international treaty on climate change. Building on this commitment, the Company went on to adopt a 1.5°C emissions reduction target by 2030. This commitment has been communicated within the Company.

At BioNTech's headquarters in Mainz, the construction of a building complex called "K2 Campus Goldgrube" is in progress and set to house 25,000 m<sup>2</sup> (ca. 270,000 ft<sup>2</sup>) of primarily office and laboratory space.

An observant employee from the BioNTech Site Services (BSS) department realized that the plans for the new building's energy supply were still based on fossil natural gas, which appeared out of line with the Company's climate targets. Taking the initiative to investigate further, quick action was taken to address this.

Within just a few days, the BSS department, in close coordination with the CSR team, rallied to come up with several options for alternative and renewable energies (biomethane, green power grid, green power PPA, green hydrogen) and promptly had them evaluated for their feasibility, market

availability, climate impact, and cost, taking the rising CO<sub>2</sub> prices into account. The results were immediately presented to the Chief Operating Officer.

The evaluation led the Management Board to switch to a green energy solution (green electricity, grid) based on its positive climate impact and ready market availability, despite the higher costs (roughly 70% higher than the natural gas solution). From the awareness of one employee and the rapid response of top management came the securing of a regenerative energy supply for the K2 building in a short time. The building's first structural elements have been steadily emerging from the excavation pit since early 2021. The project is expected to be completed in 2025.

In the further course of 2022, the Business Continuity Management department responded to several challenges arising from the global gas and energy crisis. The department established a task force to continuously monitor events while evaluating, as well as reducing, the Company's dependence on gas. The task force developed location-specific gas emergency plans as well as measures to reduce gas consumption on-site in order to be prepared in case of any potential gas shortages.



## 4.5 INFORMATION SECURITY

To achieve BioNTech’s ambitious vision, the Company must have access to reliable and trustworthy information and data at the right time. The significant and increasing volume of sensitive information that the Company receives, generates and stores – such as patient, employee and customer data – requires strong cyber and information security capabilities across the entire organization. BioNTech’s security approach, which is aligned with its business objectives, strives to appropriately protect all information, systems, assets, physical locations, and people.

### THE MAIN OBJECTIVE OF INFORMATION SECURITY AT BIONTECH

- **Confidentiality of information:** Ensuring information is disclosed only to authorized parties.
- **Integrity of information:** Ensuring only authorized parties and systems can make changes to information, systems and assets.
- **Availability of information:** Availability of information: Ensuring authorized parties have the appropriate level of access to information, systems, and assets and do not disrupt business-relevant information processing.

From a business perspective, this requires protecting the most important information assets and complying with all applicable international and national privacy laws, information security policies and contractual obligations. These include but are not limited to the German Commercial Code (HGB), the General Data Protection Regulation (GDPR), the German Federal Data Protection Act (BDSG), the German IT Security Act 2.0 (IT-SiG 2.0), and the German Federal Office for Information Security Act (BSIG).

### Management Approach

BioNTech pursues a central approach to the governance of information security in order to achieve a consistent level of security and compliance across all entities and locations.

The Chief Operating Officer (COO) is ultimately accountable for ensuring the information security capabilities of the BioNTech Group. The COO makes certain that information security is represented in the Management Board and that appropriate resources are provided to the Information Security Organization (ISO) to reach the set objectives. The ISO oversees all roles and responsibilities associated with the Information Security Management System (ISMS). Aligning the strategic direction of ISMS with the information security policies and objectives of the BioNTech Group is ensured by the Information Security Head (ISH), who is accountable for the security strategy and design and implementation of global policies, as well as for security operations.



**Ensuring the confidentiality, integrity, and availability of information drives BioNTech’s information security approach.**

**RAIMOND JÄHN**  
Senior Director IT



**Achieving the Information Security Transformation**

To deliver on BioNTech's goal of establishing a best-in-class information security function by the end of 2023, in 2021, the Company put a security framework into place. BioNTech's overarching information security strategy was developed by the COO and ISH in close alignment with the Data Protection Officer and the Head of Global Security and Protection. The strategy has been endorsed by senior management to demonstrate the Company's commitment to protecting its assets.

In 2022, the Company drafted an internal information security policy, defining the objectives, scope and principles for information security management. Coming into effect in the first quarter of 2023, the policy applies to BioNTech SE and its affiliates, including but not limited to all Supervisory Board and Management Board members, as well as all other officers and employees. Any violation of the policy must be reported to the Information Security Organization (ISO). The policy will be reviewed every two years and adapted if required.

In order to achieve and preserve information security, BioNTech strives to maintain an orderly process for planning, implementing, controlling, and optimizing all of the activities required to protect, detect, respond and recover. BioNTech uses applicable international standards for orientation, such as ISO/IEC 27001, which is internally recognized and serves as the framework for the Company's Information Security Management System (ISMS). Obtaining relevant certifications as official documentation for BioNTech's internal and external stakeholders is scheduled for 2023.

An essential step of the transformation in 2022 was the successful implementation of a new line organization for Cyber & Information Security, reflecting four areas of expertise (Governance, Engineering, Operations and Identity Governance & Administration), each with a dedicated team.

In their first year, each team supported the overall transition roadmap by delivering key milestones, including:

- completing central security assessments for the Operational Technology and Cloud Security departments, as well as for research and development activities and other major applications;
- introducing a central management platform to support all identity-related processes;
- establishing a 24/7 security operations center (SOC) for continuous security monitoring, threat hunting and intelligence, and related processes; and
- performing periodic vulnerability scans of internal and external systems and aligning vulnerability management processes; and
- launching new functionalities for seamless authentication in laboratory environments.

In 2023, the teams will continue to improve BioNTech's information security footprint along the transition roadmap to achieve the targeted maturity levels in all four areas, in line with industry benchmarking, international standards and good practices.

**Building an Information Security Culture**

Building and maintaining mature levels of information security within BioNTech, in the supply chain and in close collaboration with partners requires the commitment of each and every employee. As of 2022, BioNTech has been streamlining information security processes and measures into business operations, such as demand management processes that ensure newly introduced applications meet the Company's IT risk and security requirements. The Information Security Management System (ISMS), for example, requires employees to communicate potential improvements or discrepancies as the system evolves.

To further improve information security awareness among all BioNTech employees in 2023, BioNTech will focus on company-wide awareness campaigns and establish a security reporting dashboard to provide full transparency to all executive stakeholders. The Company will also concentrate on continuously improving to adapt to future information security risks and regulatory requirements.



## 4.6 PATIENT PRIVACY

When patients, like other stakeholders such as employees, customers and vendors, engage with BioNTech, they entrust their personal information to the Company. BioNTech takes responsibility for ensuring that their data is collected, used and processed only for legitimate business purposes while protecting the information from any possible misuse, inappropriate disclosure or loss.

### Regulatory Framework

When processing personal data, BioNTech is responsible for ensuring it complies with the data protection laws it is subject to, such as the European Union General Data Protection Regulation (“GDPR”) and other laws in the various countries where BioNTech operates. The requirements and standards applicable to BioNTech for processing personal data are set out in the Company’s internal data privacy policy.

In addition, BioNTech’s commercial (consumer) data privacy notice can be viewed on the [website](#) of BioNTech. The notice applies to all personal data of natural persons and business partners, including consumers, contractors, customers, study participants, and employees of business partners, as well as to parties interested in establishing a business relationship with BioNTech.

### Promoting Consistent Data Privacy Management

Given the Company’s global strategy, privacy-related documents, such as informed consent forms for clinical trials, are being standardized on a company-wide basis. The forms transparently show how and why BNT processes personal data. Data will be processed strictly in accordance with the applicable laws and with the highest security standards. The Company is planning to put a global data privacy framework in place by the first quarter of 2023.

In 2022, the Company implemented a new data privacy system that ensures data privacy risk assessments are conducted for every process and system in place. It also provides for proper data mapping, up-to-date recordkeeping on processing, data transfer impact assessments, and vendor data management.

In 2023, Data Privacy Regional Leads will be appointed, supported by Data Privacy Liaisons at a team level. For relevant teams, such as IT and Clinical Operations, selected members work closely with Data Privacy Operations to ensure privacy compliance.

BioNTech plans to implement mandatory data privacy training for new employees and raise awareness for data privacy among existing staff through campaigns across the Company starting in the first quarter of 2023. ● GRI 3-3

In 2022, no substantiated complaints concerning breaches of patient or customer privacy, leaks, thefts, or losses of patient or customer data were reported. All contracts and confidentiality agreements with clinical trial sites were confirmed to be compliant with relevant regulations. ● GRI 418-1



**BioNTech takes responsibility for ensuring that personal data is processed in a fair and transparent manner and protects data from any possible misuse.**

**STEFANIE KIRCHNER**  
Senior Director Data Privacy



## 4.7 PATIENT SAFETY

Patient safety is the highest-ranked topic in BioNTech’s materiality matrix of Corporate Social Responsibility (CSR).

For the purpose of this sustainability report, the term “patient” is used to denote humans receiving investigational medicinal products from BioNTech either within a clinical trial or outside a clinical trial (e.g for compassionate use) and individuals receiving an approved medicinal product from BioNTech, including prophylactic vaccines against infectious diseases.

BioNTech addresses the needs of patients and health care professionals (HCPs) within the framework of national and international regulations, guidelines and harmonized global standards. Achieving this involves the transparent disclosure of product-related risks and benefits, securing operational excellence, and continuously working to build trust with society on a local, national, and international level. Ensuring the safety of BioNTech’s products covers the entire product lifecycle. From the research and clinical trial phases to the approved and distributed products, BioNTech makes the well-being of patients its highest priority. The Company fosters teamwork and effective communication, as these are central to ensuring product safety. BioNTech continuously communicates openly with regulators, patients, and other stakeholders and requires all employees to report drug safety and quality issues immediately to the Company’s specialized personnel.

### Management Approach

BioNTech’s Quality Management System is designed to ensure compliance with national and international legislation, regulations and guidelines encompassing the clinical development, production, registration, and marketing of medicinal products. The relevant guidelines for this system include, but are not limited to, the International Council for Harmonization (ICH) guidelines including Good Clinical Practice (GCP), Good Manufacturing Practice (GMP), Good Distribution Practice (GDP) and Good Pharmacovigilance Practice (GVP).

BioNTech’s Global Regulatory Affairs department is responsible for all submissions and correspondence to regulatory authorities during clinical trials and for obtaining and maintaining regulatory approvals globally. It is also in charge of ensuring compliance with technical requirements, fulfilling post-approval commitments and obligations, and coordinating the lifecycle management of approved products to keep the relevant dossiers and product information aligned with available scientific knowledge. Within the Global Regulatory Affairs department, the Regulatory Affairs CMC team is responsible for all regulatory matters related to chemistry, manufacturing, and controls (CMC) for both clinical trials and approved products. This includes the establishment and maintenance of state-of-the-art regulatory documentation and global dossier compliance with manufacturing processes and control strategy.

Implementation of BioNTech’s Quality Management System is continuously monitored by BioNTech’s Quality Assurance department. Quality Assurance is responsible for ensuring that systems and processes are implemented to assure the quality of products entering the market or used in clinical trials. Quality defects that

could have an impact on patient safety are detected as early as possible. Thus, the Quality Management System is enabling the strict control of risks in production, starting with the raw materials to the final product. It also supports the relevant quality assurance and legal standards. ● GRI 3-3; HC-BP-210a.1



**From the research and clinical trial phases to the approved and distributed products, BioNTech makes the well-being of patients its highest priority.**

**RUBEN RIZZI**

Vice President Global Regulatory Affairs



BioNTech is also strengthening its efforts in patient and trial participant safety by expanding its Medical Safety & Pharmacovigilance Department (MSPv). Pharmacovigilance is defined as the science and activities related to the detection, assessment, understanding, and communication of adverse events following immunization and other vaccine- or immunization-related issues.

**Training**

To raise general awareness for patient and trial participant safety, BioNTech conducts company-wide, mandatory training on the fundamentals of pharmacovigilance. This includes pharmacovigilance awareness training, which aims to give all BioNTech employees and relevant contractors the ability to identify and appropriately report safety-related information. All employees receive this mandatory training as part of the onboarding process, with refresher training conducted on an annual basis. All employees directly involved in the safety and quality of BioNTech’s active ingredients receive regular training in accordance with internationally applicable rules.

**Transparency**

Sharing health information is fundamental for the good functioning of healthcare services. It helps ensuring patient safety, advances research and medical understanding, and improves public health. This is why BioNTech goes beyond what is legally required when it comes to transparency related to clinical studies. How this is done is described in the commitments listed in BioNTech’s Transparency Declaration posted on the Company [website](#) and summarized below.

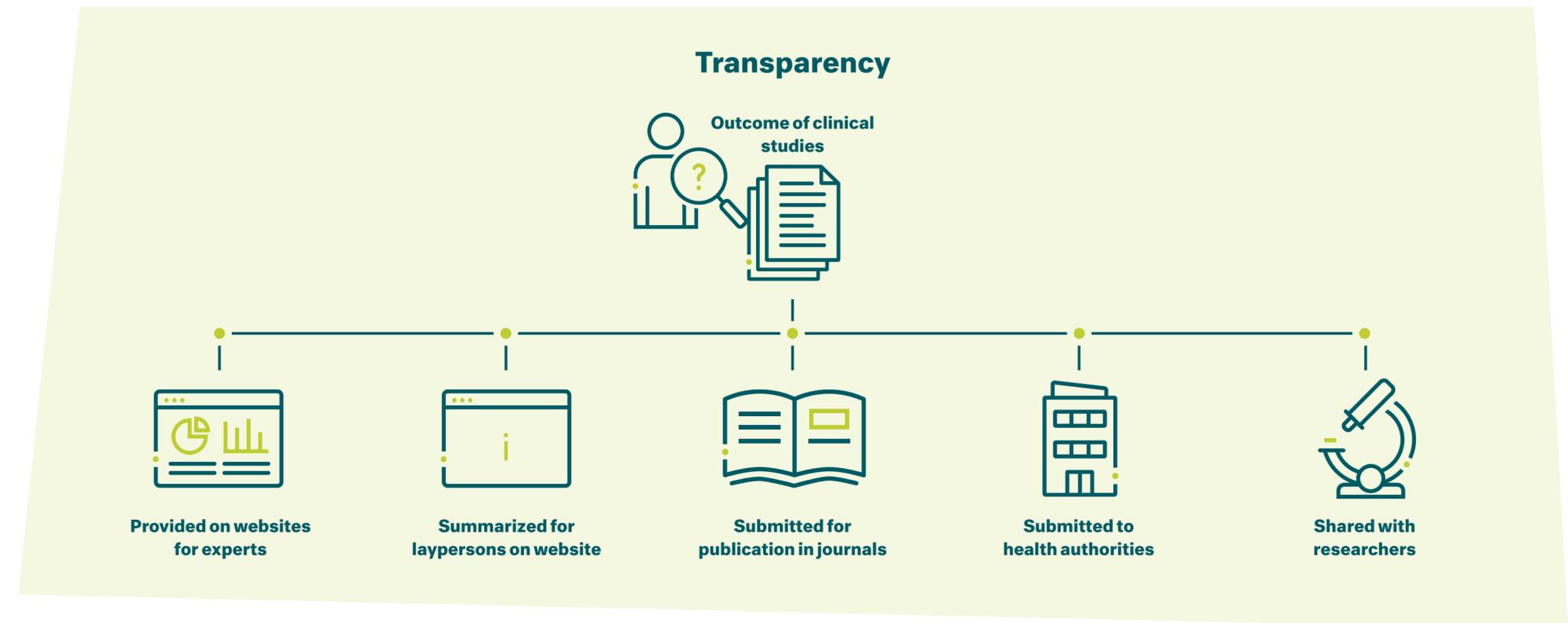
For all interventional clinical studies (Phase I and beyond) with the first participant enrolled after March 2022, BioNTech will register and post the primary and secondary outcomes on the publicly accessible website [clinicaltrials.gov](#). BioNTech will also post layperson and expert summaries of the primary and secondary outcomes on a publicly accessible website (the Company website). They will also be submitted for publication in publicly accessible journals.

Upon request and subject to some contractual controls to protect personal data and commercially confidential information, BioNTech also commits to sharing with researchers clinical study reports for clinical studies submitted to regulatory authorities in support of applications granted for marketing authorization in the European Union and/or United States. This refers to clinical study reports complying with the International Council for Harmonisation of Technical Requirements for Pharmaceuticals for Human Use (ICH) E3 – Structure and Content of Clinical Study Reports, outlined in the guideline dated July 1996.

These commitments apply to all BioNTech-sponsored interventional clinical studies (Phase I and beyond) investigating authorized treatments, non-authorized use of authorized treatments, or investigational treatments (i.e., non-authorized treatments), and with first participant enrolled after 25 March 2022. These commitments do

not apply to clinical studies where BioNTech cannot disclose the above information due to contractual agreements with development partners.

Although not a commitment in the BioNTech Transparency Declaration, due to the exceptional and immense public interest in the BioNTech COVID-19 vaccine COMIRNATY®, upon request BioNTech will also share with researchers individual participant data for COMIRNATY® clinical studies submitted to health authorities in support of applications granted for marketing authorization in the European Union and/or United States. This sharing will be subject to some contractual and technical controls to protect personal data and commercially confidential information, approval of the proposed research by an independent review committee, and the researchers committing to submit the research outcomes for publication in publicly accessible journals.



**Patient Safety in Clinical Trials**

Based on the regulatory framework and international guidelines for clinical trials, BioNTech applies a rigorous safety framework to its clinical trials to ensure trial participant safety. BioNTech conducts global clinical trials by commissioning the trial conduct to qualified contract research organizations (CROs). For individualized therapies, BioNTech ensures a complete and strict chain of custody in compliance with national regulations and clinical trial protocols.



**BioNTech applies a rigorous safety framework to its clinical trials to ensure trial participant safety.**

**ALEXANDRA KEMMER-BRÜCK**

Senior Director Clinical Operational Excellence

Ethics committees are the trial participants' trustees. They review the study process from start to finish to ensure, among other things, that the trial participant is well informed and that procedures and treatment methods are disclosed transparently. Should ethical questions arise during a study, solutions are developed in close cooperation with the ethics committee.

The regulatory authority and ethics committee monitor each study and its data from approval to completion. All parties involved – BioNTech, the CROs, the regulatory authorities, and the ethics committees – contribute to ensuring that the well-being and safety of the trial participants are safeguarded. If at any time during a clinical trial, an unexpected risk is identified, an internal procedure prompts a risk evaluation committee to collect information on the potential risk identified and recommend the most appropriate actions to safeguard trial participants' safety. This is performed in addition to the established regulatory requirements for reporting to the regulatory authorities and/or ethic committees.

BioNTech was not involved in any legal proceedings associated with clinical trials in developing countries in 2022. ● [HC-BP-210a.3](#)

**Number of FDA Sponsor Inspections Related to Clinical Trial Management and Pharmacovigilance**

In 2022, no FDA inspections took place at any BioNTech site.

**Monitoring Vaccine Safety**

BioNTech has continued to distribute its COVID-19 vaccines worldwide. BioNTech's COVID-19 vaccine (BNT162b2) is the Company's most advanced mRNA product and is sold in monovalent (based on the original strain; marketed as COMIRNATY®) and bivalent (one RNA based on the Original strain and one RNA based on an Omicron variant) formats. The monovalent format has received full U.S. FDA approval for individuals 12 years and older and emergency use authorization for individuals 6 months to less than 12 years old, as well as full and/or conditional marketing approval in various other

jurisdictions. The bivalent format (Original and Omicron BA.4/BA.5) has been authorized under Emergency Use Authorization (EUA) by the FDA in the United States for individuals 6 months and older. In Europe, two bivalent versions (Original and Omicron BA.1; and Original and Omicron BA.4/BA.5) received full marketing authorization for individuals 12 years and older.

In 2022, approximately 1.8 billion doses were shipped to 170 countries. As with any other medicinal product, rare or potentially serious side effects may be detected post-approval. BioNTech's Medical Safety and Pharmacovigilance department, together with BioNTech's partner Pfizer, continuously monitors the benefit-risk profile of the COVID-19 vaccine.

This firm commitment is formalized in the Pharmacovigilance Agreement signed by BioNTech and Pfizer, outlining the responsibilities for safety activities. In addition to regular internal audits, regulatory authorities conduct periodic inspections to ensure that BioNTech is complying with Good Clinical Practice (GCP) and applicable local laws and regulations. In 2021, routine inspections were performed by the European Medicines Agency (EMA), the UK's Medicines and Healthcare products Regulatory Agency (MHRA) and Health Canada, and no critical observations were made. No inspections on good pharmacovigilance practices (GVP) were carried out in the 2022 financial year.

BioNTech's Medical Safety & Pharmacovigilance Department (MSPv, see above), in close collaboration with business partners Pfizer and Fosun Pharma, oversees the recording, monitoring and reporting of any instances of vaccine adverse events. As in prior years, BioNTech was not issued any FDA warning letters or subject to FDA enforcement actions in the 2022 financial year, and no comparable actions were taken by regulatory authorities outside the US. In 2022, there were no market recalls of BioNTech's COVID-19 vaccine.

● [GRI 416-1](#); [GRI 416-2](#); [HC-BP-210a.2](#); [HC-BP-250a.3](#); [HC-BP-250a.5](#)



**Preventing Counterfeiting**

BioNTech applies high safety standards along the value chain of its COVID-19 vaccine. This ensures high production quality and effectively excludes any outside interference. The Company has the following methods and technologies in place to ensure product traceability throughout the supply chain and prevent counterfeiting:

- The procurement of raw materials takes place exclusively via qualified service providers with whom BioNTech fosters long-standing relations. When collecting finished products, BioNTech ensures high safety standards through close liaison with the Company's cooperation partner Pfizer and through external contract manufacturers with high-level, specialized qualifications.
- Raw materials, intermediate products and finished products are stored in secured warehouses located on fenced, restricted access and specially secured, camera-monitored sites.
- Materials inspections in the incoming goods department are carried out, without exception, using delivery bills and a digital merchandise management system that monitors all merchandise management activities. This means that the cargo can be precisely identified at any point using digitally stored configurations and unique two-dimensional matrix codes.

For the supply of finished products in countries that require serialization, a unique, digitally assigned serialization number is printed on the label and communicated to the respective authority. Finally, each single vial and respective secondary and tertiary packaging container display the manufacturer's batch information. At the nodes in the supply chain, the batch number and barcode information is checked upon the goods' arrival. Finished products are sealed in secondary packaging using a tamper-evident seal or comparable packaging to prevent tampering. In supplying its products, BioNTech employs specific security measures.

Special security measures for supplying to the EU markets include

- the complete traceability of the supply and real-time monitoring of the goods through active loggers with temperature monitoring and GPS tracking and a three-tier control tower, including established alerts and an escalation process for any incidents;
- secured pick-up and delivery; and
- an established BioNTech/Pfizer controlled distribution channel, including qualified service providers to ensure the vaccine's security.

● **HC-BP-260a.1**

**Product Information**

Providing adequate information about BioNTech's COVID-19 vaccine products to ensure their optimal use is a crucial element of patient care. The global Pfizer and BioNTech product and information website provides the most up-to-date access to country-specific product information. The Summary of Product Characteristics (SmPC) for respectively the COMIRNATY® and the Pfizer-BioNTech COVID-19 Vaccine educates healthcare professionals on the correct use of the vaccine and enables informed treatment decisions. It contains all essential details describing the COVID-19 vaccine in accordance with legal requirements, such as dosing, administration, scheduling, storage, handling, contraindications, warnings and precautions, as well as possible side effects. The package leaflet available in country-specific languages provides all of the relevant information for the vaccine. In 2022, BioNTech submitted multiple updates of the product information (SmPC and package leaflet) to the relevant regulatory authorities in accordance with legal requirements. These included variations to introduce variant-adapted vaccines developed in response to the spread of the Omicron sublineages. No legal violations resulting from false marketing claims were reported in 2022. ● **GRI 3-3; GRI 417-1; HC-BP-270a.1**

**Interactions with HCPs and HCOs**

BioNTech places a strong emphasis on ensuring appropriate interactions with healthcare professionals (HCPs). The BioNTech [Code of Business Conduct and Ethics](#) contains a dedicated section on interactions with healthcare professionals, patients, and healthcare organizations (HCOs). In addition, the Compliance and Business Ethics team has implemented and provides training on a policy for interacting with healthcare professionals.

BioNTech also has an internal process where all business interactions with healthcare professionals and healthcare organizations are recorded and monitored in an IT-based database that includes an approval and review process by the Compliance and Business Ethics team. This database also supports adherence to HCP and HCO transparency reporting requirements. Relevant payments for the 2022 financial year made to these organizations will be made available on BioNTech's [website](#) in the course of 2023.

The promotion of off-label use of drugs and products is strictly prohibited by the Compliance Policy on Business Interactions with Healthcare Professionals. The policy includes the principle that all sales-related business functions are prohibited from answering off-label use questions that are raised by HCPs. Any off-label use questions raised by HCPs can only be answered by the Medical Information team, which is part of the Global Medical Affairs team.



## 4.8 ANIMAL WELFARE

At BioNTech, we conduct research with the aim of improving the health of people worldwide. The safety, efficacy and quality of BioNTech’s products are the Company’s top priorities. BioNTech develops products with scientific care and precision, first in preclinical studies and then in clinical trials. For this purpose, it is essential that BioNTech conducts studies that involve the responsible use of animals. The knowledge that it obtains from the complex interaction of cells and their functions in a living being helps to prevent diseases and improve their diagnosis and treatment options.



**With special attention to the species specific needs, BioNTech’s goal is to create optimal living conditions and ensure individual wellbeing for our animals throughout their entire lives.**

### Management Approach

BioNTech is committed to combining excellent research results and individual animal welfare in the best possible way. Responsible research at BioNTech is guided by the implementation of the 3R principles: Replacement, Reduction and Refinement. Wherever it is possible, BioNTech applies non-animal methods in its testing practices (Replacement). In addition, the number of animals required to obtain the necessary scientific information is kept to an absolute minimum (Reduction). Moreover, all animal testing is designed in a way to reduce the severity caused by necessary treatments and examinations to the indispensable level for every research animal (Refinement).

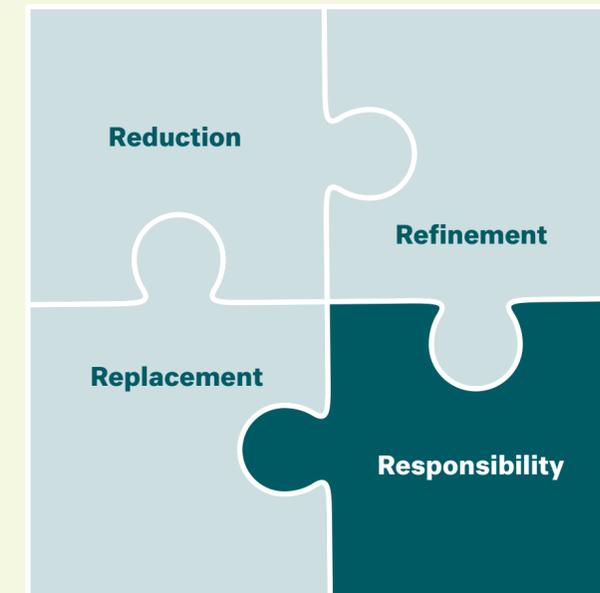
BioNTech has also added a fourth dimension to the 3R principles: Responsibility. With special attention to the species-specific needs, BioNTech’s goal is to create optimal living conditions and ensure individual well-being for the Company’s animals throughout their entire lives. All actions are therefore directed at not only meeting the legal requirements for species-appropriate housing and performance of animal testing but also at making continuous improvements based on the latest status of science and technology. In addition, BioNTech strives for open and transparent communication about preclinical studies. In accordance with European and national law and the European Commission’s “Ethics for Researchers,” it is BioNTech’s responsibility to not inflict pain, suffering or harm on any animal without reasonable justification and limit adverse effects as much as possible.

All EU animal studies during preclinical research are conducted in state-of-the-art animal facilities with housing conditions that are in strict accordance with EU and national laws. Business partners

in animal testing are obliged to comply with BioNTech’s Supplier Code of Conduct, as are all suppliers. In the General Terms and Conditions of Purchase, BioNTech reserves the right of extraordinary termination if animal welfare standards are violated.

In close coordination with the CSR Steering Board, a working group is conducting a comprehensive review of BioNTech’s existing animal welfare measures with the goal of strengthening the Company’s animal welfare management. • GRI 3-3

### Main commitments & approach



## 4.9 GOVERNMENT RELATIONS

### Taxes

BioNTech's Tax team is part of the Global Finance Operations department, which reports directly to the Chief Financial Officer (CFO). Ultimate responsibility for all tax-related topics rests with the Management Board.

BioNTech cooperates with the relevant tax authorities in all tax matters in a trustworthy and transparent manner, in line with the mandatory Code of Business Conduct & Ethics. This includes not performing any tax-motivated transfer mispricing. The Company also makes certain that it effectively monitors tax-relevant business processes in a risk-oriented manner. At a meeting of the CSR Steering Board in 2022, corporate tax decision-making options and a specific ethical tax issue were discussed comprehensively. The outcome of this cross-functional internal dialogue was taken into account in the Management Board's decision on this matter.

In the 2022 financial year, BioNTech operated primarily in Germany and, therefore, the tax expenses described concern mainly the German tax group. [➤ Chapter 1.3 Economic Contributions](#). The Company's income tax and financial position for the year ended 31 December 2022 are disclosed in the Annual Report and in the Form 20-F, which was filed with the SEC on 27 March 2023 and is available on the BioNTech website in the [📄 Investors section](#).

In keeping with its commitment to transparent communications with stakeholders, in 2022, the Company informed non US-based holders of American depositary receipts (ADRs) of the double taxation on dividends. Information on dividend payments and tax deduction is available on BioNTech's [📄 website](#). • [GRI 3-3](#), [GRI 207-1](#), [GRI 207-2](#)

### Financial Assistance

#### Government Grants

During the year ended December 31, 2022, BioNTech received a small government grant from the Austrian research promotion agency



**BioNTech aims to promote constructive exchange with political stakeholders and advance the vision of fighting infectious diseases and cancer through the development of novel therapies.**

(Forschungsförderungsgesellschaft, FFG) totaling €2.5 million. Between 2018 and 2022, the Company received smaller development loans from the Austrian research promotion agency (Forschungsförderungsgesellschaft, FFG). As of the 31 December 2022 reporting date, the loans amounted to €2.2 million. The maturities are between 2026 and 2029. • [GRI 201-4](#)

#### Special Non-Governmental Grants

On 25 November 2020, BioNTech and the Bill & Melinda Gates Foundation (BMGF) signed a grant agreement under which BMGF provides BioNTech a COVID immunotherapy and a pandemic grant supporting the development of a COVID-19 therapeutic approach.

### Advocacy

#### Political Contributions

BioNTech does not make monetary contributions to political parties or affiliated political organizations. The same applies to initiatives that support the objectives of either a political party's or an individual representative's candidacy for public office.

BioNTech is a member of the vfa (Verband Forschender Arzneimittelhersteller e.V.), the association of research-based pharmaceutical companies in Germany. Since 2022, BioNTech's VP Global Commercial and General Manager Michael Boehler has been a member of the vfa board. • [GRI 415-1](#)

#### Public Affairs

Due to the high sociopolitical relevance of BioNTech's COVID-19 vaccine, the Company has continued to experience increasing interest in its positions in the political realm. Where necessary, BioNTech has presented its positions and views in direct dialogue with political stakeholders. In early 2021, the Company began strategically and operationally bundling public affairs activities into the Market Access & Public Affairs department within BioNTech Europe GmbH. BioNTech aims to promote constructive exchange with political stakeholders and advance the vision of fighting infectious diseases and cancer through the development of novel therapies.

#### Lobby Register

In compliance with legal obligations, the Company has been registered in the [📄 EU Transparency Register](#) since 2020 (BioNTech SE) and in the lobby register of the German Bundestag since the beginning of 2022 ( [📄 BioNTech SE](#) and [📄 BioNTech Europe GmbH](#)). The registers transparently disclose the Company's annual financial expenditures related to lobbying, the channels for lobbying purposes as well as the lobbying positions. • [GRI 3-3](#)



# 5.0 Environmental & Climate Protection

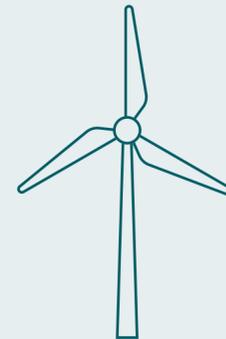
## Creating Value within Planetary Boundaries

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**For future generations:**  
We are following our successful path in a Paris Agreement-aligned<sup>1</sup> and environmentally conscious way.

BioNTech CO<sub>2</sub>e footprint 2022 (Scope 1, 2 and 3)

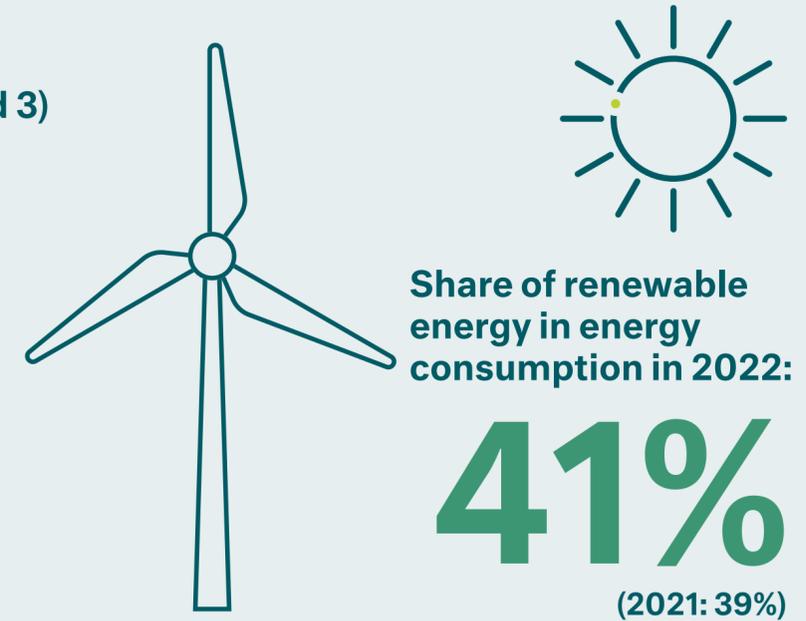
**1,120,486**  
metric tons



Percentage of renewable electricity from bought-in electricity in 2022:

**84%**

(2021: 91%)



Scope 1 & 2 targets for 2030 vs. 2021:  
Absolute reduction of GHG emissions of



**99.6%**  
of BioNTech GHG emissions are generated in the value chain (Scope 3)

**100%** of business flight-related CO<sub>2</sub>e emissions in 2022 mitigated through sustainable aviation fuels<sup>2</sup>



<sup>1</sup> See [page 55](#)

<sup>2</sup> See [page 57](#)

# 5.0 Environmental & Climate Protection

## 5.1 BIONTECH'S IMPACT ON THE ENVIRONMENT

As a research-based, commercially producing biotech company, BioNTech and its work have an impact on the environment. The Company's production and R&D activities, for example, require resources, such as energy and water, and generate waste. The greenhouse gas (GHG) emissions from BioNTech's purchased goods and services are particularly high. For many of BioNTech's activities, face-to-face interaction with other researchers, collaborators and business partners is essential and requires business travel. This is further intensified by BioNTech's global presence. The Company recognizes its role in seeking to reduce its emissions from its own operations as well as those in its supply chain. The highly regulated safety requirements in the biotech industry in areas such as waste and water management also present their own special challenges in environmental protection.

Over the past two years, BioNTech has acquired new sites and undertaken several major infrastructure and construction projects, both in Germany and globally. This growth and the projects associated with it will continue to have an impact on the environment and the surrounding local areas. This may also result in a greater burden on the environment and the climate.

BioNTech's CSR materiality analysis revealed two topics for the "Environmental and Climate Protection" field of action: "Pollution & Waste," whose relevance was rated as very high, and "Climate Protection," which was rated as material. BioNTech is focused on minimizing its environmental impact and maintaining compliance with the industry's strict regulations.

## 5.2 GROUP ENVIRONMENTAL MANAGEMENT

### Governance

The responsibility for the operational environmental management of the BioNTech Group lies with the Safety, Health and Environment (SHE) department and is embedded in the Environmental Programs & Protection function. The scope of global safety, health and environment includes environmental protection, wastewater and waste management, energy management, energy audits, occupational health and safety, plant and process safety, as well as biological safety and hygiene.

### Management Systems

BioNTech continuously develops, monitors and looks for ways to improve group-wide policies and procedures on environmental issues. These processes seek to ensure that we comply with the relevant environmental, health and occupational safety laws and regulations. Relevant group-wide standard operating procedures (SOPs) are in place to facilitate the Company's adherence to applicable national and local laws and regulations. Employees have easy access to the SOPs as well as regulations and other environmental information through an online library. The SHE management team also has a role in this continuous development by contributing to the design of new technical systems, introducing new processes and monitoring their compliance with all the relevant requirements. In carrying out its role, the department communicates with the authorities and assists with external audits.

In 2022, the Company continued to develop the group-wide SHE management system and achieved the following milestones:

- The near completion of the documentation of the SHE management system based on the ISO 14001 (environmental protection), ISO 45001 (occupational health and safety) and ISO 50001 (energy management) standards. The initiation of the system's implementation in Mainz, Marburg, Martinsried and Halle, with the first locations expected to be certified by the end of 2023.
- The Management Board's approval of the SHE policy in the areas of environment, energy and occupational health and safety and the appropriate training of staff.
- The creation of Environment and Energy teams in Marburg and Mainz, comprising employees from various functions who meet regularly to design ways to make BioNTech's everyday operations more sustainable. A similar initiative was launched in the US and is embodied by the US Green Team (see infobox next page). Other locations and the establishment of a global team are expected to follow in 2023.



### GREEN TEAM AT BIONTECH US

With the goal of informing, motivating and engaging employees on sustainability-related topics, the US Green Team was established in October 2021 and comprises approximately 15 members. All BioNTech US employees are welcome to join meetings and events organized by the Green Team. Green Team members volunteer their time to lead and support sustainability initiatives, such as composting and recycling. In 2022, the US Green Team hosted a virtual Earth Day event. The event included a high-level review of BioNTech’s 2021 Sustainability Report and featured speakers from local government and the non-profit organization My Green Lab. Team members in Gaithersburg also held a community service event at a local park to clean up a historic flower garden. A total of four events were hosted in 2022, with the last event drawing more than 100 of BioNTech’s 435 US employees.

### Risk Management

SHE’s management is responsible for conducting its own risk assessments and contributing to the group-wide risk management. Potential risks are identified, evaluated and qualified, or financially quantified, according to defined criteria, and action is taken when necessary.

### 5.3 WASTE

BioNTech prioritizes waste prevention and professional waste disposal – especially when it concerns hazardous waste. The processes involved are described in the internal operating and mandatory work procedures. Each employee receives training on waste management and is required to read and sign instructions on waste management procedures. Disposal service providers are carefully selected and disposal conditions are contractually defined. All service providers are required to provide proof of proper waste disposal.

BioNTech generated 1,488 tons of waste in 2022 (2021: 897t; 2020: 1,558t; 2019: 371t). The rise in the total volume of waste over the previous year can be put into perspective by considering the Company’s strong corporate growth since 2021, which included the acquisition and operation of new facilities in 2022 and an overall increase in production.

BioNTech is working on several initiatives to continually improve how it manages waste. More recycling bins were installed in office buildings, for example, to make it easier to separate waste. In order to gain better data on its waste, the Company also plans to implement a waste balance sheet that includes the types and routes of waste disposal. ● GRI 3-3; GRI 306-1; GRI 306-2

#### Hazardous Waste

At least 18% of BioNTech’s waste in 2022 was categorized as hazardous waste and required incineration at special facilities and thermal treatment as required by law for this category of waste. In order to avoid endangering people and the environment, BioNTech prioritizes both waste prevention and the proper disposal of waste and hazardous waste.

BioNTech expects its disposal facilities to:

- have a certified environmental management system in place;
- comply with all applicable safety and environmental laws and regulations;
- have an established and certified occupational safety management system; and
- have the permission to transport, store, dispose and further use the generated waste.

In 2023, BioNTech plans to introduce a structured audit plan for its disposal facilities as part of BioNTech’s ISO14001 environmental management system. ● GRI 306-3; GRI 306-5

#### Waste accumulation<sup>1</sup>

Waste in metric t



<sup>1</sup> Sums may not add up to exact totals due to rounding.



## 5.4 WATER & EFFLUENTS

### Impact Management

By 2050, 52% of the world's population is expected to be living in [water-stressed areas](#). As the issues of water scarcity and pollution become increasingly relevant, the ability to manage water and wastewater sustainably will be key to ensuring sustainable development. One goal of the Company's environmental management is therefore to ensure sustainable water and wastewater management. As BioNTech grows and expands in Germany and in other countries on continents such as Asia and Africa, it is important for it to manage the availability and sustainable use of water. In taking on this responsibility, BioNTech seeks to minimize any impacts of its operations on local water scarcities, to ensure that water is available in sufficient quality, and to monitor the quality of natural water bodies.

### Risk Management

As part of BioNTech's corporate risk management, these potential risks on water and effluents are carefully identified and evaluated. Their potential longer-term impact is also taken into consideration. In addition, by taking a precautionary approach, BioNTech protects the Company from the adverse effects of increasingly stringent water protection regulations. ● [GRI 3-3](#); [GRI 303-1](#)

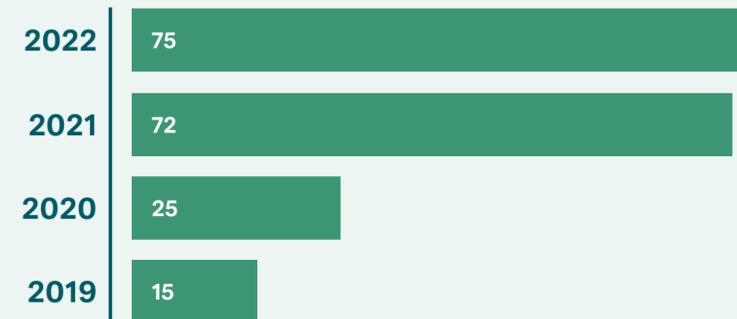
### Water Withdrawal

BioNTech's total water withdrawal remained relatively constant, increasing only 4% between 2021 and 2022. The Company monitors its water withdrawal on an annual basis, using the water invoices for each site.

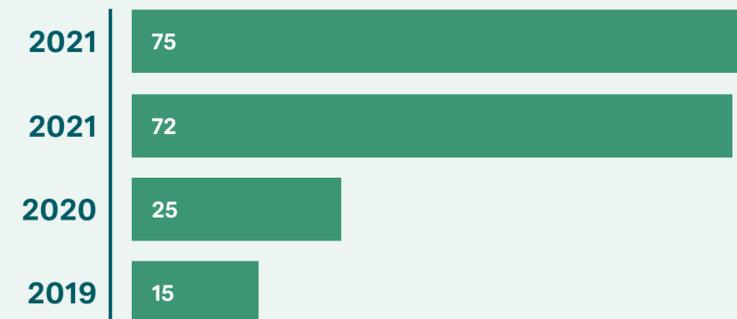
In 2022, BioNTech continued to only withdraw water from locations where the risk of water depletion was low or very low, according to the [WWF Water Risk Filter](#). ● [GRI 303-3](#)

### Water withdrawal

Total water withdrawal in 1,000 cbm



Total water discharge in 1,000 cbm



### Wastewater Effluents

Similar to its monitoring of water withdrawal, BioNTech also closely monitors the discharge of the wastewater it produces. In addition to the usual greywater and blackwater from offices and other administrative establishments, wastewater is generated in the Company's research and development laboratories and production facilities.

These pharmaceutical wastewaters are not allowed to be discharged into the municipal sewer system. This is to prevent hazardous chemicals and substances from entering water bodies and the related environment. For this reason, BioNTech has created internal guidelines and mandatory procedures to ensure that it properly handles pharmaceutical wastewater.

As all BioNTech sites operate in countries with strict legal and regulatory requirements for wastewater handling, wastewater is closely monitored and analyzed before being discharged into special disposal channels. Additionally, BioNTech has started to design and implement its own neutralization systems in accordance with the applicable laws. In 2022, a new wastewater treatment plant commenced operations that is used to neutralize wastewater from the laboratories in Mainz. Plans were made for a second wastewater treatment plant for the Mainz production site in 2022 and are expected to be implemented in 2023. ● [GRI 303-2](#)



## 5.5 CLIMATE PROTECTION & MANAGEMENT

The climate crisis is one of the main global challenges of our time. Since the beginning of industrialization, human activities have been causing human-made greenhouse gases which are causing rising temperatures. We are already experiencing the consequences of this in various ways, such as weather-related natural disasters.

It is essential that mankind limits global warming to 1.5°C compared to pre-industrial levels and meets the goals of the Paris Agreement.

This will require a profound transformation in the way BioNTech produces goods and manages its value chain to enable massive and timely reductions in greenhouse gas emissions. After allocating electricity and heat emissions to the end-use sectors, the industrial sector continued to be the sector with the highest emissions in 2020, accounting for more than 40% of emissions globally (IEA 2021, see graphic for further details). As an industrial company, BioNTech takes responsibility for its own share of emissions.

While BioNTech’s focus is on improving people’s health, climate protection forms an integral part of its strategy. Due to the direct link between the energy consumption (GRI 302) of BioNTech’s sites and its Scope 1 and Scope 2 GHG emissions footprint (GRI 305), these are combined and reported as one comprehensive management approach.

### Climate Governance

The continuous development and execution of the Company’s climate protection strategy shows the increasing attention paid to climate protection and reducing BioNTech’s GHG emissions. Many areas of the Company as well as the Management Board are involved in driving the strategy forward, with the ultimate responsibility assigned to the COO, who is briefed regularly. He ensures that the relevant GHG emissions and energy issues are taken into account in the work and decisions of the Management Board. Climate-related performance indicators are indirectly reflected in the variable remuneration of the Management Board, part of which is linked to maintaining the ISS ESG “Prime” rating (➔ see page 78). To achieve its near-term climate targets, BioNTech strives to integrate greenhouse gas emissions reduction targets into its growth and investment planning, supply chain management, and ongoing operations. This transformation requires additional financial, operational and human resources and the respective management, is a focus of senior management.

This was the reason for establishing the Energy & Sustainability Projects (ESP) department in September 2022 as part of the BioNTech Site Service (BSS) department. One of the tasks of the ESP function is to implement the decarbonization targets at the operational level globally. We intend to gradually expand the ESP department in terms of personnel and provide it with the necessary resources to achieve the climate protection targets set by the Management Board.

Climate protection as a strategic objective is part of the CSR function, with direct and regular reporting to the COO. The CSR and ESP departments work closely together to achieve the targets with the support of other relevant departments, such as Environmental Programs & Protection, Procurement, Supply Chain Management, and IT.

Within the IT department, the Cloud Center of Excellence (CCoE) was formed in 2022. By leading and driving the adoption of cloud computing, the CCoE’s mission is to provide innovative and modern IT infrastructures at BioNTech with the additional goal of reducing the Company’s IT carbon footprint.

The strategic objective of CSR management with regard to climate protection is to establish the responsibility for climate protection and decarbonization in BioNTech’s operating units, subsidiaries and branches. ● **GRI 3-3: Management of material topics**

### Global CO<sub>2</sub> emissions by sector, 2020



Source: IEA (2021), Greenhouse Gas Emissions from Energy Data Explorer, IEA, Paris



### Calculation of BioNTech's Corporate Carbon Footprint 2022

BioNTech accounts for its greenhouse gas emissions in accordance with the internationally recognized standards of the GHG Protocol using the operational control approach. Under this approach, the Company accounts for 100% of the GHG emissions from the operations over which it has control. In 2022, BioNTech's CO<sub>2</sub> emissions footprint was 1,120,486 metric tons of CO<sub>2</sub>e. A total of 3,963 metric tons are Scope 1 and Scope 2 (0.35% of total emissions), and 1,116,523 metric tons of CO<sub>2</sub>e are Scope 3 (99.65%). As in the previous year, upstream Scope 3 emissions constituted the largest share of BioNTech's emissions in 2022. From 2021 to 2022, Scope 1 and 2 emissions increased by 23% as a result of the Company's growth and higher consumption of natural gas and bought-in electricity. Total Scope 3 emissions decreased by 23% during this period.

Details on these data can be found in the detailed environmental data on [page 85](#) and [page 86](#). ● GRI 305-1; GRI 305-2; GRI 305-3; GRI 305-5

In 2021, BioNTech had its first full year of commercial production, leading to higher energy consumption and more goods and services needed for its operations. This was also the first year for which BioNTech calculated its total carbon footprint, including Scope 1, 2 and 3 emissions. As a result, the year 2021 was chosen as the baseline year for future comparisons of BioNTech's climate protection efforts. In 2022, BioNTech established a GHG emissions recalculation policy according to the GHG Protocol guidance. This sets rules for organic and inorganic growth, ensures a consistent data set over time and allows for meaningful comparisons of emissions data.

## GHG footprint (Scope 1, 2 and 3)

Overview of emissions – Baseline year 2022 in 1,000 t CO<sub>2</sub>e



<sup>1</sup> SBTi validation started on 23 January 2023



## TWO PIONEERS JOIN FORCES: FLYING MORE SUSTAINABLY WITH SUSTAINABLE AVIATION FUEL

As the pandemic was still in progress, BioNTech continued to expand its global presence. With the ongoing establishment of production sites and collaborations worldwide, flight kilometer after flight kilometer was adding up in 2022, and CO<sub>2</sub>e emissions were a cause for concern. By partnering with the Lufthansa Group, BioNTech employees have found a way to fly more sustainably.

In 2022, BioNTech joined the Lufthansa Group's Compensaid Corporate Program. This program gives corporate customers a way to invest in mitigating carbon emissions through their use of sustainable aviation fuel (SAF) and reducing CO<sub>2</sub>e emissions.

BioNTech has opted to mitigate 100% of its passenger flight-related CO<sub>2</sub>e emissions through SAF. This means first calculating the amount of CO<sub>2</sub>e emitted into the atmosphere from the fossil fuel used for BioNTech's business flights using a well-to-wheel assessment. Based on this calculation, the Lufthansa Group then commits to using a corresponding amount of SAF in its flight operations within six months.

**compensaid**  
by Lufthansa Innovation Hub



**BioNTech is committed to improving the health of people worldwide. This is inconceivable without flying. The next best environmental option to avoiding flights is flying with sustainable aviation fuel. It's the fastest, most direct way to make flying significantly more sustainable. Our agreement with Lufthansa Group is also in recognition of their pioneering spirit and innovative strength in this field.**

**SIERK POETTING, PH.D.**  
COO and Member of the  
BioNTech Management  
Board, responsible for  
Sustainability



**CHRISTINA FOERSTER**  
Member of the Lufthansa  
Group's Executive Board,  
responsible for Brand and  
Sustainability



**BioNTech and the Lufthansa Group share the spirit of innovation and have always been pioneers in their industries. BioNTech has teamed up with us and is advancing sustainable mobility by flying with 100 percent sustainable aviation fuel. Together, we are committed to making our industries more sustainable.**

There is still very little SAF available on the global market, and it is significantly more expensive than fossil fuel. As a Compensaid Corporate Program Ambassador, BioNTech supports a more sustainable aviation industry and is helping to advance the broader availability of SAF. BioNTech has received certificates guaranteeing the purchase of SAF to mitigate 2,215 tons of CO<sub>2</sub>e emissions as a result of replacing fossil fuel with SAF<sup>1</sup>.

The use of SAF is recognized by organizations such as the World Economic Forum and the Science Based Targets initiative (SBTi) as an important measure to reduce carbon emissions worldwide. Together with Lufthansa Group, BioNTech will closely monitor future developments with respect to standards such as the GHG Protocol and the Science-Based Target Aviation Guidance and report its flight-related emissions accordingly.

<sup>1</sup> The Lufthansa Group excludes palm oil-based raw materials for the production of SAF and sources the fuel from a manufacturer that complies with the requirements of the Renewable Energy Directive II (RED II) and the ISCC EU certification system, approved by the European Commission.

### WHAT IS SUSTAINABLE AVIATION FUEL?

Sustainable aviation fuel is the umbrella term for all aviation fuels produced without fossil energy sources that meet certain sustainability criteria. As an alternative to fossil fuels, SAF has the potential to make air travel significantly more sustainable. Different manufacturing processes and feedstocks can be used. Today, SAF must still be blended with fossil fuel before being used in aircraft. The maximum blending rate allowed according to fuel specifications is currently 50 percent. The expectation is that one day this blending limit will be abolished.

Presently, SAF is produced mainly from biogenic residues such as used cooking oils. During the SAF combustion process, only as much CO<sub>2</sub> is released into the atmosphere as has been extracted from the atmosphere for production. SAF from biogenic residues currently reduces CO<sub>2</sub>e emissions by around 80 percent compared to fossil fuel. The supply chain currently generates around 20 percent of CO<sub>2</sub>e.

Even more innovative technologies producing sustainable aviation fuels from renewable energies, solar thermal energy, water and CO<sub>2</sub> (from the atmosphere) are currently in development, building towards their launch on the market.



### Climate Strategy

To meet BioNTech's commitment to contribute to protecting the climate, a comprehensive climate strategy was developed in 2021 and further refined in 2022. The strategy sets out ambitious emissions reduction targets in line with the Science Based Targets Initiative (SBTi) to minimize the environmental impact of BioNTech's business activities by cutting GHG emissions in its own operations and its entire value chain. In 2022, BioNTech's COO signed the SBTi Commitment Letter, formally committing the Company to adopting science-based targets. As a result, BioNTech now officially appears on the SBTi website as a company committed to near-term targets. In the third quarter of 2022, BioNTech formally submitted the following proposed science-based targets (SBTs):

- An absolute reduction of 42% in the Company's Scope 1 and 2 greenhouse gas emissions by 2030 compared to the baseline year of 2021 in accordance with the SBTi requirements for near-term targets.
- A supplier engagement target for Scope 3 greenhouse gas emissions that requires the most important suppliers, which covers at least 2/3 of BioNTech's Scope 3 greenhouse gas emissions, to set themselves near-term science-based targets in line with the SBTi requirements. This near-term Scope 3 target is to be achieved no later than 2027.

The SBTi's validation process for the SBTs started on 23 January 2023.

### Climate Protection in Operations

BioNTech wants to play an active role in climate protection by reducing the emissions under its direct control. The key challenge for the Company is to simultaneously reduce its Scope 1 and 2 emissions to fulfill its SBTi commitment while managing increasing production and steady growth. BioNTech has been implementing various mitigation levers to meet this challenge and will continue to do so in the future.

### Direct GHG emissions (Scope 1)



Total emissions in 2022: 100% = 801 t CO<sub>2</sub>e

### Indirect GHG emissions (Scope 2)



Total emissions in 2022 (market-based): 100% = 3,162 t CO<sub>2</sub>e

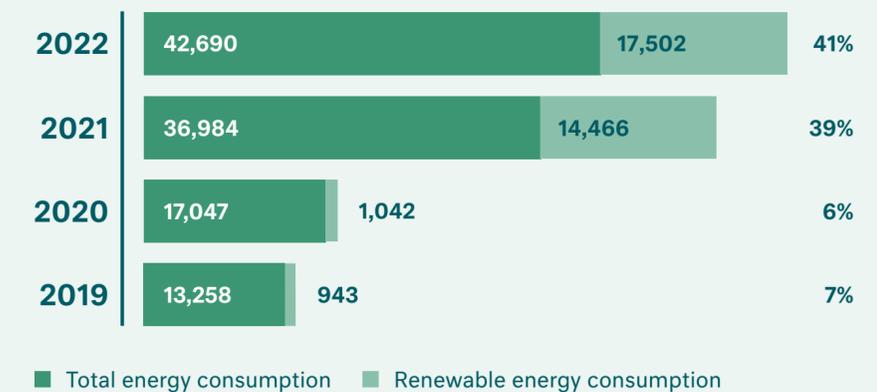
The greenhouse gas (GHG) emissions generated by BioNTech's operations are directly related to the amount and type of energy the Company consumes.

The Company uses energy primarily to heat and power its facilities. A significant portion of the Company's natural gas consumption is used to generate steam for production facilities and research and development processes.

Since 2021, BioNTech has been developing a series of measures aimed at reducing its energy consumption and facilitating the switch to renewable alternatives. In 2022, the Company continued developing and implementing these measures, which are detailed in the following paragraphs.

### Energy consumption ● GRI 302-1

In MWh/thereof renewable energy consumption in %

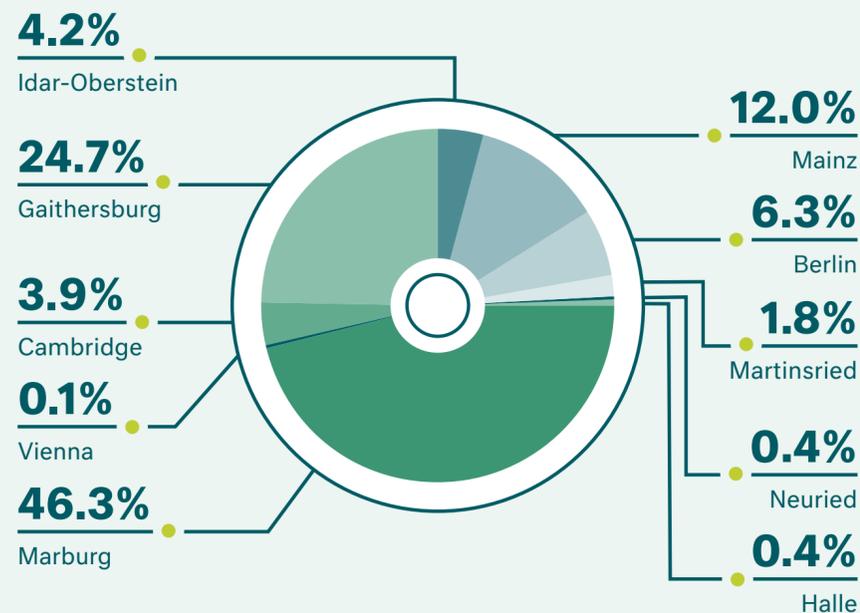


### Understanding BioNTech’s Energy Requirements

BioNTech has been analyzing its main sources of energy consumption and the corresponding emissions at its locations since 2021. The analyses are conducted at the process and infrastructure levels to identify suitable locations for implementing the transformation agenda to reduce GHG emissions. This has made it possible to plan and execute several measures across the Company’s operations that are particularly focused on energy efficiency and the use of renewable energies.

#### Emissions by location

Emissions (Scope 1 & 2) in % of t CO<sub>2</sub>e



Total emissions in 2022: 100% = 3,963 t CO<sub>2</sub>e;  
Scope 2 market-based calculation

### Energy Efficiency

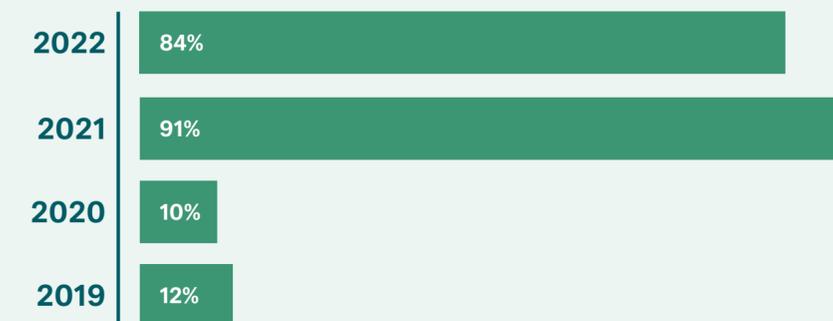
Environmental management systems play a key role in increasing the energy efficiency of BioNTech’s overall operations. After focusing on the establishment of an energy and environmental management system in accordance with the ISO 50001 and ISO 14001 standards, BioNTech intends to complete the implementation of the ISO50001 requirements in 2023. Certification of the first locations, which includes all Mainz entities, is planned to take place by the end of 2023. All other locations, including new locations such as Rwanda and Singapore, are expected to be certified in the coming years. BioNTech also plans to start implementing an energy monitoring system in 2023. This will improve the collection of energy-related data and enable detailed analysis and evaluation of energy consumption. It will also support the definition of energy-related targets. BioNTech is developing a sustainability guideline that will apply to new buildings and major renovations, as mentioned above. The main purpose of the guideline will be to promote energy efficiency and climate neutrality in operations.

Employees receive information to help make them aware of the importance of taking energy efficiency into account and working towards improvements, particularly in the current energy crisis. A variety of communication channels are used to ensure the dissemination of information among employees. These channels include internal communication and town hall meetings.

### Renewable Energy

BioNTech has been working to reduce its energy consumption since 2021. This includes switching energy contracts under its direct control to green electricity, resulting in the majority of all energy contracts already having been switched. In 2022, the percentage of bought-in electricity produced by renewable energy was 84% compared to 91% in 2021. This decline is the result of the Company’s growth and the acquisition of new locations in the US, such as the Gaithersburg location, which was running on gray electricity. Meanwhile, in December 2022, the site in Gaithersburg has switched all of its electricity supply to green electricity and, in 2023, will receive 100% of its electricity from renewable sources.

#### Percentage of renewable electricity from bought-in electricity



To find ways to improve its climate impact and actively contribute to the energy transition, BioNTech has been carrying out in-depth analyses. This has enabled it to identify potential improvement measures, such as installing its own renewable energy plants in the form of photovoltaic systems and using power purchase agreements (PPAs). The Company is currently planning to install photovoltaic systems on buildings that are scheduled for renovation. In Idar-Oberstein, a building rented in 2022 was equipped with a roof-mounted photovoltaic system as part of the renovation and in agreement with the landlord.

In the future, equipment and processes that require steam will be supplied with steam generated from green electricity to gradually replace natural gas. This has already been put into practice at a new-build project, where steam will be generated entirely from green electricity. In addition, BioNTech will consider the use and on-site generation of renewable energy when constructing new buildings and renovating existing ones.

**Climate Protection in the Supply Chain**

In 2022, BioNTech conducted a comprehensive analysis of its Scope 3 emissions. These emissions are outside BioNTech’s direct sphere of influence but account for more than 99% of its total Scope 1-3 footprint. In the reporting year, BioNTech calculated all relevant sources in its upstream and downstream value chains to identify hot spots and key emissions sources. The majority (over 92%) of GHG emissions stemmed from category 3.1: Purchased goods and services. The Scope 3 data was calculated using spend-based methods. ● GRI 305-3

In 2022, BioNTech began taking steps to meet its SBTi commitment regarding the supplier engagement target. This included taking sustainability and climate-related criteria into consideration in its purchasing decisions. BioNTech is now planning to introduce a revised Supplier Code of Conduct with dedicated requirements for climate protection and climate-related disclosures. In 2023, BioNTech plans to start discussions with decision-makers at key suppliers and lay the foundation for a Memorandum of Understanding to achieve the near-term SBTi targets.

**Chemical and pharmaceutical products dominate the BioNTech supply chain**

A total of 84%<sup>1</sup> of CO<sub>2</sub>e emissions of purchased goods and services are caused by suppliers to the chemical and basic pharmaceutical product sectors.



The remaining 16% is distributed among the following sectors: rubber and plastic products, business services, human health and social work activities, insurance, metal products, computer, and construction.

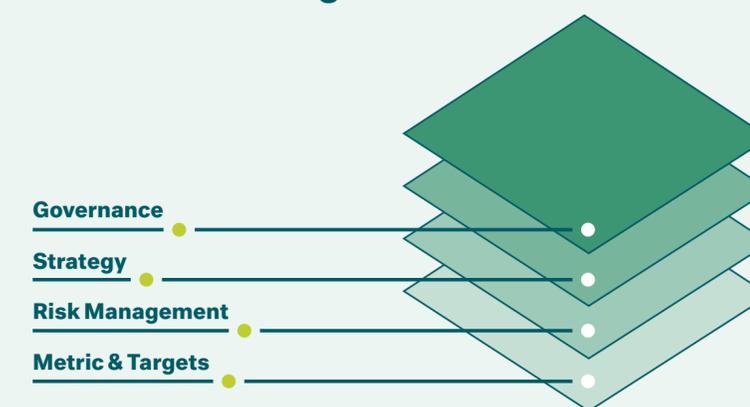
<sup>1</sup> Share of sourcing category of total Tier 1-n CO<sub>2</sub>e emissions Scope 3.1 Purchased Goods and Services in 2022. Source: PwC ESCHER Analysis.

**5.6 CLIMATE RISK MANAGEMENT**

BioNTech also recognizes the impact climate change can have on its business from a risk and opportunity perspective. The Company has therefore decided to more fully address the transition and physical climate risks and opportunities and integrate this perspective into a holistic climate strategy. In 2022, BioNTech followed the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) and conducted a qualitative and quantitative scenario analysis for both transition risks and physical risks and opportunities covering the entire value chain (see infobox “TCFD Risks & Opportunities” on next page ➔ page 62). Based on the results, the Company has begun examining its governance policies, informing its strategy and investment plans, integrating findings into risk management, and reviewing its metrics and targets. This work will continue in 2023.

Launched by the Financial Stability Board (FSB) in 2015, the TCFD initiative has developed recommendations for identifying risks and opportunities arising from climate change. The framework covers four areas that are central to a company’s operation: governance, strategy, risk management, metrics and targets (see Figure below).

**TCFD recommendations structured around four building blocks**



**TCFD Risks & Opportunities** • GRI 201-2

**Physical risks**

If we do not contain climate change, more physical risks will materialize.



**Transition risks...**

If we embark on a transition path, more transition risks will materialize.



**...but also transition opportunities**

At the same time, the transition can also open up opportunities.



**Governance**

BioNTech’s comprehensive climate protection activities are led from the top. This reflects the critical importance of the climate crisis to creating and securing value and managing risks. BioNTech has the explicit endorsement of the Management Board, particularly from its Chief Operating Officer (COO), Sierk Poetting, and Chief Strategy Officer (CSO), Ryan Richardson. In 2022, regular training and updates with the COO, CSO and senior management were provided on climate-related risks and opportunities and the TCFD recommendations. Under the leadership of the COO, the entire operational senior management team discussed management options to facilitate BioNTech’s path towards its SBTi targets and climate resilience.

**Strategy**

In 2022, the Company conducted a qualitative and a quantitative transition risk scenario analysis based on data from the [IEA Net Zero Emission \(NZE\) report](#). The report looked at market, policy, legal and technology risks and opportunities across the value chain. The analysis addresses the risks and opportunities for BioNTech that arise as the world transitions to a low-emission economy and society, including the changing regulatory and marketplace in which BioNTech operates. The transition risk scenario analysis conducted was based on the 1.5°C scenario and aligned with the Paris Agreement. It incorporated time frames up to 2030 and 2050 to gain insight into medium- and long-term effects. The transition risk analysis focused on BioNTech’s primary commercial product, the COVID-19 vaccines.

The key findings showed that BioNTech is mitigating a substantial portion of its risks. It is accomplishing this through its commitment to the SBTi for its operations and supply chain and the corresponding ongoing decarbonization efforts the Company is taking to minimize transition risks and fully exploit the possible opportunities as presented in [Chapter 8.0 Appendix & Data](#).

Going forward, BioNTech will monitor the global regulatory landscape and update its analysis based on significant changes in climate-related legislation and any changes in the market or in its business organization.

The Company has also conducted a physical risk analysis under the IPCC RCP 4.5 scenario, which projects a rise in temperatures between 1.1°C and 2.6°C. BioNTech selected a medium- and long-term time frame of 2030, 2050, and 2100 for the analysis. It identified both chronic and acute physical risks such as the increased likelihood of extreme weather events. Understanding the effect of physical impacts on BioNTech’s own facilities, assets, production and on its workforce is critical to ensuring the Company’s long-term financial stability. At the same time, the Company recognizes the importance of thinking holistically and has extended the analysis to include the entire value chain, including logistics, transport, and suppliers. In 2023, BioNTech plans to focus on the key lessons learned, the status of adaptation and a review of the strategy. Appropriate adaptation measures to be implemented in the future will be reviewed as part of this process. The results of the analysis can be found in [Chapter 8.0 Appendix & Data](#). The scenario analyses will be repeated as necessary to identify risks based on new scientific findings and to reflect material changes at BioNTech.

BioNTech is in the process of integrating the findings into elements such as its internal investment planning and its Supplier Code of Conduct.

**Risk Management**

BioNTech intends to integrate climate-related issues (SBTi targets and TCFD) into its corporate risk management. In 2023, the Company plans to include specific categories for the potential material financial impacts of climate change and integrate these into its corporate risk management.

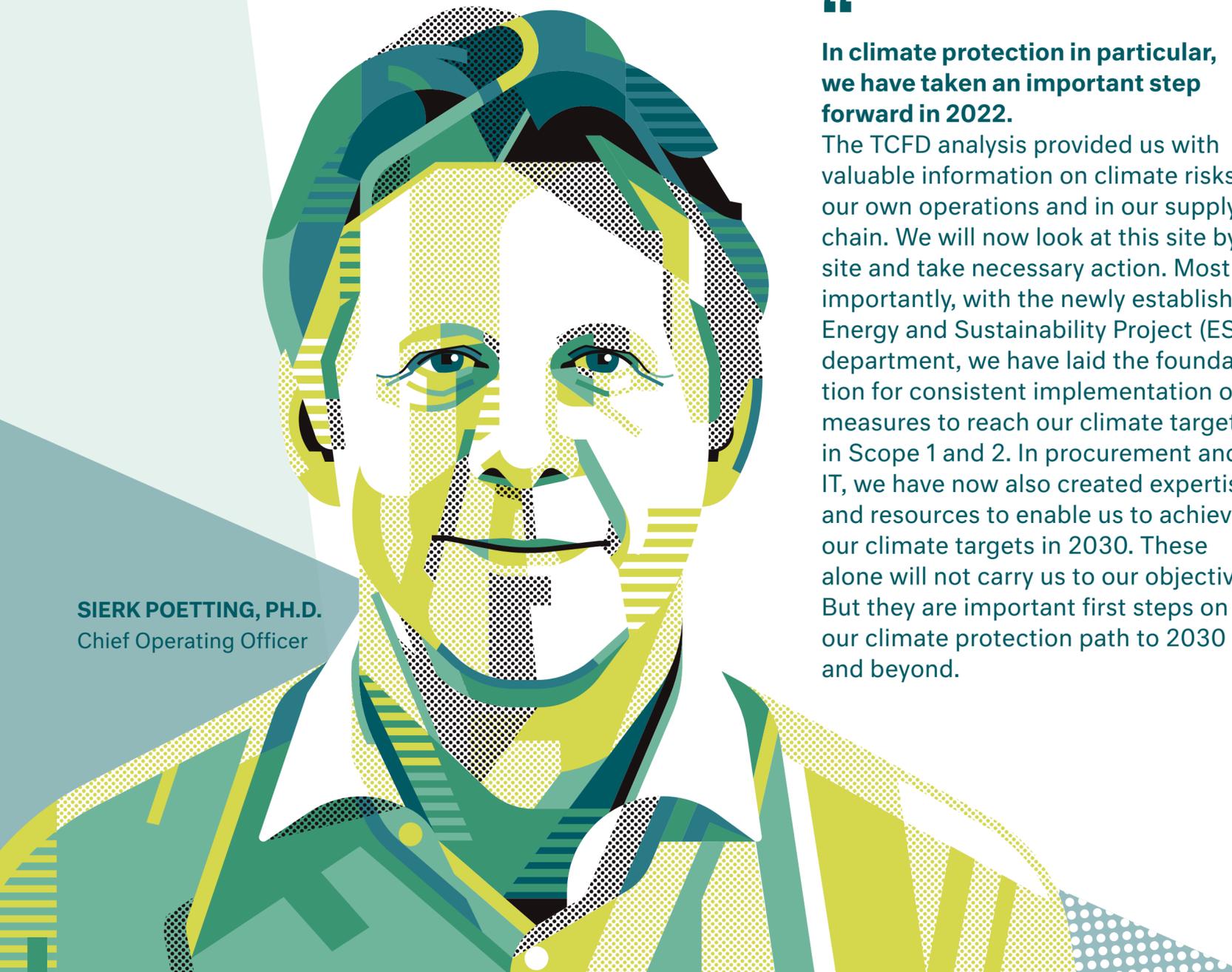
**Metrics and Targets**

In 2021, BioNTech reported a full carbon footprint, including all relevant scopes in accordance with the Greenhouse Gas Protocol. The Company’s 2022 carbon footprint equals 1,120,485 CO<sub>2</sub>e. A detailed breakdown of emissions and details on BioNTech’s decarbonization efforts can be found on [page 85](#).



TELL US ABOUT:

## ENVIRONMENTAL & CLIMATE PROTECTION



**SIERK POETTING, PH.D.**  
Chief Operating Officer

### WHAT WERE THE HIGHLIGHTS IN 2022?

“

**In climate protection in particular, we have taken an important step forward in 2022.**

The TCFD analysis provided us with valuable information on climate risks in our own operations and in our supply chain. We will now look at this site by site and take necessary action. Most importantly, with the newly established Energy and Sustainability Project (ESP) department, we have laid the foundation for consistent implementation of measures to reach our climate targets in Scope 1 and 2. In procurement and IT, we have now also created expertise and resources to enable us to achieve our climate targets in 2030. These alone will not carry us to our objectives. But they are important first steps on our climate protection path to 2030 and beyond.

## INTERVIEW WITH SIERK POETTING

### WHAT WERE THE GREATEST CHALLENGES IN 2022?

“

**The greatest challenge is and remains to bring our growth in line with our climate targets.**

We cannot delegate this to the ESP team or CSR team. We need the commitment of all managers and employees in many departments. Climate protection, our climate targets – environmental protection in general – must become a matter of course in all processes and departments. It must be implemented there. If we can do this together, we can make an important contribution to climate protection: growth in line with the Paris climate targets.

### WHAT ARE BIONTECH'S GOALS AND EXPECTATIONS FOR 2023?

“

**We must continue to build and optimize structures and processes step by step so that we can achieve the important interim targets on the way to our 2030 climate goals.** This also includes valid, auditable data in all areas of sustainability. In 2023, we are planning a cross-divisional project to prepare for future real and regulatory challenges in this area. As with everything, the rule is: let actions speak.





# 6.0 Attractive Employer

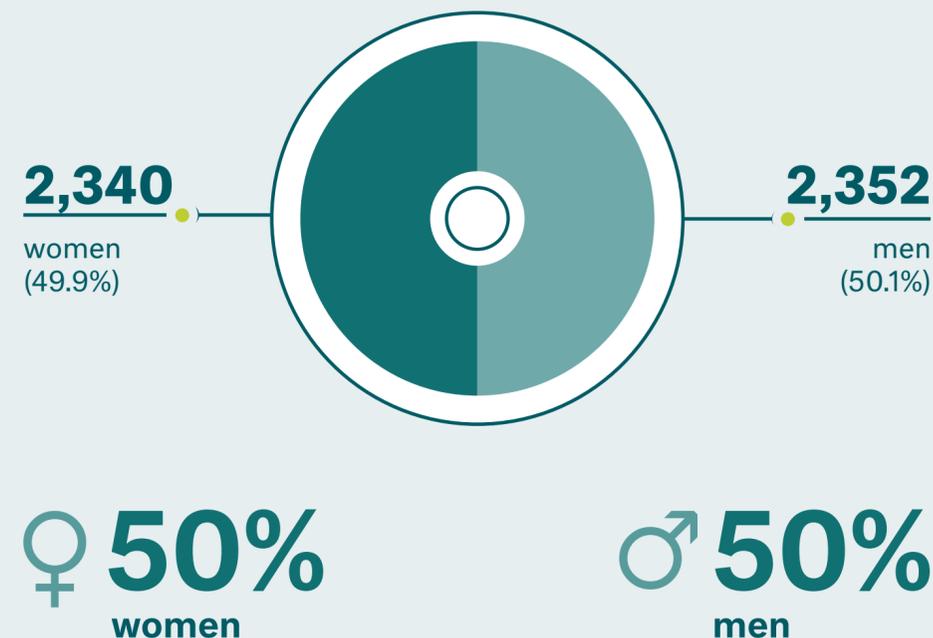
## Fostering the Full Potential of all Employees

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**For our employees:**  
We are creating an environment where everybody feels respected and valued and can grow to his or her full potential.

**4,692** employees  
from over  
**80** nations

**38%**  
women in highest management level  
below Management Board



**1,944**  
new hires in 2022

**8.8%**  
total turnover  
rate in 2022

TELL US ABOUT:  
**ATTRACTIVE  
EMPLOYER**



**JENS HOLSTEIN**  
Chief Financial  
Officer

## WHAT WERE THE HIGHLIGHTS IN 2022?

“

**The year 2022 was a year of continued growth for BioNTech.**

For the second year in a row, we grew our global staff by more than a third and created roughly 1,500 new jobs at the Company. This is an important milestone. Each and every new employee is making an important contribution to achieving our corporate mission. Expanding at such speed was only possible thanks to the exceptional dedication and commitment of our human resource team. More than 40,000 processed applications are a testament to their outstanding work. As our staff expanded, so did BioNTech's global network of sites and partners. To develop our company from its Mainz roots into a global powerhouse is an extraordinary experience. It allows us to compete for the best and brightest talent globally. With the development of human resources into a global function in 2022, we are in a better position to do exactly that than ever before.

# INTERVIEW WITH JENS HOLSTEIN

## WHAT WERE THE GREATEST CHALLENGES IN 2022?

“

**BioNTech's culture has been the basis for our success.**

Our vision is at the center of everything we do, and our strong sense of purpose, our prioritizing of teamwork over individual competitiveness, and our high responsiveness will continue to guarantee our success. With almost 40% of employees joining in just the past 12 months, maintaining this culture while leaving room for evolution is a key task being driven by an exceptional team at BioNTech. With the expansion of the Culture Campus department in 2022, we have anchored the topic of culture in the organization for the long term, and assigned it the priority it deserves. We also plan to continue making progress in the areas of diversity, inclusion, equity and belonging.

## WHAT ARE BIONTECH'S GOALS AND EXPECTATIONS FOR 2023?

“

**The coming year will hold many opportunities for us to move closer to our objective of developing breakthrough therapies against cancer, infectious and other serious diseases.**

Attracting and investing in the development of our pioneers continues to be the building block of our progress. In this regard, I am especially excited about the launch of our operations in Rwanda. With our commitment to hire locally, we have a unique chance to not only extend the reach of our innovative product portfolio but to strengthen our local capacity ( [Chapter 6.5 Building Capacities Locally](#)) and value chains as well.



# 6.0 Attractive Employer

## 6.1 IMPACT & MATERIALITY

BioNTech is a global next-generation immunotherapy company pioneering novel medicines against cancer, infectious diseases and other serious diseases. It stands for visionary thinking and a pioneering spirit. The Company was founded by scientists and physicians to translate science into survival by combining fundamental research and operational excellence. Scientific rigor, innovation, passion and a unique corporate culture are BioNTech's driving forces. BioNTech employees – known as “pioneers” – are key to the Company's success in achieving its objectives. Their knowledge, experience, innovative ideas and commitment to contribute have led to the innovation and commercial success of the COVID-19 vaccine and a pipeline of more than 25 clinical stage production candidates in over 30 research programs in 2022.

### Relevance and Materiality

The great importance of BioNTech's pioneers is reflected in the Company's CSR materiality assessment. BioNTech has classified optimized talent recruitment and efficient succession planning (“Pioneer Pipeline”) as material topics. The topics Growth & Culture, Pioneer Development, Safety & Health, Equal Opportunity and Non-Discrimination were identified as highly relevant CSR topics. To realize its potential, BioNTech aspires to be an employer of choice in the global competition for talent by creating a workplace that is inclusive and empowering.

## 6.2 HUMAN RESOURCE MANAGEMENT

Ensuring a welcoming and all-encompassing corporate culture and successfully managing an expanding global workforce of 4,692 employees depend on well-functioning, integrated structures. In 2022, BioNTech's Human Resource department continued to evolve into a global function as the Company set up or acquired new sites in Rwanda and Singapore and with a continuous expansion of presence worldwide in the future. Advancing the Company's globalization and digital transformation required a comprehensive reorganization of the HR organization in 2022. As early as 2021, the existing HR areas, HR Talent Acquisition, HR Business Partnering and People Management, Learning and Development, HR Total Rewards and HR Labor Law, were already transforming into cross-functional, cross-regional collaborations to improve performance.

### BioNTech's New Human Resource Functions

BioNTech's new, global Human Resource operating model is now structured around the following functions:

→ **Human Resource Business Partners** focuses on enabling the business to achieve BioNTech's corporate goals through value-adding partnerships and excellent services. This allows BioNTech's management to focus on sustainable growth. The function provides deep business expertise and entrepreneurial spirit. It partners with the business to define and deliver solutions. Human Resource Business Partners work closely with client organizations, shaping and driving the people agenda in alignment with the overarching people agenda of BioNTech.

→ BioNTech's **Human Resource Centers of Excellence** are accountable for all HR stages of the employee lifecycle as well as for optimization and governance processes, among others. The centers operate in a globalized, but not centralized Center of Excellence set-up, creating unique user experiences for core processes, such as recruiting and talent development. They support the continued growth and global expansion of BioNTech, including an improved, better-structured onboarding process.

→ **People Services and Systems** teams ensure that transactions and operations run as optimally as possible based on guidelines set by the Centers of Excellence. This is supported by standardization and economies of scale as well as ambitious yet realistic KPIs to drive delivery.

→ The **Agile Team** function helps to deliver on special projects and facilitates functional excellence.

To effectively support the HR function's structural transformation, BioNTech launched the global digitalization initiative tHRrive in 2022. The initiative introduced a new SAP-based IT landscape that covers and maps all core HR processes worldwide. It includes a service delivery platform, a digital time recording function and an HR-internal tool for personnel e-files. BioNTech has been working successfully with this fully integrated, cloud-based IT solution since December 2022. ● **GRI 3-3**



### 6.3 VALUES & CULTURE

In 2022, BioNTech continued to grow at full speed, hiring 1,944 new employees and expanding its global team by approximately 1,500 new jobs. That is roughly one-third more compared to 2021. The Company believes that its unique corporate culture is a unifying force among its 4,692 employees from over 80 nations and a range of disciplinary, cultural and personal backgrounds. ● GRI 2-7

BioNTech’s values and corporate culture have been key factors in its success over the past decade, and they remain essential to its innovation engine and execution to bring new medicines to people. It was the Company’s founding corporate culture, exemplified by “Project Lightspeed”, which led to the rapid and successful development of its COVID-19 vaccine. Both the Management Board and Supervisory Board recognize that maintaining this founding corporate culture is fundamental to BioNTech’s strategy for managing its anticipated future organizational growth. The topic “Growth & Culture” was rated in the CSR materiality matrix as having “very high relevance” and is seen as material by the Management Board.

The importance of corporate culture led to the establishment of the “Culture Campus” in 2020. This was created out of two parallel initiatives that evolved into an extensive unified project team in 2021. The team has spent considerable effort in the key components of the Company’s current culture through empirical social research, which has included employee focus groups, research, and structured feedback loops. An internal communication campaign to jointly reflect on the Culture Essentials began in 2022 and will continue in 2023.

To maintain this culture in times of sustained growth and to reflect its importance in achieving the Company’s vision, a dedicated Culture Campus department was established with a direct reporting line to CEO Ugur Sahin and CMO Özlem Türeci, who founded the company jointly with Supervisory Board member Christoph Huber. Besides the recognition as an official department, Culture Campus also expanded its team of contributing members.

In 2022, the number of Culture Campus ambassadors, a network of multipliers from all parts of BioNTech, supporting cultural development within the different teams and actively contributing to shaping

“

**If we want to achieve our goals, we have to return to our roots. To the knowledge and understanding that we are working on the same mission, to which everyone can contribute and for which content, not titles, counts.**

**PROF. ÖZLEM TÜRECI, M. D.**  
Chief Medical Officer and Founder

the BioNTech culture, rose considerably and expanded its footprint across the organization. ● GRI 3-3. A total of over 1,000 employees participated in Culture Campus events and workshops. More on the Culture Campus activities can be found on the next page.



**Through Culture Campus initiatives, we can be an example of how to live BioNTech’s values. Openness is also one of our strengths. At BioNTech, the opinion of every scientist matters.**

**PAUL PANORCHAN**

Vice President, Head of Clinical Pharmacology and Pharmacometrics, Culture Ambassador





**We strengthened our US connection to become a global Culture Campus**



**We expanded our cross-functional reach to address burning topics**



**Culture Campus collaborated with > 50 teams with tailor-made solutions**



**We became an official department**

## GROWING ROOTS & GROWING COMMUNITY

In times of rapid growth and change in an organization, it is vital to have a compass and a map. The Management and Supervisory Board both recognized the need to safeguard the Company's founding corporate culture as a compass, while also supporting the organization with mechanisms for sensing, shaping and developing what needs to emerge to support our business strategy as a map. The Culture Campus was established as an internal department to have a direct impact on strategic levers impacting the corporate culture, and to align with other relevant stakeholders. In the spirit of BioNTech, in its culture work, the Company wants to stay agile, innovative and inclusive.

The focus of this year's activity was to foster a growing together of teams and to sow seeds for communities.

Culture Campus fast-tracked facilitation activities on site integration and collaboration, accompanied Target Operation Model implementation, and supported individual teams with tailored workshops.

The Culture Campus started a series of company-wide dialogue sessions led by senior scientists open to all employees to reflect on the founding corporate culture and how it is currently evolving.

The Culture Campus has established cross-functional networks across the Company, with a nucleus of a group of employees that have been part of BioNTech's success for a long time and new joiners interested in supporting BioNTech's culture development. The Culture Ambassadors are building bridges, acting as guardians, sensors and role models. This year, the network was focused on creating cross-collaboration in the community, mirroring the path of the organization. Fitting our culture, they have a large degree of freedom to shape their role and to innovate on topics they care about and want to push forward for the community. Collectively, they sense which issues emerge that need attention, and they actively co-create opportunities for teams to engage with each other and the Culture Ambassadors.



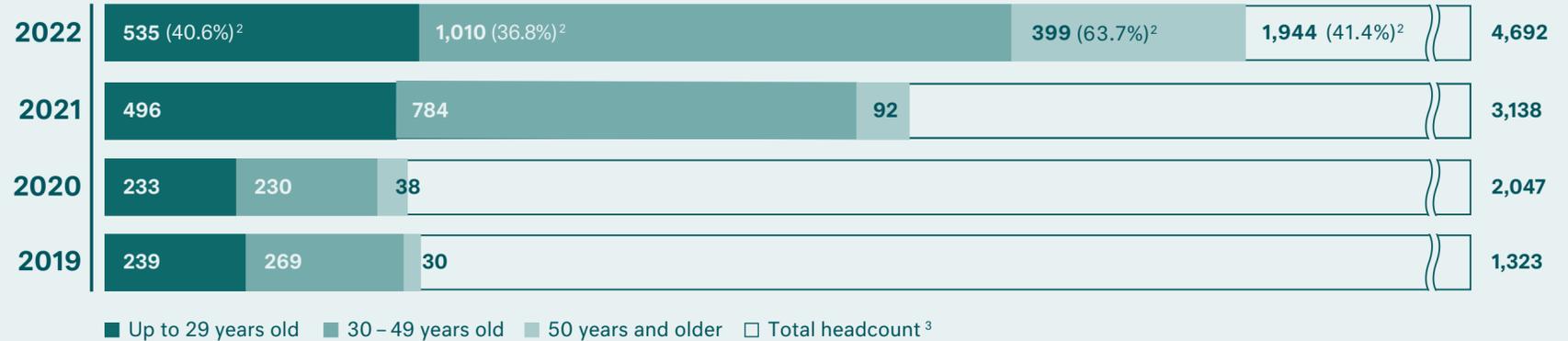
## 6.4 PIONEER PIPELINE

The recruitment of talent and effective succession planning (“Pioneer Pipeline”) are essential for BioNTech’s continued success. In light of the Company’s reliance on highly skilled employees for its research and development and the intense competition for a constrained talent pool, BioNTech’s HR Talent Acquisition is part of the Human Resource Centers of Excellence and works to improve the Company’s visibility among talented graduates and professionals. As part of the strategy to increase its visibility and employer brand awareness to recruit new talent, BioNTech participates in career fairs and other events. In 2022, for example, BioNTech supported its Cambridge and Gaithersburg sites in the United States to meet their hiring objectives by taking part in the local MassBio Virtual Career Event for biotechnology companies in Massachusetts.

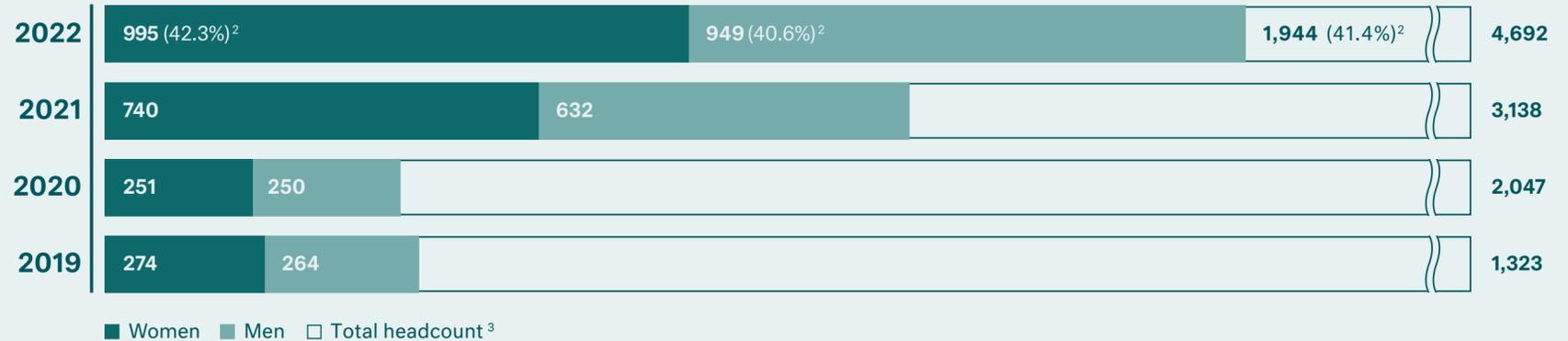
To leverage the power of university partnerships, BioNTech is exploring the option of working together with the University of Massachusetts, Boston, to develop technical training programs for candidates in underrepresented communities. To build early career candidate pipelines and increase its visibility among new generations of talent, BioNTech is continuously expanding its early career outreach efforts and internship opportunities in the United States of America and other countries. ● SASB HC-BP-330a.1

### Development of new hires<sup>1</sup>

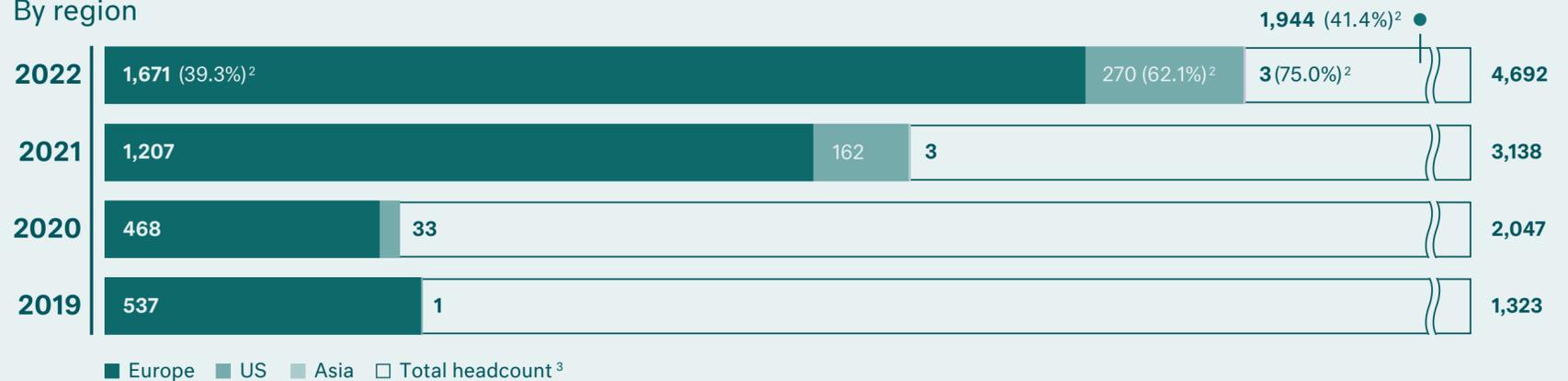
By age group



By gender



By region



<sup>1</sup> New hires, excluding the Management Board, trainees and interns, as of 31 December.

<sup>2</sup> Formula for calculating the rate of new employee hires as a percentage: number of new employee hires divided by number of employees as of 31 December. For detailed information, see [page 89](#).

<sup>3</sup> Headcount, excluding the Management Board, trainees and interns, as of 31 December.



### Hiring and Turnover

Throughout the application process, the talent acquisition team ensures a smooth and timely recruitment experience for each talent. Out of the more than 40,000 applications processed in 2022 (2021: >52,000), 1,944 employees were selected, hired and integrated into the Company in 2022. As the Company continues to expand its team, it is placing an emphasis on maintaining the quality and cultural fit of employees and new hires while ensuring a positive candidate experience throughout the recruiting journey.

#### Total number of new employees

(as of 31 December) [page 89](#)

1,944

2022

1,372

2021

501

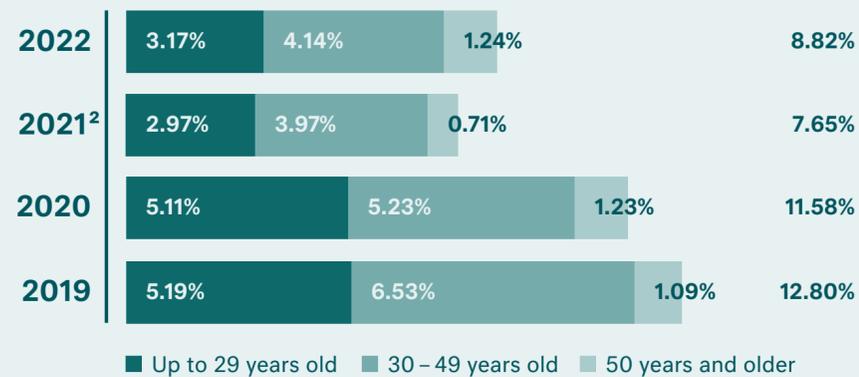
2020



### Total turnover rate<sup>1</sup>

**8.8%** 2022      **7.6%**<sup>2</sup> 2021      **11.6%** 2020

By age group



- 1 Turnover rate is calculated as follows: total number of leavers from the past 12 months divided by the quarterly average employee headcount (see table on [page 90](#)), multiplied by 100. Quarterly averages are not yet available per sub-group. Figures should therefore be interpreted accordingly.
- 2 The published data from 2021 was corrected from 6.6% (6.56%) to 7.6% due to an incorrectly applied formula. ● GRI 2-4

BioNTech has been able to maintain a relatively low turnover rate compared to the industry. In the 2021 financial year, BioNTech succeeded in significantly reducing its turnover from 11.6% in 2020 to 7.6%. In 2022, turnover increased slightly to 8.8%. The Company's ambition continues to be to reduce the employee turnover rate in the medium to long term and become an employer of choice in a highly competitive labor market. ● GRI 401-1; SASB HC-BP-330a.2

In 2022, as in the two previous years, there were no large-scale redundancies or significant job cuts at BioNTech or at the acquired companies.

### Employee Benefits and Support Programs

As part of its efforts to strengthen employer attractiveness and reward the efforts of its pioneers beyond compensation, BioNTech offers a wide range of benefits, including subsidized company pension plans, a job ticket for public transportation and life coaching by experienced coaches as well as e-learning offers.

#### Overview of benefits<sup>3</sup>



<sup>3</sup> The availability, eligibility and structure of the listed benefits apply only to locations in Germany and may vary per location. The explicit requirements for the individual use of benefits are based on the Company's internal regulations.



BioNTech also works at its German locations to promote efforts to reconcile work and family life by offering multiple options for regular childcare as well as holiday and emergency care. If there is a childcare emergency, where employees need immediate assistance and alternative support is not available, backup childcare is provided through pme Familienservice. Backup childcare is provided virtually or in person at a backup facility, depending on the child's age. During the COVID-19 pandemic, BioNTech offered three hours of virtual childcare daily for school-aged children between the ages of six and twelve and suspended the usual cap of 12 days per year for direct childcare through pme.

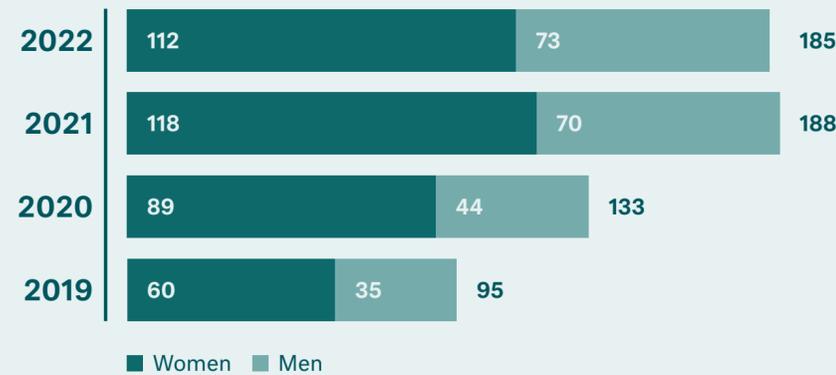
BioNTech's return to work and retention rates after parental leave are close or equivalent to 100%. This indicates the appropriateness of the existing family support measures and encourages more investment in such measures in the future.



### Number of employees entitled to parental leave<sup>1</sup> ● GRI 401-3



### Number of employees who took parental leave<sup>2</sup>



1, 2 see table on [page 91](#)

By default, benefits provided to full-time employees are also available to part-time and temporary employees. Differences are made only in so far as they are required or justified under applicable law.

● GRI 401-2

### EMPLOYEE EQUITY AND RESTRICTED STOCK UNIT PLANS

Without BioNTech's employees, the development and approval of the COVID-19 vaccine would not have been possible. This scientific and entrepreneurial achievement has had a positive economic impact on BioNTech. In recognition of these achievements, in December 2020, BioNTech's Management Board and Supervisory Board approved the adoption of the BioNTech 2020 Employee Equity Plan for employees in Europe and the BioNTech 2020 Restricted Stock Unit Plan for employees in the US (together referred to as the "Plans"). All employees employed by BioNTech in Europe and the US are eligible to participate in the Plans, with awards under the Plans being made in 2021 and 2022. The Plans are long-term in character and intended to motivate employees to commit to BioNTech for the long term. Under the Plans, employees receive restricted stock units (RSUs) free of charge and, after the relevant vesting periods applicable to the Plans have been satisfied, the vested RSUs can be settled in existing BioNTech's American Depositary Shares (ADSs), which are traded on the Nasdaq stock exchange. BioNTech also has the option to settle the RSUs in cash instead of ADSs, after the expiry of the relevant vesting period. Detailed descriptions of the 2020 Employee Equity Plan and the US Restricted Stock Unit Plan are published in the Company's Registration Statements on Form S-8 filed with the U.S. Securities and Exchange Commission ("SEC"), which can be found on BioNTech's [website](#).



## 6.5 PIONEER DEVELOPMENT

BioNTech invests in its human resources by acquiring new talent and developing and training its existing workforce of pioneers, be it in the early stages of their career or as part of a leadership program. The measures implemented to strengthen human resource management in 2021 laid the foundation for a more strategically oriented management of talent and leadership development (TLD) at BioNTech in 2022. Talent and leadership development is built on four pillars: Culture & Leadership Development, Learning & Development, Digital Learning Experiences and Early Career.

### Culture & Leadership Development

The Culture & Leadership Development function works closely with BioNTech's Culture Campus department. [➤ Chapter 6.3](#) It focuses on cultural development initiatives, such as the development of leadership principles, cultural learning journeys and cultural onboarding activities. In 2022, 487 training hours across 193 training sessions were offered centrally through TLD in the field of leadership development, with 365 leaders participating.

### Learning & Development

The in-house open enrollment courses of the Learning & Development function focus on human skills and languages. In 2022, 94 of the 753 employees in leadership positions worldwide took part in BioNTech's New Horizon Program (NHP) for new leaders, while 47 more experienced leaders joined the Leadership Culture Program (LCP). In addition to routinely updating and expanding these established leadership programs, BioNTech also makes a conscious effort to respond to the needs of its leadership on an ad hoc basis. Employees are encouraged to voice their training needs, from labor law to human skills. These are then taken up by BioNTech's TLD and either integrated into the training and development portfolio or responded to on a case-by-case basis. In 2022, 409 participants took part in 545 training hours across 36 training sessions offered by the TLD. In addition to these offers, employees can also receive financial support to take part in external professional development programs.

### Digital Learning Experiences

As part of the broader tHRive project, in December 2022, BioNTech launched a new learning management system to complement its existing digital learning platform and systematically offer and administer training courses. The new system is available globally and easily scalable, making it an ideal platform for any current or future offers from the Digital Learning Experiences function. It also makes it easier to evaluate training data more systematically and support data-driven improvements going forward. As of December 2022, the platform had 3,247 active users, 19,617 viewed learning modules and 16,231 completed learning elements.

### Early Career

Through the Early Career function, BioNTech offers apprenticeships to people in the early stages of their career. Apprenticeships cover 13 professions across all fields, from industrial manager to biology laboratory trainee. BioNTech is one of just a few companies in Germany to offer apprenticeships in pharmaceutical production. The Company works closely with an external education provider to offer training in the industrial production of pharmaceuticals and the maintenance of relevant technical installations. As of 31 December 2022, BioNTech employed 61 apprentices across its German locations in Mainz, Martinsried, Idar-Oberstein and Marburg. In 2022, 14 apprentices completed their apprenticeships with 13 of these joining BioNTech as permanent employees.

In addition to the apprenticeship opportunities, BioNTech sponsored 15 recipients of the Deutschland Stipendium scholarship to study at the University of Mainz in a field relevant to the Company, such as medicine, chemistry, law or economics. BioNTech additionally sponsored five biological technical assistants in training from the Hochschule Fresenius. In addition to receiving a monthly grant, the scholarship holders completed a four-week compulsory internship at BioNTech and returned for a voluntary internship later in their training.

Comprehensive professional development courses, such as degree programs, technician or master's courses with a minimum duration of one year, complement BioNTech's professional development offers. In 2022, 17 employees began their professional development training as part of such programs. ● [GRI 3-3](#); [GRI 404-1](#); [GRI 404-2](#)

### Feedback and Performance Appraisal

BioNTech currently implements different performance appraisal systems across its sites and locations. At the Company's site in Mainz, official performance evaluations are held once annually and are based on a feedback catalog consisting of 12 criteria. In addition, BioNTech encourages its employees to regularly gather and share formal and informal feedback and harness the opportunities this offers for further development. The Company intends to harmonize the appraisal systems in the future in line with its feedback philosophy and establish a global performance appraisal system.

● [GRI 404-3](#)

### Building Capacities Locally

BioNTech seeks out the brightest talent to move it closer to its aim of improving healthcare worldwide through innovative medicines and technologies. The first BioNTainer-based facility in Rwanda is under development with a possible network extension in Africa and beyond to follow. This, in addition to partnering with existing manufacturers of pharmaceutical products, would place BioNTech in a unique position to provide its mRNA-based vaccines and build a durable and reliable biotechnology infrastructure. The Rwanda facility is expected to employ approximately 100 people by 2024, with roles across a range of disciplines.



Supporting the quest of several African countries to produce vaccines independently and invest in building local capacity, BioNTech has committed to hiring employees locally, in line with SDG 5 – Gender Equality, an initiative that has been met with great interest in Rwanda. Of the almost 2,000 applications received as part of the first hiring wave (contingent workers), the vast majority of applicants (90%) were Rwandan nationals.

To support the development of a local biotechnology ecosystem and build the skill set needed for the manufacturing of mRNA-based vaccines, BioNTech is working closely with partners at the local and international levels as well as experts from research and academia. As an example, BioNTech works with the African Biomanufacturing Institute (ABI) to facilitate the academic accreditation of professional experience gained working on-site. The ABI has been formally established in June 2022 by the Republic of Rwanda and operates as an Institute of Higher Education with university status under the oversight of the Ministry of Education and is managed in close coordination with the African Union. The institute’s purpose is to meet the growing demand for highly skilled individuals and attract local talent in STEM (Science, Technology, Engineering, and Mathematics) areas as well as those without exposure to academia in Rwanda and the African Union as a whole. In the run-up to the launch of production, BioNTech plans to work with its staff from Germany to accelerate the training of the local colleagues who will be responsible for running the production and for all of the associated laboratory and quality assurance tasks on-site. The Company expects to invest more than €10,000 per person in the qualification and training of its workforce in Rwanda.

## 6.6 EQUAL OPPORTUNITY & DIVERSITY

As of December 2022, BioNTech’s international workforce consisted of employees representing more than 80 nationalities. The Company’s history shows that different cultures and perspectives contribute to its success. Diverse teams drive innovation, reach more robust decisions and further the personal development of their members. Therefore, BioNTech believes promoting diversity is both a moral obligation and instrumental to achieving the Company’s business objectives. The Company has been a signatory of the Charta der Vielfalt since 2018, an initiative that promotes diversity in the working world in Germany.

Discrimination, favoritism, or harassment based on gender, political opinion, religion or belief, nationality, ethnic or social origin, age, sexual orientation, marital status, disability, physical appearance, health status or any other personal aspect are not tolerated. This is regulated in the Company’s policies and Code of Business Conduct & Ethics, which are binding for all employees. Anyone who discriminates against or harasses another person may face disciplinary actions, up to and including the termination of their employment with BioNTech. BioNTech’s HR department is responsible for ensuring a respectful environment with equal opportunities in all areas, from recruitment and hiring to professional development, succession planning and compensation. As the Company continues to grow, it seeks to further instill diversity, inclusion, equity and belonging in its HR practices and make a conscious effort to understand and overcome any potential biases.

### The queeRNA Network

In July 2022, the BioNTech queeRNA network was founded out of an employee initiative. All individuals who identify with the LGBTQIA+ community and those who would like to provide their support are invited to meet, exchange ideas and get involved. The group meets every six to eight weeks in a Teams meeting and once a month at a lunch meeting in Mainz. queeRNA supported the raising of the rainbow flags in 2022 by the Member of the Board Sierk Poetting at

the Company headquarters in Mainz and at a similar event in Marburg. queeRNA is BioNTech’s first employee resource group (ERG). The Company is working on ERG governance to foster further ERGs.

### Fair Representation of Women

Gender equity is one among many aspects of diversity that BioNTech strives to achieve for both its employees and management personnel. At the level of the Management Board and the Supervisory Board, BioNTech takes the professional and personal qualifications of board members into account as well as diversity and the appropriate participation of women in the composition of both bodies.

● GRI 3-3

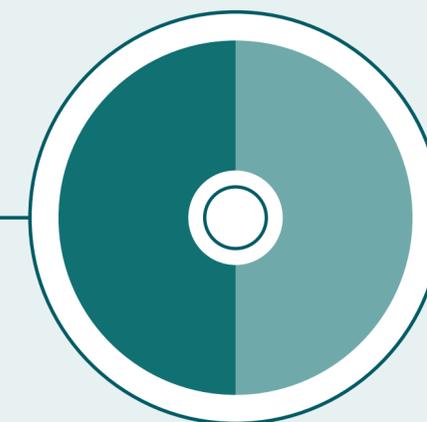
### Total number of employees <sup>1</sup>

4,692

2022

2,340

Women  
49.9%



2,352

Men  
50.1%

<sup>1</sup> Headcount, excluding the Management Board, trainees and interns, as of 31 December 2022. For detailed information, see [page 88](#).



### Women on the Management Board

BioNTech's Management Board currently consists of six members, with Prof. Özlem Türeci, M.D., acting as Chief Medical Officer. The current proportion of women on the Management Board is 16.7% (2021: 16.7%; 2020: 20%).

On 4 May 2020, the Company's Supervisory Board set the target for women on the Management Board at 25%. Mr. Jens Holstein was appointed to the Management Board as Chief Financial Officer, effective 1 July 2021. Prior to Mr. Holstein's appointment, an extensive selection process took place involving several female and male candidates. Mr. Holstein was appointed based on his expertise, his many years of experience and his profile as a chief financial officer. Based on these considerations, he was the most suitable candidate for the position of Chief Financial Officer. He was also the best fit for the Company. Last year, the contracts of the individual Management Board members were all renewed, and no new members were appointed. This was done after careful consideration and discussion and, in the view of the Supervisory Board, was in the best interest of the Company.

On 8 March 2023 and in accordance with Section 111 (5) of the German Stock Corporation Act (AktG), the Supervisory Board set the target for the proportion of the Management Board positions to held by women at 25%. The deadline by which this target is to be achieved was set at 31 December 2025.

### Women on the Supervisory Board

In accordance with recommendation C.1 of the German Corporate Governance Code, the Supervisory Board shall ensure diversity in its composition. The Supervisory Board was expanded in the 2022 financial year with the election of Prof. Anja Morawietz, Ph.D., and Prof. Rudolf Staudigl, Ph.D., by the Annual General Meeting in 2022. Based on this composition, the target ratio for women on the Supervisory Board, which was set in 2020 at 25% by 31 December 2022, in accordance with Section 111 (5) of the Stock Corporation Act (AktG), was not achieved.

In preparation for the election proposals for the 2022 Annual General Meeting, a large number of female and male candidates were interviewed. By the time the invitation to the Annual General Meeting was published, two female candidates had been shortlisted. After intense deliberation and taking into account the Company's interests, the Supervisory Board decided to propose Rudolf Staudigl and Anja Morawietz as new board members in order to fulfil the required competence profile as best as possible.

The issue of diversity is of central importance to the Supervisory Board and the Company is to be given particular consideration in the upcoming Supervisory Board elections.

On 8 March 2023 and in accordance with Section 111 (5) of the German Stock Corporation Act (AktG), the Supervisory Board set the target for the proportion of the Supervisory Board positions to held by women at 25%. The deadline by which this target is to be achieved was set at 31 December 2025.

### Women's Representation at Different Management Levels

In 2022, 38% (2021: 43%; 2020: 45%) of the members at the highest management level below the BioNTech Management Board were women. At the second-highest management level below the BioNTech Management Board, 40% (2021: 52%; 2020: 45%) of the positions were held by women. This trend is driven by the fast growth over the past years and according to organizational alignment at management levels. BioNTech is committed to maintaining its strong female representation at senior management levels through its measures and in the area of diversity, inclusion, equity and belonging. Accordingly, this is above BioNTech's current target of 30% women representation at in the highest and second-highest management levels below the Management Board that it set in April 2020 in accordance with Section 76 (4) of the German Stock Corporation Act (AktG). On 8 March 2023, the Management Board set the target for the proportion of management positions to be held by women at the first and second management levels below the Management Board at 30%. The deadline by which this target should

38%

of highest management level positions below Management Board held by women (43% in 2021)

40%

of second-highest management level held by women (52% in 2021)

be achieved at both management levels was set at 31 December 2025. ● GRI 405-1

### Fair Remuneration

As a fast-growing company, BioNTech is committed to establishing and maintaining fair and transparent base salaries and job level as well as consistent employee remuneration systems that are competitive, transparent and attractive. Doing so is particularly important in light of the Company's continued growth and acquisition of companies with different collective bargaining bases. With the plant in Marburg (BioNTech Manufacturing Marburg GmbH), acquired in 2020, BioNTech is bound by an industry-wide collective bargaining agreement ("Manteltarifvertrag der Chemischen Industrie"). When employment conditions are not covered by collective bargaining agreements, BioNTech strives to determine the terms and conditions of employment, including remuneration, in accordance with market practices. ● GRI 2-20

Unlike legal systems in other countries, Germany has a law against discrimination in the workplace entitled the "General Equal Treatment Act" (Gesetz zur Allgemeinen Gleichbehandlung – AGG) that applies in Germany. Part-time employees have the same rights to remuneration and benefits as full-time employees, in some cases on a pro-rata basis. ● GRI 401-2



## 6.7 FREEDOM OF ASSOCIATION

BioNTech respects the rights of every individual and is committed to complying with the labor laws in the markets where it operates. Employees are free to join or not join any union of their choice to represent them and engage in collective bargaining. Moreover, the Company complies, at a minimum, with the provisions of the ILO Core Labour Standards Nos. 87 and 98 on freedom of association and the right to collective bargaining, without prejudice to more favorable national regulation. These rights are explicitly expressed in BioNTech's [Human Rights Policy](#). Over 90% of employees work within the European Union and are subject to the strict EU workplace regulations of this market. ● [GRI 407-1](#)

The Company underlines its commitment by being a signatory of the UN Global Compact, in which these freedoms are explicitly named in Principle 3. The right of freedom of association has been legally reinforced by the German Act on Corporate Due Diligence Obligations for the Prevention of Human Rights Violations in Supply Chains (Lieferkettensorgfaltspflichtengesetz – LkSG) since 1 January 2023. Compliance with this law, as well as with all human rights laws and regulations, BioNTech's Human Rights Policy, and all of the Company's commitments, are monitored by the Human Rights Officer see [Chapter 4.3 Human Rights](#). In addition, suppliers are expected to comply with the freedom of association and right to collective bargaining provisions contained in BioNTech's Supplier Code of Conduct.

Employees have the opportunity to voice their concerns to the Company individually or collectively without fear of reprisal. This is ensured through regular town hall meetings, "Ask us anything" formats and staff meetings ("Betriebsversammlungen"). Questions are typically answered directly by the responsible Management Board member.

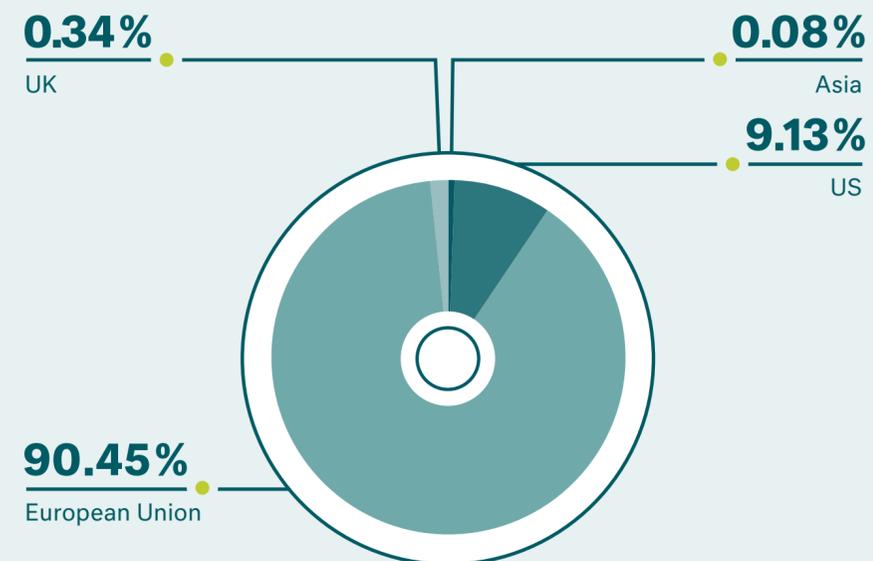
Comprehensive information on these employee rights is provided to employees on the Company's intranet. BioNTech's compliance tool, BxP Hub, is available to all employees for reporting potential violations of the Code of Conduct, internal guidelines or laws. Reports can be submitted confidentially. The human rights grievance mechanism is explained in [Chapter 4.3 Human Rights](#).

### Works Councils and the Group Works Council

BioNTech employees have the right to form and join employee organizations of their choice. Employee organizations are allowed to act independently of the employer. BioNTech supports these activities by giving employees adequate access to the information, resources and means necessary to carry out their duties.

There are works councils in Mainz, Marburg, Idar-Oberstein, and in Berlin for employees of JPT Peptide Technologies GmbH, a 100% subsidiary of the BioNTech Group. A Group works council (Konzernbetriebsrat – KBR) has been in place since 2021. The works council at each site delegates two members to the KBR, which meets once each quarter and consisted of eight members in 2022. The Group works council is an independent body in accordance with the works constitution (Betriebsverfassung). In principle, it has the same rights and duties as a works council within the scope of its original responsibilities. There is no superordination or subordination, but rather delineated areas of responsibility. For employees, the establishment of a KBR ensures that co-determination rights can be exercised in their favor at all levels of a group of companies. The interests of employees working at a Group company that does not have a works council are represented by the KBR. ● [GRI 3-3](#)

### Breakdown of employees<sup>1</sup> by region



<sup>1</sup> Headcount, excluding the Management Board, trainees and interns, as of 31 December 2022. For detailed information, see [page 88](#).

## 6.8 HEALTH & SAFETY

Ensuring the highest occupational safety and health standards for employees of BioNTech, its business partners and other stakeholders is essential. Workplace-related risk assessments, including those specifically focused on risks associated with hazardous substances, are carried out at least every two years.

Ultimate responsibility for safety and health rests with the Management Board. Operational implementation and responsibility lie with the line managers and are supported by the SHE (Safety, Health, Environment) department and its management. The SHE department operates globally to maintain a safe working environment by proactively removing hazards and minimizing risks through the following hierarchy of measures:

- Elimination of hazards
- Substitution by less hazardous work processes, operating procedures, work materials or work equipment
- Application of technical measures and changes in how work is organized
- Application of administrative measures, including training
- Use of suitable personal protective equipment

● GRI 403-2

BioNTech regularly consults with experts and regulatory authorities at different stages of the processes outlined above. The SHE department is also responsible for emergency responses, evacuation procedures, rescue plans and related training.

### Health and Safety Management System, Training and Communication

The Company is implementing an integrated management system for the 14001 (environmental management) and 45001 (occupational health and safety management systems) standards, to be

implemented in all sites globally, covering all employees. In preparation for a certification audit (Stage 2 audit), a Stage 1 audit is planned for 2023. ● GRI 403-1; GRI 403-8

General health and safety briefings are provided to all new employees shortly after joining the Company and are repeated on an annual basis. These briefings cover aspects such as emergency preparedness (e.g., for accidents or spills), the appropriate handling of hazardous substances and biohazards, and general safe behavior practices and are available to employees online at all times.

Specific safety briefings for employees working in laboratories and other special workplaces are carried out regularly by relevant departments, and such workplaces are monitored in accordance with

regulatory requirements. BioNTech has not identified any negative occupational health and safety impacts in the context of its business relationships ● GRI 403-7.

All relevant information on the subject of safety and health, including operating directives, risk assessments, guidelines, and laws is available to all employees. Relevant digital information areas have been set up for the topics of occupational safety and health and genetic engineering. They contain applicable laws, ordinances, rules, operating instructions, forms and relevant contextual information. Mandatory training and an annual general health and safety instruction program are available to all employees and ensured and controlled by the Safety, Health and Environment (SHE) department. In addition, all SHE training courses – both mandatory and voluntary – are always available to all employees online. Accidents and near-accidents are documented and inspected for hazard elimination by SHE employees at all times (see detailed figures on [page 91](#)).

● GRI 403-4; GRI 403-5

### Occupational Medical Services and Health Promotion

The occupational medical service is regularly on-site and conducts examinations in accordance with the German Ordinance on Preventive Occupational Medicine (Verordnung zur arbeitsmedizinischen Vorsorge – ArbMedVV).

BioNTech continues to expand its measures and informative work on employee health promotion beyond addressing specific work-related risks. In addition to company-supported sports activities and health-related courses, such as yoga, health days are sponsored four times each year by Germany's largest health insurer. Other offers, health information, and campaign days on the subject of health are regularly communicated on the intranet.

● GRI 3-3; GRI 403-3; 403-6

“

**BioNTech's target:  
No impairment  
of employee health**

**FRANÇOIS CLEMENT PERRINEAU**

Vice President BioNTech Site Services



# 7.0 ESG Ratings & Memberships



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# 7.0 ESG Ratings & Memberships

## 7.1 ESG & SUSTAINABILITY-RELATED RATINGS

ESG and sustainability-related ratings provide valuable information that can be used in the ongoing development of BioNTech's sustainability activities and sustainability management. They also reflect the expectations and requirements of relevant stakeholders. The Company expects the relevance of ESG ratings to continue to grow dynamically on the capital market.

BioNTech publishes its ESG rating results as promptly as possible after their publication and within the scope of legal and regulatory requirements. Openness, dialogue and cooperation are important principles when engaging with ESG rating agencies.

### Prime Rating from ISS ESG

BioNTech was awarded "Prime" status in 2022 by [ISS ESG](#), a provider of ESG screening, ratings and analytics services and part of the Institutional Shareholder Services Group (ISS). BioNTech first received the Prime rating in 2021 after the publication of its first sustainability report. In 2022, ISS ESG again awarded BioNTech "Prime" status, placing it again in the top 10% of all companies rated in the Pharmaceuticals and Biotechnology sector. ISS ESG gave the Company an overall Corporate Rating of B- and a Governance Rating of 7 on a risk scale ranging from 1 (low risk) to 10 (high risk).

### S&P Corporate Sustainability Assessment (S&P CSA)

BioNTech received an overall score of 32 (2021: 20) out of 100 from the S&P Corporate Sustainability Assessment (CSA). After being listed as a non-participant for 2021, BioNTech actively engaged in the [S&P CSA rating](#) in 2022 and was listed as a participating company. BioNTech intends to actively participate in the rating again in 2023. The rating is updated annually and in response to major developments.

### Morningstar Sustainalytics

In the [Sustainalytics ESG risk rating](#), BioNTech received a score of 24.1, assigning it a "medium risk" rating, representing the third of five risk levels (negligible, low, medium, high and severe). The rating measures the degree to which a company's economic value is at risk based on ESG factors. Sustainalytics uses absolute risk categories and quantitative scores ranging from 0 to 40+ to offer comparable scoring across all rated companies and industries.

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## 7.2 MEMBERSHIPS

### UN Global Compact

BioNTech  signed the **UN Global Compact** on 9 March 2020 and committed to submitting an annual progress report. The Sustainability Report 2022 also serves as a Communication on Progress (CoP) in line with the UN Global Compact.

The UN Global Compact is the world's largest and most important initiative for responsible corporate governance. Based on 10 universal principles and the Sustainable Development Goals (SDGs), it pursues the vision of an inclusive and sustainable global economy for the benefit of all people, communities and markets. Building on the 10 principles, signatories are called upon to promote the general goals of the United Nations, particularly the Sustainable Development Goals.

By signing the Global Compact, BioNTech shows that it shares this vision and intends to implement these corporate governance principles in its work. The Sustainable Development Goal 3 "Good health and well-being" is closely aligned with BioNTech's core business. The SDGs will remain an important point of reference for BioNTech in the future.

### German econsense Network

econsense is a network of internationally operating companies with the common goal of actively shaping the transition to a more sustainable economy and society. econsense supports its  members in anchoring sustainability in operations and strategy, as well as along the supply chain. The network tracks and analyzes all of the relevant issues spanning environmental protection to human rights and always with a focus on the business case for sustainability. By exchanging with business, politics, and civil society, econsense proactively addresses sustainability challenges and advocates frameworks and policies that facilitate business innovation and competitiveness. This makes econsense a valued thought leader, advisor, and partner in matters of sustainability.

### German B.A.U.M. Network

B.A.U.M. e.V. is a network committed to a future worth living through sustainable management. Founded in 1984 and with over  700 members, the association is a strong voice for sustainably operating companies and a driving force for sustainable development in Europe.

B.A.U.M. supports its members in the establishment and further development of sustainability strategies and brings together actors from business, politics, science, media and associations. The association's objective is the transformation to a social-ecological market economy based on the guiding principles of the United Nations' Sustainable Development Goals (SDG) and the Paris Agreement on climate protection.

Internationally, B.A.U.M. is a founding member of the International Network for Environmental Management e.V. (INEM).

### "Charta der Vielfalt" (Diversity Charter)

The "Charta der Vielfalt" is a German employer initiative to promote diversity within companies and institutions. The aim of the initiative is to advance the recognition, appreciation and inclusion of diversity in the work world in Germany. Signatories strive to create a work environment that is free of prejudice. All employees should be valued and feel appreciated regardless of their gender, gender identity, nationality, ethnic origin, religion, beliefs, disability, age, sexual orientation or identity.

As a  signatory to this initiative, BioNTech is committed to promoting diversity and creating an appreciative work environment at BioNTech and in the working world. ● **GRI 2-28; GRI 2-29**



econsense



charta der vielfalt  
Für Diversity in der Arbeitswelt



**List of Memberships** • GRI 2-28

This list contains BioNTech's most important memberships.

- American Association for Cancer Research (AACR)
- American Chamber of Commerce in Germany e.V.
- American Society for Mass Spectrometry (ASMS)
- American Society of Clinical Oncology (ASCO)
- American Society of Tropical Medicine and Hygiene (ASTMH)
- Arbeitsgemeinschaft für Pharmazeutische Verfahrenstechnik e.V.
- Association of American Physicians (AAP)
- Biotechnologie-Industrie-Organisation Deutschland e.V. (BIO Deutschland e.V.)
- Bundesdeutscher Arbeitskreis für Umweltbewusstes Management (B.A.U.M.) e.V.
- Bundesverband Materialwirtschaft, Einkauf und Logistik e.V. (BME)
- Chambre de Commerce et D'Industrie France-Amerique
- Cluster for Individualized Immune Intervention (Ci3) e.V.
- DECHEMA Gesellschaft für Chemische Technik und Biotechnologie e.V.
- DIRK – Deutscher Investor Relations Verband e.V.
- DSAG - Deutschsprachige SAP-Anwendergruppe e.V.
- econsense – Forum Nachhaltige Entwicklung der Deutschen Wirtschaft e.V.
- European Society for Medical Oncology (ESMO)
- Freiwillige Selbstkontrolle für die Arzneimittelindustrie e.V.
- gesundheitswirtschaft rhein-main e.V.
- Hessenchemie – Arbeitgeberverband Chemie und verwandte Industrien für das Land Hessen e.V.
- IHK – Industrie- und Handelskammer für Koblenz
- IHK – Industrie- und Handelskammer für München und Oberbayern
- IHK – Industrie- und Handelskammer für Rheinhessen
- IHK – Industrie- und Handelskammer Halle-Dessau
- IHK – Industrie- und Handelskammer zu Berlin
- International Society For Advancement of Cytometry (CYTO/ISAC)
- International Society for Cell & Gene Therapy (ISCT)
- Kita Bio Regio e.V.
- Mainzer Wissenschaftsallianz e.V.
- Massachusetts Biotechnology Council
- Max Bergmann Kreis e.V.
- Project Management Institute (PMI)
- Research Quality Association Ltd.
- Singapore Business Federation
- Society for Immunotherapy of Cancer (SITC)
- The American Association of Pharmaceutical Scientists (AAPS)
- The Foundation for the Global Compact
- The National Association for EHS&S Management (NAEM)
- Verband der Chemischen Industrie e.V. (VCI)
- Verband Forschender Arzneimittelhersteller e.V. (vfa)
- Vereinigung für Sicherheit in der Wirtschaft e.V.
- Vienna BioCenter – Wissenschaftliche Standortgemeinschaft
- Zentrale zur Bekämpfung unlauteren Wettbewerbs e.V.



# 8.0 Appendix & Data



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# 8.0 Appendix & Data

## 8.1 ABOUT THIS REPORT

The Sustainability Report 2022 is the third corporate responsibility and sustainability report of the BioNTech Group. It was published on 27 March 2023. The reporting period corresponds to the 2022 financial year. As a general rule, the data relevant for reporting relate to the 2022 financial year.

The editorial deadline for this report was the end of March 2022 to be able to adequately present relevant developments. Topics with relevance beyond the 2022 financial year are therefore part of the report and indicated appropriately. The sustainability report complies with the requirements of Sections 289b et seq. and 315b et seq. of the German Commercial Code (HGB) and includes what is referred to as “non-financial aspects” of the Company’s activities (environmental, employee and social issues, human rights, anti-corruption and anti-bribery) that are relevant for an understanding of its business performance and position.

This report has been prepared in accordance with the Universal Standards 2021 of the Global Reporting Initiative (GRI) (see [➔ 8.4 GRI Content Index](#)). ● **GRI 2-3**

The Company’s CSR management program is to be updated in accordance with the results of its ongoing materiality assessment and will be presented in the Sustainability Report 2023.

## 8.2 VERIFICATION

The Supervisory Board has examined the contents of the Sustainability Report 2022 in accordance with Section 171 (1) AktG. The Supervisory Board found that the content of the report complies with the requirements of Sections 289b et seq. and 315b et seq. HGB. It also stated that the report is coherent in relation to the adopted strategy and corporate policy of the Management Board with regard to non-financial objectives and the concepts developed for this purpose. The Sustainability Report 2022 was reviewed with regard to the statements in the group management report on the opportunities and risks of the future development of the Company. Following the outcome of the Supervisory Board’s review, there were no objections raised to the Sustainability Report 2022 for the 2022 financial year. ● **GRI 2-14**



### 8.3 FORWARD-LOOKING STATEMENTS AND DISCLAIMER

This report contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. In some cases, forward-looking statements can be identified by terminology such as “will,” “may,” “should,” “expects,” “intends,” “plans,” “aims,” “anticipates,” “believes,” “estimates,” “predicts,” “potential,” “continue,” or the negative of these terms or other comparable terminology, although not all forward-looking statements contain these words. The forward-looking statements in this report are neither promises nor guarantees, and you should not place undue reliance on these forward-looking statements because they involve known and unknown risks, uncertainties, and other factors, many of which are beyond BioNTech’s control and which could cause actual results to differ materially from those expressed or implied by these forward-looking statements. You should review the risks and uncertainties described under the heading “Risk Factors” in BioNTech’s Annual Report on Form 20-F for the year ended December 31, 2022 and in subsequent filings made by BioNTech with the SEC, which is available on the BioNTech website in the [Investors section](#). Except as required by law, BioNTech disclaims any intention or responsibility for updating or revising any forward-looking statements contained in this presentation in the event of new information, future developments or otherwise. These forward-looking statements are based on BioNTech’s current expectations and speak only as of the date hereof.

Furthermore, certain statements contained in this report relate to or are based on studies, publications, surveys and other data obtained from third-party sources and BioNTech’s own internal estimates and research. While BioNTech believes these third-party sources to be reliable as of the date of this report, it has not independently verified, and makes no representation as to the adequacy, fairness, accuracy or completeness of, any information obtained from third-party sources. In addition, any market data included in this report involves assumptions and limitations, and there can be no guarantee as to the accuracy or reliability of such assumptions. While BioNTech believes its own internal research is reliable, such research has not been verified by any independent source. In addition, BioNTech is the owner of various trademarks, trade names and service marks that may appear in this report. Certain other trademarks, trade names and service marks appearing in this report are the property of third parties. Solely for convenience, the trademarks and trade names in this presentation may be referred to without the ® and TM symbols, but such references should not be construed as any indicator that their respective owners will not assert, to the fullest extent under applicable law, their rights thereto.



## 8.4 DETAILED DATA

Energy Consumption<sup>1</sup> ● GRI 302-1; GRI 302-2; GRI 302-4

In MWh	% of total in 2022	2022	2021	2020	2019
<b>Direct energy consumption</b>					
Renewable energy generated on site	0.1	26	26	0	0
Coal	0	0	0	0	0
Natural gas	8.4	3,603	3,826	3,509	2,470
Heating oil	0	0	0	0	0
Fleet (petrol, diesel)	0.3	123	345	0	0
Biofuels	0	0	0	0	0
<b>Indirect energy consumption</b>					
Bought-in electricity	48.8	20,847	15,934	10,466	7,812
Thereof renewable bought-in electricity		17,476	14,440	1,042	943
% of renewable electricity		84	91	10	12
District heating	9.2	3,921	3,678	3,072	2,976
District cooling	15.5	6,629	5,814	0	0
Bought-in steam	17.4	7,432	7,219	0	0
Bought-in compressed air	0.3	110	107	0	0
<b>Total energy consumption</b>		<b>42,690</b>	<b>36,984</b>	<b>17,047</b>	<b>13,258</b>
Thereof renewable energy consumption		17,502	14,466	1,042	943
% of renewable energy		41	39	6	7

<sup>1</sup> Data is partially based on estimations and assumptions.

## Energy by Source

In MWh	% of total in 2022	2022	2021	2020	2019
Renewable energy sources	41.1	17,537	14,466	1,042	943
Natural gas	8.4	3,603	3,862	3,509	2,470
Coal, nuclear, petroleum fuels and/or similar energy sources	50.5	21,550 <sup>2</sup>	18,656 <sup>2</sup>	12,496	9,845
<b>Total energy</b>		<b>42,690</b>	<b>36,984</b>	<b>17,047</b>	<b>13,258</b>

<sup>2</sup> This includes electricity from non-renewable sources, district heating, district cooling, steam, compressed air, and fleet.



## Direct GHG Emissions (Scope 1) and Indirect GHG Emissions (Scope 2) ● GRI 305-1; GRI 305-2; GRI 305-5

In t CO <sub>2</sub> e	% of total in 2022	2022	2021	2020	2019
<b>Scope 1 emissions</b>	<b>20</b>	<b>801</b>	<b>886</b>	<b>704</b>	<b>607</b>
Coal		0	0	0	0
Natural gas		728	809	660	565
Heating oil		0	0	0	0
Fleet emissions		33	42	25	29
Process-related emissions		40	35	19	14
Refrigerants		0.03	0	0	0
<b>Scope 2 emissions (market-based)<sup>1</sup></b>	<b>80</b>	<b>3,162</b>	<b>2,337</b>	<b>3,851</b>	<b>2,748</b>
Electricity <sup>2</sup>		1,279	423	3,139	2,460
District heating		211	290	713	288
District cooling		0	0	0	0
Steam		1,672	1,624	Not collected	Not collected
Bought-in compressed air		0	0	0	0
<b>Total Scope 1 &amp; 2</b>		<b>3,963</b>	<b>3,223</b>	<b>4,555</b>	<b>3,356</b>
CO <sub>2</sub> e emissions from biofuels		0	0	0	0

<sup>1</sup> The market-based method was used for the calculation of Scope 2 carbon dioxide equivalent emissions from externally sourced energy (electricity, steam and district heating). The market-based method uses emission factors from BioNTech's renewable energy suppliers who fulfill internal quality criteria. For all other electricity, BioNTech uses residual mix factors (if available) and grid mix factors of the International Energy Agency (IEA). They are updated annually. The location-based Scope 2 emissions are also based on IEA data and equal 8,634 t CO<sub>2</sub>e.

<sup>2</sup> Scope 2 market-based calculation.

CO<sub>2</sub>e emissions missions relate to all our sites that are under BioNTech's operational control.

CO<sub>2</sub>e Emissions Scope 1 and 2 by Location<sup>3</sup>

In t CO <sub>2</sub> e	% of total in 2022	2022	2021	2020	2019
Mainz	12.0	474	393	2,122	2,243
Berlin	6.3	251	84	82	15
Idar-Oberstein	4.2	165	395	1,591	915
Martinsried	1.8	71	53	110	144
Neuried	0.4	16	31	46	38
Halle	0.4	16	9	11	-
Marburg	46.3	1,834	1,834	493	-
Vienna	0.1	3	2	-	-
Cambridge	3.9	155	78	101	-
Gaithersburg	24.7	979	345	-	-
<b>Total BioNTech</b>	<b>100</b>	<b>3,963</b>	<b>3,223</b>	<b>4,555</b>	<b>3,356</b>

<sup>3</sup> Scope 2 market-based calculation. Data is partially based on estimations and assumptions.



**Energy/CO<sub>2</sub> Intensity KPIs** ● GRI 2-4; GRI 302-3; GRI 305-4

	2022	2021 <sup>1</sup>	2020	2019
Cost of sales (in € m)	2,995.0	2,911.50	59.30	17.40
Energy use/cost of sales (in MWh/€ k) <sup>2</sup>	0.01	0.01	0.30	0.80
GHG emissions/cost of sales (in t/€ m)	374.12	497.98 <sup>1</sup>	104.20	334.10

**Other indirect GHG emissions (Scope 3)** ● GRI 2-4; GRI 305-3; GRI 305-5

In t CO <sub>2</sub> e	% in total of 2022	2022	2021 <sup>1</sup>	2020	2019
Upstream activities	99.8	1,114,662	1,444,411 <sup>1</sup>	1,624	2,445
Downstream activities	0.2	1,861	2,228 <sup>1</sup>	Not collected	Not collected
<b>Total Scope 3</b>		<b>1,116,523</b>	<b>1,446,639<sup>1</sup></b>	<b>1,624</b>	<b>2,445</b>

<b>Total Scope 1-3 (in t CO<sub>2</sub>e)</b>		<b>1,120,486</b>	<b>1,449,862<sup>1</sup></b>	<b>6,179</b>	<b>5,801</b>
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<sup>1</sup> 2021 recalculated due to corrections in purchasing data using a comprehensive environmental input-output model and corrected transports, including WTT (well-to-tank).

<sup>2</sup> Unit corrected due to error.

**Waste Generated<sup>2</sup>** ● GRI 306-3; GRI 306-4; GRI 306-5

In t	% of total in 2022	2022	2021	2020	2019
<b>Hazardous waste</b>	<b>18.6</b>	<b>277</b>	<b>247</b>	<b>274</b>	<b>214</b>
Energy recovery		277	247	274	214
Incineration		0	0	0	0
Landfill		0	0	0	0
Recycling		0	0	0	0
<b>Non-hazardous waste</b>	<b>81.4</b>	<b>1,211</b>	<b>650</b>	<b>1,283</b>	<b>157</b>
Energy recovery		1,211	650	1,283	157
Incineration		0	0	0	0
Landfill		0	0	0	0
Recycling		Not collected	Not collected	Not collected	Not collected
<b>Total waste<sup>2</sup></b>		<b>1,488</b>	<b>897</b>	<b>1,558</b>	<b>371</b>

<sup>2</sup> Data was provided mainly by external service providers.

**Water and Wastewater<sup>3</sup>** ● GRI 303-3; GRI 303-4

In thousand cubic meters	2022	2021	2020	2019
Total water withdrawal	75	72	25	15
Thereof from locations with water stress <sup>4</sup>	0	Not collected	Not collected	Not collected
Total water discharge	75	72	25	15

<sup>3</sup> Data was provided mainly by external service providers. Data is partially based on estimations and assumptions. All water withdrawal represents fresh water.

<sup>4</sup> Locations with water stress were assessed using the water depletion ratio from WWF "Water Risk Filter".



**TCFD**

Type of risk/opportunity	Description
Transition risks – 1.5°C scenario <sup>1</sup> based on the IEA NZE report	Along the supply chain, opportunities can be derived as raw material prices are decreasing. This is linked to decreasing energy prices, fostered by the transition to renewable energies, as well as efficiency gains. Fossil fuel use, which may lead to high carbon costs, is limited along the supply chain in the future. Transportation is generating risks, especially for long-distance routes, as air transport will be impacted by increasing carbon prices or alternative fuels.
Physical risks – Supply chain IPCC RCP 4.5 scenario	In the chosen scenario and for the assessed timeframe, BioNTech’s international suppliers, in particular, face a variety of potential high-impact risks (risks that could halt production for an extended period or even completely), from rising sea levels and floods to convective storms and tropical cyclones. European suppliers are particularly impacted by convective storms; however, this typically results in minor property damage not affecting business continuity. Heatwaves pose a medium risk to all suppliers in 2030, with risk significantly increasing in 2050. The resulting higher energy costs and employee productivity losses will not likely be passed on to BioNTech in 2030 but may result in higher raw material prices in 2050 and sourcing delays.
Physical risks – Own production sites IPCC RCP 4.5 scenario	Heatwaves across all sites are resulting in higher production costs to meet the increased cooling demand. International sites show the highest physical risks due to heatwaves, floods, and sea level rise. This may lead to asset damage and/or business interruption. German sites are mainly impacted by convective storms, which typically lead to only minor property damage. However, Berlin, Mainz and Halle are also close to flood areas.
Physical risks – Logistic and distribution IPCC RCP 4.5 scenario	Under this scenario, BioNTech’s largest distribution centers in Germany would be highly affected by heatwaves in 2030. Thus, BioNTech could face increased energy costs for cooling and be affected should the cooling system fail. Regarding transport, heatwaves impact refrigerated trucking by disturbing the cold chain and endangering the stability of the vaccines. Generally, the highest impact due to heatwaves can be seen in regions south of the equator or in the Mediterranean and tropical climate zones, where temperatures will already reach significantly higher levels in 2030 compared to today.
Opportunities	There may be a link between rising temperatures as a result of climate change and an increased incidence of infectious diseases, especially affecting populations that are exposed to these infectious diseases in particularly vulnerable parts of the world. BioNTech aims to develop and provide medicines to help affected people while further reducing the Company’s impact on the environment. BioNTech could play an important role in minimizing the toll such infectious diseases could take on vulnerable populations.



**Number of Employees** • GRI 2-7; GRI 405-1

	2022				2021				2020			
	Men	Women	Diverse	Total	Men	Women	Diverse	Total	Men	Women	Diverse	Total
Employees	2,340	2,352	0	<b>4,692</b>	1,533	1,605	Not collected	<b>3,138</b>	949	1,098	Not collected	<b>2,047</b>
Permanent employees	1,647	1,805	0	<b>3,452</b>								
Temporary employees	612	471	0	<b>1,083</b>								
Full-time employees	2,186	1,955	0	<b>4,141</b>								
Part-time employees	154	397	0	<b>551</b>								
Non-guaranteed hours employees	81	76	0	<b>157</b>								

**Quarterly Average of Employees by Function**

Headcount, excluding Management Board, trainees and interns	31 Dec 2022	31 Dec 2021	31 Dec 2020	31 Dec 2019	31 Dec 2018
Clinical Research & Development	243	137	113	81	46
Scientific Research & Development	1,302	875	586	414	300
Operations	1,240	863	490	376	268
Quality	383	322	184	129	105
Support Functions	828	431	218	126	97
Commercial & Business Development	108	66	33	69	28
<b>Total</b>	<b>4,104</b>	<b>2,694</b>	<b>1,624</b>	<b>1,195</b>	<b>844</b>

**Employees by Function as of end of Reporting Period**

Headcount, excluding Management Board, trainees and interns	31 Dec 2022	31 Dec 2021	31 Dec 2020	31 Dec, 2019	31 Dec 2018
Clinical Research & Development	274	153	128	90	52
Scientific Research & Development	1,512	1,026	661	459	338
Operations	1,365	1,036	699	416	305
Quality	413	301	234	142	118
Support Functions	983	539	276	139	109
Commercial & Business Development	145	83	49	77	31
<b>Total</b>	<b>4,692</b>	<b>3,138</b>	<b>2,047</b>	<b>1,323</b>	<b>953</b>



## New Employees • GRI 401-1

	2022	2021	2020	2019
<b>Total number of new employee hires</b>	<b>1,944</b>	<b>1,372</b>	<b>501</b>	<b>538</b>
By age group				
Up to 29 years old	535	496	233	239
30–49 years old	1,010	784	230	269
50 years or older	399	92	38	30
By gender				
Women	995	740	251	274
Men	949	632	250	264
By region				
Europe (incl. UK)	1,671	1,207	468	537
US	270	162	33	1
Others	3	3	0	0
<b>Rate of new employee hires (in %) <sup>1</sup></b>	<b>41.43</b>	<b>43.72</b>	<b>24.47</b>	<b>40.67</b>
By age group				
Up to 29 years old	40.59	60.86	49.79	58.72
30–49 years old	36.75	39.44	17.33	34.53
50 years or older	63.74	27.46	15.08	21.90
By gender				
Women	42.30	46	22.86	36.98
Men	40.56	41	26.34	45.36
By region				
Europe (incl. UK)	39.29	42	23.96	40.68
US	62.07	70	35.11	33.3
Others	75.00	100	–	–

<sup>1</sup> Formula for calculating the rate of new employee hires: Number of new employee hires divided by number of employees at the end of the financial year. The calculation method has changed compared to the method used in last year's report to show the new employee hire rates within the relevant subgroups of employees.

## Employees by regions • GRI 2-7

	Total number of employees 2022	Share of employees (in %) 2022	Total number of employees 2021	Share of employees (in %) 2021
Asia	4	0.08	3	0.10
US	435	9.13	233	7.43
Africa <sup>2</sup>	0	0	0	0
EU	4,311	90.45	2,898	92.35
UK	16	0.34	4	0.13

<sup>2</sup> Excluding contingent workers.

## Fair representation of women • GRI 401-5

As of 31 December	Total number of employees			
	2022	2021	2020	2019
Women	2,352	1,605	1,098	741
Men	2,340	1,533	949	582
<b>Total</b>	<b>4,692</b>	<b>3,138</b>	<b>2,047</b>	<b>1,323</b>

All employee data excludes contingent workers.



**Employee Turnover<sup>1</sup>** • GRI 2-4; GRI 401-1; HC-BP-330a.2

	2022	2021 <sup>2</sup>	2020	2019
<b>Total turnover rate (in %)</b>	<b>8.82</b>	<b>7.65</b>	<b>11.58</b>	<b>12.80</b>
By age group				
Up to 29 years old	3.17	2.97	5.11	5.19
30–49 years old	4.41	3.97	5.23	6.53
50 years or older	1.24	0.71	1.23	1.09
By gender				
Women	4.43	4.75	6.03	7.36
Men	4.48	2.90	5.54	5.44
By region				
Europe (incl. UK)	7.21	6.76	11.21	12.80
US	1.58	0.89	0.37	0
Others	0.02	0	0	0
Voluntary turnover rate <sup>3</sup>	4.66	Not collected	Not collected	Not collected

<sup>1</sup> Formula for calculating the turnover rate: number of leavers divided by quarterly average total employee headcount of BioNTech SE. Quarterly averages are not available per subgroup. Figures should therefore be interpreted accordingly.

<sup>2</sup> 2021 figures corrected due to error.

<sup>3</sup> Proportion of employees who chose to leave BioNTech in the reporting period expressed as a percentage of total employees.

	2022	2021	2020	2019
<b>Total number of leavers</b>	<b>362</b>	<b>206</b>	<b>188</b>	<b>153</b>
By age group				
Up to 29 years old	119	80	83	62
30–49 years old	155	107	85	78
50 years or older	37	19	20	13
By gender				
Women	178	128	98	88
Men	184	78	90	65
By region				
Europe (incl. UK)	296	182	182	153
US	65	24	6	0
Others	1	0	0	0
By type according to SASB HC-BP-330a.2				
Executives/senior managers voluntary and involuntary turnover rate	32	5	5	6
Mid-level managers voluntary and involuntary turnover rate	24	14	17	13
Professionals voluntary and involuntary turnover rate	95	33	45	40
All others voluntary and involuntary turnover rate	211	154	121	94



## Parental Leave in Germany • GRI 401-3

As of 31 December	2022	2021	2020	2019
Employees entitled to parental leave	185	188	136	101
Thereof women	112	118	89	61
Thereof men	73	70	47	40
Employees that took parental leave in the reporting year	185	188	133	95
Thereof women	112	118	89	60
Thereof men	73	70	44	35
Employees that returned to work in the reporting year, after parental leave ended	74	100	65	53
Thereof women	16	58	31	21
Thereof men	58	42	34	32
Return to work rate <sup>1</sup> (in %)	100.0	97.0	94.2	93.0
Women	100.0	96.6	93.9	91.3
Men	100.0	97.6	94.4	94.1
Retention rate <sup>2</sup> (in %)		94.0	89.0	89.0
Women	Figures will be available on 31 December 2023	96.6		
Men		90.5		

1 Formula for calculating the rate of return to work: total number of employees who returned to work after parental leave divided by total number of employees due to return to work after taking parental leave.

2 Formula for calculating the rate of retention: total number of employees retained for 12 months after returning to work from parental leave divided by total number of employees returning from parental leave in the prior reporting period(s).

## Work-Related Injuries • GRI 403-9

	2022	2021	2020	2019
Number of fatalities as a result of work-related injuries	0	0	0	0
Rate of fatalities as a result of work-related injuries in % <sup>1</sup>	0	0	0	0
Number high-consequence-work-related injuries (excluding fatalities)	0	0	0	0
Rate of high-consequence-work-related injuries (excluding fatalities) in % <sup>2</sup>	0	0	0	0
Number of recordable work-related injuries at the BioNTech facilities in Mainz <sup>3</sup>	17	2	4	2
Lost time accident rate (LTAR) at the BioNTech facilities in Mainz <sup>4</sup>	0.902	0.1328	0.2756	0.169

1 Number of fatalities as a result of work-related injury divided by number of hours worked and multiplied by 200,000. Work-related injuries are those that arise from exposure to hazards at work.

2 High-consequence, work-related injuries (excluding fatalities) divided by number of hours worked and multiplied by 200,000. A high-consequence, work-related injury is a work-related injury that results in a fatality or in an injury from which the worker cannot, does not, or is not expected to recover fully to pre-injury health status within six months.

3 Work-related injuries are work-related injuries or ill health that result in any of the following: death, days away from work, restricted work, transfer to another job, medical treatment beyond first aid, loss of consciousness or significant injury or ill health diagnosed by a physician or other licensed healthcare professional, even if it does not result in death, days away from work, restricted work or job transfer, medical treatment beyond first aid, or loss of consciousness.

4 Number of recordable work-related injuries divided by number of hours worked and multiplied by 200,000.



**Donations**

This list contains BioNTech's monetary and in-kind-donations. The completeness of this list cannot be guaranteed for the Sustainability Report 2022.

Donation recipient/vendor	Purpose	Monetary/In-kind donations	Donation amount in euros (Exchange rate reference date 15 February 2023)
ACIR Fritsch Foundation	Health-Related Cause	Monetary donation	22,073.11
Anne-Frank-Realschule plus Mainz	Regional Cause	In-kind donation	No financial value for BNT
Ärzte ohne Grenzen e.V. <sup>1</sup>	Health-Related Cause	Monetary donation	2,000.00
Berliner Tafel e.V.	Regional Cause	Monetary donation	3,000.00
BRETZENHEIM gestalten e.V., (Nachhaltigkeitsinitiative Bretzenheim)	Regional Cause	Monetary donation	250.00
Caritasverband Mainz e.V.	Regional Cause	Monetary donation	10,000.00
Caritasverband Mainz e.V.	Regional Cause	Monetary donation	2,000.00
Childrens Hospital Kyiv	Exceptional Cause	Monetary donation	100,000.00
Deutsch-Ukrainische Gesellschaft Rhein-Neckar e.V.	Exceptional Cause	Monetary donation	15.00
DLRG Idar-Oberstein e.V.	Regional Cause	Monetary donation	1,000.00
DLRG Ingelheim am Rhein e.V.	Regional Cause	Monetary donation	2,500.00
Evangelische Stadtmission Halle e. V.	Regional Cause	Monetary donation	500.00
Food For Free (Cambridge)	Regional Cause	Monetary donation	560.75
Förderverein der Grundschule im Feldgarten e.V.	Regional Cause	Monetary donation	250.00
Förderverein für Tumor- und Leukämiekranke Kinder e.V.	Health-Related Cause	Monetary donation	5,000.00
Förderverein für Tumor- und Leukämiekranke Kinder e.V.	Regional Cause	Monetary donation	1,000.00
Frederick County Community College <sup>2</sup>	Regional Cause	In-kind donation	3,271.03
Freiwillige Feuerwehr Mainz-Stadt 1864 e.V.	Regional Cause	Monetary donation	500.00
GfM – Förderverein der IGS Mainz-Bretzenheim	Regional Cause	Monetary donation	250.00
Hallescher-Ruder-Club e.V.	Regional Cause	Monetary donation	3,000.00
Holzkirchner Tafel e.V.	Regional Cause	Monetary donation	500.00
in.betrieb Gesellschaft für Teilhabe und Integration	Regional Cause	Monetary donation	2,000.00

<sup>1</sup> Condolence donation.

<sup>2</sup> Divided into three individual donations between €467.29 and €2,336.45.



Donation recipient/vendor	Purpose	Monetary/In-kind donations	Donation amount in euros (Exchange rate reference date 15 February 2023)
Integrierte Gesamtschule Anna Seghers Mainz	Regional Cause	In-kind donation	No financial value for BNT
Integrierte Gesamtschule Auguste Cornelius Mainz-Hechtsheim	Regional Cause	In-kind donation	No financial value for BNT
IUIS Central Office	Health-Related Cause	Monetary donation	20,000.00
Kanonikus-Kir-Realschule plus (Kulturschule) & Fachoberschule Mainz	Regional Cause	In-kind donation	No financial value for BNT
Kita Bio Regio	Regional Cause	Monetary donation	1,000.00
Leben mit Krebs Marburg e.V.	Regional Cause	Monetary donation	5,000.00
Mainzer Tafel e.V.	Regional Cause	Monetary donation	39,000.00
Make-A-Wish® Deutschland gGmbH	Health-Related Cause	Monetary donation	4,000.00
Montgomery County Community College <sup>3</sup>	Regional Cause	In-kind donation	11,682.25
Münchener Tafel e.V.	Regional Cause	Monetary donation	1,500.00
ÖFO – Ökumenische Flüchtlingshilfe Oberstadt e.V.	Regional Cause	Monetary donation	1,500.00
Ökumenisch-Öffentliche Bücherei Dolgesheim	Regional Cause	Monetary donation	100.00
Realschule Plus Mainz-Lerchenberg im Carl-Zuckmayer-Schulzentrum	Regional Cause	In-kind donation	No financial value for BNT
Regionales Diakonisches Werk	Regional Cause	Monetary donation	2,500.00
Robert-Koch-Stiftung e.V.	Regional Cause	Monetary donation	10,000.00
Stadtsportverband Mainz e.V.	Regional Cause	Monetary donation	500.00
Stiftung kreuznacher diakonie Kirchliche Stiftung des öffentlichen Rechts	Regional Cause	Monetary donation	6,500.00
Tafel Marburg e.V.	Regional Cause	Monetary donation	9,000.00
United Way of Central Maryland	Regional Cause	In-kind donation	5,607.48
UNO-Flüchtlingshilfe e.V.	Exceptional Cause	Monetary donation	1,000,000.00
unplugged – Das Beratungscafé	Regional Cause	Monetary donation	750.00
Unterwegs für eine gerechte Welt e.V.	Regional Cause	Monetary donation	1,500.00
Verein der Freunde und Förderer der Marc-Chagall-Schule	Regional Cause	Monetary donation	2,400.00
we-SHARE e.V. (café international)	Regional Cause	Monetary donation	1,000.00

<sup>3</sup> Divided into eight individual donations between €467.29 and €4,672.90.



## 8.5 GRI AND SASB CONTENT INDICES, INCLUDING UN SUSTAINABLE DEVELOPMENT GOALS (SDGS) AND PRINCIPLES OF THE UN GLOBAL COMPACT

### GRI

BioNTech's sustainability reporting is guided by the standards of the Global Reporting Initiative (GRI). This report was prepared in accordance with the current version of the guidelines, the GRI Universal Standards 2021. In the GRI Content Index, readers will find an overview of all reported indicators, including references to the corresponding text passages.

### SASB

In the Sustainability Report 2020, BioNTech started to apply the industry standards for the "Biotechnology & Pharmaceuticals"

industry of the Sustainability Accounting Standards Board (SASB) to identify, manage and communicate financially material sustainability information to shareholders. In the SASB Content Index, readers will find an overview of all reported SASB indicators, including references to the corresponding text passages.

### UNGC and SDGs

By signing the 10 principles underlying the United Nations Global Compact (UNGC), BioNTech has explicitly committed to respecting human rights and labor standards, and promoting environmental protection in its business operations and preventing corruption.

BioNTech supports the UNGC with the objective of contributing to the global implementation of its 10 principles and the Sustainable Development Goals (SDGs). BioNTech has integrated the UNGC principles into its business processes and is carrying out concrete actions to enforce them. The GRI Content Index references the 10 principles and corresponding text passages. The overall Sustainability Report 2022 therefore also serves as the Company's Communication on Progress Report for the UN Global Compact. The UN's 17 Sustainable Development Goals (SDGs) have been also cross-referenced in this report's content index whenever applicable.

### GRI Content Index

**Statement of use:** BioNTech has reported the information cited in this GRI content index for the 2022 reporting year in accordance with the GRI Standards.

Code	Indicator	SDG (2022)	UNGC Principle	Page Number	Comments/Omissions
<b>GRI 1 used: GRI 1: Foundation 2021</b>					
<b>GRI 2: General Disclosures 2021 (BioNTech Material Topic: Governance)</b>					
2-1	Organizational details			9	
2-2	Entities included in the organization's sustainability reporting			9	
2-3	Reporting period, frequency and contact point			82, 102	
2-4	Restatements of information			70, 86, 90	BioNTech recalculated its Scope 3 emissions for 2021 due to corrections in purchasing and transport data. The Company also corrected its 2021 turnover rate.
2-5	External assurance				BioNTech did not seek independent external assurance for this report.
2-6	Activities, value chain and other business relationships			9	
2-7	Employees	8, 10	6	67, 88, 89	
2-8	Workers who are not employees	8, 10	6		In 2022, 137 agency workers that were not directly employed by BioNTech worked for the Company.



Code	Indicator	SDG (2022)	UNGC Principle	Page Number	Comments/Omissions
2-9	Governance structure and composition	5, 16			<a href="https://investors.biontech.de/corporate-governance/">https://investors.biontech.de/corporate-governance/</a>
2-10	Nomination and selection of the highest governance body	5, 16			<a href="https://investors.biontech.de/static-files/bee07085-78a5-4b1a-bc1c-f2284579f132">https://investors.biontech.de/static-files/bee07085-78a5-4b1a-bc1c-f2284579f132</a> (see § 2, “Rules of Procedure for the Supervisory Board”)
2-11	Chair of the highest governance body	16			<a href="https://www.biontech.com/int/en/home/about/our-board-members.html">https://www.biontech.com/int/en/home/about/our-board-members.html</a>
2-12	Role of the highest governance body in overseeing the management of impacts	16		11	
2-13	Delegation of responsibility for managing impacts			11	
2-14	Role of the highest governance body in sustainability reporting			82	BioNTech’s COO Sierk Poetting and the Company’s Disclosure Committee have reviewed and approved the information in this report, including BioNTech’s material topics.
2-15	Conflicts of interest	16		36	See also: <a href="https://investors.biontech.de/static-files/bee07085-78a5-4b1a-bc1c-f2284579f132">https://investors.biontech.de/static-files/bee07085-78a5-4b1a-bc1c-f2284579f132</a> (§ 2(3), 5(6), 12(2), “Rules of Procedure for the Supervisory Board”)
2-16	Communication of critical concerns			33, 34	Critical concerns are directly reported to BioNTech’s Chief Operating Officer through the Company’s compliance team. For confidentiality reasons, the total number and nature of concerns will not be reported here.
2-17	Collective knowledge of the highest governance body				<a href="https://investors.biontech.de/corporate-governance/">https://investors.biontech.de/corporate-governance/</a>
2-18	Evaluation of the performance of the highest governance body				<a href="https://investors.biontech.de/corporate-governance/">https://investors.biontech.de/corporate-governance/</a>
2-19	Remuneration policies				<a href="https://investors.biontech.de/static-files/0481d7a7-fc5f-40f6-8555-0343a08a4848">https://investors.biontech.de/static-files/0481d7a7-fc5f-40f6-8555-0343a08a4848</a>
2-20	Process to determine remuneration	16	6	30, 74	
2-21	Annual total compensation ratio				Information unavailable.
2-22	Statement on sustainable development strategy		1–10	5	
2-23	Policy commitments	16	1–6, 7, 10	35, 36, 40	
2-24	Embedding policy commitments			33	
2-25	Processes to remediate negative impacts			33	
2-26	Mechanisms for seeking advice and raising concerns	16	1–6, 7, 10	33, 34, 39	
2-27	Compliance with laws and regulations	16			Not reported due to confidentiality constraints.
2-28	Membership associations			79, 80	
2-29	Approach to stakeholder engagement			14, 79	
2-30	Collective bargaining agreements	8	3		Information incomplete. BioNTech applies the federal collective bargaining agreement of the chemical industry at its Marburg site and maintains several company agreements (Betriebsvereinbarungen).



Code	Indicator	SDG (2022)	UNGC Principle	Page Number	Comments/Omissions
<b>GRI 3: Material Topics 2021</b>					
3-1	Process to determine material topics			14	
3-2	List of material topics			14	
<b>GRI 201: Economic Performance 2016 (BioNTech Material Topic: Sustainable Growth and Culture)</b>					
3-3	Management of material topics			41	
201-1	Direct economic value generated and distributed	8, 9		10	
201-2	Financial implications and other risks and opportunities due to climate change	13	7, 8, 9	62	
201-4	Financial assistance received from government			50	
<b>GRI 203: Indirect Economic Impacts 2016 (BioNTech Material Topic: Sustainable Growth and Culture)</b>					
3-3	Management of material topics			11	
203-2	Significant indirect economic impacts	1, 3, 8		11	
<b>GRI 205: Anti Corruption 2016 (BioNTech Material Topic: Governance)</b>					
3-3	Management of material topics			33	
205-1	Operations assessed for risks related to corruption	16	10	36	
205-2	Communication and training about anti-corruption policies and procedures	16	10	33	
205-3	Confirmed incidents of corruption and actions taken	16	10	36	
<b>GRI 207: Tax 2019 (BioNTech Material Topic: Governance)</b>					
3-3	Management of material topics			50	
207-1	Approach to tax	1, 10, 17		50	
207-2	Tax governance, control, and risk management	1, 10, 17		50	
<b>GRI 302: Energy 2016 (BioNTech Material Topic: Climate Protection)</b>					
3-3	Management of material topics			55	
302-1	Energy consumption within the organization	7, 8, 12, 13	7, 8, 9	59, 84	
302-2	Energy consumption outside of the organization	7, 8, 12, 13	7, 8	84	
302-3	Energy intensity	7, 8, 12, 13	7, 8	86	
302-4	Reduction of energy consumption	7, 8, 12, 13	8, 9	84	



Code	Indicator	SDG (2022)	UNGC Principle	Page Number	Comments/Omissions
<b>GRI 303: Water and Effluents 2018 (BioNTech Material Topic: Pollution and Waste)</b>					
3-3	Management of material topics			54	
303-1	Interactions with water as a shared resource	6, 12	7	54	
303-2	Management of water discharge-related impacts	6	7	54	
303-3	Water withdrawal	6	7, 8	54, 86	
303-4	Water discharge	6		86	
<b>GRI 305: Emissions 2016 (BioNTech Material Topic: Climate Protection)</b>					
3-3	Management of material topics			55	
305-1	Direct (Scope 1) GHG emissions	3, 12, 13, 14, 15	7, 8	56, 85	
305-2	Energy indirect (Scope 2) GHG emissions	3, 12, 13, 14, 15	7, 8	56, 85	
305-3	Other indirect (Scope 3) GHG emissions	3, 12, 13, 14, 15	7, 8	61, 86	
305-4	GHG emissions intensity	13, 14, 15	8	86	
305-5	Reduction of GHG emissions	13, 14, 15	8, 9	56, 85, 86	
<b>GRI 306: Waste 2020 (BioNTech Material Topic: Pollution and Waste)</b>					
3-3	Management of material topics			53	
306-1	Waste generation and significant waste-related impacts	3, 6, 12, 14		53	
306-2	Management of significant waste-related impacts	3, 6, 12		53	
306-3	Waste generated	3, 6, 12, 14, 15		53, 86	
306-4	Waste diverted from disposal	3, 12		85	
306-5	Waste directed to disposal	6, 14, 15		53, 86	
<b>GRI 308: Supplier Environmental Assessment 2016 (BioNTech Material Topic: Pollution and Waste)</b>					
3-3	Management of material topics			38	
308-1	New suppliers that were screened using environmental criteria		8		Information unavailable. Screening process to start in 2023.
308-2	Negative environmental impacts in the supply chain and actions taken		8		Information unavailable. Screening process to start in 2023.



Code	Indicator	SDG (2022)	UNGC Principle	Page Number	Comments/Omissions
<b>GRI 401: Employment 2016 (BioNTech Material Topic: Growth and Culture, Attractive Employer)</b>					
3-3	Management of material topics			66	
401-1	New employee hires and employee turnover	5, 8, 10	6	70, 89, 90	
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	3, 5, 8	6	71, 74	
401-3	Parental leave	5, 8	6	71, 91	
<b>GRI 402: Labor/Management Relations 2016 (BioNTech Material Topic: Attractive Employer)</b>					
3-3	Management of material topics			66	
402-1	Minimum notice periods regarding operational changes	8			Information unavailable.
<b>GRI 403: Occupational Health and Safety 2018 (BioNTech Material Topic: Safety and Health)</b>					
3-3	Management of material topics			76	
403-1	Occupational health and safety management system	3, 8, 16		76	
403-2	Hazard identification, risk assessment, and incident investigation	8		76	
403-3	Occupational health services	8		76	
403-4	Worker participation, consultation, and communication on occupational health and safety	8, 16		76	
403-5	Worker training on occupational health and safety	8		76	
403-6	Promotion of worker health	3		76	
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	8		76	
403-8	Workers covered by an occupational health and safety management system	8		76	
403-9	Work-related injuries	3, 8, 16		91	
<b>GRI 404: Training and Education 2016 (BioNTech Material Topic: Pioneer Development)</b>					
3-3	Management of material topics			72	
404-1	Average hours of training per year per employee	4, 5, 8, 10	6	72	
404-2	Programs for upgrading employee skills and transition assistance programs	8		72	
404-3	Percentage of employees receiving regular performance and career development reviews	5, 8, 10	6	72	



Code	Indicator	SDG (2022)	UNGC Principle	Page Number	Comments/Omissions
<b>GRI 405: Diversity and Equal Opportunity 2016 (BioNTech Material Topic: Equal Opportunity)</b>					
3-3	Management of material topics			73	
405-1	Diversity of governance bodies and employees	5, 8	6	74, 88	
405-2	Ratio of basic salary and remuneration of women to men	5, 8, 10	6		Information unavailable.
<b>GRI 406: Non-discrimination 2016 (BioNTech Material Topic: Equal Opportunity)</b>					
3-3	Management of material topics			73	
406-1	Incidents of discrimination and corrective actions taken	5, 8	6		Not reported due to confidentiality constraints.
<b>GRI 407: Freedom of Association and Collective Bargaining 2016 (BioNTech Material Topic: Governance)</b>					
3-3	Management of material topics			75	
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	8	2, 3	75	
<b>GRI 408: Child Labor 2016 (BioNTech Material Topic: Governance, Chapter: Human Rights)</b>					
3-3	Management of material topics			38	
408-1	Operations and suppliers at significant risk for incidents of child labor	8	2, 5		Information unavailable. Screening process to start in 2023.
<b>GRI 409: Forced or Compulsory Labor 2016 (BioNTech Material Topic: Governance)</b>					
3-3	Management of material topics			38	
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor				Information unavailable. Screening process to start in 2023.
<b>GRI 414: Supplier Social Assessment 2016 (BioNTech Material Topic: Governance)</b>					
3-3	Management of material topics		1-6	38	
414-1	New suppliers that were screened using social criteria	5, 8, 16			Information unavailable. Screening process to start in 2023.
414-2	Negative social impacts in the supply chain and actions taken	5, 8, 16	1-6		Information unavailable. Screening process to start in 2023.
<b>GRI 415: Public Policy 2016 (BioNTech Material Topic: Governance)</b>					
3-3	Management of material topics			50	
415-1	Political contributions	16		50	
<b>GRI 416: Customer Health and Safety 2016 (BioNTech Material Topic: Patient Safety)</b>					
3-3	Management of material topics			45	
416-1	Assessment of the health and safety impacts of product and service categories			47	
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	16		47	



Code	Indicator	SDG (2022)	UNGC Principle	Page Number	Comments/Omissions
<b>GRI 417: Marketing and Labeling 2016 (BioNTech Material Topic: Patient Safety)</b>					
3-3	Management of material topics			48	
417-1	Requirements for product and service information and labeling	12	7	48	
<b>GRI 418: Customer Privacy 2016 (BioNTech Material Topic: Patient Privacy)</b>					
3-3	Management of material topics			44	
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	16		44	
<b>BioNTech Material Topic: Animal Welfare (without reporting standard)</b>					
3-3	Management of material topics			49	
<b>BioNTech Material Topic: Innovation (without reporting standard)</b>					
3-3	Management of material topics			9	
<b>BioNTech Material Topic: Caring for Patients (without reporting standard)</b>					
3-3	Management of material topics			24	



## SASB Content Index

Code	Accounting Metric	Page Number	Comments
<b>Safety of Clinical Trial Participants</b>			
HC-BP-210a.1	Discussion, by world region, of management process for ensuring quality and patient safety during clinical trials	45	
HC-BP-210a.2	Number of FDA Sponsor Inspections related to clinical trial management and pharmacovigilance that resulted in: (1) Voluntary Action Indicated (VAI) and (2) Official Action Indicated (OAI)	47	
HC-BP-210a.3	Total amount of monetary losses as a result of legal proceedings associated with clinical trials in developing countries	47	
<b>Drug Safety</b>			
HC-BP-250a.1	List of products listed in the Food and Drug Administration's (FDA) MedWatch Safety Alerts for Human Medical Products database		No products listed in FDA MedWatch database.
HC-BP-250a.2	Number of fatalities associated with products as reported in the FDA Adverse Event Reporting System		 <b>FDA Adverse Event Reporting System</b>
HC-BP-250a.3	Number of recalls issued, total units recalled	47	
HC-BP-250a.5	Number of FDA enforcement actions taken in response to violations of current Good Manufacturing Practices (cGMP), by type	47	
<b>Counterfeit Drugs</b>			
HC-BP-260a.1	Description of methods and technologies used to maintain traceability of products throughout the supply chain and prevent counterfeiting	48	
<b>Ethical Marketing</b>			
HC-BP-270a.1	Total amount of monetary losses as a result of legal proceedings associated with false marketing claims	48	
<b>Employee Recruitment, Development &amp; Retention</b>			
HC-BP-330a.1	Discussion of talent recruitment and retention efforts for scientists and research and development personnel	69	
HC-BP-330a.2	(1) Voluntary and (2) involuntary turnover rate for: (a) executives/senior managers, (b) midlevel managers, (c) professionals, and (d) all others	70, 90	
<b>Supply Chain Management</b>			
HC-BP-430a.1	Percentage of (1) entity's facilities and (2) Tier I suppliers' facilities participating in the Rx-360 International Pharmaceutical Supply Chain Consortium audit program or equivalent third-party audit programs for integrity of supply chain and ingredients	40	
<b>Business Ethics</b>			
HC-BP-510a.1	Total amount of monetary losses as a result of legal proceedings associated with corruption and bribery	36	
HC-BP-510a.2	Description of code of ethics governing interactions with health care professionals	36	
<b>Activity Metrics</b>			
HC-BP-000.A	Number of patients treated		Clinical trials: 14,391 patients across 24 countries in 2022. Commercial activities: 1.8 billion vaccine doses shipped across 170 countries in 2022.
HC-BP-000.B	Number of drugs (1) in portfolio and (2) in research and development (Phases 1–3)		1 commercialized drug (BNT162b2). 24 drug candidates in Phases 1–3 (clinical trials).



## 8.6 IMPRINT

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**BioNTech SE**  
**Internal Communications &  
Corporate Social Responsibility**  
An der Goldgrube 12  
55131 Mainz  
Germany

Phone: +49 6131 9084-0  
Fax: +49 6131 9084-390

Email: [sustainability@biontech.de](mailto:sustainability@biontech.de)  
Website: [www.biontech.de](http://www.biontech.de)

District Court of Mainz  
HRB 48720  
VAT ID No. DE 263 382 495  
EORI No. DE 1070347

### Management Board

Prof. Ugur Sahin, M.D.  
Prof. Özlem Türeci, M.D.  
Sean Marett  
Sierk Poetting, Ph.D.  
Jens Holstein  
Ryan Richardson

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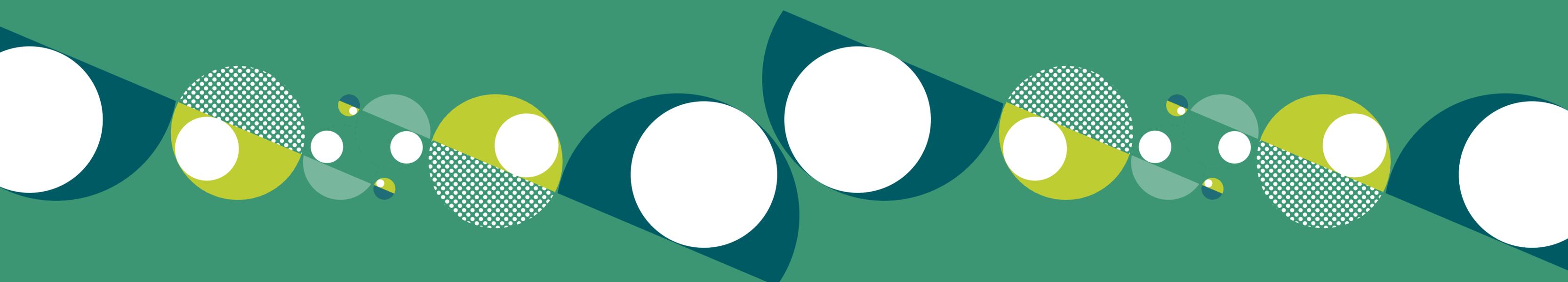
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### Contact Point ● GRI 2-3

Sven Griemert  
Director Corporate Social Responsibility  
and Human Rights Officer  
[sven.griemert@biontech.de](mailto:sven.griemert@biontech.de)





**BioNTech SE**  
**Internal Communications &**  
**Corporate Social Responsibility**  
An der Goldgrube 12  
55131 Mainz  
Germany