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Formerly ESG newsletter | Edition no.15

Q3 impact and sustainability update

Dear investors and analysts,

In the Q3 update, we highlight the key takeaways from our Impact & Health Equity annual event, followed by an update on the work of the Novartis Foundation.

We appreciate the engagement on all topics related to impact and sustainability, and particularly welcome feedback on governance topics this quarter, ahead of AGM 2024.

The top 10 questions and answers are included below.

Thank you.

For further questions or comments please contact

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Key takeaways from Impact & Health Equity annual event

On November 13, 2023, Novartis held its 10th annual event focused this year on Impact & Health Equity. Below are the key takeaways from the event:

01. **Focusing on innovation and access** to medicines to create value for the company while mitigating risks

02. Creating **impact** by fulfilling unmet medical need through delivering innovative, quality medicines to **as many people as possible**

03. Our **Access Principles** are designed to drive impact

04. Novartis has one of the **most extensive pipelines in Global Health** with 7 new chemical entities currently in human trials across 6 disease areas

05. **Long-term commitment, partnerships,** early access planning, trial diversity are critical success factors in Global Health

06. **Well positioned** to meet existing/emerging ESG reporting requirements in this complex **regulatory landscape**

You may view the recording of the webcast here, and the presentation deck can be accessed here.

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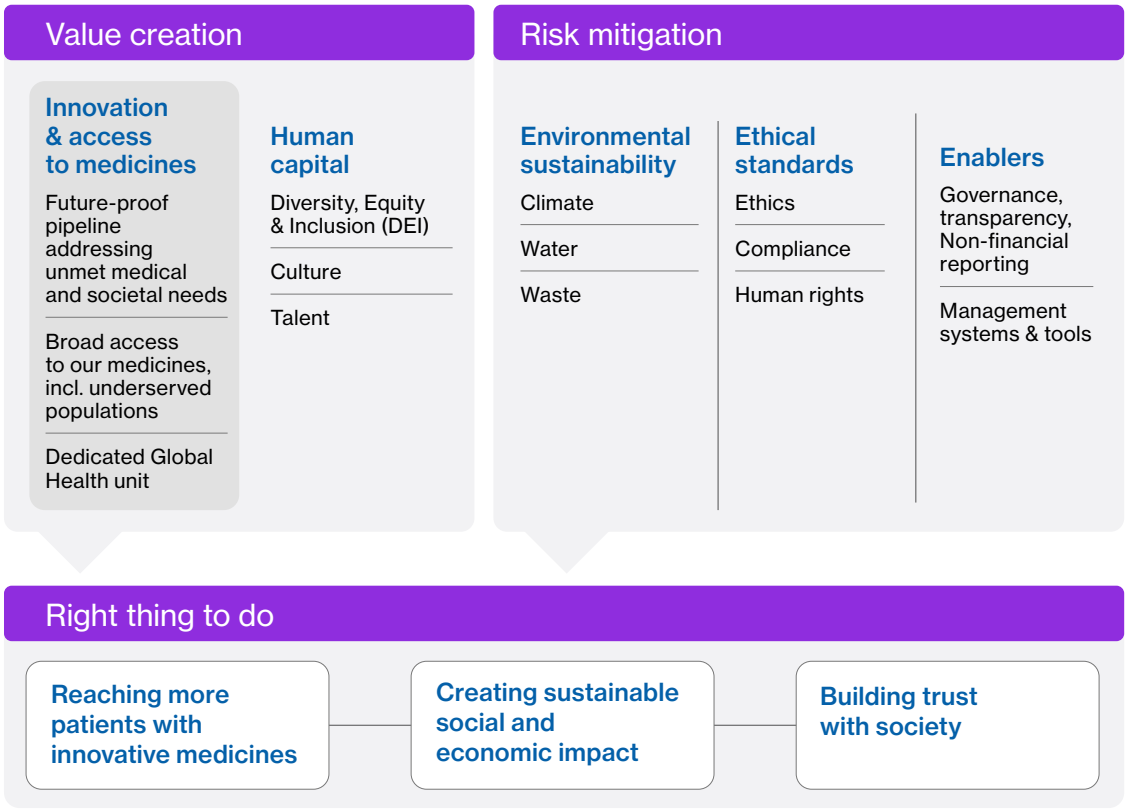
01. Focusing on innovation and access to medicines to create value for the company while mitigating risks

ESG means different things to different people. For Novartis, ESG is a framework to incorporate material environmental, social and governance factors to manage business risks whilst also ensuring that we deliver impact. We define impact as a change in wellbeing beyond what would have happened otherwise and must be measurable.

At Novartis, ESG is part of our ethos and we consistently measure our performance against our ESG priority areas and commitments.

Our aim is to create impact by fulfilling unmet medical need through delivering innovative, quality medicines to as many people as possible.



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02. Creating impact by fulfilling unmet medical need through delivering innovative, quality medicines to as many people as possible

We maximize impact by focusing on what we do best - discovering and developing breakthrough treatments and finding new ways to deliver them to as many people as possible. That's why we exist. Our medicines reach well over 250m patients - which is one of the largest footprints in the sector; we have a broad and rich pipeline that has yielded 40 new drug approvals in the last 2 decades; and we continue to invest in new technologies to remain at the leading edge of industry progress (e.g. radioligand therapies).

>250 million patients

reached with innovative medicines (2022)

~130 pipeline projects

further expanding patient reach

First gene, siRNA and radioligand therapies

(at scale), fulfilling unmet medical need

~40 new drug approvals

over the last 20 years, delivering innovative medicines

Recent innovation highlights:

Kisqali®	NATALEE eBC
Scemblix®	CML
Pluvicto®	Prostate cancer
iptacopan	PNH and C3G

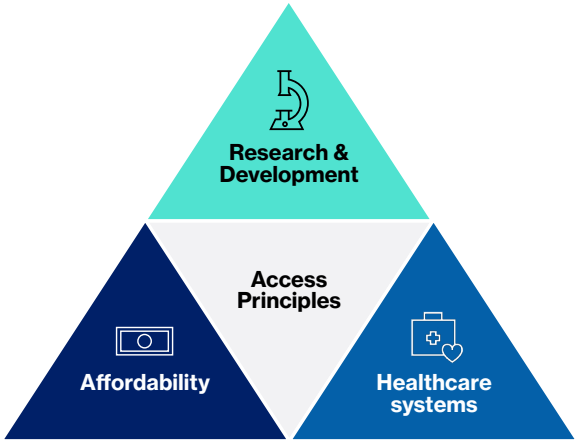
03. Our Access Principles are designed to drive impact

Our focus is to expand access to innovative medicines in low- and middle-income countries (LMICs).

We are committed to increasing patient reach with innovative medicines by at least 200% by 2025 and to increase patient reach of our Global Health programs in Leprosy, Malaria, Chagas Disease and Sickle Cell Disease (SCD) by at least 50% over the same time period.

Our Novartis Access Principles are designed to drive impact, with 100% of launches having a global access strategy.

Bringing more of our medicines to more people, no matter where they are.



Selected examples

R&D

Trial diversity strategy

Adaptive development: Modification of medicines for vulnerable populations

Affordability

Tiered pricing framework (EMBs)

Sub-Saharan Africa: Shift from margin to impact focus

ATOM Coalition: First company to grant a freedom-to-operate license for an innovative cancer therapy

Healthcare systems

One Novartis Health System Strengthening (HSS) framework

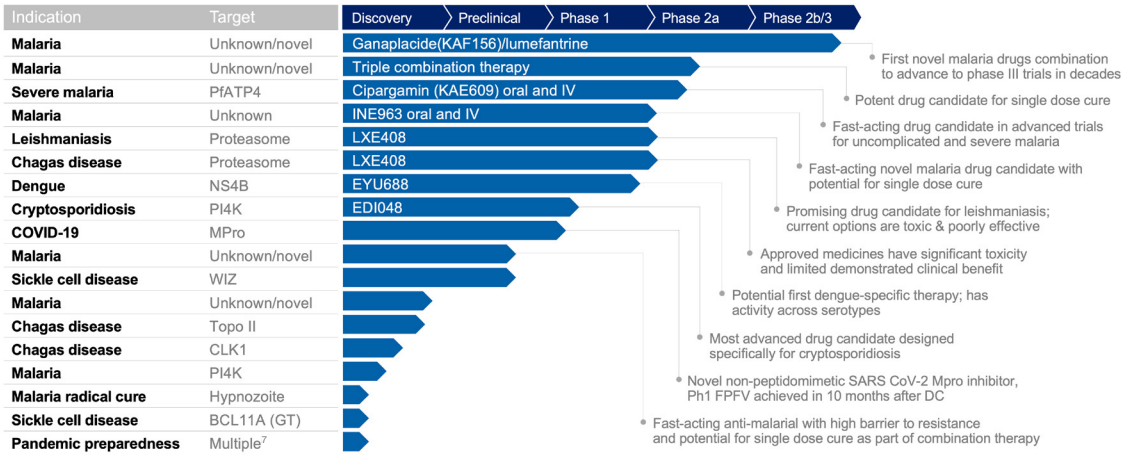
US Foundation made disparities of care a priority

Although we still have a long way to go in reaching our ambitious long-term targets, we are making progress; plans and commitments on track.

ESG Pillar	Long-term public target	2023 target	Q2/Q3 progress
Innovation & Access	+200% patient reach in LMICs with Strategic Innovative Therapies by 2025[1] (1.6m) - bond target	1.1m	1.5m
	+50% patient reach with Global Health programs[2] by 2025[1] - bond target	22.6m	18.5m
	100% of new launches have a global access strategy	100% of pre-defined launches	On track
Human Capital*	Gender balance in management by 2023 - EPIC pledge	48-52%	48%[3]
	100% of recruitment no longer asking for historical salary by 2023 - EPIC Pledge	100%	92%
Environmental Sustainability**	Carbon neutral (scope 1 and 2 emissions) by 2025	-60% (scope 1 and 2)[4]	-56%
	Carbon neutral (scope 1, 2, 3 emissions) by 2030; Net Zero by 2040	>55% of scope 3 emissions covered with ES criteria in suppliers' contracts	>54% of scope 3 emissions covered
	Waste disposal reduced by 50% by 2025[4]	>60%[4]	64%
	Plastic neutral by 2030; eliminate PVC in packaging[5] by 2025[4]	-90% PVC in secondary/ tertiary packaging[4]	-90%
	Water consumption reduced by half in our operations by 2025[4]	-45%[4]	-46%
	Water neutral by 2030	Top 25% sites taking actions[6]	On track

04. Novartis has one of the most extensive pipelines in Global Health with 7 new chemical entities currently in human trials across 6 disease areas

Novartis is proud of our long-term commitment to Global Health R&D, which creates value for all our stakeholders. We prioritize our portfolio on unmet therapeutic needs and based on Global Health challenges set out by WHO.



*Renewed EPIC pledge from 2024; existing EPIC targets until 2023. **Q2 data. EPIC – Equal Pay International Coalition. ES – Environmental Sustainability. LMIC - Low-income and lower-middle income countries. PNH - paroxysmal nocturnal hemoglobinuria. PVC – Polyvinyl Chloride. DC – development Candidate nomination. FPFV – First patient, first visit/trial initiation. GT – In vivo gene therapy. For references see last page.

05. Long-term commitment, partnerships, early access planning, trial diversity are critical success factors in Global Health

External partnerships are critical to achieve progress on complex healthcare and access challenges. Novartis has longstanding relationships with philanthropies, healthcare systems and major stakeholders to catalyze R&D efforts, delivery and access models.

Select examples below demonstrate the global impact we can create by collaboration on research and patient reach.

Dengue

We have partnered with the Wellcome Trust in research efforts and separately with the US National Institutes of Health.

Our drug candidate EYU688 is expected to commence Ph2 trials shortly.

Sickle Cell Disease

Novartis has developed a child-friendly formulation of Hydroxyurea, a disease-modifying generic that is the standard of care. It is now approved in five African countries and was launched in Ghana in 2022.

06. Well positioned to meet existing/emerging ESG reporting requirements in a complex regulatory landscape

ESG reporting environment is evolving driven by:

1. Maturing regulatory requirements
2. The need for confidence and reliability over data to facilitate tracking against public commitments
3. Increasing expectations from investors, customers and employees
4. Preparing for reasonable assurance

The collection of high quality and reliable data which is standardized is a crucial aspect of disclosure and emerging regulations attempt to ensure this. We welcome these developments and continue to advance ESG reporting, preparing for a future convergence of financial and non-financial reporting in line with regulations.

For Novartis, non-financial reporting goes beyond our disclosures, allowing us to build trust with society and drive long-term, sustainable value.

Novartis is well prepared for ESG reporting and due diligence regulations. These include requirements such as:

	Timing
Swiss Article 964[8]	FY 2023
Swiss Climate Ordinance	FY 2024
EU Corporate Sustainability Reporting Directive (CSRD)	FY 2025
EU Taxonomy	FY 2025

Additionally, we are focusing our efforts on:

- Conducting regular materiality assessments to monitor and manage our material risks.
- Exploring the measurement of impact aligned with the Value Balancing Alliance.
- Ongoing assessments of quantitative and qualitative indicators to enhance our sustainability position.
- Preparing for future assurance requirements, planning our transition from limited to reasonable assurance.

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Our efforts are reflected by consistent industry-leading performance across priority ESG ratings

Priority rating	Updated	Scores[9] Current	Scores[9] Previous[10]	Status	Industry perspective
MSCI	Jul 2023	AA	AA	**Leaders** group	One peer with AAA, two peers with AA[11]
Sustainalytics*	Sep 2023	16.2	16.9	**Leaders** group	Low risk category
ISS ESG	Jul 2023	B	B	**Industry leader** group	2/522
Access to Medicine Index	Nov 2022	3.87	4.18	**Leadership group** since 10 years	4/20
CDP Climate Change	Dec 2022	A	B	**Double A** List (Leadership)	One peer with double A List[11]
CDP Water Security	Dec 2022	A	A-		

 For references see last page.

The Novartis Foundation
Advancing digital and data-led approaches to population health

The Novartis Foundation focuses on the world's most pressing health challenges: Cardiovascular disease and rising health inequities. Leaning on data and digital technologies, it seeks to turn our reactive systems of care into predictive and proactive systems of health.

Focus		Impact
Cardiovascular disease and health inequities	CARDIO4Cities Cardiovascular disease is the world's leading cause of death, responsible for almost 18 million deaths per year. The Foundation works with city authorities and other partners to co-design and implement data-driven responses to improve cardiovascular population health and narrow health inequities.	After just 1-2 years of implementation in the cities of São Paulo (Brazil), Dakar (Senegal) and Ulaanbaatar (Mongolia), the CARDIO4Cities approach dramatically improved hypertension control rates at population level, the prime risk factor for cardiovascular disease, and showed positive effects on stroke and coronary heart disease rates. This increase in control of hypertension could be translated into a reduction of up to 13% of strokes and up to 12% of heart attacks.
	AI4HealthyCities Only about 20% of our health outcomes are shaped by the healthcare we access, while up to 80% are determined by the environment we are born, grow and live in[12]. AI4HealthyCities seeks to decipher these underlying drivers to help city authorities target resources to the most effective interventions that keep people healthy.	Launched in New York in 2022, AI4HealthyCities was expanded to Lisbon and Singapore in 2023, with more cities to follow soon.
Accelerating emerging health technologies	HealthTech Hub Africa In 2021, the Novartis Foundation founded the HealthTech Hub Africa (HTHA), a pan-African accelerator for African start-ups and scale-ups that drive the development of health technologies, with a focus on cardiovascular disease, breast cancer and virtual health and care.	Since its launch, the HTHA has supported 68 organizations across 17 African countries, working on critical issues from cardiovascular disease to breast cancer to data and digital systems to strengthen healthcare delivery. In the last 1.5 years the 2 cohorts of innovators have touched the lives of 2.35 million beneficiaries, raised over USD 18 million in funding and created over 830 new jobs.

Top 10 questions from shareholders and our responses

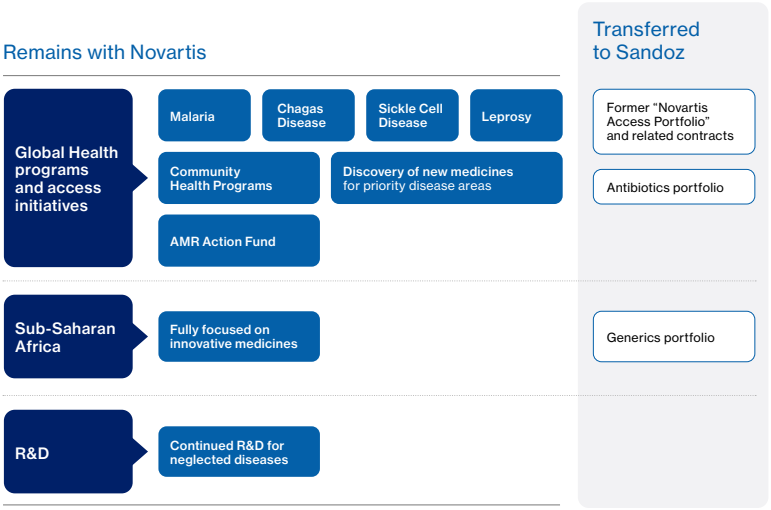
Question

01

What has changed in Global Health following the Sandoz spin-off?

Response

Novartis has a long-term commitment to Global Health and delivering medicines to underserved populations. This is why the vast majority of Global Health programs have remained with Novartis following the Sandoz spin-off.



The aim of our medicines is to reach more than 250 million patients - a result of our efforts to integrate access throughout our company to reach more patients with groundbreaking medicines. Sandoz will continue to focus on patient reach of 500 million for its access and affordability goals.

02

What is the highest priority on your ESG agenda?

- We believe that the aim of ESG is to create a lasting impact. Access to innovative therapies and addressing unresolved Global Health challenges is where the health industry can drive the largest impact to society, as this is the highest unmet need in medicine.
- At Novartis, we focus on the following success factors:
  - Extending access to innovation for the underserved in both LMICs and high-income countries
  - Addressing major unresolved Global Health challenges
  - Developing integrated and sustainable commercial business models
- ESG has become embedded across all levels of our organization, supported by a clear governance structure at the leadership level, including the Board of Directors and the ESG Committee, a sub-committee of the Executive Committee.
- Our public ESG targets are listed in our Annual Report and are linked to the compensation incentives of our CEO and Executive Committee.

Question	Response
03 What are the benefits of investing in Global Health and is it sustainable?	• Novartis invests in Global Health R&D for three reasons: risk mitigation, value creation and because it is the right thing to do. • **Value Creation:** Innovation for Global Health aims to drive impact in neglected tropical diseases. Many drug candidates in our Global Health pipeline are in indications that are eligible for a US FDA Priority Review Voucher, a by-product of our efforts and external validation of our R&D efforts on the unmet need. • **Risk Mitigation:** As the global population grew from 7 to 8 billion people, approximately 70% of the added population was in LICs and LMICs. When the population rises from 8 to 9 billion, approximately 90% of the growth will take place in LICs and LMICs. Additionally, climate change is projected to expand the geographic footprint of infectious diseases such as malaria and dengue. • **Right thing to do:** Underserved patients are severely impacted by diseases for which traditional market incentives for drug R&D do not exist. Novel Global Health therapies can change the course of some of humanity's most longstanding unsolved health challenges.
04 What plans do you have to open up clinical trials to patients in LMICs?	• We assess our R&D work against the needs of underserved populations and integrate access considerations and evidence needs for LMICs early into the development process. We begin anticipating potential access barriers and enablers for our investigational medicines at the end of Phase II development. • We strive to include diverse patient populations in our clinical trials, to understand how patients who are most likely to be treated for a disease will respond to a medicine, and because it is the right thing to do; in 2021 we published a Commitment to Diversity in Clinical Trials. • In the short term, we committed to evaluate diversity and inclusion principles for all our Phase III studies with US country participation; in the longer term, we aim to expand this to all our global trials while leveraging data science and digital technology to track diversity data across our drug development programs.
05 How are you mitigating potential risks that may arise from generative artificial intelligence?	• The use of novel technology, such as artificial intelligence (AI) or generative AI is paramount to drive innovation. • We believe that any development, application, or use of AI systems should be governed within ethical principles that are fully aligned to our Code of Ethics, as set out in our commitment to the ethical and responsible use of AI. To safeguard us from risks stemming from novel technology applications, we started the roll-out a new AI Risk & Compliance Management framework in October 2023. • Once fully implemented, it will provide a fully integrated, structured, and comprehensive approach to assessing and managing risks related to exploration, design, development, deployment, and usage of AI Systems. It includes a two-stage process to identify the potential impact of an AI system and then to treat and monitor the risks that are associated with high-risk applications.

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Question	Response
06 What are the greatest climate-related health risks where Novartis can have an impact?	• Climate change poses a significant threat to human health, particularly for vulnerable populations living in fragile and conflict-affected countries. According to WHO, between 2030 and 2050, climate change is expected to cause approximately 250 000 additional deaths per year due to malnutrition, malaria, diarrhea, and heat stress. • We expect that the diseases most likely impacted by climate change include non-communicable diseases such as cardiovascular, respiratory, and non-small cell lung cancer and tropical diseases such malaria, and dengue. • Our Novartis portfolio covers diseases that could be most impacted such as cardiovascular. For tropical diseases, we have endorsed the Kigali Declaration, pledging USD 250 million to advance R&D of new treatments against neglected tropical diseases and malaria over five years.
07 What is your position on the use of horseshoe crab blood to support biodiversity efforts?	• Horseshoe Crabs blood products are used for pharmaceutical development and manufacturing for endotoxin testing, ensuring drug product safety. • There are three affected species of Horseshoe Crabs: Limulus polyphemus (East Coast of the US and the Indo-Pacific) and Tri-spine Horseshoe crabs (Tachypleus gigas and Tachypleus tridentatus) found in Asia. Their blood is used to produce Limulus Amebocyte Lysate (LAL) and Tachypleus Amebocyte Lysate (TAL) respectively, both being extracted without harming the crabs, who are typically collected, a measured amount of blood extracted and released back into the wild. • Novartis currently requires horseshoe crab blood for various quality assurance tests. • In line with the Pharmaceutical Supply Chain Initiative (PSCI) to remove Tachypleus Amebocyte Lysate (TAL) from the supply chain, Novartis is not procuring TAL across our operations. We will continue to search for the use of TAL, both in our direct operations and for our first-tier suppliers, and put actions in place to promote conservation efforts. • We have active workstreams evaluating alternative methodologies (including recombinant Factor C) but it will require validation testing, securing sourcing for materials necessary that are not always readily available, and validation with marketing authorities.

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Question	Response
08 What controls do you have in place to mitigate bribery risk?	• Ethical conduct is at the center of our purpose to make Novartis the most trusted medicines company in the world. In previous years, we have strengthened our governance by adopting principles-based compliance policies, reinforced our speak-up culture and combined our risk management and compliance functions to enable more effective risk management and mitigation efforts. • Our Compliance System is designed to prevent, detect, and correct systemic misconduct. This framework is aligned with recognized international standards and best practices. We regularly seek to measure the maturity and effectiveness of the Compliance Management System, considering the results from the Compliance controls self-assessment, and other performance indicators. • We further enhanced our approach in 2022 and conducted a review of our program to evaluate our Compliance Management System, supported by an external non-profit organization focused on governance and anti-corruption. Overall, our methodology was considered to be dynamic and robust. • In addition, we established a comprehensive monitoring/audit framework, which comprises three types of activities: Compliance Review & Remediation, Third Party anti-bribery audits, and HSE audit legal compliance and conformance reviews.
09 What enhancements have you made to your Ethics, Risk and Compliance program since 2022?	• Some of our changes include enhancements to our External Partner Risk Management (EPRM), formerly known as Third Party Risk Management: — The EPRM has been extended to wholesalers and distributors and the EPRM process has been re-designed and automated — The Anti-Bribery Third Party Guideline and Third Party Code have been updated • We have updated our Human Rights Commitment — Focus on four most important areas: Right to health/Labor Rights/ Human Rights and the environment/Human Rights and Technology — Integration of Third-Party Labor Rights team into our global Human Rights team • We have launched Doing Business Ethically policy framework (combining Anti-Bribery and Professional Practices Policies) supported by Be Sure System framework • We have enhanced our Speak Up program — Launch of stand-alone Non-retaliation policy and updated Speak Up Policy — Launch of new case management and reporting tool • Data Privacy, Digital and Artificial Intelligence (AI) joined ERC — Launch of AI Risk & Compliance Management framework with further evolution and full implementation planned for 2024

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Question	Response
10 Can you share more details on your renewable energy initiatives?	• We've devised a clear strategy to reach our 2025 targets, emphasizing carbon neutrality in our operations. This rests on two main pillars: 1. **Reducing Energy Consumption:** We're transitioning to energy-efficient equipments, adopting advanced manufacturing technologies such as continuous manufacturing and optimizing site infrastructure for efficient energy management. 2. **Ensuring Clean Energy Supply:** This includes exploring renewable thermal solutions like green steam and biomass-based generation. We're committed to achieving 100% renewable electricity by 2025, with ~80% already sourced through virtual power purchase agreements in the US, EU, and Canada. In 2023, we have placed a high priority on securing renewable solutions in three key countries: India, China, and Singapore. • We're steadfast in our commitment to these goals, promoting sustainability through energy efficiency and renewable sources.

References

1. Vs. 2019 baseline; target linked to sustainability-linked bond.
2. Malaria, Leprosy, Chagas disease, Sickle Cell Disease.
3. Reflects post-Sandoz spin.
4. Vs. 2016 baseline.
5. Defined as secondary and tertiary packaging; primary packaging when feasible.
6. High water risk locations identified based on operational risk assessment performed in accordance with WWF Water Risk Filter Tool.
7. Viruses with epidemic or pandemic potential: flaviviruses, henipaviruses, coronaviruses.
8. Art. 964 of the Swiss Code of Obligations, in force since January 1, 2023.
9. Score ranges - ATMI: 1 to 5; CDP: D- to A; ISS ESG: D- to A+; MSCI: CCC to AAA; Sustainalytics ESG Risk Rating: 0 (Negligible risk) to 40+ (Severe risk).
10. ATMI is being published every other year.
11. Based on the peer group of 14 global healthcare companies as listed in Novartis Annual Report.
12. Hood, C. M., K. P. Gennuso, G. R. Swain, and B. B. Catlin. 2016. County health rankings: Relationships between determinant factors and health outcomes. American Journal of Preventive Medicine 50(2):129-135. https://doi.org/10.1016/j.amepre.2015.08.024.