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Edition no.19

# Q3 2024 Impact and Sustainability Update to investors

Dear investors and analysts,

In our Q3 update, we highlight the Novartis Foundation's AI4HealthyCities population health initiative and the findings of its New York City research on potential associations between social determinants of health and cardiovascular health outcomes.

We also invite you to our 11th annual ESG investor event and provide an update on the latest industry rankings and recognition for our work in the ESG space. As always, we also included top questions from shareholders during Q3 and our responses.

We thank you for your continued engagement.

For any questions and comments, please reach out to:

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# Harnessing data and AI to tackle heart health inequities in cities

## Studies<sup>1</sup> suggest that

10-20%

80-90%



of our health is determined by the healthcare we access.



is determined by the conditions in which we are born, grow, live, work and age – factors known as social, environmental and behavioral determinants of health.

## AI4HealthyCities

The Novartis Foundation designed the AI4HealthyCities initiative to improve understanding of **what drives cardiovascular health** in populations. First launched in New York City in 2022, AI4HealthyCities linked multiple datasets, including electronic health records from public and private health systems, with publicly available social, environmental and behavioral data, and **leveraged advanced analytics** to identify patterns in the data.

The findings, presented at the sidelines of the 79th United Nations Global Assembly in September 2024, suggest **associations between heart health and daily city life**. For example, in certain New York City neighborhoods:

- ▶ Regular commutes above one hour, reliance on public assistance, air pollution, and living alone above the age of 65 are associated with high **hypertension** prevalence.
- ▶ Regular commutes above one hour, lower educational attainment, low broadband rates, and living in single-parent households may contribute to high **diabetes** prevalence.

The Novartis Foundation will share these and more detailed insights with the New York City Department of Health and Mental Hygiene to inform **actionable interventions** at a population level.

1. Hood, C. M., K. P. Gennuso, G. R. Swain, and B. B. Cattlin. 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>.

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# Upcoming investor event

Our 11th annual ESG investor event will take place on **December 9, 2024**.

It will be a virtual webcast from 16:00-17:00 CET (10:00 – 11:00 EST), focusing on **social impact, access to medicines and environmental sustainability**.



**Dr. Lutz Hegemann**  
Global Health & Sustainability President

Will present updates on our social impact through access to medicines, health systems strengthening and R&D.

→ [Profile](#)



**Dr. Steffen Lang**  
Operations President

Will share insights into how Novartis is ensuring environmentally sustainable performance and supply chain resilience.

→ [Profile](#)



You may access the webcast on our website → [here](#)



You can add to your calendar by → [registering in advance](#)

The event will include a Q&A session, providing an opportunity for investors and analysts to submit questions online. A recording will be available shortly after the event.

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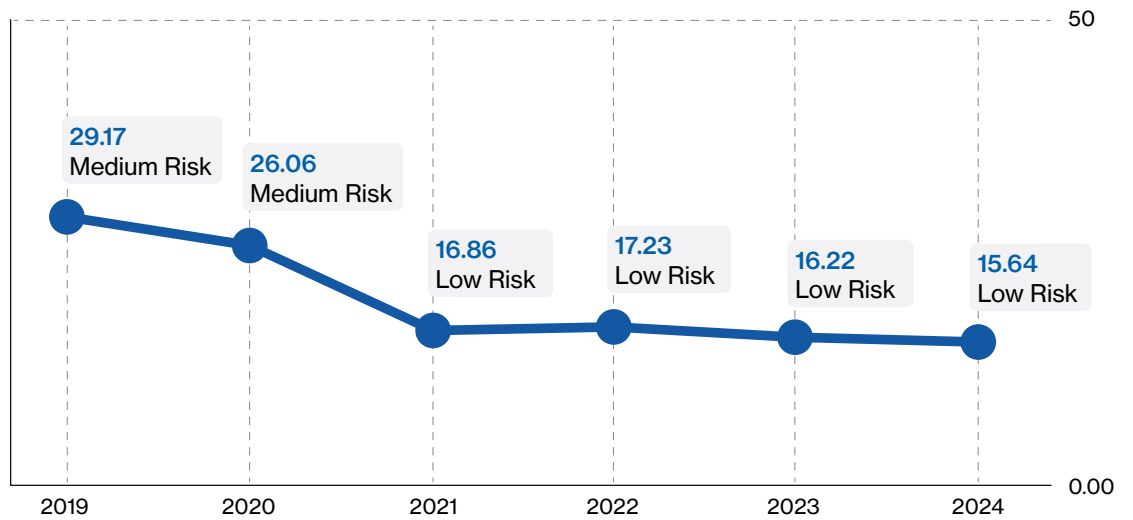
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# Novartis efforts recognized in ESG rankings

## Sustainalytics<sup>1</sup> improves Novartis ESG risk rating

Sustainalytics upgraded our ESG risk rating to 15.6 in the full annual update (September 2024). This continues a positive trend of improvement for more than five years. Novartis is rated at low risk of experiencing material financial impact from ESG factors. Out of nine assessment categories, our risk exposure was rated as “negligible” in seven and “low” in the remaining two. This positive result underscores our ongoing commitment to sustainability and responsible business practices. We continue to be a leader among our peers, and ranked 6th out of 446 companies within the pharmaceutical subindustry category.

### ESG Risk Rating History



Novartis was also recognized for reporting enhancements in alignment with evolving frameworks as well as improved disclosure of water and waste management activities and collective bargaining agreement coverage. According to Sustainalytics, our overall management of material ESG issues is strong, particularly in the areas of carbon emissions in own operations and stakeholder governance. Additionally, we saw strong performance in several industry-specific indicators, such as access to medicine programs, clinical trial programs, and neglected diseases R&D.

**We remain committed to improving our practices and disclosures on significant ESG risk factors.**

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## Recognition on sustainable laboratory practices and disability inclusion

### Novartis receives the 'Commercial Catalyst Award' by My Green Lab

Novartis received the 'Commercial Catalyst Award' at the 2024 My Green Lab Awards for efforts in advancing sustainability within commercial lab environments. Recognized by the United Nations "Race to Zero" Campaign as a Breakthrough Initiative for the Pharma Sector, the My Green Lab certification program is a positive indicator of progress towards a net zero future and is regarded as the benchmark for sustainable laboratory practices worldwide. 25 laboratories in Novartis have been certified under this program.



### Novartis scores 100 on Disability Index for third consecutive year

Novartis was named as a "Best Place to Work for Disability Inclusion" by Disability:IN, earning a top score of 100 on the Disability Equality Index (DEI) for the third consecutive year. The DEI benchmarks more than 70% of the Fortune 100, aiming to highlight those that make a positive impact on the underemployment and empowerment of people with disabilities.

The top score on the DEI acknowledges the impacts of our programming on creating a more inclusive workplace, including our annual A.B.L.E. (Access, Belong, Leadership, Equity) Summit, opportunities through our CapABLE Employee Resource Group and partnerships with advocate organizations.



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# Top 10 impact and sustainability-related questions from shareholders and our responses

## Governance

### Question

01

Are there any planned changes to the Board ahead of the 2025 Annual General Meeting (AGM)?

### Response

- In accordance with the 12-year term limit, Dr. Joerg Reinhardt (Chairman), Dr. Charles Sawyers and William Winters will not stand for re-election.
- Dr. Giovanni Caforio has been nominated for election as Board Member and Board Chair at the 2025 AGM. He has deep experience in our industry, having served as the CEO of Bristol Myers Squibb (BMS) from 2015 to 2023, and Executive Chairman from 2017 to March 2024. Under his leadership, BMS successfully transformed into a global medicines company with strong capabilities across R&D and commercialization. He is a physician by training and received his M.D. from the University of Rome. Dr. Caforio is fluent in Italian, French, Spanish, Portuguese and English.
- Dr. Elizabeth McNally is nominated for election to the Board at the 2025 AGM. She is Director of the Center for Genetic Medicine at Northwestern University, Feinberg School of Medicine. As a practicing cardiologist and renowned research leader, she specializes in the genetics of cardiovascular and neuromuscular disorders. Her clinical and scientific expertise will add greatly to the Board.
- Subject to shareholders approving all proposed Director (re-)elections at the 2025 AGM, we will achieve female representation of greater than 40%.

## Social impact and health equity

02

What is the business rationale of your access to medicines initiatives and global health programs in low- and middle-income countries (LMICs)? Is the objective philanthropic?

- Novartis is committed to working with health systems and partners to make our medicines accessible to as many patients as possible. We systematically integrate access considerations into how we research, develop and deliver treatments to reach patients with unmet medical needs. These efforts are largely implemented through our International and US commercial units.
- We initially launched our Global Health activities as a donation-based philanthropic effort, but saw a need for financially sustainable models to deliver long-term impact. As a result, our programs have evolved into business-integrated solutions.
- Our Global Health unit focuses on providing access to underserved populations while aiming for financial self-sustainability. Some of its programs include:
  - Our Sub-Saharan Africa business model, where we shifted from a profit-led to an impact-led model, which increased employee motivation and led to better sales and profitability.
  - Our Vietnam cardiovascular community health program (Cùng Sống Khỏe), where we target underserved, rural populations, complementing commercial efforts and expanding market reach.



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## Question

03

What is the time lag between introduction of drugs in a developed market and LMICs? How do you plan to reduce that going forward?

## Response

- The pharmaceutical industry typically takes 3-8 years to launch an innovative medicine in an LMIC after launching in a developed market. On average, Novartis has reduced that time lag to 4-8 months.
- For example, ribociclib (Kisqali®) was launched in India five months after its first EU launch, and Kesimpta® was launched in Brazil four months after its first EU launch.
- We continuously work to reduce time to market by tackling systematic barriers through health system strengthening, tailoring our approach in priority LMIC markets, launching emerging market brands (EMBs) where possible, and exploring innovative financing solutions.

04

With regards to health systems strengthening, what kind of training does Novartis impart to health educators and healthcare providers?

- With the support of our partners, we follow a systematic, enterprise-wide approach to address health system barriers, including those facing health workers.
- Health system strengthening (HSS) has been integrated throughout our core business planning processes, and all Novartis launches now have a global HSS strategy for local adaptation. The Novartis HSS framework guides our teams through a process of systematically identifying and prioritizing local systems barriers across the patient journey. For example, in partnership with the Clinton Health Access Initiative, Cambodia government and Vision Catalyst Fund, we have developed a program to increase access to diabetes, hypertension and ophthalmology treatments in Cambodia by addressing key systems barriers across the patient journey. The program has helped educate patients and upskill healthcare workers in Cambodia.
- Complementing these disease area-specific efforts and in collaboration with the University of Basel, we established the Next Generation Scientist (NGS) fellowships/internships program for scientists and clinicians in LMICs more than a decade ago and trained 247 fellows from 34 countries.

## Nature and environment

05

Have you identified treatments in your pipeline that could help treat climate-sensitive diseases?

- Climate change impacts are expected to contribute to the exacerbation of both infectious and non-communicable diseases, with an effect that may be particularly pronounced in LMICs, given less resiliency in public infrastructures and health systems. Our efforts to address this include a multi-pronged approach to tackling climate risk mitigation and adaptation.
- **Climate risk mitigation:** We strive to mitigate our carbon footprint and have committed to achieve net zero greenhouse gas emissions across our value chain by 2040. In 2023, we reduced our scope 1 and 2 emissions by 63% vs. 2016.
- **Climate risk adaption:** We are developing new treatments for diseases likely to spread in changing climates:
  - Novartis has one of the most extensive pipelines for vector-borne diseases with eight new chemical entities currently in human trials across six disease areas.
  - Kigali declaration: We have pledged to invest USD 250 million over 5 years (compared to 2022) in researching and developing treatments for malaria and neglected tropical diseases.
  - Since 2000, we have delivered >1bn treatment courses of our antimalarial Coartem®, including >470m courses of our child-friendly formulation in >70 countries, contributing to a significant reduction in malaria deaths. The Novartis malaria program is one of the largest access-to-medicine programs in the healthcare industry.

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## Question

06

Your newly approved SBTi target implies a 90% reduction in absolute Scope 1, 2, and 3 emissions by 2040. Please provide an update on your progress towards this target.

07

What are your capacity-building initiatives with suppliers on environmental topics?

## Response

- Novartis received approval by SBTi for near- and long-term targets in July 2024. Below is a summary of our climate targets:
    - By 2025: Carbon neutrality for Scope 1 & 2
    - By 2030 (SBTi approved in July 2024): More than 90% reduction in Scope 1 and 2 emissions; 42% reduction in Scope 3 emissions (vs. 2022 baseline)<sup>1</sup>
    - By 2040 (SBTi approved in July 2024): More than 90% reduction in Scope 1, 2, and 3 (vs. 2022 baseline).
  - We have already made significant progress in reducing our Scope 1 and 2 emissions. In 2023, our scope 1 & 2 emissions reduced by 63% vs. 2016 and by 19% vs. 2022 (baseline year for SBTi is 2022)<sup>2</sup>. This is driven by energy efficiency (through process innovation and new technologies) and increased use of renewables across our operations.
  - Scope 3 emissions, which represent 90% of our overall carbon footprint, reduced by ~9% in 2023 vs. 2022<sup>3</sup>. We are actively partnering with our suppliers and participate in alliances to drive system-level change and set clear expectations with suppliers to create a scalable impact.
  - We will continue to report on progress against our targets annually.
- 
- Novartis participates in cross-industry initiatives such as the Sustainable Markets Initiative, PSCI and the World Business Council for Sustainable Development (WBCSD) – to share knowledge on decarbonization, carbon transparency, and GHG emissions reduction across the industry.
  - Novartis launched the Environmental Sustainability (ES) Supplier Playbook, distributed to over 1,000 prioritized suppliers (based on GHG emissions). This serves as a foundational guide for developing ES strategies, GHG emissions accounting, and setting action plans and targets, including best practices from Novartis. The Playbook is now being adapted by the Pharmaceutical Supply Chain Initiative (PSCI) as part of their learning modules.
  - In Q3 2024, we launched SiGREEN (a Siemens platform) with pilot suppliers to collect emissions data for the products and services we procure. This initiative helps suppliers better understand product-specific footprints, identify emission hotspots, and improve data quality.
  - Novartis holds one-on-one discussions with suppliers to develop tailored sustainability roadmaps. These discussions focus on addressing challenges in implementing Novartis' ES criteria in supplier contracts and identifying decarbonization opportunities. The ES criteria have been added as an additional supplier evaluation criterion with a standard weighting. As of end of Q3 2024, we have completed 30 such discussions – which include the exchange of best practices and opportunities for joint action.

1. Legacy target which has been discontinued to align with SBTi validated targets: by 2030, carbon neutrality across Scope 1, 2, 3. 2. Reduction figures are on 9+3 basis from Novartis in Society report 2023. (Minor target boundary related differences expected for Scope 1 emissions based on SBTi validated targets in 2024, latest figures aligned with SBTi boundary to be reported in NIS 2024). 3. Restated full year figure; We reported 3.4% Scope 3 emissions reduction in the 2023 Novartis in Society report which is 9+3 data.



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## Responsible AI

### Question

08

Can you share your perspectives on AI and how you are mitigating the risks?

### Response

- Novartis believes in the potential that technologies such as AI hold for the discovery, development and delivery of innovative medicines.
- We are implementing AI use cases across Novartis and continually explore opportunities to create value with AI applications:
  - Leveraging our data across R&D: Through data42, our digital research and development platform, Novartis applies AI to harness its collection of patient data and data from >2k clinical studies to uncover correlations between drugs and diseases.
  - Enabling drug discovery: Through our strategic research collaboration with Isomorphic Labs, we have developed an AI model predicting protein folding to reshape drug design. It models multiprotein and multiligand complexes in 3D at atomic resolution.
  - Automating clinical trial report writing: With our strategic investment in Yseop, an AI technology developer, we automate clinical trial report writing.
- At the same time, we recognize that the application and integration of AI into core business processes comes with risks, which need to be thoughtfully managed.
  - In 2020, we launched our → **Commitment to the ethical and responsible use of AI systems** emphasizing our dedication to the responsible use of AI.
  - In response to new advancements in technology, we updated our Code of Ethics and will roll out a new Ethical Use of Data and Technology Policy and AI Handbook (and our commitment to the ethical and responsible use of AI will be updated accordingly). These will be principles-based, framed with the overall need for accountability in using and deploying AI. They highlight the need to 1) respect human rights and apply human oversight, 2) apply transparency and explainability, 3) drive an ethical AI approach, and 4) design safe & secure technology and keep data protected.
- We are upskilling our workforce to ensure Novartis employees are equipped with the skills to use AI to drive innovation. Novartis is running an enterprise-wide AI upskilling campaign covering a broad spectrum of topics, including ethical AI. A significant component of this program is supporting the adoption of Microsoft Copilot. We also established a Data Science Academy that offers education sessions and accreditation for data scientists and executives.

## Human capital

09

What has driven the increase of your total employee turnover from 13% in 2021 to 17% in 2023?

- Total turnover is higher due to the new organizational structure we announced in 2022. This initiative was designed to simplify and increase the agility of the organization to support innovation, growth and productivity. However, it also resulted in a reduction in our workforce.
- Novartis continues to see low voluntary turnover due to our continued investment in our people. In 2023, our voluntary turnover was 7%, compared with 9% in the previous year. We believe our single digit voluntary turnover rate is a testament to our culture; our focus on diversity, equity and inclusion; our investment in the continued training and development of our people, and in their overall wellbeing.



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## Question

10

Are you planning to disclose more information specific to your R&D department, e.g. the average turnover rate for the department?

## Response

- Our R&D organization is vital to the future success of the company, and we will continue to monitor future developments with respect to talent disclosures.
- The voluntary turnover rate in our Biomedical Research and Development groups has significantly declined over the last 12 months, signaling solid retention of key talent and low talent risk in critical positions.
- We have a deep bench of talent with strong succession plans for key leadership roles. We implement specific development programs for our key talents, including job rotation, extensive learning and development opportunities (including in leading technologies), and differentiated rewards. In addition to low turnover rates, the engagement of our R&D workforce is in the top quartile of the company.