

Calculating lives improved

Our methodology

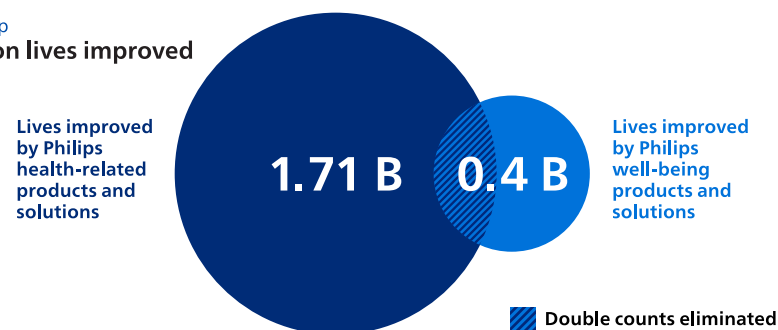
The lack of access to affordable, quality care is one of the most pressing issues of our time. Climate change is intensifying this situation and putting the lives of millions of people at risk.

At Philips, we are conscious of our responsibilities towards society and the planet. It is our purpose to improve people's health and well-being through meaningful innovation. As such, we aim to improve the lives of 2.5 billion people a year by 2030. To ensure we remain on track to achieve this goal, we have developed an integrated approach, that tells us how many lives have been improved by our products and solutions in a given year. We call this our lives improved model. Engaging with consumers and end-users encouraged us to make our calculation methodology publicly available, use references like the WHO definitions, and collaborate with the Harvard School of Public Health to measure our impact.

The lives improved model helps us to track our performance on a country-to-country basis in line with the UN Sustainable Development Goal 3, allowing us to shape strategies to ensure healthy lives and promote well-being for all at all ages. ESG investors appreciate our target and the transparency we provide on our methodology. However, they would prefer to have a comparable metric, which is currently not available. In the absence of such a metric, they encourage us to proceed with our methodology.

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1.88 billion lives improved



We have additional commitments to improve the lives of 300 million people in underserved communities that lack access to care with our health-related products by 2025, and 400 million by 2030.

Stakeholders, including Philips' businesses, (ESG) investors, and academia, were involved in the 2025 target setting process as a whole, including the process for setting the 2025 targets. This commitment allows us to increase our focus on those populations where we can make a positive impact by providing access to effective and affordable healthcare for those in need. Targeting communities where the need for providing access to healthcare is highest. By combining the strengths of Philips, Philips Foundation and its partners, we can provide better healthcare and improve health outcomes for all. In the course of 2023, we have included the contributions of our Ambulatory Monitoring & Diagnostics (AM&D) and Philips Capsule Medical Device Information Platform (MDIP).

Through Philips products and solutions that support people's health and well-being, we improved the lives of 1.88 billion people in 2023 (2022: 1.81 billion). Our health-related products to 1.71 billion lives. Our wellbeing solutions contributed 0.4 billion lives. After the elimination of double counts – people touched multiple times – we arrived at 1.88 billion lives.

This document describes the methodology and metrics used to calculate the number of lives improved by Philips, as well as the different data sources used. The Lives Improved metric is part of the assurance assignment of EY. EY's assurance report can be found here: [chapter 13.6 of the Annual Report 2023](#).

Methodology

To calculate how many lives we are improving, we apply a three-step approach:

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From solutions sold to lives improved, 2023

1

Determine installed base

We first determine the installed base of our health- and well-being solutions.

2

Determine the number of touchpoints

We determine the number of touchpoints per product per year

3

Eliminating all direct- and indirect double counts between products and solutions

To avoid double-counting, we eliminate all direct- and indirect double-counts between products and solutions

Determine installed base

To determine how many solutions are active, we take multiple approach, depending on the type of product.

For our larger medical systems, we know on a country-to-country basis which systems are actively used. We call this our active installed base.

For our products- and smaller medical devices we determine if a product is active by tracking the moment of sale and combing that with the lifetime of the product. For example, if we sell a product on the 1st of February 2022 and this product has an average lifetime of 5 years, we count the impact of this device up until 31st of January 2027.

For our software solutions, we count the number of active licenses as input for our lives improved model. Finally, the impact of the Philips Foundation is jointly determined by the Foundation and its partners.

Determine the number of touchpoints

The user statistics are based on market intelligence and market-specific statistical data on the number of people touched by our solutions that contribute to the health- and wellbeing of its users each year.

To define our statistics, we quantify the number of market-specific touchpoints in a given year per solution. These statistics are underpinned by our actual use cases, input from Market Intelligence teams and/or product experts from the respective businesses. If actual user statistics (from system readings) are unavailable, we use best estimations from product/clinical experts, which are verified by clinical scientists in the different businesses on a yearly basis. This could be a (1) confirmation from product expert with (external) research corroborating the estimate, (2) confirmation from product expert based on Philips business insights, or (3) confirmation from product expert.

Example product	Example of our approach to determine yearly touch-points
1 Computed Tomography (CT)	<p>Computed tomography (CT) is a technique that uses x-rays and computers to create detailed images of the inside of the body, allowing the identification of possible tumors or abnormalities. To determine the number of unique lives touched per year by CT, we follow the below steps:</p> <p>Step 1: We determine the average number of procedures per day on a market-to-market basis Step 2: We determine the average number of active days per year on a market-to-market basis Step 3: We break-down into the following clinical segments: Oncology, Orthopedics, Vascular and Cardiac Care Step 4: We determine and apply an average return-rate – accounting for patients that come back multiple times in a given year, which has been defined on a market-to-market basis Step 5: We determine the in- versus out-patient shares per clinical segments; a distinction is made between 'inpatients' (hospitalized) and 'out-patients' (not hospitalized) to eliminate any overlap inpatients that are (assumed) to be always touched by existing Philips patient monitoring equipment Step 6: We eliminate the direct overlap with other Philips equipment (e.g. Philips Patient Monitors for in-patients)</p> <p>As a result, for example, 1,000 procedures using our CT equipment touch only 496 individual lives, and the adjustment factor is 496/1000. After the direct double count elimination (see step 5 and 6) with other Philips products, this is corrected to 459/1000, which serves as the input for the lives improved calculation. This detailed calculation is performed for all large medical systems on a market-to-market basis. These statistics are applied to the active installed base.</p>
2 Fetal Monitor	<p>When you're in labor, a fetal monitor helps the local healthcare team monitor how your baby is coping. For a fetal monitor, only the baby is included as positively impacted, not the mother. To determine the number of unique lives touched per year by a fetal monitor, we follow the below steps:</p> <p>Step 1: We obtain the quantity sold per country per year per month Step 2: We determine and apply the average lifetime per product Step 3: We determine the installed base based on the above two steps at the moment of quantifying our lives improved results Step 4: We determine the average number of procedures per day on a market-to-market basis Step 5: We determine the average number of active days per year on a market-to-market basis Step 6: We determine and apply an average return-rate – accounting for patients that come back multiple times in a given year, which has been defined on a market-to-market basis</p> <p>The results of these calculations are verified by clinical scientists in the different businesses on a yearly basis. Via this process direct double counts are eliminated, ensuring we quantify the number of unique patients served per year to the best of our knowledge.</p>
3 Sonicare	<p>For a Sonicare (electric toothbrush), we only account for 1 user touched over the entire lifetime of the product.</p> <p>Step 1: We obtain the quantity sold per country per year per month Step 2: We determine and apply the average lifetime per product Step 3: We determine the installed base based on the above two steps at the moment of quantifying our lives improved results Step 4: We determine the average number of users on a market-to-market basis, which for a toothbrush will always be set to 1 user</p>

Eliminating all indirect double counts between products and solutions

Finally, for our in-direct – uncorrelated – product overlap, we eliminate the calculated chance of overlap where certain uncorrelated Philips products- and solutions are used in unison. This is a statistical elimination of cross-product category double counts based on the Probability Theory and the De Morgan's Law on a country-to-country basis (refer to the Appendix). We categorize product groups (labels) that might have an indirect overlap with other products and solutions. To eliminate these indirect double counts, we apply the Probability Theory and the De Morgan's Law on a country-to-country basis. This allows the expression of conjunctions and disjunctions purely in terms of each other via negation. E.g., it allows us to eliminate the uncorrelated overlap of a user of a Philips Sonicare toothbrush user with that of a Philips Ultrasound system, based on the saturation rates and population size of a given country.

Health solutions

The starting point is the installed base of Philips products and solutions from the following clusters:

- Precision Diagnosis (PD)
- Image Guided Therapy (IGT)
- Connected Care excl. S&RC
- Sleep & Respiratory Care (S&RC)
- Within Personal Health we count solely the contributions of Oral Healthcare and Mother & Childcare as health-related solutions

Wellbeing solutions

- Within Personal Health we count the contributions of Grooming and Beauty products as wellbeing-related solutions. The impact associated with this category is excluded from the contribution towards our metric to quantify the health-related Impact in medically underserved communities/populations.

Metrics and data sources for our larger Medical Systems and Software businesses

The metrics and data sources we are tracking to complete the Lives Improved calculations are:

- The installed base contains:
 - Active installed base for our large medical systems – contains active information on the number- and locations of our active medical systems globally. This information is managed by- and received from our asset management team.
 - Active software licenses – to quantify the impact from our software solutions, we request and receive the number of active software licenses for each month by country. Examples of software solutions that are integrated in the Lives Improved model are EMR TASY, Picture Archiving and Communication System (PACS) and Imaging Clinical Applications (ICAP).

- Adjustment factors:

To eliminate occurrences where unique patients are touched several times and to account for the potential direct overlap between products in a hospital setting (e.g., MRI and patient monitoring). A model has been set up that calculates the number of individuals that are affected by several imaging procedures (see above), based on the professional judgment of healthcare specialists. An estimate is made per clinical area of how many scans or touch-points are part of a typical treatment in this area. Additionally, it is assumed that only 'lives improved' of in-patients need to be corrected for double counts, as out-patients are assumed not to be treated by our patient monitoring equipment. Philips' global market share is then used to eliminate the double counts. This is then used to further eliminate double counts within a modality.

- In-patient (hospitalized) versus out-patient treatments – based on expert opinion and on data from i_Supply for Magnetic Resonance.
- For some parameters (e.g. distribution over clinical segments) the professional judgment of healthcare specialists is used.
- Patients per day – data from Espicom and Netforum is used.
- Average bed occupation rate – indicates the average bed occupation in a hospital setting. As beds are not always 100% utilized, we correct our results accordingly. This data is sourced from Worldwide Medical Market Factbook 2015.

Metrics and data sources for our Products and Medical Devices

The metrics and data sources we are tracking to complete the Lives Improved calculations are:

- Active products sold (based on quantity sales) - From our financial systems, we obtain the number of products sold by month by country. We capture this historically for all smaller (medical) products of which the active installed base data is not available. By applying the average lifetime, we can make a best estimate on which products are still active at the time of quantifying our lives improved results. For example, if we sell a product on the 1st of February 2022 and this product has an average lifetime of 5 years, we count the impact of this device up until 31st of January 2027.
- Product lifetime and lives improved per product estimates from Philips Innovation & Development and marketing intelligence specialists. These statistics are underpinned by our actual use cases, input from Market Intelligence teams and/or product experts from the respective businesses. If actual user statistics (from system readings) are unavailable, we use best estimations from product/clinical experts, which are verified by clinical scientists in the different businesses on a yearly basis. This could be a (1) confirmation from product expert with (external) research corroborating the estimate, (2) confirmation from product expert based on Philips business insights, or (3) confirmation from product expert.
- Statistical elimination of cross-product category double counts based on the Probability Theory and the De Morgan's Law on a country-to-country basis (refer to the Appendix).

- Average length of stay - ALOS in a hospital plays a role in some parts of the Lives Improved model. The data used is based on Worldwide Medical Market Factbook 2015. A global weighted average is calculated based on Worldwide Medical Market Factbook 2015 data and number of hospital admissions per country, which mainly applies to our patient monitoring solutions in a general ward setting.
- Market share information from Philips' marketing intelligence specialists.

Population data

- Population data is obtained from public sources to determine the most recent population. Sources leveraged are the CIA World Fact Book, IMF, OECD reports, and The World Bank.

Products and solutions out of scope

Solutions that are out of scope for 2023 are:

- Enterprise Informatics (TomTec, DCP, OIG, Disease Management Solutions)

We aim to start the onboarding of these businesses- and solutions in the course of 2024.

Products that are completely excluded are:

- HeartStart (AED) devices

Next steps

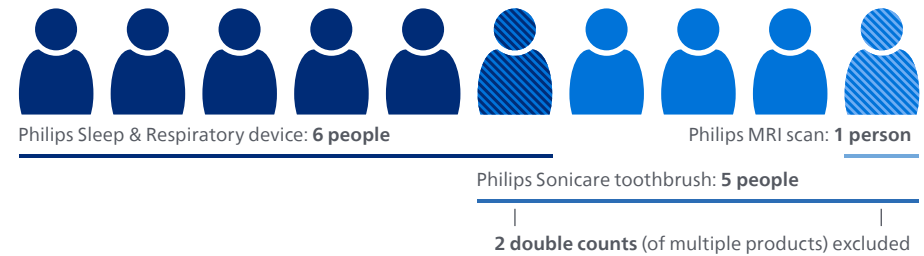
We used opinions from Philips experts and estimates for some parts of the Lives Improved calculations. There is therefore an inherent uncertainty in our calculations. The figures reported are Philips' best possible estimate. The Lives Improved model will be used in the Philips organization to manage our progress towards the target of 2.5 billion lives improved in 2030 and to gain understanding where we increase our efforts to improve access to care in all regions of the world. Therefore, we expect further refinements over the coming years. As we gain new insights, we may enhance the methodology in the future.

Appendix

In the next graphic representation we have assumed a market size of 18 people, of whom six have a Philips Sleep & Respiratory (SRC) device, five have a Philips Sonicare toothbrush, and one person has had an MRI scan in a Philips MRI machine. As the figure illustrates, there is a chance that not all lives touched by Philips products are unique lives; one person can have had an MRI scan in a Philips MRI machine and use a Philips Sonicare toothbrush.

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Total of 10 lives touched (excluding double counts)



$$\text{Lives improved} = \text{SRC} \cup \text{Sonicare} \cup \text{MRI} = \text{Total market} - (\text{SRC} \cup \text{Sonicare} \cup \text{MRI})^C$$

By assuming the product overlaps are statistically uncorrelated, i.e. using a Philips Sonicare does not significantly influence the likelihood of also using Philips well-being SRC, we can use the following: $(A \cup B)^C = A^C \cap B^C$ (De Morgan's laws) and, $P(A \cap B) = P(A) * P(B)$ (Probability theory)

This gives us: $\text{Lives improved} = \text{Total market} * [1 - (P(\text{SRC}) * P(\text{Sonicare}) * P(\text{MRI}))] = \text{Total market} * [1 - ([1 - P(\text{SRC})] * [1 - P(\text{Sonicare})] * [1 - P(\text{MRI})])] = 18 * [1 - ([1 - 6/18] * [1 - 5/18] * [1 - 1/18])] = 18 * [1 - (0.667 * 0.722 * 0.944)] = 18 * [1 - 0.455] = 9.8$

Our methodology for defining medically underserved health communities

Philips believes that regardless of GDP, population density or existing infrastructure, improving access to healthcare requires meaningful innovation.

It also requires an understanding of the complex relationship between all stakeholders and their specific needs to truly make a difference and help people to improve access to healthcare.

Philips has made strong commitments towards enabling healthy living and well-being for all. Amongst others towards the UN Every Woman Every Child movement, with the commitment to improve the lives of 300 million people, in underserved countries that suffer the highest maternal, neonatal and child, infectious diseases and NCD mortality rates, by 2025, and 400 million by 2030. This will allow us to increase our focus on those populations where we can make a positive impact by providing access to effective and affordable healthcare for those in need.

To increase our focus on those communities and countries where the need for providing access to healthcare is highest, we have developed a model to identify medically underserved health communities and countries. These communities and countries are determined by the "Access to Care score", a scoring based on the computation of the sub-categories of the Universal Health Coverage Service Coverage index, developed by the World Health Organization (WHO)¹. Communities and countries that have relatively higher maternal, newborn and child mortality, higher probability of dying from non-communicable diseases, higher incidence of infectious diseases and lower service capacity and access than others, are defined as medically underserved. The underlying metrics, as detailed in table 1, are sub-targets of the Sustainable Development Goal 3 "Ensure healthy lives and promote well-being for all at all ages", developed by United Nations².

Table 1: Composition of Royal Philips' Access to Care score

Sub-category	Metric	SDG 3 sub-target
1. Maternal, newborn and child health	Maternal mortality ratio per 100'000 live births	3.1.2
	Neonatal mortality rate per 1'000 live births	3.2.2
	Under-five mortality rate per 1'000 live births	3.2.1
2. Non-communicable diseases (NCDs)	Probability of dying from cardiovascular, cancer, diabetes, chronic respiratory disease between age 30 and exact age 70	3.4.1
3. Infectious diseases	Tuberculosis incidence per 100 000 population	3.3.2
	Malaria incidence per 1000 population at risk	3.3.3
	New HIV infections per 1000 uninfected population	
4. Service capacity and access	Physician density (per 10,000 population)	3.C.1
	Nurse density (per 10,000 population)	3.C.2

Access to Care score:

Average (Maternal,newborn and child health+ NCDs + inf diseases + service capacity)

The metrics are normalized to a percentiles scale. The average of the metrics within a specific category results in a score between 1-100 for that sub-category. Each country gets an Access to Care score by taking the average score of the 4 sub-categories. A lower score indicates low access to care. A high score indicates good access to health services. At least half the world's population lacks access to the health services they need and therefore communities and countries scoring 55 and lower are defined as medically underserved³. The WHO 2019 Report (2015 and 2017 data) is our reference for data on these metrics. Countries for which no data is provided by the WHO are excluded until new insights are available. The methodology will be updated with newer data in 2025 to assess the impact of changes in the data.

At Philips we are aware that access to healthcare is an extremely complex issue that requires a multi-lateral approach among those who have the means, stature, mission and personal drive to move the needle. This idea, together with the methodology to define medically underserved markets will drive our effort of improving people lives: setting ourselves underserved markets specific targets will let us make a meaningful impact in delivering an effective care where is needed the most.

By bringing together the qualities of Philips, the Philips Foundation together with its partners, we know we can provide better healthcare and improve health outcomes for all.

Sources:

1. World Health Organization. (2019). Primary health care on the road to universal health coverage: 2019 monitoring report. World Health Organization.
2. United Nations, Sustainable Development Goals Knowledge Platform.
3. World Health Organization. (2017). Tracking universal health coverage: 2017 global monitoring report.

