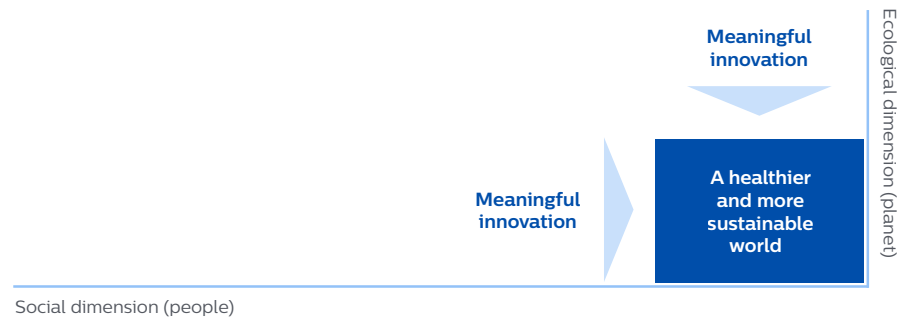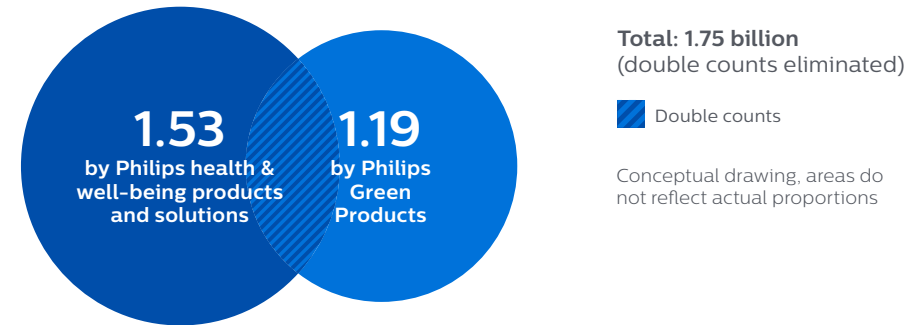PHILIPS

Calculating lives improved

Our methodology

At Philips, our purpose is to improve people's health and well-being through meaningful innovation. Our goal is to improve the lives of 2.5 billion people a year by 2030. To guide our efforts and measure our progress, we take a two-dimensional approach – social and ecological – to improving people's lives.

Lives improved in millions

Total: 1.75 billion
(double counts eliminated)

Double counts

Conceptual drawing, areas do not reflect actual proportions

1.53 by Philips health & well-being products and solutions

1.19 by Philips Green Products

Philips Group
Lives Improved dimensions, 2020

Meaningful innovation

Meaningful innovation

A healthier and more sustainable world

Ecological dimension (planet)

Social dimension (people)

Solutions from our portfolio that directly support the curative ('care') or preventive ('well-being') side of people's health determine the contribution to the social dimension. This is also our contribution to the UN Sustainable Development Goal 3 ("to ensure healthy lives and promote well-being for all at all ages"). As healthy ecosystems are also needed for people to live a healthy life, the contribution to the ecological dimension is determined by means of our steadily growing Green and Circular solutions portfolio, such as our energy-efficient products in Personal Health. This is our contribution to Sustainable Development Goal 12 ("to ensure sustainable consumption and production patterns").

Philips Group
From solutions sold to lives improved, 2020

1
Number of solutions sold
Determine the number of solutions sold in these categories
- Green Products
- Care solutions
- Health & well-being products and solutions

2
Installed base of solutions
Determine the installed base per Green, Care or Well-being category based on solutions sold and average solution category lifetime

3
Number of lives improved
Determine the number of lives improved by multiplying the installed base with the identified number of people touched by a Green, Care or Well-being solution [1]

[1] Double-counts between various Philips Green, Care and Well-being solutions that touch the same person are eliminated.

We started the development of this methodology for calculating the number of lives improved with our contribution to the 'Care' side in the social dimension in 2010. With the renewal of our company vision in 2012, we have extended that approach with our 'Well-being solutions' and our 'Green solutions'.

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 2020.

Methodology

To calculate how many lives we are improving, market intelligence and statistical data on the number of people touched by the products contributing to the social or ecological dimension over the lifetime of a product are multiplied by the number of those products delivered in a year. After elimination of double counts – multiple different product touches per individual are only counted once – the number of lives improved by our innovative solutions is calculated. It is assumed that product contacts are statistically uncorrelated, i.e. using a Philips Senseo does not significantly influence the likelihood of also using a Philips Sleep & Respiratory device.

Through Philips products and solutions that support people's health and well-being, we improved the lives of 1.53 billion people in 2020 (2019: 1.54 billion), mainly driven by Diagnosis & Treatment businesses and Connected Care businesses. Our Green Products and Solutions that support a healthy ecosystem contributed 1.19 billion lives. After the elimination of double counts – people touched multiple times – we arrived at 1.75 billion lives. This is an increase of around 110 million compared to 2019, driven by all segments, mainly in China, the ASEAN countries, North America and the Indian Subcontinent.

In 2020 our health and well-being solutions improved the lives of 207 million people in underserved markets (an increase of 13 million compared to 2019).

'Care' solutions

The starting point is the installed base of Philips equipment from the following three businesses:

Diagnosis & Treatment businesses
- Diagnostic Imaging
- Ultrasound
- Enterprise Diagnostic Informatics
- Image Guided Therapy

Connected Care businesses
- Monitoring & Analytics
- Sleep & Respiratory Care
- Therapeutic Care
- Connected Care Informatics and Population Health Management

Sleep & Respiratory Care
- Sleep Solutions
- Respiratory Solutions
- Smart Sleep Solutions
- Hospital Respiratory Care

Next, an adjustment factor is determined per modality in Diagnosis & Treatment businesses. For example, Computed Tomography (CT) usage is first broken down into the following clinical segments: Oncology, Orthopedics, Vascular and Cardiac care. For each clinical segment, the number of touch-points per patient is determined to obtain a typical treatment in that segment.

Furthermore, a distinction is made between 'inpatients' (hospitalized) and 'out-patients' (not hospitalized) to eliminate overlap between Diagnosis & Treatment and Monitoring & Analytics businesses (assuming that inpatients are always touched by Patient Monitoring equipment). As a result, for example, 1,000 procedures using our CT equipment touch only 462 individual lives, and the adjustment factor is 462/1000. This detailed calculation is performed for all modalities.

For fetal monitoring, only the mother is included in the calculations, not the baby. To arrive at the total lives improved for the 'Care' category, the installed base is multiplied by the number of patients per day, the average occupancy rate (days/year), and the adjustment factor. For Patient Monitoring, the result is divided by the average length of stay (ALOS) to arrive at the total number of lives touched by our monitoring systems. An estimated return-rate is included to avoid any potential double-counts from returning patients.

The results of these calculations are verified by marketing intelligence officers, product marketeers and clinical scientists in the different businesses.

Metrics and data sources for the 'Care' category

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

· Installed base – calculated based on data from financial systems and market share information. From our financial systems, only equipment that is known to be operational is included. This is equipment connected to our Remote Service Network, or for which there has been service activity in the past year.

· Adjustment factors – methodology explained above. To eliminate double counts within Diagnosis & Treatment businesses and between Diagnosis & Treatment businesses and Monitoring & Analytics, a model has been set up that calculates the number of individuals that are affected by a number of imaging procedures (see above), based on the professional judgment of healthcare specialists. 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 Monitoring & Analytics. To eliminate double counts, it is assumed that in-patients are always touched by Monitoring & Analytics equipment, whether at admission or during their stay. Philips' global market share is then used to eliminate the double counts. Lastly, an estimate is made per clinical area of how many scans or touch-points are part of a typical treatment in this area. This is then used to further eliminate double counts within a modality. In 2020 we have optimized our statistics in collaboration with the product experts and Market Inteligence teams and made some improvements in comparison with 2019.

· 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.

· Occupancy rate – data from Worldwide Medical Market Factbook 2015 is used.

· 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.

Well-being solutions

In the next table some example well-being solutions categories are given:

Physical and mental health	Food
• Electric toothbrushes	• Home cookers
• Airfloss	• Blenders
• Breast pumps	• Juicers
• baby bottles	• Grinders
• Light therapy	• Air fryers
Healthy home environment	
• Airpurification	
• Waterpurification	

The starting point here is the sales in units of designated well-being products. These are all consumer products and services that enable people to live healthier lives by providing them with the tools to make healthier choices:
· to prepare food
· to care for their physical and mental health
· to create a healthy home environment

Products are only included during the estimated lifetime of that product. So, a product sold in January 2019, with an average lifetime of three years, will be included in 2019, 2020, up until January 2021. Next, the lives improved per product are calculated using an estimate of lives touched per product. For example, an electric toothbrush only enables the improvement of one life, whereas a Philips Airfryer enables improvement of the lives of an average family size. Next, in order to avoid double counts (a person owning a Sonicare toothbrush could also own an Airfryer, but should only be counted once), a statistical elimination is performed (refer to the Appendix). First, the statistical elimination is performed within the 'Well-being' and 'Green' categories, and then also across the three categories that contribute to 'lives improved' by Philips.

Products from acquisitions are only included as of the year after the acquisition and subject to the acquisition agenda.

'Green' solutions

The methodology used to calculate lives improved for 'Well-being' products is also used for Green Products. Green Products are developed and produced by all businesses in the sectors Diagnosis & Treatment, Connected Care and Personal Health. Green Products are developed with reference to the Philips Green Focal Areas: Energy efficiency, Packaging, Hazardous substances, Weight, Circularity, and Lifetime reliability

Green solutions criteria

Green solutions need to prove leadership in at least one Green Focal Area compared to the industry standard, which is defined by a sector-specific peer group. This is done either by outperforming reference products (which can be a competitor or predecessor product in the particular product family) by at least 10%, outperforming product-specific ecorequirements, or by being awarded a recognized ecoperformance label.

Because of their different product portfolios, sectors have specified additional criteria for Green solutions, including product-specific minimum requirements where relevant.

Products from acquisitions are only included as of the year after the acquisition and subject to the acquisition agenda.

Metrics and data sources (for the 'Well-being' and 'Green' solutions)

The metrics and data sources we are tracking to complete the Lives Improved calculations are:
- Sales in quantities from financial systems (to provide more insightful information we changed the sales data from "country of sales" to "country of designation" resulting in changes in reported data per market)
- Public sources, where available, to determine, for example, number of people in a market and Gross Domestic Product (e.g. CIA world fact book, IMF, OECD reports, The World Bank)
- Product lifetime and lives improved per product estimates from Philips Innovation & Development and marketing intelligence specialists
- Market share information from Philips marketing intelligence specialists
- Statistical elimination of cross-product category double counts based on Set Theory (refer to the Appendix)

Scope

Solutions that are out of scope are:

Care solutions
- IntelliVue telemetry devices and HeartStart (AED) devices, PPACS systems and central processing servers

Well-being solutions
- All solutions that do not fulfil the 'Well-being' criteria

Green solutions
- All Philips solutions that do not fulfil the 'Green' criteria

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. Therefore, we expect further refinements over the coming period. As we gain new insights, we may enhance the methodology in the future.
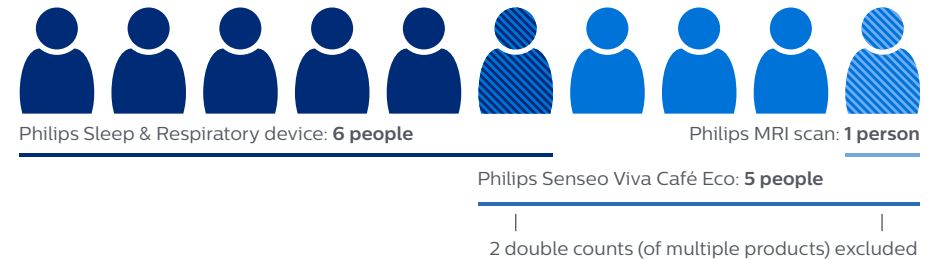
Appendix

In the graphic representation below we have assumed a market size of 18 people, of whom six have a Philips Sleep & Respiratory (SRC) device, five have a Philips Senseo Viva Café Eco, 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 Philips MRI machine and a Philips Senseo Viva Café Eco.

Philips Group
Lives improved in millions

Total of 10 lives touched (excluding double counts)

Philips Sleep & Respiratory device: **6 people**   Philips MRI scan: **1 person**

Philips Senseo Viva Café Eco: **5 people**

2 double counts (of multiple products) excluded

Lives improved
$= SRC \cup Senseo \cup MRI = Total\ market - (SRC \cup Senseo \cup MRI)^C$

By assuming the product overlaps are statistically uncorrelated, i.e. using a Philips Senseo Viva Café Eco 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: Lives improved = Total market * $[1-(P(SRC^C) * P(Senseo^C) * P(MRI^C))]$ = Total market * [1-([1-P(SRC)] * [1- P(Senseo)] * [1- P(MRI)])] = 18 * [1-([1-6/18] * [1-5/18] * [1-1/18])] = 18 * [1-(0.667 * 0,722 * 0,944)] = 18 * [1-0.455] = 9.81

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.

Our goal is 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 a model, audited externally, that tells us how many lives have been improved by our products and solutions in a given year.

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, 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.

We identify countries where the need for providing access to healthcare is highest. This is determined by four selected indicators below, as provided by United Nations Sustainable Development Goal 3 (2015)[1], which focuses on health and well-being:

· Where **maternal mortality** ratio is higher than 70 maternal deaths per 100,000 live births
· Where **neonatal mortality** rate is higher than 12 neonatal deaths per 1,000 live births
· Where **under-five mortality** rate is higher than 25 under-five deaths per 1,000 live births
· Where premature mortality from **non communicable diseases (NCDs)**[2] is higher than 20% of total mortality

SDG 3, aiming to "reduce by one-third premature mortality from NCDs", does not define any thresholds about NCDs; we decided to set ourselves a threshold of 20% of the mortality caused by NCDs[2].

We consider as medically underserved, each country which, in 2015, could not meet one of the above mentioned thresholds. The World Health Organization (WHO) is our reference for data on these indicators. Countries for which no data is provided by the WHO are excluded until new insights are available.

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.

[1] United Nations, Sustainable Development Goals Knowledge Platform
[2] WHO, 2016, World Health Statistics 2016: Monitoring health for the SDGs