PHILIP MORRIS INTERNATIONAL

SUSTAINABILITY REPORT

2018

About PMI[1]

Philip Morris International (PMI) is a leading international tobacco company engaged in the manufacture and sale of cigarettes, smoke-free products and associated electronic devices and accessories, and other nicotine-containing products in markets outside the U.S. PMI became a free-standing publicly traded company (NYSE: PM) in March 2008, following a spin-off from Altria Group, the parent company of Philip Morris USA.

PMI is building a future on smoke-free products that, while not risk-free, are a much better choice than continuing to smoke. Through multidisciplinary capabilities in product development, state-of-the-art facilities, and scientific substantiation, PMI aims to ensure that its smoke-free products meet adult smoker preferences and rigorous regulatory requirements.

Our smoke-free product portfolio, *IQOS*, consists of heated tobacco and nicotine-containing vapor products. We estimate that some 6.6 million adult smokers around the world have already stopped smoking and switched to *IQOS*, which is currently available for sale in 44 markets. Our ambition is to completely replace cigarettes with smoke-free products, to the benefit of consumers, society, the company, and our shareholders.

Sustainability at a glance

For us, sustainability is about creating long-term value while minimizing the negative externalities associated with our products, operations, and value chain.

PMI's Board of Directors understands our special responsibility as a tobacco company and expects us to continuously improve the sustainability of our business and value chain and to contribute to the global sustainability agenda.

This report sets out our sustainability material topics, our approach to managing them, and how we are progressing.

We provide detailed updates on our commitments, achievements and challenges in the relevant sections of this report, along with many case studies. Our Chief Executive Officer and Chief Sustainability Officer also review the year and invite you to start a conversation with us.

DISCOVER

"PMI's transformation brings opportunities for wider societal value for consumers, shareholders and society. Sustainability stands at its core and helps address some of the challenges resulting from this transition, while securing long-term success. I am pleased with the role the Nominating and Corporate Governance Committee of the Board can play in this field."

Kalpana Morparia
Member of the PMI Board of Directors, and Chair of the Nominating and Corporate Governance Committee

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Letter from the Chief Executive Officer

"To us, sustainability is about replacing cigarettes with better alternatives, addressing sustainability challenges across our value chain, and seizing opportunities to add value to society."

Dear Reader,

Can a tobacco company be sustainable?

Smoking cigarettes causes serious disease, and the best way to avoid the harm of smoking is never to start, or to quit. Governments around the world heavily regulate and tax cigarettes to discourage smoking – and rightly so. The reality today is that roughly one in five adults around the world smokes. The World Health Organization (WHO) projects that the total number of smokers remains relatively stable at about 1.1 billion people. In this context, can PMI truly add value, not only to shareholders, but also to society?

We know that quitting is the best option, but we want to provide less harmful alternatives to smoking for those who don't quit. Many years of research and various commercialization attempts eventually led to the launch of *IQOS* at the end of 2014. This product was very well received by adult smokers, exceeding all our expectations. The early success of *IQOS* gave me the confidence to set out a new course for the company in 2016: to replace cigarettes with less harmful products as fast as possible. Our vision has been, step by step, turning into reality ever since.

In 2018, smoke-free products represented 13.8% of our total net revenues. In three countries, such revenues exceeded those of our combustible products. I am proud to say that, in just four years, an estimated 6.6 million adult smokers have stopped smoking and switched to *IQOS*. We continue to shift company resources towards achieving our ambition: 92% of our investment in research and development (R&D) and 60% of our global commercial expenditure were dedicated to smoke-free products in 2018. Seven of our 44 factories around the world currently produce the consumables for these products.

Our sustainability ambition extends to the way we operate, manage our social impact, and reduce our environmental footprint. Society's expectations of businesses are changing, and we must play our part in addressing global challenges. To make sure we focus our efforts where we should, we conducted a sustainability materiality analysis in 2018 which will serve as the basis for the development of our 2025 sustainability strategy.

We are proud of the progress made in 2018, thanks to the hard work and dedication of our employees and partners across the world. Our pilot human rights impact assessment took place in Mexico, and our Agricultural Labor Practices program was strengthened to better address the recurring issues in our tobacco supply chain. Also, worldwide representation of women in our management rose to 35.2%, on track to reach our goal of 40% by 2022. Our environmental efforts were recognized in the Carbon Disclosure Project (CDP) Climate A List for the fifth consecutive year, and we achieved our CO_2e emissions reduction target for scope 1 and 2 ahead of time. Our factory in Brazil was certified by the Alliance for Water Stewardship (AWS), a first for any company in Latin America. We have set the direction for a more robust supplier due-diligence approach and further embedded sustainability throughout functions and markets.

Big challenges remain. To make our vision truly global and inclusive, we need a more diverse product portfolio and innovative routes to market. We also face a lack of awareness of smoke-free products among smokers. Governments play a crucial role here. They can influence the pace and scale of switching away from cigarettes by adopting risk-proportionate regulations and providing smokers with accurate information.

We share stakeholder concerns about youth initiation. The benefits that smoke-free products bring to adult smokers should not come at the cost of an increase in youth use of nicotine products. Our marketing code is strong and enforced globally. Two recent independent studies in Japan and Switzerland show that the use of heated tobacco products among middle-school and high-school students is extremely low. But I recognize that skepticism remains. We are carefully reviewing and where necessary improving the steps PMI takes across all of its business activities to ensure youth are not targeted or encouraged to use any of our products.

Let's come back to my initial question: can a tobacco company be sustainable? Absolutely, by taking every step possible to completely replace cigarettes with better alternatives, addressing its sustainability challenges across its value chain, and seizing opportunities to add value to society. This is what PMI is committed to doing, and our Sustainability Report 2018 is a means for you to assess our progress.

I cordially invite you to comment, challenge, and guide us as we transform our company towards a more sustainable smoke-free future.

André Calantzopoulos
Chief Executive Officer

Interview with the Chief Sustainability Officer

"Transformation cannot succeed without sustainability, and sustainability would not be achieved without transformation."

Huub Savelkouls, you are the first Chief Sustainability Officer (CSO) at PMI. What does it mean for the company?

As a company, we have been working for many years to make our business more sustainable, focused on very specific challenges that we face in parts of our business. Over the last years, the number of sustainability initiatives became more widespread across different functions. To take a truly holistic and proactive perspective on sustainability, across all aspects of our business, the company decided the moment had come to institute the CSO position. It is a sign of PMI's commitment to take our company's sustainability to the next level.

This comes at the right time, as the company progresses on its transformation and opens up further to the outside world. An external focus enables us to learn from others as well as to share our experience with them, ultimately helping us all improve our sustainability efforts.

It is also a strong message to employees and people interested in joining our company about the seriousness of our sustainability endeavor.

Your company's focus is on transforming its business. How do you see the connection to sustainability?

It is much more than just a connection: both lay at the foundation of our ambition towards a smoke-free future. Transformation cannot succeed without sustainability, and sustainability would not be achieved without transformation.

The shift the company has taken by replacing cigarettes with less harmful alternatives is at the core of addressing our main sustainability impact. This was highlighted again in the sustainability materiality analysis we carried out last year.

We need to be coherent, which means excelling in all four pillars of our sustainability strategy. This is even more important as the transformation brings about its own challenges from a social and environmental perspective.

How do external stakeholders react when you introduce yourself and explain your role?

As a tobacco company, some stakeholders may question our motives. Part of my job is to make our work and ambition known to the many stakeholders who actually don't know much about PMI. Very often, I am confronted with negative generalizations. People believe that all tobacco companies are the same. But, of course, this is not the case, just as companies in other sectors differ from each other.

In my experience, we can overcome this lack of awareness and trust through dialogue and disclosure: we need to diligently explain and show what we do. Our business transformation metrics on page 118 are one example of relevant disclosure; they allow people to see how we are shifting our company's resources to achieve a smoke-free future.

And last but not least: we need to listen and respond to feedback. No company is perfect, and PMI certainly can improve. Dialogue enables us to learn and change the way we operate, where needed.

What are your main priorities going forward?

As you will see in this report, we set targets in a number of areas, but we would like to develop a more comprehensive set of 2025 objectives. That will be one of our priorities for 2019.

We can be proud of a number of long-standing ambitious programs, such as our sustainable agriculture work, or our programs to address climate change. A second priority is to replicate such successes in other sustainability areas across the company, particularly in those that are new to us, such as the recycling of *IQOS* devices electronics.

I also want to make sure that we have the sustainability fundamentals in place across the company, for instance by systematizing our non-financial data management and making progress on impact valuation to explain our work in the language of the financial community.

In brief, I want to bring sustainability leadership to PMI.

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Our approach to sustainability

Genuine sustainability for a tobacco company starts with addressing the negative health impacts of its products. This means, first and foremost, developing and commercializing less harmful alternatives to cigarettes while managing our social and environmental impacts across our operations and value chain.
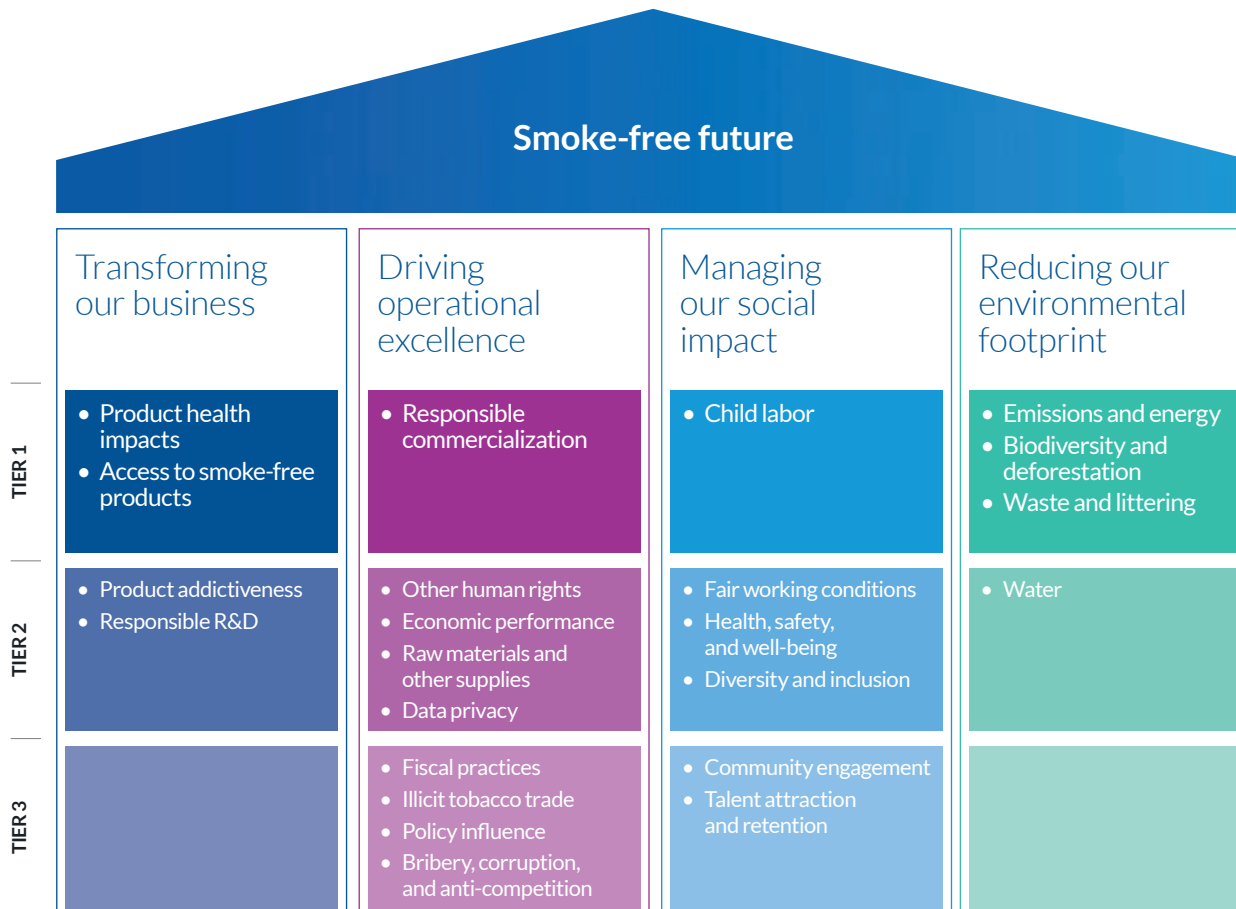
We know it is the right thing to do. We are committed to setting ambitious goals, working hard to reach them, and communicating transparently on our progress.

To ensure that our sustainability work aligns with societal expectations and focuses where we can have the greatest impact, we conducted a new sustainability materiality analysis in 2018 (see page 113) to set priorities across the four pillars of our strategy. As we write, we are crafting our new 2025 sustainability strategy based on the results of that analysis.

We are prioritizing the tier 1 topics of our strategy (see chart on the left), for which we will set ambitious objectives, and will publicly report our progress annually:

- Developing less harmful alternatives to cigarettes and providing global and inclusive access to them is imperative for our consumers and society at large, and is fundamental to our long-term success;

- Considering the harmful nature and addictiveness of our products, we must ensure that they are commercialized responsibly, aiming to prevent youth from accessing and using them;

- We do not condone child labor in our supply chain, and we continue to focus considerable resources to prevent and address this issue; and

- Climate change poses a threat to our planet and could have consequences on our work. We address it through our efforts on emissions reduction. Other top environmental priorities are waste and littering management, and preservation of biodiversity, land, and forest.

We continue to manage and measure progress on our tier 2 and tier 3 topics, but we do not report on them as comprehensively as on tier 1 topics.

Smoke-free future

Transforming our business

TIER 1
- Product health impacts
- Access to smoke-free products

TIER 2
- Product addictiveness
- Responsible R&D

TIER 3

Driving operational excellence

TIER 1
- Responsible commercialization

TIER 2
- Other human rights
- Economic performance
- Raw materials and other supplies
- Data privacy

TIER 3
- Fiscal practices
- Illicit tobacco trade
- Policy influence
- Bribery, corruption, and anti-competition

Managing our social impact

TIER 1
- Child labor

TIER 2
- Fair working conditions
- Health, safety, and well-being
- Diversity and inclusion

TIER 3
- Community engagement
- Talent attraction and retention

Reducing our environmental footprint

TIER 1
- Emissions and energy
- Biodiversity and deforestation
- Waste and littering

TIER 2
- Water

TIER 3

Working towards the UN Sustainable Development Goals (SDGs)

PRIMARY SDGs

SECONDARY SDGs

Human Rights

Our business strategy aims to contribute to making the SDGs a reality. Our SDG prioritization is the result of a four-step process we undertook as part of our sustainability materiality analysis in 2018, which took the following approach:

1 We mapped our sustainability work to the 17 SDGs and 169 targets;

2 We identified the SDGs where we believe we can have the greatest positive impact;

3 These SDGs were aligned to our sustainability strategy; and

4 The SDG wheel was developed based on the tiered structure of our strategy. Considering the health impact of our products, SDG 3 was identified as the goal we can contribute most to, whereas human rights is an encompassing concept relevant to all SDGs.

Taking decisive actions where we can have the greatest impact: Primary SDGs

SDG 3 Cigarette smoking causes serious disease. By replacing cigarettes with less harmful alternatives we can significantly reduce the negative impact of our products on individuals and society.

SDG 8 We ensure good working conditions for all our employees and expect our suppliers to do the same for the benefit of over one million workers throughout our value chain.

SDG 12 We improve the life-cycle impacts of our products – from reducing the environmental impacts of tobacco growing, to efficient low-carbon manufacturing, litter prevention and recycling programs.

SDG 13 Our energy-efficiency programs in our operations and our alternative curing fuels program in our tobacco leaf supply chain contribute to mitigating the risk of climate change.

SDG 14 Our Environmental Commitment (our Policy) governs our management approach to waste and water to ensure that all effluents released are within, or better than, levels required by regulations in the countries where we operate.

SDG 15 We are committed to protecting biodiversity, especially forested areas affected by our operations, particularly in the supply chain of tobacco leaf and paper-based packaging.

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Creating value at PMI in 2018

OUR MISSION

Unsmoke the world

WHAT WE DO

Replace cigarettes with less harmful tobacco and nicotine products for the benefit of adults who would otherwise continue to smoke

Above: Tobacco seedlings in Brazil

INPUTS

HUMAN

77,400
Employees

42.1%
Women employees

>100
Employee nationalities

>350,000
Farmers contracted by PMI and our suppliers in 27 countries

INTELLECTUAL

$383m
Total R&D expenditure

92%
Of our total R&D expenditure related to smoke-free products

2
R&D centers

>400
Scientists, engineers, and technicians

MANUFACTURING

44
Owned manufacturing facilities

26
Third-party manufacturers

7
Of PMI-owned manufacturing facilities producing smoke-free products

$1.4bn
Capital expenditure

NATURAL

>330,000 tons
Packed tobacco sourced

9.1m
Gigajoules energy consumed in PMI facilities

4.4m
Water use (in m³)

3
Most significant direct materials purchased: printed paper board used in packaging, acetate tow used in filter making and fine paper

FINANCIAL

$10bn
Annual spend on supply chain beyond tobacco

A
Long-term credit rating by Standard & Poors, Fitch, and A2 by Moody's

$31.8bn
Total debt

1st
Largest publicly traded tobacco company by market capitalization

SOCIAL

>36,000
Suppliers

5.9m
Retailers selling PMI products

>230
Partners implementing our charitable contributions programs

31
PMI IMPACT projects selected for funding in 2018

All data as of December 31, 2018

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TRANSFORMATION ACROSS THE VALUE CHAIN

R&D

Our research and development work is the catalyst for our transformation. The harm reduction potential of smoke-free products must be scientifically substantiated.

Our product portfolio needs to meet adult consumer expectations and allow more inclusive access.

Our portfolio now includes electronic devices, which need to be designed to fit into the circular economy.

Sourcing

The sourcing of raw materials and other supplies evolves and is increasingly diversified as we transform our company. We engage with our new partners in electronics to implement our Responsible Sourcing Principles.

We are working with tobacco farmers to transition to other crops as we expect a gradual decrease in our tobacco leaf requirements over time.

Manufacturing

Manufacturing of smoke-free products requires different processes and equipment. Such a transition also impacts our environmental footprint, which we seek to reduce.

As we convert our traditional cigarette factories to produce smoke-free products, we are also equipping our employees with new skills.

Commercialization

A different regulatory framework is key to make smoke-free products known and available to adult consumers.

A new commercialization approach is required towards more consumer centricity.

Additional specialists to engage with adult smokers, retail spaces including flagship stores, customer care infrastructure and digital platforms, and recycling options are essential to our success.

OUTPUTS

150m
People consuming our products

4,600
Patents granted worldwide related to smoke-free products

90%
Tobacco purchased at no risk of deforestation of old growth forest

36%
Reduction in scope 1+2 CO_2e emissions since 2010

86.9%
Employees trained on PMI Guidebook for Success (our Code of Conduct)

119
Illegal tobacco manufacturing factories closed

$74.2bn
Excise taxes on PMI products

$2.4bn
Corporate income taxes

9.6m
IQOS users, out of which 6.6m users who have stopped smoking and switched to IQOS

44
Markets in which IQOS is available for sale

89%
Prompt actions resolved relating to child labor incidences in our tobacco supply chain

84%
Waste recycled in our factories

0.13
Lost Time Incident Rate per 200,000 hours worked

>300,000
People reached through our charitable contributions

$29.6bn
Net revenues, out of which 13.8% from smoke-free products

$7.9bn
Net earnings attributable to PMI

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Our business

In our transformative journey towards a smoke-free future, we rely on our expertise in building great brands, in innovating and inventing, and in surpassing adult consumer expectations.
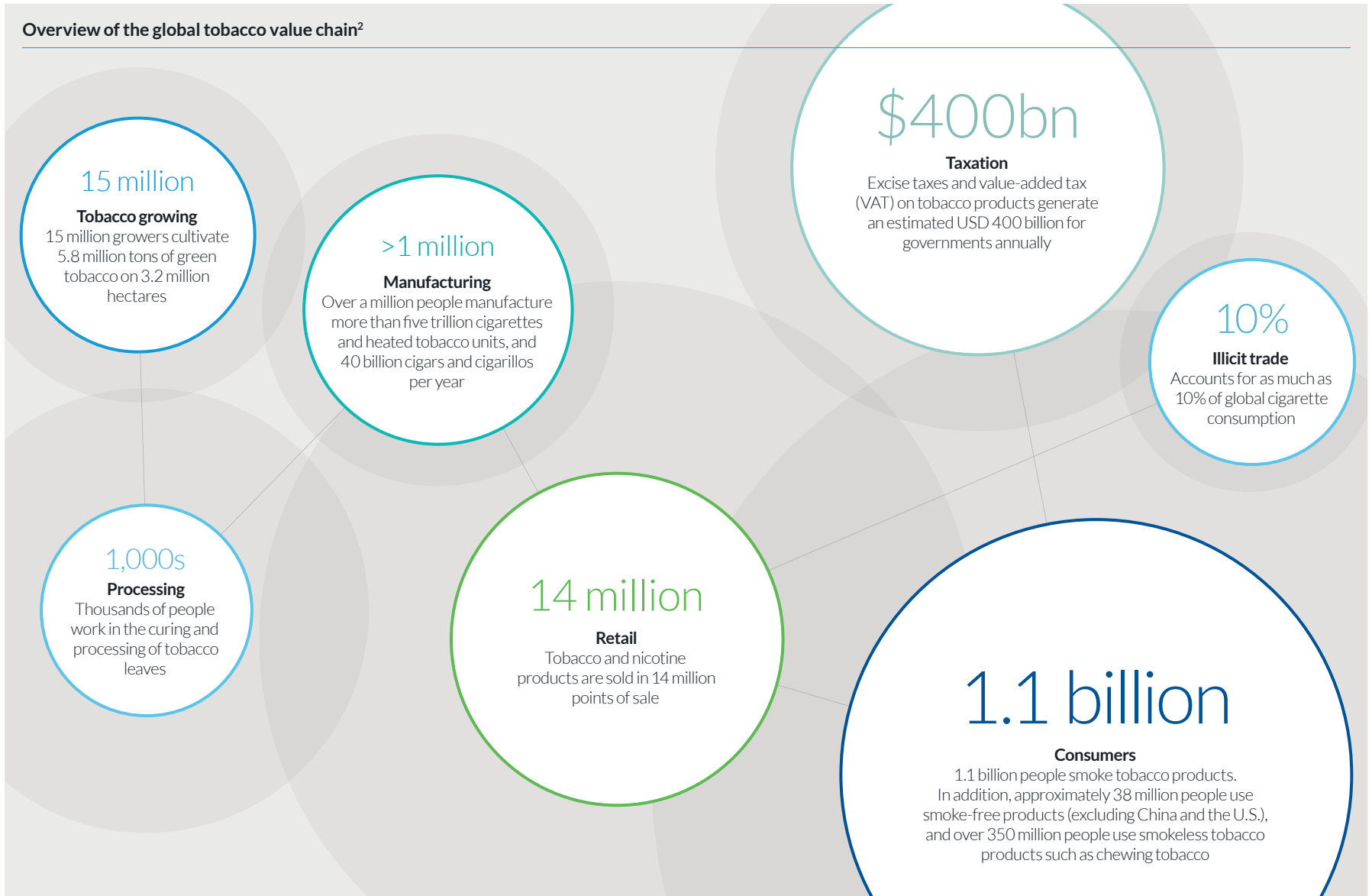
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Our business environment

Overview of the global tobacco value chain[2]

15 million

Tobacco growing
15 million growers cultivate 5.8 million tons of green tobacco on 3.2 million hectares

>1 million

Manufacturing
Over a million people manufacture more than five trillion cigarettes and heated tobacco units, and 40 billion cigars and cigarillos per year

$400bn

Taxation
Excise taxes and value-added tax (VAT) on tobacco products generate an estimated USD 400 billion for governments annually

10%

Illicit trade
Accounts for as much as 10% of global cigarette consumption

1,000s

Processing
Thousands of people work in the curing and processing of tobacco leaves

14 million

Retail
Tobacco and nicotine products are sold in 14 million points of sale

1.1 billion

Consumers
1.1 billion people smoke tobacco products. In addition, approximately 38 million people use smoke-free products (excluding China and the U.S.), and over 350 million people use smokeless tobacco products such as chewing tobacco

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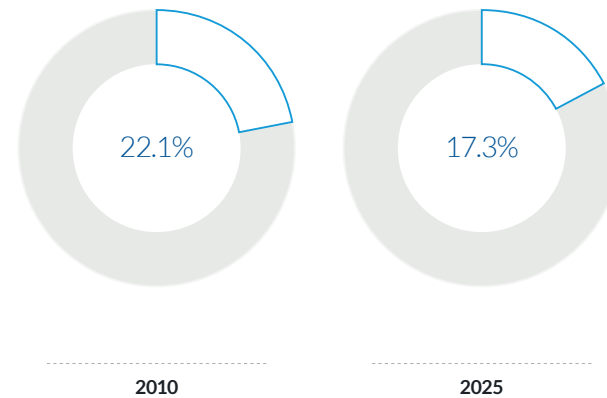# Our business environment continued

Consumers

Today an estimated 1.1 billion men and women around the world smoke cigarettes or other combustible tobacco products. The latest WHO projections indicate a fall in smoking prevalence (age 15+) from 22.1% in 2010 to an estimated 17.3% by 2025. At the same time, the global population is growing by around 70 million people per year. The combined effect of a growing population and a declining smoking prevalence results in a virtually unchanged total number of smokers by 2025.

Importantly, WHO member states want faster change by encouraging cessation and discouraging initiation – targeting a reduction in prevalence of tobacco use of 30% by 2025 (2010 baseline). Even if the WHO prevalence target is achieved, there will still be around 980 million smokers by 2025. It is these hundreds of millions of men and women who stand to gain the most from less harmful alternatives.
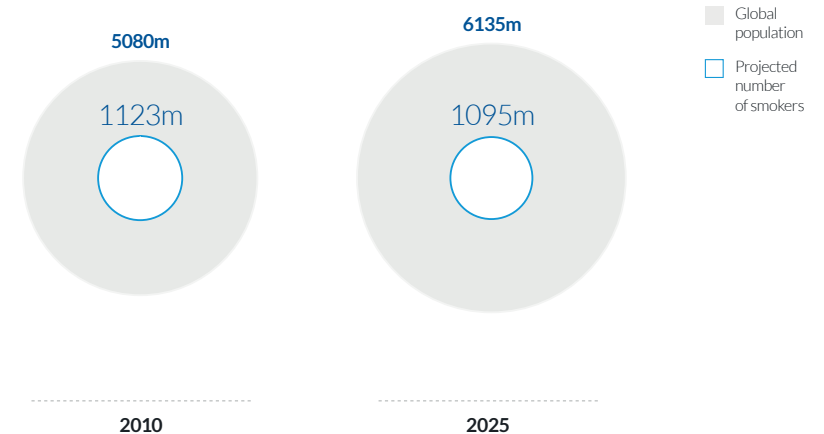
Projected smoking prevalence

22.1%   17.3%

2010   **2025**

Projected number of smokers

5080m   6135m

1123m   1095m

■ Global population
□ Projected number of smokers

2010   **2025**

These projections are based on WHO/UN data and refer to age 15+

Above: An *IQOS* store in Athens, Greece

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Market dynamics

The tobacco and nicotine market is characterized by a range of products, including combustible tobacco products (cigarettes, fine-cut tobacco, pipe tobacco, cigars and cigarillos), smokeless tobacco products (snus, chewing tobacco, moist snuff), and smoke-free products (electronic cigarettes and heated tobacco products).

While the number of consumers of tobacco and nicotine products around the world remains largely unchanged, the total tobacco industry volume trend in the international market, which excludes China and the U.S., has been declining by an average 2.3% per year over the last five years. Cigarette retail price increases, often as a result of tax increases, and restrictions on where people are allowed to smoke, are reducing the average daily consumption of cigarettes among smokers. In addition, illicit trade also affects the legitimate industry's sales volumes.

The total value of the global tobacco market continues to grow as volume declines are more than offset by tax and price increases. PMI's average combustible tobacco pricing variance over the last ten years has been approximately 6.5%.

The emergence of smoke-free products is also contributing to the decline in combustible products. In 2018, the international retail value for heated tobacco and nicotine-containing e-vapor products was estimated at around USD 18 billion, reflecting year-on-year growth of around 70%, driven by higher volume. Heated tobacco products accounted for more than two-thirds of this total value, and were the main driver of the growth.

Over recent years, some governments have started legalizing marijuana for medical and/or recreational purposes. Significant growth in this market is expected, and some tobacco companies have started looking into this space. PMI does not sell marijuana products and has no plans to enter this business.

Above: An IQOS 3 device

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Our business environment continued

Regulation and taxation of tobacco and nicotine products

The risks of smoking have led regulators to impose rigorous restrictions and high excise taxes on cigarettes. Such restrictions are comprehensive, covering packaging and health warnings, use of ingredients, advertising, marketing, promotions and sponsorships, and smoking in public spaces.

Much of the regulation that shapes the business environment in which the tobacco industry operates is driven by WHO's Framework Convention on Tobacco Control (FCTC),

which entered into force in 2005. To date, 180 countries and the European Union (EU) are parties to the FCTC, which requires a suite of measures.

The regulation of smoke-free products is in its early stage, as the category is still emerging. There is no global consensus among regulators on how to regulate or tax smoke-free products. Some aim to encourage them as products presenting less risk for smokers and an opportunity for public health, while others severely restrict or ban such products from the marketplace.

Our perspective

We view government regulation of tobacco and nicotine products as essential and support effective measures to reduce smoking prevalence. The most harmful tobacco products, such as cigarettes and other combustible products, should be subject to the most restrictive measures. Regulation should also ensure that adults who would otherwise continue to smoke have access to alternative products, and to truthful and non-misleading information.

Illicit trade

The illicit tobacco trade provides a cheap and unregulated supply of tobacco products. It undermines efforts to reduce smoking prevalence, damages legitimate businesses, stimulates organized crime, increases corruption, and reduces government tax revenue. It is estimated that illicit trade accounts for as much as 10% of global cigarette consumption and that governments are losing USD 40 billion in tax revenues each year as a result.

Many countries have introduced or are considering actions to prevent illicit trade. In 2012, the FCTC adopted the Protocol to Eliminate Illicit Trade in Tobacco Products (the "Protocol"), which includes supply chain control measures, enforcement in free trade zones, controls on duty free and internet sales, and tracking and tracing technologies. With 54 signatories and 48 party ratifications, the Protocol came into force in September 2018 and its measures will now start to be implemented via national legislation. In October 2018, in their first meeting, the parties to the Protocol decided to produce a comprehensive report on good practices for tracking and tracing systems, and to prepare a conceptual framework for global information-sharing to combat illicit tobacco trade.

Our perspective

The illicit tobacco trade is large and demands integrated action. From our side, we focus on controlling our supply chains to prevent the diversion of our products. For 15 years, we have been operating a global tracking and tracing system for our products, covering all markets. We also work with governments and other partners in the public and private sectors to combat illicit trade.

Above: A production technician in Bahia, Brazil

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Competition

The tobacco sector includes two companies that are focused on their home country – the China National Tobacco Company (CNTC) in China and Altria Group, Inc. in the U.S. – and four large international tobacco manufacturers: British American Tobacco (BAT), Japan Tobacco (JT), Imperial Brands (IMB) and PMI. Together, these six companies account for over 85% of global cigarette sales. Regional and local companies, including state-owned enterprises, count for the remaining 15%.

As in other consumer goods sectors, manufacturers compete primarily on the basis of product quality, brand recognition, brand loyalty, taste, R&D, innovation, packaging, customer service, marketing, advertising, and retail price.

Increasingly, competition also focuses on the development and commercialization of smoke-free tobacco and nicotine products. Tobacco manufacturers are shifting their focus to different degrees towards the development of such products, in particular e-cigarettes and heated tobacco products.

The e-cigarette was invented in 2003 in China and has become increasingly popular over the last decade, in particular in the U.S. and Europe. Initially, there were numerous start-up companies active in the category, followed by established tobacco companies. The first heated tobacco products were launched by various manufacturers, including PMI, in the late 1990s, without commercial success. The launch of *IQOS* at the end of 2014 marked the first real breakthrough for a heated tobacco product, with 1.5 million smokers having switched to *IQOS* by the end of 2016. Soon, other manufacturers started to launch their own heated tobacco products, such as BAT's Glo. In addition, hybrid products that combine aspects of e-cigarettes and heated tobacco products, were launched, such as Ploom TECH by JT.

Our global market share 2018, including cigarettes and heated tobacco units
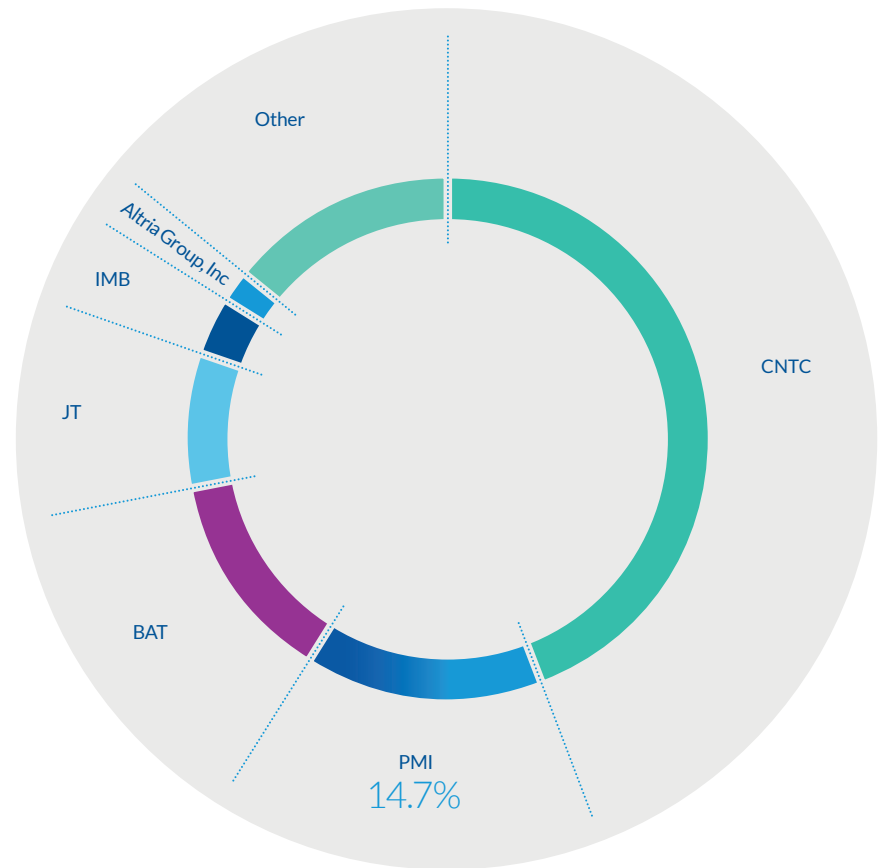
Our perspective

Starting in 2016, we focused on transforming our business towards smoke-free products. At the end of 2018, we held a 57% retail value share in the smoke-free product category outside of China and the U.S., and around 6.6 million people have stopped smoking and switched to *IQOS*. In that geography, our volume share for cigarettes and heated tobacco products combined climbed from 27.9% in 2017 to 28.4% in 2018. A 0.8% market share growth for heated tobacco products more than compensated for a 0.3% decline in cigarette share.

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Our business environment continued

Megatrends

Our long-term success requires us to monitor and take into account major social, environmental, economic, political, or technological changes. We see seven megatrends particularly relevant to our work within the wider context of sustainable development, representing an opportunity for PMI to lead change.

TECHNOLOGICAL PROGRESS

New technologies are rapidly emerging, including in robotics, artificial intelligence, and virtual reality. Coupled with rapid digitalization, these advances allow for productivity enhancements and new ways of engaging with consumers. It also comes with risks related to new employment patterns, data privacy, brand safety, and also human rights.

CHANGING CONSUMER EXPECTATIONS

Consumers' preferences and behaviors are evolving, requiring companies to constantly adapt their products and commercialization mechanisms. Consumers are changing their purchasing habits, often combining both offline and online channels. In today's connected world, they can provide immediate feedback on products and experiences, enabling direct interaction with manufacturers. Well-informed consumers are also increasingly concerned about their health, and are changing their consumption patterns accordingly.

CLIMATE CHANGE

Climate change is one of the most pressing issues of our time. As its impacts are becoming more and more visible, participating nations to the Paris Agreement within the United Nations Framework Convention on Climate Change committed to keep global temperature increases this century well below 2° Celsius above pre-industrial levels. Governments are considering various regulatory and market-based mechanisms to lower carbon emissions. Many of those are directed at businesses, which must enhance their efforts in reducing greenhouse gas emissions and improving energy efficiency.

SUSTAINABILITY

Consumers, governments and other stakeholders expect businesses to operate responsibly and transparently. Regulatory and reporting requirements are increasing, requiring higher due diligence and more actions from businesses along their value chain.

DEMOGRAPHIC CHANGE

Demographic trajectories and pace of change vary greatly among countries and regions. Along with migration flows, those changes carry important impacts, notably on the workforce. Integrating the new generations of employees into the workplace brings challenges and opportunities, especially for companies seeking to transform.

EROSION OF TRUST

In a context marked by a loss of faith in traditional institutions and overwhelming amounts of sometimes unreliable information, it is becoming increasingly difficult for people to make sound decisions. To secure the trust of their consumers, corporations need to transparently disclose relevant information and communicate responsibly through the right channels.

INEQUALITY

Income inequality is on the rise nearly everywhere around the globe. Growth has disproportionally benefited higher income groups while lower income households have been left behind. This threatens social cohesion and economic growth. In many countries, smoking is more common among lower income adults, exacerbating health inequalities. Smoke-free products present an opportunity to reduce such inequalities, as we further develop our product portfolio and new business models to address pricing barriers.

Our products and brands

We have built our company on a portfolio of leading cigarette brands that are the choice of 150 million consumers worldwide. Our cigarettes are sold in more than 180 markets and, in many of these markets, they hold the number one or number two market share position.

We have a wide range of premium, mid-price and low-price cigarette brands, including *Marlboro, L&M, Chesterfield, Philip Morris, Parliament* and *Bond Street,* that are among the 15 most popular cigarette brands outside of China and the U.S. Marlboro is the world's best-selling international cigarette, which in 2018 accounted for approximately 36% of our total cigarette shipment volume and held a 9.7% share of the international cigarette market.

Our smoke-free product development is based on the elimination of combustion, which we believe is the most promising path to providing a better consumer choice for those who would otherwise continue to smoke. We recognize that no single smoke-free product will appeal to all adult smokers. This is why we have adopted a portfolio approach, including both heated tobacco products and nicotine-containing vapor products that are intended to appeal to a variety of distinct adult consumer preferences. Our current smoke-free product portfolio contains four platforms – all under the umbrella brand name *IQOS* – in various stages of development and commercialization.

Our smoke-free product platforms

The science	Brand
IQOS HeatControl Technology	IQOS

HEATED TOBACCO PRODUCTS

Platform 1

Our leading smoke-free platform is a precisely controlled heating device into which a specially designed tobacco unit is inserted and heated to generate a flavorful nicotine-containing aerosol. We market our heated tobacco units under brand names such as *HEETS* and *Marlboro HeatSticks*. *IQOS* was first introduced in Nagoya, Japan and Milan, Italy in 2014, and, as of December 31, 2018, *IQOS* is available for sale in 44 markets, including Duty Free. In 2018, our *IQOS* heated tobacco unit consumables would have qualified as a top-15 international tobacco brand by market share, an unprecedented achievement for a new tobacco brand.

Platform 2

Our second heated tobacco platform, *TEEPS*, uses a pressed carbon heat source which, when ignited, generates a nicotine-containing aerosol by heating tobacco. The patented design of *TEEPS* prevents the tobacco from burning. The consumer puffs on *TEEPS* to inhale a flavorful nicotine-containing vapor until the end of the experience. We completed a small-scale city test of *TEEPS*, which we had initiated in December 2017 in Santo Domingo, the Dominican Republic, and are working on improving this product and incorporating our learning into our future plans.

NICOTINE-CONTAINING E-VAPOR PRODUCTS

Platform 3

We are also developing products inspired by technology that we acquired in 2011 from Professor Jed Rose of Duke University – one of the world's leading experts on nicotine and smoking – and his co-inventors. Our scientists continue to develop this technology to replicate the feel and ritual of smoking without tobacco and without burning. One of the products under development is called *STEEM*. Unlike an e-cigarette, this product generates an aerosol of nicotine salt formed by the chemical reaction of nicotine with a weak organic acid.

Platform 4

Our fourth platform consists of e-vapor products that use nicotine extracted from tobacco leaves. These battery-powered devices – commonly known as e-cigarettes – vaporize a liquid solution containing nicotine and flavors. In 2018, we successfully introduced our first *IQOS MESH* product in the U.K. on a limited scale. We are making further investments to support our e-vapor manufacturing capacity, and plan to meaningfully enter the e-vapor category later in 2019 and expand in 2020 as we build capacity.

Our global footprint[3]

Key

- Tobacco sourcing

Manufacturing facilities:
- Combustible products only
- Smoke-free products partially or exclusively
- Markets where *IQOS* is available

>180
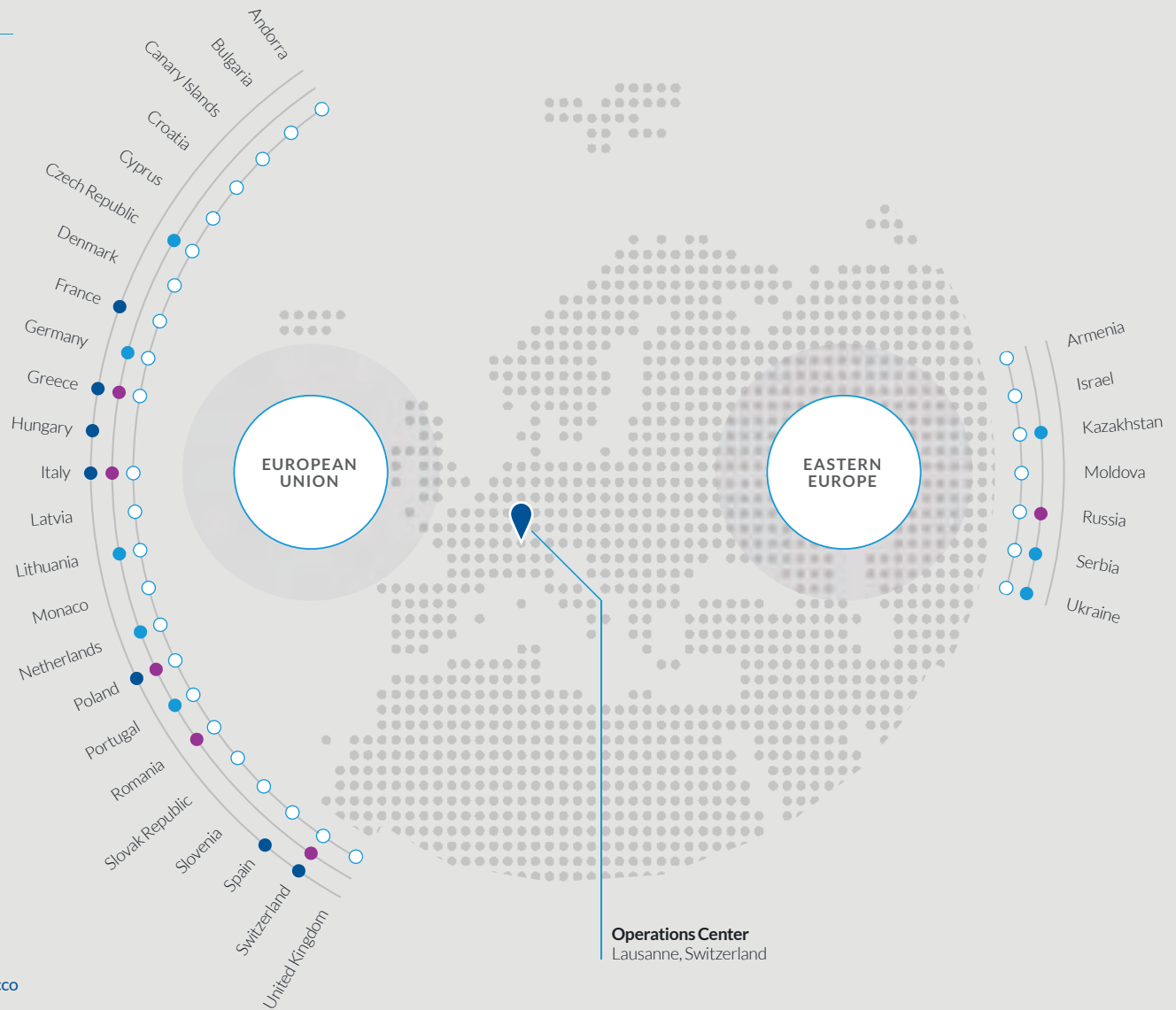
Markets where we sell our products

44

Markets where *IQOS* is available

27

Countries where farmers contracted by PMI and our suppliers are located

>350,000

Farms from which PMI and our suppliers source tobacco

EUROPEAN UNION

EASTERN EUROPE

Andorra
Bulgaria
Canary Islands
Croatia
Cyprus
Czech Republic
Denmark
France
Germany
Greece
Hungary
Italy
Latvia
Lithuania
Monaco
Netherlands
Poland
Portugal
Romania
Slovak Republic
Slovenia
Spain
Switzerland
United Kingdom

Armenia
Israel
Kazakhstan
Moldova
Russia
Serbia
Ukraine

Operations Center
Lausanne, Switzerland

Overview | Transforming our business | Driving operational excellence | Managing our social impact | Reducing our environmental footprint | Reporting on sustainability

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Headquarters
New York, USA

LATIN AMERICA & CANADA

MIDDLE EAST & AFRICA

EAST ASIA & AUSTRALIA

SOUTH & SOUTH EAST ASIA

Argentina
Brazil
Canada
Colombia
Curacao
Dominican Republic
Ecuador
Guatemala
Mexico
Venezuela
United States

China
Japan
Malaysia
New Zealand
South Korea

India
Indonesia
Pakistan
Philippines
Thailand

Jordan
Lebanon
Malawi
Mozambique
Reunion
Senegal
South Africa
Tanzania
Turkey
PMI Duty Free

44
PMI-owned manufacturing facilities and 26 third-party manufacturing facilities

7
PMI-owned manufacturing facilities partially or fully dedicated to smoke-free products

49%
Net revenues from developed markets[4]

51%
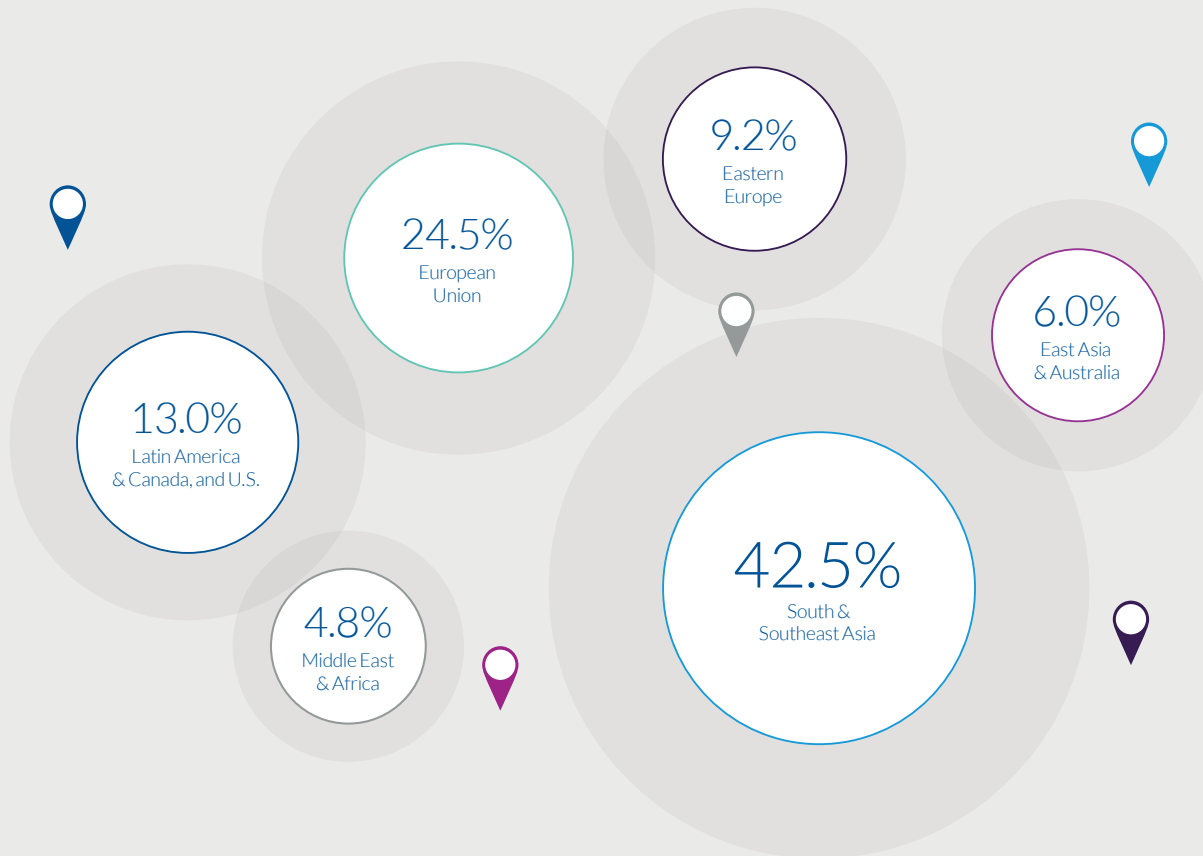Net revenues from emerging markets[4]
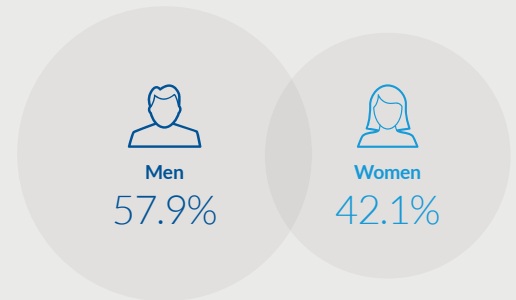
Our global footprint continued

Our workforce

77,400
Employees worldwide

>100
Employee nationalities

9.2%
Eastern Europe

24.5%
European Union

6.0%
East Asia & Australia

13.0%
Latin America & Canada, and U.S.

4.8%
Middle East & Africa

42.5%
South & Southeast Asia

Our workforce by gender

Men
57.9%

Women
42.1%

Our workforce by age group

9.8%
above 50 years old

18.6%
below 30 years old

71.6%
30-50 years old

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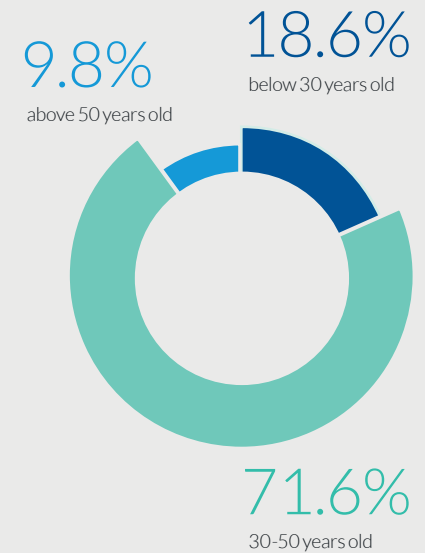
Sustainability, a core strategy for our business

At the heart of our business strategy is our ambition to lead the transformation of our company, and eventually the tobacco industry, towards the replacement of cigarettes with high-quality scientifically substantiated smoke-free products for adult consumers.
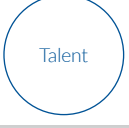
In 1847, Mr. Philip Morris opened a shop on London's Bond Street. Ever since, we have built our business success on products that meet the preferences of adult smokers. Today, we are building our future on smoke-free products that are a much better choice than continued smoking. In our transformative journey, we will rely on our expertise in building great brands, in innovating and inventing, and in surpassing adult consumer expectations.

Our sustainability strategy, which covers our products, operations and value chain, is an integral part of PMI's vision of a smoke-free future. It has four pillars:

- Transforming our business;
- Driving operational excellence;
- Managing our social impact; and
- Reducing our environmental footprint.

Read more on page 4 ▶

LEARN MORE ON OUR BUSINESS:

Our Tobacco and Nicotine Database ▶
2018 Philip Morris International Inc. Annual Report ▶
PMI's Investor Information book ▶
2018 PMI Form 10-K ▶
on www.pmi.com

Our ambition towards a smoke-free future is supported by seven core strategies:

Smoke-free	Develop, market, and sell smoke-free alternatives to which adult smokers who would otherwise continue to smoke will switch
Transition	Transition our resources from cigarettes to smoke-free alternatives
Regulation	Propose regulatory policies that encourage the people who smoke to replace cigarettes with smoke-free alternatives
Talent	Be the employer of choice for our global workforce and work tirelessly to attract and retain the best talent
Transparency	Share our progress, and invite dialogue and independent verification of our science
Growth	Provide superior returns for our shareholders
Sustainability	Drive world-class sustainability programs across our entire value chain

PILLAR 1

Transforming our business

We aim to minimize the negative impact of cigarette use on public health, by replacing cigarettes with less harmful alternatives.

To this end, we have developed a portfolio of smoke-free products under the *IQOS* brand name and are assessing their impact on the individual smoker and the overall effect on public health with rigorous scientific methods. Our research and development work aligns with international standards, and we are committed to transparently sharing our results as we progress.

Seeking to provide men and women who will not quit with access to smoke-free products, we are re-allocating company resources from our cigarette business to the manufacturing and sales of smoke-free products.

Our smoke-free products are not risk-free. They contain nicotine and are addictive.

IN THIS SECTION

92%

Of our total R&D expenditure related to smoke-free products in 2018

6.6m

Adult men and women have stopped smoking and switched to *IQOS* as of December 31, 2018

Image: Employees in PMI's manufacturing facility in Crespellano, Italy

Overview | **Transforming our business** | Driving operational excellence | Managing our social impact | Reducing our environmental footprint | Reporting on sustainability

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Sustainability Report 2018

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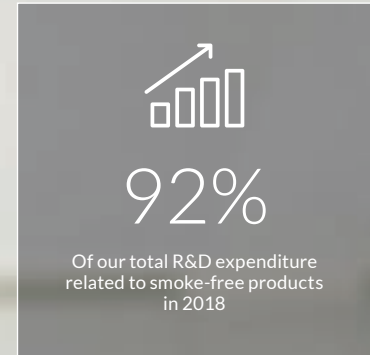
Addressing product health impacts

Foreword

For around 20 years, PMI has been working on better alternatives to cigarettes. Experts and many regulatory bodies, such as the U.S. FDA, agree that the primary cause of smoking-related diseases is not nicotine, but the inhalation of harmful and potentially harmful constituents (HPHCs) formed as a result of burning tobacco.

Cigarette smoking is a well-established ritual and switching to an alternative method of nicotine consumption takes time. While reduced risk product development based on technological innovation and scientific substantiation is key, consumer acceptance for such new products is also necessary to achieve a smoke-free future. PMI's portfolio of alternative products shows how we can leave combustion behind, globally.

Above: Scientists in PMI's R&D center in Neuchâtel, Switzerland

Addressing product health impacts continued

Progress in 2018

Scientific assessment of our smoke-free products

Our scientific assessment across all our product platforms follows the same five-stage approach. It is a step-by-step program that covers initial development, assessment, perception, and impacts over the long term. Here is a summary of the scientific assessment program. For further details, please visit PMI Science website.

Overview of our scientific assessment program

Step 5
Step 4
Step 3
Step 2
Step 1

Step 1 — **Product design and aerosol chemistry**

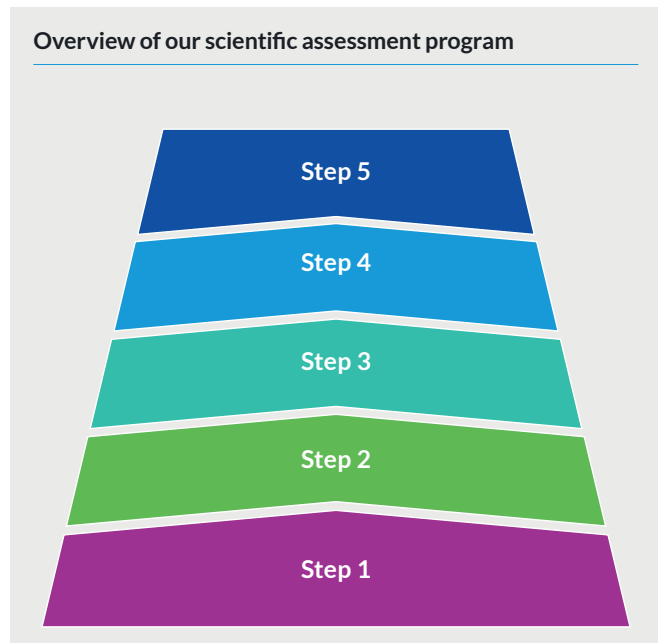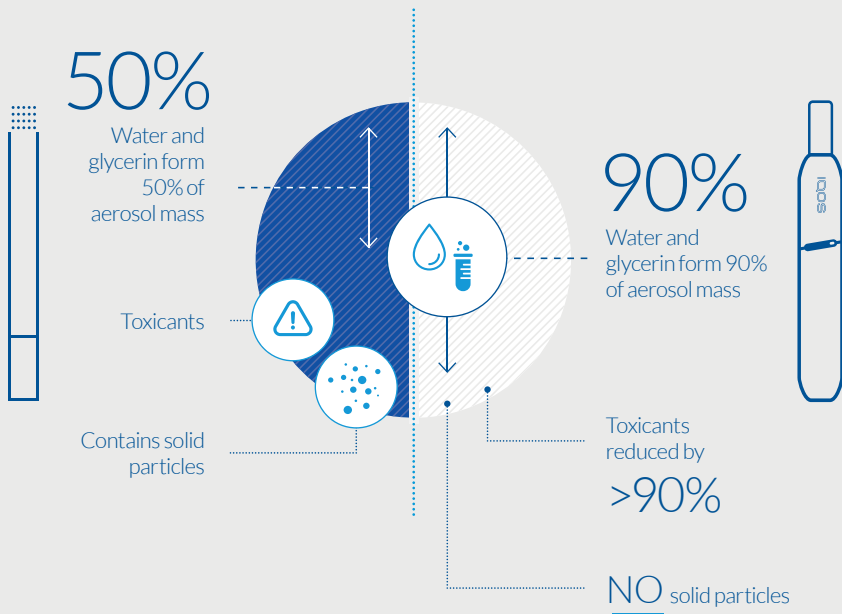Assessment of a smoke-free product's risk-reduction potential relies on the quality of the initial product design and on strict manufacturing controls to ensure that the product delivers a consistent aerosol. We design our products to generate an aerosol without combustion of tobacco. We then test our products to ensure that the design leads to an overall and significant reduction in harmful and potentially harmful constituents (HPHCs) in the aerosol, in comparison with cigarette smoke. In this initial phase of developing a product, we verify that the product's design does not pose any additional risks to those already known for cigarettes. Only then can we begin to conduct further research.

Step 2 — **Toxicological assessment**

Our next step is to verify the potential of a smoke-free product's aerosol to reduce risk compared with cigarette smoke by measuring a reduction in toxicity as well as a reduction in risk using laboratory models. If risks are reduced significantly, we move on to clinical studies. We employ standard toxicology as well as advanced systems toxicology methods to assess whether the reduction in HPHCs leads to a reduced impact of our product aerosol on the biological mechanisms underlying smoking-related diseases.

Step 3 — **Clinical assessment**

Once we have completed our laboratory research, we conduct clinical studies with adult smokers to understand whether switching to smoke-free products reduces their exposure to harmful compounds. We also determine whether this leads to a favorable change in clinical risk markers associated with smoking-related diseases. The effects measured in smokers who switch to a smoke-free product are compared with those in smokers who continue to smoke cigarettes. These results are then assessed against smoking cessation as reported in the scientific literature.

Step 4 — **Perception and behavior assessment**

We conduct extensive studies to understand a smoke-free product's potential to benefit public health, including understanding how different groups of people perceive the risk profile of a given smoke-free product and the likelihood they will adopt and use the product instead of cigarettes. The program also attempts to assess the risk of unintended consequences (e.g. initiation or relapse). We can use this information to make predictions of the likely effect of commercializing a smoke-free product on population harm.

Step 5 — **Long-term assessment**

We monitor and research the use of our smoke-free products once they are on the market in order to assess the product's contribution to harm reduction. This is done by collecting a set of qualitative and quantitative data on the use of the smoke-free product in real-world conditions.

The *IQOS* aerosol is not smoke

The term aerosol is commonly used in chemistry to describe a gaseous suspension of fine solid particles and/or liquid droplets. Unlike burning cigarettes, the *IQOS* device heats a specially formulated tobacco blend using an electronically controlled heater to temperatures well below that necessary to initiate combustion. This heating releases nicotine and flavors, generating an aerosol that is not smoke. Experiments performed under specific nitrogen and air conditions confirm the absence of combustion in the *IQOS* device. The absence of combustion and smoke has been validated by experts in countries such as the U.S., U.K., Italy, Japan, New Zealand, and Poland.[5]

Smoke and aerosol were collected on a Cambridge filter pad using Health Canada Intense smoking regime; this showed the following:

50%
Water and glycerin form 50% of aerosol mass

Toxicants

Contains solid particles

90%
Water and glycerin form 90% of aerosol mass

Toxicants reduced by
>90%

NO solid particles

Above: A laboratory analyst in PMI's Greek affiliate, Papastratos manufacturing facility
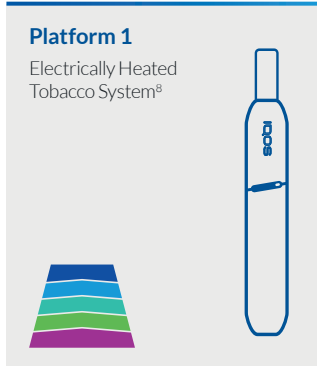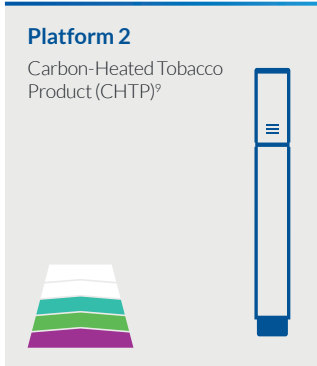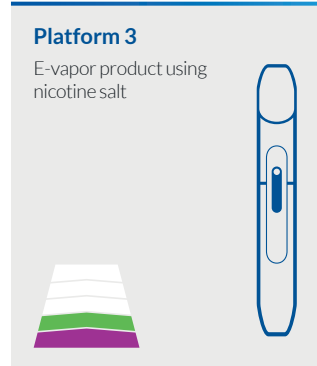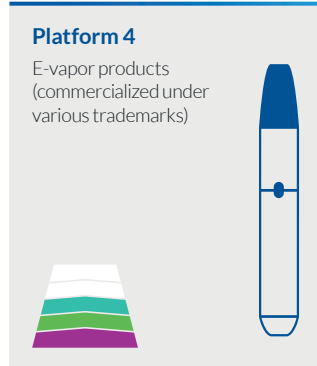
Addressing product health impacts continued

We have numerous scientific studies on Platform 1, our main smoke-free product. They conclude that *IQOS* does not generate smoke and that its tobacco vapor has on average 95% lower levels of HPHCs than cigarette smoke.[6] This does not necessarily equal a 95% reduction in risk, which can only be fully quantified based on long-term epidemiological studies.

The clinical studies conducted to date also conclude that smokers who completely switched to *IQOS* significantly reduced their exposure to 15 key toxicants, approaching levels observed in the cessation groups. The totality of the evidence to date shows that, while not risk-free, switching to *IQOS* presents less risk than continuing to smoke.

An overview of the progress across all our platforms as of December 31, 2018 is presented here.

After we receive the results of our scientific studies mentioned here, in accordance with standard scientific practices, we intend to share the conclusions in scientific forums and to submit them for inclusion in peer-reviewed publications.

Heated tobacco products[7]

Platform 1
Electrically Heated Tobacco System[8]

Platform 2
Carbon-Heated Tobacco Product (CHTP)[9]

Products without tobacco

Platform 3
E-vapor product using nicotine salt

Platform 4
E-vapor products (commercialized under various trademarks)

Assessment progress

We have conducted a series of clinical studies for this platform, the results of which were included in our submission to the U.S. Food and Drug Administration (FDA). The results of the first six-month term of the 6+6 month exposure response study were received at the end of 2017, and the related report was completed and submitted to the FDA in the second quarter of 2018. The study showed that all eight of the co-primary clinical risk endpoints moved in the same direction in the group that switched to IQOS as observed for smoking cessation, with statistically significant changes in five of the eight endpoints compared with ongoing smoking. The results of the second six-month term of the 6+6 month exposure response study were received for analysis in the second quarter of 2018; the related report is under preparation. In addition, as set out in our submission to the FDA referenced above, we completed an 18-month combined chronic toxicity and carcinogenicity study in mice, which was ongoing at the time of our FDA submission. We shared the results with the FDA in August 2018.

The results of our pharmacokinetic study (that measured the nicotine pharmacokinetic profile as well as subjective effects) and of our five-day reduced exposure study indicate that this platform could be an acceptable substitute for adult smokers who seek an alternative to cigarettes. The reduced exposure study results showed a substantial reduction in relevant biomarkers of exposure to the measured HPHCs in those who switched to Platform 2 compared with those who continued to smoke cigarettes over a five-day period. The sustainability of this reduction as well as changes in clinical risk markers were assessed in a three-month reduced exposure study. The results of this study were received at the end of 2017, and the related report was finalized in the second quarter of 2018.

We have explored two routes for this platform, one with electronics and one without, and conducted nicotine pharmacokinetic studies with both versions. The results of the pharmacokinetic study related to the version without electronics were received, and the related report was finalized in the fourth quarter of 2018. The results indicate this product's potential as an acceptable alternative to continued cigarette smoking in terms of product satisfaction. We will also initiate a clinical product use and adaptation study.

We conducted a nicotine pharmacokinetic study in 2017. The results of this study were received in the second quarter of 2018 for analysis, and the related report was finalized in the fourth quarter of 2018. The results of this study indicate that *IQOS MESH* products are an effective means of nicotine delivery while being a satisfying alternative for e-cigarette users. We will also initiate a clinical reduced exposure study to measure selected biomarkers of exposure to HPHCs and assess changes in clinical risk markers.

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Peer reviews and independent reviews of our science

We are confident in the quality of our research and we welcome high-quality independent research on our smoke-free products. We are committed to act on any reliable information that can improve our methods or that challenges our findings. A growing number of peer-reviewed publications can be found on the PMI Science website.

Our scientific results are also being supported by independent research. Several government agencies are taking an interest in validating the available evidence on *IQOS* or conducting research of their own. Overall, these reports so far conclude that *IQOS* aerosol contains lower levels of harmful and potentially harmful compounds than cigarette smoke, and some of the reports go on to say that this reduction in toxicants is likely to lead to reduced risk of harm from *IQOS* compared with cigarettes.

We provide here an overview of independent, government agency studies until year-end 2018.

United Kingdom

The U.K. Committee on Toxicity conducted a review of available evidence on two heated tobacco products, one of which is *IQOS*, and concluded that these products "are likely to reduce risks for smokers." Public Health England relied on this review in its subsequent report, concluding that "the available evidence suggests that heated-tobacco products may be considerably less harmful than tobacco cigarettes and more harmful than e-cigarettes."

Netherlands

The Dutch National Institute for Public Health and the Environment, a member of the WHO Tobacco Laboratory Network, published a "Factsheet on novel tobacco products that are heated," concluding that "the use of *HeatSticks* with the *IQOS* is harmful to health, but probably less harmful than smoking tobacco cigarettes," based on its aerosol chemistry measurements, which are "of the same order of magnitude as in the data of Philip Morris."

Germany

The German Federal Institute for Risk Assessment, a branch of the Federal Ministry for Food and Agriculture and a member of the WHO Tobacco Laboratory Network, conducted a laboratory study on *IQOS*. The study found that reductions in selected toxicants measured by the Institute "are likely to reduce toxicant exposure." The results of the aerosol chemistry measurements in this study were overall in line with our own.

United States

The U.S. Food and Drug Administration (FDA) published a Briefing Document in preparation for its Tobacco Product Scientific Advisory Committee (TPSAC) meeting on *IQOS* as part of its review of PMI's Modified Risk Tobacco Product Application (MRTPA). The document, which offered a balanced view of the totality of evidence available on *IQOS*, included a section explaining the results of the FDA's *IQOS* aerosol chemistry measurements.

It mentioned that "The independent testing performed by FDA's Southeast Tobacco Laboratory confirmed the lower levels of selected HPHCs in the aerosol from the *Heatsticks* compared to mainstream cigarette smoke." TPSAC confirmed that the evidence supported the statement that switching completely to *IQOS* significantly reduces exposure to harmful chemicals.

On April 30, 2019, the FDA confirmed that IQOS is appropriate for the protection of public health and authorized it for sale in the U.S. FDA's decision followed its comprehensive assessment of PMI's premarket tobacco product applications filed with the Agency in 2017. The order sets out clear commercialization guidelines, including marketing requirements, that maximize the opportunity for adults to switch from cigarettes, while minimizing unintended use.

Korea

Data from the Korea Ministry of Food and Drug Safety (MFDS), a member of the WHO Tobacco Laboratory Network, confirm lower levels of harmful chemicals in three heated tobacco products, finding over 90% average reduction in the levels of nine harmful chemicals in the aerosol compared with levels found in the smoke of the top five cigarette brands in Korea.[10] However, instead of focusing on the significant reductions in harmful chemicals compared with cigarette smoke, MFDS points to "tar" measurements to judge the relative risk of tobacco products. But major public health organizations, including the WHO, agree that "tar" is not an appropriate measure for comparing the harmfulness of different tobacco products. They also agree that when comparing tobacco products, whether they are cigarettes or heated tobacco products, it is much more important to analyze the levels of individual toxicants in the smoke or aerosol. In fact, the WHO said, in 2015, that "tar need not be measured, as it is not a sound basis for regulation, and the levels can be misleading."
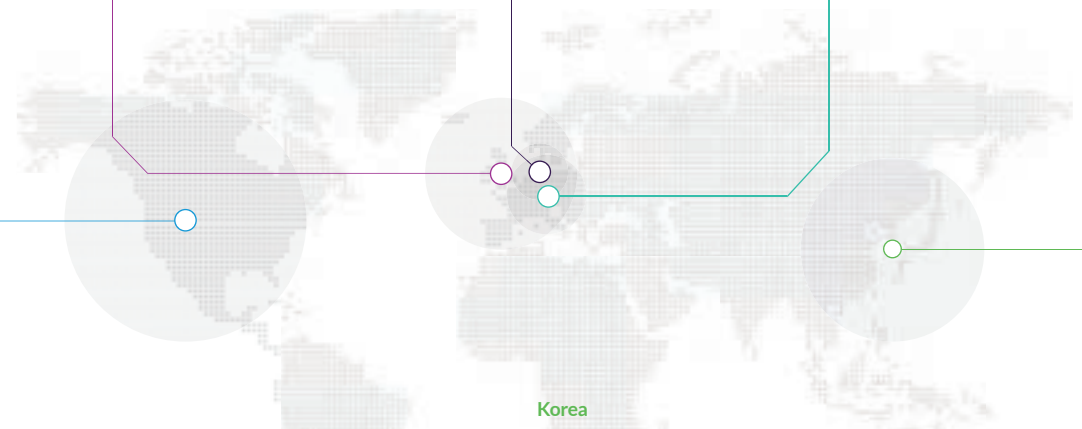
Addressing product health impacts continued

Above: A scientist in PMI's R&D center in Neuchâtel, Switzerland

PM Equity Partner (PMEP) – Solutions for a better world

PM Equity Partner, PMI's Corporate Venture Capital Fund, actively invests in technologies and businesses that support PMI's vision for a smoke-free future and that promote a better life for underprivileged communities, responding to today's evolving consumer and societal expectations.

Through these investments, we expand our global effort to improve the quality of life of society, and learn to better integrate new technologies and more agile operating models into PMI's business. Our portfolio companies are able to tap into PMI's extensive R&D capabilities, operational and marketing excellence, and deep involvement in the agricultural supply chain.

PMEP invests in early and growth stage companies that share the vision for healthier consumer goods, improved human health, and sustainable environment.

Biognosys is an example of an investment made by PMEP, enhancing the impact of our science, based on a disruptive solution that enables full proteomic profiling. By comparing the proteins present in affected samples with the ones present in normal samples, Biognosys' technology can identify changes in expression of proteins that are related to organ toxicity. Therefore, a proteomic profile (or protein signature) can be used to diagnose a specific condition and to check how well the body responds to certain treatments or exposure. By quantifying proteins with extraordinary precision and depth, Biognosys enables PMI to identify biomarkers in scientific studies and understand the biological impact of switching to *IQOS* through the monitoring of key biomarkers.

Post-market surveillance

IQOS has now been commercialized for more than four years, and our understanding of actual consumer use of the product across a broad range of countries has improved.

We have established *IQOS* adult owner panels in 15 countries. Those dynamic longitudinal studies, which involve approximately 95,000 participants across 15 countries, allow us to measure the usage patterns of *IQOS* adult owners over time. Data from these *IQOS* owner panels show that the large majority of *IQOS* adult owners have converted to *IQOS* (*IQOS* being more than 95% of their tobacco consumption). Converted *IQOS* adult owners range from 58% in Japan to 82% in Greece (as of August 2018).

Among *IQOS* adult owners who have converted, the number of heated tobacco units consumed per day is in general similar to the average daily consumption of cigarettes among adult smokers.

In Japan, Germany, and Italy, we have also initiated repeated cross-sectional studies in the adult general population and in *IQOS* owners, with the main objective of describing current and past use of tobacco and nicotine-containing products. During the first year of the Japanese cross-sectional post-market study, we have surveyed a representative sample of approximately 5,000 participants from the adult general population and a sample

of 2,000 *IQOS* owners. The data confirm that *IQOS* is reaching the intended audience, adult smokers, and is of very limited interest to adults who have never used nicotine products before, or adults who had already completely stopped using nicotine products.

According to a study commissioned by the Japanese Ministry of Health, conducted between December 2017 and February 2018, among 22,275 middle-school and 42,142 high-school Japanese students, the use of heated tobacco products is extremely low and lower than smoking cigarettes.[11] The proportion of students who have ever used heated tobacco products was 1.1% for middle-school students (2.6% for cigarettes) and 2.2% for high-school students (5.1% for cigarettes). The proportion of monthly users was respectively 0.5% among middle-school students (0.6% for cigarettes) and 0.9% among high-school students (1.5% for cigarettes). Finally, the percentage of daily users was 0.1% for both middle-school and high-school students (respectively 0.1% and 0.5% for cigarettes).

A study conducted in Switzerland in 2018 by the independent foundation Addiction Suisse[12] found that regular use of heated tobacco products among 14 and 15-year-old boys and girls is practically negligible, and essentially limited to cigarette smokers.
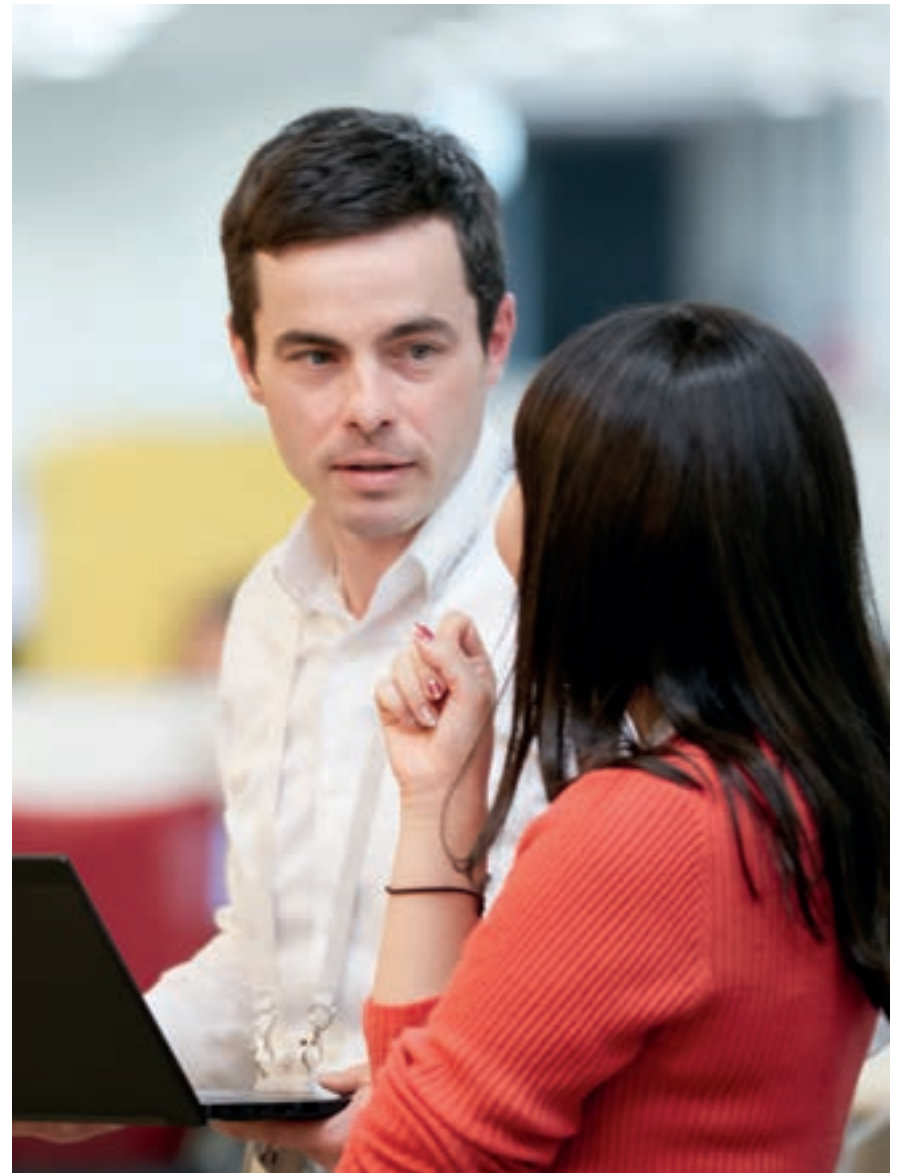
Above: Employees in PMI's office in Tokyo, Japan

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Addressing product health impacts continued

PERFORMANCE AND NEXT STEPS

In 2018, 92% of our total R&D expenditure related to smoke-free products. These expenditures include the costs related to clinical studies, the development of new machinery, prototypes, and product acceptability testing. The R&D expenditure for our combustible tobacco products is largely related to legal compliance requirements, such as the measurement and reporting of tar, nicotine, and carbon monoxide for cigarettes, and adaptation to regulatory changes.

Our R&D work, and its associated innovations, has resulted in 4,600 patents granted for smoke-free technologies as of the end of 2018. We are the 45th largest patent filer of European patent applications, making us the only tobacco company in the European Patent Office's list of top 50 applicants. In Switzerland, where most of our research is conducted, we are the second largest patent filer of international patent applications.

We will continue to engage with the scientific community to verify the public health benefits of our products. Disease-risk-reduction studies are ongoing as part of the long-term work on *IQOS*. In short, PMI is continuing and expanding the scope of its program of work and allocating significant investments accordingly.

	2016	2017	2018
R&D expenditure (smoke-free/total)	72%	74%	**92%**
Patents granted relating to smoke-free products (cumulative)	1,800	2,900	**4,600**

Above: A laboratory analyst in PMI's Greek affiliate, Papastratos manufacturing facility

Providing access to smoke-free products

— ASPIRATIONS[13] —

40

Million adult smokers who would have otherwise continued to smoke will have switched to smoke-free products by 2025

>30%

Shipment ratio of smoke-free products by 2025 (smoke-free/total)

Foreword

Developing scientifically substantiated smoke-free products that are an acceptable alternative to cigarettes is only the first step. The next big step is to make them available to all men and women smoking cigarettes or other combustible products. For more than five years, we have been ramping up production capacity for smoke-free products. We are also shifting people and resources in marketing and sales towards these products, while at the same time rethinking our approach as we move from the business-to-business model of cigarette sales towards a business-to-consumer commercial approach necessary for smoke-free products.

Our aspirational target for our business transformation was formulated using WHO "base case" projections as the counterfactual scenario. Based on these projections, which do not include the effect of smoke-free products, and assuming no changes in market shares, there would be 145 million smokers buying PMI cigarettes by 2025. The WHO aims to further reduce smoking prevalence by strengthening traditional tobacco control measures such as tax increases. The WHO 2025 target in this respect, translated to our consumer base, implies a 15 million reduction to 130 million smokers of PMI products by 2025.

Our smoke-free strategy supplements these efforts by the WHO. Our aspiration is that, by 2025, at least 40 million people who would otherwise have smoked cigarettes will have switched to our smoke-free products (up from 6.6 million people at the end of 2018), reducing the number of PMI cigarette smokers by a total 55 million by 2025. In other words, our aspiration is to reduce smoking almost four times faster than the target set by WHO.

Above: A customer in an *IQOS* store in Athens, Greece

Providing access to smoke-free products continued

Progress in 2018

Converting manufacturing facilities from cigarettes to smoke-free products

As we are expanding the sales of smoke-free products to more countries, we needed to significantly invest in converting existing cigarette factories. This includes capital expenditure, as for instance new machinery is required for the production and packaging of heated tobacco units. Our colleagues working in these factories were extensively trained to be ready for the new production environment.

In 2018, our factories in South Korea, Russia, Greece, and Poland all started to produce heated tobacco units or other nicotine-containing products, bringing the total of factories partially or fully converted to smoke-free products to seven.

Launching *IQOS 3*

A second major milestone in 2018 was the launch of our next generation *IQOS* device, *IQOS 3* and *IQOS 3 MULTI* in mid-November. These new devices integrate extensive consumer insights and feedback to improve design and user experience while maintaining taste, sensory attributes, and ritual – all underpinned by strong scientific substantiation. Specifically, the new devices are more robust, more intuitive in use, and are faster charging. When launching *IQOS 3*, we maintained the previous version (*IQOS 2.4*) on the market at a reduced price, thereby making the switch away from cigarettes more affordable.

Consumers of PMI products – projection 2025
(assuming constant PMI market share)

Legend:
- ■ Smokers of PMI products
- ■ People who switch to PMI smoke-free products, as per PMI's aspiration
- ■ People who quit or less people starting, in line with reduction aimed for by WHO with additional tobacco control measures

- **2025 estimate based on WHO prevalence projection:** 145m Smokers of PMI products
- **2025 estimate based on WHO prevalence target:** 15m / 130m
- **2025 estimate based on WHO prevalence target and PMI smoke-free aspirations:** 15m / 40m / 90m

IQOS device progression

2014: *IQOS 2.2*
Pilots in Nagoya, Japan and Milan, Italy
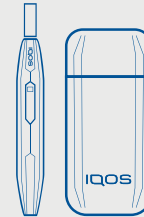
- Base device

2016: *IQOS 2.4*
Product reliability and improvements
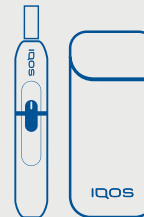
- Aesthetics
- Automatic blade cleaning
- Easier holder insertion

2017: *IQOS 2.4+*
Product reliability and improvements
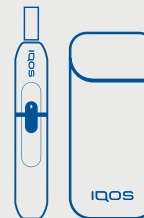
- Aesthetics
- Reinforced opening
- Faster charging of holder
- Bluetooth connectivity
- Improved user interface
- Utility accessories
- Mobile app

2018: *IQOS 3 and IQOS 3 Multi*
Continued innovation
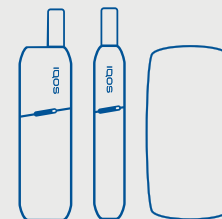
- New design language
- More robust (ProtectPlus™)
- Faster charging of holder
- Sequential heating
- More intuitive
- Portfolio of accessories
- Compact
- Personalization

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Allocating more than half of our global commercial expenditure to smoke-free products

Historically, we ran a relatively simple business in a strict regulatory environment. Today, we are moving to an innovative product in an evolving and complex regulatory environment, with a high-tech consumer relationship and a more diverse supply chain.

A smoke-free future means greater scale and diversity of up-front investments than those required for launching a cigarette brand.

We are shifting from a business-to-business model to a consumer-centric model to assist smokers with the transition to smoke-free products. Our efforts are aimed at overcoming previously unseen challenges: increased time to communicate product benefits, consumer acceptance of a different ritual, and their willingness to stay with the product throughout the conversion process. It means additional specialists to engage with adult smokers, customized retail spaces including flagship stores, consumer care infrastructure, and digital platforms.

We adapt and learn: since our launch in Japan and Italy over four years ago, we have for instance fine-tuned our capacity, inventory, and distribution in order to avoid product shortages that could work against switching. We have already significantly re-allocated budgets and people from our cigarette business. Smoke-free products represent 5.1% of our sales volume, but 60% of our global commercial expenditure is dedicated to their commercialization.

Continued *IQOS* user growth (in millions)

	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Total	2.9	4.1	5.2	6.9	7.6	8.3	8.8	9.6
%	70%	71%	71%	68%	67%	67%	67%	69%

2017 — 2018

Total *IQOS* users*

Estimated users who have stopped smoking and switched to *IQOS**

* See Glossary for definitions. Source: PMI Financials or estimates, and *IQOS* user panels and PMI Market Research
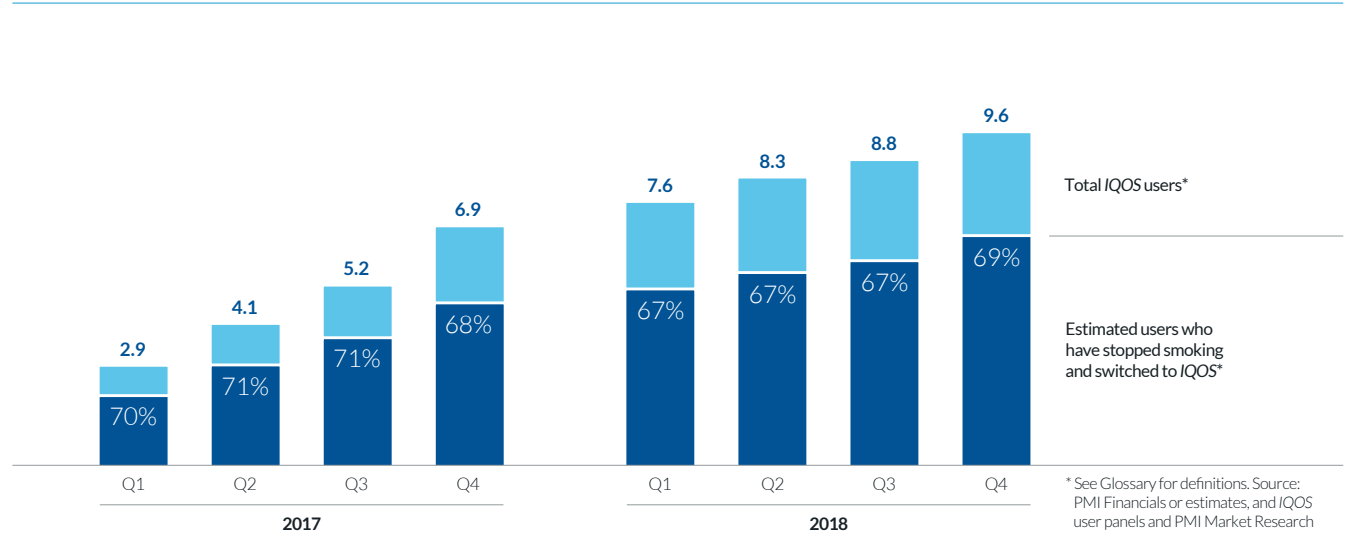
Smoke-free products: increasing interactions with adult consumers

From

"Business-to-business"

Wholesale and retail

To

"Business-to-consumer"

Learn
— Discover
Consider
Evaluate
Find

Experience
— Try
Buy

Live
— Use
Convert
Bond

Advocate

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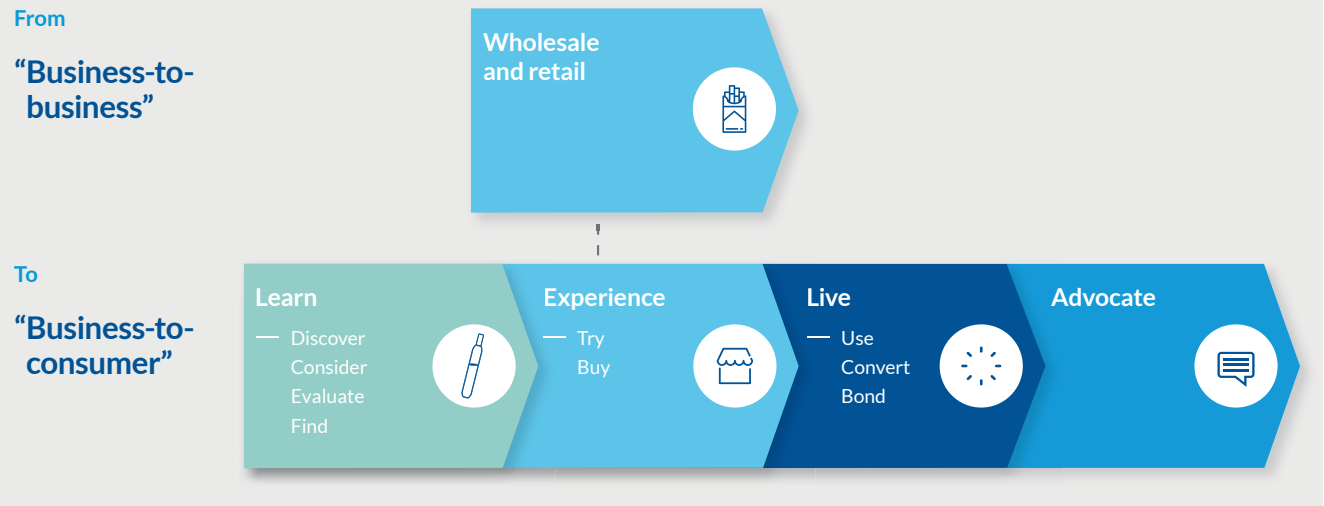
CASE STUDY

Early adopter market – how is it going in Japan?

>50%

Of PM Japan's net revenues from smoke-free products in 2018

600

Total workforce at our customer call center in Japan

Above: Customers in an *IQOS* store in Ginza, Japan

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CASE STUDY

Early adopter market – how is it going in Japan?

Japan is a tangible and powerful example of how we are living our transformation journey. In 2014, the revenue from smoke-free products sales for PM Japan stood close to 0%. In 2018, it was more than half of total sales. We have been able to pioneer an entirely differentiated market category allowing adult smokers to switch to less harmful alternatives.

In parallel with the commercialization of heated tobacco products, which commenced in 2014, smoking prevalence has fallen to 19.4% in 2018 (versus 20.8% in 2014). As the market leader of this new category, PM Japan increased its total tobacco market share, as many *IQOS* users have switched from competitive brands of combustible cigarettes.

In Japan, we intensify our focus on the "whole user experience," how to meet adult consumer expectations as they evolve, and ensuring that our teams deliver on our ambition.

The year 2018 saw some challenges in the Japanese market for smoke-free products where we witnessed more reluctance in switching away from cigarettes beyond the innovator and early adopter adult smoker segments, despite the increased availability of competitive offerings. PMI continues to bring innovation and superior experience to the category. To address the needs of such consumers, we began to implement a number of initiatives such as shortening the registration process or enhancing the product to suit user styles. Most importantly, we launched *IQOS 3* and *IQOS 3 MULTI*, and increased the number of consumer touchpoints.

Inside PM Japan, our organization transformation continues with significant developments in compensation, benefits, work–life balance, and childcare support, and an open office environment. We have significantly improved gender diversity; of new hires in 2018, 48% were women.

Total market – in market sales volume, annual 2012-18 (in billions)

197
200
167
150
133
100
50

2012 2013 2014 2015 2016 2017 **2018**

— Cigarettes
— Cigarettes and heated tobacco units
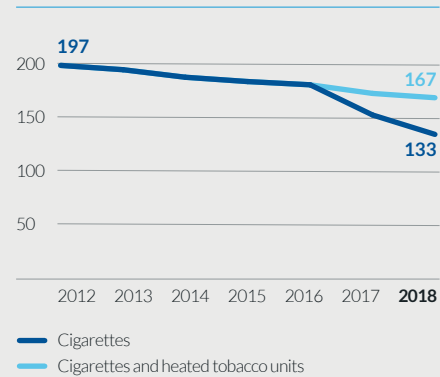
Source: Tobacco Institute of Japan IMS and PMJ Estimate/smoke-free products includes competitive smoke-free products IMS

PM Japan share of market, annnual 2012-18 (in %)

35   34.0
27.7 30
25
20
15   18.4
10
5

2012 2013 2014 2015 2016 2017 **2018**

— PMI cigarettes
— PMI cigarettes and heated tobacco units
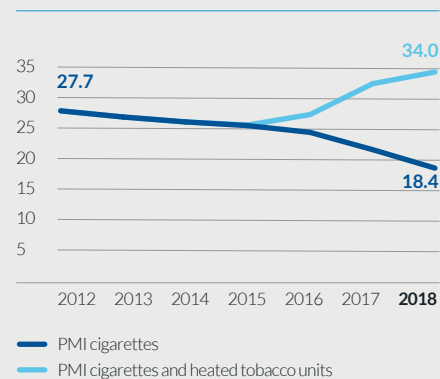
Source: Tobacco Institute of Japan IMS and PMJ Estimate/Note: Denominator = Cigarettes + Smoke-free products including JT's PloomTECH and BAT's Glo consumables IMS

Importantly for the transformation and for the consumer, we have further shifted resources to support the smoke-free product category growth. We have invested in our digital teams, bringing in people from outside our industry with the skills necessary to measure and enhance the quality of the consumer experience across all channels at each stage of the consumer journey.

To widen the appeal to new target segments among current adult smokers who would otherwise not quit cigarettes, we now have a 14-day, no-obligation product loan program, an option to have an extra device holder, and have also introduced *HEETS* consumables at a more affordable price point and with a new taste to complement the existing *Marlboro HeatSticks* available at a premium price. Our call center has a workforce of 600 and is based in Japan, so new customers can reach for help online or by phone.

Stakeholder engagement in Japan is positive: industry and society are accepting *IQOS* more readily; an example is Fuji Transport, which has endorsed the concept of "smoke-free" in its operations and only allows use of heated tobacco products inside the cabin of its trucks.

Above: Shea Lih Goh, President, PM Japan

Below: A call center employee in Fukuoka, Japan

Providing access to smoke-free products continued

Regulation of smoke-free products

People often ask when we will stop selling cigarettes. Our objective is to reach this moment as soon as possible by replacing cigarettes with smoke-free products. But this clearly depends on a number of factors out of our control, in particular the action from regulatory and public health authorities. In the most extreme cases, such as in Australia and Singapore, smoke-free products are banned, while cigarettes remain legal. We find it difficult to understand that governments would only allow the most dangerous tobacco product for sale, and prevent their citizens from accessing better alternatives.

The large majority of countries allow the sale of smoke-free products, but the regulatory environment varies substantially. As a result, it is easier in some countries than others to make people who smoke aware of alternatives to cigarettes and how they should use them. A recent survey[14] shows that nearly all (94%) respondents share the belief that consumers should have the right to know if such better alternatives exist.

Until recently, no country had any specific product standards for heated tobacco products. However, Russia, Ukraine, and Kazakhstan have now adopted quality and safety standards for the consumables, and in Kazakhstan for the devices, and defined methods for demonstrating the absence of combustion.

In Europe, all EU member states have transposed the EU Tobacco Products Directive, including the provisions on novel tobacco products, such as heated tobacco products and e-cigarettes. Most EU member states require a notification submitted six months before the intended commercialization of a novel tobacco product, and some require pre-market authorizations for the introduction of such products.

In some markets, regulators and public health bodies are developing new frameworks for smoke-free products. For example, in the U.K., a report published in 2018 by the Science and Technology Committee of the House of Commons concluded that e-cigarettes are significantly less harmful to health than smoking tobacco and that heated tobacco products may also offer a public health benefit despite their relative risk.[15] The report called for a risk-proportionate regulatory environment for both e-cigarettes and heated tobacco products and noted that e-cigarettes should remain the least taxed, cigarettes the most taxed, with heated tobacco products falling between the two. Furthermore, the U.K. Committee on Advertising Practice announced the removal of a prohibition on health claims in the advertising of e-cigarettes in the U.K., effective November 2018, with a review of this decision on market practices after 12 months.

Recently, the New Zealand government announced plans to introduce risk-proportionate regulation covering all tobacco and nicotine products.

At the end of 2018, following a rise in the use of e-cigarettes among minors in the U.S., the FDA announced a policy framework that restricts the sales of flavored e-cigarettes (other than tobacco and menthol flavors). It also announced its intention to remove from the market certain e-cigarettes that are appealing to or marketed at youth. PMI fully agrees that youth should not consume any type of tobacco and nicotine product. Our marketing code strictly prohibits any activity that targets youth and we support regulatory measures that will make it less likely that youth start consuming tobacco and nicotine products.

More generally, PMI supports and advocates for risk-proportionate regulation, whereby cigarettes are subject to the most restrictive regulation, and smoke-free products are subject to regulation that encourages smokers to switch completely. In addition, we recommend that governments ensure that smokers who want to continue using tobacco or nicotine products have truthful and non-misleading information and are encouraged to switch to less harmful alternatives.

Longer term, we can envisage a time when demand measures that encourage smokers to switch can be supplemented with supply measures on a country-by-country basis. We are committed to continue leading the industry in this massive transformation, and will be ready to support industry-wide supply-side measures as soon as scientifically substantiated smoke-free products have become widely acceptable and a large majority of smokers in a country have switched to them.

Above: An *IQOS* store in Ginza, Japan

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Inclusive access to smoke-free products

Our goal to replace cigarettes with smoke-free products extends to adult smokers of all income levels and to all countries worldwide. We are only at the beginning of commercializing a fully fledged portfolio of smoke-free products and realize that additional efforts are necessary to find products that are affordable and acceptable to consumers in different parts of the world.

Of course, we continue to work on developing different product platforms that can help achieve this goal. We are also experimenting with other solutions to reduce the financial barrier of switching to smoke-free products, such as the temporary lending of *IQOS* devices, combined with promotional offers where permitted by local legislation.

Today, *IQOS* is sold in a few upper-middle-income countries, including Guatemala, South Africa, and Kazakhstan, and we have put in place a team to focus specifically on low and middle income countries (LMICs as defined by the World Bank classification) and how to include them in our vision for a smoke-free future.

Question to Goekhan Aladag, Director for Smoke-Free Products in LMICs

PMI is successfully commercializing *IQOS* in numerous developed countries with higher levels of income and health awareness, but what about developing countries? How is the issue of access to better alternatives considered for LMICs?

We started our transformation journey a few years ago with the aim of offering a better choice for all 1.1 billion smokers, regardless of where they live or what segment of the population they represent.

I am currently working with dedicated teams to provide affordable and innovative alternatives, as well as tailored business models for LMICs. These efforts are focused on providing a sustainable model for adult smokers living in these countries.

Our goal is to accelerate the end of smoking worldwide, including in developing countries, by making sure that all smokers that would otherwise continue to smoke have the right kind of access, awareness, and ability to afford better products.

In addition to developing and commercializing innovative solutions, my role is also to find a way to make sure consumers in these countries can be made aware that there are better alternatives to cigarettes.

In that regard, and without a doubt, governments play a key role in appropriately creating frameworks that encourage the promotion of less harmful alternatives for smokers. For me, the key learning here is that the more awareness is built in collaboration with authorities and civil society, the faster cigarettes will be replaced.

Working in this role, I often get asked whether our smoke-free vision and reduced-risk product proposition is a solution reserved for the developed world and what we are doing to help smokers in LMICs.

Clearly, every smoker in the world deserves access to better products. We are committed to do our part and come up with products and business models that make scientifically substantiated smoke-free products affordable and accessible to consumers in LMICs. It is part of the disruption we are driving and there is no blueprint – so we are building everything from scratch.

Above: An *IQOS* store in Bogotá, Colombia

Providing access to smoke-free products continued

PERFORMANCE AND NEXT STEPS

Two years ago, we introduced a set of business transformation metrics to make the actions we are taking to pursue our smoke-free vision measurable and verifiable. This year, we have expanded the number of metrics to better illustrate the massive changes taking place at PMI.

In 2015, only two of our manufacturing facilities produced smoke-free products for commercialization purposes. In 2018, seven manufacturing facilities were producing *IQOS* heated tobacco units and other nicotine-containing products, up from three factories in 2017.

Our commercial expenditure ratio shows how much of our total global spend on marketing, consumer engagement, and trade activities is dedicated to smoke-free products. Last year, more than half of our global commercial expenditure was dedicated to smoke-free products, which is remarkable considering that we have not yet launched smoke-free products in the majority of our markets.

The net revenue ratio refers to the proportion of our net revenues (operating revenues net of sales and promotional incentives) that is generated by the sales of smoke-free products (including electronic devices and accessories). Excise taxes are excluded from the net revenue figures.

Compared with last year, we have added two metrics to better illustrate the rapidity of our progress at individual market level. These new metrics show the number of our markets in which net revenues of smoke-free products

exceeded 10% or 50% of our total net revenues. In three markets already, smoke-free products have become the biggest part of our business.

The last three metrics show our smoke-free product shipment volumes (including both heated tobacco units and e-cigarettes) and our combustible tobacco product shipment volume (mainly cigarettes), as well as smoke-free product volumes as a percentage of total volume. It is our ambition that, by 2025, at least 30% of our shipment volume will come from smoke-free products.

Last, but most importantly, the table shows the number of people who are using *IQOS* and how many of them have stopped smoking completely. By the end of 2018, there were 6.6 million adult men and women who had stopped smoking and switched to *IQOS*.

In terms of next steps, we will continue executing our strategy to provide all smokers with access to the best smoke-free products.

As we developed and started to commercialize Platform 1, we have not been idle on the other platforms. Following the pilot of Platform 4 in the U.K., we will be ready in 2019 to enter more markets with e-vapor products at scale.

We will continue engaging with external stakeholders to build support for the opportunity that a smoke-free future provides for consumers and society more broadly. We recognize that societal support is an essential step to enable the introduction of regulatory frameworks that can end cigarette smoking rapidly by encouraging smokers to consider smoke-free products.

And finally, we will continue to build our internal capabilities so that our organization is always fit-for-purpose and at the leading edge of technology, science, and user experience.

Business transformation metrics[16]	2015	2016	2017	2018	Aspirations[17]
Number of factories producing smoke-free products out of total number of factories	2 out of 48	2 out of 48	3 out of 46	**7 out of 44**	
Commercial expenditure (smoke-free/total)	8%	15%	39%	**60%**	
Net revenues[18] (smoke-free/total)	0.2%	2.7%	12.7%	**13.8%**	38–42% by 2025
Number of markets where net revenues from smoke-free products exceed 10% of total net revenues	0	1	5	**19**	
Number of markets where net revenues from smoke-free products exceed 50% of total net revenues	0	0	1	**3**	
Smoke-free product[19] shipment volume (billion units)	0.8	7.7	36	**42**	90–100 by 2021[20] >250 by 2025
Combustible product[21] shipment volume (billion units)	881	845	791	**767**	<550 by 2025
Smoke-free product shipment ratio[22] (smoke-free/total)	0.1%	0.9%	4.4%	**5.1%**	>30% by 2025
Total *IQOS* users (in millions)[23]	0.2	2.1	6.9	**9.6**	
Estimated users who have stopped smoking and switched to *IQOS* (in millions)[24]	n/a	1.5	4.7	**6.6**	>40 by 2025

Product addictiveness

Nicotine is the substance in cigarette smoke that stimulates the brain and affects the mood, creating an effect that smokers will often describe as helping them to relax and concentrate at the same time, but it is also nicotine that causes the addiction and makes it so hard to quit.

Our smoke-free products allow adult consumers to enjoy tobacco in a way less harmful than cigarette smoking, delivering nicotine without smoke. They are designed to significantly reduce or eliminate the formation of HPHCs, while approaching as much as possible the taste, nicotine delivery, and ritual characteristics of cigarettes in order for people who smoke to switch to the alternative product.

Let's be clear on the scientific facts about nicotine. As FDA Commissioner Gottlieb has stated: "The nicotine in cigarettes is not directly responsible for the cancer, lung disease, and heart disease". [25] Decades of scientific research show that the primary cause of smoking-related disease is the HPHCs formed by the combustion of tobacco. But nicotine is addictive and it is not risk-free. It can increase a person's heart rate and blood pressure, which can be problematic for those with pre-existing heart disease or severe high blood pressure. Pregnant or breastfeeding women should refrain from nicotine use altogether. Nicotine-containing products should not be used by, or sold to, minors (see more on page 41.)

All this being said, without nicotine delivery and the overall sensory experience, it is likely that smoke-free products would not be viable alternatives for current adult smokers, making nicotine necessary to achieving tobacco-harm reduction.

We are working hard to achieve a future without cigarettes. As society progresses towards the elimination of the most harmful form of nicotine delivery, there needs to be a societal debate on the risks and potential benefits of long-term nicotine use, comparing it objectively with a wide range of other mood-changing substances such as caffeine, alcohol, or THC in certain countries.

Nicotine is used by over 1 billion people every day. And with the right delivery method, nicotine use does not need to harm others. The world will definitely be a better place without cigarettes, but it is very difficult to see how this can be achieved without alternatives that deliver an acceptable sensory experience and nicotine.

Our responsibility in this domain has three aspects. First, we need to do our utmost to ensure that all our products are commercialized in a responsible way, helping to prevent youth nicotine initiation. Second, we monitor the use of our smoke-free products after launch on the market. This post-market surveillance will help us assess potential changes in prevalence, relapse, and complete quit rates towards nicotine abstinence, comparing cigarettes and smoke-free products. And third, we will continue to share our science and our post-market surveillance data relating to the risks and potential benefits of nicotine use to encourage a science-based and objective debate on this important societal question.

Above: A customer in an *IQOS* store in Bogotá, Colombia

Responsible R&D

We have recruited more than 400 scientists, engineers, and technicians over the years.

The way we work emulates pharmaceutical industry standards and the draft guidance on MRTPA issued by the FDA's Center for Tobacco Products in 2012. Our research aligns with international standards and practices that assure the quality and integrity of clinical and non-clinical laboratory processes and include the Good Laboratory Practice, Good Clinical Practice, and Good Epidemiological Practice standards.

We restrict animal studies to situations where no alternatives are available, and perform all activities in accordance with applicable laws and regulations, as well as internationally established best practices in laboratory-animal care. We always follow the widely recognized principles known as the "3Rs" of animal research: Replace, Reduce, and Refine.[26] We hope that in time we will be able to replace much or all animal testing with non-animal alternatives. In 2018, PMI and 24 other organizations collaborated on non-animal assessment of acute inhalation toxicity.[27]

We recognize that scientific assertions from tobacco companies may be met with skepticism. Sharing our science and listening to feedback are therefore fundamental parts of encouraging debate with scientific experts, regulators, and the public on important questions about our innovative products.

Since 2008, we have published over 340 papers on smoke-free products in peer-reviewed publications. In 2018, we presented our results at an additional 150 scientific conferences (2017: 76). Since 2018, the data from our non-clinical and clinical studies about our smoke-free products has become open-source, freely available to the public.

Further, we open our systems biology methods and processes for quality verification via a scientific crowd-sourced platform called sbvIMPROVER. This state-of-the-art approach allows us to peer-review and scientifically verify our results. Since 2011, around 200 institutions have taken part in the program; they have developed parallel methods to effectively challenge us, but ultimately they verified our research. The results are publicly available.

Additionally, to secure trust with specialist stakeholders, we share detailed product data on a specialist platform called Intervals to facilitate dialogue and reproduction of the science. By the end of 2018, 20 studies, 57 protocols and 144 data sets were published.

Our own dedicated science website (PMI Science) provides a wealth of information which feeds our regular bulletin.

In an additional step to promote independent research in the domain of tobacco harm reduction, we made a commitment in 2017 to contribute USD 80 million per year to the Foundation for a Smoke-Free World, up to 2030, on terms specified in the agreement. The Foundation has U.S. non-profit status and is an independent body governed by its own board of directors. It operates completely independently from PMI. The Foundation's role, as set out in its corporate charter, includes funding research in the field of tobacco harm reduction, encouraging measures that reduce the harm caused by smoking, and assessing the effect of reduced cigarette consumption on the industry value chain.

LEARN MORE ON TRANSFORMING OUR BUSINESS:

Peer-reviewed publications ▶

The Tobacco and Nicotine Database ▶

PMI's views on regulation ▶

PMI's views on the health effects of smoking ▶

PMI's standards for animal testing ▶

on www.pmi.com

and www.pmiscience.com

ADDITIONAL RESOURCES ON:

www.sbvimprover.com

www.intervals.science

Above: A scientist in PMI's R&D center in Neuchâtel, Switzerland

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PILLAR 2

Driving operational excellence

Our efforts to drive operational excellence are reflected through established programs on ethics and compliance, responsible marketing, and prevention of illicit tobacco trade.

As we progress on our transformation, we are strengthening risk management in our supply chain and further developing human rights due diligence activities.

In this section, we provide an update on our performance and key developments in 2018 for each of these topics.

IN THIS SECTION

Our human rights efforts cover all SDGs, please see page 5

86.9%
Of employees participated in training sessions pertaining to our Guidebook for Success in 2018

1st
Pilot human rights impact assessment conducted in 2018

Image: An employee in PMI's office in Bogotá, Colombia

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Responsible commercialization, and youth access and usage prevention

Above: A customer in an *IQOS* store in Bologna, Italy

Foreword

Tobacco product marketing is subject to extensive restrictions, including outright bans, throughout the world. We have robust internal policies and procedures in place intended to ensure that our marketing and advertising are directed only towards adult smokers. In some countries, our own standards are stricter than local laws and regulations.

We aim to market our products responsibly while providing adult consumers with meaningful information on the risks relating to our products. Our four core principles, which are applicable across the world without exception, are:

- We only market and sell our products to adult smokers;
- We warn consumers about the health effects of our products;
- Our marketing is honest, transparent, and accurate; and
- We respect the law and our high standards.

Responsible commercialization is an area where many stakeholders have expressed concerns, especially about how we communicate to adult consumers; whether we target non-smokers or minors; and whether we apply lower marketing standards in developing countries. The above four core principles drive our approach in all the countries where we sell our products and we welcome opportunities to discuss and improve this approach as part of our commitment to market our products responsibly.

Progress in 2018

The well-known health risks of smoking have led regulators to impose significant restrictions on cigarette marketing. We are clear that nicotine-containing products should be subject to strict regulations and robust enforcement to dissuade non-smokers from starting to smoke and to encourage smokers to quit. But it is equally clear that the millions of men and women who wish to continue to smoke should have the choice and appropriate information to switch to better alternatives.

Conventional and smoke-free tobacco products are fundamentally different. While our four basic marketing principles apply to all products, this difference means that we apply some specific rules and processes to conventional and smoke-free products. An overview of our marketing principles for combustible products is available online.

The Good Conversion Practices serve as the bedrock for our engagement with adult smokers to support them in switching to smoke-free products while discouraging unintended use; these products are not for people who have never smoked or for those who have quit smoking. We are also clear that smoke-free products are not risk-free nor are they a safe alternative to cigarettes.

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Underpinning our marketing practices is PMI's Guidebook for Success – our Code of Conduct (see page 43 for more). In 2018, we provided approximately 23,440 training sessions on our Marketing Code through different channels to employees and relevant third parties. Marketing initiatives across markets are subject to reviews and approvals as required by our strict standards. Our Senior VP, Commercial, is the owner of the Marketing Code and our VP and Chief Ethics and Compliance Officer oversees our Ethics & Compliance (E&C) program. Adherence to our Marketing Code and to all our Principles & Practices is monitored by the Internal Controls function along with the independent Corporate Audit department, which reports directly to the Board's Audit Committee.

Youth access prevention

We know that great care must be taken when it comes to preventing youth access to and usage of our products. Nicotine is addictive. It is not risk-free, and it poses particular risks for adolescents: youth should not use any nicotine-containing product.

We took this aspect into consideration right from the start, as we were developing our new products, and continue to do so as we expand our portfolio. We do not conduct studies on youth; however, studies that we have conducted among young adult never smokers between legal smoking age and 25 years of age suggest that our smoke-free products are not attractive to them, as evidenced by the very low levels of intention to try and intention to use reported when they were exposed to various forms of *IQOS* branded communications. In particular, young adult never smokers between legal smoking age and 25 years of age expressed particularly low levels of positive intention

to use *IQOS*, which varied between 0% and 1.1%. These results are consistent with two recent independent studies in Japan and Switzerland that show that the use of heated tobacco products among middle- and high-school students is extremely low (see page 27).

Our marketing must be honest, accurate, and transparent, and our principles must be understood and properly implemented. All our marketing and sales activities must respect applicable laws, global standards of decency, and the local culture and practices prevailing in the country where the activities will be conducted. To ensure that our Marketing Code is implemented as intended, each PMI affiliate head aims to ensure that the affiliate uses a robust and substantive review and approval process, such as a brand marketing review, coupled with an auditable documentation trail.

In addition to principles requiring compliance with all applicable laws and regulations, we also have internal policies and procedures in place to ensure that all marketing and advertising are directed only towards adult smokers or users of nicotine-containing products. Examples of this in action are: the complete absence of cartoons, youth-oriented celebrities, or models who are or appear to be under the age of 25; and no names or logos of our brands on any promotional items likely to be used or seen by minors.

We support regulation that ensures that only adults can buy tobacco and other nicotine-containing products as well as the strict enforcement of minimum-age laws and penalties for adults who provide tobacco products to retailers. We also provide guidance to retailers to ensure that they are aware of underage regulations and that they understand their role, even in the absence of relevant regulations, in preventing sales of tobacco and other nicotine-containing products to minors.

Our Good Conversion Practices – a summary

1. Smoke-free products are for adult smokers who want to continue enjoying tobacco or nicotine;

2. We do not offer smoke-free products to people who have never smoked or who have quit smoking;

3. Our goal is to switch every adult smoker who would otherwise keep smoking combustible products to smoke-free products, such as *IQOS*. We are committed to supporting adult smokers in their switching journey through education and guidance;

4. Smoke-free products are not an alternative to quitting. The best choice for consumers concerned about the health risks of smoking is to quit altogether;

5. To experience the benefit of smoke-free products, adult smokers should switch completely and abandon smoking permanently; and

6. Smoke-free products are not risk-free or a safe alternative to cigarettes, but they are a much better consumer choice for smokers who wish to continue to use tobacco and nicotine.

Above: A customer in an *IQOS* store in Ginza, Japan

Responsible commercialization, and youth access and usage prevention continued

PERFORMANCE AND NEXT STEPS

PMI has a heightened level of openness as our transformation expands. We monitor stakeholder feedback and track any complaints.

Our Marketing Code is strong and enforced globally. Nevertheless, responding to stakeholders' concerns, we are reviewing our business activities to ensure that youth are not targeted or encouraged to use any of our products. We will publicly report the results of that review by the end of 2019. This will further inform our work on responsible commercialization, which is one of the priority outcomes of our 2018 sustainability materiality analysis.

We comply with all legal requirements for product and service information, labelling and marketing communications. We report on label-related class actions and individual cases in our 10-K disclosure, which can be found on the U.S. Securities and Exchange Commission website, www.sec.gov.

23,438

Training sessions on our Marketing Code completed by employees and relevant third parties in 2018

Above: An *IQOS* store in Ginza, Japan

Maintaining a strong ethics and compliance culture

Foreword

The business transformation necessary to achieve a smoke-free future depends on a strong foundation of principles and values delivered through actions on the ground. We want to demonstrate seriousness and professionalism through transparent communications, coherent regulatory engagement, and a culture of respect, honesty, and fairness.

The ethics and compliance (E&C) program at PMI is the foundation for these elements of our transformation. At the core is our Guidebook for Success, which is our Code of Conduct. We strive to maintain a strong ethics and compliance culture through a combination of elements: Principles & Practices, which provide specific guidance on key topics; training and communications, which build understanding and commitment; and a diligent and fair investigation process for suspected misconduct combined with proportionate disciplinary action, which together reinforce a speaking-up culture and confidence in organizational justice. We have developed and continue to improve each of these elements, informed by empirical research and insights gained from our own cases on how and why people behave as they do.

The E&C program aims to enable employees to take courageous decisions on difficult questions, and to help PMI achieve commercial success and operational excellence while adhering to responsible business practices.

Above: Employees in PMI's office in Bogotá, Colombia

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Maintaining a strong ethics and compliance culture continued

Progress in 2018

A stronger compliance culture every day

Our Guidebook for Success, together with its supporting Principles & Practices, covers the following core risk areas: anti-competitive behavior; marketing and sales; conflicts of interest; workplace and labor practices; environment; health, safety and security; trade; and information security. It also covers a range of risk areas: prohibiting bribery and corruption, regulating gifts and entertainment, prohibiting facilitating payments, and regulating political contributions and advocacy activities. The Guidebook is available in 45 languages on the PMI website and employees can access it at all times on their company mobile devices.

In times of transformation, when legal frameworks are often still developing to take into account rapid change, using good ethical judgement is critical. While codes and training help promote the culture and behaviors desired, we aim to build and reinforce a culture in which employees "own" the sense of corporate integrity, where they are accountable (and hold others to account), and where PMI values guide everyday business decisions. We promote a way of working where we pause before taking action, we ask for help when we need it, and we speak up about things that do not seem quite right.

Our VP and Chief Ethics and Compliance Officer, who has a reporting line to PMI's President, External Affairs, and General Counsel, and reports regularly to the Board and its Audit Committee, oversees our E&C program. Adherence to our Guidebook for Success is monitored by the Internal Controls function and the independent Corporate Audit department, which reports directly to the Board's Audit Committee. Suspected violations of the Guidebook or other misconduct are investigated by the E&C department.

Preventing bribery, corruption, and anti-competitive practices

Corruption, bribery, influence trafficking, misleading information, secrecy about issues that are material to a decision, and dishonesty in general are not acceptable forms of doing business at PMI. Our Guidebook for Success, together with its supporting Principles & Practices, govern our interactions with government officials, which are conducted transparently, with integrity, and in adherence to local laws.

In particular, our Guidebook for Success and Principles & Practices cover a range of anti-bribery topics, including giving and receiving gifts and entertainment, facilitating payments (prohibited), contributions involving or connected with government officials, third parties who interact with government officials on our behalf, membership of organizations, advocacy activities, and reporting and record keeping.

We also publicly disclose the limited political contributions we make on our corporate website.

We comply with advocacy rules, report on our activities as required in several jurisdictions, and are transparent when others engage on our behalf. We also prohibit third parties from interacting with governments, public institutions, or other audiences on our behalf from engaging in bribery or in other forms of inappropriate influence. We make our internal standards known to them, integrate such standards in our agreements with them and monitor their compliance.

In addition, leveraging our values, cross-functional knowledge, and experience, we connect with international organizations and global experts, such as Transparency International, Business 20 (B20), Business at OECD, the Basel Institute on Governance, and the International Anti-Corruption Academy, to contribute to the fight against corruption, seek broad public–private cooperation, and support collective action in building effective, accountable institutions at all levels.

Above: Employees at PMI's Operations Center in Lausanne, Switzerland

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Workplace integrity

Our Guidebook for Success and the related Principles & Practices establish our standards for a work environment that is respectful, inclusive, and safe. We are committed to maintaining an environment in which all PMI employees have an equal chance to contribute and succeed based on the merits of their work. We strive to eliminate discrimination, harassment, and unsafe conditions in the workplace.

We perform an ethics and compliance "health check" of our organization every few years using a global ethics and compliance census. We completed the last one in December 2018, in order to "check the pulse" of employees during this time of fundamental change and transformation. We provided the online assessment tool to nearly 40,000 employees and achieved a 70% response rate.

The results of our 2018 ethics and compliance census confirmed that the fundamentals of our E&C program remain strong. More than 90% of respondents agreed that PMI, the head of their business affiliate, and the CEO of PMI are each committed to doing business ethically. More than 90% of respondents also confirmed that they are aware of the E&C department and their duty to speak up about suspected misconduct, and that an investigation would take place if they were to speak up about a potential ethics and compliance violation.

Nevertheless, we saw early warnings that some employees may be increasingly concerned about retaliation, even though 70% of respondents still agreed that they would not face retaliation in any form for speaking up about potential misconduct. This represents a six-point drop on previous research completed in 2015. To address this and some other points raised by the census results, we are currently working to develop action plans that we will execute during 2019.

Above: Employees in PMI's manufacturing facility in Dakar, Senegal

Risk management at PMI

Our governance and technical procedures for risk management align with the Sarbanes-Oxley Act. Our Chief Strategy Officer reports to our CEO directly on strategic group risk. Strategic and operational risks are managed in an integrated way that accounts for functional, market, and product risks.

PMI's integrated risk assessment process, in place since 2015, brings together the functions of Corporate Audit, Internal Controls, and Ethics & Compliance. These groups collaborate to understand, assess, and advise on risk and its potential consequences for PMI. The work is based on feedback from the markets as well as on top-down strategic analysis. When a risk assessment requires a formal follow-up, PMI nominates an accountable person who follows up with an action plan and reports up to Board level.

Operational and strategic risks, such as safety, leaf supply, climate change, electronic waste, or labor conditions, are well covered by our risk teams and management processes through which, increasingly, more complex sustainability and human rights risks and opportunities are being embraced at PMI. This is being done in parallel to the challenging work to transform to a smoke-free future: for example, by assessing diverse risks relating to the shift from a business-to-business model to a business-to-consumer model.

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Maintaining a strong ethics and compliance culture continued

PERFORMANCE AND NEXT STEPS

In 2018, 86.9% of employees participated in training sessions pertaining to our Guidebook for Success. A total of 193,000 training sessions were completed across PMI, all of which helped our employees and relevant third parties to build their awareness about risks to the business, good ethical judgement, and how to speak up should they notice something wrong or something that could be improved.

We received 872 reports of suspected misconduct in 2018, of which approximately 40% were substantiated (2017: 714 received, 40% substantiated). None of the substantiated misconduct resulted in a material consequence for PMI.

A third-party-operated Compliance Helpline is available 24 hours a day, seven days a week, in all languages spoken at PMI. Although anonymous reporting is available, approximately four out of five people who used one of the many channels available to report suspected misconduct gave their name.

The principal categories of reported misconduct were "Theft and Fraud" and "Workplace Integrity," accounting for approximately 60% of the cases. Over half of the employees whose misconduct was substantiated left the company, while the other half received written or verbal warnings, sometimes with financial penalties.

Despite our high ethical standards and rigorous control and compliance procedures aimed at detecting and preventing misconduct, given the breadth and scope of our international operations, we may not be able to detect all potential improper or unlawful conduct by our employees and partners.

86.9%
Of employees participated in training sessions pertaining to our Guidebook for Success in 2018

Above: Employees in PMI's office in Tokyo, Japan

Delivering on our commitment to human rights

Foreword

Respect for human rights is fundamental to operating a sustainable global business. At PMI, we embed respect for human rights in our culture, so that human rights principles govern the way we work with employees, suppliers, consumers, and the communities where we operate.

Different policy instruments set out how we want to achieve this aim: our Commitment to Human Rights, our Guidebook for Success, our Responsible Sourcing Principles, and our Agricultural Labor Practices Code. They align with our core values, and commit us to managing our human rights impacts in a systematic way, in accordance with the United Nations Guiding Principles on Business and Human Rights (UNGPs).

To ensure that we uphold our corporate responsibility to respect human rights in line with the UNGPs, in the diverse and challenging environments where we operate and from which we supply, we must focus on where we have the greatest potential human rights risk. We are continuously striving to improve our practices with respect to identifying risks to "rights holders" and we are strengthening our due diligence processes helping to drive continuous improvement and raise standards across our value chain.

Above: Hand rollers of kretek cigarettes in PMI's Indonesian affiliate, Sampoerna

Delivering on our commitment to human rights continued

Progress in 2018

Our human rights commitment is delivered by practical actions across our operations, and our supply chain. Our Human Rights Roadmap directs the actions across functions which are targeted to be delivered by the end of 2020. Actions fall under four broad aims, and typically range from capacity building and due diligence processes to grievance mechanisms and clear reporting.

The Roadmap one year on

The Roadmap is built on extensive internal engagement and consultation with experts in human rights, business partners, and other stakeholders. Its development included a high-level, company-wide human rights risk mapping, data collection and analysis of PMI's group-level policies, procedures, and practices. Periodically, we will share our progress in implementing the Roadmap.

Embedding a culture of respect

Top-down senior commitment counts. That PMI's senior management is instilling a culture of respect for human rights throughout our operations provides fertile ground for meaningful actions down the road. This sends an important message to employees and business partners about the need for a practical understanding of human rights risks and of PMI's commitment.

Embedding an ethos in a corporate culture starts with awareness raising and training. We have provided tailored training programs to our corporate auditors and the regional security personnel, and specific training on modern slavery and human trafficking for relevant supply chain employees. We also started raising awareness on the foundations of human rights for new employees in our External Affairs department and at our Operations Center. In parallel, we continue engaging with our suppliers to build their understanding of PMI's Responsible Sourcing Principles (RSP) and comprehensive Implementation Guidelines.

As per our commitment in the Human Rights Roadmap, we started benchmarking and reviewing key Principles & Practices to include, where needed, relevant human rights considerations, starting with the PMI Marketing Code, and the employment (including all relevant labor rights) and anti-bribery policies. We also worked on a new security policy and a human rights guideline, to reinforce our security service suppliers due diligence process, especially for those who carry weapons to fulfil their duty; both documents will be rolled out in 2019.

Human rights due diligence

Human rights due diligence is the cornerstone of our human rights program. Over the last years, we have developed due diligence processes for labor rights in our tobacco supply chain: environmental, health, safety, and security risks throughout our operations; and business integrity risks across our value chain.

Building on our early work, we continue undertaking due diligence activities in line with the UNGPs to identify, prevent, and mitigate adverse human rights impacts of our global operations and supply chain. In 2018, we performed a corporate human rights risk assessment to identify our potential human rights risks at a global level, confirming that we are focusing on the right issues in line with our Human Rights Roadmap. We also integrated sustainability and human rights considerations in our ethics and compliance risk briefs included in PMI's integrated risk assessment.

Human rights grievance mechanisms

Providing access to effective grievance mechanisms in our operations and across our supply chain is a key requirement of the UNGPs and a core element of our due diligence approach. Internally, we have clear policies, run regular training and ensure robust processes are in place to encourage employees to speak up if things don't seem right or can be improved. The same applies to our supply chain where we believe that everyone should be able to have a voice and seek help. In our RSP, we specifically

ask our suppliers to provide their workers with easily accessible ways to raise concerns, free from any retaliation. An effective grievance mechanism is a strong element of due diligence and remediation.

In our tobacco supply chain, our Agricultural Labor Practices (ALP) Code states that "Workers should have access to a fair, transparent and anonymous grievance mechanism." Such mechanisms are available in several countries where we source tobacco. The most common form is a free helpline that is supported by working with local authorities, professional agents, and NGOs. Concerns can also be raised with field technicians at any time.

As we move forward, we will continue looking into ways to provide better access to grievance mechanisms throughout our operations and supply chain.

Reporting on our progress

This report serves as a means to share our progress and challenges as we advance on our Human Rights Roadmap.

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CASE STUDY

Human rights due diligence in Mexico

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Action plan to address the findings of the pilot human rights impact assessment conducted in 2018

Image: Employees in PMI's manufacturing facility in Guadalajara, Mexico

CASE STUDY

Human rights due diligence in Mexico

In accordance with the commitment in our last report, we reinforced our due diligence processes by conducting a pilot human rights impact assessment in 2018 with the support of Article One, a specialist human rights consultant. Its scope was limited to our manufacturing operations, non-tobacco leaf supply chain, security operators, and communities impacted by our operations in the country. Our tobacco supply chain and marketing practices were not in scope of this first pilot exercise. The former is largely covered by our Agricultural Labor Practices (ALP) program and will be included in the 2019 impact assessment, which will also include our marketing activities and related internal reviews and control processes. In parallel, a cross-functional working group will conduct a comprehensive review of the steps PMI takes across its business activities to market its products responsibly.

Our pilot assessment comprised five steps:

1. Preparation
Review by the consultant of PMI policies, procedures, and controls, including interviews with functional heads at the Operations Center (including People & Culture, Health and Safety, Supply Chain, Security, E&C, Procurement and External Affairs).

2. Methodology and research
Definition of the method and scope of the assessment, based on country risk briefs and scoping questionnaires, to identify the "rights holders" to be interviewed, the PMI facilities to visit, and the external stakeholders with whom to engage.

3. Assessment
In-country interviews and visits by the consultant with PMI local management and several "rights holders," such as factory workers, contracted employees, trade union representatives, suppliers, third-party staff, as well as external stakeholders, such as non-governmental organizations (NGOs), local authorities, trade associations, and international human rights organizations.

4. Integration
Based on the findings, recommendations and a corresponding action plan, timeline and accountability program were developed for the Mexico-based team to implement. The corporate human rights team monitors the follow-up of the actions at the country operation level.

5. Reporting
Reporting on the action plan and learning from this exercise.

The pilot assessment in Mexico revealed strengths in safety, employee loyalty, diversity and inclusion policies and practices, and parental leave, and a high awareness of the internal grievance process. In parallel, it substantially improved awareness of human rights impacts in PMI Mexico. It also led to an action plan to address the following areas:

- Working time: even though in compliance with Mexican labor law, some PMI workers in Mexico sometimes work excessive overtime especially during peak season. This may pose a potential human rights risk related to factory workers' safety;

- Although evening and night transport is provided for all factory workers to and from the workplace, some workers expressed the need to review the city areas covered by this service;

- Long shifts for certain vendor-employed drivers and security guards in retail delivery may pose a risk of road safety related accidents among PMI suppliers' drivers;

- Risk to personal security and life of truck drivers and guards from robberies;

- Risk of wages below living wage level for some suppliers' staff; and

- Risk of substandard working conditions for some suppliers' workers in low-skill manufacturing and services. Identifying

and addressing human rights impacts on the ground is a complex task involving many different issues, functions, and segments of the value chain. Even though limited in scope, this exercise raised awareness of human rights at the country level and further developed employee competencies and skills to address human rights issues. From a corporate perspective, we aim to use local learnings to enhance our global understanding and management of human rights impacts.
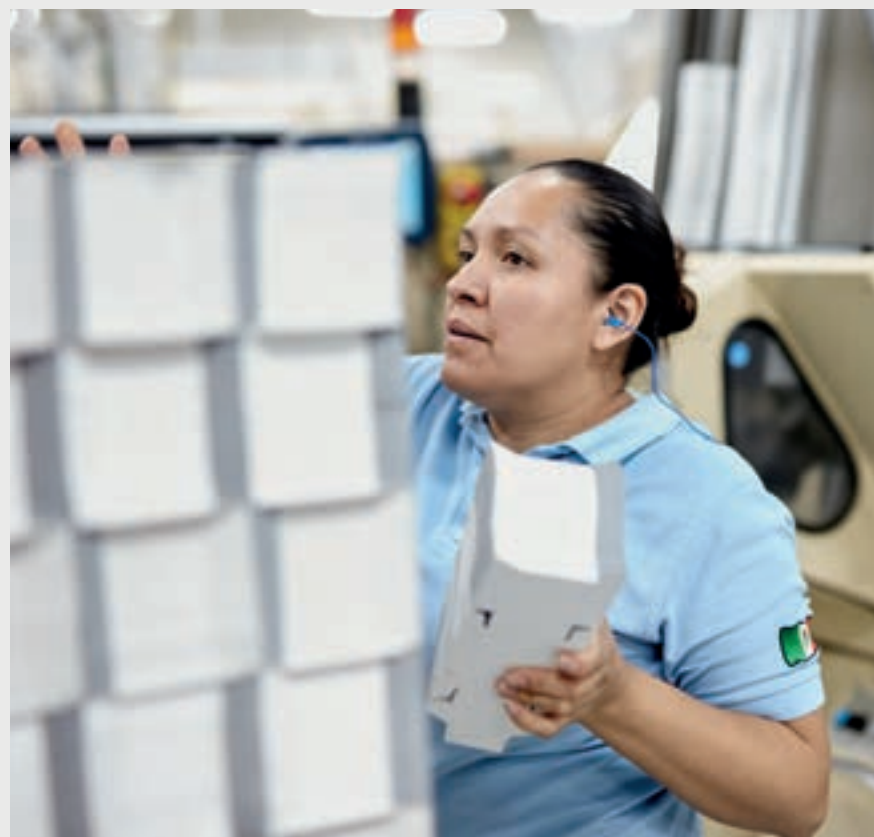
Above: An employee in PMI's manufacturing facility in Guadalajara, Mexico

PERFORMANCE AND NEXT STEPS

In 2019, all relevant functions will continue implementing their action plan as per our Human Rights Roadmap. A key focus will still be raising awareness of human rights across the organization. To go further, and to reach our employees in all markets, we will be reviewing our human rights e-learning tool to ensure that practical training content is accessible and relevant to all employees. We will further review and integrate human rights considerations into our Principles & Practices, our integrated risk assessments and our Corporate Audit protocols.

Following the pilot assessment in Mexico, we will focus on implementing its findings and will conduct a second human rights impact assessment in 2019 elsewhere. We expect to gain an even better understanding of the actual and potential human rights impacts at site level and to use feedback through our due diligence program. We will report the findings in next year's Sustainability Report.

2nd

Human rights impact assessment to be conducted in 2019

Above: Hand rollers of kretek cigarettes in PMI's Indonesian affiliate, Sampoerna

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Sourcing raw materials and other supplies responsibly

—— TARGET ——

2,000

Suppliers assessed though the supplier due diligence platform (STEP – Sustainable Transformation Enables Performance) by the end of 2020

Foreword

A central pillar to becoming a leader in sustainable business practices is engaging with our suppliers to achieve responsible, sustainable supply chain practices.

Our business has a significant, global supply chain. We have a large agricultural supply chain, ranging from tobacco growers to producers of other agricultural raw materials, such as clove, menthol, and guar gum. Another part of the supply chain consists of manufacturers of direct materials used to produce cigarettes and other tobacco products, such as acetate tow (for filters) and paper (both cigarette paper and packaging materials). Also key to our business are the manufacturers of machines for our cigarette and heated tobacco products factories, a highly specialized industry. A recently added part of our supply chain includes manufacturers of electronic devices for heated tobacco products and e-cigarettes. Finally, we work with thousands of suppliers of goods and services that are not specific to the tobacco business, but essential to any business, such as office equipment, company cars, and consultancy.

In our tobacco leaf supply chain, PMI has direct contracts with approximately 21,000 tobacco farmers and direct contractual relationships with more than 20 third-party suppliers contracting over 329,000 tobacco farmers (excluding China). Beyond tobacco, our supply chain comprises more than 36,000 suppliers across 180 markets with an annual spend of around USD 10 billion.

Our total supply chain has a significant environmental, social, and economic footprint that calls for comprehensive programs to address risks and achieve improvements.

PMI's approach to sustainable supply chain management includes a set of Responsible Sourcing Principles (RSP) which define the expectations for our suppliers, and their suppliers too. Our supply chain due diligence system aligns with the UNGPs. The specific sustainability risks of our agricultural supply chain are addressed through our Good Agricultural Practices (GAP) and the Agricultural Labor Practices (ALP) program.

We aim to anticipate and respond to sustainability issues arising in our supply chains through our management approach and by working with our suppliers and other stakeholders.

Above: An employee in PMI's manufacturing facility in Neuchâtel, Switzerland

Progress in 2018

We formally assess where our supply chain risks are and how to manage them. We do this by considering the risks (social, environmental, and governance) of the material or service supplied, as well as the country in which the material is produced or the service is delivered. The materials with the most significant sustainability risks in our supply chain are:

- Tobacco leaf;
- Other agricultural products such as clove, menthol, and guar gum;
- Acetate tow (filters);
- Wood-based products used in packaging; and
- Electronic devices and components (for products such as *IQOS*).

Assessing suppliers against our Responsible Sourcing Principles (RSP)

We published our RSP in 2017 along with the RSP Implementation Guidelines to set the requirements for a responsible approach to the sourcing of our materials and services.

The RSP has been translated into 26 languages and covers environmental, social, and governance topics. We provide suppliers with information and engage with them on the need, over time, to align their business practices with our RSP. A major focus in 2018 was delivering training and workshops for PMI procurement teams as part of the capacity-building process with suppliers.

In parallel, we have designed a Supplier Due Diligence Framework which is currently being developed in line with international best practices.

The Framework aims to regularly evaluate suppliers' status in social, environmental, and business integrity compliance and to address gaps within our RSP or other commitments. This

means an initial screening of suppliers according to geography and industry. This screening will identify the suppliers that need to be more closely monitored and assessed. Monitoring may range from self-assessments, to desktop reviews, and up to suppliers' on-site audits.

Our objective is, of course, to support suppliers in a continuous improvement approach to align their practices with our requirements, improving the overall working and living conditions in our supply chain. An integral part of the Supplier Due Diligence Framework is a process to ensure that suppliers have established action plans for potential gaps and that they rigorously and timely implement them. Tracking and reporting on our suppliers' performance, both internally and externally, will drive transparency. In addition, we will continue to look for further opportunities to collaborate with our suppliers in specific projects to improve social and environmental sustainability.

We are setting up an online supplier platform (based on information collection and data exchange) to deliver the Supplier Due Diligence Framework in practice.

During 2019, we intend to invite the first wave of suppliers to join the platform as the core part of their assessment against our RSP. The target is to assess 100% of global suppliers of direct materials and devices using the platform. Suppliers of technical and indirect materials will be the next target group.

Engaging with direct materials and electronics suppliers

In 2018, we specifically looked at risks in our *IQOS* supply chain. As illustrated by the case study on the next page, the way we work comprises on-site engagement, assessments, establishment of action plans, and improvement tracking. Where required, we also conduct conflict minerals reporting.

We plan to expand the assessment and engagement work over the next two years. To push sustainability in the smoke-free product supply chain in 2018, we launched initiatives with tier 1 and tier 2 electronic component suppliers, for example:

- Written commitment to the RSP by all tier 1 and tier 2 suppliers directly managed by PMI;
- Audits with Verité, our supply chain assessment partner, of the key tier 1 suppliers in Asia;
- Pilot project to promote better recruitment and employment practices for foreign workers in Asia; and
- A review of tier 2 electronics suppliers directly managed by PMI, including visits and preliminary risk mapping.

The 2018 conflict minerals submission to the U.S. Securities and Exchange Commission (fiscal year 2017) reported that all 259 smelters, except one, in our electronics supply chain covered in that report are certified "conflict-free."[28] To continue to build internal capabilities, we introduced a conflict minerals e-learning for procurement employees.

Additionally, part of our procurement work in 2018 was to focus on the strategy for carbon emissions and deforestation in our non-leaf direct materials supply chains. We engaged a specialist organization to collect and analyze data on the carbon emissions of our paper, board, and acetate tow supply chains, in order to better understand the opportunities and set targets for suppliers during 2019.

We also worked with our principal paper and board suppliers on deforestation and traceability of wood-based products. An initial analysis of the deforestation risk identified acetate tow as a top priority area for engagement in 2019, followed by board and paper. Our strategy for assessing deforestation risk is described on page 97.

Our Supplier Due Diligence Framework

Approach
- Risk-based
- Data-driven
- Systematic
- Scalable

Objectives
- Assess performance of suppliers against the Responsible Sourcing Principles
- Define corrective action plans to address gaps
- Monitor progress against plans
- Report

Suppliers engagement — **Risk screening** — **Performance assessment** — Mitigation — Tracking & reporting

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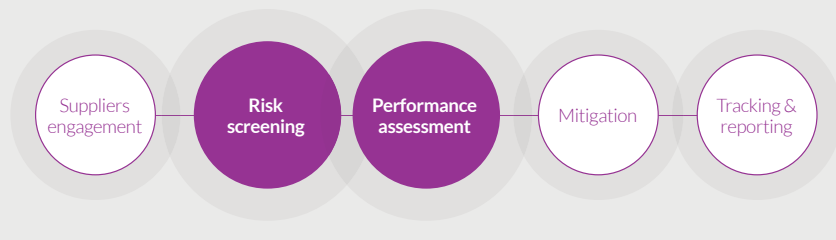
CASE STUDY

Addressing social impacts in our electronics supply chain

$2.7m

Reimbursed by the supplier to workers after the establishment of an average recruitment cost per country of origin

>1,000

Workers surveyed by our supplier to better understand issues in the recruitment process

Image: IQOS device manufacturing in Asia

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CASE STUDY

Addressing social impacts in our electronics supply chain

We are still new to the world of electronics supply chains but we are not new to engaging with stakeholders to promote high standards for work conditions in our supply chains. Since 2010, we have partnered with an international fair labor NGO, Verité, to improve labor practices on the farms from which we source tobacco. Since 2016, our collaboration has embraced efforts to improve human rights in our electronics supply chain too.

Our work so far has focused on understanding our exposure to social sustainability risk. Our due diligence work started with formal assessments of our tier 1 suppliers. We found that most suppliers aligned with our RSP, although some had issues that needed to be resolved, primarily recruitment practices and the living and working conditions of migrant workers.

With one of our major electronics suppliers in Asia, our journey started in late 2016, where PMI worked with Verité to carry out a comprehensive assessment of the labor management systems to understand the living and working conditions of workers, particularly migrant workers, who make up a significant percentage of the supplier's labor force. During 2017, we worked with this supplier to establish a labor management system at the manufacturing site and to eliminate some of the more serious issues, like retention of passports and excessive working hours.

In 2018, we undertook a full follow-up audit that included interviews with 40 workers in their native languages, as well as interviews with management and third-party service providers. We cross-checked our findings against the supplier's policies and procedures and our RSP.

Health and safety management was good, working hours were within the RSP limits, and workers were in possession of their passports. However, the interviews, the review of internal documents such as worker contracts, and the analysis of supplier agreements identified important gaps. Recruitment fees were being charged to migrant workers, the living conditions needed improvement, deductions from wages were unclear, and the grievance mechanism was not effective. A prompt response was needed to address these findings.

With support from senior management at the supplier, we established an ambitious action plan that required the supplier to close the major gaps swiftly. We also undertook a benchmarking exercise to understand better how other manufacturers in the region have managed similar issues.

At the end of 2018, the supplier surveyed over 1,000 workers at the site to better understand issues in the recruitment process. As a result, the supplier established an average recruitment cost per country of origin, and then reimbursed all workers at the site, not only those working on

our products. Total reimbursements amounted to the equivalent of more than USD 2.7 million. The supplier also decided to stop outsourcing its worker recruitment process and to develop a training and audit process for its own recruitment service providers. Additionally, the supplier informed PMI that it would no longer recruit from those countries of origin where there is known to be a very high risk of worker exploitation. The supplier further committed to improve grievance mechanisms, factory manager training, and communication with candidate workers in their home countries before they migrate. Moreover, the workers will move to new dormitories in 2019.

Following our recommendations, the supplier joined a program that aims to promote ethical recruitment practices. The program includes an external worker helpline, multiple rounds of in-depth worker surveys to help improve working conditions, worker–management communication training, and effective pre-departure orientation training, along with other measures. The program should extend until early 2020.

Above and right: *IQOS* device manufacturing in Asia

Sourcing raw materials and other supplies responsibly continued

Implementing Good Agricultural Practices (GAP) for tobacco suppliers and farmers

Sustainable tobacco production is the efficient and competitive production of quality tobacco in conditions that limit as much as possible the impact on the natural environment, and that improves the socio-economic conditions of the people and communities involved in its production. Sustainable tobacco production is the desirable outcome when GAP is properly applied.

GAP has been in place since 2002, and since 2016 we have been assessing conformity of tobacco suppliers and farmers with our GAP standards through the industry-wide Sustainable Tobacco Program (STP) managed by AB Sustain, an independent supply chain management specialist. One of the outcomes of the assessment is an independent performance rating against all STP criteria. AB Sustain conducted STP assessments in all suppliers' locations over the last three years; in 2018, they assessed suppliers in 11 countries (2017: 8). The STP process includes:

- Annual self-assessments completed by tobacco suppliers (reviewed by AB Sustain);
- On-site audits conducted by AB Sustain to a sample of contracted farmers; and
- Comprehensive review of tobacco suppliers' policies, procedures, and documentation; and demonstrating the level of STP/GAP implementation.

GAP at PMI: a mature system with demanding requirements

Our GAP program is structured around four key pillars: Governance, Crop, Environment and People. Under each one of them are principles and measurable standards that we expect all those who grow and supply tobacco to PMI to meet.

- **Governance**: PMI expects leaf suppliers to embed the necessary processes in their business practices to ensure its successful implementation. Good business practices may include contracting arrangements with farmers, sufficient field technicians for an effective GAP implementation, regular visits and training for farmers.

- **Crop**: GAP promotes the adoption of growing practices that result in tobacco produced with the right quality, style and integrity, and meeting regulatory requirements. It includes considerations such as seed variety integrity, sound plant nutrition, integrated pest management, and crop profitability.

- **Environment**: GAP enables PMI to help farmers minimize negative impacts on the environment by an appropriate usage of the natural resources such as water and energy; conserving ecosystems and biodiversity; ensuring soil fertility in the long term; and managing waste properly.

- **People**: PMI is committed to eliminate child labor and other labor abuses and to achieve safe and fair working conditions on all farms from which we source tobacco. This pillar of GAP is supported by PMI's Agricultural Labor Practices (ALP) program (see page 65 for more).

GAP implementation by PMI and our tobacco suppliers

PMI

GAP
- **8** PMI leaf operations
- **24%** volume of tobacco purchased

GAP & RSP
- **23** third-party leaf suppliers
- **76%** volume of tobacco purchased

GAP

GAP

>2,600
Field technicians support and monitor GAP implementation

21,000
Farmers

>350,000
Tobacco farmers committed to applying GAP

>329,000
Farmers

PMI has direct contracts with 21,000 farmers via our PMI leaf operations. We also contract over 20 third-party leaf suppliers who themselves have direct contracts with more than 329,000 farmers in the countries where we source tobacco.

PMI adopts an inclusive farming approach called Integrated Production System (IPS) that requires leaf suppliers to be in a commercial partnership with farmers, enabling direct levels of support, such as the provision of recommended crop inputs, knowledge and technology transfer, financial loans or other extension services, aligning with the goals of the GAP standards. IPS farmers are provided with market information from suppliers that, alongside the contract, helps to protect them from market uncertainty to achieve a fair price for their crop, and to guarantee the sale of tobacco. IPS involves all farming practices, from crop planning until the tobacco is processed and packed.

Additionally, an important aspect of our GAP program is the systematic intervention and monitoring by field technicians. These men and women know the farmers they support and their community. They facilitate GAP implementation on the ground, and work to ensure good labor practices are upheld at the farm level. It is often a daunting task: in many countries most farms are small-scale family farms of less than two hectares, with perhaps no business procedures, and located in rural areas where basic infrastructure is poor or absent. Field technicians' visits are important for GAP and ALP monitoring, training, and procedural support. They build trust with farmers to resolve issues together sensibly and overcome barriers to progress. They are vital to the whole monitoring system.

Above: A field technician and a tobacco farm worker in Mozambique

Mint: first steps towards responsible sourcing

Mint is used in heated tobacco units and conventional cigarettes. It is sourced mainly from small farmers in the Uttar Pradesh region of India. We recognize the potential for sustainability risks due to the long supply chain, with many intermediaries, no direct contracting, and challenging socio-economic conditions.

In 2018, with a key supplier, we surveyed 1,100 households in the region to evaluate how menthol mint farming is organized. Potential risks identified include safety, child labor, access to drinking water, and the use of firewood for cooking. A first step in 2019 is to establish 40 women's self-help groups as the backbone of a sustainability program (including approximately 400 women in 10 villages). The aim is to improve sustainability performance, increase household profitability, develop agricultural practices, and boost economic empowerment.

Role of field technicians

- Provide agronomical assistance
- Identify and address labor issues
- Deliver training to farmers
- **Field technicians**
- Connect farmers and leaf suppliers
- Monitor GAP implementation
- Ensure implementation of improvement plans

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Sourcing raw materials and other supplies responsibly continued

PERFORMANCE AND NEXT STEPS

We report steady progress in enforcing the requirements of our RSP, GAP and associated guidelines to source tobacco and other categories in a responsible manner.

Across our entire supply chain, the supplier due diligence platform, to be launched in 2019, will provide the data on the status of key suppliers on performance improvements. Our initial focus will be on 400 suppliers of raw materials, electronics, and selected categories of indirect materials. Through 2020, we plan to include an additional 1,600 suppliers, using a risk-based approach.

All our tier 1 electronics suppliers for smoke-free products aligned with our RSP and achieved performance improvements. Over the next two years, we will extend our monitoring to tier 2 suppliers and we will further develop a process for monitoring tier 3 suppliers. We are integrating sustainability criteria and more detailed guidance in our contract tendering process, for further development in 2019.

Our RSP was signed by 100% of our tobacco leaf suppliers in 2018. The conformity of tobacco suppliers and farmers to our GAP standards has been audited in all countries from which we source by AB Sustain through the STP, between 2016 and 2018.

All

Our tobacco leaf suppliers signed our RSP in 2018

Above: Production technicians in Bahia, Brazil

Maintaining data privacy

In recent years, there has been increasing public awareness of privacy issues and greater scrutiny by stakeholders of how companies approach data privacy. Global data protection laws have become more prevalent and rigorously enforced. Even before the EU General Data Protection Regulation (GDPR) became effective in May 2018, PMI had developed, and will maintain, its Global Privacy Program (GPP) to establish a new global standard for data privacy across our markets and functions. The GPP was developed and deployed using an internationally recognized privacy management system. The program is designed to support PMI functions and affiliates within the EU to achieve and demonstrate GDPR compliance and to embed policies and practices that facilitate data privacy compliance. Outside the EU, the GPP sets the GDPR as PMI's global standard, ensuring that the whole PMI organization is aligned to a high standard of privacy practice.

Core to GPP is greater central governance for data privacy, whereby specific people lead on data privacy for markets and functions. Our External Affairs and Information Protection and Governance group have come together to run a central privacy office. Meanwhile, our Data Protection Governance Board also reports twice per year to the Corporate Risk Governance Committee. The GPP also mandates practices that the GDPR introduces or enhances, in areas such as data privacy impact assessments, awareness and training, privacy compliance assessments, personal data inventories, and data subject rights. Additionally, many existing data protection approaches have been reviewed and strengthened, such as the principle of transparency and the management of third-party risks.

Above: An employee in PMI's office in Athens, Greece

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Tackling the illicit tobacco trade

Above: Training on prevention of illicit tobacco trade in Medellin, Colombia

Foreword

It is estimated that one in every ten cigarettes smoked globally is illicitly traded.[29]

The illicit tobacco trade has a sustainability impact as it is often associated with organized crime and corruption, and can lead to abuses of human rights, labor rights, and environmental standards. It is a major economic problem for governments, which are losing a potential USD 40 billion in tax revenue each year.[30]

We have long-standing preventive and protective measures to secure our supply chain. Tackling illicit trade requires cooperation from all affected parties; stakeholder engagement and cooperation with law enforcement agencies are therefore key.

PMI strongly supports the objectives and the principles of the WHO Framework Convention on Tobacco Control (FCTC) Protocol to Eliminate Illicit Trade in Tobacco Products and we are delighted to see a growing number of parties joining this international treaty. We support many countries through bilateral cooperation agreements in their fight against illicit trade.

Progress in 2018

We channel our efforts to:

1. Fight the diversion of our products by continuously improving measures to secure the supply chain with all stakeholders;

2. Share our knowledge with the impacted parties through continuous research, analysis, and communication of illicit trade issues and consequences; and

3. Pre-empt attempts to illegally divert our smoke-free products by assessing potential risks and by equipping our organization for this new challenge.

Fighting the diversion of our products

Work continued in 2018 on tools that prevent the illegal diversion of our products. Under PMI's Anti-Diversion Governance Committee, which oversees the continuous refinement process, and the update of our Principles & Practices, we implemented a risk-based approach with positive results that allowed us to focus resources where needed, improving efficiency. Information on security and anti-diversion measures taken by our key markets can be found in the Anti-Diversion Governance Committee's Progress and Outlook Report 2018 available on our stop illegal website.

In 27 higher-risk markets for combustible products, we enhanced our Anti-Diversion tools such as "Know Your Customer", volume monitoring, and tracking and tracing technologies, to ensure that our products are sold legally in the markets for which they are intended.

As an example, following a large increase in excise taxes levied on tobacco products in Saudi Arabia in 2017, Kuwait witnessed a significant increase in demand from Saudi adult smokers. PMI and its distributors closely monitored sales in Kuwait across all trade channels down to retailers to ensure legal product availability for Kuwaiti consumers while mitigating the outflow to Saudi Arabia.

Above: Operation to prevent illicit tobacco trade in Medellin, Colombia

Supply chain controls: our risk-based approach

COUNTRY A
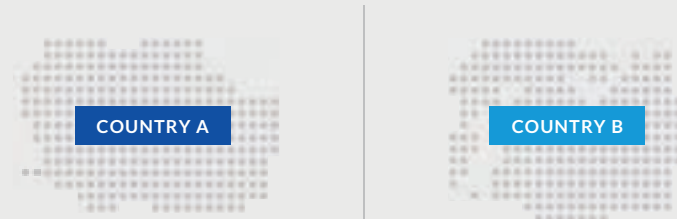
Low risk
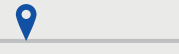
- Simple distribution network
- High retail price
- Limited incentive to smuggle

COUNTRY B

High risk

- Complex distribution network
- Low retail price
- Profit opportunities to smuggle

We adapt tools to suit risk profile

Volume monitoring   Order controls   Anti-diversion plans   Tracking and tracing

Tackling the illicit tobacco trade continued

Taking strong action with second- and third-level tracking and tracing

In Ukraine, cigarette taxes and prices reflect local economic conditions. Their price attractiveness, by European standards, makes them an attractive object for smuggling to other countries. For many years, PM Ukraine has acted to prevent such smuggling by utilizing a comprehensive set of actions including volume monitoring and awareness raising. PMI operates a global tracking and tracing system, allowing us to monitor and retrace product flows as they make their way down the supply chain. In a nutshell, it enables us to identify and address any supply chain "leaks," such as wholesalers selling our products to illegitimate retailers in the intended market, or to criminals smuggling our products into higher tax countries. In 2018, PM Ukraine expanded the tracking and tracing system to the third layer for selected customers, improving the precision with which we can identify and resolve problems in our supply chain.

Sharing our knowledge with the impacted parties

PMI IMPACT is our global initiative to support projects dedicated to fighting illicit trade and related crime. We invite public organizations, law enforcers, private entities, and NGOs from around the world to submit their project proposals for funding. Projects are selected through an open and defined evaluation process, led by a council of independent experts.

PMI has committed USD 100 million for this program. Established in 2016, PMI IMPACT has, to date, launched two funding rounds and received around 390 applications, with over 60 projects from 40 countries selected for funding. Projects include research, the development of technical solutions, the funding of equipment to support law enforcement operations, activities to enhance the capacity and proficiency of law enforcement agencies, awareness platforms, and communication initiatives to foster cross-sector and public–private collaboration.

Substantially all grants under the second funding round were awarded in 2018.

In addition to PMI IMPACT, we have a comprehensive research program in place looking into all types of illicit trade of tobacco products. Our base approach to assess the prevalence of illicit trade includes "Empty Packs" surveys, which help us monitor the nature, trends, and challenges in over 80 countries. This provides crucial data alongside other technical studies which we share with stakeholders with whom we align our priorities.

Pre-empting attempts to illegally divert our smoke-free products

It is paramount that we do everything we can to protect the integrity of our new product portfolio supply chain and to ensure that our consumers have access to products of uncompromised quality.

Securing our supply chain from raw materials to consumer and from consumer to product recycling and disposal is very important to prevent diversion of critical components and products. During the second half of 2018, we established a cross-functional team to deal with this matter. We currently focus on supplies distribution and reverse logistics processes. We are also setting up new operating standards with our partners at the beginning and the end of the life cycle of our products. At the same time, we continue to enhance our standards on product tracking requirements with a special focus on the tracking requirements for electronics in our supply chain.

Cooperating with law enforcement agencies in Colombia and Ecuador

Over the years, our teams in Colombia and Ecuador have established concrete information-sharing with law enforcement agencies and provided regular training sessions on illicit tobacco products prevention. With the launch of smoke-free products in Colombia in 2017, PMI teams have increased their efforts and trained 735 law enforcement officials in 2018, up by 160 attendees from the previous year.

Above: Operation to prevent illicit tobacco trade in Medellin, Colombia

PERFORMANCE AND NEXT STEPS

As of 2018, PMI has Memoranda of Understanding with customs authorities and governments in 49 countries as part of concerted efforts to take action against illicit trade.

In Poland, successful cooperation with law enforcement agencies led to the closure of 119 illegal factories in 2018.

We support enforcement actions led by authorities to destroy confiscated manufacturing equipment, materials used to make cigarettes, and illegal tobacco products. This is essential in order to prevent these items from finding their way back into the illicit trade.

In 2018, we worked continuously with law enforcement agencies and authorities worldwide and provided Anti-Illicit Trade Awareness and PMI Forensics Technical Training to more than 900 recipients during 41 sessions in 14 countries, helping them to understand illicit trade issues, consequences, and technical knowledge on PMI product authentication.

We continue to secure our supply chains and prevent the illegal diversion of products by investing our resources and aligning our organization towards our goal.

+900

Recipients of Anti-Illicit Trade Awareness and PMI Forensics Technical Training in 2018

Above: An employee at PMI's Operations Center in Lausanne, Switzerland

LEARN MORE ON DRIVING OPERATIONAL EXCELLENCE:

Our Guidebook for Success (PMI's Code of Conduct) ▶

An overview of PMI's marketing principles for combustible products ▶

PMI's Good Conversion Practices ▶

An overview of PMI's engagement principles ▶

PMI's Commitment to Human Rights ▶

PMI's Human Rights Roadmap ▶

PMI's Responsible Sourcing Principles (RSP) and RSP Implementation Guidelines

PMI's Agricultural Labor Practices (ALP) Code ▶

PMI's Good Agricultural Practices (GAP) Principles and Measurable Standards ▶

on www.pmi.com

or www.pmi.com/transparency

ADDITIONAL RESOURCES ON:

www.stopillegal.com

www.pmi-impact.com

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PILLAR 3

Managing our social impact

Continuously improving PMI's social impact within our operations and beyond is essential to our long-term success. This starts with how we attract and retain people and extends to the labor standards we expect from farmers and suppliers.

In this section, we provide an overview of what it is like to work at or with PMI, focusing on the main topics that emerged from our sustainability materiality assessment: our efforts to tackle child labor in tobacco growing; how we promote fair working conditions; our programs to promote health, safety, and well-being; our approach to diversity and inclusion; and our community engagement efforts.

IN THIS SECTION

89%
Of prompt actions relating to child labor incidences in our tobacco supply chain were resolved in 2018

>70
Of our affiliates around the world have adopted flexible working arrangements

Image: A field technician and a tobacco farm worker in Mozambique

Eliminating child labor and improving labor conditions on tobacco farms

— TARGETS[31] —

Zero
Child labor in our tobacco supply chain by 2025

100%
Workers paid at least the minimum wage by 2022

100%
Workers provided with safe and adequate accommodation by 2020

100%
Farmers and workers have access to personal protective equipment (PPE) for application of crop protection agents (CPAs) and prevention of green tobacco sickness (GTS) by 2020

Foreword[32]

The informal, seasonal, and transactional nature of agricultural work makes farm workers vulnerable. Most child labor occurs in agriculture[33] and results from complex socio-economic challenges. Overcoming these challenges cannot be accomplished overnight, or by a single company, but we are committed to playing our part and making a difference.

Since 2011, PMI has been implementing the Agricultural Labor Practices (ALP) program to eliminate child labor and to achieve safe and fair working conditions and a decent livelihood for all farmers contracted to supply tobacco. We co-developed the ALP program with Verité, our strategic partner and a leading global NGO in responsible supply chains. The ALP program comprises five elements:

1. The ALP Code, based on International Labour Organization (ILO) conventions, with seven principles and 33 measurable standards, to be followed by over 350,000 farmers whom we source tobacco from. The seven principles of the Code are: no child labor, no forced labor or human trafficking, fair treatment, safe work environment, fair income and work hours, freedom of association, and terms of employment.

2. Training for PMI's Leaf Sustainable Agriculture teams, suppliers, farmers, and workers about the Code and how to address any gaps when applying it.

3. Internal monitoring by over 2,600 field technicians, the human face of monitoring, solving problems and communicating PMI's expectations during their regular visits to farms.

4. External country-specific assessments by Control Union, a specialist supply chain auditor, to independently evaluate the implementation of the ALP program.

5. Collaboration with civil society organizations, governments, and the private sector on initiatives to address systemic issues and to empower communities through new participatory processes, such as local ALP Committees.

In order to take the ALP program to the next level, we initiated a "Step Change" approach in 2018, to address the root causes of the main issues that keep surfacing year-on-year and to provide long-term solutions to prevent them. As part of this approach we have defined ambitious targets in key risk areas.

Above: A tobacco farm worker in Mozambique

Eliminating child labor and improving labor conditions on tobacco farms continued

Progress in 2018

In 2018, we accounted for developments in the field of human rights, by amending our ALP Code to better reflect the tenets of the United Nations Guiding Principles on Business and Human Rights and to align it with our Responsible Sourcing Principles. The key changes relate to human trafficking risks, broadening the scope of a safe work environment, and precisions on terms of employment and compliance with the law.

In 2018, we continued to invest in improving and expanding the farm-by-farm ALP monitoring by updating and implementing our Prompt Action (PA) Guidelines as a standardized process in each country. Globally, we have expanded the geographic coverage of our monitoring from 77% in 2017 to 88% in 2018 and we have improved our data quality through better reporting guidance, further training for field technicians, and more farm visits, both planned and unannounced.

In 2018, a total of 18,543 prompt actions were recorded by field technicians, 74% of which were related to an unsafe work environment and 25% to child labor.

The data gathered paint a more accurate picture of what is going on in each farm and allows the people involved with the ALP program management in each country to continue to develop their understanding of the challenges faced by tobacco farmers and workers. The global data consolidation enables a more thorough analysis and a better understanding of trends and patterns where the most prevalent and persistent issues occur in order to deploy targeted initiatives to solve these issues.

Overview of prompt actions recorded by field technicians (2017-2018)

1%
2018
25%
2017
2%
35%
63%
74%

- Safe work environment issues
- Hazardous work performed by children
- Other

A "Step Change" approach for our ALP program

Leveraging on efforts made so far, and having gained a more accurate sense of the program's overall performance, we took the decision in 2018 to deploy a "Step Change" approach to achieve significant improvements in areas with intensive and targeted needs.

Through 2018–2022, as part of a new "Step Change" approach, we will give additional focus to our work in Argentina, Indonesia, Malawi, Mozambique, South Africa, and Turkey.

The focus areas in each country differ but include at least one of the most recurrent and difficult issues listed here:

- Elimination of child labor. Currently, we identify and address over 4,000 child labor incidents every year. While we have seen a general decrease over the years, by 2025 we want to achieve a situation where no child labor occurs; if isolated incidents are identified, they will be addressed immediately;

- Payment of at least the legal minimum wage for workers. Informal, traditional agreements in the agricultural sector mean that remuneration rates may fall below national minimum standards. By 2022, we want to ensure that all workers are receiving at least the minimum wage, regardless of local practices;

- Availability and usage of personal protective equipment (PPE) for the application of crop protection agents (CPAs) and the prevention of green tobacco sickness (GTS). By 2020, we want to ensure that everybody working on the farm has access to the appropriate PPE; and

- Adequate accommodation for workers. We have identified a few countries where the accommodation provided to workers was inappropriate. We are making the necessary investments to help farmers to fully address this issue by 2020.

Above: Childcare center in Nayarit, Mexico

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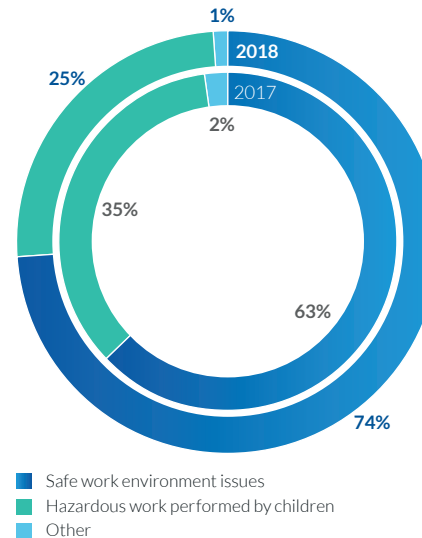
Working with Verité, we are intensifying partnerships and engagement with local NGOs, governments and other stakeholders to tackle the social and economic root causes of child labor and other unacceptable labor practices. Over the next few years our action plans will consist of the following:

- More effective due diligence before contracting, and stronger consequence management in case of persistent ALP Code violations;
- Projects with farmers and suppliers to improve crop yields and quality and farm management aiming to achieve at least a living income;
- Systematic sharing of best practice solutions between field technicians; and
- Wider collaboration with other companies to explore solutions to complex social problems, such as child labor, for the benefit of the entire industry, farmers' families and farming communities.

These action plans are currently being implemented and will be a fundamental part of our program in the coming years.

Prompt actions step-by-step process

Prompt actions arise from situations where somebody on the farm may face a risk or a danger and immediate action is required. Any incident of children carrying out age-inappropriate tasks or hazardous work is reported as a prompt action and addressed immediately.

The vast majority of child labor-related prompt actions arise in a family context on small-scale farms with two hectares or less. Typically, children are carrying out farming tasks alongside their parents who may not see this work as detrimental to the child because of local traditions and experience.

In any case, whenever a field technician witnesses a child labor incident they are obliged to stop it and raise a prompt action. The next step is to agree with farmers on a corrective action. An unannounced follow-up visit will check whether the situation has been resolved. If not, the matter is escalated and sanctions can lead up to contract termination.

What happens if a field technician (FT) identifies a situation requiring a prompt action during a regular farm visit?

Action 1	Action 2	Action 3	Action 4
✋	🤝	🏠	✔️

Maximum 6 weeks

The FT immediately stops the occurring situation and raises the issue with the farmer.

The FT discusses with the farmer to agree on an action plan, and records both the prompt action and the action plan in the monitoring database.

⚠️ If the FT faces challenges with the farmer in acknowledging the issue and agreeing on an action plan, he or she escalates the issue. Appropriate action is taken on a case-by-case basis, ranging from a warning to contract termination.

The FT makes an unannounced visit to the farm (or during the following crop season if it is not possible for the FT to re-assess the issue under similar conditions).

The FT closes the prompt action if:
> no recurrence is observed
> the action has been implemented
> the circumstances have changed, making the issue unlikely to occur again

⚠️ If the prompt action is not solved, the FT escalates the issue. Appropriate action is taken on a case-by-case basis, ranging from a warning to contract termination.

Taking action to prevent and eliminate child labor

Based on our comprehensive and regular monitoring of tobacco farms (including through external third parties), we are confident that the vast majority of contracted farms supplying PMI do not use child labor. Our monitoring data (covering 88% of contracted farms) show that, out of the over 300,000 farms visited by field technicians, 98% were meeting the standards in this respect by the end of the crop season.

While this number is a positive sign of the efforts on the ground, we remain cautious as we acknowledge the limitations of our monitoring system (e.g. field technicians are present on the farms for a limited amount of time at various crop stages) and of course the seriousness and the complexity of the issues we face.

In 2018, the total number of child labor related prompt actions amounted to 4,587, a slight increase from 4,417 in 2017. The vast majority of child labor cases identified (92%) were children working with their own families. While there was a general decrease in most geographies and by most suppliers, this was offset by significant increases in Turkey and Malawi. Our analysis shows that the increase in these two countries does not necessarily reflect a higher prevalence of child labor on the ground, but rather an enhanced visibility at farm level attributed to better monitoring with increased coverage.

In 2018, we addressed 4,082 of these incidents, representing 89% of the prompt actions identified, up from 67% in 2017.

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Eliminating child labor and improving labor conditions on tobacco farms continued

Detailed analysis of our 2018 data shows fewer incidents of children below 18 handling and stringing tobacco leaves for curing and harvesting. However, the data show a higher incidence of children carrying heavy loads and working with sharp tools. A stricter and more thorough application of our guidelines in Malawi has meant increased detection of such prompt actions.

In the geographies where the incidents persist, we are focusing on developing a better insight and understanding of the root causes. We are enhancing the remediation initiatives available and adapting them to the local socio-economic environment, so that we can work with farmers to directly address the root causes of each incidence. We will monitor the remediation efforts and undertake external verification to validate the effectiveness of these initiatives. In parallel, we plan to intensify awareness raising and training to farmers and workers, including local communities when possible. In addition, we support community initiatives that provide alternative educational opportunities for children or basic literacy and numeracy skills for mothers. We are also strengthening our due diligence and consequence management processes to address persistent non-compliance cases to ensure our efforts are effective.

In sum, child labor has no place in our supply chain. We have put in place the mechanisms to identify it and we are systematically addressing the cases that surface. Despite complex challenges, we want to reach a point where these issues are no longer happening.

Tackling child labor in Indonesia

The same scene plays out across rural Indonesia: the children finish school at around one o'clock, sometimes three. Typically, the head of the family expects the children to help out after school in some way because this is the common practice. The family farm is small, farm workers are not available, or may be too expensive for the household economics, and mechanized equipment is rare.

Against this general backdrop, child labor has been a persistent issue in tobacco-growing areas in Indonesia. PMI's monitoring data show that children are most likely to work in the tobacco fields during the peak season (August–November), starting straight after

school and working on stringing, harvesting, or handling green tobacco. Our strategy to draw children away from the fields involves monitoring by the field technicians, training and awareness for parents regarding hazardous work in tobacco, removing the need for children to help on the farm (by mechanizing the stringing process for instance) and offering after-school initiatives.

In addition to the above actions, in 2016, a community-based initiative known as Rumah Pintar ("Smart House") was introduced in Lombok and Java by PMI's Indonesian affiliate, its suppliers and local NGOs. Rumah Pintar are community facilities offering after-school

recreational and educational activities to the children of contracted farmers and workers. By 2018, the program had expanded to 34 villages and 14,561 children aged 7–18 years. In 2019, the plan is to expand to 73 units. Two external surveys undertaken by the local NGOs involved indicated a significant reduction in child labor as a result of the Rumah Pintar. Children removed from child labor increased on average from 47% before the program to 82% in 2018. This initiative has achieved widespread recognition, including from the government.

Child labor prompt actions reported, per type of activity (2017-2018)

Legend: ■ 2018 ■ 2017

Activity	2018	2017
Harvesting or handling green tobacco	35%	39%
Stringing	26%	27%
Carrying heavy loads	17%	10%
Working with sharp tools	13%	7%
Handling or applying fertilizer	3%	5%
Driving a tractor or operating machinery	2%	3%
Handling or applying CPA	2%	2%
Working in extreme temperatures	1%	3%
Other	2%	4%
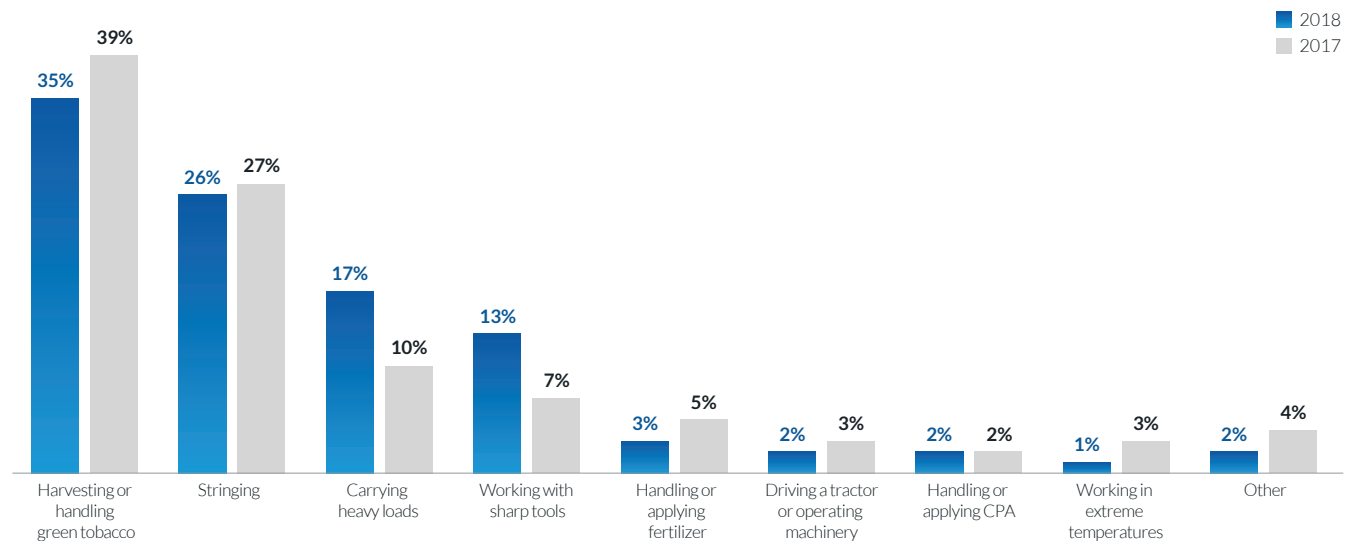
Focusing on safe working conditions

In 2018, among the over 300,000 farms visited by field technicians, a total of 13,780 prompt actions were related to an unsafe work environment, compared with 8,087 in 2017. Almost two-thirds of those were linked to inadequate CPA storage practices, CPA application, and handling of green tobacco without appropriate PPE. Unsafe or insufficient worker accommodation accounted for the second category of our prompt actions reported and represented by far the biggest increase in the reported prompt actions since 2017. This was particularly the case in Malawi, Mexico, and South Africa, where we strengthened our focus and monitoring of this issue. We have set ambitious plans to resolve the accommodation problems.

An example of this is the large-scale renovation of workers' accommodation in South Africa. The project covers all contracted tobacco farms in two areas: Limpopo, and the Eastern and Western Cape. In 2018, 174 houses were completed in Limpopo with the remaining 45 to be completed together with the 24 houses in the Eastern and Western Cape in 2019. Upon completion in 2019, we expect a total of 243 new rooms, 326 renovated rooms, 408 window replacements and 83 toilets to be built, benefiting over 560 workers.

Safe work environment prompt actions reported, per type (2017–2018)

Legend: ■ 2018   ■ 2017

- CPA stored in a way that could cause a health and risk accident: 32% (2018), 46% (2017)
- Unsafe or insufficient work accommodation: 30% (2018), 3% (2017)
- Exposure to GTS due to not wearing proper PPE: 19% (2018), 32% (2017)
- Exposure to CPA due to not wearing proper PPE: 14% (2018), 17% (2017)
- Other: 5% (2018), 2% (2017)

OUR "STEP CHANGE" APPROACH IN ACTION:
Addressing poor living conditions of migrant workers in Mexico

In our 2017 report, we shared our intensive efforts to address the poor living and working conditions of migrant workers in tobacco-growing areas in Nayarit, Mexico. Every year, these migrant workers come from Mexico's highlands and settle in tobacco-growing areas for the season. One year on, this provides a good illustration of our "Step Change" approach.

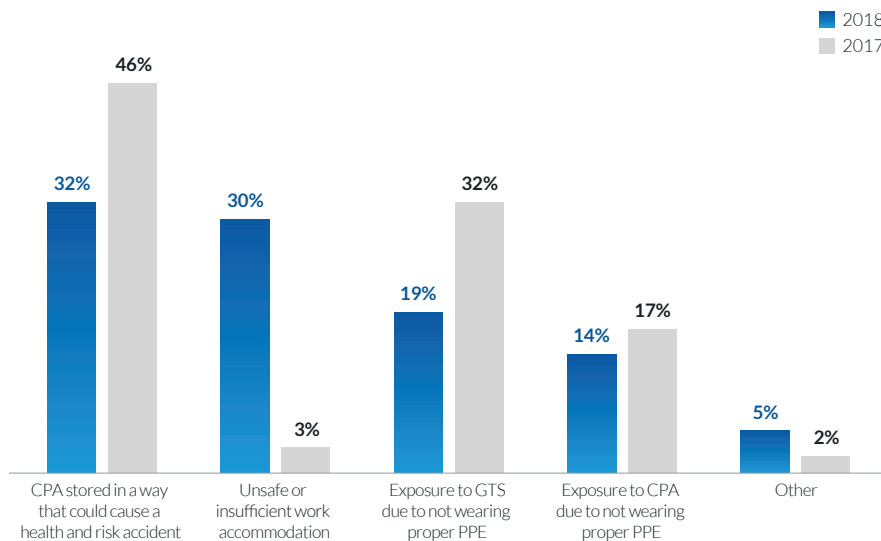In the last quarter of 2017, PMI and its supplier Tabaco del Pacífico Norte (TPN – subsidiary of Universal Corporation) conducted an in-depth analysis of this complex and deep-rooted problem and developed a plan with the following objectives:

- Prevent workers from living on the tobacco fields;
- Prevent night work in the fields;
- Provide adequate accommodation to all migrant workers; and
- Provide workers with access to shade areas for rest and lunch, and to sanitation.

To address the root causes of the issues in an effective and sustainable manner, PMI introduced a series of measures to reorganize labor schedules and activities and to prohibit field work after sunset to be implemented by TPN, including:

- A 25% increase on the piece-rate paid to workers;
- A sensitization campaign in the workers' communities of origin;
- Cost compensation for farmers that successfully provide adequate accommodation, transportation, as well as sanitation and clean water;
- No renewal of contracts with farmers that do not join the effort; and
- An extension of the opening hours and capacity of the five childcare centers providing education, nutrition, and medical services for the children of the migrant families.

By the end of the season, these measures benefitted over 6,000 people (workers and their families). Only six farmers did not make an effort to align with our objectives and their contract was terminated at the end of the season. Additionally, the monitoring and external verification of the program undertaken by Fundación Mexicana de Apoyo Infantil in July 2018 showed significant progress had been made on the objectives:

- 93% of workers no longer lived on the tobacco fields or worked into the night;
- 87% of migrant workers had access to adequate accommodation; and
- 85% worked in adequate field conditions, and 94% were provided with rest areas and toilet facilities, and 98% with drinking water.

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Eliminating child labor and improving labor conditions on tobacco farms continued

Ensuring fair working conditions

One of PMI's seven Principles outlined in the ALP Code is "income and work hours" – ensuring farm workers are treated fairly and are paid at least the minimum wage by the farmers from whom we buy tobacco. In 2018, roughly one-third of contracted farmers hired workers at some point during the season. Contractual employment relations are typically informal and temporary – spanning from a few days to deliver a particular task to an entire growing season. Remuneration is often agreed either by piece-work (workers get paid a certain amount for a given output, e.g. amount of leaves prepared for curing) or in the form of a lump sum for the services provided across the season. While we have been building awareness about national minimum wages as part of our ALP Code requirements, very often both farmers and workers do not know how to apply these national standards to their agreements (e.g. converting traditional piece-work rates to a daily rate equivalent if benchmarked against the national minimum wages). In addition, the seasonal agreements on small-scale farms do not encompass in practice a full-time, continuous occupation for the whole season (simply because there is not enough work). In this case, it is difficult to benchmark against the national minimum wage rates without a record of the number of days actually worked.

In addition to the informal nature of the employment agreements and the challenges described, in some geographies, particularly in Indonesia and the Philippines, there are traditional community organizations (involving farmers and workers) that agree on the season's remuneration rates without taking into account the national minimum wages. Although tobacco workers are paid typically at or above the prevailing agricultural rates, given the specialized nature and complexity of the work involved, our monitoring data showed that in 13% of the cases, workers were paid below the national minimum wage rates. These issues have been identified in Malawi, Mozambique, the Philippines, and in one region in Argentina and one region in Indonesia.

In 2018, as part of our "Step Change" approach, the above-mentioned markets undertook more in-depth surveys to better understand the issues and their root causes, and began developing ambitious plans to close the wage gap by changing practices in relation to the types of agreements established, including formalization of contracts and record keeping for work rendered.

An example of PMI's commitment to the adoption of minimum wage standards is the company's position on the tenancy system in Malawi. Tenant farming is an agricultural production system in which landowners contribute their land, while tenant farmers contribute their labor. Tenancy agreements can take multiple forms but typically, in Malawi, landowners pay tenant farmers an agreed cash amount for each kilogram of tobacco delivered at the end of the season (a percentage of the selling price to the final buyer) and provide the crop inputs, subsistence goods and accommodation. Historically, we have discouraged the tenancy practice because we cannot properly ensure the respect of our ALP Code. This tenancy system in Malawi has long been contentious among stakeholders and remains an unresolved issue. While the industry has taken some measures, this year PMI has gone a step further by asking our suppliers in Malawi that the tobacco supplied to us should not originate from farms with tenancy agreements.

We expect that our position will drive the general adoption and implementation in the country of the minimum wage, as well as other measures to mitigate the risks of exploitation of vulnerable tenant farmers.

Above: A tobacco farm worker in Nayarit, Mexico

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CASE STUDY

Working with tobacco farmers towards crop diversification

73%

Of contracted tobacco farmers grow food crops for their own consumption, out of all farmers growing alternative crops

400,000

Tons of food produced by contracted farmers through our crop diversification and suppliers' food programs in Malawi and Mozambique

Image: A farm worker growing alternative crops in Mozambique

CASE STUDY

Working with tobacco farmers towards crop diversification

Transforming our business can lead to new challenges for farmers in certain geographies as we foresee a gradual decrease in our tobacco leaf requirements, smoke-free products requiring half the quantity of tobacco or less, compared with cigarettes. Consequently, we are expanding the support we provide to farmers.

While we have focused on Malawi in our previous reports, we have also been busy in Brazil, Colombia, Mozambique, Pakistan, and the Philippines.

Malawi
Pakistan
Colombia
Philippines
Brazil   **Mozambique**
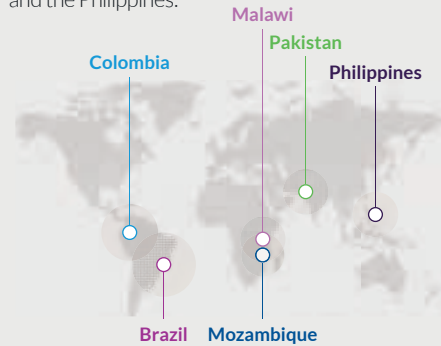
In **Malawi**, a priority country for our diversification program, we signed a Memorandum of Understanding with Palladium International LLC (Palladium) to work together on selected initiatives. Palladium is a global impact firm implementing USAID's "Feed the Future" program in Malawi. The aim is to create opportunities for smallholder farmers to diversify production away from tobacco and into other food crops, such as soybean or groundnuts. During 2018, we trialed various irrigation methods, including drips, sprinklers, and pivot systems fed from different water sources, such as dams, weirs, rivers, and boreholes pumped using solar or diesel pumps, to identify efficient, cost-effective solutions for farmers. To reduce post-harvest losses, 147,000 crop storage bags were distributed to all farmers in our food crop program to improve crop storage as a simple, low-cost way to reduce losses and insecticide use.

In **Mozambique** in late 2018, we, together with our supplier, initiated pilots of alternative crops with an international NGO, Business for Development, whose experience lies in assisting communities to rise out of poverty. In addition, 400 treadle pumps were distributed to smallholder farmers, providing them with a means to pump water from existing water sources to use on seedbeds and vegetable gardens. In addition, we distributed 6,000 crop storage bags.

In 2018, we launched our new **Pakistan** Diversification Program, where we initiated the Corn Support Program, providing hybrid corn seed and fertilizer to 200 farmers under our Integrated Production System (IPS). We expect yields of around 3,000 kg of corn on a 0.5-hectare plot, earning approximately USD 500 of additional income. In addition, Pea Support Program provides pea seeds to 64 farmers. A similar project is planned to help 75 farmers grow mushrooms. PMI will provide raw materials and training, and the marketing will be sponsored by the Hashoo Foundation.

Our **Philippines** "Tobacco Roadmap" aims to improve the competitiveness of farming communities by reducing poverty, promoting sustainability and improving farmers' profitability and livelihood through diversified crops while enhancing the quality and competitiveness of Philippine tobacco. PMI is strengthening the Corn Support Program, launched in 2015 and annually supporting around 175 farmers. We are running a pilot to analyze the supply chain and identify inefficiencies related to transportation and post-harvest activities. Mobile threshers and grain dryers will be lent to farmers to potentially reduce post-harvest costs and generate additional income.

In **Colombia**, farmers are benefiting from diversification programs with food crops such as banana/plantain, corn, and garden vegetables. Approximately one-third of farmers inter-crop corn with tobacco, while we have distributed

banana/plantain seeds to 256 farmers and provided 375 home garden vegetable seed kits. Additionally, we have assisted 50 farmers in setting up micro-fisheries and 100 farmers in setting up chicken cooperatives as an alternative source of income.

In **Brazil**, PMI has helped to set up home allotment gardens for rural families in 201 municipalities to grow native and exotic fruits. The project in partnership with Embrapa (the Brazilian Agricultural Research Corporation) provides each beneficiary with fruit tree saplings and farming inputs while the beneficiary provides land and labor for implementation and maintenance of the gardens. The project aims to expand, reaching new beneficiaries including not only farmers supplying to PMI,

but also vulnerable communities. The project increases diversification activities, improves biodiversity in small farms through the planting of trees, improves family health by promoting healthier eating habits and generates additional income to the farmers, due to the possibility of selling surplus production.

As we expand our diversification efforts, monitoring and evaluation will allow us to assess the impact of the various initiatives on farmers and their families. We have compiled a household welfare survey, which was piloted in Malawi at the end of 2018 with a small sample of farmers. Rolling out this survey to a larger population will allow us to measure, on an annual basis, the impacts on household income, food security, and nutritional diversity.

Above: A farm worker growing alternative crops in Mozambique

PERFORMANCE AND NEXT STEPS

The systematic monitoring of the ALP program implementation in 2018 increased to 88% (2017: 77%) of the 350,000 farmers from whom PMI or our leaf suppliers source tobacco, against a 2020 goal of 100%. Overall, our analyses show that child labor is decreasing in most geographies despite a higher number of recorded incidents in some countries, mainly attributable to improved monitoring.

In 2018, we resolved 13,687 issues raised through prompt actions representing 74% of the total prompt actions raised by field technicians. Of the prompt actions relating to child labor, 89% were resolved, up from 67% in 2017. In the 2017–2018 crop season, 50 contracts with farmers were not renewed or terminated for lack of compliance with our ALP program.

Our external verification partner Control Union further assessed four countries in 2018, bringing the cumulative total to 21, against a 2020 target of 24. The reports are published on PMI website.

Our biggest achievement in 2018 is that, together with our suppliers, we developed comprehensive and ambitious action plans taking into account the local, social, and economic drivers of the priority problems that we aim to eradicate. We are taking a strong stance and have ambitious targets, and will measure our progress and report it transparently. These plans are currently being implemented and will be a fundamental part of our program in the coming years.

In 2019, we will pilot a new business model in Malawi and other countries to better assess our approach to a living income for farmers.

89%

Of prompt actions relating to child labor incidences were resolved in 2018

Above: A field technician with farm workers in Mozambique

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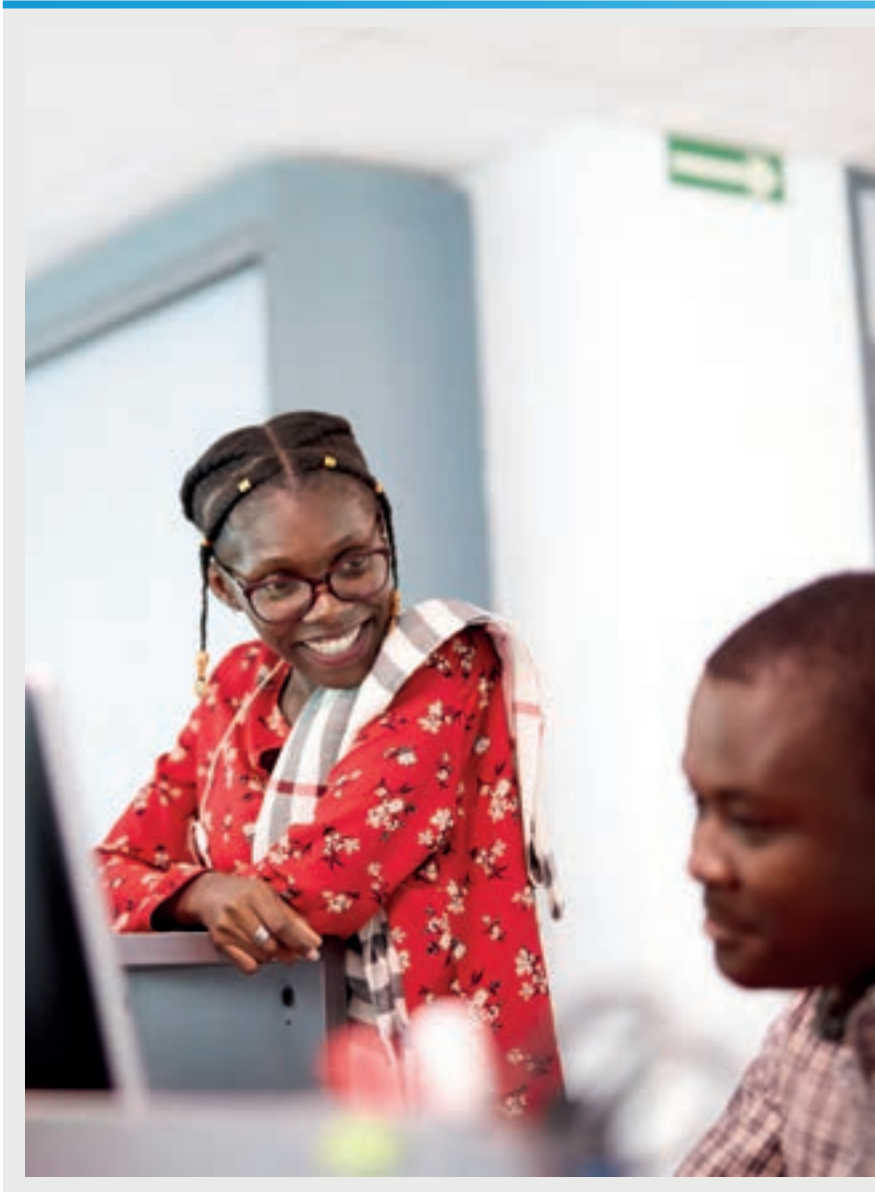
Above: Employees in PMI's office in Dakar, Senegal

Foreword

PMI's vision of creating a smoke-free future requires a full transformation of many other aspects of our company – the way we are organized, the way work is defined and allocated, and the way leaders are assessed and their performance is measured. That's a momentous challenge and to accomplish it we need the full array of skills and talents available to us.

Our intention is to strengthen our inclusive culture and boost how everyone can contribute their personal best through attitudes, behaviors, and employment practices that value, respect, and accommodate differences, that promote listening and learning from others, and that create space for constructive disagreement.

The era of transformation at PMI has ushered in new people, new skills, and new ways of working. We aim to harness the way transformation inspires and motivates our colleagues while mitigating the natural anxiety and stress that business transformation brings.

Progress in 2018

Attracting and retaining talent

Our new operating model, the way we organize ourselves, was a focus in 2018, and vital to realizing our business transformation. Essentially, it means we are blending old and new ways of working at PMI. The learnings from *IQOS* growth in Japan and the digital skills for a "consumer-centric" approach are examples of the new ways. New employee training is provided about smoke-free products, responsible marketing and sustainability. Going smoke-free means a new leadership approach where openness, constant learning, collaboration, and stakeholder engagement are demanded from our leaders.

We equip our teams with the right skills and encourage their development through our *Thrive* program, which helps connect people to the company purpose, stimulate behavior change and encourage leadership. In order to make learning and development accessible to all employees globally we have upgraded our learning platform in 2018 to make it more interactive with better content.

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400

Jobs being created in Greece in the smoke-free category

€157m

Economic value added (EVA) to the Greek economy by Papastratos in 2017

CASE STUDY

Transformers in Greece

Image: An employee in PMI's Greek affiliate, Papastratos manufacturing facility

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CASE STUDY

Transformers in Greece

Imagine for a moment that you are a machine operator in PMI's factory in Greece, it is 2016 and you are told the factory is converting to deliver new products that will contribute to a smoke-free future. Fast-forward to 2018 – transformation is happening everywhere. Not just in factories but also in communications, commercial, and external affairs functions, for example. We are proud to face the challenges, and Papastratos, our Greek affiliate, is an exemplary story.

"The only constant is our values, which have been our guiding light since Papastratos was founded some 87 years ago," says the managing director Christos Harpantidis. So, once we had explained to employees why a transformation is taking place, most understood it to be a logical step forward. And, while change is not free of challenge, Papastratos recorded no serious negative economic impact for staff through 2016–2018. Ultimately, staff motivation was secured because PMI is intensifying the social dimension of its corporate purpose.

Our staff "get it." And there is a domino effect as neighboring teams, in Bulgaria for example, gear up for growth in *IQOS* sales. But what caught

our attention was that our agility at work was further primed by the long-standing government-debt crisis. People are willing to adapt. And while trust in business during the tough times has faded, Papastratos is recognized as a role model for rebuilding it. As Christos says, "People here see the transformation as an amazing period of their lives, and other companies in Greece can't believe how fast we are moving."

IQOS in Greece is already used by 150,000 people and 400 jobs are being created there in the smoke-free category. Core internal tasks for us in Greece have included achieving cultural and behavioral change, installing cross-functional "enabler" teams, training over 500 people on new standards and machinery. Alongside that, we are installing new customer care and digital services, operating retail *IQOS* stores and e-commerce, expanding the sales car fleet, amending supply chain management processes, and engaging on our transformation vision with new external stakeholders, such as scientists and physicians.

Against this backdrop, we have assessed in 2017 the socio-economic impact of our business in Greece. Our findings showed that Papastratos contributed 2.2% to the Greek state revenues, with an economic value added (EVA) of EUR 157 million (0.1% of Greek GDP). For every EUR 1 of EVA by Papastratos, EUR 2.30 is added to the Greek economy, an increase of 66.7% on 2016. Additionally, every job at Papastratos indirectly supports 2.5 jobs in the overall Greek economy, thus supporting the income of 7,130 Greek citizens. Equally significant is the social impact of the Corporate Responsibility Plan, which invested more than EUR 2.2 million during 2009–2017 and aims to provide the most vulnerable social groups with relief from the economic crisis, while creating new economic prospects, empowering women, facilitating access to education, and supporting Greek tobacco growers.

Above: Christos Harpantidis, Managing Director, PMI EU South East cluster

Above: Call center employees in Athens, Greece

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Rewarding employees

We reward our employees in a way that helps attract and motivate the people who work on successfully achieving our business strategy. Our total reward package comprises compensation programs and benefits.

Our policy is to pay at or above market median in all countries where we do business, while ensuring a living wage standard for all employees. Our compensation structures and principles promote equitable treatment of everyone.

PMI uses a global performance management system set up to run an annual process. At the beginning of the year, employees agree on objectives with their managers, which is followed by an appraisal in November, with feedback and one-to-one discussions. An individual performance rating is decided based on delivery against the business objectives and key behaviors that are critical to PMI success. PMI also has a 360-degree feedback tool to complement traditional performance measurement methods.

We reward superior performance aligned with our strategy. The short- and long-term incentives for our managers are based on objectives that measure both financial performance and strategic initiatives in pursuit of our smoke-free vision.

Our benefits can include health insurance, well-being support, flexible working arrangements, retirement plans, life and disability insurance, and many others.

Upholding the living wage

We are serious about our efforts to ensure that the lowest-paid people in our organization are able to maintain a fair standard of living, and that none of our employees gets paid below the living wage rate.

A living wage is distinct from a minimum wage and is defined as a wage earned within normal working hours that provides the means to purchase goods and services necessary to attain a basic standard of living and to accumulate a minimum level of savings. It also aligns with the social and cultural standards of the community and/or relevant host country.

Since 2016, we have worked with Business for Social Responsibility to assess pay rates globally and to validate that we pay a living wage across the world. Previous surveys have found that no permanent employee was paid below the living wage rate (2017, 58 countries surveyed). In 2018, our survey was extended to cover standard temporary and seasonal employees. The results pointed to less than 20 employees being paid below the living wage, requiring minor adjustments. Action plans are established to address these findings in 2019.

Follow-up checks will continue to ensure that we remain a living wage employer globally.

Engaging on labor relations

The year 2018 saw an ongoing focus on dialogue, along with more engagement with employee representatives, both in countries with already well-established practices in this field, as well as in those where this was not yet the case. Dialogue with employees and their representatives is especially important during times of business transformation.

PMI has a long history of diligence in recognizing employee rights and fostering solid and collaborative labor relations practices.

We respect our employees' rights of freedom of association and collective bargaining, whereby they are free to form or join trade employee representative organizations of their own choice and bargain collectively through employee representatives. We do our utmost to ensure that they are able to make an informed decision free from coercion, and to bargain in good faith and respect the terms of collective agreements where they exist.

Collective Labor Agreements (CLAs) govern many of our employees' terms and conditions at work and may include several arrangements, such as working hours, occupational health and safety, holidays, wages, and procedures for dispute resolution. In 2018, we had 81 CLAs in 35 countries, covering approximately 65% of our employees (2017: 80 CLAs, 35 countries, 67%). In 2018, the Labor relations assessment toolkit was shared with local People & Culture teams across the business to help them build action plans to maintain this topic high on the agenda and respond where potential labor relations risk arises.

We have faced difficult discussions with employee representatives in the context of collective bargaining or restructuring in certain countries such as Pakistan. However, we have maintained good contact with employee representatives and fully respected employees' rights.

Above: Employees at PMI's Operations Center in Lausanne, Switzerland

Supporting fair working conditions continued

PERFORMANCE AND NEXT STEPS

Our employee turnover rate is slightly higher than in previous years. The transformation process principally accounts for the change.

Our careful monitoring of pay levels in the markets reveals that only a few employees received a salary slightly below the defined living wage level; this is subject to a corrective plan of action.

We are expanding our work on living wages. In 2019, we will review how employee benefits relate to living wages, as well as what minimum amount of life insurance protection could be provided to employees across our affiliates.

65%

Of employees covered by Collective Labor Agreements in 2018

Above: Employees in PMI's Indonesian affiliate Sampoerna's office in Jakarta

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Promoting health, safety, and well-being

─── TARGETS ───

0.10

Lost Time Injury (LTI) rate

1.50

Fleet collision rate per million kilometers driven

0.30

Total Recordable Incidents Rate (TRIR)

Foreword

The physical and mental health of employees is a priority and key to PMI's success. We are committed to providing a safe and secure work environment for all employees, service providers, and visitors.

Transforming our business to deliver a smoke-free future means changing the way we work, from the factory machinery we use, to the new ways of working by our sales force, and to the corporate processes we follow. We strive to ensure that these changes do not affect the health and safety of our workforce.

We do so by implementing organizational programs, technology, behavioral change programs, and country-level support through our BalancedYou platform.

An overriding goal that ripples through the markets is a smoke-free workplace, which naturally aligns with our vision and which signifies our view that the responsible management of health, safety, and well-being is key to how a business creates sustainable value.

Above: Papastratos, PMI's Greek affiliate's manufacturing facility

Promoting health, safety, and well-being continued

Progress in 2018

Leadership and ownership go hand in hand

It is everyone's right to work safely and it is everyone's duty to correct unsafe acts, practices and conditions, for the protection of themselves and others.

Our *Mission Zero* "Because We Care" program aims to deliver safer behavior, safer culture, and effective incident reporting in our operations and affiliates around the world. In 2018, PMI saw the emergence of a new "shared" responsibility approach to safety. The responsibility of PMI to provide its employees with awareness raising and training on safety, safe technical equipment, and appropriate risk management systems, is coupled with every employee's own, personal responsibility to behave in a safe way in the workplace (office, manufacturing facility, or while driving).

This sense of ownership is complemented by a systematic management approach. Nearly all our sites are certified or pre-certified to OHSAS 18001. Any uncertified site is currently being constructed, renovated, or closed.

In 2018, the aggregated LTI rate at PMI increased slightly. However, we continue to improve safety through risk-based programs, such as in Canada, Dominican Republic, Poland, Spain, and Turkey.

Ensuring safety in our facilities

Our *Mission Zero* "Because We Care" program aims to prevent injuries in the workforce. In 2018, the LTI rate in our manufacturing facilities was 0.07, a slight increase versus 2017 (0.05) but still within the level of excellence of 0.10 injuries per 200,000 exposure hours. This change is partly due to increased exposure linked to the conversion of production lines and new ways of working, and better transparency as a result of improved tracking and monitoring. The overall severity rate decreased (number of lost or restricted days). Our total recordable incidents rate was 0.22, in line with 2017 and within our 0.3 target.

We regret to report, however, that we endured one fatality at our Pamekasan office in Indonesia. A contractor was electrocuted while handling a water pump. We take this seriously, and have commiserated with the family and friends of the contractor. We have learned from what happened and shared our findings to prevent further occurrence.

It is important that each and every employee understands how to accomplish a task safely. We promote the concept of ownership by each individual to strengthen their contribution to safety at work. Of course, our leaders must uphold a culture of safety at all times. Beyond providing safe machineries and technologies, we aim to integrate safety into every process. Additionally, the message is reinforced by our safety champions as well as the emergent safety pillar of our OPEN+ system, which offers a standardized way to ensure safety on the factory floor. It draws on leading models of safety culture and blends concepts of lean manufacturing with organizational change. An emergent initiative is the new safety "climate" survey, run at nine sites in 2018.

Promoting fleet safety

We have close to 25,000 cars and vans in our fleet and our colleagues collectively drive more than 500 million kilometers each year in more than 100 countries. Driving presents the highest risk to the safety of our employees and contractors. Our *Mission Zero* "Because We Care" program formalizes how we manage an extensive range of topics, from emergency preparedness and driver hiring to vehicle selection and crash incident reporting.

Despite falling collision rates in 2018, we endured five fatalities: two PMI employees (one in Mexico and one in Serbia), and three members of the public in Indonesia and the Philippines. We deeply regret these losses, investigated the cause of each accident, and offered support to family and friends.

Even during tough times, we have to learn from challenges. During the year, we introduced a new tool in 12 of our markets and invited 4,500 drivers to evaluate the risk profile and risk awareness of drivers, especially new hires. To raise awareness of fleet safety, our Chief Operating Officer relaunched the fleet safety award, attracting 58 submissions from the markets.

Above: An employee in PMI's manufacturing facility in Crespellano, Italy

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Striking a balance:
health and well-being at PMI

BalancedYou, our health and well-being (H&WB) program, was officially launched a few years ago and is now accessible worldwide by employees and contractors through our online dedicated platform. The program has four key objectives:

1. **Disease:** Preventing illness and disease;

2. **Movement:** Encouraging physical activity;

3. **Food:** Promoting healthy eating; and

4. **Balance:** Supporting stress management and work–life balance.

There are over 40 local H&WB committees who represent employees' interests. Composed of cross-functional team members and employee representatives, they foster the collaboration and dialogue necessary to tailor the activities according to the specific needs of local employees. These committees contribute to our objective to support our employees in all aspects in their lives.

BalancedYou is "owned" by employees and was set up after detailed research on what employees valued. Each country, guided by its local H&WB committee, has a tailored package of support and content to meet their needs. Employees can ask questions, confident that their privacy is maintained.

In some markets, H&WB committees direct the shape of the program. In Egypt, for instance, the committee has started a *Healthy Food Catering* initiative, coupled with a work–life balance initiative called *Flexico*. Supporting these is a suite of medical services provided by an external provider, a financial advice service, and a gym discount allowance, as well as special events linked to happenings like International Women's Day or the 2018 FIFA World Cup.

While doing all this, *BalancedYou* complements the existing set of employee benefits, such as health insurance, nutritious canteen food, and sporting facilities.

To encourage a healthy work–life balance, more than 70 of our affiliates around the world have adopted flexible working arrangements aimed at better supporting women and men to succeed, both personally and professionally. These include, for instance, the possibility to work remotely, compress the working week, work part time or take unpaid leave. In addition, we want to support our employees to be both great parents and great professionals, for example by running pre-maternity, post-maternity, and new father workshops, and by facilitating peer-to-peer support through the employee-run network *Parents@PMI*.

A smoke-free workplace

In 2018, we formally launched our cessation and smoke-free advice program to all employees.

PMI is not able to give medical advice or offer formal cessation services so we direct smokers to available resources and experts who can provide the support and advice, as appropriate. On the *BalancedYou* platform, the user clicks on the "I would like to quit" button for concise information that includes, for example, PMI's medical plan, nicotine replacement tools, and coaching services.

We encourage those who would otherwise continue to smoke to switch to smoke-free products. In doing so, we are clear that smoke-free products are not a complete solution to the problems related to tobacco consumption. They are not risk-free and are addictive. Quitting any tobacco and nicotine product is the best option.

The program is promoted on the *BalancedYou* platform accompanied by workshops, events, apps, and other outreach.

Above: Call center employees in Athens, Greece

"After my twin boys Tom and Luka were born in 2014 (children number three and four!), I took advantage of FlexAbility at PMI by working 60% for a whole year. It was an amazing experience, spending much more time with my family, and I'm proud to work at a company that gives us such opportunities and forever grateful to all the colleagues around me who helped make it work."

Till Olbrich, Deputy General Counsel

Promoting health, safety, and well-being continued

PERFORMANCE AND NEXT STEPS

We recorded an overall LTI rate of 0.13 in 2018 (2017: 0.10). Our market safety initiatives continue to be put in place, and our culture assessment will target where additional action is needed.

Our fleet collision rate has improved to 0.91 down from 1.01 in 2017, meeting our target to stay below 1.50 collisions per million kilometers driven. We set challenging country-level targets to improve global fleet performance and promote local initiatives to respond to the different road infrastructure and driving cultures around the world.

Nearly all our sites are certified or pre-certified to OHSAS 18001.

We aim to achieve best practice in our H&WB programs and to intensify performance across its four objectives. We want to expand the outreach of our *BalancedYou* program to further support our employees in all markets. Importantly, we look forward to reporting all PMI workplaces as smoke-free over the coming years.

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Of our affiliates around the world offer flexible working arrangements

Above: An employee in PMI's manufacturing facility in Neuchâtel, Switzerland

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Furthering diversity and inclusion

— TARGETS —

40%

women in management positions by 2022[34]

1st

international company to achieve and to maintain the Global EQUAL-SALARY Certification

Above: A call center employee in Fukuoka, Japan

Foreword

We aim to foster behaviors that embrace diversity. Businesses that are diverse and inclusive are more innovative, consumer-centric, and profitable in a fast-paced, complex world. As we transform our business, we see diversity as a necessity and a strength. An inclusive culture founded on equal opportunity, fairness and respect for everyone, builds a diverse workplace of talented people with the full range of skills, ideas, experiences, and perspectives to deliver positive change for consumers and society.

Furthermore, healthy dissent and disruption resulting from diversity drives innovation and creativity. Only with truly inclusive and diverse teams can we be confident that we are generating the best ideas and product innovation. Our challenge – and opportunity – is to enhance the openness of our workplace culture and organizational structures to further support diversity, so that each and every person feels valued, respected, and included, and has the space to deliver their best, individually and collectively.

Diversity and inclusion

Diversity is about who's sitting around that table, who's being recruited or promoted, and who's represented, and underrepresented. We think about diversity very broadly at PMI, including gender, gender identity, ethnicity, nationality, age, sexual orientation, religious background, physical ability, education, technical skills, life experiences, and more. Inclusion is the how. Inclusion is the behaviors that welcome and embrace diversity, so that each person can bring the full range of their background, experience, and perspective to work with them – and share that diversity with peers and in the work they do every day.

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Furthering diversity and inclusion continued

Progress in 2018

Achieving gender balance

Given that women make up half the world's talent pool and influence 60 to 70% of consumer spend, improving gender balance at PMI is our first inclusion and diversity priority.

At the end of 2018, 42.1% of PMI's global workforce were women, and a growing number of management roles across PMI are being filled by women, reaching 35.2% – up 6 percentage points since year-end 2014.

Women accounted for 40.4% of new hires at managerial levels and 47.1% of new hires at more junior levels. To support our gender parity target for all new hires, we have in place practices to remove potential gender bias from the recruitment process.

Supporting career development of our women and ensuring equal access to learning opportunities are also critical. In 2018, women accounted for 38.3% of promotions at managerial level. This is progress towards our goal to have at least 40% women in management roles by 2022.

We continued in 2018 to expand our parental support programs, and to provide opportunities for women in PMI to access role models, build connections, and develop peer support and professional relationships through networking events and leadership forums.

Gender split at various managerial levels

	Male	Female
	64.8%	35.2%
Senior management	84.8%	15.2%
Directors	70.6%	29.4%
Managers	63.2%	36.8%
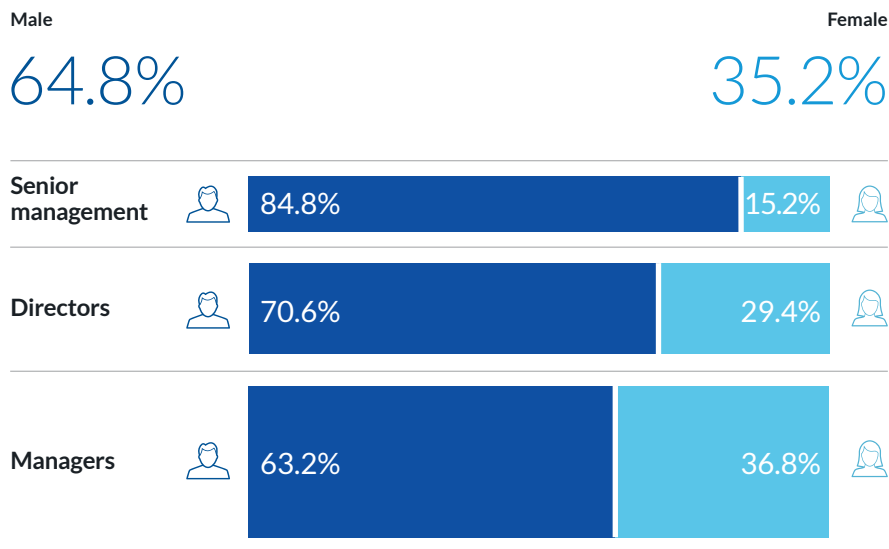
Above: Employees in PMI's office in Bogotá, Colombia

Ensuring Equal Pay

At PMI, we see equal pay for equal work between women and men as the baseline standard for equality. That's why we undertook the Global EQUAL-SALARY certification by the EQUAL-SALARY Foundation.[35] The certification confirms PMI's commitment to equality and is an important building block on our path to creating an inclusive, gender-balanced workplace.

The EQUAL-SALARY certification methodology verifies that PMI pays all its male and female employees equally for work of equal value everywhere we operate across the world. The certification process included a statistical analysis of salary data and a qualitative audit of PMI affiliates by PricewaterhouseCoopers (PwC), the Foundation's partner appointed to audit compliance with the methodology. The auditors conferred management to confirm their commitment to gender pay equality, held focus groups with female employees to understand their perception of that commitment, and reviewed human resources policies and practices to help uncover potential "gender blind spots" that could hinder equal opportunities for women, recommending improvements in certain cases. This rigorous process spanned 18 months, involving input and commitment from the top down and bottom up, demonstrating the company's commitment to equality.

Our record on EQUAL-SALARY certification:

PMI was the first international company to obtain the EQUAL-SALARY label in Switzerland in 2015. In doing so, we set ourselves apart as a top employer where principles of fairness, diversity, and inclusion are the foundation for our success.

Philip Morris Japan was the first company outside of Switzerland to obtain the EQUAL-SALARY certification in November 2016, and maintained it for the last three years through the annual audit process. By applying the Foundation's rigorous equal pay methodology in the country, PMI helped to bring their work to an international level, encouraging other companies to follow suit.

The Global EQUAL-SALARY certification verifies that PMI pays men and women equally for equal work everywhere we operate worldwide. We are proud to be the first company to receive this global certification.

Reaching the Global EQUAL-SALARY certification is a concrete, practical step towards our commitment to improve our gender balance and close the gender talent gap.

Above: Employees in PMI's office in Dakar, Senegal

PERFORMANCE AND NEXT STEPS

Change does not happen overnight in a multinational company with a workforce of around 77,400 diverse employees speaking more than 80 languages. But with clear targets, accountable leaders, and company-wide programs, we are making progress.

Women now hold 35.2% of all management roles at PMI. We achieved the Global EQUAL-SALARY certification in March 2019.

Work remains to be done, however. A priority for 2019 is to increase the representation of women in the senior leadership, among whom only 15.2% were women in 2018. We will do this through targeted recruitment of top talent and personalized career development plans. Additionally, we will further embed flexible working practices and support employees to thrive at work and at home.

Through 2019 and beyond, we will also continue to go beyond our global priority of improving our gender balance to progress inclusion of other diversity dimensions in different affiliates and geographies – whether that relates to the LGBTQ community, people with disabilities, different ethnicities, or across generations.

35.2%

Of management roles held by women in 2018

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Engaging with our communities

Above: Rumah Pintar ("Smart House") community initiative in Lombok, Indonesia

Our community engagement has always been about being a good neighbor and partnering with the communities around us to help address local needs.

In 2018, we contributed to 280 community projects in over 60 countries partnering with more than 230 organizations, and it is estimated that these projects served over 300,000 people. More than 5,000 employees across 18 countries participated in corporate volunteering activities amounting to close to 18,000 hours in total.

Projects in 2018 varied in scale and subject matter. For instance, they included computer classes for the elderly, legal counseling to victims of domestic violence, small enterprises scaling up support, or access to quality education for children living in tobacco-growing regions.

In addition, when disaster happens, we help communities rebuild, delivering both immediate and long-term help. For example, a significant effort went into a global fundraising campaign we organized in 2018 in response to the tsunami that affected communities in the region around our Palu office in Sulawesi, Indonesia. PMI employees generously gave over USD 150,000, matched by the company. The proceeds paid for the relocation of PMI colleagues and their families, new accommodation and schools, town planning advice, and the creation of a fund for children of employees who sadly lost their lives. This campaign was made through Projects with a Heart, a platform developed in 2018 by employees for employees, aimed at fostering volunteering initiatives worldwide.

Building on our long-standing commitment to support the communities around us, we are currently refining our approach to intensify how we invest in relevant causes for positive outcomes. We are aligning our efforts with our sustainability strategy, with reference to the LBG Framework, a global standard for measuring corporate community investment.

280

Projects supported through our charitable contributions in 2018

LEARN MORE ON MANAGING OUR SOCIAL IMPACT:

PMI's Agricultural Labor Practices (ALP) Code ▶

Country-specific assessments by Control Union of the ALP program and action plans ▶

PMI's Commitment to Human Rights ▶

PMI's Human Rights Roadmap ▶

PMI's Responsible Sourcing Principles (RSP) and RSP Implementation Guidelines ▶

PMI's 2018 list of charitable contributions ▶

on www.pmi.com

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PILLAR 4

Reducing our environmental footprint

Effective environmental management across our operations and value chain goes beyond compliance with applicable laws and regulations. We are committed to constantly improve our business activities to achieve the highest standards of environmental sustainability, as stated in our Environment Commitment published in 2018.

In this report, we focus on the four most relevant areas of our environmental footprint: greenhouse gas (GHG) emissions, biodiversity and deforestation, waste and littering, and water use.

While improving the environmental performance of our manufacturing operations is key, the majority of our environmental footprint arises elsewhere in our value chain, especially in tobacco growing and curing, and with consumer waste (cigarette butt litter). Working collaboratively with tobacco growers, suppliers, retailers, NGOs, and governments is key to the success of our environmental programs and to achieving our targets.

IN THIS SECTION

A

Achieved A-List in the CDP Climate Change for the fifth consecutive year

36%

Absolute CO$_2$e emissions reduction from our own operations (scope 1 and 2) in 2018 versus our 2010 baseline

Above: Employees at PMI's Indonesian affiliate, Sampoerna, solar panel farm in Karawang

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Reducing our energy usage and carbon emissions

— TARGETS —

30%

Reduction of absolute CO_2e
emissions from our own operations
(scope 1 and 2) by 2020, 40% by 2030,
and 60% by 2040, versus 2010 baseline

100%

Share of electricity used in
manufacturing from renewables
by 2030, versus 2010 baseline

40%

Reduction of absolute CO_2e emissions
from our operations and value
chain (scope 1, 2, and 3) by 2030,
versus 2010 baseline

70%

Reduction of flue-curing GHG
emissions by 2020, versus
2010 baseline

70%

Share of tobacco leaf purchased
that is cured using sustainably sourced
fuels by 2020

Zero

Coal used in tobacco
curing by 2020

Foreword

Climate change is caused by GHG emissions,
mainly from industry and agriculture. Stabilizing
global temperature rise below the internationally
agreed 1.5 degrees Celsius requires rapid change
in all aspects of society, including in our industry.

Our carbon footprint extends across our value
chain, from the supply of tobacco and other
materials, to the production, packaging, and end-
of-life. We strive for continuous improvement in
line with international agreements: we support
the Paris Climate Agreement and believe urgent
action by all stakeholders is necessary, as was
highlighted again in the October 2018 report
from the Intergovernmental Panel on
Climate Change.

Reducing our energy usage and carbon emissions
is embedded in our strategy, our Environmental
Commitment, our Guidebook for Success, our
Responsible Sourcing Principles and our Good
Agricultural Practices program. Our targets align
with the capacity of the environment to tolerate
impacts – known as science-based targets.

Above: Employees at PMI's manufacturing facility in Guadalajara, Mexico

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Progress in 2018

Responding to climate change risk

In 2018, we continued and strengthened the implementation of carbon reduction projects across our operations and our tobacco supply chain. For the fifth consecutive year, PMI achieved the top score (an "A" rating) from CDP, the global disclosure system that enables organizations to measure and manage greenhouse gas emissions and other impacts.

More energy and water are required to produce *IQOS* heated tobacco units, as additional manufacturing steps are needed for smoke-free products compared to cigarettes. Scope 1 and 2 GHG emissions remained stable overall. As we evolve more factories to produce smoke-free products, we will be resetting our carbon dioxide equivalent (CO_2e) target baseline level to reflect the new production process and relative difference in emissions.

The chart on the right depicts the share of carbon emissions throughout the value chain.[36] Compared with many other industries, our factories have a relatively small impact.

We aim to reduce carbon emission in our operations (scope 1 and 2) where we have full control, but also in our value chain (scope 3).

Share of carbon GHG emissions across our value chain in 2018

Purchased goods and services, including tobacco

Upstream transportation and distribution

Business travel

Employee commuting

Fuel-and-energy related activities

Capital goods

Scope 1   Scope 2   Scope 3   Upstream   Downstream

7.4%   3.2%   85.9%   3.5%

Downstream transportation and distribution

Use of sold products

End-of-life treatment of sold products
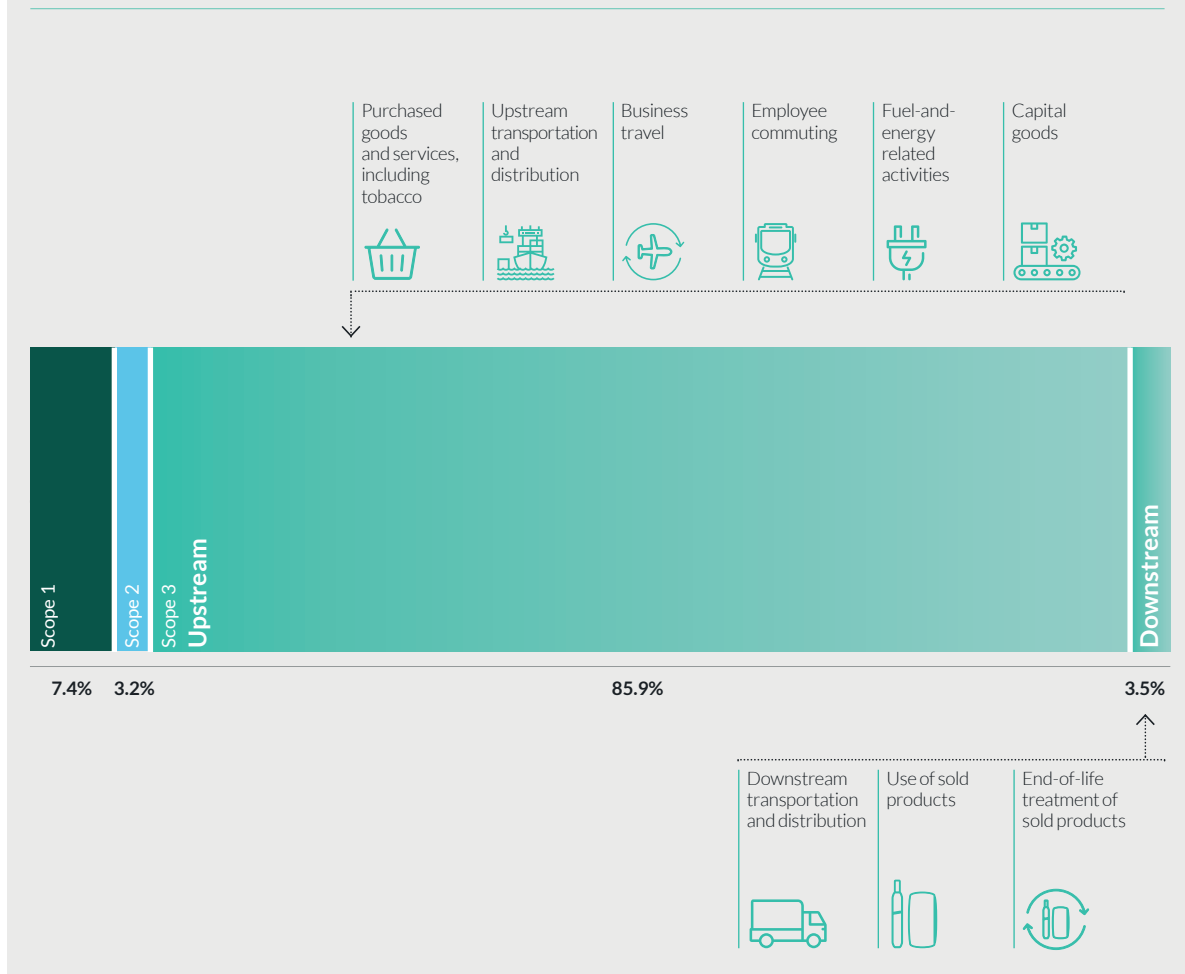
In 2018, we developed a new carbon footprint model with an external consultancy, with the aim to better prioritize our actions as well as to track our supplier's improvements. Our scope 3 figures are now more accurate than previously. We have included more primary data from our suppliers, an updated methodology, and a better understanding on risks and opportunities to reduce carbon emissions. Furthermore, a full third party verification brings extra credibility to the results.

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Reducing our energy usage and carbon emissions continued

Reducing emissions in our manufacturing operations

We prioritize carbon reduction projects in our factories as follows: we save energy; we switch to lower-carbon fuels, especially renewables; and we source renewable electricity.

In 2018, we continued our global program to implement energy-saving projects at every factory. We commissioned projects focused on energy-efficient buildings, fuel control in manufacturing, and LED lighting. At the same time, our manufacturing of smoke-free products is expanding fast. This process requires more energy and is currently attenuating the benefits of our energy-saving projects. With the growth of our smoke-free business, it will be increasingly challenging to reduce our global energy usage. We therefore need to globally accelerate our switch to renewables, as these have a much lower carbon footprint than fossil fuels.

We did so in the Philippines in 2018, where we installed a solar photovoltaic plant to produce clean electricity, and in Mexico where we built a new boiler house to use biomass instead of fossil fuels, which should both lead to an estimated annual emissions reduction of 5,000 tons of CO_2e annually. More and more PMI factories buy electricity from renewable sources, now representing 65% of our consumption globally.

All carbon reduction investment decisions are supported by "Marginal Abatement Cost Curve" calculations and our internal carbon price of USD 17 per ton of CO_2e in order to allocate capital for the best return in terms of carbon reduction and cost-effectiveness.

Philippines solar plant

In 2018, our factory in Batangas (Philippines) invested in a 2.5 MW power plant converting solar energy to electricity through photovoltaic modules. The installation is the largest of its kind for PMI, and follows in the footsteps of PMI affiliates in Pakistan and Indonesia. The power plant produces 3,500 MWh of electricity annually, with an expected reduction in CO_2e emissions of more than 2,000 tons per year. The project supports the Philippines government's Renewable Energy Roadmap 2017–2040.

Disclosing our climate performance

In line with our Environmental Commitment, we disclose our environmental performance and risks to CDP, the organization which runs the global disclosure system on climate, water, and forests. Out of the world's 7,000 largest companies assessed by CDP climate last year, PMI is one of only 138 companies in CDP's 2018 Climate "A List," rewarded for consistently taking comprehensive action to reduce GHG emissions and mitigate climate change in a transparent manner.[37]

We are also one of 115 members of the CDP Supply Chain program. For the second consecutive year, PMI was recognized for its leadership in supplier engagement. The intent of this program is to increase the impact up the value chain by encouraging suppliers to put in place their own environmental programs.

Above: Employees at PMI's Indonesian affiliate, Sampoerna, solar panel farm in Karawang

Lowering carbon emissions from transport

A fleet of close to 25,000 vehicles is used in our business for delivery, sales, and other services. Our fleet emissions account for about 28% of our direct (scope 1) GHG emissions. In 2018, we decreased the absolute CO_2e emissions from our fleet by 4% versus 2017. This reduction results from good vehicle maintenance, ongoing switch to hybrid and more fuel-efficient vehicles, and eco-driving behavior. Our fleet comprises approximately 400 "green" vehicles, which are either electric, hybrid or that emit less than 80 g/km of CO_2 for cars or vans and less than 600 g/km of CO_2 for trucks. Following the switch of our Spanish car fleet to hybrid vehicles, other affiliates are planning similar investments. Lastly, eco-driving brings fuel savings, and also safer driving.

Working with tobacco farmers to reduce emissions

As most our emissions occur in our supply chain, we work with tobacco suppliers and farmers to reduce the environmental impacts from tobacco growing and curing, which is a priority area in our upstream value chain. Our GAP program covers a broad range of topics, including GHG emission reductions.

We mainly source three types of tobacco: Virginia, Burley, and Oriental. Virginia tobacco represents over half of our global needs. Virginia leaves are flue-cured in barns that are heated using various fuels, including fossil fuels and biomass (wood fuels and agro fuels).

We now run 41 carbon reduction initiatives across our tobacco supply chain that focus on three strategic aspects:

1. Supporting the implementation by our suppliers to plant trees in farmers' communities, and commercial wood lots which are managed sustainably;
2. Improving the fuel efficiency of flue-curing barns; and
3. Switching from high-carbon or unsustainable fuels, such as coal, to sustainable wood sources and a range of biomass products (wood pellets, agro-pellets, or other agricultural waste products.)

More efficient curing

About five kilograms of wood are needed to flue-cure one kilogram of Virginia tobacco, equivalent to about half a kilogram of wood per 200 cigarettes.

While farmers own their curing barns, PMI and its suppliers provide guidance and support to make them more fuel-efficient, focusing on better combustion efficiency, ventilation, and heating control. Building on barn improvements made in previous years, in 2018 we improved a further 18,700 flue-curing barns in Brazil, Indonesia, Italy, Malawi, Mozambique, Pakistan, the Philippines, and Tanzania. By 2020, we aim to improve 80,000 barns.

Sustainable and traceable curing fuels

We aim to ensure that, by 2020, 70% of the tobacco leaf we purchase is cured using renewable fuels that are fully traceable. In 2018, we reached 46%, up from 36% in 2017. Our move away from coal by 2020 is clearly under way, with the share of coal used as a curing fuel down to 15% in 2018, from 20% in 2017. Farmers switch from coal to more sustainable fuels such as agricultural waste pellets.

As we use more traceable firewood from sustainably managed tree plantations, our flue-curing GHG emissions will continue to fall. The way we calculate our carbon footprint accounts for the "precautionary approach": we use a "full carbon" emissions factor until proof is available that the source is sustainable.

The proportion of tobacco we currently purchase that is cured at no risk of deforestation is approaching 90%. See page 94 on deforestation risk in our supply chain, including live barns.

Above: Curing barns in Bahia, Brazil

Reducing our energy usage and carbon emissions continued

PERFORMANCE AND NEXT STEPS

We are on track to meet our carbon emissions reduction targets, even as we move to new processes required by smoke-free products in more and more factories.

By the close of 2018, the absolute CO_2e emissions from our own operations decreased by 36% against our target of 40% by 2030 (GHG emissions scope 1 and 2, from 2010 baseline) following energy savings, fuel switching and sourcing of renewable electricity. In 2018, 65% of electricity used in our manufacturing operations was from renewables, up from 53% in 2017, against our target of 100% by 2030. This resulted mostly from a switch in the electricity supply in the Philippines and Argentina. We have met our 2020 target to reduce absolute emissions by 30% in 2017, and are now focusing on our 2030 target to reduce emissions by 40%. In line with the upcoming guidance from the Science Based Targets initiative,[38] we will review and strengthen our carbon targets and evaluate the best approach to future-proof our operations.

Across our value chain, we achieved a total reduction of 34% in 2018, against our target to reduce absolute CO_2e emissions by 40% by 2030 (baseline: 2010).

A key element of our value chain emissions reduction was the improvement made in flue-curing: flue-curing GHG emissions intensity was 47% lower in 2018 than in 2010 (2020 target: 70%).

In 2018, 46% of flue-cured leaf we purchased was cured using renewable and traceable fuels (2017: 36%), while 33% of the fuel was sustainably sourced firewood and 13% came from other biomass.

The gradual switch to renewable sources and efficiency gains due to curing barn improvements has reduced GHG emissions in 2018 by 170,000 tons of CO_2e versus 2017.

What's next? We plan to deliver the 41 flue-curing efficiency initiatives and we will apply the new Monitoring Framework in all flue-cured sourcing markets, with audits to be completed by 2020.

As we grow the production of smoke-free products, we will review our targets and how they account for the changing emissions profile of product use, recycling, and disposal. As we review environmental policies and commitments, we will account for new risks and opportunities facing the business and the environment.

We aim to play our part in accelerating the transformation of the global energy market by using more renewables and we will continue to share and learn best practices via organizations such as CDP. Our governance of climate change risks aligns well with the framework proposed by the Task Force on Climate-related Financial Disclosures; our CDP submission provides technical input into an understanding of climate risk and opportunity. In line with CDP's supply chain program advocacy, we expect additional action by our suppliers to benefit from opportunities to cut emissions and costs.

36%
The absolute CO_2e emissions reduction from our own operations (scopes 1 and 2) in 2018 versus our 2010 baseline

Global greenhouse gas emissions scope 1, 2 and 3 ('000 tons CO_2e)

Legend:
- Scope 1
- Scope 2
- Scope 3

Year	Total	Scope 3	Scope 2	Scope 1
2010 (Baseline)	8,349	89.1%	5.6%	5.3%
2016	6,315	89.4%	5.0%	5.6%
2017	5,767	89.1%	4.2%	6.7%
2018	5,504	89.4%	3.2%	7.4%
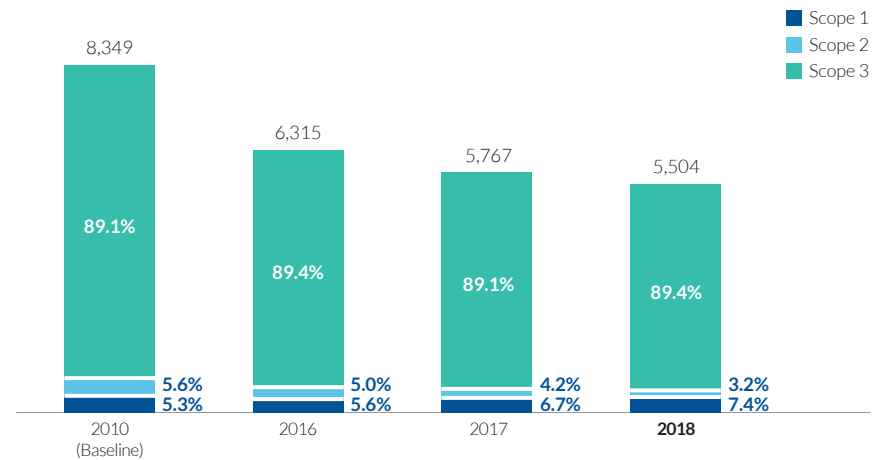
Reduction in CO_2e emissions from tobacco flue-curing (%) – baseline 2010
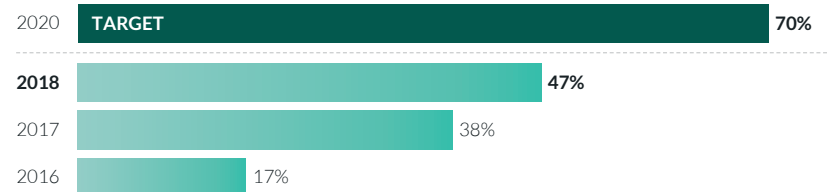
Year		Value
2020	TARGET	70%
2018		47%
2017		38%
2016		17%

Proportion of flue-cured tobacco purchased cured with renewable fuel sources (%)

Year		Self-sufficient firewood	Biomass adoption	Total
2020	TARGET			70%
2018		33%	13%	46%
2017		29%	7%	36%
2016		27%	5%	32%

- Self-sufficient firewood
- Biomass adoption

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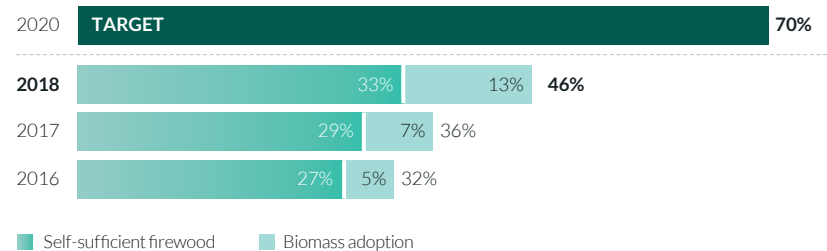
Conserving biodiversity and combating deforestation

— TARGETS —

Zero
Net deforestation of primary and high conservation value (HCV) forests associated with the tobacco supply chain by 2020

Zero
Net deforestation of primary and HCV forests associated with the supply chain of paper and board by 2022

Zero
Net deforestation of primary and HCV forests associated with the supply chain of other significant pulp-based products, including cellulose acetate tow by 2025

Zero
Net deforestation of natural forests in the tobacco supply chain by 2025

Zero
Net deforestation of natural forests in the paper and pulp-based products supply chains by 2030

Net positive
Impact on forests associated with the tobacco supply chain by 2025

Above: A PMI employee with a production technician in Bahia, Brazil

Foreword

The conservation of flora and fauna is essential because healthy habitats provide vital ecosystem services, such as pollination, biological pest control, and the regulation of nutrient cycles. Our day-to-day life, health, and livelihoods all depend on a stable climate, healthy oceans and rivers, and soils, land, and forests rich in biodiversity. Agriculture also depends on a healthy and resilient ecosystem.

While our own manufacturing operations have no significant impacts on biodiversity or deforestation, some elements of our supply chain may impact deforestation and biodiversity. While most of our suppliers of paper and packaging source from areas free of deforestation, our aim is to improve our supply chain traceability to provide clarity that all pulp is sourced deforestation-free.

The main risks associated with tobacco farming arise from the firewood used as curing fuel and, to a lesser extent, from the land use change for tobacco growing and the use of timber for curing barn construction.

PMI's long-term approach has been based on our GAP program, in place since 2002, which includes measures to prevent biodiversity loss. As part of GAP, all PMI tobacco suppliers are expected to present zero risk to national parks, designated conservation reserves, or other biological conservation areas; indeed, all suppliers are expected to enhance natural habitats and the corridors that connect them.

In 2018, we developed a new zero deforestation ambition and a set of targets to protect forests in our supply chain. Our aim is to align with existing international frameworks and ambitions on deforestation. The priority in forest protection is to conserve primary, untouched forests, as well as forests with a high conservation value, as those harbor the highest diversity. We will also extend our ambitions to cover protection of all natural forests over time. Our targets aim for zero net deforestation, as we may not be able to achieve zero deforestation with all suppliers and all locations, and we may have to compensate elsewhere as a last resort.

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Conserving biodiversity and combating deforestation continued

Progress in 2018

According to the global deforestation risk assessment we conducted in 2018, tobacco leaf and pulp and paper are the main categories of raw materials posing potential risks to forests and biodiversity.

In our tobacco supply chain, these risks pertain to: firewood used for curing, forest land clearance for tobacco growing, and timber used for curing barn construction. We describe our respective action plans, as well as our integrated pest management approach to help conserve biodiversity further in this text.

Firewood used for curing

The global deforestation risk assessment results showed that, while deforestation risks associated with curing fuel are important, PMI is currently managing them – via our specific monitoring arrangements, clear goals, and active engagement with suppliers and their farmers.

We aim to ensure that, by 2020, 70% of the tobacco leaf we purchase is cured using renewable fuels that are fully traceable. Our data show that we are two-thirds of the way towards that target, at 46%.

To prove that firewood is renewable and traceable, we use our Monitoring Framework, to verify the sustainability attributes of how our suppliers and their farmers are managing deforestation risks. The Framework is an internal standard that aligns with international best practices and is verified by a third party. It requires full chain of custody not only for tier 1 suppliers but also for many tier 2 suppliers. The proportion of tobacco we currently purchase that is cured at no risk of deforestation stands at approximately 90%.

Monitoring and supplier engagement go hand in hand. To ensure fuel sources are sustainable, we support suppliers and farmers in planting trees to supply renewable firewood for curing.

We recommend that tree-planting takes place on marginal lands where there is no threat to existing biodiversity, and we acknowledge the importance of careful management of land use change due to its effect on carbon sinks. Since 2000, we have supported our contracted farmers and suppliers to plant more than 220 million trees of different species. Fast-growing trees provide farmers with firewood, while other native species may be used for traditional medicinal cures, and to supply fruits for food and additional income, and some slower-growing species provide farmers with high-value hardwoods for additional income.

Meanwhile, in Brazil our agronomy team is working with tobacco suppliers, an external agency and a local university to validate that firewood sources are sustainable. As part of a community watershed project, we are restoring 145 hectares of riparian areas and forests, using species that are fast growing and naturally part of the local ecosystem. The project is improving water quality to the extent of making it drinkable, benefiting the local population.

Forest land clearance for tobacco growing

Our 2018 global deforestation risk assessment identified that, nowadays, the risks specifically associated with land-use change from tobacco farming are not significant. Where PMI sources tobacco, there is no direct deforestation associated with expansion of tobacco because tobacco-growing areas are not expanding.

The 2018 Assessment, complemented by the findings of an additional pilot land-use-change study from November 2018, concludes that the direct impact from land-use change currently associated with tobacco grown for PMI products is close to zero.

Timber used for barn construction

Another deforestation risk confirmed by that assessment is the use of timber for construction of barns used to cure Burley tobacco leaf, which, unlike Virginia tobacco, is hung and air-dried, rather than flue-cured. Our aim is to ensure that the suppliers and farmers we work with plant more trees for barn construction than they cut by 2025. We will also work with suppliers on forest land restoration, biodiversity, and natural habitat, focusing on ecologically valuable and sensitive areas such as HCV areas.

The following case study details the issue and how we are tackling it in Malawi and Mozambique, where the risk of deforestation is particularly high.

NEW FRAMEWORK FOR BIOMASS AND BIOFUEL USE:
Know your fuel source, be sustainable, be transparent, and engage with stakeholders

PMI supports the use of low-carbon energies, such as solar and water, but also of sustainably managed biofuels. There are two main sources of biomass: wood products from natural woody biomass, and agro-fuels from agricultural biomass.

PMI has developed a new Monitoring Framework to systematically monitor the sustainability of all fuel types used in our tobacco supply chain; we will only use biofuel if it does not compete with food production or affect food security.

Our "step-wise approach" to assess fuel types relies on understanding the suitability of different fuel types and the farmers' willingness to adopt change. This is used to design the right approach to fuel supply and farm-level practices within the local context.

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85,000

Live barns grown by our suppliers across Malawi and Mozambique since 2014

CASE STUDY

Promoting live barns to prevent deforestation in Malawi and Mozambique

Image: A tobacco farm worker in front of a live barn in Mozambique

CASE STUDY

Promoting live barns to prevent deforestation in Malawi and Mozambique

PMI sources significant quantities of tobacco from Malawi and Mozambique and therefore has an important role to play in supporting community and environmental well-being in those countries. To give an idea of scale, PMI's supply of tobacco leaf in Malawi comes from 28,000 farms covering approximately 50,000 hectares.

Both countries face the challenge of deforestation driven by population growth, demand for agricultural land expansion, urban expansion, fuelwood, timber and charcoal demand, tobacco cultivation, brick-making, and uncontrolled bush fires.

A further specific challenge in Malawi and Mozambique is the demand for timber used to build barns for the air-drying of Burley tobacco – timber poles are used in a simple thatched roof structure where tobacco leaves are hung to dry.

As the wooden poles used in the barns are attacked by termites, they need to be replaced regularly. This issue has been solved with the concept of the "live barn" – a structure of living trees which support the curing poles and remain in place for many years.

Since 2014, PMI suppliers have grown more than 85,000 such barns across the two countries. The first 1,000 live barns we planted are now being used. In 2018, we supported the planting of ten million trees that in future will grow to be the poles for some 68,400 barns.

PMI suppliers provide the tree seedlings (from a range of species), advice, and propagation materials to help ensure high tree survival rates and optimal growth rates. Bamboo seedlings are also provided so that bamboo poles can be used as horizontal supports and for the barn roof skeleton in the future.

By 2020, all contracted Burley farmers in Malawi and Mozambique will have live barns planted. This program will help farmers to conserve the environment and increase biodiversity, promote efficiency on their farms, provide additional wood for their own use from annual pruning, and effectively reduce deforestation.

Above: Forestry nursery in Mozambique

Above: Live barn construction in Mozambique

Deforestation risks in pulp, paper, and other supplies

In our non-tobacco supply chains, the main deforestation risks are those related to pulp and paper, in which we aim for zero net deforestation of primary and HCV forests by 2025 and 2022 respectively, and zero net deforestation of all natural forests by 2030.

In practice, this means 100% traceability to the forest source and 100% use of certified, or verified, materials by 2022.

Our approach towards our zero net deforestation goal is to:

1. Work with priority suppliers to assess their risk level and sustainability practices;

2. Deepen our assessment of the risk level for each supplier and compare suppliers, using a ratings scorecard;

3. Collect best practices and remediation actions, such as sustainable sourcing policies, improved traceability, increased share of certified materials, and upstream capacity-building; and

4. Refine our corporate commitment relating to deforestation risk and learn from leading pulp and paper suppliers.

Integrated Pest Management

Crop protection agents are needed to control the spread of pests and ensure healthy and robust growth of crops, but they also have the potential to reduce biodiversity. Our aim is that CPAs are used responsibly on the farms supplying our tobacco. Implementation of GAP is mandatory for all our tobacco suppliers (see page 56) and it includes actions on Integrated Pest Management (IPM).

The IPM program has three main priorities:

1. Promote the use of less hazardous CPAs;

2. Reduce unnecessary use of CPAs; and

3. Ensure that CPAs are managed appropriately.

IPM practices lead to improved yield, production efficiencies, environmental protection, as well as health and safety; this contributes to each of the GAP focus areas.

IPM requires new ways of working towards a more "ecosystem" approach, combining different management strategies and practices to grow healthy crops while minimizing the use of CPAs. Working in partnership with our suppliers is key to shared understanding and success.

We have been providing guidance and support to suppliers on IPM for around 15 years: crucially, it is systematically implemented in all of PMI's principal tobacco-sourcing areas.
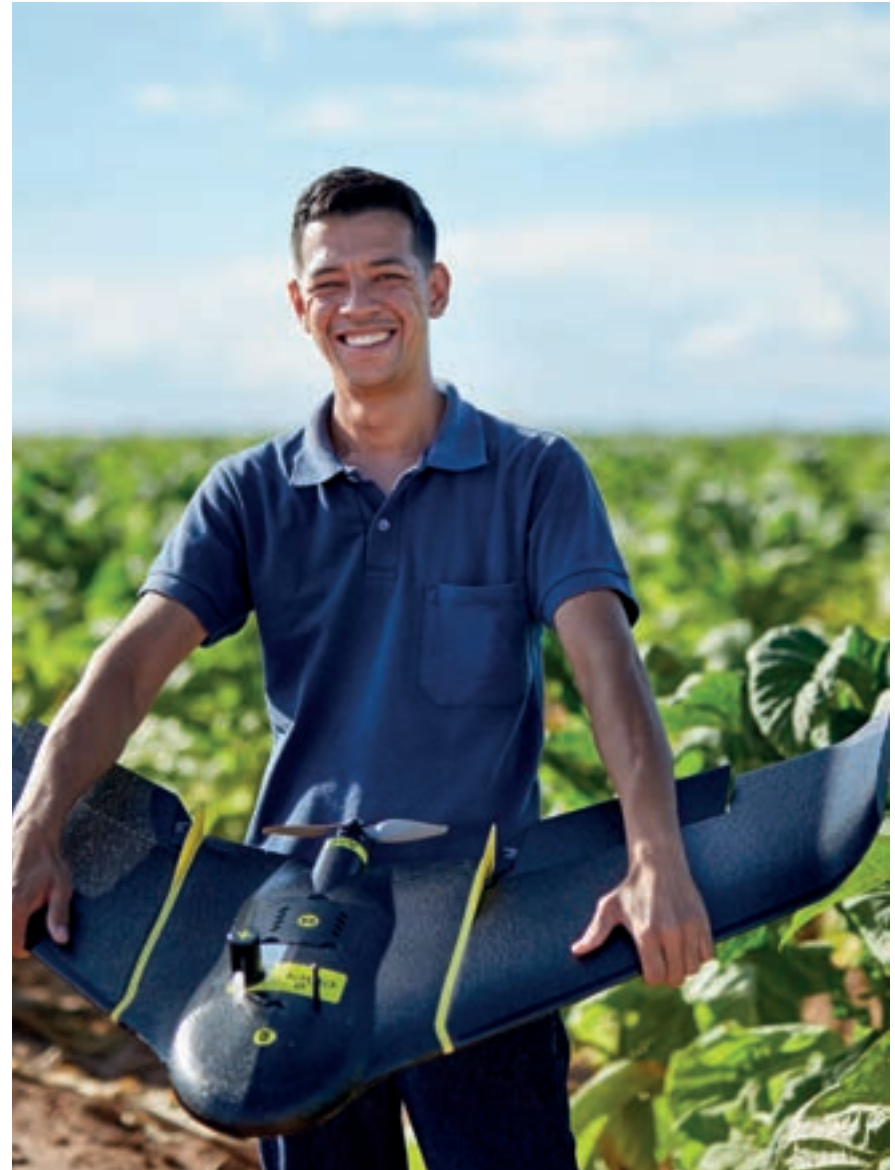
Above: A production technician in Bahia, Brazil

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Conserving biodiversity and combating deforestation continued

Providing alternatives to highly hazardous pesticides

PMI is committed to removing highly hazardous pesticides (HHPs) from its tobacco supply chain globally. For example, PMI Colombia has started to provide a tea-tree extract to farmers to combat fungal diseases. Historically, two destructive fungal diseases in Colombia – Frogeye and Brown Spot – have been controlled using carbendazim, a fungicide classified as an HHP according to guidelines from the Food and Agriculture Organization of the United Nations (FAO) and the WHO. As part of its IPM program, PMI committed to its complete removal, which led to the search for an alternative. We searched microbial and botanical bio-pesticides, and found a tea-tree extract, for which trial results showed an effective level of control in Burley tobacco. Since 2015, the tea-tree extract is provided to the 146 PMI tobacco farmers whose farms are at risk of infection, and other markets are now testing it as an alternative for the control of fungal diseases of tobacco.

Above: A PMI employee with a production technician in Bahia, Brazil

In 2018, we expanded our guidance to growers on the use of bio-pesticides, including access to a database of over 300 alternatives to HHPs, advice on PPE, and the safe disposal of empty CPA containers. Training on this technical guidance was delivered with the Centre for Agriculture and Bioscience International (CABI), our specialist partner. A pest management website funded by PMI provides open access to all the guidance, training materials, participatory approaches, and even puzzles designed to test knowledge gained.

CPAs should only be used as a last resort. Our target is zero purchase of tobacco containing residues attributable to the use of WHO TOX1 by crop 2018, or other HHPs as defined by WHO and FAO guidelines by crop 2020. We are currently collecting data on residues relating to crop 2018 and will report findings in future reporting.

A farming app

Where there is a lack of knowledge on Integrated Pest Management (IPM), there is a risk of gaps in responsible pest management and CPA use. In response, we developed the app "Tobacco IPM" that puts information on IPM and responsible CPA management at the fingertips of field technicians and farmers. Its content is produced by CABI and includes guides, regulatory updates, country-specific pest management sheets, and technical information on safe and effective methods for prevention, monitoring, and control. The app is freely available for download on mobile phones.

PERFORMANCE AND NEXT STEPS

In 2018, 90% of the tobacco we purchased was cured at no risk of deforestation, down from 94% in 2017 due to sourcing constraints, but still on track to achieve our target of 100% by 2020. In 2018, we supported our suppliers and farmers to plant an additional 26 million trees of various species in countries such as Brazil, Indonesia, Malawi, Mozambique, Pakistan, the Philippines, and Tanzania.

We continue our work to address deforestation risks in tobacco leaf curing, particularly in countries exposed to high deforestation risks, and we are building on the initial results of our live barns program.

We have in place our Monitoring Framework and third party audit process to assess our impact annually and we are using our deforestation risk assessment to develop additional risk mapping and expand actions to mitigate deforestation risk in diverse countries.

Crucially, we foresee continued supplier engagement; after all, it is the relationships with the people on the ground that delivers results from the Monitoring Framework and risk mitigation actions.

Transparency is essential when combating deforestation. We achieved a B score in our first CDP Forest disclosure in 2018. This provides a great first step in deforestation risk transparency for PMI and it demonstrates our ambition to combat deforestation going forward.

In total, 99% of the tobacco crop grown during the 2017 crop was free of any quantifiable level of residues attributable to the use of WHO TOX1 CPAs, almost reaching our target of 100% for the 2018 crop. Furthermore, 88% was free from any other quantifiable HHP residues, showing further progress against our target to completely eliminate the use of HHPs by the 2020 crop.

26m
Additional trees planted by our suppliers and farmers in 2018

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Minimizing waste and littering

—— TARGET ——

All

Manufacturing facilities with zero waste
to landfill by 2022

Foreword

At PMI, we recognize the importance for the global environment of moving from a linear "take-make-waste" production model to a more circular model. It is imperative that waste management programs minimize all waste, recycle as much as possible, and aim to make landfilling obsolete. It is also crucial to prevent the leakage of waste, especially plastics, into the environment, and combat the plastic pollution of our land and seas by reducing litter.

We recognize a responsibility to be stewards of the product, and are further developing our anti-littering campaign program. We analyze the causes of littering, the drivers of behavior change, equipment for proper disposal, and awareness raising. We are committed to encouraging and enabling smokers to reduce littering globally.

As we expand our portfolio of smoke-free products, we are incorporating sustainability considerations into the design of these products, their packaging, and accessories. Given the sensitive and often scarce resources required for electronic components, products need to be designed with easier recycling in mind.

Above: Rejected cigarettes in PMI's manufacturing facility in Neuchâtel, Switzerland

Minimizing waste and littering continued

Progress in 2018

Preventing littering

Globally, plastic pollution is worsening every year: 300 million tons of plastic waste are generated annually, about 60% of which ends up in landfill or the natural environment.[39] In 2018, PMI global sales of cigarettes and heated tobacco units amounted to 782 billion units, resulting in about 0.1 million tons of filter waste. According to the EU, cigarette filters are the second most littered, single-use plastic item in the EU,[40] and are usually found among the most littered items in beach clean-ups.

Our goal, enshrined in our Environmental Commitment, is to make tangible and measurable improvements to the problem of cigarette butt littering. We aim to be recognized as a reliable and committed partner in delivering successful anti-littering programs. Our most impactful contribution is in the realm of consumer behavior, enabling smokers to change their habits from littering to proper disposal.

PMI encourages proper disposal of cigarette butts and heated tobacco units by raising awareness and providing equipment, such as ashtrays and pocket ashtrays. We are improving our understanding of littering behavior, of anti-littering approaches, and of ways to directly reach consumers about this issue. For example, *IQOS* heated tobacco units are much less littered than cigarette butts. This was corroborated in a pilot monitoring study, see on the right. The heated tobacco units are not burning or contaminated by smoke, so consumers find it more convenient to keep them for proper disposal later.

It is commonly recognized that there are three drivers to changing the habit of littering: educate, enable, and enforce. We apply these in our approach to anti-littering:

1. **Innovative approaches to promote awareness:** PMI works with local stakeholders in our markets to promote anti-littering, using signs and other communication tools to encourage proper disposal behavior in littering "hotspots," such as urban centers, beaches, parks, outdoor concerts, and events;

2. **Enabling action by consumers:** This means access to adequate waste receptacles such as ashtrays or bins with stubbing plates, or portable solutions, such as pocket ashtrays.[41] Where adequate municipal collection equipment is not in place, PMI will work with stakeholders to identify improvements; and

3. **Enforcing anti-littering laws:** While a producer cannot enforce regulations, we can raise consumer awareness on existing regulations and we can contribute to making littering socially unacceptable, an approach which can complement the work of authorities.

PMI has developed anti-littering guidance for its affiliates, to help them run local campaigns that create an impact. The guidance follows four steps: (i) identify the local needs; (ii) define the local strategy and targets; (iii) implement the campaign; and (iv) monitor the progress. This guidance is shared with affiliates globally, and the aim is to support them to develop their campaigns in 2019.

Anti-littering campaign in Portugal

In Portugal, our affiliate launched a new anti-littering campaign to target cigarette butts and plastic together with the European Blue Flag Association (ABAE). Starting with the campaign launch in the greater Lisbon area in December 2018, in partnership with the Municipality of Oeiras, and the Portuguese rail and infrastructure organizations, the movement is expected to grow to national level through 2019. The train stations of Algés and Oeiras hosted the launch, entitled "Every object at its place and the place for rubbish is not the ocean"/"#Breakthehabit."

The objective is to raise awareness on this important issue and highlight that if people join in together with good environmental habits, then their efforts can truly make a difference "for the protection of the environment as a whole and the oceans in particular." The campaign explains that many people are unaware that about 80% of the rubbish ending up in the oceans actually comes from bad inland habits, such as littering and poor waste management.

Intelligent litter monitoring

To evaluate an anti-littering campaign, it is essential to have a replicable method to quantify the amount and type of litter on the ground. We partnered with a technology start-up enterprise that has an innovative monitoring tool, using high-resolution cameras mounted on an electric bicycle to photograph the ground, coupled with an artificial intelligence software that learns to recognize litter. This system was tested in the streets of Athens last summer to quantify cigarette butt littering. The software can distinguish conventional cigarettes from our heated tobacco units for *IQOS*. The share of littered heated tobacco units was around half the market share of our heated tobacco units for *IQOS* among all sold tobacco products during the study period, which suggests that they are much less likely to be dropped as litter than cigarette butts.

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The EU Single-Use Plastics Directive

In 2018, the European Union developed the Single-Use Plastics (SUP) Directive aimed at reducing marine plastic pollution by reducing the amount of single-use plastic leaking to the environment. The SUP Directive foresees a number of policy instruments, from awareness raising to outright bans, depending on the product category, its environmental impact, and its potential for improvement.

The SUP Directive identifies ten different product categories falling in the scope of SUP items. Tobacco product filters are one of them. For each product category, the SUP Directive requires certain measures to apply. Tobacco product filters are subject to Extended Producer Responsibility (EPR), covering the cost of public collection systems. This is the first time that EPR has been applied to an anti-littering objective. EPR schemes were typically applied either to create a recycling system or to manage hazardous waste safely. How EPR is to be implemented nationally will be defined by member states within the two-year transposition period following the Directive's adoption. PMI supports the concept of EPR, provided that the schemes put in place are ecologically and economically efficient and socially acceptable, and that they deliver on the goal of reducing littering.

The SUP Directive also foresees awareness raising related to tobacco product filters. This aligns with PMI's awareness campaigns that began many years ago and with our new anti-littering tools for 2019.

Lastly, the SUP Directive will mandate marking tobacco product packs to make smokers aware of the appropriate waste management options for the product and of the presence of plastics in the product. In parallel with that requirement, we are working to develop with impactful messages that will encourage our consumers to properly dispose of our products after use.

What are cigarette filters made of?

The main constituent of cigarette filters is cellulose acetate (CA), a bioplastic made from wood cellulose. CA biodegrades over several months or several years, depending on the surrounding conditions. While it does not meet the strict biodegradability standards required for labeling as biodegradable, it will not accumulate in the environment over time. In contrast, conventional plastics made from petrochemicals take hundreds of years to degrade, often breaking down to form micro-plastics.

Recycling is a popular way of minimizing the impact of waste and promoting the circular economy, but it can often face challenges. There have been isolated attempts to recycle cigarette butts. Unfortunately, various factors make such attempts unviable, including the size of the filters and complex collection and storage logistics. We believe that incineration with heat recovery, commonly used in waste management in many countries, is currently the most ecologically and economically efficient solution.

PMI has been researching cigarette filters with higher degradability for many years, but no better alternative has yet been found. The purpose of the filter is to capture some of the particulates from the smoke and to dilute substances found in the smoke such as tar, nicotine, and carbon monoxide. It allows better handling and stubbing of the cigarette. Paper filters have been tried but were not successful in the marketplace. We do continue our research for filters with higher degradability, but should develop anti-littering policies on the assumption that the cigarette filter in its current form remains an integral part of the product.

Above: Heated tobacco units hollow acetate tubes

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Minimizing waste and littering continued

Addressing the waste of smoke-free products

As we are replacing cigarettes with smoke-free products, new challenges as well as opportunities arise. A new challenge for us as a company relates to the recycling of electronics that we started selling in 2014 and that make up an increasingly important part of our revenues. A new opportunity also relates to the heated tobacco units, where we do see an opportunity for recycling.

Heated tobacco units

Heated tobacco units are more convenient to keep for later disposal and, therefore, are more appropriate for recycling programs than cigarette butts. Our progress so far includes:

- A successful collection system of heated tobacco units at our offices in Switzerland;
- Testing consumer interest in the Greek market; this revealed that consumers are keen to participate when the collection system is convenient. In 2019, we will pilot the collection system across the market; and
- We have further explored the technical feasibility of recycling heated tobacco units and, given the complexity of the logistics that would be involved, we will now investigate the economic feasibility of such a scheme.

Electronic waste

The *IQOS* device comprises an electronic holder and a pocket charger or, in the case of the *IQOS 3 MULTI*, a single electronic unit. In the majority of markets where *IQOS* is commercialized there are requirements for properly managing electronic waste. In addition, to ensure compliance with all regulatory requirements, our aim is that each device can be returned after use and recycled to the highest industry standards in every country where we market *IQOS*.

With regulations governing cross-border e-waste transportation, we aim to ensure that our recycling operations comply with those, and that our products contain no substances that would contravene rules on the trans-frontier shipment of waste.

Composition of a heated tobacco unit

Cellulose Acetate (CA)

Mouthpiece filter

Hollow acetate tube

PLA filter

Tobacco plug

Above: Recycling of *IQOS* devices hub in Japan

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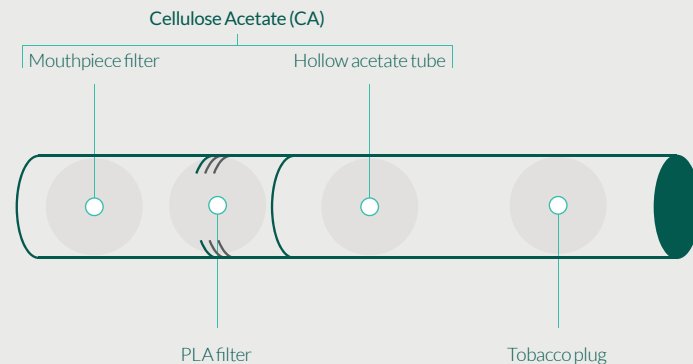
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Recycling hubs for our electronic devices in Europe and Asia

CASE STUDY

A step towards circularity

Image: Recycling of *IQOS* devices hub in Japan

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CASE STUDY

A step towards circularity

At the end of 2018, there were 9.6 million *IQOS* users, each owning one or more *IQOS* electronic devices, and this figure is projected to keep growing. With this in mind, we plan to play our part in the circular economy. Our first steps are through an initiative known as CIRCLE (Central Inspection and Recycling for a Closed Loop Economy), a substantial investment by PMI into collecting and recycling used devices. Our ambition is that each device can be returned after use and recycled to the highest industry standards in every country where we market *IQOS*.

First, let's take a look at the components of *IQOS*. The holder is made of a heating blade, powered by a battery and controlled by a printed circuit board, housed within a polymer casing. The charger consists of a battery and printed circuit board, inside a polymer casing. In the case of our *IQOS 3 MULTI* version, these elements are all in a single unit.

If the device breaks, the consumer is able to return the device through retail stores or postal routes depending on the country. *IQOS* customers can contact their care points for more information on local solutions.

State-of-the-art electronic waste management

In 2018, we established two recycling hubs, or reverse logistics centers, in Europe and Asia, to ensure that device recycling is done to best practice standards. Three markets have so far implemented CIRCLE; the remaining *IQOS* markets are expected to be on board by 2020 (some local conditions may mean a specific alternative solution may be used in certain markets).

These hubs are state-of-the-art facilities run by specialist companies that meet our requirements for electronic waste processing. Once devices are received, our contracted partners first inspect the product, and then dismantle it into the various material types: plastics, printed circuit boards, batteries, and metals. The disassembly procedures go beyond industry standards, with more exhaustive material separation levels achieved.

Sustainability benefits from a centralized model

These centralized recycling hubs are a first step towards a circular economy at PMI and provide a variety of opportunities to improve our sustainability performance. We identified several key benefits so far:

- **Quality:** The inspection process allows us to identify potential manufacturing improvements, leading to lower returns and longer product life cycles, reducing the life-cycle sustainability impacts;
- **Illicit trade prevention:** By taking our devices back and ensuring materials are processed and recycled, these materials cannot be used to manufacture counterfeit products that may not have the same reduced-risk properties as our *IQOS* devices;
- **Sustainable economies of scale:** Centralized hubs are more efficient than country-level programs, allowing PMI to invest strategically in recycling program infrastructure and maximize performance;
- **Regional investment:** Our hubs demonstrate a commitment to the regions in which they are placed, not only directly generating jobs at our recycling centers, but also supporting local recycling partners as we mutually strive for industry-leading programs; and
- **Design enhancement:** Our device recycling process provides valuable insight on how to improve our products' sustainability, which can be directly fed back to our ideation and development teams.

The key challenges to date are ensuring the capacity of our hubs is scaled to the volume anticipated and validating a comprehensive process for on-boarding new markets within our ambitious timeline. In 2018, we began to evaluate how to reuse collected materials within our own supply chain through material studies and pilot initiatives, with the ambition to create a truly closed-loop scheme. We will continue to expand these efforts in 2019.

Ultimately, we see this investment as one more step away from the "take-make-waste" production model – particularly when a more closed-loop program creates new business opportunities for our *IQOS* products, transforming the way we look at raw materials in our value chain.

What is an *IQOS 3* device made of?

Heated tobacco unit

Holder

Casing

Charger

Heating blade

Control electronics

Battery

Above: Recycling of *IQOS* devices hub in Japan

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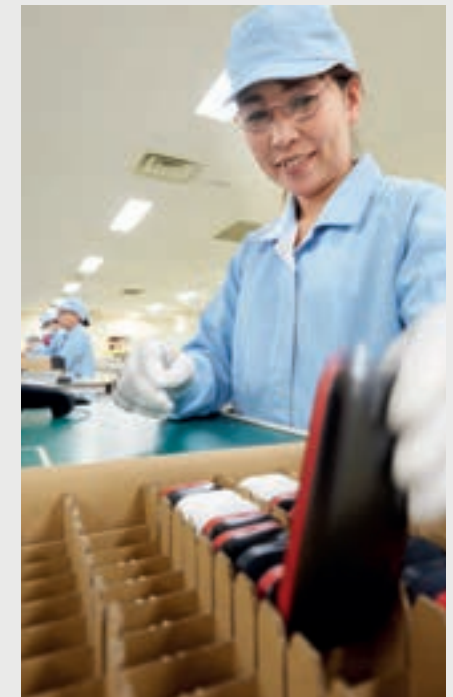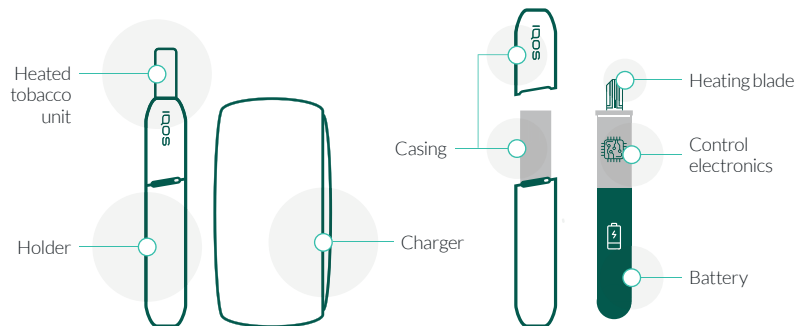
Life cycle assessment of our smoke-free products

We want to know where the impacts occur through the entire life cycle of our products, and manage them responsibly. For example the heated tobacco units have a similar carbon footprint to that of a cigarette, but we must also account for the added effect of our electronic devices. Across its life cycle, we assess the carbon footprint of each new version of the *IQOS* device. We have now embedded these product assessments into our development process with the expectation that we will be able to improve future versions of our smoke-free products. During 2019, we will continue to expand this program and work to further integrate sustainability into device development and decision-making requirements.

Through our quality and design processes, we have worked hard to make each subsequent version of our *IQOS* devices more robust. This improved quality leads to longer life cycles, reducing the carbon footprint impact of our devices on the environment. Additionally, we have doubled the battery life for *IQOS* 3, allowing more charging cycles per device, again supporting our efforts to minimize the environmental footprint of each device. By including sustainability considerations right from the design stage of the product, the devices' carbon emissions per 1,000 use cycles were reduced by 40% from previous versions.

We are also focusing on the environmental impact of our packaging, aiming to use more sustainable packaging for each new product generation. For example, *IQOS* 3 comes in packaging that uses less plastic in the inner tray and which is increasingly wood fiber-based.

Reducing manufacturing waste that ends in landfill through recycling

Our waste management program continues at every factory in line with local regulations and often going beyond them. In 2018, 96% of our factory waste was either recycled or incinerated with energy recovery, up from 93% in 2017. The vast majority of our factory waste, about 84%, was recycled. In absolute terms, total waste has decreased by 4% in 2018 to 134,367 tons, approximately 1% of which was hazardous waste.

Disposal of waste in 2018

- ■ Recycled
- ■ Incinerated with energy recovery
- ■ Disposed to landfill
- ■ Incinerated without energy recovery
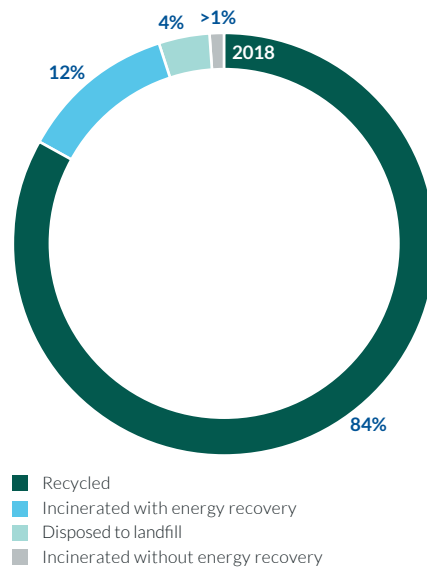
PERFORMANCE AND NEXT STEPS

In 2019, we will expand our efforts to discourage cigarette butt littering, as our affiliates develop anti-littering campaigns. We will also focus on EPR, working with stakeholders in the EU to develop efficient and effective EPR schemes.

Our ambition is that *IQOS* increasingly becomes part of the "circular economy": we are piloting an inspection and e-waste reverse logistics program, which, by the end of 2018, served markets covering two-thirds of our total *IQOS* device sales volume. We look forward to sharing progress on the recycling of devices.

We are proud that, with each new smoke-free device generation, we are improving the sustainability attributes of the packaging. In 2018, we replaced plastic trays with wood pulp trays in our *IQOS* device packaging, decreasing the overall plastics content by 93%. Our heated tobacco unit packs are made of recyclable materials.

Over 95% of the materials used to make our conventional tobacco products are from renewable resources. Our packaging sustainability program sets the direction of our work to reduce the use of non-recyclable material, such as multi-layered plastics, in our packaging and replace them with more sustainable alternatives.

93%

Decrease in plastics content of *IQOS* device packaging by replacing plastic trays with wood pulp trays in 2018

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Managing water

TARGET

100%

All PMI manufacturing facilities will be certified to the Alliance for Water Stewardship (AWS) Standard by 2025

Foreword

Water is used in our manufacturing facilities, our agricultural supply chain, and in the production of other raw materials and supplies, such as cellulose acetate filters, paper, electronic devices, and packaging materials.

Our water strategy accounts for the risks we face from water stress and pollution, their impacts, both in catchments relevant to operations and in supply chains, and drives action to ensure that water is managed sustainably as a shared resource. As PMI is exposed to moderate water risks in some areas, we commit to use water more efficiently and sustainably and to reduce negative impacts in the communities where we operate.

Our goal is to minimize the amount of water used per unit manufactured (cigarette or heated tobacco unit). Following a successful pilot in Brazil, we are implementing the AWS Standard across all our factories, to promote a more sustainable use of water in the communities where we operate.

Also, we run programs to help maintain the quality of water resources we use; for example, through GAP. Sustainable water management in agriculture at PMI includes access to safe water and sanitation for tobacco growing communities. We assess countries of origin for water risk and take measures to improve water access and storage if required.

We maintain transparent external reporting regarding our water use via our CDP Water disclosure, for which we achieved a B rating in 2018.

Above: Drip irrigation for tobacco seedlings in Nayarit, Mexico

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Progress in 2018

Towards water efficiency in manufacturing

Our water footprinting exercise showed that water consumption in our manufacturing operations was only around 6% of the total water consumed across our value chain.[42] However, that still amounts to around 4.4 million cubic meters and our new smoke-free products are more water intensive to manufacture. In 2018, initial data showed that the manufacture of heated tobacco units required four to five times more water per unit than that of conventional cigarettes.

Therefore, as we increase production capacity to meet the demand for smoke-free alternatives, we also account for local or regional water scarcity. Indeed, our water risk analysis data feed into decisions about any structural changes at a factory.

For instance, in our factory in Italy, we are implementing water recycling technology to compensate for the increase in water typically expected in the manufacture of smoke-free

products. In 2018, 73,000 cubic meters of water could be recycled internally (13% of the total site water use), with a second step planned for 2019. The technology that was developed will be implemented at other sites in the future.

In 2017, we started to pilot the Alliance for Water Stewardship (AWS) Standard: AWS is a leading organization dedicated to better water catchment management. In March 2018, our pilot factory became the first factory in Brazil to be AWS certified, and we are expanding its application across our global operations. Throughout the rest of 2018, we started to implement the AWS Standard at a further five sites – in Italy, Portugal, Indonesia, Russia, and Turkey – as part of the program to certify all factories by 2025, with the first ten targeted by 2020.

We believe that neighboring communities near our factories must not experience any negative impact on water resources due to our operations. We regularly consult with communities around the world on environmental and community issues and we recognize the importance of engagement with external stakeholders.

Water footprint

- 🟩 Tobacco supply chain
- 🟦 Other supply chain
- 🟦 Manufacturing sites

| Water scarcity footprint
=
Water consumed
x
Water stress index |
| Blue water footprint
=
(Water withdrawal)
–
(Water release) |

Water scarcity footprint: 35% / 64%
Blue water footprint: 56% / 42%

Water scarcity footprint | **Blue water footprint**
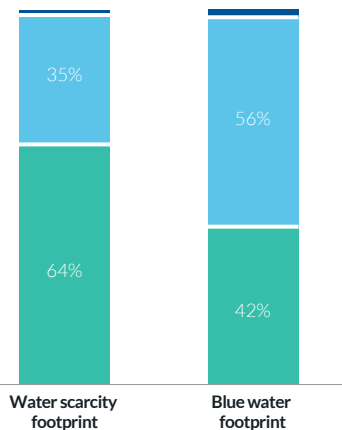
Water stewardship at and around our manufacturing sites

PMI joined the AWS in 2017. We piloted the implementation of the AWS Standard at our vertically integrated location in Brazil, where all stages of tobacco cultivation and cigarette production, from farm to pack, are represented. Our factory already had ISO14001 certification for its good standard of environmental management and, based on that and strong existing water management processes and great personal engagement, the local team succeeded in reaching certification to AWS in only four months. AWS goes beyond requiring excellence in managing water-related issues within the site, it also requires deep understanding of the local watershed and extensive engagement on water-related topics with local communities and stakeholders. We collected our practical experience and learning from the project into a toolbox that has been shared with a further five PMI factories across the world, which are planned to be certified in 2019, in line with our commitment to certify all factories by 2025.

A key learning from the broad approach that the AWS Standard requires is that water issues are always more complex than anticipated, but that engagement with stakeholders can help to resolve problems that individually may be viewed as insurmountable.

Above: Wastewater treatment in PMI's Indonesian affiliate Sampoerna's manufacturing facility in Sukorejo

Managing water continued

Water use in tobacco agriculture

More than half of the tobacco crops supplied to PMI globally are rain-fed and do not require supplementary irrigation other than at the seedling stage.

Water is nevertheless an essential resource for growing tobacco and for the farmer household. The quantity, quality, and timing of water availability through rainfall and irrigation all have an impact on the successful growth of the plant.

In 2018, we assessed our global water risks based on the World Resources Institute's Aqueduct tool, and incorporated water stress, flooding, and drought considerations. Water Insights, first collected in 2018, provides additional data to inform our understanding of water-related issues and for the development of management actions and targets.

Based on this assessment, none of PMI's tobacco-growing areas is exposed to the "extremely high" risk category[43] for physical water risk and only 10% are exposed to "high" risk. On average, drought severity risks are lower than risks of flooding. Risks of pollution are identified in the case of potential uncontrolled usage of CPAs and fertilizers. Fertilizer leaching from tobacco cultivation represents 62% of PMI's modeled water pollution footprint (the non tobacco supply chain represents a further 33%).

We share and discuss with suppliers and their farmers the relevant findings of our assessment. All contracted farmers are required to apply GAP, which includes water-related standards and procedures. Guided by PMI and its suppliers, farmers are best able to identify and mitigate risks where they operate and then to find opportunities for long-term benefits to water access and farmer livelihoods. Going into deeper detail, in 2018 we supported suppliers to conduct local water risk assessments in nine priority areas in Argentina, Brazil, Greece, Indonesia, Italy, Malawi, and the U.S.

Regarding water quality, CPAs used in our supply chain can cause pollution in the catchment areas. Our IPM program provides resources to our suppliers to mitigate this risk (see page 97).

Collective action with our tobacco suppliers and others includes watershed management, and the development of drought-tolerant and flood-tolerant seed varieties, as well as access to water, sanitation, and hygiene (WASH) services for farmers and their workers.

In early 2018, we piloted the "WASH Action Plan" for the first time in Malawi, which aims to address inadequate access to WASH services in our leaf supply chain and to identify priority needs and feasible actions. In 2018, PMI sponsored ten solar-powered boreholes, the rehabilitation of hand pumps, sanitation facilities, concrete storage tanks, and rainwater harvesting systems, and we distributed household water treatment products and organized WASH training sessions in 15 villages. Our projects incorporate international criteria requiring the availability of improved drinking water quality within a 30-minute round trip from the project location, better sanitation in each household, and a handwashing point with soap.

Above: Tobacco field in Nayarit, Mexico

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PERFORMANCE AND NEXT STEPS

The average water consumption in PMI manufacturing facilities increased to 5.4 cubic meters per million units of product equivalent (cigarettes and heated tobacco units), compared with 5.0 cubic meters in 2017.

As we increase the production capacity for smoke-free products, so we evolve our water strategy, with clean technology investments delivering water recycling projects, as described above.

Our global water risk assessment included the modeling of water risk over a 20-year time span for the areas where PMI sources tobacco. Over that period, water stress is projected to increase to some extent, as water supply is also projected to decrease. As demand for water is increasing in many areas across the globe, PMI will support further local water risk assessments to be undertaken from 2020.

We believe that the use of PMI's GAP and other water management practices has a mitigating impact on water risk. For example, we estimate that more than 70% of the tobacco purchased by PMI in Italy is produced in water-efficient drip-irrigated fields (targeting 100% by 2030). There are tangible results linked to GAP program areas covering irrigation, fertilizers, and pesticide application, improving water use as well as yields: an average 2.5% uplift in yields and a potential annual water saving of three million cubic meters over recent years. We will monitor water reduction progress from PMI's GAP and other projects.

1st

PMI factory AWS certified in Brazil in 2018

Above: Water management community project in Mozambique

LEARN MORE ON REDUCING OUR ENVIRONMENTAL FOOTPRINT:

PMI's Environmental Commitment ▸
PMI's submissions to CDP ▸
PMI's Good Agricultural Practices (GAP) ▸
on www.pmi.com

ADDITIONAL RESOURCES ON:

The Tobacco Integrated Pest Management (IPM) Toolbox on www.tobaccoipm.com ▸

The Alliance for Water Stewardship on a4ws.org ▸

The Centre for Agriculture and Bioscience International on www.cabi.org ▸

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Reporting on sustainability

In 2018, we strengthened the foundation of our sustainability efforts. We conducted a new sustainability materiality analysis, engaging with a broad range of external and internal stakeholders. We also enhanced our sustainability reporting in line with external expectations and frameworks.

IN THIS SECTION

Engaging with our stakeholders

How we talk with the outside world is guided by certain principles. Our direct engagement with stakeholders happens in three ways: information disclosure; dialogue; and participation.

Our Guidebook for Success (the PMI Code of Conduct) and several Principles & Practices set out detailed standards for engaging with governments and public organizations or third parties generally, communicating externally, making contributions, or providing financial support to certain projects. An overview of our Engagement Principles is publicly available on PMI website.

We know who our stakeholders are, we listen to them, and we map their concerns. Stakeholders are identified based on the degree to which they are affected by our activities and relationships, as well as by their ability to influence our business objectives. Engagement helps to enhance a mutual understanding of interests, concerns and aspirations, especially as we transform.

Our business transformation has brought us in touch with a growing number of external parties and partners, including academia, public health experts, tobacco control organizations, human rights organizations, sustainability organizations, agribusinesses, electronics suppliers, and e-waste recyclers. We are learning from them, and we hope they also benefit from the relationship.

The table on the right shows our stakeholder groups and how we engage with them.

* Where appropriate and as per local regulations

** We train customs and law enforcement officers as part of our efforts to fight illicit tobacco trade

Stakeholders	Stakeholder groups	Ongoing dialogue	Surveys and questionnaires	Training	Corporate communications	Formal gatherings	Forums and events	Contractual relationships	Memberships and partnerships	Regular or ad hoc visits	Reports and publications	Hotline and call centers	Consultations	Other
PMI employees and contracted employees / PMI management / Work councils / Trade unions	**Employees**	●	●	●	●		●	●			●	●	●	
Peers and other tobacco companies / Trade associations / Chambers of commerce	**Business community**	●				●	●		●		●			
Tobacco farmers and workers / Farmers associations / Farmers of other agricultural supplies	**Farmers and farm workers**	●	●	●	●	●		●					●	Hotlines and access to field technicians
Sourcing communities / Operating communities	**Local communities**	●	●	●	●		●		●		●	●	●	Community contributions
Providers of goods and services (including raw materials) / Third party operated manufacturers / Contractors	**Suppliers**	●	●	●	●	●	●	●	●		●	●	●	
Wholesalers / Retailers	**Distributive trade**	●		●			●	●		●				
Adult consumers*	**Adult consumers**	●	●				●					●		
Intergovernmental organizations / Regulatory agencies / Standard setters / Health authorities / Customs**	**Regulators and governments**	●*		●**	●	●					●		●	Submissions and consultations
Academia / Citizens / NGOs	**Civil society**	●			●	●	●		●		●			
Written press / Social media / Journalists	**Media**	●	●		●		●		●		●			Studies, interviews, business achievements, and certifications
Researchers / Public health experts / Academia	**Scientific community**	●			●			●	●	●	●			
Analysts / Shareholders / Institutional investors / Sustainability ratings agencies / Socially responsible investors	**Investors and shareholders**	●			●		●				●			

Means of engagement

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Engaging with our stakeholders continued

At the end of 2018, we conducted a sustainability materiality analysis, which further structured our engagement with a broad range of stakeholders. Feedback from that exercise is addressed throughout this report, and will help craft our 2025 sustainability strategy.

Overview of feedback from stakeholders gathered during our sustainability materiality assessment:

Transforming our business

- **Product health impacts** Demonstrate unmistakably that PMI wants to transform into a smoke-free future.
- **Access to smoke-free products** To generate access, include the context of different markets for smoke-free product business models and portfolios.

- **Product addictiveness** Be transparent on how PMI deals with the addictiveness of its products.
- **Responsible R&D** Enhance credibility of results through independent confirmation and address animal welfare.

Driving operational excellence

- **Responsible commercialization** Be outspoken about the harmfulness of combustible and new products and better address post-consumer waste. Make the products less attractive to youth, who tend to follow adults' behavior.

- **Data privacy** PMI needs to be transparent on the consumer data tracked and ensure full data integrity.
- **Economic performance** Elaborate on economic viability of the business transformation and PMI's determination towards its vision.
- **Other human rights** Aim to ensure that human rights are upheld along the whole supply chain and exchange with external stakeholders on best practices.
- **Raw materials and other suppliers** Ensure that new materials and supply chains are sustainable. Eradicate poverty through collaborative actions across the whole tobacco industry.

- **Bribery, corruption and anti-competition** More transparency and leadership on local, national and international levels to address corruption.
- **Fiscal practice** A leader does not just comply with regulations, but does the right thing.
- **Illicit tobacco trade** More collaboration and awareness-raising is needed for effective actions.
- **Policy influence** Take up a clear position to demonstrate transparency. Otherwise PMI is not credible.

Managing our social impact

- **Child labor** Understand drivers and local context and collaborate with peers to develop local solutions.

- **Fair working conditions** Address the changing work environment as the business transforms and leave no one behind in times of transition.
- **Health, safety and well-being** Ensure good training and education besides providing protective equipment.
- **Diversity and inclusion** Work on a culture of inclusion at PMI and along the value chain to strengthen the transformation process.

- **Talent attraction and retention** Assess actual situation internally and analyze changing needs.
- **Community engagement** Use community engagement to understand local context as a foundation to solve other issues successfully.

Reducing our environmental footprint

- **Emissions and energy** Align reduction targets according to local context to reach maximum impact.
- **Biodiversity and deforestation** To protect biodiversity, collaborate, diversify crops, and ensure traceability.
- **Waste and littering** Set an example of how to manage electronic devices in a life-cycle approach.

- **Water** Actions need to be defined on a basin level and integrate local actors.

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Focusing on what matters

A sustainability strategy and report only have meaning and impact if they focus on what matters: the right set of topics. In 2018, we worked with BSD Consulting, an ELEVATE company, to carry out a comprehensive sustainability materiality assessment to do just that. BSD Consulting is a renowned international sustainability consultancy with in-depth experience of this type of analysis.

PMI's sustainability materiality assessment process

The assessment, which fosters transparency and credibility, enabled us to further embed sustainability across the company. It followed a five-step process.

We first listed potentially relevant sustainability topics. Secondly, the topics were discussed with a set of stakeholders and a survey was issued. The impact of these sustainability topics on the economy, society, and the environment were assessed based on a qualitative expert assessment. Results were then used to prioritize the topics in a sustainability materiality matrix. The final step was to allocate relevant topics to the existing four pillars of our strategic framework. This was discussed and approved together with the matrix in a validation workshop with the members of our Sustainability Committees.

STEP 1
The long list of topics

The analysis identified a long list of 24 topics that were potentially relevant for PMI. They were derived from a review of PMI's internal documentation and external regulatory and operational environments. The external research included analyses of public health

debates, investor requirements, e.g. Morgan Stanley Capital International or Dow Jones Sustainability Index, media reports, and sustainability standards and frameworks, such as the Global Reporting Initiative (GRI) and the SDGs. It benchmarked the sustainability practices of multinational peers, while also considering sustainability megatrends. The initial list of topics and definitions can be found on the next page.

STEP 2
A. Stakeholder interviews

We wanted to go deep and wide into conversations with our stakeholders. Our consultancy interviewed 48 people, half external and half internal personnel. The aim was to understand which sustainability topics they found most important, and how they viewed the company's efforts to manage them. Interviewees included executives and

employees from across the company, investors, NGOs, business partners, and other groups considered relevant to our industry and business. Overall, the interviews confirmed the topic list. They also generated further insights into regional differences, as well as into how sustainability should be governed at PMI. As a result of the interviews, the topic of "raw materials and other supplies" was added to the initial topic list.

Process of the PMI sustainability materiality assessment

1 Topics	2 Assessment	3 Sustainability matrix	4 Sustainability strategy	5 Sustainability report
	Stakeholder survey / Stakeholder interviews / Impact assessment	Stakeholder (y-axis) / Impact on sustainable development (x-axis)	> Strategy / > Targets / > Measures / > KPIs	
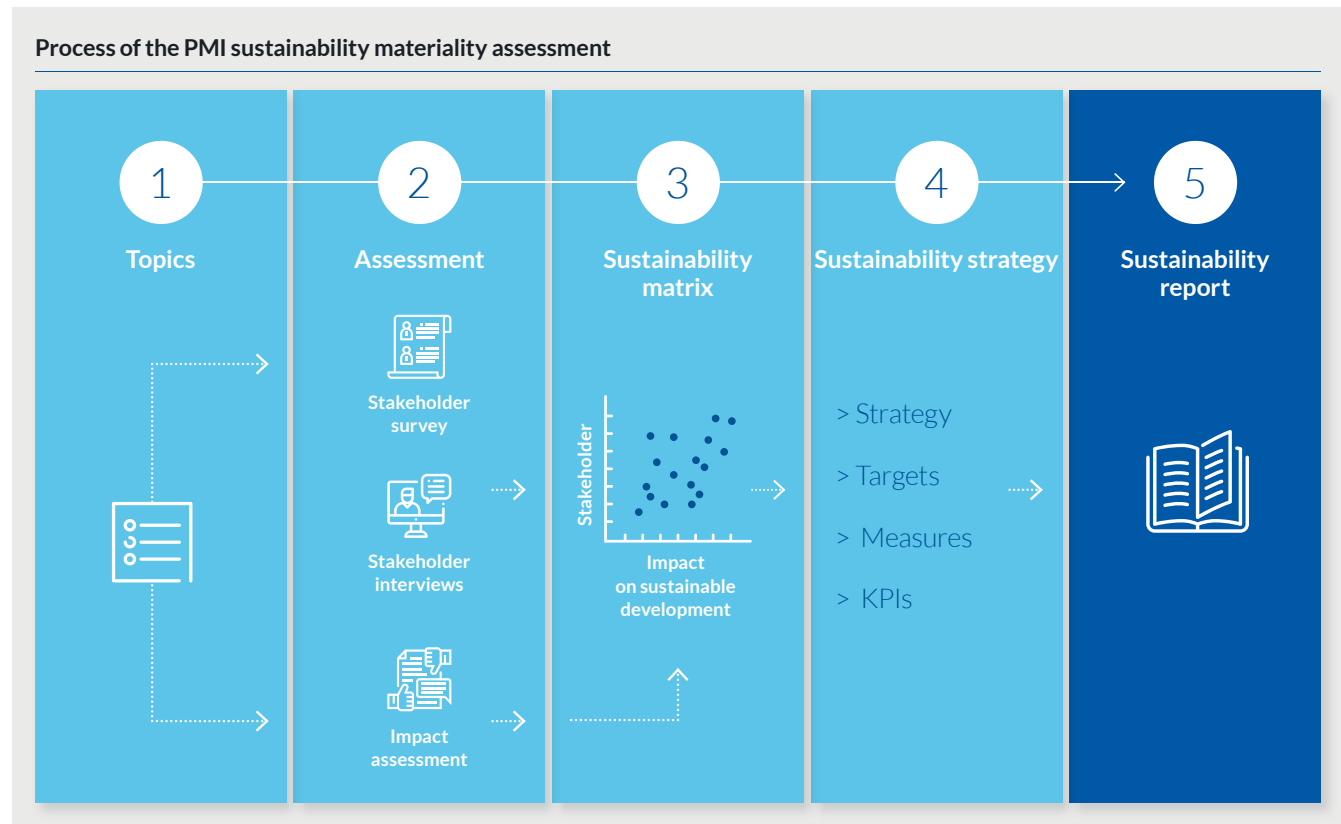
Focusing on what matters continued

STEP 2
B. Online stakeholder survey

To add a layer of analysis and refine the topic prioritization process, we surveyed over 100 stakeholders via an online survey. The majority of the survey respondents were PMI employees, but the in-depth analysis of the results showed that internal views did not differ substantially from external ones. The survey results confirmed the overall pattern of topic importance identified by the qualitative interviews. It further generated a ranking of sustainability topics and offered some insights into what people understand by certain topics.

STEP 2
C. Desktop impact assessment

To understand which relevant topics impact most on sustainable development, and therefore need to be managed with the highest priority, a desktop impact assessment was conducted. Our consultancy evaluated the impact on sustainable development of each relevant topic at the different stages of our simplified value chain (see chart on the right). The likeliness, reversibility, and severity of the impact were also assessed.

STEP 3
Sustainability materiality matrix

Using all the inputs gathered through the process, we generated a sustainability materiality matrix as shown on the next page. From there, we grouped the topics by order of priority into three tiers. In addition, we highlighted emerging topics, which interviewees mentioned will likely become more relevant in the future.

Key:

- ● High impact
- ● Medium impact
- ● Low impact
- ○ Not relevant

	Definition	Simplified PMI value chain		
		Raw materials and other supplies	PMI operations	Consumers
Access to smoke-free products	Availability and pricing of our smoke-free products for adult consumers in both developed and developing countries.	Not relevant	Not relevant	High
Biodiversity, deforestation and land use	Preventing deforestation and protecting biodiversity.	High	Low	High
Bribery, corruption and anti-competitive practices	Preventing bribery and corruption as well as acting competitively in the markets.	High	Low	High
Child labor	Preventing child labor in our supply chain.	High	Low	Not relevant
Community engagement	Engaging with the communities around us along our value chain.	High	Medium	Low
Data privacy	Ensuring privacy of data throughout our value chain (consumers, employees, R&D).	Low	Low	High
Diversity and inclusion	Promoting a diverse and inclusive workforce.	High	High	Not relevant
Economic performance	Economic value created and distributed.	High	High	Not relevant
Emissions and energy	Reducing our emissions and energy consumption, and adapting to climate change.	High	High	High
Fair working conditions	Respecting fair wages, working hours, and the right to collective bargaining.	High	High	Not relevant
Fiscal practices	Engaging in responsible corporate and excise tax practices.	Low	High	High
Forced labor	Preventing forced labor in our supply chain.	High	Low	Not relevant
Health, safety and well-being	Promoting health, safety and well-being within our operations and supply chain.	High	High	Not relevant
Illicit tobacco trade	Preventing the illicit trade of tobacco products.	High	High	High
Other human rights	Respecting human rights (beyond aspects covered by other listed topics such as child labor, forced labor, etc.) and access to a grievance mechanism.	High	Low	High
Policy influence/political accountability	Acting in a fair, honest, and respectful way when advocating PMI's position in political and regulatory debates.	Medium	High	High
Product addictiveness	Product addictiveness irrespective of potential health risks of the product.	Not relevant	Not relevant	High
Product health impacts	Risks to health associated with the usage of our products.	Not relevant	Not relevant	High
Responsible commercialization	Developing, commercializing, marketing, and selling our products responsibly to adult consumers, informing them transparently about the health impact of our products, including product labeling.	Not relevant	Not relevant	High
Responsible R&D	Conducting scientific research, and developing products, while respecting Good Laboratory and Clinical Practices, and animal welfare. Being transparent about our research methodology and results.	High	High	Not relevant
Talent attraction and retention	Attracting new employees and developing, and engaging with our workforce.	High	Medium	Not relevant
Waste and littering	Reducing and recycling waste as well as preventing littering.	High	High	High
Water	Reducing water use and preventing water scarcity, managing water quality and discharge.	High	Low	Not relevant
Youth access and usage prevention	Preventing youth from accessing and using our products.	Not relevant	Not relevant	High

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Matrix validation and sustainability strategy

The various topics were mapped to the four pillars of our sustainability strategy according to their tiering, tier 1 being our most pressing issues to address. The findings of our sustainability assessment and suggested strategic framework were presented to the Sustainability Committees, which validated the matrix and the way forward. It was also decided to allocate the emerging topics to the next highest tier to pay special attention to them during strategy development and monitoring process, as well as to cluster certain topics (e.g. responsible commercialization encompasses youth access prevention).

See our sustainability strategy on page 4.
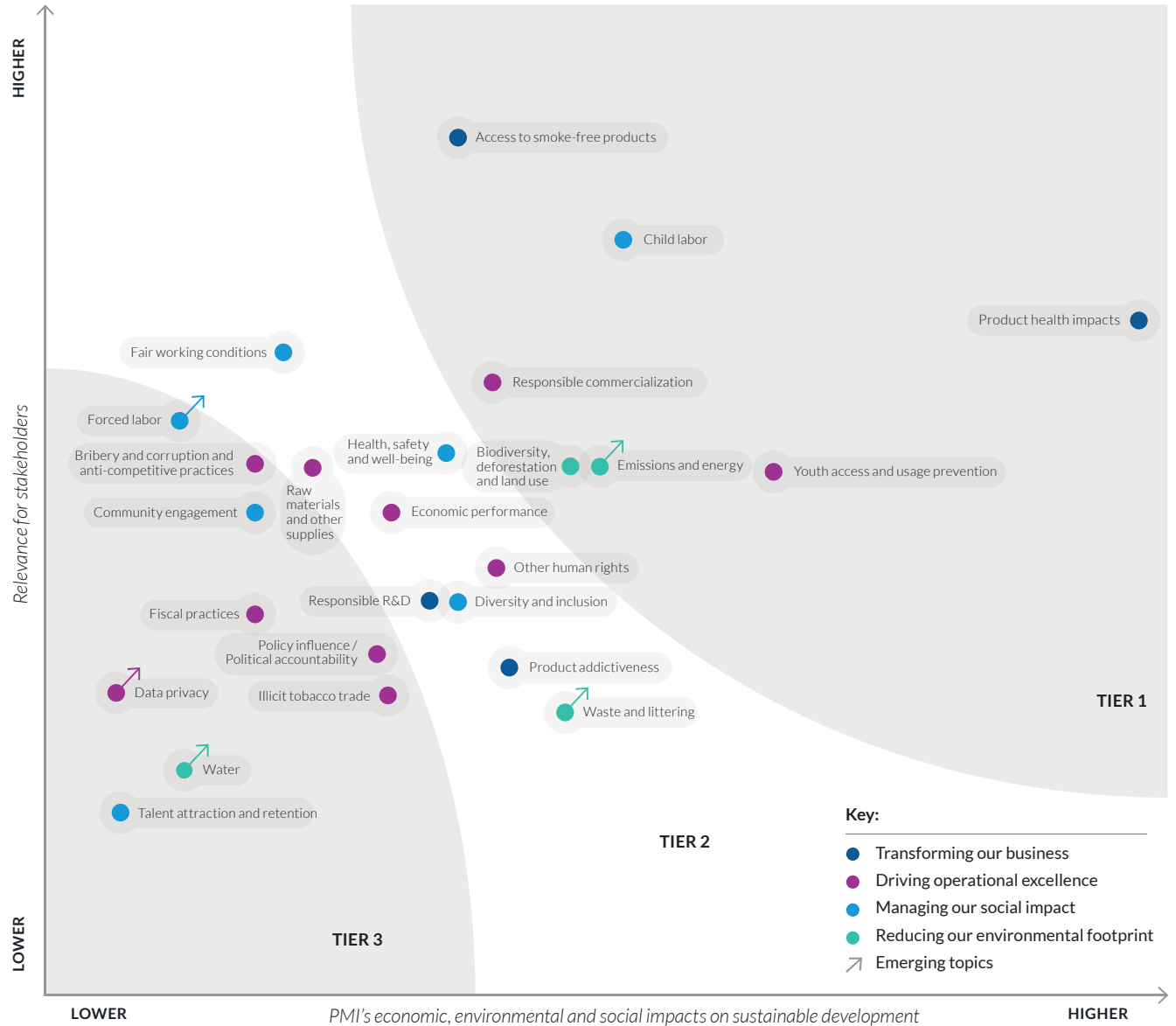
Way forward

In 2019, we will further develop our sustainability strategy, goals and key performance indicators (KPIs) based on the findings of assessment. We will share more in our next sustainability report. To ensure that we continue to address the right issues and report on them effectively, we plan to conduct a comprehensive sustainability materiality analysis regularly, strengthening and adjusting our process at each exercise.

Materiality matrix with axes "Relevance for stakeholders" (LOWER to HIGHER, vertical) and "PMI's economic, environmental and social impacts on sustainable development" (LOWER to HIGHER, horizontal).

Topics plotted: Access to smoke-free products, Child labor, Product health impacts, Fair working conditions, Responsible commercialization, Forced labor, Bribery and corruption and anti-competitive practices, Health, safety and well-being, Biodiversity, deforestation and land use, Emissions and energy, Youth access and usage prevention, Raw materials and other supplies, Economic performance, Community engagement, Other human rights, Responsible R&D, Diversity and inclusion, Fiscal practices, Policy influence / Political accountability, Product addictiveness, Illicit tobacco trade, Data privacy, Waste and littering, Water, Talent attraction and retention.

TIER 1, TIER 2, TIER 3

Key:
- Transforming our business
- Driving operational excellence
- Managing our social impact
- Reducing our environmental footprint
- Emerging topics

Sustainability governance and management

Clear governance and management structures enable us to deliver on our commitments to sustainability. We strengthened those across our organization in 2018.

Board of Directors PMI's Board of Directors believes that environmental, social, and governance factors are critical to PMI's long-term success. In 2018, the Nominating and Corporate Governance Committee was formally given the mandate to oversee the sustainability strategies and performance of the company. The Committee is updated on progress by the Chief Sustainability Officer, and advises the Board on sustainability matters.

Senior Management Team (SMT) Our SMT, the company's management, regularly reviews sustainability matters, strategy, key programs, and budget. Certain members of the SMT are part of our Sustainability Committees, which oversee and validate the company's sustainability work.

Chief Sustainability Officer The Chief Sustainability Officer reports to the President External Affairs and General Counsel, a member of the SMT. Heading the Sustainability Team, the Chief Sustainability Officer leads the integration of sustainability into our business. He also coordinates the Sustainability Committees, composed of senior leaders from various functions (including Operations, People & Culture, External Affairs, Commercial, Science & Innovation, Global Communications, Finance, Investor Relations, and Corporate Audit).

An increasing number of employees within the company work on sustainability on a daily basis. Some functions have dedicated teams addressing sustainability in their area of expertise. All our affiliates have appointed a local sustainability coordinator. This helps ensure that our global strategies and programs can be implemented at the market level, and that local realities are also reflected in our global efforts. To further ensure that our sustainability work is embedded at all levels and across all geographies of the organization, the Sustainability Team acts as a catalyst. Most of the coordination takes place in the context of sustainability working groups and with local market coordinators.

Managing our most relevant topics

Our approach to managing our sustainability material topics is harmonized across areas. At the foundation of our work lies our Guidebook for Success, underpinned by our policies that cover specific topics or areas of work and define responsibilities and accountability.

To meet our objectives, we seek to allocate resources appropriately, set targets and KPIs to measure our progress, and evaluate our efforts.

We support the precautionary approach in our research and development work: scientific assessment across all our platforms follows the same approach. We welcome independent research on our smoke-free products, and a growing number of peer reviews are completed every year, which we transparently publish on the PMI Science website.

Such an approach is equally important to our environmental efforts: we seek to minimize our impact on the environment as well as to understand and adapt to potential future business impacts of major environmental trends.

Our risk management approach is described on page 45.

Next steps

In this fourth Sustainability Report, we have attempted to provide a structured overview of our company's work by focusing on the topics highlighted as most relevant to our business by both external and internal stakeholders. This report reflects the hard work and commitment of all our employees globally. We are on track to achieve our sustainability ambition and are well positioned to address the challenges ahead.

Starting in 2019, we aim to:

- Develop a comprehensive 2025 sustainability strategy, based on the results of our sustainability materiality assessment, setting a holistic and ambitious set of targets;
- Continue to embed sustainability at market level;
- Carry out a second human rights impact assessment and replicate our learning across the company;
- Conduct an internal assessment of our marketing practices and issue a public report with a specific focus on youth smoking and nicotine usage prevention;
- Further develop our supply chain due diligence framework;
- Refine our approach to charitable contributions;
- Further implement our Environmental Commitment by intensifying our use of renewable energies;
- Develop and implement impactful anti-littering campaigns across the world;
- Formalize our commitment to forest conservation and work with our supply chain partners to further combat deforestation;
- Continue to embed good water stewardship in our operations and the AWS certification of our factories; and
- Further include *IQOS* devices into the "circular economy."

We welcome your feedback on this report and look forward to sharing our progress in our next report.

Above: Tobacco seedlings in Brazil

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Our performance

PILLAR 1:
Transforming our business

Business transformation metrics[1]	2015	2016	2017	2018	Aspiration[2]
R&D expenditure (smoke-free/total)*	70%	72%	74%	**92%**	
Patents granted relating to smoke-free products (cumulative)	600	1,800	2,900	**4,600**	
Number of factories producing smoke-free products out of total number of factories	2 out of 48	2 out of 48	3 out of 46	**7 out of 44**	
Number of markets where *IQOS* is available	6	20	38	**44**	
Commercial expenditure (smoke-free/total)*	8%	15%	39%	**60%**	
Net revenues[3] (smoke-free/total)*	0.2%	2.7%	12.7%	**13.8%**	38–42% by 2025
Number of markets where net revenues from smoke-free products exceed 10% of total net revenues	0	1	5	**19**	
Number of markets where net revenues from smoke-free products exceed 50% of total net revenues	0	0	1	**3**	
Smoke-free product[4] shipment volume (billion units)*	0.8	7.7	36	**42**	90–100 by 2021[5] >250 by 2025
Combustible product[6] shipment volume (billion units)*	881	845	791	**767**	<550 by 2025
Smoke-free product shipment ratio[7] (smoke-free/total)*	0.1%	0.9%	4.4%	**5.1%**	>30% by 2025
Total *IQOS* users (in millions)[8]	0.2	2.1	6.9	**9.6**	
Estimated users that have stopped smoking and switched to *IQOS* (in millions)[9]	n/a	1.5	4.7	**6.6**	>40 by 2025

1 The 2018 metrics marked with a star (*) are subject to PwC's Assurance Report. See page 129.
2 Assuming constant PMI market share. We do not set aspirational targets for R&D and commercial expenditure but we expect both ratios to continue increasing to enable the stated outcome in terms of shipment volume.
3 Excluding excise taxes. For future periods, at today's pricing and excise tax assumptions.
4 Includes heated tobacco units and e-cigarettes.
5 The 90–100 billion units' shipment volume is a target and pertains exclusively to heated tobacco units.
6 Includes cigarettes and other combustible products.
7 The smoke-free product shipment ratio is compiled based on million of units.
8 See glossary on page 130.
9 See glossary on page 130. Metric introduced in 2018.

PILLAR 2:
Driving operational excellence

Maintaining a strong ethics and compliance culture	2016	2017	2018
Proportion of employees participating in training sessions pertaining to our Guidebook for Success (%)	83	93.5	**86.9**
Total number of compliance training[1]	238,351	189,696	**193,063**
Total number of compliance training on marketing	44,948	37,903	**23,438**
Proportion of employees who received compliance training versus third parties (%)	76	75	**82**
Proportion of third parties who received compliance training versus employees (%)	24	25	**18**
Number of reports of suspected misconduct	792	714	**872**
Number of substantiated claims	292	317	**338**

Sourcing raw materials and other supplies responsibly (excluding tobacco supply chain)	2016	2017	2018
Total number of suppliers	50,000	50,000	**>36,000**
Number of languages in which PMI's Responsible Sourcing Principles are available (in addition to English)	n/a	13	**26**

Sourcing raw materials and other supplies responsibly (tobacco supply chain)	2016	2017	2018	Goal
Proportion of tobacco purchased assessed by AB Sustain (%)	22	33	**43**	100% over 3 years (2016–2018)
Proportion of tobacco purchased for which labor practices have been systematically monitored (%)	72	77	**88**	100% by 2019
Cumulative number of tobacco supplier locations (countries) assessed by Control Union since 2013 (ALP topics)	15	19	**21**	24 by 2020
Proportion of tobacco purchased through direct contracts (by PMI and tobacco suppliers) (%)	88	90	**93**	>90

1 2016 and 2017 training numbers have been updated to include live training that was conducted during these years but reported late, after the publication of our 2017 report.

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Our performance continued

PILLAR 2:
Driving operational excellence

Tackling the illicit tobacco trade	2016	2017	2018	2019 goals
Coverage for tracking and tracing – master case level (in %)[1]	100	100	**100**	100
Tracking and tracing – percentage of packs sold with unique code applied (in %)[2]	67	75	**85**	100
Additional Memoranda of Understanding with law enforcement agencies/governments signed in a given year – number of countries[3]	5	10	**5**	5
Regional studies and country analysis to improve awareness of illicit trade – % of global cigarette consumption covered	25	25	**27**	35
Number of law enforcement officers trained on how to authenticate PMI products	2,176	717	**500**	500
Number of countries with law enforcement agencies trained on how to authenticate PMI products	14	15	**10**	10
Number of PMI IMPACT projects selected per funding round	n/a	32	**31**	90 by 2021
Number of countries from which PMI IMPACT projects were selected per funding round	n/a	18	**23**	60 by 2021
Number of applications (project proposals) received by PMI IMPACT per funding round	234	157	**n/a**	540 by 2021
Number of countries from which applications were received by PMI IMPACT per funding round	42	56	**n/a**	140 by 2021
PMI IMPACT grants allocated in USD million[4]	n/a	28	**21**	100

1   Full coverage equates to 95% tracking and tracing in our supply chain (excluding Kretek business). There are 5% of master cases not covered – these are destined to countries which are not identified as a source of potential diversion or where PMI sells to a single customer in the country.

2   Excludes Kretek business.

3   2016 data includes SELEC, representing 11 countries.

4   PMI pledged USD 100 millions as PMI IMPACT program goal.

PILLAR 3:

Managing our social impact

Eliminating child labor and improving labor conditions on tobacco farms	2016	2017	2018
Number of farmers contracted by PMI and PMI tobacco suppliers	380,000	>350,000	>350,000
Number of countries where farmers contracted by PMI and PMI tobacco suppliers are located	26	28	27
Number of farmers with whom PMI has direct contracts	26,000	23,000	21,000
Number of farmers who have direct contracts with PMI tobacco suppliers	354,000	332,000	>329,000
Number of third party tobacco suppliers with whom PMI has direct contractual relationship	>20	>20	23
Number of field technicians providing support to contracted tobacco farmers for GAP implementation	2,800	2,790	2,610
Total number of terminated contracts due to ALP violations (per crop season)	n/a	36	50
Total number of ALP prompt actions recorded by field technicians	n/a	12,749	18,543
Total number of ALP prompt actions resolved	n/a	10,154	13,687

Supporting fair working conditions	2016	2017	2018
Approximate total number of employees	79,500	80,600	77,400
Employee overall turnover rate (%)[1]	9.29	9.37	11.51
Employee voluntary turnover rate (%)[1]	3.45	3.96	4.12
Proportion of employees covered by Collective Labor Agreements (%)	68	67	65
Total number of Collective Labor Agreements	79	80	81
Total number of countries with Collective Labor Agreements	35	35	35

1 2016 and 2017 turnover rates have been restated to include 100% of our employees.

Our performance continued

PILLAR 3:
Managing our social impact

Promoting health, safety, and well-being	2016	2017	2018	Goal
Lost Time Incident (LTI) rate per 200,000 hours worked – PMI and contracted employees	0.12	0.10	**0.13**	<0.10 (ongoing)
Total Recordable Incidents Rate (TRIR) per 200,000 hours worked – PMI and contracted employees	0.27	0.22	**0.22**	0.30
Number of fatalities – PMI and contracted employees	1	2	**2**	0
Number of fatalities – contractors	1	1	**1**	0
Number of fatalities – members of the public	2	9	**3**	0
Collision rate within PMI's fleet of vehicles per year (collisions per million km driven)	1.22	1.01	**0.91**	<1.50
Percentage of manufacturing facilities with OHSAS 18001 certification	93	91	**97**	100
Occupational Illness Frequency Rate (OIFR) per 200,000 hours worked – PMI and contracted employees	0.0040	0.0027	**0.0013**	
Number of markets with health and well-being committees	n/a	36	**>40**	

Furthering diversity and inclusion	2016	2017	2018	Goal
Proportion of women employees (%)	41.2	41.6	**42.1**	
Proportion of management positions held by women (%)	32.8	34.4	**35.2**	40% by 2022
Proportion of new hires in management positions that are women (%)	43.1	43.0	**40.4**	
Proportion of new hires at more junior levels that are women (%)	48.1	46.5	**47.1**	
Proportion of promotion at management positions that are women (%)	35.4	38.3	**38.3**	
Number of women in company management (management board)	1 (out of 17)	2 (out of 20)	**2 (out of 21)**	
Proportion of women in company management (management board) (%)	6	10	**10**	
Number of women in Board of Directors	2 (out of 13)	2 (out of 13)	**3 (out of 12)**	
Proportion of women in Board of Directors (%)	15	15	**25**	

PILLAR 3:
Managing our social impact

Engaging with our communities	2016	2017	2018
Proportion of charitable contributions out of total philanthropic spend (%)	100	100	**100**
Value of cash contributions ('000 USD)	29,920	29,562	**28,278**
Value of in-kind giving, estimated ('000 USD)	n/a	175	**260**
Value of time spent on employee volunteering, estimated ('000 USD)[1]	n/a	n/a	**500**
Total number of volunteering hours[1]	n/a	n/a	**17,941**

1 Data was initially collected in 2018 and does not cover all our operations.

Our performance continued

PILLAR 4:
Reducing our
environmental footprint

Reducing our emissions and energy usage	2010 baseline	2016	2017	2018	Goal	Scope
CO_2e scope 1 (metric tons)	443,186	351,990	388,384	**408,162**		PMI factories, offices, and fleet
CO_2e scope 2 (metric tons)	470,864	314,049	241,355	**175,785**		PMI factories and offices
CO_2e scope 1+2 (metric tons)	914,050	666,039	629,739	**583,947**		PMI factories, offices, and fleet
CO_2e scope 1 from fleet (metric tons)	143,148	122,434	119,588	**114,936**		PMI fleet and aircraft
CO_2e emissions from vehicles (g CO_2e per km driven)	296	227	226	**221**		PMI fleet
CO_2e scope 3 ('000 metric tons)[1]	7,435	5,649	5,137	**4,920**		PMI operations and value chain
CO_2e scope 1+2+3 ('000 metric tons)[1]	8,349	6,315	5,767	**5,504**		PMI value chain
CO_2e scope 1+2+3 per million cigarettes equivalent (kg)[1,2]	8,942	7,394	6,932	**6,749**		PMI value chain
CO_2e scope 1+2 absolute reduction versus 2010 baseline (%)		27	31	**36**	30 by 2020 40 by 2030 60 by 2040	PMI factories, offices, and fleet
CO_2e scope 1+2+3 absolute reduction versus 2010 baseline (%)[1]		24	31	**34**	40 by 2030	PMI value chain
CO_2e scope 1+2+3 intensity reduction versus 2010 baseline (%)[1,2]		17	22	**25**	30 by 2020	PMI value chain
Total energy consumed (gigajoules)	8,025,559	8,307,941	8,896,274	**9,088,301**		PMI factories, offices and fleet
Energy intensity (megajoules/million cig. sold)[2]	8.60	9.73	10.69	**11.15**		PMI factories, offices and fleet
Total electricity consumed (MWh)		922,269	903,253	**919,226**		PMI factories, offices and fleet
Total electricity consumed that is from renewable sources (MWh)		267,806	442,739	**544,845**		PMI factories, offices and fleet
Proportion of electricity used and purchased that is from renewable sources (%)		29	49	**59**		PMI factories, offices and fleet
Proportion of electricity used and purchased that is from renewable sources (%)	0	32	53	**65**	100 by 2030	PMI factories
CDP Climate Change rating	n/a	A	A	**A**	A	

1 In 2018, we reviewed our carbon footprint model, taking into account more primary data from suppliers and updating our methodology, leading to a more accurate figures for our scope 3 emissions. We have restated our baseline and our 2016 and 2017 data according to the new model. Other figures that include scope 3 emissions in their calculations have also been restated.

2 Intensity is measured in CO_2e per million sold cigarettes equivalent. From 2018 onwards we are reporting energy intensity based on sold units of cigarettes (versus produced units of cigarettes previously). Previous years' data have been restated accordingly.

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PILLAR 4:
Reducing our environmental footprint

Conserving biodiversity and combating deforestation	2016	2017	2018	Goal
Proportion of tobacco purchased without detection of residues attributable to the use of WHO TOX1 group of crop protection agents (%)[1]	98	99	n/a	100% by crop year 2018
Proportion of tobacco purchased without detection of residues attributable to the use of highly hazardous pesticides (HHPs), as defined by FAO and WHO guidelines in 2016 (%)[1]	84	88	n/a	100% by crop year 2020
CO_2 intensity reduction in tobacco curing versus 2010 baseline (%)[2]	17	38	47	60% by 2019 70% by 2020
Proportion of tobacco purchased at no risk of deforestation of old growth forests (%)[3]	88	94	90	98% by 2019 100% by 2020
Proportion of flue-cured tobacco purchased cured with renewable fuel sources (self-sufficient firewood and biomass adoption) (%)[2]	32 (27+5)	36 (29+7)	46 (33+13)	55% by 2019 70% by 2020
Proportion of Virginia tobacco purchased cured with coal (%)[2]	17	20	15	10 by 2019 0 by 2020
Approximate cumulative total number of curing barns upgraded since 2014[4]	31,000	57,000	76,000	78,600 by 2019 80,000 by 2020
Cumulative number of Local Water Risk Assessments performed	n/a	n/a	8	15 by 2019 22 by 2020
CDP Forest rating	n/a	n/a	B	A

1 The 2018 crop season data were not available at the time of the publication of this report.

2 Previous years' data have been restated based on final crop actual figures.

3 The category "Old growth forests" includes both primary (untouched) forests and secondary high conservation value forests. Old growth forests are living, functional ecosystems which need protection. The negative trend in Tanzania is due to an unplanned additional volume intake to support our Leaf suppliers in a year of complex market dynamics. We were conscious about that and we collaborate with our suppliers to minimize risks associated with deforestation of old growth forests in the tobacco growing areas of Tanzania (effort in reforestation activities and curing barn efficiency to reduce firewood consumption via curing barn improvement program). Despite the slowdown in our progress, we are confident to achieve the 2020 target set of 100% of tobacco with no deforestation risk of old growth forests.

4 In 2018, we show an increase in the figures related to total number of curing barn and total number of curing barn upgraded, also reflected in the 2020 target. This is due to an expansion of the tobacco farmers' base in the Philippines and related increase in the number of contracted farmers, and consequently of their total curing barns. Excluding China.

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Our performance continued

PILLAR 4:
Reducing our
environmental footprint

Minimizing waste and littering [1]	2010 baseline	2016	2017	2018	Goal
Total amount of waste generated (metric tons)	143,596	130,077	140,316	**134,367**	
Proportion of total waste generated that is recycled (%)	79	87	81	**84**	85
Proportion of total waste generated that is incinerated with energy recovery (%)	9	8	12	**12**	
Proportion of total waste generated that is disposed to landfill (%)		4	6	**4**	
Proportion of total waste generated that is incinerated without energy recovery (%)		<1	<1	**<1**	
Amount of hazardous waste generated (metric tons)		1,275	1,357	**1,423**	
Proportion of hazardous waste generated that is recycled (%)		48	37	**41**	
Proportion of hazardous waste generated that is incinerated with energy recovery (%)		30	44	**44**	
Proportion of hazardous waste generated that is disposed to landfill (%)		6	9	**6**	
Proportion of hazardous waste generated that is incinerated without energy recovery (%)		16	10	**9**	

1   The scope of waste data covers factory waste, but excludes marketing and project waste.

PILLAR 4:
Reducing our environmental footprint

Managing water	2010 baseline	2016	2017	2018	Goal	Scope
Total amount of water withdrawn ('000 m^3)	4,998	3,394	4,152	**4,371**		PMI factories
Total amount of water consumed (withdrawn minus discharged) ('000 m^3)	2,449	1,498	1,672	**1,958**		PMI factories
Water ratio (water withdrawn in m^3 per million units of cigarettes sold)[1]	5.35	3.97	4.99	**5.36**		PMI factories
CDP Water rating		B	A	**B**	A	

Other environmental metrics	2016	2017	2018	Goal	Scope
Manufacturing facilities certified to ISO 14001 (%)	93	91	**100**	100	PMI factories
CDP Supplier Engagement rating	A-	A	**A**	A	

1 From 2018 onwards we are reporting water ratio based on sold units of cigarettes (versus produced units of cigarettes previously).

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Forward-looking and cautionary statements

This report contains projections of future results and other forward-looking statements. Achievement of future results is subject to risks, uncertainties and inaccurate assumptions.

In the event that risks or uncertainties materialize, or underlying assumptions prove inaccurate, actual results could vary materially from those contained in such forward-looking statements.

Pursuant to the "safe harbor" provisions of the Private Securities Litigation Reform Act of 1995, PMI is identifying important factors that, individually or in the aggregate, could cause actual results and outcomes to differ materially from those contained in any forward-looking statements made by PMI.

PMI's business risks include: excise tax increases and discriminatory tax structures; increasing marketing and regulatory restrictions that could reduce our competitiveness, eliminate our ability to communicate with adult consumers, or ban certain of our products; health concerns relating to the use of tobacco products and exposure to environmental tobacco smoke; litigation related to tobacco use; intense competition; the effects of global and individual country economic, regulatory, and political developments, natural disasters and conflicts; changes in adult smoker behavior; lost revenues as a result of counterfeiting, contraband, and cross-border purchases; governmental investigations; unfavorable currency exchange rates and currency devaluations, and limitations on the ability to repatriate funds; adverse changes in applicable corporate tax laws; adverse changes in the cost and quality of tobacco and other agricultural products and raw materials; and the integrity of its information systems and effectiveness of its data privacy policies.

PMI's future profitability may also be adversely affected: should it be unsuccessful in its attempts to produce and commercialize reduced-risk products or if regulation or taxation do not differentiate between such products and cigarettes; if it is unable to successfully introduce new products, promote brand equity, enter new markets or improve its margins through increased prices and productivity gains; if it is unable to expand its brand portfolio internally or through acquisitions and the development of strategic business relationships; or if it is unable to attract and retain the best global talent. Future results are also subject to the lower predictability of our reduced-risk product category's performance.

PMI is further subject to other risks detailed from time to time in its publicly filed documents, including the Form 10-Q for the quarter ended March 31, 2019. Aspirational targets do not constitute financial projections. PMI cautions that the foregoing list of important factors is not a complete discussion of all potential risks and uncertainties. PMI does not undertake to update any forward-looking statement that it may make from time to time, except in the normal course of its public disclosure obligations.

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Independent Assurance Report on the Business Transformation Metrics Reporting 2018

To the Board of Directors of Philip Morris International Inc. Lausanne

We have been engaged to perform assurance procedures to provide reasonable assurance on the Business Transformation Metrics reporting of Philip Morris International Inc. and Subsidiaries ('PMI').

Scope and subject matter

Our reasonable assurance engagement focused on selected Business Transformation Metrics of PMI for the financial year ended December 31, 2018 included in the Sustainability Report 2018:

a. The following Business Transformation Metrics, in all material aspects, as disclosed on page 118.
- R&D expenditure (smoke-free/total)
- Commercial expenditure (smoke-free/total)
- Net revenues (smoke-free/total)
- Smoke-free product shipment volume (billion units)
- Combustible product shipment volume (billion units)
- Smoke-free product shipment ratio (smoke-free/total)

b. The application of the internal financial reporting guidelines for the preparation of the Business Transformation Metrics published on pages 28 and 36; and

c. The internal reporting system and procedures to collect and aggregate the Business Transformation Metrics data

The prospective data in the Aspiration column is not subject to this assurance report. Consequently, we do not express any conclusion on this data.

Criteria

The reporting criteria used by PMI are described and disclosed on pages 28 and 36 and in the internal financial reporting guidelines. These define those procedures, by which the Business Transformation Metrics data are internally gathered, collated and aggregated.

PMI's Management Responsibilities

PMI's management is responsible for the preparation of the Business Transformation Metrics in accordance with the reporting criteria. This responsibility includes the design, implementation and maintenance of related internal control relevant to the preparation of the Business Transformation Metrics as defined in PMI's internal control framework for financial reporting so that they are free from material misstatement, whether due to fraud or error. Because of its inherent limitations, internal control over reporting may not prevent or detect misstatements.

Our Responsibility

Our responsibility is to perform a reasonable assurance engagement to express a conclusion on selected Business Transformation Metrics on page 118. We planned and conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE 3000) (Revised) 'Assurance engagements other than audits or reviews of historical financial information'. That standard requires that we comply with ethical requirements and plan and perform our procedures to obtain reasonable or limited assurance whether the selected Business Transformation Metrics was prepared, in all material aspects, in accordance with the reporting criteria.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Our firm applies International Standard on Quality Control and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Summary of work performed

Our assurance procedures included the following work but are not limited to:
- Reviewing the application of the internal financial reporting guidelines
- Interviewing PMI representatives responsible for the internal reporting and data collection
- Test a sample of data from PMI operations in Switzerland, Japan, South Korea and Germany concerning the completeness, accuracy, consistency and classification as Smoke-Free Products
- Inspecting relevant documentation on a sample basis, including PMI policies, management reporting structures and documentation
- Reviewing and assessing the management reporting processes for Business Transformation Metrics data and consolidation and their related controls

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our assurance conclusions.

Reasonable assurance conclusion

In our opinion,

a. The selected Business Transformation Metrics as outlined in the scope and subject matter paragraph and disclosed on page 118 give a fair picture of PMI's Smoke-Free Product performance;

b. The internal financial reporting guidelines are applied in all material aspects as published on pages 28 and 36; and

c. The internal reporting systems to collect and aggregate the Business Transformation Metrics data are functioning as designed and provide an appropriate basis for the reporting.

Lausanne, May 3, 2019

PricewaterhouseCoopers SA

Richard Thomas   **Raphael Rutishauser**

Glossary and acronyms

Aerosol – Gaseous suspension of fine solid particles and/or liquid droplets

ALP – Agricultural Labor Practices

AWS – Alliance for Water Stewardship

CDP – Carbon Disclosure Project

CHTP – Carbon-Heated Tobacco Product

CLAs – Collective Labor Agreements

Combustible products – The term PMI uses to refer to cigarettes and OTP, combined

Combustion – The process of burning a substance in oxygen, producing heat and often light

Converted *IQOS* Users – The estimated number of legal age (minimum 18 years) *IQOS* users that used PMI HTUs for over 95% of their daily tobacco consumption over the past seven days

CPA – Crop protective agent

EHTS – Electrically Heated Tobacco System

E-liquids – Refers to a liquid solution that is used in/with e-cigarettes. E-liquids contain different levels of nicotine in a propylene glycol and/or vegetable glycerin-based solution with various flavors

EPR – Extended Producer Responsibility

Estimated users who have stopped smoking and switched to *IQOS* – For markets where *IQOS* is the only heated tobacco product, this is defined as the daily individual consumption of PMI HTUs representing the totality of their daily tobacco consumption in the past seven days. For markets where *IQOS* is one among other heated tobacco products, this is the daily individual consumption of HTUs representing the totality of their daily tobacco consumption in the past seven days, of which at least 70% are PMI HTUs

EVA – Economic value added

E-vapor product – Electrical product that generates an aerosol by heating a nicotine or non-nicotine containing liquid, such as electronic cigarettes (or "e-cigarettes")

FAO – Food and Agriculture Organization of the United Nations

FCTC – Framework Convention on Tobacco Control

FDA – U.S. Food and Drug Administration

FTs – Field technicians monitoring the implementation of PMI's Good Agricultural Practices and Agricultural Labor Practices programs

GAP – Good Agricultural Practices

GDPR – General Data Protection Regulation

GHG – Greenhouse gas

GPP – Global Privacy Program

GTS – Green tobacco sickness

HCV – High conservation value

Heated tobacco product or HTP – A manufactured tobacco product that delivers a nicotine-containing vapor (aerosol), without combustion of the tobacco mixture

Heated tobacco units or HTUs – The term PMI uses to refer to heated tobacco consumables, which for PMI include the company's *HEETS*, *HEETS Marlboro* and *HEETS FROM MARLBORO*, defined collectively as *HEETS*, as well as *Marlboro HeatSticks* and *Parliament HeatSticks*

HHPs – Highly hazardous pesticides

HPHCs – The harmful or potentially harmful constituents that have been identified as likely causes of tobacco-related diseases

Illicit trade – Refers to products that have not paid domestic tax, other than non-domestic products that are brought into the country legally by consumers

IPM – Integrated Pest Management

IPS – Integrated Production System

IQOS MESH – The brand name that PMI has chosen for one of its Platform 4 reduced-risk product that leverages new proprietary vaporization technology. *IQOS MESH* is a closed-tank system, to be used exclusively with VEEV flavor caps

KPIs – Key performance indicators

LMICs – Low and middle income countries

LTI – Lost Time Injury

MRTP – Modified Risk Tobacco Product, the term used by the U.S. FDA to refer to RRPs

MRTPA – Modified Risk Tobacco Product Application under section 911 of the Federal Food, Drug, and Cosmetic Act

NGOs – Non-governmental organizations

OECD – Organisation for Economic Co-operation and Development

P&C – People and Culture

PCSD – Policy Coherence for Sustainable Development

PMI – Philip Morris International Inc. and its subsidiaries

PMI Regions – Effective January 1, 2018, PMI began managing its business in six reporting segments as follows: the European Union Region (EU); the Eastern Europe Region (EE); the Middle East & Africa Region (ME&A), which includes PMI Duty Free; the South & Southeast Asia Region (S&SA); the East Asia & Australia Region (EA&A); and the Latin America & Canada Region (LA&C)

PPE – Personal protective equipment

Predominant *IQOS* Users – The estimated number of legal age (minimum 18 years) *IQOS* users that used PMI HTUs units for between 70% and 95% of their daily tobacco consumption over the past seven days

Reduced-risk products (RRPs) or smoke-free products – Products that present, are likely to present, or have the potential to present less risk of harm to smokers who switch to these products versus continued smoking. PMI has a range of RRPs in various stages of development, scientific assessment and commercialization. PMI's RRPs do not burn tobacco; they produce an aerosol that contains far lower quantities of harmful and potentially harmful constituents than found in cigarette smoke

R&D – Research and development

RSP – Responsible Sourcing Principles

SDGs – Sustainable Development Goals

Smoke – A visible suspension of solid particles, liquid droplets, and gases in air, emitted when a material burns

STP – Sustainable Tobacco Program

SUP – Single-use plastics

THS – Tobacco Heating System

Tons – "Tons" equates to "metric tons" throughout this report

Total *IQOS* users – The estimated number of legal age (minimum 18 years) *IQOS* users that used PMI HTUs for at least 5% of their daily tobacco consumption over the past seven days

Total shipment volume – The combined total of cigarette shipment volume and HTU shipment volume

TPSAC – Tobacco Products Scientific Advisory Committee

UNGPs – United Nations Guiding Principles on Business and Human Rights

WASH – Water, sanitation, and hygiene

WHO – World Health Organization

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Endnotes

1. Data are as of December 31, 2018. The scope of the data in this report covers all our operations, unless stated otherwise, for the full calendar year 2018.

2. Source: Tobacco and Nicotine Database (data as of September 2018 and includes China and the U.S.) or PMI Financials or estimates, as of end 2018; or WHO https://www.who.int/fctc/protocol/anniv_protocol/en/

3. Data as of December 31, 2018.

4. S&P Dow Jones classification. Source: PMI Financials or estimates and Dow Jones Global Total stock Market Index.

5. See PMI Science, https://www.pmiscience.com/news/absence-combustion-pmi%E2%80%99s-heated-tobacco-product-platform-1

6. Average reductions in levels of a broad range of harmful chemicals (excluding nicotine) compared with the smoke of a reference cigarette (3R4F).

7. The products depicted are subject to ongoing development, and therefore the visuals are illustrative and do not necessarily represent the latest stages of product development.

8. Platform 1 – Electrically Heated Tobacco System (EHTS) is referred to as Tobacco Heating System (THS) in research.

9. Platform 2 – Carbon-Heated Tobacco Product (CHTP).

10. https://www.pmiscience.com/discover/news/pmi-assessment-of-the-kfda-statement

11. Osaki Y, et al. "Field survey on drinking and smoking and the development of effective alcohol reduction intervention approaches for the prevention of lifestyle-related diseases." Annual Report of MHLW Research Committee, May 2018. Available at: https://mhlw-grants.niph.go.jp/niph/search/NIDD00.do?resrchNum=201709021A

12. Health Behaviour in School-aged Children (HSBC): La consommation de substances psychoactives des 11 à 15 ans en Suisse – Situation en 2018 et évolutions depuis 1986.

13. Assuming current retail selling price and excise tax levels. Includes devices and consumables (source: PMI Financials or estimates).

14. https://www.pmi.com/media-center/news/public-supports-alternatives-to-cigarettes

15. https://www.parliament.uk/business/committees/committees-a-z/commons-select/science-and-technology-committee/

16. As of December 31, 2018.

17. Assuming constant PMI market share. We do not set aspirational targets for R&D and commercial expenditure but we expect both ratios to continue increasing to enable the stated outcome in terms of shipment volume.

18. Excluding excise taxes. For future periods, at today's pricing and excise tax assumptions.

19. Includes heated tobacco units and e-cigarettes.

20. The 90–100 billion units is a target and pertains exclusively for heated tobacco units.

21. Includes cigarettes and other combustible products.

22. The smoke-free product shipment ratio is computed based on millions of units.

23. See glossary on page 130.

24. See glossary on page 130. Metric introduced in 2018.

25. https://www.fda.gov/NewsEvents/Speeches/ucm569024.htm

26. https://www.pmi.com/resources/docs/default-source/our_company/product-assessment_v2.pdf?sfvrsn=164e8bb5_2

27. https://www.pmiscience.com/library/publication/pathway-based-predictive-approaches-for-non-animal-assessment-of-acute-inhalation-toxicity

28. We refer to conflict minerals in accordance with U.S. legislation and Securities and Exchange Commission rules; the definition of responsible sourcing of such minerals is set out in the Responsible Sourcing Initiative which is used to determine whether smelters are conformant.

29. The WHO estimates that the global illicit trade amounts to approximately 10% of global consumption. Source: https://www.who.int/fctc/protocol/anniv_protocol/en/

30. https://www.stopillegal.com/the_problem/consequences-of-illicit-trade

31. Targets pertain farmers and workers contracted by PMI or by PMI suppliers under the Agricultural Labor Practices (ALP) Code.

32. The numbers provided in this section are approximate numbers, considering the limitations faced during the data collection, the large data scope, and the diversity of markets assessed. The scope of our ALP data excludes China, France, Hungary, Switzerland, and one of our suppliers in Tanzania.

33. According to the International Labour Organization (ILO), Global Estimates of Child Labor: Results and Trends, 2012–2016, https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/documents/publication/wcms_575499.pdf

34. At 40% representation, people stop feeling like they are in the minority. This target is supported by a supplemental target to hire talented men and women at a ratio of 1:1 at entry levels.

35. The certification is conducted against standards set up by the non-profit EQUAL-SALARY Foundation (www.equalsalary.org). The audit is conducted by PwC.

36. The Greenhouse Gas (GHG) Protocol Corporate Standard 2015 introduces the "market-based method" which allows companies to show how different types of electricity purchases, such as renewables, can count towards emissions targets. We collect two sets of data for scope 2 emissions: a location-based total, which represents the GHG intensity of the grids where our sites operate; and a market-based total, which takes into account emissions from energy contracts and instruments (such as renewable energy credits). We publicly report on market-based emissions.

37. In 2017, the CDP-A List comprised 25 organizations: https://www.cdp.net/en/scores

38. New guidance relates to moving targets from a 2 to 1.5 degrees Celsius scenario: https://sciencebasedtargets.org/

39. UN Environment, "Our planet is drowning in plastic pollution": https://www.unenvironment.org/interactive/beat-plastic-pollution/

40. European Council, "Single-use plastics: Presidency reaches provisional agreement with Parliament'" 19 December 2018: https://www.consilium.europa.eu/en/press/press-releases/2018/12/19/single-use-plastics-presidency-reaches-provisional-agreement-with-parliament/

41. Clean Virginia Waterways, "Cigarette Butt Litter Prevention Tips": http://www.longwood.edu/cleanva/cigbuttlitterpreventiontips.htm

42. Quantis (2018), Corporate Footprint report.

43. For context, the Global Risk Assessment shows that 19% of tobacco-growing areas are in this category worldwide.

About this report

We are pleased to share our fourth Sustainability Report, which follows the previous report published in May 2018. The report is shaped around the topics relevant to our business and to our stakeholders.

With the aim of achieving greater transparency, we have shared more detailed information on our sustainability materiality assessment, stakeholder engagement, and how we manage our impacts. We realize that the transformation of our company brings along challenges we need to address, and we have shared some of them through our case studies.

This report also accounts for feedback received from various stakeholders on our previous report relating for example to targets, responding to stakeholders' concerns, and materiality. To allow readers to assess our progress, we are trying to be more systematic in disclosing our targets and commitments and will continue improving in the coming year.

The scope of the data in this report embraces all our operations, unless stated otherwise, for the full calendar year of 2018. PricewaterhouseCoopers SA (PwC) has assured certain of the business transformation metrics on page 129 of this report. The external verification statement of our environmental and health and safety data can be found on our PMI website.

This report is signed off by members of PMI's Senior Management Team, including our Chief Executive Officer, Chief Financial Officer, Chief Operating Officer, and President External Affairs and General Counsel.

This report has been prepared in accordance with the GRI Standards: Core option. Our GRI cross-reference index can be found on PMI website. In addition, we align our reporting with the UN Sustainable Development Goals, the UN Global Compact principles, and the Sustainability Accounting Standards Board (SASB) standards.

We report on sustainability annually and always welcome your feedback. Please contact Esther Bares and Marie Corger at sustainability@pmi.com.

Overview

Transforming
our business

Driving operational
excellence

Managing our
social impact

Reducing our
environmental footprint

**Reporting on
sustainability**

Philip Morris International
Sustainability Report 2018

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Cover image: Drone used to map and scout tobacco
fields, generating live data for decision making on crop
management, in Bahia, Brazil

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