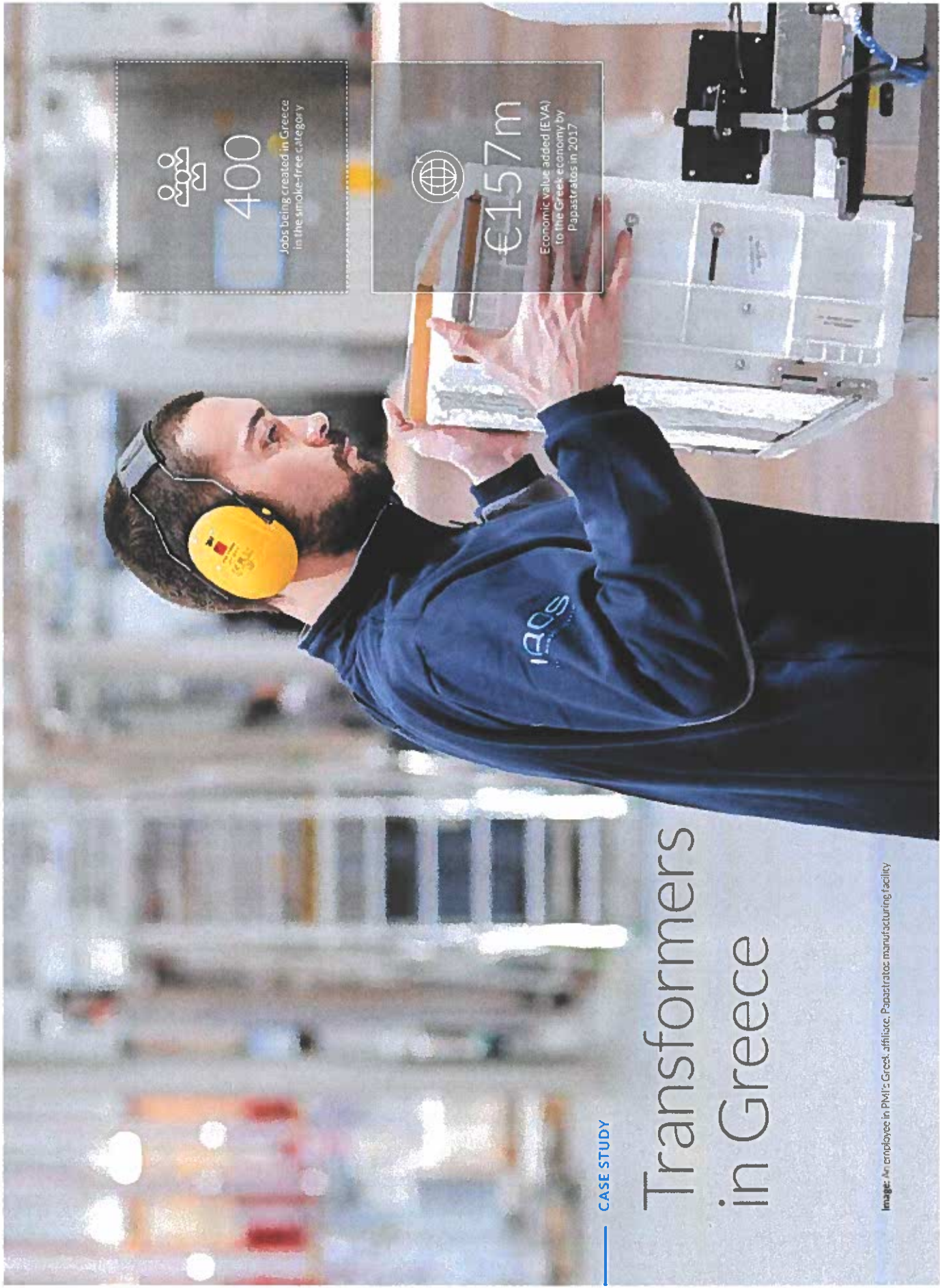


CASE STUDY

Transformers in Greece




400
Jobs being created in Greece in the smoke-free category


€157m
Economic value added (EVA) to the Greek economy by Papastratos in 2017

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

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 Harpanidis. 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: Call center employees in Athens, Greece



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

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 Lubsanne, Switzerland

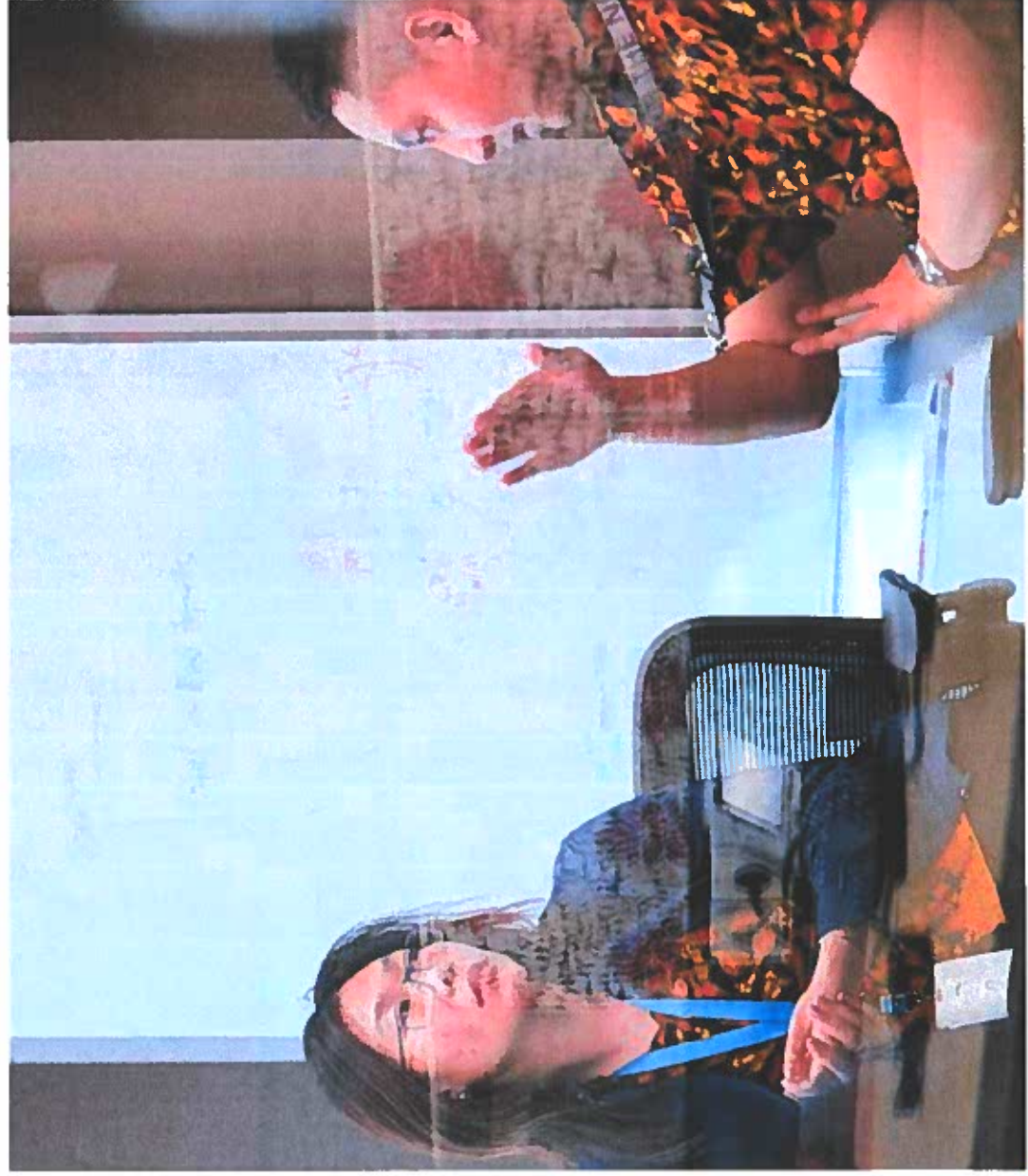
Supporting fair working conditions continued

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.



Above: Employees in Piri's Indonesian affiliate Sumpokno's office in Jakarta

65%

Of employees covered by Collective Labor Agreements in 2018

Promoting health, safety, and well-being



Above: Papayri-ates, PMI's Greek affiliate's manufacturing facility

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 county-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.

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, removed, or closed. In 2018, the aggregated LFR 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 LFR rate in our manufacturing facilities was 0.07, a slight increase versus 2017 (0.04) 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 leader's 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 Crespos, Italy

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 TIR 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&SWB programs and to intensify performance across its four objectives. We want to expand the outreach of our *Balanced You* program to further support our employees in all markets. Importantly, we look forward to reporting all PMI workplaces as smoke-free over the coming year's.

>70

Of our affiliates around the world offer flexible working arrangements



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

Furthering diversity and inclusion

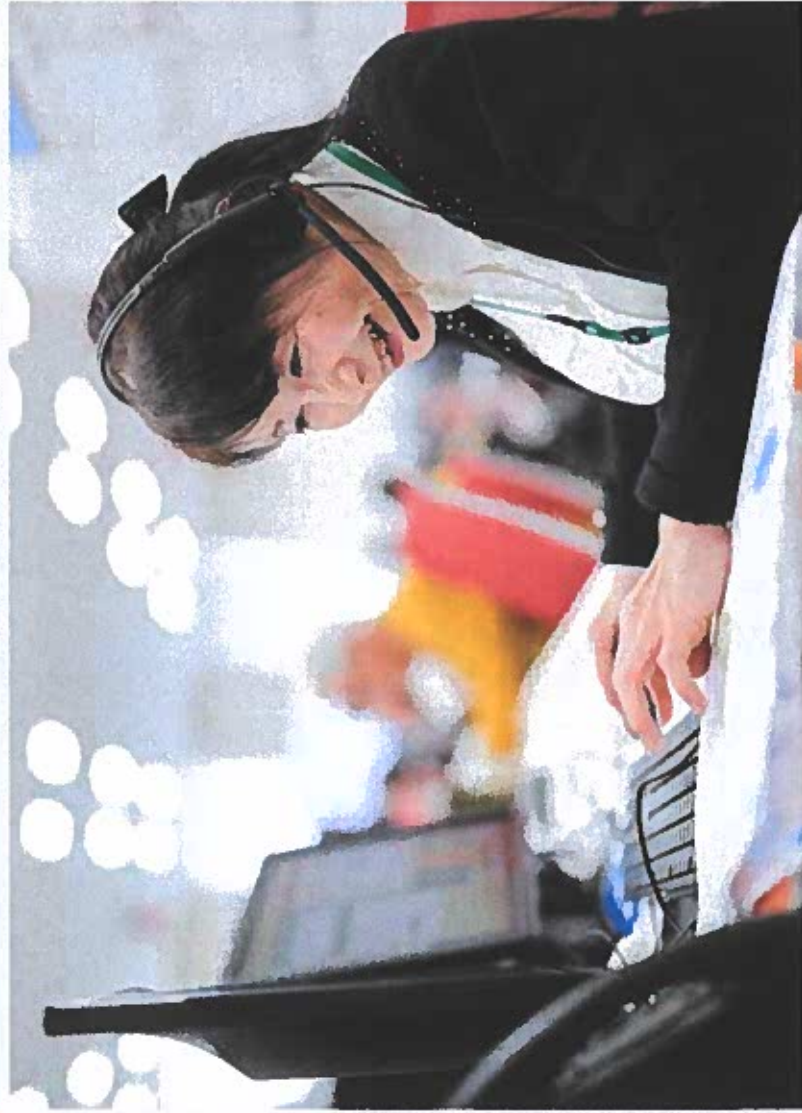
— TARGETS —

40%

women in management positions by 2022*

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.

Furthering diversity and inclusion continued

Progress in 2018

Achieving gender balance

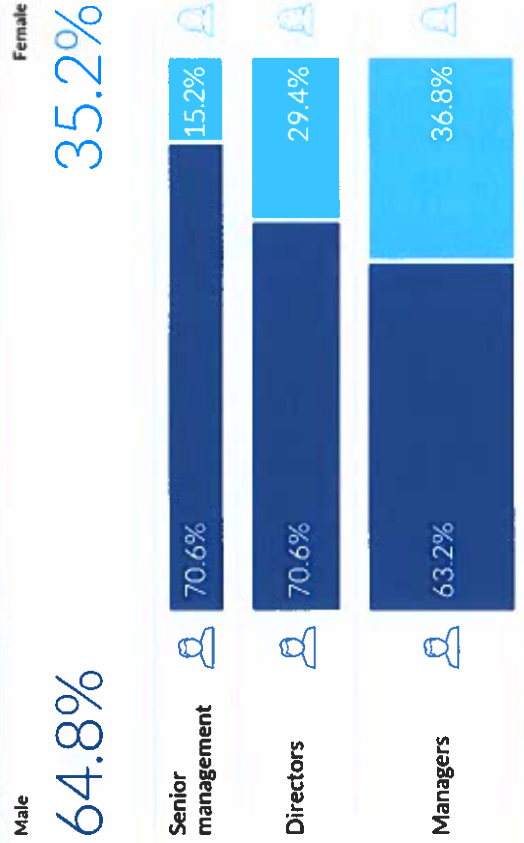
Given that women make up half the world's talent pool and influence 60 to 70% of consumer spend, improving gender balance at PMI is our first inclusion and diversity priority. At the end of 2018, 42.1% of PMI's global workforce were women, and a growing number of management roles across PMI are being 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 all 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



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.¹⁸ 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 auditor's 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 our sails apart as a top employer where principles of fairness, diversity and inclusion are the foundation for our success.



Philip Mori is 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.

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



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

Engaging with our communities



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 counselling 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 Paku 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

onwww.pmi.com

Above: Runch Prima ("Smart House") community initiative in Lombok, Indonesia

PILLAR 4

Reducing our environmental footprint

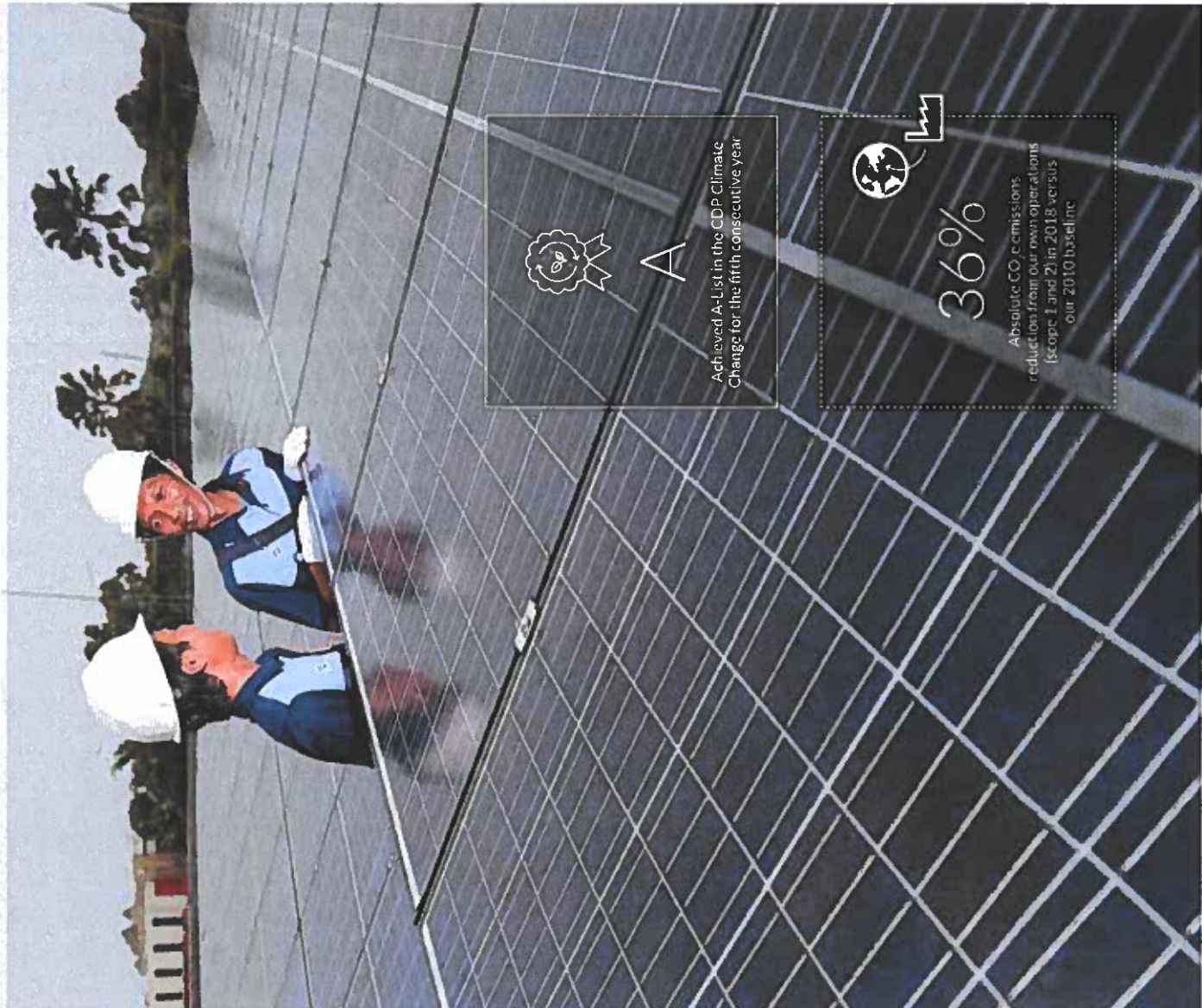
Effective environmental management across our operations and value chain goes beyond compliance with applicable laws and regulations. We are committed to constantly improve our business activities to achieve the highest standards of environmental sustainability as stated in our Environment Commitment, 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 filtering, 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 filter). Working collaboratively with tobacco growers, suppliers, retailers, NGOs, and governments is key to the success of our environmental programs and to achieving our targets.

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A

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

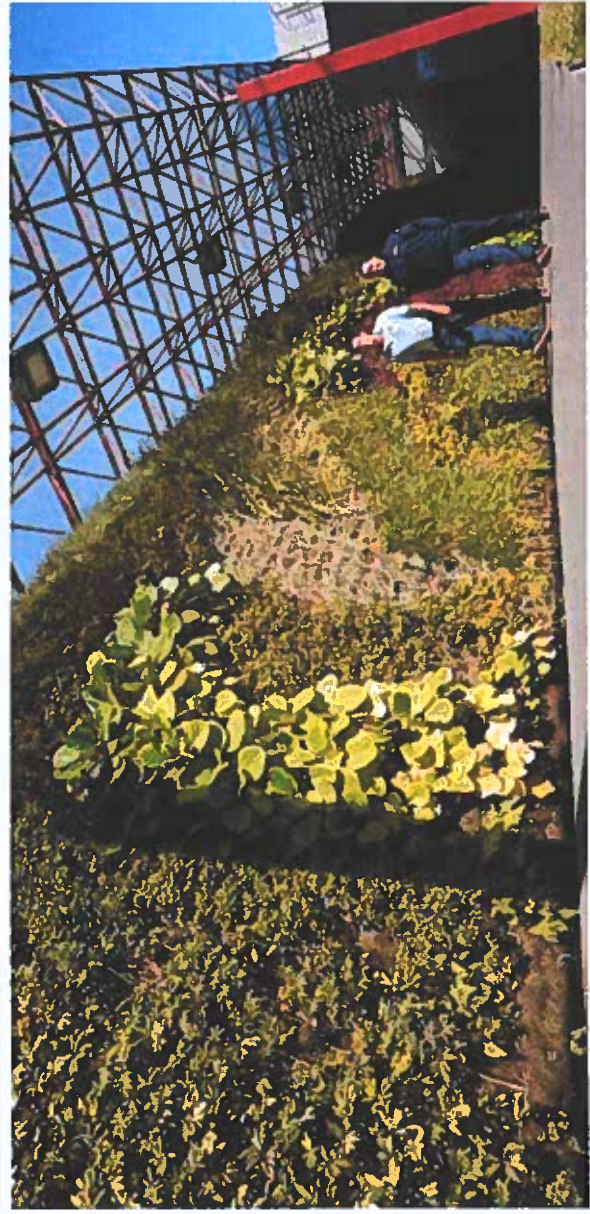
36%

Absolute CO₂e emissions reduction from our own operations (Scope 1 and 2) in 2018 versus our 2010 baseline

Reducing our energy usage and carbon emissions

— TARGETS —

<p>30%</p> <p>Reduction of absolute CO₂e emissions from our own operations (scope 1 and 2) by 2020, 40% by 2030, and 60% by 2040, versus 2010 baseline</p>	<p>100%</p> <p>Share of electricity used in manufacturing from renewables by 2030, versus 2010 baseline</p>	<p>40%</p> <p>Reduction of absolute CO₂e emissions from our operations and value chain (scope 1, 2, and 3) by 2030, versus 2010 baseline</p>
<p>70%</p> <p>Reduction of flue-curing GHG emissions by 2020, versus 2010 baseline</p>	<p>70%</p> <p>Share of tobacco leaf purchased that is cured using sustainably sourced fuels by 2020</p>	<p>Zero</p> <p>Coal used in tobacco curing by 2020</p>



Above: Employees at PMI manufacturing facility in Guatemala, Mexico.

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.

Progress in 2018

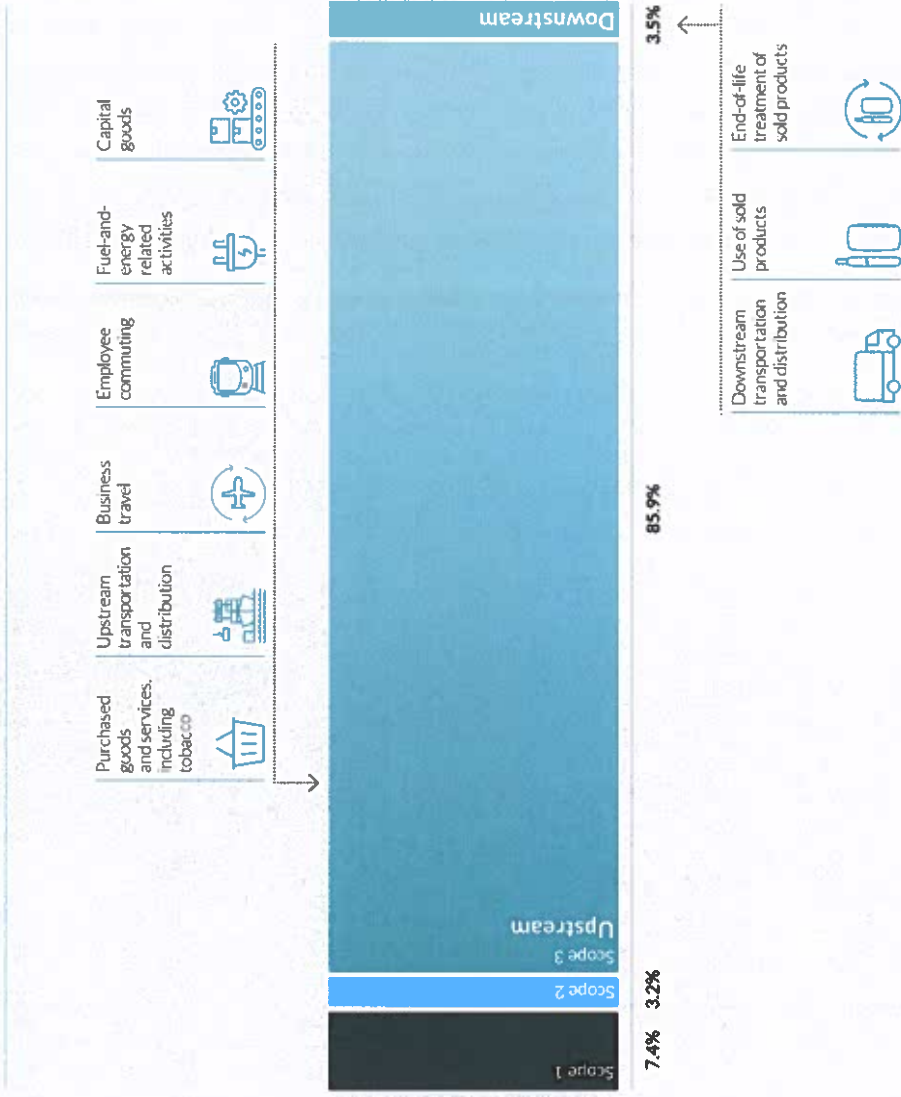
Responding to climate change risk

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 (CO₂e) 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.⁴⁶ 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



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.

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 CO₂e 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 CO₂e 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 CO₂e emissions of more than 2,000 tons per year. The project supports the Philippines government's Renewable Energy Roadmap 2017–2040.



Abner / iStockphoto.com / iStockphoto.com / iStockphoto.com / iStockphoto.com

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.³⁴

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.

Lowering carbon emissions from transport

A fleet of close to 75,000 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 CO₂e 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 CO₂ for cars or vans and less than 600 g/km of CO₂ 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 of 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 underway, with the share of coal used as a curing fuel down to 15% in 2018, from 20% in 2017. Farmer's 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 tobacco in Brazil, PMI

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 CO₂e 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,¹⁸ 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 CO₂e emissions by 40% by 2030 (baseline: 2010).

36%

The absolute CO₂e emissions reduction from our own operations (scopes 1 and 2) in 2018 versus our 2010 baseline

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 CO₂e 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.

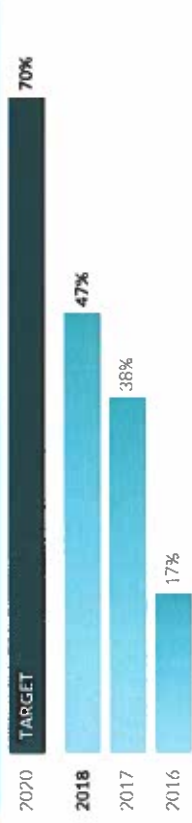
As we grow the production of smoke-free products, we will review our targets and how they account for the changing emissions profile of product use, recycling, and disposal. As we review environmental policies and commitments, we will account for new risks and opportunities facing the business and the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

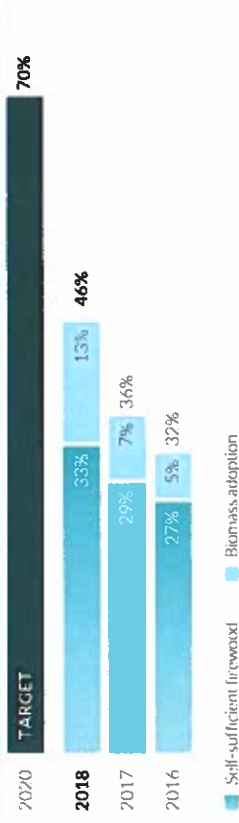
Global greenhouse gas emissions scope 1, 2 and 3 (‘000 tons CO₂e)



Reduction in CO₂e emissions from tobacco flue-curing (%) - baseline 2010



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



Conserving biodiversity and combating deforestation

— TARGETS —

<p>Zero</p> <p>Net deforestation of primary and high conservation value (HCV) forests associated with the tobacco supply chain by 2020</p>	<p>Zero</p> <p>Net deforestation of primary and HCV forests associated with the supply chain of paper and board by 2022</p>	<p>Zero</p> <p>Net deforestation of primary and HCV forests associated with the supply chain of other significant pulp-based products, including cellulose acetate tow by 2025</p>
<p>Zero</p> <p>Net deforestation of natural forests in the tobacco supply chain by 2025</p>	<p>Zero</p> <p>Net deforestation of natural forests in the paper and pulp-based products supply chains by 2030</p>	<p>Net positive</p> <p>Impact on forests associated with the tobacco supply chain by 2025</p>



Above: A PMI employee with a production technician in Bina, 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.

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 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 additional 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.

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.

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 fire-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 FICV 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.

Forest land clearance for tobacco growing

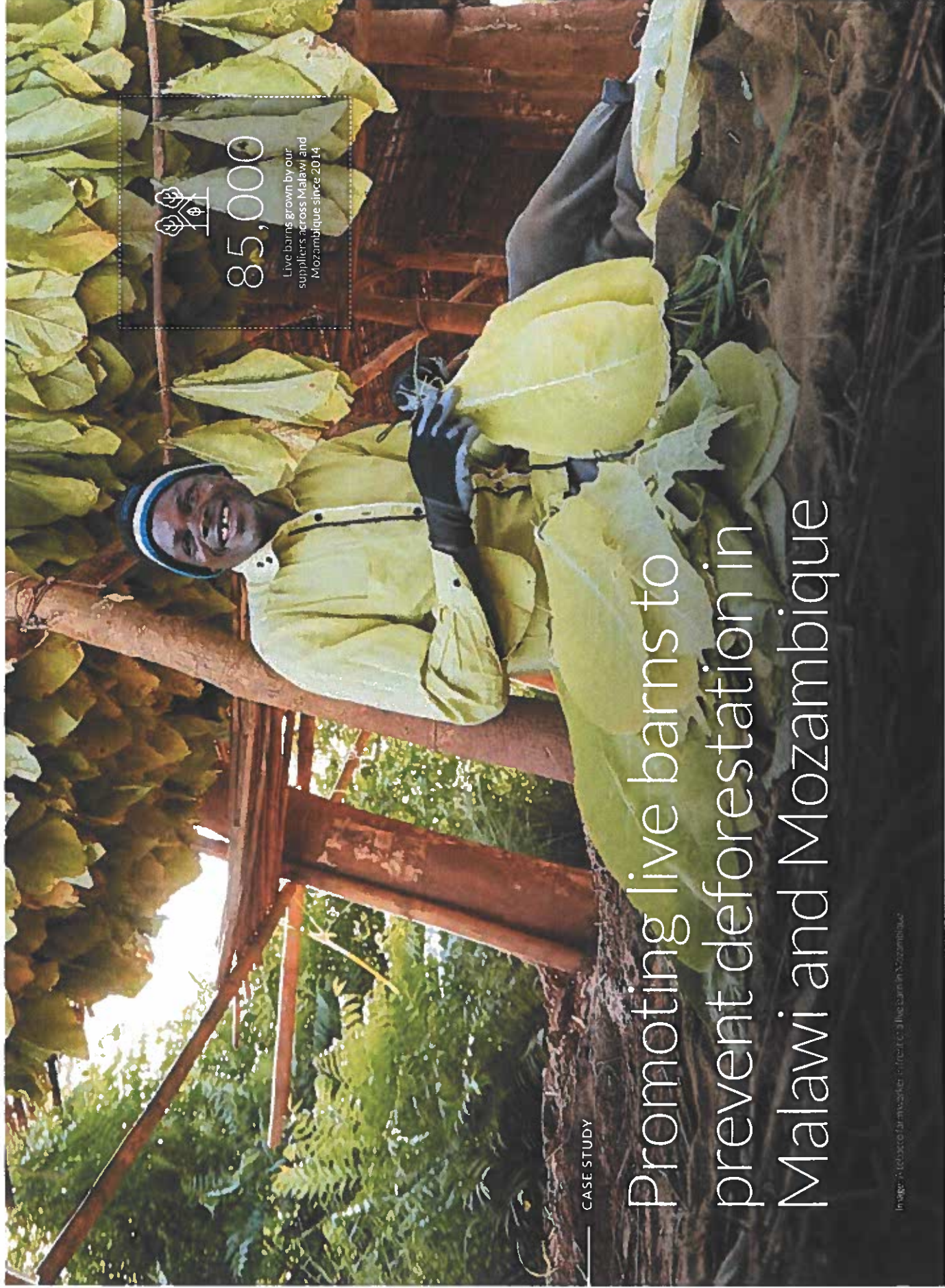
Our 2018 global deforestation risk assessment identified that, nowadays, the risks specifically associated with land-use change from tobacco farming are not significant. Where PMI sources tobacco, there is no direct deforestation associated with expansion of tobacco because tobacco growing areas are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

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 farmer’s willingness to adopt change. This is used to design the right approach to fuel supply and farm-level practices within the local context.



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

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 supplier's 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: Live barns under construction in Mozambique



Below: Forcetry nurseries 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 2027, 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

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 carbenazim, 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.

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 PPF, 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, regulator 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.



Above: A tobacco farmer in a tobacco plantation in Brazil.

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.

Critically, we foresee continued supplier engagement; after all, it is the relationships with the people on the ground that deliver 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

Minimizing waste and littering

— TARGET —

All

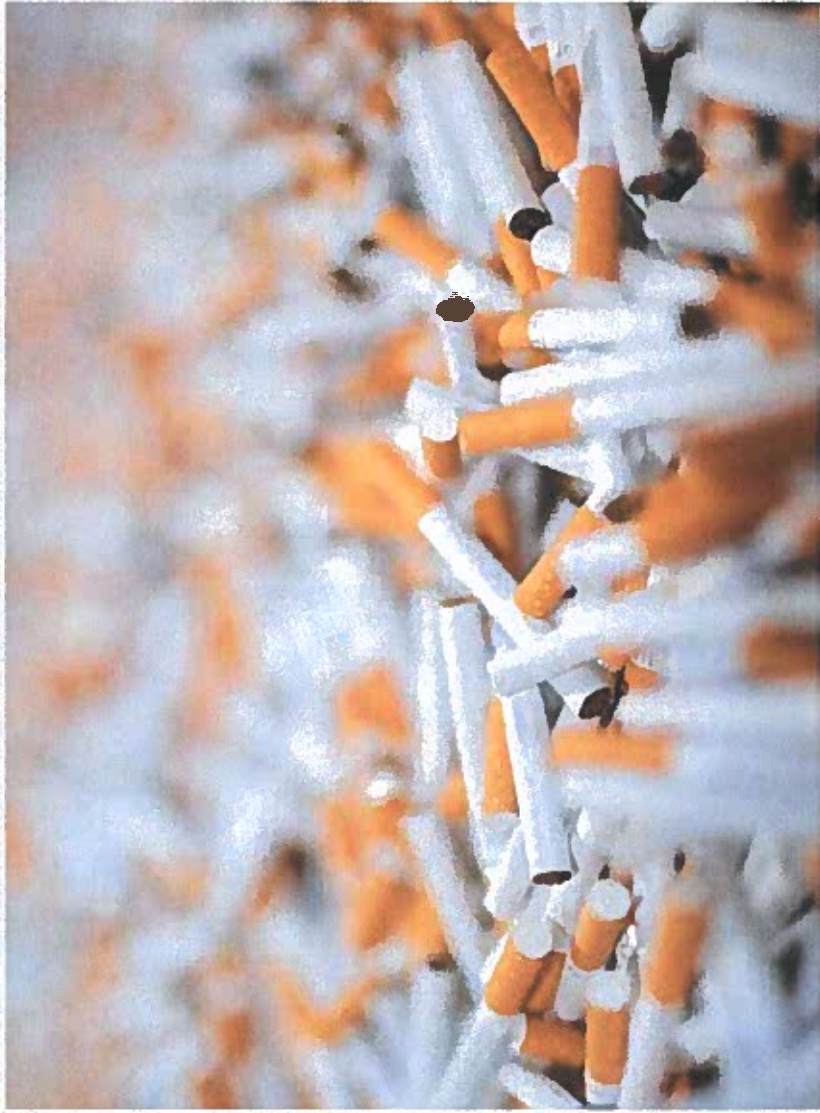
Manufacturing facilities with zero waste to landfill by 2022

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: Discarded 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 filter share 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

3. Enforcing anti-littering laws

Where adequate municipal collection equipment is not in place, PMI will work with stakeholders to identify improvements, and 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.

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



Above: Filtered tobacco units hollow acetate tubes.

implemented nationally will be defined by member states within the two-year transition 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 making 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.

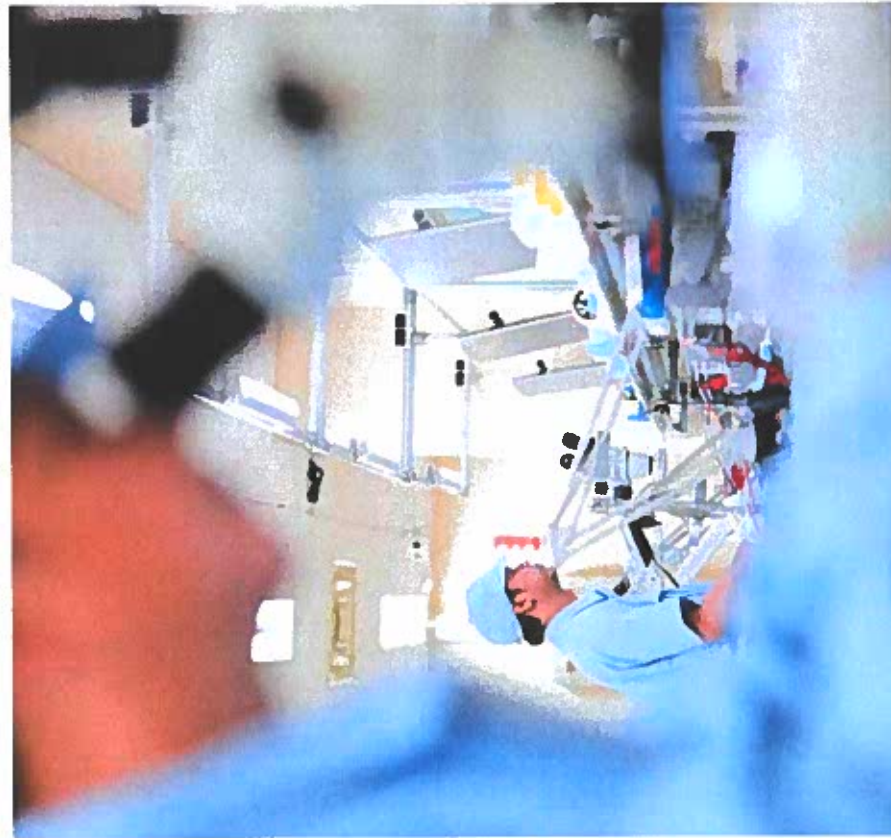
Recycling is a popular way of minimizing the impact of waste and promoting the circular economy, but it can often face challenges. There have been isolated attempts to recycle cigarette butts. Unfortunately, various factors make such attempts unviable, including the size of the filters and complex collection 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.

Minimizing waste and littering continued

Addressing the waste of smoke-free products

As we are replacing cigarettes with smoke-free products, new challenges, new opportunities arise. A new challenge for us as a company relates to the recycling of electronic products 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.



Above: © Philip Morris International 2018

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:

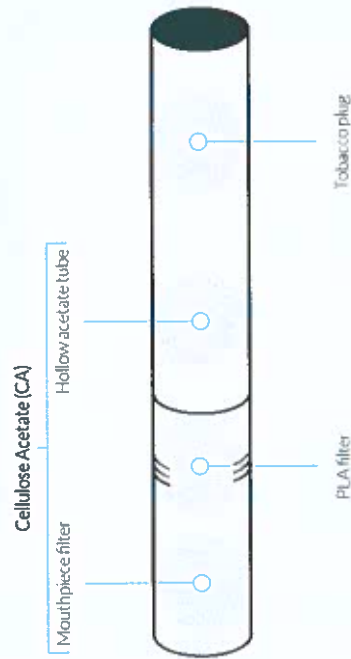
- A successful collection system of heated tobacco units at our offices in Switzerland;
- Testing consumer interest in the Greek market; this revealed that consumers are keen to participate when the collection system is convenient. In 2019, we will pilot the collection system across the market; and
- 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-shipment of waste.

Composition of a heated tobacco unit





Overview

Transforming our business

Driving operational excellence

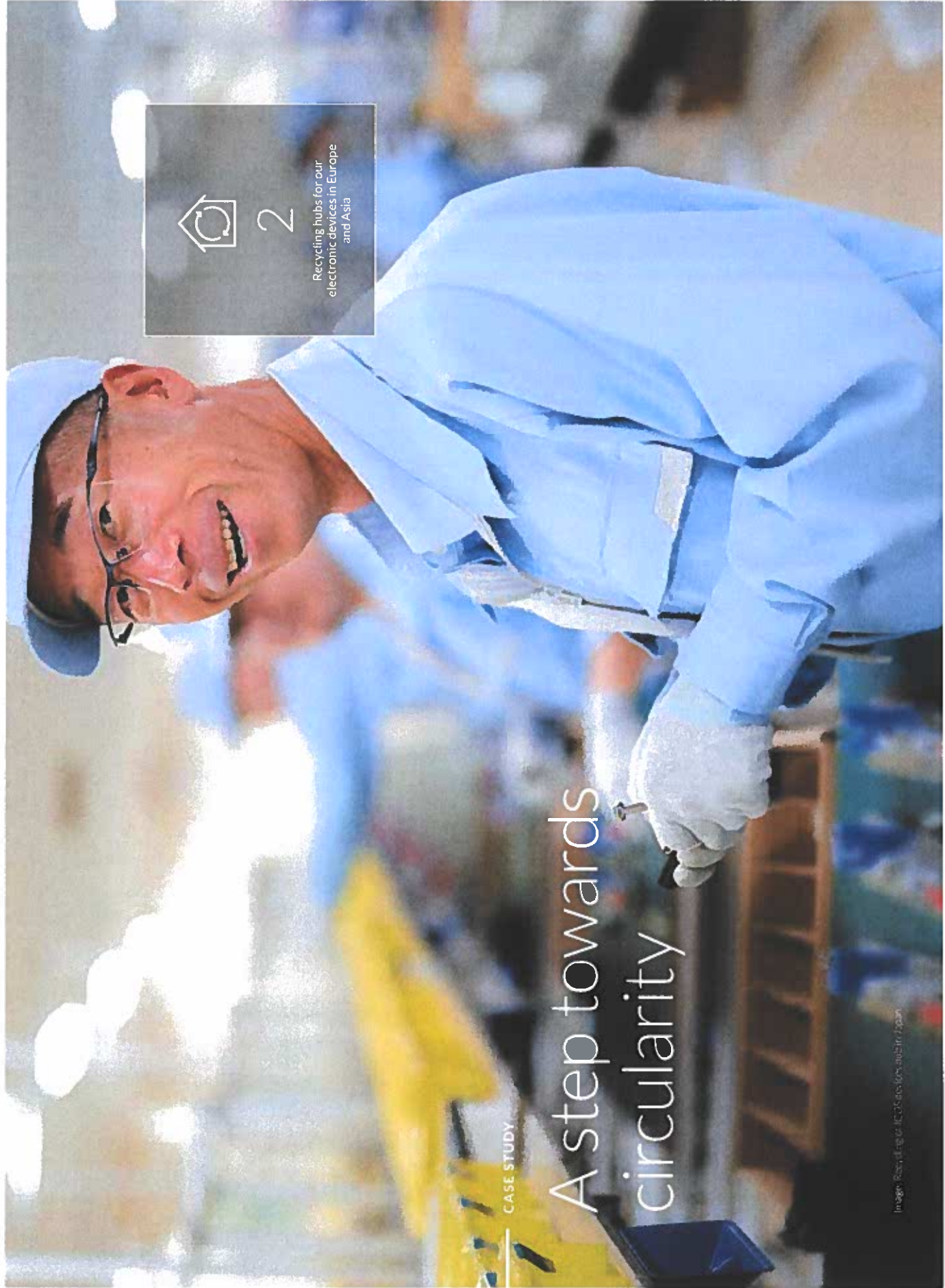
Managing our social impact

Reducing our environmental footprint

Reporting on sustainability

Philip Morris International Sustainability Report 2018

100




2

Recycling hubs for our electronic devices in Europe and Asia

CASE STUDY

A step towards circularity

Image: Reuters/Alamy/ICU Associates/Asia in Japan

CASE STUDY

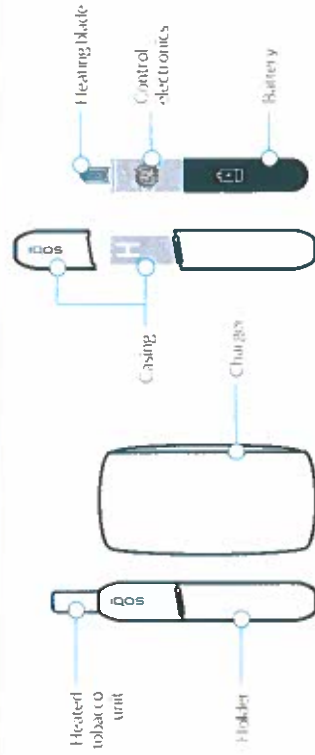
A step towards circularity

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.

What is an IQOS 3 device made of?



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. These 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.



Above: Recycling of IQOS devices hub in Japan

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.

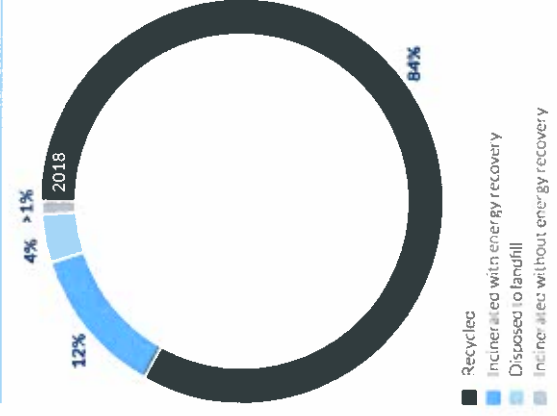
Through our quality and design processes, we have worked hard to make each subsequent version of our IQOS devices more robust. This improved quality leads to longer life cycles, reducing the carbon footprint impact of our devices on the environment. Additionally, we have doubled the battery life for 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



PERFORMANCE AND NEXT STEPS

In 2019, we will expand our efforts to discourage cigarette but 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 economy²⁴; 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

Managing water

— TARGET —

100%

All PMI manufacturing facilities will be certified to the Alliance for Water Stewardship (AWS) Standard by 2025

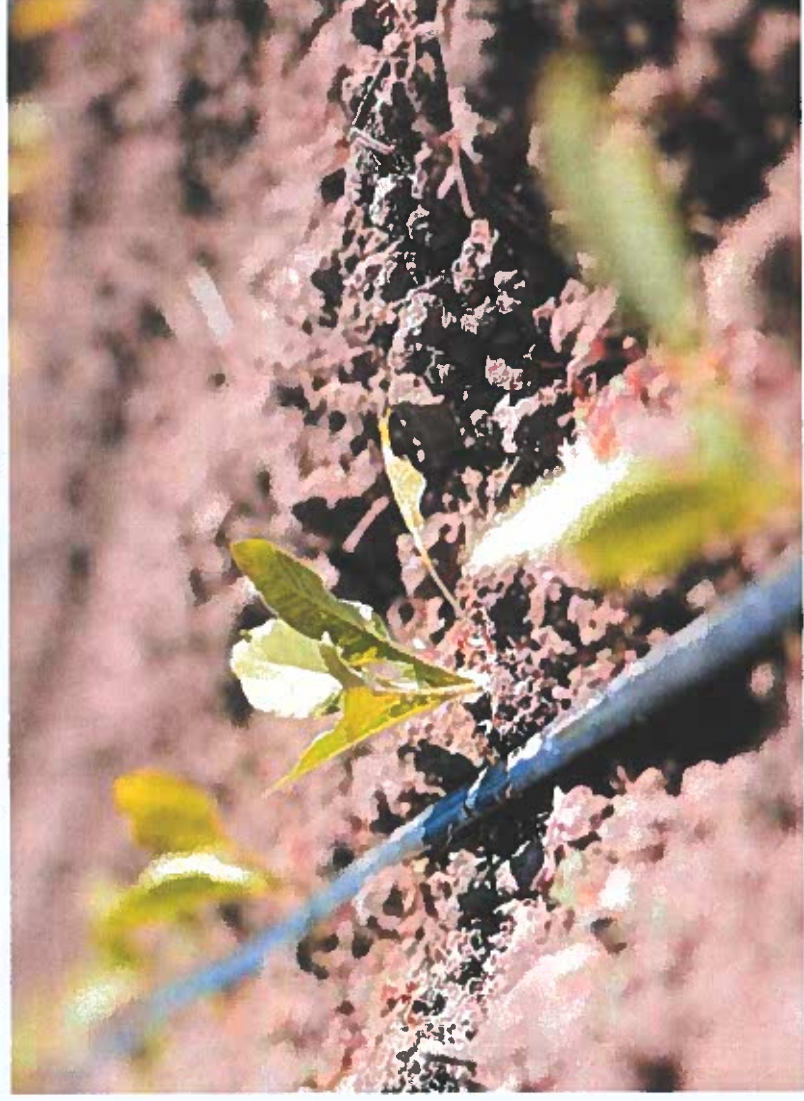
Foreword

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: iStockphoto.com/daanvandenBurg for iStock

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.²¹ 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 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: Water treatment in PMI's Itabane, an affiliate Simpoena's manufacturing facility in Sukarejo

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)



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 category¹ 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.

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"² 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 Malawi, Malawi

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.tobaccopmi.com ▶
- The Alliance for Water Stewardship on a4ws.org ▶
- The Center for Agriculture and Bioscience International on www.cabi.org ▶



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.



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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, dialogic, 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.

Means of engagement

Stakeholders	Stakeholder groups	Means of engagement	Other
PMI employees and contracted employees	Employees	Organic dialogue, Surveys and questionnaires, Training, Corporate communications, Formal gatherings, Forums and events, Contractual relationships, Meetings and partnerships, Regular office visits, Reports and publications, Hotline and call centers, Consultations	
Work councils			
Trade unions			
Peers and other tobacco companies	Business community		
Trade associations			
Chambers of commerce			
Tobacco farmers and workers	Farmers and farm workers		Headlines and access to field technicians
Farmers associations			
Farmers of other agricultural supplies			
Sourcing communities	Local communities		Community contributions
Operating communities			
Providers of goods and services (including raw materials)	Suppliers		
Third party operated manufacturers			
Contractors			
Wholesalers	Distributive trade		
Retailers			
Adult consumers*	Adult consumers		
Intergovernmental organizations	Regulators and governments		Submissions and consultations
Regulatory agencies			
Standard setters			
Health authorities			
Customs**			
Academia	Civil society		
Citizens			
NGOs			
Written press	Media		Studies, interviews, business achievements, and certifications
Social media			
Journalists			
Researchers	Scientific community		
Public health experts			
Academia			
Analysts	Investors and shareholders		
Shareholders			
Institutional investors			
Sustainability ratings agencies			
Socially responsible investors			

* Where applicable and as per local regulations

** Where institutions and law enforcement officers as part of our efforts to fight illicit tobacco trade

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 raw 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.

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.

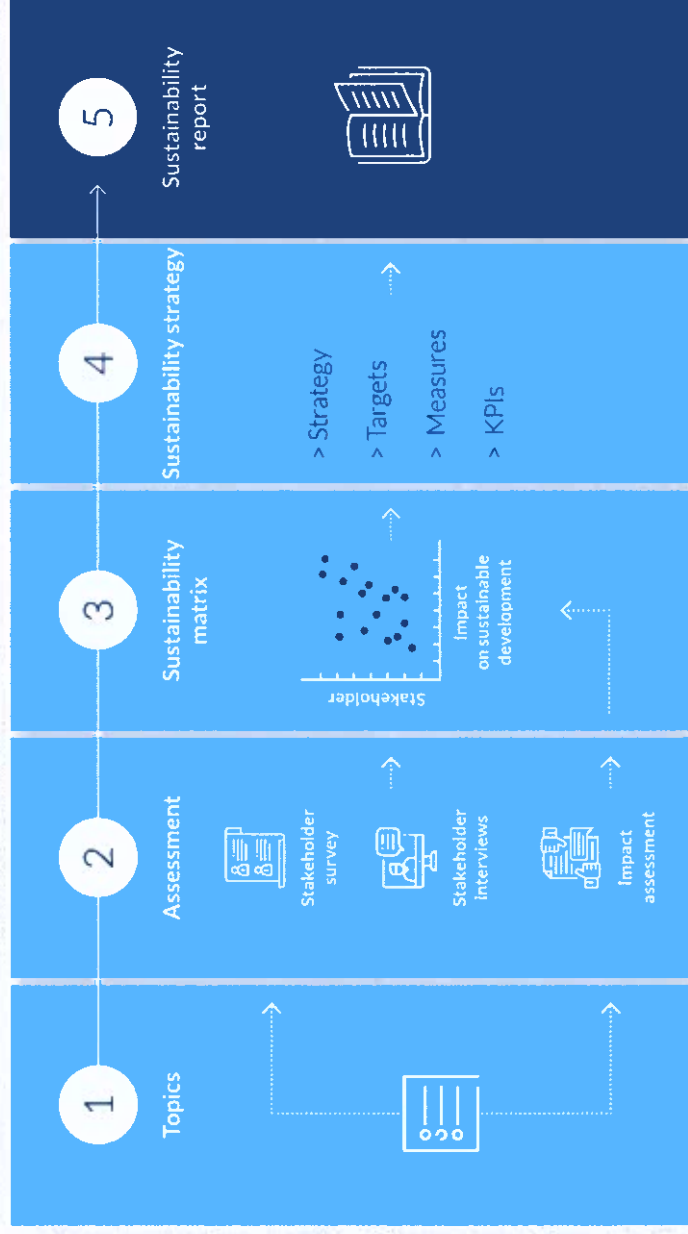
STEP 2

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



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 likelihood, 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:

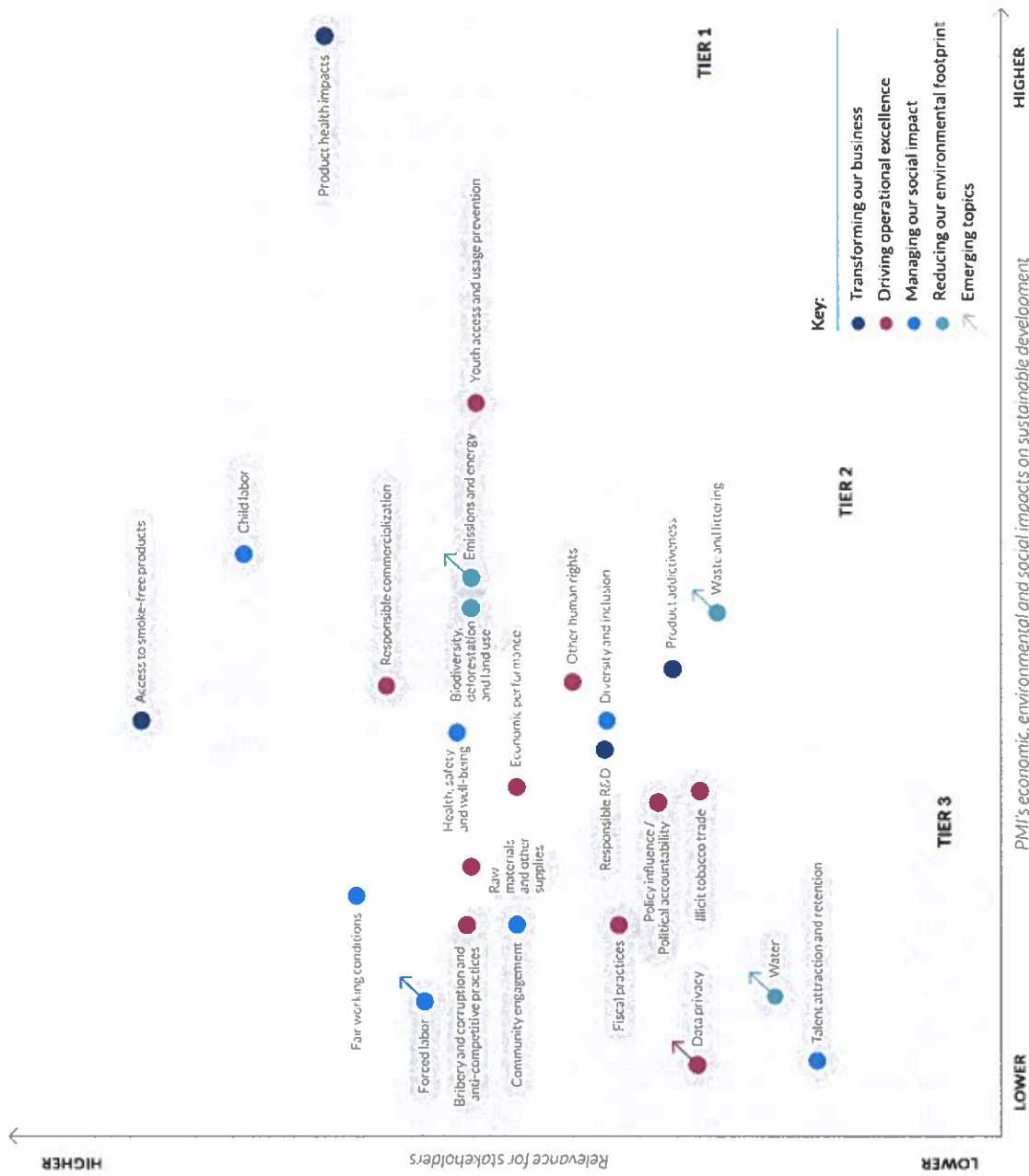
- High impact
- Low impact
- Medium impact
- Not relevant

		Simplified PMI value chain		
		Raw materials and other supplies	PMI operations	Consumers
	Definition			
Access to smoke-free products	Availability and pricing of our smoke-free products for adult consumers in both developed and developing countries.	○	○	●
Biodiversity, deforestation and land use	Preventing deforestation and protecting biodiversity.	●	●	●
Bribery, corruption and anti-competitive practices	Preventing bribery and corruption as well as acting competitively in the markets.	●	●	●
Child labor	Preventing child labor in our supply chain.	●	●	○
Community engagement	Engaging with the communities around us along our value chain.	●	●	●
Data privacy	Ensuring privacy of data throughout our value chain (consumers, employees, R&D).	●	●	●
Diversity and inclusion	Promoting a diverse and inclusive workforce.	●	●	○
Economic performance	Economic value created and distributed.	●	●	○
Emissions and energy	Reducing our emissions and energy consumption, and adapting to climate change.	●	●	●
Fair working conditions	Respecting fair wages, working hours, and the right to collective bargaining.	●	●	○
Fiscal practices	Engaging in responsible corporate and excise tax practices.	●	●	●
Forced labor	Preventing forced labor in our supply chain.	●	●	○
Health, safety and well-being	Promoting health, safety and well-being within our operations and supply chain.	●	●	○
Illicit tobacco trade	Preventing the illicit trade of tobacco products.	●	●	●
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.	●	●	●
Policy influence/political accountability	Acting in a fair, honest, and respectful way when advocating PMI's position in political and regulatory debates.	●	●	●
Product addictiveness	Product addictiveness in respect of potential health risks of the product.	○	○	○
Product health impacts	Risks to health associated with the usage of our products.	○	○	○
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.	○	○	○
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.	●	●	○
Talent attraction and retention	Attracting new employees and developing, and engaging with our workforce.	●	●	○
Waste and littering	Reducing and recycling waste as well as preventing littering.	●	●	●
Water	Reducing water use and preventing water scarcity, managing water quality and discharge.	●	●	○
Youth access and usage prevention	Preventing youth from accessing and using our products.	○	○	○

STEP 4

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.

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.

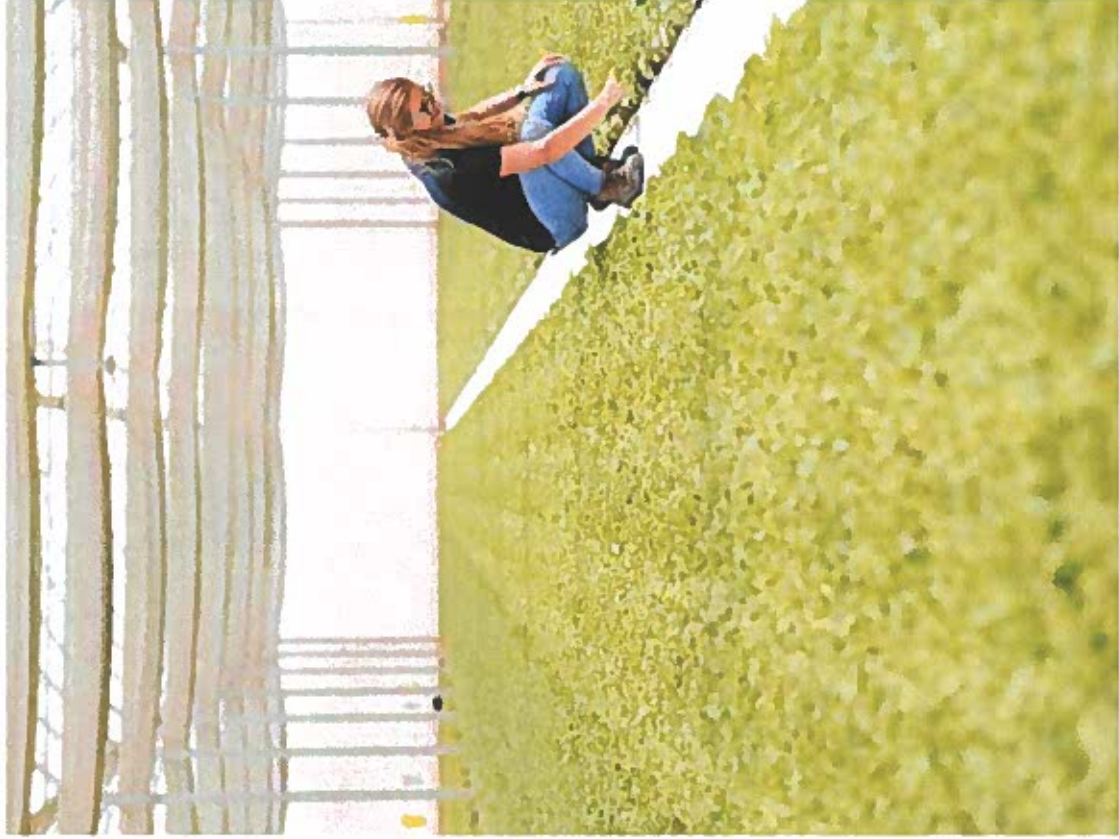
Next steps

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

Our performance

PILLAR 1: Transforming our business

Business transformation metrics ¹	2015	2016	2017	2018	Aspiration ²
R&D expenditure (smoke-free/total)*	70%	77%	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 PwC 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 law assumptions.

⁴ Includes market tobacco units and e-cigarettes.

⁵ The 90-100 billion units shipment volume is target and pertains exclusively to future 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. Metrics 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 Suppliers (a)	83	93.5	86.9
Total number of compliance training	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 AR Sustain (%)	72	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 later, after the publication of our 2017 report.

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 ⁴ projects selected per funding round	n/a	32	31	90 by 2021
Number of countries from which PMI IMPACT ⁴ projects were selected per funding round	n/a	18	23	60 by 2021
Number of applications (project proposals) received by PMI IMPACT ⁴ per funding round	234	157	n/a	5-10 by 2021
Number of countries from which applications were received by PMI IMPACT ⁴ per funding round	42	56	n/a	140 by 2021
PMI IMPACT ⁴ grants allocated in USD million ⁴	n/a	28	21	100

1. Full coverage refers to 95% tracking and tracing in our supply chain (excluding K pack business). There are 5% of master cases not covered – these are distinct from countries which are not identified as a source of potential diversion or where PMI sells to a single customer in the country.

2. Excludes K pack business.

3. 2016 data includes SE, EC, representing 11 countries.

4. PMI allocated USD 100 million 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	76	78	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

	2016	2017	2018	Goal
Promoting health, safety, and well-being				
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				
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	1/5	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 2016 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 ₂ e scope 1 (metric tons)	443,186	351,990	388,384	408,162		PMI factories, offices, and fleet
CO ₂ e scope 2 (metric tons)	470,864	314,049	241,355	175,785		PMI factories and offices
CO ₂ e scope 1+2 (metric tons)	914,050	666,039	629,739	583,947		PMI factories, offices, and fleet
CO ₂ e scope 1 from fleet (metric tons)	143,148	122,434	119,588	114,936		PMI fleet and aircraft
CO ₂ e emissions from vehicles (g CO ₂ e per km driven)	296	277	276	221		PMI fleet
CO ₂ e scope 3 (1000 metric tons) ¹	7,435	5,649	5,137	4,920		PMI operations and value chain
CO ₂ e scope 1+2+3 (1000 metric tons)	8,349	6,315	5,767	5,504		PMI value chain
CO ₂ e scope 1+2+3 per million cigarettes equivalent (kg) ^{1,2}	8,942	7,394	6,932	6,749		PMI value chain
CO ₂ e 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 ₂ e scope 1+2+3 absolute reduction versus 2010 baseline (%)		24	31	34	40 by 2030	PMI value chain
CO ₂ e 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) ¹	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	A

¹ In 2018, we reviewed our carbon footprint model, taking into account more primary data from suppliers and updating our methodology, leading to 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 CO₂e per million sold cigarettes equivalent. From 2018 onwards we are reporting energy intensity based on sold units of cigarettes (versus products units previously). Previous year's data have been restated accordingly.

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 (%)	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) (%) ⁴	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
GDP 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 collaborated 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 upgrades, 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, including China.

Our performance continued

PILLAR 4: Reducing our environmental footprint

Minimizing waste and littering

	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 projects 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 (w/ 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 cigarette(s) 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	A

¹ From 2018 onwards we are reporting water ratio based on sold units of cigarettes (versus produced units of cigarettes previously).

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.

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

FTCT – 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

MRTTP – 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 (E&A); and the Latin America & Canada Region (L&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

In this report, “PMI,” “we,” “us,” and “our” refers to Philip Morris International Inc. and its subsidiaries.

Trademarks: Trademarks and service marks in this report are the registered property of, or licensed by, the subsidiaries of Philip Morris International Inc., and are italicized or shown in their logo form.

Endnotes

- 1 Data 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 2018; or WHO https://www.who.int/tobacco/allianz_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.pmi-science.com/news/absence-of-combustion-ions/46268099%3Fheated-tobacco-product-platform-1>
- 6 Average reductions in levels of a broad range of harmful chemicals (excluding nicotine) compared with the smoke as 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.pmi-science.com/press-releases/pmi-assessment-of-the-40x-statement>
- 11 Osaka 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 IHLW Research Committee, May 2018. Available at: <https://ihlw.grants.nih.gov/ihlw/issarciv/NID000406research/num=201709021A>
- 12 Health Behaviour in School-aged Children (HBSC): U.S. consumption of substances psychoactives ages 11 to 15 and on Swiss – Situation in 2018 et évolutions depuis 1986
- 13 Assuming our virtual 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 cigarettes. For future periods, at today's pricing and excise tax assumptions.

- 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/uk/press/press-releases/2018/12/19/single-use-plastics-presidency-reaches-provisional-agreement-with-parliament/>
- 41 Clean Virginia Waresays, "Cigarette But Litter Prevention Tips" <http://www.lungwound.com/uk/news/cigarette-litter-prevention-tips.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.

- 19 Includes heated tobacco units and e-cigarettes
- 20 The 90–100 billion units is a large, and potentially exclusive, for heated tobacco units.
- 21 Includes cigarettes and other combustible products.
- 22 The smoke-free product shipment ratio is compared based on millions of units.
- 23 See glossary on page 130.
- 24 See glossary on page 130. I-Metric introduced in 2018.
- 25 <https://www.fda.gov/news-events/spotlights/um569024.htm>
- 26 https://www.pmi.com/resources/docs/default-source/our-company/product-assessment_2.pdf?sfvrsn=16-e88b55_2
- 27 <https://www.pmi-science.com/library/publication/pathway-based-productive-approaches-for-non-animal-assessment-of-acute-toxicity-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/ctc/protocol/anniv_protocol/en/
- 30 https://www.stopillegalciv.com/the_problems_consequences_of_illicit_trade
- 31 Targets pertain farmers and workers contracted by PMI or by PMI suppliers under the Agriflural 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/-dgr/documents/-dcom/documents/publication/wcms_575499.pdf
- 34 At 40x representation, people stop feeling like they are in the minority. The 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/).

In this report and in related communications, the terms "materially," "material" and similar terms, when used in the context of economic, environmental, and social topics, are defined in the referenced sustainability standards, and are not meant to correspond to the concept of materiality under the U.S. securities laws and/or disclosures required by the U.S. Securities and Exchange Commission.

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

Enabling 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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PHILIP MORRIS INTERNATIONAL

Headquarters

Philip Morris International Inc.
120 Park Avenue
New York, NY 10017-3579
USA

www.pmi.com

Operations Center

Philip Morris Products S.A.
Avenue de St-Jacques 59
1007 Lausanne
Switzerland

www.pmi.com

