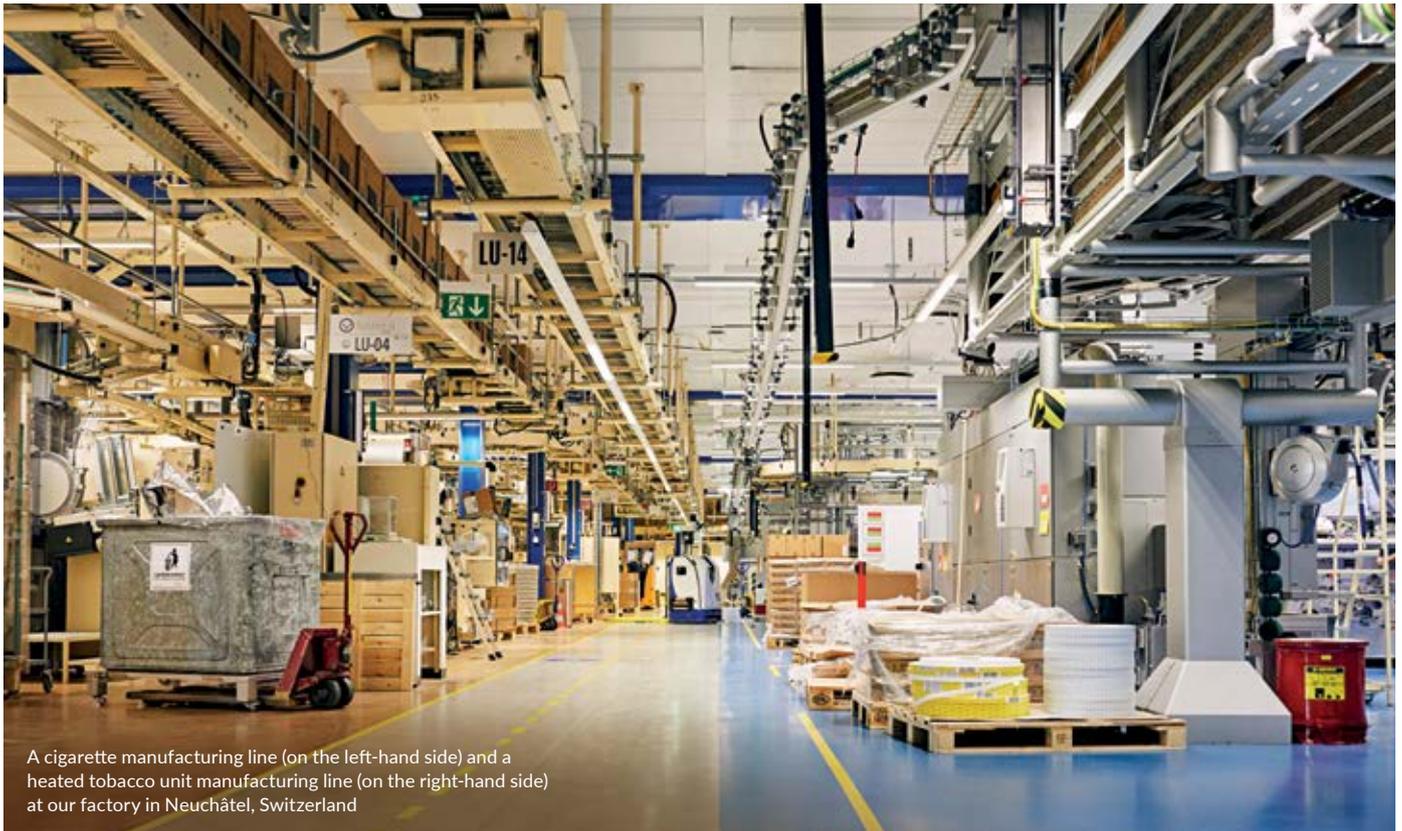


Transforming our business



A cigarette manufacturing line (on the left-hand side) and a heated tobacco unit manufacturing line (on the right-hand side) at our factory in Neuchâtel, Switzerland

Replacing cigarettes with smoke-free products

In 2017, PMI manufactured and shipped 791 billion cigarettes and other combustible tobacco products and 36 billion smoke-free products, reaching approximately 150 million adult consumers in more than 180 countries.

Smoking cigarettes causes serious disease. Smokers are far more likely than non-smokers to get heart disease, lung cancer, emphysema, and other diseases. Smoking is addictive, and it can be very difficult to stop.

The best way to avoid the harms of smoking is never to start, or to quit. But much more can be done to improve the health and quality of life of those who continue to use nicotine products, through science and innovation.

For over a century, the basic design and use of cigarettes have not changed. A smoker lights the cigarette, shredded tobacco leaves are burned, and the smoker inhales nicotine, flavors, and various other substances present in the smoke. While nicotine is addictive and not risk-free, experts agree that the primary cause of smoking-related diseases is found in toxicants generated by combustion and inhaled in cigarette smoke.

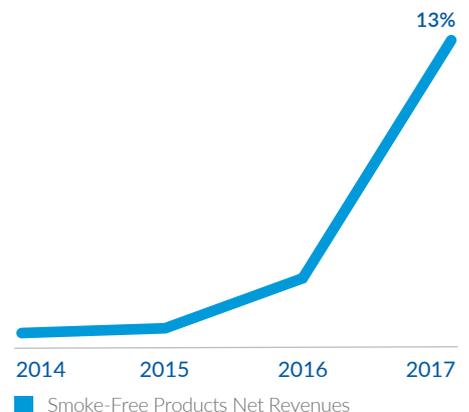
While several attempts have been made to develop better alternatives to smoking, drawbacks in the technological capability of these products and a lack of consumer acceptance rendered them unsuccessful. Recent advances in science and technology have made it possible to develop innovative products that consumers accept and that are less harmful alternatives to continued smoking.

PMI has developed a portfolio of smoke-free products, including heated tobacco products and nicotine-containing e-vapor products that have the potential to significantly reduce individual risk and population harm compared to cigarettes.

Many stakeholders have asked us about the role of these innovative smoke-free products in the context of our business vision. Are these products an extension of our cigarette product portfolio? Are they intended for developed countries only? Are they aimed at compensating a decline in cigarette sales? In 2016, we made a bold announcement: **Our business vision is to replace cigarettes with less harmful, smoke-free products as soon as possible.**



Contribution of Smoke-Free Products to PMI's Total Net Revenues



■ Smoke-Free Products Net Revenues

Source: PMI Financials or estimates

Smoke-free products: our product Platforms

Heated tobacco products

Platform 1



IQOS, using the consumables *HeatSticks* or *HEETS*, features an electronic holder that heats tobacco rather than burning it, thereby creating a nicotine-containing vapor with significantly fewer harmful toxicants compared to cigarette smoke.

Platform 2



TEEPS uses a pressed carbon heat source that, once ignited, heats the tobacco without burning it, to generate a nicotine-containing vapor with a reduction in harmful toxicants similar to IQOS. A small-scale city test of the product was initiated in 2017.

Products without tobacco

Platform 3



Platform 3 is based on acquired technology that uses a chemical process to create a nicotine-containing vapor. We are exploring two routes for this platform: one with electronics and one without.

Platform 4



Products under this platform are e-vapor products: battery-powered devices that produce an aerosol by vaporizing a nicotine solution. One of these – *MESH* – uses new proprietary vaporization technology.

Our ambition for a smoke-free future

Projection of smoking prevalence

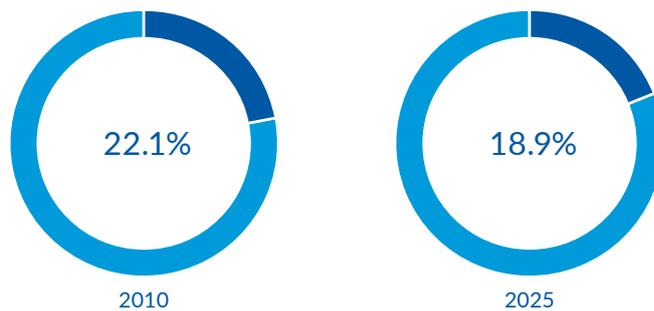
Today an estimated 1.1 billion men and women around the world smoke cigarettes or other combustible tobacco products such as cigars, bidis, and pipe tobacco. Smoking prevalence, which was estimated at 22.1% in 2010 (age 15+), has been in constant decline for several decades, and the World Health Organization (WHO) projects it will continue declining by 0.21 percentage points per year.² At that pace, it will take almost 100 years until the world is smoke free.

At the same time, global population is growing by around 70 million people per year. The combined effect of a growing population and a declining smoking prevalence results in a projected 1.16 billion smokers by 2025. These WHO projections assume current tobacco control policies and do not consider the potential of smoke-free products.

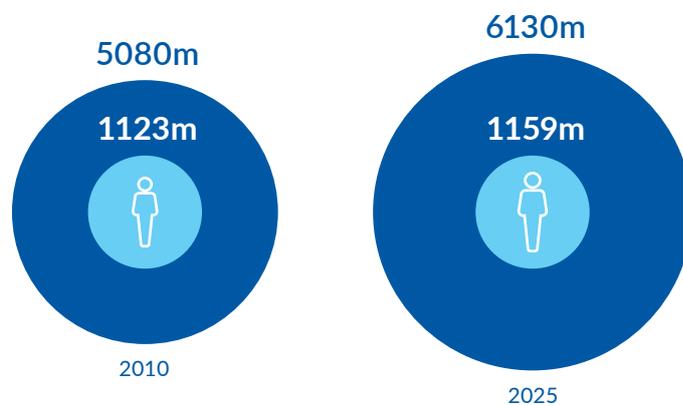
Member states of WHO are rightly dissatisfied with the slow pace at which smoking is declining and have established a 2025 target to reduce the prevalence of tobacco use by 30% compared to 2010, aiming to achieve a smoking prevalence of 15.5%.³

As population growth partially offsets the impact of this prevalence target, there will still be approximately 950 million smokers by the year 2025 if the WHO objective is achieved.

Projected smoking prevalence



Projected number of smokers



- Global population
- Projected number of smokers

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

PMI's ambition

We believe smoking prevalence can be reduced much faster by supplementing measures that governments take to discourage smoking initiation and encourage cessation with efforts to encourage smokers who would otherwise continue smoking to switch to smoke-free products. To illustrate the opportunity for public health, we project the number of consumers of PMI products for the year 2025. These calculations are consistent with the WHO projections, PMI's Business Transformation Metrics shown on page 25, and assume a constant global market share for PMI (excluding China and the U.S., where we do not have a material presence).

In the base case scenario, and without smoke-free products, the number of smokers buying PMI products is projected to increase slightly to an estimated 152 million by 2025. The WHO target to reduce the prevalence of tobacco use – assuming a proportionate effect on smokers using PMI products – implies a 19 million reduction to 133 million smokers of PMI products by 2025.

It is our ambition that at least 30% of our consumers who would otherwise continue smoking switch to our smoke-free products by 2025 versus 2010. Based on that ambition, we project that by 2025 at least 40 million PMI cigarette smokers will have switched to smoke-free products.

The combination of measures to discourage tobacco initiation and encourage cessation and our full-scale effort to replace cigarettes with smoke-free products could reduce smoking of PMI products by 40% within a decade – a major acceleration towards a smoke-free world.

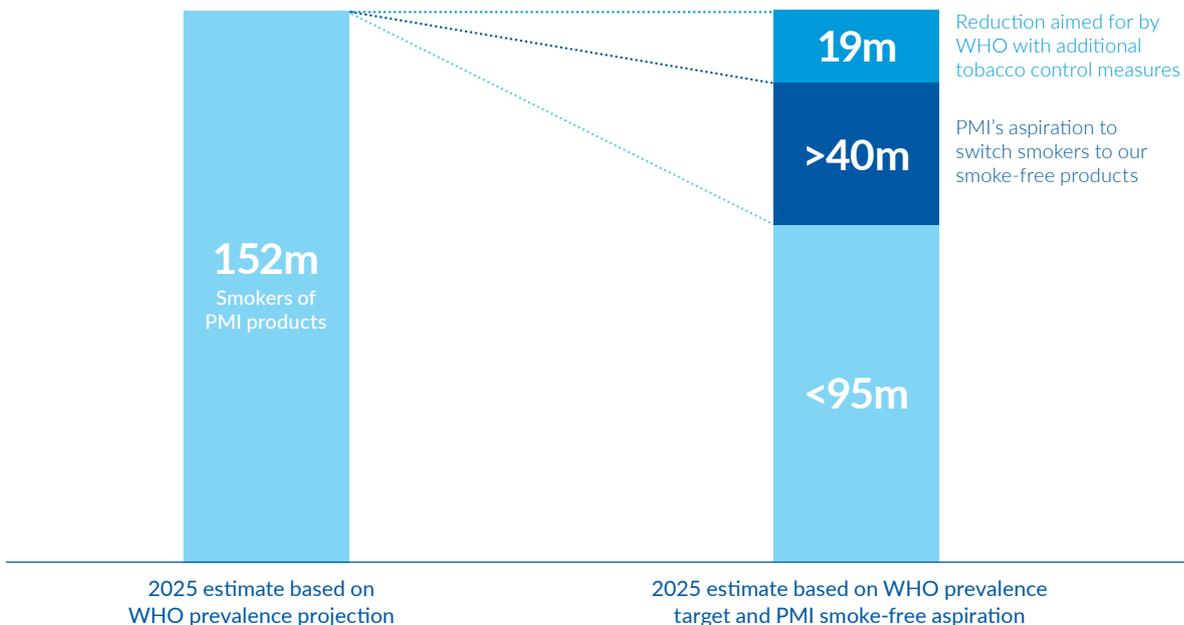
These are illustrative calculations, as we left out the potential for PMI to grow market share by switching consumers of competing cigarette brands to our smoke-free products. We also excluded the possible positive interventions by governments to regulate products proportionate to the harm they cause. Clearly, governments and civil society, especially leading scientists and public health professionals, and ideally the WHO, can play a decisive role in encouraging

the use of smoke-free products to replace cigarettes for people who would otherwise keep smoking.

Our competitors are also increasing their efforts to develop and commercialize their own smoke-free products. As a result, we expect a positive acceleration of innovation, competition, and consumer adoption that could reduce global smoking prevalence at a pace significantly beyond past reductions and future goals set by the WHO.

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

- People who quit or less people starting
- People who switch to PMI smoke-free products
- Smokers of PMI products



The rationale for our business vision

We understand that our vision of replacing cigarettes with smoke-free products is unprecedented for a tobacco company. Some will question our motives, and others will question why PMI would seek to transform a very profitable market for cigarettes. The answer is simple: Our goal of developing and commercializing less harmful products to replace cigarettes is completely aligned with the expectations of smokers, society, and our shareholders.

Our success as a business was primarily built on offering the best smoking experience through our top-quality cigarette brands, including *Marlboro*, *L&M* and *Chesterfield*. We are convinced that our continued success will depend, above all, on our ability to offer men and women who smoke less-harmful alternative products.

The business case is straightforward. PMI leads the smoke-free category, thanks to sustained R&D investments. We are therefore in an excellent position to not only switch consumers who smoke PMI cigarettes, but also those who smoke competing cigarette brands.

We are observing this in Japan, where many *IQOS* users previously smoked cigarettes made by our competitors. We are thus increasing market share, thereby enhancing business results. In addition, the profit margins of smoke-free products are similar to or exceed those of cigarettes helped by differentiated excise tax, as many governments recognize that products such as *IQOS* are not cigarettes and require a different tax system and yield.

A smoke-free world can be achieved faster if the industry as a whole, including new entrants, are incentivized for efforts in this direction. A wide variety of companies – from small start-ups to multinational tobacco companies – is increasingly active in the smoke-free category. All multinational tobacco companies are commercializing at least one smoke-free product, and the category is undergoing rapid change. This is a positive development, provided that all companies show the same commitment to scientific rigor and transparency.

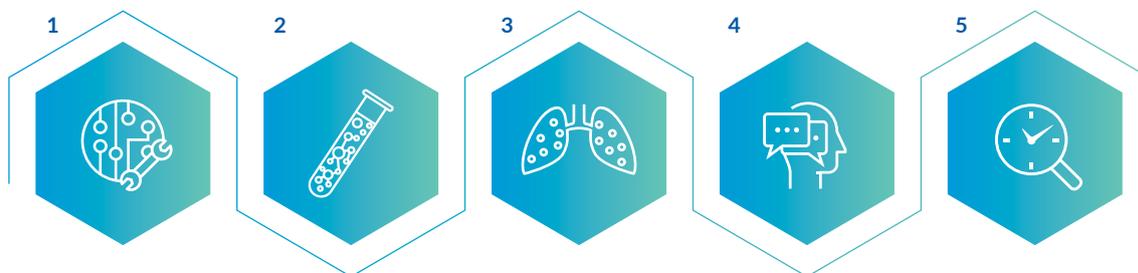
Technological innovation is transforming our industry. Developing, assessing, and commercializing novel, less-harmful alternatives to cigarettes should, in our view, become the focus of competition. PMI has been, and will continue to be, a driving force of this transformation.

We are often asked about our willingness to license our technology to other tobacco companies. PMI has granted Altria an exclusive license to commercialize *IQOS* in the United States, and we are in principle open to other partnerships where it makes business sense and helps to advance a smoke-free world.

Scientific assessment of our smoke-free products

The catalyst for our transformation is the science behind our smoke-free products. We knew from the outset that our science would be met with skepticism. Since 2008, we have hired over 400 scientists and engineers who are working in state-of-the-art facilities and use cutting-edge technologies to develop and assess our smoke-free products. Our scientific assessment program follows a stepwise approach inspired by pharmaceutical industry standards and in line with draft guidance issued by the U.S. Food and Drug Administration's (FDA) Center for Tobacco Products in 2012. We conduct our research in accordance with international standards and practices, such as internationally accepted Good Laboratory Practices (GLPs) and Good Clinical Practices (GCPs).

Our five-step approach to assess individual risk and population harm



1. Developing the product

Assessment of a smoke-free product's risk reduction potential relies on the quality of the initial product design and on strict manufacturing controls to ensure that the product delivers a consistent aerosol. We eliminate combustion and ensure that the product delivers less Harmful and Potentially Harmful Constituents (HPHCs). In this initial phase of designing a product, we verify that the product's design does not pose any additional risks to those already known for cigarettes. Only then can we begin to conduct further research.

2. Laboratory studies

Our next step is to verify the potential of a smoke-free product's aerosol to reduce risk compared to cigarette smoke by measuring a reduction in toxicity as well as a reduction in risk using laboratory models. If they are reduced significantly, we move on to clinical studies.

3. Clinical studies

Once we have completed our laboratory research, we conduct clinical studies with adult smokers to understand whether switching to smoke-free products reduces their exposure to toxic compounds. We also determine whether this leads to a favorable change in clinical risk markers associated with smoking-related diseases. The effects measured in smokers who switch to a smoke-free product are compared with those in smokers who continue to smoke cigarettes and smokers who quit using any tobacco and nicotine product for the duration of the study.

4. Consumer use research

We also conduct several types of perception and behavioral studies to better understand a smoke-free product's potential to benefit public health. These studies include research into how smokers perceive a product's risk and how they adopt and use a smoke-free product under real-life conditions. We also verify that never smokers and former smokers understand that smoke-free products are not intended for them.

5. Long-term assessment

We monitor and research the use of our smoke-free products once they are on the market in order to assess the product's contribution to harm reduction. We are undertaking post-market surveillance studies, starting in Japan, where our objective is to assess the marketed product in order to further substantiate the results collected in the pre-market clinical assessment and perception and behavioral assessment programs. This is done by collecting a set of qualitative and quantitative data on the use of the smoke-free product in real world conditions.

Developing and assessing a smoke-free product is a rigorous process⁴ that starts with the initial design of the product platform, a fundamental step for quality and consistency. Laboratory and clinical studies are then used to evaluate exposure and risk reduction potential. In addition, we also conduct research on how people understand communications about a product's risk profile and on how the product is actually used. Finally, we monitor the long-term use of all our products once they are in the marketplace. To see if our products fulfill their potential to have a positive impact on public health in the real world, it is important for us to follow the products even after they have been launched on the market. We combine a number of approaches, including safety surveillance, clinical studies and epidemiological studies, in order to progressively obtain a clearer picture of the risk-reduction potential of our products.

Our studies on *IQOS* are very advanced and point towards risk reduction. Our findings to date show that:

- *IQOS* does not generate combustion or smoke;⁵
- *IQOS* vapor contains on average 90-95% lower levels of toxicants compared to the smoke from a reference cigarette designed for scientific research, with nicotine at similar levels to cigarette smoke;⁶

IQOS: Scientific substantiation progress

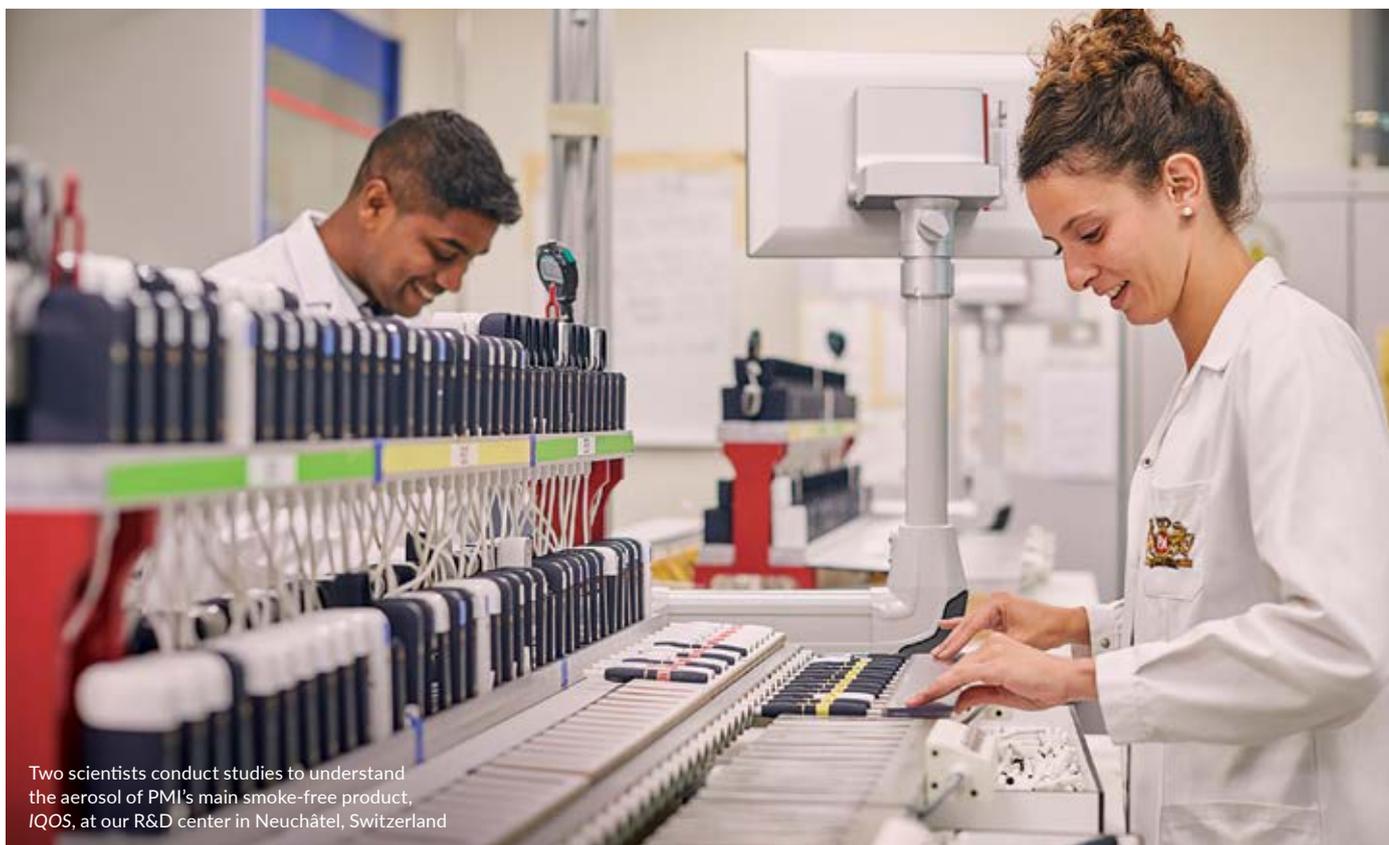
Totality of scientific evidence supporting reduced risk potential	Reduced impact on users and those around them	Improved oral hygiene
No combustion Reduced HPHC formation Reduced toxicity Reduced exposure Reversal of clinical risk markers Pre-market perception and behavior assessment Post-market surveillance Japan	Less smell No ash No risk of burning No negative impact on indoor air quality	Better breath Less unpleasant aftertaste Reduced tooth discoloration

- Laboratory studies conducted in animal models of disease confirm that these lower levels of toxicants result in *IQOS* vapor being significantly less toxic than cigarette smoke;⁷
- Laboratory studies confirm that switching to *IQOS*, conducted in animal model of diseases, led to a reduction in key smoking-related diseases and their associated mechanisms. These reductions approached those observed in the cessation group;⁸
- Clinical studies conducted to date confirm the results of our laboratory studies. Smokers who switched completely to *IQOS* in two one-week and two three-month clinical studies significantly reduced their exposure to 15 toxicants. These reductions

- approached levels observed in the cessation groups;⁹ and
- *IQOS* use does not adversely affect indoor air quality based on indoor air quality exposure limits and is not a source of second-hand smoke.⁸

These results give us confidence that switching fully to *IQOS* is likely to present less risk of harm than continuing to smoke. We are convinced its introduction will benefit public health.

Our research efforts will continue to seek ways to further reduce the risk of harm and to broaden our smoke-free product portfolio such that we have products that are acceptable and affordable alternatives to all smokers.



Two scientists conduct studies to understand the aerosol of PM's main smoke-free product, *IQOS*, at our R&D center in Neuchâtel, Switzerland

Encouraging scrutiny of our science through transparency and engagement

Ideological rhetoric is often fierce when tobacco is the topic, preventing the public from understanding factual information and undermining sound public policy. Confusion can be exacerbated by headlines and media stories. We understand that harsh media coverage or biased scientific studies are inevitable, and certainly take great care in our consumer information and our public statements because the public and consumers expect it – and deserve no less. We recognize these hurdles but are doing our best to counter and correct inaccuracies that erode the information environment in which consumers, policy makers, and investors are making important decisions.

Sharing our science, gathering feedback, and participating in robust scientific debate help answer important questions we receive about our innovative products from the public, scientific experts, and regulators. Since 2008, we have published more than 200 smoke-free-product-related studies and book chapters in peer-reviewed publications, such as the American Journal of Physiology, Nature Biotechnology and Regulatory Toxicology and Pharmacology. Over the last two years, we presented our results at over 150 scientific conferences around the world. In 2017, our scientists presented research results at 76 leading scientific conferences and published over 45 book chapters and articles in peer-reviewed journals.

In 2018, we are going one step further in our scientific transparency by making the data from our non-clinical and clinical studies about our smoke-free products available to the public.

Our systems toxicology program uses large datasets to build an understanding of disease mechanisms, predict the extent of damage to the body from exposure to toxic substances, and estimate improvements if those exposures are reduced. In 2011, we launched our sbvIMPROVER platform, a crowd-sourcing initiative developed with IBM, to enable independent scientific experts to review and validate our scientific methods and conclusions. It does so through the publication of Challenges and defined criteria by which scientific institutions

can independently develop methodologies and draw their own conclusions. Through this robust, 21st-century approach to peer review and scientific verification, we can gauge the extent to which our own research is in line with these crowd-sourced results. Since the inception of the sbvIMPROVER platform, nearly 200 institutions across the globe have taken part in the program, and the Challenges have verified our research. The Challenges and all publications and news articles related to this platform are available online.¹⁰

We use various print and online communication tools to share our science and encourage further debate and understanding about our smoke-free products. We have a dedicated website (www.PMScience.com) to share the latest information about our ongoing research, peer-reviewed publications, and we issue a regular “Scientific Update for Smoke-Free Products.”

We have created an infrastructure and website, Intervals.science,¹¹ to share more detail on the methods we use to assess products and the data we generate to support our results. With this platform, we also aim to foster increased reproducibility and trust in the science relevant for tobacco harm reduction and a dialogue among all relevant stakeholders.

Lastly, on September 12, 2017, we announced our support of the Foundation for a Smoke-Free World. We agreed to contribute \$80 million per year over the next 12 years, as specified in the agreement. We made an initial contribution of \$4.5 million in 2017 and the first annual contribution of \$80 million in the beginning of 2018. The Foundation is an independent body and is governed by its independent Board of Directors. The Foundation's role, as set out in its corporate charter, includes funding research in the field of tobacco harm reduction, encouraging measures that reduce the harm caused by smoking, and assessing the effect of reduced cigarette consumption on the industry value chain.

Investing in production capacity for smoke-free products

Our company's shift toward a smoke-free future means going beyond developing the products and science. It also means supplying the demand. The case of IQOS in Japan illustrates the need to anticipate demand. Despite optimistic projections for a nationwide roll-out of IQOS in Japan, in 2016, consumer demand exceeded our expectations. We were surprised by the rapid pace of adult smoker conversion to the product once we hit a critical mass of 2-3% market share nationwide. By June 2016, we had to ration the number of IQOS devices sold across the country to avoid a situation where smokers who had switched to IQOS would be unable to find heated tobacco units. At the same time, we accelerated investment in the manufacturing capacity for heated tobacco units.

Our factory in Neuchâtel, Switzerland, was the first to produce the heated tobacco units used with the IQOS device. In 2015, our factory in Bologna became the first site fully dedicated to heated tobacco unit production. We are also converting some existing cigarette factories such as in Greece and Romania.

Milestones and investments



+\$4.5bn

Since 2008, we have invested more than USD 4.5bn in fundamental research, product and commercial development, production capacity, scientific substantiation, and studies on adult smoker understanding



+400

World-class scientists, engineers, and technicians hired since 2008 to support our best-in-class R&D capability in our two R&D facilities in Neuchâtel (Switzerland) and Singapore



+2,900

Patents granted worldwide related to smoke-free products



PMI's factory in Greece, its first cigarette factory fully converted to the manufacture of HeatSticks, used with IQOS

Our commercialization efforts behind smoke-free products

Developing and manufacturing scientifically substantiated smoke-free products is only the start: The next challenge is to convince smokers to switch. We have learned a great deal about the consumer conversion journey since our city tests of *IQOS* in Milan, Italy, and Nagoya, Japan, in late 2014.

The regulatory environment in which we commercialize our smoke-free products varies substantially around the world. As a result, it is easier in some countries than others to make smokers aware of smoke-free products and how they should use them. The differences in the regulatory environment explain, to a large extent, why switching rates to smoke-free products vary from one geography to another.

As the heated tobacco category is new, we face several challenges unseen before: increased time to communicate product benefits; consumer acceptance of a different ritual; and a willingness to stay with the product throughout the conversion process. We know that it usually takes one to two weeks for someone to fully stop smoking cigarettes and switch to *IQOS*. We also know that those who smoke are reluctant to change

their behaviors. For these reasons, we are shifting from a business-to-business model to a consumer-centric model to assist smokers with this transition.

This effort includes the deployment of specialized field personnel, or “coaches,” who have been rigorously trained to perform quality guided trials with adult smokers and explain the fundamental differences between cigarettes and *IQOS*.

For adult smokers, a successful guided trial – a truly personalized experience – leads to the purchase of an *IQOS* kit and the start of their conversion journey. Customer care services, including digital tools, are then available to follow up and to encourage smokers not to fall back to cigarettes, as well as to address any questions or issues.

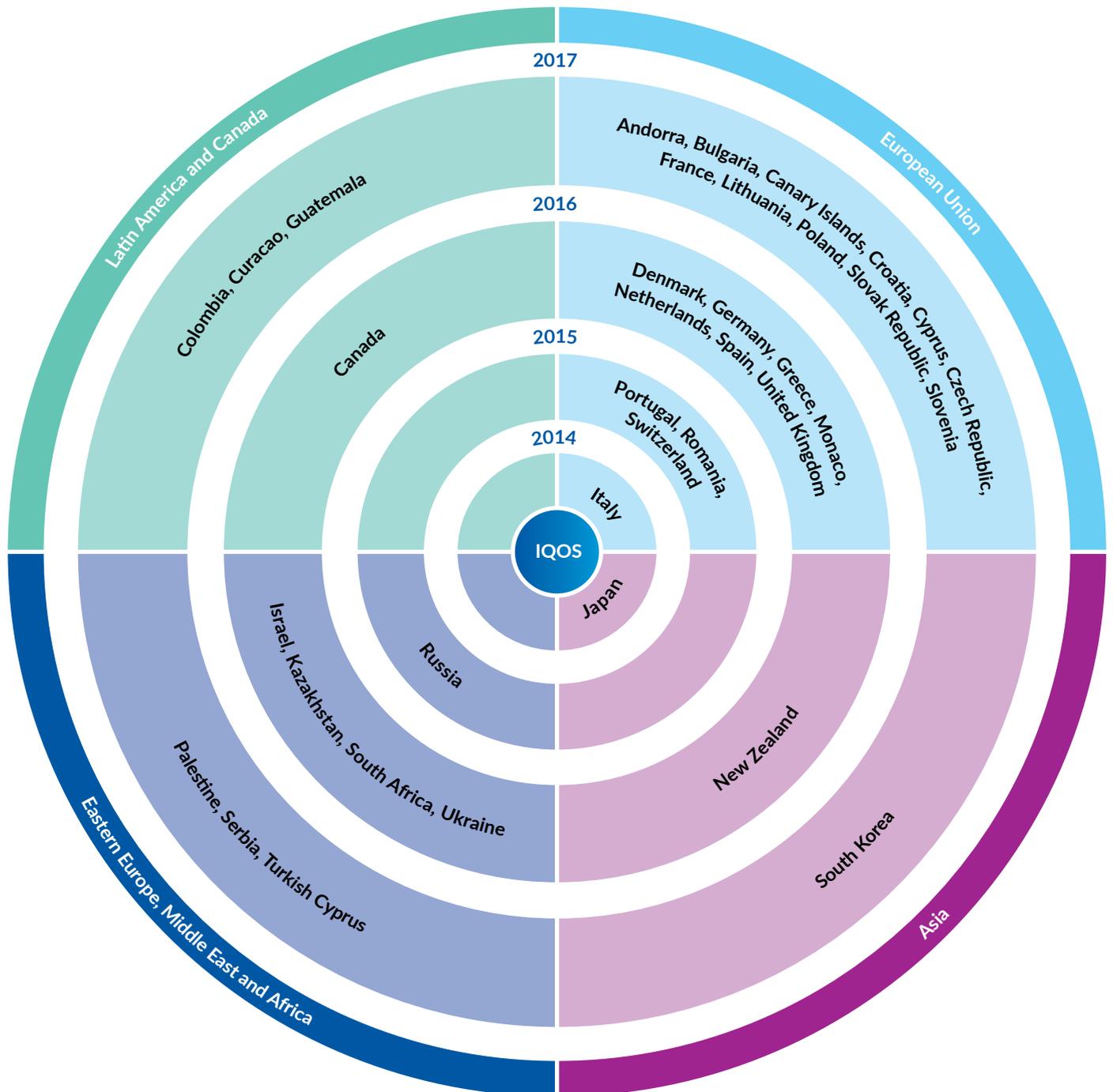
Smoke-free products contain nicotine, are addictive, and are not risk-free. We understand that any communication with adult smokers about these products must be carried out responsibly, attuned to the local environment and, observing regulatory obligations. Our employees and third parties acting on our behalf must follow strict principles in the commercialization of smoke-free products, which are formalized in our Good Conversion Practices (GCPs) which are being implemented as smoke-free products are launched. See page 28.

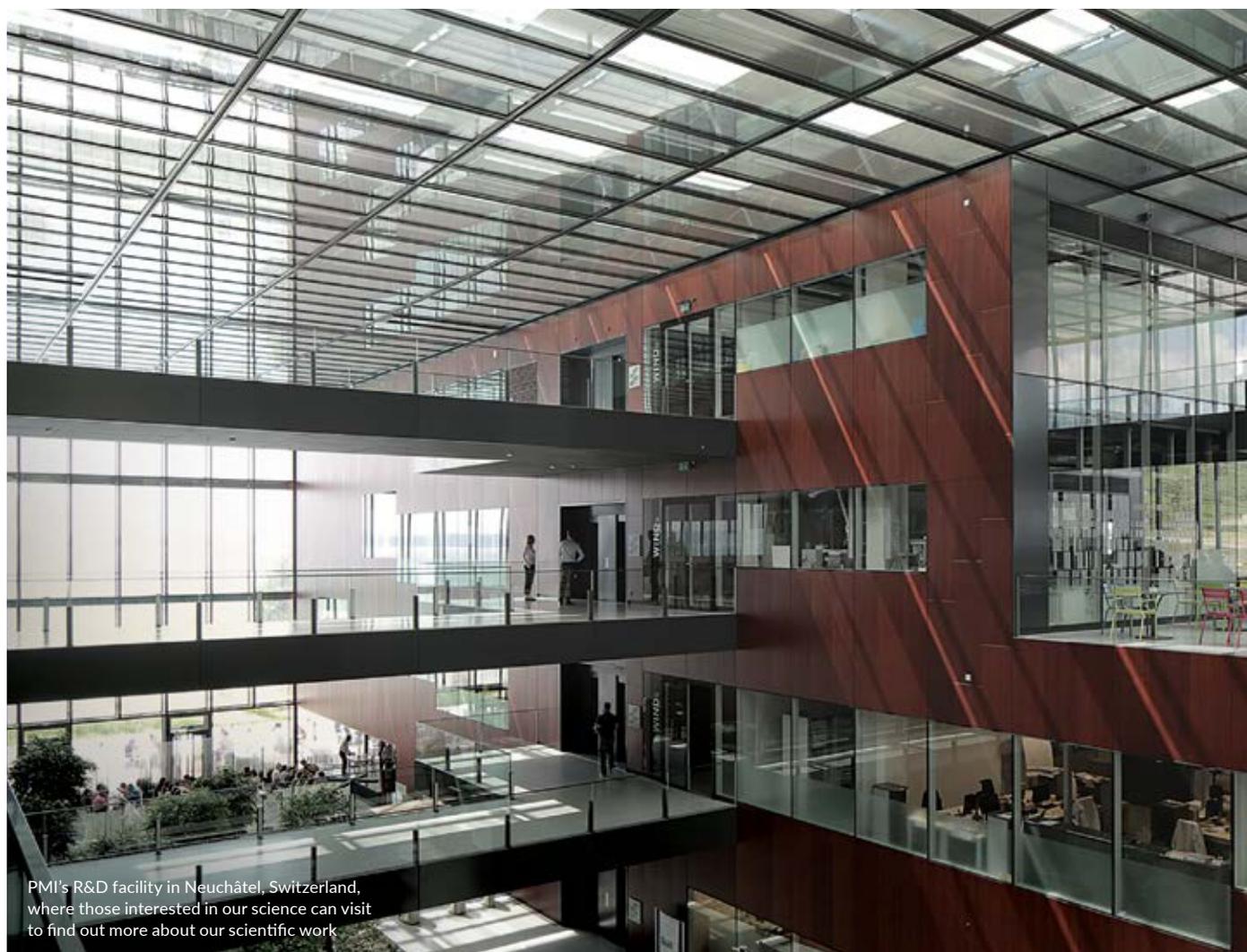
A substantial part of our marketing and sales budget in countries where we have launched *IQOS* has been re-allocated from cigarettes to *IQOS*. Clearly, to promote our smoke-free vision we must allocate our budget and headcount accordingly.

Our goal to replace cigarettes with smoke-free products extends to all countries where we operate, regardless of development status. We are only at the beginning of commercializing a fully fledged portfolio of smoke-free products and realize that additional efforts are necessary in finding products that are affordable and acceptable for consumers in different parts of the world. We acknowledge the need to continue working to develop different product platforms that can achieve this goal. We are also experimenting with other solutions to reduce the financial barrier of switching to smoke-free products, such as the temporary lending of *IQOS* devices, combined with promotional offers if permitted by local legislation.

Our global progress overview

IQOS is available in key cities in 37 markets and nationally in Japan in 2017.





PMI's R&D facility in Neuchâtel, Switzerland, where those interested in our science can visit to find out more about our scientific work

Our view on tobacco regulation

The well-known risks of smoking have led regulators to impose more restrictions and higher excise taxes on cigarettes than on any other consumer product – while allowing cigarettes to remain available to adults. There's absolutely no doubt that nicotine-containing products should be subject to strict rules and enforcement.

Comprehensive requirements were put in place to control nearly every aspect of the cigarette business. The question then becomes: What's the plan to address the needs of men and women who are looking for less harmful, yet satisfying, alternatives to smoking?

The answer, in our view, is innovation – in products and in policies. As we work to design a smoke-free future, our priorities are changing. Technology that we and others have developed makes it possible to shift the tobacco and nicotine market towards a future in which cigarettes are replaced by less harmful, yet satisfying, smoke-free alternatives.

Not all regulatory and fiscal rules that apply to cigarettes are relevant and justified for smoke-free products. Regulators must differentiate supply and demand measures – for example, product, communication, and fiscal policies – based on product attributes and risk profiles. This is of critical importance for the people who smoke and who deserve policy choices that respect them and their ability to decide. And policies should be sensible, and based on principled pragmatism rather than influenced by ideology.

Many regulators, including the U.S. FDA and Public Health England, have included tobacco harm reduction as a complementary pillar of their comprehensive tobacco control plans, complementing cessation and prevention programs.

To be clear, regulations should continue to dissuade people from starting to smoke and encourage cessation, and we support regulatory measures to this end. But it is equally clear that millions of men and women will continue to smoke, and they should have the opportunity and information to switch to better alternatives.

Nagoya, Japan, was selected as the world's first pilot market for IQOS in November 2014. We found that adult Japanese smokers readily accepted IQOS, as it allowed them to enjoy a satisfying tobacco experience with no fire, no ash, less smell, and without negatively impacting indoor air quality. By the end of the Nagoya pilot launch in August 2015, the offtake share of IQOS had grown to 0.8% for the city of Nagoya. In September 2015, Philip Morris Japan (PMJ) expanded the IQOS sales area to include 12 major Prefectures, followed by nationwide expansion in April 2016.

IQOS continued to grow in popularity, and production was soon unable to meet demand. It was not an uncommon sight to see lines in front of IQOS stores where customers would patiently queue in the mornings for a chance to purchase an IQOS device. In addition, the competition was quickly entering the category with pilot launches of heated tobacco products in Fukuoka and Sendai, in May and December 2016.

Despite the limited supply of both IQOS devices and HeatSticks, the market share in Japan continued to grow and by October 2017, three million smokers had quit smoking and converted to IQOS. As of the fourth quarter of 2017, HeatSticks represented 13.9% of the nationwide tobacco market in Japan.

While the total tobacco industry volume continues to decline in line with long-term trends, the decline of combustible products has accelerated with the introduction of heated tobacco products.

As the market leader of this new category, PMJ increased its total tobacco market share. In fact, around 70% of IQOS users have switched from competitive brands of combustible cigarettes.

Transforming our business

In July 2016, PMJ undertook a massive organizational change wherein the number of sales staff were significantly reduced, and a new IQOS development team was created. Over the last two years, 30% of PMJ staff have been fully reallocated from combustible products to smoke-free products, with the other 70% supporting both portfolios. On top of that reorganization, more than half of PMJ marketing and sales budgets were shifted to smoke-free products.

PMJ continues to transform the business model to address new challenges with innovative solutions, such as guided trials, a dedicated customer care call center, improved logistics chain, IQOS stores, and digital platforms.

Guided trials

PMJ sales staff meet face-to-face with legal-age smokers interested in switching to IQOS to explain the scientific evidence behind IQOS and how to properly use and maintain the device. During these guided trials, the staff can directly address questions by interested smokers and seek to ensure that smokers switch to IQOS with a correct understanding of the product proposition and device usage. In 2017 alone, 871,000 guided trials were conducted in Japan.

Customer care call center

With the introduction of IQOS, PMJ established a dedicated call center with staff trained to respond to a wide variety of questions ranging from scientific evidence to technical support. In 2017, the Customer Care Call Center responded to an average of 15,000 daily contacts through an omni-channel approach, including phone calls, e-mail, and online self-service support.

Logistics chain

To return and repair devices with technical issues, PMJ has created a bi-directional logistics network that allows for the return of defective devices and the delivery of a new device nationwide within 24 hours.

PMJ is also undertaking efforts to recycle the metal from devices that were returned, and we are considering how to expand and improve this program in the future.

IQOS stores

PMJ has a network of nine dedicated IQOS stores across Japan. They serve as a touchpoint for adult smokers interested in switching to IQOS to learn about the device through guided trials, as well as provide current users with customer service, IQOS devices, and accessories.

Digital platforms

PMJ has several innovative digital initiatives that support smokers on their conversion journey and provide up-to-date content to IQOS users. Smokers switching to IQOS are supported by a "30-Day Challenge" program that sends information to registered users at regular intervals either by e-mail or through a social networking service platform to support them in their lifestyle change. Also, the IQOSphere user community provides a wealth of content to registered users to enrich their IQOS experience.

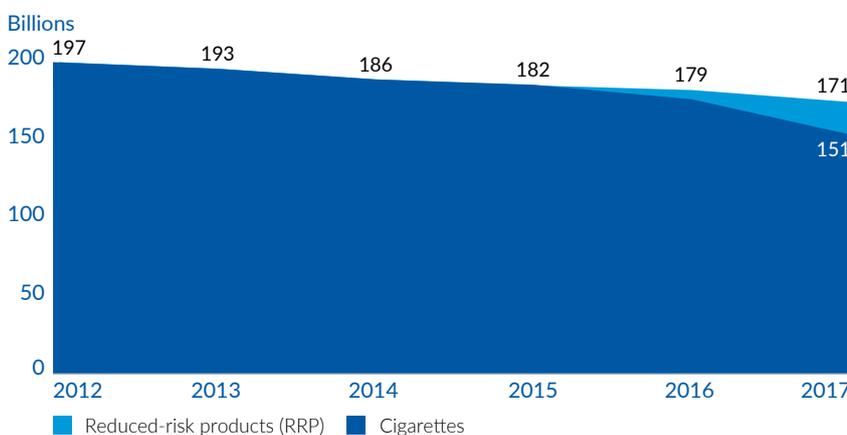
Challenges

With any new product, there are new challenges that need to be addressed. PMJ is on the forefront of PMI's transformation and is striving diligently to address these new challenges.

Accidental ingestion

According to the Japan Poison Center (JPC), an average of 97 cases of accidental or unintended HeatStick ingestion per month were reported

Total Market - In Market Sales Volume, Annual 2012-2017



Source: Tobacco Institute of Japan IMS and PMJ Estimate/RRP includes competitive RRP IMS

in 2017. As PMI became aware of such cases, to prevent accidental ingestion by children, PMJ partnered with JPC to share information and prompt consumers calling PMJ call centers to contact JPC. Additionally, PMJ started an awareness campaign through the IQOS website and leaflets. PMJ will continue to find new ways to communicate with consumers regarding the prevention of accidental *HeatStick* ingestion by children.

IQOS manners

Although *IQOS* offers many convenience benefits, *IQOS* users still need to be considerate of those around them. PMJ launched a campaign to remind users to pay attention to their surroundings when using *IQOS*. With regard to indoor use of *IQOS*, PMJ is aiming to create space for users of smoke-free products without bothering people who do not use nicotine products, for instance by transforming existing smoking areas into *IQOS* areas.

Transforming society

IQOS can truly transform the way smokers enjoy tobacco products, but to achieve a smoke-free Japan, it is important for the society as a whole to understand the potential of smoke-free products.

Mitsubishi Estate Co., Ltd. is a market-leading comprehensive real estate developer operating a wide range of real estate-related businesses. Mitsubishi Estate established 10 *IQOS* lounges in common areas of office buildings which have become very popular with tenants as they meet the needs of the rapidly growing



An *IQOS* store in Ginza, Japan.

number of *IQOS* users without the smell and high maintenance fees of traditional smoking rooms.

Goshobo is a traditional Japanese ryokan (inn) operating in the Arima hot spring resort since 1191. The management of the inn wanted to find a way to remove the potential fire hazard of combustible cigarettes while accommodating guests who wished to enjoy tobacco during their stay. Learning of *IQOS*, the management decided to make the inn completely non-smoking and offer guests the option of renting an *IQOS* device for the duration of their stay.

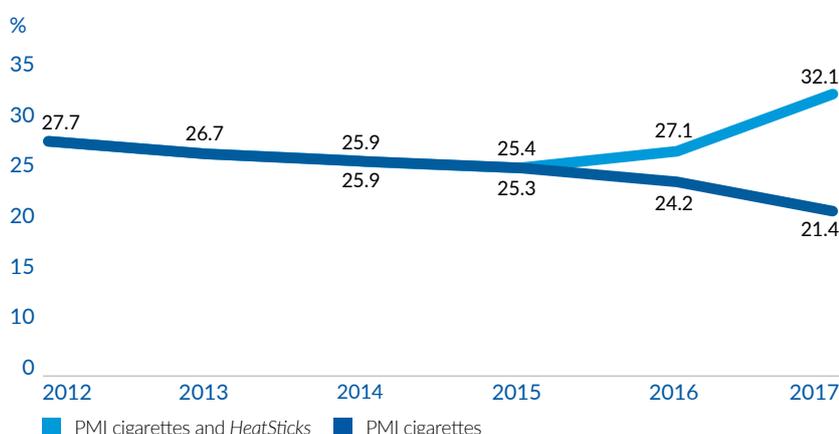
As another example, employees of a major telecommunications company were complaining about the bad smell

of the smoking room. The company met with PMJ to learn more about *IQOS* and the product's scientific substantiation, especially the impact on indoor air quality. Based on these discussions, the management decided to remodel the smoking room to an *IQOS* lounge where smoking is not allowed, but *IQOS* use is permitted. Tests were performed on the air quality of the lounge, and an employee satisfaction survey was conducted to gauge the results of the new initiative. The results show that there is no negative impact on indoor air quality, and employees who switched from cigarette smoking to *IQOS* now enjoy relaxing in this *IQOS* lounge.

Realizing a smoke-free future

In the last quarter of 2017, smoke-free products from PMJ and its competitors comprised 17% of the tobacco market, up from 5% in the same quarter of 2016. As a result of this phenomenal growth – never before seen in the tobacco category – cigarette sales in Japan have been declining at record pace, dropping by 16% over the same period. Smoke-free products already represent over 40% of PMJ's 2017 sales volume. Our ambition is to realize a smoke-free Japan by completely replacing cigarettes with smoke-free products in Japan as soon as possible.

PMJ Share of Market, Annual 2012-2017



Source: Tobacco Institute of Japan IMS and PMJ Estimate/Note: Denominator = Cigarettes + RRP including Japan Tobacco's PloomTECH and British American Tobacco's glo consumables IMS

Business transformation metrics

Last year, we introduced a set of business transformation metrics to make the actions we are taking to pursue our smoke-free vision measurable and verifiable. The first two metrics show our resource allocation between combustible products and smoke-free products, while the following four show progress in making smoke-free products the core of our business. We will continue to publish updates on our performance on a regular basis.

The first metric – **R&D expenditure** – shows how much of our total spend on research and development is dedicated to smoke-free products.

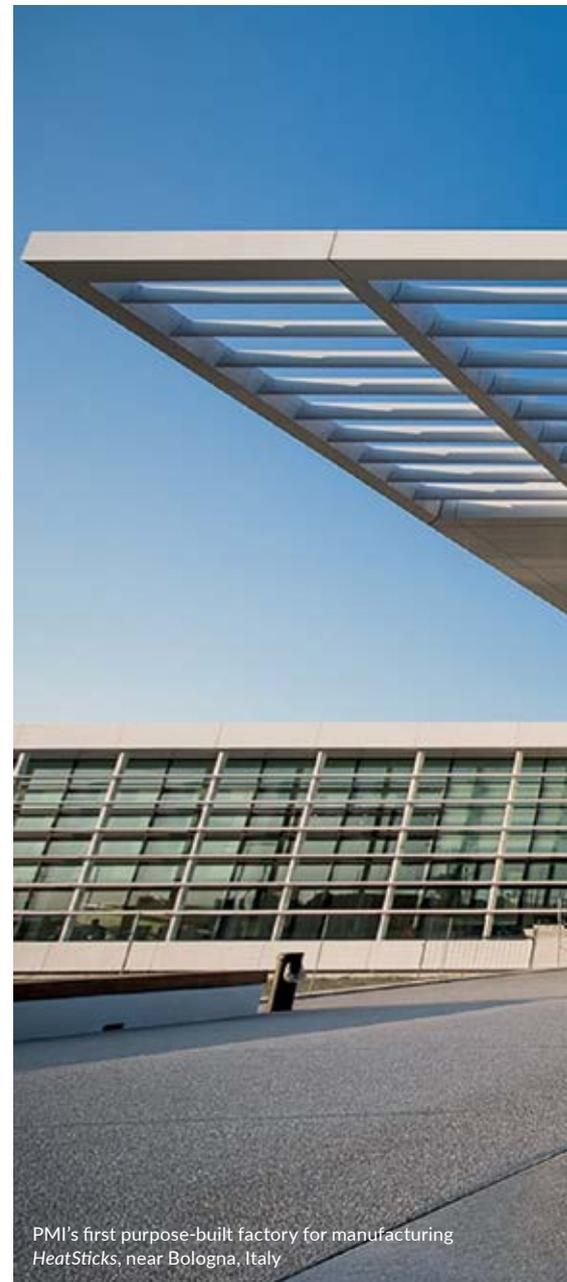
It includes the costs related to clinical studies, the development of new machinery, prototype, and product acceptability testing. The R&D expenditure for our combustible tobacco products is largely related to legal compliance requirements, such as the measurement and reporting of tar, nicotine and carbon monoxide for cigarettes, and adaptation to regulatory changes.

The second metric – **commercial expenditure** – shows how much of our total spend on the commercialization of our products is dedicated to smoke-free products. Commercial expenditure includes costs for marketing, consumer engagement, and trade promotions. As with the other metrics these refer to our global business, and therefore, the total includes commercial expenditures related to cigarettes in the many markets where we have not yet launched smoke-free products. For markets where we are commercializing new products, this percentage is and will be significantly higher. Last year, approximately 39% of our global commercial expenditure was dedicated to smoke-free products. The shift in resource allocation will continue in the years ahead.

The third metric – **net revenues** (operating revenues net of sales and promotional incentives) – shows the portion of our revenues that is generated by the sales of smoke-free products (including electronic devices and accessories). Excise taxes are excluded from the net revenue figures.

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

As for previous years, our business transformation metrics have also been assured.



PMI's first purpose-built factory for manufacturing HeatSticks, near Bologna, Italy

Our performance: Transforming our business	Actuals			Aspiration	
	2015	2016	2017	2018	2025 ¹
R&D expenditure (Smoke-free/Total)	70%	72%	74%	>80%	
Commercial expenditure (Smoke-free/Total)	8%	15%	39%	>55%	
Net Revenues ² (Smoke-free/Total)	0.2%	2.7%	13%	>16%	>38%
Smoke-free product ³ shipment volume (billion units)	0.8	7.7	36	>46	>250
Combustible product ⁴ shipment volume (billion units)	881	845	791	<755	<550
Smoke-free product shipment ratio (Smoke free/Total)	0.1%	0.9%	4.4%	>6%	>30%

1 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.

2 Excluding excise taxes. For future periods, at today's pricing and excise tax assumptions.

3 Includes heated tobacco units and e-cigarettes. The 2018 aspiration pertains to in-market sales.

4 Includes cigarettes and other combustible tobacco products.

The 2017 metrics are subject to PwC's Assurance Report. See page 75.

