



Philip Morris International

Science & Innovation in Tobacco Harm Reduction

*“Our ambition is to convince all current adult smokers that intend to continue smoking to **SWITCH TO SMOKE-FREE PRODUCTS** as soon as possible”*

André Calantzopoulos, CAGNY Conference 2016

“We have set a bold new course for the company, and are leading a full-scale effort to ensure that smoke-free products replace cigarettes to the benefit of adult smokers, society, our company and our shareholders. Our efforts are supported by world-class science, and steadfast organizational and resource commitment.”

Andre Calantzopoulos, Annual Shareholder Meeting 2017



Tobacco harm reduction



1. Smoking is addictive and causes a number of serious diseases
2. Worldwide it is estimated that by 2025 one billion people will still continue to smoke*
3. Tobacco harm reduction encourages smokers to switch to less harmful alternatives to combustible cigarettes

*The Lancet, "Global trends and projections for tobacco use, 1990–2025", March 2015.

Tobacco harm reduction

May 2014 – 53 public health specialists wrote to WHO about alternatives to smoking

Statement from specialists in nicotine science and public health policy

Dr Margaret Chan
Director General
World Health Organisation
Geneva

CC: FCTC Secretariat, Parties to the FCTC, WHO Regional Offices

26 May 2014

Dear Dr Chan

Reducing the toll of death and disease from tobacco – tobacco harm reduction and the Framework Convention on Tobacco Control (FCTC)

<https://www.clivebates.com/53-public-health-specialists-write-to-who-about-alternatives-to-smoking-heres-the-letter/>

- *Tobacco harm reduction is part of the solution, not part of the problem*
- *Tobacco harm reduction policies should **be evidence-based and proportionate to risk**, and give due weight to the significant reductions in risk that are achieved when a smoker switches to a low risk nicotine product*
- *On a precautionary basis, regulators **should avoid support** for measures that could have the **perverse effect of prolonging cigarette consumption***
- *It is **counterproductive to ban communication/information about e-cigarettes and other low risk alternatives to smoking***
- *The **tax regime for nicotine products should reflect risk** and be organized to create incentives for users to switch from smoking to low risk harm reduction products*



Nicotine is not the primary cause of smoking related diseases

1. Nicotine is naturally present in tobacco
2. Nearly all nicotine used today comes from natural sources
3. Though not risk-free, it is not the primary cause of smoking-related diseases



"Nicotine is the very same compound FDA has approved for over 30 years as a safe and effective medication. People are dying from the tobacco-related diseases from the smoke particles, not the nicotine... Can we start to take a different look at this?"

Mitch Zeller, Director of US FDA's Center for Tobacco Products; Presentation at Legacy Foundation

"It is primarily the toxins and carcinogens in tobacco smoke – not the nicotine – that cause illness and death."

NICE Public Health Guidance: Tobacco: Harm Reduction Approaches to Smoking (2013)

"Nicotine is responsible for addicting users and for fueling the tobacco epidemic, but it is the smoke from combustible tobacco products—not nicotine—that injures and kills millions of smokers"

ACS, Public Health Statement on Eliminating Combustible Tobacco Use in the United States (2018)



Growing number of countries are recognizing the benefit of better alternatives

Governments recognize the potential benefits of smoke-free alternatives for public health



“...**new product innovations** could make a lot of sense and **help people transfer off cigarettes**”

- Scott Gottlieb, Commissioner Food & Drug Administration



“help people to quit smoking by **permitting innovative technologies that minimize the risk of harm**” / “maximize the availability of safer alternatives to smoking”



“Manufacturers will need to demonstrate their products are **significantly less harmful** than tobacco smoking and that their introduction into New Zealand will **contribute to a smoke-free future.**”

- The Official website of New Zealand Government

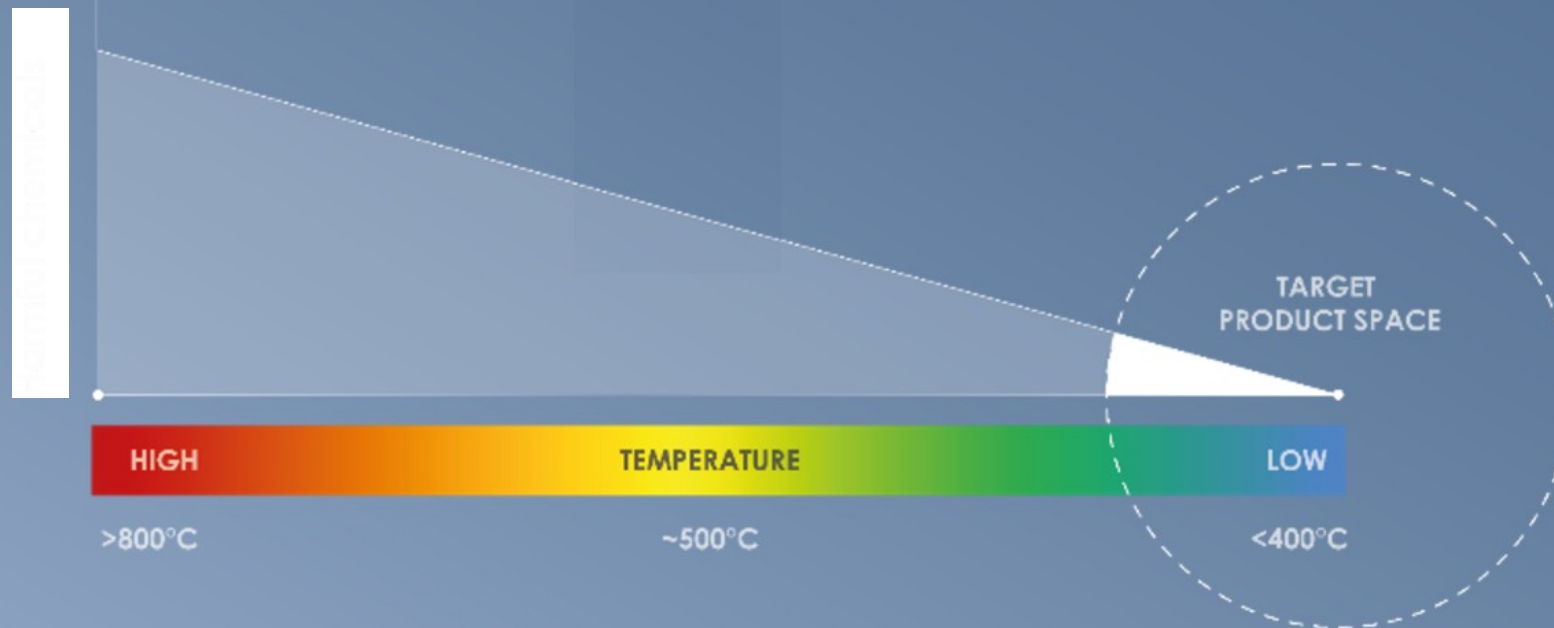


Heating instead of burning reduces constituents

Harmful chemicals



- Reducing temperature reduces overall constituents
- Reducing overall toxic compounds seen as a promising avenue to reduce risk (US Institute of Medicine)

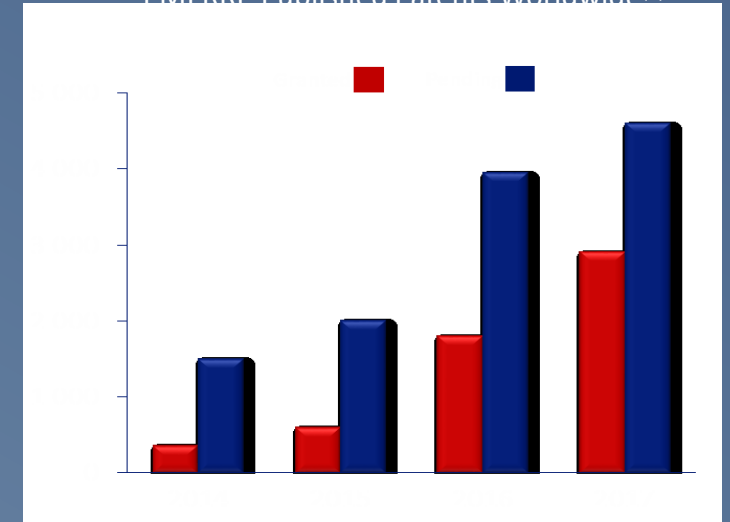


Innovation in PMI R&D

Since the spin-off from Altria (2008), PMI has significantly enhanced its R&D capabilities

1. Invested over **USD 4.5 billion**
2. Over **430 R&D experts** working on the development and assessment of products with the potential to reduce smoking-related diseases
3. A thorough multi-layer scientific assessment program, in line with the Pharmaceutical practices and US FDA draft guidance for MRTPs applications
4. Rapidly increasing IP portfolio of granted patents and pending applications
5. **58th largest patent filer** in EU, only tobacco company in top 100

PMI RRP Published Patents Worldwide^(a)



Post-Market Studies and Surveillance	
Consumer Perception and Behavior Assessment	
Clinical Trials	
Systems Toxicology Assessment	
Standard Toxicology Assessment	
Aerosol Chemistry and Physics	
Product Design and Control Principles	

(a) Cumulative status at December 31
Source: PMI Research & Development



Increasing Number of Independent Research



Committee on Toxicology (COT)



National Tobacco Quality Supervision and Test Center



Federal Institute for Risk Assessment (BfR)



National Institute of Public Health



Food & Drug Administration



National Institute for Public Health and the Environment (RIVM)



National Scientific Centre "M.D. Strazhesco Institute of Cardiology

Emerging data from the independent research further validates the PMI's research and findings. The publically available studies or reviews performed by independent researchers (without any involvement of PMI) are in line with those of our research.





Philip Morris International
**DESIGNING
A SMOKE-FREE
FUTURE**