

Philip Morris International

Science & Innovation in Tobacco Harm Reduction

Boosting Innovation for EU Industry

Ljubljana, Slovenia

April 3, 2019

*“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.

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"



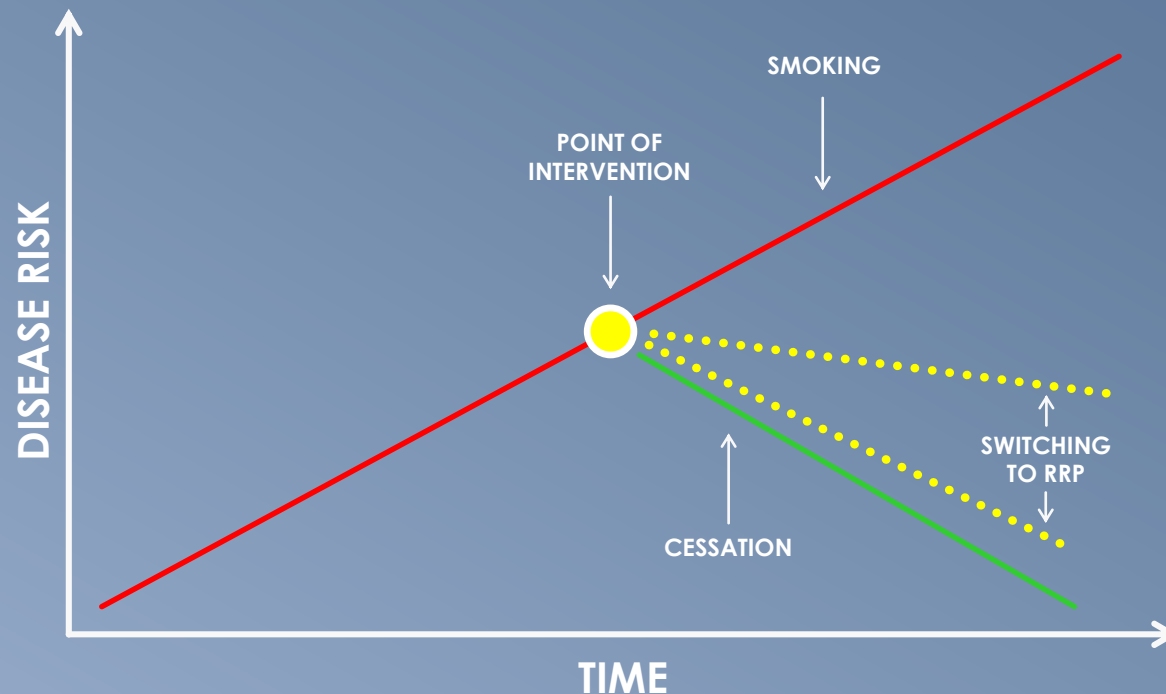
ACS, Public Health Statement on Eliminating Combustible Tobacco Use in the United States (2018)

Scientific approach in substantiating reduced risk

We apply the US Institute of Medicine's "gold standard" for assessing risk reduction: comparability to cessation

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

FROM EPIDEMIOLOGY



Post-Market Studies and Surveillance	Reduced Population Harm
Consumer Perception and Behavior Assessment	
Clinical Trials	Reduced Exposure & Risk
Systems Toxicology Assessment	Reduced Risk in Laboratory Models
Standard Toxicology Assessment	Reduced Toxicity in Laboratory Models
Aerosol Chemistry and Physics	
Product Design and Control Principles	Reduced Formation of HPHCs

We are conducting **extensive and rigorous scientific studies** to determine whether we can support reduced risk potential for our products when **compared to smoking cigarettes**.

The descriptions in the chart are for illustrative purposes only

Source: IOM (Institute of Medicine), 2012, Scientific Standards for Studies on Modified Risk Tobacco Products. Washington, DC: The National Academies Press



Innovation in PMI R&D

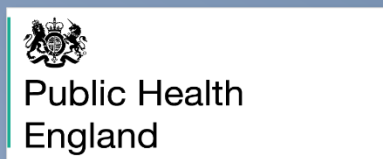
Since the spin-off from Altria (2008), PMI has significantly enhanced its R&D capabilities

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 (2600) and pending applications (4600)
5. **58th largest patent filer** in EU, only tobacco company in top 100



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

Scientific bodies looking at heat-not-burn



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**

Thank you !