

BEYOND SMOKE

CONSUMER-CENTRIC
SCIENCE & INNOVATION



**UNDERSTANDING
CONSUMERS IS
KEY TO HARM
REDUCTION**



**REAL-WORLD SCIENCE
DEMONSTRATES
ADULT SMOKERS
SWITCH TO NGP**



**THE IMPORTANCE
OF INSIGHTS:
OUR CONSUMER
STORIES**

AND MORE...



IMPERIAL
BRANDS

SCIENCE

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UNDERSTANDING CONSUMERS IS THE KEY TO HARM REDUCTION



Paola Pocci,
Chief Consumer
Officer

The tobacco industry is going through an unprecedented transformation, and it was the opportunity to help make a meaningful contribution to tobacco harm reduction which attracted me to Imperial Brands.

There are many stakeholders with an interest in reducing cigarette smoking-related harm through potentially harm reduced next generation products (NGP) – including regulators, public health, industry, and the media. We often have differing perspectives upon the key issues, but we’re united by a single purpose – to reduce smoking-related disease on a global scale. In this latest edition of *Beyond Smoke*, we’re excited to focus on the people at the heart of this endeavour – *our consumers*. As part of our commitment to making a meaningful contribution to tobacco harm reduction (THR), Imperial Brands has chosen to adopt a challenger approach. What do we mean by this? It’s a combination of a culture of high performance, a focus on agility, being led by data,

strong, differentiated brands and – above all – becoming the most consumer-centric company in our industry. As an ex-smoker, I’ve experienced my own personal journey switching from cigarettes to NGP – and I understand how many other adult smokers feel. From a health perspective, the science is clear. If you don’t smoke, please don’t start. If you already smoke, quit. However, many thousands of consumers have clearly explained to us that they value our products for the moments of relaxation and pleasure they help provide. So, it’s clear that consumer acceptance of NGP is essential for THR to succeed. In other words, the more smokers who switch, the greater the ensuing positive public health impact.

A consumer-led, data-driven approach to THR and NGP defines our challenger mindset. Over the last year, we’ve conducted almost a quarter of a million interviews, learning that:



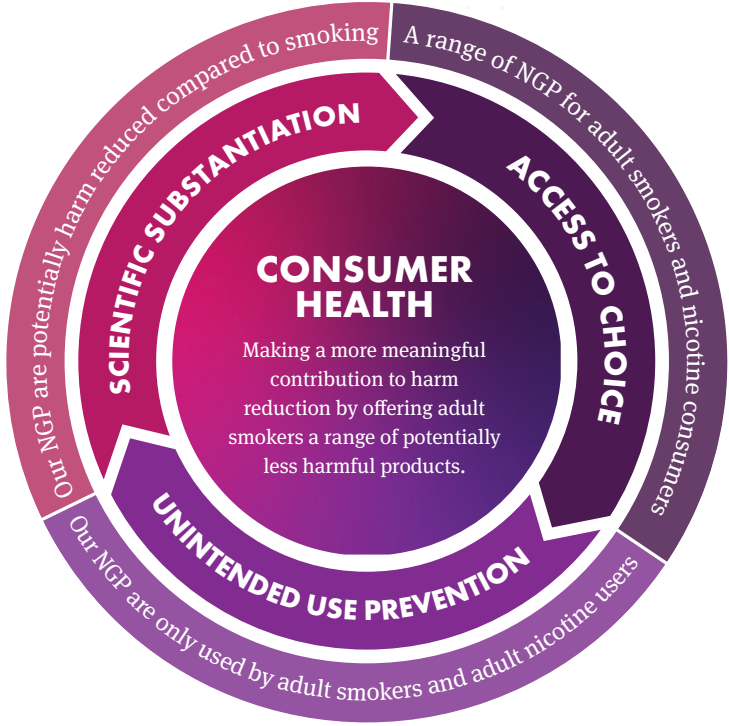
Adult smokers aren’t so different to consumers of other product categories. Most importantly, they value their health, with many now actively seeking cigarette alternatives which are potentially harm reduced compared to smoking.



Consumers have varied preferences in their choice of NGP categories. Vaping, heated and tobacco-free oral nicotine pouches all have important roles to play; currently, there’s no ‘one size fits all’ solution to facilitate THR.



Consumers won’t compromise on either product quality or sensory experience. This sensory element – what we call a ‘nicotine moment’ – includes nicotine uptake into the bloodstream, taste, aroma, and various NGP usage ‘rituals’.



Our Environmental, Sustainability, and Governance (ESG) approach to Consumer Health has harm reduction embedded at its core.

Capable Hands

To understand our consumers’ evolving preferences, and help address their various needs, we continue to invest heavily in developing our innovation and insights capabilities. (Read more on pp. 12-13.) Consumers aren’t simply searching for innovative new features and high quality components and ingredients though; they’re demanding NGP they can rely on for moments of relaxation and pleasure. As a responsible manufacturer, we therefore clearly also need to play our role in building broader regulatory and societal trust. How are we going about this? By contributing robust and transparent scientific research, including our own

close-to-real-world studies demonstrating how our NGP are helping switch adult smokers away from cigarettes – and keeping them switched. (Read more on pp. 10-11.) We’re also building scale rapidly. Our NGP are now available to more than 200 million smokers in 25 markets, while our related revenues have doubled since 2020. As an industry, we can be proud of the collective progress we have made on THR and the stories our consumers are telling us. (Read more on pp.8-9.) However, there are still over a billion adult smokers globally who have yet to choose to either quit cigarettes, or switch to NGP. So, we need to continue making the case for the availability of responsible choice – that’s the considerable challenge that still lies ahead of us. We believe that a combination of insights, science, and innovation will be key to winning over doubters – be they regulators, public health, or consumers – in the future. We also need to recognise – and overcome – the growing threat to THR that stems from rogue actors who are deliberately targeting youth or selling illegal products. Illicit activity erodes trust in NGP, deters smokers from switching, and may even lead to bans in some markets. As an industry, we’re confident we understand our consumers best, and responsible manufacturers have a vital role to play in the co-development and enforcement of risk-proportionate regulation that balances the need to protect youth and exclude irresponsible players, while supporting THR through a range of NGP. (Read more on pp. 20-21.) Making this case is not always easy, but I’m an optimist. The positive transformation of the nicotine industry over the past few years is an extraordinary accomplishment. We’re still in the early stages of this journey but, provided we stay close to our consumers and act responsibly, I believe our greatest achievements are still to come. I’m excited to introduce the latest edition of *Beyond Smoke*, and hope you enjoy reading about our progress.

NGP CASE STUDY: GREECE

Historically, Greece had one of the highest smoking rates in Europe.

However, a dramatic decline in adult smoking rates in recent years has been driven by regulation enabling the growing availability of satisfying, responsibly marketed NGP – including our vaping and heated brands blu and PULZE and iD/iSENZIA. In fact, blu has become the most popular vape in Greece!

Making a positive difference to the lives of consumers through this growing THR success story is helping to inspire our Greek market colleagues to even greater achievements.



WATCH OUR VIDEO ON THE POWER OF TOBACCO HARM REDUCTION IN GREECE





INTRODUCING OUR NEXT GENERATION PRODUCTS



Francesco Tortora
Global NGP
Category Director

In the past, the most common way of consuming nicotine was through burning tobacco. But alongside nicotine, cigarette smoke also contains hundreds of harmful chemicals.

Thanks to significant recent advances in science and innovation, that's fortunately no longer the case – our next generation products (NGP) don't burn tobacco. Instead, our peer-reviewed academic research demonstrates they deliver nicotine to consumers alongside significantly fewer, and lower levels of, harmful chemicals compared to cigarette smoke.

We acknowledge every single adult smoker's journey away from cigarettes is unique, so to help make a meaningful contribution to the public health concept of tobacco harm reduction (THR) we're committed to offering them a range of satisfying, non-combustible NGP brands that fulfil their diverse range of needs and maximise their switching opportunities.

HEATED SYSTEMS

The burning tobacco in a cigarette reaches about **900°C** at the tip, generating smoke which contains over **7000** chemicals.

Heated products are a type of NGP that heat – but, crucially, don't burn – bespoke sticks. Our sticks contain either a portion of refined tobacco (which naturally contains nicotine), or a herbal tea-based substrate (to which pharmaceutical-grade nicotine is added during the manufacturing process).

Heating the sticks creates an inhalable aerosol containing nicotine and flavour aromas – alongside fewer and substantially lower levels of harmful chemicals compared to cigarette smoke.

Our research has also shown our heated aerosol doesn't pose air quality issues to bystanders, when compared to indoor air quality regulations and guidelines.

Disclaimer: Not all our potentially harm reduced products are sold in every market in which we operate, including the US. Products sold in the US are subject to FDA regulation, and no specific reduced risk, reduced exposure, or cessation claims are or will be made regarding those products without FDA clearance.

VAPES

Vapes are a type of NGP which can contain nicotine but – crucially – no tobacco leaf. Devices are available in several formats, including open tank, pod-based, and disposable.

Instead of burning tobacco to generate smoke, vapes heat an e-liquid to create an aerosol that users inhale.

Our vape e-liquids contain pharmaceutical grade high-purity nicotine derived from tobacco leaf,

propylene glycol, and glycerol (also known as vegetable glycerine) alongside flavourings.

We're aware of societal concerns around vaping and are committed to discouraging unintended use, especially regarding youth. We don't offer baked goods, confectionery or candy flavours, and target our vapes towards mature adult smokers making a broader lifestyle shift.



TOBACCO-FREE ORAL NICOTINE POUCHES

Tobacco-free nicotine pouches are an oral NGP that represent an evolution of traditional Scandinavian smokeless tobacco snus.

Our products contain pharmaceutical grade high-purity nicotine from tobacco leaf, that's either combined with a plant fibre-based substrate (e.g., wheat or bamboo), or in a dry powder format.

Users absorb the nicotine via their gums, meaning any lung-related toxicity and disease risks associated with smoking are not to be expected.

These NGP don't produce any aerosol or smoke, so there's no impact on air quality or risk to bystanders at all.

RELATIVELY SPEAKING

To help build understanding of the harm reduction potential of NGP relative to cigarettes, we developed the relative risk scale. The scale demonstrates the crucial distinction between high-risk cigarettes and other, potentially reduced harm nicotine-containing products that don't involve tobacco combustion.



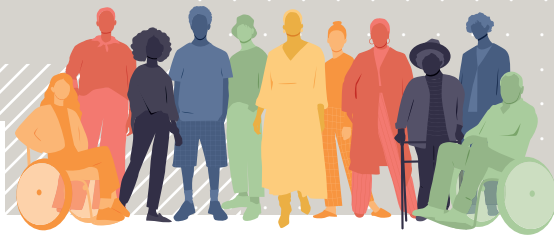
FIND OUT MORE





Janakan
Ramalingam,
Global Insights
Director

OUR CONSUMER STORIES



At Imperial Brands we're committed to always starting with the consumer – they're at the forefront of everything we do.

After all, you can create the most potentially reduced risk products on the market in terms of their scientific profiles, but if consumers ignore them, they won't make a meaningful contribution to improving public health through tobacco harm reduction.

Our insights have clearly shown us that every adult smoker consumer's journey away from cigarettes is unique, while their individual tastes are increasingly eclectic. We therefore offer a wide choice of next generation products (NGP), a variety of

nicotine strengths, plus a wide range of flavours where regulations allow.

Ensuring we continue to listen closely to our consumers is paramount to create strong, differentiated NGP brands that meet their evolving needs and help them transition away from cigarettes once and for all.

Here are a handful of the varied and inspiring stories* we've heard during thousands of insightful conversations with adult NGP users across the globe.



EMERIC

BLU, FRANCE

"I was a smoker for years, until I decided to try vaping. Now I exclusively vape. I like the flavours, and this is the reason I carry on. I don't like that cigarette taste now.

"When I started vaping, I liked minty things. Over time, I switched to a fruitier vibe. Sometimes I want watermelon, other times mango.

"There's just a lot more variety. The flavours I pick are based on how I feel. It's like music; I like dance and reggae, but I don't listen to the same thing every day. It depends on my mood."

*The comments above were recorded during consumer research sessions organised on behalf of Imperial Brands.

DONNA

BLU, UK



"I started vaping as I didn't want to smoke at home during lockdown, but now it's more for the taste and enjoyment.

"You want that relaxing element. I've never gone back to smoking – I'm a vaper now. With flavours, it's wine. You can have a red, a white or a rosé, but they each have a distinctive taste. I like the taste and smell of fruity flavours.

"I don't like tobacco flavour vapes though; I find them too harsh. Talk of restricting flavours has set alarm bells ringing for me, because I don't want to go back to cigarettes."



JUSTIN

ZONE, US

"Since my military days I wanted a product that got me over cigarettes. I needed something when I was on a job site. Homeowners don't want workers taking smoke breaks; it just doesn't look professional.

"In the morning, I jump in my truck, put in a Zone and feel like I'm ready to start my day. The pouch is smooth, and the citrus flavour is crisp and clean. After the day is over, I put in another Zone for the ride home and it helps me unwind.

"This is the future of nicotine. It's discreet and inoffensive – no smell, no tar. My family and friends are proud of me for making the switch."



JULIA

PULZE & ISENZIA
POLAND

"I wanted to find something that wouldn't smell like a cigarette. I like the flavours. There are lots, and they're noticeable and quite intense. I like lemon best; it's sour, not so sweet.

"PULZE is small and handy, it looks good. I use it in places like the nail salon during a manicure. If it doesn't bother anyone, you can use it. There's no smoke, and it doesn't smell.

"I also like to use PULZE when reading – the device in one hand and a book in the other. It's such a stress reliever."



IGNACIO

BLU, SPAIN

"Currently I'm vaping mixed berry, but I also like watermelon, or even peach flavour, and blueberry. I usually change every time that I go to buy new pods, but the fruity ones are those I like the most. This is one of the pros of vaping, right? The fact that we can experiment with flavours in a way that you cannot with traditional cigarettes.

"The smell of the flavour stays just for a while, and then it goes away. But with cigarettes, that smell... friends who visit even a few days later will still know that I have smoked. I'm not going to move back to traditional cigarettes."



OUR CONSUMER SCIENCE IS DEMONSTRATING REAL WORLD TOBACCO HARM REDUCTION POTENTIAL



Libby Clarke,
Scientific Substantiation & Engagement Lead

Imperial Brands has performed hundreds of scientific studies to substantiate the tobacco harm reduction (THR) potential of our next generation products (NGP) relative to cigarettes.

Certain research is required by regulators to launch products, but as a responsible manufacturer we're actively choosing to go beyond routine testing.

Why?

We believe making a meaningful contribution to tobacco harm reduction means going beyond simply performing 'science for compliance'.

As consumer preferences, NGP innovation, and the THR debate itself continue to all evolve at pace, the accompanying research must too.

So, while we continue to substantiate our NGP across all stages of our scientific assessment framework, we're also conducting a series of novel in-market studies intended to help demonstrate their real-world effectiveness.

Our behavioural scientists track adult smoker participants, all of whom have no intention to quit at the study onsets, to understand how they use our NGP in their daily lives to help cut down – or even entirely replace – their cigarette usage over time.

We believe the data this research produces will increasingly help build belief in NGP among key stakeholders like regulators, public health bodies, the media, and adult smoker and nicotine consumers.

Here's what we've learned so far across three studies...

SCIENCE MATTERS



FIND OUT MORE

As part of our commitment as a responsible manufacturer to offering adult smokers potentially harm reduced NGP as smoking alternatives, we've developed a multi-stage and multi-discipline scientific assessment framework to thoroughly evaluate them.

This approach ensures we're rigorously validating our NGP safety profiles throughout their lifecycles while scientifically

assessing their benefits and relative risks compared to cigarettes – focusing on both individuals and wider adult smoking populations.

Meanwhile, our specialist teams, accredited laboratories, high internal standards, and diligent product safety assessment processes are helping to ensure we're delivering quality products to safeguard our consumers.

ADULT SMOKER PARTICIPANTS

AFTER WEEK 1

AFTER WEEK 6

AFTER WEEK 24

IMPACT OF FLAVOURS

STUDY END

**STUDY 1
PULZE & ID**



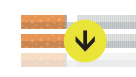
332



Fall in smoking rate of
35.6%



16%
completely switched



33.7%
substantially reduced^[1] daily cigarette use



24%
exclusively using PULZE 2.0 & ID



40.1%
of sticks consumed were fruit flavours^[2]



50% had completely switched or cut smoking by at least 50%

**STUDY 2
BLU BAR**



421



Fall in smoking rate of
30.5%



10.3%
completely switched



29.4%
substantially reduced^[1] daily cigarette use

32.5%
either completely switched or substantially reducing cigarette smoking

9.3%
had ceased all nicotine use



60%
intended to purchase blu bar based on flavours



Over 40% had completely switched, cut smoking by at least 50%, or stopped all tobacco/nicotine product use

**STUDY 3
BLU 2.0**



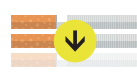
429



Fall in smoking rate of
26.8%



5.8%
completely switched



30.5%
substantially reduced^[1] daily cigarette use

26.4%
either completely switched or substantially reducing cigarette smoking

8.6%
had ceased all nicotine use



28.9%
either switched or substantially reduced exclusively using fruit flavours



Over 33% had completely switched, cut smoking by at least 50%, or stopped all tobacco/nicotine product use

CONCLUSIONS

It's clear from the study data that our heated tobacco and vape NGP possess compelling 'real-world' potential to help adult smokers either substantially reduce, or completely stop, using cigarettes. We're excited to publish these results in the academic literature, and to communicate our findings more widely to help build broader belief in NGP.

[1] For the purposes of this study, 'substantially reduced' is defined as a >50% reduction in cigarettes smoked per day.
[2] The EU has since introduced a ban on the sale of heated tobacco consumables, including ID, with characterising flavours. I.e. any product with a clearly noticeable taste or smell that isn't tobacco.



NGP INNOVATION

sense
HUB



Mattia De Dominicis,
SVP R&D
and Innovation

How consumer-centricity is transforming the way we think about next generation product innovation.

At Imperial Brands we believe true innovation is not only consumer-centric, but consumer *driven* – so starting with the consumer underpins our entire next generation product (NGP) research & development philosophy as we strive to identify technologies that satisfy our consumers while facilitating improved harm reduction potential.

This mindset led to the creation of our Sense Hubs and prototyping labs. Within them, we interact and collaborate with the actual people buying and using our NGP on a daily

basis – feeding their crucial insights into each stage of the product development process.

This approach to innovation is transforming the pace, agility, and efficiency of our product development in new and exciting ways. (See 'Makes Sense'.)

Meanwhile, we continue to build deep and open partnerships with third-parties across the globe so our innovation ecosystem is best equipped to fulfil our harm reduction ambitions.

And the results? Product

development cycles have fallen from years to months in some cases.

As a result, we now offer much greater choice to consumers.

Our continued investment in our innovation capabilities makes Imperial Brands a more exciting, diverse place in which to work and collaborate. It also clearly demonstrates our passion and commitment to providing adult smokers with a wide range of satisfying, state-of-the-art NGP that help them in their unique journeys to switch away from cigarettes.

OUR INNOVATION APPROACH



Consumer Co-creation

We prioritise 'real world' consumer insights, data, and co-ideation to maximise product impact.



Pre-to- and Prototyping

We bring NGP ideas to life more rapidly than ever, co-creating and co-iterating at pace with our consumers.



Technology Readiness

We look for technologies that provide sensorial benefits to our consumers, as well as increased harm reduction potential.



Platform Approach

We focus on technologies with the potential for long-term deployment across multiple NGP categories.

MAKES SENSE

Since opening, our innovation hubs have become a core component of our NGP pipeline – transforming the pace, agility, and efficiency of our product development through consumer collaboration.



LIVERPOOL

In the UK we bring all of our NGP concepts to life through consumer co-creation – rapidly building, understanding and testing ideas, prototypes and products together. We gather feedback on elements including size, shape, aesthetics, and ease of use and use the data to make further improvements.



HAMBURG

Our Hub in Germany focuses on heated tobacco and oral nicotine. Additional expert sensory panels perform product appraisals on a daily basis. Strong collaboration between Sense Hubs ensures best practice and new learnings are quickly shared to evolve our broader capabilities.



SHENZHEN

Our Chinese Hub hosts device and packaging laboratories plus expert panels. These facilities enable us to rapidly screen new NGP flavours and tobacco extracts during product development in collaboration with our local external partners.

FIND OUT
MORE



Formulation

This team focuses on new NGP formulations, product sample development, and production capabilities. These capabilities allow them to experiment with diverse elements including flavour and intensity, sensory experiences, and nicotine satisfaction.



Industrial Design

This team translates consumer insights into compelling product designs. Concepts are brought to life through sketches, pre/prototyping, model making, and photorealistic visualisations. Preferred consumer designs then pass to our engineering and realisation teams.



TEAM EFFORT

Meet some of the teams helping to drive our NGP innovation



Consumer Psychology

Our psychology, neuroscience, and sensory capabilities – including emotional and biometric measurements – help us develop a deep and meaningful understanding of consumer perceptions of our NGP.



Consumer Co-creation

This team engages with consumers around early NGP iterations, closely observing their reactions in our viewing studio. Following pre-to- and prototype phases, they once again gather consumer insights before subsequent market launches.

CASE STUDY: BLU BOX POD

Our latest vape innovation brings to life our commitment to understand and meet NGP consumer needs through close, impactful co-creation across our Sense Hubs.

Resulting enhancements include:

- Convenient 'box' pod format and premium materials
- Optimised mesh heating and draw resistance technology for consistent flavour delivery and intensity
- Lighter mouthpiece to help monitor e-liquid levels
- Up-to-1000-puff pods are co-compatible with blu Bar Kit
- Low liquid detection and child security lock to address key consumer needs
- Removable battery for easier recycling

blu Box Pod compared favourably to competitor products on elements including taste intensity and mouthpiece preference in consumer testing. It's launching across a range of markets soon.



A CHOICE OF FLAVOURS HELPS ADULT SMOKERS TRANSITION AWAY FROM CIGARETTES



Thomas Nahide,
Head of Harm
Reduction &
Engagement

Next generation products (NGP) are helping millions of smokers worldwide to switch away from cigarettes, with huge potential benefits to their health.

NGP, unlike cigarettes, are available in a range of flavours. A growing body of academic research suggests they are extremely important in persuading consumers to switch away from smoking and – just as importantly – not return.

This wasn't always the case. When vapes (first known as e-cigarettes) initially emerged in the mid-2000s, only tobacco and mint flavours were available. Our blu brand was among them, but – despite our best efforts – initial interest in the category among the world's one billion smokers was limited.

At the time, many consumers reported vaping wasn't sufficiently 'satisfying' or 'interesting'

for them to give up cigarettes. However, over the past decade interest in vaping and other NGP among adult smokers has surged.

Academic research on vapes suggests an important catalyst for this trend has been a growing choice of flavours. Both quantitative data and consumer insights demonstrate their importance in initially attracting – cited by almost 30% of respondents in one study – and retaining adult smokers' interest in using vapes and other NGP. Once adult smokers become accustomed to flavours, it's clear that the tobacco taste of a cigarette simply becomes less appealing².

Footnotes

1. PubMed: <https://tinyurl.com/27w3a5z>
2. Harm Reduction Journal: <https://tinyurl.com/34tfv3w3>
3. Tobacco Control Journal: <https://tinyurl.com/223j7tmu>;
PubMed: <https://tinyurl.com/4b5xkvd4>;
ATS: <https://tinyurl.com/4etcm68u>

4. IMB: <https://tinyurl.com/yc3whfxp>
5. PubMed: <https://tinyurl.com/37h3k7nj>
6. SRNT: <https://tinyurl.com/bdzhm7es>
7. NIHR: <https://tinyurl.com/ybypfysx>

OUR APPROACH TO FLAVOURS

Where permitted, our NGP are available in a range of flavours that our scientific research and consumer insights suggest enhances adult smoker switching.

However, we also recognise it's crucial our flavours aren't attractive to non-smokers – including youth – so we develop and market them responsibly.



Tobacco



Candy



Baked goods



Fruity



Mint/Menthol

The way adult smokers are using flavours to help them switch also continues to evolve. Previously³, many smokers started vaping using tobacco and menthol flavours before moving on to fruit. However, our recent in-market behavioural research (*see pp. 10-11*) suggests they're now more likely to transition *directly* to fruity flavours.

Additionally, first time purchases of fruit flavours in the United States almost doubled between 2011 and 2016 – while tobacco and menthol flavour purchases halved⁴.

While the flavours NGP users choose may – and often do – vary over time, the broader role they play in helping ensure adult smokers not only switch to NGP, but stay switched and satisfied, is increasingly clear.

For instance, one study suggested the use of fruit and other flavoured e-liquids was positively related to smokers' transitioning away from cigarettes⁵, while another concluded:

“Those (participants) using flavoured e-cigarettes, particularly menthol or mint, are more likely to quit successfully”.

On the other hand, *restricting* the flavours available to vapers is likely to reduce their appeal and therefore their effectiveness as tobacco harm reduction (THR) tools. We're concerned calls to either ban vaping, or prohibit non-tobacco vape flavours, may significantly increase the likelihood vapers could gravitate towards the black market to source their preferred flavours.

A Responsible Approach

While the current scientific evidence⁶ doesn't indicate vaping is a 'gateway' to start smoking, it's not inconceivable that flavour bans could inadvertently encourage some vapers to return to smoking cigarettes. This would be a significant blow for progressive public health policy – not just when it comes to vapes, but *all* NGP.

While adult consumer choice is important when it comes to helping facilitate THR, not all manufacturers and retailers act responsibly when it comes to offering products and flavours that are also compliant with regulations.

Inappropriate flavours, flavour names, packaging, advertisements, and NGP formats have understandably led to societal anxieties around their appeal to underage users.

We appreciate and share these concerns, and remain committed to promoting the responsible innovation and marketing of all our NGP.

To help facilitate public health wins, NGP not only need to be scientifically substantiated to be less harmful than cigarettes; they also need to be satisfying, accepted, and adopted by significant numbers of existing adult smokers.

Use by unintended audiences can severely undermine their broader public health potential – as the THR equation (below) illustrates.

The regulation of flavours is therefore a delicate balancing act. To realise the public health benefit through THR, it's necessary to maximise adult smoker transitioning away from tobacco by offering varied NGP experiences, while simultaneously minimising the likelihood these products also attract never smokers.

There are practical and enforceable steps to help achieve this and we've consistently advocated for risk-proportionate NGP regulation that encourages smokers to transition away from smoking – with flavours playing a vital role.

We're committed to continuing to gather insights, publish research, and engage with regulators and public health on this crucial topic.

THE TOBACCO HARM REDUCTION EQUATION



tobacco harm
reduction at a
population level

=



scientifically
substantiated
harm reduced
product



adult smoker
consumer
acceptance



adult smoker
consumer
usage



unintended user
appeal



unintended user
usage

**'OFF RAMP'
FROM SMOKING**

An appropriate and responsibly marketed range of flavours can **positively** impact the off-ramp and **support** THR.

**'ON RAMP'
TO NICOTINE USE**

Inappropriate and/or irresponsibly marketed flavours can **negatively** impact the on-ramp and **undermine** THR.

ILLICIT NGP:

EXAMINING A GROWING SOCIETAL CONCERN



Zoe Walker-Cleave,
Head of Corporate Affairs - NGP



The positive contribution next generation products (NGP) can make to tobacco harm reduction (THR) is undoubtedly exciting news for global public health.

The overwhelming weight of scientific evidence suggests NGP offer the world's one billion smokers potentially harm reduced alternatives to cigarettes.

However, it's clear there are still hurdles to overcome to maximise the positive impact of NGP – one of which is the rapid and concerning rise in the global illicit trade, particularly involving vapes.

This growing societal issue of counterfeit and non-compliant NGP poses a threat to the health of consumers, helps facilitate

undesirable youth access to nicotine products and – over time – generally erodes trust in genuine products sold by those manufacturers striving to safeguard their consumers.

The increasing sophistication, accessibility, and affordability of illicit NGP, combined with their unregulated nature, creates environments for more widespread adoption – particularly among consumers who don't fully understand the potential risks, including youth.

This would be a discouraging outcome for THR advocates, including responsible manufacturers and retailers, and – most importantly – consumers themselves. After all, the only people who benefit from the illicit trade are the criminals involved.

A complex societal issue like this requires a collaborative, multi-stakeholder approach to overcome – and we believe this should also include responsible manufacturers like Imperial Brands.

OUR INITIATIVES TOWARDS APPROPRIATE REGULATION AND ENFORCEMENT INCLUDE:



Engaging with regulators to highlight the scale of the illicit issue, advocating for legislative environments which minimise illicit trade, and emphasising the need for stricter enforcement (See 'Smart Regulation').



Working closely with our network of suppliers to establish robust compliance processes, and ensure 100% compliance with our Code of Conduct and high internal quality standards.



Communicating data to educate key stakeholders like regulators and public health bodies around black market NGP, while raising consumer awareness so they can better distinguish between legitimate and illicit products.



Investing in systems alongside global law enforcement agencies to improve the security of our NGP, plus sharing intelligence to help disrupt the supply of illegal product through our Anti-Illicit Trade team.



Continuing to invest in adult smoker insights and consumer-centric science and innovation to advance the responsible development of NGP categories and help contribute to tobacco harm reduction strategies.

WE'RE CONFIDENT THESE KINDS OF INITIATIVES WILL, IN TIME, HELP TO MINIMISE THE IMPACT OF THE ILLICIT TRADE ON TOBACCO HARM REDUCTION AND ALLOW NGP TO FULFIL THEIR EXCITING PUBLIC HEALTH POTENTIAL.

IDENTIFYING ILLICIT NGP...

Illicit NGP can be either counterfeit, non-compliant with regulations – or both. Here are some examples of how illegal products may potentially differ from their legitimate equivalents.

LEGAL

Maximum e-liquid volume (e.g. 2ml)
Max puff count (e.g. 1,000)
Maximum nicotine level (e.g. 20mg/ml)
Appropriate and compliant health warnings
Developed for, and marketed to, adult smokers and nicotine users only



ILLEGAL

No maximum e-liquid volume
No max puff count; some illicit NGP contain 10,000+ puffs
Non-compliant nicotine levels (e.g. 50mg/ml or higher)
Missing, or non-compliant, health warnings
Marketed and sold to never smokers and/or youth



RESPONSIBLE MANUFACTURING

Unlike those involved in the illicit trade, we're committed to fully understanding the products we're selling – and ensuring we only develop our NGP for, and market to, adult smoker consumers.

Our in-house team of professional toxicologists conduct a mixture of desk and laboratory-based assessments to build a comprehensive picture of our product safety profiles.

For our vapes, for instance, we only use pharmaceutical-grade nicotine, food-grade propylene glycol and glycerol in our e-liquids, along with the highest quality flavourings.

We also exclude certain ingredients, including those that are carcinogenic or banned by regulators in markets – like diacetyl and vitamin E acetate.

SMART REGULATION



Responsible manufacturers have a clear role to play in the development and enforcement of proportionate NGP regulation, working alongside policy makers, regulators, and broader society.

We believe pragmatic and effective regulation should balance the need to protect youth and exclude irresponsible players, while also supporting the principles of THR through the availability of a range of NGP, as well as appropriate flavours.

Potentially helpful initiatives we suggest include:



Implementing regulatory codes for product naming, packaging, and marketing. This may help limit any youth appeal of NGP.



Recognising the importance of flavours in helping switch smokers to NGP, while ensuring they're designed for, and marketed towards, adults only.



Advocating for retailer licensing regimes, and larger fines for manufacturers who don't adhere to regulations. This may provide stronger deterrents against under-age sales and non-compliant NGP.



Proposing the extension of excise to the vape category, with the ambition of providing additional enforcement tools against rogue manufacturers and retailers.

DEMYSTIFYING NICOTINE

Nicotine is a relatively simple chemical with a very complicated history...



Joe Thompson,
Group Science
& Regulatory
Affairs Director

Nicotine is found in the tobacco plant. It's also present in some common foods like tomatoes, aubergines, potatoes, and peppers – albeit at substantially lower levels compared to tobacco.

Nicotine is also a mild stimulant. Usage results in a broad range of temporary effects that many adult smokers and NGP consumers find pleasurable, including increased alertness and concentration. It also increases heart and breathing rates. (See 'How Does Nicotine Work?')

Nicotine can be consumed in different ways, but by far the most common is by smoking tobacco.

Over time, this has led to an inevitable association with cigarettes, smoking, and smoking-related disease.

Nowadays, there's clear consensus among public health

experts that nicotine is addictive and not risk-free.

However, they also agree it's the harmful chemicals in cigarette smoke created by burning tobacco – and not nicotine itself – which can potentially lead to diseases including heart disease, emphysema, and lung cancer.

Disappointingly, potentially hundreds of millions of people around the world – including adult smokers, journalists, and even regulators and public health professionals including doctors and surgeons – still don't necessarily understand or appreciate the crucial nuance between the risks of *smoking* and the risks of *nicotine*.

With this in mind, it's clear where nicotine's historical stigmatisation stems from. However, it's time to begin an honest and transparent dialogue to help shape its future.

The Next Generation

In recent years, technological advances have successfully decoupled nicotine from tobacco smoke, leading to a range of nicotine-containing, potentially harm reduced next generation products (NGP).

This is a crucial development for the world's one billion-plus adult smoker consumers.

Transitioning consumers from cigarettes to NGP presents a global public health opportunity with the potential to reduce the risks of smoking-related disease for millions of adult smokers.

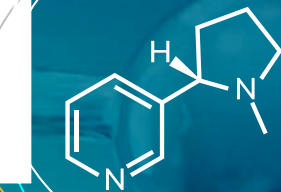
Encouragingly, the real-world evidence suggests the public health concept of tobacco harm reduction (THR) is working in countries like the UK, Sweden, Greece, and Japan that advocate and endorse NGP as a legitimate alternative for adult smokers who are uninterested or unwilling to quit.

Unfortunately, THR isn't currently universally endorsed or advocated across the globe.

Widespread misperceptions around nicotine don't help, with consumers needing – and seeking – clearer messaging around its role in smoking-related disease, but responsible manufacturers remaining largely blocked from communicating around the topic.

We believe the onus is on all parties – including industry – to work collaboratively to address these communications failures, not only in terms of challenging nicotine's misunderstood and misrepresented role in smoking-related disease, but also the positive role it can play in THR through NGP when decoupled from cigarettes and tobacco smoke.

We believe educating stakeholders through debunking key nicotine myths, while advocating for the adoption of risk-proportionate legislative frameworks that endorse and advocate high quality NGP as compelling smoking alternatives, will facilitate THR and – ultimately – improve global public health.



HOW DOES NICOTINE WORK?

Part of the nicotine molecule looks very similar to a chemical messenger (acetylcholine) that naturally occurs in our bodies and plays an important role in alertness, attention, learning, and memory.

Nicotine binds to the same receptors in human bodies as acetylcholine, mimicking its action. In adult smokers, nicotine has a similar effect to acetylcholine.

Considered a mild stimulant, nicotine produces a broad range of physical effects. These are transient and not dissimilar to those experienced when

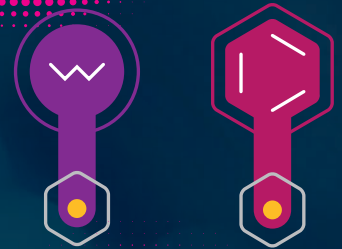
drinking coffee.

Although it's a stimulant, using nicotine may also have different effects. For instance, adult users report small doses can lead to alertness, while larger doses help with relaxation.

ATTENTION
ALERTNESS

ACETYLCHOLINE

NICOTINE



LEARNING
MEMORY

NICOTINE MYTHS: DEBUNKED

“Nicotine is poisonous!”

Like many substances, at high doses nicotine can be poisonous – but not at the intended levels for adult smokers and NGP consumers.

“Nicotine causes cancer!”

Nicotine isn't risk free but, to date, the firm scientific consensus is that nicotine, by itself, has not been established to cause cancer or cardiovascular disease.

“Nicotine is added to cigarettes!”

Nicotine occurs naturally in the tobacco plant, so there's no need to add it to cigarettes.

FIND OUT
MORE



HON LIK ON NGP:

“Manufacturers need to provide consumers with better choices.”

Hon Lik is widely acknowledged as the original inventor of the e-cigarette. He talks about the origins of vaping, the challenges the category faces... and putting consumers at the heart of harm reduction.

IMB: When you see somebody vaping, how do you feel?

HL: Pride. I believe vapes are a highly humanised product that lets users enjoy nicotine alongside potential lower risks compared to smoking cigarettes. They are, of course, only for adult smokers.

Overall, I’m satisfied and gratified to witness this revolution that’s changing the lifestyle of millions of adult smokers around the world.

IMB: It must be fascinating to watch the evolution of your original device into so many types and variants.

HL: It’s important that consumers have choices and manufacturers need to help facilitate that. Products should be of the highest quality and perform exactly as designed. That’s crucial to boosting consumer confidence and driving increasing acceptance.

IMB: How important do you think different flavours are to the vaping experience?

HL: When we first commercialised the e-cigarette there were only two variants – tobacco and tobacco-mint. Now there are many! I didn’t think of developing fruit

flavours, but they’ve certainly been effective – especially as consumers have diverse needs.

I personally think regulators should focus on enforcing age limits rather than banning flavours – we should all be as strict as possible on any potential adoption by vulnerable populations like youth.

IMB: Are you pleased with the progress made by tobacco harm reductionists and next generation nicotine products globally, or frustrated they’re not being adopted more widely and quickly?

HL: Focusing on vaping, media coverage continues to confuse many consumers. The public health principle of tobacco harm reduction has always been based on the relative harm of vaping compared to smoking.

However, anti-vaping activists always focus on the potential for absolute harm of vaping – i.e. vaping without having ever smoked cigarettes. This is not the point. They also use extreme language, including describing nicotine as ‘poison’ – which I think is incredibly misleading.

Furthermore, the World Health Organisation’s Framework Convention on Tobacco Control might be well intentioned, but in my opinion it’s also ineffective



INVENTING THE E-CIGARETTE

Hon Lik’s father smoked cigarettes and was eventually diagnosed with lung cancer. Mr Hon also smoked and knew he had to quit. However, despite using nicotine replacement therapy he found it extremely hard. Patches helped with the nicotine cravings, but he missed the actual act of smoking.

Mr Hon therefore applied his engineering and pharmaceutical background to design a device that delivered nicotine to the human body in a manner more akin to a traditional combustible cigarette. This resulted in the first electronic cigarette – the Ruyan V8 – being launched in China in 2004.

and irresponsible. For instance, their current position on vapes i.e. that the products are harmful and their usage by youth leads to smoking initiation, is extremely subjective and lacks a firm scientific basis.

Cost is another hurdle, and it will require further innovation to make future NGP more affordable and accessible to everyone.

In my opinion this will inevitably occur, and hopefully allow adult smokers everywhere to benefit from potential tobacco harm reduction.

IMB: What are your hopes for the future of vaping and other NGP?

HL: I truly believe the innovation has only just started. In the 1960s, owing to scientific and technological limitations, nicotine was considered the main harmful component in tobacco. Today, we know it’s the harmful chemicals in cigarette smoke created through tobacco combustion.

The media isn’t correcting this crucial mistake. They are also often guilty of sensationalist headlines without



interrogating the scientific data being presented or investigating more deeply.

Over time, I think it will be widely accepted that NGP like vapes are clearly harm reduced compared to combustible tobacco – hopefully creating a pathway for millions more smokers to leave cigarettes behind.

Disclaimer: Mr Hon Lik is based in China and retained as a consultant by Imperial Brands. The views reflected in this article are his own.



SUPPORTIVE REGULATORY ENVIRONMENTS CAN HELP DELIVER PUBLIC HEALTH WINS



Tobias Baude,
Director of
Corporate Affairs
- NGP

Imperial Brands is committed to offering a range of potentially harm reduced next generation product (NGP) alternatives to cigarettes for adult smokers to help make a meaningful contribution to harm reduction.

Innovating, manufacturing, and scientifically substantiating NGP are just three ingredients in the broader recipe for improved global public health.

Another crucial ingredient is supportive, consumer-friendly regulatory environments that encourage NGP uptake by significant numbers of adult smokers.

What does 'good' NGP regulation look like?

To achieve better public health outcomes, we believe

legislation and regulation clearly need to be driven by quality science and robust data, not emotion or ideology.

The THR equation (*see p. 15*) provides the ideal consumer-centric approach to help shape a positive regulatory framework for NGP.

Legislation that considers and supports the elements in the THR equation can maximise the ensuing positive public health impact.

These include:



Creating innovative and satisfying NGP.



Scientifically substantiating the harm reduction potential of NGP through robust, peer-reviewed science.



Ensuring high product standards to build confidence among regulators, public health, and consumers.



Combating NGP misperceptions through responsible education, marketing, and communications to raise awareness among key stakeholders and encourage adult smoker switching.



Advocating for robust and consistent enforcement to help ensure product compliance, minimise the illicit trade, and prevent unintended use of NGP.

What about 'bad' NGP regulation?

Unsurprisingly, it contradicts all of the previously outlined.

Naïve regulation often incorrectly considers THR as a threat to traditional tobacco control measures, rather than embracing its potential as a complementary measure.

The results of this approach include:

- Prohibition-style approaches, and/or weak enforcement of NGP that fuel the black market.
- An increase in NGP misperceptions that inhibit adult smoker switching, drive confused former smokers back to cigarettes and may even lead to further misguided legislation.
- The proliferation of irresponsible actors, including manufacturers and retailers, who further damage perceptions of NGP categories.

Another consequence of ineffective regulation is that regulators implement ever tougher, more restrictive legislation – like the forthcoming review of the European Tobacco Product Directive – to try and rectify their previous efforts, rather than ensuring the original regulation is enforced effectively.

Regarding excise, it's crucial regulators don't see categories as 'revenue raisers' to compensate for decreasing returns on traditional tobacco taxation revenues. Rather, excise should be a means to add/leverage a degree of control and scrutiny to categories that are scientifically acknowledged as not being risk-free, or accessible to unintended audiences.

Finally, misguided NGP regulation results in broader negative economic and societal consequences, including poorer public health (and the ensuing increased strain on health services), potential declines in government revenue from poorly designed taxation, rising crime rates from the illicit tobacco and NGP trade, and surges in unintended use due to weak enforcement.

Nobody wants these scenarios to come to pass.

A level playing field for NGP?

It's clear that offering NGP with the potential to help facilitate THR comes with a serious societal responsibility. But does any regulatory framework currently exist that creates a truly level playing field for responsible NGP manufacturers?

For instance, Imperial Brands has an extremely robust set of internal standards – including our scientific assessment framework and global marketing standards, to help safeguard our consumers.

We also monitor compliance and regularly engage with regulators to advocate for stronger enforcement of

category-specific regulations.

Yet these high standards are far from universal. This has resulted in enduring compliance issues, ever-increasing rises in illicit products, plus disruptive issues with youth vaping even in more mature NGP markets – let alone emerging ones.

Compliance – or rather non-compliance – is a particularly concerning, and growing, issue when it comes to NGP. Are appropriate product standards and responsible retailing being enforced strictly enough, even in traditionally pro-THR countries?

We'd argue that in most cases, they're not – and this is bad news for public health, consumers, and the broader reputation of NGP.

Hope for Healthier Futures

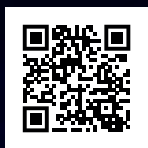
Imperial Brands believes that fostering positive relationships between industry and regulators is the right path forward, and we must seize this valuable opportunity.

This means manufacturers must strive to continue to act with integrity when it comes to product design, transparent science, and responsible marketing. In this way, we become an important part of the solution rather than being perceived (by some) as the root of the problem.

The prize is potentially healthier futures for a billion-plus adult smokers and a truly meaningful positive contribution to global public health.



BEYOND
SMOKE



FIND OUT
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