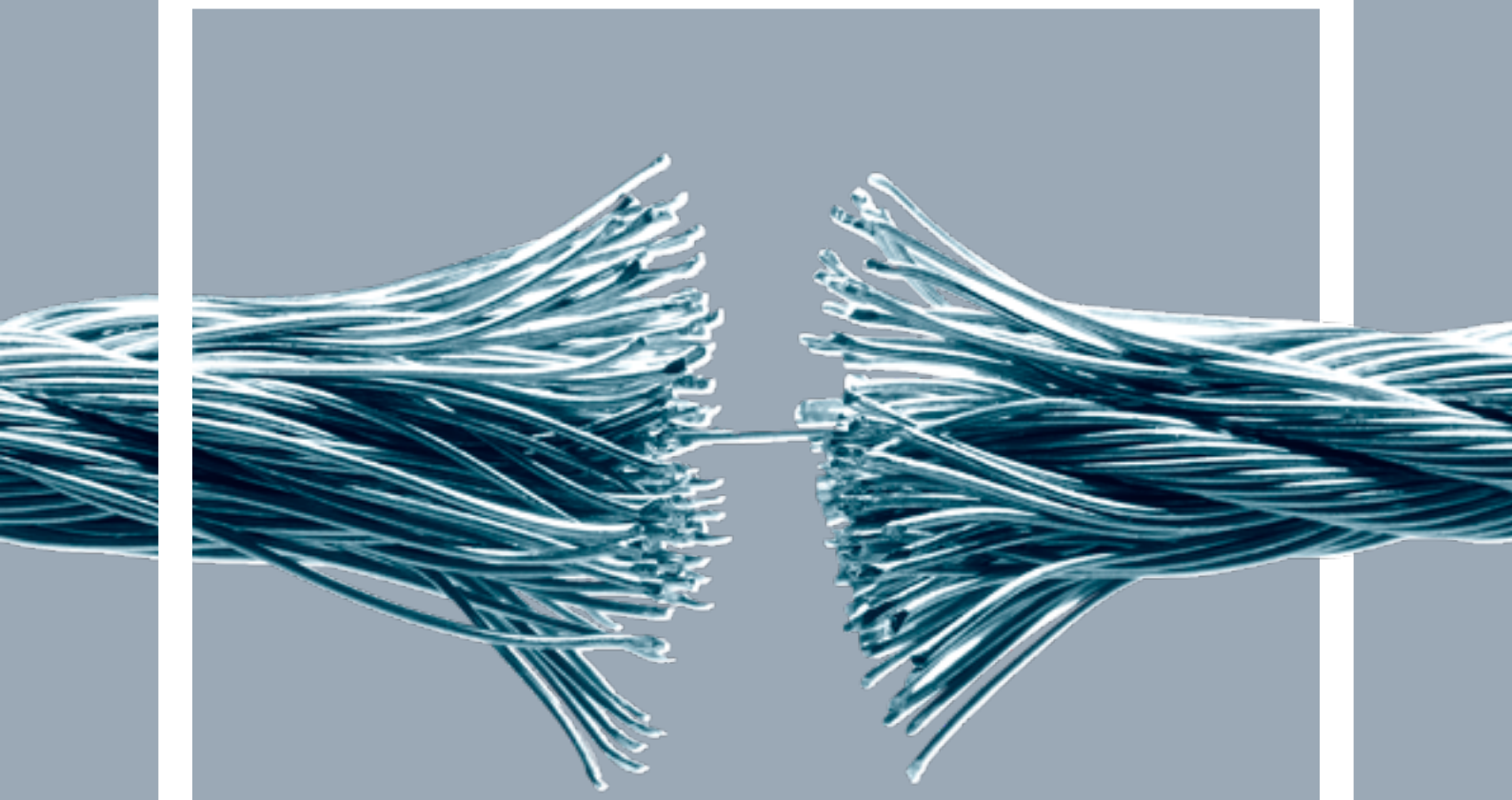
PHILIP MORRIS INTERNATIONAL



RETHINKING DISRUPTION

INNOVATING FOR BETTER IN AN ERA OF DIVISION

FALL 2022

WHITE PAPER

PHILIP MORRIS INTERNATIONAL

Rethinking Disruption: Innovating for Better in an Era of Division

Fall 2022

CONTENTS

INTRODUCTION

Disruption has multiple meanings, stretching from the most positive societal solutions (think refrigeration) to the most negative occurrences (think global pandemic).

Whatever meaning one assigns it, disruption is a defining and profoundly impactful feature of our times. As such, it merits careful consideration and handling.

With this paper and companion international study, Philip Morris International (PMI) seeks to identify better ways to harness the forces of disruption and manage the many changes in prospect. Some are changes society actively promotes and welcomes; others are forced on us. While change is a challenge for all—from individuals to global bodies—this paper concentrates on the disruptive shifts facing organizations, policymakers, and society as a whole. It argues that many of the world's problems are too fast-moving and too urgent to be addressed only with cautious, incremental approaches or be left in gridlocked stasis.

At the time of writing, in summer 2022, the world is tentatively emerging from the COVID-19 pandemic, although a new wave of infections is emerging, and is casting about to see how it can control outbreaks of a new virus, monkeypox. Russia's invasion of Ukraine continues to have profound global repercussions that could worsen as the war continues. Surging energy prices and potential gas shortages raise further concerns across Europe and beyond.

Meanwhile, extreme heat and water crises afflict much of the globe. Exacerbating matters, these dramatic developments are taking place against a backdrop of polarization and societal discord.

In view of these and myriad other urgent issues, this paper advocates for boldly breaking with the plodding pursuit of business as usual and the gridlock of sectarian trench warfare that have paralyzed policymaking. We would argue that some form of disruption is essential. Ingrained and unproductive patterns of thinking (and acting) need to be shaken up. To drive meaningful progress, however, it is critical that disruptors—in business and beyond—pursue purpose-driven change, bridge divides, and insist on more equitable outcomes. With that in mind, this paper proposes a particular version of change: **EPPIC disruption**, characterized by the following five criteria:

- **E**fficient
- **P**urposeful
- **P**ro-social
- **I**nclusive
- **C**onstructive

By prioritizing these criteria, leaders and organizations can catalyze disruptive energies that are directed and constructive rather than random and destructive.

Before we dig deeper into each characteristic, we look at the current state of and appetite for change, beginning with our company and industry.

PMI VIEWPOINT: DISRUPTING FOR BETTER

> History has taught us that inspiration arrives in times of disruption. The greatest threat to that inspiration is inaction—whether caused by fear, timidity, or simply by too many people not willing to push through change. … In both the private and public sectors, we need to encourage the emboldened and give people the space and opportunity to dream out loud, openly discussing the unobvious and challenging orthodoxy without fear. If ideas are deprived of light and oxygen, how will we ever know what's possible?
>
> —**Jacek Olczak**, CEO, Philip Morris International, "Dare Mighty Things," LinkedIn, April 12, 2021

Disruption is not of casual interest to Philip Morris International. It is our life force, our promise to stakeholders, and our pathway to transforming for good. Critically, it holds the potential for a historic public health breakthrough, which we urge policymakers, health experts, and civil society to seize.

Doing away with cigarettes would be the most significant, positive disruption for the estimated 1.1 billion people worldwide who smoke—and we have the means to achieve this in the not-too-distant future. There's no doubt that the best choice for all smokers is to quit tobacco and nicotine completely. But we know that many won't. By empowering every adult who would otherwise continue to smoke to switch instead to a better alternative, we can make cigarette smoking—the most harmful form of nicotine consumption—obsolete.

Several critical steps are required to get us to this future.

First, there is a need for innovative products that offer a better choice for adults than continuing to smoke. Those products now exist thanks to advances in science and technology and ongoing category investment by our company and others. Since 2008, PMI has invested more than USD 9 billion to develop, scientifically substantiate, and commercialize smoke-free products that, while not risk-free, are a far better choice for adult smokers than continued cigarette use.

Second, these better products must be commercialized responsibly and only to their intended audience: adults who

smoke or use other nicotine-containing products. It is critical to minimize unintended consequences, especially potential use by minors and nonsmokers, as PMI does under its Code for Design, Marketing, and Sale of Non-Combusted Alternatives.

Innovation and commercialization alone are not enough to achieve a radical change for all smokers, however. Regulation is equally critical. For decades, regulators worldwide have worked to promote smoking cessation and prevent initiation. These measures must remain in place. But for the millions of people who continue to smoke, policymakers now have another tool to reduce the harm caused by smoking: risk-proportionate regulations and taxation for tobacco and nicotine-containing products that encourage adult smokers who don't quit tobacco and nicotine altogether to switch to the better options now available and leave cigarettes behind.

We know from empirical evidence that when smokers have access to these better products and accurate information about them, many will choose to switch. We see this shift firsthand: As of June 30, 2022, an estimated 13.2 million adult smokers* have switched to PMI's smoke-free products and stopped smoking.

Accelerating the End of Smoking

With the right regulatory encouragement and support from civil society, we believe cigarette sales can end within 10 to 15 years in many countries. However, several gridlocks delay progress; chief among them: policies that deny adult smokers access to these better alternatives and to

**Excluding Russia and Ukraine*

accurate information about them, category misinformation and confusion, historical mistrust of the tobacco industry, and the ideological opposition of certain groups.

None of these obstacles is insurmountable, provided all parties—industry, policymakers, adult smokers, and anti-tobacco organizations alike—engage in good faith dialogue based on science and evidence rather than ideology and faulty assumptions. Moreover, it is essential to safeguard nonsmokers and youth from all tobacco or nicotine-containing products.

At PMI, we have chosen the path of positive disruption to bring about what we recognize as much-needed change. This has required that we fundamentally change not just our product portfolio but also our purpose, business model, value chain, and practices. While some might try to dismiss our new path as a PR stunt or wishful thinking, the proof of our progress is irrefutable: Already, as of June 30, 2022, smoke-free products account for over 30 percent of our total net revenues, up from just 0.2 percent in 2015. And we are on track to achieve our ambition to become a majority smoke-free business by 2025. Furthermore, this shift has enabled us to expand our social, human, intellectual, and manufactured capital in ways that allow us to go a step further: moving from a value proposition centered on doing less harm toward one where we can seek to have a net positive impact on society by evolving our portfolio for the long term to include products outside the tobacco and nicotine sector, focusing on wellness and healthcare.

By embracing this opportunity for meaningful tobacco harm reduction and a better future, governments, public health authorities, and civil society can harness the power of science and innovation to achieve disruptive change that benefits adults who smoke and the public health, impacting hundreds of millions of lives.

> **Science and technology have enabled us to develop smoke-free products that—while not risk-free—are a better choice than cigarettes for men and women who would otherwise continue to smoke. At PMI, we have made the bold decision to focus our resources on these products, with the ambition of completely replacing cigarettes as soon as possible.**
>
> —**Dr. Moira Gilchrist**, Vice President, Strategic and Scientific Communications, Philip Morris International, "We Cannot Let Misinformation Get in the Way of Progress," April 2021

DISRUPTING DISRUPTION

Disruption comes from the Latin *dis* ("apart") and *rumpere* ("to break"), meaning "breaking apart."

Historically, *disruption* has carried a negative connotation. Bad weather, technical faults, and worker strikes disrupt services. Hecklers disrupt meetings, and unruly students disrupt classes. It's only in the past 30 years or so that the term started to be used in a positive sense as well.

In business, the term came to prominence with the concept of "disruptive innovation," coined in the early 1990s by Harvard Business School professor Clayton Christensen. He described it as the way a product or service initially takes root at the bottom of a market—typically by being less expensive and more accessible—and then relentlessly moves upmarket, eventually displacing established brands. The notion caught on, although the eminent professor has since emphasized that the concept of disruptive innovation has been "misunderstood and misapplied." In other words, people have been getting disruption wrong. As journalist Matthew Yglesias observed, "Christensen's point about disruption and innovation initially caught on because it's a smart idea. But it's become a fad because it sounds cool."

French advertising luminary Jean-Marie Dru has a similar complaint. The author of several books with *Disruption* in the title believes he was the first person to use the term positively, back in 1990. Dru's idea of disruption is concerned with brand communication. It is a way of analyzing category conventions and finding a way for the brand to behave differently to accelerate growth. Dru notes that several years later, authors in the business space started to talk about "disruptive technologies" and "disruptive innovations" to the extent that disruption became a buzzword and even the norm.

Arguably, the most prominent standard-bearer of disruption is Silicon Valley, where "move fast and break things" has been the unofficial mantra expressing tech's swashbuckling approach to innovation.

And so it is that disruption has come to cover a broad terrain stretching from specific technical definitions all the way to casual hyperbole. At PMI, we think disruption is a useful concept as long as it is used purposefully rather than as just another word meaning "big change." For our purposes, disruption is qualitatively different from everyday change. It's about shifts that create radical breaks from what is regarded as "normal" and "expected." As we attempt to cope with the changes forced on us by circumstances and welcome the changes we desire, we need to combine the best features of the deliberative and disruptive approaches into our own takes on disruption.

CORPORATIONS AS DRIVERS OF CHANGE

Many people acknowledge the need for change—at least in theory. In practice, change can be difficult to navigate and accept, not least because established ways of doing things are deeply ingrained through habit.

Regular people, for the most part, simply live with change. What choice do we have? We may resent the disruption, but most make accommodations to it and sometimes even come to embrace it. (Think of all those people who initially vowed not to buy one of those newfangled microwave ovens.) Broadscale change, however, can be unsettling—especially when the waves come in quickly and powerfully, as they have during the global shift to digital living and working. This level of change can spur negative reactions driven by fear, uncertainty, and resentment, especially among those who feel their identities or livelihoods are threatened. These reactions, in turn, open up opportunities for political entrepreneurs who hold up the promise of returning to how things were before the changes: back to "the good old days," making X "great again," or "restoring" Y.

Policymakers and elected officials often have no choice but to deal with change. Waves of change cause governments and other authorities to act, but these actions can sometimes be plodding and may be limited to cautious tinkering at the margins. This is because so many changes in the modern era involve complex technologies (e.g., cybersecurity, artificial intelligence, fintech) that require highly specialized expertise. Furthermore, the consequences of getting it wrong loom sooner and larger than the benefits of getting it right.

Corporations tend to be more responsive. They must adapt to change if they are to

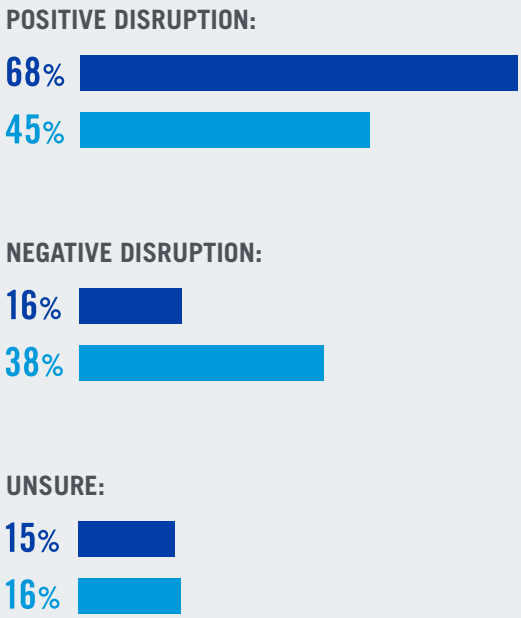
survive. Executives and employees must get ahead of the changes to avoid being overrun. They can't afford to be overly slow.

Entrepreneurs are usually champions of change. They have found that all those waves of change give them the freedom to dream up and try out the sorts of innovations that have made life radically different from just a few years ago. Like self-reinforcing loops, many of these innovations amplify the waves of change. However, it's becoming clear that disruption for disruption's sake can easily end up creating more problems than it solves.

Given these tendencies, it's no wonder the general public has more faith in corporations than governments to drive positive change, as we see in a 14-country online survey conducted by independent research firm Povaddo in July and August 2022. PMI commissioned the survey of more than 17,000 adults aged 21 and older to gauge the public's attitudes toward innovation in general and disruption in particular. To identify perceived drivers of progress, we asked respondents: "Generally speaking, do you view [business and industry / government] as a driver of positive disruption or negative disruption?" More than two-thirds of respondents (68 percent) deemed business and industry a driver of positive disruption, compared with 45 percent who said the same of government.

BUSINESS AND INDUSTRY
Generally speaking, do you view business and industry as a driver of positive or negative disruption?

GOVERNMENT
Generally speaking, do you view government as a driver of positive or negative disruption?

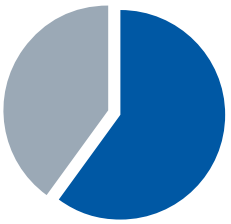


Povaddo conducted the online survey on behalf of PMI between July 19 and August 10, 2022. The survey was fielded among 17,207 general population adults aged 21 and older in 14 countries: Argentina, Brazil, Colombia, Costa Rica, Dominican Republic, Germany, Italy, Japan, Mexico, Panama, Philippines, Sweden, United Kingdom, and United States. Approximately 1,100 interviews were administered in each country. Data have been weighted by age, gender, and nicotine product use per market to match national statistics. Results are accurate to a margin of error of ±1 percent.

ATTITUDES TOWARD CHANGE

People worldwide are hungry for change.

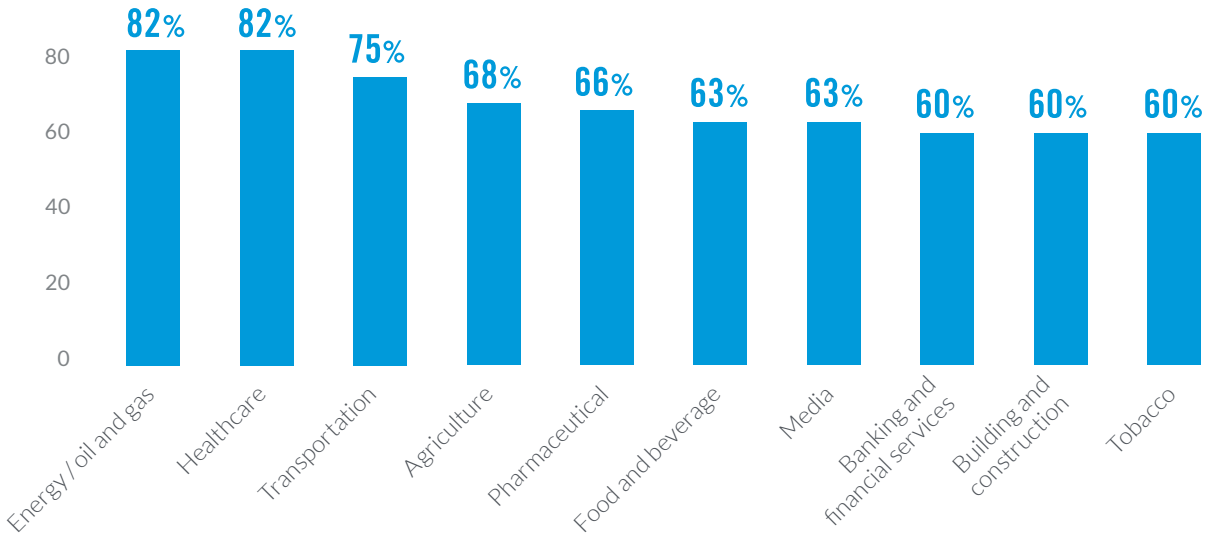
We asked respondents to the Povaddo survey whether each of 10 industries and sectors needs to radically innovate to deliver a significant positive impact on society. For all 10 of those industries, a majority of respondents indicated radical change is needed, with the highest proportions advocating shakeups within the energy and healthcare sectors. That makes sense given the immense societal concerns regarding climate change and healthcare access, affordability, and quality. Sixty percent of respondents indicated the tobacco industry requires radical change to have a positive impact.



60%

agree that the tobacco industry needs to radically change/innovate.

Industries and sectors that need to radically change/innovate to deliver a significant positive societal impact:



We also wanted to understand how the public feels about the relentless pace of scientific and technological innovation that has marked the past two decades. Top of mind for most people are the internet and smartphones, but also impactful are innovations that have transformed life behind the scenes—e.g., medical imaging, diagnostics, and devices in healthcare; sensors and processors in all forms of transportation; and control systems for utilities such as water and electricity. Literally billions of people have been swept along in these waves of change, whether they wanted to be or not.

We presented respondents with a range of a dozen innovations and asked whether they believe each will have a positive or negative impact on the world. The good news for change drivers is that respondents anticipate a positive impact for all 12 innovations. The highest net positive scores* (positive minus negative ratings) were received for the following innovations:

ELECTRIC VEHICLES:
NET 68%
+76% vs. -8%

INTERNET OF THINGS:
NET 67%
+73% vs. -6%

IMMUNOTHERAPY:
NET 67%
+71% vs. -4%

DRONE TECHNOLOGY:
NET 59%
+68% vs. -9%

ARTIFICIAL INTELLIGENCE:
NET 50%
+63% vs. -13%

SPACE EXPLORATION / SPACE TOURISM:
NET 46%
+58% vs. -12%

** Due to rounding, the net does not always tally precisely with positive and negative percentages.*

Although the lowest ratings are still net positive, the relatively high negatives indicate that the public has some concern about the following "advances":

CRYPTOCURRENCY:

NET 21%

+44% vs. -23%

METAVERSE:

NET 30%

+43% vs. -13%

CARBON EMISSIONS TRADING / OFFSET SCHEMES:

NET 30%

+48% vs. -18%

SOCIAL MEDIA:

NET 35%

+54% vs. -19%

SELF-DRIVING VEHICLES:

NET 41%

+57% vs. -16%

PLANT-BASED MEAT SUBSTITUTES:

NET 43%

+57% vs. -14%

Based on these findings, we can surmise that respondents have generally positive associations with and expectations of 21st-century technological innovation. Nevertheless, there is a noticeable undercurrent of concern, especially regarding cryptocurrency and social media. It's probably no coincidence that, of all the innovations listed, social media is the most widely adopted, with an estimated 4.62 billion users worldwide, and cryptocurrency is among the most widely covered tech news topics. Discussions surrounding both raise the potential for peril as well as progress.

The innovations listed are just a few of the many that people are experiencing or may well experience soon, such as self-checkout in stores, cashless/contact-free payments, telemedicine, remote education, personal genetic profiling, lab-grown meat, and bionic implants. It bears repeating that these and many more add up to more innovations in just a few years than previous generations experienced in a lifetime.

The takeaway from this portion of the study is that the global public is generally supportive of technology-driven change, but concerns remain.

Cigarettes Disrupted

Is a future without cigarettes possible? And if so, what would it look like?

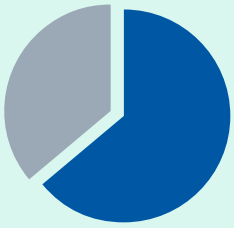
In that future, cigarettes have become obsolete. There is no longer significant consumer demand for them as smokers have quit tobacco and nicotine use altogether (the best choice a smoker can make) or have switched to a better, smoke-free alternative. Smoke-free products are strictly regulated to prevent sales to minors, and post-market surveillance continuously monitors compliance with regulatory requirements. Anti–illicit trade measures prevent sales of black market cigarettes.

At the core of such a future are innovation and the development of scientifically substantiated products that have the potential to present less risk of harm than cigarettes for adults who would otherwise continue to smoke.

Why are smoke-free products a better alternative? Decades of scientific research show that the primary cause of smoking-related disease is the high levels of harmful compounds released when tobacco is burned. By eliminating the burning, smoke-free products drastically reduce the levels of those compounds compared with those in the smoke of a burning cigarette. To be accepted as an alternative to cigarette smoking, smoke-free products (e.g., heated tobacco, e-cigarettes), like cigarettes, contain nicotine. While experts agree this substance is addictive and not risk-free, nicotine is not the primary cause of smoking-related disease. For instance, the U.K.'s Royal College of Physicians has stated: "... it is inherently unlikely that nicotine inhalation itself contributes significantly to the mortality or morbidity caused by smoking."

Smoke-free alternatives to cigarettes already exist. Millions of adults have switched to them and stopped smoking. Moreover, there is broad public support for the potential such innovations represent. In the Povaddo survey, nearly two-thirds of respondents (64 percent) agreed that new technologies and innovations have an important role to play in helping to replace cigarettes with less harmful alternatives for adult smokers. And a growing number of public health institutions, experts, and governments support the harm reduction potential of smoke-free alternatives to cigarettes.

The question now is how to speed up change. Existing efforts to discourage people from smoking and encourage those who do smoke to quit must continue, but they are not enough. Supplementing these measures with a tobacco harm reduction approach can accelerate the decline of smoking. With the right mix of government leadership and commercial initiative, we can more rapidly achieve a significant milestone in global health: a world without cigarettes.



64%

agree that new technologies and innovations have an important role to play in helping to replace cigarettes with less harmful alternatives for adult smokers.

IN SUPPORT OF PROGRAMMED CHANGE

We can observe four broad categories of change, ranging from potentially cataclysmic to constructive:

Emergency or urgent change—aka "wake-up change": Typically, this change occurs when a crisis forces people to react fast without much planning or preparation. This is disruption in the classic sense of the term—a major disturbance that thwarts plans or interrupts an event or process.

Incremental change: This change occurs over time as people make small, purposeful adjustments.

Drifting change: This sort of change happens gradually, unintentionally, barely noticed as a result of many small choices that add up over time. Management bloat, for instance, is a drifting change that can afflict organizations.

Programmed change: This type of change occurs when people decide what they want to change, plan the change, and implement it.

The past couple of years have provided vivid examples of urgent change, not least the COVID-19 crisis that emerged in early 2020. Although epidemiologists had anticipated such an outbreak and ways to deal with it, waves of disruption swept across the globe through 2020 and 2021. Health systems were overwhelmed; global supply chains were thrown into disarray; hospitality, travel, and tourism shrank dramatically; governments resorted to emergency financing to keep businesses and citizens afloat; working or learning from home became the norm for hundreds of millions.

This massively disruptive event illustrates the whiplash effect that occurs when drifting change becomes emergency change. Given other issues that command political and economic attention, the pandemic risks were not addressed with sufficient resolve. As a consequence, the world has paid a steep price that may well have been substantially lower had the need for immediate and comprehensive action been recognized and addressed earlier.

This experience of the pandemic and other recent crises raises worrying questions. Does the world have to face emergency-level situations before we are willing to take meaningful action? If so, what are our prospects for dealing effectively with the sorts of crises that pose seriously grave threats—global catastrophic risks and even existential risks; nuclear war, global warming, engineered pandemics, and rogue artificial intelligence, among them?

Society needs to develop more effective approaches to change at every level—social, corporate, regulatory, and governmental. We must snap out of drifting and incremental change and bring the spirit of disruption to programmed change. Otherwise, we are fated to react to events with emergency measures—measures apt to carry a prohibitively high cost or arrive too late.

BEYOND SECTARIAN ARGUMENTS AND GRIDLOCK

The pressing need for programmed change is evident. Equally clear are perhaps the greatest impediments to this type of change: sectarianism and gridlock.

Every year seems to bring new issues that become subject to intense polarization. The points of contention differ by country: gun control, racial justice, and reproductive rights in the United States; Brexit in the United Kingdom; regional independence in several EU and African nations. And as the world grows ever more complex, we all face difficult decisions about what we support or oppose on a whole range of issues such as taxation, social benefits, environmental protection, globalization, economic and social justice, public health, and—in recent years—pandemic mitigation policies. An irony of this moment is that in a time of infinite possibilities and unprecedented complexities, politics and public debate in many places are becoming more binary—more "either this or that."

Against this backdrop, it is hardly surprising that the more innovations and changes we face, the greater their scope to trigger intersecting controversies linked to strong opinions. Personal genetic profiling triggers privacy concerns; self-driving vehicles trigger concerns about safety and driver employment; the notion of a universal basic income triggers concerns about self-reliance and motivation; the principle of harm reduction triggers concerns that it will perpetuate the harm. And on and on.

It also seems to be increasingly the case that self-selecting sectarian identities come into play on any issue. Insiders ("us") regard outsiders ("them") as not just having different opinions or interests but as being fundamentally different in every respect. Those on one side dislike and distrust "them" intensely, perceiving them as immoral and wicked—or even as a genuine existential threat. At PMI, we are familiar with being perceived as "them." We recognize the origin of this perception, even though it is long out of date.

Where sectarian attitudes prevail, issues are approached from a place of entrenched prejudices reinforced by a confirmation bias that seeks to justify the response. Equally troubling, issues aren't reexamined in the light of newly established facts and evidence. On the contrary, even the idea of objective facts and evidence can become controversial when sectarian identities are involved. This can cause legislative and regulatory gridlock as various policymakers and groups

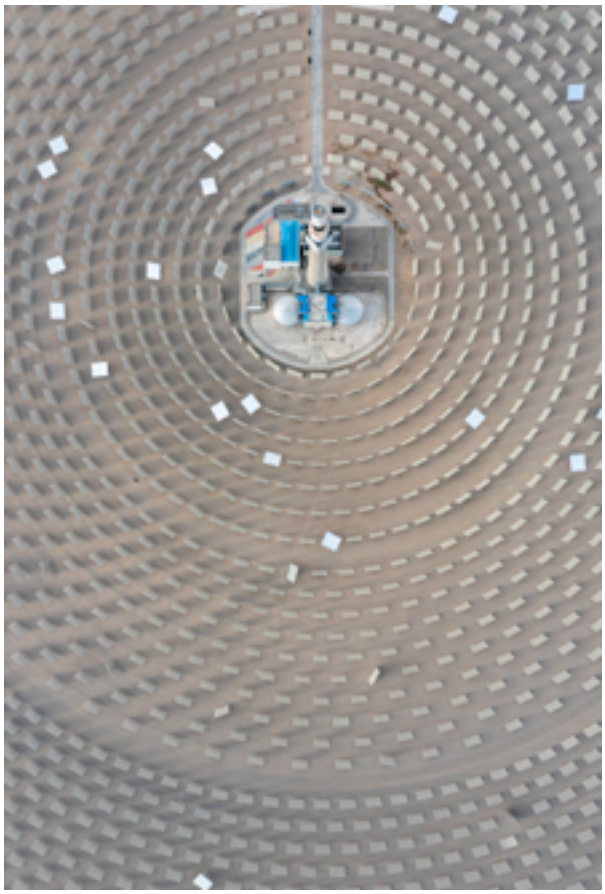
disagree on whether there is a problem, whether change is required, what outcome is desired, what measures are needed, and how the outcome should be evaluated. When polarization and sectarianism are heightened, a proposed solution is likely to be rejected for no other reason than that it comes from "the other side." The presence of sectarianism can have a serious impact on any attempt to agree on any sort of change process.

This sort of gridlock is bad enough when the issues involved are local and have a relatively low immediate impact on people's well-being—e.g., zoning decisions, the siting of cell phone masts. Any harm from gridlock on these issues is limited and can be undone when the gridlock is resolved.

When the issues go beyond local and potentially impact people's health—e.g., emissions controls, vehicle safety standards, and harm reduction measures—harm from gridlock is likely to last longer, with adverse effects that may become apparent only over time.

When the issues are global, with effects that are cumulative, not easily reversible, and potentially existential—e.g., unaccountable artificial intelligence or greenhouse gas emissions leading to runaway climate change—harm from gridlock risks accumulating to the point where human civilization is threatened.

While these various types of issues represent different orders of risk, the gridlock that prevents them from being addressed is comparable. We believe that we can all improve our gridlock-disrupting skills by acknowledging the possibility that—regardless of sectarian identity and ideology—"the other side" probably has relevant facts and perceptions to bring to the debate. The "inclusive" element of EPPIC disruption may well involve incorporating input from perceived opponents.



Tobacco Harm Reduction: Disrupting Gridlock to the Benefit of Adults Who Smoke and Public Health

For the first time in history, smoke-free alternatives to cigarette smoking exist—alternatives that can make a profound difference for those adults who would otherwise continue to smoke.

A substantial body of scientific evidence shows that these alternatives—while not risk-free and containing nicotine, which is addictive—are a much better choice than continuing to smoke. Given the well-known harm caused by smoking, it stands to reason that adult smokers who otherwise would not quit would be encouraged to switch to these better alternatives. That's not the case in every country.

At present, the debate around the potential these alternatives represent for adults who smoke and for public health remains polarized and politicized. Influential discussions often take place behind closed doors, allowing extreme views and the agendas of special interest groups to carry more weight than those of adult smokers—the people most directly affected by the policies under debate. Ideologically driven initiatives and flawed science are picked up by the media, confusing smokers and the public. This confusion has been leveraged by interest groups in several countries to call for legislation that prohibits some or all smoke-free alternatives, leaving adults who don't quit altogether with no option but to continue using cigarettes, the most harmful form of tobacco and nicotine consumption. We know that in any given year, the vast majority of adult smokers don't quit, and so, without better options, they continue to smoke.

By not insisting on an inclusive and fact-based dialogue on the role and potential of scientifically substantiated smoke-free alternatives, policymakers are effectively losing sight of those who stand to gain the most from these products.

Meaningful tobacco harm reduction is within reach. We can achieve it faster if regulators worldwide make way for innovative thinking, scientific fact, inclusive dialogue, and constructive debate. By reaching a consensus that smoke-free alternatives—when subject to proper government oversight and regulation to protect youth and nonsmokers—are part of a sound tobacco policy, society has a unique opportunity to achieve a public health breakthrough and accelerate progress toward a future without cigarettes.

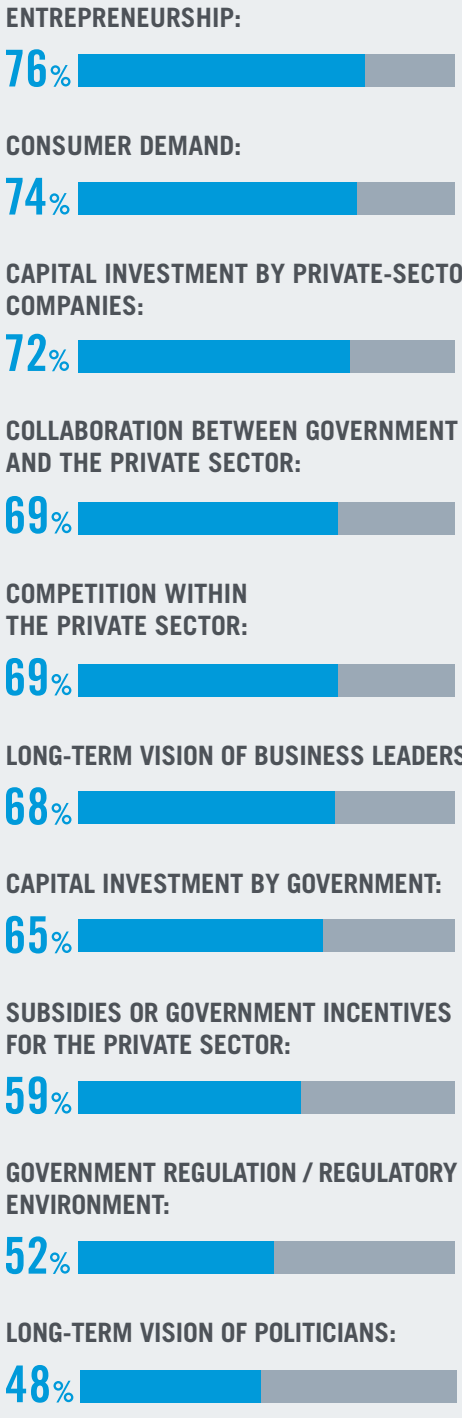
POLICY AS AN ENABLER OF POSITIVE CHANGE

Governments are not typically considered catalysts of innovation. This is hardly surprising.

Policymakers and regulators operate in a complex environment. They are subject to political party lines that may well change with election cycles. They are answerable to the media, whose job is to question and report on their activities. They are answerable to the public, who engage in debate about policy and voice their opinions, both at the polls and through social media. They have to formulate policy proposals and regulations, knowing that their nuanced thinking and carefully crafted wording are likely to be mangled during negotiations. And they know that their policies will impact millions of people over many years—for better or worse. They have a responsibility to seek out, examine, and evaluate the facts to inform their decision-making. And they must be mindful of public opinion, not least because they risk being pilloried and removed from office if they deviate too far from what their constituents think and want.

Findings from the Povaddo survey support this view. Presented with 10 factors that affect the pace of innovation, respondents placed government regulation and the long-term vision of politicians at the bottom of the list, with only 52 percent and 48 percent, respectively, agreeing that these enable innovation. Conversely, more than 7 in 10 respondents consider

For each of the following, please indicate whether you believe it enables or hinders innovation. (% choosing "enables")



entrepreneurship, consumer demand, and capital investment by private-sector companies enablers of innovation.

As outlined earlier in this paper, businesses in general and entrepreneurs in particular tend to be quicker to respond to change. Unlike legislators and regulators, their default position cannot be to shut the doors and keep quiet, to slow-walk their response and stick with the status quo. In brief, the inbuilt incentives are for businesses to forge ahead with innovations and for regulators to mistrust and restrain the innovation: for business to be the accelerator and for regulators to be the brake.

It need not be this way. Conceived and applied well, regulation can facilitate innovation and foster positive change while safeguarding the public interest. It can be a catalyst of EPPIC disruption. The key is for regulators to engage in understanding and helping to shepherd positive innovation rather than stand in its way.

As innovation accelerates and challenges become more complex, society needs new and quicker ways to reach technical and scientific consensus. Without robust processes to identify and understand relevant information, debate its implications, and translate it into sound policy, we will be stuck with a status quo that is delivering unsatisfactory results.

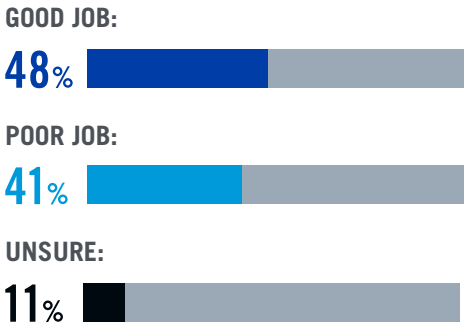
A Modern and Pragmatic Regulatory Framework to Enable Access to Public Health Innovations

Regulating innovation is rarely something lawmakers get right the first time, particularly in the absence of relevant expertise and up-to-date research. This tendency is not lost on the public. Less than half of respondents to the Povaddo survey (48 percent) think the government and public health authorities in their country have done a good job of embracing new technologies and innovations to improve public health. Nearly as many (41 percent) believe they have done a poor job. The results were more pronounced on the topic of access. Nearly half of respondents (47 percent) believe their governments and public health authorities have done a poor job of ensuring everyone has access to the latest public health innovations and technologies, compared with 42 percent who believe they have done a good job.

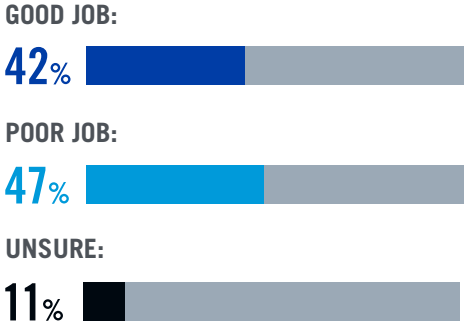
By implementing informed legislation that anticipates and acknowledges innovation, enabling adoption of the novel product or service while safeguarding the interests of the wider public, policymakers can address many of the barriers that

impede progress. A phased-in regulatory approach—one that incorporates regular reviews of the innovation and shifting market realities—is best suited to today's fast-paced advances in technology and science, ensuring that policies adapt and improve over time.

Do you believe government and public health authorities have done a good job or a poor job of embracing new technologies and innovations as a way to improve public health in your country?



Generally speaking, do you believe government and public health authorities in your country have done a good job or a poor job of ensuring everyone has access to the latest innovations and technologies that can improve public health?



An approach of this nature is critical to regulating change in the tobacco and nicotine space. Now that better alternatives to cigarettes exist, we need regulations crafted to encourage more adult smokers who don't quit tobacco and nicotine altogether to switch to these products while ensuring their commercialization does not lead to uptake by minors or nonsmokers. For example, components of such a regulatory framework can include:

- *Increased support for prevention, quitting campaigns, and cessation services, with a particular focus on vulnerable populations*
- *Measures to address smokers' confusion about the roles of combustion and nicotine in developing smoking-related disease*
- *Regulatory and fiscal differentiation between combusted tobacco products and noncombusted forms of tobacco and nicotine use, coupled with robust safeguards against unintended use*
- *Post-market monitoring and surveillance to assess public health outcomes and the impact of policy interventions*

We have before us a unique opportunity for public health. To take full advantage, all relevant stakeholders—including businesses, government, public health authorities, and consumer groups—must work together to cocreate a modern and pragmatic regulatory framework that promotes progress for all adult smokers.

THE NEW DISRUPTORS: GOING EPPIC

Substantial and rapid progress inevitably involves disruption.

The business world, in particular, has shown that disruption—especially Christensen's disruptive innovation and Dru's disrupting conventions—can be a powerful strategy to solve problems, fulfill unmet consumer needs, and even do things that few outside science fiction imagined possible until recently.

A disruptive mindset in business powered by technological innovation, for instance, has revolutionized in just a few years how people access all forms of media content—newspapers, books, music, movies, and TV. It has opened up a whole ecosystem of podcasting. It has transformed how we shop, how we book travel, and how many people work. While these have all helped to make life more convenient, they are "nice to haves" rather than essentials. These processes were ripe to be disrupted, but they didn't need to be disrupted. They weren't broken, but that didn't stop some entrepreneurs from thinking they needed fixing.

In contrast, some things are well and truly broken. They need disrupting and fixing, particularly when the principles or processes on which they're based create bad outcomes for individuals, society, or the planet. We must recognize, however, that even intentional disruptive innovation does not always equal progress. Disruption without regard to its social consequences does not necessarily bring about lasting and meaningful improvement. And particularly in today's divisive environment, with disruption becoming a go-to strategy for social and political actors alike, its consequences can be detrimental.

How can society leverage the power of innovation and disruptive change for the benefit of all? A new mindset and approach are needed to address big societal issues. To drive meaningful progress, the new disruptors—in business and beyond—need to go **EPPIC**:

Efficient: Politically or commercially, anybody with enough resources can come along and disrupt things with no purpose in mind beyond profits or power. This may well shake things up and break logjams, but it all too easily ends up benefitting the few at the expense of everyone else. This sort of me-first mindset may be expected and even accepted in the world of startups and venture capital, but is it sustainable? There is no shortage of examples of disruptors who rose to fame and then crashed—either due to external factors (e.g., economic downturn) or because of their deficiencies and lack of planning. Hence the need for targeted, purposeful disruptions that aim to get the

best possible return on time and money by analyzing critical variables in the system and identifying which can be disrupted to create the most positive change. For example, the use of airline e-ticketing and self-check disrupted the time-consuming processes of issuing physical tickets and the personnel-heavy process of checking in.

Purposeful: "For what purpose?" is a vital question that should be raised repeatedly when undertaking any initiative, especially disruption. "Because things need to change" is not a satisfactory answer; it's just the start of an answer. Sometimes the urge to disrupt comes first as a cool idea, with possible greater purposes only agreed on later. For example, wearables started as a cool idea for counting steps and gradually grew into all-around fitness and activity monitors. There can be value in startups or individuals in noncritical domains experimenting with random, playful, open-ended disruption. That approach verges on dangerous territory, however, when the stakes are high. In those instances, it is essential to be explicit with all stakeholders about what outcome the disruption aims to achieve.

Pro-social: Would-be disruptors typically talk about how they are disrupting to revolutionize industry X and provide customers with better products or services. This is a fine ambition as far as it goes,

but how far does it go? Is it possible that, globally, a small subset of society typically benefits most from innovations? Analysis by an international research data and analytics group in six markets—France, Germany, Great Britain, India, Indonesia, and the U.S.—found that early adopters of new technologies are most likely to be younger men (aged 18–34) with higher-than-average

disposable incomes. In our view, disruption must aim to be of substantial benefit to wider society. To check that a disruption is pro-social, we believe in soliciting inputs from a range of people who can bring alternative perspectives to bear—including nonexperts who don't have commitments to previous decisions and aren't afraid to ask "stupid" questions.

Inclusive: Disruptors know how to command attention. They tend to be good at voicing their agendas and driving them over objections. These attributes can be dangerous if they serve only narrow interests. Conversely, attention-getting disruptors can be valuable if they serve a broad constituency of interests. We at PMI believe it's important and valuable to hear a broad array of voices and respect their input. Unless there is a serious commitment to inclusiveness, disruption risks being a way for the wealthiest and most privileged to become even wealthier and more privileged. This has been an inexorable trend over the past quarter century. It's high time to disrupt that trend.

Constructive: The word *disruption* contains the idea of breaking. In fact, what makes disruption appealing for some people is its sense of defying convention and shaking off the shackles of societal norms. Maxims conveying an unwavering determination to realize one's vision without fear evoke the sort of swaggering attitudes that have become aspirational. We get all that, and we understand that disruption will probably involve breaking things, but this mustn't be an end in itself. For us, the point of disruption is to break up logjams and shake up stale habits that get in the way of progress.

Delivering Disruptive Innovation Equitably

For all the progress and opportunity innovation unleashes, it must be coupled with a conscious and concerted effort from business and government to ensure its benefits are accessible to all. Several factors impact access, including awareness, affordability, and acceptability.

There is no doubt that some innovations reduce inequalities—think of the development of solar-powered pumps that offer remote communities access to clean water. However, the benefits of innovation are not always equitably distributed, and that lack of equity becomes even more evident in times of crisis. Consider, for example, the global energy crisis. Those impacted most by the high cost of energy—low- and middle-income households—may find it cost-prohibitive to switch to solar energy, purchase an electric car, change to energy-efficient devices, or access other high-tech means of reducing their energy consumption.

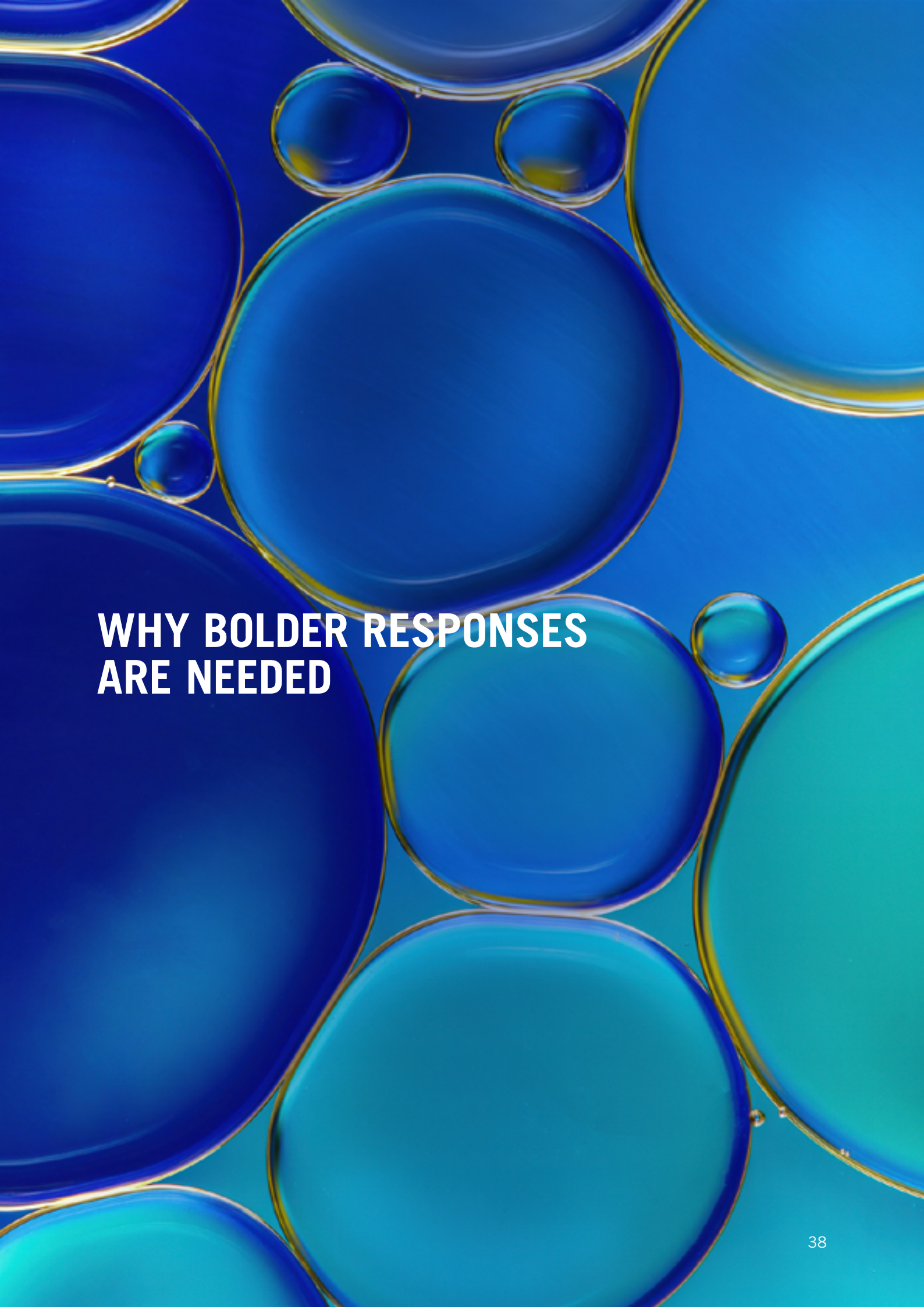
Where lack of access hampers progress and limits the well-being of many citizens, business and government can take steps to ensure fairer outcomes. For the private sector, this means prioritizing equitability and accessibility in innovation pipelines and commercial implementation. For public policymakers, it's about putting in place guidelines and protocols that promote innovation adoption while safeguarding the interests of the wider public.

The tobacco harm reduction space is a case in point. Better alternatives to cigarettes exist today for those adults who would otherwise continue to smoke. These innovations are real and are driving genuine change. However, there are far too many countries (particularly low- and middle-income countries with high rates of cigarette use) where the only tobacco and nicotine products that can be legally sold are cigarettes. Moreover, in those markets where better alternatives are available, existing policies too often hamper adult smokers' access to these products. This has to change. Adult smokers need to be able to access accurate information about these better alternatives, choose them, and afford them.

At PMI, we have set an ambition that by 2025 at least 50 percent of the markets where we commercialize our smoke-free products will be low- and middle-income markets. While it is vital that our science-based smoke-free alternatives are available across countries, we must also ensure that adult smokers within each market can afford them so they consider switching instead of continuing to smoke. This means accounting for the purchasing power of adult smokers and deploying inclusive solutions such as a broadened portfolio with smoke-free alternatives in a range of price points, enhanced battery and firmware performance to reduce maintenance costs, and increased device longevity.

Equity-minded business initiatives such as these are a start, but they need to be paired with the right regulatory framework to ensure the broadest possible access. In the case of smoke-free alternatives, policy interventions such as differentiated taxation frameworks that take into account the fundamentally different risk profiles of combustible tobacco products versus smoke-free alternatives can, when applied appropriately, incentivize adult smokers to switch and encourage manufacturers to channel their investments and R&D away from cigarettes and toward scientifically substantiated better alternatives.

Disruptive innovation for good is relatively new in the tobacco sector, as it is in many sectors. By insisting as a society on pragmatic policy interventions, we can enable innovation to benefit as many people as possible and achieve its full potential.



WHY BOLDER RESPONSES ARE NEEDED

Cautious, deliberative decision-making processes served us fairly well for many decades. Committees, commissions, and boards became our go-to formats for accumulating and tapping expertise.

Such institutions encourage the methodical gathering of evidence on issues. At their best, they imagine a range of possible scenarios and explore potential intended and unintended consequences. They guard against rushing to conclusions. They mitigate risks.

For all these benefits, however, the long, gradual evolution of current deliberative processes is no guarantee that they will work well now, let alone deliver well in the future. They can lose sight of their purpose. They can become inward-looking, self-perpetuating, self-protecting bureaucracies. Over time, they can develop a culture of "we've always done it this way," reflexively resisting innovation. Ultimately, their built-in caution may not mitigate risks and may, in fact, increase risk. The conditions with which they are dealing are changing radically and rapidly.

At a time when changes build on one another and multiply, they are driven by interactions among the following factors:

Speed: Change is happening faster as technology accelerates and grows more powerful. Each successive wave builds on the speed of the previous wave. For example, it took 13 years (1990–2003) for scientists to sequence a human genome for the first time. The process has been accelerated to the point where, in 2022, a team led by Stanford scientists sequenced a human genome in just 5 hours and 2 minutes.

Scale: Change is magnified by the scale and concentration of populations. The global population is set to reach 8 billion in 2022, more than triple that of 1950. It's not just the size of the population that has increased but also its demands and expectations. Consider, for example, that as of April 2022, over 58 percent of the world's population were active social media users. In less than three decades, more than half the world's population has adopted a service few could have conceived of in the last century.

Complexity: Even seemingly simple everyday things are becoming complicated as elements and functions are added. Household appliances communicate

with one another. Cars are packed with computing power. Mobile phones act as health monitors and payment devices. And as life gets increasingly complex, few people have more than the most superficial understanding of issues that impact everybody: finance, nutrition, genetics, IT, the internet, climate science, and artificial intelligence, among them.

Innovation: More and more people are thinking up more and more ideas. This makes for a fast-growing range of innovations of which authorities have limited knowledge or understanding—e.g., high-frequency trading and cryptocurrencies. Consider one area of focus: outer space. As entrepreneurs increasingly set their sights on space (a 2021 report identified more than 10,000 private tech companies and 5,000 top investors in the sector), the need for up-to-date policies and regulatory frameworks to regulate space commercialization, space mining, and other activities is becoming more pressing.

Information: Vast stores of data and other information accumulate more quickly than ever before. The availability of information may have increased, but how about its quality and people's understanding of it? Moreover, the sheer volume of data may cause vital pieces of information to be lost or overlooked.

Disinformation: The negative consequences of a media environment polluted with disinformation, often meant to deliberately create confusion, have been widely discussed and have the potential to worsen as "deepfake" technology grows increasingly sophisticated.

Dark side: Illicit activities such as smuggling and tax evasion have increased the number of issues that can have a big impact on events but are beyond the reach of regulators.

As the proceedings of governments and regulatory bodies become more transparent, it's possible for concerned citizens to tune in and see them at work. This has made it apparent that, try as authorities might to understand complex issues and update their processes accordingly, many are struggling. These and other factors are disrupting the institutions and processes that regulated so much of our lives so well until recently. Potential responses to these sorts of pressures include the following:

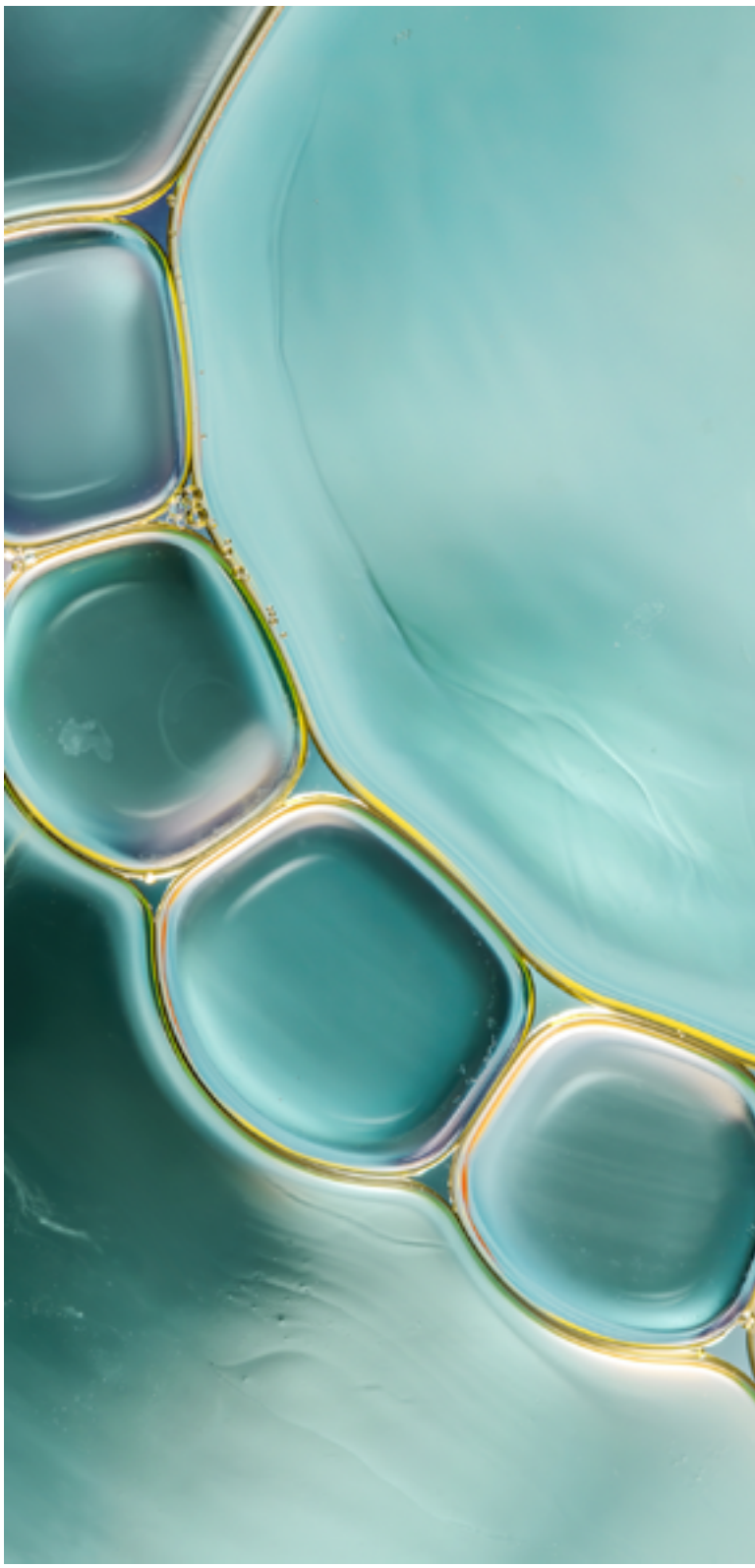
Retrench: This response resents and resists disruption. It harkens back to times when things were "better"—meaning more stable, predictable, and above all, familiar. It calls for old approaches to be reestablished and followed more rigorously. Its watchword: "Get back to basics."

Hold steady: This response tends to view disruptions as temporary. It assumes that steady equilibrium is the default state, so regulation is about resisting disruption and maintaining course until normality can be restored. At most, it makes a few minor changes and trusts that what's worked in the past will continue to work. Its watchword: "Keep calm and carry on."

Overturn: This response sees disruption as giving rise to immense opportunities, and it is skeptical of established institutions' ability to achieve progress in a timely fashion. It instinctively believes that resistance to disruption must be countered vigorously and that established institutions and processes should be ignored or abolished to make a fresh start. Its watchword: "Move fast and break things."

Adopt and adapt: This response believes that disruption in the future is likely to be the normal state rather than a temporary disturbance, with changes created by a combination of circumstance and choice. It believes in updating institutions systematically to identify what's working, what's not working, why it's not working, and what's needed to make it work better. Its watchword: "Harness disruption to change better."

It's not hard to think of individuals and institutions that have responded to change in at least one of these four ways. Each approach has merits. Each may prove to be just what's needed in a particular context. However, we believe that the adopt-and-adapt response is the smart way to meet the needs of this moment. We believe in working with disruption to change better.



WHAT NEEDS EPPIC DISRUPTION

Overall, people are optimistic about the potential of radical disruption to address the most pressing global challenges in the next decade or two.

More than 7 in 10 respondents to the Povaddo survey believe that disruptive innovation has the capacity to encourage healthier eating habits, improve mental health, prepare for future pandemics, ensure quality and affordable healthcare for all, and improve vaccine deployment. More than two-thirds are confident that disruption can help to combat climate change, eliminate hunger, and reduce smoking rates (something PMI is working to do). Respondents are least optimistic about the pernicious issue of illegal drug use; still, even on this question, a majority (56 percent) think radical disruption can achieve progress.

Given everything happening on the world stage—including the rise in polarization and discord—it can be easy to lose faith in the potential for meaningful progress. What these survey findings tell us is that the general population has not lost faith. They are convinced that disruption—when conceived, planned, and harnessed correctly—can bring about the change society demands.

Issues survey respondents believe disruptive innovation can address in the next 10–20 years:

ENCOURAGING HEALTHIER EATING HABITS:
77%

IMPROVING MENTAL HEALTH SERVICES:
74%

DEPLOYING VACCINES TO THE ENTIRE POPULATION:
73%

ENSURING QUALITY AND AFFORDABLE HEALTHCARE FOR ALL:
72%

PLANNING FOR FUTURE PANDEMICS:
71%

COMBATING CLIMATE CHANGE:
68%

REDUCING SMOKING RATES:
65%

ELIMINATING HUNGER/MALNOURISHMENT:
62%

REDUCING ILLEGAL DRUG USE:
56%

CLOSING THOUGHTS

The big question is not whether change will happen. It will. Change is constant and inevitable.

Rather, the big questions are around how we will respond to change and whether we will be able to enact changes with the potential to improve the world we live in.

Anyone who has witnessed the past couple of decades may well feel they have had more than enough disruption and paradigm shifts to last a lifetime: financial crises, the COVID-19 pandemic, remote work and schooling, smartphones everywhere and all the time, streaming entertainment, and all manner of crises, including climate, energy, food, and inflation. All these shifts and challenges have contributed to the social and political turbulence of recent years.

For anyone to advocate further disruption in an era of relentless change might seem perverse—unless that disruption is **EPPIC**: **Efficient**, **Purposeful**, **Pro-social**, **Inclusive**, and **Constructive**. Such an approach won't shield the world from the aftershocks of the significant events that have already happened, let alone those that may lie ahead. However, we can be certain that to create positive change at scale and at pace, we must all be prepared to disrupt our old ways and establish common ground on which progress can be built.

For our business, the preferred future is clear. We are disrupting the tobacco sector from within to deliver a smoke-free future—a tomorrow in which cigarettes have become obsolete. We have restructured and refocused our organization to reach this future as quickly as possible, and we are making tremendous progress. But we cannot do it alone. Governments and public authorities have a critical role in 1) providing clear and accurate information to adult smokers about the better alternatives available and 2) establishing regulatory frameworks that accelerate large-scale switching while minimizing unintended consequences. Public health experts have a responsibility to provide accurate information on the science they develop and review. Finally, adults who would otherwise continue to smoke need to embrace the opportunity science and technology have made possible and switch to these better alternatives.

A clear framework agreed to by political, regulatory, and public health stakeholders and supported by civil society and businesses offers the best prospect for ending smoking and its related harms.

Why wait?

> Industry disruption only looks easy in hindsight. At present, we are in mid-stride: with one foot in our past, operating in a fiercely competitive legacy cigarette business, and one foot in our bold future, building an entirely novel and improved category of products. We recognize the magnitude of the challenge and remain committed to continuing to lead, tracking progress and reporting on it transparently to ensure cigarettes become obsolete as soon as possible.
>
> —**Emmanuel Babeau,** CFO, Philip Morris International, PMI Integrated Report 2021

PHILIP MORRIS
INTERNATIONAL

Philip Morris Products S.A.
Avenue de Rhodanie 50 1007
LAUSANNE, SWITZERLAND