

TAKING THE ROAD LESS TRAVELLED Communicating Congestion Pricing in North America

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DISCLAIMER

This report was produced as part of the UBC Sustainability Scholars Program, a partnership between the University of British Columbia and various local governments and organizations in support of providing graduate students with opportunities to do applied research on projects that advance sustainability across the region.

This project was conducted under the mentorship of TransLink staff and draws from interviews with individuals involved with congestion pricing in cities across the United States. The opinions and recommendations in this report and any errors are those of the author and do not necessarily reflect the views of TransLink, the University of British Columbia, or the organizations or individuals responsible for congestion pricing in the cities mentioned in this report.

ACKNOWLEDGEMENTS

UBC's Vancouver Campus is located on the unceded, traditional, ancestral territories of the x^wməθk^wəỷəm (Musqueam), Skwxwú7mesh (Squamish), and səlílwəta?+ (Tsleil-Waututh) Nations. This project, however, was conducted virtually from the traditional territory of the Lək^wəŋən (Lekwungen) peoples, where I am beyond grateful to live, work, and learn. I acknowledge with respect the Songhees and Esquimalt peoples, whose relationship with this land continues to this day and who inspire me to do better, by them and by the ecosystems that they and their ancestors have successfully stewarded for tens of thousands of years. To learn about the lands and peoples where you live, visit native-land.ca.

I would also like to thank the representatives of the cities featured in this report, for sharing their time and deep expertise on the communication of congestion pricing, and the project mentor, Fearghal King, without whom this project would not have been possible.

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1 MAPPING THE ROUTE About this report

I am often told that congestion pricing is inevitable, and every city will eventually have it. I do not believe that is true. It will always be a political choice, and that is important. The alternative for a growing city is to accept the costs associated with congestion and inefficient use of a major public asset: a city's transportation system.

DANIEL FIRTH, 2020¹

Congestion pricing policies—when carefully designed and implemented—offer an equitable, effective, and often elegant solution to a suite of pressing issues rarely addressed by a single transportation policy tool. Air and noise pollution, unsustainable levels of greenhouse gas emissions (GHGs; see *Climate Connection* box), and increasingly congested commutes are only the most proximal of these issues. Far worse are the direct consequences of these issues: rising rates of respiratory illness, continued destabilization of the global climate, decreased job satisfaction, and the rising financial costs of addressing these harms and their causes as both continue to increase, while revenues from fuel taxes continues to fall. Add to that the fact that these harms are borne disproportionately by those who contribute least to their generation,² and it quickly becomes clear just how important it is to get this right.

Economists and transportation planners need little convincing on this point. Congestion pricing has enjoyed steadfast support across the professions and disciplines engaged in transportation planning since its theoretical proposition over a century ago.³ Among those scholars and professionals, the conversation has largely shifted from *whether* congestion pricing should be implemented to *how* it should be implemented.⁴

¹ Firth, "Congestion Charging/Mobility Pricing."

² Cohen D'Agostino, Pellaton, and White, "Equitable Congestion Pricing"; Ecola and Light, "Equity and Congestion Pricing: A Review of the Evidence."

³ Arthur C. Pigou is often credited with introducing the concept in *The Economics of Welfare* (1920); it was elaborated by others, notably including economist William Vickrey (Lindsney & Verhoef, 2001; Vickrey, 1959).

⁴ de Palma and Lindsey, "Traffic Congestion Pricing Methodologies and Technologies"; Gu et al., "Congestion Pricing Practices and Public Acceptance"; Miller, "Charging Drivers to Use Roads Can Be Equitable."



Figure 1. Congestion pricing is a type of road user charge and a mobility pricing mechanism

Despite this expert backing, several decades of positive results and iterative improvement, and an overall trend of worsening congestion (before a global pandemic brought it, temporarily, to within acceptable levels), public and political appetite for congestion pricing remains the most formidable and least tractable of the barriers to successful congestion pricing.⁵ At the time of publication, no North American city or region had yet managed to replicate the successes of the few global metropolitan areas who have implemented comprehensive congestion pricing.⁶

⁵ Gu et al., "Congestion Pricing Practices and Public Acceptance"; Hamilton et al., "Determinants of Congestion Pricing Acceptability"; Hess and Börjesson, "Understanding Attitudes towards Congestion Pricing"; Selmoune et al., "Influencing Factors in Congestion Pricing Acceptability."

⁶ This is not the case for other road (user/usage) charging policies, including parking, fuel taxes, toll roads and lanes, bridges, and tunnels, which are in use across Canada and the US (see Ecola & Light, 2009, for details of these programs). Here, and throughout this report, we refer to the more comprehensive pricing models in use in other countries, such as cordon pricing.



Figure 1. Pricing policies vary in their primary aims, infrastructure or geographic scope, and method

In this report, we explore why this may be. Why has broad acceptance and support of congestion pricing proven so elusive? What have the few North American cities considering congestion pricing done to reach the stages of implementation that they have? Which techniques, strategies, and considerations do the individuals driving those programs believe to have contributed most to their successes to date? What do they believe to be the most promising paths forward?

To answer these questions, we draw on the first-hand experiences of individuals working at the forefront of congestion pricing policy in five US cities: New York City, New York; Washington, D.C.; Portland, Oregon; San Francisco, California; and Los Angeles, California. In the following pages, we present the lessons learned in each of these cities within the context of evidence-based recommendations from the interdisciplinary fields of public policy, risk communication, and the behavioural sciences. It is our hope that these timely insights will give current and future proponents of congestion pricing the best possible chance of successfully designing and communicating their versions of this essential tool.

Climate Connection

How does congestion pricing relate to climate change?

In Canada and around the world, the risks and hazards associated with continued accumulation of greenhouse gases (GHGs) in the atmosphere will lead to more frequent and severe natural disasters and extreme weather events, including prolonged heat waves and droughts.⁷ The effects of failing to adapt to or mitigate climate change and associated environmental damage would cost Canadian citizens as much as \$43 billion *per year* by the 2050s.⁸ Because certain individual behaviours are relatively inelastic within existing systems (such as transportation systems with few alternatives to private vehicle use), efforts to reduce our impact on the planet have to include policy-level systemic action.⁹

Canadian federal policy on climate change is outlined by the 2016 Pan-Canadian Framework on Clean Growth and Climate Change (PCFCGCC).¹⁰ This framework details actions estimated to reduce emissions to 588 MT/year by 2030, just short of Canada's Paris Agreement target of 511 MT CO₂e (30% below its 2005 emissions).¹¹ A key component of this framework was an emissions reduction plan implemented into law as the Greenhouse Gas Pollution Pricing Act (GGPA).¹² The GGPA introduced two carbon pricing mechanisms: 1) a surcharge on certain fuels, and 2) an emissions pricing system. Like congestion pricing, these mechanisms are designed to internalize unpriced external costs and to reduce demand (for high emissions activities and products, in this case) to meet supply (our planet's ability to store GHG emissions in carbon sinks such as forests and oceans). Marc Lee, a senior economist in the BC office of the Canadian Centre for Policy Alternatives suggests that the design of these mechanisms could inform pricing policies: "[w]ith the carbon tax, a low-income credit is funded out of carbon tax revenues. This should be considered for mobility pricing as well. Using mobility pricing revenues to expand public transit can further address congestion by getting more people out of their vehicles. It benefits most low-income households because they are much more reliant on public transit."13

⁷ Canadian Public Health Association, "Position Statement: Climate Change and Human Health"; Environment and Climate Change Canada, "Third Annual Synthesis Report."

⁸ NRTEE, "Paying the Price."

⁹ IPCC, "Global Warming of 1.5°C."

¹⁰ Environment and Climate Change Canada, "Pan-Canadian Framework on Clean Growth and Climate Change."

¹¹ Environment and Climate Change Canada, "A Healthy Environment and a Healthy Economy."

¹² "Greenhouse Gas Pollution Pricing Act."

¹³ "Getting around Metro Vancouver: A Closer Look at Mobility Pricing and Fairness."

2 ALL ABOARD Our target audience

The themes and recommendations in this report draw from the insights of the same audience that we hope to reach: professionals tasked with the (sometimes unenviable) job of designing and communicating congestion pricing policies to the public, stakeholders, and decisionmakers. Because the problems and solutions associated with urban traffic congestion span professions, disciplines, and jurisdictions, this is not a small group. The information in this report will be relevant to:

- transportation planners and economists working at all governance levels on policy objectives, strategy, and system design;
- communications and engagement professionals working to involve, empower, and learn from residents, stakeholders, and decision-makers;
- elected officials and other decision-makers evaluating and communicating congestion pricing proposals;
- policymakers aiming to understand and navigate the unique context of congestion pricing in North America.

Given the knowledge bases of the target audiences listed above, the excellent resources already available, and the objectives and scope of this report, we do not intend to provide an introduction to congestion pricing. The language and content therefore presuppose an understanding of congestion pricing and a familiarity with its history and the communication challenges it poses. For an excellent and accessible introduction to the recent history of congestion pricing, see Firth, 2020. For an overview of congestion pricing and a detailed review of technological considerations, see de Palma and Lindsey, 2011. For a comprehensive history of downtown congestion pricing including recent developments, see Lehe, 2019.

Road User Charging Terminology

The fees levied on road users go by many names, depending on their purpose, area or infrastructure target, and pricing method. Although definitions differ by region, authority, and author, the list below defines some common terms as they will be used in this report.

Purpose

Tolls (and taxes such as Fuel Sales Taxes): fees applied primarily to generate revenue

Congestion pricing (also decongestion pricing, value pricing, and surge pricing): fees applied primarily to reduce traffic congestion

Environmental pricing: fees applied primarily to reduce environmental impacts

Scope

Traffic demand management: policies designed to increase network performance by encouraging changes in user behaviour rather than expanded infrastructure; TDM includes congestion pricing and other forms of mobility pricing (when used to manage demand), but also non-pricing demand management programs, such as employer-, institutional-, and district-based initiatives to increase transit use, carpooling, and active transportation

Mobility pricing: fees charged for the use of transportation infrastructure and services, including roads, but also transit, for-hire vehicles, and equipment sharing services for active transportation

Road user (or usage) charging: fees charged for road access (e.g., to decrease congestion or to generate revenue, often to replace existing revenue-generating taxes)

Area & Infrastructure

Urban road pricing: fees charged for road access in urban areas, regardless of reason (e.g., decongestion or revenue generation)

Downtown (or city centre) pricing: fees charged for road access in the (often congested) downtown core(s) of a city or metropolitan area

Bridge, tunnel, and road tolls: fees charged to use a specific piece of transportation infrastructure, primarily to generate revenue

Single-entity pricing or facility pricing: fees charged to use a specific piece of transportation infrastructure, often for reasons other than revenue generation

Road User Charging Terminology (continued)

Pricing Method

Area licensing: an earlier form of access charge using prepurchased licenses to grant access to specific (often congested) areas

Cordon-based charges: fees charged at the perimeter of a specific (often congested) area, to enter (and sometimes also to exit) that area; can be either per entry or for a specific duration or period

Area-based (or zone) charges: fees charged to drive within a specific (often congested) area

Time- and distance-based charges: As yet uncommon fees charged based on the time of day (e.g., peak and off-peak hours) and/or distance travelled within a specific (often congested) area or on a specific road or highway

Point charges: fees charged at important transportation nodes within a regional transportation network, such as bridges and tunnels, for access to the road network beyond those nodes.

Definitions adapted from various sources.¹⁴

¹⁴ Firth, "Congestion Charging/Mobility Pricing"; King et al., "Innovative Methods towards Building and Evaluating Congestion Charging Scenarios: The Case of Metro Vancouver"; Lehe, "Downtown Congestion Pricing in Practice"; Lindsney and Verhoef, "Traffic Congestion and Congestion Pricing"; Mobility Pricing Independent Commission, "Metro Vancouver Mobility Pricing Study: Findings and Recommendations for an Effective, Farsighted, and Fair Mobility Pricing Policy"; Transportation Association of Canada, "Road Pricing in an Urban Context"; Transportation Association of Canada, "Mobility Pricing Opportunities and Challenges"; Wood et al., "Emerging Challenges to Priced Managed Lanes."

3 GRIDLOCK

Congestion (in)action in North America

It has been a commonplace event for transportation economists to put the conventional diagram [of congestion pricing] on the board, note the self-evident optimality of pricing solutions, and then sit down waiting for the world to adopt this obviously correct solution. Well, we have been waiting for 70 years now, and it's worth asking what are the facets of the problem that we have been missing? Why is the world reluctant to do the obvious?

CHARLES LAVE, 1995¹⁵

In 2008, TransLink, the regional transportation authority for Metro Vancouver, in British Columbia, Canada, published a book summarizing its first decade of existence. The title of this book, "The Road Less Travelled,"¹⁶ hinted at the organization's unique origin story and subsequent journey as the world's first multi-model regional transportation authority. With chapter headings like "Ignition," "Acceleration," and "Momentum," the document conveyed a sense of pride in the successes of the experiment and excitement for the ambitious ideas planned down the road (not to mention a proclivity for transportation wordplay common among transportation professionals and adopted with zeal throughout this report).

The title might also be read more literally, however. Since before the inception of TransLink, Metro Vancouver has considered traffic demand management—policies designed to encourage changes in driving behaviour to bring demand into line with supply—to be one of four core tenants of a comprehensive plan for the area's transportation system (see Road User Charging Terminology sidebar, previous section).¹⁷ In the 1993 report on this long-range plan that led to the creation of TransLink, steering committee members wrote that "[t]his approach to urban form is essential if we are to wean the region from its troubling and growing dependence on

¹⁵ Lave, "The Demand Curve under Road Pricing and the Problem of Political Feasibility."

¹⁶ Wales, The Road Less Travelled.

¹⁷ Transport 2021 Steering Committee, "Transport 2021: A Long-Range Transportation Plan for Greater Vancouver."

the private automobile."¹⁸ That report, *Transport 2021*, projected a vision for Greater Vancouver's future that included small-town squares, more employment opportunities in population centres, enhanced transit and cycling infrastructure, and all the consequent benefits of a transportation network capable of meeting demand without increasing supply. It is now 2021 and almost all of the report's major recommendations have been adopted or are in the process of being adopted. It is perhaps telling that those concerning congestion pricing are among the very few that hadn't been on track to be adopted prior to the COVID-19 pandemic.¹⁹

Vancouver is hardly unique in this regard. Around the world, congestion pricing proposals for cities and metropolitan regions experience public and political pushback on par with the most contentious of public policies, frequently failing to rally the support required to reach implementation.²⁰ In the US and Canada, no city has yet managed to implement a city- or region-wide comprehensive congestion pricing policy, despite several high profile attempts to do so.²¹ Several transportation researchers have suggested that this is at least partially due to North America's unique reliance on the private automobile.²² Subsidization of road infrastructure from the revenue of flat taxes, those researchers argue, led to the misconception among drivers that the use of public roads is, or should be, costless. This stands in contrast to many European cities, where drivers may be more accustomed to the idea that road users should pay for their share of access to road infrastructure (the *user pay* principle), as well as the costs they impose on society by driving or causing congestion (the *user cost* principle). Whether it is a consequence of this history and its resulting collective sentiment or not, in urban centres in Canada and the US, population density is lower, transit systems less. developed, and the idea of paying for decongestion less accepted than similarly populous European cities.²³

¹⁸ Transport 2021 Steering Committee.

¹⁹ Transport 2021 included three recommendations specifically concerning congestion pricing:

^{2.10} The Province should introduce road pricing measures or tolls structured to reduce congestion, provide clearer price signals to users for the costs they incur and impose on others, and to raise revenue for transportation improvements.

^{2.11} The Province should apply road pricing/tolls with the long run purpose of shaping travel demand in addition to obtaining revenues. The Province should not remove tolls unless it is clear that the external costs of the automobile have otherwise been accounted for and are recognized by the user.

^{2.12} The Province should dedicate toll revenues to system-wide transportation improvements, including transit/HOV improvements, retrofitting infrastructure to withstand earthquakes, rehabilitation of deteriorating facilities and construction of new facilities.

²⁰ Gu et al., "Congestion Pricing Practices and Public Acceptance."

²¹ Zheng et al., "Understanding Public Response to a Congestion Charge."

²² Harrington, Krupnick, and Alberini, "Overcoming Public Aversion to Congestion Pricing"; King, Manville, and Shoup, "The Political Calculus of Congestion Pricing"; Lave, "The Demand Curve under Road Pricing and the Problem of Political Feasibility."

²³ Selmoune et al., "Influencing Factors in Congestion Pricing Acceptability."

This context may seem to present an impasse, but there is reason to be hopeful. Returning to Vancouver, for example: in 2018, the Mobility Pricing Independent Commission, a group of regional representatives convened by the Mayors' Council on Regional Transportation and TransLink's Board of Directors, completed one of the most comprehensive reports on regional congestion pricing to date, outlining the possibilities, rationale, and principles for mobility pricing in Metro Vancouver.²⁴ Although the final phase of their recent *10 Year Vision* was halted by COVID-19, the next long range regional transportation strategy—known as *Transport 2050* will soon be confirmed by TransLink and its partners. It remains to be seen what, if anything, this strategy will say about the role of (mobility) pricing over the next 30 years, as well as if or how this might be prioritized in the near-term. Meanwhile, and as part of their Climate Emergency Action Plan and regional growth strategy *Metro Vancouver 2040*,²⁵ the City of Vancouver has committed to launching a study to explore the feasibility of a congestion pricing system (which they are calling *transport pricing*) in the city centre, an initiative already proposed as a key component of their forthcoming *Climate 2050* plan.²⁶ At the same time, a Transportation Association of Canada project to explore the opportunities and challenges for mobility pricing across Canada has just launched.

In the US, the situation is even more exciting, with several cities launching, reviving, or implementing proposals for innovative pricing programs. To capture this historical moment, we met with professionals involved in these programs in each of the five cities introduced at the beginning of this report and asked them to share with us the design and communication decisions and considerations that they believe to be most important to ensuring the success of congestion pricing policies. The next two sections of this report will establish the background for these conversations and review several evidence-informed recommendations for communicating with non-experts. In the final sections of this report, we will return to these five cities, their experiences in designing and communicating their proposed policies, and their recommendations for other North American cities and regions considering congestion pricing.

²⁴ Mobility Pricing Independent Commission, "Exploring Mobility Pricing in Metro Vancouver: What We Learned so Far Summary of Our Findings and Recommendations for an Effective, Farsighted, and Fair Mobility Pricing Policy"; Mobility Pricing Independent Commission.

²⁵ Metro Vancouver, "Metro Vancouver 2040: Shaping Our Future: Regional Growth Strategy."

²⁶ Metro Vancouver, "Transportation: Discussion Paper to Support Climate 2050 and Clean Air Plan."

4 STEPS IN THE RIGHT DIRECTION Communicating technical information

It is easy to characterize a decongestion charge as a "money grab" or "just another tax." The paradox is that the less you charge, the more it would be just that [...] Indeed, if you are only looking for a way to raise revenues for investment then a mobility pricing system that includes a decongestion charge is not the best solution. But if you are willing to take on the complex discussions it will require, then a decongestion charge could be transformative as part of a strategy to support efficient, affordable, and sustainable mobility.

ALLAN SECKEL, 2018²⁷

4.1 Public and political pushback on pricing

Pricing is exceptionally difficult to communicate successfully. Communications and engagement professionals working in transportation are often tasked with communicating new infrastructure, but there is no ribbon to cut with congestion pricing and the benefits to road users and community members are less tangible. The human tendency to attach greater value to losses than gains means that the costs to road users, on average, will be felt more acutely than the benefits they receive. Research on this phenomenon, known as loss aversion²⁸ suggests that even programs designed to be revenue neutral would start on an uneven footing. To complicate matters further, most successful examples of congestion pricing are from decades ago and thousands of kilometres away from the North American context. What then, is a congestion pricing communicator to do?

To probe this question, we first reviewed available academic literature on 1) best practices for the communication of technical information in general, and 2) the factors that affect public and political acceptance of congestion pricing policies, including recommendations for successful

²⁷ Mobility Pricing Independent Commission, "Metro Vancouver Mobility Pricing Study: Findings and Recommendations for an Effective, Farsighted, and Fair Mobility Pricing Policy."

²⁸ Levine and Kline, "Loss-framed arguments can stifle political activism."

communication of these policies. Although necessarily cursory, this review covered articles from the fields of transportation studies; science, risk, and policy communication; and the behavioural sciences, including applications of behavioural economics and psychology. The second part of this review, on communicating congestion pricing, formed the basis of our interview guide (see Appendix 1) and informed our analysis of the themes that came up during our interviews and focus groups (see section 5). In the next section, we cover the first part of the review, framing the challenge of communicating congestion pricing within existing research on the communication of technical information more generally.

4.2 Evidence-based best practices for communicating technical information

Successfully communicating congestion pricing requires a move beyond the information deficit model of communication (e.g., that public, stakeholder, and decisionmaker skepticism around congestion pricing can be remediated by providing them with information) and towards an acknowledgement of the active role of policy users in policy design and of the psychological factors that affect the way people think and feel about different types of risks.

4.2.1 Beyond the information deficit

We have two decades of data indicating that voluntariness, control, fairness, and the rest are important components of our society's definition of risk. When a risk manager continues to ignore these factors—and continues to be surprised by the public's response of outrage—it is worth asking just whose behavior is irrational.

PETER SANDMAN, 1987²⁹

The quote above is from Peter M. Sandman, one of the most significant contributors to the field of risk communication. Over three decades after he penned these words, this is still a question worth asking. Sandman's characterization of risk as a combination of hazard (the "objective" harm) and outrage (perception of that harm) applies particularly well to congestion and

²⁹ Sandman, "Risk Communication."

congestion pricing. Of the factors he proposed as minimizing outrage (and therefore reducing overall perception of risk), many apply to congestion. While irritating, traffic congestion is familiar, and therefore less dreaded than an unfamiliar remedy.³⁰ The more abstract effects of congestion, on the climate, air quality, and driver safety, may seem far away or spread out and therefore more acceptable. Congestion pricing programs, on the other hand, check the boxes for maximizing "outrage" (i.e., public rejection of an innovation and its risks). These boxes include involuntariness, external agency control, unfamiliarity, and concentration of harms.³¹ Distrust of the governments and organizations responsible for congestion pricing, a key finding of the Metro Vancouver Mobility Pricing Study,³² further increases the imbalance in risk perception between the status quo and an uncertain change. That these components of risk are subjective means nothing for policy communication in practice—acknowledging them as a barrier is crucial to successfully communicating congestion pricing.

4.2.2 Narrative framing

"Whereas statistics may reveal the objective reality of all members of a target audience, narratives may do a better job of approaching the reality of each individual receiver."

JOHN B. F. DE WIT, ENNY DAS, & RAYMOND VET, 2008³³

Just as congestion pricing communicators must acknowledge and overcome the barriers to communication, so too must they acknowledge and apply the factors that enable successful communication. One of these factors draws on recent research into an accessible, familiar, and persuasive communication tool: storytelling. Humans have been using stories to communicate with each other since before the development of writing systems, and evidence from modern hunter gatherer societies suggests that storytelling likely served a fundamental role in the survival and evolution of our ancestors.³⁴ In the present day, most non-experts rely on and are

³⁰ Slovic, "Perception of Risk."

³¹ Sandman, "Risk Communication."

³² Mobility Pricing Independent Commission, "Metro Vancouver Mobility Pricing Study: Findings and Recommendations for an Effective, Farsighted, and Fair Mobility Pricing Policy."

³³ Wit, Das, and Vet, "What Works Best."

³⁴ Smith et al., "Cooperation and the Evolution of Hunter-Gatherer Storytelling."

accustomed to the narrative framing of the mass and social media they turn to for the majority of the information that they consume.³⁵ It makes sense then, that the call for communication in this form is one of the clearest of the scholars of science communication.³⁶

The evidence for the effectiveness of storytelling in policy and science is overwhelming. People are more willing to take action based on complex or uncertain facts when they are embedded within a story.³⁷ They are more likely to engage in pro-social behaviour when the request to do so is framed narratively.³⁸ Even within the scientific community, journal articles with more narrative abstracts are cited more often, and in higher impact journals.³⁹

Stories are easier to understand, more interesting, and more engaging than information in other formats⁴⁰ and they can be better than facts and figures at convincing an individual of the risks and benefits of a shift from the status quo,⁴¹ allowing communicators to outsource the individualization of communication to policy users themselves.

4.2.3 Communicating conversationally

In an eerily prescient 2019 article on the state of science communication, Carnegie Mellon's Baruch Fischhoff, founding chair of the FDA's Risk Communication Advisory Committee, included as an example a case study of preparations for a pandemic. In it, he notes that a communication strategy for a (then hypothetical) pandemic would effectively communicate what people should expect "regarding quarantine, home schooling, rationing, hospital closures, telecommuting, drug shortages, and social solidarity (or fracture)."⁴² Although this short list summarizes many of the topics most ineffectively communicated during the COVID-19 pandemic, more important is *how* he recommended that this critical information be communicated.

Fischhoff makes an impassioned plea for the abandonment of unidirectional, information deficit communication in favour of what he views as the conclusion of decades of behavioural

³⁵ Dahlstrom, "Using Narratives and Storytelling to Communicate Science with Nonexpert Audiences."

³⁶ Bayer and Hettinger, "Storytelling."

³⁷ Krause and Rucker, "Strategic Storytelling."

³⁸ Morris et al., "Stories vs. Facts."

³⁹ Hillier, Kelly, and Klinger, "Narrative Style Influences Citation Frequency in Climate Change Science."

⁴⁰ Dahlstrom, "Using Narratives and Storytelling to Communicate Science with Nonexpert Audiences."

⁴¹ Wit, Das, and Vet, "What Works Best."

⁴² Fischhoff, "Evaluating Science Communication."

science research. This research suggests a model that many outside of the policy world will find intuitive: communication as a conversation. Adopting a two-way approach to communication makes it possible to determine what policy users need by asking them. But the benefits of bidirectional communication go beyond the obvious. Publicly stating and justifying one's beliefs, a necessary component of dialogue, encourages individuals to adopt an "accuracy motivation," potentially avoiding belief polarization and increasing openness to new evidence.⁴³ It also allows for near-instant detection of jargon or overly complex language, which, unchecked, can lead to resistance and less informed decision-making through decreased information processing.⁴⁴

Most importantly, however, involving the users of technical information in the generation or communication of that information is a key part of the process of developing trust, transparency, and agency.⁴⁵ For as long as this kind of advice sounds like it is outside the purview of policy and its communication, communicators will continue to struggle to have their messages understood by people they don't understand.

⁴³ Druckman and McGrath, "The Evidence for Motivated Reasoning in Climate Change Preference Formation."

⁴⁴ Bullock et al., "Jargon as a Barrier to Effective Science Communication."

⁴⁵ Fischhoff, "Evaluating Science Communication."

5 GETTING UP TO SPEED US cities exploring congestion pricing

"[W]hile an adequate, safe, and efficient network of roads and highways will always be an essential component of our transportation system, building new roadway capacity without managing the long-term demand for solo driving is not an enduring strategy for meeting the region's rapidly evolving mobility needs. An approach primarily geared to serving single-occupancy vehicles is neither economically nor environmentally sustainable, nor would it advance other widely shared goals for improving quality of life within the region."

LOS ANGELES COUNTY METROPOLITAN TRANSPORTATION AUTHORITY, 2018⁴⁶

As no jurisdiction in North America had implemented congestion pricing at the time of writing (August 2021), the second portion of our review highlighted research on the cities and metropolitan areas outside of North America that have already implemented congestion pricing policies. Drawing from the main themes presented in those articles, we developed a set of guiding questions and conducted a series of semi-structured interviews and small focus groups across the US between June and July, 2021.⁴⁷ During these interviews, we met with individuals involved in the research, development, and deployment of congestion pricing policies in the five US cities introduced earlier in this report (New York City; Washington, DC; Portland; San Francisco; and Los Angeles).

While several cities in the US and around the world are considering congestion pricing policies at the city and regional levels, we chose these five cities because of their visibility and inclusion in recent congestion pricing research. They also represent the full range of the policy implementation process, from initial feasibility studies to the final hurdles required to reach implementation. While caution must be exercised in drawing conclusions from a small number

⁴⁶ "Metro Vision 2028."

⁴⁷ The questions for these interviews were selected from a brief literature review and arranged in a qualitative semi-structured interview guide (as per Kallio et al., 2016). Each interview lasted approximately 90 minutes and consisted of an overview of the project, confirmation of informed consent, and a series of closed- and open-ended questions. Follow-up questions (or prompts) were used as necessary to elicit more detailed answers to specific questions (Adams, 2015). Further methodological details are available by request.

of case studies,⁴⁸ we believe it to be worthwhile to capture the experiences of the very few examples of proposed congestion pricing programs in North America. In addition, methodologies involving a small number of case studies are frequently used in the international transportation planning literature.⁴⁹ When taken together, these interviews provide a sample of the North American jurisdictions at various stages of congestion pricing policy.

Individually, each city's experience is a unique example of a specific context and circumstances including historical, political, geographic, demographic, and economic factors. Despite these differences, several high-level themes emerged from our analysis of the interviews.⁵⁰ In the next section, we summarize these themes and, where appropriate, contextualize the results within recent peer-reviewed research on the communication of congestion pricing policies.

5.1 Cities exploring congestion pricing

At the beginning of each interview, we asked participants to describe the basic information about the congestion pricing programs in their cities or metropolitan areas. This included questions about the primary rationale behind those programs, how decisions about the program were, are, or will be made, and which specific forms of congestion pricing are being considered. We introduce each program below and summarize those answers to show the diversity of congestion pricing programs and the places exploring them. Because congestion pricing policy in the US is rapidly evolving, the information below should be considered a snapshot of each program as of August, 2021.

⁴⁸ Diefenbach, "Are Case Studies More than Sophisticated Storytelling?"

⁴⁹ Börjesson, Eliasson, and Hamilton, "Why Experience Changes Attitudes to Congestion Pricing"; Grisolía, López, and Ortúzar, "Increasing the Acceptability of a Congestion Charging Scheme," April 1, 2015; Hess and Börjesson, "Understanding Attitudes towards Congestion Pricing."

⁵⁰ Interviews were transcribed and coded (as per Boyatzis, 1998), before codes were grouped to form the emergent themes summarized here, in a process known as thematic analysis (see, for example Fereday & Muir-Cochrane, 2006; Guest et al., 2012). Although the topics of conversation were driven by the choice of interview questions, these themes were identified by coding only responses, highlight trends within those responses.

5.1.1 Washington, D.C.

More than sixty years after economist William Vickrey first petitioned the US Congress to implement congestion pricing in Washington, D.C.,⁵¹ the District's Department of Transportation is in the final stages of delivering to D.C. council an analysis of the impacts of a possible congestion pricing.

Program name:	Decongestion pricing (informally, not yet decided)
Program stage:	Early feasibility study
Decisionmakers:	Study conducted by the District Department of Transportation, funding and study mandate by DC Council
Objectives:	1) Produce a high-level overview of transit, mobility, and impacts; 2) determine how congestion pricing might help alleviate observed equity issues; and 3) determine how congestion pricing might incentivize a mode shift
Pricing forms:	Considered the impact of pricing entrance, entrance and exit, time spent, and distance traveled in a cordon-based area

5.1.2 Portland, OR

Across the continent, the Bureau of Transportation for Portland, Oregon has completed a twoyear internal feasibility study and, at the request of the Portland city council, has entered into a public conversation on congestion pricing through the Pricing Options for Equitable Mobility (POEM) taskforce.

Program name: Pricing Options for Equitable Mobility (POEM)

Program stage:Second phase, engagement with taskforce of community representatives;Metro regional government has done a feasibility study and technical
analysis of different types of pricing

⁵¹ Vickrey, "Statement to the Joint Committee on Washington, DC Metropolitan Problems: Preliminary Sketch of Possible Schemes for Automatic Toll Assessment with Reference to the Washington, DC Metropolitan Area. [Republished 1994]."

Decisionmakers:	POEM project led by Portland Bureau of Transportation, by mandate of				
	Portland City Council; metro regional and state government involved in				
	separate congestion pricing and tolling projects				
Objectives:	Reduce congestion, with equity as a key focus				
Pricing forms:	Undecided, but will focus on mobility pricing mechanisms including parking fees and potentially congestion charges				

5.1.3 Los Angeles, CA

The Los Angeles County Metropolitan Transportation Authority (LA Metro) is unique in the scale of its operations: over 10 million residents (and counting) call LA County home.⁵² The region faces other unique challenges, ranking among the most congested regions in the US and among the metropolitan regions with the lowest transit mode shares. If Metro's *Vision 2028* strategic plan goals are realized, however, this could be about to change. The organization is currently analyzing data from their Traffic Reduction Study, one of the initiatives from Vision 2028, while preparing to embark on their third round of stakeholder and public consultation. At the conclusion of this study, the Metro Board of Directors will decide whether LA Metro will implement a pilot program.

- **Program name:** traffic reduction pilot program; feasibility study being called Traffic Reduction Study
- **Program stage:** Feasibility study; preparing to conduct third round of stakeholder and public consultation; at the conclusion of this study, the Metro Board of Directors will decide whether LA Metro will implement a pilot program
- Decisionmakers: Study led by LA Metro; Metro Board of Directors, which is the governing body, will decide whether a pilot program will be implemented at the conclusion of study

⁵² LA Metro, "Metro Vision 2028."

Objectives: Core goals: Reduce congestion and provide more high-quality transportation options. Additional positive outcome goals: support environmental and economic justice by mitigating impacts and improving outcomes for low income and vulnerable populations; support public health and safety, including air quality improvements and roadway safety; support economic prosperity, including supporting business and goods movement and improving access to jobs and other key destinations and opportunities

5.1.4 San Francisco, CA

Prior to the pandemic and in response to record congestion levels, San Francisco began the process of resurrecting and re-tooling a conceptual feasibility study of cordon-style congestion pricing conducted (and shelved) a decade earlier. This updated study will produce a list of requirements and recommendations for a congestion pricing design by the end of this year.

Program name:	Downtown San Francisco Congestion Pricing Study
Program stage:	Update of 2010 feasibility study
Decisionmakers:	San Francisco County Transportation Authority Board of directors, policy advisory committee (composed of paid representatives of community-based organizations), city and county governments, state government
Objectives:	Manage/prevent congestion and advance safety, climate, equity, and transit improvement goals
Pricing forms:	Undecided, but considering cordon-based and zonal designs

5.1.5 New York, NY

Closest to implementation is New York's congestion pricing program, approved at the state level in 2019, over a decade after an earlier proposal failed at that same critical hurdle.⁵³ New York's Metropolitan Transportation Authority has now received the federal greenlight for an environmental assessment of their congestion pricing proposal, putting the program on track for a 2023 rollout.

Program name:	Congestion Pricing Program
Program stage:	Federal environmental assessment
Decisionmakers:	Federal environmental assessment being led by New York's Metropolitan Transportation Authority, by mandate of state government, with support from New York City and New York State Departments of Transportation
Objectives:	Revenue generation for transit budget deficit and improvements, as well as congestion reduction in and around the Manhattan central business district
Pricing forms:	Cordon-based (no charge for trips that start and end within zone)

⁵³ Gu et al., "Congestion Pricing Practices and Public Acceptance."

6 WHERE THE RUBBER HITS THE ROAD What can we learn from the US cities exploring congestion pricing?

interested starting feel ves answer thinkina challe leveis e next focus done 165 hear better henefits rtunitv last money regional **C** noint thought group impacts mean curious nolicy area ways first plans strategy able costs phase building out share specific 's exemptions always meetina potential narticularly certainly understand

Figure 2. The 150 most common used by interview and focus group participants (excluding stop words: the, a, and, etc.)

6.1 NOT ALL ROADS LEAD TO ROME Global examples provide a starting point, but every city is unique

What we say is "We are great. [Our city] is not like those other places." But let's not start from scratch. Let's not reinvent the wheel, because other places have managed to successfully deploy congestion pricing programs. Let's learn from those places. But let's tailor it to the context of [our city].

PARTICIPANT 8

Although comparisons to the successful congestion pricing policies of London, Stockholm, Gothenburg, Milan, Singapore, and others can be helpful, the transportation professionals that we spoke with focused more on what makes their cities unique. By distancing themselves from these cities, some argued, they were better able to tap into a sense of community identity while forestalling the criticism that "this city isn't like those cities."

For some cities, this included an earlier and more explicit focus on community engagement than was generally the case with the global examples:

I think—it's a little bit different than a lot of other cities—sometimes our line is we flip the usual script. Often, cities will start with a technical study or a feasibility analysis, [and then] do that second phase of the internal in-house work to see what the design could look like before starting the community conversation. [...] We know in our community we needed to do that differently and start with the community conversation. [...] I think that has probably moved us further along than if we had spent the last two years doing just an in-house feasibility study.

PARTICIPANT 5

Our interview participants also highlighted the importance of communicating the similarities between specific aspects of their city's context and the contexts of other cities:

Those other cities though are also very different from each other. [...] Congestion pricing is always adapted to fit the city that it is in and then I would give some examples about how Stockholm is different from London, or different from Milan. The other thing, though, is people will say "Well those cities all have really great rail systems or they're superior in some other way." So, I'll point out how actually there is something similar about Stockholm and London which is they weren't using congestion pricing to improve their rail system and that's not where they saw the increased transit. They saw it from their bus system and in fact, London was trying to improve its bus system because they couldn't squeeze more capacity out of their rail and Stockholm focused their investment in their buses. So, try to make that relatable as [our city's] system is primarily bus-based and that's how other cities focused theirs, too.

PARTICIPANT 3

Even when these comparisons highlighted differences between cities and global examples, however, our participants suggested focusing on the flexibility of traffic demand management tools to open a conversation into how they could be tailored to a specific city's context:

We have a lot of pretty low-income people driving downtown because we're just a much smaller city and people still do. And so, that means that's a really important factor, and no, we're not going to do it like New York and we're not going to be able to do it like London. But that still doesn't mean we can't have a conversation and think about how we can do it for [our city]. I think that the fact that it's a flexible tool is one of the things that we've tried to say when people ask us.

PARTICIPANT 6

6.2 IT'S A TWO-WAY STREET Early, frequent, bi-directional communication improves policies and creates advocates

Ultimately, [our goal is] to better understand the concerns, the opportunities, the challenges, potential solutions, and really working with these different stakeholders, where they feel we're taking them along on this journey with us. And that we're working through all of these things together, rather than talking at people about all of these things, really enlisting their help as part of this process.

PARTICIPANT 8

Familiarity with congestion pricing among the public is both low and a key determinant of policy support.⁵⁴ Although past communication efforts have attempted to address this by providing more information about congestion pricing, this one-way communication has been largely ineffective at increasing support for congestion pricing.⁵⁵ Instead, and consistent with the communication recommendations introduced earlier in this report, our interviewees consistently spoke to the importance of communication, engagement, and education as reciprocal exercises. Individuals from several cities also drew attention to the importance of eliminating barriers to participation in engagement activities, such as by paying community representatives for their time and lived experience as transportation network users and citizens. Part of this valuable two-way communication relates to the previous theme and requires flexibility in congestion pricing policy design:

⁵⁴ Milenković, Glavić, and Maričić, "Determining Factors Affecting Congestion Pricing Acceptability."

⁵⁵ Selmoune et al., "Influencing Factors in Congestion Pricing Acceptability."

What we're really asking ourselves now is could this tool do other things? Could some of the things that we are familiar with be used in ways that get us closer to our goals? [That has] allowed us to, I think, overcome that hurdle and at least just keep the conversation alive. And that's maybe my last point: it's a conversation. We really tried to say, 'This is not about convincing or selling an idea, it's about exploring whether and how this would have to look in [our city].

PARTICIPANT 5

That flexibility in policy design reflects an authentic commitment by pricing policy advocates to incorporate the feedback they seek from stakeholders. Besides creating community advocates and increasing familiarity with congestion pricing, this kind of conversational communication allows for iterative and accountable improvement of the proposal and network-building:

For some of our research technical audiences, we really want to enlist their help to understand emerging and longer-term travel patterns and trends. So, for example, we're enlisting local university researchers in this conversation and leaning on their knowledge and expertise in terms of, that's their space. [...] And then for those who are elected officials, we want to better understand 'who else should we be reaching out to?' So ideally our stakeholder list gets longer because we would have been able to add to it and reach more people as the study progresses.

PARTICIPANT 8

Although the design details and technology are what interest people, that information can sometimes stifle open conversation.⁵⁶ Our participants recommend starting small, engaging with stakeholders to understand their values and concerns, and undertaking a collaborative approach to develop core principles for pricing that stakeholders feel they have informed. For the kind of engagement that leads to policy success, it seems to be the journey that matters more than the destination: before getting to specifics, it's important to secure buy-in on policy principles, objectives, outcomes, and values.

⁵⁶ Milenković, Glavić, and Maričić, "Determining Factors Affecting Congestion Pricing Acceptability."

6.3 THE HIGH ROAD Communicating and designing for equity

There is plenty of evidence it can be good for congestion, and it can be good for mobility. It can bring down greenhouse gases and be good for climate. But that really was the question of, like 'can you design it not only so that it doesn't harm our equity communities, but can you design it so that it actually benefits our equity communities?'

PARTICIPANT 6

In a recent review of the factors affecting the acceptability of congestion pricing, Ziyuan Gu and colleagues found that, out of eight high profile cities and metro areas that had attempted to implement some form of congestion pricing, four were successful and four were not (see Table 1).⁵⁷ All four of the successful implementations included an explicit consideration of equity in their design, while all four of the failed implementations did not. Although there are other factors at play in those examples, the coincidence is striking.

In our interviews, too, one of the strongest themes that emerged was the importance of centering equity while designing and communicating the process and outcomes of congestion pricing plans. Of the five cities we interviewed, four are approaching congestion pricing with a focus on equity and each of them highlighted that decision as crucial to the early successes of their feasibility studies and public engagement.

⁵⁷ Gu et al., "Congestion Pricing Practices and Public Acceptance."

While the broad messaging hasn't really connected with people, I don't think, when we give our presentation on congestion pricing about equity, I think it does work in these co-creation workshops when we say the status quo is not equitable, you and your community have more traffic, crashes, you are breathing bad air, they get it. Your buses are late, they get it. That's where a lot of equity of processes have been going.

PARTICIPANT 2

Those that had additionally or primarily focused on congestion pricing's power as a revenue generator highlighted this as a reason for resistance. Concern about the potentially regressive nature of pricing mechanisms has long been a part of the discussion on traffic demand management⁵⁸ but the results of our conversations suggest that designing and communicating equitable processes and outcomes is non-optional to community support for congestion pricing in many cities. This is also reflected in the more recent academic literature with many authors listing equity concerns as the single most important barrier to public acceptance.⁵⁹

City/Metro	Factors considered/addressed/included in congestion pricing program						
	Privacy	Equity	Complexity	Uncertainty	Pilot	Referendum	Implemented
Singapore	Y	Y	Y	-	Ν	Ν	Y
London	Y	Y	-	Y	Ν	Ν	Υ
New York	-	N	Y	-	Ν	Y	N
Stockholm	-	Y	Y	Y	Y	Y	Υ
Milan	-	Y	Y	Y	Ν	Y	Y
Hong Kong	-	Ν	-	Ν	Y	Y	Ν
Edinburgh	Ν	N	Ν	Ν	N	Y	Ν
Greater Manchester	-	-	Ν	Y	Ν	Y	Ν

Table 1. Key factors affecting public acceptance of prominent area-based congestion pricing programs

Note. Y = yes, factor was considered/included in program; N = no, factor was not considered/included in program;

- = consideration/inclusion of the factor was not mentioned. Data in table are from a recent review of area-based congestion

pricing by Gu et al. (2018).

⁵⁸ Giuliano, "Curbing Gridlock."

⁵⁹ Cohen D'Agostino, Pellaton, and White, "Equitable Congestion Pricing"; Ecola and Light, "Equity and Congestion Pricing: A Review of the Evidence"; Kockelman and Kalmanje, "Credit-Based Congestion Pricing"; Miller, "Charging Drivers to Use Roads Can Be Equitable"; Wu et al., "Design of More Equitable Congestion Pricing and Tradable Credit Schemes for Multimodal Transportation Networks."

In our interviews, we further distinguished between *process equity*, or fairness and meaningful inclusion in the design of the program, and *outcome equity*, fairness in the results of the implementation of that program. Most of the professionals we spoke to said that they had considered both aspects of equity, and many attributed successful public engagement so far with their decision to embed a consideration of each into their design and communications strategies.

A really big part of our engagement efforts are not super visible on our website or on our emails but they're happening; first in person and they were transitioned to be virtual. We pay the [community-based organizations] and the participants for their time and expertise. We've been getting a lot of really great feedback from communities through this process [...]

PARTICIPANT 2

Finally, equity is inseparable from all other aspects of policy design, implementation, and communication. The following advice from Liisa Ecola and Thomas Light of the RAND Corporation's Transportation, Space, and Technology program ties considerations of equity into the other themes described here and is worth printing in full:

A region seeking to implement congestion pricing should look at measuring and assessing equity early in the planning process. Since equity is so specific to individual regions, those responsible for developing a congestion pricing proposal should test it through modeling to determine who tends to pay charges and whether low-income or other transportation-disadvantaged groups are disproportionately affected. They should also conduct sufficient outreach that residents understand the proposal and have opportunities to offer suggestions. Finally, equity should be monitored after congestion pricing is implemented, and the system changed periodically if the initial tools to promote equitable outcomes are not meeting their goals.

LIISA ECOLA AND THOMAS LIGHT, 2009⁶⁰

⁶⁰ Ecola and Light, "Equity and Congestion Pricing: A Review of the Evidence."

6.4 THE STRAIGHT AND NARROW Transparent, community-informed revenue use

About 75% of participants were wanting a congestion pricing program that they were able to design through those [collaborative] workshops. I think a lot of it had to do with them being able to choose what the investments were. We also had a wildcard where they could add something if they wanted to.

PARTICIPANT 2

In an experiment with residents of a Spanish city considering congestion pricing, José Grisolía and his colleagues found that a commitment to offsetting congestion fees by reducing or eliminating other taxes can increase support for congestion pricing by 7%.⁶¹ While this may seem small, it is more than the difference between positions in several congestion pricing referendums.⁶² In our interviews, communication of revenue use was seen as playing a large role in public acceptance. This communication, though, as described in Section 6.2, must go both ways. For several cities, an important use for revenue was to ensure that the outcomes of the policy are equitable:

We're starting with the premise that the existing system is not equitable. The existing transportation system is not equitable. And we have an opportunity through the study to actually improve equity outcomes. And so, we do not, though, start with the idea that this is a program that's designed with the goal of generating revenues, so much as we know that revenue is going to be a by-product of congestion pricing from what we've seen from these types of programs around the world. And we want to look at 'how can those net revenues that are generated be reinvested back into the communities that are going to be served or affected by a pilot program?'

PARTICIPANT 8

⁶¹ Grisolía, López, and Ortúzar, "Increasing the Acceptability of a Congestion Charging Scheme," April 1, 2015.

⁶² Harrington, Krupnick, and Alberini, "Overcoming Public Aversion to Congestion Pricing."

[I]f I had to sum up the most critical piece, it would be that we are actually hearing pretty strongly: low-income exemptions. Not even just discounts, but straight low-income exemptions.

PARTICIPANT 6

6.5 TAKING IT FOR A SPIN Pilot testing and experience with congestion pricing

One of the clearest calls from researchers of congestion pricing is to expose drivers to the benefits of policy implementation in a firsthand, temporary, trial of congestion pricing ⁶³, and then to carefully and consistently communicate the results of that trial.⁶⁴ With the exception of Milan, which was transitioning from an earlier environmental pricing plan, every major city that held a referendum without first implementing the policy on a trial basis, failed to be implemented (see Table 1).

Experts in our five cities placed somewhat less emphasis on the importance of pilot testing, although most are considering the option. Although this may be partly an artifact of the cities being early in their congestion pricing policy development process, it could also signal a lower importance of pilot testing than suggested by the academic literature and global case studies. This is consistent with the idea that pilot testing offers an opportunity, not the guaranteed solution it is sometimes framed to be.⁶⁵ One interviewee associated pilot testing with the risk of policies stalling out at earlier stages of implementation:

⁶³ Börjesson, Eliasson, and Hamilton, "Why Experience Changes Attitudes to Congestion Pricing"; Eliasson, "The Role of Attitude Structures, Direct Experience and Reframing for the Success of Congestion Pricing"; Firth, "Congestion Charging/Mobility Pricing"; Hamilton et al., "Determinants of Congestion Pricing Acceptability"; Hess and Börjesson, "Understanding Attitudes towards Congestion Pricing"; Selmoune et al., "Influencing Factors in Congestion Pricing Acceptability."

⁶⁴ Gu et al., "Congestion Pricing Practices and Public Acceptance."

⁶⁵ Hårsman and Quigley, "Political and Public Acceptability of Congestion Pricing."

[Pilot testing] is something we've heard from most of the taskforce. I think it's something that our council—just, in general, across all of our government areas piloting has become the word of the year, and it makes a lot of sense. I think the folks who are most bought in already on congestion pricing, one thing we hear is, 'Don't delay implementation,' or things like, 'Benefits are bigger if you do it in a bigger area.' So, there's a little bit of a tension, too, between urgency, 'get something going,' which actually I think piloting can help with, but also the 'Don't go piecemeal, and also don't go piecemeal too much if there's a risk it backfires and it's not actually showing the scale of benefit that we would need to convince people.

PARTICIPANT 2

Depending on the type of pilot test, the exercise may also bring significant political risk. Although Stockholm is often cited as a success story, it very nearly failed the post-pilot referendum that brought the larger program into being.⁶⁶ Careful consideration and communication is therefore needed in the design of staged implementation:

[There is a] closed loop interaction between the government and the public whereby information is shared between both parties. In Hong Kong, New York City, Edinburgh and the Greater Manchester [sic], though a referendum (or multiple public hearings) was held during which the public's opinions were conveyed to the government, inadequate knowledge or feedback was provided in turn by the government with respect to the potential consequences after the implementation of the scheme, either through a trial or by means of theoretical modelling. As a result, the closedloop interaction degrades into a unilateral political process.

GU, ZIYUAN, ZHIYUAN LIU, QIXIU CHENG, AND MEEAD SABERI, 201867

⁶⁶ Firth, "Congestion Charging/Mobility Pricing."

⁶⁷ Gu et al., "Congestion Pricing Practices and Public Acceptance."

6.6 EBBS AND FLOWS Economic and political factors present uncertainty... and opportunity

"Implementation can always be traced to some unusual political event which serves as catalyst."

LEWIS LEHE, 2019⁶⁸

The final theme that occurred throughout our interviews was a recommendation to focus on what you can control while preparing for what you can't. A quote attributed to both Oprah and the Stoic philosopher Seneca accurately captures much of what we heard on this topic: "Luck is what happens when preparation meets opportunity."

We always start this study when congestion's really bad, which usually means the economy's really good. We finish it right after the recession. Then the next something happens. If we can power through and get this phase of this long process approved, in the end of this year or early next year; by the time that we're done and have it as a potential tool, it might actually be at the point where congestion's bad again.

PARTICIPANT 2

COVID was really dramatic but it could have been a recession like any of the two: we had a recession in 2000, we had a recession in 2008. That's why congestion pricing was shelved last time. It was because of recession.

PARTICIPANT 3

⁶⁸ Lehe, "Downtown Congestion Pricing in Practice."

Political windows of opportunity, congestion levels, economic trends, and other external factors play outsized roles in the success of every stage of congestion pricing policy development and deployment. It is not possible to predict when these factors will align favourably for congestion pricing, but it is possible to prepare to act when they do. This preparation offers a communication opportunity:

Some of those behaviors are going to be hard to change back. If we turn the economy back on and people shift to driving, the networks just can't handle it. So, traffic is going to be even worse than before. So, I think that's going to be one of the narratives that are going to be out there for proponents of the project.

PARTICIPANT 7

Another type of uncertainty was that introduced by having multiple decision-makers, jurisdictions, and political systems to navigate. Advice here again focused on finding the leverage points that were available outside of this uncertainty.

We don't actually control a lot of the local roadways or the transportation system. So, we rely a lot on partnerships with the local municipalities who do control that right of way.

PARTICIPANT 5

7 CROSSING THE FINISH LINE Putting it all together

In a discussion paper to support updated climate and clean air strategies, Metro Vancouver notes that "[p]ublic support for mobility pricing will depend on how the policy design considers affordability challenges, improvements in transit access, and equitable ways to mitigate impacts."⁶⁹ While these design elements are certainly important, they are far from sufficient predictors of policy implementation. To ensure pricing policies have the greatest chance of success possible, policymakers must also effectively communicate those considerations to the public, decisionmakers, and other stakeholders. Rather than trying to fill the knowledge gap on congestion pricing, modern best practice and the transportation professionals interviewed for this project suggest bridging that gap.

This involves more than making the information available (although, again, that is an important prerequisite): communicators of complex technical information also need to consider what they can do to ensure that their audience understands those considerations, as well as how and why they were considered. This includes communication *about* communication: how and why engagement with the public is taking place, how policymakers will use the resulting public input to tailor policies to local needs, and how communities can trust and know that those commitments and others (e.g., transit investments) will be kept. Communication efforts designed with these principles in mind serve the dual purposes of 1.) opening the communication channels that are crucial for iterative improvement and tailoring of policies to local needs and 2.) creating well-informed advocates who can champion the congestion pricing cause within their communication is an evidence-based model powered by an ever-evolving understanding of how humans understand and apply the complex information shared with them. Access to information, literally and psychologically, persuasive framing, and knowledge co-construction play crucial roles.

⁶⁹ Metro Vancouver, "Transportation: Discussion Paper to Support Climate 2050 and Clean Air Plan."

Our world is in the middle of intersectional catastrophes of historic proportions. In deciding how to address the effects of these catastrophes on their citizens, cities and metropolitan regions have an opportunity to rethink the role of pricing in addressing many of those effects. Congestion pricing is not a silver bullet. Its deployment as a tool for behavioural change must be carefully considered, rigorously planned, and clearly communicated, with special attention to the psychological, socioeconomic, and political barriers that so often dampen its acceptance. However, when viewed and communicated in this way, it can be one of the most effective tools in the transportation planner's toolkit, providing an efficient and equitable solution to some of the most pressing problems facing cities today and in the foreseeable future.

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Appendix A: Interview Topic Questions

- 1. Would you mind introducing yourself and the role you've played in your [CP program name] program?
- 2. Where are you in the process of implementing a [CP program name] policy?
- 3. About the name "[CP program name]": as you're no doubt aware, this policy tool goes by many names! How did you arrive at the name that you did?
- 4. Much of the empirical research on traffic demand management has come from the few global "success stories," like London, Milan, and Stockholm. I'm sure you're no stranger to the argument that "our city isn't like those cities!" How do you or would you respond to that?
- 5. What would you say were/are the objectives of your [CP program name] policy?
- 6. Have you tied the revenue that will be generated by your policy to any specific project?
- 7. Have you conducted or are you planning to conduct anything that you would consider to be a pilot test of your larger [CP program name] policy?
- 8. In your own words, what does equity mean in the context of your [CP program name] policy?
- 9. In terms of equity in the process of designing your policy, how have you weighed the many different voices at the table?
- 10. In terms of equitable outcomes, to what extent has an attention to those outcomes informed the design of your policy?
- 11. Did you have a communications and engagement strategy or action plan?
- 12. Have you had to coordinate across other jurisdictions, or with other governance and decision-making bodies?
- 13. Did you have a strategic plan for engaging with decision-makers at various levels of government?
- 14. Did you find that there were certain windows of political opportunity that have been instrumental to the success of your program so far?
- 15. We know, at least in theory, that congestion pricing is something that can appeal to both sides of the political spectrum. The right tends to like it as an application of a market-based tool, while the left likes it because it's a form of a green tax. Did you apply this type of thinking anywhere when seeking political acceptance?
- 16. To finish off, if you could travel back in time to before the current stage of your policy, what is the one thing you'd tell yourself to give your plan the best chance of success?