

# Encouraging Retirement Planning through Behavioural Insights

Prepared by the Behavioural Insights Team  
on behalf of the Ontario Securities Commission Investor Office

July 27, 2018



ONTARIO  
SECURITIES  
COMMISSION

INVESTOR OFFICE

THE  
BEHAVIOURAL  
INSIGHTS TEAM 

# Contents

- Introduction** ..... 3
- It’s hard to start**..... 4
- It’s easy to put off** ..... 8
- It’s easy to get overwhelmed and drop out**.....13
- It’s hard to get the right advice for me** .....17
- Conclusion** .....20
- Appendix A: Opportunities and Interventions** .....22
- Appendix B: Results from Experiment to Promote Use of the Canadian Retirement  
Income Calculator**.....31
- Appendix C: Works Cited** .....38
- Endnotes** .....41

## Introduction

The Investor Office of the Ontario Securities Commission (OSC) leads the OSC's efforts in investor engagement, education, outreach, and research, and brings the investor perspective to its policymaking activities. The OSC Investor Office is committed to developing evidence-based policy and programs, identifying opportunities to apply behavioural insights to policy creation, and engaging with Ontarians to better understand their needs. Improving the financial security of older Ontarians is an OSC priority, with the Investor Office recently leading the development of the OSC Seniors Strategy.<sup>1</sup>

As discussed in the OSC Seniors Strategy, improving the financial security of older Ontarians is a complex goal, requiring collaboration and information-sharing among government and regulatory bodies, financial institutions, employers, and other organizations. In addition to the important role played by organizations, there are steps that Ontarians themselves can take to improve their financial security, like saving more or developing a financial plan for their retirement. Even though retirement planning can lead to higher levels of wealth accumulation<sup>2</sup> and there is an appetite for information about retirement, 54% of pre-retired Ontarians aged 45 or older have no retirement plan, with only 14% having a formal, written plan.<sup>3</sup>

This research report, prepared by the Behavioural Insights Team (BIT) in collaboration with the Investor Office, identifies ways that government, regulators, employers, and financial institutions can promote retirement planning among Ontarians. It draws on research from behavioural science to present a picture of the barriers that Ontarians experience in retirement planning and the opportunities that exist to implement simple, low-cost interventions that can help overcome these barriers. This focus on low-cost interventions informed by behavioural science supports the Investor Office's focus on investor education, outreach, and evidence-based policy development. Our research focuses on retirement planning because of its potential value to Ontarians, and because there is substantially less existing behavioural science research on retirement planning than other related topics (e.g. increasing savings, pension enrolment).

This report also includes the results of a randomized experiment that BIT conducted with support from OSC and partners at the Government of Ontario and Government of Canada. The experiment tested several of the ideas proposed in this report, and the results offer a powerful demonstration of the role that behavioural science can play in promoting retirement planning. See Appendix B for a full description of the experiment and the results.

Behavioural science offers policymakers a more realistic understanding of how people make decisions and behave. It reveals how human psychology can limit people's ability to make choices that are in their own best interest. While we believe that most people want to make a retirement plan, a number of barriers frequently explored in behavioural science research and "nudge theory" can get in the way: planning requires that people focus on the future, it offers mostly intangible benefits in the present, it can seem (and is) complicated, assistance can be hard to come by for some, and the retirement planning process is full of small moments of friction. These seemingly small roadblocks can add up and have a paralyzing effect. This report investigates these barriers and identifies promising, evidence-based approaches for addressing them to help people follow through on their intention to make a financial plan for their retirement.

This report provides recommendations that should be relevant to a variety of stakeholders, and potentially helpful to a broad cross-section of Ontarians. The barriers to retirement planning that we address are experienced—to greater or lesser degrees—across gender, ethnicity and socio-economic status. However, we believe this work will be most effective in supporting the needs of middle-income Ontarians. Higher income people tend to have access to specialized financial experts who can assist with retirement planning, reducing the barriers they experience. For people with very limited incomes (e.g. below the low-income cut-off), other financial concerns are likely to—and perhaps should—take precedence over retirement planning. The research participants we spoke with who had or were currently experiencing significant financial challenges indicated that making ends meet each month or developing a small emergency savings fund was as far as their resources could possibly stretch, reinforcing this point. These individuals may also achieve a higher degree of income replacement from government pensions and other programs.<sup>4</sup>

Our research findings and recommendations were developed on the basis of a literature review, BIT’s relevant experience, and qualitative research with pre-retirement Ontarians and financial advisors. The literature review was the primary input—we’ve drawn heavily from the rich behavioural science literature on saving, making decisions about the future, and planning. To supplement our literature review, we conducted qualitative interviews with several pre-retired Ontarians aged 45 or older and two financial advisors. The interviews were conducted to add nuance to our understanding of how Ontarians think about retirement and to illuminate some of the challenges they face. We did not draw conclusions or make recommendations based on these interviews, given the limited scale, but they were invaluable in pointing to new research questions and opportunities. For example, the interviews suggested that the term “retirement plan” can be understood in very different ways. In this report, a “retirement plan” is defined as a description of one’s estimated expenses post-retirement and how one will pay for them (e.g. through pensions, savings, or part-time employment), but some of the interviewees understood a “retirement plan” as referring to a pension plan. We sought to address the considerations raised in qualitative interviews with further research wherever possible, and they also helped us identify compelling areas for further research, which we note in the conclusion.

This report is organized around the primary challenges people experience in moving from the intention to create a retirement plan to actually having a plan: *it’s hard to start, it’s easy to put off, it’s easy to get overwhelmed and drop out, and it’s hard to get the right advice for me.* In each section, we describe the barriers people experience and the opportunities for government and regulatory bodies, employers, financial institutions and practitioners, and others to help remove those barriers through simple, low-cost interventions.

## It’s hard to start

Starting the retirement planning process is perhaps the most challenging part. Inertia is a powerful force in people’s lives. We can all understand the draw of putting off a task, particularly one that might be time consuming, emotionally or intellectually difficult, and for which there’s no impending deadline. On the other hand, if we can overcome this inertia and take an initial step in the retirement planning process, it will generate momentum for completing it.

There are two key barriers people need to overcome to get started: 1) the default option is not to have a plan, and 2) making a plan is perceived to be complex. The following sections describe these barriers and promising or proven interventions to address them.

### ***We go with the flow (i.e. the default option)***

Default options—the choices people make when they do not actively choose at all—are incredibly powerful. For example, far more people are organ donors in countries where people need to opt-out than in countries where people need to opt-in.<sup>5</sup> There are myriad other examples, but even so, the power of defaults is generally underestimated.<sup>6</sup> When it comes to retirement planning, the default option is not to make a plan at all, and we believe this is a significant factor limiting the extent of retirement planning in Ontario and other jurisdictions.

Our research uncovered two sets of potential opportunities to address this significant challenge. First, find ways to make planning for retirement the default option. Pension plan administrators have had great success in boosting pension plan enrollment by switching from an opt-in model to an opt-out model so that when people start a new job they have to choose to unenroll rather than choose to enroll, thereby harnessing inertia for their own good.<sup>7</sup> One company saw the enrollment rate of new employees in their 401(k) plan more than double, just by switching the default.<sup>8</sup> Finding a way to mirror this change for retirement planning may have striking effects. Second, take away the default option entirely. In particular, requiring people to make an “active choice” rather than giving them a default can be effective, even where one of the choices is to do nothing.<sup>9</sup> Research on the benefits of active choice framing show that it is particularly effective in situations where people tend to procrastinate and where different people have different preferences, meaning that no single default will work for everyone.<sup>10</sup> Both of these conditions are present in retirement planning; it’s something people tend to put off and there’s no good “one-size-fits-all” plan to recommend.

The table below summarizes these barriers and opportunities and suggests evidence-based interventions to address them.

#### ***Barrier:***

**People tend to go with the default option, and the default is not to plan for retirement.**

#### ***Opportunity 1:***

**Make planning for retirement the default option.**

#### ***Intervention 1A:***

Employers could **integrate retirement planning into their onboarding process for new employees**. For example, employers could ask new employees to draft a retirement plan, providing them with a standardized tool or template. Even better, employers could also pre-book an appointment with a qualified retirement planner to review that plan. This approach would make the development of a financial plan for retirement feel like a typical, default activity. Employers might benefit from employees feeling like their company is invested in their long-term financial wellbeing.

### **Opportunity 2:**

**Eliminate or mitigate the impact of the default option by requiring people to actively choose to make a retirement plan or not to.**

### **Intervention 2A:**

Organizations seeking to encourage retirement planning could prompt people to make a retirement plan through “active choice” framing. This could involve a communication that would present two options: “**Yes, I will create a retirement plan**” or “**No, I don’t want to help prepare for my retirement by making a retirement plan.**” The Behavioural Insights Team used this framing in Scottsdale, Arizona to encourage donations to “Scottsdale Cares” and found it increased donation rates by 125% (Fig. 1).

Similar to intervention 1A, employers could also pre-book a meeting for their current employees with a financial advisor during the workday. Employees would then have to choose to turn down the meeting rather than choose to schedule one themselves. This type of intervention may be particularly effective for people as they get closer to retirement and the consequences of their choice become more salient.

Would you like to join your neighbors and donate to Scottsdale Cares?



*Fig. 1: BIT’s Intervention to Encourage Donations to “Scottsdale Cares” in Scottsdale, Arizona.*

### **We are put off by complexity**

Our literature review and qualitative research revealed that retirement planning can be perceived as a complex and lengthy process. These perceptions make the inertia described above even more difficult to overcome. Our natural tendency to procrastinate is deepened when we are presented with something we perceive to be difficult.

To address this challenge, we present two interventions that organizations could implement to reduce the perceived difficulty of the retirement planning process. The first capitalizes on the “head start effect,” which presents a task as being already partially accomplished. This makes people feel like the goal (i.e. completing the task) is closer, leading them to exert more effort.<sup>11</sup> The second explores how to use “chunking,” which refers to presenting information or instructions as a series of small, manageable steps. This helps people conceptualize those tasks more easily.<sup>12</sup> More broadly, presenting the retirement planning process as quicker and simpler may help people first put pen to paper and make a plan.

**Barrier:**

People will avoid making a retirement plan because of the perceived length and complexity of the process.

**Opportunity 3:**

Frame retirement planning in ways that reduce the perceived challenges, making it feel more concrete and attainable.

**Intervention 3A:**

Government, regulatory bodies, or employers could provide people with a template to make a retirement plan that includes information about their pension already filled in. These organizations could then prompt people to *finish* making their retirement plan. The crux of this intervention would be to **make the planning process feel quicker and simpler by providing people with a “head start”** in making their plan.

**Intervention 3B:**

Organizations could prompt people to complete a retirement plan in a way that breaks the retirement planning process down into a series of simpler, smaller “chunks.” **Instead of suggesting that people “make a retirement plan,” ask them to follow 3-4 more concrete, comprehensible steps.** E.g. 1) estimate how much money you’ll need to spend each month when you retire, 2) subtract your government (e.g. CPP) pension, and any workplace pension, 3) use the calculator provided to see how much you’ll need to save and when you might be able to retire.

***We often experience strong, negative emotions when we think about retirement planning***

People may view retirement planning as an emotionally taxing or unpleasant task. Retirement planning involves thinking about eventualities such as failing health and mortality. Retirement planning can also be especially difficult for those who worry that they have not saved enough and who may feel guilt or anxiety about how they will make ends meet. The financial advisors and pre-retired Ontarians we interviewed drove this point home, with one participant noting that looking at her finances would mean that she could no longer hope she had a financial buffer, despite limited savings and a small government pension. Ignorance can be bliss, at least temporarily.

When people are confronted with decisions about the future while in emotionally charged or “hot” states, their decision-making is clouded to an extent they fail to appreciate or account for.<sup>13</sup> Thinking about retirement planning may put some Ontarians into a negative emotional state they wish to avoid, leading them to overlook the value of the activity and put it off.

Organizations that want to encourage retirement planning should avoid highlighting the emotional or negative aspects of the process and should try to prompt people to make a retirement plan when they are in more of a “cold state” (i.e. less prone to deeply felt emotions). For example, inserting retirement planning into a workplace setting, as suggested in the previous section of this report, may be a promising avenue.

### **Barrier:**

The idea of retirement planning can bring on strong negative emotions and people may put it off to avoid those emotions.

### **Opportunity 4:**

Ask people to complete a retirement plan at times when they are less likely to have strong negative emotions about their retirement finances.

### **Intervention 4A:**

Organizations could prompt people to make a retirement plan at times when they're likely to feel more positive about their financial situation (e.g. after receiving a tax refund, a raise or bonus, or a windfall). People may feel more in control and less concerned about their financial future during these moments.

## **It's easy to put off**

Retirement planning is all about the future, which makes it very tempting to put off in the present. First, we don't tend to think about the future all that much. We focus on our immediate concerns and priorities and only rarely step outside of our routine to think about the long term. Second, when we do think about the future, we do not value future outcomes as much as we should. We're willing to forgo significant long-term benefits to save ourselves some short-term costs. Third, even when we do think hard about the future, we tend to be too optimistic. This optimism reduces our perceived need to plan—who needs a plan if things will work out for the best?

### ***We are focused on the present, not the future***

It's advisable to develop a retirement plan well in advance of retiring. People often need time to start saving more or make other changes necessary to achieve their plan. The problem is that humans have a strong inclination to focus on what's urgent, and retirement planning fits squarely into the category of "important, but not urgent." As a result, people put off retirement planning in favour of immediate needs and concerns. This tendency is exacerbated when people are busy. When time is scarce, they "tunnel," doubling down on what's urgent at the expense of other priorities.<sup>14,15</sup>

We recommend testing the use of planning prompts to counter the tendency to put off retirement planning. Planning prompts ask people to define when and how they will complete a task. Putting together a plan helps people think through all of the steps they'll need to complete to achieve a goal, how long each of those steps will take, and the barriers they may need to overcome along the way.<sup>16</sup> As a result, people are more likely to follow through on an action if they've planned for it.<sup>17</sup> For example, get-out-the-vote calls with plan making questions are more than twice as effective as more traditional calls.<sup>18</sup> Some organizations may be able to go further than simply prompting people to plan by helping them build that plan into their schedules. By prompting people to make a plan, or by making a plan for them, we reduce the need for people



to think about the future as an impetus for retirement planning. We bring retirement planning into the present.

Another promising strategy is to capitalize on the “fresh start effect,” encouraging people to plan when they are more likely to be thinking about the future. Events like birthdays, holidays, or the start of a new year can lead people to step back from their day-to-day and consider the bigger picture.<sup>19</sup> People are more likely to change their habits or tackle ambitious goals in these moments. They mark the passage of time and allow people to relegate their bad choices to a time in the past and see a new period of time stretch in front of them ripe for better decisions.<sup>20</sup> Because retirement planning requires people to step back, look at the big picture, and make the choice to engage in a “good” behaviour they haven’t done in the past, it is important to take advantage of the points in time when that behaviour change is more likely. However, institutions are often focused on their own calendars and timelines, and don’t always communicate at the right moments.

The following table summarizes these opportunities and describes how they might be captured in more specific terms:

**Barrier:**

**People tend to ignore the future. They prioritize the urgent over the important, especially when they are busy. As a result, they are likely to put off retirement planning, which does not feel urgent until it is too late.**

**Opportunity 5:**

**Help people follow through with their intention to make a retirement plan by helping them build it into their schedule.**

**Intervention 5A:**

Organizations could provide access to a retirement planning tool and prompt people to make a specific plan for when and how they will use it. For example, have people fill out the following card or email: **“I will make a financial plan for my retirement on [date]. I’ll start by sitting down with [family member/significant other]. I will build and document my plan using [name of planning tool].”**

**Intervention 5B:**

**Employers could put time in their employees’ calendars for the express purpose of making a retirement plan.** They could also break the retirement planning process into several concrete steps and put each step in their employees’ calendars as a separate event, so that it seems less daunting.

**Opportunity 6:**

**Capitalize on moments people think about the future more, and communicate with people at those key points to encourage them to make a retirement plan.**

**Intervention 6A:**

Government, regulatory bodies, financial institutions, or employers could **send people prompts on their birthday** (particularly on “round number” birthdays or the year before these milestones), when they may already be thinking about the future and the passage of time, urging them to use a provided resource to make a retirement plan.

### **Intervention 6B:**

Government, regulatory bodies, or financial institutions could **prompt parents to start thinking about retirement when their kids first start drawing down from their Registered Education Savings Plan.** At this point parents may feel like they have tackled one major savings goal (for their children’s education) and may be receptive to financially planning for their next goal and stage of life.

### **We undervalue the future**

When people make a retirement plan, they invest time and effort in the present in exchange for (hopefully) better outcomes in the future. This type of trade-off is common, but often difficult. People struggle to choose healthy food over the less healthy options they crave. They tend to spend now instead of saving for later.<sup>21</sup> In general, when faced with this type of decision, people act as though what happens in the future matters much less than what happens in the present.<sup>22</sup> This fundamental concept in behavioural science is called “present bias”; we discount future outcomes far more than we should. There are two promising ways to combat this challenge and encourage retirement planning: 1) make the future feel less distant so that people discount it less, and 2) emphasize the near-term benefits of retirement planning (or create a near-term incentive).

### **Barrier:**

**The primary benefits of retirement planning accrue in the future, but people discount long-term outcomes compared to short-term outcomes.**

### **Opportunity 7:**

**Prompt people to plan for their retirement using methods that make the future seem close or salient.**

### **Intervention 7A:**

Government, regulatory bodies, or employers could send a communication aimed at making retirement feel more real by **including pictures of different ways that someone might be able to spend their retirement** and prompting people to take action for the retirement they want. The Behavioural Insights Team adopted this approach to encourage retirement planning in Scottsdale, Arizona and found a 75% increase in the number of people who signed up for a meeting with a financial advisor as a result of the intervention (Fig. 2).<sup>23</sup>



*Fig. 2: BIT's intervention to encourage use of retirement planning service in Scottsdale, Arizona.*

### ***Intervention 7B:***

Organizations developing retirement planning tools or assisting with retirement planning may wish to send a communication **asking people to picture their future selves**. Questions could include: “picture yourself in retirement, what are you doing? Who are you with?” To make these prompts more impactful, people could also be shown an aged picture of themselves.<sup>24</sup> Alternatively, organizations could ask people to write out a diary style entry depicting a day in retired life. These strategies would help make the future feel more salient and concrete, increasing the proportion of people who complete their retirement plan.

*Refer to Appendix B for results of a randomized experiment testing a similar intervention.*

### ***Intervention 7C:***

Organizations encouraging retirement planning could prompt people to plan with visualizations that help people feel like the future is close at hand. For example, they could **show people what the trajectory of their lives would look like if it took place over the course of 100 days, highlighting the day they’re on now and the day their retirement would start to make retirement feel more immediate**.

### ***Opportunity 8:***

**Prompt people to plan for their retirement by emphasizing the short-term benefits of doing so or by creating a near-term incentive to do so.**

### ***Intervention 8A:***

Government, regulatory bodies, or employers could **highlight the short-term psychological benefits of having a plan in place** in communications encouraging retirement planning. Employing this framing would help people focus on benefits they could receive in the present, like peace of mind, rather than the benefits they could receive in the future and might highly discount.<sup>25</sup>

*Refer to Appendix B for results of a randomized experiment testing results of this intervention.*

### ***Intervention 8B:***

Organizations could offer a lottery or prize draw in which people are automatically entered but must have completed a retirement plan in order to claim their prize. Lotteries are an effective incentive because people tend to overestimate small probabilities.<sup>26</sup> This type of lottery, called a **regret lottery**, is even more effective because it capitalizes on our aversion to losing something we could have.<sup>27</sup> In Gresham, Oregon the Behavioural Insights Team found that using a regret lottery more than doubled the number of utilities customers who signed up for automatic payments (Fig. 3).<sup>28</sup>

**Dear Danielle,**

Congratulations, you've been selected to participate in a drawing for a \$100 credit to your utility account! Your account number will serve as your drawing number. **But there's a twist: if you win, you will only be eligible to claim your prize if you have set up automatic bill payments (AutoPay) by the time of the drawing.**

[Sign up for AutoPay](#) before the drawing at 9 a.m. on November 30 to make sure you don't lose out on your chance at a prize!

*Fig. 3: Example of a "regret lottery", BIT's intervention to encourage AutoPay sign up in Gresham, Oregon.*

### **Intervention 8C:**

As an alternative incentive, employers could create a **team-based competition**. For example, if a whole team of employees creates retirement plans, they could win a modest prize (like a team lunch). This would create a short-term benefit for people to focus on and will motivate them further through social pressure.

## ***We are too optimistic about what the future will hold***

In addition to discounting future outcomes, people tend to be too optimistic about what the future will hold. We underestimate the probability of negative events or fail to think about them altogether.<sup>29</sup> This optimism bias limits retirement planning: we think that planning is less important because we assume that things will work out, and that we'll have as much as we need. Optimism bias can also lead to retirement plans being insufficiently conservative. We may assume that our savings rates or investment gains will be high, or that our post-retirement expenses will be low.

We've identified two promising opportunities for combatting optimism bias. First, by getting people to think about the details of their post-retirement lifestyle, we may be able to increase the perceived value of planning. Once they have a clearer, more detailed picture of what they would like their life to look like, they may be more interested in figuring out exactly how they'll pay for it. Second, to counteract the impact of optimism bias in developing retirement plans, we can give people relevant benchmarks about other people's plans and outcomes. By giving people a benchmark about how much other people save, earn on their investments or spend in retirement, we can counteract the tendency to be overly optimistic when developing our own estimates. This approach is called "reference class forecasting."<sup>30</sup> Each of these opportunities is outlined further in the table below:

### ***Barrier:***

**People tend to be overly optimistic about the future and may assume that current savings will be sufficient for retirement, limiting the perceived value of retirement planning. Optimism bias may also lead to retirement plans that are insufficiently conservative.**

### ***Opportunity 9:***

### ***Intervention 9A:***

**Combat optimism bias by engaging people in the details of their post-retirement lives.**

Optimism bias may lead people to minimize the need for a retirement plan. To counteract this, organizations can **prompt people to think about the details of their desired post-retirement lives** (i.e. their retirement goals and priorities). However, people struggle to develop a list of goals from scratch, finding it much easier to rank a list of goals provided to them.<sup>31</sup> **Providing people with a list of common retirement goals** (and associated costs) may be an effective way to help people overcome optimism bias and get people engaged in retirement planning.

#### **Opportunity 10:**

**Combat optimism bias by providing relevant benchmarks.**

#### **Intervention 10A:**

**Benchmarks could be included throughout a retirement planning process or integrated into a retirement planning tool** as a way of overcoming our tendency to be too optimistic. For example, people could be provided with appropriate benchmarks for savings rates, investment returns and post-retirement expenses. For expenses, we recommend providing a detailed list of common expenses (including “one-offs”), as our interviews with retirement planners and pre-retired Ontarians indicated that people often forget about major categories of expenses.

#### **Intervention 10B:**

Similarly, **warnings to avoid making common assumptions could be integrated into a retirement planning tool**. For example, people tend to pick Target Retirement Funds that end in a year ending in zero.<sup>32</sup> (People have a bias for “round” numbers.) Reminding people to check and see if they meant to make that choice may help them reassess their options. These warnings could also remind people about inflation and other factors people often forget to account for when making a plan.

## **It’s easy to get overwhelmed and drop out**

After people overcome the challenges in getting started on a retirement plan, they will continue to face barriers in completing the planning process. In this section, we discuss the behavioural and practical challenges people face in working through their retirement plan, including gathering their financial information and making decisions and assumptions about their post-retirement future. These challenges can be daunting, but behavioural insights suggest a number of potential interventions that could mitigate them.

## ***Even small friction costs can lead us to quit a process***

Even small roadblocks can be enough to convince us to put tasks off for another day or to abandon them altogether. The interventions that BIT designs often focus on making it easier for people to access or get through a government service. Removing even minor friction costs can significantly shift behaviour. One of BIT's simplest but most telling interventions was to change a link on a letter that asked people to file their taxes using an online form. The link was sending people to a website, which required one more click to get to the form. By changing the link so that it went directly to the form (saving people a single click), we were able to increase use of the form by four percentage points (from 19% to 23%) at no cost.<sup>33</sup>

One of the biggest friction points in the retirement planning process is collating all the financial information people need to create their plan (e.g. government and workplace pension information, RRSP and TFSA investments, information on current or future living costs). It's an intimidating amount of information, particularly because people don't necessarily know where to find all of it. For example, one research participant mentioned that she wanted to know how much money she would get from the government in retirement so that she could anticipate how much of a gap she might have to fill in with other income but did not know how to access that information despite searching online.

Reducing friction costs is likely to help more people complete their retirement plans. In support of this opportunity, one financial advisor we spoke to noted that she used to ask people to fill out a 15-page needs assessment to start the retirement planning process. However, asking for so much information all at once overwhelmed many people, and she has now simplified the process significantly. Financial institutions, governments, regulatory bodies, and employers can make retirement planning a lot easier by either directly providing the information (e.g. pre-populating retirement plans) or providing clear guidance on how to access it.

### ***Barrier:***

**It is difficult to gather the necessary financial information to complete a retirement plan, and even small friction costs can lead people to abandon important tasks.**

### ***Opportunity 11:***

**Provide easy, consolidated access to the financial information people need to build their retirement plans.**

### ***Intervention 11A:***

The government, regulatory bodies, financial institutions, and employers could collaborate to **make it easy for Ontarians to find all the information they need to build their retirement plan in one place** (e.g. pension income, investments, current or projected living expenses). Even better, this information could be provided in a way that makes it easy to automatically populate a retiring planning tool (e.g. through an application programming interface (API)).

We recognize that this is an extremely ambitious idea that would run into a variety of practical and commercial constraints. Unlike most of the interventions we recommend, it is not easy or low-cost. However, it can function as a "north

star” for finding ways to reduce friction costs associated with finding and compiling financial information. Partial solutions based on this model could include banks compiling spending information so that their clients could more easily determine their expenses (and be provided with benchmarks for how expenses tend to shift post-retirement), or government / employers providing easier access to pension information.

This type of intervention is particularly compelling because in addition to reducing friction costs, it would enable greater personalization of generic retirement planning tools (they would be populated with an individual’s information).

### **Opportunity 12:**

**Make it easier for people to find the financial information they need to complete their retirement plan.**

### **Intervention 12A:**

If it is not possible to directly provide the financial information people need to complete a retirement plan, organizations can help people understand what information they will need and where to find it. For example, they could **create a checklist of what information people will need to make a retirement plan and encourage people to gather it all before beginning to make a plan**. This checklist could also include direct links or simple instructions on how to access the necessary information and how much time the plan will take to complete. Helping establish these needs before someone really gets into making a plan will reduce the chance they get frustrated and give up.

*Refer to Appendix B for results of a randomized experiment testing a similar intervention.*

## ***We get overwhelmed when presented with a lot of information and choices***

In building a financial plan for retirement, people need to make a wide range of choices and process a lot of information. They need to consider how much they will save, when they will retire, what investment returns they can expect, and how much they will need to spend post-retirement, among other considerations. The volume of choices and information presents a barrier to completing a retirement plan. When people need to make choices from a long list of options, or make a large number of choices, they have a tendency put off making a decision altogether. This tendency is exacerbated when people are given too much information or don’t know how to weigh the different options they are presented with.<sup>34</sup> For example, for every 10 additional investment fund options, people are 2 percentage points less likely to complete the process of enrolling in a pension plan and selecting their investment choices.<sup>35</sup>

Rather than asking people to build a financial plan from the ground up, organizations should look to reduce the “cognitive bandwidth” people need to expend in retirement planning. Behavioural insights suggest a number of potentially effective approaches to reduce the risk of people being cognitively overwhelmed and giving up the planning process. Rather than presenting interventions, the table below presents a number of tactics that can be integrated into a wide range of interventions related to retirement planning tools, resources and processes.



### **Barrier:**

When people are presented or asked to provide a lot of information, or required to make a lot of choices, they can experience cognitive “overload” and are more likely to abandon the retirement planning process altogether.

### **Opportunity 13:**

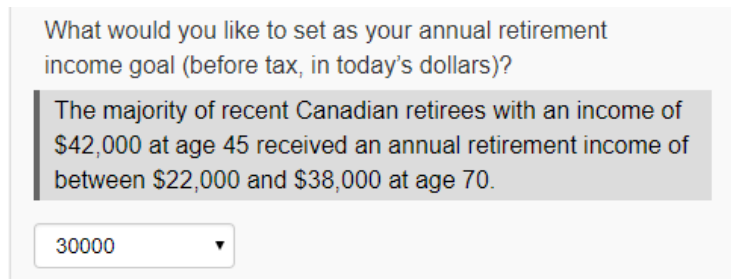
Reduce the cognitive burden imposed by retirement planning by simplifying and structuring the process as well as providing supporting tools and resources.

### **Tactic 13A:**

**Provide directed prompts to people filling out retirement plans instead of open-ended questions.** For example, instead of asking people to list and estimate post-retirement living expenses, ask a series of clearly worded questions like “how much will your mortgage payment be each month?” Directed questions can also use qualifiers like “around how much” to help people not feel like they need to provide exact figures. Further, these questions can be accompanied with reassuring statements about the value of having a plan even if each input isn’t perfectly precise.

### **Tactic 13B:**

**Provide sample inputs for people to customize rather than having them start from scratch.** For example, people could be presented with four sample post-retirement expense scenarios and asked to select which one is most like them. They could then customize elements of this sample budget to make it more accurate and reflective.



What would you like to set as your annual retirement income goal (before tax, in today's dollars)?

The majority of recent Canadian retirees with an income of \$42,000 at age 45 received an annual retirement income of between \$22,000 and \$38,000 at age 70.

30000

*Fig. 4: Example of including a sample reference point, screenshot from the government of Canada’s Canadian Retirement Income Calculator.<sup>36</sup>*

### **Tactic 13C:**

Where people are completing a retirement plan and are asked to make an estimate, **provide them with simple guidelines or rules of thumb.** For example, provide the historical returns for suitable investment portfolios over an appropriate time horizon.

### **Tactic 13D:**

**Use plain language to the greatest extent possible.** Financial jargon can demotivate and intimidate people. For example, instead of asking people about their “savings rate,”



ask them to indicate “about how much money they plan to save each year.”

***Tactic 13E:***

**“Chunk” the retirement planning process into a series of simple, understandable steps.** We discussed the use of “chunking” in framing the retirement planning process above. This technique should also be used for how the actual retirement planning process is structured.

***Tactic 13F:***

Where people have to make a lot of choices, have them **rank their preferences by comparing two options at a time** rather than having to consider every option at once.<sup>37</sup> For example, people could compare different lifestyle trade offs two at a time to determine their priorities before budgeting for them.

***Tactic 13G:***

**As an additional form of support, ask people to nominate their friends or family members** to get text message reminders to check in on their progress in making a plan. BIT employed a similar strategy asking students to nominate “study supporters” and saw that students with these supporters were 27% more likely to pass certain exams.<sup>38</sup>

## It’s hard to get the right advice for me

Even if you’ve convinced yourself to put pen to paper and start the process, have gathered all your financial information, and have made difficult choices about your future, there’s a good chance you’ll run into some part of the planning process where you’ll want advice. But it can be hard to find advice that fits a person’s unique circumstances and motivations.

People want their advice to be personalized, but professional advice that’s personalized can be inaccessible unless you have high income or assets. Advice from friends and family can be personalized, but taboos often limit the opportunities for discussions about money with these informal advisors. Last, any kind of personalized advice requires starting a conversation, and many people just don’t know what to ask.

### ***We want personalized advice***

General retirement advice can be extremely valuable; there are certain principles and considerations that apply to a large majority of Ontarians. However, many people discount general advice, or incorrectly assume that it does not apply to them. Adding even small elements of personalization, which can often be done at scale, may encourage people to make full use of the advice they can already access but are undervaluing.

The Ontarians we interviewed expressed concerns with the idea of using generalized advice to plan for their retirement. They recounted negative experiences with advice that did not resonate with their experience or circumstances. One research participant we spoke to was frustrated by advice like “cut your daily coffee and save for retirement,” as her financial situation already didn’t allow for those kinds of indulgences. Another research participant went to a bank and was told she needed to save half a million dollars for retirement: “I became depressed after that,” she explained, noting that it was simply not a feasible goal for her. Now she says that if she ever got financial advice again, she’d want it to be from someone who would work with her and focus on her specific circumstances because “each case is a unique case.” Interviewees tended to focus on the uniqueness of their lifestyles, families, and jobs. One participant was a freelance music composer whose initial reaction to the idea of retirement itself was “impossible” and “irrelevant.” She viewed retirement as something only people who didn’t like their work looked forward to. A disassociation with the idea of retirement could translate into feeling like generalized advice doesn’t hold any personal relevance.

The views of our research participants reflect findings from the behavioural science literature. People respond to personalization, and it is an effective tactic for increasing engagement.<sup>39</sup> However, professional advice that’s personalized can be prohibitively expensive. Financial advisors indicated that one often needs \$250,000 or more in financial assets to qualify as a potential client.

However, personalization does not necessarily require a one-to-one relationship with an advisor. Even personalization as simple as including someone’s name on an otherwise generic communication can have outsized effects on engagement.<sup>40</sup> One of BIT’s highest impact trials in the retirement space, redesigning pension “wake-up” packs, involved personalization at scale (Fig. 5). The UK government had introduced changes to workplace pension rules and wanted to encourage citizens to take up a pension advice service. Simplifying this communication by summarizing 100 pages of information into a personalized one page “pensions passport” increased engagement over tenfold.<sup>41</sup> Personalization can encourage people to make use of otherwise generic advice and complements valuable resources by driving engagement with them.

Another way that people can get personalized advice is by talking to their friends or family. People get a lot of financial advice from their peers and other informal advisors.<sup>42</sup> However, finding someone to talk to about their finances can be difficult; many people have an aversion to talking about money with those close to them. One research participant told us that if she needed advice she probably wouldn’t go to friends because, “finances are kind of

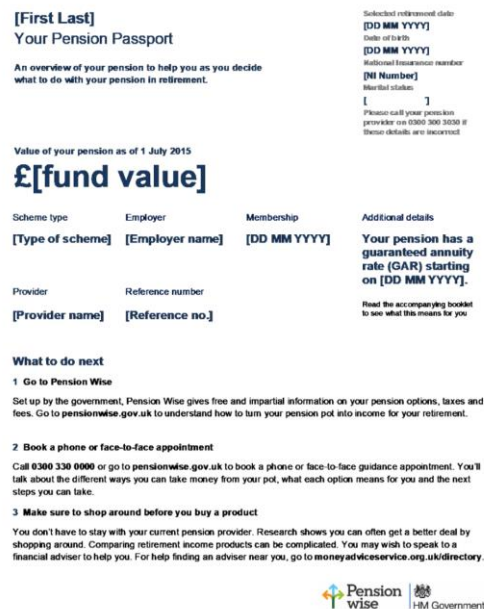


Fig. 5: BIT’s simplified and personalized “Pension Passport”

personal.” If she did get a friend’s advice it would have to be a friend in a similar financial situation “because you don’t want to go to the person that lives in the mansion and ask them about their financial plan.” Another participant told us that she made a point to talk with her children about her finances because she could never do so with her own parents and she felt that had put a significant strain on her.

### ***We don’t know what to ask***

Finally, even if people are able to face the taboo of talking about money and find informal advisors they’re comfortable with, they also have to discuss a topic they might not have much experience talking about. People may not know what to expect or what to ask, and may be unable to answer basic questions about their finances. Not knowing what to ask can also feed into a negative emotional state (e.g. feeling unintelligent that one does not know what to ask), further dissuading people from engaging in a discussion. One financial advisor described a client who cried as she noted that she had been too embarrassed to sit down with a financial advisor or anyone else because she didn’t feel like she knew enough about her own investments.

#### ***Barrier:***

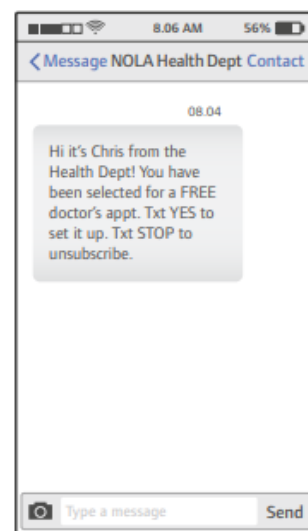
**People want personal advice, but personalized professional advice can be out of reach to many and taboos limit discussion with friends and family. Even when people have ready access to an advisor, they may be intimidated by not knowing what to ask.**

#### ***Opportunity 14:***

**Ensure that the information and communications sent to people are as personalized as possible.**

#### ***Intervention 14A:***

In prompting people to make a retirement plan, organizations should **test messaging that feels personally relevant or appeals to ego**. BIT has had success in several different contexts by using the key message, “you have been selected.” In New Orleans, a message including this line increased take up rates of a free doctor’s appointment by 40% as compared to the same message without it (Fig. 6).<sup>43</sup> Organizations offering retirement planning resources could frame their support by saying “you have been selected to receive this free retirement planning tool / resource / service.”



*Fig. 6: BIT’s Intervention to Encourage Sign Up for Doctor’s Appointments in New Orleans by Making People Feel Specially Selected.*

### ***Intervention 14B:***

Government, regulatory bodies, or employers should **personalize communications and resources**. For example, they could include the recipient's name on retirement planning prompts. Personalizing more deeply, such as by pre-populating a retirement planning tool with relevant financial information, as recommended in an earlier intervention, would be even better.

### ***Opportunity 15:***

**Help people build confidence and comfort talking about their finances by providing a structure for these conversations.**

### ***Intervention 15A:***

Government, regulatory bodies, or employers could **create a list of questions to help people start conversations** about their finances. These questions could cover interactions ranging from when you're by yourself on the computer and need to know what to start looking for to when you're talking to your friends, family, bank, or financial advisor. Giving people a structured guide might help them gain confidence before starting these conversations and normalize an otherwise taboo interaction.

## **Conclusion**

Ontarians face an array of barriers to making a financial plan for their retirement. It's hard to start and easy to put off. It's easy to get overwhelmed and drop out, and it can be hard to find the right advice for me. For the most part, these are not systemic barriers that require complex or costly interventions. Our research identified a range of promising "nudges" that can help remove, work around, or mitigate the impact of these barriers. Few of these ideas have been tested in a retirement planning context, but they have proven successful in similar circumstances and are well worth testing. To support the development of this body of research, we tested several of the interventions proposed in this report through a randomized experiment. The experiment found that email prompts asking people to reflect on who they would spend time with in retirement and emphasizing that retirement planning is easier than one might think were the most impactful in getting people to engage with retirement planning. For a detailed summary of the trial, see Appendix B. We strongly encourage employers, governments and regulatory bodies, and financial institutions to continue testing ideas and sharing insight into what works.

Our work also raised several important empirical questions regarding retirement planning that could not be addressed within the scope of this research but that could also add important nuance to the topic. For example, as mentioned in the introduction, the term "retirement plan" is understood in very different ways. Several participants thought that a "retirement plan" was identical to a pension plan. "Rebranding" retirement planning may encourage more Ontarians to make a plan. We found that the term "post-retirement budget" was effective in explaining what we meant by a retirement plan, although the term "budget" can have a negative association.

As our qualitative research revealed, we need to reflect further on the idea of retirement as a fixed stage in life given significant shifts in employment and retirement trends (e.g., stopping work entirely versus merely reducing hours). Regardless, we believe that most people

will continue to see reductions in their employment income as they age, and that there is substantial value in having a financial plan to understand the implications of this reduction, regardless of whether it is considered “retirement.”

Retirement planning is an important activity that can help Ontarians make better decisions and improve their financial security as they get older. However, retirement planning is only one lever for improving financial security, and one with limitations. Sticking to a retirement plan and revisiting that plan as circumstances change are perhaps more important than making the plan itself. We believe that many of the barriers and interventions outlined in this report will be relevant to sticking to a plan, but we recognize that the context is different and encourage further research in that direction.

The most significant limitation of our research is that it will not help solve the financial challenges of people with very low incomes and assets. This issue extends beyond the OSC’s jurisdiction; it is a whole-of-government challenge, which we note has been an area of focus for multiple levels of government in recent years. As noted in the OSC’s Seniors Strategy, addressing the full spectrum of financial security challenges experienced by older Ontarians will require collaboration among different government entities as well as stakeholders more broadly.

## Appendix A: Opportunities and Interventions

<p><b>Barrier:</b></p> <p>People tend to go with the default option, and the default is not to plan for retirement.</p>	
<p><b>Opportunity 1:</b></p> <p>Make planning for retirement the default option.</p>	<p><b>Intervention 1A:</b></p> <p>Employers could <b>integrate retirement planning into their onboarding process for new employees</b>. For example, employers could ask new employees to draft a retirement plan, providing them with a standardized tool or template. Even better, employers could also pre-book an appointment with a qualified retirement planner to review that plan. This approach would make the development of a financial plan for retirement feel like a typical, default activity. Employers might benefit from employees feeling like their company is invested in their long-term financial wellbeing.</p>
<p><b>Opportunity 2:</b></p> <p>Eliminate or mitigate the impact of the default option by requiring people to actively choose to make a retirement plan or not to.</p>	<p><b>Intervention 2A:</b></p> <p>Organizations seeking to encourage retirement planning could prompt people to make a retirement plan through “active choice” framing. This could involve a communication that would present two options: “<b>Yes, I will create a retirement plan</b>” or “<b>No, I don’t want to help prepare for my retirement by making a retirement plan.</b>” The Behavioural Insights Team used this framing in Scottsdale, Arizona to encourage donations to “Scottsdale Cares” and found it increased donation rates by 125%.</p> <p>Similar to intervention 1A, employers could also pre-book a meeting for their current employees with a financial advisor during the workday. Employees would then have to choose to turn down the meeting rather than choose to schedule one themselves. This type of intervention may be particularly effective for people as they get closer to retirement and the consequences of their choice become more salient.</p>

<p><b>Barrier:</b></p> <p>People will avoid making a retirement plan because of the perceived length and complexity of the process.</p>	
<p><b>Opportunity 3:</b></p> <p>Frame retirement planning in ways that reduce the perceived challenges, making it feel more concrete and attainable.</p>	<p><b>Intervention 3A:</b></p> <p>Government, regulatory bodies, or employers could provide people with a template to make a retirement plan that includes information about their pension already filled in. These organizations could then prompt people to <i>finish</i> making their retirement plan. The crux of this intervention would be to <b>make the planning process feel quicker and simpler by providing people with a “head start”</b> in making their plan.</p>
	<p><b>Intervention 3B:</b></p> <p>Organizations could prompt people to complete a retirement plan in a way that breaks the retirement planning process down into a series of simpler, smaller “chunks.” <b>Instead of suggesting that people “make a retirement plan,” ask them to follow 3-4 more concrete, comprehensible steps.</b> E.g. 1) estimate how much money you’ll need to spend each month when you retire, 2) subtract your government (e.g. CPP) pension, and any workplace pension, 3) use the calculator provided to see how much you’ll need to save and when you might be able to retire.</p>
<p><b>Barrier:</b></p> <p>The idea of retirement planning can bring on strong negative emotions and people may put it off to avoid those emotions.</p>	
<p><b>Opportunity 4:</b></p> <p>Ask people to complete a retirement plan at times when they are less likely to have strong negative emotions about their retirement finances.</p>	<p><b>Intervention 4A:</b></p> <p>Organizations could <b>prompt people to make a retirement plan at times when they’re likely to feel more positive about their financial situation</b> (e.g. after receiving a tax refund, a raise or bonus, or a windfall). People may feel more in control and less concerned about their financial future during these moments.</p>

<p><b>Barrier:</b></p> <p>People tend to ignore the future. They prioritize the urgent over the important, especially when they are busy. As a result, they are likely to put off retirement planning, which does not feel urgent until it is too late.</p>	
<p><b>Opportunity 5:</b></p> <p>Help people follow through with their intention to make a retirement plan by helping them build it into their schedule.</p>	<p><b>Intervention 5A:</b></p> <p>Organizations could provide access to a retirement planning tool and prompt people to make a specific plan for when and how they will use it. For example, have people fill out the following card or email: <b>“I will make a financial plan for my retirement on [date]. I’ll start by sitting down with [family member/significant other]. I will build and document my plan using [name of planning tool].”</b></p>
	<p><b>Intervention 5B:</b></p> <p>Employers could put time in their employees’ calendars for the <b>express purpose of making a retirement plan.</b> They could also break the retirement planning process into several concrete steps and put each step in their employees’ calendars as a separate event, so that it seems less daunting.</p>
<p><b>Opportunity 6:</b></p> <p>Capitalize on moments people think about the future more, and communicate with people at those key points to encourage them to make a retirement plan.</p>	<p><b>Intervention 6A:</b></p> <p>Government, regulatory bodies, financial institutions, or employers could <b>send people prompts on their birthday</b> (particularly on “round number” birthdays or the year before these milestones), when they may already be thinking about the future and the passage of time, urging them to use a provided resource to make a retirement plan.</p>
	<p><b>Intervention 6B:</b></p> <p>Government, regulatory bodies, or financial institutions could <b>prompt parents to start thinking about retirement when their kids first start drawing down from their Registered Education Savings Plan.</b> At this point parents may feel like they have tackled one major savings goal (for their children’s education) and may be receptive to financially planning for their next goal and stage of life.</p>



<b>Barrier:</b>	
The primary benefits of retirement planning accrue in the future, but people discount long-term outcomes compared to short-term outcomes.	
<b>Opportunity 7:</b>  <b>Prompt people to plan for their retirement using methods that make the future seem close or salient.</b>	<b>Intervention 7A:</b>  Government, regulatory bodies, or employers could send a communication aimed at making retirement feel more real by <b>including pictures of different ways that someone might be able to spend their retirement</b> and prompting people to take action for the retirement they want. The Behavioural Insights Team adopted this approach to encourage retirement planning in Scottsdale, Arizona and found a 75% increase in the number of people who signed up for a meeting with a financial advisor as a result of the intervention. <sup>44</sup>
	<b>Intervention 7B:</b>  Organizations developing retirement planning tools or assisting with retirement planning may wish to send a communication <b>asking people to picture their future selves</b> . Questions could include: “picture yourself in retirement, what are you doing? Who are you with?” To make these prompts more impactful, people could also be shown an aged picture of themselves. <sup>45</sup> Alternatively, organizations could ask people to write out a diary style entry depicting a day in retired life. These strategies would help make the future feel more salient and concrete, increasing the proportion of people who complete their retirement plan.  <i>Refer to Appendix B for results of a randomized experiment testing a similar intervention.</i>
	<b>Intervention 7C:</b>  Organizations encouraging retirement planning could prompt people to plan with visualizations that help people feel like the future is close at hand. For example, they could <b>show people what the trajectory of their lives would look like if it took place over the course of 100 days, highlighting the day they’re on now and the day their retirement would start to make retirement feel more immediate.</b>

<p><b>Opportunity 8:</b></p> <p><b>Prompt people to plan for their retirement by emphasizing the short-term benefits of doing so or by creating a near-term incentive to do so.</b></p>	<p><b>Intervention 8A:</b></p> <p>Government, regulatory bodies, or employers could <b>highlight the short-term psychological benefits of having a plan in place</b> in communications encouraging retirement planning. Employing this framing would help people focus on benefits they could receive in the present, like peace of mind, rather than the benefits they could receive in the future and might highly discount.<sup>46</sup></p> <p><i>Refer to Appendix B for results of a randomized experiment testing this intervention.</i></p>
	<p><b>Intervention 8B:</b></p> <p>Organizations could offer a lottery or prize draw in which people are automatically entered but must have completed a retirement plan in order to claim their prize. Lotteries are an effective incentive because people tend to overestimate small probabilities.<sup>47</sup> This type of lottery, called a <b>regret lottery</b>, is even more effective because it capitalizes on our aversion to losing something we could have.<sup>48</sup> In Gresham, Oregon the Behavioural Insights Team found that using a regret lottery more than doubled the number of utilities customers who signed up for automatic payments.<sup>49</sup></p>
	<p><b>Intervention 8C:</b></p> <p>As an alternative incentive, employers could create a <b>team-based competition</b>. For example, if a whole team of employees creates retirement plans, they could win a modest prize (like a team lunch). This would create a short-term benefit for people to focus on, and will motivate them further through social pressure.</p>
<p><b>Barrier:</b></p> <p><b>People tend to be overly optimistic about the future and may assume that current savings will be sufficient for retirement, limiting the perceived value of retirement planning. Optimism bias may also lead to retirement plans that are insufficiently conservative.</b></p>	
<p><b>Opportunity 9:</b></p> <p><b>Combat optimism bias by engaging people in the details of their post-retirement lives.</b></p>	<p><b>Intervention 9A:</b></p> <p>Optimism bias may lead people to minimize the need for a retirement plan. To counteract this, organizations can <b>prompt people to think about the details of their desired post-retirement lives</b> (i.e. their retirement goals and priorities). However, people struggle to develop a list of goals from scratch, finding it much easier to rank a list of goals provided to them.<sup>50</sup> <b>Providing people with a list of common retirement goals</b> (and associated costs) may be an effective way to help people overcome optimism bias and get people engaged in retirement planning.</p>

<p><b>Opportunity 10:</b></p> <p><b>Combat optimism bias by providing relevant benchmarks.</b></p>	<p><b>Intervention 10A:</b></p> <p><b>Benchmarks could be included throughout a retirement planning process or integrated into a retirement planning tool</b> as a way of overcoming our tendency to be too optimistic. For example, people could be provided with appropriate benchmarks for savings rates, investment returns and post-retirement expenses. For expenses, we recommend providing a detailed list of common expenses (including “one-offs”), as our interviews with retirement planners and pre-retired Ontarians indicated that people often forget about major categories of expenses.</p>
	<p><b>Intervention 10B:</b></p> <p>Similarly, <b>warnings to avoid making common assumptions could be integrated into a retirement planning tool.</b> For example, people tend to pick Target Retirement Funds that end in a year ending in zero.<sup>51</sup> (People have a bias for “round” numbers.) Reminding people to check and see if they meant to make that choice may help them reassess their options. These warnings could also remind people about inflation and other factors people often forget to account for when making a plan.</p>
<p><b>Barrier:</b></p> <p><b>It is difficult to gather the necessary financial information to complete a retirement plan, and even small friction costs can lead people to abandon important tasks.</b></p>	
<p><b>Opportunity 11:</b></p> <p><b>Provide easy, consolidated access to the financial information people need to build their retirement plans.</b></p>	<p><b>Intervention 11A:</b></p> <p>The government, regulatory bodies, financial institutions, and employers could collaborate to <b>make it easy for Ontarians to find all the information they need to build their retirement plan in one place</b> (e.g. pension income, investments, current or projected living expenses). Even better, this information could be provided in a way that makes it easy to automatically populate a retiring planning tool (e.g. through an application programming interface (API)).</p> <p>We recognize that this is an extremely ambitious idea that would run into a variety of practical and commercial constraints. Unlike most of the interventions we recommend, it is not easy or low-cost. However, it can function as a “north star” for finding ways to reduce friction costs associated with finding and compiling financial information. Partial solutions based on this model could include banks compiling spending information so that their clients could more easily determine their expenses (and be provided with benchmarks for how expenses tend to shift post-retirement), or government / employers providing easier access to pension information.</p> <p>This type of intervention is particularly compelling because in addition</p>

	<p>to reducing friction costs, it would enable greater personalization of generic retirement planning tools (they would be populated with an individual's information).</p>
<p><b>Opportunity 12:</b></p> <p><b>Make it easier for people to find the financial information they need to complete their retirement plan.</b></p>	<p><b>Intervention 12A:</b></p> <p>If it is not possible to directly provide the financial information people need to complete a retirement plan, organizations can help people understand what information they will need and where to find it. For example, they could <b>create a checklist of what information people will need to make a retirement plan and encourage people to gather it all before beginning to make a plan.</b> This checklist could also include direct links or simple instructions on how to access the necessary information and how much time the plan will take to complete. Helping establish these needs before someone really gets into making a plan will reduce the chance they get frustrated and give up.</p> <p><i>Refer to Appendix B for results of a randomized experiment testing a similar intervention.</i></p>
<p><b>Barrier:</b></p> <p><b>When people are presented or asked to provide a lot of information, or required to make a lot of choices, they can experience cognitive “overload” and are more likely to abandon the retirement planning process altogether.</b></p>	
<p><b>Opportunity 13:</b></p> <p><b>Reduce the cognitive burden imposed by retirement planning by simplifying and structuring the process as well as providing supporting tools and resources.</b></p>	<p><b>Tactic 13A:</b></p> <p><b>Provide directed prompts to people filling out retirement plans instead of open-ended questions.</b> For example, instead of asking people to list and estimate post-retirement living expenses, ask a series of clearly worded questions like “how much will your mortgage payment be each month?” Directed questions can also use qualifiers like “around how much” to help people not feel like they need to provide exact figures. Further, these questions can be accompanied with reassuring statements about the value of having a plan even if each input isn't perfectly precise.</p> <hr/> <p><b>Tactic 13B:</b></p> <p><b>Provide sample inputs for people to customize rather than having them start from scratch.</b> For example, people could be presented with four sample post-retirement expense scenarios and asked to select which one is most like them. They could then customize elements of this sample budget to make it more accurate and reflective.</p>

	<p><b>Tactic 13C:</b></p> <p>Where people are completing a retirement plan and are asked to make an estimate, <b>provide them with simple guidelines or rules of thumb</b>. For example, provide the historical returns for suitable investment portfolios over an appropriate time horizon.</p> <p><b>Tactic 13D:</b></p> <p><b>Use plain language to the greatest extent possible.</b> Financial jargon can demotivate and intimidate people. For example, instead of asking people about their “savings rate,” ask them to indicate “about how much money they plan to save each year.”</p> <p><b>Tactic 13E:</b></p> <p><b>“Chunk” the retirement planning process into a series of simple, understandable steps.</b> We discussed the use of “chunking” in framing the retirement planning process above. This technique should also be used for how the actual retirement planning process is structured.</p> <p><b>Tactic 13F:</b></p> <p>Where people have to make a lot of choices, have them <b>rank their preferences by comparing two options at a time</b> rather than having to consider every option at once.<sup>52</sup> For example, people could compare different lifestyle trade offs two at a time to determine their priorities before budgeting for them.</p>
	<p><b>Tactic 13G:</b></p> <p><b>As an additional form of support, ask people to nominate their friends or family members</b> to get text message reminders to check in on their progress in making a plan. BIT employed a similar strategy asking students to nominate “study supporters” and saw that students with these supporters were 27% more likely to pass certain exams.<sup>53</sup></p>

<p><b>Barrier:</b></p> <p>People want personal advice, but personalized professional advice can be prohibitively expensive and taboos limit discussion with friends and family. Even when people have ready access to an advisor, they may be intimidated by not knowing what to ask.</p>	
<p><b>Opportunity 14:</b></p> <p>Ensure that the information and communications sent to people are as personalized as possible.</p>	<p><b>Intervention 14A:</b></p> <p>In prompting people to make a retirement plan, organizations should <b>test messaging that feels personally relevant or appeals to ego</b>. BIT has had success in several different contexts by using the key message, “you have been selected.” In New Orleans, a message including this line increased take up rates of a free doctor’s appointment by 40% as compared to the same message without it.<sup>54</sup> Organizations offering retirement planning resources could frame their support by saying “you have been selected to receive this free retirement planning tool / resource / service.”</p>
	<p><b>Intervention 14B:</b></p> <p>Government, regulatory bodies, or employers should <b>personalize communications and resources</b>. For example, they could include the recipient’s name on retirement planning prompts. Personalizing more deeply, such as by pre-populating a retirement planning tool with relevant financial information, as recommended in an earlier intervention, would be even better.</p>
<p><b>Opportunity 15:</b></p> <p>Help people build confidence and comfort talking about their finances by providing a structure for these conversations.</p>	<p><b>Intervention 15A:</b></p> <p>Government, regulatory bodies, or employers could <b>create a list of questions to help people start conversations</b> about their finances. These questions could cover interactions ranging from when you’re by yourself on the computer and need to know what to start looking for to when you’re talking to your friends, family, bank, or financial advisor. Giving people a structured guide might help them gain confidence before starting these conversations and normalize an otherwise taboo interaction.</p>

## Appendix B: Results from Experiment to Promote Use of the Canadian Retirement Income Calculator

### Context and purpose of the trial

We conducted a randomized controlled trial (RCT) in order to test the effect of messaging inspired by interventions 7B, 8A, and 12A above. In partnership with OSC Investor Office and the Government of Ontario's Behavioural Insights Unit (BIU), we designed five different messages prompting people to use the Canadian Retirement Income Calculator, a tool built and hosted by Employment and Social Development Canada (ESDC). The effectiveness of these messages was tested through emails to Ontario Public Service (OPS) employees. The aim of the study was to contribute to the research on effective ways to generate engagement with retirement planning.

### Intervention and rationale

The 5 messages we tested each encouraged recipients to start making a retirement plan by working through the Government of Canada's [online retirement income calculator](#). The messages were included in the weekly Ontario Public Service (OPS) newsletter, which is sent to all OPS employees. Each message provided a link to the online calculator.

Four of the five messages included language informed by behavioural science, developed based on the research outlined in this report. One, which served as our "control," simply provided information on the benefit of retirement planning.

Each version of the message is described below:

#### *1. Information Only*

This message was designed to reflect a traditional government communications approach. It provided basic information and indicated the benefit of having a retirement plan. This message did not apply behavioural insights.

#### **[Prepare for your retirement](#)**

A retirement plan helps you understand how much you will need to save for retirement based on your anticipated expenses, your pensions and your current savings. The Government of Canada provides a free retirement calculator to help you through the process.

#### *2. Short Term Benefits*

Rather than focusing on the future benefits of retirement, this message emphasized the immediate benefits of retirement planning. By bringing the focus to near-term benefits, we hoped to mitigate "present bias," which causes people to undervalue the future and leads to putting off retirement planning.

#### **[Gain confidence today, prepare for your retirement](#)**

Planning for your retirement can help build your financial confidence and security. Start preparing for your retirement today with the Government of Canada's free retirement calculator.

### *3. Salience of Future Self - Social*

This message also focused on reducing the impact of present bias, but aimed to do so by making the future seem more tangible. Our qualitative research revealed that people are often excited about the idea of spending more time with their friends and family when they retire, so this message sought to tap into the salience of social life post-retirement.

#### [Picture who you'll spend time with in retirement](#)

Think about yourself the day after you retire. Will you be spending more time with your friends and family? Start preparing for your retirement with the Government of Canada's free retirement calculator.

### *4. Salience of Future Self - Individual*

Also aimed at making the future more salient, this message emphasized another concrete aspect of retirement that came up in our qualitative research: the activities that people plan on doing. Unlike the socially-framed message above, this message focused on the things an individual might do during retirement.

#### [Picture what you'll spend time doing in retirement](#)

Think about yourself the day after you retire. Will you be traveling, volunteering in your community, or mastering a new hobby? Start preparing for your retirement with the Government of Canada's free retirement calculator.

### *5. Simple Message*

Our research showed that because people tend to be put off by complexity, it's hard to start the retirement planning process. To overcome this barrier, we emphasized that retirement planning can be easy. We also helped people more easily plan to complete the calculator by telling them how long it would take and what information they would have to provide.

#### [Prepare for your retirement, it's easier than you think](#)

Use the Government of Canada's free retirement calculator. In less than 30 minutes, the calculator will help you understand how much you will need to save for retirement based on your anticipated expenses, your pensions and your current savings.

## **Trial design**

We conducted a randomized experiment to better understand how effective each of the five messages might be on encouraging retirement planning. With the support of the BIU, we randomly divided 76,565 OPS employees into 5 groups and assigned a different version of the message to each group. The newsletters were sent by the Treasury Board Secretariat's Communications Branch on May 23, 2018 and data was collected until June 13, 2018.

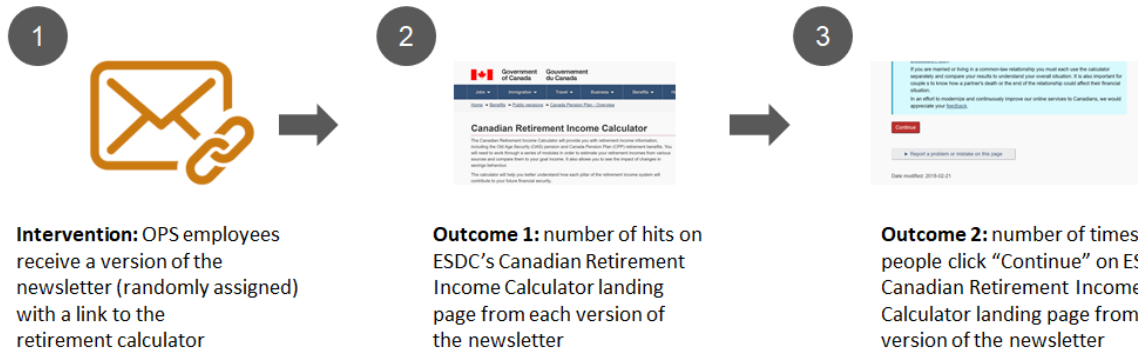
To increase engagement with retirement planning, we hoped that recipients of the emails would read them, be interested enough to click on the link to the retirement income calculator, and then be motivated to work through the calculator.

To determine the relative success of each email, we measured two outcomes:

1. The proportion of recipients who clicked through from the newsletter to the Government of Canada's retirement calculator landing page (the link provided in the headline of each message) within a week of the newsletter being sent; and



- The proportion of recipients who clicked from the landing page into the calculator itself, demonstrating a higher level of engagement.



ESDC, which developed and maintains the calculator, provided us with data on both outcomes. Unfortunately, it was not possible to track the number of recipients of each email who completed the calculator.

## Results

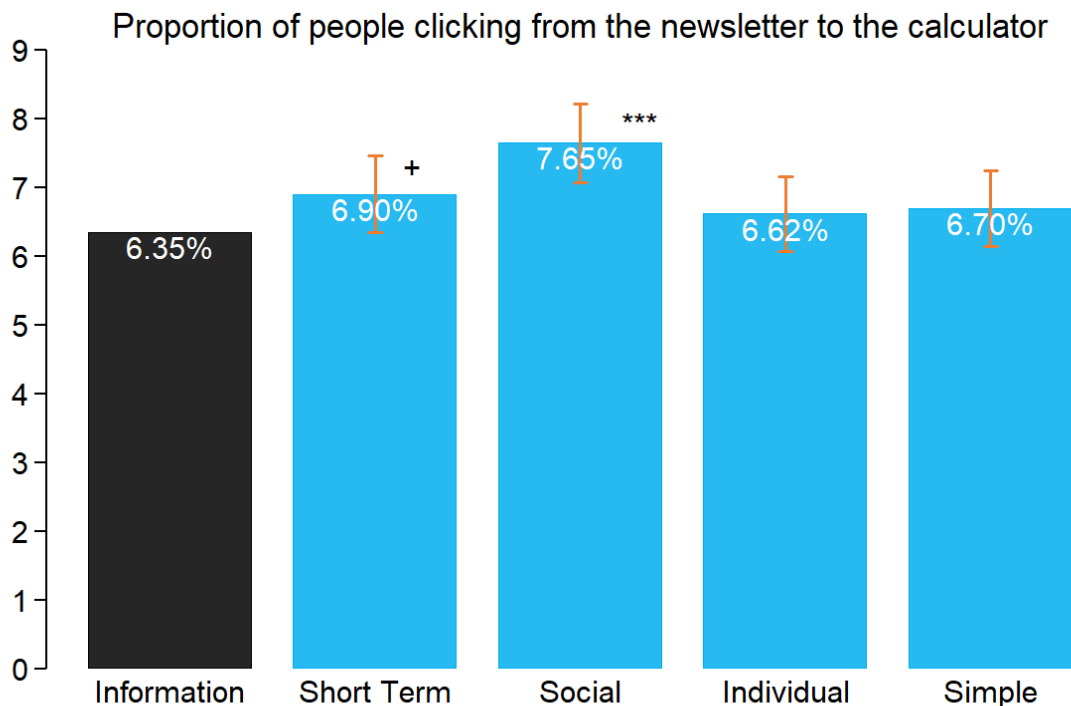
### *Outcome 1: Clicks from the newsletter to the calculator webpage*

One week after the newsletter was sent, we saw that the email had generated 5,237 clicks to the online retirement calculator, which equates to about 6.8% of recipients engaging.<sup>1</sup>

The "Salience of Future Self - Social" message was the most effective message in getting people to engage. Recipients who received this message were 20.5% (1.3 percentage points) more likely to click through than recipients of the "Information Only" message. If everyone had received this email, approximately 995 more people would have clicked on the link to the retirement income calculator than if everyone had received the more traditional, "Information Only" message.<sup>2</sup> This finding alone illustrates the powerful effect that small changes informed by behavioural science can have on behaviour.

<sup>1</sup> The true number of OPS employees clicking on a link may be a bit lower, as we expect some people clicked more than once.

<sup>2</sup> This estimate is based on the assumption that each "click" represented a unique email recipient. As a result, we are likely to be slightly overestimating the effect.



n=76,565

\*\*\*  $p < 0.001$ , \*\*  $p < 0.01$ , \*  $p < 0.05$ , +  $p < 0.1$

The success of the “Salience of Future Self - Social” message demonstrates that we may be able to increase interest in retirement planning by emphasizing opportunities for spending time with friends and family. This socially-oriented frame appears to be a more effective way of making the future salient than emphasizing the activities individuals might like to spend their time on (which is more individually-oriented). We cannot say with certainty why the social message is so effective, but this result suggests there is value in further exploration of this type of framing.

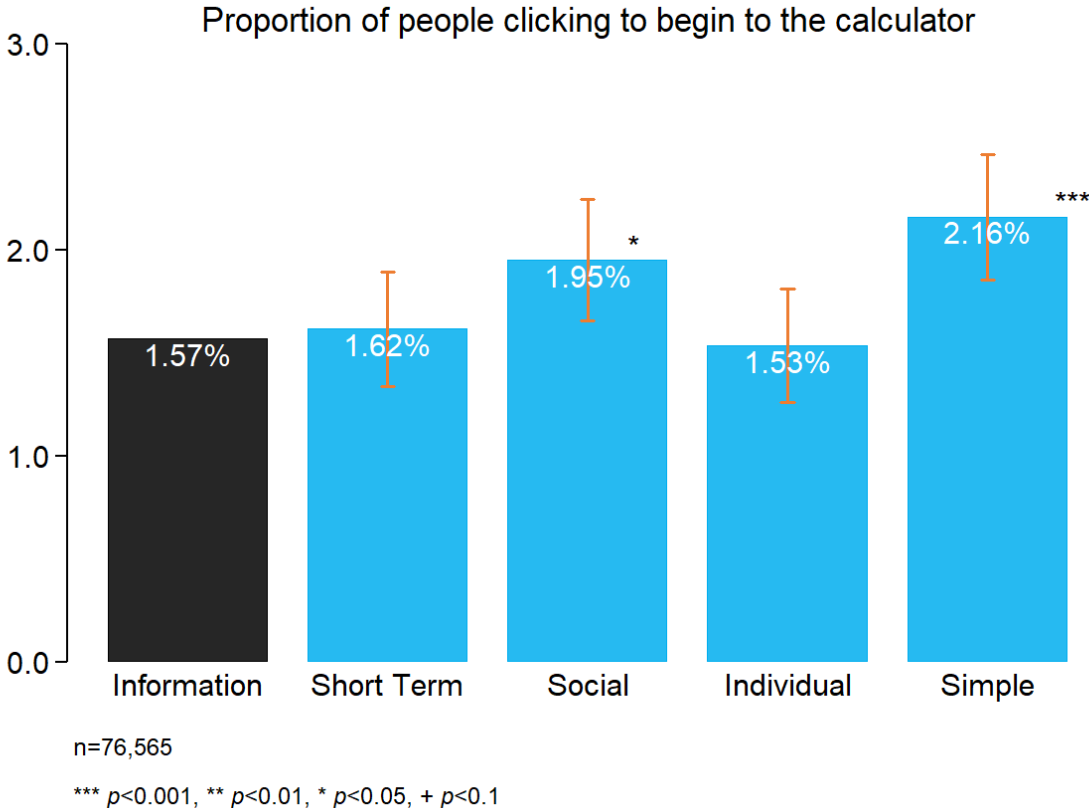
The “Short Term Benefits” message also generated more engagement than the “Information Only” message. However, the effect was smaller and we cannot be as certain that it was not the result of chance. While the “Salience of Future Self - Individual” and “Simple” messages did a bit better than the “Information Only” message, the differences were small and not statistically significant.

#### *Outcome 2: Clicks to begin the calculator*

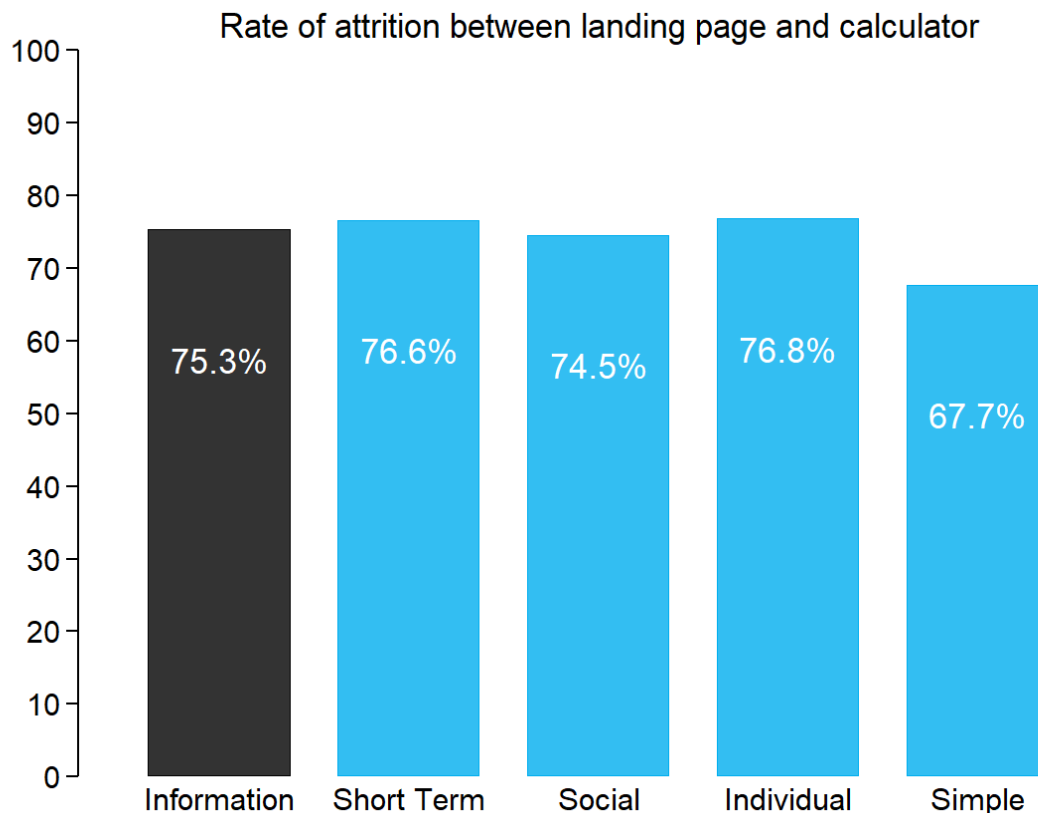
There were 1,352 clicks to continue from the landing page to the calculator, equating to 1.8% of all recipients. Continuing into the retirement calculator from the landing page demonstrates a deeper level of engagement with retirement planning than Outcome 1.

Compared to the “Information Only” message, the “Salience of Future Self - Social” message increased the likelihood of a recipient clicking to begin the calculator by 24.2% (0.38 percentage

points). The “Simple” message improved the chance of clicking to continue even more, by 37.6% (0.59 percentage points).



While the “Salience of Future Self - Social” message was the most effective for Outcome 1, the “Simple” message was the most effective message in motivating people to engage more deeply by clicking from the landing page to the retirement planning calculator itself. This difference in impact across the two outcomes derives from the “Simple” message having a substantially lower rate of attrition in moving from the landing page to the calculator (see chart below).



We hypothesize that while social framing garnered the initial attention required to overcome present bias, the “Simple” message was a more effective cue to drive action -- starting to work through the retirement calculator. The “Simple” message underscored the relative ease of using the calculator and helped people prepare for the task (e.g. by providing a time estimate and indicating what information would be required).

### Recommendations

Retirement planning is an essential, yet often understudied, step in the journey towards retirement security. We often assume that the main step in preparing for retirement is accumulating savings, but knowing how much savings are needed for a financially secure retirement requires planning. Retirement plans enable people to make better decisions on savings, investments and labour market participation. By developing evidence on how to boost engagement with retirement planning, we hope to enable governments, financial institutions, employers, and other organizations to more effectively help people enjoy the lives they want to lead in retirement.

Our trial with over 70,000 OPS employees generated valuable evidence about what messages resonate most with people and motivate them to engage in the retirement planning process. By enhancing traditional, informational approaches with behavioural insights, we learned more about how different types of retirement framing help people think about the future and take action. In particular, **we found that helping people imagine their social selves in retirement**

**by evoking time spent with friends and family can be highly effective.** It may be an effective emotional “binding agent” that connects present to future self and helps to make people’s post-retirement future feel more concrete and salient.

We also learned that **messages focused on the simplicity of retirement planning can be quite effective in moving people from an initial spark of interest into more concrete action.** Organizations who are interested in helping people make a retirement plan should consider preparing participants with checklists and time estimates to help them complete each step of a plan and reassure them that these steps won’t be overly complex or time-consuming. Of course, this requires that retirement planning tools should be made as simple as possible!

The results of this trial also suggest opportunities for further research and innovation. This RCT was conducted with OPS employees, who may respond differently than other Ontarians. For example, a higher proportion of OPS employees have a workplace pension than Ontarians in general. We hypothesize that having a pension may decrease propensity to engage in retirement planning as it may feel less necessary or important. The messages we test might be more effective for those without a workplace pension. Similarly, the OSC and other organizations tend to focus on people 45 or older (closer to retirement), while our study included people under that age. We think that older people may also respond to the messages we developed at higher rates.

We encourage other organizations to continue testing these ideas and others informed by behavioural science to encourage retirement planning. We also suggest that using RCTs or other experimental methods to generate high-quality evidence about what works is well worth the (modest) investment required.

### ***Acknowledgement***

*As indicated throughout this report, this trial would not have been possible without the support of a number of partners: the Investor Office at the Ontario Securities Commission, the Behavioural Insights Unit and Treasury Board Secretariat Communications Branch in the Government of Ontario, and Employment and Social Development Canada. The Behavioural Insights Team thanks each of these partners for their collaboration, expertise, and effort.*

## Appendix C: Works Cited

- Baldwin, B. (2016). Assessing the Retirement Income Prospects of Canada's Future Elderly: A Review of Five Studies. C.D. Howe Institute Commentary No. 456. Retrieved from [https://www.cdhowe.org/sites/default/files/attachments/research\\_papers/mixed/Commentary%20456\\_0.pdf](https://www.cdhowe.org/sites/default/files/attachments/research_papers/mixed/Commentary%20456_0.pdf).
- Benartzi, S. & Lehrer, J. (2015). *The Smarter Screen: Surprising ways to influence and improve online behavior*. New York: Portfolio/Penguin.
- Benartzi, S., & Thaler, R. H. (2007). Heuristics and Biases in Retirement Savings Behavior. *The Journal of Economic Perspectives: A Journal of the American Economic Association*, 21(3), 81–104.
- Carroll, G. D., Choi, J. J., Laibson, D., Madrian, B. C., & Metrick, A. (2009). Optimal Defaults and Active Decisions. *The Quarterly Journal of Economics*, 124(4), 1639–1674.
- Dai, H., Milkman, K. L. & Riis, J. (2014). The Fresh Start Effect: Temporal Landmarks Motivate Aspirational Behavior. *Management Science*. Retrieved from: [https://faculty.wharton.upenn.edu/wp-content/uploads/2014/06/Dai\\_Fresh\\_Start\\_2014\\_Mgmt\\_Sci.pdf](https://faculty.wharton.upenn.edu/wp-content/uploads/2014/06/Dai_Fresh_Start_2014_Mgmt_Sci.pdf)
- Flyvbjerg, B. (2008). Curbing Optimism Bias and Strategic Misrepresentation in Planning: Reference Class Forecasting in Practice. *European Planning Studies*, 16(1), 3–21.
- Gobet, F., Lane, P. C. R., Croker, S., Cheng, P. C.-H., Jones, G., Oliver, I., & Pine, J. M. (2001). Chunking mechanisms in human learning. *Trends in Cognitive Sciences*, 5(6), 236–243.
- Government of Canada. (2018, February 21). *Canadian Retirement Income Calculator*.
- Gray, R. (2016). *How Pensions Are More Popular Than Kanye West*. Retrieved from: <https://reba.global/content/how-pensions-are-more-popular-than-kanye-west>
- Hershfield et. al. (2011). Increasing Saving Behavior Through Age-Progressed Renderings of

- the Future Self. *Journal of Marketing Research*.
- Innovative Research Group (commissioned by the Ontario Securities Commission). (2017). *Investing As We Age*.
- Iyengar, S. S., Jiang, W., & Huberman, G. (2003). How Much Choice is Too Much?: Contributions to 401(k) Retirement Plans. *Pension Research Council Working Papers*.
- Johnson, E. J., & Goldstein, D. G. (2004). Defaults and donation decisions. *Transplantation*, 78(12), 1713–1716.
- Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica: Journal of the Econometric Society*, 47(2), 263–291.
- Kivetz, R., Urminsky, O. & Zheng, Y. (2006). The Goal-Gradient Hypothesis Resurrected: Purchase Acceleration, Illusionary Goal Progress, and Customer Retention. *Journal of Marketing Research*, XLIII, 39–58.
- Laibson, D. (1997). Golden Eggs and Hyperbolic Discounting. *The Quarterly Journal of Economics*, 112(2), 443–478.
- Loewenstein, G. (2005). Hot-cold empathy gaps and medical decision making. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, 24(4S), S49–56.
- Lovallo, D. & Kahneman, D. Delusions of success: how optimism undermines executives' decisions. *Harv. Bus. Rev.* 56, 56–63 (2003).
- Liu, X., Zhang, W., & Kalra, A. (n.d.). Zero Bias in Target Retirement Fund Choice.
- Lusardi, A. (n.d.). Planning for Retirement: The Importance of Financial Literacy. Retrieved from: <http://www.dartmouth.edu/~alusardi/Papers/PPAR09.pdf>
- MacEwen, K. E., Barling, J., Kelloway, E. K., & Higginbottom, S. F. (1995). Predicting retirement anxiety: the roles of parental socialization and personal planning. *The Journal of Social Psychology*, 135(2), 203–213.
- Madrian, B. & Shea, D. (2001). The Power Of Suggestion: Inertia In 401(k) Participation And

- Savings Behavior. *Quarterly Journal of Economics*, v116(4,Nov), 1149-1187.
- Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why Having Too Little Means So Much* (1st ed.) .  
New York: Times Books, Henry Holt and Co.
- Nickerson, D. W., & Rogers, T. (2010). Do you have a voting plan?: implementation intentions, voter turnout, and organic plan making. *Psychological Science*, 21(2), 194–199.
- Ontario Securities Commission. (2018). *Ontario Securities Commission Seniors Strategy*.
- Postma, O. & Brokke, M. (2002) Personalization in Practice: The Proven Effects of Personalization. *Journal of Database Marketing & Customer Strategy Management*.
- Rogers, T., Milkman, K. L., John, L. K., & Norton, M. I. (2015). Beyond good intentions: Prompting people to make plans improves follow-through on important tasks. *Behavioral Science & Policy*, 1(2), 33–41.
- Thaler, R. H. (2004). *Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving*. By *The University of Chicago. All Rights Reserved.*, 0022, 3808.
- The Behavioral Insights Team. (2014). *East: Four simple ways to apply behavioural insights*.
- The Behavioral Insights Team. (2016). *Behavioral Insights for Cities*.
- The Behavioral Insights Team. (2017). *The Behavioural Insights Team update report 2016-2017*.
- Tversky, A. & Shafir, E. (1992). Choice under Conflict: The Dynamics of Deferred Decision. *Psychological Science*, 3(6), 358–361.
- UK Cabinet Office (Behavioural Insights Team) (2012) *Applying Behavioural Insights to Reduce Fraud, Error and Debt*, p. 38.
- van de Ven, N., & Zeelenberg, M. (2011). Regret aversion and the reluctance to exchange lottery tickets. *Journal Of Economic Psychology*, 32(1), 194–200.
- Zlatev, J. J., Daniels, D. P., Kim, H., & Neale, M. A. (2017). Default neglect in attempts at social influence. *Proceedings of the National Academy of Sciences of the United States of America*, 114(52), 13643–13648.



## Endnotes

- 
- <sup>1</sup> Ontario Securities Commission. (2018). *Ontario Securities Commission Seniors Strategy*. Retrieved from [http://www.osc.gov.on.ca/documents/en/Securities-Category1/sn\\_20180320\\_11-779\\_seniors-strategy.pdf](http://www.osc.gov.on.ca/documents/en/Securities-Category1/sn_20180320_11-779_seniors-strategy.pdf).
- <sup>2</sup> Lusardi, A. (n.d.). Planning for Retirement: The Importance of Financial Literacy. Retrieved from <http://www.dartmouth.edu/~alusardi/Papers/PPAR09.pdf>.
- <sup>3</sup> Innovative Research Group (commissioned by the Ontario Securities Commission). (2017). *Investing As We Age*. Retrieved from [http://www.osc.gov.on.ca/documents/en/Investors/inv\\_research\\_20170926\\_investing-as-we-age.pdf](http://www.osc.gov.on.ca/documents/en/Investors/inv_research_20170926_investing-as-we-age.pdf)
- <sup>4</sup> Baldwin, B. (2016). Assessing the Retirement Income Prospects of Canada's Future Elderly: A Review of Five Studies. C.D. Howe Institute Commentary No. 456. Retrieved from [https://www.cdhowe.org/sites/default/files/attachments/research\\_papers/mixed/Commentary%20456\\_0.pdf](https://www.cdhowe.org/sites/default/files/attachments/research_papers/mixed/Commentary%20456_0.pdf).
- <sup>5</sup> Johnson, E. J., & Goldstein, D. G. (2004). Defaults and donation decisions. *Transplantation*, *78*(12), 1713–1716.
- <sup>6</sup> Zlatev, J. J., Daniels, D. P., Kim, H., & Neale, M. A. (2017). Default neglect in attempts at social influence. *Proceedings of the National Academy of Sciences of the United States of America*, *114*(52), 13643–13648.
- <sup>7</sup> Benartzi, S., & Thaler, R. H. (2007). Heuristics and Biases in Retirement Savings Behavior. *The Journal of Economic Perspectives: A Journal of the American Economic Association*, *21*(3), 81–104.
- <sup>8</sup> Madrian, B. & Shea, D. (2001). The Power Of Suggestion: Inertia In 401(k) Participation And Savings Behavior. *Quarterly Journal of Economics*, *v116*(4,Nov), 1149-1187.
- <sup>9</sup> Carroll, G. D., Choi, J. J., Laibson, D., Madrian, B. C., & Metrick, A. (2009). Optimal Defaults and Active Decisions. *The Quarterly Journal of Economics*, *124*(4), 1639–1674.
- <sup>10</sup> Ibid.
- <sup>11</sup> Kivetz, R., Urminsky, O. & Zheng, Y. (2006). The Goal-Gradient Hypothesis Resurrected: Purchase Acceleration, Illusionary Goal Progress, and Customer Retention. *Journal of Marketing Research*, *XLIII*, 39–58.
- <sup>12</sup> Gobet, F., Lane, P. C. R., Croker, S., Cheng, P. C.-H., Jones, G., Oliver, I., & Pine, J. M. (2001). Chunking mechanisms in human learning. *Trends in Cognitive Sciences*, *5*(6), 236–243.
- <sup>13</sup> Loewenstein, G. (2005). Hot-cold empathy gaps and medical decision making. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, *24*(4S), S49–56.
- <sup>14</sup> Mullainathan, S., & Shafir, E. (2013). *Scarcity: Why Having Too Little Means So Much (1st ed.)*. New York: Times Books, Henry Holt and Co.
- <sup>15</sup> People experiencing poverty (or other forms of scarcity) are also more likely to discount the future and put off planning for retirement. We do not focus on very low income Ontarians in this analysis, because prioritizing nearer-term financial outcomes, such as building emergency savings, are likely a better use of time and cognitive bandwidth. Improving financial security in retirement for low income Canadians may entail more systemic policy and program interventions that are beyond the scope of this report.
- <sup>16</sup> Rogers, T., Milkman, K. L., John, L. K., & Norton, M. I. (2015). Beyond good intentions: Prompting people to make plans improves follow-through on important tasks. *Behavioral Science & Policy*, *1*(2), 33–41.
- <sup>17</sup> Ibid.
- <sup>18</sup> Nickerson, D. W., & Rogers, T. (2010). Do you have a voting plan?: implementation intentions, voter turnout, and organic plan making. *Psychological Science*, *21*(2), 194–199.
- <sup>19</sup> Dai, H., Milkman, K. L. & Riis, J. (2014). The Fresh Start Effect: Temporal Landmarks Motivate Aspirational Behavior. *Management Science*. Retrieved from [https://faculty.wharton.upenn.edu/wp-content/uploads/2014/06/Dai\\_Fresh\\_Start\\_2014\\_Mgmt\\_Sci.pdf](https://faculty.wharton.upenn.edu/wp-content/uploads/2014/06/Dai_Fresh_Start_2014_Mgmt_Sci.pdf).

---

<sup>20</sup> Ibid.

<sup>21</sup> Thaler, R. H. (2004). Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving. *By The University of Chicago. All Rights Reserved.*, 0022, 3808.

<sup>22</sup> Laibson, D. (1997). Golden Eggs and Hyperbolic Discounting. *The Quarterly Journal of Economics*, 112(2), 443–478.

<sup>23</sup> The Behavioral Insights Team. (2017). The Behavioural Insights Team update report 2016-2017. Retrieved from: [http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT\\_Update-16-17\\_E\\_.pdf](http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT_Update-16-17_E_.pdf).

<sup>24</sup> Hershfield et. al. (2011). Increasing Saving Behavior Through Age-Progressed Renderings of the Future Self. *Journal of Marketing Research*. Retrieved from: <http://vhil.stanford.edu/mm/2011/hershfield-jmr-saving-behavior.pdf>.

<sup>25</sup> MacEwen, K. E., Barling, J., Kelloway, E. K., & Higginbottom, S. F. (1995). Predicting retirement anxiety: the roles of parental socialization and personal planning. *The Journal of Social Psychology*, 135(2), 203–213.

<sup>26</sup> Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica: Journal of the Econometric Society*, 47(2), 263–291.

<sup>27</sup> van de Ven, N., & Zeelenberg, M. (2011). Regret aversion and the reluctance to exchange lottery tickets. *Journal Of Economic Psychology*, 32(1), 194–200.

<sup>28</sup> The Behavioral Insights Team. (2017). The Behavioural Insights Team update report 2016-2017. Retrieved from: [http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT\\_Update-16-17\\_E\\_.pdf](http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT_Update-16-17_E_.pdf).

<sup>29</sup> Lovallo, D. & Kahneman, D. Delusions of success: how optimism undermines executives' decisions. *Harv. Bus. Rev.* 56, 56–63 (2003).

<sup>30</sup> Flyvbjerg, B. (2008). Curbing Optimism Bias and Strategic Misrepresentation in Planning: Reference Class Forecasting in Practice. *European Planning Studies*, 16(1), 3–21.

<sup>31</sup> Benartzi, S. & Lehrer, J. (2015). *The Smarter Screen: Surprising ways to influence and improve online behavior*. New York: Portfolio/Penguin.

<sup>32</sup> Liu, X., Zhang, W., & Kalra, A. (n.d.). Zero Bias in Target Retirement Fund Choice.

<sup>33</sup> The Behavioral Insights Team. (2014). East: Four simple ways to apply behavioural insights. Retrieved from: [http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2015/07/BIT-Publication-EAST\\_FA\\_WEB.pdf](http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf).

<sup>34</sup> Tversky, A. & Shafir, E. (1992). Choice under Conflict: The Dynamics of Deferred Decision. *Psychological Science*, 3(6), 358–361.

<sup>35</sup> Iyengar, S. S., Jiang, W., & Huberman, G. (2003). How Much Choice is Too Much?: Contributions to 401(k) Retirement Plans. *Pension Research Council Working Papers*. Retrieved from: <https://pdfs.semanticscholar.org/04f0/7b37fc9deb167e56c729e1f35e052998ba4a.pdf>.

<sup>36</sup> Government of Canada. (2018, February 21). *Canadian Retirement Income Calculator*. Retrieved March 2018 <https://www.canada.ca/en/services/benefits/publicpensions/cpp/retirement-income-calculator.html>.

<sup>37</sup> Benartzi, S. & Lehrer, J. (2015). *The Smarter Screen: Surprising ways to influence and improve online behavior*. New York: Portfolio/Penguin.

<sup>38</sup> The Behavioral Insights Team. (2017). The Behavioural Insights Team update report 2016-2017. Retrieved from: [http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT\\_Update-16-17\\_E\\_.pdf](http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT_Update-16-17_E_.pdf).

<sup>39</sup> Postma, O. & Brokke, M. (2002) Personalization in Practice: The Proven Effects of Personalization. *Journal of Database Marketing & Customer Strategy Management*.

<sup>40</sup> UK Cabinet Office (Behavioural Insights Team) (2012) Applying Behavioural Insights to Reduce Fraud, Error and Debt, p. 38.

<sup>41</sup> The Behavioral Insights Team. (2017). The Behavioural Insights Team update report 2016-2017. Retrieved from: [http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT\\_Update-16-17\\_E\\_.pdf](http://38r8om2xjhh125mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT_Update-16-17_E_.pdf).

- 
- <sup>42</sup> Benartzi, S., & Thaler, R. H. (2007). Heuristics and Biases in Retirement Savings Behavior. *The Journal of Economic Perspectives: A Journal of the American Economic Association*, 21(3), 81–104.
- <sup>43</sup> The Behavioral Insights Team. (2016). Behavioral Insights for Cities. Retrived from: <http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2016/10/Behavioral-Insights-for-Cities-2.pdf>.
- <sup>44</sup> The Behavioral Insights Team. (2017). The Behavioural Insights Team update report 2016-2017. Retrieved from: [http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT\\_Update-16-17\\_E\\_.pdf](http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT_Update-16-17_E_.pdf).
- <sup>45</sup> Hershfield et. al. (2011). Increasing Saving Behavior Through Age-Progressed Renderings of the Future Self. *Journal of Marketing Research*. Retrieved from <http://vhil.stanford.edu/mm/2011/hershfield-jmr-saving-behavior.pdf>.
- <sup>46</sup> MacEwen, K. E., Barling, J., Kelloway, E. K., & Higginbottom, S. F. (1995). Predicting retirement anxiety: the roles of parental socialization and personal planning. *The Journal of Social Psychology*, 135(2), 203–213.
- <sup>47</sup> Kahneman, D., & Tversky, A. (1979). Prospect Theory: An Analysis of Decision under Risk. *Econometrica: Journal of the Econometric Society*, 47(2), 263–291.
- <sup>48</sup> van de Ven, N., & Zeelenberg, M. (2011). Regret aversion and the reluctance to exchange lottery tickets. *Journal Of Economic Psychology*, 32(1), 194–200.
- <sup>49</sup> The Behavioral Insights Team. (2017). The Behavioural Insights Team update report 2016-2017. Retrieved from: [http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT\\_Update-16-17\\_E\\_.pdf](http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT_Update-16-17_E_.pdf).
- <sup>50</sup> Benartzi, S. & Lehrer, J. (2015). *The Smarter Screen: Surprising ways to influence and improve online behavior*. New York: Portfolio/Penguin.
- <sup>51</sup> Liu, X., Zhang, W., & Kalra, A. (n.d.). Zero Bias in Target Retirement Fund Choice.
- <sup>52</sup> Benartzi, S. & Lehrer, J. (2015). *The Smarter Screen: Surprising ways to influence and improve online behavior*. New York: Portfolio/Penguin.
- <sup>53</sup> The Behavioral Insights Team. (2017). The Behavioural Insights Team update report 2016-2017. Retrieved from: [http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT\\_Update-16-17\\_E\\_.pdf](http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2017/10/BIT_Update-16-17_E_.pdf).
- <sup>54</sup> The Behavioral Insights Team. (2016). Behavioral Insights for Cities. Retrived from: <http://38r8om2xjhhl25mw24492dir.wpengine.netdna-cdn.com/wp-content/uploads/2016/10/Behavioral-Insights-for-Cities-2.pdf>.