**FORUM ON TAX ADMINISTRATION**

# Behavioural Insights for Better Tax Administration

## A BRIEF GUIDE

OECD

BETTER POLICIES FOR BETTER LIVES

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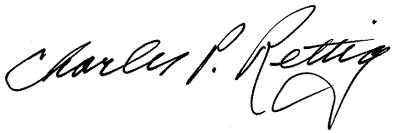
## Preface

I am pleased to present this work showcasing how behavioral insights can be applied for the betterment of tax administration. The report draws upon the expertise of behavioral scientists and the hands-on experiences of tax administrations around the globe. The result is a concise view into the opportunities provided by leveraging a deep, data-driven understanding of human behavior. The guide outlines a vision for how tax administrations can use these insights to improve taxpayer and customer services, optimize enforcement strategies, and improve staff productivity. The demonstrated value of behavioral science shines in the practical, real-world use cases shared by Forum on Tax Administration member countries.

Within my own tax administration, I've found behavioral insights to deliver actionable insights and returns on investment. Like several of my colleagues, I have found that simple changes to communications can increase self-service actions and dollars collected. In the US, behaviorally informed outreach in combination with enforcement actions increased filing among prior nonfilers by 15% and resulted in an estimated USD 400 collected for each taxpayer contacted.

The methods used in analyzing behavioral responses have further helped evaluate how well enforcement strategies and policies are working. For example, behavioral economists provided valuable insights on the impact of new offshore reporting requirements and account disclosures in the US. Such efforts further helped us identify potentially non-compliant populations where we could focus future efforts.

I believe that behavioral insights can make a significant difference in the work of tax administrations and transform our interactions with taxpayers, leading to increased compliance. I encourage my fellow Tax Commissioners to harness the power of behavioral insights to help meet the challenges we face. To this end, this report includes some easy, actionable steps for initiating and growing capabilities for applying behavioral insights.



Charles P. Rettig
*Commissioner,* Internal Revenue
United States

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## Contents

## Executive Summary

Fundamentally, the field of behavioural insights is focused on understanding human decisions and behaviours, then leveraging those insights to design practical policies and interventions. Regarding tax administration, it can be beneficially applied to a wide range of areas, from taxpayer services and enforcement to internal topics such as employee engagement and productivity. The dual purpose of this guide is to showcase the value of these applications and provide considerations for how to build the capabilities to enact them.

Tax administrations – and indeed all organisations – operate on a set of assumptions as to what drives human behaviour. These assumptions inform strategies for achieving tax compliance and other goals and can benefit from the application of behavioural science. Considerable research in recent decades has uncovered deeper understandings of why people behave the way they do. Behavioural scientists apply these understandings to craft more successful strategies. Furthermore, these scientists employ methods to measure responses to policies, events, or interventions to see how they work in the reality of a given context.

This brief guide highlights how the rigorous methods employed by behavioural scientists are responsive to the growing push for data-driven decision making. Behavioural insights can be beneficially applied to inform a suite of options for achieving strategic goals, such as improving compliance behaviours in a range of situations. This leaves senior decision makers better positioned for selecting the most viable course of action, whether it is a distinct intervention or a complementary set of approaches. Several concrete examples from tax administrations around the world help to illustrate these points.

This report not only provides an entry point for tax administrations considering behavioural insights, but also illustrates ways for organisations with existing programmes to scale their initiatives to greater maturity. Behavioural insights provides opportunities to improve effectiveness across all functions, while also identifying paths for upstream, proactive changes. Developing new strategies and considering existing ones through a behaviourally informed lens will leave tax administrations better equipped to handle the ever-changing landscape of modern tax administration.

This guide is organised into four sections:

### 1) A Short Background to Behavioural Insights

This section introduces the field of behavioural insights and explains how it can be used to amend traditional economic thinking.

### 2) Applications for Tax Administration

This section provides an overview of how behavioural insights can be beneficial to tax administration. It covers strategic considerations as well as a high-level discussion of the methods employed by behavioural scientists. These methods are the cornerstone to producing actionable results in which decision-makers can be confident.

### 3) Behavioural Insights in Practice

This section provides concrete examples of how behavioural insights has been used in tax administration. It also highlights prospective uses and strategic considerations.

### 4) Building Capabilities for Behavioural Insights

The final section of this guide provides practical considerations for beginning or growing behavioural insights within an organisation.

## Introduction

One doesn't have to look far to see behavioural insights in action. Over the past decade, hundreds of behavioural insights units have been stood up around the globe, both in government agencies and in major corporations.[1] Collectively they have carried out thousands of projects, improving the attainment of social and business goals. Tax administrations have joined this movement and increasingly recognise behavioural insights as an important tool for meeting their missions. In a 2020 survey conducted by the Forum on Tax Administration (FTA), 73% of respondents agreed that behavioural insights were part of their organisation's current strategy. Overall, around one third of FTA members are using behavioural insights.

### Interventions involving behavioural insights have helped tax administrations:

- Reduce the number of taxpayers owing taxes through behaviourally informed changes to processes, by as much as 33%[2]
- Improve timely personal income tax payments with low-cost changes to communications, significantly increasing revenues collected and debts prevented[3]
- Reduce misreporting of income and expenses through tailored digital prompts[4]
- Reduce improper payments of benefits to ineligible taxpayers[5]
- Increase voluntary disclosures and reporting of wealth, by as much as 30%[6]
- Increase filing among prior nonfilers, by as much as 15%[7]
- Increase self-service and online actions, by more than 20%[8]

The dual purpose of this guide is to showcase the many ways behavioural insights can support tax administrations and to provide guidance for building the capabilities to do so. We cover a wide range of applications, including those that move beyond more well-known "nudge" examples. We also provide considerations for initiating and scaling an organisation's behavioural capabilities, both internally and through leveraging external partnerships.

## A Short Background to Behavioural Insights

The explosion of behavioural insights in the 21st century reflects a shifting paradigm that accounts for, rather than ignores, humanity's tendencies toward illogicality. Several current government systems – from tax administration to criminal justice to public policy writ large – were predicated on an assumption of human rationality. That changed with the cognitive revolution in the mid-twentieth century, which introduced and expanded on the idea that people frequently act in predictably irrational ways (to borrow a phrase from well-known psychologist Dan Ariely).

Cognitive psychology, behavioural economics, and many other fields converge to inform behavioural insights – the term first developed by the UK's Behavioural Insights Team in 2010. Since then, behavioural insights have been successfully applied to a wide range of topics, including healthcare, social policies, personal finances and, of course, tax administration. Behavioural insights units apply modern understandings of human behavior to design effective policies and interventions. Furthermore, they use analytics and experiments to uncover new insights and provide a strong evidence base from which senior leaders can base strategies.

According to a 2020 Forum on Tax Administration survey, around one third of FTA members are using behavioural insights to meet their missions.

### What Are Behavioural Insights?

Early economic models suggested that individuals make logical decisions on tax compliance based on the calculated costs and benefits to themselves. From this belief emerged traditional strategies to fight tax noncompliance: tax inspections, sanctions, and heavy fines. However, research in psychology and related disciplines has revealed additional factors that could motivate or deter behavior. Behavioural insights distills those findings and focuses them towards real-world applications.

Behavioural insights are fundamentally about understanding decisions and behaviours—including the less logical and irrational ones—and leveraging that understanding to design practical policies and interventions. This has led to important modifications to traditional methods, such as guiding behaviour via the architecture of systems or the presentation of choices.

It can be helpful to consider peoples' behaviours through a framework of individual factors, environmental factors and social factors. The following includes extracts from the United States' Internal Revenue Service (IRS) Behavioural Insights Toolkit, as well as some additional examples:

Behavioural insights are fundamentally about understanding decisions and behaviours—and leveraging that understanding to design practical policies and interventions.

**Individual Factors: People are faced with more decisions and information than we can consciously process.**

Research from the cognitive sciences explains that we process information in two ways: 1) in an automatic fashion, without much conscious thought; or 2) using deliberate, logical thought. Most of our behaviour stems from the former; it is fast and automatic, relying on a myriad of cognitive shortcuts in order to reserve our limited ability to deeply process information for the most salient, non-routine, or novel situations.

## Examples of Individual Factors

**Loss Aversion.** Humans show strong responses to scenarios framed as losses. In one study, 84 percent of doctors chose to recommend surgery. when told that "The one-month survival rate [for this surgery] is 90%." This dropped to 50 percent when doctors were given a choice framed as a loss, stating that "There is a 10% mortality in the first month."[9] Continued research showed that the amount of a possible gain needed to be at least double what could be lost.

**Cognitive Load.** Being presented with too much information at once can be overwhelming, leading to suboptimal, potentially impulsive decisions or inaction. Several studies have shown that having a greater degree of choice can be demotivating -- Take the classic example of the *Jam Experiment,* which showed that when presented with too many options (24+ flavors of jam or chocolates), consumers were less likely to buy a product than when they had fewer options (6 flavors). Not only were consumers with fewer choices more likely to buy a product, they were also more satisfied with their choice.[10]

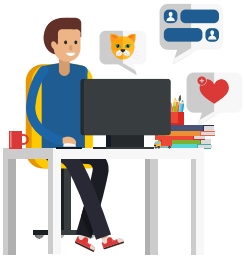
**Social Factors: Humans are social beings who care what others think and do.**

Humans by nature are social creatures. We go to great lengths to match our behaviour to those around us, particularly if we respect them or want to belong to their social group. We try to present a positive image of ourselves, especially when we believe others are watching.

## Examples of Social Factors

**Messenger Effects.** The entity delivering a message is important – a trusted authority on a subject is more likely to be believed than a random person on the street. A source with an established relationship to an audience can be leveraged for greater impact. For example, engaging community partners in an outreach campaign can prompt more people to pay attention and act on information.

**Reciprocity.** There is a social norm to return favours. People feel a sense of obligation toward those who have done something for them. For example, you might feel obliged to offer early feedback on a presentation to someone who had previously done so for you. Providing fair treatment and highlighting extra effort from the tax administration to help the taxpayer may encourage additional effort from the taxpayer to ensure they provide honest, accurate information.



**Environmental Factors: Much of our behaviour is unconscious and in response to our surroundings.**
Because we rely so heavily on our automatic processing system, our actions and decisions are often influenced by our environment – both our physical surroundings and things like advertising or elements of a task at hand (e.g., a multitude of pop-up ads distracting from an interesting article or, on the other end of the spectrum, the thoughtful design of an easily-completed form).

## Examples of Environmental Factors

**Salience.** Prominent, conspicuous items capture attention more readily than more mundane things. Something could be conspicuous for personal reasons – say you just bought a new watch and now identify the same model on several strangers where you previously never noticed such things. Salience can also be crafted. News coverage can draw attention to enforcement actions, making those deterrents more salient to potentially similar taxpayers. Instructions for tax forms can be reworked to guide the reader to the most important features.

**Choice Architecture.** The physical presentation and order of options matters. Someone entering a cafeteria with a beautiful, prominently displayed arrangement of healthy options is more likely to choose a nutritious meal than someone entering to a display of fried foods and decadent desserts.

**Interconnection: Individual, environmental, and social factors can mutually influence each other.**
The above framework highlights how our peers, cognitions and environment can all shape our choices and actions (or lack thereof). The pieces of this framework are tightly interconnected. Individual factors can influence what social and environmental factors we attend to and vice versa – in short, human behaviour is multifaceted. For instance, social norms may exert pressure to conform to a given standard, but only if that standard is shared by a salient, personally-important group.

## Applications for Tax Administration

Tax administrations have dedicated considerable resources toward achieving taxpayer compliance, but they may have reached a limit of what is possible without a deeper consideration of root causes. Identifying what influences compliance and noncompliance provides more options for effectively interacting with taxpayers. Behavioural science offers a set of tools to identify and shape those influences, helping to further modernise tax administration. In a growing number of administrations, behavioural scientists are investigating how best to enact change by targeting general taxpayer behaviours, as well as by tailoring interventions for individuals and specific taxpayer segments. Their investigations are experimental in nature and informed by behavioural principles.

Successful strategies and interventions are not a matter of guesswork or gut-feelings; they require experimentation and analysis. The bottom line is that human behaviour is complex and context matters. What works in some situations or with certain taxpayers may not work with others. Making assumptions about what drives behaviours is of little value if not informed by evidence or subjected to meaningful dialogue and open questioning. What might intuitively seem to be an effective compliance approach – for example, increasing sanctions or increasing auditing – might on their own be counter-productive strategies, engendering distrust and less compliant behaviour over time. The methods used to understand behavioural responses and test interventions to change behaviours can build confidence in policies and procedures. They also provide foundations for evidence-based decision-making.

### How Behavioural Insights Can Help Tax Administration

**In concrete terms, behavioural insights can help:**

- Improve tax compliance behaviours
- Change service behaviours
- Encourage productive employee behaviours

**Through a process of:**

- Understanding behaviours and what drives them
- Designing policies or other interventions to change behaviours
- Providing evidence on the most effective ways to achieve change

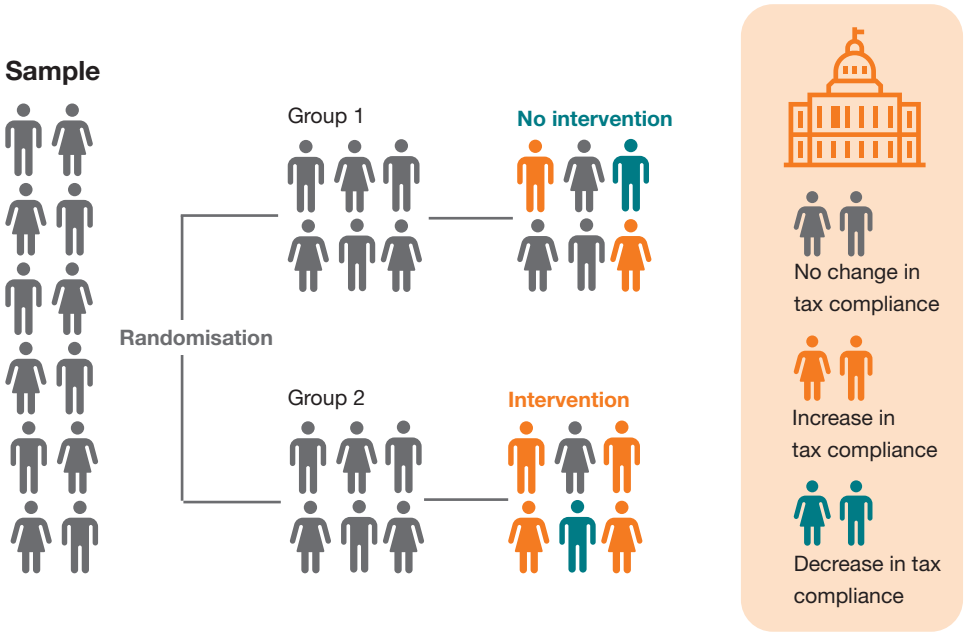
## Methods Matter: Behavioural Insights for Confident Decision Making

Behavioural scientists generally use carefully crafted experimental methods to derive insights and provide evidence of what works. Having a relevant comparison group allows for a clear measure of intervention effectiveness. One common approach – the randomised controlled trial – uses random assignment to create two or more groups drawn from one larger population. By selecting participants into groups at random, researchers are able to limit the possibility of external factors influencing the outcomes. That is, an experimental design assures researchers that the results reflect a true effect of the intervention (e.g., receiving a letter, being audited) as opposed to some other factor. Senior leaders can be confident when making determinations based on evidence from well-designed experiments.

Sometimes randomised controlled trials are not feasible due to financial, logistical, or political factors. In these instances, quasi-experimental designs may be an alternative method for generating evidence. While there are many variations of these designs, selection for treatment (for instance, receiving a letter or being audited) is not random. In one approach, a researcher may create a comparison group with similar characteristics as the treated group. Comparing these two groups provides a stronger understanding of outcomes than assessing changes in the treated group alone. In general, the lack of random assignment can reduce the ability of these methods to measure the true impact of a policy or treatment on behaviour. However, they can produce credible evidence with the use of appropriate statistical techniques.

Experiments involving fewer people than a typical randomised control field trial may be another viable alternative. In these, smaller groups of people may be invited to try a new digital prototype or respond to hypothetical scenarios with a proposed intervention. Without a representative sample, you may not be able to accurately say how the broader population will respond. However, such studies are often able to provide a deeper understanding of potential root causes because they provide a means for researchers to ask taxpayers about their thought processes and identify any barriers.

Methods used by behavioural scientists are responsive to the burgeoning calls for data-driven, evidence-based decision making. Conducting pilot experiments and testing interventions are important for determining what impact an intervention may have in a given context. Tests will not always produce desired results; this is a natural part of the experimentation process and should not deter testing. So-called "failed" experiments teach us what does not work (or works differently than anticipated) and are just as important as successful experiments. These may help tax administrations avoid costly investments in ineffective approaches or avoid approaches that may unintentionally increase undesired behaviour. Additionally, tests may also reveal positive outcomes outside of the expected behaviour change. For example, a reminder to file may also prompt sign-up for digital service channels. Human behaviours evolve over time and may require strategies to evolve with them. This also underlies the importance of continued testing and evaluation.



## From Behaviour to Change: The Strategic Application of Behavioural Insights

Behavioural interventions often involve removing frictions that hinder desired actions (e.g., reducing steps for taxpayers), prompting reconsideration before submitting undesired actions (e.g., adding steps for potential inaccuracies), and providing nudges that encourage desired behaviour. Determining the appropriate intervention will need to consider what's driving behaviours as well as what interventions may be technically feasible in a given context.

To effectively change behaviours, we need to understand why people act the way they do. For example, different strategies may need to be deployed when someone is making a rational choice versus when actions are less deliberate. Designing a system of penalties to discourage behaviours may work when a taxpayer is making a rational choice about non-compliance, but is likely to be less effective at curtailing non-compliant behaviour resulting from other factors – for example, unintentional math errors.

Optimal strategies also may need to consider whether the *why* varies for different population segments. This will help determine when to choose systemic interventions (applied to an entire population) or segmented interventions (applied to specific groups within a population). Consider a scenario where two taxpayers have unpaid taxes. Past behaviours show one is routinely timely and the other, routinely untimely. One may procrastinate and benefit from regular reminders. The other may have experienced an unexpected hardship and be eligible for relief. This is the type of scenario that may benefit from a tailored, segmented intervention.

## Awareness / Attention

Do people know what they need to do?

Are they paying attention?

Are they making unintentional errors?

- Provide short, clear reminders
- Simplify text and use design elements to bring attention to key information
- Add salient prompts to direct attention or point out potential errors.
- Leverage external partners or media to raise awareness

## Enactment

Do they follow through on their intentions?

- Reduce or eliminate steps
- Change defaults (e.g., opt out instead of opt in, or option to pre-set/automate recurring actions)
- Help taxpayers commit to a plan

## Comprehension / Persuasion

Do they understand the risks and rewards?

Do they think others actually do this?

- Provide peer comparisons highlighting high compliance
- Personalise communications with taxpayer-specific history and consequences of inaction

## Credibility / Persuasion

Do they believe that their noncompliance will be detected?

Will sanctions have a noticeable impact?

Do they believe sanctions will be enforced?

- Increase detection capabilities and visibility of enforcement, such as through media coverage
- Follow through on deterrence messages
- Adjust penalties or sanctions

## Applying a Broader Lens: Behavioural Insights Across the Value Chain

Traditional interventions are often reactive, focusing on how to encourage a corrective action after an issue has occurred. Proactive consideration of behavioural insights can suggest where choices or the need to act might be nudged, limited, or removed entirely to achieve compliance up front, including through possible policy changes. Reviewing tax administrations' strategies with a behavioural lens can identify opportunities for upstream, proactive changes.

## Digitalisation as an Accelerator for Behavioural Insights

Digitalisation can serve as an amplifier in behavioural change. Modern technology enables the efficient capture of data, ranging from third-party reporting to tax filings to service interactions – such as who called, why they called, what was discussed on the call, and whether issues were resolved. These capabilities are supported by electronic filing, recordings of customer interactions, voice to text translation, and notes from assisters captured in internal platforms. Greater electronic data capture enables tax administrations to analyse behaviours, understand trends, and identify anomalies both in the moment and over time. Behavioural insights stemming from digitalisation can identify unique needs for different taxpayer groups, allowing for customised interventions in services or enforcement. Technology can further aid the delivery of interventions, including enabling upstream interventions and timely information delivery. As tax administrations seek to apply evidence-based decision making, greater digitalisation can be critical to designing experiments (for example, by more easily randomising recipients) and measuring behavioural responses.

### Automation: Automate tax processes and minimize the need for action

**Default Changes:** Implement automatic enrollment (Opt out instead of Opt in)

**Automation:** Pre-populating returns or stored information can help ensure taxpayers complete processes and minimise typos*

**Caution: Pre-populating tax returns works best when complete and accurate information is available. People tend to take the easiest path, which could include accepting incorrect information.*

### Detection: Understand customers and detect anomalies

**Service Needs:** Analyse data to better understand customer needs and behaviours

**Error Detection:** Cross-reference data entries to third-party information or averages to detect potential errors

**Risk Detection:** Use electronic data to identify non-compliance signals and develop better risk models

### Correction: Use interventions to change behaviour

**Tailored messages:** Enable personalised communications

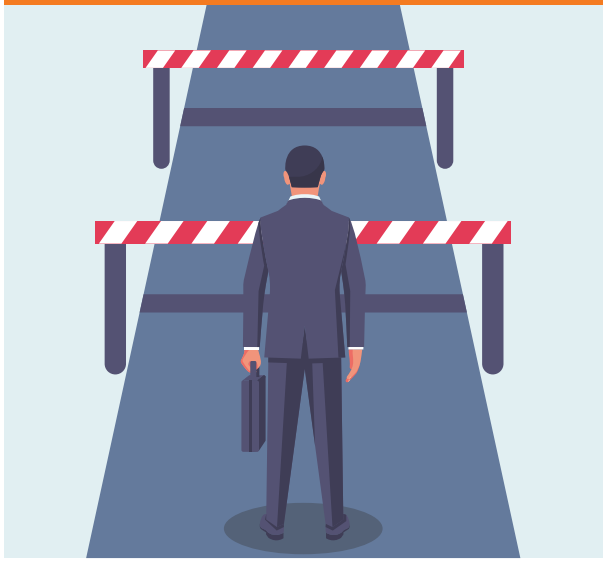
**Real-time prompts:** Provide prompts to check manual entries when they appear inconsistent with other information

**Assister prompts:** Enable prompts to assisters to flag potential needs and provide a more holistic service

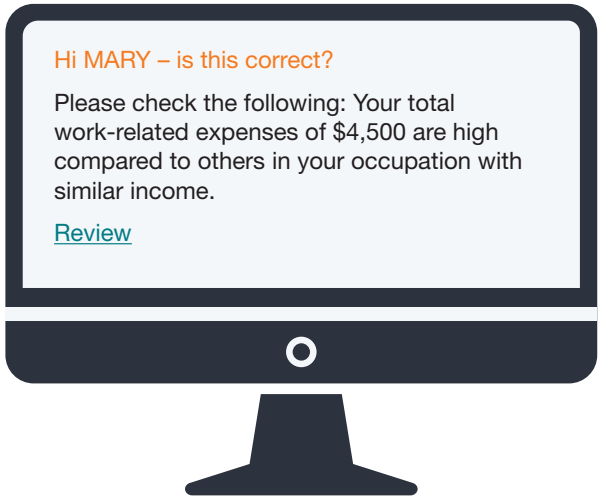
## Using Interventions to Change Behaviour

Interventions can be used to improve compliance, service quality, or employee productivity. Tailored messages, real-time prompts, and assister prompts may help with these goals. Communications and prompts can be used to overcome barriers and encourage immediate action. To improve effectiveness, tax administrations need to identify the need, determine the right message, and deliver the message at the right time. Digitalisation enables personalized and systematic interventions (or nudges) that can increase the likelihood of delivering information at the time people need it. Behavioural inisghts informs how to utilize these tools and how to craft messages to achieve the best results.

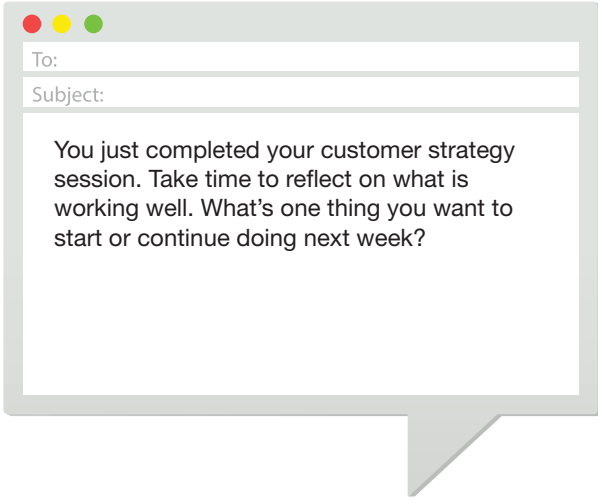
The section Behavioural Insights in Practice, beginning on the next page, shows specific examples of applications like these and other behaviourally informed interventions that tax administrations have used.



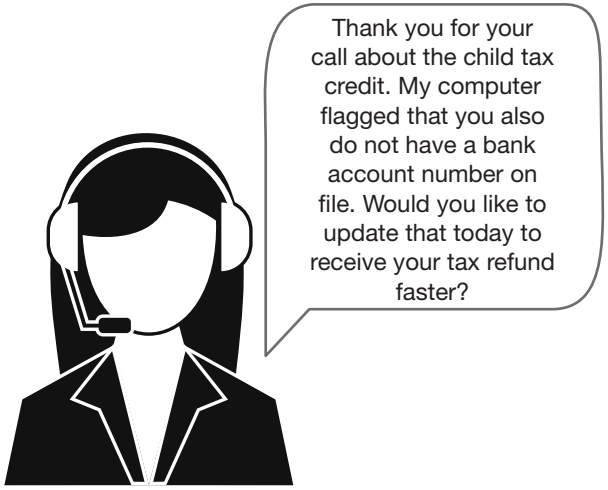
### Interventions in Self-Service Applications



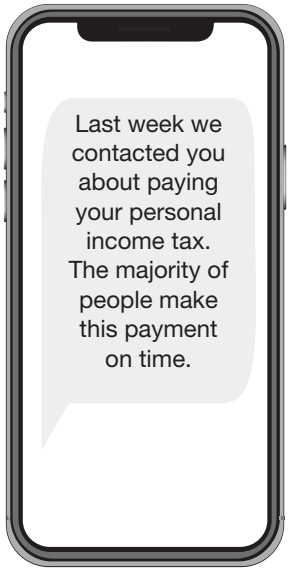

### Interventions to Employees




### Interventions with Assisted Service




### Interventions with Digital Communications



## Behavioural Insights in Practice

### Taxpayer Services

The volume of service interactions - particularly for assisted services - is quite large: In a given year, there are more than 400 million customer calls and visits to in-person assistance centres across FTA countries. In many cases, demand for these channels exceeds available resources, especially during seasonal peaks. At the same time, tax administrations are expanding digital and self-service channels and considering how to migrate customers to these options. Taxpayer services are critical interaction points that will influence not only compliance but also customer opinions of the tax administration. These outcomes can be influenced by employee behaviours as well as channel capacity. Overall, behavioural insights can help with a broad set of goals to optimise services, including demand management, channel migration, service productivity, and service quality.

**Create interventions to moderate demand**

- If and when service is needed
- Migrate customers to other channels

**Example**

The Australian Taxation Office (ATO) recognised that high call volumes could be generated from taxpayers wanting to know the status of their refund. When certain taxpayers were expected to experience a delay with the processing of their tax return, the ATO sent them SMS messages. This mitigated calls and increased transparency, which supports a positive taxpayer experience.[11]

**Provide tools to improve customer response**

- Design knowledge aids or tailored prompts for efficient, high-quality service
- Use call scripts that elicit greater actions

**Example**

Inland Revenue Authority of Singapore updated call phrases to encourage payment of overdue taxes. These scripts encouraged full payment today (instead of by a future due date), built commitment for future payments, and encouraged the taxpayer to set a reminder. The revised call script increased the number of callers making earlier payments by more than 10 percentage points.[12]

**Design processes and tools to reduce errors**

- Design prompts to prime honesty and flag issues
- Auto-populate forms where appropriate

**Example**

The ATO real-time analytics initiative sends customised prompts to taxpayers filing annual tax returns. For instance, a taxpayer may see a pop-up window letting them know that their reported work-related expenses are high and ask them to check the entry. This initiative prompted 25% of taxpayers who were nudged to alter their tax returns, resulting in around AUD 22.4mn in revenue from voluntary adjustments for 2018-2019 tax filings.[13]

## Taxpayer Communications

Communications with taxpayers provide an opportunity to nudge action. Letters and other outreach are typically generated to prompt a certain behaviour, such as signing up for digital communications or making a payment. Experimental testing with behavioural insights has shown that several factors can influence if and how customers respond:

- Who delivers the message (the tax administration, an affiliated individual, a community group, etc.)
- What type of message is sent (letter, SMS, email, phone call, etc.)
- When the message is sent
- How action items are presented
- How context is presented (why you are receiving this communication, the consequences of not taking action, etc.)

**Example:**

The Belgian Tax Administration sent reminder letters with different behavioural messages to personal income taxpayers to reduce late payments. The trial resulted in an 18% increase in advanced payments and generated an additional EUR 3.16mn net revenue, a return that is more than forty times the cost of the trial.[14]

In numerous examples across FTA countries and beyond, experimenting with low-cost changes to communications have yielded increased action and positive returns on investment.

## Enforcement

Tax administrations have a variety of options regarding how to interact with taxpayers, penalise non-compliance, and communicate enforcement, all of which can factor into taxpayer behaviours and perceptions. Tax administrations make strategic choices regarding policies and resource allocation that may impact audit productivity and longer-term taxpayer compliance. Behavioural methods can evaluate the trade-offs associated with various audit formats (mailed verification versus in-person; single issue versus comprehensive audits). Similarly, considering taxpayer behaviours (such as transparency) may inform whether a taxpayer would be better suited for traditional enforcement or a cooperative audit in which tax administrations work with taxpayers – particularly large businesses – to achieve greater certainty in tax positions prior to filing. Ideally, enforcement strategies will leave taxpayers believing that non-compliance can be detected and that compliance will be enforced, as credible enforcement with salient consequences can also motivate voluntary compliance. Tax administrations can evaluate patterns of behaviour and how those patterns change in response to new policies, sanctions, audit interactions, or other decisions. These behavioural insights can be used to optimise strategies.

**Example: Salience of Sanctions with Credible Enforcement**

New Zealand's Inland Revenue (IR) is one of the government agencies that administers New Zealand's Student Loan scheme. By mid-2011 there was more than NZD 400mn in rapidly rising defaulted debt. IR implemented legislative changes to increase data matching with other agencies, allowing contact with overseas-based borrowers (70% of which started to comply after contact), and implemented an 'arrest at border' policy for borrowers who persistently defaulted and attempted to leave the country. The first arrest of a student loan defaulter received media attention with positive community acceptance. In the two months following the arrest, there was a 50% increase in overseas based borrowers contacting IR and a 31% increase in repayments (compared to the same period in the previous year) for this group.[15]

**Actionable Insight: Salient consequences and increased visibility of enforcement can motivate action.**

**Example: Motivating Voluntary Disclosures**

The Dutch Tax and Customs Administration sought to reduce non-filing with targeted letters. Letters contained information that the administration knew about the taxpayer's foreign bank account(s) and provided a period to file without fines. These messages increased the credibility of enforcement, incentivised early filing to avoid fines, and communicated norms by highlighting that a lot of others had already filed. These methods successfully increased voluntary disclosures.[16]

**Actionable Insight: Increasing detection capabilities and nudging taxpayers can motivate voluntary action.**

**Example: Network Effects**

The Hungarian National Tax and Customs Administration sent reminder letters to self-employed entrepreneurs about their upcoming VAT filing date. On average, receiving a reminder letter increased filing rate by 5-6 percentage points. The effects were the highest among taxpayers who did not comply with the deadline in previous years. However, the experimental design also showed significant spill-over effects: other clients of treated taxpayers' accountants also had improved VAT filing.[18]

**Actionable Insight: Networks can accelerate enforcement effects. Targeting networks (vs. anomalies), where appropriate, may help maximise impacts.**

**Example: Audits and Future Compliance**

One study in the U.S. evaluated how audits of self-employed taxpayers impacted future compliance. The results suggest that audits with adjustments can have persistent positive impacts on future compliance, but audits may carry negative long-term consequences when they do not detect any non-compliance. The previously non-compliant taxpayers began reporting higher taxable incomes which continued three years after the audit (on average, 120% more). In contrast, those without an adjustment reported around 35% less taxable income than the control group in future years.[17]

**Actionable Insight: Understanding why taxpayers reduce their compliance may help inform strategies to keep them in compliance.**

**Example: Enforcement in Communications**

Tax Norway conducted survey experiments about how the economic impacts of the COVID-19 pandemic can influence support for economic relief programmes, trust in tax administrations, and attitudes towards evasion. One of these information provision studies showed that adding a single sentence about fewer on-site audits caused a statistically significant reduction in support of the Business Compensation Scheme by 5.6 percentage points (compared to baseline support of 80%) as well as a 10% decrease in perceived detection rates and a 14% reduction in trust in the tax administration's abilities.[19]

**Actionable Insight: Communicating audit reductions may lead compliant taxpayers to believe more people will successfully cheat the system. This can reduce trust and perceptions of fairness.**

## How Behavioural Insights Informs and Supports Enforcement Strategies:

### Risk Assessment:

- Consider how to address non-compliance around thresholds: Size-based policies may incentivise taxpayers to change their behaviours – or at least their reporting – to be eligible for benefits or to avoid burdens (such as additional reporting requirements for companies larger than 100 employees),
- Consider recent and prior behaviours (e.g., from a structured auditor questionnaire): Taxpayers who show a lack of transparency and cooperation may be better candidates for enforcement than cooperative programmes.
- Consider how many audits to do within a network and across networks: Seeing action taken against others in the network may be sufficient to change behaviours

### Impact Measurement:

- Measure short and long-term behavioural responses to enforcement. Learn which methods have greater persistence in achieving future year compliance.
- Include network spill-over effects in measuring enforcement impacts.

### Enforcement Strategy:

- Use insights from analysis of behavioural responses to inform resource allocation, audit frequencies, penalty levels, and sanction types. In some instances, reducing penalties or changing sanctions (such as removing passport privileges) may have greater impact.
- Consider where nudges and communications can be a cost-effective way to increase voluntary compliance.
- Consider how taxpayers will perceive fairness.

### Taxpayer Awareness:

- Apply behavioural insights to how enforcement is communicated to build trust and deter non-compliance. Recent events typically have greater impact, and extended time or repeated exposure may lessen impacts.
- When there is strong voluntary compliance, communicating this can reinforce compliance norms. When using a “worst offenders” list, it will be more effective if there is a perceived social or economic cost to being on the list.

## Employee Experience and Organisational Performance

As tax administrations strive to have high-performing organisations, considering employee behaviour can be critical to achieving that goal. Tax administrations may find they are able to improve performance by identifying and encouraging specific behaviours of leaders, managers, and employees. People often face competing demands that may impact whether they complete a task accurately or in a timely manner. Robotic process automation has the potential to help organisations eliminate errors for routine tasks as well as moderate employee workloads, enabling them to focus on other needs. However, broader opportunities for improving performance may require changing behaviours or building habits. Innovative technologies are aiding companies in delivering nudges to do just this – providing salient and timely messages to help employees stay connected, improve manager effectiveness, and prompt culture changes. These ideas are already being explored within tax administration, with one administration beginning to look at how behavioural interventions can encourage habits for life-long learning and foster greater teamwork. Analytical and experimental techniques can identify where to focus a behaviourally informed intervention and evaluate its success. Taken together, these can provide best practices for improving organisational performance.

### Nudges

Tax administrations may already use some simple nudges where managers remind employees in order to prompt more timely action, yet administrations recognise that there is more to strong performance than just meeting deadlines. Considerable research has gone into identifying what leads to happy customers, high-performing teams, effective leaders, and engaged employees – in nearly every instance, employee behaviour is key. Building effective behaviour goes beyond general awareness. It requires repetition and building new habits. Additionally, various individual, social and environmental factors can all influence whether we achieve behaviour change. For instance, a manager may know that regular interaction and feedback is helpful to direct reports, but may delay these interactions due to competing priorities. Designing prompts into our environment is one way to encourage people to act. Scientific study is foundational to understanding what behaviours to prompt and how to change these behaviours. The wrong nudges delivered at the wrong time or in excessive frequency could hinder effectiveness. However, when done right, behavioural scientists have shown how nudges can deliver strong results. Nudges are also showing promise as a complement to cultural or change management initiatives.

**Example: Using Nudges to Improve Employee Performance**

A large contact center wanted to improve efficiency and reduce customer hold times during its busy season. They worked with an external partner to design and implement employee nudges that delivered significant productivity gains estimated at USD 5.25mn. They accomplished this by identifying what drives efficiency and then designing tailored nudges to prompt behaviour change. These nudges were delivered over several months, often in the moment they were needed - that is, when employees and managers could act upon them.[20]

**Impacts**

- **Employees showed consistent 80%+ engagement with nudges**
- **Nudge recipients were 8.4% more productive than non-recipients**

## Network Analysis

Organisations are increasingly looking for ways to increase agility and innovation while also promoting employee retention and productivity. Employee networks are critical precursors to affecting these desired outcomes. Analysing internal networks provides a means for understanding employee interactions and collaborations. By better understanding how work gets done, organisations can develop strategies to improve performance. These analytics can help identify where to focus interventions and whom to include in change initiatives.

### How it works:

Data can be passively collected from email metadata (i.e., to/from fields) or actively collected through surveys. (Organisations often will give employees the choice to opt in to this kind of research.)

Surveys often ask with whom one interacts and how frequently these interactions occur. Questions may be framed as:

- With whom do you work to get your job done?
- With whom do you discuss ideas and better ways of getting things done?
- To whom do you go for expert advice?

### What it provides:

Analytical methods and graphical tools can help organisations glean insights, such as:

- Mapping collaboration patterns and identifying silos
- Identifying individuals or areas with collaborative overload that may increase turnover
- Identifying bottlenecks that may be slowing information exchange
- Identifying key influencers and network connectors – these top performers are often overlooked using traditional metrics and may be critical for organisational change initiatives

**Example: Analysing Networks to Promote Collaboration and Innovation**

One large manufacturer sought to provide innovative solutions that required collaboration across the company. The organisational network analysis revealed a lack of collaboration across divisions. Through this, tailored strategies were implemented to improve performance and achieve goals. The analysis identified individuals who have strong interactions across organisational groups ("connectors"). Mentoring programmes were carefully crafted to help new employees build networks with experienced employees as well as these network-spanning "connectors." Additional steps were taken to reduce burdens on critical top connectors, including identifying secondary "go-to" people and ensuring work process documentation was developed and easily accessible. These initiatives were paired with more systematic changes where they redefined staffing methods, aligned incentives, etc. Using these behavioural analyses to drive decision making, the manufacturer achieved higher reported job satisfaction and increased collaborations by 23%.[21]

## Building Capabilities for Behavioural Insights

There are many methods for incorporating behavioural insights into the workings of tax administration.

A 2020 survey of FTA members sought to understand the current state of how tax administrations are applying behavioural insights. Fifty-three tax administrations received the survey, and twenty-six responded. Results showed considerable variety in operating models. Several tax administrations noted working with external partners. Some conveyed that they established their own behavioural insights unit or embedded experts within functional groups. Most of those who built internal capacities continue to collaborate with external partners.

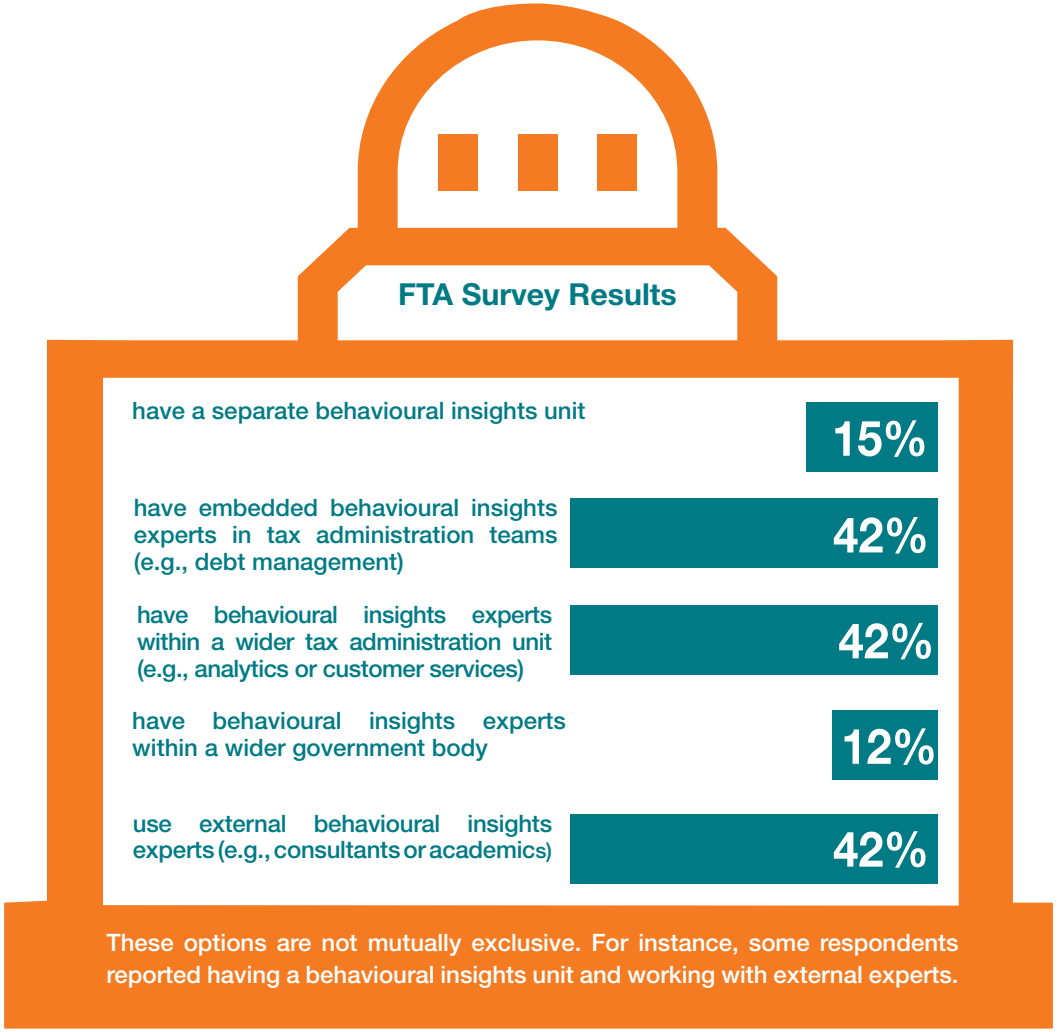
In this section, we outline common operating models for applying behavioural insights, then move into some preparations needed to pave the way for these operating models, and finally show a possible route for scaling behavioural insights within your organisation.

We focus on three operating models. Tax administrations do not need to choose one: These can be used concurrently to maximise impacts.

**Consultant collaboration**

**Academic collaboration**

**Internal experts**



## Consultant Collaboration

Consultants bring with them a specialised skillset beneficial for evaluating capabilities and operational needs. From their broader work, consultants have access to insights and case studies from similar or related work that allows them to quickly build business cases and compare opportunities. Additionally, a consultant is able to provide a highly customised solution for a particular project in order to meet key business objectives. External consultants can come from independent consulting organisations or cross-governmental units specialising in behavioural insights.

### Key Areas for Consultant Collaboration

- Developing toolkits or imparting knowledge on behavioural insights
- Conducting assessments or producing frameworks on where behavioural insights could be applied
- Producing frameworks for evidence-based evaluations
- Designing interventions and conducting research and analysis
- Conducting evaluations and producing actions plans for developing appropriate infrastructure and processes to support behavioural insights and experimentation

### Considerations for Consultant Collaboration

- Additional start-up time may be necessary to complete contracts and other onboarding activities.
- Consultancies vary in expertise. Understanding skills needed for specific engagements can help evaluate fit.
- Consultancies may seek to promote the use of their existing proprietary frameworks.

## Academic Collaboration

Academics can offer a wide array of benefits to the organisation. They often stay abreast of the latest research and methodological techniques and bring a working knowledge of recent developments to potential projects. Likewise, they often bring a rich knowledge of theory and literature in their areas of expertise. Academics are frequently financially supported by their employing institutions and/or through grants to conduct research. Academics may be willing to collaborate without direct compensation, if they may be able to publish new research from the engagement. Analysing taxpayer responses to policies or designing and conducting experiments are typically suitable topics for these engagements.

### Key Areas for Academic Collaboration

- Providing insight on behavioural science
- Designing interventions and conducting research trials
- Evaluating behavioural responses to policies or events

### Considerations with Academic Collaborations

- Professors and academic researchers will often be seeking publication opportunities. Not all tax administration projects will have strong publication potential. If publication potential is limited, then consultants may be better suited to the project.
- Universities often have research review boards. Academics may have additional procedures and processes for their participation in government research.
- Additional start-up time may be necessary in order to complete contracts and other onboarding activities.

### Internal Experts

Developing internal expertise can be critical for identifying new use cases and extending the application of behavioural insights. Internal staff can be readily available, as needs arise, and are not subject to the additional start-up time of external collaborations. They are also knowledge accelerators: while partners will gain knowledge for their respective trials, internal collaborators can stay well-informed of the approaches and outcomes across multiple projects. A focus on building a deep knowledge of tax administration can help with project selection and execution. Effective internal knowledge management and transference can capture what has and has not worked in the past, thus aiding efficient calibration for future interventions.

### Key Areas for Internal Experts

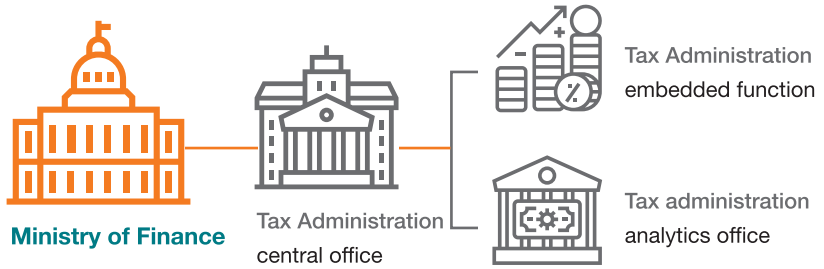
The behavioural insights personnel may perform one or more of the following roles:

- Advisory role — where the team provides advice to other areas of the organisation on how, when, and where to apply behavioural knowledge
- Research role — where the team conducts independent research trials and analysis
- Training role — where the team educates others on behavioural principles and / or aggregates findings across organisational functions to ensure cross-organisational knowledge sharing

### Considerations with Internal Experts

- The placement of a behavioural insights unit will influence how and where behavioural insights is applied. Varying placements will come with different benefits and challenges.

## Determining how to organise and where to place internal behavioural insights experts




### Behavioural Insights Unit

- **Cross-Functional Unit:** A shared-service approach allows for expansion across functional areas. However, opportunities will exceed resources, and teams will need to prioritise applications and stakeholder groups. They also may need to commit more effort and resources in securing internal subject matter experts, particularly when the idea is generated by the behavioural unit instead of a programme office.
- **Within a Functional Division:** This prioritises a given application area and may limit expansion into other areas. However, these locations can sometimes facilitate better access to subject matter experts and help with assimilating insights into general operations. These efficiencies are largely achieved through having the same leader both driving the mission and championing behavioural insights.

### Embedding Experts

- Behavioural scientists can easily integrate with teams that conduct experiments or are responsible for analytics, innovation, or user experience. Where such activities already exist, embedding behavioural scientists (or teams) into these organisational divisions may be appropriate.

## Education, Knowledge, and Skillsets for Behavioural Scientists

Behavioural economics, psychology, neuroscience, cultural anthropology, sociology and marketing are among the traditional training backgrounds for behavioural insights. Behavioural scientists may specialise in understanding or shaping behaviour in particular contexts (such as health behaviour, savings behaviour, or consumer behaviour). While some behavioural principles are universal, others may vary by context. Understanding tax behaviours or tax administration customer behaviour will be beneficial to crafting successful interventions.

The work of behavioural insights is often empirical: it requires research, analytical thinking and application of rigorous methods for testing and evaluating proposed solutions. Behavioural scientists generally have an understanding of what drives human behaviour, awareness of various types of behavioural interventions, and proficiencies with experimental or analytical methods, though each behavioural scientist may have greater proficiencies with specific methods (randomised control trials, econometric studies, lab experiments, surveys, etc.). The relative importance of particular skills may vary based on the context. Some skillsets may be more helpful in designing nudges or communications, while others will be required for advanced statistical analysis and predictive modeling around behaviours.

Oftentimes, behavioural scientists exist within diversely staffed teams comprised of individuals with different backgrounds and technical expertise. Pooling different types of expertise can help behavioural scientists look at problems through multiple lenses and apply more flexible, dynamic approaches to designing research in complex environments. As different specialisations may be more effective for different types of interventions or analyses, diverse teams are better positioned to address a range of potential applications and needs.

Some of the specific knowledge and skills that may be sought for behavioural insights teams include:

**Statistical:** data analytics, econometrics, statistics

**Experimental:** experience with randomised controlled trials, sampling methodologies, and other experimental methods

**Project:** project/programme management, communications, consulting, presentation skills

**Design:** visual design principles, design thinking, conceptual thinking

**Behavioural:** familiarity with behavioural principles and theories, ability to consume and apply new research from relevant fields

**Tax administration:** familiarity with systems and processes, and taxpayer needs and behaviours

## Governance Considerations

To operate with peak efficacy, a behavioural insights team needs governance processes in place that support their work.

**Data management.** Behavioural insights research often relies heavily on data, both in using existing internal administrative data and in the collection of additional external data. Tax administrations may benefit from having established processes and guidance to determine what information can be collected, how it can be used, and how it will be stored and accessed. These are conversations that would typically involve staff with backgrounds in data management and information technology as well as HR, if involving employee data.

**Law and ethics.** Experiments intentionally provide different treatments to different groups. Nudging was introduced as an opportunity to help people make the right choices for them. These methods alternatively can be applied to reduce choice or manipulate people into outcomes that are not in their best interest. The use of ethical codes of conduct or institutional review boards can help ensure behavioural insights experiments are carried out responsibly and in accordance with legal requirements. Additionally, certain studies may call for informed consent where individuals grant permission for their information to be used for research.

**Quality control and review.** The accuracy and reliability of findings depends on good research methods. Academic publications almost always go through peer review before publication. Internal projects may likewise consider opportunities for expert reviews. One approach is having other behavioural insights practitioner(s) from other project team(s) comment on methods or analysis. Another approach is to seek external review and comment. These can be done at multiple stages in the process – before and after conducting an intervention or analysis. Quality reviews can help validate study methods and results to give greater confidence in acting upon findings.

## Additional Governance Considerations Specific to External Partnerships

**Policies and procedures:** Develop risk mitigation procedures for allowing access to sensitive information. These might include non-disclosure agreements, the removal of unique identifiers from data that will be accessed, and background checks of those accessing the data.

**Agreements:** Develop agreements to clarify expectations. These are particularly important for engagements that may result in public-facing publications, such as with an academic collaboration. Specific considerations should be given to any internal access limitations, what information a partner/collaborator may discuss publicly, how review and clearance processes will be handled, and other expectations of collaborators, such as whether work needs to be done inside government offices, restrictions on communications, etc.

**Equity considerations:** Those who have worked with a tax administration previously are likely to have shorter start-up times than others who have not. Recurring partnerships will achieve greater efficiencies but may come at the cost of perceived fairness to others who are not granted similar privileges. It will be beneficial to consider operating principles to help guide decisions in these areas.

## Creating Structured Processes for Academic Proposals

### External partnerships emerge from two starting points:

**1. Business needs of a tax administration:** The tax administration identifies a use case and solicits detailed proposals or qualifications from subject matter experts to conduct work.

**2. Proposals from external parties:** Potential partners suggest ideas to the tax administration of possible applications or experimental areas. One common approach for receiving these ideas is through an open call for proposals.

Open calls for proposals may produce new innovative ideas but require additional processing by the organisation. Protocols and processes must be established for receiving, reviewing, and approving collaborations. A tax administration may need selection protocols for situations in which multiple teams submit near-identical proposals. Overlap with internally led projects also could also arise, so it is advantageous for individuals managing partnerships to be familiar with related research. Involving relevant stakeholder groups in the review process also can help ensure success.

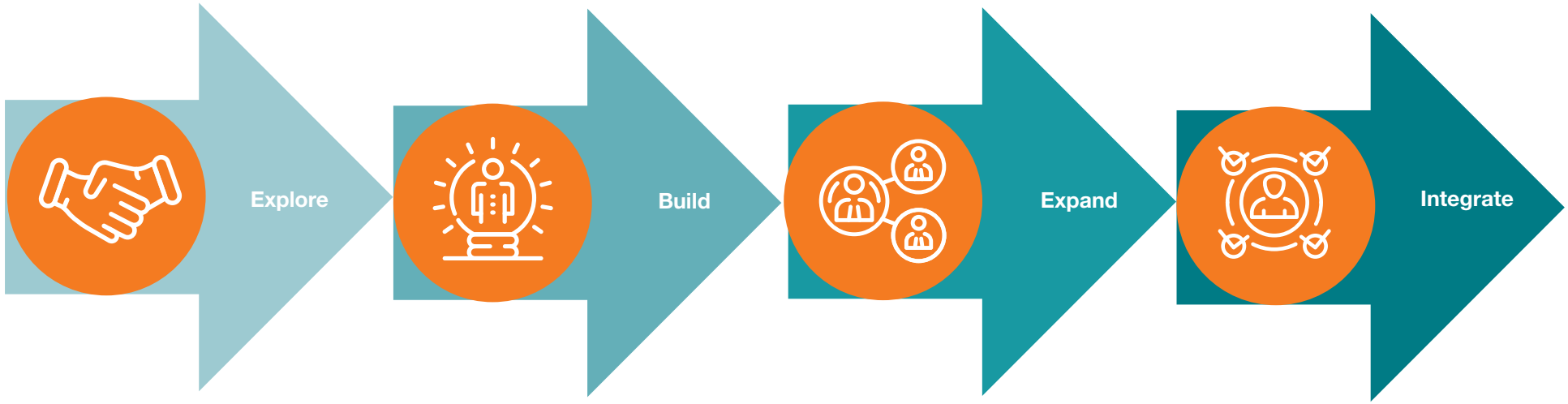
### IRS Joint Statistical Research Program

The IRS Joint Statistical Research Program (JSRP) has been a successful platform for collaborating with academics and other research institutions. The JSRP helps the IRS comply with recent legislative mandates to broaden researcher access to federal data to support program evaluation and evidence building, while at the same time safeguarding individually identifiable information. Established in 2011, this programme produces periodic calls for proposals whereby external researchers can submit proposals for research projects, including studies to understand behaviour or experimental trials to change behaviour. Proposals are reviewed by formal panels that include internal and external advisors. Individuals within the research community as well as programme offices are invited to participate. Evaluation criteria include clear, demonstrable benefit to tax administration, data availability, feasibility of the research plan, capacity of internal IRS staff to support the project, and potential benefits to IRS research or statistical priorities. In 2018, the IRS received more than 100 submissions and accepted nearly 30. The IRS actively seeks to ensure equitable consideration of all projects and to foster broad partnerships across the spectrum of academic and research institutions. To date, the IRS has partnered with more than 40 universities. These partnerships have evaluated behavioural responses to new legislation and enforcement activities, informed policy changes, identified examples where enforcement has increased compliance impacts across networks, and executed experimental designs to test new interventions to increase compliance behaviours, among other activities.

For more information, see https://www.irs.gov/statistics/soi-tax-stats-joint-statistical-research-program

## Scaling Behavioural Insights

The following sections present activities and outcomes for different phases in scaling behavioural insights. This prototype journey was informed by the experiences of several tax administrations. While behavioural insights can be applied without experimentation, the focus here assumes that applications will include experimental testing.




**Explore applications of behavioural insights: Select initial use cases and conduct early trials**

**Build internal capabilities: Hire or train internal behavioural insights experts**

**Expand awareness of behavioural insights and applications**

**Integrate behavioural insights into operational strategies, planning and risk mitigation processes**

### Phase 1: Explore

In this phase, tax administrations explore potential use cases and launch projects. Due to the specialised skills involved in behavioural interventions, early projects typically involve partnering with external experts. Early successes can be crucial in building support for programme expansion. Additionally, the experience of working on a behavioural intervention can begin introducing behavioural concepts and tax administration applications to internal collaborators and champions.

#### Activities in Phase 1:

- Identify priority application areas for using behavioural insights. (Several tax administrations start with a use case involving increasing on-time filing or payment compliance.)
- Identify and engage potential internal stakeholders and external partners.
- Select project(s), conduct intervention(s), and evaluate results.
- Develop communication strategies with internal and external audiences to build trust during trials and disseminate results.

### Phase 2: Build

In this phase, organisations build upon initial projects to consider additional strategic application areas. Likewise, they will consider how to increase the number of staff implementing behavioural projects, which can accelerate insights and impacts. Tax administrations will need to determine where to place new behavioural experts. Building internal capacities is not intended to replace partnerships with external experts, but rather to augment and support continued growth.

#### Activities in Phase 2:

- Develop a strategy for building behavioural insights expertise within the tax administration.
- Establish behavioural insights unit and/or onboard behavioural insights experts.
- Develop the mission and operating model of the behavioural insights unit.
- Continue to expand behavioural analysis and experimentation pilots.
- Connect with external networks and learning communities to exchange ideas and findings.
- Establish marketing materials for new stakeholder engagements.

## Tips for Phase 1: Explore

#### Identifying a Project

A good candidate for an initial pilot study will have:

- A clearly identified issue where behavioural change could produce a strategically desired result (best practice guides from behavioural experts may be a good source of ideas for potential applications)
- Sufficient time and resources for timely implementation
- Engaged stakeholders and supportive management
- An outcome capable of being measured, ideally with data that is routinely captured
- A successful path for broader implementation following a favorable trial

#### Identifying Partners

Tax administrations benefit from identifying and cultivating networks with academic institutions, independent researchers, and/or consulting firms with the requisite expertise in behavioural insights. Engaging the right audiences will increase the likelihood of attaining successful partnerships and achieving actionable insights. Engaging with professional networks may also help tax administrations reach the right experts. Partnering with well-regarded external experts can increase perceptions of legitimacy and credibility among stakeholders.

## Phase 3: Expand

Awareness campaigns and successful pilots often pave the way for greater interest in further expansion of behavioural insights activities. This phase looks to extend behavioural insights applications and capabilities into even more functional areas. Tax administrations likely will further extend financial and human capital resources to support expanded testing and insights. Considerations also should be given to infrastructure investments to achieve strategic goals and greater maturity in behavioral insights.

### Activities in Phase 3:

- Expand behavioural expertise and projects
- Conduct broad stakeholder outreach and awareness campaigns to introduce the work of the behavioural insights unit to additional segments of the organisation
- Build internal learning networks to exchange ideas and findings – these are particularly useful connection points if separate units are (or will be) applying behavioural insights.
- Implement behavioural insights training programs for new employees within behavioural insights units or across broader employee networks, as appropriate.

## Phase 4: Integrate

Previously, efforts focused on awareness and application within specific projects and programmes. This phase aims for experimental testing and behavioural insights to be recognised as critical capabilities that are operationalised into organisational strategies. Tax administrations will consider behavioural insights when determining strategic investments in resources as well as strategies for enforcement, services, and other core operations. This does not require application across all areas, as technological or resource limitations may hinder this. Nevertheless, there is a normalisation of testing and consideration of behavioural insights more broadly – this mainstreaming moves the organisation towards a higher maturity in behavioural insights.

### Activities in Phase 4:

- Incorporate behavioural analysis and intervention testing into standard operating procedures and programme expectations across functional areas
- Add behavioural insights into strategic visions
- Introduce criteria for behavioural change in decisions regarding technological infrastructure and digitalisation roadmaps

## Final Thoughts

Human behaviour underlies many challenges within tax administrations, from improving taxpayer compliance to ensuring positive taxpayer interactions. The introduction of behavioural scientists to tax administration has shown how these perspectives can improve outcomes and produce actionable insights. Behavioural insights can aid in designing processes and solutions. It provides the methods needed to better understand human behaviour, responses to tax administration actions, and broader policies. While digitalisation and technological investments can broaden opportunities, behavioural insights can be applied across a range of digital maturities. This ensures that all tax administrations have applicable uses for behavioural insights, regardless of infrastructure or operating models. We therefore encourage tax administrations to consider investing in developing capabilities to apply these methods and insights. To support these goals, we've outlined how tax administrations can partner with external experts, build internal expertise, or use some combination thereof.

Tax administrations may find further value in engaging with external networks. The Behavioural Insights Community of Interest (hosted by the Forum on Tax Administration) provides a forum for tax administrations to build understanding of behavioural insights and share ideas. The community serves early explorers as well as experienced units in sharing lessons learned, identifying effective approaches, and proliferating innovative ideas across the globe.

For more information on the Behavioural Insights Community of Interest, contact fta@oecd.org.

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FORUM ON TAX ADMINISTRATION

# Behavioural Insights for Better Tax Administration: A Brief Guide

Tax administrations across the globe raise hundreds of billions of euros every year in revenue to fund vital public services. Much of this depends on taxpayers complying voluntarily with their obligations, and small positive shifts in this behaviour can lead to significant additional revenue. This report sets out how the use of behavioural insights can influence the behaviour of taxpayers to help deliver those positive shifts.

It covers strategic considerations as well as a high-level discussion of the methods employed by behavioural scientists. The report also provides concrete examples of how behavioural insights have been used in tax administration, and highlights prospective uses and strategic considerations. Finally, the report sets out some practical guidance for tax administrations considering growing the use of behavioural insights.

www.oecd.org/tax/forum-on-tax-administration/