MALAYSIA PRODUCTIVITY CORPORATION

National Behavioural Insights Guideline

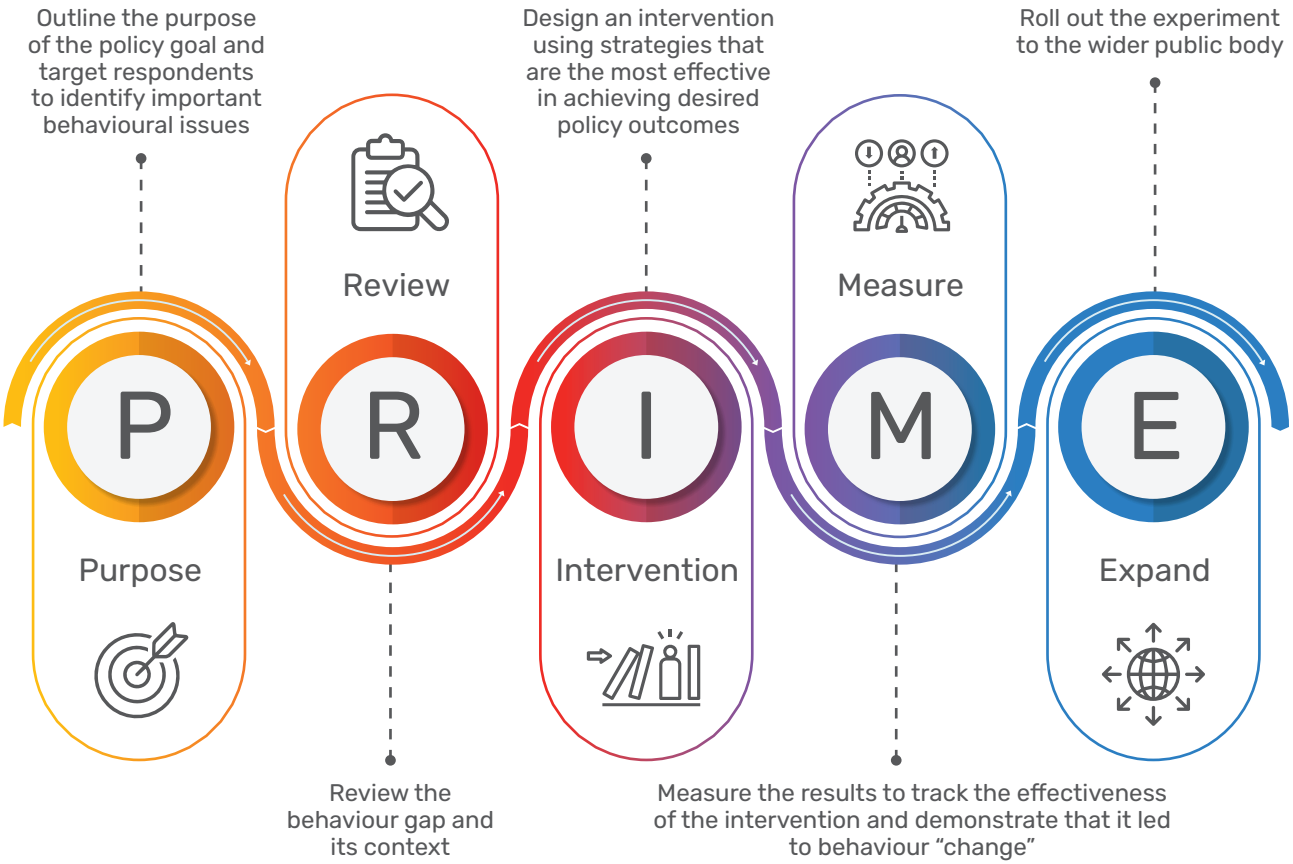
for Ministries, Government Agencies, State Governments and Local Authorities

EXECUTIVE SUMMARY

This National Behavioural Insights Guideline is developed by the Malaysia Productivity Corporation (MPC) to guide practitioners in applying and implementing Behavioural Insights (BI) as a policy and productivity tool in the public sector.

This guideline is intended for the use by government officers in Malaysia at the ministries, government agencies, state governments and local authorities in implementing a BI initiative. To achieve this end, this document guides users using the PRIME Framework, which was previously developed by the MPC to equip policymakers with simple processes, design strategies and methods for implementing Behavioural Insights.

The PRIME framework outlines how behaviourally-informed public policy can be applied in a practical way through 5 processes:



This guideline is organised into five chapters:

Chapter 1 - Introduction: Provides the introduction and background to Behavioural Insights, roles of MPC and information on training and resources

Chapter 2 - Applying Behavioural Insights using the PRIME framework: Guides users in applying Behavioural Insights using the PRIME framework

Chapter 3 - Ethical Considerations: Describes ethical considerations in implementing Behavioural Insights

Chapter 4 - Case Studies: Provides case studies to illustrate real-world public policy examples in applying Behavioural Insights

Chapter 5 - Conclusion

Wherever possible, flowcharts and infographics are used to facilitate understanding of this guideline. In addition, separate sections on **Glossary** and **Frequently Asked Questions (FAQ)** are provided.

FOREWORD

As the agency entrusted with championing productivity in Malaysia's public and private sector, Malaysia Productivity Corporation (MPC) is pleased to produce the National Behavioural Insights Guideline. It is prepared to serve as a reference for policy makers, regulators and government agencies to implement Behavioural Insights (BI) into their regulatory delivery programme and services.

This is in line with the objectives of the Twelfth Malaysia Plan 2021-2025 (Twelfth Plan). BI will be used to design and implement policies to guide the rakyat towards making better decisions. The BI approach will be adopted to steer mindset and behavioural changes, mainly through the provision of appropriate facilities, product labelling and reward system as well as incorporation in faith practices. This will further elevate environmental awareness and contribute to sustainable lifestyles.

BI has been defined by the Organisation for Economic Cooperation and Development (OECD) as "an inductive approach to policy-making that combines insights from psychology, cognitive science, and social science with empirically-tested results to discover how humans actually make choices".

Since 2020, MPC has been entrusted to take the lead in the introduction and implementation of BI in Malaysia. To that effect, we have come up with the Purpose, Review, Intervention, Measure and Expand (PRIME) framework, as well as planned out several initiatives. Details of these are further explained in this Guideline.

BI is important as it aims to understand why people do things and then shape public policy in a way that will persuade, rather than force them to comply. This will reduce red tape, bureaucracy and ensure greater efficiency.

It will also help free up resources as there will be less need for enforcement since people will be willing to comply with rules and regulations because they want to do so, and not because they have to do so. This enables the Government, at various levels, to dedicate resources to other pressing matters.

We hope that this National Behavioural Insights Guideline will serve as a useful reference point in helping policymakers and regulators to design and implement policies that are more rakyat-centric and spur greater productivity.

Dato' Abdul Latif Hj Abu Seman

Director General
Malaysia Productivity Corporation

GLOSSARY

Attrition	When individuals drop out of the control or treatment group over the course of the evaluation (J-PAL, 2018).
Behaviour	What to attend to, how to form beliefs, what to choose, whether to stick to one's choices and any other response that constitutes a counterfactual event conditional on volition (OECD, 2019).
Behavioural Insights	An inductive approach to policy making that combines insights from psychology, cognitive science, and social science with empirically-tested results to discover how humans actually make choices (OECD).
Choice architecture	The practice of influencing choice by changing the manner in which options are presented to people (The Behavioral Economics Guide, 2018).
Cognitive bias	People's systematic but purportedly flawed patterns of responses to judgment and decision problems (A. Wilke & R. Mata, 2012)
Crossover	When an individual in the control group strays from his or her initial assignment and receives the treatment (J-PAL, 2017).
Default	The choices that are selected automatically unless an alternative is specified (World Bank, 2015).
Heuristics	Mental shortcuts or intuitive judgments (OECD, 2019)
Nudge	Any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives (Thaler & Sunstein, 2008).
Randomised controlled Trial (RCT)	A trial or experiment carried out on two or more groups to capture the impact of an intervention where participants are randomly assigned to receive an intervention or not (Nesta, 2017).
Social norms	The values, actions, and expectations of a society or culture that offer both implicit and explicit guides to behaviour. Norms are often identified as descriptive norms (observation of what others do, providing information about what is "normal") and injunctive norms (perceived behaviour of what most people approve of, providing information on what one "should" do) (IRS, 2016).
Spillover	When a treatment affects those in the control group or individuals who are not in the study sample. Spillover can take many forms and be positive or negative (J-PAL, 2017).
Statistical power	The likelihood that an evaluation will be able to detect a treatment effect of a certain size (J-PAL, 2018).

ABBREVIATIONS

ABCD	Attention, Belief formation, Choice and Determination
BI	Behavioural Insights
BIT	Behavioural Insights Team, UK
EAST	Easy, Attractive, Social, Timely
EBP	Evidence-Based Policy
IRS	Internal Revenue Service, US
J-PAL	Abdul Latif Jameel Poverty Action Lab
MBO	Measurable Behavioural Outcomes
MPC	Malaysia Productivity Corporation
PRIME	Purpose, Review, Intervention, Measure, Expand
OECD	Organisation for Economic Cooperation and Development
RCT	Randomised Controlled Trial

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CHAPTER 1 INTRODUCTION

1.1 Introduction

In the Twelfth Malaysia Plan 2021-2025, the BI approach will be adopted as a complementary tool to enhance the Government's services to the rakyat. BI will be used to design and implement policies to guide the rakyat towards making better decisions.

The application of BI in the public sector will be introduced in the Twelfth Malaysia Plan 2021-2025 through several initiatives by the Malaysia Productivity Corporation.

Twelfth Malaysia Plan 2021 - 2025

Behavioural Insights is a policy tool that combines insights from psychology, cognitive science and social science to improve how people make choices for their own wellbeing. BI has been used for over a decade in public policy applications, with the U.K. government being the first to establish a Behavioural Insights Team (BIT) in 2010.

The MPC has been given the responsibility by the Government to introduce and implement Behavioural Insights (BI) in Malaysia since 2020, as the Government is keen to embed BI in designing public policy to achieve better quality and effective regulation.

This National Behavioural Insights Guideline is developed based on the BI PRIME Framework as a guidance to practitioners in applying and implementing BI in public policy.

This Guideline is a practical instrument for policy officials working in ministries, departments and public agencies. This Guideline describes the process through which the behavioural aspects of a problem can be identified, scoped and addressed.

1.2 Objectives

The objectives of the National BI Guideline are:

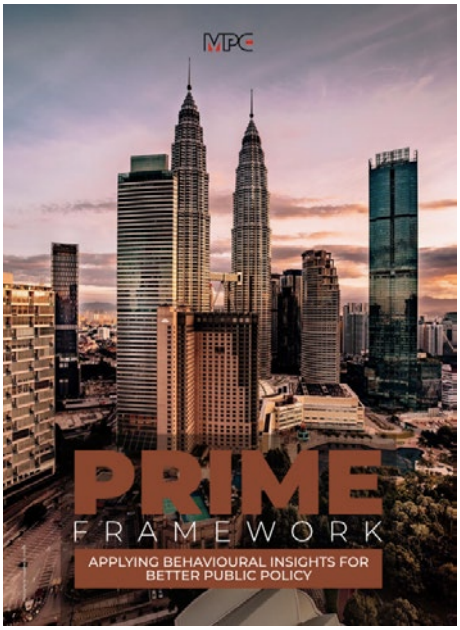
i. To serve as a guide in applying BI to public policy from the beginning to the end of the policy cycle;

ii. To serve as a repository of best practices, proof of concepts and methodological standards for BI practitioners and policymakers; and

iii. To provide general principles for the ethical application of BI and guidelines where ethical concerns might be raised for specific issues.

This Guideline includes designing solutions to ensure that policies reflect real needs and behaviour for greater impact and effectiveness.

The Guideline attempts to simplify the process of adopting BI in public policy among practitioners. Users of this guideline are recommended to use this document together with other supporting documents, primarily the PRIME Framework developed by MPC.



Adoption of BI as a policy tool is in line with evidence-based policymaking.

Evidence-Based Policymaking (EBP) will be promoted including, establishing a user-friendly data sharing framework. In addition, programme evaluation and monitoring will be improved to increase the effectiveness of productivity initiatives.

Twelfth Malaysia Plan 2021 - 2025

1.3 Training and Resources

To obtain optimum benefit from this guideline, practitioners are recommended to attend basic training in behavioural insights. For online training offered by MPC, refer to My Latihan Maya portal (www.mylatihanmaya.my). Physical training can also be arranged by MPC for ministries, government agencies, state governments and local authorities. In addition, short videos (typically 5 minutes, or less) are available at the Behavioural Insights YouTube Channel for topics such as introduction, approach and application of BI. Readers are also encouraged to join the Telegram Channel "Behavioural Insights Malaysia" which is managed by the MPC.

Several references are listed to complement this guideline (refer Table 1.1).

Description	Content	Publisher
Introduction and Background reading	Chapter 5 in 2021 Productivity Report *https://www.mpc.gov.my/static_files/media_manager/36/Productivity-Report-2021.pdf*	MPC
	World Development Report 2015: Mind, Society, and Behavior *https://www.worldbank.org/content/dam/Worldbank/Publications/WDR/WDR%202015/WDR-2015-Full-Report.pdf*	World Bank
	Nudge: Improving Decisions about Health, Wealth, and Happiness by Richard H. Thaler and Cass R. Sunstein, 2008.	Penguin Books
Framework (local)	PRIME *https://grp.mpc.gov.my/reports*	MPC
Other framework/ implementation steps/guide	EAST *https://www.bi.team/wp-content/uploads/2015/07/BIT-Publication-EAST_FA_WEB.pdf*	BIT
	ABCD and BASIC in *The BASIC Toolkit: Tools and Ethics for Applied Behavioural Insights* *https://www.oecd.org/gov/regulatory-policy/BASIC-Toolkit-web.pdf*	OECD
Ethics framework	FORGOOD by Lades & Delaney, 2020 in the Behavioural Public Policy journal	Cambridge University Press
Application	Behavioural Insights and Public Policy Lessons from Around the World	OECD

Table 1.1: References to BI Guideline

In addition to references listed in Table 1.1, other relevant references can be used to complement initiative or project on BI.

1.4 Overview of Behavioural Insights

"Almost all government policy seeks to change behaviour".

Behavioural Insights Network Netherlands (BIN NL)

BI is about how and what we choose (decision-making), and the impact of such decision to our well-being and the wider implication in public policy.

BI is defined as:

"An inductive approach to policy making that combines insights from psychology, cognitive science, and social science with empirically-tested results to discover how humans actually make choices."

(OECD)

Within the context of public policy, a key concept in BI is ***libertarian paternalism***. One way to understand this concept is given below:

"Strategy to devise policy that will "maintain or increase freedom of choice" and at the same time "influence people's behaviour in order to make their lives longer, healthier, and better."

(The Oxford Handbook of Freedom)

Libertarian paternalism

Libertarian because it preserves freedom of choice and paternalism because it seeks to promote the good of the agent being nudged (Stanford Encyclopaedia of Philosophy, 2020).

The key word in BI is "behaviour". For the purpose of this guideline, it is useful to refer to the following definition on "behaviour" by the OECD:

"What to attend to, how to form beliefs, what to choose, whether to stick to one's choices and any other response that constitutes a counterfactual event conditional on volition."

Our decision-making depends on our thinking systems, which is divided into System 1 and System 2 (see Table 1.2). System 1 is automatic whereas System 2 is deliberative. Errors in decision-making happens when we unintentionally use System 1 thinking when we should be using System 2 thinking.

System 1	System 2
Effortless	Deliberative
Associative	Considers range of factors
Intuitive	Effortful
	Reasoning and reflective

Table 1.2: System 1 and System 2 Thinking
(Source: World Bank)

The difference between desired behaviour and current (prevailing) behaviour due to decision-making error (cognitive limitation) is the behavioural gap. This difference is also referred to as bias.

Desired behaviour is more commonly known in economics as "rational" behaviour whereas deviation from the desired behaviour is referred to as "irrational". Cognitive bias leads to irrationality in human decision-making.

For ease of understanding among practitioners, the decision-making limitations of humans are summarised by the OECD using the ABCD framework. ABCD refers to Attention; Belief formation; Choice; and Determination (ABCD), as shown in Table 1.3. The framework can be used to analyse and diagnose behavioural problems (gaps).

Aspect	What rationality says	What BI shows
Attention	People should focus on what is most important in light of their knowledge and preferences.	People's attention are limited and easily distracted.
Belief formation	People should form their beliefs according to the rules of logic and probability.	People rely on mental shortcuts or intuitive judgments and often over/underestimate outcomes and probabilities.
Choice	People should choose so as to maximise their expected utility.	People are influenced by the framing as well as the social and situational context of choices.
Determination	Provided that one decides to pursue certain long-term goals, one should stick to the plan	People's willpower are limited and subject to psychological biases.

Table 1.3: ABCD Framework
(Source: OECD)

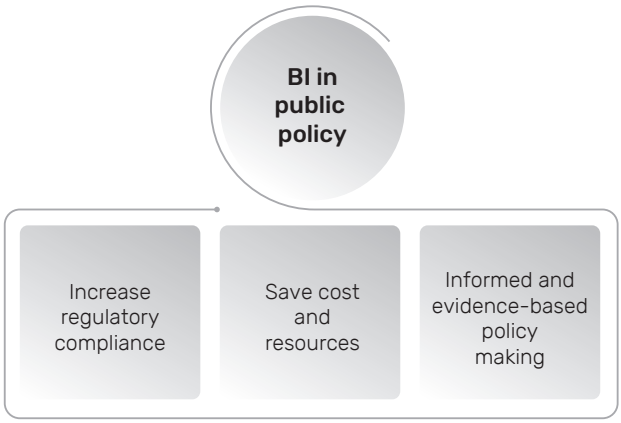


Figure 1.1: Productivity Report 2021

BI has been identified as a tool that can be used to address one of the five challenges to productivity growth in Malaysia i.e. Productivity Mindset (outlined in the Malaysia Productivity Blueprint). With BI, targeted policy interventions can be adopted based on the understanding of behavioural gap. BI offers an excellent policy tool to overcome challenges in productivity mindset through a cost-effective approach.

Key benefits of BI

Cost saving

Increased compliance

Informed policy-making

For adoption of BI in Malaysia, the following are planned and implemented:

- To organise awareness programmes through webinars, conferences, and seminars to engage regulators and policy-makers from Strategic Planning and Policy Division at the relevant ministries.
- Case studies and Behavioural Insights initiatives be broadened through "1 Ministry, 1 Project" Programme to develop local pool of talent and widen local experiences among practitioners in the public sector. Relevant publications will be produced, including publications on the case studies and baseline studies.
- BI programme evaluation will be developed to measure the effectiveness of adopting BI as a policy tool. In addition, guidelines and case studies will be published as references for practitioners in government agencies at the federal, state, and local authority levels.
- Government officers will be trained throughout the implementation of the Twelfth Malaysia Plan 2021 - 2025. Trained government officers are anticipated to actively participate in relevant case studies and BI initiatives across various ministries and government agencies.

For BI implementation in Malaysia, the MPC developed the PRIME Framework (Figure 1.2). PRIME stands for Purpose, Review, Intervention, Measure and Expand.

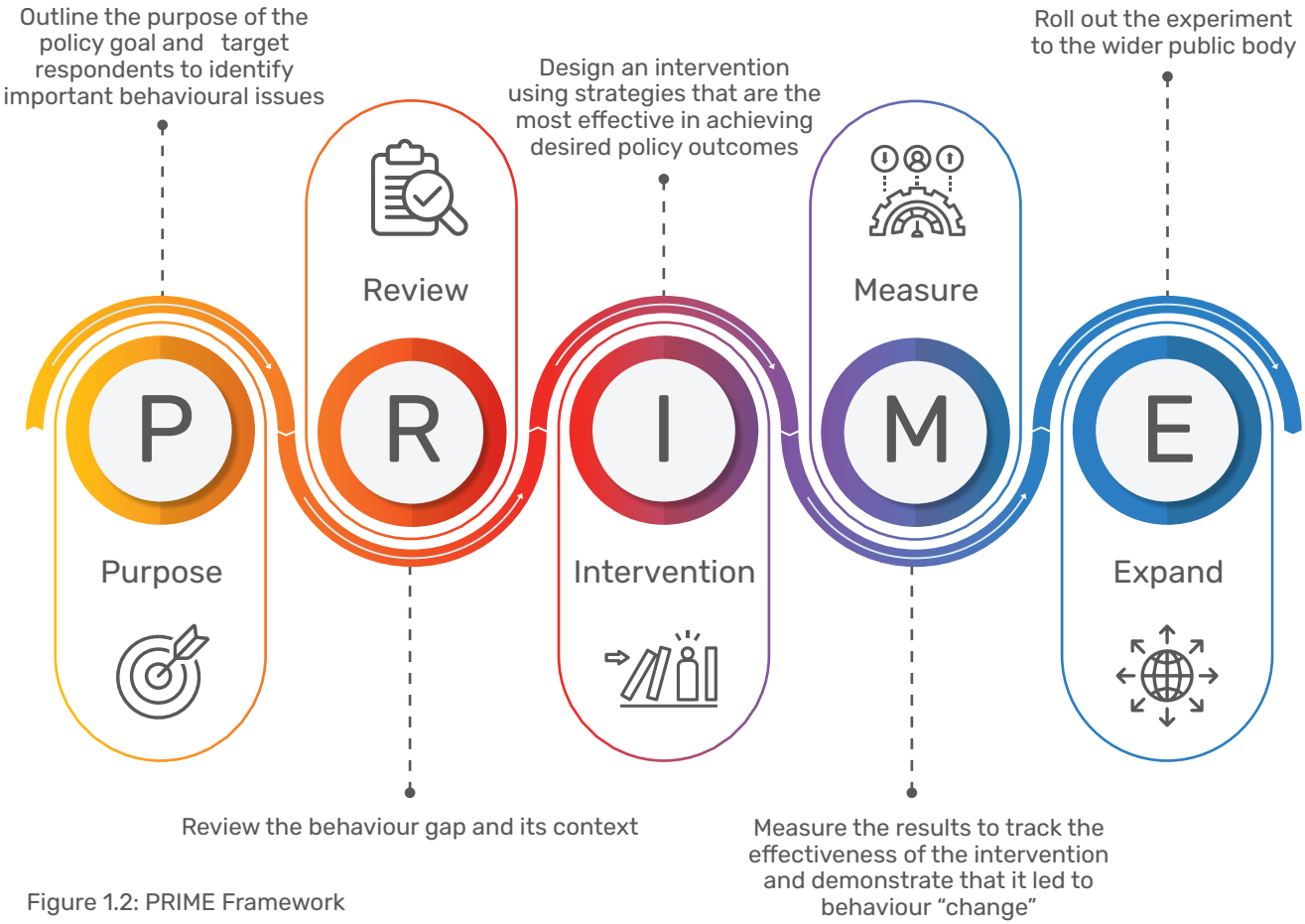


Figure 1.2: PRIME Framework

In BI, the outcome is measured as evidence on the effectiveness of intervention, consistent with the evidence-based policy-making (EBP). BI initiative is first implemented at smaller or pilot scale, before expanding to large scale and to other similar projects, upon careful evaluation. Therefore, the BI approach offers an effective solution to a given problem in public policy.

BI utilises a problem-solving approach (Figure 1.3) where an issue is analysed before suggestions are proposed. The recommendations must be practical for implementation by practitioners at the ministry, agency and state local authority level.

Figure 1.3: Problem-solving approach in Behavioural Insights

CHAPTER 2 APPLYING BEHAVIOURAL INSIGHTS USING THE PRIME FRAMEWORK

This chapter guides users in applying BI using the PRIME framework. This chapter starts with the introduction to the framework (section 2.1), followed by BI implementation in summary (section 2.2). The main part (section 2.3) describes the detailed PRIME processes in implementing BI. This is then followed with reporting (section 2.4) and finally, tools and checklist (section 2.5).

Within the public policy context, behavioural insights can be applied throughout a policy cycle. Target groups' behavioural gaps (irrationality or cognitive limitations) are considered when formulating a new policy or initiative/programme or modifying/improving existing ones.

2.1 Introduction

To apply BI at the ministry, agency, state local authority or business association level, the PRIME framework developed by MPC should be adopted. The framework provides a structured approach in implementing BI.

The PRIME framework (Figure 2.1) outlines how behaviourally-informed public policy can be applied in a practical way through 5 processes:

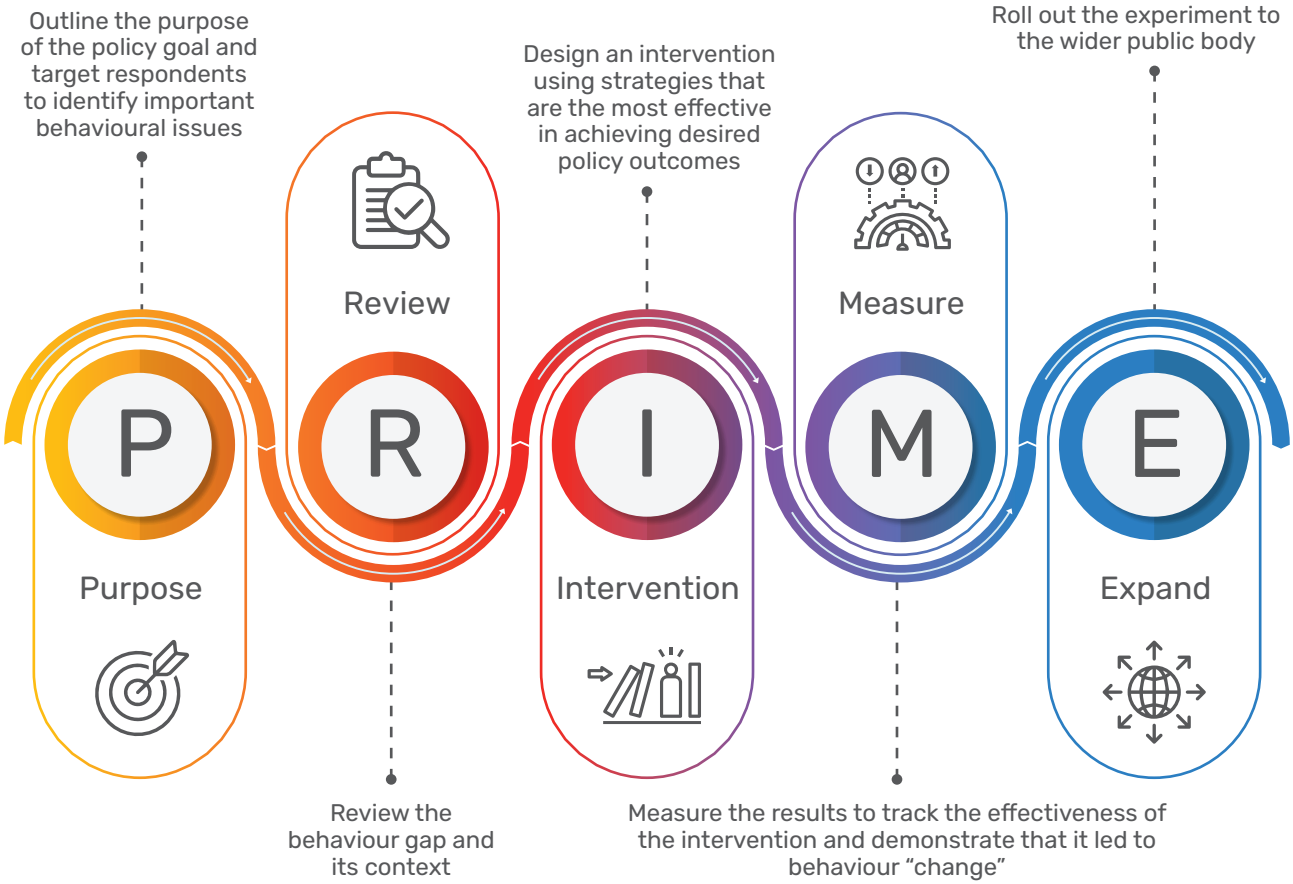


Figure 2.1:
PRIME framework

2.2 BI implementation in summary

A summary of the overall BI implementation using the PRIME framework is given below:

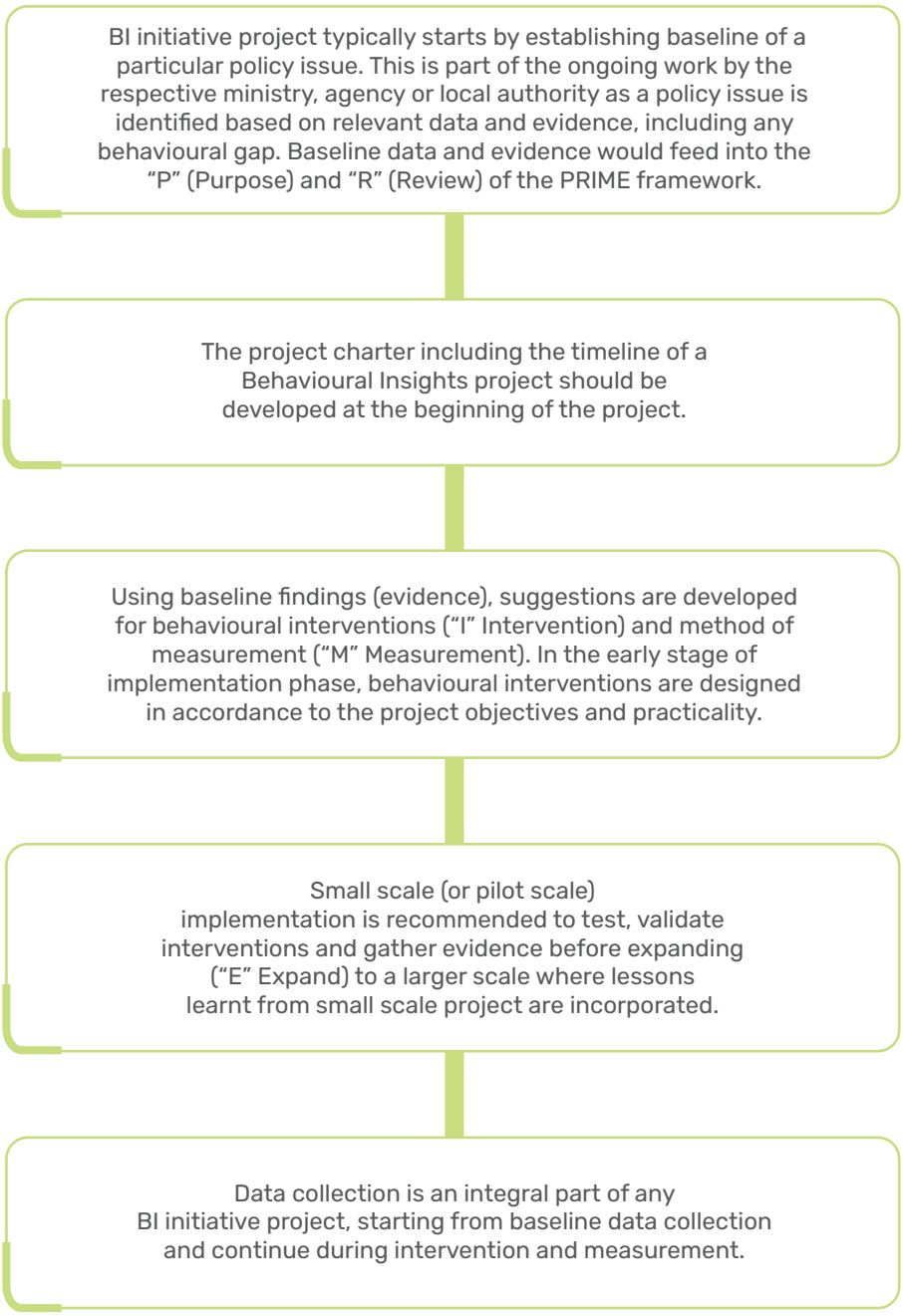


Figure 2.2: BI Implementation Summary

"A key factor in applying BI in an organisation is the experimental, evidence-based and iterative test-learn-adapt process".

Behavioural Economics in Action at Rotman (BEAR)

2.3 The PRIME framework implementation

This section describes each process in the PRIME framework.

2.3.1 P Purpose

Purpose: Outline the purpose of the policy goal and target respondents to identify important behavioural issues.

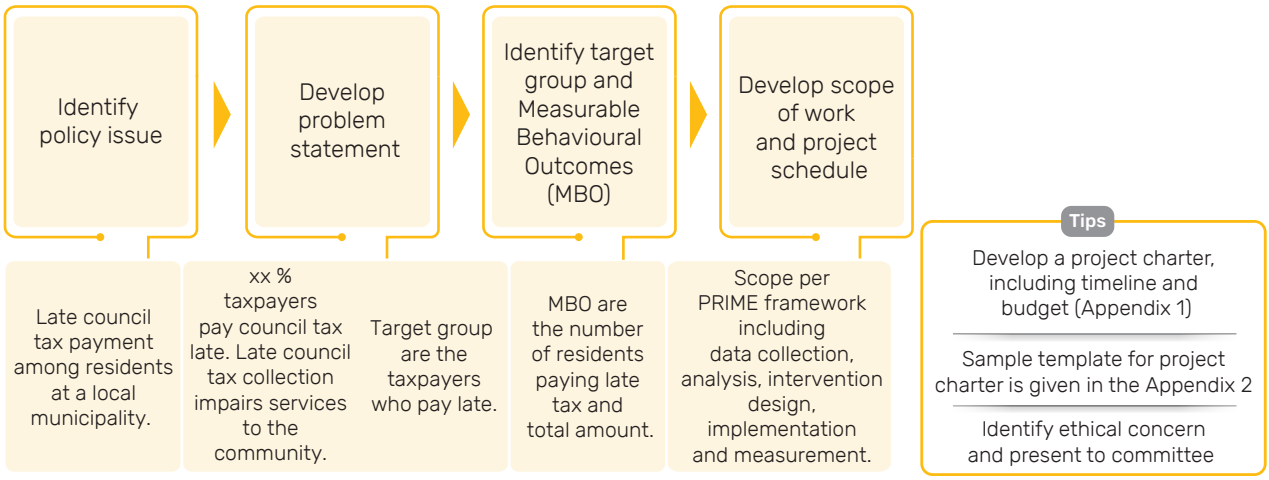


Figure 2.3: Flow chart for 'Purpose'

To outline the purpose of an intervention, ask:

- What is the desired behavioural change that this intervention aims to influence?
- Is there a way that this behaviour can be measured reliably?
- How do behavioural outcomes relate to the specific policy goals and broader policy areas?

Source: PRIME framework

2.3.2 R Review

Review : Review the behaviour gap and its context.

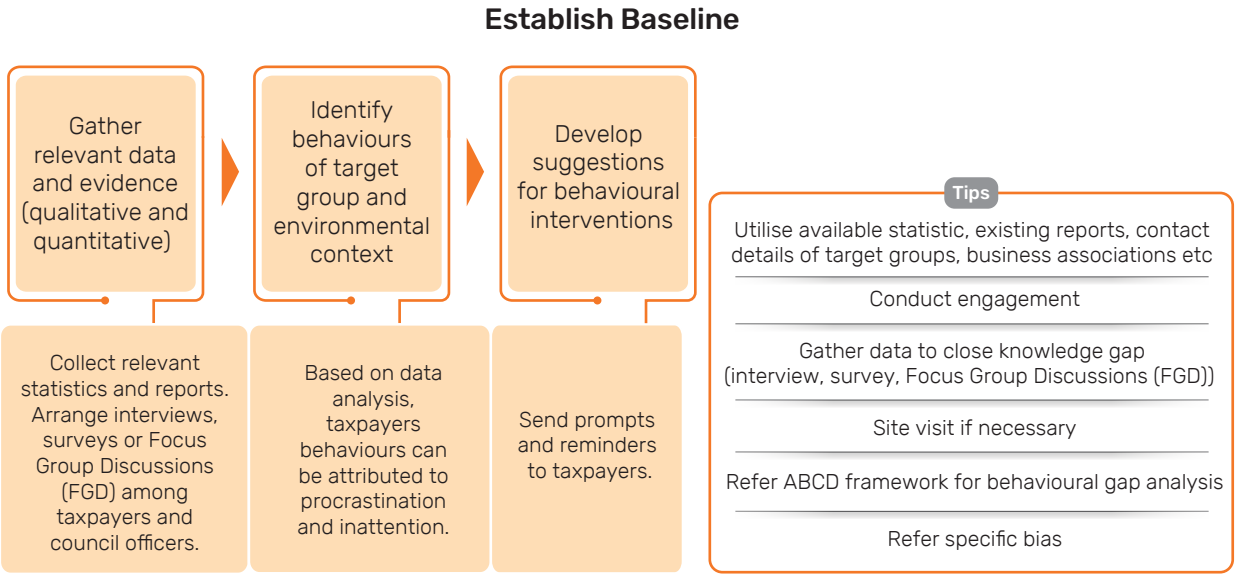


Figure 2.4: Flow chart for 'Review'

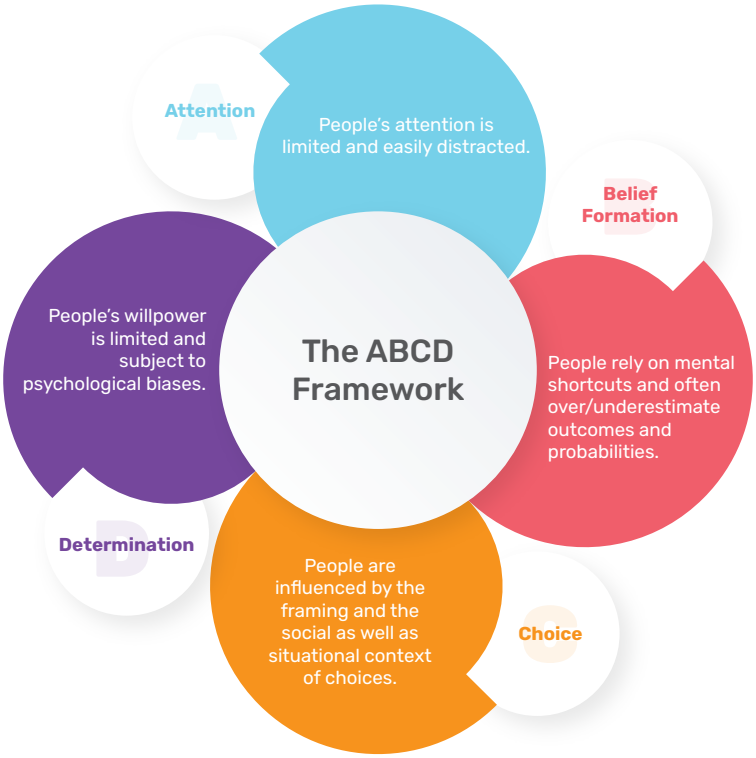


Figure 2.5: ABCD Framework
Source: OECD

Analysis of findings

The purpose of analysing the findings obtained in the "Review" process is to understand why people (target group) behave as they do.

In the "Review" process of the PRIME framework, findings from secondary and primary sources can be analysed as follows:

- Descriptive statistic to analyse data from baseline study eg. Demographic data obtained from survey
- Thematic analysis to analyse data from the baseline study (interview, FGD, survey) based on the themes identified in the project.

Findings during the "Review" process can be categorised as follows:

i. Findings from literature review (secondary source)
ii. Surveys, interviews or FGD findings (primary source)
iii. Findings from site visits or field trips including photos, video recordings etc.

Findings may suggest behavioural gaps due to cognitive biases and behaviours influenced by social norms and environment. Behavioural gaps can be analysed using the ABCD framework (Figure 2.5). The ABCD framework covers the main aspects of behaviour that tend to cause the biases involved in behavioural problems (OECD). The sample template ABCD is given in the Appendix A1.

The results from the "Purpose" and "Review" processes are typically reported in a baseline study report.

Analysing findings during "Review" process

Findings from literature review (secondary sources)

Official reports, statistics, news reports, academic studies etc offer useful source of information for a BI project. Relevant data or evidence should be extracted and documented or tabulated for use in a project. Data or evidence obtained will provide context and background information which help define the issue.

Literature review is also used to identify if there is any additional theory that should be considered in a BI project.

Findings from surveys, interviews or FGD (primary sources)

Findings from primary sources can be described based on themes and questions asked.

a) Issues and problems.

Issues and problems are identified based on responses provided by respondents. In a BI project, focus is given to cognitive limitations and biases that lead to behavioural gaps.

b) Existing initiatives

Existing initiatives should be identified from relevant persons who are involved in planning and implementing the initiatives.

c) Implications from the issues

Implications from the issues should be identified, including financial, safety and security dimensions which would have public policy implications. By listing the implications, due priority and attention can be given to the issues and resources can be allocated accordingly.

d) Root cause of the issues

Root cause of issues should be established.

e) Actions already taken to address identified issues

f) Suggestions to address the issue

To come up with practical and implementable suggestions, it is useful to obtain feedback and opinion from stakeholders who are directly involved in the issue.

g) Roles that can be played by relevant stakeholders

Stakeholders can provide support for the project during intervention. Intervention should be implemented in close cooperation with stakeholders. Stakeholders can be assigned to a specific task as part of the implementation team.

2.3.3 Intervention

Intervention: Design an intervention using strategies that are the most effective in achieving desired policy outcomes.

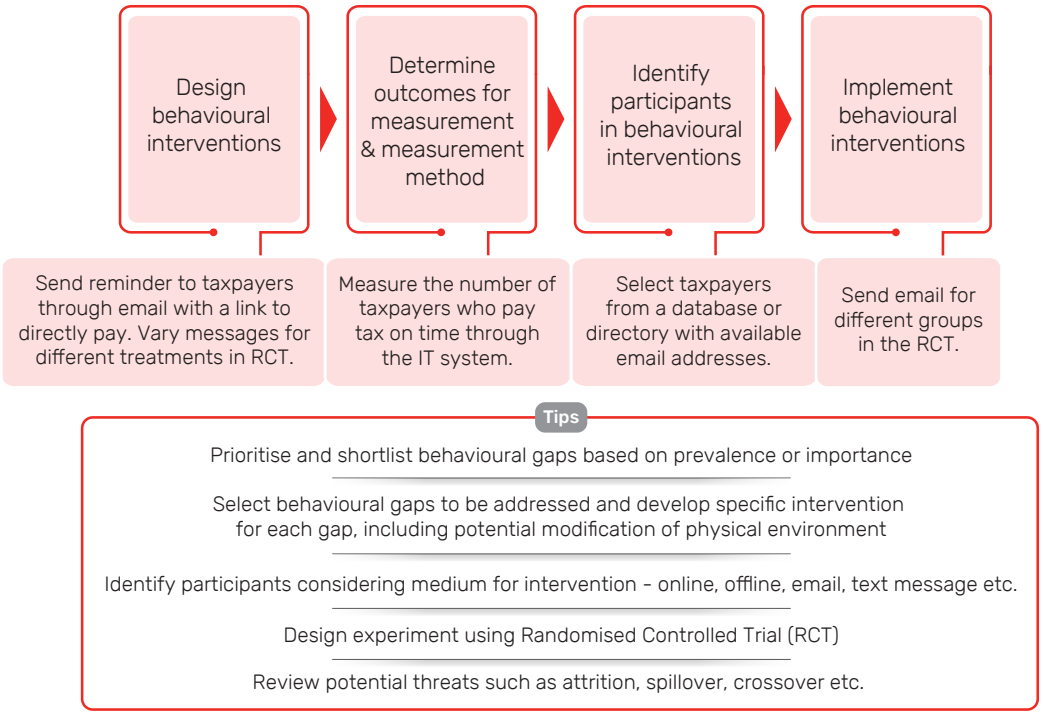


Figure 2.6: Flow chart for 'Intervention'

The most common behavioural intervention is nudge. Nudge is defined as:

"A nudge, as we will use the term, is any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting fruit at eye level counts as a nudge. Banning junk food does not"

(Thaler and Sunstein, 2008).

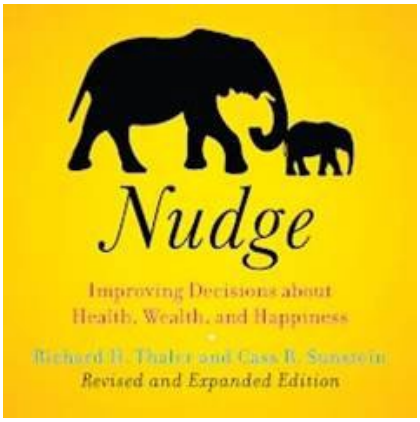


Figure 2.7 : Nudge

Design Strategies

Five key design strategies should be considered when designing behavioural interventions (MPC, 2021):

1. Straightforward
2. Welcoming
3. Interpersonal
4. Fact-based
5. Timely

In addition, desired behaviours can be achieved through interventions that are designed to be easy, attractive, social and timely, by referring to the EAST (Easy. Attractive, Social and Timely) framework developed by The Behavioural Insights Team (BIT) (Figure 2.8)

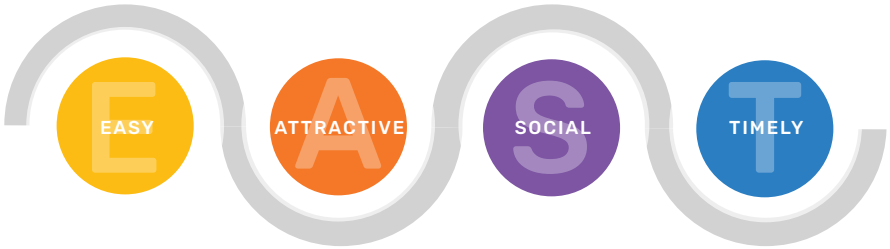


Figure 2.8: EAST Framework
Source: The Behavioural Insights Team (BIT)

Factors Influencing Human Behaviour

Interventions should be designed to influence decision making of individuals in the target group, by considering factors that influence human behaviour such as:

- Individual factors
- Environmental design factors
- Social factors

Source : Internal Revenue Service (IRS), US

Intervention design is done through "choice architecture" i.e. by simplifying the presentation of options, by automatically evoking particular associations, or by making one option more salient or easier to choose than the alternatives (World Bank).

Choice architecture changes the way options are ordered or presented. This helps individuals to make better decisions.

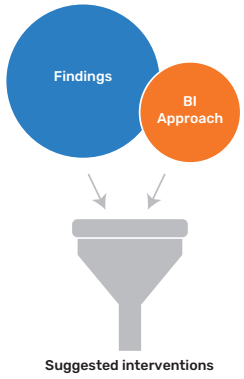


Figure 2.9: Designing Interventions

Interventions are developed based on the findings from the baseline study and take into consideration behavioural gaps and BI approaches, as well as the five design strategies, the EAST framework and factors that influence human behaviour (Figure 2.9).

Behavioural intervention or nudge can be implemented through messages that are crafted to influence target groups, taking into consideration behavioural gaps. Posters, videos, projects, reminders can be designed to deliver relevant messages. These materials can be sent to the target audience through suitable communication channels, which should be identified at the early stage of a project.

Program evaluation methods

To evaluate the outcome and effectiveness of intervention, a program evaluation should be conducted. The method of program evaluation depends on the design of intervention and therefore should be identified as part of the "Intervention" process.

Examples of program evaluation methods are:

- Randomised Evaluation/ Randomised Control Trial
- Pre-Post
- Simple Difference
- Differences in Differences

To gain understanding in relevant program evaluation methods, readers are advised to attend relevant training or seek advice from expert practitioners.

Designing experiment for intervention

In designing intervention, appropriate and suitable implementation method should be identified by implementing experiment. Randomised evaluation or randomised control trial (RCT, Figure 2.10) is recommended as it is considered as the gold standard by experts and practitioners. RCT enables measurement between control and treatment groups and thus produce strong evidence for evaluation and expansion, consistent with evidence-based policymaking (EBP). By measuring outcomes for control and treatment groups, the intervention can be isolated to be the main variable in driving behaviour of the treatment group.

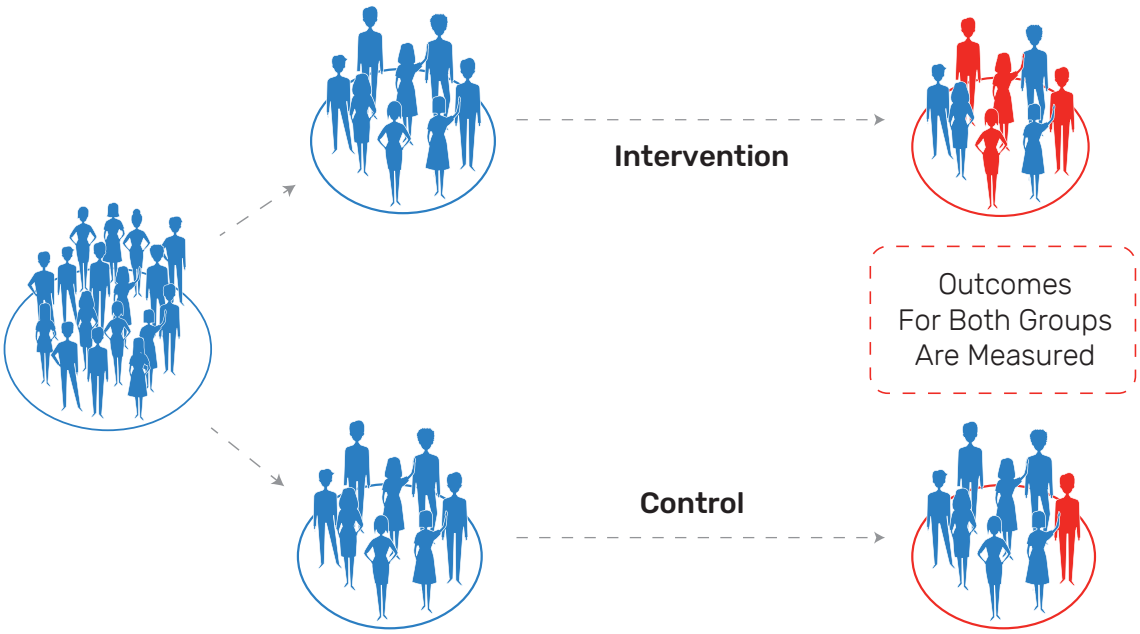


Figure 2.10: Randomised Control Trial (RCT)

During intervention design, parameters (or variables) should be identified for measurement. These are the measurable behavioural outcomes (MBO).

Recruiting participants for intervention

Participants for intervention should be recruited to achieve sufficient statistical power, which refers to:

"Statistical power, or power, of an evaluation reflects the likelihood of detecting any meaningful changes in an outcome of interest brought about by a successful program"

Source: Abdul Latif Jameel Poverty Action Lab (J-PAL)

To achieve sufficient statistical power, the following strategies are recommended;

1. **A BI initiative project initiative should attempt to maximise the number of participants in an intervention program as long as it is reasonably practical within the budget constraint.**
2. **Online intervention is generally cheap and should be adopted wherever practical as there is less constraint on the number of participants. Similarly, intervention through email and text message (SMS/Whatsapp) is also preferred due to low cost involved even with high number of participants.**
3. **The same number of participants are assigned to each group (treatment/control) in the RCT.**

The above strategies are based on the rule of thumb in determining sample size and statistical power by J-PAL.

For further details on RCT, refer the following documents:

1. White, H., Sabarwal S. & T. de Hoop, 2014. Randomized Controlled Trials (RCTs), Methodological Briefs: Impact Evaluation 7, UNICEF Office of Research, Florence.

https://www.unicef-irc.org/publications/pdf/brief_7_randomized_controlled_trials_eng.pdf

2. J-PAL, 2018. Six Rules of Thumb for Determining Sample Size and Statistical Power.

https://www.povertyactionlab.org/sites/default/files/research-resources/2018.03.21-Rules-of-Thumb-for-Sample-Size-and-Power.pdf

2.3.4 M Measure

Measure: Measure the results to track the effectiveness of the intervention and demonstrate that it led to behaviour change.

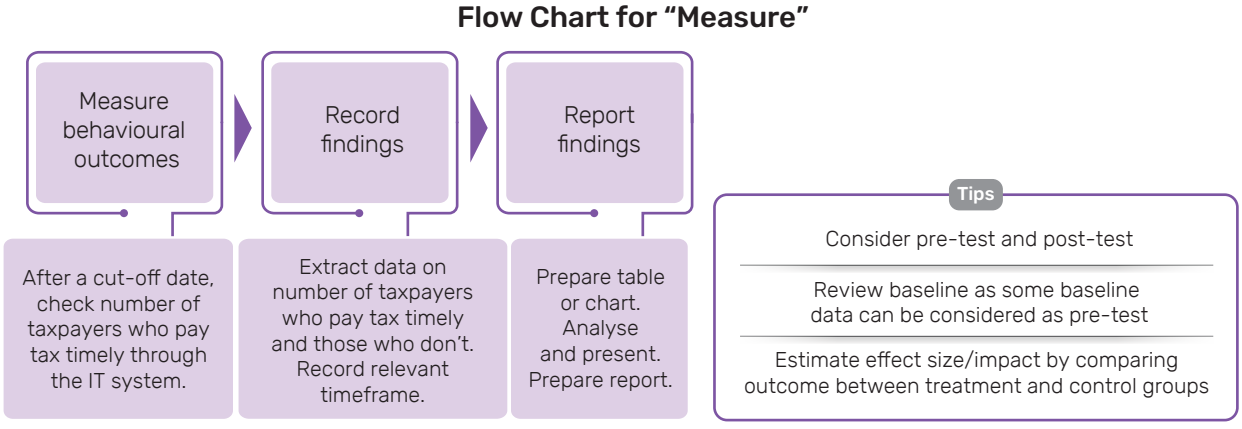


Figure 2.11: Flow chart for 'Measure'

Measurement is an important aspect of behavioural insights project, as well as satisfying the need for evidence-based policy-making (EBP). Appropriate method allows measurement of outcome and effectiveness of intervention. Prior implementation of any behavioural intervention, measurement method should be identified during the design phase of intervention.

2.3.5  Expand

Expand: Roll out the experiment to the wider public body.

The "E" (Expand) is conducted after implementation of intervention and measurement, based on lessons learned and evaluation on scalability of a particular BI project to a larger scale.

In the "Expand" process, consider the following questions:

- How can the knowledge from this intervention be disseminated into best practice?
- Is scaling the intervention feasible in the current political climate?
- Is there clear societal impact if the intervention is expanded?
- Can the intervention be scaled upwards across other demographics?

2.4 Reporting

Throughout the implementation of a BI initiative project, relevant reports can be produced at various stages of the project depending on project requirements or as determined by the relevant committee or technical panel, such as:

- Inception report, covering initial project requirements such as objectives, scope, methodology and implementation plan
- Baseline study report, typically covering the Purpose and Review processes
- Final report, typically covering the Intervention and Measurement processes

2.5 Tools and Checklist

To assist practitioners in implementing a BI project, the following tools and checklist are provided (Table 2.1).

No.	Description	Refer
1.	Sample Template ABCD	Appendix A1
2.	Project charter template	Appendix A2
3.	A quick guide for developing survey questionnaire and sample size estimate	Appendix A3
4.	Checklist and points to consider	Appendix A4

Table 2.1: Tools and Checklist

CHAPTER 3 ETHICAL CONSIDERATIONS

The ultimate goal of BI intervention is to improve the well-being of the target group (or beneficiary), be it citizens or a specific group of people. The application of BI raises concerns about the autonomy of the target group and their consent to interference in their lives. These are legitimate questions that need to be answered before introducing behavioural intervention.

Ethical concerns include: collecting data on individual or group behaviour, using experimental methods, issues around privacy, consent and ethics of applying certain solutions to only some groups.

To ensure that ethical concerns are adequately addressed, a review by a panel (or board) and necessary consent should be obtained at the early stage of the project.

Implementation of any BI project demands for transparency. Communicating the purpose of the intervention and offering ways for target group to opt-out are essential parts of ethical considerations.

For reference, FORGOOD is an ethics framework for nudging in a memorable mnemonic. FORGOOD suggests nudgers to consider seven core ethical dimensions: Fairness, Openness, Respect, Goals, Opinions, Options and Delegation.

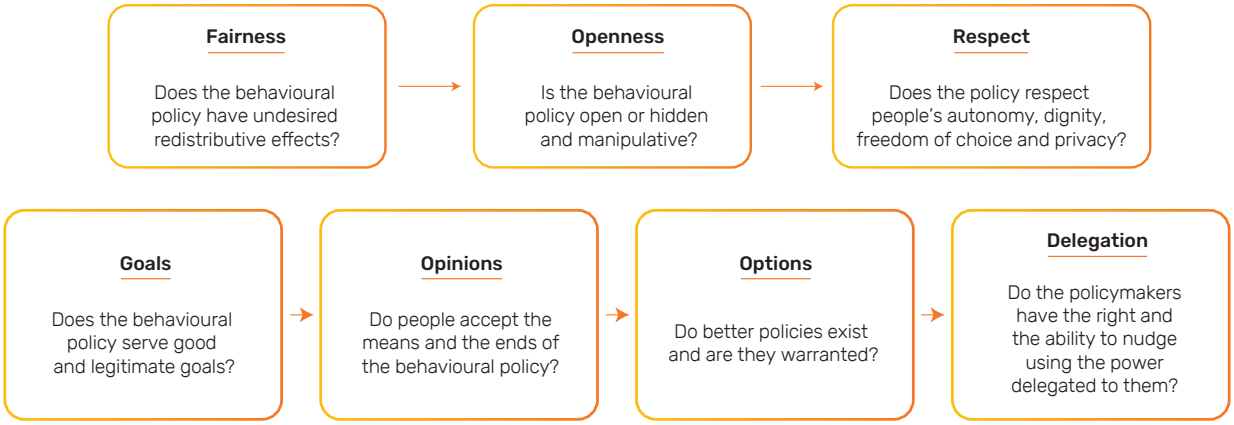


Figure 3.1: FORGOOD ethics framework
Source: Lades & Delaney, 2020.

To have better understanding on ethical issues, the following reference materials can be referred to (full details of the references are available in the "References" section).

- PRIME Framework by MPC
- The BASIC Toolkit: Tools and Ethics for Applied Behavioural Insights by OECD
- Nudge FORGOOD by Lades & Delaney.

CHAPTER 4 CASE STUDIES

This chapter provides a number of case studies to illustrate the application of BI in the real world. The case studies described in this chapter provides a variety of case studies from local experiences as well as from overseas.

Case 1: Encouraging residents to pay tax arrears (*Cukai Taksiran Am*) to a local council

More than 60,000 residential accounts are found to have tax arrears with the total sum exceeding RM20 million. 71% of total tax arrears come from residential properties whilst the remaining come from businesses and factories. To address this problem, a BI team with officers from the local authority and MPC was formed.

P – Purpose

RM21.3 million tax arrears from 61,400 residential accounts.
The measurable behavioural outcomes (MBO) for this project are:
i) Number of residential taxpayers paying tax arrears (main outcome)
ii) Total amount of tax arrears collected from residential taxpayers (secondary outcome)

The target group are residents who have tax arrears.

R – Review

Gather evidence - statistics and interviews with local authority and survey among residents.
- number of accounts with tax arrears,
- the total amount of tax arrears,
- the type of property, and
- the zones within the municipality where the properties are located.

Interviews with local authority officers and an online survey among residents were conducted, with 514 respondents. The survey questions focused on attitude and perceived behavioural control with regards to tax payment.

Data gathered from the interview and survey were analysed by the team and suggestions for the way forward were developed.

I – Intervention

Interventions are designed by the team using randomised controlled trial (RCT) with 4,079 participants with tax arrears amounting RM3.5 million and divided into three groups (Figure 4.1).

The team proposed a nudge message on the Borang E (Figure 4.2), utilising a form that would normally be sent anyway to taxpayers, even before the BI intervention.

Three different messages were crafted for the three groups in the RCT (Figure 4.3):
i) simple reminder
ii) reminder and encouragement to be responsible resident
iii) reminder and encouragement to be concerned resident and how the tax collected is used to benefit residents

M – Measure

Main outcomes are measured, utilising data from the IT system used by the local authority.
- 6.3% to 6.8% reduction in the number of residential account with tax arrears.
- 6.4% to 6.9% reduction in the amount of tax arrears among residential accounts.

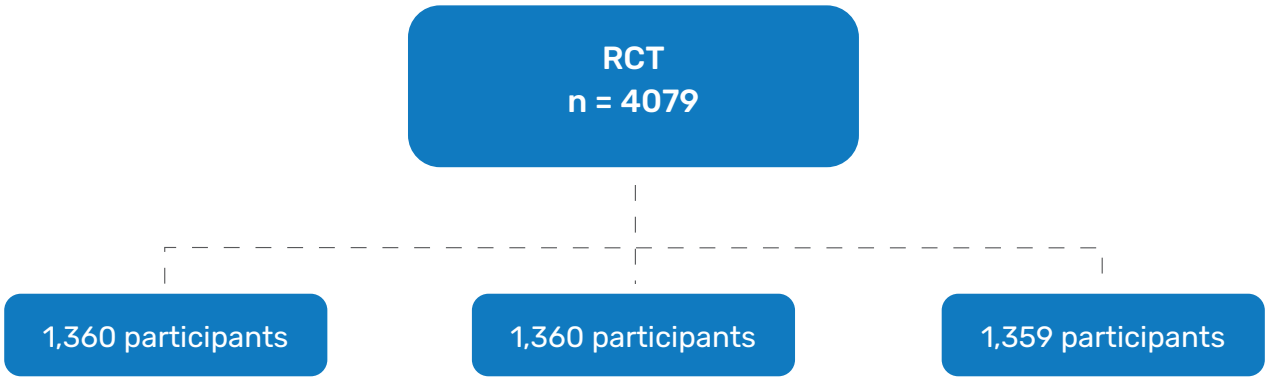
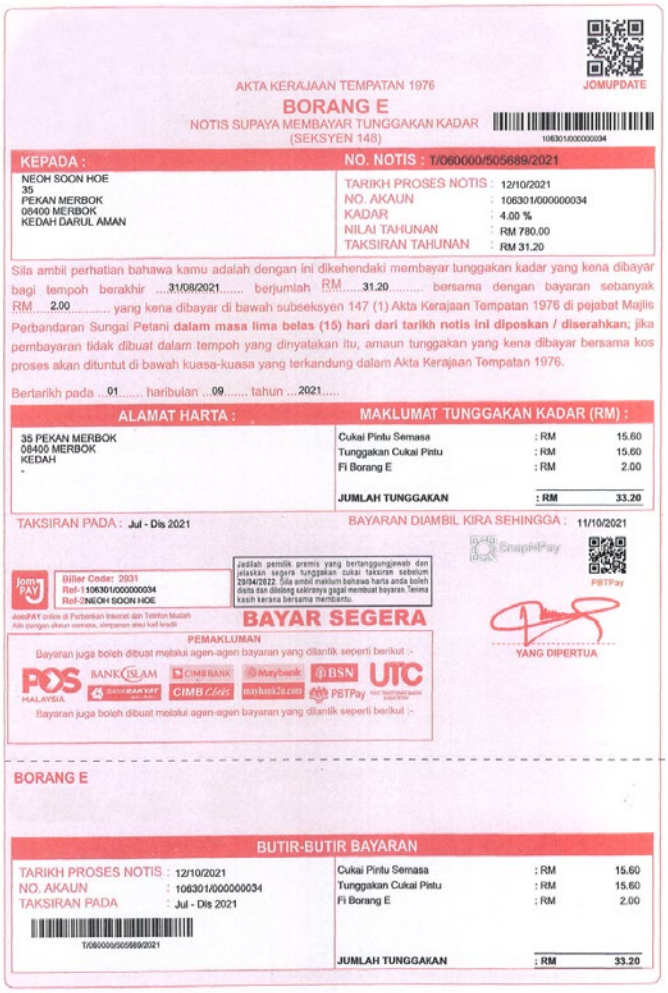


Figure 4.1: Randomised controlled trial (RCT) for residents with tax arrears

Participants for the intervention were selected based on the database of taxpayers from the local authority. A set of criteria was set by the team for participant selection. Based on the criteria, 4,079 taxpayers were selected as participants for the intervention, with tax arrears amounting RM3.5 million. Participants are tagged in the local authority's IT system to enable tracking and measurement before and after intervention.

This BI project shows that a simple nudge which incurred minimal cost can be very impactful in delivering policies at the local government level. The project also demonstrate the importance of experimental approach (randomised evaluation) in producing evidence, thus achieving the objective of evidence-based policy-making (EBP) as advocated in the Twelfth Malaysia Plan 2021-2025.



AKTA KERAJAAN TEMPATAN 1976

BORANG E

NOTIS SUPAYA MEMBAYAR TUNGGAKAN KADAR (SEKSYEN 148)

JOMUPDATE

KEPADA :	NO. NOTIS : T/060000/505689/2021
NEOH SOON HOE 35 PEKAN MERBOK 08400 MERBOK KEDAH DARUL AMAN	TARIKH PROSES NOTIS : 12/10/2021 NO. AKAUN : 106301/000000034 KADAR : 4.00 % NILAI TAHUNAN : RM 780.00 TAKSIRAN TAHUNAN : RM 31.20

Sila ambil perhatian bahawa kamu adalah dengan ini dikehendaki membayar tunggakan kadar yang kena dibayar bagi tempoh berakhir ....31/08/2021..... berjumlah RM.....31.20..... bersama dengan bayaran sebanyak RM.....2.00..... yang kena dibayar di bawah subseksyen 147 (1) Akta Kerajaan Tempatan 1976 di pejabat Majlis Perbandaran Sungai Petani **dalam masa lima belas (15) hari dari tarikh notis ini diposkan / diserahkan**; jika pembayaran tidak dibuat dalam tempoh yang dinyatakan itu, amaun tunggakan yang kena dibayar bersama kos proses akan dituntut di bawah kuasa-kuasa yang terkandung dalam Akta Kerajaan Tempatan 1976.

Bertarikh pada ...01..... haribulan ...09..... tahun ...2021.....

ALAMAT HARTA :	MAKLUMAT TUNGGAKAN KADAR (RM) :		
35 PEKAN MERBOK 08400 MERBOK KEDAH -	Cukai Pintu Semasa Tunggakan Cukai Pintu Fi Borang E	: RM : RM : RM	15.60 15.60 2.00
	JUMLAH TUNGGAKAN	: RM	33.20

TAKSIRAN PADA : Jul - Dis 2021

BAYARAN DIAMBIL KIRA SEHINGGA : 11/10/2021

Biller Code: 2031
Ref-1 106301/000000034
Ref-2 NEOH SOON HOE

Jasilah pemilik premis yang bertanggungjawab dan jelaskan segera tunggakan cukai taksiran sebelum 29/04/2022. Sila ambil maklum bahawa harta anda boleh disita dan dilelong sekiranya gagal membuat bayaran. Terima kasih kerana bersama membantu.

BAYAR SEGERA

PBTPay

YANG DIPERTUA

PEMAKLUMAN

Bayaran juga boleh dibuat melalui agen-agen bayaran yang dilantik seperti berikut :-

POS MALAYSIA · BANK ISLAM · BANK RAKYAT · CIMB BANK · CIMB Clicks · Maybank · maybank2u.com · BSN · PBTPay · UTC

Bayaran juga boleh dibuat melalui agen-agen bayaran yang dilantik seperti berikut :-

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BORANG E

BUTIR-BUTIR BAYARAN

TARIKH PROSES NOTIS : 12/10/2021 NO. AKAUN : 106301/000000034 TAKSIRAN PADA : Jul - Dis 2021	Cukai Pintu Semasa Tunggakan Cukai Pintu Fi Borang E	: RM : RM : RM	15.60 15.60 2.00
T/060000/505689/2021	JUMLAH TUNGGAKAN	: RM	33.20

Figure 4.2: *Borang E*

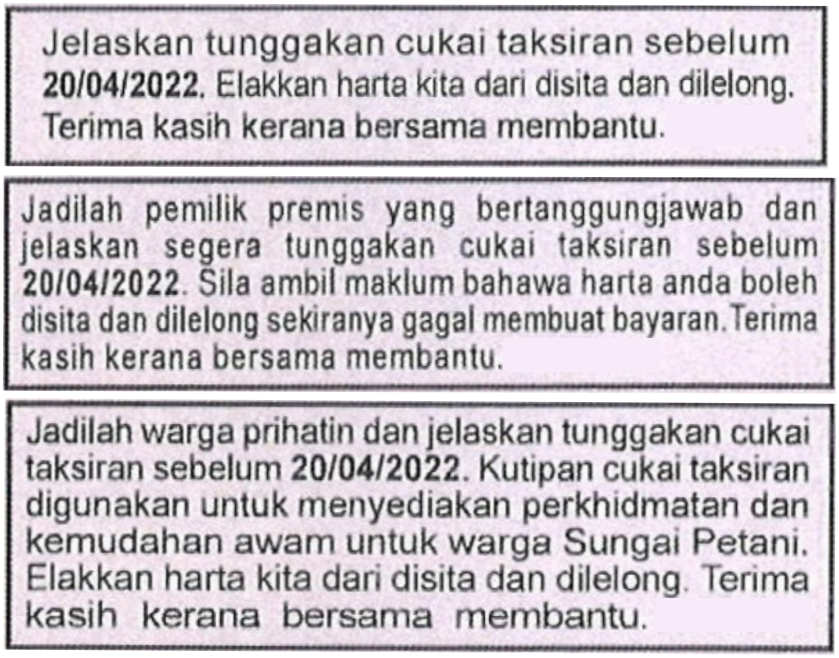


Figure 4.3: Messages included in the *Borang E*

Case 2: Encouraging employees to perform health screening

This BI case study attempts to encourage employees to perform health screening in an effort to reduce non-communicable diseases (NCDs) among Malaysians.

P – Purpose

The behavioural gap that this BI case study attempts to address is the low take-up rate of health screening offered by the government, such as through *Skim Peduli Kesihatan untuk Kumpulan B40* (PeKa B40, 11% take-up) and Social Security Organization (SOCSO, 19% take-up).

The target group for this BI case study were employees who were contributors to SOCSO and whom did not do any health screening for the last 12 months, at the time of the study.

R – Review

507 respondents aged 18 to 50 and above were interviewed on self-care practices, such as exercise, sports and diet. Respondents were also asked about their health conditions and any health screening for the last 12 months.

I – Intervention

From the baseline study, 307 participants who did not do any health screening for the last 12 months were selected for the intervention.

Nudges are developed using positive or negative framing messages.
The intervention also evaluated frequency of exposure to the messages being sent (once a week or 3 times a week for over 3 weeks).

Using randomised control trial (RCT), participants are divided into 5 groups (1 control and 4 treatments).

M – Measure

Increase in the percentage of health-behaviours seeking among participants.

More frequent messaging (3 times a week) have greater impact.

Positive Framing Message

"Kajian dari Pertubuhan kesihatan Sedunia (WHO) menunjukkan saringan kesihatan awal dapat mengurangkan kos rawatan penyakit ini. Sudahkah anda melakukannya?"

Negative Framing Message

"30% dari rakyat Malaysia mengalami darah tinggi dan 47.7% mengalami kencing manis. Adakah anda salah seorang yang berisiko?"

Source: Compilation of Case Studies on Behavioural Insights 2020

The results from the study shows that after receiving the message, there was an increase in health screening behaviour for all treatment groups.

The Negative Framing Message or also known as the Loss Aversion, by incorporating the message *"30% dari rakyat Malaysia mengalami darah tinggi dan 47.7% mengalami kencing manis. Adakah anda salah seorang yang berisiko?"* was found to be significantly more effective than the Positive framing message also known as Gain Aversion. The gain framing message suggested a third party's loss aversion which also played a role in employees signing up to the healthscreen programme. However the loss framing message showed a more significant result in employees coming forward to register in the healthscreen programme as the message hits directly on to them, by asking *"Adakah anda salah seorang yang berisiko?".* **In this Loss aversion**, messages that went to the employee group which did not attend any sessions previously, the message focused on the opportunities that were missed rather than what could be gained from attending the healthscreen programme. This connects the tendency of people to place more value on losing something rather than gaining an equivalent item.

Case 3: Encouraging the poor to save in Kenya

In Kenya, informal workers in the low income households have low savings thus making these groups vulnerable when they are out of work. Using BI and working in partnership with a local bank, interventions are developed to encourage the target groups to save.

The program recruited over 3,800 participants for the intervention over a period of 6 months. The intervention program was designed using randomised control trial (RCT) to include behavioural interventions as well as the more conventional, financial incentive. This way, comparison can be made between behavioural interventions and financial incentive.

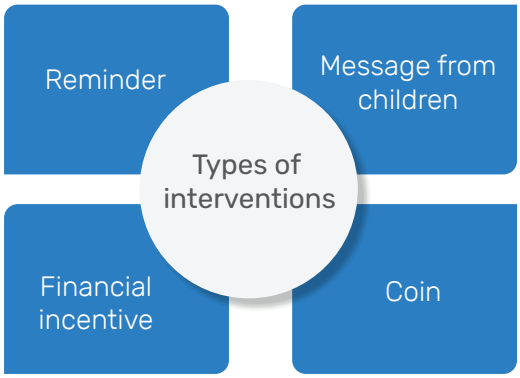


Figure 4.4: Variation and combination of the above is designed for implementation eg. 10% and 20% financial incentive, combination of financial incentive and coin etc.

Figure 4.5: Coins given to participants

This project demonstrates that giving a tangible coin (Figure 4.5) to the participants and asking them to keep track of their weekly saving influence their saving behaviour strongly, resulting in statistically and economically significant increase in saving (Figure 4.6). This project also shows that behavioural intervention can be more effective than financial incentive.

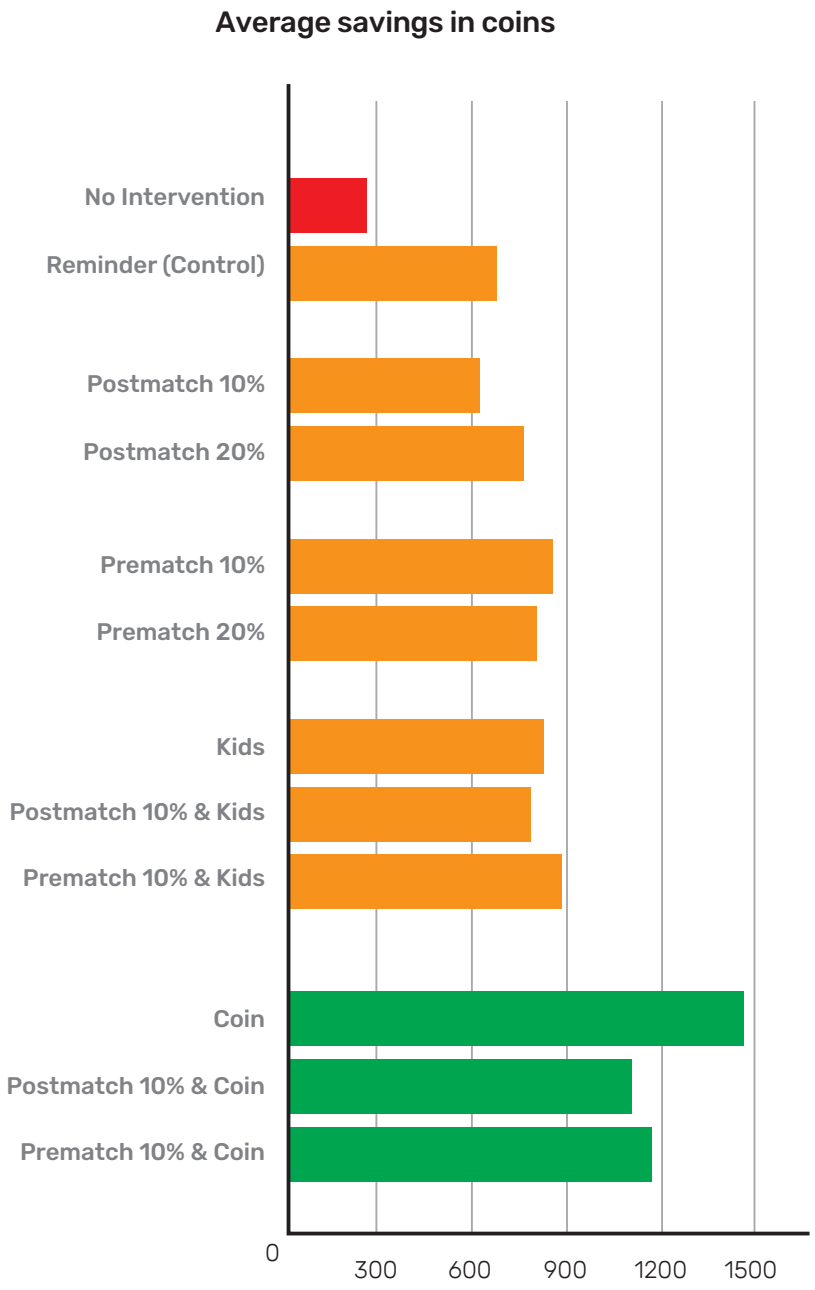
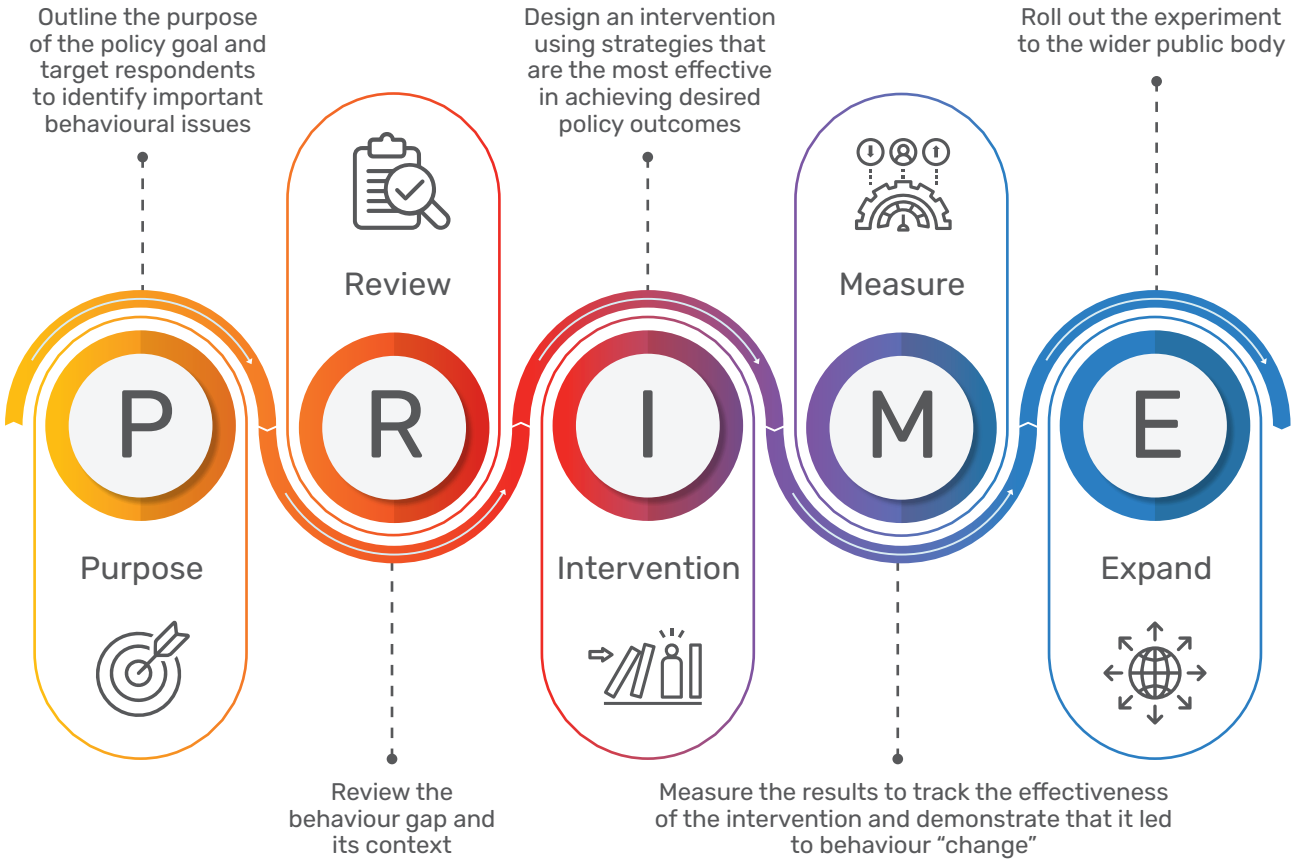


Figure 4.6: Intervention outcomes to encourage the poor to save in Kenya

CHAPTER 5 CONCLUSION

BI is a useful and cost effective policy and productivity tool to improve effectiveness of government programmes. BI can be applied for wide-range of public policy issues, at different stages of policy cycle and at various levels of government; federal, state or local authority to address behavioural gaps among target groups. BI complements existing policy tools in the public sector and offers evidence-based policymaking (EBP) approach. It is a powerful tool in evaluating "what works".

This document guides users in applying BI in the public sector using the PRIME framework, following the five processes:



Wherever possible, flowcharts and infographics are used to facilitate understanding of this guideline, particularly in applying BI using the PRIME framework (Chapter 2). Each flowchart is equipped with examples.

As application of BI involve data collection and intervention through experiment, concerns on ethics are real. Ethical considerations are outlined in Chapter 3. Ethical concerns should be reviewed as part of BI implementation from the start, as well as at relevant stages in the PRIME processes, such as during Review (R) and Intervention (I).

To strengthen understanding of this guideline, case studies based on real world experiences are provided in Chapter 4. Due to space limitation, only three examples are given. Users are advised to make references to relevant publication for wealth of experiences that have been gained internationally, as well as locally.

In implementing BI in public policy, evidences and lessons obtained through experiences should be documented, presented and shared with relevant parties. Evidences and lessons learned should be considered for future update of this guideline.

FREQUENTLY ASKED QUESTIONS (FAQ)

1. What is Behavioural Insights (BI)?

BI is an inductive approach to policy-making that combines insights from psychology, cognitive science, and social science with empirically-tested results to discover how humans actually make choices (OECD).

2. What is a nudge?

A nudge is a behavioural intervention to encourage target group to perform the desired behaviour.
It is defined as:

> "Any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives. To count as a mere nudge, the intervention must be easy and cheap to avoid. Nudges are not mandates. Putting fruit at eye level counts as a nudge. Banning junk food does not"
>
> (Thaler and Sunstein, 2008).

3. What are the benefits of BI?

BI is anticipated to bring the following benefits:

i. Increase regulatory compliance
ii. Save cost and resources
iii. Informed and evidenced-based policy-making

(Productivity Report 2021, MPC)

4. Is BI a policy tool?

BI is a policy tool and a valuable addition to the policymakers' toolkit. BI uses behaviours, rather than traditional economic levers to drive the success rate and improve effectiveness of policies introduced to the general public or specific target groups (MPC, 2021).

In the Twelfth Plan, the BI approach will be adopted as a complementary tool to enhance the Government's services to the rakyat. BI will be used to design and implement policies to guide the rakyat towards making better decisions (Twelfth Malaysia Plan 2021-2025).

5. Is implementing BI compulsory in the public sector?

In the Twelfth Plan, the BI approach will be adopted as a complementary tool to enhance the Government's services to the rakyat. BI will be used to design and implement policies to guide the rakyat towards making better decisions. Most Government policies and programmes involve behavioural issues and therefore, BI is the right policy tool for use by practitioners in the public sector, complementing existing tools, rules and regulations.

6. What is the role of MPC in implementing BI in Malaysia?

MPC is the oversight agency appointed to spearhead BI initiatives in Malaysia. MPC organised awareness programmes, capacity and competency development training, strategic communication plan and engagements with stakeholders.

MPC partners with ministries, agencies and local authorities to conduct BI initiatives and case studies. MPC also promotes BI through social media (YouTube channel, Telegram).

7. What is the PRIME framework?

The PRIME Framework equips the policymaker with a simple process, design strategies and methods for implementing BI. PRIME stands for Purpose, Review, Intervention, Measure and Expand.

8. How to implement BI using the PRIME framework?

The PRIME framework is implemented by identifying the problem statement, measurable behavioural outcome, the target group and behavioural gaps (these constitute Purpose and Review in the framework). By understanding behavioural gaps, intervention can be designed (Intervention) and implemented where behavioural outcome is measured (Measurement). Evaluation and lessons learned from implementing BI can be used to expand (Expand) to other similar problems, or for expansion at larger scale.

9. Do we need an expert to apply BI?

BI can be implemented by government officers (practitioners) in the public sector, working with BI practitioners from MPC. Successful interventions depend on multi-disciplinary and cross governmental approaches across all levels to yield insights into user behaviour that feed into optimising policy design and delivery mechanisms.

For competency development, government officers can attend or request training from MPC, or join the free online training at the My Latihan Maya portal *(www.mylatihanmaya.my)*.

10. How long does it take to implement a BI initiative or project?

The time taken to implement a BI project depends on the nature of each project. MPC typically aims to complete a BI project between 3 to 6 months. However, shorter or longer duration may be required depending on each project.

11. What are the issues and challenges in implementing a BI project?

Various issues and challenges can occur throughout different phases of a BI project. If survey is conducted, getting sufficient number of respondents within the allocated timeframe can be a challenge. During intervention, attrition and crossover may occur among participants.

12. Is there a cost in implementing BI?

The cost of implementing BI is low compared to other form of interventions because BI intervention typically uses nudge to encourage better decision-making among any target group.

13. Where can I get training on BI?

Government officers can attend or request training from MPC, or join the free online training at the My Latihan Maya portal *(www.mylatihanmaya.my)*.

Typically, MPC organise training and workshop for any ministry or agency that implement BI project through MPC.

14. Where can I get more information about BI?

Short videos are available at the Behavioural Insights YouTube Channel for introduction on topics such as introduction, approach and application in Behavioural Insights. Government officers are encouraged to join the Telegram Channel “Behavioural Insights Malaysia” (managed by the MPC) which provides updates on BI development in Malaysia. Alternatively, please get in touch with MPC officer who would be happy to help.

APPENDIX

A1. Sample Template ABCD

Behavioural findings can be categorised according to the ABCD framework and tabulated. A sample template is shown in Table A1

The ABCD Framework	Findings
Attention People's attention are limited and easily distracted	
Belief formation People rely on mental shortcuts or intuitive judgments and often over/underestimate outcomes and probabilities.	
Choice People are influenced by the framing as well as the social and situational context of choices.	
Determination People's willpower are limited and subject to psychological biases.	

Table: A1 : Sample Template ABCD

A2. Project Charter

Project charter is developed during the "P" stage of PRIME framework as an elevator pitch of project objectives, scope, and responsibilities to get key project stakeholders' approval. In the project charter, a short, brief explanation of the main elements of a project is prepared before the project starts. A project charter format is shown in Table A2.

Project Title	
Business Case	Problem Statement
Measurable Behavioural Outcomes	Project Scope
Project Plan	Team Selection

Table A2: Project Charter Format

Timely council tax collection at PBT "AA"

Business Case	Problem Statement	Measurable Behavioural Outcomes	Project Scope	Project Plan	Team Selection
Timely council tax collection ensure effective operations of PBT "AA".	xx % residential taxpayers are late in paying council tax.	Number of taxpayers paying council tax timely.	Collect relevant statistics and identify behavioural gaps through combination of interviews, surveys or focus group discussions (FGD). Design behavioural intervention (nudges), implement RCT and measure outcome.	3 months / refer separate document for schedule	Officers from PBT that are in charge of the BI Project

Figure A2: Project Charter Format - Example

A3. Guidance in developing survey questionnaires

Surveys can be used to obtain opinion from the target groups about a given issue. Survey questionnaires are developed based on information obtained through desk research, site visit or interview. As required, survey sample should be determined and agreed with the decision-making authority. Sample size can be estimated using a formula or sample size calculator.

Survey questionnaires can generally be divided into 2 sections

1) Profile of respondents (demography)
2) Issues to be addressed, focusing on behaviour

For the second section, the questionnaires can be further divided into several categories to obtain opinion from respondents for specific item (subject) or issue.

Two (2) formats can be used for the survey questions:

1) Using Likert scale. An example of Likert scale with 1 to 5 rating is given below:

   1. Completely disagree
   2. Disagree
   3. Neutral
   4. Agree
   5. Completely agree

Structured or subjective question to gain subjective view from respondents, such as opinion, issue, challenge and suggestion.

Surveys can be conducted online or offline or a combination of both. Depending on the nature and target group of the project, feedback may be obtained from individuals, household representatives, business owners and entrepreneurs.

To obtain a reasonable number of respondents for a survey, strategies such as through cooperating with relevant authorities, associations etc, maybe employed.

Duration of a survey depends on the project duration. In practice, a survey normally takes no less than 2 weeks.

Sample of respondents for survey

To calculate sample size for a survey, users can refer to sample size calculator available online. An example is available at the http://www.raosoft.com/samplesize.html.

A4. Checklist

To implement a BI project, a checklist can be used to ensure that key activities are conducted following the PRIME framework.

Table A4: BI Project Checklist and points to consider

No.	Task/activity	Check
1.	Identify a policy issue with potential or confirmed behavioural gap and gather relevant information/ data.	
2.	Do you need a consultation session with BI practitioner at the start of the project? If so, contact MPC.	
3.	List all relevant data/evidence and collate the information accordingly.	
4.	Review available data/evidence and identify behavioural and non-behavioural gaps.	
5.	Is there a knowledge gap? Should you collect more data/evidence to close the gap? Consider interview, survey or FGD.	
6.	Is there any stakeholder you should engage to understand the issue better or to conduct the BI initiative?	
7.	Do you need a field trip/site visit?	
8.	Analyse data/evidence for behavioural gaps	
9.	Design interventions based on behavioural gaps	
10.	Can you implement RCT? If not, consider other methods	
11.	How do you plan to measure outcome?	
12.	Review results (outcome of intervention)	
13.	Should you expand the project (intervention)?	

1) Consultation session with BI practitioner

Consultation session with a BI practitioner or expert can be arranged at the early stage of the project to obtain advise on the overall approach of the project. In this session, the project proposal is presented and discussed. The objective of this session is to obtain guidance and suggestions at an early stage before the project is implemented.

2) Field trip/site visit

Field trip can be arranged to observe physical environment or surrounding of project location. Relevant photos (or video recording) at site should be taken. These evidences should be included in the project report. Visual evidences are helpful for designing interventions, particularly in relations to "choice architecture" i.e. the surrounding environment.

3) Engagement session

An engagement session is conducted to build rapport with relevant stakeholders, some or all of which can the respondents for interview, survey or ethnographic study. An engagement session can help facilitate data collection and can be planned to coincide with field trip/site visit.

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