

An Examination of Nudge Interventions in Japan and its Implications for Japanese Behavioural  
Public Administration

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## ABSTRACT

The disciplines of behavioural insights in public policy and behavioural public administration have grown substantially in recent years, developing in parallel with areas of overlap. Both fields draw foundations from behavioural science but apply them differently toward their respective goals. Nudge theory, a key concept within behavioural insights, has seen increasing application in public policy design and implementation over the last decade, evidenced by the proliferation of nudge units globally, reflecting the growing nudge movement. Japan exhibits this trend with nudge teams emerging across municipalities nationwide. However, there is no readily available database or typology that provides an accurate and complete overview of the nudge interventions being implemented across Japan, categorised by key dimensions such as policy area, target population, and type of nudge employed. This thesis explores Japan's nudge landscape by developing a typology of collected nudge interventions, through which it provides insights into the current state of Japan's nudge movement and its implications for Japanese behavioural public administration. It aims to contribute to the intersecting literature on nudge theory, behavioural insights in public policy, and behavioural public administration within the Japanese context. As nudge research has predominantly focused on understanding and applying nudges to the public, while under-examining their application to mitigate biases among policymakers, a secondary goal examines the integration level of nudges within public administration. Nudge interventions were reviewed and gathered from online sources, including government reports, academic journals, and web articles, and then compiled into a comprehensive typology. While revealing Japan's expanding nudge adoption, especially in policy areas of health and environment sustainability, findings indicate gaps in the research and application of nudge interventions to public service employees. This has implications for nudge-based policymaking, the diffusion of nudge theory nationwide, and the field of Japanese behavioural public administration, particularly public-government interactions.

*Keywords:* behavioural insights, behavioural public administration, nudge theory, bias

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## 1. INTRODUCTION

The public sector innovation movement, typically understood as “the implementation by a public-sector organisation of new or significantly improved operations or products” (OPSI, 2018), emerged from governments’ need to reimagine their role in addressing complex, “wicked” problems affecting the public, and amidst a context of increasingly sophisticated demands and fiscal pressure (Bekkers, Tummers & Van Leeuwen, 2015). In pursuit of innovating government operations, new tools are being explored to improve society, one of which is leveraging behavioural insights (BI) to study the complexities and contradictions of human behaviours. This approach enables the design and implementation of projects that aims to maximise social value.

The adoption of BI was the result of a gradual shift by behavioural economists in the early 2000s, as they began examining the implications of moving away from the neoclassical notion of rationality for welfare economics and public policy (Congiu & Moscati, 2021). Within the neoclassical framework, economic policies aimed to achieve the highest-ranked outcomes based on rational preferences (Congiu & Moscati, 2021). However, if preferences are inconsistent, unstable, and context-dependent, and information processing is idiosyncratic, the traditional rationale for economic policies fails. This also implies questioning the effectiveness of traditional policy tools, such as financial incentives, fines, or bans, as most are designed with assumptions of rational responses (Sunstein, 2016).

Against this backdrop, behavioural economics and behavioural sciences have increasingly become realms for policymakers to draw insights to address societal problems (Bekkers, Tummers & Van Leeuwen, 2015), particularly the concept of ‘nudge’. Introduced by Thaler and Sunstein in their 2008 book “Nudge: Improving Decisions about Health, Wealth, and Happiness”, this concept entails gently steering citizens towards more desirable behaviours. Recognising citizens’ bounded rationality and cognitive biases, policymakers began drawing from psychological insights to encourage desired behaviours and achieve welfare impacts. As such, nudging can assist policymakers in designing and implementing innovative projects to maximise value. Consequently, governments began using BI to manage change and influence societal behaviours through the establishment of nudge units (Afif, 2017).

The nudge movement gained momentum with the United States (US) appointing scholar Cass Sunstein to lead the Office of Information and Regulatory Affairs (OIRA) in 2009, and the

United Kingdom (UK) establishing the first Behavioral Insights Unit (BIT) under the Cabinet Office in 2010 (which later privatised in 2013 due to its success) (Afif, 2017). Following these early efforts, other countries like Australia, Canada, the Netherlands, and Germany also began adopting BI in their policies (Afif, 2017). International organisations such as the World Bank, UN agencies, the Organisation for Economic Co-operation and Development (OECD), and the EU followed suit, establishing their own BI teams. The OECD created the Behavioural Insights Knowledge Hub in 2021, following its 2017 report on BI and Public Policy, which compiled data from 60 pioneering BI units. Since then, the Hub has collected data from over 300 institutions in 63 countries, providing a comprehensive overview of BI functions and methodologies (Hubble & Varrazani, 2023). This global initiative supports policymakers in designing and evaluating solutions that align with human behaviour, thereby enhancing policy effectiveness.

Japan possesses its own nudge unit, the Behavioural Sciences Team (BEST), under the Ministry of Environment (MOE) since 2017 (BEST, 2019). The MOE's goal in establishing BEST was to shift Japan towards a low-carbon society that prioritises environmental values by developing a Japanese model of behavioural change using insights from behavioural science, particularly nudge theory (BEST, 2019). As a cross-sector team composed of members from industry, academia, and local and central governments, BEST aims to address societal issues across various fields, including the environment, energy, health, and education, while participating in knowledge-sharing initiatives with international governments, businesses, and experts (BEST, 2019). The diffusion of the nudge movement in Japan is clearly present, with the emergence of local nudge units, such as the Yokohama Behavioral Insights and Design Team (YBiT) and Policy Garage, as well as nudge initiatives across the country (Murayama et al., 2023).

This thesis examines the landscape of Japan's current nudge movement by creating a typology of collected nudge interventions, categorised by different dimensions. Through this examination, it seeks to provide insights into the nudge movement in Japan, particularly in the field of behavioural public administration (BPA). Given that policymakers behind nudge-based policies are also subject to the same biases or heuristics that they aim to mitigate (or leverage) within citizens, understanding the implications of researching and actively mitigating policymakers' biases within Japanese public administration is important. In other words, this thesis hopes to also inform the examination and use of nudge interventions inside public

administrative organisations, specifically on civil and public servants. This is hoped to contribute to the intersecting literature of nudge theory, BI in public policy, and BPA in the Japanese context.

The thesis proceeds as follows: Chapter 2 provides background information and theoretical foundations of BI in public policy, BPA, and nudge theory. Chapter 3 presents the literature review on the types of categorisation methods of nudges, the use of BI in governments and comparable organisations, and the expansion of the nudge movement in Japan. Chapter 4 describes the methodology used to conduct this research. Chapter 5 presents the results from the collected data. Chapter 6 interprets the results and discusses the implications of those findings. Chapter 7 concludes with directions for future research.

## 2. BACKGROUND

### **Behavioural Insights (BI) for Public Policy and Organisations**

Policymakers can attempt to craft and implement successful policies by knowing how people perceive their choices and available or unavailable alternatives, as well as their considerations of others' actions. The endeavour to comprehend human behaviour has increased over the last decade, as countries, especially high-income ones, began establishing their behavioural units (Hubble & Varrazani, 2023). This growing focus on understanding human behaviour has led to the emergence of innovative approaches in policymaking, such as the application of BI.

According to the Observatory for Public Sector Innovation (OPSI) from the OECD, behavioural insights (BI) is “an inductive approach to policymaking that combines the insights from psychology, cognitive science, and social science with empirically-tested results to discover how humans actually make choices” (*Behavioural insights*, 2022). It often involves using experiments and observations to identify behaviour patterns and inform policies and regulations based on the findings. Experiments replace and challenge the assumptions based on what is believed to be “rational behaviour” of citizens and businesses. BI uses evidence on what “actual” behaviours are observed to inform policy-making and implementation (OECD, 2017). BI is also known as behavioural public policy but is not to be confused with behavioural economics, despite these two fields being closely linked. For instance, both examine how human behaviours deviate from the assumptions of classical economic models (Kahneman, 2013). They draw on the idea that humans use two systems for processing information and decision-making, notably the automatic and the reflective one. However, behavioural economics combines the principles from the field of economics and psychology, which recognises that behaviours are influenced by the imperfections of the brain and the surrounding context in which choices are made. BI applies behavioural sciences to policy and practice, focusing on automatic processes, but not exclusively (Perry, Chhatralia, Damesick, Hobden, & Volpe, 2015).

Increasingly, BI as an approach has become extensively adopted in governments around the world as a tool to improve regulations and policy effectiveness. It is applied across a wide range of sectors, including healthcare, finance, education, consumer protection, energy, environment, and more. Governments can leverage BI during the design and implementation



stages as a cost-efficient method to experiment with multiple policy responses simultaneously on a smaller scale. This approach can mitigate the risk of committing resources to full-scale implementation of a policy solution that may be ineffective and requires reevaluation later. BI can also serve as a diagnostic tool, offering insights from a user perspective into what strategies yield positive outcomes and which ones do not (OECD, 2017). It has the potential to enhance the effectiveness of policy-making tools, such as by reducing biases in stakeholder engagement processes to understand citizens' true preferences better, and can be instrumental in influencing organisational behaviour (Einfield, 2021). Ultimately, behaviour change interventions are crafted to enhance the appeal of preferred choices, whether by educating individuals on the associated costs and benefits of specific behaviours or establishing fresh incentive systems.

### *BI For Organisations*

Most applications of BI have primarily focused on individuals and the implementation of public policies, but addressing the behaviour of organisations is also crucial. BI for organisations is a subfield that emerged after BI for public policy, with the increasing understanding by scholars on the behavioural dimensions of organisations. BI for organisations is closely related to other disciplines, including organisational psychology, organisation management, public management, and industrial-organizational psychology (Shephard, 2017). This subfield is founded on the understanding that organisations are composed of individuals, which entails targeting the behaviours of people and the policies set by decision-makers within the organisation for organisational change. The field of BI for organisations inherently includes behavioural analysis, which involves reviewing organisational routines, policies, and procedures to identify misaligned incentives or missing policies affecting governance and performance (OECD, 2020). In combination with the literature in BPA, BI for organisations has also been integrated into organisations' strategy and decision-making processes, organisational management for internal operations, and aspects of program implementation (Shephard, 2017). It also encompasses initiatives that focus on improving how governments make decisions and explore biases in policymakers and civil servants. In short, BI is also used as a way to understand government, rather than merely a policy tool (Hallsworth et al., 2018); specific case studies will be presented in the literature review section.

## **Behavioural Public Administration (BPA)**

Public administration scholars have emphasised the significance of integrating psychological research into public administration very early on before the practice has grown over the last decade (Grimmelikhuijsen et al., 2016). Fields like economics, political science, and management have substantially benefited from psychological insights, leading to the development of subfields such as political psychology and behavioural economics, and providing valuable lessons for behavioural approaches to public administration (Grimmelikhuijsen et al., 2016). Political psychology typically focuses on individual-level political behaviour, tracing its roots back to the 1930s and gaining prominence since the 1980s (Lavine, 2010), whereas behavioural economics, best illustrated through the works of Kahneman and Tversky, highlights deviations from neoclassical economics through concepts like bounded rationality and cognitive biases (1979). While both fields demonstrate an integration of behavioural science, they differ in their approaches: political psychology is more pluralistic, while behavioural economics focuses on cognitive psychology (Grimmelikhuijsen et al., 2016).

Behavioural public administration (BPA), on the other hand, seeks to bridge macro-level theories with micro-level foundations using BI and experimental methods in areas like public leadership, motivation, transparency, and performance information (Grimmelikhuijsen et al., 2016). The interdisciplinary exchange between psychology and public administration, a trend exemplified by the early adopters of behavioural sciences into public policy, like the Behavioral Insights Team in the UK, reflects the emergence of BPA, which integrates individual behaviour and attitudes into public administration research.

Academic research in this field has investigated multiple issues, like measuring the nuances of the impact of transparency on trust, as studies show transparency's effects vary with the context or testing representative bureaucracy theory, finding that diverse workforces enhance trust and performance perceptions (Ricucci et al., 2014). Similar to BI in public policy, BPA also examines the individual biases and issues that could plague individual civil servants and public service employees, which then influence their performance and decision-making. In the context of Japan, research by Professor Aoki has investigated the interplay between choice availability and institutional trust that influence the public's vaccination intentions during the COVID-19 pandemic (2022). Another example from this context is the study of factors that influence procedural fairness in non-coercive public health measures and how they affect public

acceptance of these measures (Yanagi et al., 2023). Both research investigate behavioural effects that stem from public administration decisions and the public's relationship with the latter, moderated by different factors. While the field of BPA in Japan is nascent (the two previous studies were the only ones studied in a Japanese context found in the *Journal of Behavioural Public Administration*), it has the potential to grow in a context where BI for public policy is becoming more mainstream.

Some critiques about BPA include how an emphasis on experimental designs and micro-level behaviour can raise concerns about whether BPA sufficiently addresses the broader political and institutional dimensions crucial to the field (Bertelli & Riccucci, 2020). Herbert Simon, who coined the concept of “bounded rationality” to challenge the assumptions of neoclassical economics and proposed a notion of rationality that accounts for the cognitive limitations of individuals, emphasised the importance of considering institutional efficiency and advocated for a more scientific approach to public administration (Wheeler, 2020 ). However, the challenge lies in reconciling efficiency goals with broader political and institutional contexts. While experiments in public administration occasionally consider politics, the field's focus on internal validity may limit its external applicability, especially in addressing the complexities of political forces within bureaucracies and societies. It raises concerns about the adequacy of considering politics in experimental designs, particularly in online survey experiments and field experiments. While experiments offer insights, they often lack theory-driven approaches and may overlook nonexperimental methods.

## **Nudge Theory**

As mentioned earlier, behavioural nudges are known to be methods that gently guide individuals in certain directions, while still allowing them the freedom to make their own choices, and have been increasingly incorporated into public policies (Sunstein, 2016). They are considered as an approach to using knowledge from the umbrella discipline of behavioural sciences. The most widely cited definition of a nudge is the original one by Thaler and Sunstein: “A nudge 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.” (2008, p. 6). The OECD describes nudges as “...focus[ing] on changing specific choice architectures” (Varazzani & Hubble, 2023), and could be complemented with ‘boosts’, which are interventions

“that provide actionable competencies to individuals” and can “have the potential to lead to more generalisable and lasting behaviour change than nudges” (Varazzani & Hubble, 2023).

Nudges encompass a wide array of strategies, such as graphic warnings on cigarette packing, labels that provide nutrition information on food products, or default rules for opt-in/opt-out (Enfield, 2021). In essence, they are subsets of choice architectures and function by modifying the architecture, which is the backdrop against which decisions are made (Szasz et al., 2017). Choice architectures encompass all the contextual details and environmental factors that shape the metaphorical architecture or backdrop for decisions—and these contextual nudges can cause people to behave differently without directly instructing or incentivising certain choices. Tweaking the decision architecture can thereby nudge behaviours in a desired direction (Quigley, 2013). Nudges, thus, require an active or subtle decision-making process.

Behavioural nudges are not policies but rather policy instruments (Nova & Lides, 2022). In other words, while policies are strategic in nature and tend to be broad plans or sets of guidelines that governments establish to achieve specific goals (*Definition of Policy*, 2023), policy instruments, like behavioural nudges, are specific tools or mechanisms used to implement policies and achieve their objectives. Policy instruments are operational and tactical in nature and are often categorised as regulatory, economic, and so on. Behavioural nudges, in short, are behavioural instruments. They rely on mostly non-monetary information that alters human behaviour rather than financial incentives (Asanaka et al., 2023).

### *Effectiveness of Nudges*

The aspiration behind choice architects is that they can prove highly effective in accomplishing societal objectives at low costs. Forms of choice architecture can wield considerable influence—when they are effective. While behavioural nudges hold promise in guiding individuals toward desirable choices within decision-making environments, their effectiveness can vary, and sometimes they may even prove counterproductive (Sunstein, 2017). This variability underscores the importance of understanding the extent to which nudges and other behaviour change interventions influence decision-making processes.

A meta-analysis by Mertens and their colleagues demonstrated that choice architecture interventions effectively promote behaviour change, with a moderate effect size, comparable to traditional intervention methods like education campaigns or financial incentives (2022). These

findings align with previous analyses examining the effectiveness of choice architecture interventions (Beshears & Kosowsky, 2020), indicating the robustness of choice architecture as a behaviour change tool. Structural interventions consistently outperform other types by offering cognitive shortcuts, while interventions providing information or assistance may be influenced by individual differences, suggesting the need for tailored approaches. Moreover, choice architecture interventions demonstrate versatility across diverse domains, populations, and geographical locations, with a particularly pronounced impact on food-related behaviours due to their ability to influence habits. The research also highlights the adaptability of choice architecture interventions in various policy areas and their capacity to enhance the effectiveness of economic interventions such as taxes or incentives. Despite these promising results, further investigation is warranted to elucidate the underlying mechanisms of nudges and their differential effectiveness across various contexts and populations (Mertens, 2022).

Nudge interventions are not perfect and can, at times, be ineffective or detrimental. If they fail, it is often due to a wide variety of factors: strong pre-existing preferences, presence of counter-nudges from vested interests, incorrect behavioural assumptions in the design process, overly complex information, psychological reactance, short-term effects, and trigger of compensating behaviours where individuals offset the nudge's impact in other areas (Sunstein, 2017). These failures highlight the importance of thoroughly testing behavioural hypotheses and designing effective strategies. While nudges preserve freedom of choice, their ineffectiveness in certain contexts may necessitate stronger measures to enhance welfare, especially when clear errors or third-party effects are involved. There is also the existence of 'sludges', which are coined as the opposite of nudges and are characterised by their purposes of increasing friction to make certain choices harder, discouraging the continuation of the process (Nudge and Sludge, 2019). However, while they are often deemed as disadvantageous or profit-driven, they can also encourage thoughtful behaviour. For instance, privacy protection requirements, though inconvenient, prompt users to be more cautious about the data they share online (Nudge and Sludge, 2019).

Overall, the critical thing to remember is that the ultimate goal of nudge interventions is not effectiveness per se but welfare. Effective nudges may increase positive welfare (and they are usually designed with this intention), while ineffective ones reduce welfare—but the opposite can be true. Proponents of nudges focus on the fact that choice architectures can preserve freedom of

choice while still potentially delivering behaviours that are beneficial for society. The scope of this paper's research will not seek to examine extensively the effectiveness of nudge interventions, but it does warrant an understanding and reminder that nudge interventions are small parts of bigger solutions to complex problems.

### *Ethics of Nudges*

Questions regarding the ethical dimensions of nudges frequently arise when discussed, especially in the context of policymaking, despite numerous governmental bodies worldwide embracing their use to innovate public services. Ongoing debates about the ethical implications of nudges include whether it is morally justifiable for public servants to employ nudges in their policymaking efforts. Moreover, nudges represent a middle ground of two extreme ideologies: libertarianism, which advocates for the individual right to complete freedom of choices, and paternalism, which advocates for choices to be made on behalf of individuals given that they are bound to act irrationally (UCL, 2021). As such, libertarian paternalism implies a degree of freedom for individuals to make their own choices, but the choices are partially manipulated (UCL, 2021). Sunstein argues that nudges can be ethically justified to inform individuals about potential harm and promote their well-being, like displaying the calorie content of food items to help people make healthier choices (2014). Additionally, governments may need to counteract private sector nudges that steer individuals towards behaviours detrimental to their interests, such as overspending on phone plans or purchasing unhealthy foods (Sunstein, 2014a).

Research suggests that public support for nudges varies based on alignment with personal political views and transparency of the nudging method (Tannenbaum, Fox & Rogers, 2017). This is illustrated in a study by researchers Culau, Yamori, and Nakano, who investigated public perceptions concerning the acceptability and effectiveness of nudges for disaster risk reduction efforts in Japan (2022). The researchers found that cultural and individual preferences moderated the degree of acceptance and effectiveness of certain nudges. For instance, emotional nudges, like showing grief-stricken families, were not widely accepted, even in the context of reducing disaster risk (Culau, Yamori, & Nakano, 2022). Additionally, it was found that transparency about the goals and methods of nudges can increase their acceptance. Although the study used surveys to conduct the research and would benefit from real-world testing, the results provide insights into how the Japanese public valued education and law enforcement alongside nudges

(Culau, Yamori, & Nakano, 2022). Overall, nudges should complement, not replace, existing disaster risk reduction methods.

Advocates for nudge theory, such as Thaler and Sunstein, argue that choice architecture is inevitable because decisions are always made within some environment (Sunstein, 2014a). The argument becomes that objecting to nudges on ethical grounds is pointless since defaults are unavoidable, and something will occur even if a decision is not made. Rather than objecting to nudges, the efforts should be focused on designing choice environments to promote the best outcomes (Einfeld, 2021). However, critics like Hausman and Welch argue that the intentionality behind nudges matters (2010). When public servants alter choice architecture to influence decisions, they exercise power over individuals, especially through nudges that trigger automatic thinking. This raises potential concerns about abuse, violation of autonomy, and manipulation, supporting the idea that choice architecture does not justify all types of nudges (Hausman & Welch, 2010).

Civil servants thus have a strong responsibility to properly balance accountability, efficiency and integrity in the choice and design process of nudge interventions, especially so that they can accurately represent individuals' preferences (Sunstein, 2014a) and do not increase inequality for vulnerable populations (Einfeld, 2021). Governments and other institutions have developed ethical guidelines to help policymakers responsibly use BI (OECD, 2019), as it is their duty to inform, and protect individuals from significant harm and promote their welfare. If businesses can use nudges to steer consumers towards behaviours that may be detrimental to their well-being, there is a case to be made that governments should intervene to rectify misinformation or steer individuals towards better choices (Einfeld, 2021).

As outlined above, criticisms of the use of nudge interventions are numerous, ranging from the libertarian paternalism dimension of nudges to concerns about their long-term effectiveness. Some also argue that nudges serve as a political tool to shift away attention from the need for systemic changes (Mills, 2023a). While the scope of this thesis does not delve into these concerns, it acknowledges their existence. The position on nudge interventions in this thesis is that they are meant to complement other policy tools rather than replace them. Given the popular uptake of using nudges in policymaking worldwide, the question is not whether policymakers should use them or not, but rather ensuring they use them ethically.

### 3. LITERATURE REVIEW

The following literature review begins by exploring the various categorisations of nudges that exist within academic discourse, highlighting the implications and challenges of multiple existing taxonomies and typologies. It also briefly examines the role of environmental scans and reviews in data collection, laying the foundation for developing a novel typology within this thesis. This initial section establishes the context for the data collection approach employed in constructing the typology.

The subsequent section delves into the application of BI within organisational settings. It first illustrates the existing research surrounding the examination of public service employees' biases. It then explores case studies drawn from public-facing reports by governments, international organisations, and other comparable entities where BI has been leveraged to identify and mitigate the biases of public service employees in public sector organisations. The case studies are selected based on similarities across multiple dimensions, such as mission, policy development and implementation processes, bureaucratic and hierarchical structures, and accountability mechanisms. This section aims to illustrate the extent to which research has explored the integration of nudges into public administration. It concludes by drawing parallels between the presented cases and bridging the gap between the fields of BI in public policy and BPA, positioning nudge interventions as a connecting force.

The third section contextualises the diffusion of the nudge movement in Japan, highlighting current issues and challenges within this domain that this thesis hopes to address.

#### **Illustrating the Nudge Movement**

The expansion of nudge literature invites an increasingly diverse set of ways to categorise (and even define) nudges. Researchers and behavioural teams worldwide typically refer to Thaler and Sunstein's broad definition of a nudge to design interventions or set research directions (2008). However, classifications and frameworks to define, evaluate, or categorise nudges differ according to policymakers' and researchers' goals. This variability allows wide application but also presents challenges for researchers in the field.



For instance, Hagman and colleagues categorised nudges into pro-self and pro-social, focusing on maximising private welfare versus encouraging behaviours that benefit others (2015). This specific method of differentiating nudges was of interest to the researchers because the nature of pro-social nudges went against the rational model of maximising self-interest (Hagman et al., 2015). The UK's Behavioral Insights Team (BIT) classified nudge interventions by policy areas ("Safer Communities", "The Good Society", and "Healthy and Prosperous Lives") using the MINDSPACE framework to achieve behaviour change while maintaining government legitimacy back in 2010 (Dolan et al., 2010). Sunstein laid out a method of categorising nudges into ten broad types, including default rules; simplification; uses of social norms; increases in ease and convenience; disclosure; warnings, graphic or otherwise; precommitment strategies; reminders eliciting implementation intentions; and informing people of the nature and consequences of their own past choices (2014a). Numerous other classification methods exist, incorporating dimensions such as cognitive processes (Luo, Soman & Zhao, 2023), brain systems (Thaler & Sunstein, 2008), levels of intrusions (Sunstein, Reisch & Rauber, 2017), and more (Khadzhyradieva, Hrechko & Smalskys, 2019).

In practice, common frameworks used to guide policymakers when designing nudges are the EAST Framework designed by the Behavioural Insights Team from the UK, the BASIC tool by the OECD and the MINDSPACE framework originally developed by the UK's Institute for Government (2015). EAST emphasises making nudges easy, attractive, timely, and social (Pilat & Krastev, 2021). The BASIC toolkit outlines general principles and ethical guidelines for applying BI, focusing on behaviours, analysis, strategies, interventions, and change (OECD, 2019). This MINDSPACE framework is a checklist of the most robust, non-coercive influences on behaviours, captured in a mnemonic, which can be used as a quick checklist when making policy (Dolan et al., 2010). Other frameworks, such as the 23 Ways to Nudge Mechanism (Caraban & Karapanos, 2020) or the 4s, have also been presented to support nudge designers (Mills & Whittle, 2023).

**Figure 1. MINDSPACE Framework Checklist**

<b>Messenger</b>	we are heavily influenced by who communicates information
<b>Incentives</b>	our responses to incentives are shaped by predictable mental shortcuts such as strongly avoiding losses
<b>Norms</b>	we are strongly influenced by what others do
<b>Defaults</b>	we 'go with the flow' of pre-set options
<b>Salience</b>	our attention is drawn to what is novel and seems relevant to us
<b>Priming</b>	our acts are often influenced by sub-conscious cues
<b>Affect</b>	our emotional associations can powerfully shape our actions
<b>Commitments</b>	we seek to be consistent with our public promises, and reciprocate acts
<b>Ego</b>	we act in ways that make us feel better about ourselves

*Source: Institute for Government*

Scoping reviews and environmental scans can illustrate how the nudge movement has grown, offering valuable insights into implementing nudge interventions. Van Deun and colleagues conducted a comprehensive review of nudge literature, revealing that most research focuses on health and environmental policy sectors (2018). Their findings also highlight the broad interest in nudge interventions across various academic disciplines, evidenced by publications in diverse journals. They found the four main types of nudges that were most used were information provision, changes to default policies, use of social norms and salience, and changes to the physical environment. Additionally, the review identified significant issues, such as the lack of a consistent framework for evaluating nudge effectiveness, complicating the comparison and generalisation of results (Van Deun et al., 2018). Moreover, the authors reported a notable lack of focus on efficiency, an essential factor in justifying nudge interventions. Despite the field's foundation on heuristics and biases, only about one-third of the reviewed articles explore these underlying mechanisms in detail. Additionally, outcomes like feasibility and distributive effects are rarely discussed, with some studies indicating positive results for feasibility, particularly in health policies, and mixed effects on social welfare and income distribution (Van Deun et al., 2018).

Hopkins and Lawlor conducted an environment scan on the use of BI in the public policy landscape in Canada (2023). They collected data on BI projects from the three BI units in the

country, most of which are public-facing reports over the span of seven years, from 2015 to 2022. The results from public reports of Canada's Federal Impact and Innovation Unit, British Columbia's BI unit and Ontario's BI units included 59 projects across 13 policy areas, supplemented by email correspondence and interviews with BI unit members. They discovered that most projects were in health and government operations, primarily using field studies with randomised controlled trials (RCTs) as the dominant methodological design. Despite modest goals, 80% of completed projects achieved their targets, including reducing tax delinquency and increasing support program applications, though they acknowledged this may be a result of the government choosing not to disclose failed projects. The number of BI personnel in Canada has increased tenfold from 2016 to 2022, with BI staff now present in ten departments, indicating significant growth and integration of BI across various sectors. The study aligned with global trends, noting the prevalence of BI in health and a growing acceptance of non-experimental BI work, similar to findings in Australia (Hopkins & Lawlor, 2023). However, the authors recognised the data limitations of some BI projects, like those improving tax collection, are underreported. Additionally, it provides a starting point for policymakers to see which policy areas could potentially use more nudge interventions, and so on.

Szaszi and colleagues conducted a systematic scoping review of the nudge movement, illustrating the empirical foundation of the movement's rapid expansion, which is reflected by the high number of field studies and real-world applications of nudge techniques (2017). The nudge movement also spans various domains and intervention types, with a significant focus on health-related behaviours, especially eating and drinking, while also covering areas like sustainability and consumer choice (Szasi et al., 2017). With studies having been conducted in 87 subdomains, showcasing the wide applicability of nudge techniques, the findings exhibited high heterogeneity in target populations, intervention types, behaviours, experimental designs, reporting methods, and outcome measures, revealing numerous factors that influence the effectiveness of nudge techniques (Szasi et al., 2017). However, the authors also identified some issues in their research, particularly related to obstacles of evidence accumulation. As mentioned earlier, the use of different categorisations (nomenclatures, taxonomies, and labels) for nudge interventions presents challenges for researchers, particularly in accurately replicating and implementing interventions, as well as creating systematic reviews (Szasi et al., 2017). The primary issues stem from the varying bases for categorisation: some focus on underlying

cognitive processes, while others focus on the interventions used (2017). Additionally, current categorisations are often redundant and non-exhaustive, meaning one label can refer to multiple intervention techniques, and the list of labels does not cover all forms of nudge interventions. They recommended further developing choice architecture taxonomies to establish a comprehensive and standardised classification system with clear, non-overlapping, and non-redundant categories. Acknowledging the complex relationship between cognitive processes and intervention techniques, they also suggested structuring the taxonomy around intervention techniques, as this approach may facilitate consensus, a recommendation that aligns with previous suggestions by other researchers (Szaszi et al., 2017; Michie et al., 2013; Münscher et al., 2015).

While the goal of this thesis is not to develop a streamlined taxonomy using the nudge interventions applied in the Japanese context as a case study, it will attempt to list out nudge interventions formulated based on the underlying cognitive processes—an approach that models closely the previously discussed MINDSPACE framework and Sunstein's ten nudge categories. Additionally, the research methodology used to compile the list of collected nudge interventions will follow the principles of an environment scan.

## **BI Inside Public Administration**

Much attention has been placed on the integration of BI in public policy when it comes to developing policies by civil and public servants for the general public (that is, individuals who are external to the government), while less literature exists on the use of BI onto public sector employees themselves, though some research has emerged on the use of BI for organisational purposes, as mentioned in the first chapter (Hallsworth et al., 2018). Parallel to this, in the field of public administration, significant discussions have emerged on decision-making biases in public management, administration, and policy (Battaglio et al., 2019). Most research has focused on how citizens interact with the government, whereas much fewer studies have examined the decision-making processes of public sector managers and policymakers (Battaglio et al., 2019).

This gap was highlighted through research by Battaglio, Belardinelli, Bellé, and Cantarelli, who argued that the examination and understanding of the broader contributions of behavioural sciences to public administration is limited (2019). Through a systematic review of

public administration articles, the authors identified certain trends and gaps in the research surrounding public administration, particularly related to the work of scholars Herbert Simon, Daniel Kahneman, and Richard Thaler. Simon's concept of bounded rationality allows BPA to explore how public administrators and citizens make decisions under constraints, emphasising the practical implications for policy and management (Battaglio et al., 2019). Kahneman and Tversky's prospect theory extends Simon's ideas by identifying systematic deviations from rational behaviour, demonstrating how people assess outcomes based on gains and losses from a reference point and how framing effects influence risk preferences. These insights into cognitive biases, such as the reliance on heuristics and the impact of system 1 (intuitive) and system 2 (deliberative) thinking, are crucial for understanding and predicting decision-making patterns in public administration (Battaglio et al., 2019). BPA applies these concepts to improve policy design and implementation by accounting for predictable errors in judgment. Finally, Richard Thaler's concept of nudging, rooted in libertarian paternalism, applies behavioural science to guide individuals towards better decisions without restricting their freedom of choice. The authors argued that this approach is particularly relevant in public administration for designing interventions that enhance public welfare while preserving individual autonomy (Battaglio et al., 2019). Furthermore, they stressed how BPA can benefit from incorporating these tactics to nudge public administrators into making better decisions when designing environments.

The systematic review consisted of 109 primary studies focused on cognitive biases and nudging in public administration, with 25 of them addressing cognitive biases in public administration decision-making from a theoretical perspective (Battaglio et al., 2019). Topics ranged from loss aversion in public personnel management and policy, groupthink, nudging, herd behaviour, the halo effect, negativity, multiple cognitive biases, and bounded rationality in BPA. More than half of the studies focused on general citizens, while 21% focused on civil servants and 12% on elected officials. Most research on cognitive biases in public administration, management, and policy has been conducted in Europe (54%), and the United States (38%); only one study from this review was conducted in Japan, which investigated citizens' response mechanisms to the decline of municipality caused by municipal management failure (Battaglio et al., 2019).

Based on the systematic review's findings, one of the gaps in BPA highlighted by Battaglio and colleagues is the lack of studies that examine the use of nudges and choice

architecture to leverage cognitive biases and improve behaviour (2019). Choice architecture, appealing across political and economic spectrums, can address straightforward policy issues, as well as more complex problems, according to the authors. Additionally, high-stakes choices can be influenced by combining incentives and nudges, especially when governments cannot provide strong enough incentives (Battaglio et al., 2019). Using nudges can allow public managers to address cognitive biases and guide policy decisions toward more effective and justifiable outcomes (Battaglio et al., 2019). The authors also recommended that to provide public administration practitioners with reliable evidence for improving policy outcomes, scholars should focus more on how cognitive biases impact decision-making within public organisations. Specifically, more experimental fieldwork with policymakers and public servants is needed to strengthen the ecological and external validity of BPA research (Battaglio et al., 2019).

Overall, this review highlights the need for more research on the biases affecting public servants and civil servants, and exploring strategies such as nudges and choice architecture to mitigate these biases. Nudges applied to public administration, particularly within civil service, remain a relatively underexplored field compared to their widespread use on citizens. While a review of the literature will highlight several examples of BI being incorporated into public administration, these represent only a small fraction of the overall body of research. A few potential reasons could explain this observed gap. First, much of the existing research on nudges has prioritised testing interventions on citizens rather than civil servants, as the focus has been on improving public policy outcomes (Mosely, 2020). This could be because applying nudges to citizens directly aligns with policy priorities, where the public benefits are more visible and measurable. The resources available for such research may therefore be directed toward public-facing interventions rather than those targeting internal government processes (Blanding, 2017). Furthermore, the integration of nudges into public administration remains a niche area of study, combining two traditionally distinct fields that, while each quite extensive in research, have not frequently intersected. In fact, while behavioural nudges gained significant attention in 2008 with the publication of *Nudge* by Thaler and Sunstein, the conversation about applying nudge theory within governments (i.e., governments nudging themselves) only gained traction nearly a decade later. This shift was notably catalyzed by the publication of the Behavioural Insights Team's report "Behavioural Government" in 2018 (Hallsworth et al.), which expanded the scope of nudge theory into internal public sector reform. While numerous studies examine

how public service managers and high-ranking officials make decisions, particularly within the fields of public administration, public policy, and organizational psychology, these studies tend to focus more on uncovering cognitive biases and decision-making patterns than on testing behavioural interventions aimed at mitigating these biases. Research often centers around understanding the biases themselves, rather than experimenting with corrective tools such as nudges to influence decision-making processes (Kelman, Sanders & Pandit, 2015; Belle, Cantarelli & Belardinelli, 2017).

Some other potential reasons may include the role that practical barriers play in limiting studies on nudges within public administration. Governments may be hesitant to publish less than desirable data on civil servants' behaviour or performance, as it could undermine their legitimacy, and impact citizens' trust in them. As Hopkins and Lawlor's research on Canada's BI landscape noted, governments are more likely to publish public-facing reports that highlight successful BI initiatives, leaving out failed projects that remain undisclosed in private government reports (2023). The potential backlash or damage to a government's public image might deter research into internal nudging practices. Another barrier is that measuring the impact of nudges within public administration is more difficult than for public-facing interventions, as the link between internal behaviours and high-visibility public outcomes may not be immediately clear. The bureaucratic resistance, time, and financial resources needed to conduct randomized controlled trials (RCTs) within the government also contribute to the challenges of studying behavioural nudges inside public administration (Linos, 2023).

Lastly, the expansion of the literature on nudge application in public administration may simply be a matter of time. Some studies have begun to explore how behavioural interventions can be applied to civil servants, such as in areas of task compliance (Scartascini & Zamora, 2021). In addition, researchers like Gold and Johal (2013) have suggested that BI may offer an effective, low-cost alternative to traditional civil service reform efforts, which have often produced mixed results. Nudges could help overcome challenges in public sector performance improvement without relying on financial incentives, which are difficult to implement in many public sector contexts (Weibel, Rost, and Osterloh, 2009). Additionally, nudges often require fewer legal changes or union approvals, making them a more accessible tool for driving public sector reform (Gosnell, List, & Metcalfe, 2016). As such, it is expected that more research focusing on nudges applied to civil and public servants may gradually emerge.

The context of Japan reflects the reality above, given how limited the research on civil servants is. When it does occur, it typically focuses on the relationship between their profession and their health (Matsuhira et al., 2008; Kwarada, 2010), as well as their motivation as public service employees (Mizuno, 2020). Additionally, despite the significance of research on bureaucracy and bureaucratic organisation, there is a lack of empirical studies focused on enhancing organisational efficiency in public administration (Arami, 2021). Methodological innovation and a stronger empirical foundation are needed, given how Japanese public administration research seems to lag in data collection methods compared to business organisations, which hampers international comparative analysis (Arami, 2021). Addressing these issues is essential for improving the efficiency of Japanese public administration organisations. While nudges are typically applied to the general public, there is significant potential for their application within public administration itself. This approach would also bridge the gap between BI for public policy and BPA despite some existing overlaps between these two fields.

### *Case Studies Around the Globe*

There are several countries in the world with well-established BI teams that have looked into the application of BI within their entities. The following section summarises some of the initiatives put out by the governments of Australia and Canada, as well as the original BI unit from the United Kingdom, which is now a social-purpose private company. While scholars have conducted research identifying the biases public sector employees are subjected to, only public-facing reports related to mitigating policymakers' biases published directly by the governments and organisations will be described below. For the purpose of this thesis, it is more interesting to examine initiatives that came directly from the governments and comparable organisations to identify existing practices and potential gaps in Japan's public administration.

#### Australia

In 2017, the Behavioural Economics Team of the Australian Government (BETA), known as the Australian government's nudge unit, published a report on an RCT conducted in partnership with the Australian Public Service Commission. The study, titled "Going Blind to See More Clearly: Unconscious Bias in Australian Public Service Shortlisting Processes",



addressed gender imbalances in management and executive roles (Hiscox et al., 2017). Women were significantly underrepresented in these positions despite constituting nearly half of the Australian workforce. The report highlighted unconscious biases like affinity bias, confirmation bias, groupthink, the halo effect, and status quo bias as factors influencing hiring and promotion decisions. To address this, the Australian Public Service (APS) introduced a Gender Equality Strategy in 2016, promoting diversity through training and awareness programs. One proposed solution was the de-identification of job applications to reduce discrimination, particularly through ‘gender-blind’ processes. As such, a study which involved creating a standardised set of applications for an executive-level APS position was conducted, with three versions of applications prepared (de-identified, male-identified, and female-identified). However, the results from the study revealed a modest form of affirmative action among reviewers, favouring female and minority candidates. This suggested that de-identification might hinder efforts to enhance diversity at senior levels, emphasising the need for context-specific strategies in addressing gender and minority inequality. According to the authors of the report, their research in 2017 is the first of its kind in Australia to rigorously assess bias and the effects of de-identification in senior management recruitment, contrasting with earlier studies that focused on entry-level positions and found discrimination against ethnic minorities (Hiscox et al., 2017).

In this thesis’s context, this report illustrates that biases within the APS are considered, and efforts to counter them are attempted. Although the topic of this report pertains to the hiring process rather than the policymaking process for the general public, it does confirm from an external perspective that there is an active awareness surrounding the public servants’ mind traps. There were no mentions of incorporating nudge theory into future shortlisting processes, and the design of this study suggested a direction towards the change of hiring policies (rather than attempting to introduce a nudge intervention into the status quo hiring process, nor the potential de-identification hiring process).

### Canada

A policy brief published by Policy Horizons Canada titled “Behavioural Insight Brief: Applying Behavioural Insights to Government Organizations” emphasised the need for government organisations to examine and address biases among their workers, which can affect decision-making processes (Jamieson & Giraldez, 2017). The report mentions explicitly how

“...much of the focus has been on better understanding and “nudging” citizens’ behaviours toward improved public outcomes. Far less work has been done by government organisations to understand and apply behavioural insights introspectively” (Jamieson & Giraldez, 2017, p. 2), highlighting how organisational behaviours can aid management in identifying decisions influenced by personal or organisational biases.

The report identified common cognitive biases in organisational settings, such as blind spot, optimism, affinity, bandwagon, confirmation, status quo, anchoring, and saliency biases. These biases influence inferences, judgments, and predictions, leading to groupthink and information cascades. The report suggested techniques like blinding, leveraging emotions, bias detection training, counteracting groupthink, encouraging diverse perspectives, pre-mortems, and using technology for better decision-making. Strategies were also included as potential solutions, such as noise audits, cost-benefit analyses, reference class forecasting, foresight methods, choice architectures, and RCTs. The report concluded with business administration scholars Beshears and Gino’s 5-step method to address biases in public service, acknowledging that while complete elimination is challenging, integrating behavioural science techniques can improve policy analysis and decision-making within organisations (Jamieson & Giraldez, 2017). Similar to nudge theory interventions, the strategies provided are designed to fit within existing organisational structures without requiring significant financial incentives or institutional restructuring.

The report concluded that while bias elimination is difficult, collective efforts can mitigate biases in organisational culture and decisions. Public servants are thus encouraged to integrate behavioural science techniques into their practices to improve policy analysis and decision-making. In the context of this thesis, it is important to point out that Policy Horizons Canada did provide thorough strategies and recommendations to improve the decision-making process of Canadian public servants to reduce individual and group errors. Although, similarly to its Australian counterpart, the report does not mention using nudges directly, the suggested strategies were akin to nudge theory interventions. For instance, when they described the emotion-leveraging tactic, one can argue that the underlying principle of this intervention is priming, which is the attempt to subtly influence one’s behaviour by exposing them to certain stimuli or cues that subconsciously shape their subsequent actions and decisions (Dolan et al., 2010). The report provided some specific examples but remained relatively general. This is

understandable, given that the tools provided are meant to be tailored to different agencies and departments composed of different people, organisational structures and cultures. It is also worth noting that a good number of the strategies provided by Policy Horizons were mostly ones that did not involve significant financial incentives or institutional restructuring—changes that are beyond the scope of BI—and were tailored to be introduced within an existing organisational ecosystem.

### United Kingdom

The Behavioural Insights Team (BIT) from the United Kingdom were one of the first pioneers of BI for public policy. Though they initially started as a governmental entity, they are now a private company with satellite teams across the world. Nevertheless, their 2017 report still focused on how the heuristics and biases that elected and unelected government officials attempt to address in citizens also influence them. The report titled “Using behavioural science to improve how governments make decisions” explores how biases occur and how to mitigate them across the three core activities of policymaking: noticing, deliberating, and executing (Hallsworth et al., 2018). From the beginning, the authors highlight how policymakers can use BI lens to identify unintended consequences of existing policies and adjust them accordingly; viewing BI as a way to understand government rather than merely a policy tool is crucial (Hallsworth et al., 2018). Based on the recent studies that suggested a shift towards studying ‘behavioural public administration’, the authors recognised that biases are often context-dependent mental shortcuts (Hallsworth et al., 2018). The report compiled a list of biases to which policymakers were most susceptible, accompanied by suggested strategies to mitigate them. The biases that policymakers are most often impaired by are framing, confirmation bias, group reinforcement, inter-group opposition, and optimism bias. General mitigation strategies with examples were proposed for each of the biases mentioned: re-framing techniques to counter the framing effect, investing in windows of opportunity techniques that would challenge assumptions, leveraging attention cascades, fostering cognitive diversity, involving politicians early in decision-making, conducting pre-mortems, using simulations, and incorporating feedback mechanisms.

All in all, in comparison to the Canadian and Australian governments, the BIT’s report provides a much more comprehensive landscape of how biases and heuristics affect

decision-makers in the government setting and under what circumstances those effects can be minimised (Hallsworth et al., 2018). The authors acknowledge that integrating bias mitigation strategies requires a comprehensive approach involving raising awareness, adopting practical strategies like trainings focused on specific contexts and behaviours, effectiveness testing, and tailored structural changes within systems, processes, and institutions (Hallsworth et al., 2018). As such, this report also provides concrete measures for using BI to mitigate biases, but it does not mention the term “nudge” explicitly.

### The European Commission

A report drafted by two professors from the University of Exeter, titled “Overcoming Illusions of Control: How to Nudge and Teach Regulatory Humility”, argued how EU policymakers within the European Commission (EC) can be nudged into breaking free from the illusion of control, a bias which overestimates the influence one has over the outcomes (Dunlop & Radaelli, 2015). The authors, Dunlop and Radaelli, argue that EU policymakers may hold biases when conducting impact assessments of given proposals. The case they make is that during EU impact assessment processes, the option of non-intervention is rarely selected by policymakers, which could be due to the illusion of control that policymakers hold in an environment where the tendency to regulate is virtually institutionalised (Dunlop & Radaelli, 2015). The authors first described how, according to regulatory theory by Majone 1996, the European Commission is seen as a supranational bureaucracy inherently inclined towards regulation due to limitations in their ability to use other policy tools such as taxation and expenditure. Regulation, in this context, is considered fundamental to the Commission’s functioning. Without addressing all the structural causes behind choosing non-interventionist options, the authors focus on contingent or proximate causes that could explain policymakers’ biases and mitigate them in approaching public policy choices.

Two categories of solutions are proposed: the first is to restructure policymakers’ cognitive architecture through nudges that would counteract the illusion of control and the risk of automaticity; the second is to change minds slowly (Dunlop & Radaelli, 2015). For the first set of solutions, the report described several biases, including messenger bias, loss aversion, and social norms. It proposed solutions, such as incorporating expert advice on framing questions and achieving parity in calculating benefits and costs. Other biases discussed include defaults,

salience, priming, affect, honouring commitments, and ego, with solutions focusing on increasing diversity of input, ensuring diverse messages reach policymakers early, and requiring post-decision evaluations to provide perspective and avoid negative outcomes (Dunlop & Radaelli, 2015). For the second set of strategies, Dunlop and Radaelli proposed the route of changing minds slowly, which requires more than just modifying choice architecture and involves practising deep understanding and habitual reflection by policymakers on their professional practices. Trainings should focus on accessing ‘slow’ thinking and promoting reflective and reflexive thinking, which can be achieved through traditional methods like case studies and academic literature, as well as innovative approaches such as in-class experiments. These methods encourage policymakers to recognise biases like messenger bias, cognitive shortcuts, and the illusion of control, ultimately fostering regulatory humility and long-term engagement.

Overall, the report describes a nudge proposition of restructuring the policymaking environment to counter the institutionalised “illusion of control” within the European Commission. This is the first report to explicitly use the term “nudge” to describe behavioural interventions aimed at policymakers, marking a departure from previous reports. Additionally, the case study highlights how the bias is entrenched in the institutional structure of the European Commission, signalling that while nudge interventions can be a route of solution to mitigate it, systemic changes may also be considered.

### The World Bank

In the 2015 report “Mind, Body and Society” published by the World Bank, the organisation dedicated an entire chapter to examining the biases that development professionals—those who designed policies to alleviate poverty in the countries they worked with—were subjected to, which in turn affected their policy designs and decision-making processes. The report argued that it was crucial to have mechanisms in place to identify and correct biases and influence, as they could inadvertently harm those they seek to assist. Development professionals, like everyone else, relied on automatic thinking and can fall into decision traps (World Bank, 2015). Specifically, the report described that they were susceptible to poor decision-making due to four sources: complexity, confirmation bias, sunk cost bias, and

contextual influence on decision-making—each of these four issues can be addressed through organisational measures.

The report advised that projects be broken down into smaller, manageable parts to address complexity through problem identification and collaboration. For confirmation, encouraging debates and deliberations to expose individuals to diverse perspectives was recommended as a mitigation strategy. Red teaming, a practice used in the military, was illustrated to challenge assumptions and prevent groupthink, enhancing plan effectiveness. Sunk cost bias was described to be preventable by making the development professionals recognise that terminating a project was not wasting resources but reallocating them for better outcomes. Finally, understanding local contexts through systematic efforts can reduce biases in decision-making (World Bank, 2015).

The report emphasised for adaptive design and interventions as essential in development contexts due to the various biases and factors influencing decision-making. Continuous diagnosis and experimentation, supported by institutional mechanisms and feedback loops, are crucial for adapting programs based on implementation evidence, which may require changing mental models and increasing tolerance for failure. In the context of this thesis, the report called institutional strategies, which can be understood as the modification of environmental choice architectures, similar to the previous EC case, but did not explicitly use the term “nudge” to refer to behavioural change interventions.

### The OECD

The OECD published the report “Applying Behavioural Insights to Organisations: Case Studies” in 2017, which highlighted examples where BI was integrated into the strategy and decision-making processes of organisations, organisational management for internal operations, and aspects of program implementation—while acknowledging that the application of BI to organisations is still an emerging field. They took on a broad view of BI, extending beyond behavioural economics and nudging by incorporating influences from social psychology, decision-making, cognitive psychology, and industrial and organisational psychology (Shephard, 2017). Global case studies were presented in three key areas: strategy and decision-making, management, and implementation. In strategy and decision-making, identified behavioural barriers included escalation of commitment, planning fallacy, over-confidence, status quo bias,

peer influence, loss aversion, and preference for immediate gains, to name a few. Mitigation strategies included reference class forecasting, flatter decision-making structures, combining top-down accountability with bottom-up mechanisms, and non-monetary incentives structured as losses. For management operations, barriers included the halo effect, biased assessments, missed or ignored opportunities and failure to act on intentions. They were accompanied by solutions like promoting a growth mindset, ensuring clear communication through plain language policies, linking management goals with specific implementation intentions, and designing stakeholder interfaces using BI. Related to implementation efforts in organisational settings, the barriers identified consisted of delays in providing data and payments, compliance issues, and fraud. In turn, personalisation, simplification, social norms, and implementation intentions were highlighted as mitigation strategies. Behaviorally informed interventions like reframing communications, triggering positive identities, and adjusting interaction timing were deemed to positively influence organisational behaviour (Shephard, 2017),

While specific cases were pulled from examples coming from both the private sector and the public, the guidelines remain general to provide room for users of the report to adapt to its own contexts. Nevertheless, despite how nudges were not explicitly cited, many of the strategies have a foundational basis in nudging, such as simplification (which relates to the underlying principle of plain languages), social norms, implementation intentions (which refers to commitment strategies), framing, and so on.

### *Bridging BI for Public Policy and BPA through Nudges*

Across the case studies, common biases and strategies were outlined, demonstrating the pervasive nature of heuristics and biases, even among experts. For instance, confirmation bias, groupthink, and status quo bias were highlighted in Australia's hiring process and decision-making processes in Canada, the UK, and the World Bank. The EC also noted these issues affecting their policymakers' impact assessment process, while the OECD case studies demonstrated their presence across sectors. Common strategies were also highlighted under general directions, like encouraging growth mindsets and diverse perspectives, or specific plans, like fostering diverse perspectives through debates and deliberations in Canada and the World Bank's cases. Bias detection training was suggested to raise awareness of decision-makers' inherent biases by BETA, Policy Horizons Canada, and the BIT, which also offer debiasing

training for external partners. Pre-mortems and red-teaming techniques were mentioned in the Canadian, BIT's, and World Bank's reports as ways to challenge assumptions, biases, and to prevent groupthink. While some tactics required institutional reforms, like encouraging flatter decision-making structures, others consisted of more minor environmental changes. Reframing and simplification techniques were suggested as viable solutions to counter framing effects and cognitive overloads – either by simplifying the language used or breaking down projects and problems into smaller parts.

Except for the EC case, nudging was never explicitly mentioned as a mitigation strategy for the government or institutional body. Yet many of the underlying solutions parallel nudging techniques. The reports use BI as an overarching concept to explain how decision-makers are prone to biases and how to use techniques built on BI to counter them. It appears that the term “nudging” is more commonly used to describe applying nudge interventions from the government to the public. As such, when it comes to “nudging” policymakers, public servants, and civil servants, the literature refers to drawing from BI to inform improvement strategies for their policymaking and decision-making processes.

Nudging, exemplified by the EC Case, presents a way to strengthen the connection between BI for public policy and BPA. Both draw on principles from psychology and behavioural economics, challenging traditional assumptions of rational behaviour through concepts like cognitive biases and bounded rationality. While BPA aims to optimise internal public administration processes, BI for public policy targets public choices and behaviours through policy interventions. Nudging, an approach widely applied to the public (i.e., citizens), could be integrated inside public administration to enhance both the creation and implementation of public policies.

Nudging those behind the policymaking process can have implications for public sector innovation, a field associated with various reform movements like New Public Management (NPM), digital government, the transition from government to governance, and economic challenges (de Vries, Bekkers, & Tummers, 2015). The application of BI to public policy and BPA arguably represents innovation stemming from integrating multiple disciplines. BI has become a tool in many governments' strategies to foster innovation, such as improving public service quality and enhancing governmental organisations' problem-solving capacities in addressing societal challenges, thereby contributing to the public sector's overall modernisation.



Civil servants and public employees, who wear both the innovator and administrator hats, are at the core of these new ideas and approaches to achieve better service delivery and internal processes. As innovation is arguably a behavioural process from beginning to end (Moleskis, 2022), it relies on public servants' decision-making processes and behaviours in government settings, reinforcing the need to explore how nudging in public administration can support it.

This discussion of BI within public administration served as a foundation for understanding the broader scope of BI application, particularly in addressing cognitive biases and improving decision-making processes among public and civil servants. While the integration of nudges within public administration remains relatively limited, several international case studies highlight the growing need to apply BI in public administration and demonstrate how nudges can address internal governmental challenges. Given that part of this thesis focuses on exploring the extent to which nudges have been applied within public administration, specifically to civil and public servants, it is valuable to examine how these interventions have been implemented elsewhere first. While Japan may have been somewhat slower in adopting nudges compared to countries like the UK, Canada, and Australia, it has increasingly integrated them as a policy tool, particularly at the local municipality level, making the exploration of BI within public administration timely and relevant. Transitioning from this global perspective, the next section focuses on Japan's approach to adopting and expanding the nudge movement. This section will explore how Japan, with its unique governmental and cultural context, has engaged with BI in public policy and administration, shedding light on the potential for further growth in this area.

### **The Nudge Movement in Japan**

In 2017, Japan began engaging with "Evidence-based Policymaking" (EBPM) to improve its public administration management (BEST, 2019). The difference between traditional policymaking and EBPM is the use of evidence founded on scientific demonstrations of the causal effects of policies and the production of this type of evidence. Causal evidence, however, must be extracted through research. RCTs are the most frequently used method when researchers attempt to establish causal relationships, but several administrative barriers exist that prevent their full potential use in Japan. According to consulting Fellow Kobayashi Yohei from the Research Institute of Economy, Trade and Industry (RIETI), some of these barriers include time

constraints with budget proposals, coming up with funding to conduct the appropriate research to examine the effects; difficulty modifying pre-existing project structures with allocated budget; and ensuring fairness in the acceptance of applicants who wish to participate in projects (2019).

The researcher views nudges as a good entry point to streamlining EBPM in Japan, especially in addressing the challenges of implementing RCTs in policy evaluation. Nudges often make it possible to overcome the barriers associated with evaluating policy effects, such as providing insights into the impacts of policies over short periods (Kobayashi, 2019). Additionally, since the analysis for a straightforward RCT is simple, it is feasible to assess the effects using only internal administrative resources. Furthermore, many nudges are frequently employed for operational enhancements in policymaking, such as innovations in information dissemination methods. They can often be implemented by the responsible department without significant alterations to the policy structure. As such, nudges can be applied to existing policies without having to wait for the next fiscal year's budget proposal (Kobayashi, 2019). In numerous cases, nudges such as information provision or reminders can be implemented at low costs and are likely to fit within the current budget allocation. Then remains the concern of fairness in the random assignment of policy benefits. The researcher argues that in the case of nudges, which tend to require the creation and distribution of different versions of a notification document first, fairness may not be so much of a concern because notification documents will be sent to all relevant parties first, unlike the random distribution of actual benefits.

Another advantage to using nudges as entry points for EBPM is the availability and accessibility of a wide range of practical implementation guides, such as OECD's BASIC framework, the BIT's EAST framework, and, more recently, Osaka University Professor Fumio Ohtake's new book called *Using Behavioural Economics* ("Kodo keizaigaku no tsukaikata") describing how to create nudges, and providing concrete examples (Kobayashi, 2019). References for the implementation of nudges are increasing, allowing policymakers to make use of them as a means to propagate EBPM, especially with the rising popularity of nudges in Japan.

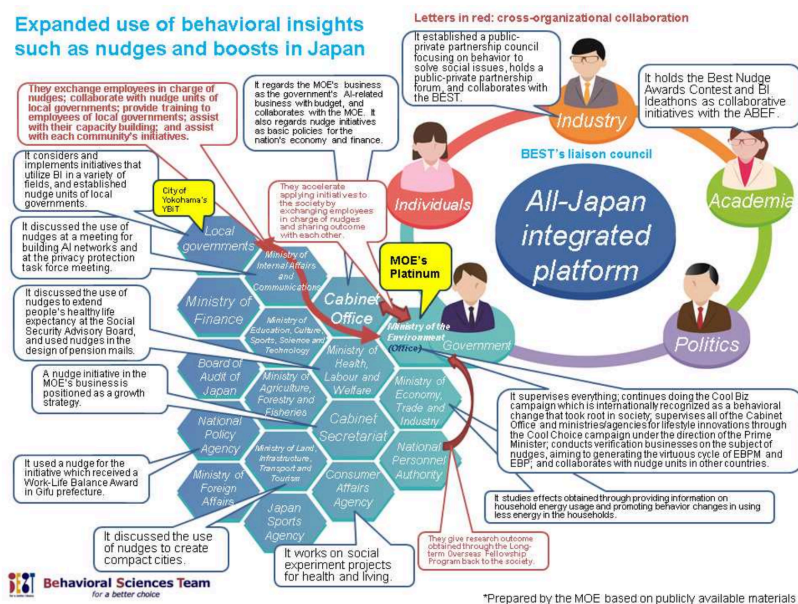
### *Expansion of Nudge Units in Japan*

Japan has been slower than some other countries in adopting nudges in public policy. However, in recent years, there has been a notable increase in the use of nudges by local and municipal governments in the country. As previously mentioned, Japan's first nudge unit was

established by the MOE in 2015, followed by the formation of BEST in 2017 to coordinate with local nudge units. BEST is an all-Japan initiative of industry-academia-government-private sector collaboration comprising relevant government ministries and agencies, local authorities, industry and experts (2019). According to the BEST FY 2017-2018 Annual Report, the nudge unit aims to apply BI, including nudges, to society through government policy or business strategy and disseminate them autonomously. BEST focuses on utilising BIs to solve social issues by enabling individuals to make better choices and reflect on their behaviours. It seeks to develop new, cost-effective, and flexible policy approaches that complement traditional ones, ensuring transparency and accountability (2019). The MOE launched Nudge PT ‘Platinum’, the first nudge unit in the prefectural ministries and agencies, with the aim for initiatives based on behavioural science findings, including nudges, to be implemented across society as a policy and in the private sector as early as possible and spread independently (BEST, 2019). BEST established liaison councils as collaborative forums where members from over ten ministries and agencies, as well as participants from industry, academia, government, and citizens, discuss and share methodologies, issues, and solutions related to behavioural sciences in fields like environment and energy.

BEST also collaborates within the central government through various initiatives: the MOE and National Personnel Authority focus on utilising research outcomes from the Long-term Overseas Fellowship Program; the MOE and Cabinet Office accelerate the application of BI by exchanging staff, sharing knowledge, and holding seminars; and the MOE and Agency for Natural Resources and Energy share project progress to inform policy measures (BEST, 2019). The Cabinet Office endorses policies promoting behaviour changes using BIs as part of national growth strategies. Additionally, the MOE, local governments, and the private sector formed the Human Behavior (HuB) council to address social issues, with BEST collaborating with HuB. These efforts reflect a broadening collaboration across central and local governments, industry, academia, politics, and citizens to enhance the use of BIs in solving social issues in Japan. Nationwide collaborations involving BEST also include participating in the HuB public-private partnership council, which addresses social issues like the Sustainable Development Goals (SDGs) by networking project operators and local governments. The nudge unit also networks with local government BI teams and aims to enhance nationwide collaboration.

**Figure 2. Expanded use of Behavioural Insights in Japan prepared by the MOE**



Source: BEST FY 2017-2018 Annual Report

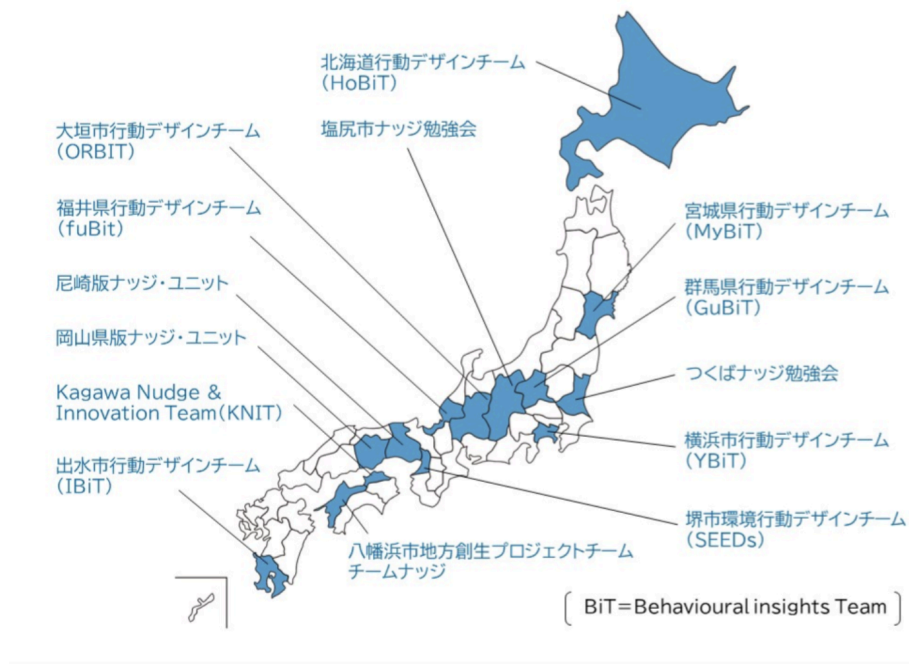
BI-TECH is another pivotal part of the government's strategy to integrate behavioural science into public policy, addressing a wide array of societal challenges. This initiative, part of the government's broader artificial intelligence (AI)-related efforts, focuses on leveraging BI to enhance policy effectiveness and promote the SDGs. One of the key aspects of BI-TECH is its use of advanced technologies like AI and IoT. For instance, in BI projects, the MOE collects detailed Internet of Things (IoT) data on individual and household energy usage, such as electricity, gas, and automotive fuels, along with demographic information. This data is then analysed using AI to generate personalised messages, encouraging energy-saving behaviours. The impact of these messages on behaviour change is rigorously evaluated. BEST emphasises the development of BI-Tech as a cross-disciplinary technology, similar to FinTech and HealthTech, to improve policy outcomes (BEST, 2019).

Overall, BEST's key activities and goals include promoting environmental sustainability by encouraging eco-friendly behaviours like reducing energy consumption and increasing recycling rates, as well as enhancing public health through nudges for vaccinations and healthier lifestyles (2019). It also aims to improve public policy efficiency by simplifying administrative

processes and enhancing the delivery of public services. They emphasise the use of low-cost, scalable interventions that can be quickly implemented and evaluated using rigorous methods like RCTs to ensure their effectiveness.

Ministry-level projects are larger in scale and have less direct engagement with the public. As such, efforts have been poured into expanding the nudge movement through local authorities, that is, municipalities with frontline relations with the public (BEST, 2019). The creation of the Yokohama Behavioral Insights and Design Team (YBiT) in February 2019 by the city's volunteer officials marked the establishment of Japan's first local government nudge unit, serving as a model for others (Takahashi et al., 2020). The entity pioneered local governmental nudge units and built an ecosystem of learning and raising awareness activities, networking and community-building activities, and co-designing, implementation and evaluation activities—activities that were and still are critical to the diffusion of the nudge movement across Japan (Tsuda, 2022). The Municipal Nudge Unit emerged from the YBiT's model and was established to promote and support the implementation of nudges within local governments. This team advocates for nudges, promotes design thinking and EBPM, and drives policy changes across various municipalities. The voluntary team comprises a diverse group of staff members eager to utilise and develop their strengths and expertise, such as interviewing and statistical analysis, during the implementation process (Tsuda, 2022). Another initiative that emerged is the foundation of PolicyGarage in January 2021, a nonprofit organisation that also acts as a network. PolicyGarage aims to promote using BI and human-centred design in public policymaking in Japan and internationally. It has collaborated with organisations such as the World Health Organization (WHO) Western Pacific Region to provide training and consultation on healthy aging. Additionally, partnerships with Osaka University and the Association of Behavioral Economics and Finance have facilitated knowledge-sharing, online training programs, and consulting services to enhance the evidence base for incorporating behavioural insights into public policy (Tsuda, 2022).

**Figure 3. Establishment of Municipal Nudge Units (as of January 2023)**



Source: Institute of Administrative Information Systems

Currently, there are fourteen municipal nudge units across the country, demonstrating the gradual expansion of nudge units in Japan's local authorities through the networks created by the MOE, YBiT, MyBiT, Policy Garage, and so on (Izu, 2023). However, the network of nudge units has issues that must be addressed over time, such as the wide variety of ways they each operate. For instance, the structure and leadership of these units depend on local conditions and the preferences of senior officials: leadership may come from the municipality's head, a core policy department, specialised departments, or volunteer staff like YBiT members (Takahashi et al., 2020). Additionally, some initiatives are project-based and funded by national grants, which can influence other organisations. Evaluating the effectiveness of nudges must also be streamlined across the nudge units, including testing for long-term effectiveness, given how early interventions prioritise quick wins to gain trust and demonstrate legitimacy (Takahashi et al., 2020). Despite the progress, there is still a need to accumulate evidence surrounding the limitations of nudge interventions and ethical considerations regarding the public, as well as develop expertise to ensure policy nudges become a standard tool in local governance.

One of the reasons why municipalities have been drawn to the nudge movement is because of limited budgets which often resulted in subsidy competitions between municipalities (Izu, 2023). As such, nudges have emerged as a key theme for connecting local authorities in this context. However, as social issues have become more complex, the importance of sharing knowledge on effective methods between municipalities has also grown. Collaborative sessions like the administrative nudge study session for over 300 municipalities, partial administrative unions, and wide-area associations were held in Miyagi Prefecture to facilitate knowledge-sharing (Izu, 2023). As the adoption of nudges becomes more widespread, collaborative demonstration projects involving multiple municipalities are also expected to increase.

The diffusion and expansion of nudge theory across the country are also partially facilitated by Policy Garage, which evolved into a networked non-profit organisation (NPO). By January 2023, the organisation had conducted 130 lectures and 80 case study support projects. The monthly online study group, in particular, has provided around 100 participants with a real-time platform to share nudge knowledge. Policy Garage also operates the website ‘Municipal Nudge Share’ in collaboration with the Institute of Socio-Economic Research and the Behavioural Economics Society of Osaka University. The platform organises articles by field from various websites and allows practitioners to share their experiences, challenges, and innovations. This knowledge-sharing system was created to answer the challenges of finding valid frameworks and case studies amidst the vast amount of online information (Izu, 2023). However, the ‘Municipal Nudge Share’ platform can be improved in its sorting and search functions to organise the articles more clearly and facilitate the big picture and granular visualisation of nudge initiatives in Japan. Dimensions such as types of nudges, target populations and effectiveness levels could also be considered to be included.

Overall, the nudge movement in each municipality is still very much a trial-and-error process (Izu, 2023), highlighting the need for a streamlined typology of nudge interventions in Japan. Furthermore, the BEST report and other local nudge units do not mention how nudges can be leveraged to check and mitigate policymakers’ own biases. Despite its collaborative nature, the narrative of the nudge movement still portrays the application of nudges as something done by expert policymakers to citizens and the public. This limits the potential for behavioural public administration (BPA) in Japan to grow in both research and practice.

### *Contextualising the Need for Continued Promotion of Nudges in Japan*

Promoting nudges in Japan is essential, both to test the external validity of results from other countries, where behavioural nudges have been proven effective, and to explore how Japan's unique cultural context may influence the impact of these interventions, potentially leading to tailored, more effective nudging strategies. This approach ensures that global evidence can be applied locally while accounting for Japan's specific societal dynamics. In some cases, similar nudges applied across different cultures have generated similar results, with small variations. For instance, Komatsu and colleagues had previously developed and tested an information nudge about air pollution that moderated risk-averse attitudes toward air pollution caused by industrialisation in Japan, which had significant impacts (2022). They then performed a cross-cultural comparison to investigate the universality of the nudge messages among people living in Japan, Canada, and the US. The results showed that the intervention was effective in all three countries, with some variations in effect size according to gender, personality traits and due to external factors, such as COVID-19. This highlights one type of external validity, where a nudge originating in a Japanese context was successfully applied in other countries, suggesting that similar cross-cultural adaptations may be possible in reverse as well.

Conversely, merely replicating a successful nudge from one country in another does not always yield the same results due to differences in local contexts, operational dynamics, and populations, as demonstrated in a Swiss study on antibiotic over-prescription (Fox et al, 2020). The researchers found that design differences in the Swiss study, such as removing peer comparison elements present in the successful U.S. version, undermined the intervention's effectiveness (Gill, 2020). This highlights the importance of customising nudges to local environments while maintaining critical design elements. Rather than questioning the efficacy of nudging, researchers suggest focusing on differences in implementation and context.

Behavioural nudges must also be implemented in a way that considers the target audience's underlying motivations and assumptions, within that environment (Wu & Paluck, 2021). Wu and Paluck conducted a field experiment in a Chinese textile factory to find out how to nudge workers into disposing of waste properly, as opposed to leaving it on the floor. Traditional methods like rules and monetary incentives did not affect them as they were primarily motivated to avoid interruptions during their work. Additionally, instead of using a typical nudge (e.g., floor shoeprints leading to trash bins, which are effective in the UK), the



researchers decided to try a nudge that would repel the act of littering, as opposed to guiding people to a trash bin. As such, they introduced a culturally relevant nudge by placing images of golden coins, which symbolise good fortune in Chinese culture, on the factory floor. This approach created a countervailing motivation to avoid throwing waste on the floor, which significantly reduced the amount of waste left on the ground (Wu & Paluck, 2021). It underscored that the effectiveness of nudges depends heavily on the context and the motivations of the target group.

Public acceptance of nudges, which varies across cultures, also impacts the potential effectiveness of a nudge. Nudges are meant to be transparent and easily avoidable, but if people disagree with the goals or methods of these interventions, they may resist the behaviours that the nudge is designed to promote (Wu & Paluck, 2021). In a 2017 study by Sunstein, Reisch, and Raubert comparing acceptance levels of nudges across eight countries—Australia, Brazil, Canada, China, Japan, Russia, South Africa, and South Korea—Japan emerged as an outlier with low approval rates compared to the other countries. The researchers speculated that Japan's lower approval of nudges might stem from the population's relatively low trust (by international comparison) in government institutions (Lukner & Sakaki, 2017; Edelman, 2023). Another potential explanation for Japan's outlier status could be tied to the specific goals of the nudges: for instance, if reducing smoking is not considered a pressing issue, there will be less support for nudges aimed at achieving this outcome (Sunstein, Reisch & Rauber, 2017).

At the same time, Japan presents a unique case of a complex dynamic, with low levels of trust in government coexisting with high levels of civility and collective responsibility (Wright, 2021). This was especially evident during the 2020 pandemic, when Japan's low political trust, a key social determinant of pandemic resilience in public health, contrasted with its impressive pandemic response. Despite the government's lack of authority to enforce public health recommendations, most people voluntarily complied with government advice, resulting in relatively low excess mortality compared to many other countries (Wright, 2021). This example illustrates that applying nudges in Japan may yield unpredictable and counter-intuitive results.

Moreover, while public acceptance of nudges is crucial in determining their effectiveness, it is equally important that civil servants approve of using BI to institutionalise nudges effectively within government policy (Khadzhyradieva, Hrechko & Smalskys, 2019). The ability to institutionalise BI depends on factors like the competence and motivation of public servants,

their resistance to change, and the quality of feedback mechanisms. The approval of civil servants is seen as a necessary precursor to their intrinsic motivation, which is key to efficiently embedding BI into public policy (Khadzhyradieva, Hrechko & Smalskys, 2019). As such, the success of nudges within public administration is not just dependent on public approval but also on the buy-in from the civil servants who implement and sustain these interventions, further signaling the need for more research into how nudges can be applied inside public administration to improve internal decision-making and policy outcomes.

All in all, promoting nudging in Japan offers a valuable opportunity to leverage the external validity of successful behavioural interventions from other countries while also capitalising on the unique cultural context of Japan. Globally, nudging has led to positive outcomes in diverse areas such as public health, energy conservation, and financial decision-making (BIT Review 2021-2022). By incorporating these proven strategies, Japan can adapt best practices to its local contexts, thereby enhancing the effectiveness of policy initiatives and reducing the risks associated with trial-and-error approaches. It also needs to balance the possibility of unique effects emerging from similar nudges that may have been successful elsewhere due to its unique political and cultural context. This type of contribution to the BPA literature can further develop the research surrounding citizen-government interactions, such as examining the public's perceptions of government transparency and legitimacy in the use of nudge interventions on their own workers.

## 4. METHODOLOGY

This thesis aims to draw an overview of Japan's current nudge movement landscape by creating a typology of collected nudge interventions, categorised by different dimensions. Through this examination, it seeks to provide insights into the nudge movement in Japan, particularly in the field of BPA. It adopts a loose version of an environment scan, wherein cases of nudge interventions are reviewed and collected. The goal is to compile as many nudge initiatives as possible from various sources, including academic journal articles, think tanks, blogs, and official government websites. The only strict criterion in the research process is that the term “nudge” must be used in the article, as this thesis focuses on nudge theory rather than the broader field of BI. So long as the nudge initiative fulfils this criterion and describes one or more nudge interventions designed to achieve a specific purpose through behavioural change, it was included in the dataset. Most nudge cases were in Japanese and were subsequently translated using Deepl and Google Translate.

To compile and categorise the list of nudge interventions in Japan, an extended definition of a nudge is used, based on the original definition from Thaler and Sunstein's 2008 book: “A nudge 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.” In other words, there should be no drastic changes to the original environment where the nudge intervention(s) is/are introduced, and high financial costs should not be incurred.

Once all the nudge cases were compiled, they were organised into a master table by different characteristics, some for analysis and others for simple description. For the scope of this thesis, the analysed dimensions include initiative type, policy area, target population, and nudge type. The subsections below explain how each dimension of interest in the typology was defined and distinguished from others in the same category.

### Initiative Types

For the scope of this thesis, any project or proposal involving one or more nudge interventions, whether implemented or tested, for a distinct purpose will be defined as an ‘initiative’. This definition is necessary because the terminology used for nudge cases varied across the articles, and sometimes, multiple nudges were tested within the same initiative for the same purpose. The table below shows the four categories into which initiatives were classified.

These categories were defined and developed after compiling all the nudge initiatives, using a bottom-up approach where the data itself guided the categorisation.

**Table 1. Initiatives Types & Descriptions**

INITIATIVE TYPE	DESCRIPTION
Academic research & experimental studies	Nudge initiatives, categorised as academic research and experimental studies, are systematic investigations conducted by scholars and researchers to explore specific hypotheses and gather data. These interventions are drawn from academic journals or policy think tank databases. Authors are typically professors and researchers from academic institutions, public institutions, and think tanks. The rigour of the research methodologies and tools is often very high, with strict protocols, peer review, and replication studies to validate findings.
Demonstration project	Nudge initiatives categorised as demonstration projects are practical initiatives, pilot studies, and field trials designed to test and showcase behavioural nudges in real-world settings. These projects are usually rolled out by local governments, schools, grassroots organisations, or private companies (often commissioned by the Ministry of Environment). The research methodologies and tools used in these interventions can vary, with many employing classical RCTs. These projects aim to provide evidence of feasibility and effectiveness before broader implementation. It remains unclear whether effective demonstration projects have subsequently been officially adopted by local governments; however, other local governments have sometimes attempted to implement the same nudge after observing its initial application.
Implemented policy	Nudge initiatives categorised as implemented policies are policies that have been officially adopted by governing bodies, institutions, or organisations. These nudge-based policies are put into practice, often at the local level. The policy analysis and impact assessment processes are not always clear in this research, implying that while the intervention is categorised as a nudge, the overall policymaking process behind the policy is not well-documented (i.e., it is uncertain whether it has been tested beforehand).
Policy proposal	Nudge initiatives categorised as policy proposals are suggestions or recommendations put forward by public service employees from local governments or grassroots initiative entities for consideration by decision-makers. These proposals describe the literature review, context, design, and implementation process of the nudge interventions. Most of these proposals have not been tested.

## Policy Areas

Policy areas were identified based on the descriptions in initiatives's articles or reports. The categorisation was formulated using a mix of a bottom-up approach, where the data itself guided the categorisation and the author's judgment in cases where a policy area was not clearly defined or easily understood. Some policy areas were more straightforward to define than others. For instance, health was a broad category and relatively easy to categorise nudge initiatives within. However, other areas required more analysis and consideration, especially to avoid creating too many categories.

**Table 2. Policy Areas & Descriptions**

<b>POLICY AREA</b>	<b>DESCRIPTION</b>
Administration	The administration sector pertains to nudge interventions aimed at influencing individuals' behaviours related to administrative tasks, whether in response to a public service call or a private sector call. This category includes various interventions compiled from the list, targeting the efficiency and compliance of administrative processes.
Civil participation	The civil participation sector pertains to nudge interventions intended to influence the behaviours of citizens in relation to the government. This includes nudges that affect how citizens interact with government entities, particularly in exercising civil rights, such as voting.
Disaster risk management	The disaster risk management sector encompasses nudge interventions aimed at influencing behaviours related to minimising the adverse impacts of natural and human-induced disasters. This involves nudges that enhance the preparedness, response, and recovery behaviours of individuals and communities.
Education	The education sector encompasses nudge interventions designed to influence the behaviours of students within academic institutions. These interventions typically relate to the learning environment and pedagogy, aiming to improve educational outcomes and student engagement.
Energy	The energy sector encompasses nudge interventions aimed at influencing behaviours related to energy consumption and use. These interventions tend to promote energy conservation and encourage the adoption of energy-efficient practices.
Environmental sustainability	The environmental sustainability sector encompasses nudge interventions designed to influence behaviours related to environmental and sustainable practices. This broad category includes interventions aimed at reducing food waste, encouraging waste separation, and promoting overall environmental responsibility.

Health	The health sector encompasses nudge interventions designed to influence behaviours related to health and well-being. These interventions tend to aim at enhancing health literacy, fostering preventive health behaviours, and supporting individuals in making informed health choices.
Social service	The social service sector involves nudge interventions aimed at supporting vulnerable populations and promoting social welfare. This category includes interventions designed to improve access to social services and enhance the well-being of individuals in need.
Urban spaces	The urban spaces sector encompasses nudge interventions implemented to influence behaviours in public spaces. This broad category includes interventions related to road sharing, public space safety, parking, and street cleanliness, aiming to improve the use and enjoyment of urban areas.
Labour & Employment	The labour & employment area involves nudge interventions implemented in workplace settings, regardless of the nature of the sector (public, private, civil, etc.). These interventions often relate to work habits, such as reducing overtime work, improving productivity, and enhancing employee well-being.

### Target Populations

Target populations were identified based on the descriptions in the initiatives' articles or reports, specifically if they included specific demographic information. The categorisation was formulated using a mix of a bottom-up approach, where the data itself guided the categorisation and the author's judgment (such as cases where no relevant information related to the target population was disclosed). For the context of this thesis, the author aimed to maintain a balance between keeping the categories broad and being able to extract a particular segment of the population that is of interest to this research, which is public service employees. Additionally, it acknowledges that the direction of categorisation may not be conventional (e.g., not using age or gender as demographic categories). However, for the research purpose of this thesis, the author felt that this method of separating target populations was the most appropriate.

**Table 3. Target Populations & Descriptions**

<b>TARGET POPULATION</b>	<b>DESCRIPTION</b>
General public	The ‘general public’ category includes general citizens without specific demographic characteristics such as gender or age unless otherwise specified in the nudge content section. It frequently refers to adults and encompasses individuals who do not belong to specific professions. If the target population of a nudge intervention is the general public, it implies that the participants' characteristics are not particularly relevant to the behavioural intervention (i.e., it is not due to these characteristics that the nudge is being tested).
Elderly	The ‘elderly’ category includes individuals aged 65 years and older, based on the studies and reports compiled. These nudge interventions are designed to target issues specifically related to old age, such as susceptibility to illnesses or other age-related experiences. The characteristic of being ‘elderly’ is relevant to the purpose and content of the nudge intervention.
Public service employees	The ‘public service employees’ category includes both civil servants and public servants. Nudge interventions in this category pertain to various aspects of the lives of these employees, not limited to decision-making or policymaking. All nudge interventions aimed at influencing people working inside government offices or public services are categorised here.
Students	The ‘students’ category includes all individuals with student status. Most of the nudge interventions in this research involve junior high school, high school, and university students. These interventions are not limited to impacting pedagogy but also include other aspects of student life.
Others	The ‘others’ category includes populations that do not fit into the previously defined categories, given their specific nature. This category captures any unique or uncommon target groups for nudge interventions.

### **Nudge Types**

The categorisation of nudge types is based on the structure and influences of the MINDSPACE Framework, with modifications made by the author to reflect the dataset accurately. The choice to use this framework stems from these influences incorporating cognitive processes. The nudge type dimension is also built on Sunstein’s ten broad categories of nudges. As such, for each nudge type, the definition consists of a mix of the ones provided by the MINDSPACE framework, Sunstein, and other scholars from the nudge literature. The categorisation method in this thesis also includes information based on the author's judgment and what was revealed by the data.

**Table 4. Nudge Types & Definitions**

NUDGE TYPE	DEFINITION	Source
Default	<p>Default nudges involve setting a pre-selected option that individuals automatically receive unless they actively choose an alternative. This leverages human inertia or status quo bias, making it easier for people to stick with the default choice rather than opting out. There are two main systems: opt-in (requiring individuals to actively choose to participate) and opt-out (automatically including individuals unless they choose not to participate). Defaults often utilise status quo bias to reduce the effort required to make decisions.</p> <p><b>Key Point:</b> The reduction of effort involved in making a choice influences individuals to go along with the default setting.</p>	Thaler & Sunstein (2008)
Feedback	<p>Feedback nudges provide individuals with information about their past or present behaviours to influence future behaviour. It aims to help individuals understand the consequences of their previous or current actions and make adjustments. This nudge is commonly seen in interventions like energy consumption reports.</p> <p><b>Key Point:</b> Feedback requires that an individual has already displayed a behaviour in order to receive information about it.</p>	Thaler & Sunstein (2008)
Framing	<p>Framing nudges present information in a way that makes it either more attractive or less attractive. It leverages the framing effect, where decisions are influenced by how choices are presented. Common types of framing include loss-frame (emphasising losses), gain-frame (emphasising gains), altruistic-frame (appealing to altruism), and selfish-frame (focusing on personal well-being).</p> <p><b>Key Point:</b> Framing taps into the cognitive process of perception construction—it is mostly about how individuals will perceive their choices, which then influences their behaviour.</p>	Tversky & Kahneman (1985); Dolan et al. (2010)
Incentives	<p>Incentives are rewards or punishments that incentivise individuals to behave in certain ways. In behavioural economics, incentives usually refer to financial rewards that can influence behaviour significantly. In the context of this research, incentives are categorised as a type of nudge, as most incentive nudges found in the research consist of small-scale rewards (even if they are of a financial nature).</p> <p><b>Key Point:</b> Incentives align individual behaviour with the desire to gain specific rewards.</p>	Lafont & Martimont (2001)



Information	<p>Information nudges involve presenting relevant data (e.g., nutritional information, context, etc.) to raise awareness and enhance understanding, often by providing additional information to nudge individuals toward specific intentions.</p> <p><b>Key Point:</b> Information disclosure does not consist of providing specific instructions that guide behaviours. They are often neutrally phrased information aimed to increase knowledge in the individual.</p>	Corrales & Jurčys (2016); Thornhill et al. (2019)
Instructive	<p>Instructive nudges provide direct instructions to influence behaviour, often through polite prompts like “Please wash your hands.” These nudges leverage authority bias, where individuals are more likely to comply with directives from perceived authority figures or trusted sources. They often come in poster or message forms. While ‘instructive’ is not a commonly found nudge in the literature, it is recognised as a nudge in the context of this research as they are frequently used.</p> <p><b>Key Point:</b> Instructive nudges use direct communication but are not enforced through systematic punishment or reward.</p>	Braithwaite (2023)
Pre-commitment	<p>Pre-commitment nudges involve an individual deciding in advance to bind oneself to a particular course of action, limiting future options and helping them adhere to long-term goals. This often includes setting targets or picking appointment dates in advance. Sometimes, the pre-commitment nudge is manifested as a default, leaving the individual no choice but to see through the action until the end.</p> <p><b>Key Point:</b> It reduces the temptation to deviate from planned actions by committing in advance.</p>	Sunstein (2014a); Dolan et al. (2010)
Priming	<p>Priming nudges introduce one stimulus to influence responses to subsequent stimuli. This exposure activates particular associations or memories, affecting subsequent actions (i.e., their mindsets have been primed, which then affects subsequent actions). Examples include using music or goal-setting exercises to influence behaviour.</p> <p><b>Key Point:</b> Priming is subtle and not a direct message, influencing behaviour through associated stimuli.</p>	Dolan et al. (2010)
Reminder	<p>Reminder nudges are prompts or cues designed to bring something to an individual’s attention or to remind them to perform a specific action, helping to mitigate forgetfulness and enhance follow-through.</p> <p><b>Key Point:</b> Reminders must be added to the environment to prompt conscious awareness and action. The reminder nudge cannot be one to ‘remind’ an assumed common sense that the person should hold.</p>	Damgaard & Gravert (2017)

Salience	<p>Salience nudges refer to the characteristic of something that stands out from its surroundings, grabbing attention. Salient items are prominent and easily noticed, leveraging the salience bias where people focus on more noteworthy information or stimuli.</p> <p><b>Key Point:</b> Salience involves the cognitive process of drawing attention to specific information. The salience nudge relies predominantly on its ability to capture attention.</p>	Bordalo, Gennaioli & Shleifer (2022); Dolan et al. (2010); Majgaonkar (2021)
Simplification	<p>Simplification nudges involve making information or processes easier to understand and use, reducing complexity to facilitate better decision-making or the operations to be carried out. This can include simplifying existing information or intentionally designing simple stimuli.</p> <p><b>Key Point:</b> Simplification reduces cognitive load, making decision-making easier.</p>	Thaler & Sunstein (2008)
Social norms	<p>Social norms nudges use the accepted behaviours and beliefs within a setting to influence behaviour by showing what is typical or expected, leveraging the social conformity bias, which is the tendency to conform to the majority. In the context of this research, social norms nudge encompass anything that prompts pro-social behaviours, reciprocity, and social responsibility.</p> <p><b>Key Point:</b> Social norms influence behaviours by making individuals aware they are part of a larger group.</p>	Dolan et al. (2010)

## 5. FINDINGS

The final typology comprises a total of 72 initiatives sourced from 41 distinct online documents. The majority of these documents were presentation materials accessed from the MOE's website, reports from nudge units, local government reports, and blog articles on platforms like Note, Medium, and Nudgeshare. For the full table containing detailed information and dimensions for each nudge intervention, please refer to the Appendix.

Table 5 below presents the distribution of nudge interventions across policy areas and target populations, highlighting the most frequently employed nudge type in each policy area. The nudge interventions in Table 5 are organised by individual nudge interventions rather than by initiative, given that multiple nudge interventions can originate from the same one, with the same intended purpose but differentiated in their nudge type and design. In the complete typology, for instance, a single study might test six types of nudges, resulting in each nudge intervention being listed separately, even if they serve the same purpose. Health and environmental sustainability emerge as the most explored policy areas in terms of nudge interventions, with 52 and 44 nudges, respectively. The policy areas of disaster risk management, energy, and labour and employment also have significant nudge interventions, closely followed by education. Administration, civil participation, social services, and urban spaces lagged behind, contributing a total of 11 nudge interventions out of 147.

Salience and priming were the most commonly used nudge types across all policy areas. For social services and labour and employment, the two policy areas consisted of more than one nudge. This is because the former area had only one nudge intervention that used a combination of priming, information disclosure, and simplification, while the latter area saw these nudges used an equal number of times across all the nudge initiatives. One caveat regarding the presentation of nudge types in Table 5 is that many nudge interventions employed multiple types of nudges. Therefore, while the column shows the most frequently occurring nudge, it may not fully represent the entire range of nudges used.

Finally, it is worth noting that nudge interventions targeting public service employees were exclusively in the sectors of health, environmental sustainability, energy, and labour and employment.

**Table 5: Number of Nudge Interventions by Policy Area and Target Population**

<b>POLICY AREA</b>	<b>TARGET POPULATION</b>						<b>MOST USED NUDGE BY POLICY AREA</b>
	General public	Elderly	Public service employees	Students	Others	Total	
Administration	2	0	0	0	0	2	Simplification
Civil participation	3	0	0	0	0	3	Simplification
Disaster risk management	10	0	0	0	0	10	Framing
Education	0	0	0	9	0	9	Salience
Energy	8	0	1	2	0	11	Feedback
Environmental sustainability	33	0	1	10	0	44	Priming
Health	39	3	7	3	0	52	Salience
Labour & Employment	6	0	4	0	0	10	Default / Priming / Salience / Social norms
Social service	0	0	0	0	1	1	Priming Information Simplification
Urban spaces	4	0	0	0	1	5	Salience
<b>Total</b>	<b>105</b>	<b>3</b>	<b>13</b>	<b>24</b>	<b>2</b>	<b>147</b>	-

Table 6, on the other hand, illustrates the number of initiatives categorised by policy area and type of project. In total, there were 72 distinct initiatives, many of which were sourced from the same report. Once again, the health and environmental sustainability sectors stood out with the highest number of projects, totalling 28 and 16, respectively. The health area's initiatives are distributed across all four types, a characteristic shared only by the urban spaces area. Demonstrative projects were the most commonly used, followed by policy proposals, contrasting with the number of actually implemented policies, which stood at only 5. Interestingly, the implemented policies were exclusively found in the health sector.

Regarding initiative types, demonstration projects were the most prevalent, followed by policy proposals and academic studies. The environment sector had more demonstration projects,

while the health area's initiatives were spread across various project types. The health sector ranked first in terms of academic research and policy proposals.

**Table 6. Number of Initiatives by Policy Area and Type**

<b>POLICY AREA</b>	<b>TYPE OF INITIATIVES</b>				
	Academic research & experimental studies	Demonstration project	Implemented policy	Policy proposal	<b>Total</b>
Administration	0	2	0	0	<b>2</b>
Civil participation	0	2	0	1	<b>3</b>
Disaster risk management	1	3	0	0	<b>4</b>
Education	0	1	0	2	<b>3</b>
Energy	0	7	0	0	<b>7</b>
Environmental sustainability	2	13	0	1	<b>16</b>
Health	7	8	4	9	<b>28</b>
Labour & Employment	0	1	0	2	<b>3</b>
Social service	0	1	0	0	<b>1</b>
Urban spaces	1	2	1	1	<b>5</b>
<b>Total</b>	<b>11</b>	<b>40</b>	<b>5</b>	<b>16</b>	<b>72</b>

Table 7 complements the data presented in Tables 5 and 6 by outlining all the collected intended purposes of each nudge intervention according to sectors. Each bullet point represents one purpose. It is logical that there is a higher number of purpose statements in the policy areas with a higher number of interventions and initiatives. Most of these purposes refer to the same core behaviour but are simply applied in different contexts or with slight variation.

**Table 7. Intended Purposes of Nudges by Policy Area**

POLICY AREA	INTENDED PURPOSE OF NUDGES
Administration	<ul style="list-style-type: none"> <li>○ Improve compliance with paying fixed asset taxes on time.</li> <li>○ Increase applications for the dry cleaning certification examination.</li> </ul>
Civil participation	<ul style="list-style-type: none"> <li>○ Increase the rate of return of consent forms and questionnaires sent to citizens to determine who wishes to participate in the city council.</li> <li>○ Increase the rate of answers to the citizen awareness and satisfaction survey.</li> <li>○ Increase voter turnout.</li> </ul>
Disaster risk management	<ul style="list-style-type: none"> <li>○ Increase evacuation intentions during natural disasters.</li> <li>○ Increase the return rate of consent forms from people who require evacuation assistance.</li> <li>○ Improve disaster risk understanding and preparedness, including food and water stockpiling.</li> <li>○ Encourage stockpiling habits in citizens.</li> </ul>
Education	<ul style="list-style-type: none"> <li>○ Encourage proper placement of bicycles in school bicycle racks.</li> <li>○ Encourage high school students to visit the school library.</li> <li>○ Reduce the risk of students' tablets being damaged and prevent eyesight and posture problems.</li> </ul>
Energy	<ul style="list-style-type: none"> <li>○ Encourage switching off lights to conserve energy.</li> <li>○ Increase adoption of energy-saving habits to reduce CO2 emissions.</li> <li>○ Increase awareness in energy-saving appliances</li> <li>○ Encourage employees to turn off the lights and reduce air conditioner use to save energy.</li> <li>○ Encourage switching off lights to conserve energy.</li> <li>○ Reduce electricity use.</li> <li>○ Shift charging periods to daytime to take advantage of renewable energy.</li> </ul>
Environmental sustainability	<ul style="list-style-type: none"> <li>○ Encourage switching off lights to conserve energy.</li> <li>○ Improve waste separation and increase waste collection to promote resource circulation.</li> <li>○ Encourage drivers to drive in a more eco-friendly manner.</li> <li>○ Reduce household food waste (i.e., prevent food waste) to reduce CO2 emissions</li> <li>○ Increase food waste recycling.</li> <li>○ Change attitude on meat consumption to favour vegetarian-based diets</li> <li>○ Reduce water usage to conserve resources and reduce environmental impact in the Tokyo Metropolitan area.</li> <li>○ Increase awareness of students' knowledge, attitudes, and actions surrounding environmental issues.</li> <li>○ Encourage students to properly dispose of PET bottles.</li> <li>○ Reduce littering in public park by children.</li> <li>○ Improve waste separation.</li> <li>○ Decrease amount of food discarded after reaching its expiration date.</li> <li>○ Encourage proper disposal of plastic bottles.</li> </ul>

	<ul style="list-style-type: none"> <li>○ Reduce food waste.</li> <li>○ Promote better waste separation.</li> <li>○ Reduce plastic spoon use.</li> <li>○ Reduce use of plastic water bottles.</li> <li>○ Reduce food waste in restaurants.</li> <li>○ Reduce food waste frequencies in retail shops.</li> <li>○ Reduce food waste frequencies in schools.</li> <li>○ Reduce food waste frequencies at home.</li> <li>○ Increase environmentally-conscious behaviours to reduce carbon footprint.</li> </ul>
Health	<ul style="list-style-type: none"> <li>○ Encourage infection-preventative behaviours like avoiding crowded places and reducing outings to promote social distancing.</li> <li>○ Ensure appropriate social distance to prevent the spread of COVID-19.</li> <li>○ Increase rates of hand washing.</li> <li>○ Reduce queue congestion to maintain proper social distancing to prevent the spread of COVID-19.</li> <li>○ Prohibit conversations in elevators to prevent the spread of COVID-19.</li> <li>○ Increase hepatitis virus screening uptake.</li> <li>○ Increase hospital workers' purchase of healthy food items to improve diet.</li> <li>○ Encourage students to avoid walking while looking at their smartphones.</li> <li>○ Increase rubella antibody testing and vaccination eligible receivers (men in the 40s and 50s).</li> <li>○ Encourage regular weighing to prevent obesity.</li> <li>○ Increase cancer screening uptake.</li> <li>○ Increase colorectal cancer screening uptake.</li> <li>○ Increase general health check-ups uptake.</li> <li>○ Increase of social and physical activities in the elderly populations.</li> <li>○ Encourage people in their 30s and 40s who are health-conscious to exercise more.</li> <li>○ Reduce heatstroke cases in seniors.</li> <li>○ Encourage monitoring salt intake for people concerned with blood pressure.</li> <li>○ Increase the rate of dental checkups.</li> <li>○ Raise awareness and encourage young independent people on nutritional food choices and importance of eating a balanced breakfast.</li> <li>○ Improve eating habits.</li> <li>○ Increase health checkup uptake.</li> <li>○ Increase exercise rates in people without exercise habits.</li> <li>○ Increase walking rates during work hours and in work settings</li> </ul>
Labour & Employment	<ul style="list-style-type: none"> <li>○ Encourage employees to utilize their allocated time off.</li> <li>○ Reduce resistance of employees to adopting digital transformation initiatives.</li> <li>○ Reduce overtime rate at work.</li> </ul>
Social service	<ul style="list-style-type: none"> <li>○ Encourage animal owners to pick up their pets' feces.</li> <li>○ Deter taxi drivers from parking illegally.</li> <li>○ Reduce walking or running frequencies on escalators.</li> <li>○ Encourage drivers to slow down without imposing physical constraints or compulsory restrictions, enhancing local community interactions.</li> <li>○ Increase interest in and consumption at local rest area shops.</li> </ul>
Urban spaces	<ul style="list-style-type: none"> <li>○ Enhance inmates' interest in seeking employment services by improving their understanding of the support system.</li> </ul>

## 6. DISCUSSION & IMPLICATIONS

Based on the findings of this research, which were organised into a typology, nudge interventions in Japan seem to be mainly applied for behavioural changes related to policy areas of health, and environment and sustainability, closely followed by energy and disaster risk management. This trend generally mirrors the literature from other countries and is understandable given that Japan's central nudge unit operates within the MOE. The expansion of the nudge movement in Japan is evident from the number of initiatives collected, and although the list is not exhaustive, it highlights areas for further enhancement and provides valuable insights into the discipline of BPA.

The three tables presented in the findings section offer a comprehensive overview of the current nudge movement in Japan, focusing on the dimensions of policy areas, target populations, nudge types, and specific purposes. The purposes of the nudge interventions seem to moderate the relationship between target populations and policy fields. The high number of nudge interventions targeting the general public is supported by the generalisable nature of the desired behavioural changes in the fields of health, environment and sustainability, and energy. In other words, because the purposes of the nudge interventions typically involve behaviours that can be easily adopted by people of various demographics and without specific population-related requirements, these fields potentially see a bigger number of nudge interventions (proposed and implemented). For example, reducing food waste or conserving energy are behaviours that can be exhibited by people of all ages and professions. In the health policy area, while some interventions were tailored to specific demographics based on risk factors related to certain illnesses, most aimed to increase screening uptakes (i.e., early detection as a preventative measure), promote preventative hygiene behaviours, and encourage general lifestyle habits. Once again, these types of behaviours are usually easily adopted by the general population, resulting in a higher number of nudges applied to the general public.

Further research into the priorities of the MOE and different municipal authorities can provide more insight into how and which societal issues are selected as areas where nudge interventions are deemed feasible solutions. The literature mentions budget constraints within local governments as a factor that attracts them to nudge theory, but more exploration is needed on the linkages between perceived priorities by different stakeholders in a given community.



On the surface, the finding of frequently used nudge types in Table 5 slightly confirms what Van Deun and colleagues discovered (2018). As mentioned previously, they found that the four main types of nudges most frequently used were information provision, changes to default policies, the use of social norms and salience, and changes to the physical environment. In this thesis, the findings are similar, as salience and priming were the most frequently used nudge types across all policy sectors. Defaults and social norms were more challenging to assess, given that they came up most frequently in smaller samples. Also, it may be difficult to claim whether certain nudge interventions should be used more often in currently under-used policy areas based on the findings, as contextual, demographic, and cultural factors influence the design of interventions. Furthermore, many nudge interventions in the dataset employed multiple types of nudges. Therefore, while the right column in Table 5 showed the most frequently occurring nudge, it may only represent part of the picture. These findings do, however, support the argument for streamlined and agreed-upon methods of categorising nudges, as stated by Szaszi and colleagues (2017), given how many interventions used combinations of types of nudges. This thesis attempted to structure the categorisation of nudges around existing models and based (as much as possible) on their cognitive characteristics.

As mentioned in the literature review, the examination of Japanese public service employees' behaviours and cognitive biases, particularly civil servants, is still in its early stages compared to other governments and institutions in the world. The findings from this thesis further support this reality, demonstrating the low number of nudge interventions that were applied to public service employees. While there were nudge interventions aimed at influencing the behaviours of public service employees, they were mostly applied in the policy areas of health, labour and employment, and energy. These nudges were implemented in workplace settings to encourage behaviours such as conserving energy or maintaining appropriate distancing during the COVID-19 pandemic. However, they were not applied to employees because of their roles as public and civil servants, nor were they intended to impact the functions of their profession, such as decision-making or policymaking. Instead, the public service employees were treated as if they were the general public—the nudge interventions were simply applied in public administration settings. Overall, when comparing Japan to the case studies described in the literature review, the gap in nudge applications for public service employees is evident, reinforced by the findings of this research. Public-facing reports published by the

Canadian and Australian governments, the BIT, and two international institutions, the World Bank and the European Commission, have firmly acknowledged the biases and heuristics that policymakers are subject to and have provided recommendations to mitigate them. In the case of Japan, this research has not yet found any similar public-facing reports, nor do the findings show any evidence for nudge applications onto policymakers. Given how quickly nudge theory is spreading across local governments, there is even more reason to pause, investigate, and implement nudges for public service employees to improve their work. Examining the psychological biases and heuristics that civil servants in Japan are prone to can inform the government of these biases and allow for the development of mitigation strategies.

Related to the development of BPA literature is the current lexical choice of the term “nudge”. In the literature reviews and this research, “nudge” was widely used to describe instances when the government implements BI-informed policies on the public. However, when it came to discussing internal biases and the strategies to mitigate them in public service employees, the term “nudge” was rarely used. This semantic difference can be understood as how nudges are interventions that are typically applied to the public (i.e., the external world), while terms like “BI-informed strategies” or “techniques that leverage BI” are applied inside public administration (i.e., the internal world). This was indirectly demonstrated by the findings, in which even when public service employees experienced nudges, they were not experiencing them in their roles of policymakers or decision-makers. The nudges applied to public service employees were related to the realms of environment, health, and energy—all of which describe behavioural changes meant for the general public. In addition, nudge interventions applied to public service employees in the labour and employment area were mostly related to reducing overtime frequencies. Although some have begun to use the term internally, as shown in the EC report, it is not widely practised. The tendency to use nudges for the “external world” and strategies for the “internal world” of organisations may further contribute to the gap in examining behaviour-related phenomena inside public administration.

Some literature that employs the term “nudging” to describe the efforts of inducing behavioural change inside organisational settings, particularly the government, is beginning to emerge in fields like future studies and innovation. For instance, Professor Heng’s working paper “Futures Ecosystems and Nudges for Futures Literacy - The Case of the UK and Singapore” (2023) examined how policymakers can be better informed and make better judgments of

existential risks by assessing if they were being “nudged” to perceive these risks from certain perspectives. Another study looked into a nudge aimed at fostering innovative behaviour within participants by altering risk perceptions (Matthewes, Nassar & Zihlmann, 2021). While this experiment was conducted in a controlled environment, it has important implications for private and public organisations in the use of salience as a nudge tool for affecting innovative behaviour (Matthewes, Nassar & Zihlmann, 2021). Overall, these examples demonstrate the potential of incorporating nudge language into BPA and contribute to the literature on public sector innovation.

Finally, the complete typology, available in the Appendix, represents an attempt to comprehensively organise nudge interventions in Japan. The typology not only helps with streamlining the knowledge-sharing process—an issue faced by nudge proponents at different government levels and sectors—but also increases transparency regarding how nudges are applied in public policies for the general public. Currently, nudge interventions are not widely used to moderate interactions between citizens and the government, with only three initiatives collected in the policy area of civil participation. Exploring the outlet of leveraging existing platforms or creating new ones where both citizens and nudge enthusiasts can access projects filtered by dimensions of their choice would contribute to the expansion of the nudge movement and enhance transparency in policymaking. This interaction, characterised by trust levels between the public and the government, could also then be further studied to contribute to the growing field of BPA in Japan.

### **Limitations of research**

This research has several limitations that should be considered when interpreting the findings. Firstly, the time constraints of this research project limited the scope of methodologies that could be employed. While efforts were made to conduct a comprehensive review of existing literature, including reports and studies from multiple sources, the study could not incorporate other research methods, such as qualitative interviews with experts in the field of BI in Japan. Qualitative interviews could have provided valuable insights and perspectives that are not captured in the existing literature, enriching the depth and breadth of the analysis. Additionally, there is the inherent challenge of not being able to identify all existing nudge cases in this thesis:

it is almost certain that some cases were not included in the dataset, which could potentially impact the accuracy of the findings.

Secondly, the language barrier presented a challenge in accessing all available information. While efforts were made to access English-language sources, some relevant information may have been overlooked due to the limited availability of translations. This limitation may have impacted the comprehensiveness of the literature review and the depth of the analysis, particularly regarding innovative practices in other countries that may not be well-documented in English-language sources. Although Japanese sources were consulted, the accuracy of translation of these documents may not have been perfect, given the imperfections of translation tools, such as Deepl and Google Translate.

Third, parallel to the other two aspects mentioned above, there is also a barrier to internal information of public administrations, in that there is no way of knowing whether internal procedures have been implemented to address these biases. Ideally, being able to access internal organisational information on management strategies would increase the strength of this paper, as it could shed light on the current practices that are in use by public administration to “check” public service employees’ own biases.

Fourth, the author acknowledges that the analyses and categorisation of the different dimensions from the developed typology have room for improvement. Certain dimensions, such as the effectiveness levels and the types of entities behind the initiatives (local government, university, etc.), could have been refined and included as units of analysis. Additionally, including a dimension on the specific types of evidence-based methodologies (e.g., RCTs, difference in differences, etc.) could have provided insights into the state of EBPM efforts in Japan and opened up avenues for further research questions. Finally, the approach to categorising and defining the current dimensions of analysis may not garner universal agreement and could also benefit from further input from other BI enthusiasts.

Despite these limitations, this study aimed to provide a comprehensive analysis of the use of behavioural nudges in public sector organisations in Japan, offering valuable insights into the challenges and opportunities in promoting innovative behaviours among policymakers and public servants. To the best of the author’s knowledge, there has not been any public research examining the landscape of behavioural nudge applications in Japan through the creation of a typology, with a specific focus on its implications for Japanese BPA.

## 7. FUTURE DIRECTIONS

This thesis aimed to illustrate Japan's current nudge movement through a typology of nudge interventions categorised by different dimensions. Through this examination, it sought to provide insights into the landscape of nudge interventions in the country, which contributes to the discipline of BPA. Specifically, it hoped to show that nudge theory, a concept widely used in BI for public policy, can bridge the gap with BPA.

Overall, the findings in this thesis revealed a predominant use of nudge interventions in policy areas of health, environment and sustainability, followed closely by energy and disaster risk management—a trend consistent with global patterns. The prevalence of nudge interventions targeting the general public is supported by the generalisability of desired behavioural changes in these sectors. Furthermore, this study underscores the importance of streamlined categorisation methods for nudges to enhance knowledge sharing, both domestically and internationally, while balancing the knowledge that nudges can have different effects based on the local factors of a place. The continued promotion of nudges in Japan is important for external validity reasons and for examining the unique results of nudges, especially in their effectiveness degree. This paper also highlights a significant gap in applying nudges to public service employees, despite the challenges that come with this, suggesting the need for further investigation, considering policymakers are equally susceptible to biases as the public they serve.

Moving forward, there is scope for advancing this research by refining the developed typology. Additional dimensions, such as effectiveness and efficiency levels, could be analysed to inform any gaps in evaluation methods. Detailed categorisation of the methodologies used in nudge initiatives (e.g., whether the project used an RCT or difference in differences approach) could also provide insights into the current EBMP movement and inform future practices.

Finally, there is an opportunity to explore the potential of leveraging nudges to promote behaviours conducive to innovation. This would shift the focus from identifying biases that hinder decision-making and policymaking to harnessing these biases for innovation. Given the pressing need for innovation in the public sector, integrating BI for public policy and BPA can be a valuable approach to drive public administration towards innovation.

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PUBLICATION DATE (yyyy/m)	NAME OF INITIATIVE	POLICY AREA	TARGET POPULATION	INTENDED PURPOSE	DESCRIPTION OF NUDGE INTERVENTION	NUDGE TYPE	INTERVENTION TYPE	EFFECTIVENESS LEVEL	INITIATIVE LEADS	INFORMATION SOURCE
2018	Yellow Chalk Operation	Urban space	General public	Encourage animal owners to pick up their pets' feces.	A circle drawn around dog feces on the ground with yellow chalk, with the date/time it was found, and a message to have it removed.	Salience Social norms	Demonstration project	Effective	Uji City Citizens Environment Department Living Environment Section, Environmental Planning Division	柴田 浩久. (2018). 犬のフン害対策に関する取組について [PowerPoint slides]. <a href="https://www.env.go.jp/earth/ondanka/nudge/renrakukai02/mat03_3.pdf">https://www.env.go.jp/earth/ondanka/nudge/renrakukai02/mat03_3.pdf</a>
2018-12	Promoting resource circulation through gratitude feedback	Environmental sustainability	General public	Improve waste separation and increase waste collection to promote resource circulation.	Letters of appreciation installed at 42 randomly selected garbage bins to encourage citizens to properly separate waste.	Social norms Priming	Demonstration project	Effective	NEC Solution Innovator Co., Ltd. (Private company) in Minamisanriku Town, Miyagi prefecture	河又 恒久. (date). 感謝フィードバックによる資源循環促進 [PowerPoint slides]. <a href="https://www.env.go.jp/earth/ondanka/nudge/renrakukai13/mat_01-1.pdf">https://www.env.go.jp/earth/ondanka/nudge/renrakukai13/mat_01-1.pdf</a>
2019-6	Eco-driving diagnosis report using a GPS sensor and a smartphone app	Environmental sustainability	General public	Encourage drivers to drive in a more eco-friendly manner.	A GPS eco-driving application showing information on fuel consumption, driving ranking, eco-driving advice, and facial expressions reflecting the eco-driving behavior of the driver.	Feedback Social norms Priming	Demonstration project	Unknown	Ministry of Environment	環境省 (日本版ナッジ・ユニット BEST 事務局). (June 24, 2019). BI-Tech: 行動インサイトとAI/IoT等技術の融合によるwell-beingの向上 [PowerPoint slides]. <a href="https://www.env.go.jp/content/900447927.pdf">https://www.env.go.jp/content/900447927.pdf</a>
2019-11	Promoting vacation taking through an opt-out system	Labour & Employment	Public service employees	Encourage employees to utilize their allocated time off.	Day-off request forms designed to automatically enroll employees into taking time off over consecutive holidays, especially for those who have done night shifts.	Default Social norms	Demonstration project	Effective	Chubu Regional Police Bureau Gifu Prefectural Information and Communication Department, Kanto Regional Police Bureau Shizuoka Prefectural Information and Communication Department	中部管区警察局岐阜県情報通信部, 関東管区警察局静岡県情報通信部. (2019年11月9日).「オプトアウト方式による休暇取得の促進」[PowerPoint slides]. <a href="https://www.env.go.jp/earth/ondanka/nudge/renrakukai13/mat_01-2.pdf">https://www.env.go.jp/earth/ondanka/nudge/renrakukai13/mat_01-2.pdf</a>
2020-3	Early Evacuation Promotion Nudges for Heavy Rain Disasters in Hiroshima	Disaster risk management	General public	Increase evacuation intentions during natural disasters.	A 'gain-framed altruistic' message: "Until now, most of the people who evacuated in response to the evacuation advisory during heavy rains did so because the people around them were evacuating. Your evacuation saves lives."	Framing Social norms	Academic research & experimental studies	Effective	Osaka University Hiroshima University Osaka Univeristy	Ohtake, F., Sakata, K., Matsuo, Y. (2020). Early Evacuation Promotion Nudges for Heavy Rain Disasters. RIETI Discussion Paper Series 20-J-015. <a href="https://www.rieti.go.jp/jp/publications/dp/20j015.pdf">https://www.rieti.go.jp/jp/publications/dp/20j015.pdf</a>
2020-3	Early Evacuation Promotion Nudges for Heavy Rain Disasters in Hiroshima	Disaster risk management	General public	Increase evacuation intentions during natural disasters.	A 'loss-framed altruistic' message: "Most of the people who evacuated in the past due to the evacuation advisory during heavy rains did so because the people around them were evacuating. If you do not evacuate, you are putting people's lives at risk."	Framing Social norms	Academic research & experimental studies	Effective	Osaka University Hiroshima University Osaka Univeristy	Ohtake, F., Sakata, K., Matsuo, Y. (2020). Early Evacuation Promotion Nudges for Heavy Rain Disasters. RIETI Discussion Paper Series 20-J-015. <a href="https://www.rieti.go.jp/jp/publications/dp/20j015.pdf">https://www.rieti.go.jp/jp/publications/dp/20j015.pdf</a>
2020-3	Early Evacuation Promotion Nudges for Heavy Rain Disasters in Hiroshima	Disaster risk management	General public	Increase evacuation intentions during natural disasters.	A 'shifting reference point' message: "When an evacuation advisory is issued due to heavy rainfall, it is necessary to evacuate as soon as possible. If you must remain in your home, wear something that can identify you in case your life is in danger."	Framing	Academic research & experimental studies	Effective	Osaka University Hiroshima University Osaka Univeristy	Ohtake, F., Sakata, K., Matsuo, Y. (2020). Early Evacuation Promotion Nudges for Heavy Rain Disasters. RIETI Discussion Paper Series 20-J-015. <a href="https://www.rieti.go.jp/jp/publications/dp/20j015.pdf">https://www.rieti.go.jp/jp/publications/dp/20j015.pdf</a>
2020-3	Early Evacuation Promotion Nudges for Heavy Rain Disasters in Hiroshima	Disaster risk management	General public	Increase evacuation intentions during natural disasters.	A 'gain-frame message' about relief supplies: "If you evacuate to a shelter when an evacuation advisory is issued due to heavy rain, you can secure food, blankets, etc."	Framing	Academic research & experimental studies	Effective	Osaka University Hiroshima University Osaka Univeristy	Ohtake, F., Sakata, K., Matsuo, Y. (2020). Early Evacuation Promotion Nudges for Heavy Rain Disasters. RIETI Discussion Paper Series 20-J-015. <a href="https://www.rieti.go.jp/jp/publications/dp/20j015.pdf">https://www.rieti.go.jp/jp/publications/dp/20j015.pdf</a>
2020-3	Early Evacuation Promotion Nudges for Heavy Rain Disasters in Hiroshima	Disaster risk management	General public	Increase evacuation intentions during natural disasters.	A 'loss-frame message' about relief supplies: "If you do not evacuate to an evacuation site when an evacuation advisory is issued due to heavy rain, you may not be able to secure food, blankets, etc."	Framing	Academic research & experimental studies	Effective	Osaka University Hiroshima University Osaka Univeristy	Ohtake, F., Sakata, K., Matsuo, Y. (2020). Early Evacuation Promotion Nudges for Heavy Rain Disasters. RIETI Discussion Paper Series 20-J-015. <a href="https://www.rieti.go.jp/jp/publications/dp/20j015.pdf">https://www.rieti.go.jp/jp/publications/dp/20j015.pdf</a>
2020-4	Energy saving visual nudge at Yokohama City Elementary School	Energy	Students	Encourage switching off lights to conserve energy.	Visual cues on light switches to prompt users to switch them off, accompanied by posters.	Salience Priming	Demonstration project	Effective	YBIT advisor Dr Takaho Itoigawa (Utsunomiya University) conducts a workshop and introduces the 'Energy Saving Visual Nudge' initiative created by sixth grade children at a Yokohama municipal primary school.	植竹香織. (2020年4月22日). 日本のナッジ実践事例②: 横浜市立小学校の省エネビジュアルナッジ (糸井川高穂先生). <i>Note</i> . <a href="https://note.com/bi_nudge/n/nc2bbe5b2af87">https://note.com/bi_nudge/n/nc2bbe5b2af87</a>
2020-5	Citizen Discussion Council notification layout change	Civil Participation	General public	Increase the rate of return of consent forms and questionnaires sent to citizens to determine who wishes to participate in the city council.	Notification messages sent to citizens to determine who wishes to participate in the city council re-designed with simplified wording, coloured forms, and attention drawn to important information.	Salience Simplification Social norms	Demonstration project	Non-effective	Citizen Autonomy Promotion Section, General Affairs Department, Chigasaki City	植竹香織. (2020年5月9日). 日本の自治体でのナッジの広がり①: 勝山明日香さん (茅ヶ崎市). <i>Note</i> . <a href="https://note.com/bi_nudge/n/nb6226e3c091d">https://note.com/bi_nudge/n/nb6226e3c091d</a>
2020-5	Citizen Awareness Surveys Return	Civil Participation	General public	Increase the rate of answers to the citizen awareness and satisfaction survey.	Notification messages sent to citizens to complete a an awareness and satisfaction survey re-designed with simplified wording, simplified explanation of operation steps, and information on number of survey participants.	Simplification Social norms	Demonstration project	Effective	Citizen Autonomy Promotion Section, General Affairs Department, Chigasaki City	植竹香織. (2020年5月9日). 日本の自治体でのナッジの広がり①: 勝山明日香さん (茅ヶ崎市). <i>Note</i> . <a href="https://note.com/bi_nudge/n/nb6226e3c091d">https://note.com/bi_nudge/n/nb6226e3c091d</a>
2020-6	Effective but fragile? Responses to repeated nudge-based messages for preventing the spread of COVID-19 infection	Health	General public	Encourage infection-preventative behaviours like avoiding crowded places and reducing outings to promote social distancing.	A 'gain-framed altruistic' message in online survey to encourage proper COVID-19 prevention measures: "By refraining from going out, avoiding the '3 Cs,' washing your hands, and wearing a mask, you can protect the lives of people close to you."	Framing Social norms	Academic research & experimental studies	Effective (short-term)	Faculty of Economics, Tohoku Gakuin University School of Economics and Management, University of Hyogo Center for Infectious Disease Education and Research (CiDER), Osaka University	Sasaki, S., Kurokawa, H., & Ohtake, F. (2021). Effective but fragile? Responses to repeated nudge-based messages for preventing the spread of COVID-19 infection. The Japanese Economic Review, 72(3), 371–408. <a href="https://doi.org/10.1007/s42973-021-00076-w">https://doi.org/10.1007/s42973-021-00076-w</a>
2020-6	Effective but fragile? Responses to repeated nudge-based messages for preventing the spread of COVID-19 infection	Health	General public	Encourage infection-preventative behaviours like avoiding crowded places and reducing outings to promote social distancing.	A 'loss-framed altruistic' message in online to encourage proper COVID-19 prevention measures: "By going out, not avoiding the '3 Cs,' and not washing your hands or wearing a mask, you will put the lives of people close to you at risk."	Framing Social norms	Academic research & experimental studies	Non-effective	Faculty of Economics, Tohoku Gakuin University School of Economics and Management, University of Hyogo Center for Infectious Disease Education and Research (CiDER), Osaka University	Sasaki, S., Kurokawa, H., & Ohtake, F. (2021). Effective but fragile? Responses to repeated nudge-based messages for preventing the spread of COVID-19 infection. The Japanese Economic Review, 72(3), 371–408. <a href="https://doi.org/10.1007/s42973-021-00076-w">https://doi.org/10.1007/s42973-021-00076-w</a>
2020-6	Effective but fragile? Responses to repeated nudge-based messages for preventing the spread of COVID-19 infection	Health	General public	Encourage infection-preventative behaviours like avoiding crowded places and reducing outings to promote social distancing.	A 'selfish' message in online to encourage proper COVID-19 prevention measures: "By refraining from going out, avoiding the '3 Cs,' washing your hands, and wearing a mask, you can protect your own life."	Framing	Academic research & experimental studies	Non-effective	Faculty of Economics, Tohoku Gakuin University School of Economics and Management, University of Hyogo Center for Infectious Disease Education and Research (CiDER), Osaka University	Sasaki, S., Kurokawa, H., & Ohtake, F. (2021). Effective but fragile? Responses to repeated nudge-based messages for preventing the spread of COVID-19 infection. The Japanese Economic Review, 72(3), 371–408. <a href="https://doi.org/10.1007/s42973-021-00076-w">https://doi.org/10.1007/s42973-021-00076-w</a>
2020-6	Effective but fragile? Responses to repeated nudge-based messages for preventing the spread of COVID-19 infection	Health	General public	Encourage infection-preventative behaviours like avoiding crowded places and reducing outings to promote social distancing.	An 'altruistic and selfish' message in online to encourage proper COVID-19 prevention measures: "By refraining from going out, avoiding the '3 Cs,' washing your hands, and wearing a mask, you can protect the lives of yourself and people close to you."	Framing Social norms	Academic research & experimental studies	Non-effective	Faculty of Economics, Tohoku Gakuin University School of Economics and Management, University of Hyogo Center for Infectious Disease Education and Research (CiDER), Osaka University	Sasaki, S., Kurokawa, H., & Ohtake, F. (2021). Effective but fragile? Responses to repeated nudge-based messages for preventing the spread of COVID-19 infection. The Japanese Economic Review, 72(3), 371–408. <a href="https://doi.org/10.1007/s42973-021-00076-w">https://doi.org/10.1007/s42973-021-00076-w</a>
2020-8	Social distance awareness-raising using the local speciality 'Hiketa buri'	Health	Students	Ensure appropriate social distance to prevent the spread of COVID-19.	Pairs of <i>Hiketa buri</i> (yellowtail fish) posters placed in visible, frequented locations at school to illustrate the standard 2-meter distancing between students.	Salience Priming	Demonstration project	Effective	Higashi Kagawa Municipal Hiketa Elementary and Junior High School (Higashi Kagawa City, Kagawa Prefecture)	環境省, 環境省ナッジPT(ブラチナ), 日本版ナッジ・ユニット (BEST) 事務局. (令和2年8月21日) 新型コロナウイルス感染症対策における市民の自発的な行動変容を促す取組 (ナッジ等) の募集について (結果) — ナッジ等の具体例、留意点 —. [PowerPoint slides]. <a href="https://www.env.go.jp/content/900447771.pdf">https://www.env.go.jp/content/900447771.pdf</a>
2020-8	Ensuring appropriate distances between visitors through placement of stuffed animals	Health	General public	Ensure appropriate social distance to prevent the spread of COVID-19.	Bank mascot stuffed animal placed in different seats (at intervals) to maintain proper sitting distance between customers.	Salience	Demonstration project	Unknown	Resona Bank, Ltd.	環境省, 環境省ナッジPT(ブラチナ), 日本版ナッジ・ユニット (BEST) 事務局. (令和2年8月21日) 新型コロナウイルス感染症対策における市民の自発的な行動変容を促す取組 (ナッジ等) の募集について (結果) — ナッジ等の具体例、留意点 —. [PowerPoint slides]. <a href="https://www.env.go.jp/content/900447771.pdf">https://www.env.go.jp/content/900447771.pdf</a>
2020-8	Placing hand sanitizers with arrows and messages in offices	Health	Public service employees	Ensure proper and frequent hand sanitization to prevent the spread of COVID-19.	Arrow marks on walls pointing to hand sanitizers, accompanied with messages requesting cooperation and expressing gratitude.	Salience Priming Social norms	Demonstration project	Unknown	Ministry of Environment	環境省, 環境省ナッジPT(ブラチナ), 日本版ナッジ・ユニット (BEST) 事務局. (令和2年8月21日) 新型コロナウイルス感染症対策における市民の自発的な行動変容を促す取組 (ナッジ等) の募集について (結果) — ナッジ等の具体例、留意点 —. [PowerPoint slides]. <a href="https://www.env.go.jp/content/900447771.pdf">https://www.env.go.jp/content/900447771.pdf</a>
2020-8	Operation Yellow Tape	Health	Public service employees	Ensure proper and frequent hand sanitization to prevent the spread of COVID-19.	Arrow tapes on floor to guide people towards the hand sanitizers installed at the entrance to the government building.	Salience	Demonstration project	Effective	Uji City Hall	環境省, 環境省ナッジPT(ブラチナ), 日本版ナッジ・ユニット (BEST) 事務局. (令和2年8月21日) 新型コロナウイルス感染症対策における市民の自発的な行動変容を促す取組 (ナッジ等) の募集について (結果) — ナッジ等の具体例、留意点 —. [PowerPoint slides]. <a href="https://www.env.go.jp/content/900447771.pdf">https://www.env.go.jp/content/900447771.pdf</a>
2020-8	Nudge messages posted on toilet sinks to encourage soapy hand washing	Health	General public	Increase rates of hand washing.	Posters requesting proper hand washing and thanking for cooperation in Shinjuku park's bathrooms.	Salience Social norms Instructive	Implemented policy	Effective	Ministry of Environment	環境省, 環境省ナッジPT(ブラチナ), 日本版ナッジ・ユニット (BEST) 事務局. (令和2年8月21日) 新型コロナウイルス感染症対策における市民の自発的な行動変容を促す取組 (ナッジ等) の募集について (結果) — ナッジ等の具体例、留意点 —. [PowerPoint slides]. <a href="https://www.env.go.jp/content/900447771.pdf">https://www.env.go.jp/content/900447771.pdf</a>

2020-8	Coloured signage on ground to guide visitors to the correct ticket booths.	Health	General public	Reduce queue congestion to maintain proper social distancing to prevent the spread of COVID-19.	Colored arrows and lines on the ground to delineate different queues people should wait in to purchase tickets based on visitor categories (adult, children, students, or seniors).	Saliency	Implemented policy	Effective	Ministry of Environment	環境省、環境省ナッジPT(ブラチナ)、日本版ナッジ・ユニット (BEST) 事務局。(令和2年8月21日) 新型コロナウイルス感染症対策における市民の自発的な行動変容を促す取組(ナッジ等)の募集について(結果)ー ナッジ等の具体例、留意点 ー。[PowerPoint slides]. <a href="https://www.env.go.jp/content/900447771.pdf">https://www.env.go.jp/content/900447771.pdf</a>
2020-8	Coffee shop tape in Shinjuku Gyoen	Health	General public	Reduce queue congestion to maintain proper social distancing to prevent the spread of COVID-19.	Coloured lines placed at coffee shop entrances and nearby roads to mark queuing spots.	Saliency	Implemented policy	Effective	Ministry of Environment	環境省、環境省ナッジPT(ブラチナ)、日本版ナッジ・ユニット (BEST) 事務局。(令和2年8月21日) 新型コロナウイルス感染症対策における市民の自発的な行動変容を促す取組(ナッジ等)の募集について(結果)ー ナッジ等の具体例、留意点 ー。[PowerPoint slides]. <a href="https://www.env.go.jp/content/900447771.pdf">https://www.env.go.jp/content/900447771.pdf</a>
2020-8	Conversations ban in elevators	Health	Public service employees	Prohibit conversations in elevators to prevent the spread of COVID-19.	Posters with simple messages and images stating the prohibition of conversations inside and outside elevators.	Saliency Simplification Instructive	Implemented policy	Effective	Ministry of Health, Labour and Welfare Ministry of the Environment	環境省、環境省ナッジPT(ブラチナ)、日本版ナッジ・ユニット (BEST) 事務局。(2020年8月21日) 新型コロナウイルス感染症対策における市民の自発的な行動変容を促す取組(ナッジ等)の募集について(結果)ー ナッジ等の具体例、留意点 ー。[PowerPoint slides]. <a href="https://www.env.go.jp/content/900447771.pdf">https://www.env.go.jp/content/900447771.pdf</a>
2020-10	Taxi parking manner improvement nudge	Urban space	Taxi drivers	Deter taxi drivers from parking illegally.	A signage board with two sides: one side illustrated with a pair of eyes and the message "everyone is watching you." visible to taxi drivers; the other side with a message indicating the taxi in front of pedestrians is parked illegally.	Social norms Priming Feedback	Demonstration project	Effective	NTT Data Management Institute, Inc. in partnership with Kyoto city	小林健太郎。(date). タクシー駐停車マナー改善ナッジ「いけず看板」で違法駐停車時間が9割減少 [PowerPoint slides]. <a href="https://www.env.go.jp/content/000103268.pdf">https://www.env.go.jp/content/000103268.pdf</a>
2021-2	Increasing hepatitis virus screening uptake at worksites in Japan using nudge theory and full subsidies	Health	General public	Increase hepatitis virus screening uptake.	Reminder notification messages re-designed with simplified and reduced wording, while emphasizing low fees of hepatitis virus screening.	Simplification Saliency	Academic research & experimental studies	Effective	Researchers from universities: Department of Preventive Medicine and Public Health, School of Medicine Keio University; Hepatitis Information Center, The Research Center for Hepatitis and Immunology, National Center for Global Health and Medicine; Department of Social and Preventive Epidemiology, School of Public Health, Graduate School of Medicine, Tokyo University; Department of Policy Management, Keio University; Cancerscan; School of International Health, Graduate School of Medicine, Tokyo University	Fukuyoshi, J., Korenaga, M., Yoshi, Y., Hong, L., Kashiara, S., Sigel, B., & Takebayashi, T. (2021). Increasing hepatitis virus screening uptake at worksites in Japan using nudge theory and full subsidies. Environmental Health and Preventive Medicine, 26(1), 1–9. <a href="https://doi.org/10.1186/s12199-021-00940-6">https://doi.org/10.1186/s12199-021-00940-6</a>
2021-3	Food environment improvement using nudge tactics in a convenient store at a hospital	Health	Public service employees	Increase hospital workers' purchase of healthy food items to improve diet.	Food displays re-designed to emphasize healthy sets, using "popular item" tags and reminders about employee discount	Saliency Priming Incentives	Academic research & experimental studies	Effective	Graduate School of Kagawa Nutrition University Kagawa Nutrition University Japan Association for Development of Community Medicine Japan Association for Development of Community Medicine, Taito Hospital	Kawabata, T., Takemi, Y., Hayashi, F., Nakamura, M., & Yamada, T. (2021). Food environment improvement using nudge tactics in a convenient store at a hospital. Journal of Food System Research, 27(4), 226–231. <a href="https://doi.org/10.5874/jfsr.27.4_226">https://doi.org/10.5874/jfsr.27.4_226</a>
2021-03	Verification of changes in awareness and behaviour towards the replacement of energy-saving appliances through web-based publicity.	Energy	General public	Increase awareness in energy-saving appliances	Campaign poster for fridge, air conditioner and tv with message that suggests 'many people are replacing'.	Social norms	Demonstration project	Effective	That's Corporation Comissioned by the Ministry of Economy, Trade and Industry (METI)	株式会社ザッツコーポレーション。(令和3年3月)。令和2年度省エネルギー促進に向けた広報事業(ナッジを活用した需要喚起型の一般向け情報発信事業)[報告書]。 <a href="https://www.meti.go.jp/meti_lib/report/2020FY/000077.pdf">https://www.meti.go.jp/meti_lib/report/2020FY/000077.pdf</a>
2021-03	Verification of changes in awareness and behaviour towards the replacement of energy-saving appliances through web-based publicity.	Energy	General public	Increase awareness in energy-saving appliances	Campaign poster for fridge, air conditioner and tv with loss-frame message emphasizing the extra cost in electricity by using an old appliance.	Framing	Demonstration project	Effective	That's Corporation Comissioned by the Ministry of Economy, Trade and Industry (METI)	株式会社ザッツコーポレーション。(令和3年3月)。令和2年度省エネルギー促進に向けた広報事業(ナッジを活用した需要喚起型の一般向け情報発信事業)[報告書]。 <a href="https://www.meti.go.jp/meti_lib/report/2020FY/000077.pdf">https://www.meti.go.jp/meti_lib/report/2020FY/000077.pdf</a>
2021-03	Verification of changes in awareness and behaviour towards the replacement of energy-saving appliances through web-based publicity.	Energy	General public	Increase awareness in energy-saving appliances	Campaign poster for fridge, air conditioner, and tv designed to suggest 'which' appliance to replace with, rather than 'whether' they should replace.	Default	Demonstration project	Effective	That's Corporation Comissioned by the Ministry of Economy, Trade and Industry (METI)	株式会社ザッツコーポレーション。(令和3年3月)。令和2年度省エネルギー促進に向けた広報事業(ナッジを活用した需要喚起型の一般向け情報発信事業)[報告書]。 <a href="https://www.meti.go.jp/meti_lib/report/2020FY/000077.pdf">https://www.meti.go.jp/meti_lib/report/2020FY/000077.pdf</a>
2021-03	Verification of changes in awareness and behaviour towards the replacement of energy-saving appliances through web-based publicity.	Energy	General public	Increase awareness in energy-saving appliances	Campaign poster for fridge, air conditioner, and tv designed to highlight the time to replace appliances by a certain time (e.g, New Year).	Reminder	Demonstration project	Effective	That's Corporation Comissioned by the Ministry of Economy, Trade and Industry (METI)	株式会社ザッツコーポレーション。(令和3年3月)。令和2年度省エネルギー促進に向けた広報事業(ナッジを活用した需要喚起型の一般向け情報発信事業)[報告書]。 <a href="https://www.meti.go.jp/meti_lib/report/2020FY/000077.pdf">https://www.meti.go.jp/meti_lib/report/2020FY/000077.pdf</a>
2021-6	Project to promote voluntary measures for families by sending nudges (information on energy reports) to promote low-carbon behaviour change in 2019)	Energy	General public	Increase adoption of energy-saving habits to reduce CO2 emissions.	Personalized energy reports sent to households, comparing gas and energy use with neighbours, and providing energy-saving advice.	Feedback	Demonstration project	Effective	Oracle Japan and Jyukankyo Research Institute, in partnership with Hokkaido Gas, Tohoku Electric Power3, Hokuriku Electric Power, Kansai Electric Power, and Okinawa Electric Power	Oracle News. (June 29, 2021). Oracle Helps Utility Customers Reduce 47,000 Tons of CO2 with Ministry of Environment Japan Program to Realize Decarbonized Society [Press release]. <a href="https://www.oracle.com/news/announcement/oracle-helps-utility-customers-reduce-co2-with-ministry-of-environment-japan-program-2021-06-29/">https://www.oracle.com/news/announcement/oracle-helps-utility-customers-reduce-co2-with-ministry-of-environment-japan-program-2021-06-29/</a>
2021-06	Improving the return rate of consent forms for people who require support during evacuation	Disaster risk management	General public	Increase the return rate of consent forms from people who require evacuation assistance.	Notification messages for disaster evacuation assistance sent with clarification of operation instructions: "Please return [form] by X month X year"	Reminder Saliency Instructive	Demonstration project	Effective	Tsukuba City Hall, Ibaraki Prefecture Policy Innovation Department Statistics and Data Utilization Promotion Office (Tsukuba Nudge Study Group Secretariat)	主任 金野理和。(date). 封筒のメッセージが返送率に与える影響 [PowerPoint slides]. <a href="https://www.env.go.jp/earth/ondanka/nudge/renrakukai26_1/mat_02.pdf">https://www.env.go.jp/earth/ondanka/nudge/renrakukai26_1/mat_02.pdf</a>
2021-06	Improving the return rate of consent forms for people who require support during evacuation	Disaster risk management	General public	Increase the return rate of consent forms from people who require evacuation assistance.	Notification messages for disaster evacuation assistance sent with personalized message: "This is an important notice for [recipient name]."	Saliency	Demonstration project	Non-effective	Tsukuba City Hall, Ibaraki Prefecture Policy Innovation Department Statistics and Data Utilization Promotion Office (Tsukuba Nudge Study Group Secretariat)	主任 金野理和。(date). 封筒のメッセージが返送率に与える影響 [PowerPoint slides]. <a href="https://www.env.go.jp/earth/ondanka/nudge/renrakukai26_1/mat_02.pdf">https://www.env.go.jp/earth/ondanka/nudge/renrakukai26_1/mat_02.pdf</a>
2021-06	Improving the return rate of consent forms for people who require support during evacuation	Disaster risk management	General public	Increase the return rate of consent forms from people who require evacuation assistance.	Notification messages for disaster evacuation assistance sent with 'gain-framed; message: "You may be entitled to receive evacuation support."	Framing	Demonstration project	Non-effective	Tsukuba City Hall, Ibaraki Prefecture Policy Innovation Department Statistics and Data Utilization Promotion Office (Tsukuba Nudge Study Group Secretariat)	主任 金野理和。(date). 封筒のメッセージが返送率に与える影響 [PowerPoint slides]. <a href="https://www.env.go.jp/earth/ondanka/nudge/renrakukai26_1/mat_02.pdf">https://www.env.go.jp/earth/ondanka/nudge/renrakukai26_1/mat_02.pdf</a>
2021-8	Empirical study of information provision methods to encourage the reduction of food loss from households BECC JAPAN 2021	Environmental sustainability	General public	Reduce household food waste (i.e., prevent food waste) to reduce CO2 emissions	Flyer asking households to take a picture of their fridge each time before going grocery-shopping, and set regular reminders on phone each day to take fridge picture.	Feedback Reminder	Demonstration project	Effective	Deloitte Tohmatsu Consulting Housing and Environment Planning Research This study was carried out as part of the Ministry of the Environment's commissioned work (Commissioned work to study the sophistication of decarbonised lifestyle promotion projects in 2020).	福田守宏, 所 平山翔, 玄 姫, 小林翼。(2021年8月31日)。家庭からの食品ロス削減を促す情報提供手法の実証調査 BECC JAPAN 2021 [PowerPoint slides]. <a href="https://seeb.jp/paper/2021/doc/BECC.JAPAN2021_A2-5.pdf">https://seeb.jp/paper/2021/doc/BECC.JAPAN2021_A2-5.pdf</a>
2021-8	Empirical study of information provision methods to encourage the reduction of food loss from households BECC JAPAN 2021	Environmental sustainability	General public	Reduce household food waste (i.e., prevent food waste) to reduce CO2 emissions	Flyer asking households to take a picture of their fridge each time before going grocery-shopping, to set regular reminders on phone each day to take fridge picture, and provided information on food waste issue in Japan.	Feedback Reminder Priming	Demonstration project	Effective	Deloitte Tohmatsu Consulting Housing and Environment Planning Research This study was carried out as part of the Ministry of the Environment's commissioned work (Commissioned work to study the sophistication of decarbonised lifestyle promotion projects in 2020).	福田守宏, 所 平山翔, 玄 姫, 小林翼。(2021年8月31日)。家庭からの食品ロス削減を促す情報提供手法の実証調査 BECC JAPAN 2021 [PowerPoint slides]. <a href="https://seeb.jp/paper/2021/doc/BECC.JAPAN2021_A2-5.pdf">https://seeb.jp/paper/2021/doc/BECC.JAPAN2021_A2-5.pdf</a>
2021-09	Promotion of resource circulation by disclosing combustible waste disposal costs	Environmental sustainability	General public	Increase food waste recycling.	Posters with 'loss-frame' messages about high costs incurred to town due to the lack of a combustible waste processing facility, placed on shelves selling combustible garbage bags.	Framing Information	Demonstration project	Effective	NEC Solution Innovator Co., Ltd.	日室 聡仁。(date)。可燃ごみ処理費の開示による資源循環促進 [PowerPoint slides]. <a href="https://www.env.go.jp/content/000103270.pdf">https://www.env.go.jp/content/000103270.pdf</a>
2021-12	Nudge to prevent smartphone use while walking	Health	Students	Encourage students to avoid walking while looking at their smartphones.	Digital signage featuring a child reacting positively when students walking are not using smartphones, and negatively when they are.	Social norms Feedback	Demonstration project	Effective	Mitsubishi Electric Co., Ltd. and University of Shiga Prefecture	古木一朗, 山田歩。(date)。歩きスマホを防止するナッジ - フィールド実験による検証 [PowerPoint slides]. <a href="https://www.env.go.jp/content/000103269.pdf">https://www.env.go.jp/content/000103269.pdf</a>
2021-12	Nudge to prevent smartphone use while walking	Health	Students	Encourage students to avoid walking while looking at their smartphones.	Digital signage designed as a fashion show challenge, featuring a model who walks smoothly if students walking are not using smartphones, but trips if they are.	Feedback	Demonstration project	Effective	Mitsubishi Electric Co., Ltd. and University of Shiga Prefecture	古木一朗, 山田歩。(date)。歩きスマホを防止するナッジ - フィールド実験による検証 [PowerPoint slides]. <a href="https://www.env.go.jp/content/000103269.pdf">https://www.env.go.jp/content/000103269.pdf</a>
2022-1	Nudges for COVID-19 voluntary vaccination: How to explain peer information?	Health	General public	Encourage voluntary vaccination behavior while preserving people's autonomous decision-making power.	A comparison message in online survey to promote COVID-19 vaccination: "7-8 out of 10/ 6-7 out of 10 people in your age group answered they would receive the vaccine".	Social norms	Academic research & experimental studies	Mixed	Faculty of Economics, Tohoku Gakuin University Center for Emergency Preparedness and Response, National Institute of Infectious Diseases, Japan Center for Infectious Disease Education and Research, Osaka University Graduate School of Economics, Osaka University	Sasaki, S., Saito, T., & Ohtake, F. (2022). Nudges for COVID-19 voluntary vaccination: How to explain peer information? Social Science & Medicine, 292, 114561. <a href="https://doi.org/10.1016/j.socscimed.2021.114561">https://doi.org/10.1016/j.socscimed.2021.114561</a>

2022-1	Nudges for COVID-19 voluntary vaccination: How to explain peer information?	Health	General public	Encourage voluntary vaccination behavior while preserving people's autonomous decision-making power.	An 'influence-gain' message in online survey to promote COVID-19 vaccination: "Your vaccination uptake can encourage the vaccination uptake of the people around you."	Framing Social norms	Academic research & experimental studies	Mixed	Faculty of Economics, Tohoku Gakuin University Center for Emergency Preparedness and Response, National Institute of Infectious Diseases, Japan Center for Infectious Disease Education and Research, Osaka University Graduate School of Economics, Osaka University	Sasaki, S., Saito, T., & Ohtake, F. (2022). Nudges for COVID-19 voluntary vaccination: How to explain peer information? <i>Social Science &amp; Medicine</i> , 292, 114561. <a href="https://doi.org/10.1016/j.socscimed.2021.114561">https://doi.org/10.1016/j.socscimed.2021.114561</a>
2022-1	Nudges for COVID-19 voluntary vaccination: How to explain peer information?	Health	General public	Encourage voluntary vaccination behavior while preserving people's autonomous decision-making power.	An influence-loss message to promote COVID-19 vaccination: "If you do not take the vaccine, the people around may also not do so".	Framing Social norms	Academic research & experimental studies	Mixed	Faculty of Economics, Tohoku Gakuin University Center for Emergency Preparedness and Response, National Institute of Infectious Diseases, Japan Center for Infectious Disease Education and Research, Osaka University Graduate School of Economics, Osaka University	Sasaki, S., Saito, T., & Ohtake, F. (2022). Nudges for COVID-19 voluntary vaccination: How to explain peer information? <i>Social Science &amp; Medicine</i> , 292, 114561. <a href="https://doi.org/10.1016/j.socscimed.2021.114561">https://doi.org/10.1016/j.socscimed.2021.114561</a>
2022-1	Utilizing and testing 4 nudges to improve the arrangement of bicycles in bicycle parking lots	Education	Students	Encourage proper placement of bicycles in school bicycle racks.	A poster placed in bicycle parking area with a direct message: "Please park your bicycle properly."	Salience Instructive	Demonstration project	Unknown	Hiroshima University High School	堀井彩帆 花田彩芽 両見真純 (date). 駐輪場の自転車の並びの改善へのナッジの活用 [PowerPoint slides]. <a href="https://www.env.go.jp/content/000103271.pdf">https://www.env.go.jp/content/000103271.pdf</a>
2022-1	Utilizing and testing 4 nudges to improve the arrangement of bicycles in bicycle parking lots	Education	Students	Encourage proper placement of bicycles in school bicycle racks.	A poster placed in bicycle parking area with an indirect message: "A disorderly bicycle is a disorderly mind."	Priming	Demonstration project	Effective	Hiroshima University High School	堀井彩帆 花田彩芽 両見真純 (date). 駐輪場の自転車の並びの改善へのナッジの活用 [PowerPoint slides]. <a href="https://www.env.go.jp/content/000103271.pdf">https://www.env.go.jp/content/000103271.pdf</a>
2022-1	Utilizing and testing 4 nudges to improve the arrangement of bicycles in bicycle parking lots	Education	Students	Encourage proper placement of bicycles in school bicycle racks.	Lines placed on the ground in bicycle parking area to delineate the space between each bicycle.	Salience	Demonstration project	Unknown	Hiroshima University High School	堀井彩帆 花田彩芽 両見真純 (date). 駐輪場の自転車の並びの改善へのナッジの活用 [PowerPoint slides]. <a href="https://www.env.go.jp/content/000103271.pdf">https://www.env.go.jp/content/000103271.pdf</a>
2022-1	Utilizing and testing 4 nudges to improve the arrangement of bicycles in bicycle parking lots	Education	Students	Encourage proper placement of bicycles in school bicycle racks.	A poster placed in bicycle parking area with an illustration of neatly parked bicycles.	Priming	Demonstration project	Unknown	Hiroshima University High School	堀井彩帆 花田彩芽 両見真純 (date). 駐輪場の自転車の並びの改善へのナッジの活用 [PowerPoint slides]. <a href="https://www.env.go.jp/content/000103271.pdf">https://www.env.go.jp/content/000103271.pdf</a>
2022-2	Fixed asset tax account transfer recommendation nudge	Administration	General public	Improve compliance with paying fixed asset taxes on time.	Tax payment application forms re-designed with less wording, simplified explanation of operation steps, personal codes, a 'loss-framed message' ("Reduce risks of paying late fees"), and a reminder of the deadline.	Simplification Framing Reminder	Demonstration project	Effective	Mitsubishi UFJ Research & Consulting Co., Ltd. (Public-private partnership project with Totsuka Ward, Yokohama City, Kanagawa Prefecture)	小林 庸平. (2022年2月7日). 固定資産税の口座振替勧奨ナッジ～横浜市戸塚区との公民連携プロジェクト～[PowerPoint slides]. <a href="https://www.env.go.jp/earth/ondanka/nudge/renrakukai26/mat_01.pdf">https://www.env.go.jp/earth/ondanka/nudge/renrakukai26/mat_01.pdf</a>
2022-3	Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan	Health	General public	Increase rubella antibody testing and vaccination eligible receivers (men in the 40s and 50s).	An 'age-emphasis' message in survey to bring attention to individuals' eligibility for testing: "To all men in their 40s and 50s (born between 1962-1978), take an antibody test and vaccination for rubella to protect you and the children of the generation to come!"	Salience	Academic research & experimental studies	Non-effective	Osaka University Tohoku Gakuin University RIETI	Kato, H., Sasaki, S., Ohtake, F. (2022 ). Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan. RIETI Discussion Paper Series 22-J-010. <a href="https://www.rieti.go.jp/jp/publications/dp/22j010.pdf">https://www.rieti.go.jp/jp/publications/dp/22j010.pdf</a>
2022-3	Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan	Health	General public	Increase rubella antibody testing and vaccination eligible receivers (men in the 40s and 50s).	An 'altruism-emphasis' message in survey: "To men in their 40s and 50s (born between 1962 and 1979), if a pregnant woman is infected with rubella because of you, there is a risk of the child being born with a disability."	Framing Social norms	Academic research & experimental studies	Effective	Osaka University Tohoku Gakuin University RIETI	Kato, H., Sasaki, S., Ohtake, F. (2022 ). Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan. RIETI Discussion Paper Series 22-J-010. <a href="https://www.rieti.go.jp/jp/publications/dp/22j010.pdf">https://www.rieti.go.jp/jp/publications/dp/22j010.pdf</a>
2022-3	Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan	Health	General public	Increase rubella antibody testing and vaccination eligible receivers (men in the 40s and 50s).	A 'loss-framed, selfish' message in survey: "To all men in their 40s and 50s (born between 1962 and 1980), if an adult male is infected with rubella, he may become seriously ill and develop complications such as encephalitis and thrombocytopenic purpura!"	Salience Framing	Academic research & experimental studies	Non-effective	Osaka University Tohoku Gakuin University RIETI	Kato, H., Sasaki, S., Ohtake, F. (2022 ). Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan. RIETI Discussion Paper Series 22-J-010. <a href="https://www.rieti.go.jp/jp/publications/dp/22j010.pdf">https://www.rieti.go.jp/jp/publications/dp/22j010.pdf</a>
2022-3	Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan	Health	General public	Increase rubella antibody testing and vaccination eligible receivers (men in the 40s and 50s).	A 'social comparison' message in survey: "To men in their 40s and 50s (born between 1962 and 1981), one out of every five men in your generation does not have antibodies against rubella. This means you are more than twice as likely as other generations to be infected with rubella!"	Social norms	Academic research & experimental studies	Effective	Osaka University Tohoku Gakuin University RIETI	Kato, H., Sasaki, S., Ohtake, F. (2022 ). Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan. RIETI Discussion Paper Series 22-J-010. <a href="https://www.rieti.go.jp/jp/publications/dp/22j010.pdf">https://www.rieti.go.jp/jp/publications/dp/22j010.pdf</a>
2022-3	Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan	Health	General public	Increase rubella antibody testing and vaccination eligible receivers (men in the 40s and 50s).	A 'loss-framed, deadline message in survey: "To men in their 40s and 50s (born between 1962 and 1982), the coupons for free antibody testing and vaccination against rubella that we delivered to you will expire on March 31, 2020!"	Reminder	Academic research & experimental studies	Non-effective	Osaka University Tohoku Gakuin University RIETI	Kato, H., Sasaki, S., Ohtake, F. (2022 ). Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan. RIETI Discussion Paper Series 22-J-010. <a href="https://www.rieti.go.jp/jp/publications/dp/22j010.pdf">https://www.rieti.go.jp/jp/publications/dp/22j010.pdf</a>
2022-3	Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan	Health	General public	Increase rubella antibody testing and vaccination eligible receivers (men in the 40s and 50s).	A 'low-cost' message: "To men in their 40s and 50s (born between 1962 and 1983), if you use the free coupons for the antibody test and vaccination at your usual medical checkup, you can be tested without having your blood drawn multiple times!"	Framing	Academic research & experimental studies	Non-effective	Osaka University Tohoku Gakuin University RIETI	Kato, H., Sasaki, S., Ohtake, F. (2022 ). Text-Based Nudges Promoting Rubella Antibody Testing and Vaccination: Evidence from a Nationwide Online Experiment in Japan. RIETI Discussion Paper Series 22-J-010. <a href="https://www.rieti.go.jp/jp/publications/dp/22j010.pdf">https://www.rieti.go.jp/jp/publications/dp/22j010.pdf</a>
2022-07	The potential for changing dietary behaviour towards food decarbonisation	Environmental sustainability	General public	Change attitude on meat consumption to favour vegetarian-based diets	Information on the negative environmental impact of livestock products are provided in the survey.	Information	Demonstration project	Effective	Central Research Institute of Electric Power Industry Mizuho Research & Technologies	木村 幸, 佐野 翔平. (2022年7月28日). 食の脱炭素化に向けた食行動変容の可能性～情報提供による菜食への意識変化の分析～[PowerPoint slides]. <a href="https://seeb.jp/paper/2022/doc/BECC.JAPAN2022_B3-1.pdf">https://seeb.jp/paper/2022/doc/BECC.JAPAN2022_B3-1.pdf</a>
2022-07	The potential for changing dietary behaviour towards food decarbonisation	Environmental sustainability	General public	Change attitude on meat consumption to favour vegetarian-based diets	Information on the health and nutritional benefits of vegetarian diets are provided in the survey.	Information Framing	Demonstration project	Effective	Central Research Institute of Electric Power Industry Mizuho Research & Technologies	木村 幸, 佐野 翔平. (2022年7月28日). 食の脱炭素化に向けた食行動変容の可能性～情報提供による菜食への意識変化の分析～[PowerPoint slides]. <a href="https://seeb.jp/paper/2022/doc/BECC.JAPAN2022_B3-1.pdf">https://seeb.jp/paper/2022/doc/BECC.JAPAN2022_B3-1.pdf</a>
2022-07	The potential for changing dietary behaviour towards food decarbonisation	Environmental sustainability	General public	Change attitude on meat consumption to favour vegetarian-based diets	Information on increased social interest in vegetarianism around the world is provided in survey.	Social norms	Demonstration project	Effective	Central Research Institute of Electric Power Industry Mizuho Research & Technologies	木村 幸, 佐野 翔平. (2022年7月28日). 食の脱炭素化に向けた食行動変容の可能性～情報提供による菜食への意識変化の分析～[PowerPoint slides]. <a href="https://seeb.jp/paper/2022/doc/BECC.JAPAN2022_B3-1.pdf">https://seeb.jp/paper/2022/doc/BECC.JAPAN2022_B3-1.pdf</a>
2022-07	The potential for changing dietary behaviour towards food decarbonisation	Environmental sustainability	General public	Change attitude on meat consumption to favour vegetarian-based diets	Information on meat alternatives are provided in the survey.	Information	Demonstration project	Effective	Central Research Institute of Electric Power Industry Mizuho Research & Technologies	木村 幸, 佐野 翔平. (2022年7月28日). 食の脱炭素化に向けた食行動変容の可能性～情報提供による菜食への意識変化の分析～[PowerPoint slides]. <a href="https://seeb.jp/paper/2022/doc/BECC.JAPAN2022_B3-1.pdf">https://seeb.jp/paper/2022/doc/BECC.JAPAN2022_B3-1.pdf</a>
2022-9	Fire Department Energy Saving Nudge Demonstration Project	Energy	Public service employees	Encourage employees to turn off the lights and reduce air conditioner use to save energy.	Simple posters next to light switches to remind the fire department to save on energy.	Salience	Demonstration project	Effective	Kurashiki City Fire Department	植竹香織. (2022年9月12日) 日本の自治体でのナッジの広がり⑤: 浅田昌宏さん(岡山県倉敷市) .Note. <a href="https://note.com/bi_nudge/n/d1adf375a996">https://note.com/bi_nudge/n/d1adf375a996</a>
2022-9	Validation of the most cost-effective nudge to promote workers' regular self-weighting: a cluster randomized controlled trial	Health	Public service employees	Encourage regular weighing to prevent obesity.	Financial awareness quiz in a health-related educational workshop focusing on the financial costs associated with obesity.	Framing Priming	Academic research & experimental studies	Effective (most)	Aomori University of Health and Welfare, Aomori University, Aomori Aomori Prefectural Government, Aomori, Japan	Takebayashi, M., Yoshiike, N., Koyama, T., Toriyabe, M., Nakamura, H., & Takebayashi, K. (2022). Validation of the most cost-effective nudge to promote workers' regular self-weighting: A cluster randomized controlled trial. <i>Scientific Reports</i> , 12(1). <a href="https://doi.org/10.1038/s41598-022-18916-z">https://doi.org/10.1038/s41598-022-18916-z</a>
2022-9	Validation of the most cost-effective nudge to promote workers' regular self-weighting: a cluster randomized controlled trial	Health	Public service employees	Encourage regular weighing to prevent obesity.	Self-weighting commitment activity in a health-related educational workshop where participants commit to a specific time/place for self-weighting, and share their chosen rewards for consistent self-weighting.	Pre-commitment Social norms	Academic research & experimental studies	Effective	Aomori University of Health and Welfare, Aomori University, Aomori Aomori Prefectural Government, Aomori, Japan	Takebayashi, M., Yoshiike, N., Koyama, T., Toriyabe, M., Nakamura, H., & Takebayashi, K. (2022). Validation of the most cost-effective nudge to promote workers' regular self-weighting: A cluster randomized controlled trial. <i>Scientific Reports</i> , 12(1). <a href="https://doi.org/10.1038/s41598-022-18916-z">https://doi.org/10.1038/s41598-022-18916-z</a>
2022-9	Validation of the most cost-effective nudge to promote workers' regular self-weighting: a cluster randomized controlled trial	Health	Public service employees	Encourage regular weighing to prevent obesity.	Success story sharing activity in a health-related educational workshop where participants share personal success stories of achieving goals after putting significant effort.	Priming	Academic research & experimental studies	Effective	Aomori University of Health and Welfare, Aomori University, Aomori Aomori Prefectural Government, Aomori, Japan	Takebayashi, M., Yoshiike, N., Koyama, T., Toriyabe, M., Nakamura, H., & Takebayashi, K. (2022). Validation of the most cost-effective nudge to promote workers' regular self-weighting: A cluster randomized controlled trial. <i>Scientific Reports</i> , 12(1). <a href="https://doi.org/10.1038/s41598-022-18916-z">https://doi.org/10.1038/s41598-022-18916-z</a>
2022-10	Using nudges for water demand management: A field experiment for water conservation	Environmental sustainability	General public	Reduce water usage to conserve resources and reduce environmental impact in the Tokyo Metropolitan area.	Feedback report sent to households with visual representation display of water as a public good, with an outline of Tokyo prefecture indicating the current water levels based on household consumption.	Feedback Social norms Framing	Academic research & experimental studies	Effective	Graduate School of Social Sciences, Hitotsubashi University Graduate School of Arts and Sciences, The University of Tokyo Faculty of Psychology, Otemon Gakuin University Graduate School of Arts and Sciences, The University of Tokyo	Otaki, Y., Iwatani, S., Honda, H., & Ueda, K. (2022). Using nudges for water demand management: A field experiment for water conservation. <i>PLOS Water</i> , 1(10), e0000057. <a href="https://doi.org/10.1371/journal.pwat.0000057">https://doi.org/10.1371/journal.pwat.0000057</a>
2022-10	Using nudges for water demand management: A field experiment for water conservation	Environmental sustainability	General public	Reduce water usage to conserve resources and reduce environmental impact in the Tokyo Metropolitan area.	Feedback report sent to households with bar graphs indicating water consumption compared to their neighbors.	Feedback Social norms	Academic research & experimental studies	Non-effective	Graduate School of Social Sciences, Hitotsubashi University Graduate School of Arts and Sciences, The University of Tokyo Faculty of Psychology, Otemon Gakuin University Graduate School of Arts and Sciences, The University of Tokyo	Otaki, Y., Iwatani, S., Honda, H., & Ueda, K. (2022). Using nudges for water demand management: A field experiment for water conservation. <i>PLOS Water</i> , 1(10), e0000057. <a href="https://doi.org/10.1371/journal.pwat.0000057">https://doi.org/10.1371/journal.pwat.0000057</a>



2023-1	Improvement impact of nudges incorporated in environmental education on students' environmental knowledge, attitudes, and behaviors	Environmental sustainability	Students	Increase awareness of students' knowledge, attitudes, and actions surrounding environmental issues.	Goal-setting activity after environmental education class for students to describe how they will try to avoid throwing away plastic products.	Priming	Academic research & experimental studies	Mixed	School of Economics and Management, University of Hyogo Graduate School of Media and Governance, Keio University Faculty of Arts and Science, Kyushu University Faculty of Social and Cultural Studies, Kyushu University Urban Institute, Kyushu University Faculty of Policy Management, Keio University Zero Waste Japan	Kurokawa, H., Igei, K., Kitsuki, A., Kurita, K., Managi, S., Nakamuro, M., & Sakano, A. (2023). Improvement impact of nudges incorporated in environmental education on students' environmental knowledge, attitudes, and behaviors. <i>Journal of Environmental Management</i> , 325, 116612. <a href="https://doi.org/10.1016/j.jenvman.2022.116612">https://doi.org/10.1016/j.jenvman.2022.116612</a>
2023-1	Improvement impact of nudges incorporated in environmental education on students' environmental knowledge, attitudes, and behaviors	Environmental sustainability	Students	Increase awareness of students' knowledge, attitudes, and actions surrounding environmental issues.	Additional essay writing activity after environmental education class for students to increase their empathy for parties impacted by environmental issues.	Priming	Academic research & experimental studies	Mixed	School of Economics and Management, University of Hyogo Graduate School of Media and Governance, Keio University Faculty of Arts and Science, Kyushu University Faculty of Social and Cultural Studies, Kyushu University Urban Institute, Kyushu University Faculty of Policy Management, Keio University Zero Waste Japan	Kurokawa, H., Igei, K., Kitsuki, A., Kurita, K., Managi, S., Nakamuro, M., & Sakano, A. (2023). Improvement impact of nudges incorporated in environmental education on students' environmental knowledge, attitudes, and behaviors. <i>Journal of Environmental Management</i> , 325, 116612. <a href="https://doi.org/10.1016/j.jenvman.2022.116612">https://doi.org/10.1016/j.jenvman.2022.116612</a>
2023-1	Improving the separation of plastic bottles at Senboku High School using nudges	Environmental sustainability	Students	Encourage students to properly dispose of PET bottles.	Transparent trash cans for clear visibility of how PET bottles are disposed of.	Social norms	Demonstration project	Effective	Osaka Prefectural Senboku High School	柴田 善, 古川 奎人, 柴嶋 莉子, 岩崎, 花乃 菊永, 麻衣子. (date). ナッジを利用した 泉北高校のゴミ(ペットボトル)の分別状況の改善 [PDF slides]. <a href="https://www.env.go.jp/content/000170130.pdf">https://www.env.go.jp/content/000170130.pdf</a>
2023-1	Improving the separation of plastic bottles at Senboku High School using nudges	Environmental sustainability	Students	Encourage students to properly dispose of PET bottles.	Simple posters illustrating how to properly dispose of PET bottles placed in near of trash bins.	Information Simplification	Demonstration project	Effective	Osaka Prefectural Senboku High School	柴田 善, 古川 奎人, 柴嶋 莉子, 岩崎, 花乃 菊永, 麻衣子. (date). ナッジを利用した 泉北高校のゴミ(ペットボトル)の分別状況の改善 [PDF slides]. <a href="https://www.env.go.jp/content/000170130.pdf">https://www.env.go.jp/content/000170130.pdf</a>
2023-2	Zonohana Park Yokohama - Counter littering	Environmental sustainability	General public	Reduce littering in public park by children.	Trash cans shaped in Minecraft character (" Creeper") placed in park to discourage littering by children and young people.	Saliency	Demonstration project	Effective	Dr Takaho Itoigawa of Utsunomiya University in Minatomirai, Yokohama.	Uetake, K., de Kort, M. (2023, February 2). Trash that you can't help but throw away. Nudging at Zonohana Park, Yokohama, Japan . <i>Medium</i> . <a href="https://medium.com/@nudgejapan/trash-that-you-cant-help-but-throw-away-nudging-at-zonohana-park-yokohama-japan-5e3c26f05d9d">https://medium.com/@nudgejapan/trash-that-you-cant-help-but-throw-away-nudging-at-zonohana-park-yokohama-japan-5e3c26f05d9d</a>
2023-02	Nudge Project to Promote Waste Sorting Using Nudge Labels 2021: Promoting garbage separation behavior using nudge labels at Fukushima Prefectural Office	Environmental sustainability	Public service employees	Improve waste separation.	Red poster featuring a simple question ("Is that combustible garbage?") to prompt viewers to stop and reflect on the nature of their garbage.	Saliency Priming Simplification?	Demonstration project	Effective	Fukushima Prefectural Government	植竹香織. (2023年2月9日). 日本の自治体でのナッジの広がり⑦: 福島県庁におけるナッジラベルを活用したごみ分別行動促進 (一般財団法人 電力中央研究所 + ポリシーナッジデザイン). <i>Note</i> . <a href="https://note.com/bi_nudge/n/n7d2722b19fd2">https://note.com/bi_nudge/n/n7d2722b19fd2</a>
2023-02-	Green Nudge initiative	Environmental sustainability	Students	Decrease amount of food discarded after reaching its expiration date.	Stickers placed on food items that are nearing expiration dates, accompanied by posters promoting awareness on food loss placed around campus and inside convenience stores.	Saliency Priming	Demonstration project	Non-effective	Project by the Ebetsu Regional Council for Global Warming Countermeasures, with the Hokkaido Action Design Team (HoBIT), Professor Takaho Itoigawa of Utsunomiya University, and Policy Nudge Design Japan LLC.	Uetake, K., de Kort, M. (2023, February 10). The Spread of Nudges in Local Governments in Japan with Mr. Takashi Anbai (Hokkaido Information University)
2023-2	Improving the rate of cancer screening in Takahama, Fukui	Health	General public	Increase cancer screening uptake.	Cancer screening appointment is integrated in the notification message on general medical examination; receivers are asked to select their desired date for screening.	Default	Demonstration project	Effective	Local government of Fukui	Murayama, H., Takagi, Y., Tsuda, H., & Kato, Y. (2023). Applying nudge to public health policy: Practical examples and tips for designing nudge interventions. <i>International Journal of Environmental Research and Public Health</i> , 20(5). <a href="https://doi.org/10.3390/ijerph20053962">https://doi.org/10.3390/ijerph20053962</a>
2023-2	Improving colorectal cancer screening participation rate due to different messages on postcards	Health	General public	Increase colorectal cancer screening uptake.	A 'loss-framed' message in reminder mail for colorectal cancer screening: "If you do not take a screening this year, you will not receive a screening kit next year".	Framing	Demonstration project	Effective	Local government of Hachijoji	厚生労働省. (date). 明日から使える ナッジ理論. <a href="https://www.mhlw.go.jp/content/10901000/000500406.pdf">https://www.mhlw.go.jp/content/10901000/000500406.pdf</a>
2023-2	Improving colorectal cancer screening participation rate due to different messages on postcards	Health	General public	Increase colorectal cancer screening uptake.	A 'gain-framed' message in reminder mail for colorectal cancer screening: "If you take a screening this year, you will receive a screening kit next year".	Framing	Demonstration project	Effective	Local government of Hachijoji	厚生労働省. (date). 明日から使える ナッジ理論. <a href="https://www.mhlw.go.jp/content/10901000/000500406.pdf">https://www.mhlw.go.jp/content/10901000/000500406.pdf</a>
2023-2	Increasing uptake of general health check-ups in Chiba	Health	General public	Increase general health check-ups uptake.	Simplified letters with clear instructions on where to get the general health check-up included in the letters sent to local residents.	Simplification	Demonstration project	Effective	Local government of Chiba prefecture	Murayama, H., Takagi, Y., Tsuda, H., & Kato, Y. (2023). Applying nudge to public health policy: Practical examples and tips for designing nudge interventions. <i>International Journal of Environmental Research and Public Health</i> , 20(5). <a href="https://doi.org/10.3390/ijerph20053962">https://doi.org/10.3390/ijerph20053962</a>
2023-3	Nudge-Based Interventions on Health Promotion Activity Among Very Old People: A Pragmatic, 2-Arm, Participant-Blinded Randomized Controlled Trial	Health	Elderly	Increase of social and physical activities in the elderly populations.	A 'loss-framed' message displayed on person's exercise feedback sheet providing information about the time-limited special content available on tablet computers ("Time-limited special quizzes made by Kyoto University are available from July 13 for a week! Don't miss it!"), followed by a commitment question ("When would you like to use the tablet again?").	Framing Pre-commitment	Academic research & experimental studies	Effective	Kyoto University Graduate School of Medicine, Kyoto, Japan Center for Infectious Disease Education and Research, Osaka University, Osaka, Japan Department of Health Data Science, Tokyo Medical University, Tokyo, Japan Kyoto University Museum, Kyoto University, Kyoto, Japan Center for Data Science Education and Research, Shiga University, Shiga, Japan	Yamada, Y., Uchida, T., Sasaki, S., Taguri, M., Shiose, T., Ikenoue, T., & Fukuma, S. (2023). Nudge-Based interventions on health promotion activity among very old people: A pragmatic, 2-arm, participant-blinded randomized controlled trial. <i>Journal of the American Medical Directors Association</i> , 24(3), 390-394.e5. <a href="https://doi.org/10.1016/j.jamda.2022.11.009">https://doi.org/10.1016/j.jamda.2022.11.009</a>
2023-3	Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University	Environmental sustainability	Students	Encourage proper disposal of plastic bottles.	A disposal inlet designed for plastic bottles, requiring them to be emptied and crushed before being thrown into the trash can.	Saliency Priming	Demonstration project	Non-effective	Keio SFC's "Experimental Behavioral Economics Seminar"	Uetake, K., de Kort, M. (2023, March 1). Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University (Assistant Professor Mika Kunieda). <i>Medium</i> . <a href="https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8">https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8</a>
2023-3	Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University	Environmental sustainability	Students	Reduce food waste.	Posters on food waste awareness hung around school, cafeteria menu that highlights small portion meals, and weight scale placed under food disposal trash cans.	Saliency Priming Information Feedback	Demonstration project	Effective	Keio SFC's "Experimental Behavioral Economics Seminar"	Uetake, K., de Kort, M. (2023, March 1). Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University (Assistant Professor Mika Kunieda). <i>Medium</i> . <a href="https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8">https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8</a>
2023-3	Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University	Environmental sustainability	Students	Promote better waste separation.	Japanese and English posters hung around school near trash bins indicating different types of garbage and their disposal methods, accompanied by photographs showing the additional work that is done by campus cleaners if garbage separation is not properly done.	Saliency Priming Framing Social norms	Demonstration project	Mixed	Keio SFC's "Experimental Behavioral Economics Seminar"	Uetake, K., de Kort, M. (2023, March 1). Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University (Assistant Professor Mika Kunieda). <i>Medium</i> . <a href="https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8">https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8</a>
2023-3	Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University	Energy	Students	Encourage switching off lights to conserve energy.	Posters encouraging turning lights off placed next to light switches in lecture rooms.	Saliency	Demonstration project	Effective	Keio SFC's "Experimental Behavioral Economics Seminar"	Uetake, K., de Kort, M. (2023, March 1). Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University (Assistant Professor Mika Kunieda). <i>Medium</i> . <a href="https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8">https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8</a>
2023-3	Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University	Environmental sustainability	Students	Reduce plastic spoon use.	Sale of edible spoons in cafeteria framed as a healthy snack that can also be used as a spoon.	Framing	Demonstration project	Mixed	Keio SFC's "Experimental Behavioral Economics Seminar"	Uetake, K., de Kort, M. (2023, March 1). Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University (Assistant Professor Mika Kunieda). <i>Medium</i> . <a href="https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8">https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8</a>
2023-3	Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University	Environmental sustainability	Students	Reduce use of plastic water bottles.	Posters hung in convenience stores encouraging the use of free cold water machines and showing where they can be found on campus.	Saliency	Demonstration project	Mixed	Keio SFC's "Experimental Behavioral Economics Seminar"	Uetake, K., de Kort, M. (2023, March 1). Green Nudge Initiatives at Japanese Universities: Shonan Fujisawa Campus, Keio University (Assistant Professor Mika Kunieda). <i>Medium</i> . <a href="https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8">https://medium.com/@nudgejapan/green-nudge-initiatives-at-japanese-universities-shonan-fujisawa-campus-keio-university-assistant-6fb9d56834d8</a>
2023-3	Biblio Nudge Proposal	Education	Students	Encourage high school students to visit the school library.	Visually appealing bulletin boards that feature book recommendations by students.	Saliency Social norms	Policy proposal	Unknown	Nonprofit Organization Gutsu no Kai Ochanomizu University Institute of Human Development and Educational Science Saitama Prefecture East Central Welfare Office Saitama Prefecture Industrial Human Resource Development Division Saitama Prefecture Urban Area Development Division Based on field surveys of Kisai Junior High School and Soka Junior High School	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究 報告書「ナッジ理論を活用した政策づくり」. <a href="http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf">http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf</a>



2023-3	Biblio Nudge Proposal	Education	Students	Encourage high school students to visit the school library.	A 'recommended books' corner, placed near the library, that changes weekly according to different topics.	Priming Salience	Policy proposal	Unknown	Nonprofit Organization Gutsu no Kai Ochanomizu University Institute of Human Development and Educational Science Saitama Prefecture East Central Welfare Office Saitama Prefecture Industrial Human Resource Development Division Saitama Prefecture Urban Area Development Division Based on field surveys of Kisai Junior High School and Soka Junior High School	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Biblio Nudge Proposal	Education	Students	Encourage high school students to visit the school library.	Inclusion of background music, tatami, dining area, and more to turn library in to relaxing environment.	Priming	Policy proposal	Unknown	Nonprofit Organization Gutsu no Kai Ochanomizu University Institute of Human Development and Educational Science Saitama Prefecture East Central Welfare Office Saitama Prefecture Industrial Human Resource Development Division Saitama Prefecture Urban Area Development Division Based on field surveys of Kisai Junior High School and Soka Junior High School	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Let's start excercising tomorrow	Health	General public	Encourage people in their 30s and 40s who are health-conscious to exercise more.	Feedback report with results from previous year's medical check-up sent in the pre-medical check-up mail.	Feedback	Policy proposal	Unknown	Funai Research Institute, Inc. The Musashino Bank, Ltd. Saitama Prefecture Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Let's start excercising tomorrow	Health	General public	Encourage people in their 30s and 40s who are health-conscious to exercise more.	A personalizable 'fortune' message is sent in the pre-checkup mail.	Priming	Policy proposal	Unknown	Funai Research Institute, Inc. The Musashino Bank, Ltd. Saitama Prefecture Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Let's start excercising tomorrow	Health	General public	Encourage people in their 30s and 40s who are health-conscious to exercise more.	Encouragement messages and health information pasted on result mail envelopes.	Information	Policy proposal	Unknown	Funai Research Institute, Inc. The Musashino Bank, Ltd. Saitama Prefecture Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Let's start excercising tomorrow	Health	General public	Encourage people in their 30s and 40s who are health-conscious to exercise more.	Reward can be retrieved at next year's health check-up if person health targets are achieved based on current year's health check-up results.	Feedback Incentives Pre-commitment	Policy proposal	Unknown	Funai Research Institute, Inc. The Musashino Bank, Ltd. Saitama Prefecture Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Let's start excercising tomorrow	Health	General public	Encourage people in their 30s and 40s who are health-conscious to exercise more.	A QR code that links to a step counting app is included in the health checkup results mail.	Priming	Policy proposal	Unknown	Funai Research Institute, Inc. The Musashino Bank, Ltd. Saitama Prefecture Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Let's start excercising tomorrow	Health	General public	Encourage people in their 30s and 40s who are health-conscious to exercise more.	Anonymous ranking system based on the health results of everyone who had a medical check-up at the hospital on the same day is included in the health results mail.	Social norms	Policy proposal	Unknown	Funai Research Institute, Inc. The Musashino Bank, Ltd. Saitama Prefecture Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Let's start excercising tomorrow	Health	General public	Encourage people in their 30s and 40s who are health-conscious to exercise more.	Food posters that display how much/little one can eat based on the amount of exercise they do included in the health results mail.	Salience	Policy proposal	Unknown	Funai Research Institute, Inc. The Musashino Bank, Ltd. Saitama Prefecture Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Let's start excercising tomorrow	Health	General public	Encourage people in their 30s and 40s who are health-conscious to exercise more.	A QR code that links to an exercise app is included in the health results mail only if individual's health results are poor.	Feedback Priming	Policy proposal	Unknown	Funai Research Institute, Inc. The Musashino Bank, Ltd. Saitama Prefecture Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	Frequent message pop-ups in restaurant panels ask about degree of satiety at regular intervals.	Reminder	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	Food replicas shown in 3D rather than 2D, providing the actual size of the plate.	Information Salience	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	Plate sizes become defaulted to 'small' during additional meal orders.	Default	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	Only small size portions are served, with multiple refills allowed.	Default	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	Classical music played in the background to increase appetite.	Priming	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	Additional "eating up fee" is added to the initial price of a meal, and returned to customer if all food is finished.	Framing	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	A QR code placed at the bottom of the plate for additional food (so new orders can only be done once food is all finished.	Default	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	A zone of food sharing (self-serve) is implemented instead of serving pre-determined portions to each guest in large banquets.	Default	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	Reward provided to customers who take and show pictures of their empty plates.	Incentives	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	New plates and chopsticks are provided when customers change tables in large banquets.	Priming	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	Reward provided to the last person to finish a food plate from a buffet.	Incentives	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste in restaurants.	Confirmation of the "take-out option" requested at the beginning when ordering food, so any unfinished meal is automatically bagged.	Default	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste frequencies in retail shops.	Advertising food items on sale as limited to prevent unsold surpluses.	Salience	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf

2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste frequencies in retail shops.	Random discount QR codes on food items maintain surprise of discount for customers.	Incentives	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste frequencies in schools.	Class competition held through photo posting of empty dishes of each class every day for each calendar month.	Social norms Incentives	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste frequencies at home.	QR codes placed on food items that offer randomized discounts, revealing the discount amount only upon scanning at the cashier.	Information	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	"It's still too early to eat insects"	Environmental sustainability	General public	Reduce food waste frequencies at home.	Food bank forms included with re-delivery mail notifications so household food items can be easily given away and delivered to a food bank.	Simplification	Policy proposal	Unknown	Human Resources, Administration Department, Shinsetsu Unyu Co. Tokorozawa City Long-Term Care Insurance Section Ageo City Lifelong Learning Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Cultivating promotion of digital transformation among local government employees	Labour & Employment	Public service employees	Reduce resistance of employees to adopting digital transformation initiatives.	Highly visible digital idea box folder on the webpage for employees to share digital transformation tools.	Salience Priming	Policy proposal	Unknown	Saitama Prefectural Air Quality Division Saitama Prefectural Health and Medical Policy Division Saitama Industrial Human Resource Development Division Building Guidance Division, Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Cultivating promotion of digital transformation among local government employees	Labour & Employment	Public service employees	Reduce resistance of employees to adopting digital transformation initiatives.	Contribution to digital idea box is visually indicated by a gamefied reward system (e.g., growth of a digital plant, indicating their progress).	Incentives	Policy proposal	Unknown	Saitama Prefectural Air Quality Division Saitama Prefectural Health and Medical Policy Division Saitama Industrial Human Resource Development Division Building Guidance Division, Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Cultivating promotion of digital transformation among local government employees	Labour & Employment	Public service employees	Reduce resistance of employees to adopting digital transformation initiatives.	Posters and notices with ideas on digital transformation are placed in visible areas of the office.	Salience Priming	Policy proposal	Unknown	Saitama Prefectural Air Quality Division Saitama Prefectural Health and Medical Policy Division Saitama Industrial Human Resource Development Division Building Guidance Division, Tokorozawa City	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Distribution of temperature change stickers to prevent heatstroke	Health	Elderly	Reduce heatstroke cases in seniors.	Colour and message changing stickers according to room temperature are placed in visible areas of home to remind the elderly to stay cool and hydrated.	Salience	Policy proposal	Unknown	Funai Research Institute, Ltd.	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Voting app	Civil participation	General public	Increase voter turnout.	Voting app that issues polling place admission tickets, requiring users to enter their planned voting date and time for ticket confirmation; timely voting earns points.	Simplification Pre-commitment Incentives	Policy proposal	Unknown	Shinsetsu Transportation Co.	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Excessive salt nudge	Health	General public	Encourage monitoring salt intake for people concerned with blood pressure.	Date information (e.g., when it is bought, when it should be refilled next time, etc.) on salt bottles to show the pace of salt consumption.	Salience	Policy proposal	Unknown	NPO Tsudoi-no-Kai (Kazo City)	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Sustainable learning environment	Education	Students	Reduce the risk of students' tablets being damaged and prevent eyesight and posture problems.	Tapes on desks to prevent tablets from falling and to teach students the appropriate distance between their tablet and eyes.	Salience Priming	Policy proposal	Unknown	NPO Tsudoi-no-Kai (Kazo City)	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Sustainable learning environment	Education	Students	Reduce the risk of students' tablets being damaged and prevent eyesight and posture problems.	Visual poster on digital break placed in classroom to encourage students to rest their eyes during recess.	Salience	Policy proposal	Unknown	NPO Tsudoi-no-Kai (Kazo City)	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Dental health check up nudge message	Health	Elderly	Increase the rate of dental checkups.	A message in mail notifications sent to citizens over 65 years old for recommended dental checkups emphasizes the relationship between the number of teeth/use of dentures and the onset of dementia, as well as providing the ratio of people who do dental checkups yearly.	Information Social norms	Policy proposal	Unknown	Musashino Bank Ltd.	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Dental health check up nudge message	Health	General public	Increase the rate of dental checkups.	A message in mail notifications sent to citizens under 65 years old for recommended dental checkups emphasizes the relationship between the rate of dental checkups and early treatment of periodontal disease, as well as providing the ratio of people who do dental checkups yearly.	Information Social norms	Policy proposal	Unknown	Musashino Bank Ltd.	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Stopping on escalators	Urban space	General public	Reduce walking or running frequencies on escalators.	Animal footprints placed on escalators that is accompanied by music when stepped on; music stops when another user walks.	Salience	Implemented policy	Unknown	Saitama Prefectural Air Quality Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Breakfast corners	Health	General public	Raise awareness and encourage young independent people on nutritional food choices and importance of eating a balanced breakfast.	Placement of healthy foods in highly visible shelves in workplace cafeterias, shops, university co-ops, etc., during morning hours, accompanied by a QR code placed near the shelves for people to scan to access a list of nutritionally balanced meals.	Salience Information Priming	Policy proposal	Unknown	Saitama East Central Welfare Office	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Online application for dry cleaning exams	Administration	General public	Increase applications for the dry cleaning certification examination.	A flyer with simplified messaging and a QR code to an online application form (as opposed to traditional paper form) for a cleaning certification exam.	Simplification	Demonstration project	Unknown	Saitama Health and Medical Policy Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Earn points and eat snacks	Health	General public	Improve eating habits.	Point card system that rewards users for healthy actions like refraining from snacks or exercising, and is shared with others for accountability.	Social norms Incentives Pre-commitment	Policy proposal	Unknown	Saitama Urban Development Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Pre-determined consultation dates for health check-ups	Health	General public	Increase health checkup uptake.	Pre-chosen reservation dates for health check-ups are included in the notification mail; the notification itself serves as the ticket, reducing the traditional two-step appointment process.	Default Pre-commitment	Policy proposal	Unknown	Saitama Prefectural Housing Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Radio Exercise	Health	General public	Increase exercise rates in people without exercise habits.	Radio exercise music played at specific times in supermarkets every day, encouraging customers to start exercising and dancing at a designated square, with points awarded in the end that can be exchanged for products.	Priming Incentives	Policy proposal	Unknown	Gyoda City Health Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Encouraging walking	Health	General public	Increase walking rates during work hours and in work settings.	Footprints and posters with information related to steps are indicated near elevators to encourage office workers to use stairs instead of elevators.	Salience Information	Policy proposal	Unknown	Tokorozawa City Nursing Care Insurance Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Encouraging walking	Health	General public	Increase walking rates during work hours and in work settings.	Information on calories burned when taking the stairs is placed near food items in the cafeteria.	Information	Policy proposal	Unknown	Tokorozawa City Nursing Care Insurance Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf
2023-3	Encouraging walking	Health	General public	Increase walking rates during work hours and in work settings.	Computer screens display pop-ups around "break times" (15:00), when opening the PC, and when logging off, with messages like "people who don't exercise regularly compared to those who do earn 10% less in income on average."	Salience Reminder Social norms	Policy proposal	Unknown	Tokorozawa City Nursing Care Insurance Division	彩の国さいたまづくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」.http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf

2023-3	Reduction of vehicle speed via road art	Urban space	General public	Encourage drivers to slow down without imposing physical constraints or compulsory restrictions, enhancing local community interactions.	Artworks and graffiti shown on road grounds, specifically in intersections and crosswalks, to encourage cars to slow down.	Saliency Priming	Policy proposal	Unknown	Tokorozawa City Architectural Guidance Division	彩の国さいたま人づくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」. <a href="http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf">http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf</a>
2023-3	RON: Reduce Overtime Nudge	Labour & Employment	General public	Reduce overtime rate at work.	Default vacation time pre-set on online portal for time-off requests (e.g., leave will be taken by default in the month or the next week after overtime work); employees can choose not to take it by canceling leave.	Default	Policy proposal	Unknown	Ageo City Board of Education, Lifelong learning	彩の国さいたま人づくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」. <a href="http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf">http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf</a>
2023-3	RON: Reduce Overtime Nudge	Labour & Employment	General public	Reduce overtime rate at work.	Reward given to employee or department that reduces the most overtime hours based on previous year's data.	Social norms Feedback Incentives	Policy proposal	Unknown	Ageo City Board of Education, Lifelong learning	彩の国さいたま人づくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」. <a href="http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf">http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf</a>
2023-3	RON: Reduce Overtime Nudge	Labour & Employment	General public	Reduce overtime rate at work.	A list of employees who do the most overtime is disclosed.	Feedback Social norms	Policy proposal	Unknown	Ageo City Board of Education, Lifelong learning	彩の国さいたま人づくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」. <a href="http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf">http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf</a>
2023-3	RON: Reduce Overtime Nudge	Labour & Employment	General public	Reduce overtime rate at work.	Standing meetings are held instead of sitting meetings.	Default	Policy proposal	Unknown	Ageo City Board of Education, Lifelong learning	彩の国さいたま人づくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」. <a href="http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf">http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf</a>
2023-3	RON: Reduce Overtime Nudge	Labour & Employment	General public	Reduce overtime rate at work.	Specific melody played at regular intervals during overtime hours to remind employees to go home.	Reminder Priming	Policy proposal	Unknown	Ageo City Board of Education, Lifelong learning	彩の国さいたま人づくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」. <a href="http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf">http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf</a>
2023-3	RON: Reduce Overtime Nudge	Labour & Employment	General public	Reduce overtime rate at work.	Computer pop-ups showing cumulative overtime hours of the month, with images changing based on the severity of overtime.	Saliency	Policy proposal	Unknown	Ageo City Board of Education, Lifelong learning	彩の国さいたま人づくり広域連合. (2023). 令和4年度産民学官・政策課題共同研究報告書「ナッジ理論を活用した政策づくり」. <a href="http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf">http://www.hitozukuri.or.jp/wp-content/uploads/R4_kyoudoukennkyuu_houkokusho_all.pdf</a>
2023-7	Nudge x Digital Decarbonisation Lifestyle Transformation Promotion Project: effects of monetary and non-monetary incentives on electricity-saving behaviour conducted	Energy	General public	Reduce electricity use.	Notification mail that includes daily forecast on electricity consumption of household, and a request message to reduce electricity use.	Feedback Priming	Demonstration project	Effective	Cyber Soken Inc. and Power Sharing Inc.	環境省. (2023年07月07日). 環境省ナッジ事業の結果について [報道発表]. <a href="https://www.env.go.jp/press/press_01858.html">https://www.env.go.jp/press/press_01858.html</a>
2023-7	Nudge x Digital Decarbonisation Lifestyle Transformation Promotion Project: effects of monetary and non-monetary incentives on electricity-saving behaviour conducted	Energy	General public	Reduce electricity use.	Notification mail that includes daily forecast on electricity consumption of household, a request message to reduce electricity use, and a financial incentive included if households use less than the forecasted amount.	Feedback Priming Incentives	Demonstration project	Effective	Cyber Soken Inc. and Power Sharing Inc.	環境省. (2023年07月07日). 環境省ナッジ事業の結果について [報道発表]. <a href="https://www.env.go.jp/press/press_01858.html">https://www.env.go.jp/press/press_01858.html</a>
2023-9	Project to promote the cross-sectional use of nudges that lead to changes in consciousness and behavior	Disaster risk management	General public	Improve disaster risk understanding and preparedness, including food and water stockpiling.	Magnetic sheet on disaster risk and temporary shelter information sent to households for fill-in and to be pasted on visible area in home.	Social norms Pre-commitment Priming Saliency	Demonstration project	Effective	Cyber Research Institute Ltd. and Electric Power Sharing Inc, in collaboration with local authorities in Kanagawa Prefecture and Hokkaido	環境省. (2023年09月01日). 環境省ナッジ事業の結果について [報道発表]. <a href="https://www.env.go.jp/press/press_02121.html">https://www.env.go.jp/press/press_02121.html</a>
2023-12	Human Behaviour Change Based on Nudge Theory: An Empirical Test at an Expressway Rest Area in Japan	Urban space	General public	Increase interest in and consumption at local rest area shops.	Footprint printed on the ground in rest stop area.	Saliency	Academic research & experimental studies	Effective	Takuji Takemoto, University of Fukui Hidenao Kumazawa, University of Fukui Kento Iwai, University of Fukui Kenta Sasaki, University of Fukui Katsunobu Okamoto, University of Fukui Kohei Nakanishi, The International University of Kagoshima Sachiyo Kamimura, Fukui University of Technology	Takemoto,T., Kumazawa, H., Iwai, K., Sasaki, K., Okamoto, K., Nakanishi, K., & Kamimura, K. (2023). Human Behaviour Change Based on Nudge Theory: An Empirical Test at an Expressway Rest Area in Japan. JSN Journal, 13(2), 148-159. <a href="https://so04.tci-thaijo.org/index.php/jsn/article/view/268119">https://so04.tci-thaijo.org/index.php/jsn/article/view/268119</a>
2024-1	Measures to encourage inmates to request employment support in prisons	Social service	Inmates	Enhance inmates' interest in seeking employment services by improving their understanding of the support system	Flyer tailored to encourage inmates to seek employment services, with clear, simple messaging, illustrations, a checklist of question/answer, and a concise summary of steps to take.	Priming Information Simplification	Demonstration project	Non-effective	Ministry of Justice Ministry of Internal Affairs and Communications	環境省. (2024年01月12日). 「ベストナッジ賞」コンテスト2023(一般部門)の結果について [報道発表]. <a href="https://www.env.go.jp/press/press_02578.html">https://www.env.go.jp/press/press_02578.html</a>
2024-3	Nudge x Digital Decarbonised Lifestyle Transformation Promotion Project: Self-record daily eco-behaviours	Environmental sustainability	General public	Increase environmentally-conscious behaviors to reduce carbon footprint.	A visualized version of their reduction in carbon footprint associated with their green behaviors is provided to eco-behaviour application users.	Priming Feedback	Demonstration project	Non-effective	Cyber Soken Inc. and Electricity Sharing Inc.	環境省. (2024年03月22日). 環境省ナッジ事業の結果について～カーボンフットプリントやコミットメント、ポイント等の効果を予備実証～ [報道発表]. <a href="https://www.env.go.jp/press/press_02966.html">https://www.env.go.jp/press/press_02966.html</a>
2024-3	Nudge x Digital Decarbonised Lifestyle Transformation Promotion Project: Self-record daily eco-behaviours	Environmental sustainability	General public	Increase environmentally-conscious behaviors to reduce carbon footprint.	A visualized version of their reduction of carbon footprint is shown to eco-behaviour application users, who are then asked to declare a target for the number of environmentally friendly actions to be undertaken per day, with non-monetary points awarded for achieving the target.	Priming Feedback Pre-commitment Incentives	Demonstration project	Effective	Cyber Soken Inc. and Electricity Sharing Inc.	環境省. (2024年03月22日). 環境省ナッジ事業の結果について～カーボンフットプリントやコミットメント、ポイント等の効果を予備実証～ [報道発表]. <a href="https://www.env.go.jp/press/press_02966.html">https://www.env.go.jp/press/press_02966.html</a>
2024-3	Nudge x Digital Decarbonised Lifestyle Transformation Promotion Project: Self-record daily eco-behaviours	Environmental sustainability	General public	Increase environmentally-conscious behaviors to reduce carbon footprint.	A visualized version of their reduction of carbon footprint is shown to eco-behaviour application users, who are then asked to declare a target for the number of environmentally friendly actions to be undertaken per day, with monetary points awarded for achieving the target.	Priming Feedback Pre-commitment Incentives	Demonstration project	Effective	Cyber Soken Inc. and Electricity Sharing Inc.	環境省. (2024年03月22日). 環境省ナッジ事業の結果について～カーボンフットプリントやコミットメント、ポイント等の効果を予備実証～ [報道発表]. <a href="https://www.env.go.jp/press/press_02966.html">https://www.env.go.jp/press/press_02966.html</a>
2024-3	Nudge x Digital Decarbonised Lifestyle Transformation Promotion Project: Self-record daily eco-behaviours	Environmental sustainability	General public	Increase environmentally-conscious behaviors to reduce carbon footprint.	A visualized version of their reduction of carbon footprint is shown to eco-behaviour application users, who are then asked to declare a target for the number of environmentally friendly actions to be undertaken per day, with monetary points awarded for achieving the target, and additional financial incentives for exceeding targets are offered.	Priming Feedback Pre-commitment Incentives	Demonstration project	Effective	Cyber Soken Inc. and Electricity Sharing Inc.	環境省. (2024年03月22日). 環境省ナッジ事業の結果について～カーボンフットプリントやコミットメント、ポイント等の効果を予備実証～ [報道発表]. <a href="https://www.env.go.jp/press/press_02966.html">https://www.env.go.jp/press/press_02966.html</a>
2024-3	Disaster Prevention Nudge Demonstration Project by the Yon-Nana Bousai-kai Nudge Unit	Disaster risk management	General public	Encourage stockpiling habits in citizens.	Flyers with messaging asking if the public is stockpiling, framing it as a default behavior, with checkboxes for the public to check.	Social norms Framing Simplification Information	Demonstration project	Effective	Local government: Yonnana Disaster Prevention Association Nudge Unit	植竹香織. (2024年3月25日). イベントレポート：防災備蓄ナッジ実証報告会. <i>Note</i> . <a href="https://note.com/bi_nudge/n/nd7f44da8436c">https://note.com/bi_nudge/n/nd7f44da8436c</a>
2024-3	Nudge x Digital Decarbonised Lifestyle Transformation Promotion Project: encourage electric vehicles (EVs) owners to charge during daytime (using renewable energy)	Energy	General public	Shift charging periods to daytime to take advantage of renewable energy.	Eco-driving app for electric vehicles displays CO2 emissions and recharged electricity information, rankings of application users, and number of points awarded according to the amount of CO2 emission reduced, which have monetary value.	Feedback Social norms	Demonstration project	Effective	Electric Power Sharing and Cyber Soken	環境省. (2024年03月29日). 環境省ナッジ事業の結果について ～再エネの有効利用に向けたEV昼充電の促進～ [報道発表]. <a href="https://www.env.go.jp/press/press_03007.html">https://www.env.go.jp/press/press_03007.html</a>