EC-OECD Seminar Series on Designing better economic development policies for regions and cities

Applying behavioural insights to organisations:

Global case studies

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Background information

This paper was prepared as a background document to the OECD-European Commission Seminar on "***Behavioural insights and organisational behaviour***" held on 10 May 2017 at the OECD Headquarters in Paris, France. It sets a basis for reflection and discussion.

About the Project

This seminar is part of a five-part seminar series in the context of an EC-OECD project "Designing better economic development policies for regions and cities". Other sessions in the series addressed the use of: contracts for flexibility/adaptability, performance indicators, financial instruments, and insights from behavioural science. The outcome of the seminars supports the work of the Regional Development Policy Committee and its mandate to promote the design and implementation of policies that are adapted to the relevant territorial scales or geographies, and that focus on the main factors that sustain the competitive advantages of regions and cities. The seminars also support the Directorate-General for Regional and Urban Policy (DG REGIO) of the European Commission in the preparation of the impact assessment for the post-2020 legislative proposals and to support broader discussion with stakeholders on the future direction of the delivery mechanisms of regional policy.

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Executive summary

Public policies impact our lives and that impact often comes through the actions of organisations. Those actions may be hindered or helped by many factors, including a family of factors that are commonly known as behavioural insights. Broadly speaking, behavioural insights seek to describe how and why people think, choose, act, and interact as they do. When applied within the context of public policy, these insights can be used to help individuals and organisations make more informed choices and more easily follow through with courses of action in line with various goals. The application of behavioural insights can have large impacts on effectiveness and efficiency – in some cases recouping millions of taxpayer dollars. Their use has substantial implications for well-being and policy precisely because of the focus on how individuals and organisations act.

It is important to note that this report takes a broad view of behavioural insights extending beyond behavioural economics, which itself is broader than the concept of nudging and distinct from the normative position of libertarian paternalism (*cf.* Lunn 2014: 19-23; Hansen, 2015; Foster, 2017). In this report, the concept of behavioural insights includes influences on behaviour that have been derived from the broader set of behavioural sciences as applied to organisations and group behaviour – including subjects such as social psychology, judgement and decision making, cognitive psychology, and others. Given this paper's focus on organisational behaviour, insights are also drawn from industrial and organisational psychology, which provides a rich academic and practitioner tradition that bridges research on behaviour and organisations (Foster, 2017).

In recent years, government, non-profit and for-profit initiatives have applied behavioural insights to programmes and policies to improve efficiency and effectiveness through changes in behaviour. These efforts have spanned the globe (Whitehead et al., 2014) with over 100 documented cases of their application to public policy (OECD, 2017). However, the application of behavioural insights to organisations is still in its infancy (OECD, 2017; Stingl and Geraldi, 2017; Gavetti et al., 2012; Lunn, 2014). This paper explores that organisational frontier through case studies of applying behavioural insights that either directly involve organisations or can inform interventions at an organisational level. Cases are organised into three sections of relevance to organisations: 1) strategy and decision making; 2) management; and 3) implementation. Each section concludes with challenges and implications for organisations broadly alongside illustrative applications that could be considered by the European Commission's (EC) Directorate-General for Regional and Urban Policy (DG REGIO) as well as managing authorities involved in Cohesion Policy and Structural Funds.

Common behavioural barriers for organisations

For **strategy and decision making**, several behavioural barriers are relevant. First, common behavioural barriers that affect the decision-making processes include the escalation of commitment, the planning fallacy and over-confidence (Lovallo and Kahneman, 2003; Stingl and Geraldi, 2017). Other behavioural barriers that can enlighten

strategic decisions include the tendency to exhibit lower levels of focus and poorer decisions in stressed or impoverished situations (Hagger et al., 2010; Mani et al., 2013), to avoid change and stay with the status quo (Kahneman, Knetsch and Thaler, 1991), to allow extrinsic motivation to crowd out other motivation (Frey and Jegen, 2001), to be more heavily influenced by peer groups (Goldstein, Cialdini and Griskevicius, 2008; Marks and Miller, 1987; Janis, 1972), to give more value to losses than to gains (Kahneman and Tversky, 1979), and to be influenced more by immediate gains than future gains (Thaler, 1981; Green, Fry and Myerson, 1994).

Many of the same behavioural barriers are highlighted in both the **management and implementation** sections of this paper. First, team members and managers can develop biased assessments of staff, projects and entire organisations due to a halo effect in which initial positive or negative impressions dominate the assessment of future acts (Feldman, 1981; Anderson and Barrios, 1961). Second, opportunities for growth and improvement might be missed if managers and other team members do not believe that skills, attitudes and behaviours can be incrementally improved (Heslin and VandeWalle, 2008). Third, organisations and teams are more susceptible than individuals to ignoring pertinent opportunities (Wieber, Thürmer and Gollwitzer, 2012) and to escalating commitment to failed courses of action (as noted above) (World Bank, 2015; Staw, 1981; Sunstein and Hastie, 2014, 2015). Teams, like individuals, also often fail to act on an intention (Wieber, Thürmer and Gollwitzer, 2012; Sheeran, 2002). Other common barriers discussed in the management and implementation cases include a lack of awareness or understanding, a lack of capacity to take part, and simple forgetfulness.

Implications for applying behavioural insights in organisations

While there are fewer cases evaluating the impact of behavioural interventions on organisations compared to individuals, there are sufficient examples to learn from and expand on. This paper summarises many of those cases and highlights several implications for how organisations might make use of behavioural insights to improve strategic decision making, management and implementation. As noted by Foster, the application of behavioural insights to organisations is often done by influencing specific individuals in those organisations to affect organisation-wide changes or by more directly intervening on organisational routines, policies and procedures of the organisation (Foster, 2017).

To improve strategic decision making organisations can: 1) conduct reference class forecasting when setting goals and allocating budgets by developing or making use of databases of historical data; 2) consider opportunities to create flatter decision-making structures to encourage innovation and reach higher levels of performance; 3) look for opportunities to strengthen existing top-down accountability by combining it with bottom-up mechanisms that make it easier for clients and citizens to report upward; and 4) look for ways to use non-monetary incentives and to amplify the effect of financial incentives by structuring them as losses and triggering them with as little delay as possible. **Potential applications for the EC and managing authorities include:** 1) using data from 2014-20 to generate benchmarks for reference class forecasting in the post-2020 Cohesion Policy for milestones, absorption rates, error rates, costs and outreach; 2) facilitating citizen and civil society reporting on key areas of project compliance via the open data platforms of the EC and member states; and 3) considering the restructuring of the performance reserve as a loss instead of a gain and timing it to be released more frequently and earlier.

To improve the management of staff, projects and stakeholders, organisations can consider: 1) training managers to be aware of, and counteract, behavioural biases through promoting a growth mindset, stronger one-to-one relationships through leader-member exchange, avoiding halo effects in order to improve the performance of the organisation and promoting effective group decision-making processes; 2) implementing a policy requiring the use of plain language when producing materials to avoid mistakes, misunderstandings and inaction caused by lack of clarity; 3) linking broader management goals with implementation intentions that provide specific contexts for taking goal-directed actions in order to increase follow through; and 4) incorporating behavioural insights when designing interfaces with external stakeholders (such as communication materials or platforms), especially using promotional framing, simplifying and encouraging access to help, and sending out calls-to-action or notifications within several weeks of the required action instead of far into the future. **Potential applications for the EC and managing authorities include:** 1) providing behaviourally informed management training to reduce turnover and increase productivity, covering topics such as enhancing leader-member exchange and having a growth mindset; 2) prompting the use of implementation intentions (in addition to goal setting) during the creation of operational programmes and performance frameworks; and 3) encouraging the use of a plain language review[1] when drafting guidance, writing operational programmes and creating requests for proposals.

To improve the implementation of projects organisations can use behavioural insights such as personalisation, simplification, social norms and implementation intentions to help ensure that data and payments are provided on time to keep programmes running smoothly. In addition, improved compliance and decreased fraud can be achieved by priming the ethical salience of the action and the reporter's own positive self-identity as a truth-teller at the beginning of financial reporting forms or invoices. **Potential applications for the EC and managing authorities include:** 1) targeting requests for information of high importance (or with low response rates) using heightened personalisation to increase and accelerate response rates, thus saving time and resources; 2) sending information on social norms to entities that are significantly underperforming on important metrics to improve performance; and 3) using ethical salience to improve the accuracy and honesty of self-reports by prompting a promise to complete the form honestly at the beginning of digital and paper-based reporting forms.

Simple behaviourally informed interventions such as reframing or simplifying the language of communications, triggering positive personal and organisational identities, and adjusting the timing of interactions or incentives can have positive effects on organisational behaviour. In addition, developing strong, trusting and co-operative relationships can be powerful in improving the performance and compliance of organisations.

1. A useful plain language resource is *How to Write Clearly*. It is available in 23 languages for free at: https://publications.europa.eu/en/publication-detail/-/publication/bb87884e-4cb6-4985-b796-70784ee181ce.

Introduction

Public policies impact our lives and that impact is mediated through various governmental, private sector and non-governmental organisations. Organisations must act on a public policy before it becomes effective. Those actions may be hindered or helped by many factors. One family of factors that facilitate or hinder action has gained increased prominence under the umbrella-term of behavioural insights. Broadly speaking, behavioural insights seek to describe how and why people think, choose, act and interact as they do. Although many behavioural insights tend to focus on ways to leverage the less rational elements of human thinking and acting to influence behaviour, the insights in our toolkit are broader than that and such definitions of behavioural insights are often too restrictive and potentially contradictory as has been noted elsewhere (Lunn, 2014, 2012; Hansen, 2015; Foster, 2017). Behavioural insights can strengthen teams, enhance intrinsic motivation, simplify information, strengthen monetary and non-monetary incentives, and can do so with and without the use of biases.

When applied within the context of public policy, these insights can be used to help individuals and organisations take more informed choices and more easily follow through with courses of action in line with their own goals and the goals of public policy. The application of behavioural insights can have great impacts on effectiveness and efficiency. Behaviourally informed interventions have helped governments collect millions of euros more in taxes and fees from both individuals and organisations (Kettle et al., 2016; OECD, 2017), have prevented fee avoidance and misreporting thus recouping millions (Social and Behavioral Sciences Team, 2015), and have prevented unwise investments in mega-projects that could have cost hundreds of millions in overruns (Flyvbjerg, 2013). The use of behavioural insights is a powerful tool with large implications for well-being and policy precisely because of the focus on how individuals and organisations act.

History of behavioural insights and their application

In recent years, government, non-profit and for-profit initiatives have applied behavioural insights to programmes and policies to improve efficiency and effectiveness through changes in behaviour. These efforts have spanned the globe and have been documented in recent reviews by the OECD, the European Commission's Joint Research Centre and the World Bank (OECD, 2017; World Bank, 2015; Lourenço et al., 2016) as well as recent popular books such as Richard Thaler's *Misbehaving* (Thaler, 2015).

A global survey by the Economic & Social Research Council published in 2014 found that the behavioural sciences were having an impact on public policies in countries around the world (Whitehead et al., 2014). Some countries have created centrally directed behavioural insights initiatives, such as the Behavioural Insights Team in the United Kingdom and the Social and Behavioural Sciences Team in the United States. More recently, the review by the OECD found over 100 cases using behavioural insights to inform public policy (OECD, 2017). Despite the increased use of behavioural insights, several authors and institutions have noted interest in new frontiers. There is an interest in how behavioural insights can be institutionalised in organisational rules, regulations and practices. This paper seeks to explore that organisational frontier.

While the idea of using psychological insights to influence behaviour is not new, our understanding has become much more precise and accurate. Some motivations and mechanisms of behaviour change have been debunked, others refined and new surprises discovered (Nelson, 2008; Kahneman, 2011). This is particularly true for the application of behavioural insights to public policy and organisations when there is a need to

encourage behaviours that are not immediately pleasurable. The field is still discovering when, where and for whom a given behavioural insight will be effective.

Behavioural insights for individuals and organisations

To date, most of this work has focused on the application of behavioural insights to influence individual behaviour (such as improving individual tax compliance or helping individuals access public benefits). Yet there are several reasons to believe that behavioural insights can be applied to help improve the efficiency and effectiveness of organisations as well. The importance of considering behavioural elements of organisational behaviour has been gaining attention recently through efforts to highlight the microfoundations of macro-level behaviours (Felin, Foss and Ployhart, 2015), work to develop a behavioural theory of strategy (Gavetti et al., 2012; Gavetti, 2012), and work on behavioural decision making (Stingl and Geraldi, 2017). Organisations are made up of individuals and group decisions are affected by individual input, and when any of us are at work, we are still susceptible to many of the cognitive and behavioural tendencies that we are influenced by outside of work. Indeed, the organisational literature has highlighted the fact that perceptions about an organisation are strongly related to perceptions of individuals – such as supervisors – in that organisation (Eisenberg et al., 2002). Secondly, psychological research on teams has shown similarities with individual psychology and behaviour (Wieber, Thürmer and Gollwitzer, 2012; Schoemaker, 1993). Where groups function similarly to individuals, many of the same behavioural insights could apply. Where groups and organisations function differently than individuals, it will be important to tailor any intervention to the behavioural insights that are unique to them (*cf.* Sunstein and Hastie, 2014; 2015). Finally, there is empirical evidence that businesses and organisations can be influenced using behavioural insights as has been documented in recent reviews of their application to public policy (OECD, 2017) and in recent reviews of the literature on strategy and management (Stingl and Geraldi, 2017; Gavetti et al., 2012).

How are behavioural insights usually applied in public policy generally and organisational behaviour specifically? Behavioural interventions are likely to focus on the implementation stage of the policy process (OECD, 2017; Social and Behavioral Sciences Team, 2016, 2015; Whitehead et al., 2014). The vehicle used to implement behavioural insights is often through written communications. For example, framing letters using a social norm to increase tax compliance among firms in Guatemala (Kettle et al., 2016)[1] or using personalised notes along with traditional mailers to increase business survey responses in Ireland (OECD, 2017: 334-335). Common behavioural insights that are deployed are social/peer pressure and default setting (Whitehead et al., 2014: 33). Social norms have been used to influence the conservation behaviours of hotel guests (Goldstein, Cialdini and Griskevicius, 2008), to influence the tax payment of both individuals and businesses (Kettle et al., 2016; Hallsworth et al., 2014), and to decrease prescriptions of antibiotics (Hallsworth et al., 2016). Meanwhile, individual defaults – in which enrolment happens unless one opts out of a programme – have been used to affect retirement savings rates and amounts (Carroll et al., 2009; Benartzi and Thaler, 2007; Social and Behavioral Sciences Team, 2016; Chetty et al., 2014), organ donor rates (Johnson and Goldstein, 2003), and other decisions such as consumer choice (Brown et al., 2004). Although these previous applications have targeted both individual and organisational behaviour, many of them are implemented by public entities with institutional goals (such as government goals to increase the retirement savings rates). As noted by Foster, the application of behavioural insights to organisations is often done by influencing specific individuals in those organisations to affect organisation-wide changes or by more directly

intervening on organisational routines, policies and procedures of the organisation (Foster, 2017).

Report structure

In order to build on existing work and extend our understanding of the application of behavioural insights to interventions with organisations and multinational bodies, this paper will focus on cases of applying behavioural insights that either directly involve organisations or can inform interventions at an organisational level. Cases are organised into three sections of relevance to organisations: 1) strategy and decision making; 2) management; and 3) implementation. The section on strategy and decision making concerns behavioural insights that can improve decisions about the direction of entire organisations or organisation sub-units. It is especially concerned with forecasting and how several strategic trade-offs can be informed by behavioural insights. The management section focuses on applying behavioural insights to the internal organisational management, such as staff management, project management and stakeholder engagement. The third section on implementation focuses more on detailed changes that can impact day-to-day elements of programme implementation, such as signing up for a project, implementing reporting requirements and encouraging appropriate behaviour.

Behavioural insights cases

Cases of strategy and decision making

To a substantial extent, strategy and decision making are concerned with taking decisions to increase long-term efficiency and effectiveness. As such, this section will begin with common forecasting and decision-making errors and behavioural strategies to limit such errors. However, any strategy or decision has costs and trade-offs and a behavioural perspective can help decision makers better identify and evaluate those trade-offs – an aspect of strategy that has been called essential (Porter, 1996: 69). Three specific trade-offs are focused on due to their behavioural dimensions and potential relevance for public institutions and programmes that disburse funds to public and private organisations to achieve policy goals (such as increased economic activity or improved educational attainment): encouraging reliable approaches or innovative ones; using top-down or bottom-up accountability systems; and how to structure incentives.

Behavioural barriers in strategy and decision making

Several behavioural barriers are relevant when taking decisions about the ideal balance between various strategic options. First, three behavioural barriers affect the decision-making processes itself: the escalation of commitment, the planning fallacy and over-confidence. Stingl and Geraldi noted that these are some of the most common cognitive biases in the decision-making literature (2017: 125). Escalation of commitment refers to pursuing a failing course of action because of the costs already incurred by that project in terms of time, effort and budget – with this tendency escalating as more time passes and greater investments are made (Staw, 1997; 1981). The planning fallacy is the tendency to estimate the time and cost a project will require by referencing a plan without consideration of external factors or the cost and time needed for other similar projects (Kahneman, Lovallo and Sibony, 2011; Kahneman and Tversky, 1977). Over-confidence is closely related to the planning fallacy with an added focus on how most people think they – or their projects – are above average (Lovallo and Kahneman, 2003; Van den Steen, 2004). For the highlighted trade-offs, behavioural barriers that can enlighten these strategic

decisions include the tendency to exhibit lower levels of focus in stressed or impoverished situations (Hagger et al., 2010; Mani et al., 2013), to avoid change and stay with the status quo (Kahneman, Knetsch and Thaler, 1991), for extrinsic motivation to crowd out other motivation (Frey and Jegen, 2001), to be more heavily influenced by peer groups (Goldstein, Cialdini and Griskevicius, 2008; Marks and Miller, 1987; Janis, 1972), to give more value to losses than to gains (Kahneman and Tversky, 1979), and to be influenced more by immediate gains than future gains (Thaler, 1981; Green, Fry and Myerson, 1994).

Behavioural insights for strategy and decision making

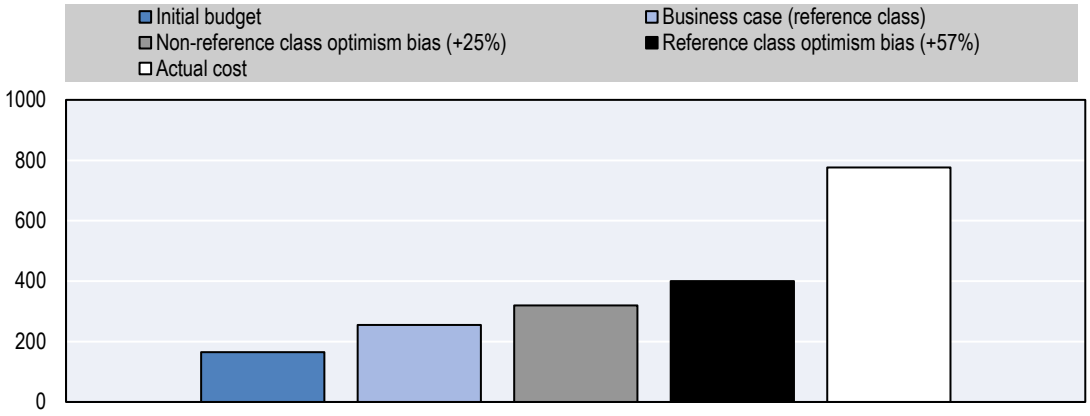
Before moving into several specific strategic trade-offs, it is important to cover decision making and forecasting in general. Ample behavioural research has shown how the escalation of commitment, the planning fallacy and over-confidence can lead to decision-making and forecasting errors. How can we limit such errors? A suggested method that is considered effective at debiasing estimates in several case studies is reference class forecasting (Lovallo and Kahneman, 2003; Flyvbjerg 2006). **The key steps in reference class forecasting according to Flyvbjerg are**:

1. identifying a relevant reference class of past, similar projects
2. establishing a probability distribution for the selected reference class
3. comparing the specific project with the reference class distribution, in order to establish the most likely outcome for the specific project. (Flyvbjerg, 2006: 8)

Two case studies from large-scale transportation projects are illustrative. Flyvbjerg has compiled a comprehensive database of infrastructure projects to use as a reference class and have found that average inaccuracy in cost forecasting was 44.7% for rail, 33.8% for bridges and tunnels, and 20.4% for roads, while inaccuracy in estimated usage was -51.4% for rail and 9.5% for roads (Flyvbjerg, 2006: 6). In one case, this database was used in an effort to debias cost estimates for the Edinburgh Tram System project (Figure 1). The initial budget was set at GBP 375 million, out of which GBP 165 million was allocated toward constructing Line 2 and a subsequent business case estimated the cost at GBP 255 million and added 25% for optimism bias, totalling GBP 320 million, for only Line 2. However, while the business case did use a reference database with the costs of other UK light rail schemes and debiased the initial estimate, this second estimate did not adequately account for the potential for cost overruns in Flyvbjerg's reference class distribution. Using step three of reference class forecasting and the database mentioned, it was determined that the estimate would need to be increased by 57% (not 25%) in order to have an 80% likelihood of staying within budget. This adjustment brought the estimated cost of Line 2 to GBP 400 million. The total project budget for both lines was later set at GBP 545 million in 2007 when construction first began.[2] The final cost of the project, after running three years late and reducing the total project to only 15 out of 23 stops of Line 2, was GBP 776 million without interest (Green, 2015). Although cost overruns were significantly higher than expected after using reference class forecasting for Line 2, they were much less biased than the original estimate of GBP 165 million.

Figure 14. **Reference class forecasting example: Scotland Rail**

Million GBP



Source: Flyvbjerg, B. (2006), "From Nobel Prize to project management: Getting risks right", https://www.pmi.org/learning/library/nobel-prize-project-management-risks-2545.

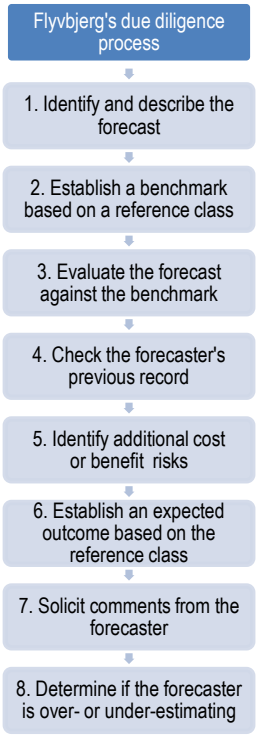
In another example, reference class forecasting was used as a due diligence process to determine the accuracy of a forecaster's prediction before beginning a multi-billion dollar rail project (Flyvbjerg, 2013).[3] The process suggested by Flyvbjerg (Figure 2) uncovered that the forecast was unrealistic. The forecaster had presented a 95% confidence level that the demand shortfall would be 15% or less, while the reference class database showed a shortfall of 85% or less for the same confidence interval. The process also revealed two previous multibillion-dollar projects in the reference class that were forecasted by the same organisation. These previous forecasts were among the most inaccurate of the reference class – indicating that the forecasts were likely to be worse (not better) than the benchmark. This process resulted in the investors in the public-private partnership deciding not to invest in the project. This case study highlights how poor forecasting can be a result of mistakes and biases, but can also be the result of strategic misrepresentation. However, even in the latter case, a behaviourally informed approach can assist in flagging such misrepresentations.

The first case, that of the Edinburgh Tram Line, shows how reference class forecasting can at least partially debias overly optimistic planning forecasts. The second case shows how reference class forecasting can be used as a due diligence process to stop projects with a high likelihood of cost overruns and underperformance before they start. Additional behavioural interventions to reduce biases in decision making can be found in the management section below.

The first of several strategic trade-offs that will be discussed from a behavioural intervention perspective is that of balancing avoiding risks with encouraging innovation. While there is no clear-cut choice between this trade-off, behavioural research has provided suggestive evidence to explain how decision makers effectively strike a balance between the two. This work has found that more executive and attentional control is associated with better decisions (Laureiro-Martínez et al., 2015). Such attentional and executive control is effortful, and its use can result in short-term ego-depletion, poor subsequent decision making and lower self-control (Hagger et al., 2010). Due to the importance of attentional control in decision making, and its limits, decision makers should consider avoiding multiple decisions about risk-taking over prolonged periods of

time or under stress. There is also some suggestive evidence that attentional control can be trained by practicing and then reflecting on the thought process used during cognitive flexibility and holistic processing tasks, such as saying the opposite compass direction than the one depicted and summarising text into bullet points and a title (Tchanturia, Lloyd and Lang, 2013).[4]

Figure 15. **Reference class forecasting and due diligence**



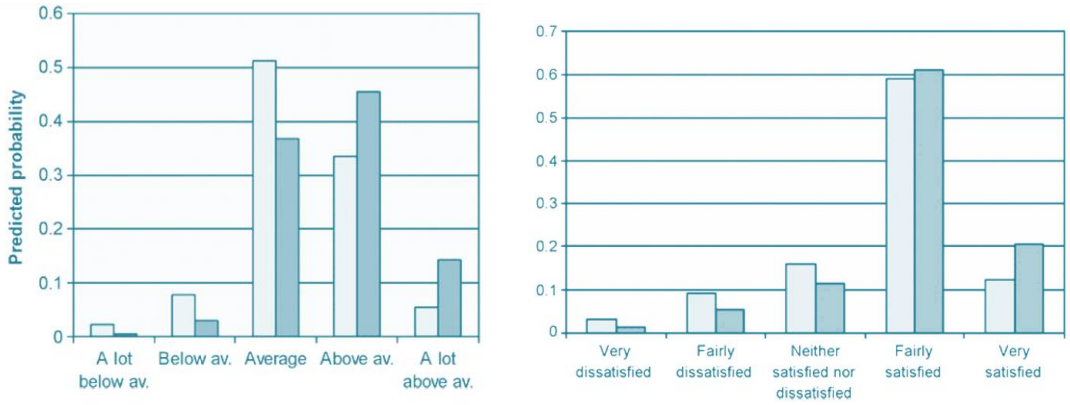
Source: Flyvbjerg, B. (2006), "From Nobel Prize to project management: Getting risks right", https://www.pmi.org/learning/library/nobel-prize-project-management-risks-2545.

Organisations can also make structural changes to decision-making processes if there is a preference for avoiding mistakes or looking for opportunities. Modelling research by Knudsen and Levinthal (2007) has outlined how organisational forms – made up of imperfect decision makers – affect the trade-off between avoiding mistakes and taking advantage of optimal opportunities. Within a hypothetical context with ten options that have some degree of interdependence, their modelling work shows that hierarchical decision-making structures (with six levels) will avoid poor performance in the context of very flawed decision makers[5] but will under-perform less hierarchical forms of decision making in all other cases (Knudsen and Levinthal, 2007). Thus, in many instances, flat decision-making structures might increase overall performance through exploring more effective and efficient opportunities. This suggests that the common use of multiple levels of command-and-control may be counterproductive.

Another strategic decision is how to balance top-down and bottom-up. Most public and private organisations use top-down accountability systems – with superiors, regulators or auditors exerting control on lower levels of the organisation. Some public entities have tried to increase the effectiveness of bottom-up accountability from citizens,

as they are the taxpayers and final beneficiaries of public policy and public organisations. One method of increasing bottom-up accountability among public institutions is by providing performance data to citizens. In England among citizens in Exeter (N = 439), James conducted a randomized controlled trial (RCT) and found that showing data on a local government's performance compared to other localities had a positive effect on citizens' perceptions of and satisfaction with the government's performance compared with citizens who are shown no such information (Figure 3) (James, 2011). For elected officials, downward accountability may be particularly potent around election season. In Brazil, municipalities that more effectively implemented a conditional cash transfer programme for child education were also more likely to be re-elected (De Janvry et al., 2005). For example, mayors who created a council to oversee the programme were 26 percentage points more likely to be re-elected. Mayors in municipalities where the programme more accurately targeted low-income individuals, and those with larger programmes, were also more likely to be re-elected. The cases above have a behavioural social comparison and social pressure dimension. In England, the presentation of information about performance was relative to other localities. In Brazil, the study provides insights that could be used to present non-financial (electoral) incentives to officials to conduct programmes with integrity. The creation of local councils to oversee programmes may be a worthwhile mechanism for providing bottom-up accountability in certain contexts – although it is not always effective as noted below.

Figure 16. **Effect of providing citizens with performance information**



Notes: The left graph shows the proportion of citizens who report a particular perception of the local government's performance compared to other localities. The light coloured bars are those who did not receive performance information while the dark bars represent those who received performance information. The right graph shows how satisfied citizens were with the local government's performance.

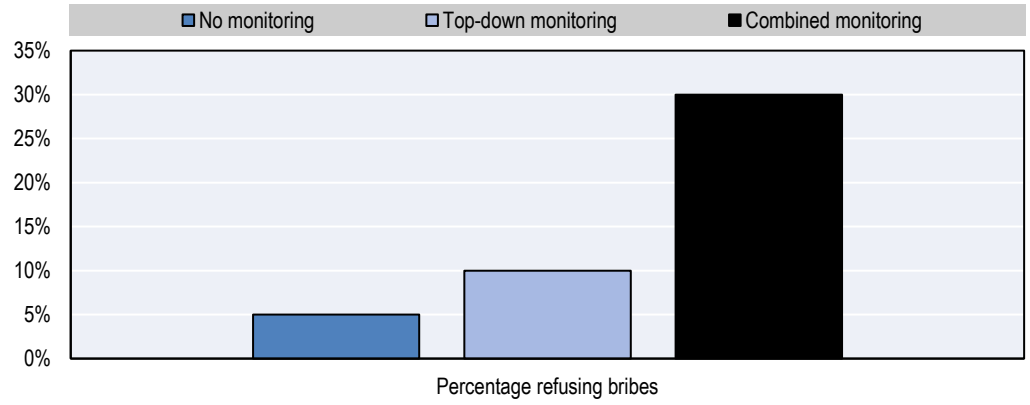
Source: James, O. (2011), "Performance measures and democracy: Information effects on citizens in field and laboratory experiments", https://doi.org/10.1093/jopart/muq057.

When it comes to rigorous evidence on the effectiveness for top-down and bottom-up accountability to prevent corruption or other inappropriate actions, the literature is mixed. A field RCT in Indonesia comparing a top-down to a bottom-up accountability regime found that increasing the risk of an audit from 4% to 100% for construction projects resulted in a statistically significant reduction in the amount of funds that went missing from 29% to 20%. Meanwhile, having a public meeting (bottom-up accountability) only decreased the amount of missing resources from 27% to 24% and was not statistically significant (Olken, 2007). However, this extreme increase in audit risk may not always be

feasible or cost-effective.[6] On the other hand, in Papua New Guinea, the "Phone Against Corruption" programme has enabled citizens to report fraud via their mobile phones using an interactive SMS system to reduce the behavioural barriers to reporting by making it simple, immediate and promising anonymity. To reinforce the behaviour, the system thanks the users and provides feedback on the case's progress. Although the system has not been rigorously evaluated, between 2014 and 2016 it helped identify 251 cases of alleged corruption that are under investigation by the Internal Audit and Compliance Division and 77 cases of corruption that are under the jurisdiction of the Department of Finance involving over USD 6 million.[7]

The most effective interventions seem to leverage a combination of top-down and bottom-up accountability. An RCT in India compared 60 schools in which each teacher was given a camera that students would use to take a time-stamped photo of the teacher and other students at the beginning and end of each day. The teachers' salary was linked to their attendance. This combination of a classic incentive with bottom-up social pressure from students resulted in teacher attendance rates increasing from 58% in control schools to 78% in treatment schools (Duflo and Hanna, 2005). The effectiveness of this combination has also been documented in a lab experiment[8] that found that top-down accountability is most effective when supplemented by a bottom-up system in which the "citizens" can report inappropriate behaviour (Serra, 2012). In this lab setting, only 5% of officials were honest when there was no monitoring system, this increased to 10% with top-down accountability in which there was a 4% probability of being caught and fined (but this increase in honesty was not statistically significant), and the percentage of honest officials jumped to 30% when the citizen involved in the bribe was allowed to report it thus triggering the same probability of being fined as above (4%) – this latter change was statistically significant (Figure 4). While top-down accountability can work, these cases suggest that combining it with a bottom-up element that creates social pressure is particularly effective.

Figure 17. **Effect of top-down and combined monitoring on bribery (Lab)**



Source: Serra, D. (2012), "Combining top-down and bottom-up accountability: Evidence from a bribery experiment", https://doi.org/10.1093/jleo/ewr010.

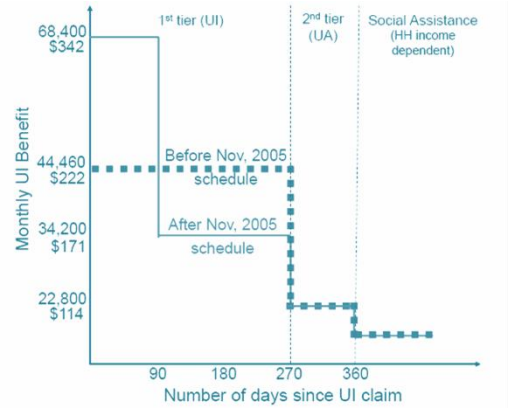
Lastly, determining a policy on financial and non-financial incentives should be viewed through a behavioural lens. While financial incentives are often used by organisations, non-financial incentives such as personal and social motivations can be equally powerful. Unfortunately, behavioural research has found that financial incentives can crowd out other motivation (Frey and Jegen, 2001). This is particularly worrisome in

the case or public organisations where public service motivation has a strong positive impact on the performance of civil servants (Pandey, Wright and Moynihan, 2008). The following provides behavioural insights for strengthening the impact of an incentive. However, before strengthening an incentive, it is important to ensure that incentives are aligned with the desired behaviours and that the behavioural barriers are motivational in nature. For further discussion of powers and pitfalls of incentives, see the accompanying work by Foster (2017).

In addition, whether incentives are designed as gains or losses, and when they take place, affects their impact. Prospect theory has shown that losses are more influential than equivalent gains (Kahneman and Tversky, 1979) and work on discount rates has shown that motivation from both deteriorates as the potential loss or pay-off moves further into the future (Thaler, 1981; Green, Fry and Myerson, 1994). Incentives structured as losses can be more motivating than gains. For example, an experiment in the United States with teachers compared offering a bonus for improved student performance at the end of the year with a group of teachers who received a bonus at the beginning of the year but would lose it if their students performed below average at the end (Fryer Jr et al., 2012). The traditional incentive (gain-frame) was not effective at improving student performance; however, the incentive that was at risk of being lost did result in a positive increase in student scores.[9]

Because we value immediate incentives more than future incentives, there is evidence that incentives – even if structured as a loss – may be more effective if adjusted periodically or given more regularly. Combining this insight with loss aversion, Hungary altered the payment of unemployment insurance so that the payment amount was lowered at two points in time instead of just once before ending – the original payment regime (Figure 5) (DellaVigna et al., 2016). In the behavioural intervention, the maximum cumulative payment amount remained the same but claimants were paid a higher amount during the first 90 days of their claim and this amount then dropped to a lower level from day 91 until day 270, at which point the benefit dropped again as occurred with the original one-step group until 360 days and the benefits were exhausted. The change was evaluated using a regression discontinuity approach[10] and found that unemployed individuals in the two-step unemployment regime exited unemployment insurance at faster rates than those in the original one-step regime. In another demonstration of the importance of frequency for motivation, a study in India found that workers were more productive on paydays (Kaur, Kremer and Mullainathan, 2010: 626).

Figure 18. **Hungary's two-step and one-step unemployment insurance schedule**



Source: DellaVigna, S. et al. (2016), "Reference-dependent job search: Evidence from Hungary", http://dx.doi.org/10.3386/w22257.

Challenges and implications

Several challenges confront organisational leadership and policy makers seeking to apply behavioural insights to strategy and decision making. First, while it is possible to pilot small changes that test different strategies using an RCT evaluation design, it is difficult – and sometimes impossible – to randomise a strategic choice that covers an entire organisation or governmental body. As such, much of the literature either takes place in a lab setting or describes a case study, as is the case with reference class forecasting (Lovallo and Kahneman, 2003; Flyvbjerg, 2013, 2006). Second, even though cutting-edge research has shown that there is a trade-off cognitively and structurally between playing it safe and exploring new frontiers, there has not been sufficient work evaluating the interventions that might reinforce decision makers' cognitive abilities or rigorous evaluations comparing the performance of hierarchical and flat decision-making structures. Third, while the literature suggests that a combination of top-down and bottom-up accountability is most effective, organisations will have to decide how to balance those two elements and how to structure them with little guidance from empirical tests of effectiveness (apart from the fact that the higher authority and the citizens or other third parties need to be aware of each other's roles). Finally, while the literature clearly shows both that non-financial incentives can be equally or more powerful compared to financial incentives and that they can be crowded out by financial incentives, there is large variability in the ways to structure either incentive.

The cases and insights do provide several potential implications for organisations and public bodies. First, there is broad consensus that reference class forecasting should be used whenever possible. As such, organisations should identify existing data sources or create new databases to use as reference classes for common projects (such as the transportation infrastructure databases managed by Flyvbjerg and colleagues). The initial cost of creating such reference databases will pay dividends. Second, organisations and public entities should consider the possibility that taking additional risks, hiring more exploration-oriented decision makers, and setting up flatter decision-making structures might yield better outcomes on aggregate, despite the added risk. This may be especially true in the case of larger entities that oversee many projects and will therefore have more opportunities to reach optimal outcomes despite periodic failures. Third, if accountability is a concern, ensuring that citizens and customers are engaged in notifying existing authorities may be more effective than merely adding additional layers of top-down accountability. Removing behavioural barriers to such bottom-up engagement will be key to the success of such an accountability system. Finally, non-monetary incentives should be used more often and financial incentives should be structured with short time horizons and as losses instead of foregone gains wherever possible.

Indicative applications to Cohesion Policy strategy development

The following are three indicative applications of these behavioural insights to strategic planning within the context of the EU Cohesion Policy and Structural Funds. These applications could be of particular interest for the European Commission.

1. The European Commission could use the open data from 2014-20 to generate benchmarking on milestones achieved, absorption and error rates for use in reference class forecasting in post-2020 Cohesion Policy when setting targets and

providing feedback on partnership agreements and operational programmes. Managing authorities could generate more accurate estimates for programme costs and outreach.

2. The Commission could pilot the addition of a mechanism for the public to report financial errors, misreporting or other topics of concern via the Open Data platform, making it as easy as possible for users to provide feedback. This would amplify bottom-up accountability. This functionality could also be added to member states' Open Data websites.
3. The EC and EU could consider restructuring the performance reserve for the post-2020 Cohesion Policy using behavioural insights. For example, the reserve could be structured as a loss or triggered more frequently to amplify its effectiveness.

Cases of management

At the level of the day-to-day management of an organisation, behavioural insights can improve the management of staff, projects and stakeholders. In the case of staff, behavioural insights can improve staff assessments and increase work satisfaction and retention. In managing projects, simplifying language and converting goals into implementation intentions can improve effectiveness. When interacting with external stakeholders, the use of promotional language, the encouragement of help-seeking behaviour and reducing time-lags between notifications and required actions can increase the engagement of other external organisations.

Behavioural barriers in management

There are several noteworthy behavioural barriers to the smooth functioning of a team within an organisation as well as an organisation's management of its relationships with other external entities. Within organisations, team members and bosses can end up delivering biased assessments of one another's work due to halo effects in which initial positive or negative impressions dominate the assessment of future acts (Feldman, 1981; Anderson and Barrios, 1961). This can be particularly problematic if a team member's improvement goes unnoticed, or if a previously high-performing team member begins slacking, but is still treated better than others. Opportunities for growth and improvement might also be missed if managers and other team members do not have a growth mindset. In other words, if someone believes that skills, attitudes and behaviours are relatively static, they will invest less in their own growth and learning and in that of their colleagues (Heslin and VandeWalle, 2008). Several behavioural biases can create barriers to successful project management. Organisations and teams are susceptible to ignoring pertinent information or opportunities (Wieber, Thürmer and Gollwitzer 2012), escalating commitment to failed courses of action (World Bank, 2015; Staw, 1981), and failing to act on an intention (Wieber, Thürmer and Gollwitzer, 2012; Sheeran, 2002). Common barriers to engaging with organisational and individual stakeholders include a lack of awareness or understanding, a lack of capacity to take part, or simple forgetfulness. Often organisations and government entities that could benefit most from being engaged are least likely to take part (Manna and Ryan, 2011; Collins, Andrew and Khunwishit, 2016).

Managing staff

Several simple behavioural techniques can have an impact on reducing the biased judgements of managers and staff caused by halo effects. For performance appraisals, one suggestion to improve the quality of 360° performance reviews of managers is to use questions that prompt a forced choice between alternatives (Brown, Inceoglu and Lin, 2017). By showing an array of characteristics and forcing a choice, it may encourage a person to be more deliberate and less intuitive in making a judgement. In the United Kingdom, 922 managers were assessed by peers, bosses and subordinates on 16 competencies using the Inventory of Management Competencies (Brown, Inceoglu and Lin 2017). Statements were presented in 40 blocks of four with responses being provided on both a traditional 5-point frequency scale and a forced-choice ranking in which one of the four statements would be selected as "most" representative of the managers' behaviour and another one of the four as "least" representative. This change increased the inter-rater reliability of different assessors, increasing the confidence that it was capturing a more objective assessment of the managers' performance.

Priming the evaluator to provide a rational judgement can help put them in a more objective mindset and reduce the chances of being affected by a halo effect (Gino, Moore and Bazerman, 2008). In a specific lab experiment, volunteers were asked to judge how ethical a decision was in scenarios in which an unethical decision was taken and then a negative outcome occurs (or not). Objectively the ethics of the choice should be stable; however, they were influenced by the existence of a negative or positive outcome (even if those outcomes were due to chance). This biased assessment due to a type of halo effect (or "outcome bias") was reduced by merely asking respondents to provide their "most rational, objective judgment." Halo effects can also impact audits if a strategic assessment is done first (O'Donnell and Schultz, 2005). If auditors develop a positive impression of the strategy of an organisation, then they are less likely to identify accounting errors, while a negative impression of the strategic assessment will make them more likely to identify such errors. These halo effects provide one of the rationales for blinding and dividing the assessment of particular components of a case.

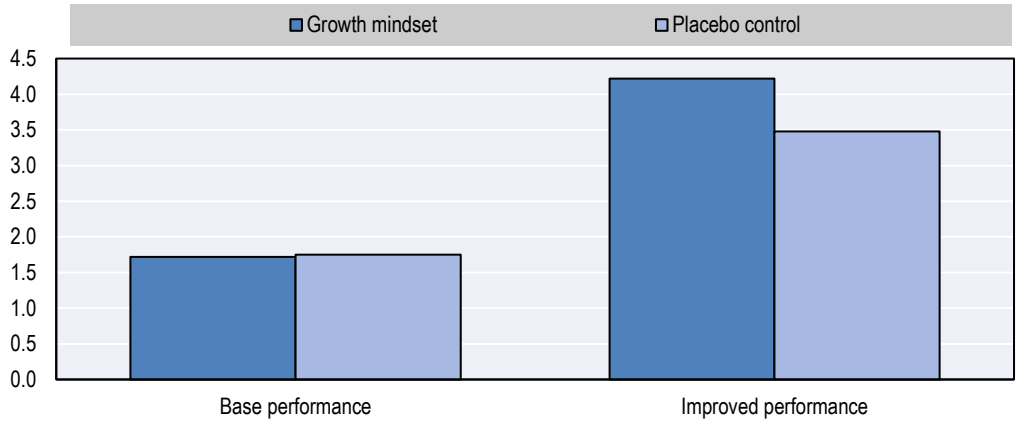
A growth mindset intervention can help a manager give a more realistic assessment of the performance of his/her employees (Heslin and VandeWalle, 2008). A lab study with MBA students in Canada, who had an average of 5.1 years of managerial work experience, showed that a 90-minute growth mindset workshop could improve the accuracy of assessments of a video-taped, fictitious, employee's negotiation skills (Heslin, Latham and VandeWalle, 2005). The study randomised 33 MBA students with an entity (non-growth) mindset to receive the workshop and 29 to receive a placebo workshop. The growth mindset workshop consisted of the following five elements (Heslin, Latham and VandeWalle, 2005: 851):

1. Scientific testimony on how "recent psychological and management research" has shown how people's characteristics can change and how the brain "is capable of 'growing like a muscle' and making new connections throughout life."
2. Counter-attitudinal idea generation asking participants to think of "at least three reasons why it is important to realize that people can develop their abilities" and to "include implications for both [themselves] and for the employees [they] (will) manage."

3. Couner-attitudinal reflections to three 2-part questions such as "What is an area in which you once had low ability, but now perform quite well? How were you able to make this change?"
4. Counter-attitudinal advocacy in which participants wrote an email to a hypothetical protégé "about how abilities can be developed" along with anecdotes from their own life dealing with challenges.
5. Cognitive dissonance induction by prompting them to think of three examples when someone learned something they thought the person could never do, why that happened and what the implications have been.

This workshop led to a more incrementalistic (growth mindset) perspective among those participants six weeks later and they were also more likely to recognise and acknowledge the improved performance of an employee conducting a negotiation (Heslin, Latham and VandeWalle, 2005: 852). Their ratings six weeks after the workshop were in line with what would have been expected among individuals who already have a growth mindset (Figure 6). Although conducted in a controlled setting with a small sample, this study provides an example of a short behavioural growth mindset intervention that can be conducted among managers to improve the accuracy of their performance assessments.

Figure 19. **Effect of a growth mindset workshop on performance ratings**



Source: Heslin, P.A., G.P. Latham and D. VandeWalle (2005), "The effect of implicit person theory on performance appraisals", http://dx.doi.org/10.1037/0021-9010.90.5.842.

Behaviourally informed management training and coaching can be effective at improving management, performance and work satisfaction. Famously, Google conducted a multi-year research project called "Project Oxygen" to determine what makes a good manager and to see if managers' performance could be improved (Garvin, 2013). The project compared the top and bottom 25% of Google's roughly 5 000 managers across multiple dimensions and found that in 2008 managers who scored in the top quartile on the performance reviews were less likely to have staff leave and more likely to have staff with higher job satisfaction in terms of innovation, work-life balance and career development. The project identified eight behaviours (Figure 7) shared by high-scoring managers that were especially relevant for first- and second-level managers for small and medium-sized teams.

These behaviours were then used as a learning tool to help assess managers, coach them in improving the eight behaviours in which they scored lower and offer courses on the topics. New managers took a course on management that was composed of three two-day modules spread over six months. In addition to coaching and courses, panel discussions were arranged with high-scoring managers from each function so that colleagues could share advice with each other. To help remind busy managers of the behaviours and ideas to implement them, automated emails are sent out with tips. In order to further motivate change, Google's Great Manager Award changed its selection criteria to align it with the eight behaviours. The reward included a week-long trip to a destination where winners spend time with senior executives and recipients of the award were more likely to be promoted to vice-president. This reward provides a good example of aligning the structure of an incentive with the desired values of the recipients – a desire to grow, learn and interact with company leadership. Through these efforts, the already high favourability scores of managers rose from 83% in 2010 to 88% in 2012 and the gains spanned functions, survey categories, management levels and geographic regions (Garvin, 2013). These management characteristics and training approaches have also entered the public sector. The United States' Office of Evaluation Sciences, Performance Improvement Council, Department of Labour, and Department of Energy conducted a training on the eight behaviours above with managers at Department of Labour and the Department of Energy in combination with a growth mindset intervention (Social and Behavioral Sciences Team, 2016: 32).

Figure 20. **Describing Google's best managers**

A good manager...	1. Is a good coach.
	2. Empowers the team and does not micromanage.
	3. Expresses interest in and concern for team members' success and personal well-being.
	4. Is productive and results-oriented.
	5. Is a good communicator, listens and shares information.
	6. Helps with career development.
	7. Has a clear vision and strategy for the team.
	8. Has key technical skills that help him or her advise the team.

Source: Garvin, D.A. (2013), "How Google sold its engineers on management".

Enhancing positive exchanges between leadership and other staff through leader-member exchange (LMX) can improve staff performance (Martin et al., 2016). Such positive interactions are typified by respect, affect, loyalty and 'felt obligation' while a weak relationship is typified by a primarily contractual and economic exchange and has the opposite effect. A systematic review and meta-analysis of 207 independent

samples found that high LMX relationships resulted in a strong positive effect on task performance, citizenship performance (or positive worker behaviours of going above and beyond expectations), and it reduces the incidence of counter-productive behaviours (Martin et al., 2016). When looking only at objective measures, the results are the same, with strong LMX relationships having a positive effect on objective task performance (such as sales per hour or error frequency) and a strong negative relationship with objective counterproductive performance (such as absenteeism and reported accidents). The impact of the LMX relationship on task performance was mediated by trust, empowerment, motivation and job satisfaction. Because low-quality leader-member exchanges not only lower performance but can also result in counterproductive work behaviours which then lead to worsening relationships, the literature highlights the importance of enhancing LMX via training and the removal of structural barriers.

An example of an intervention to increase LMX relationships in the United States conducted a two-hour session per week over six weeks (Scandura and Graen, 1984). The sessions combined lectures, discussions and role-playing one-on-one sessions. The sessions covered: 1) LMX; 2) active listening skills; 3) exchanging mutual expectations; 4) exchanging resources; and 5) practicing one-on-one sessions. The evaluation included 100 participants, of which 35 employees received the training. The training improved the relationship between managers and staff with low initial levels of LMX and increased their work productivity after the intervention through week 26. Structural changes could also be implemented to improve LMX and might include reducing group sizes, increasing the time allocated to formal and informal interactions, providing opportunities to team members in low LMX relationships to compensate for the lack of support from their immediate supervisors, and communicating the social goals of an organisation through the leader-member (manager-subordinate) relationship (Martin et al., 2016; Mallory and Rupp, 2015; Cogliser and Schriesheim, 2000). These findings align with the theories of motivation such as the Job Characteristics Model and the Positive Work Cycle covered in the supporting theoretical paper by Foster (2017).

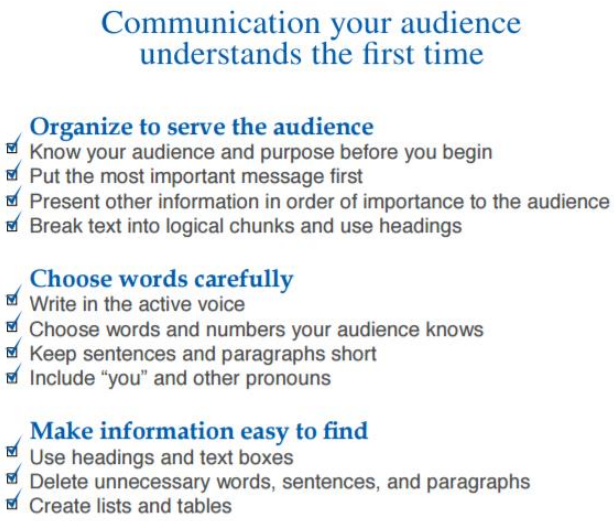
Managing projects

The use of plain language can impact the understanding and implementation of government and organisational policies and regulations. In the United States, the Plain Writing Act of 2010 (Pub. L. No. 111-274) was introduced requiring each executive branch agency to:

- designate one or more senior officials to oversee implementation of the act
- communicate the act's requirements to employees
- train the agency's employees in "plain writing" (defined as writing that is clear, concise, well-organised and follows other best practices appropriate to the subject or field and intended audience)
- establish a process for overseeing the agency's ongoing compliance with the act
- create and maintain a plain writing section on the agency's website that is accessible from its homepage
- designate one or more agency points of contact to receive and respond to public input on the implementation of the act.

Then Director of the Office of Management and Budget (OMB), Cass Sunstein, also issued guidance on the implementation of the law and PlainLanguage.gov developed additional guidelines and resources to assist agencies. As a result, agencies developed procedures and toolkits for improving the use of plain language. For example, the Centers for Disease Control developed a concise one-page checklist (**Error! Reference source not found.**). A number of examples of changes to texts can be found at the PlainLanguage.gov website. One example can be found in Figure 11. As the OMB guidance states, the benefits of plain language include reduced costs through fewer questions to staff, better compliance with regulations, reduced resources spent on enforcement, reduced errors and reduced time spent correcting those errors.[11]

Figure 21. **Centers of Disease Control Plain Language Checklist**



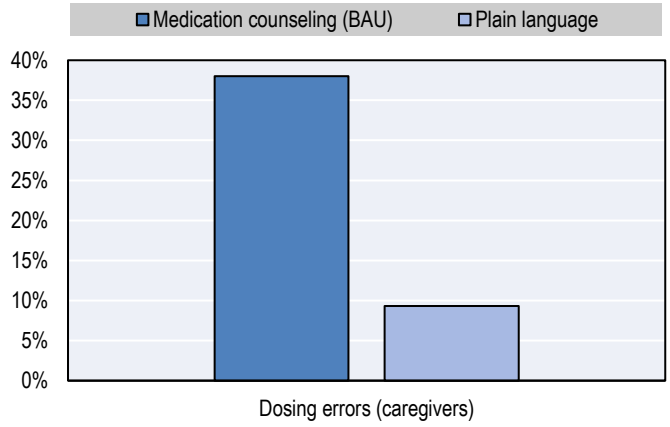
Source: Centres for Disease Control, https://www.cdc.gov/healthliteracy/developmaterials/plain-language-communication.html

Independent research has confirmed the effect of plain language on actions taken among individuals. Research on the comprehension of the United States' Food and Drug Administration Med Guides confirmed the importance of following plain language (and health literacy) guidelines. An RCT with 1 003 adults found that a rewriting of the Med Guides based on the best practices in health literacy increased comprehension compared to the status quo guides (as well as two other models) (Wolf et al., 2014). Another RCT of drug-dosing errors among caregivers of young children found that medication counseling using plain language and a pictogram-based instruction sheet reduced dosing mistakes from 38% in the control group to 9% in the treatment group (Yin et al., 2008) (Figure 9). Other studies have comfirmed the positive effects of plain language. Although this rigorous research on the effects of plain langauge has been done with individuals, other interventions that include the simplification of communications with businesses and organisations have shown positive results.

Commitment devices and implementation intentions can help close the gap between a desired goal and taking action to realise that goal (Bryan, Karlan and Nelson, 2010). An example of a commitment device among employees of a firm is in India, where employees were offered to either: 1) have no committed goal and receive the same piece-meal wage for every unit of work; or 2) to commit to a goal and if they reached the goal

they would still receive the same wage as if they had no goal, but if they failed to reach it they would be paid half the rate. The commitment was to being punished financially for not meeting a target. This offer, that would have no per-unit benefit in terms of wages, was taken up by a third of employees as a means of enhancing their self-control and increasing productivity (Kaur, Kremer and Mullainathan, 2010). The trial successfully increased overall production and income. Other examples of commitment devices would be when a country receiving funds from the International Monetary Fund publicly commits to not use part or all of the funds (Saravia and Mody, 2003) or the use of integrity pacts (Abramo, 2003).

Figure 22. **Plain language and image reduce caregiver dosing errors**



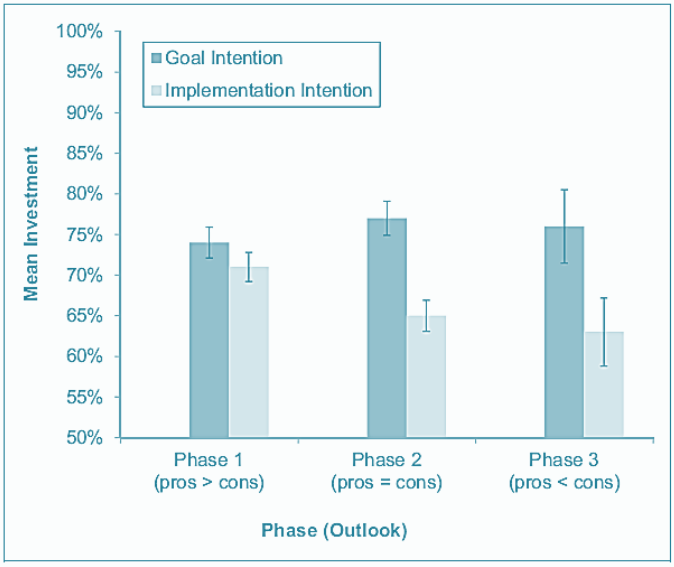
Source: Yin, H. et al. (2008), "Randomized controlled trial of a pictogram-based intervention to reduce liquid medication dosing errors and improve adherence among caregivers of young children", http://dx.doi.org/10.1001/archpedi.162.9.814.

Implementation intentions are the most well-documented type of commitment intended to reduce the gap between intention and action. Implementation intentions are pre-commitments to take a given course of action when a specific context is encountered in order to reach a broader goal. Often they are constructed as "if-then" statements of the form: "If context Y, then I will do X" (Sheeran, 2002). They have been shown to function by helping initiate the pursuit of a goal, preventing distractions from goal pursuit, de-escalating commitment to a failing course of action, and conserving energy for continued and additional goal pursuit (Gollwitzer and Sheeran, 2006).

More recent work has shown that implementation intentions are also effective when formed by groups of individuals. For groups, the formation of implementation intentions can counteract weaknesses of group dynamics by increasing their likelihood of selecting an optimal decision and decreasing the likelihood of escalating commitment to a failed course of action (Wieber, Thürmer and Gollwitzer, 2012). In a lab setting, groups were told how to take an optimal decision by reviewing the positive aspects of non-preferred options prior to taking a final decision. All individuals then formed the goal "I want to find the best alternative" while only half of the participants additionally created an implementation intention of "And when we finally take the decision sheet to note our preferred alternative, then we will go over the advantages of the non-preferred alternatives again" (Thürmer, Wieber and Gollwitzer, 2015: 104). This small addition of a collective implementation intention resulted in those groups being more efficient and more likely to choose the best alternative.

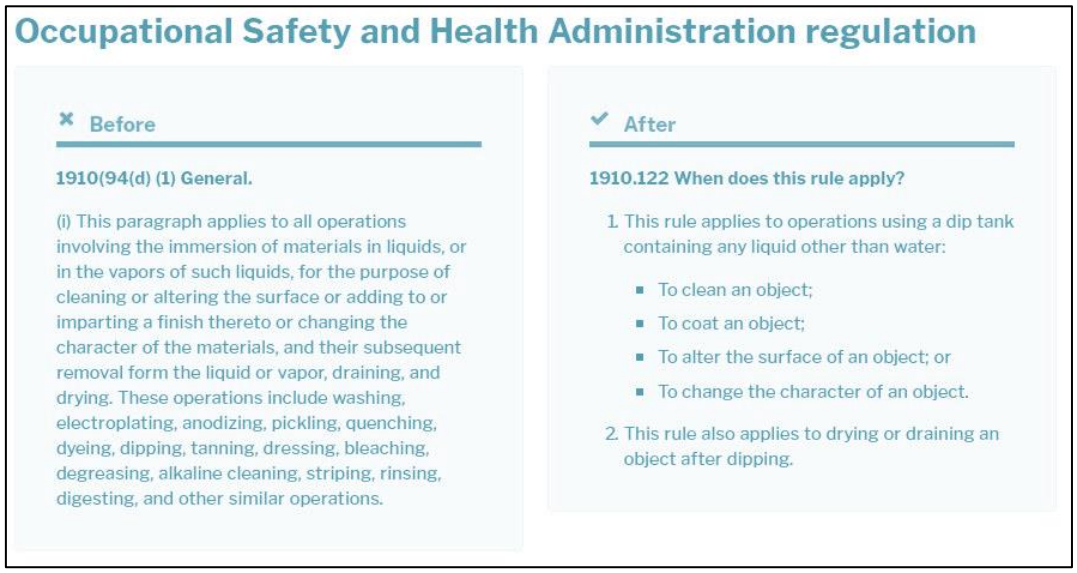
Likewise, a lab experiment found that groups which set implementation intentions were more likely to reduce their investment in a failing project. Setting a goal of "We want to make optimal investment decisions!" and then adding the implementation intention of "And when we are about to make an investment decision, we will judge the project as independent observers who are not responsible for earlier decisions!" led to reduced investment in a failing project to build a kindergarten (Figure 10) (Wieber, Thürmer and Gollwitzer, 2015: 589-590).

Figure 23. **Implementation intentions reduce escalation of commitment**



Source: Wieber, F., J.L. Thürmer and P.M. Gollwitzer (2015), "Attenuating the escalation of commitment to a faltering project in decision-making groups", http://dx.doi.org/10.1177/1948550614568158.

Figure 24. **Before and after plain language revision example**



Source: PlainLanguage.gov https://www.plainlanguage.gov/examples/awards/award-1/.

Managing stakeholders

Framing opportunities positively can prime organisations to take advantage of opportunities and to be more likely to submit applications to be eligible to continue their activities. This can be helpful if an organisation wants to encourage other entities to take part in a scheme or submit bids for a project. For example, the owners of small and medium-sized enterprises were sent messages about mentorship opportunities made available through the United Kingdom's Department of Business, Innovation and Skills in 2013. Using a positive promotion frame resulted in more positive responses, especially among long-standing businesses and expanding businesses (OECD, 2017: 294-296). It is important to note that this effect is in spite of the fact that people tend to value losses more than gains (Kahneman and Tversky, 1979). This may be because of the relationship between self-regulation and decision making. When we are primed to look for opportunities (promotion/approach focused) we will take more risks and notice more options than if we are primed to avoid negative outcomes (prevention/avoidance focused) (Mannetti et al., 2013; Higgins, 2002; Crowe and Higgins, 1997).

Direct language and encouraging help-seeking can also be effective at prompting stakeholder organisations to notice, read and respond to communication material – including communication about compliance. Such insights can help improve the management of stakeholder relationships. In one example in the United Kingdom, the Financial Conduct Authority (FCA) tested different email subject lines sent to firms who had to apply for FCA authorisation to continue with their consumer credit activities. The most effective subject lines in terms of getting the attention of recipients and encouraging them to open the email used direct language, primed help-seeking behaviour, and in the second case were personalised: "Your FCA application: help is here to complete your section" and "[Firm name], help is here to complete your application" (Smart, 2016: 14-16). The other messages started out with less salient information since they did not mention the FCA application until the 11th, 10th and 12th words in the subject lines and they used more passive language ("videos: helping you" and "guides to help").

Shortening the length of time between a notification and deadline to act can also increase the rate at which external organisations respond to requests for information or action enabling a more seamless management of such relationships. In the United Kingdom, an RCT found an impact of a shorter deadline but no impact of providing a warning about the negative consequences of non-compliance.[12] The target of the communications were mutual societies, which are small organisations run by volunteers, and they must submit annual returns. When returns are not submitted, the FCA must expend time and resources to pursue the reports. The FCA conducted an evaluation of letters sent to 7 984 mutual societies to test the inclusion of: 1) salient bulleted information (highlighting negative consequences); 2) warnings; and 3) the time between the letter and the deadline for submission. The study found that providing a shorter deadline of roughly 20 days instead of roughly 60 days increased response rates by 2.4 percentage points. It is worth noting that this effect was more than the traditional approach of highlighting negative consequences (OECD, 2017: 316-17). The marginal increase in compliance among organisations seems to be due to targeting the tendency to forget deadlines that are farther in the future and to discount longer term consequences.

Challenges and implications

There are several notable challenges in interpreting the cases above. First, in many of the cases of applied behavioural insights, it is difficult to discern which behavioural insight(s) had an impact and which did not. This is because multiple insights

are often combined. While there is a large amount of evidence that combined approaches are effective, there are also cases where more economical combinations are more effective than interventions that made use of more insights.[13] Second, when creating a behaviourally informed intervention to increase the uptake of a programme, it is important to be wary about combining insights that might trigger contrasting mindsets. In particular, it is important to be careful when combining frames highlighting opportunities using a promotional or help-seeking mindset alongside negative language that makes use of a loss-frame or warning. While both frames have been found to be effective, when they are combined they may negate each other as the former encourages broad mindedness and the latter encourages vigilance.[14] Third, as noted in the strategy section, many of the experimental studies were conducted in lab conditions while the field studies above tend to be case studies or correlational in nature. Notable exceptions include the applied experimental research on improving leader-member exchange and the applied experimental research on managing interactions with external stakeholders – especially small and medium-sized enterprises.

There are several relevant implications for how organisations manage staff, projects and external stakeholders. First, managers should be trained to avoid cognitive biases in assessing staff (or member organisations), the importance of having a growth mindset that accepts that improvement is possible, and how to strengthen one-on-one exchanges with their staff (or member organisations). Second, organisations should consider implementing a plain language policy to ensure that written materials are helpful and informative rather than creating needless barriers to good project management and implementation. Third, any goal-setting exercises should make use of commitment devices and implementation intentions (specific if-then statements) to increase follow-through. This will force an assessment of how the goal can be put into practice, and will make it more likely that the goal-striving behaviour will be engaged in when the time/opportunity comes. Creating such implementation intentions at the beginning of a project might also reduce the need for expensive monitoring later on in a project or partnership. The use of such "soft commitments" is important as it can empower partnerships, build trust and (if successfully piloted) can decrease the reliance on more heavy-handed contracting and enforcement mechanisms. Fourth, when managing interactions with external stakeholders, encourage the application of behavioural insights when crafting communications and interfaces used to interact with clients, customers and members, especially promotional framing, offering help, and ensuring that deadlines are sent close to the deadline.

In general, the following principles can help groups of individuals function better and avoid "groupthink". These principles have been adapted from the work by Sunstein and Hastie in their summary of research on the behaviour of groups – especially group decision making (Sunstein and Hastie, 2014; 2015).

- avoid having the leader voice his/her opinion until others have spoken
- encourage group members to think critically using implementation intentions
- use incentives that reward groups instead of only individuals[15]
- assign roles to all individuals to encourage each to contribute
- give someone the role of being a devil's advocate or create contrarian teams
- gather individual input prior to group discussions (e.g. the Delphi method).

Indicative applications to Cohesion Policy management

The following are three indicative applications of these behavioural insights to the management of staff, projects and partners within the context of the EU Cohesion Policy and Structural Funds. These potential applications may be particularly useful for managing authorities.

1. Managers experiencing high staff turnover could benefit from a behaviourally informed management training (e.g. covering LMX, growth mindset and other topics) to reduce staff turnover and increase staff performance and satisfaction. Likewise, staff who are responsible for assessing agreements, programmes and projects could benefit from a growth mindset training to be equipped to more accurately assess changes in performance.
2. The Commission and managing authorities could provide an example template for goals and milestone within operational programmes and performance frameworks that prompts the use of implementation intentions in goal setting. The most important goals and milestones could be highlighted via the Open Data platforms or other tools. The use of implementation intentions and public commitments (such as integrity pacts [Armstrong, 2005; Abramo, 2003]) could help translate goals into action.
3. Staff at both the Commission and the managing authority could be trained in and encouraged to use plain language. For example, the managing authorities could provide plain language support for staff drafting operational programmes and those drafting requests for proposals. A simple plain language reference available in 23 languages is *How to Write Clearly*.[16] In addition, the Commission could identify and revise guidance that would benefit most from such revision; for example, the guidance linked with confusion or errors.

Cases of implementation

Behavioural insights can also be leveraged to improve the implementation of projects and programmes by organisations. The types of behavioural interventions discussed below are the use of personalisation to gain attention, the simplification of information to decrease confusion, social norms to motivate action, the use of implementation intentions to increase follow through on goals and motivations, and priming an ethical mindset to encourage honesty.

Behavioural barriers in implementation

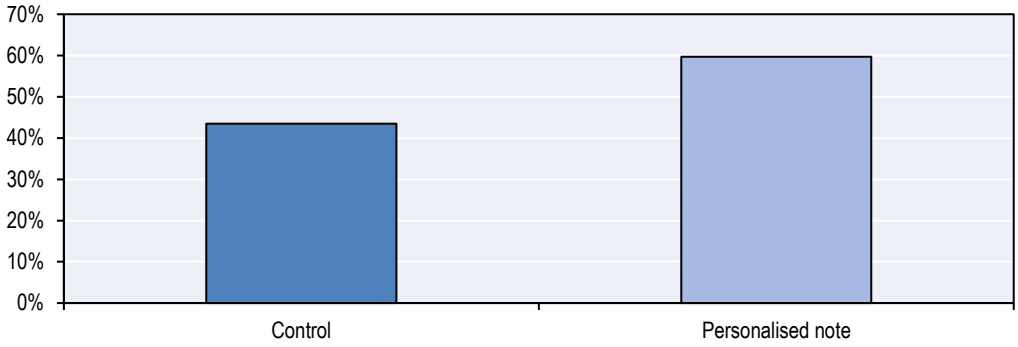
Several behavioural biases can create barriers to the successful implementation of a course of action by an organisation or groups of individuals. As noted above, organisations are susceptible to ignoring (or not noticing) pertinent information or opportunities (Wieber, Thürmer and Gollwitzer, 2012), developing incorrect mental models of the issues they are working on (World Bank, 2015), misunderstanding, and the tendency not to follow through on intentions due to forgetfulness or laziness.

Behavioural insights for implementation

Prompting organisations through personalised contact and behavioural framing can be an effective way to ensure that organisations are compliant with reporting requirements. In the Netherlands, the Authority for Consumers and Markers individually called postal firms that had not submitted required company data and followed a telephone

script with embedded behavioural insights. The insights used included personalisation, simplification, using a social norm ("We are only waiting for you, the rest already did it") and asking the firms to set a commitment to respond by a specific date. The phone calls resulted in 24 of the 27 non-compliant organisations submitting the necessary information. This process was then put in place the next year and resulted in faster data collection with more firms complying immediately (OECD, 2017: 284-286). In another example of using a combination of personalised contact and behavioural framing to increase the response rate of organisations, a personalised, handwritten post-it note was added to a business survey that was mailed out. The inclusion of the personalised note was evaluated using an RCT which found that 59.7% of businesses receiving the personalised note had responded compared to a response rate of only 43.5% among businesses that did not receive the personalised note (Figure 12) (OECD, 2017: 334-335). The increased response rate due to personalisation is in line with the broader survey response literature (Edwards et al., 2002).

Figure 25. **Personalisation improves business response rates**



Source: OECD (2017), *Behavioural Insights and Public Policy: Lessons from Around the World*, http://dx.doi.org/10.1787/9789264270480-en.

Simplifying the requirements and increasing clarity can increase organisational compliance and reduce cost. In Denmark, the Business Authority sought to increase the response rate to a letter sent out to businesses requiring a response and urging them to sign-up to a public database (the "Nutrition Base"). A behavioural analysis of the current letter led to changes including: 1) addressing the letter using the person's or business' name; 2) creating a simple checklist so the organisation could determine if it met the criteria; 3) highlighting key information; 4) presenting the steps to take action along with illustrations; and 5) moving text about when a response is not needed to the end of the letter. An RCT compared the old letter, new letter and the new letter printed on red paper. The simplified letter increased response rates to 65% for the new letter and 69% for the red letter (compared to the old letter's response rate of 57%). The impact on whether or not the businesses took the action of signing up for the Nutrition Base was even more striking, with only 29% of the businesses in the control group signing up while 35% of those who received the new letter and 42% of those who received the new red letter signed up (OECD, 2017: 311-313). Similarly, in the United States, the Occupational Safety and Health Administration tested the simplification of its citation process for employers with health and safety violations (Chojnacki et al., 2016). The implementation of the citation process was changed by: 1) giving a new handout previewing the process during inspections; 2) using a cover letter that includes a concise and simplified explanation of the options to respond;[17] and 3) adding a postcard and follow-up phone calls to remind

employers of their options and deadlines. The new process was evaluated using an RCT that randomised offices to the new process. The changes resulted in a 3.9 percentage point increase in responding, a 6.3 percentage point increase in reaching an informal settlement agreement and a 2.8 percentage point increase in making a payment.

Social norms can be used in communication with organisations to improve their implementation by updating incorrect mental models of the frequency of an action and creating a sense of social pressure. By presenting a desirable (or undesirable) action in the context of how many other individuals or organisations are taking that action, those individuals and organisations are motivated to act (or avoid the action). The use of social norms can be particularly effective when the reference point is as similar and salient as possible. For example, in the United Kingdom, a letter was sent from England's Chief Medical Officer to select general practices notifying them that they were prescribing more antibiotics than 80% of the practices in their NHS Local Area Team. The letter was effective at reducing the use of antibiotic prescriptions when sent to these top 20% of prescribers. The intervention resulted in 73 406 fewer prescriptions across 791 intervention practices when compared to a control group of 790 practices who received no communication (OECD, 2017: 266; Hallsworth et al., 2016). Although the letters were sent to individual doctors, the impact was measured at the organisational level of the practice.[18] This example shows that undesirable actions can be reduced by sending messaging with social norms from a high-profile source.

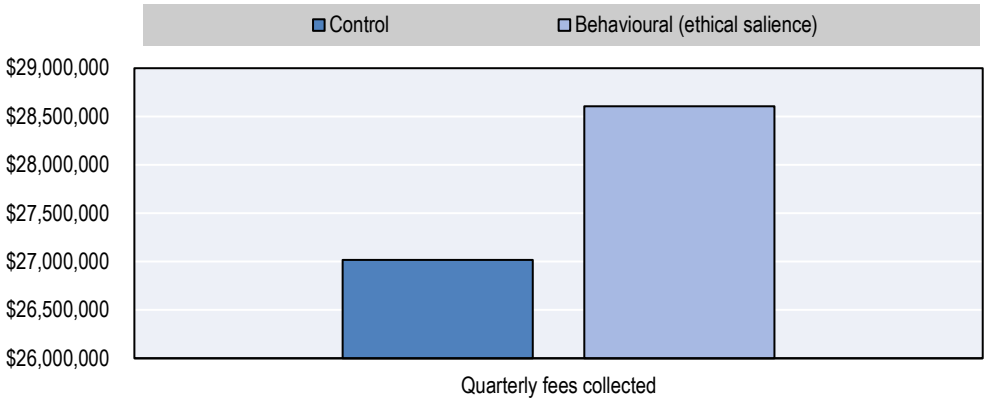
The importance of providing data to update incorrect mental models is important even in the context of organisations with high levels of expertise. For example, the World Bank recently documented the highly inaccurate mental models of poverty held by its staff – including those living and working in national offices (World Bank, 2015: 188). This tendency to have highly inaccurate predictions of the attitudes of others and frequency of their behaviours has been well-documented among experts and laypeople alike (Kahneman, 2011). This is in part due to perceptions of frequency being dominated by the most easily retrieved memories and examples rather than accurate statistical reasoning (Tversky and Kahneman, 1973) and the tendency to develop a false sense of consensus about a certain perceived "fact" (Marks and Miller, 1987). Thus, the use of social norms can both update those incorrect mental models and have the added power of exerting social pressure (Cialdini, Kallgren and Reno, 1991).

Prompting the creation of implementation intentions and simplification can also increase the compliance of organisations to requirements during implementation. In Ontario, Canada, the government sent out a behaviourally informed letter to employers who were late in filing their tax returns in 2014 and 2015. The letter included when, where and how to file with a detailed plan for filing provided to prompt an implementation intention. An RCT of the intervention found that the letters resulted in a 4.2 and 6.1 percentage point increase in tax filing relative to the unmodified letter in 2014 and 2015 respectively (OECD, 2017: 332-333).

Priming the identity and ethical salience of a responding organisation can also increase the ethical behaviour of organisations. Previous research among individuals has shown that priming their identify as truth-tellers and asking them to sign at the beginning of a report promising to tell the truth thereafter is effective at improving honest reporting (Shu et al., 2012). This work has also been extended to organisations. In the United States, the Social and Behavioural Sciences Team worked with the General Services Administration to test a change in the online reporting used by vendors to report their sales which are then used to calculate the Industrial Funding Fee that the vendor

must pay to the General Services Administration. The change placed a signature box at the beginning of the online form stating "I promise that the information I am providing is true and accurate." This change was tested using an RCT and found that the inclusion of the signature box increased the amount of fees collected from vendors in a single quarter by USD 1.59 million (Figure 13) (Social and Behavioral Sciences Team, 2015: 15-16)[19].

Figure 26. **Ethical salience increases honest reporting and payment**



Source: Social and Behavioral Sciences Team (2015), *Annual Report*.

Challenges and implications

When interpreting how best to apply behavioural insights to implementation, a few challenges are worth noting. First, many of the cases above have documented impact on groups of individuals and relatively small organisations (such as a doctor's practice). It will be important to evaluate the application of these insights to larger organisations and multinationals. Second, multinationals and large-scale granting organisations are tasked with implementing their own work as well as monitoring and encouraging implementation by partner organisations and grant recipients – sometimes with several levels of operations between final implementation and the originator of the funds. As such, there are numerous types of implementation that could be targeted through the use of behavioural insights. This multiplicity and complexity can make it difficult to choose where to start with applying the behavioural insights outlined above, but it also creates more opportunities. Third, as was noted above with management, the cases of behavioural insights for implementation often combine multiple insights in one case study, making it difficult to determine which insight, or combination of insights, was driving the change.

There are several final implications for organisations that want to use behavioural insights to improve the ultimate implementation of and reporting on projects and programmes. Firstly, the use of personalised notes, simplification, social norms[20] and implementation intentions can help ensure that data and payments are provided to keep programmes running smoothly. Personalised notes have had particularly large impacts on response rates and may be worth the additional burden if there are not too many recipients or if the message can be targeted to those who most need the added nudge. In the case above, personalised notes were sent to 300 organisations and increased response rates by 16.2 percentage points – a larger increase than other interventions. Implementation intentions are also particularly effective at helping convert goals and

aspirations into actions. As noted above, such implementation intentions should be integrated into planning, execution and communication whenever possible. Secondly, to increase honest reporting and accountability, forms and other reporting mechanisms should prompt respondents to sign and promise that they will be truthful at the beginning rather than at the end as is traditionally done.

Indicative applications to Cohesion Policy implementation

The following are three indicative applications of these behavioural insights to the implementation of projects and programmes within the context of the EU Cohesion Policy and Structural Funds. These potential applications may be particularly useful for managing authorities.

1. When sending requests for information or action to grantees or other implementing entities, managing authorities could consider using additional personalisation and the use of other behavioural communications insights. For example, response rates can be increased by revising the emails or letters that are sent out using the name of the receiving person, the name of the sender, a (partially) pre-populated response, and even adding a handwritten note with letters.
2. Managing authorities could make use of social norms to improve performance among grantees or implementers who are underperforming on a key metric compared to others (e.g. milestone achievement, error rates, sharing data, etc.). Often underperformance is incorrectly perceived to be more frequent than it is, and correcting this perception along with making use of social pressure can shift behaviour. This comparison could also be automated using a data-sharing platform, with graphic comparisons provided upon log-in.
3. Managing authorities could also make use of ethical salience to increase the accuracy and honesty of any self-reported data from implementing organisations. One simple method to do this would be to prompt the organisations' representatives to sign and commit to reporting accurately at the beginning (not the end) of any forms or online data entry platforms – for example within the Open Data platform.

Conclusion

The application of behavioural insights to public policy has expanded rapidly in recent decades. This rapid expansion enables the field to focus on particular types of application. This paper represents one of the first efforts to critically survey the cases and insights that have been applied to organisations instead of individuals. The paper has structured this review around categories of organisational actions, namely: 1) strategy and decision making; 2) management; and 3) implementation. It has highlighted a number of illustrative cases that can inform the work of multinational, national, regional and local organisations. These cases provide examples of how behavioural insights can have an impact on organisations through key individuals in those organisations as well as through behaviourally informed changes to organisational routines. However, more research is needed to investigate the impact of these insights – especially when applied in the context of more complex organisations and new countries with different approaches to business-as-usual. The remainder of this conclusion reflects on the paper's limitations and provides a summary of its findings.

Paper limitations

The findings of this study are limited by the scope of the research that informs it. One limitation is that the cases identified in this paper were drawn from existing reviews and direct experience and were not gathered through a systematic literature review. As such, they provide an indicative, but not exhaustive, account of the application of behavioural insights to organisational behaviour. Despite this limitation, the reviews used have been completed as recently as 2017 and contain more than 100 potential cases (both individual and organisational applications of behavioural insights) from all around the world. Another limitation of this paper is the nature of the cases included. Many of the cases focused on small or medium-sized organisations, with the exception of several of the correlational or qualitative case studies. More rigorous research is needed on the application of behavioural insights to change the behaviour of large organisations (private, non-profit and governmental).

Summary of application of behavioural insights to organisational behaviour

There is reason to be optimistic about the application of behavioural insights to organisational behaviour. While there are fewer cases evaluating the impact of such applications, there are sufficient examples to learn from and expand on.

This paper has highlighted several implications for how organisations might make use of behavioural insights to improve strategy and decision making, management, and programme implementation.

To improve strategy and decision making organisations can: 1) conduct reference class forecasting when setting goals and allocating budgets by developing or making use of databases of historical data; 2) consider opportunities to create flatter decision-making structures to encourage innovation and reach higher levels of performance; 3) look for opportunities to strengthen existing top-down accountability by way of bottom-up mechanisms that make it easier for clients and citizens to report upward – the added effectiveness may enable reductions in layers of top-down accountability; and 4) look for ways to use non-monetary incentives and to amplify the effect of financial incentives by structuring them as losses and triggering them with as little delay as possible. **Potential applications for the EC and managing authorities include:** 1) using data from 2014-20 to generate benchmarks for reference class forecasting in post-2020 of milestones, absorption rates, error rates, costs and outreach; 2) facilitating citizen and civil society reporting on key areas of project compliance via the open data platforms of the EC and managing authorities; and 3) restructuring of the performance reserve as a loss instead of a gain and timing it to be triggered more frequently and earlier.

To improve the management of staff, projects and stakeholders, organisations can consider: 1) training managers to be aware of, and counteract, behavioural biases through promoting a growth mindset, stronger one-to-one relationships through leader-member exchange and avoiding halo effects in order to improve the performance of the organisation; 2) implementing a policy requiring the use of plain language when materials are produced by the organisation to avoid mistakes, misunderstandings and inaction caused by lack of clarity; 3) linking broader management goals with implementation intentions that provide specific contexts for taking goal-directed actions in order to increase follow-through towards pursuing those goals; and 4) incorporating behavioural insights whenever designing interfaces with external stakeholders (such as communication materials or platforms), especially using promotional framing, simplifying and encouraging access to help, and sending out calls-to-action or notifications within several weeks of the

required action instead of far into the future. **Potential applications for the EC and managing authorities include:** 1) providing behaviourally informed management training to reduce turnover and increase productivity, covering topics such as enhancing leader-member exchange and having a growth mindset; 2) prompting the use of implementation intentions (in addition to goal setting) during the creation of operational programmes and performance frameworks; and 3) encouraging the use of a plain language review[21] when drafting guidance, writing operational programmes and creating requests for proposals.

To improve the implementation of projects organisations can: 1) use behavioural insights such as personalisation, simplification, social norms and implementation intentions to help ensure that data and payments are provided on time to keep programmes running smoothly. In addition, 2) improved compliance and decreased fraudulent reporting can be achieved by priming the ethical salience of the action and the reporters' own positive self-identity as a truth-teller at the beginning of financial reporting forms or invoices. **Potential applications for the EC and managing authorities include:** 1) targeting requests for information of high importance (or with low response rates) using heightened personalisation to increase and accelerate response rates thus saving time and resources; 2) sending information on social norms to entities that are significantly underperforming on important metrics to improve performance; and 3) using ethical salience to improve the accuracy and honesty of self-reports by prompting a promise to complete the form honestly at the beginning of digital and paper-based reporting forms.

Finally, it is important to develop a clear diagnosis of an organisational challenge before seeking to apply behavioural insights. In some cases, the main driver of a challenge is not behavioural and therefore a behavioural solution may not be appropriate. In cases where a behavioural barrier does exist, there are important context-specific dimensions that will make or break a successful behavioural intervention. The annex provides an illustrative process for diagnosing a behavioural challenge and designing an appropriate intervention. The diagnosis and design of a successful behavioural intervention is often dependent on putting together a strong multidisciplinary team of experts in behavioural science[22] and individuals who have extensive experience in the day-to-day work of that part of the organisation.

In summary, simple behaviourally informed interventions such as reframing or simplifying the language of communications, triggering positive personal and organisational identities, and adjusting the timing of interactions or incentives can have positive effects on organisational behaviour. In addition, developing strong, trusting and co-operative relationships can be powerful in improving performance and compliance of organisations.

One of the important findings in much of the behavioural literature is that there are strong psychological and social incentives that can be used. Sometimes these non-monetary incentives can be more powerful than financial incentives or blunt regulations. These social and psychological determinants of behaviour should be considered when looking for new strategic opportunities, diagnosing barriers and crafting solutions to common challenges. It may be that small behaviourally informed adjustments will have more impact on organisational behaviour than large financial incentives or strict accountability regimes.

Notes

1. The study included both firms and individuals and found effects for both.
2. It should be noted that if a similar cost uplift was applied to Line 1, this final budget would have been much higher. By simply applying the same ratio of increase in cost from Line 2 (400m/165m = 2.42) to the total original budget allocation of GBP 375 million would result in an estimate of over GBP 900 million.
3. The project name, location and forecasting company were masked in the original research to protect anonymity.
4. To date, this research on strengthening attentional and executive control has focused on groups with specific mental health needs, such as anxiety, or who may have self-control deficits, such as those with obesity.
5. For example, these very flawed (hypothetical) decisions makers were those who would choose an option that is far worse than the status quo roughly 40% of the time and fail to choose a large improvement roughly 40% of the time.
6. Olken argues that the intervention is cost-effective; however, if the variance around the estimates is included it appears that the 95% confidence interval around the savings would include positive and negative values.
7. See www.asia-pacific.undp.org/content/rbap/en/home/ourwork/development-impact/innovation/projects/png-phone-against-corruption.html for more information and here for a presentation of the case.
8. The experiment involved 180 students at the University of Oxford with an average age of 22.5.
9. There remain questions about the motivational effects of such incentives – especially over time and in the helping professions such as teaching (Murnane and Cohen, 1986; Mahony, Menter and Hextall, 2004).
10. Unemployment insurance claimants filing a claim between February and October prior to the regime change are compared to those filing between February and October in the first year of the change.
11. See page 1 of OMB (2010).
12. For example, language that was tested included “Last year mutual societies like yours were fined up to GBP 3,000 for failing to provide this information on time” and “It is a legal obligation to complete and return the enclosed form.”
13. For example, among eight behaviourally informed letter variants encouraging Americans to sign up for health insurance, the letter combining all behavioural insights was the least effective while the most effective used three main insights: a call to action, an implementation intention and a picture (e.g. Social and Behavioral Sciences Team, 2015: 38).

14. For example, in Denmark, an attempt to increase the complete and proper submissions of business registration forms showed no impact when including both a more proactive message prompting the respondents to call for help (OECD, 2017: 307-310) and an avoidance frame ("AVOID DOING IT AGAIN"). These two changes were alongside other simplifications and changes such as the inclusion of a check-box stating that all the necessary forms are included, thus many intervention characteristics could explain this null effect.

15. See Foster's discussion on the importance of aligning incentives with desired behaviour and the tendency to fall in the trap of rewarding A (e.g. individual success) while hoping for B (e.g. teamwork) (Foster, 2017).

16. The publication can be found in 23 languages at: https://publications.europa.eu/en/publication-detail/-/publication/bb87884e-4cb6-4985-b796-70784ee181ce.

17. The letter changes can be viewed in more detail in the project brief on the Department of Labor's website: https://www.dol.gov/asp/evaluation/BIStudy/files/Pilot_OSHA_Citation_Process_Increases_Employer_Responsiveness.pdf.

18. In addition to the use of a social norm and a high-profile messenger, the letter provided three actions to reduce prescriptions: 1) providing self-care advice; 2) delaying the prescription; and 3) first discussing with other general practitioners in the practice.

19. This impact was statistically significant in the first quarter. In subsequent quarters it was no longer statistically significant.

20. Organisations should be careful when sharing social norms that they do not encourage high performers to reduce their efforts downwards closer to the social norm. One way to avoid this is to target only those who you know are below the norm. Another is to provide injunctive norms (about what is expected) instead of descriptive norms (about what is commonly done). See the work by Cialdini and colleagues with the United States Forest Service for an example of the relative power of injunctive norms (Cialdini et al., 2006).

21. A useful plain language resource is *How to Write Clearly*. It is available in 23 languages for free at: https://publications.europa.eu/en/publication-detail/-/publication/bb87884e-4cb6-4985-b796-70784ee181ce.

22. Within Europe, a number of experts in behavioural science can be identified through The European Nudging Network and the European Association of Work and Organisational Psychology.

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Annex A.
Behavioural design thinking

When crafting behavioural interventions, it is helpful to make use of several frameworks that have been used previously. The following is a sketch of the steps of thinking through how to apply behavioural insights in your work:

- **Define the problem:** Develop a clear understanding of a particular behaviour that should be increased or decreased. Frame the behaviour as much as possible by specifying who performs it, where it occurs and when it is usually done.
- **Diagnose the barriers:** Look for the barriers that are preventing the desired action or that are preventing a negative action from ceasing. It is often more productive to start by identifying existing barriers before moving to solutions. Types of barriers worth considering are (Figure A.1):
  - **Awareness:** Does the person or organisation know about the behaviour? Do they know that it is (un)desirable? Do they know the ramifications?
  - **Motivation:** What is making them unmotivated to act?
  - **Behaviour:** Are there issues with the ease or complexity of the action itself that are preventing action even among those who are aware and motivated?
  - **Continuation:** Does the action require continuous follow-up? Is it likely that the follow-up actions are forgotten due to long time lags? Are there motivational hurdles to sustained action?
  - **Feedback:** Is there a lack of feedback such that individuals are not even aware that they completed the action? Is there feedback that might incentivise them to avoid future action or dissuade others from acting?
- **Design the intervention:** Look for behavioural insights that have been successful in previous cases that can help address the identified barriers. When designing the intervention, it is useful to look for existing systems that can be adapted. In particular, look for existing points of contact with the audience, partners that can implement the desired change, and any data that can help target the intervention in a precise and personalised manner.
- **Evaluate:** Test the effectiveness of the change to add to the knowledge of your organisation and the broader community about what works, when, where and for whom. The use of behavioural insights is still in its early states and applications that have worked in different contexts with different populations might not work in new contexts. Quick, low-cost and rigorous evaluations can often be carried out by using existing sources of administrative data and will inform future policy makers and practitioners.

Figure A.1. **Behavioural diagnosis funnel**