

Applying behavioural insights in policies aimed at businesses

Final report

*Netherlands Government,
Ministry of Economic
Affairs and Climate Policy*

2018-0655/WvT/BW/ah

24 September 2018



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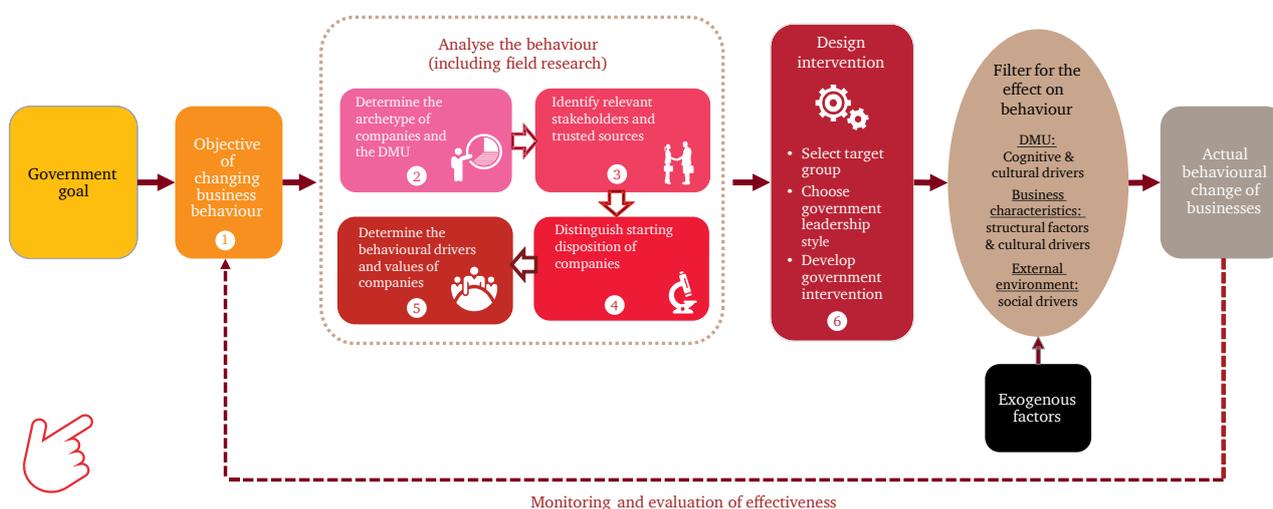
 START  TABLE OF CONTENTS  PAGE UP  PAGE DOWN



Governments in the Netherlands and abroad face a variety of societal challenges, such as climate change, an aging population and adaptation to disruptive technologies. Solving these societal challenges often requires businesses to change their behaviour. This study, commissioned by the Dutch Ministry of Economic Affairs and Climate Policy (MEACP), provides insights into how businesses behave and how the behaviour and choices of businesses can be influenced through policy instruments. Based on triangulation of academic and policy-oriented sources, case studies and expert interviews, this report presents a six-step approach that takes into account the specific characteristics of businesses as a target group when designing effective behavioural interventions.

Six steps to design behavioural interventions

To effect actual behavioural change of businesses, a successful intervention needs to consider differences between businesses, their relevant stakeholders and trusted sources, their starting disposition, and their behavioural drivers and values. Together, these factors help in selecting the appropriate leadership styles for the government to adopt, and designing interventions that have a high chance of being effective.

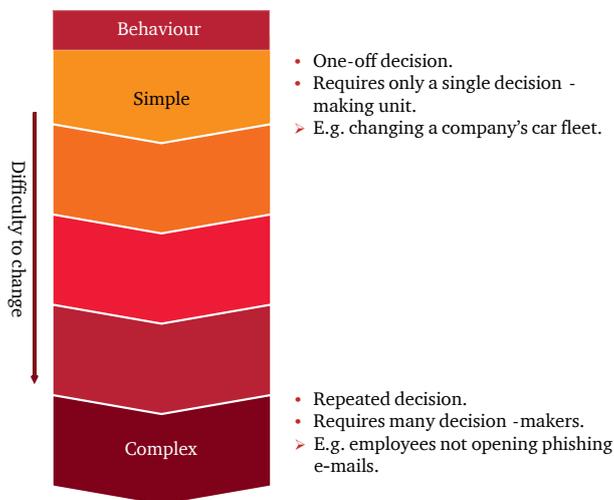


Step 1: Understanding the desired behavioural change

Government goals need to be translated into a desired behavioural change among businesses. When considering behavioural change, we distinguish between behaviour that is relatively simple to influence, and behaviour for which this is more difficult. In the course of this study, we identified several key factors that underpin this degree of difficulty, while other elements may play a role as well.

On the more straightforward end of the spectrum, behaviour can be situated that needs only a single decision to change (e.g. one-off, as opposed to everyday anew), and for which that decision requires only a single decision-making unit (DMU). For example, changing a fleet of company cars from gasoline-driven cars to electrical cars requires an executive board (a single DMU) to decide on making this investment and ordering its implementation (a one-off decision).

On the more complex end of the spectrum, behaviour can be situated that requires repeated decision-making (e.g. every day, every week or every time a specific situation occurs), and that involves a large number of decision makers (e.g. all individual employees of a department or all members of a specific layer of middle management). For example, getting all office-floor employees within a company (a large number of individual decision-makers) to separate their organic waste, paper coffee cups and plastic spoons and knives when disposing of them (a situation that occurs on a daily basis), can be seen as a relatively complex change ambition.



- Factors that influence the difficulty of behavioural change
- One -off or repeated behaviour ;
 - Number of decision - makers involved in the behaviour change;
 - Strategic decision or implementation;
 - Compliance behaviour vs. voluntary change behaviour;
 - Level of alignment with existing capabilities;
 - When new skills need to be learned:
 - Sense of urgency;
 - Self - efficacy;
 - Learning component.
 - Organisational readiness for change.



Step 2 & 3: Determining the archetype of businesses and the DMU and identifying relevant stakeholders and trusted sources

Influencing the behaviour of businesses is more complex compared to influencing behaviour of citizens. Psychological aspects relevant to understanding individual behaviour and decision making are also important when influencing business behaviour, although the specifics are different. For instance, the interactions between individuals in a DMU, the company culture and hierarchy all play a role in shaping business decision making. However, how businesses behaviour can be influenced strongly depends on specific, observable business characteristics. Business characteristics create a context that co-determines decision-making processes as well as social and individual behaviour. We have identified six business archetypes that help to determine how to influence business behaviour:

- the listed multinational corporation or financial institution;
- the cooperative;
- the family business;
- the innovative (technology-driven) start-up;
- the Small and Medium-sized Enterprise (SME);
- the self-employed entrepreneur.

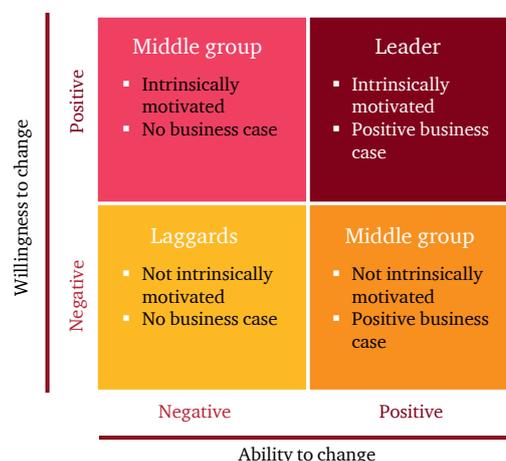
Each archetype has its own decision-making unit (DMU), and the DMU depends on the type of decision to be taken. Furthermore, business leaders and others involved in making business decisions pay attention to influential stakeholders and trusted sources in their business environment. As such, policymakers need to be aware of the type of businesses they attempt to influence, which influential stakeholders are involved, and what exactly these businesses consider trusted sources to be. These aspects further complicate the interaction between government interventions and their effects on business behaviour.



Step 4: Identify starting dispositions

When influencing business behaviour, it is important to identify the starting disposition of the businesses targeted. We distinguish three typical starting dispositions among target businesses. We identify leaders that are intrinsically motivated to make the desired change and are able to do so; laggards that are not motivated to make the change and unable to make any such change without help; and a group in the middle that lacks either motivation or the means to make the desired change. For policy makers, it is important to keep in mind what the starting disposition is of the businesses targeted by a specific change effort, since the effectiveness of change effort largely depends on this starting disposition.

The figure to the right positions these starting dispositions on two





axes. The vertical axis denotes whether a target business has a negative or a positive view of the relevance of a desired behavioural change. The horizontal axis denotes whether a target business can make a positive cost-benefit analysis of a desired behavioural change.



Step 5: Determine the behavioural drivers and values of companies

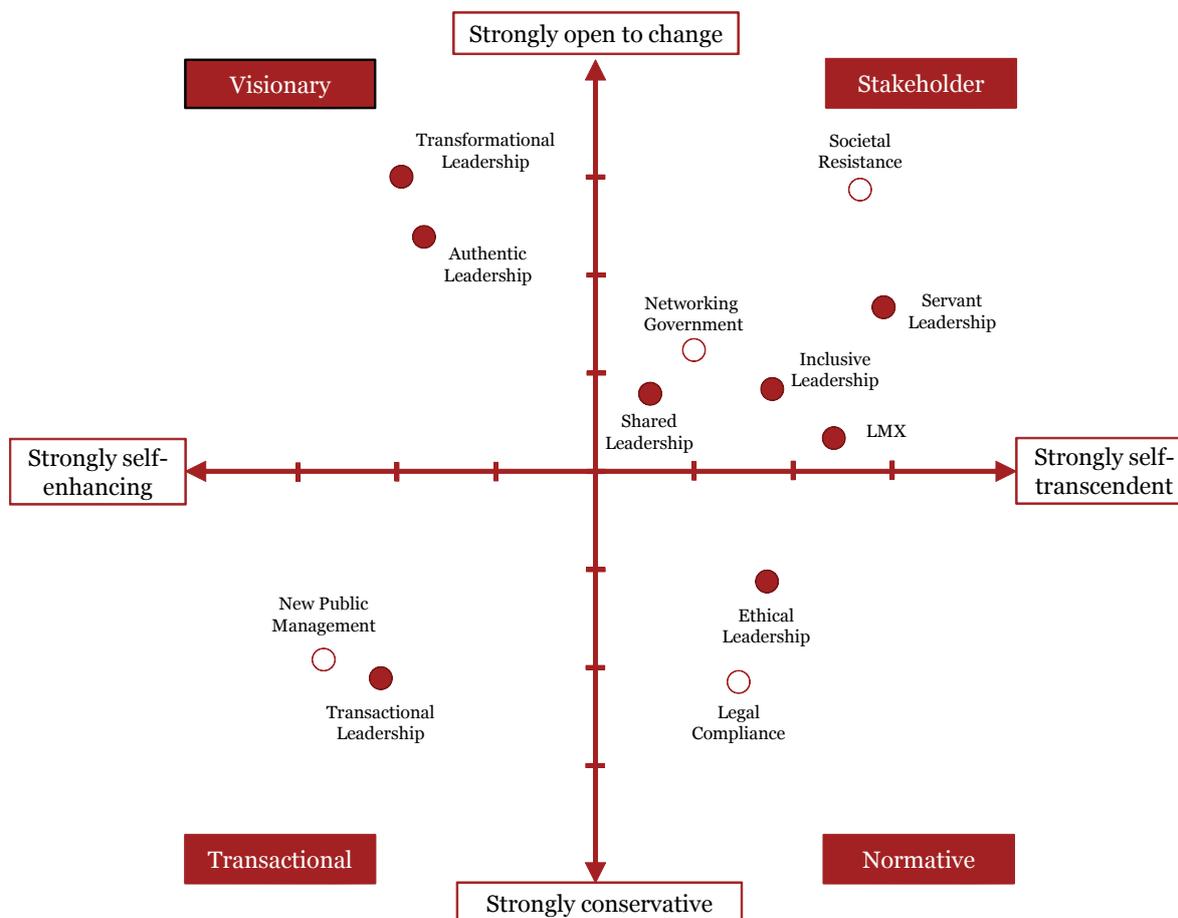
While not observable from the outside or identifiable based on the structural characteristics of a business, the behavioural drivers, such as biases and heuristics, and values of companies generally have an important role in influencing their decision making. Based on pre-existing knowledge of the target group, policymakers may already have some insight about which behavioural drivers and values are crucial to take into account in specific business contexts. However, determining the full extent of these drivers and values requires extensive information-gathering through fieldwork and/or (big) data analysis. If this investment in understanding the target group can be made in advance, it is likely to pay off through larger impact of the resulting intervention.



Step 6a: Select the right leadership style

Policymakers consciously or subconsciously use a leadership style when choosing which policy instrument to use and with which stakeholders to engage. We classify leadership styles by placing them onto two broad dimensions: 1) openness to change; and 2) self-enhancing (e.g. meritocracy, open-market principle) versus transcendent values (e.g. caring and community, universal equality). This leads to four categories of leadership styles: visionary leadership, stakeholder leadership, transactional leadership, and normative leadership.

For policymakers it is important to match their leadership style with the type of business they target (see step 2) and their starting disposition (see steps 3 and 4).





Step 6b: Design the intervention

The final step is to design an intervention that fits the selected leadership styles. This can mean adopting a visionary leadership style to persuade a large multinational that shares policymakers' sustainability ambitions to join a round-table conversation with other likeminded multinationals and agree on a shared roadmap for future green projects. It can also mean displaying a transactional leadership style to alter the cost-benefit analyses of businesses that have shown reluctance to make necessary investments in green technology.

Section 2.5.2 of this report features an extensive table that maps possible interventions across leadership styles, business types and predispositions. This can help policymakers design well thought-out interventions.

Our ambition is to make the insights presented in this report, combined with the insights presented in the EY et al. (2016) report, easily accessible. In order to do this, we will develop the content for a tool that helps policymakers navigate the insights these reports offer when trying to influence business behaviour. The tool is to be published online in due course.

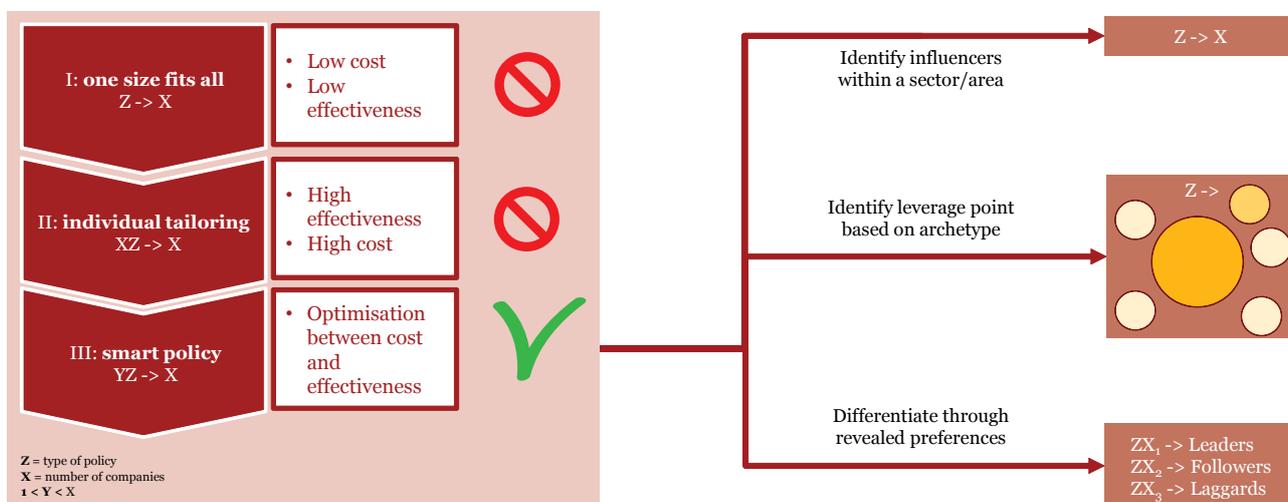
Recommendations

Building on the analytical work presented in this report, we provide two recommendations that can help policymakers apply behavioural insights in policies aimed at businesses. Moreover, these recommendations are intended to improve the efficiency and effectiveness of government policies when trying to influence businesses to change their behaviour for the better.

Recommendation 1: Leverage firm differences to increase efficiency

Understanding differences between businesses is crucial in applying behavioural insights. A one-size-fits-all type of behavioural policy, which would treat all types of businesses in the same way, is not likely to be very effective. On the other hand, tailoring behavioural interventions to individual businesses is not practically feasible and prohibitively costly. Therefore, a trade-off between effectiveness and costs needs to be realised. We provide three suggestions that may be applied separately or in combination to influence business behaviour in both an effective and an efficient way:

- Government may increase the effect of its resources by identifying businesses or individuals that have a large influence within a sector or geographical area, and focusing its efforts on influencing these influencers. By doing so, a bandwagon effect may be created that contributes to the objectives of government.
- Each archetype of firm introduced in this report is likely to have one or more 'leverage points' – sources of information trusted by the members of its decision-making unit and/or types of information that are more positively regarded than others. If policymakers target multiple businesses of the same archetype with a behavioural intervention, it may be possible to focus on these leverage points to target a large number of businesses at once.
- The final concept is perhaps the most powerful, as it allows to target firms with different initial motivations towards a behavioural objective of government. In practice, this means that policymakers make use of businesses' revealed preferences to adjust their approach and be most effective. By committing to behavioural change with a target audience of businesses over a longer period of time, government will be able to:
 - first influence 'early adopters' to commit to the desired behaviour, for instance by making it known that a societal challenge can be met if all business contribute by taking a certain action;
 - then adjust its approach towards the remaining businesses who have not taken action and approach them differently to convince the 'followers', for instance by providing insight into how the early adopters went about implementing the action and/or offering additional information or advice;
 - and finally, when the 'early adopters' and 'followers' have shown that the norm in the sector has changed by adopting the desired behaviour, apply more coercive measure such as taxes, fines or revoking privileges or the licence to operate from businesses that have shown to be 'laggards'.



Recommendation 2: Apply available insights and study what works in practice

This report has made a serious effort in presenting the latest behavioural insights. It is now time to learn more and further develop this emerging field by applying the presented insights and studying their impact in practice, to learn from best practices and unfortunate misfires.

The six-step approach to designing behavioural interventions developed in this report can guide policymakers to create policies that are more efficient and yield higher impact. As part of our assignment, we will develop the insights presented in this report and the EY et al. report into content for a practicable tool for policymakers and other interested practitioners. We recommend this tool to be made available to this target audience under the auspices of the Behavioural Insight Network Nederland (BIN NL). In our view this group is best positioned to guide interested policymakers who may have follow-up queries and want to proceed with actually applying behavioural insights in a business context. In addition, the BIN NL is continuously building further insights and may thus be able to contribute to the future enrichment of the tool with new insights.

Only few examples exist where policymakers have effectively influenced business behaviour using current behavioural insights. Even fewer of these examples have been evaluated using robust research methods. This makes it impossible to present any insights about proven effects beyond the specific cases presented in this report. Therefore, we recommend the Dutch government to proceed with small-scale experiments applying behavioural insights in a business context, following the six-step approach. This can shed more empirical light on what works and what does not. Wherever possible, we would suggest to involve academic researchers who can independently and rigorously assess the effectiveness of attempted interventions.

The only way to further our understanding is through trying things in practice. Through applying the approach in practice and through studying what works and what does not, learning-by-doing can emerge that will improve the quality of the policymaking process.



Contents

1. Introduction	9
2. Findings on the effective application of behavioural insights to policies aimed at businesses	15
3. Discussion of findings, conclusions and recommendations	55

Appendices

A. Methodological approach	61
B. Literature review on contingent government influence on corporate behaviour	64
C. Literature review on firm motivation and government leadership styles	80
D. Literature review on insights from behavioural literature	90
E. Case studies	97



This report presents the results of a study on the application of insights from the behavioural sciences to policies aimed at businesses in The Netherlands. The study was commissioned by the Dutch Ministry of Economic Affairs and Climate Policy (henceforth “MEACP”) and has been conducted by a team from PricewaterhouseCoopers Advisory N.V. (henceforth “PwC”) and the Rotterdam School of Management (which is part of Erasmus University Rotterdam and will be referred to as “RSM”). The study was conducted from January to July of 2018.



The responsible department within the MEACP was the Behavioural Insights Team (“BIT”) of the Ministry, which is part of the Directorate of General Economic Policy. The BIT and the research team were advised by a reference group, consisting of representatives of PBL Netherlands Environmental Assessment Agency, the Netherlands Enterprise Agency, the Netherlands Food and Consumer Product Safety Authority and the Netherlands Authority for Consumers & Markets. The reference group met four times during the study and provided input on a draft version of this final report. On behalf of PwC, Wendy van Tol is the partner responsible for the study and this report.

In this first chapter, we describe the aim and scope of the study, as well as the approach and methods used. We finalise the chapter by giving an overview of the structure contents of the report.

1.1 The aim of the study is to gain insight into how businesses behave and how the behaviour and choices of businesses can be influenced

The aim of the study is formulated by the MEACP in its terms of reference for the study: “To gain insight into how businesses behave and how the behaviour and choices of businesses can be influenced.” The study explicitly builds on a previous report by EY and three academic researchers¹. It also takes into account recent insights from academic and policy-oriented research, the latter including work a.o. by several Dutch government advisory bodies, as well as various national Behavioural Insights Teams and the OECD.

The main target audience of the study consists of policymakers experienced in analysing behaviour, who intend to develop policies aimed at influencing the behaviour of businesses. This report presents insights in which elements are specifically relevant when applying behavioural insights to influencing the behaviour of businesses, rather than the behaviour of individuals.

In order to achieve this aim, the MEACP specifies that both a full report of the study findings and a tool or framework should be produced. The aim of the tool or framework is to allow policy makers who have not read the report to easily apply the insights that result from the study. As part of the study, a tool is being developed at the time of writing this report. The current report does not contain the tool itself.

1.1.1 Limitations to current understanding of influencing business behaviour

Policymakers seeking to influence individuals to change their behaviour have numerous tools at their disposal. Not only is there a strong theoretical foundation to do so, but also is there a plethora of methods and tools based on this theory and on being tested in practice.

This is not the case for those policymakers that want to influence businesses to change their behaviour. Not only is there less theoretical knowledge available, there has also been less attention from the policymaking world. This means that a policymaker seeking to change business behaviour has few tools at his disposal. This is especially challenging given that shaping business behaviour is more complex than shaping individual behaviour. Therefore, there is a case for developing a model of how government can influence businesses to change their behaviour using insights from behavioural sciences. The precaution should be made that there is likely no one size fits all approach.

¹ Ernst and Young (EY), Jan Potters, Robert Dur and Stephanie Rosenkranz. 2016. “Applying behavioural insights in business.” Available (in Dutch) at <https://www.rijksoverheid.nl/documenten/rapporten/2017/01/11/rapport-gedragsbeïnvloeding-bij-bedrijven>.



1.1.2 Scope of the study

The Ministry posed five research questions:

1. Which differences exist between how businesses make decisions and how individuals do this? Provide an overview based on the literature in the fields of organisational psychology, business economics and management that addresses behavioural and decision-making processes in businesses.
2. Which differences between businesses are relevant for the way in which the government can influence their behaviour? Develop a typology of businesses that is both insightful and practicable.
3. Which practical experience have experts gathered in influencing businesses? In which contexts did this practical experience take place, and how effective was the application of the insights concerned?
4. How can the insights gained be linked to the analytical framework developed in the study by EY et al.²?
5. How can the insights gained be effectively applied in specific policies?

One aspect of the scope clearly delineated in the Ministry's terms of reference (see also research question 1 above) is a focus on the academic literature in the fields of 1) organisational psychology, 2) business economics and 3) management. The Ministry's reason for this is that in a previous study commissioned by the Ministry from EY et al.³, the literature in the field of microeconomics and behavioural economics had already been sufficiently explored. The purpose of the literature review in the current study is therefore to complement, rather than repeat, the previous study.

Based on discussions with the MEACP and the reference group, it was decided that the focus of the study will be on strategic decisions made by businesses and not on behaviour of individual employees of businesses that is part of the implementation of such strategic decisions. The reason for this focus is that the strategic decisions (e.g. decisions about investments in energy-saving measures) are most often the objective of policymakers in the MEACP, whereas the behaviour of individual employees as part of the implementation are considered the responsibility of decision makers in businesses.

We have built on the guidance from the terms of reference and our various discussions with the MEACP and the reference group to develop our approach to the study, which is presented in section 1.3. The process has been continuous co-creation with the MEACP to ensure all perspectives were taken into account in conducting this study.

1.2 This report focuses on group decisions in business with regard to voluntary business behaviour

There is growing theoretical and practical evidence on using behavioural insights to improve policy adoption. The OECD defines "behavioural insights" as "An inductive approach to policymaking that combines insights from psychology, cognitive science, and social science with empirically tested results to discover how humans actually make choices."⁴ While the theoretical foundation of behavioural sciences knows a long academic tradition, recognition of the importance of behavioural sciences in understanding and influencing decision making only took off after Sunstein and Thaler's publication of *Nudge* in 2008.⁵

In the past ten years, progress has been made in applying behavioural insights in policymaking by the Behavioural Insights Team in the UK ("BIT UK", since 2010), and other teams such as Behavioural Insights Network in the Netherlands ("BIN NL", since 2014). Using these theoretical and practical insights has yielded the creation of a number of tools that policymakers can use. These tools and insights can be used complementary to traditional policy instruments, such as legislation, treasury, communication and infrastructure, as well as to improve their effectiveness.⁶

The academic and policy-oriented research conducted to date centres on the application of behavioural insights in policies aimed at influencing the behaviour of individuals. Based on a review of 112 cases of the application of behavioural insights

² Ibid.

³ Ernst and Young (EY), Jan Potters, Robert Dur and Stephanie Rosenkranz. 2016. "Applying behavioural insights in business." Available (in Dutch) at <https://www.rijksoverheid.nl/documenten/rapporten/2017/01/11/rapport-gedragsbeïnvloeding-bij-bedrijven>.

⁴ OECD website, <http://www.oecd.org/gov/regulatory-policy/behavioural-insights.htm> Accessed last, July 17, 2018.

⁵ Thaler, Richard H. and Cass R. Sunstein. 2008. *Nudge: Improving Decisions about Health, Wealth and Happiness*. Yale University Press.

⁶ Stinesen, Baukje en Reint Jan Renes. 2014. "Overheidsbeleid gericht op gedragsverandering: meer dan een mooi streven? Een analyse van gedragsbeïnvloedende overheidsinitiatieven in de domeinen gezondheid, mobiliteit en financiën." Raad voor Maatschappelijke Ontwikkeling.



and a survey among 60 public bodies in 23 countries, the OECD concluded in 2017:

“Behavioural insights are still mostly applied to the areas where they were first introduced, namely consumer protection and choice in diverse areas. There is great potential for applying behavioural insights more broadly, for example to decisions by regulated organisations and behavioural changes by public and private organisations.”⁷

and

“The survey points to some cases where behavioural insights are being used to facilitate compliance of employers with labour regulation (this is the case for Singapore) or compliance with bankruptcy rules (Australia). However, there were no cases where the primary focus of the application was to trigger a substantive organisational change in the behaviour of a regulated entity. Regulation tends to be prescriptive (and in part reactive). Behavioural approaches can help influence how regulated organisations translate prescriptions into practice and help achieve the intended objective of the regulation (which a purely prescriptive approach might fail to achieve).”⁸

Our inventory of experiences with the application of behavioural insights by and large confirms the OECD conclusion, as we find that the vast majority of these applications are limited to influencing the behaviour of individuals, rather than businesses. The OECD (2017) itself has included 13 examples in which public authorities attempted to influence the behaviour of businesses, out of a total of 112 case studies. These 13 examples cover mostly compliance behaviour or the eliciting of responses to government communications. Only two of the cases in the OECD’s inventory address businesses’ intentions to participate in government programmes that support voluntary behaviour on the part of businesses. In a recent publication, BIN NL bundles dozens of examples of applying insights from behavioural sciences in Dutch government policies.⁹ Out of 43 experiments in which behavioural insights were applied, only six were concerned with influencing the behaviour of (individuals in) businesses. All other experiments focused on changing individual behaviour. The cases presented in the OECD and BIN NL publications are discussed in more detail in section 2.1.3 of this report.

In the remainder of this report, we will focus exclusively on the application of behavioural insights in policies aimed at influencing the behaviour of businesses. In many, but not all, cases this will mean a focus on decision making by more than one individual. Also, we will focus primarily on decision making as an important driver of behaviour. Finally, our focus will be on behaviour that is not a direct requirement resulting from regulation (compliance behaviour), but rather on behaviours and decisions that businesses can adopt voluntarily, as this is the type of business behaviour about which least is known as yet when it comes to influencing it.

7 OECD. 2017. Behavioural Insights and Public Policy. Lessons from Around the World, OECD Publishing, Paris, <https://doi.org/10.1787/9789264270480-en>. Page 3.

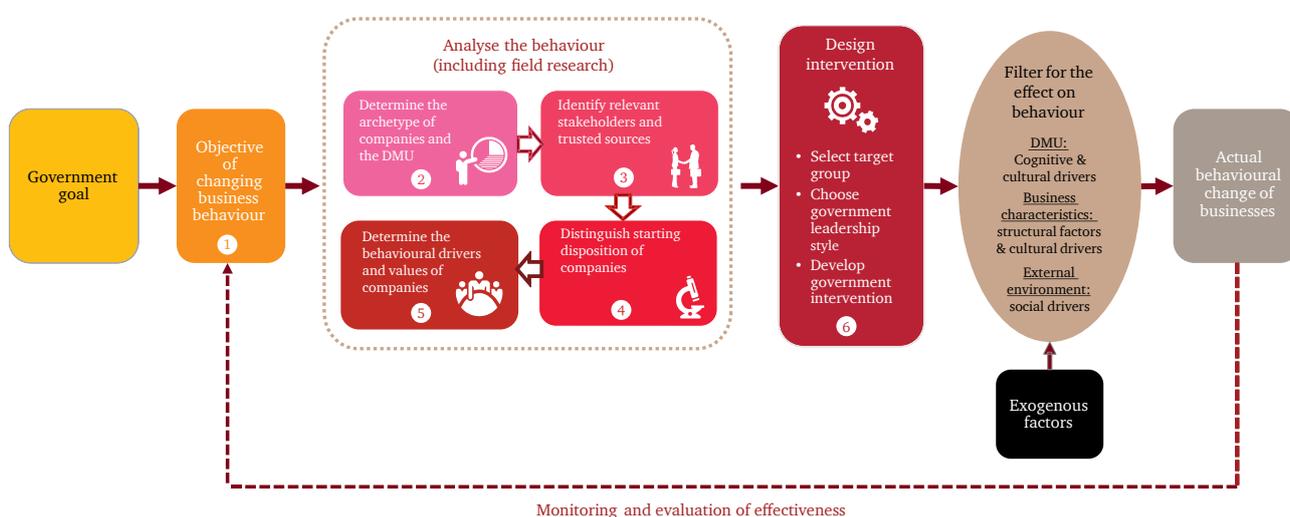
8 Op.cit. Page 51.

9 Behavioural Insights Network. 2017. “Rijk aan gedragsinzichten: editie 2017.” Available at <https://www.rijksoverheid.nl/documenten/rapporten/2017/11/01/rijk-aan-gedragsinzichten-editie-2017>. An English translation of this report is available at <https://www.government.nl/documents/reports/2018/04/01/a-wealth-of-behavioural-insights-2017-edition>. In preparing this report, we have consulted the original text in Dutch.

In developing interventions for influencing behaviour, the MEACP makes use of four steps, which are included in **Figure 1** and have been adapted here to the business context:

1. Define the problem, in which the government's goal is translated in to the specific behaviour that policymakers intend to change;
2. Analyse the behaviour, in which all elements of the behaviour are studied, analysed and described, including structural factors of the organisation that exhibits the behaviour, cognitive drivers of those deciding about the behaviour, cultural drivers that are part of the internal organisation and social drivers that are part of the business's external environment;
3. Design the intervention, in which the target group for the intervention is selected, an appropriate leadership style is chosen and the intervention is designed accordingly;
4. Implement, evaluate and improve, in which the effects of the intervention are monitored and evaluated during and directly after the first implementation.

Figure 1: Four steps of developing interventions for influencing behaviour



Source: PwC analysis, building on a Rapid evidence assessment commissioned by the UK Government¹⁰

In this report, we focus on steps 2 and 3, as step 1 is the domain of politicians and policymakers and we have found a strong capability for conducting and evaluating experiments available in the MEACP, as well as in the Dutch market for policy research and evaluation services.

1.3 Our approach to the study involves the application of multiple research methods

The research questions posed by the MEACP (cf. section 1.1.1) require an exploratory study. The research questions are open in nature, and call for the development of conceptual insights and propositions, rather than for the testing of predetermined hypotheses. An important objective of the study as we developed it is to provide insights and ideas for testing in future policy experiments rather like the ones the BIN NL and BIT of the MEACP have been conducting in previous years.

Starting from these research questions and objectives, we have developed a triangulation approach based on multiple methods that allow us to bring together existing insights and ideas from multiple sources (see **Figure 2**). Our specific approach for each part of the data collection is presented in appendix A.

¹⁰ Wilson, Sally and Silvia Sonderegger. 2016. "Understanding the Behavioural Drivers of Organisational Decision-Making: Rapid Evidence Assessment." Cabinet Office.



- We studied existing literature from academic sources, including both theoretical/conceptual and empirical research. Reports of our findings are included in appendices B, C and D.
- We developed five case studies based on existing experiences with attempts to influence the behaviour and decision making of businesses. The actors who made these attempts in our cases are both public and private actors, as well as NGOs. The results of the case studies are included in appendix E.
- We spoke with experienced scholars and policy-making practitioners to enrich our insights. These conversations took place in all stages of the development of the study, and were conducted in roughly four loci:
 - We spoke repeatedly with the policy offers at the MEACP who contracted us to perform this study.
 - The MEACP assembled a reference group, who provided us with their input and valuable comments on preliminary drafts of our findings.
 - We organised a round-table discussion with eight scholars active in the fields of organisational psychology, organisational change and development and regulatory enforcement and compliance. Some of these scholars also act as policy-making practitioners or consultants to public and private sector clients in the application of behavioural insights.
 - We conducted two telephone interviews with policy-making practitioners at the BIT UK and the British Department for Business, Energy and Industrial Strategy.

All of these conversations yielded references to further literature and other materials we took into account in preparing this report. The members of the reference group and some of the scholars who participated in the round-table discussion were kind enough to provide us with their comments and suggestions on a draft of this report.

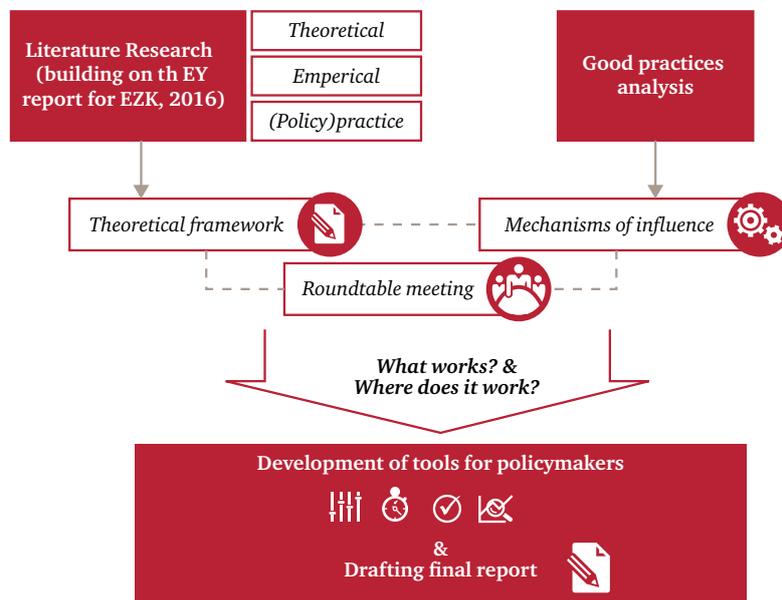
We limit our conclusions and recommendations to the manners in which governments can attempt to influence decisions made on behalf of an entire business by its decision makers, as this is the first requirement before behavioural change of the businesses can be expected.¹¹ In some policy contexts, e.g. reduction of the application of fossil fuels or the reduction of energy consumption as a whole, a decision made by the board of a business to invest in new technology may be sufficient to achieve a large effect.

In addition to the findings presented in this report, we will develop the content of an online tool that allows policy-making practitioners easy access to our findings, without having to digest this report. At the time of writing this report, the details of the tool and its online location are not yet available, as it is still being developed. We refer to recommendation 2 in section 3.3 for our view of what the tool should look like.

¹¹ While it is certainly possible for governments to influence 'grassroots' changes in behaviour among employees of businesses, without involving its legally responsible decision makers, this involves three clear risks:

- First, this approach is likely to reduce trust in the government as a partner among a business's decision makers.
- Second, the behavioural change among the employees may turn out not to be sustainable over time, if it is not supported by a management decision.
- Third, some ethical considerations may arise when governments are 'bypassing' an organisation's legally appointed representatives when trying to affect change, which may make the policy less legitimate.

Figure 2: Approach to the study



Source: PwC

1.4 This report contains our findings, conclusions and recommendations

The remainder of this report is structured as follows:

- Chapter 2 presents the study's findings:
 - In section 2.1 we address the state of play for the application of behavioural insights in policies aimed at influencing the behaviour of businesses, as well as the limitations to the understanding of the possibilities for application of behavioural insights in policies aimed at influencing the behaviour of businesses at the time of the start of this study.
 - We introduce the context of applying behavioural insights in policies aimed at influencing the behaviour of businesses in section 2.2.
 - In section 2.3 we address the contingencies that are presented by the specific characteristics of the businesses targeted by a policy.
 - Section 2.4 presents our findings on the types of behaviour that policymakers might influence and the types of motivation for observed business behaviour.
 - In section 2.5 we present our findings on the types of instruments that policymakers can apply, and the leadership styles that governments implicitly or explicitly assume when addressing businesses.
 - Finally, in section 2.6 we present our analysis and synthesis of the findings of the study.
- Chapter 3 starts with our conclusions in this study (section 3.1). These are followed by a discussion of the findings and limitations of the current study (section 3.2) and recommendations to the Netherlands Government (section 3.3).
- The appendices A through E contain supporting information to the chapters below:
 - Appendix A described our methodological approach for this study.
 - Appendix B presents the results of the literature review on contingent government influence on corporate behaviour. The literature review was conducted by dr. Frank Wijen of the Rotterdam School of Management.
 - Appendix C presents the results of the literature review on firm motivation and government leadership styles. The literature review was conducted by dr. Hannes Leroy of the Rotterdam School of Management.
 - Appendix D presents the results of the literature review on insights from behavioural literature, conducted by the PwC team.
 - Appendix E presents the results of the five case studies on influencing decision making by businesses. The case studies were performed by the PwC team

2. Findings on the effective application of behavioural insights to policies aimed at businesses



In this central chapter of the report, we present our findings. As the research is exploratory in nature, we start out by describing the state of existing insights of policymakers when it comes to applying behavioural insights in policies aimed at decision making of businesses (section 2.1).

This is followed by our findings regarding three elements that influence the effectiveness of behavioural policies in a business context:

- *the characteristics of the businesses that make up the target audience of the policy (2.2);*
- *the type of behaviour that is envisaged by the policymaker, and the pre-existing motivation on the part of the targeted decision makers in businesses to adopt that policy (2.3); and*
- *the types of policy instruments used, and their alignment with (or divergence from) leadership styles that match the motivation of decision makers in the businesses targeted (2.4).*

Finally, in section 2.5 we analyse and synthesise these findings.

2.1 The understanding of applying behavioural insights to business policy is limited

While there is substantial writing on behavioural policies targeting individuals, policy theory on behavioural change of businesses is lagging behind. This means that there is both less theoretical and practical evidence on applying behavioural sciences to business behaviour. This is related to the fact that only recently academic researchers and behavioural insights teams have started to pay attention to this topic. The main reason for this appears to be that business decision making often includes the interaction between multiple individual decision makers and adds the additional layer of the social context of the business concerned. A case for applying behavioural insights to business behaviour does exist, however. Not only because of the important role that businesses play in solving societal challenges, but also because businesses are susceptible to biased and irrational behaviour, albeit to a lesser extent than individuals.¹² This section reviews the few models and practical experiences that have been developed to date.

2.1.1 The context of applying behavioural insights into policy

When policymakers apply behavioural insights in development of policies aimed at influencing the behaviour of businesses, they do so in a given context. We introduce this context here, to illustrate the setting for which we have developed our study and the resulting findings, conclusions and recommendations.

As shown in **Figure 1** in section 1.2, designing a policy aimed at influencing the behaviour of businesses typically starts with an objective that describes which behaviour should be changed as a result of the policy, what the current behaviour is and what it should become as a result of implementing the policy. Normally, this type of objective is the result of political negotiations and is intended to contribute to achieving a broader societal goal, such as reducing the consumption of energy or the emission of greenhouse gases. Such an objective should ideally be as specific (SMART) as possible with regard to:

- which businesses make up the target group of the policy that should change their behaviour;
- what the current behaviour is, when and in what context/under what circumstances it takes place;
- what the policy objective is, and what the required behaviour of businesses in the target group should be to make the policy successful.

Based on the policy objective, the government intervention can be designed. Interventions aimed at influencing business behaviour to date consist of one or more the following elements:

- to dissuade from certain behaviour:
 - providing information;
 - legislation, including enforcement and penalties in the form of fines or forced cessation of business activities;
 - taxes;

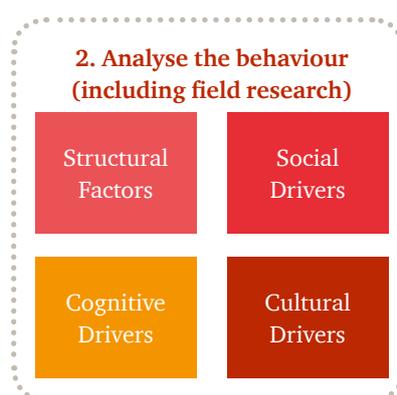
¹² Ernst and Young (EY), Jan Potters, Robert Dur and Stephanie Rosenkranz. 2016. "Applying behavioural insights in business." Available (in Dutch) at <https://www.rijksoverheid.nl/documenten/rapporten/2017/01/11/rapport-gedragsbeïnvloeding-bij-bedrijven>.

- to persuade to certain behaviour;
 - providing information;
 - subsidies, including tax discounts, soft loans, guarantees and other positive financial incentives;
 - active support, for instance by providing advice tailored to the specific situation of a business, or by organising events to bring together businesses to learn from one another;
 - public-private partnerships, in which government actively collaborates with businesses to create synergies that could not be realised by public action through one of the other instruments;
 - nudges aimed at individuals in the business organisation, that will influence the behaviour of the business.

Tailoring the intervention to the behaviour the government intends to change is key. In this regard, several aspects of the behaviour¹³ should ideally be well understood before the intervention is designed:

- the context in which the current behaviour is initiated and the incentives that context holds for the individuals who steer the behaviour (i.e. the decision-making unit (DMU) of EY et al. (2016));
- the knowledge and abilities of the individuals in the DMU;
- the motives of the individuals in the DMU (e.g. their personal values and norms and those of the business whose behaviour they steer, personal effectiveness at convincing other members of the DMU);
- the process of decision making (i.e. routine decision, intuitive decision, planned decision).

Figure 3: The drivers of business behaviour



Source: PwC analysis, building on a Rapid evidence assessment commissioned by the UK Government¹⁴

In part, these aspects vary between types of businesses. An obvious example of this are **structural factors**¹⁵: a DMU in a listed corporate differs from that of an SME, which in turn is different from the “DMU of 1” of a self-employed entrepreneur. We refer to the aspects that differ between types of businesses as “business characteristics”, and will return to this concept in section 2.3.1.

The knowledge and abilities of the individuals in the DMU are limited by **cognitive drivers**. These include routines, heuristics and biases that play a role in business decision making. EY et al. have covered the literature on behavioural economics to map the main cognitive drivers of business decision making. A challenge in getting an understanding of these aspects of the behaviour is that while individuals can participate in behavioural research, DMUs cannot as easily do so, because they have their own internal dynamics, which are tied to the locus of the business in which they operate. This appears to be why coverage of this aspect in academic literature is sparse. We will come back to what can be observed without intensive field research in section 2.3.3.

13 These aspects are derived from the GedragsToets 2.0 (<https://www.rii.nl/video/de-gedragstoets-20>), an instrument developed by the Dutch Council for the Environment and Infrastructure to facilitate designing behaviour-influencing policies aimed at individuals. While the guidance of the GedragsToets explicitly state that its effectiveness has been tested only for influencing the behaviour of individuals, we conjecture that DMUs in business are made up of individuals and therefore –while the dynamics of decision-making processes may be more complex – at least the same elements will play a role in decision making processes.

14 Wilson, Sally and Silvia Sonderegger. 2016. “Understanding the Behavioural Drivers of Organisational Decision-Making: Rapid Evidence Assessment.” Cabinet Office.

15 The terms presented in bold italics were introduced in Wilson, Sally and Silvia Sonderegger. 2016. “Understanding the Behavioural Drivers of Organisational Decision-Making: Rapid Evidence Assessment.” Cabinet Office. We will address them again when discussing this publication.



Social drivers imply that the analysis of the external environment of the target group of companies may show that targeting a specific external actor that can influence the DMU may be more effective in changing the companies' behaviour than targeting the DMUs directly. In such cases, an intervention can be developed to target e.g. the consumers that buy products or services from the target group of companies or those companies' suppliers in a specific value chain.

Cultural drivers are the result of the organisational culture and values, but also of those of the individuals that play a role in the decision-making processes. We will return to motives that play a role in decisions made by DMUs in businesses in section 2.4. Depending on the motivation of a DMU in making a specific decision, the government can design its policies according to a leadership style that builds on these motives and so strengthens them. We will address the question of alignment of leadership styles to business motivations in section 2.5.

Finally, even though many aspects of the cause-and-effect relationships between the government intervention and the resulting changes in business behaviour can be studied, analysed and – at least to a certain extent – predicted, the social and economic reality in which businesses operate continuously changes in an unpredictable manner. Therefore exogenous factors, such as an international shortage of financing for a specific business sector, may result in unpredicted changes in DMUs preferences, organisational and external environments, as well as the behavioural outcomes of the policy intervention.

2.1.2 Theory

Commissioned by the UK government, the Institute for Employment Studies published a Rapid Evidence Assessment (REA) in 2016, which was one of the first systematic attempts at providing an overview of our current understanding of the behavioural factors that explain and influence organisational behaviour.¹⁶ The REA identifies four types of behavioural factors and influencers, which can be used by those seeking to influence organisational behaviour:

- **Structural factors:** the size, sector and 'raison d'être' (e.g. profit or social impact) shape an organisation's motivation and decision-making processes. In addition, important structural factors are ownership/governance, market share and concern for reputation.
- **Cognitive drivers:** businesses are better equipped at slower and more rational decision making than individuals, because of the procedures that are often in place and because groups tend to alleviate individual biases. This does not mean that businesses are immune to biases and irrational behaviour, and the MINDSPACE checklist¹⁷ might apply depending on the circumstances.
- **Social drivers:** social interactions is an inherent part of business decision making. This means that competition, trusting advice, principle-agent dynamics, groupthink and status play a role in business decision making.
- **Cultural drivers:** within-group norms shape the culture within which decision making takes place, and determines to what extent sentimental, or 'feeling-based' approaches to influence business behaviour can be impactful relative to utilitarian, or 'rational' approaches.

Based on the Rapid Evidence Assessment, the UK government published the ORGANISER method in 2016.¹⁸ This method helps in acquiring an insight into the origin of business behaviour by mapping elements that determine the context within which a business operates (both internally and externally). Goal is to optimise the effectiveness of government policies by predicting how a business would respond to a policy initiative. ORGANISER includes a number of definitions, questions and possible steps per theme. The nine themes can be categorised into three main areas (see **Table 1**):

- External: operating environment, relationships, advantage & reputation.
- Internal: aims, norms & organisational culture, internal structures.
- Decision-making processes: strategic processes, estimation, relying on trusted resources.

16 Wilson, Sally and Silvia Sonderegger. 2016. "Understanding the Behavioural Drivers of Organisational Decision-Making: Rapid Evidence Assessment." Cabinet Office.

17 Dolan, Paul, Michael Hallsworth, David Halpern, Dominic King and Ivo Vlaev. 2010. "MINDSPACE: Influencing behaviour through public policy."

18 Cabinet Office. 2016. "ORGANISER: a behavioural approach for influencing organisations."

While the ORGANISER report makes an important contribution to insight in the divers of business behaviour, its recommendations remain generic and offer little in terms of concrete support for policymakers wishing to develop suitable interventions. Telephone interviews with policymakers in the UK Government (for whom the ORGANISER report was developed) indicate that thus far no interventions have been developed based on the insights the ORGANISER report offers. One interviewee mentioned that while ORGANISER offers a comprehensive framework and is well known within the UK Government, it lacks a translation to practical applications, which could be a barrier to applying its insights. As a result, empirical support for the ORGANISER approach is not known to us at this time.

Commissioned by the Dutch government, EY et al. proposed a model that links government goals with business behaviour in 2016.¹⁹ The model (see **Figure 4**) links the different steps between the goals of the government and the actual behaviour of businesses. An important element in this process is the Decision Making Unit (DMU), which is the group of individuals or the single individual making the strategic decisions within an organisation. EY et al. conclude that decision making by business differs from decision making by individuals in three main ways:

- Business decisions are often the result of group (decision-making) processes.
- Business decisions often take place in the context of a principal-agent relationship.
- Business decisions come about often as the result of professional decision making, which means that decisions are taken by trained professionals, who often have experience in the decisions to be made²⁰.

Given its strategic role, the DMU is the most likely target audience within the organisation for government intervention. The DMU does not operate in isolation, however, and the power distribution – the way the power is distributed within an organisation – has a significant role in the way the DMU operates. A select group of persons – the dominant coalition – has substantial influence on key decisions. This dominant coalition is influenced by the corporate culture in its conceptions, composition and size. The dominant coalition also receives resistance by internal and external stakeholders (‘countervailing power’).



¹⁹ EY et al. 2016. Op.cit.

²⁰ We will return to the element of experience in section 2.4.1.2.

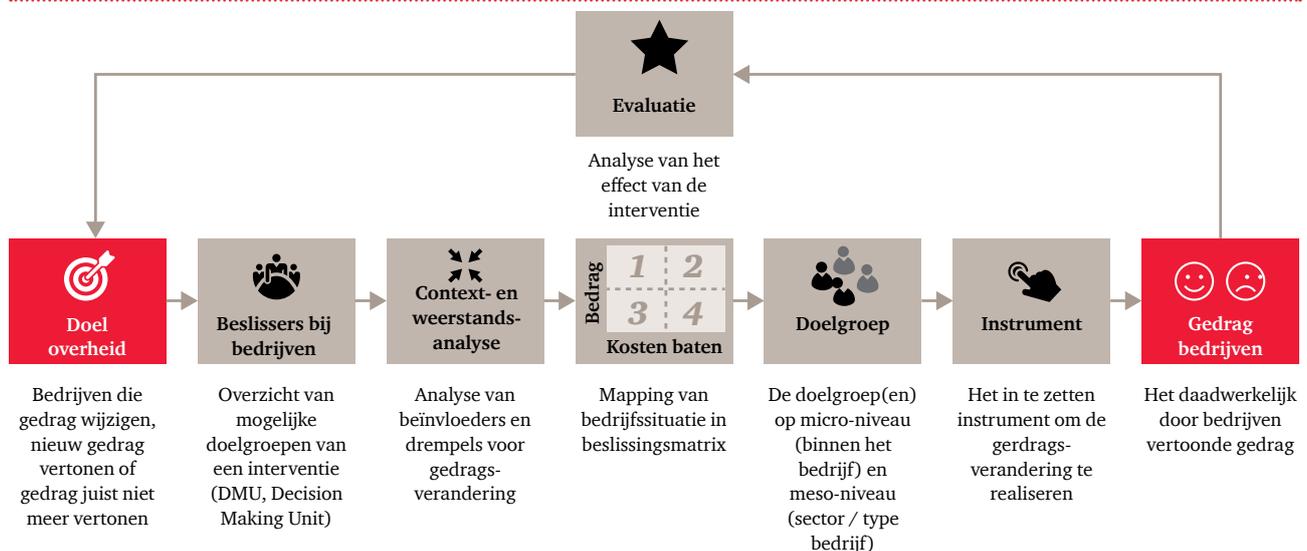


Table 1: The ORGANISER framework

The Nine Themes of ORGANISER			
Theme		Brief description	Overarching suggested action
External	Operating environment	Organisations operate in an environment characterised by a complex set of laws, regulations, taxes, and other influences that shape behaviour.	Map how the operating environment is enabling or constraining organisational behaviour and how this can affect your policy or issue.
	Relationships	Organisations exist within a network of relationships – with suppliers, customers, shareholders and others – that influence behaviour.	Identify most important network members and assess how your respective interests align and identify potential entry points for influence.
	Gaining advantage & reputation	Organisations pursue some sort of comparative or competitive advantage relative to others with which they either compete or compare themselves.	Assess whether your policy or issue can benefit from benchmarking similar organisations against each other
Internal	Aims	Organisations always have an aim or a goal or a purpose; and this aim shapes and helps to explain behaviour.	Frame your policy so it aligns with known organisational aims and capitalise on how your policy may positively affect or enhance organisational aims
	Norms & organisational culture	Organisations have norms – a culture, rules, an ethical framework, a sense of their own identity – that explain and influence behaviour.	Frame policy to align with internal organisational norms/values; and assess what shift in values/norms might be necessary to enable your policy to be more successful
	Internal structures	Organisations have an internal structure – leadership, teams, a more-or-less explicit distribution of power, a varied mechanism of making decisions – that shapes behaviour.	Target policies at the right level of decision makers focusing where responsibility for implementation resides within target organisations
Decision-making processes	Strategic processes	Organisations tend to be more strategic and slower in their decision-making than an individual; they are slower;. This can be positive, by softening extreme positions; or can be negative, creating a ‘group-think’ situation that reinforces an extreme position.	Gather evidence on decision-making by the organisation(s) and assess whether it is possible to influence any factors of negative or biased strategic decision making via your policy or issue.
	Estimation	Organisations are constrained by time and resources and use heuristics and rules of thumb – best estimates – to make decisions.	Make things easier and design implementation of policies to go with the grain of behaviour by accounting for organisational constraints and short-cuts.
	Relying on trusted sources	Organisations rely on trusted sources, in particular, to provide information, insight and judgment when making decisions.	Secure the buy-in from and use, where possible, trusted sources to deliver messages relating to your policy or issue.

Source: Cabinet Office (2016)

Figure 4: A model for shaping business behaviour



Source: EY et al. (2016)

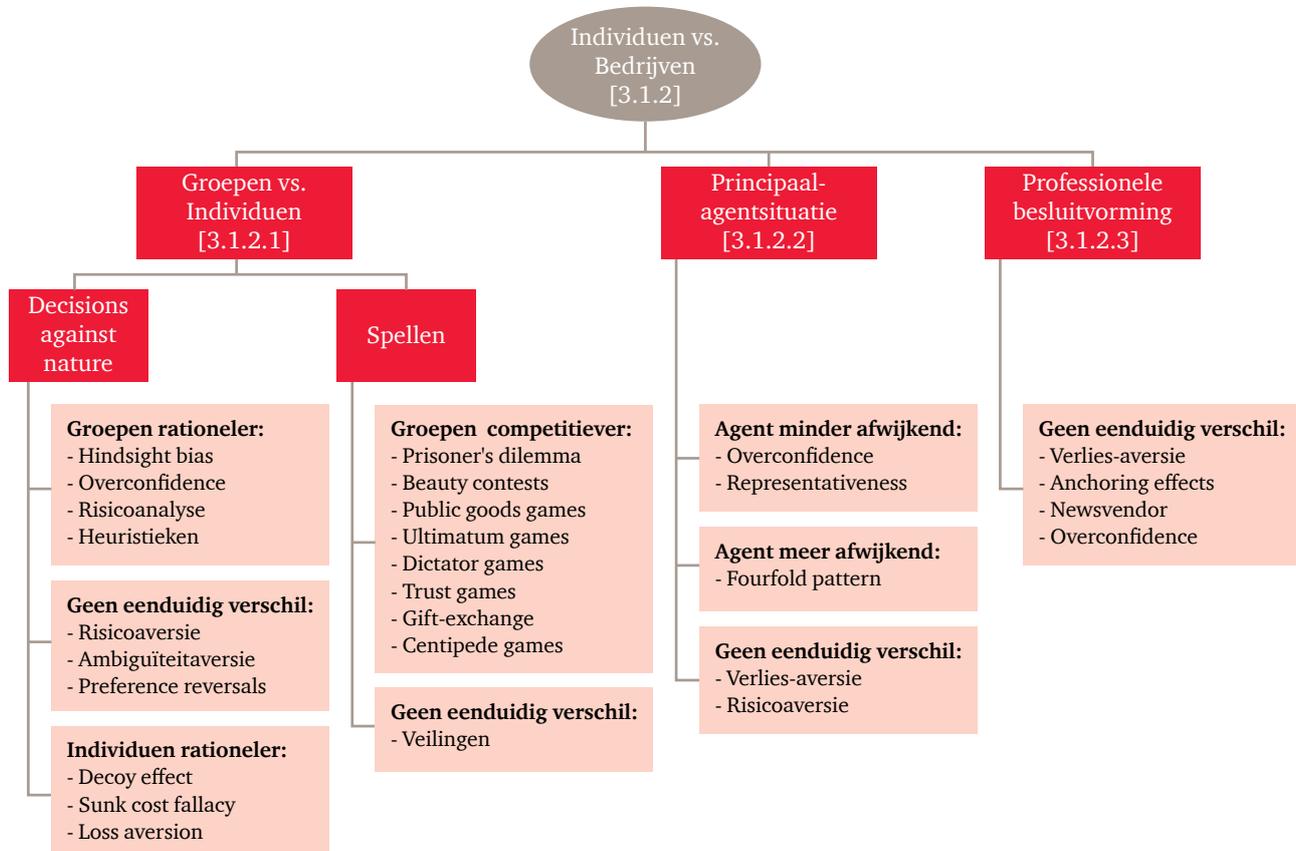
The model includes seven steps:

1. The government attempts to influence decision makers in businesses in order to realise its goal.
2. The DMUs form the target audience of the government's policy.
3. Each DMU is embedded in its organisational context, which also contains countervailing powers. These organisational contexts should be analysed by policymakers, in order to take into account their effect on decisions made by the DMU.
4. The same applies to the manner in which decisions are made in the business.
5. Based on these first four steps, the government should determine the target audience(s) at the micro (intra-business) and meso (sector) levels, as well as the instrument that is required to achieve the desired behavioural change.
6. The application of this instrument should ultimately lead to changed behaviour of the targeted businesses.
7. The behaviour that occurs because of the government's intervention is comparable with the government's objective to evaluate the effectiveness of the intervention.

While the EY et al. model marks an important next step in identifying how government goals can impact businesses' behaviour, it leaves a number of important issues unaddressed. For example, the model implies a chronological sequence, while in reality the process is iterative. Furthermore, the model only looks at culture, power distribution and the role of countervailing powers to a limited extent.

In addition to the overall model presented by EY et al., the authors also systematically investigated the behavioural economic and microeconomic literature with regard to differences between decision making by individuals and by companies. This resulted in the overview presented in [Figure 5](#).

Figure 5: Differences between decision making by individuals vs. companies



Source: EY et al. (2016)

The key findings included in **Figure 5** are:

- Groups tend to be more competitive than individuals in almost all “games” known in the literature on game theory, with the notable exception of auctions, where no significant differences have been found.
- Decisions made by groups may be subject to behavioural drivers that make them more, equally or less rational than decisions made by individuals. Groups are less susceptible to e.g. hindsight bias and are more rational in their use of heuristics than individuals, while individuals are less susceptible to e.g. sunk cost fallacies and loss aversion than groups. No differences were found between the rationality of decision making by groups and individuals when it comes to e.g. aversion to risk or ambiguity. How these behavioural drivers interact in a specific situation and what will be the outcome in terms of company vs. individual rationality is extremely difficult to predict, as no findings are available about whether, under what circumstances and to what extent the behavioural drivers found in the literature reinforce or mitigate each other, or cancel each other out.
- Decisions made by principals vs. agents show a similarly mixed pattern.
- Finally, the decisions made in a professional vs. non-professional context show no clear differences, when the effects of e.g. loss aversion or overconfidence are assessed.
- In summary, the EY et al. report has produced additional insights with regard to the cognitive and social drivers of business behaviour. Its contribution to the structural factors and cultural drivers is limited to examples and suggestions. Systematic treatment of these aspects was not in the scope of this report.



2.1.3 Practice

Not only are there fewer theoretical models on shaping business behaviour, so too are there only few real-world examples of shaping business behaviour. BIN NL provides six examples of interventions that target the behaviour of businesses (see the bulleted list on the next pages).²¹ When examined closer, the first, second and third examples (about energy consumption, recycling and data security) target primarily the behaviour of (specific) individuals in businesses, but not directly aimed at (group) decisions made by the DMUs of the businesses. While these examples are not on the business behaviour itself, they might nonetheless prove insightful when trying to understand the application of behavioural science in practice. The fourth and fifth examples target agricultural entrepreneurs, who are typically (but not always) self-employed entrepreneurs who make decisions individually. The final example in the list below concerns the automotive industry, and also includes coordination between individual businesses at sector level. Therefore we classify the sixth example as very relevant for the scope of the current report, with which we aim to add to the knowledge about behavioural interventions aimed at influencing the behaviour of businesses, rather than individuals. As a final remark, we note that the first three interventions are focused on specific behaviours that are voluntary (although the first example takes place in the broader context of compliance with a previous agreement), while the latter three interventions focus on behaviour that is specifically the focus of regulatory compliance.

- 1,100 Dutch companies have agreed to reduce their energy consumption with 30% by 2020. They are obliged to report on their progress to the Dutch government. Assuming that feedback will stimulate these companies to reach the 2020 target, the Netherlands Enterprise Agency (NEA) developed individual feedback reports based on the energy reports submitted by the 1,100 Dutch companies. It uploaded these reports to a secured online portal, and sent individual companies an email inviting them to download the report through a secured web link. Unhappy with the number of downloads these reports received, the NEA, together with the MEACP, designed a behavioural intervention: it changed the layout and content of the emails with which companies are invited to download their feedback report. Specifically, emails were shortened, their message was made more clear, a personalised salutation was added, and the secured web link directly led to the login screen – where the original link led to a landing page that required multiple clicks and some intricate navigation before the report could be downloaded. One group received an email that in addition emphasised how other businesses were doing. As a consequence, the percentage of businesses downloading the report increased from 14% (control) to 46% after the simpler and more attractive email, and 51% if it included a comparison. Moreover, surveyed companies indicate that the reports read and discussed within companies more frequently, and in cases lead to the consideration at board level to invest in new energy efficiency measures.
- To encourage recycling in the workplace, the Ministry of Economic Affairs and Climate Policy conducted a number of interventions. Initial research found that reasons for non-recycling included a lack of knowledge on how to recycle, doubts about the usefulness of recycling, and a lack of time and attention. An intervention that made recycling easier, by using bright colours and easy instructions, improved the recycling rate with 8 percentage points (from 58% to 63%). Interventions that stressed the positive consequences of recycling or included a picture of a thankful cleaner had no effect on behaviour.
- To increase data security, the Ministry of Economic Affairs and Climate Policy tested a number of interventions on its own employees. One intervention was designed to increase employees locking their screen after leaving their workstation. The percentage of screen locks increased with 30.5% after flyers and attaching stickers on desktop and keyboard. Another intervention was an experiment on what would be more effective in increasing resilience against phishing attacks: sending information emails to prevent phishing, or sending a fake phishing email and showing what would have happened if the phishing email was real. It turned out that sending a fake phishing email was 1.5 times more effective than sending an information email in preventing the number of employees voluntarily giving away their password. A combination of both interventions turned out to be most effective.
- Agricultural entrepreneurs are required to supply data annually for the purpose of collecting statistical information and awarding agricultural subsidies. The Ministry of Economic Affairs (at the time also responsible for agriculture) and the Netherlands Enterprise Agency noticed that the data submissions regularly came in just before the deadline. An experiment was set up to improve the timeliness of submissions. In 2016, four different letters requesting the information were sent to these entrepreneurs:
 - the regular, unchanged letter, with the deadline of 15 May (the control group);
 - a letter with the suggested deadline of 22 April, in addition to the deadline of 15 May;

21 Behavioural Insights Network. 2017. "Rijk aan gedragsinzichten: editie 2017." Available at <https://www.rijksoverheid.nl/documenten/rapporten/2017/11/01/rijk-aan-gedragsinzichten-editie-2017>.



- a letter with the suggested deadline of 29 April, in addition to the deadline of 15 May;
- a letter with a calendar of peak days and low days.

All three alterations to the letter resulted in earlier submissions of the data, but only for farmers who collected and submitted their data themselves (as opposed to being assisted by a consultant or accountant in submitting the data).

The letter with the desired submission date of 22 April achieved the best result: 7% fewer farmers submitted their data in the last two weeks before the data. This result was replicated in 2017.

- To reduce the non-response to the request for data from the same group of agricultural entrepreneurs, a reminder letter with a specific deadline and a social norm was sent to a selection of entrepreneurs who had not supplied the required data in 2016. Compared to the control group, this resulted in an 18% increase in response. In 2017, a selection of the entire non-response group of 2016 was sent the data request in an envelope with a personal message attached to it. Compared to the regular envelope, this yielded a 4.7% increase in response, however this effect was only marginally significant.
- In 2016, the Authority for Consumers and Markets (ACM) noticed that advertisements for car sales did not live up to legal requirements. Consumers structurally paid more for their cars than could be expected from car ads. To combat this phenomenon, the ACM discussed the matter with stakeholders in the Dutch automotive industry. Based on these conversations, the ACM learned, the authority decided to target car importers with a behavioural intervention – seeing as these importers are responsible for developing and disseminating advertisement content and materials for cars they import. The ACM sent these importers targeted letters instructing importers to comply with legal requirements, containing action-oriented language and including real-life examples of advertisements that were not up to code. To follow-up, the Consumer Authority reached out to these importers by telephone, explaining their instructions and why importers' argument for the status-quo were not sufficient for the ACM to change course. Through their website and through public speaking efforts at sectoral events, the ACM also announced punitive measures for importers that would continue their non-compliance. As a result, compliance levels rose from 3% to 89%. The remaining 11% instances of non-compliance were again engaged over the phone, which in several cases lead then to a change towards the desired behaviour.

In addition to the experiments reported on by BIN NL, we identified a total of fifteen experiments in the Netherlands and abroad that were also verifiably evaluated in terms of their effectiveness. Interestingly, nine out of these fifteen experiments are concerned with the increase of compliance rates in a regulatory setting, while four of them focus on eliciting response to letters from authorities or invitations to participate in surveys. The remaining two examples, reported by the Department of Business Innovation and Skills in the UK, are most strongly related to the focus of this report, as they are aimed at increasing the interest of SMEs in participating in government programmes for improving business performance.

- The Dutch ACM (introduced above) found that some energy suppliers were not calculating and communicating the accurate monthly fee new customers were going to pay until after the “cooling-off period”. The suppliers used the consumption information given to them by their clients when they closed a contract, even though they were able to make a more accurate calculation of consumption after a contract was closed. This meant that customers did not receive all the information they needed to use their cooling-off period. Also, suppliers presented some contracts as “fixed price for a whole year” contract while the period for which customers actually received the fixed price varied from between 10 to 12 months. Based on a behavioural analysis, ACM decided to create a higher perceived probability of sanctions by mentioning former sanctions from ACM in similar cases, informing firms of the desired behaviour and using social influence by targeting the three biggest suppliers first. With the help of the sector association in preparing its communication and endorsement of the message by both the sector association and the three biggest suppliers, the ACM achieved a substantial increase in compliance.²²
- The Department for the Environment, Food and Rural Affairs (DEFRA) in the UK, support by the consultancy Risk Solutions, attempted to model bounded rationality in the case of water abstraction.²³ In over 60 workshops in a three-year period, the team gained an understanding of how abstractor use water and how they might respond to reforms in the regulation governing abstractions. Based on the findings in the workshops, Risk Solutions developed an agent-based economic behavioural model, integrated with catchment hydrological models, to create detailed insight into how the reforms would work in practice. Based on the results a “Hybrid Option”, which introduces a share-based system of Water Shares, was chosen as the most effective option. This system allows abstractors to trade abstraction rights. However, it would be introduced in only a limited number of “enhanced catchments”, where there are clear environmental and

22 OECD. 2017. Behavioural Insights and Public Policy. Lessons from Around the World, OECD Publishing, Paris, <https://doi.org/10.1787/9789264270480-en>. Pages 110-111.

23 Op.cit. Pages 150-151.



economic benefits due to problems with water availability and the potential for trading. An impact assessment found that the proposed reforms would allow business to benefit from administrative savings, access to high river flows and the trading of abstraction licenses. Public water supply business would be able to realise administrative cost savings. The UK Government intends to implement the reform in 2020.

- Another experiment, also referred to by EY et al., comes from the Social and Behavioural Science Team (SBST), the United States' behavioural insights team.²⁴ SBST sought to improve the collection of fees from government contractors and thereby increase integrity and compliance. When the US government buys goods and services from vendors under certain contracts, these vendors are obliged to report those sales to the government and to pay the government a minor proportion of their reported sale as an administrative fee. To encourage accurate self-reporting (and enhance the size of the administrative fee), the SBST created a signature box at the top of an online payment form. A randomised sample of vendors saw and had to confirm this signature box. The box asked vendors to confirm the accuracy of the statement and that they filled it in truthfully. As a result, the median self-reported sales was \$445 higher for those vendors that received the box than those who did not. This experiment provides evidence that requiring signing one's name and confirming accurate reporting reduces self-reporting errors.
- The Behavioural Economics Team of the Australian Government (BETA) has conducted another experiment.²⁵ In Australia, the Deferred Goods and Services Tax (DGST) Scheme enables business to postpone the payment of GST on taxable imports until the goods have been sold. While this helps business manage their cash flows, business must comply with requirements including digital lodging of activity statements. Because this happened insufficiently, BETA teamed up with the Australian Tax Authorities (ATO) to design two interventions to improve business compliance. The first intervention was a trial to evaluate whether sending a reminder email with a 'cooperative' or 'direct' tone would improve compliance. It turned out that compliance rate after 14 days was 26% in the control group, 40% after sending the direct email, and 39% after sending a cooperative email. After 21 days, the percentages were 33%, 46% and 43%, respectively. This provides evidence that sending reminder emails can improve compliance, but that the tone might not make a significant difference. A second intervention, sending a welcome email to new business registered to the system, yielded no significant results.
- The former Department of Business, Innovation and Skills (BIS) in the UK used several behavioural interventions to increase interest from SMEs for government support programmes:
 - In the case of a mentoring programme for SMEs, the BIS set up a trial using various messages and comparing the effects of promotion priming with those of prevention priming.²⁶ It was found that promotion priming made entrepreneurs think more broadly and made them respond positively to the opportunity of receiving mentoring in a survey. However, changes in behaviour, such as actual increases in applications for the mentoring programme, have not been studied in this case.
 - "Growth Vouchers" was a programme that provided a matching subsidy to companies who made use of expert advice in a wide range of performance-improving areas, such as HR or the use of IT in business. 376,738 small companies received e-mails with information about Growth Vouchers.²⁷ Four different messages were sent, emphasising either incentives, social norms, a deadline or the message that the recipients had been chosen to receive the information. Also, fifth "business-as-usual" message was sent. The results were measured in terms of click-through rates to the website where the terms and conditions of Growth Vouchers were made available. Although all four messages applying a behavioural intervention were more effective than the business-as-usual message, it was found that the message stating that the recipients had been chosen to receive the information was most strongly so: its recipients were more than 40% more likely to click through than the controls. Also in this second case, the effect on actual applications for the programme promoted has not been studied.

24 Social and Behavioural Sciences Team (SBST). 2015. "Annual Report". Pp. 15-16. Accessed last, June 21, 2018. <https://sbst.gov/download/2015%20SBST%20Annual%20Report.pdf>.

25 Behavioural Economics Team of the Australian Government (BETA). 2018. "Improved Compliance with the Deferred GST Scheme." Department of the Prime Minister and Cabinet. Accessed last, June 25, 2018. <http://behaviouraleconomics.pmc.gov.au/sites/default/files/projects/report-improved-compliance-deferred-gst.pdf>.

26 OECD. 2017. Behavioural Insights and Public Policy. Lessons from Around the World, OECD Publishing, Paris, <https://doi.org/10.1787/9789264270480-en>. Pages 294-296.

27 Op.cit. Pages 299-300.



- Finally, the survey conducted by the OECD among government authorities worldwide yielded several examples of successful influencing of business (mostly, but not all, SMEs) behaviour in administrative communication and compliance areas, e.g.²⁸:
- The Dutch ACM, the Danish Business Authority and the UK Financial Conduct Authority were able to increase the rate of compliance with regard to providing legally required information.
- The UK BIS, the Danish Business Authority, the Irish Office of the Revenue Commissioners and the Spanish Ministry for Industry, Energy and Tourism were able to increase the response rate to letters and invitations to business surveys.
- The Dutch ACM successfully increased the compliance rate among a group of companies required to pay regulation fees. The Canadian Tax Administration was able to reduce the number of companies with outstanding tax debts.

Two more interventions have been identified that are currently on-going, but have not yet been formally evaluated. Therefore no information is currently available about the effectiveness of these interventions:

- The first on-going experiment also focuses on energy savings, like the first example in the list above. Many energy-intensive companies in The Netherlands can benefit from additional investment in specific measures that reduce energy consumption. Still, top management in these companies is hesitant about the financial and non-financial benefits of these investments, while technical experts within the company fail to push the issue through. To change this, the Dutch Government has designed a simulation game and invited technical experts from these companies to visit the Government's premise and play the game. While playing the game, participants were trained in sales communication techniques and were introduced in methods to calculating, presenting and communicating non-energy benefits of specific measures. This has resulted in several participants reporting big changes in the way they work and in the things they get done from upper management. In some cases this has led to company boards giving the green light to energy-saving capital investments. A more formal impact analysis is foreseen for the end of 2018.
- The British initiative Be the Business describes itself as a movement of all types of businesses throughout the UK, that aims to boost productivity. This as a response to a perceived under-performance of UK productivity. The initiative is by business and for business, and supports business in three important ways. Firstly, Be the Business helps businesses with setting goals, providing actionable insights and measuring progress. Secondly, the movement provides tools to help them assess their performance compared to others they choose (benchmarking). Thirdly, Be the Business encourages businesses to share best practice in order to find out what works. The Be the Business website²⁹ offers the benchmark tool and a collaboration hub. The benchmark tool lets business leaders create their personalised dashboards and confidentially analysis on four dimensions considered key for productivity: digital maturity, talent management, leadership and future planning. The assessment is based on a comparison with businesses by region, sector or size, and helps identifies weaknesses and opportunities. It should be noted that no formal evaluation has been conducted of the Be the Business initiative, therefore no information is as yet available about its effectiveness.

2.2 Findings on the influence of business characteristics and the external context

As introduced above, a key aspect of understanding the process of decision making and the dynamics around it, centres on understanding what sort of business it takes place in. In this section, we explore this topic, by looking at how different types of businesses can be distinguished in a meaningful manner that is also practicable for policymakers. Consecutively, we will look at specific business characteristics and contextual elements that may be taken into account when designing policies (section 2.3.1), at six different archetypes of firms (2.3.2) and the concept of observability of these characteristics (2.3.3), which may make the difference for policymakers between being able to make use of a characteristic in developing their policies, or not.

2.2.1 Contingencies of government influence on business behaviour

While firms share many similarities, there are important distinctions between firms that in turn affect their behaviour. What is more, these distinctions influence how a business is likely to respond to government policies as well. The ability of the government to influence business behaviour depends on the fit between public policy instruments and businesses' sensitivity to these instruments. The characteristics of the DMU, the internal organisation in which and the external context that surrounds that organisation all act as moderators to policy instruments and to effective government interventions. These

28 All examples from OECD. 2017. Behavioural Insights and Public Policy. Lessons from Around the World, OECD Publishing, Paris, <https://doi.org/10.1787/9789264270480-en>.

29 <https://www.bethebusiness.com>



characteristics are a given and uncontrollable for policymakers, and the observability of these characteristics varies (see section 2.3.3).

Based on a systematic review of the management literature over the past twenty years, as well as several key publications in the public management literature, we discuss below seven key findings on the relation between characteristics of businesses and their context on the one hand and susceptibility and likely response to government policies on the other. The integral literature review on contingent government influence on corporate behaviour (Wijen, 2018) is available in appendix B to this report. The seven key conclusions from the literature review are:

1. *The behavioural impact (in terms of corporate innovation, growth, etc.) of subsidies is larger for small and medium-sized firms than for large corporations. A public policy implication is that a focus on smaller firms tends to be more effective in inducing behavioural change. For instance:*
 - Entrepreneurial start-ups in policy-dependent industries are incentivized more by subsidies than corporate ventures (Georgallis & Durand, 2017)³⁰.
 - Several studies (González & Pazó, 2008; Hottenrott & Lopes-Bento, 2014; Lach, 2002) found that subsidies aiming to increase corporate R&D activities are effective for small and medium-sized firms but not for large companies. One explanation is that large firms would also have undertaken the R&D efforts in the absence of government subsidies, whereas firms with fewer than 100 employees would not have done so (Lach, 2002). Furthermore, less generous and discontinued subsidies affect entrepreneurial start-ups more than corporate ventures in policy-dependent sectors (Georgallis & Durand, 2017).
2. *Large firms are more politically active, in the sense of proactively and systematically attempting to influence public policy. This implies that the voice of large enterprises may be overrepresented in the development of government interventions, possibly at the expense of the less vocal smaller firms—unless the latter are effectively represented via trade associations. Examples include:*
 - Scholars of political corporate activities found that larger firms are more likely to engage in political activities. Firms with higher sales are more likely to engage in political actions to secure a competitive advantage and create a favorable political environment (Bhuyan, 2000; Hart, 2001; Mitchell, Hansen, & Jepsen, 1997). Furthermore, corporate size is positively related to the success of combining political actions in order to achieve the political goals of firms (Schuler, Rehbein, & Cramer, 2002).
 - Also, firms with more employees have a higher propensity to get involved in horizontal and vertical trade associations so as to partake collectively, rather than individually, in legislative processes (Hillman, 2003). Firms with higher market shares are also more likely to be involved in legislative processes to obtain favorable legislative conditions (Schuler, 1996).
3. *Coherent and concentrated industries tend to secure more government support. A policy implication is that the ability of these industries to mobilize collective action may induce policy makers to overweigh their interests. For instance:*
 - Firms in a concentrated industry are more likely to successfully combine political effort in order to achieve their political goals (Bhuyan, 2000; Schuler et al., 2002). Similarly, coherent emerging industries (i.e., firms with similar backgrounds) are more likely to secure subsidies, at least when incumbent industries are concentrated (Georgallis, Dowell, & Durand, in press).
 - Subsidizing is also more likely when emerging firms have a distinctive identity and when nascent sectors are populated by many firms (Georgallis et al., in press). However, after a certain level of concentration, firms decrease their commitment, as the necessity of further actions to secure government support is lower (Bhuyan, 2000).
4. *The relative importance of organisational departments affects the corporate sensitivity to public policy. This highlights the significance for governments to identify the ‘right’ corporate interlocutors —i.e., individuals and departments that are more sensitive to the focal public policies.*
 - Several structural features appear to affect corporate sensitivity to government interventions. The relative importance of corporate departments matters when firms are exposed to opposing pressures. Firms in which legal departments dominate are more receptive to government pressures, whereas firms with powerful marketing departments respond primarily to market pressures (Delmas & Toffel, 2008). Personnel departments have a strong positive effect on the

30 Full references to all sources referenced in the literature review are provided in appendix B to this report.



adoption of labor processes for equal employment opportunity laws (Dobbin et al., 1993).

- Other studies have focused on the roles of top-level executives and governing bodies. Type of organisation (profit versus non-profit), ownership (executive versus external), rationality of decision-making (low versus high), and attitude towards law (compliant versus resistant) do not affect an executive's propensity not to comply with legislation (Braithwaite & Makkai, 1991). An executive's degree of self-efficacy positively relates to legal compliance (Jenkins, 1994). And organisations are more likely to delay compliance with government demands when powerful constituents or organisation members do not support the requested new practice (Raaijmakers, Vermeulen, Meeus, & Zietsma, 2015).

5. *Firms closely observe their peers and are prone to behavioural change when similar firms are sensitive to government interventions (such as financial sanctions and voluntary disclosure calls). A policy implication is that targeted interventions towards corporate outliers may spill over to the entire sector. In particular, governments stimulating frontrunners to adopt desired behaviours as well as deterring laggards from displaying noncompliant behaviours may lead other firms to follow suit. This phenomenon is found in the following examples:*

- Some studies zoom in on the moderating impact of peers and other sectoral stakeholders on corporate responsiveness. Reid and Toffel (2009) found that the threat of government regulation induces both targeted large firms and other large firms in the same sector to voluntarily disclose their carbon performance and carbon strategies. Thornton, Gunningham, and Kagan (2005) observed that firms are more prone to compliance with regulation when their peers had been sanctioned in the past, even when they were not cognizant of the defection details. A study by Okhmatovskiy and David (2012) showed that firms are more likely to implement non-mandatory government standards when many of their peers have done so.
- However, if the firm's dependence on constituents that value these practices is low, the likelihood of mere symbolic implementation increases. And the presence of more political activists in an industry induces firms to successfully combine political efforts vis-à-vis the government to achieve their political goals (Schuler et al., 2002). The involvement of interest groups in legislation processes varies, depending on the level of standardization of the industry (Bartley & Schneiberg, 2002). Also, influential firms may use their professional associations to obstruct the success of policies aiming at behavioural changes (Vermeulen et al., 2007).

6. *The identity of internationally operating firms is affected by their countries of origin and operation. Multinationals with more stringent regulations in their home countries and other host countries are more likely to comply with focal host-country regulations, and vice versa. A policy implication could be that firms originating from weaker regulatory regimes may need to be monitored more intensively.³¹ Insights in the literature reviewed include:*

- Countries with very stringent or very lax environmental regulations deter incoming foreign direct investments (Kalamova & Johnstone, 2012). Multinational companies originating from politically less stable countries or nation states with a high redistributive pressure have well-developed political capabilities, which render them more likely to invest in politically unstable host countries (Holburn & Zelner, 2010). Polluting firms are less likely to invest in countries with more stringent environmental legislation than in their home countries or other host countries; this relationship is negatively moderated by a firm's environmental compliance capabilities (Madsen, 2009).
- Multinational firms experiencing stakeholder pressure, including stringent legislation, are more likely to transfer irresponsible social practices to their subsidiaries when the latter are less clearly connected—reducing the likelihood to be associated with such practices (Surroca, Tribó, & Zahra, 2013). Firms discovering a negative policy change in their countries of operation are more likely to divest from such countries (Blake & Moschieri, 2017). Corporate divestment is also more likely following a political dispute against the firm in another country in the same region (Blake & Moschieri, 2017).
- Stringent regulation drives multinational firms to standardize their environmental practices globally (Christmann, 2004). Multinational firms with internationally interdependent supply chains or reputations standardize their environmental practices according to the most demanding regulatory regime (Wijen & Van Tulder, 2011).
- When considering government interventions, it is important to note that the impact of reform is dependent on interaction effects within the type of capitalism in which the reform takes place (Hall & Soskice, 2003)³². There are

31 More intensive monitoring may not always be possible in the light of the principle of non-discrimination among foreign investors. For a review on the subject, see Diebold, N. (2011). Standards of Non-discrimination in International Economic Law. *International and Comparative Law Quarterly*, 60(4), 831-865. Moreover, it may lead to countermeasures from the host country of the foreign investor, similar to the "Dalai Lama Effect" described in Fuchs, A. and Klanna, N.H. (2013). Paying a visit: The Dalai Lama effect on international trade. *Journal of International Economics*, 91(1), 164-177.

32 Unlike the other references in this section, the full reference for this paper can be found in appendix D.



different varieties of capitalism, most notably liberal market economies and coordinated market economies, that are distinguished by the way in which firms operate with each other and their environment. There are persistent cross-national differences in institutional contexts and practices, and these differences are persistent despite forces of convergence, such as liberalization. These institutional contexts provide idiosyncratic interaction effects. Similar reforms will produce different outcomes depending on the type of capitalism in which the reform is implemented.

7. Historic regulatory performance records matter. Firms which failed to comply with regulations in the past are more likely to defect again in the future. A policy recommendation would be that past defectors warrant more scrutiny.

- Firms violating the law three times or more in the recent past were more likely to commit new violations than firms that only defected once in the recent past (Baucus & Near, 1991; Short & Toffel, 2007). Firms that received penalties in the past first improved their environmental compliance performance directly after being penalized, but then returned to their non-compliant practices (Barrett, Lynch, Long, & Stretesky, 2017).

Finally, only a few specific aspects of government instruments have been identified in our literature review as moderators of the effect on the behaviour of targeted businesses:

- Recent research (Wang, Wijen, & Heugens, 2018) addressed the importance of administrative level. When central and local public policy interests diverge, the level of government control affects corporate environmental practices, with firms controlled at very central and very decentral levels performing more poorly.³³ Moreover, public policies spread over multiple administrative levels may be ineffective when they are ambiguously crafted and inconsistently implemented, especially when business actors operate in concert (Vermeulen et al., 2007).³⁴
- Visibility is another contingency that influences responsiveness to public policies. Firms whose practices are more visible—i.e., observable to key external stakeholders—are more likely to implement non-mandatory corporate governance standards, although they are more likely to adopt symbolically in case of low corporate dependence on external constituencies (Okhmatovskiy & David, 2012). Large and visible firms are more likely to meet government demands when headquartered in countries with more stringent environmental regulations (Marquis & Toffel, 2011).
- Some studies highlight the role of time. Governments stimulating firms to adopt the ISO 14001 environmental standard are more effective during early stages of standard adoption: government promotion magnifies the diffusion of the standard when there is not yet industry-wide consensus on the benefits of corporate adoption (Delmas & Montes-Sancho, 2011). Furthermore, policy duration and generosity affect corporate impact. Relatively sustained and substantive subsidies are more conducive to firm growth in policy-dependent industries (Georgallis & Durand, 2017).
- Finally, the means of communicating policy content affects the odds of corporate action. Rosenkranz et al. (2017) found that companies are much more likely to partake in an energy efficiency programme when nudged through simpler messages that stress the corporate self-interest of participation.³⁵

Clearly these examples from the management literature are quite limited in number, and thus do not provide comprehensive coverage of all aspect of policy instruments that might matter to their effectiveness. They do provide some indication however, as to which aspects could be studied further.

The findings from the literature review presented above show many contingencies to play a role in co-determining the effectiveness of government policies aimed at influencing behaviour of businesses. The number of moderating aspects may very well be daunting when attempting to apply all insights in developing concrete behavioural interventions. We now look to practicable ways for policymakers to apply (at least part of) these findings.

33 In the Chinese context, highly centrally (e.g., provincial-level) controlled firms were subject to only one layer of government control, involving limited pressure, whereas firms controlled at more decentral levels were exposed to the cumulative pressure of several bureaucratic layers, leading to higher environmental responsiveness. The cumulative effect was outweighed by the large distance from the central, environmentally-oriented government for very decentrally (e.g., county-level) controlled firms, which were mainly sensitive to the non-environmental priorities of the directly controlling local authorities.

34 The non-alignment of government policies across administrative levels creates ambiguity for firms and enables firms to conform to the administrative regime most favourable to the corporate interests.

35 This points to the importance of framing government policies in accordance with corporate cognition and interests.



2.2.2 Archetypes of firms

Structural factors are more easily observable than behavioural ones, and consist of hierarchy, size and sector. Hierarchy plays a role, since there is evidence to suggest that flatter structures are more creative, while hierarchical structures are more risk-averse and process-driven. Size is relevant because smaller organisations value economic factors highly and reputation less so. Finally, the sector in which a business operates should be considered as well, because e.g. the intensity of competition affects firms' investment decisions and market behaviour. Developing a model that incorporates business characteristics to prevent a one-size-fits-all approach, as proposed in section 2.2, requires an understanding of how types of firms operate. Models such as ORGANISER (see section 2.1.1) help to develop an understanding of how an individual business operates, but are less helpful when a policy influences more than one business. Working with ideal types then becomes a suitable alternative. From the perspective of a Dutch policymaker, six ideal types stand out and will be discussed throughout this report:

- Listed multinational corporation/financial institution;
- Cooperatives;
- Family business;
- Innovative (technology-driven) start-up;
- SME;
- Self-employed entrepreneur ('ZZP'er').

Interventions in our model target the decision-making unit within these archetypical companies (DMU, see section 2.1.1). Within each archetype, the DMU is made up differently. For example, a 1 or 2-tier board makes the high-level decisions in a listed multinational corporation, while the general assembly is the key decision maker in a cooperative. The DMU can thus consist of one or more entrepreneur(s) or manager(s), and, depending on its composition, it might be more or less susceptible to different types of incentives.³⁶ The exact demarcation of the DMU can also be different for different decisions made by a company, depending on e.g. the subject and complexity of the decision made.

While there are many similarities between entrepreneurs and managers in large businesses, both groups show differences in their decision making, with entrepreneurs being more susceptible for biases and heuristics in their decision making than managers.³⁷ This finding is based on research directly comparing both groups. Under conditions of environmental uncertainty and complexity, these biases and heuristics can actually be an effective way to guide decision making. In fact, without the use of biases and heuristics, entrepreneurs might be too hesitant to overcome initial barriers and make entrepreneurial decisions, since the window of opportunity would often have closed by the time all necessary information is available to make a more rational decision. Moreover, overconfidence might help the entrepreneur to be persuasive and more decisive in implementing decisions. In management settings, however, these biases could cause significant errors and lead to detrimental results.

Furthermore, the DMU interacts with different internal and external stakeholders in different archetypes; for the DMU of an innovative start-up a business angel is a crucial stakeholder, while a DMU of a family business needs to consider the (non-active) family members. Managers and change agents can play a special role in influencing the DMU, either by facilitating or obstructing behavioural change. When making important decisions, most DMUs will rely on trusted sources to receive the request to make the decision, any relevant information, and (if necessary) advice. These trusted sources could be a family member in the case of a family business, and an industry association in the case of SMEs. Trusted sources are relevant, because their advice is likely to influence and help shape the DMU's decision making.

In some cases, the DMU can be heavily influenced by actors beyond their sphere of influence or control, and with who they have little to no contact. A clear example of this is the impact consumers can have on decision makers in retail companies. The case study on beefed-up chickens (appendix E.3) describes how a widespread change in consumer preferences motivates decision-makers in the agri-food value chain to change their approach to poultry-based food products. In this case, little to no interaction takes place between consumers and the DMU, and the unilateral change in consumer behaviour functions as a direct source of pressure for the DMU to change its decision making.

³⁶ There is also evidence to suggest that entrepreneurs and managers in large corporations have different biases when making decisions (see appendix D).

³⁷ Busenitz, Lowell W., and Jay B. Barney. 1997. "Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making." *Journal of business venturing* 12, no. 1: 9-30.

In all cases, the susceptibility of the DMU to specific stimuli, as well as the power distribution within a DMU, will differ on specifics, such as the type of decision at hand, the thematic area on which the decision touches, and the impact of the decision on the business as a whole.

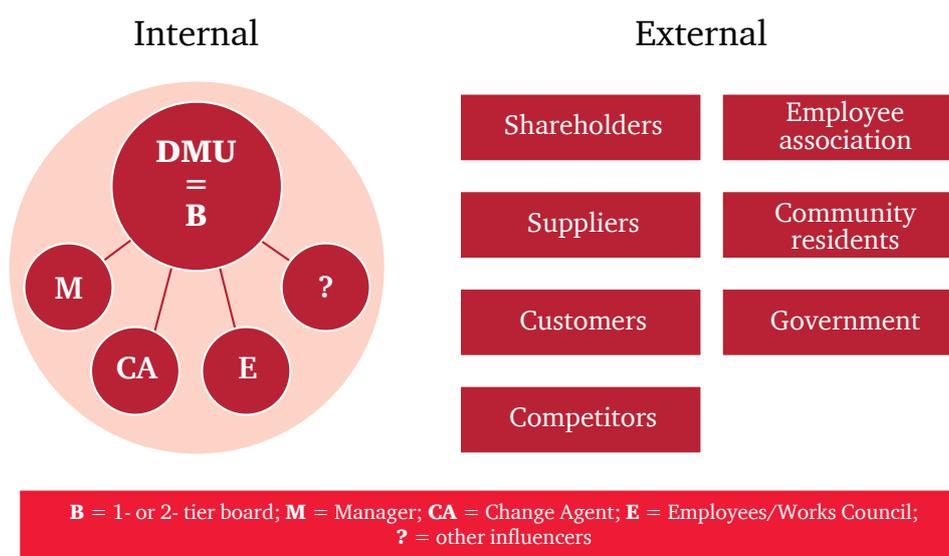
Below, we describe each archetype in more detail and provide insights in the context within which the DMU of each archetype operates. Accompanying each description is a figure that visualises this ‘DMU context’. Within the figure, a circle represents the business, with the elements inside the circle depicting the most important internal stakeholders that affect a business’s internal dynamics. At the top is the DMU, which can be a board, General Assembly, the founder, the owner or the director. Other internal actors are the managers (M) and the change agent (CA). The elements outside of the circle are the main external stakeholders. This can be a labour union in the case of a cooperative, or the financier in the case of a start-up. These actors can be described in more details as follows:

- **Managers** are responsible for a specific business line in the primary process (e.g. operations, sales or purchasing) or a specific supporting department (e.g. finance, innovation, HR). Based on this specific responsibility, they are in a position to submit information for decision making on the agenda of the DMU.
- **Change agents** are employees of the business that are either formally responsible or otherwise influential with regard to a specific topic, and can thus influence the DMU’s agenda.
- DMUs in all archetypes of businesses rely on trusted sources of information other than managers or change agents. These trusted sources may in some cases be identifiable, because they are inherent to the specific archetype (such as the Oversight Board in a listed firm, or family members of the owner in a family business), and in other cases may not be (such as personal friends of a CEO who have no formal role in or related to the business).
- Every individual business is different. The influence of specific internal and external stakeholders with respect to decision making by the DMU differs between firms. Based on management practices observed in the businesses we work with every day, we provide some insights based on this aspect for each archetype on the following pages.

Note that the figures do not include all elements that are important to a business, but rather visualise the internal context from a DMU perspective.

Figure 6: DMU in a multinational corporation/financial institution

Listed Multinational Organisation



Source: PwC



* In MNCs of European origin, a two-tier board (consisting of a board of directors who manage the firm and an oversight board who act as a sounding board and provide guidance) is common. In the Netherlands, the oversight board has legal rights and responsibilities³⁸. In MNCs with an Anglo-Saxon background, the one-tier board is more common. In a one-tier board, the executive directors and overseeing directors are all members of the same board.

** Note that, in the Netherlands, all firms with more than 50 employees are legally required to have a Works Council.³⁹ In practice, this requirement applies to all MNCs.

Listed Multinational Corporations (MNC) or financial institutions:

- **Description:** An MNC is an enterprise operating in several countries but managed from one (home) country. Generally, any business or group that derives a quarter of its revenue from operations outside of its home country is considered a multinational corporation.⁴⁰ A listed MNC is an MNC whose shares are quoted on a stock exchange. The DMU is a 1- or 2-tier board.
- **Stakeholders:** Internally, employees (including the Works Council)⁴¹ and the board of directors.⁴² Externally, shareholders⁴³, suppliers⁴⁴, customers⁴⁵, competitors⁴⁶, governments,⁴⁷ employee associations⁴⁸, community residents⁴⁹. Although not explicitly identified in academic sources we assessed, recent news items in the Netherlands suggest that prospective employees are an important group of external stakeholders and that they prefer large firms that have the image of being environmentally sustainable enterprises.⁵⁰ Relatively influential actors are the managers, who more than in any other archetype are responsible for preparing decisions for the DMU (board of directors), and shareholders and the oversight board, who have the power to hire and fire DMU members.
- Trusted sources are likely at the peer level of DMU members, e.g. directors of similarly large and powerful firms, high-ranking civil servants and ministers of the government.
- Case study examples: Large firms feature in the case studies on the Discount for Sustainable Ships, the Beefed-Up Chickens Campaign and Private quality systems. These case studies are covered in appendix E to this report.

Regarding the Discount for Sustainable Ships, large, multinational fleet operators typically tend to hold shareholder interests in high regard, focussing on the bottom line of their company. Consequently, a discount on reoccurring operational expenditures such as port dues are relevant to shareholders of these fleet operators. Through their formal power within a company, shareholders influence the decision making of large, multinational fleet operators.

The campaign against beefed-up chickens typically targets large multinational companies in the food production, retail and restaurant sectors, oftentimes publicly listed but not always. Within these companies, high-ranking managers responsible for a specific domain or aspect within the company typically dominate the decision-making unit. Although the final say is reserved for the board of the company, these managers have significant control over operational and tactical decision-making, and over the preparation of strategic decisions made at board level.

38 These rights and responsibilities are laid down in the Dutch Civil Code, which can be accessed at http://wetten.overheid.nl/BWBR0003045/2018-07-01#Boek2_Titeldeel4_Afdeling6.

39 This legal requirement is laid down in the Wet op de ondernemingsraden, which can be accessed at <http://wetten.overheid.nl/BWBR0002747/2017-09-01>.

40 <http://www.businessdictionary.com/definition/multinational-corporation-MNC.html>

41 Hillman, A., & Keim, G. 2001. Shareholder value, stakeholder management, and social issues: What's the bottom line? *Strategic Management Journal*, 22(2): 125-139.

42 Golden, B., & Zajac, E. 2001. When will boards influence strategy? Inclination x power = strategic change. *Strategic management journal*, 22(12): 1087-1111.

43 Hillman & Keim. 2001. Shareholder value, stakeholder management, and social issues.

44 Ibid.

45 Ibid.

46 Greenley, G., & Foxall, G. 1997. Multiple stakeholder orientation in UK businesses and the implications for company performance. *Journal of Management Studies*, 34(2): 259-284.

47 Davis, G. 2009. *Managed by the markets: How finance re-shaped America*. Oxford: Oxford University Press; Hillman, A. J. 2003. Determinants of Political Strategies in U.S. Multinationals. *Business & Society*, 42(4): 455-484.

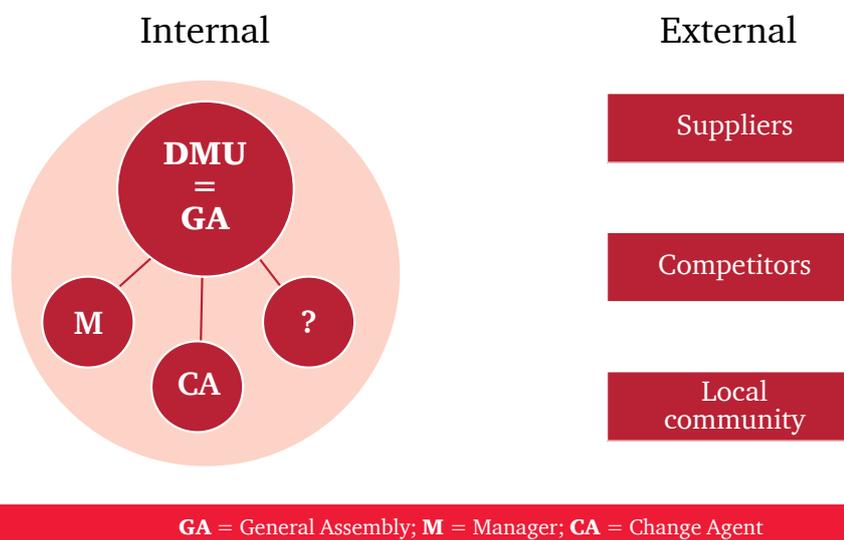
48 Greenley & Foxall. 1997. Multiple stakeholder orientation in UK businesses.

49 Hillman & Keim. 2001. Shareholder value, stakeholder management, and social issues.

50 E.g. <https://www.intermediar.nl/collega-s-en-bazen/bedrijfscultuur/tesla-voegt-zich-bij-favoriete-werkgevers-studenten> and <https://www.nu.nl/carriere/5246291/shell-niet-langer-favoriete-werkgever-technische-studenten.html>.

Figure 7: DMU in a cooperative

Cooperatives



Source: PwC

Cooperatives:

- **Description:** A cooperative is an autonomous association of persons united to meet common economic, social, and cultural goals. They achieve their objectives through a jointly-owned and democratically-controlled enterprise.⁵¹ The members, through the General Assembly, are the DMU within a cooperative.
- **Stakeholders:** Internally, the members are the most important stakeholders.⁵² Externally, the suppliers⁵³, competitors,⁵⁴ and the local community⁵⁵ are the most important stakeholders.
- **Trusted sources** are likely members of the cooperative, and those who share the cooperative's values.
- **Case study examples:** Cooperatives feature in the case studies on the Beefed-Up Chickens Campaign, Private quality systems and the Sustainable Trade Initiative, which are covered in appendix E. The beefed-up chickens campaign (also) targets cooperatives in the agri-food sector. The case study describes that, within these companies, the decision-making unit is typically dominated by the general assembly of the members of the cooperatives. On matters that relate to the treatment and welfare of livestock and the associated price elasticity, a dedicated manager or group of managers may support the general assembly in their decision-making.

51 https://ec.europa.eu/growth/sectors/social-economy/cooperatives_en

52 Boone, C., & Özcan, S. 2016. Strategic Choices at Entry and Relative Survival Advantage of Cooperatives versus Corporations in the US Bio Ethanol Industry, 1978-2015. *Journal of Management Studies*, 53(7): 1113-1140; Ashforth, B., & Reingen, P. 2014. Functions of dysfunction: Managing the dynamics of an organizational duality in a natural food cooperative. *Administrative Science Quarterly*, 59(3): 474-516.

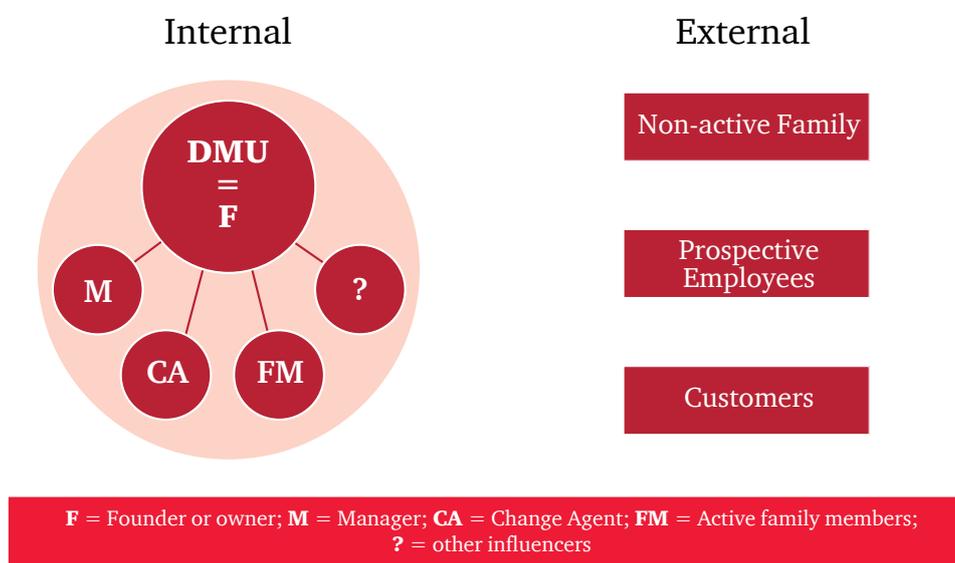
53 Núñez Nickel, M., & Moyano Fuentes, J. 2004. Ownership structure of cooperatives as an environmental buffer. *Journal of management studies*, 41(7): 1131-1152.

54 Ibid.

55 Boone & Özcan. 2016. Strategic Choices at Entry and Relative Survival Advantage.

Figure 8: DMU in a family business

Family Business



Source: PwC

Family businesses:

- **Description:** The majority of decision-making rights are in the possession of the natural person(s) who established the firm, or in the possession of the natural person(s) who has/have acquired a share of capital of the firm, or in the possession of their spouses, parents, child, or children's direct heirs.⁵⁶ Family businesses can be listed or unlisted, and can be big or small. The DMU for a family business is the founder or owner.
- **Stakeholders:** Internally, the founder⁵⁷, active family members⁵⁸, and the managers⁵⁹. Externally, the non-active family members⁶⁰, the customers⁶¹, and prospective employees.⁶²
- **Trusted sources** are likely members of the family (active in the business or not), and those who share the family's values.
- **Case study examples:** Family businesses feature in the case studies on the Private quality systems and the Sustainable Trade Initiative, which are covered in appendix E. The case study on the sustainable trade initiative describes that, typically, the decision-making unit in family businesses is heavily influenced by values and traditions, and to some extent by a vision derived from these values and traditions.

56 https://ec.europa.eu/growth/smes/promoting-entrepreneurship/we-work-for/family-business_en

57 Bingham, J., Dyer, W., Smith, I., & Adams, G. 2011. A stakeholder identity orientation approach to corporate social performance in family firms. *Journal of Business Ethics*, 99(4): 565-585.

58 Ibid.

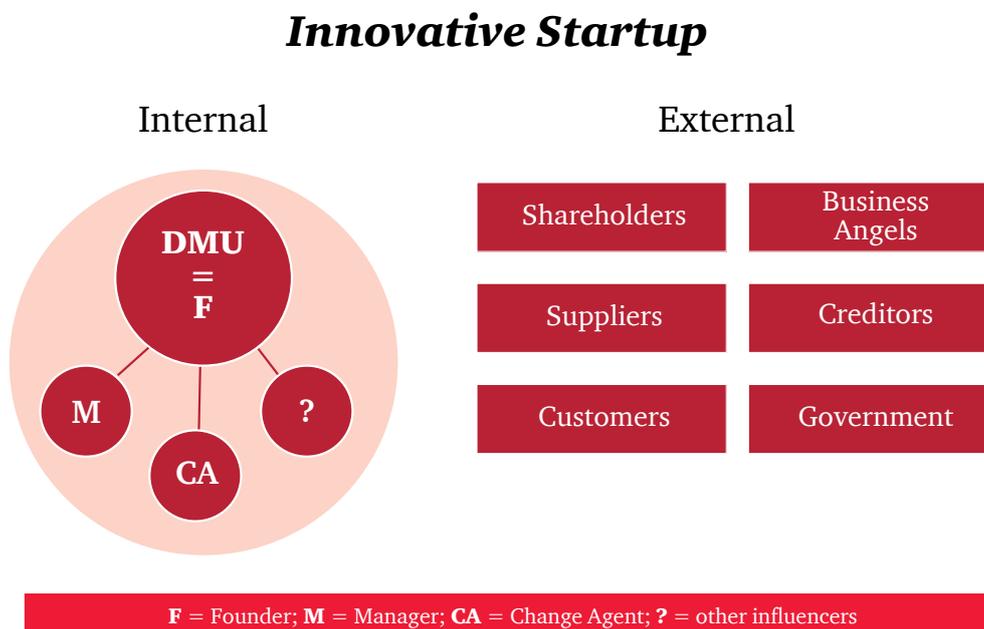
59 Chua, J., Chrisman, J., & Bergiel, E. 2009. An agency theoretic analysis of the professionalized family firm. *Entrepreneurship Theory and Practice*, 33(2): 355-372.

60 Gomez-Mejia, L., Nunez-Nickel, M., & Gutierrez, I. 2001. The role of family ties in agency contracts. *Academy of Management Journal*, 44(1): 81-95.

61 Binz Astrachan, C., & Botero, I. C. 2018. "We are a family firm" An exploration of the motives for communicating the family business brand. *Journal of Family Business Management*, 8(1): 2-21.

62 Ibid.

Figure 9: DMU in an innovative start-up



Source: PwC

Innovative start-ups:

- **Description:** A start up is a business that is in the first stage of its operations. Their entrepreneurial founders often initially bankroll these businesses as they attempt to capitalize on developing a product or service for which they believe there is a demand.⁶³ The DMU is usually the founder.
- **Stakeholders:** Internally, the top management team⁶⁴ and the founder.⁶⁵ Externally, the shareholders⁶⁶, business angels⁶⁷, creditors⁶⁸, customers⁶⁹, and the suppliers⁷⁰, governments⁷¹.
- **Trusted sources** include founder-owners of other start-ups in the region or industry, as well as business angels, who are often very much involved in advising and coaching the founders of a start-up.
- **Case study examples:** Innovative start-ups feature in the case study on Private quality systems covered in appendix E. The case study describes the heavily influence that business angels have on the DMU.

63 <https://www.investopedia.com/terms/s/startup.asp>

64 Deutsch, Y., & Ross, T. 2003. You are known by the directors you keep: Reputable directors as a signaling mechanism for young firms. *Management Science*, 49(8): 1003-1017.

65 Dencker, J., & Gruber, M. 2015. The effects of opportunities and founder experience on new firm performance. *Strategic Management Journal*, 36(7): 1035-1052.

66 Jawahar, I., & McLaughlin, G. 2001. Toward a descriptive stakeholder theory: An organizational life cycle approach. *Academy of Management Review*, 26(3): 397-414.

67 Freear, J., Sohl, J., & Wetzel, W. 1994. Angels and non-angels: are there differences?. *Journal of Business venturing*, 9(2): 109-123.

68 Jawahar & McLaughlin. 2001. Toward a descriptive stakeholder theory.

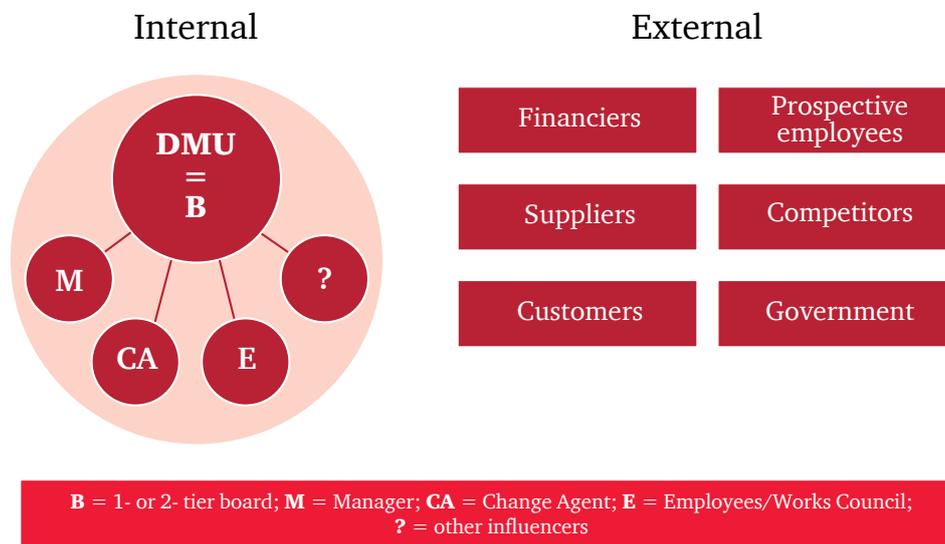
69 Ibid.

70 Venkataraman, S. 1998. Hostile environmental jolts, transaction set, and new business. *Journal of Business Venturing*, 13(3): 231-255.

71 Georgallis, P., & Durand, R. 2017. Achieving high growth in policy-dependent industries: Differences between startups and corporate-backed ventures. *Long Range Planning*, 50(4): 487-500.

Figure 10: DMU in an SME

SME in Service or Manufacturing



Source: PwC

* Note that, in the Netherlands, all firms with more than 50 employees are legally required to have a Works Council.⁷² In practice, this requirement applies to all medium-sized enterprises (defined in the EU as having between 50 and 250 employees), but not to small enterprises (<50 employees). However, small enterprises may also have a Works Council, if this is agreed between the employees and the management.

SMEs:

- **Description:** A small or medium-sized enterprise is a business with a staff headcount of between 50 and 250, and a turnover or balance sheet total of up to €50 million or €43 million respectively, according to the European Commission.⁷³ The DMU is the board, supported by the top management team.
- **Stakeholders:** Internally, employees (including the Works Council, if it is present)⁷⁴ and the top management team⁷⁵. Externally, financiers⁷⁶, suppliers⁷⁷, customers⁷⁸, competitors⁷⁹, government⁸⁰, prospective employees⁸¹.
- **Trusted sources** are likely other entrepreneurs in the region or industry, as well as aldermen in the local government.
- **Case study examples:** SMEs feature in the case studies on the Discount for Sustainable Ships, Energy performance assessments, Private quality systems and the Sustainable Trade Initiative, which are covered in appendix E.

72 This legal requirement is laid down in the Wet op de ondernemingsraden, which can be accessed at <http://wetten.overheid.nl/BWBR0002747/2017-09-01>.

73 http://ec.europa.eu/growth/smes/business-friendly-environment/sme-definition_en

74 Russo, A., & Perrini, F. 2010. Investigating stakeholder theory and social capital: CSR in large firms and SMEs. *Journal of Business Ethics*, 91(2): 207-221.

75 Darnall, N., Henriques, I., & Sadosky, P. 2010. Adopting proactive environmental strategy: The influence of stakeholders and firm size. *Journal of management studies*, 47(6): 1072-1094.

76 Becchetti, L., & Trovato, G. 2002. The determinants of growth for small and medium sized firms. The role of the availability of external finance. *Small Business Economics*, 19(4): 291-306.

77 Darnall, Henriques & Sadosky. 2010. Adopting proactive environmental strategy.

78 Ibid.

79 Russo & Perrini. 2010. Investigating stakeholder theory and social capital: CSR in large firms and SMEs.

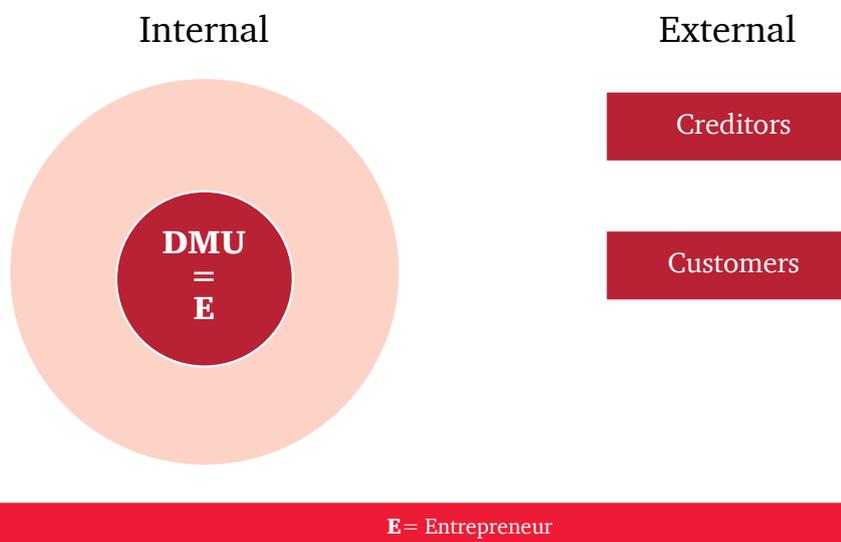
80 González, X., & Pázó, C. 2008. Do Public Subsidies Stimulate Private R&D Spending? *Research Policy*, 37: 371-389; Hottenrott, H., & Lopes-Bento, C. 2014. (International) R&D Collaboration and SMEs: The Effectiveness of Targeted Public R&D Support Schemes. *Research Policy*, 43: 1055-1066.

81 Russo & Perrini. 2010. Investigating stakeholder theory and social capital: CSR in large firms and SMEs.



Figure 11: DMU for the self-employed entrepreneur

Self-employed Entrepreneur



Source: PwC

Self-employed entrepreneurs:

- **Description:** A self-employed entrepreneur is an entrepreneur that has no personnel. Naturally, this entrepreneur is also the DMU.
- **Stakeholders:** Internally, the entrepreneur her- or himself.⁸² Externally, creditors⁸³ and customers⁸⁴.
- **Trusted sources** are likely other self-employed entrepreneurs, not necessarily in the same sector but likely either working in the same location and or linked via networks of self-employed entrepreneurs.

82 Caliendo, M., Fossen, F., & Kritikos, A. 2014. Personality characteristics and the decisions to become and stay self-employed. *Small Business Economics*, 42(4): 787-814.

83 Blanchflower, D., & Oswald, A. 1998. What makes an entrepreneur? *Journal of labor Economics*, 16(1): 26-60.

84 Blanchflower, D. 2000. Self-employment in OECD countries. *Labour economics*, 7(5): 471-505.



- **Case study examples:** Self-employed entrepreneurs feature in the case studies on Private quality systems and the Sustainable Trade Initiative, which are covered in appendix E. Among self-employed entrepreneurs in the food production chain, the decision-making unit consists of themselves as directors of their own enterprise. They are typically influenced by their clients, by their professional networks, and by the opportunities and limitations provided by their work space.

2.2.3 Observability

The extent to which the abovementioned factors are easy to observe is an important factor in determining how useful understanding these influencers is to inform the practice of policymaking. After all, if determinants of behaviour are not observable, they provide little help when designing policies. While some factors that influence business behaviour are easy to observe, others would require more effort to observe:

- Easy to observe characteristics include the governance form and firm size.
- Some characteristics are difficult to observe from the outside, such as culture, leadership and stakeholder relations.
- Some characteristics can be easy to observe in some instances, but not in others. These include corporate structure, industry structure, supply chain organisation, and geographic orientation. The observability of these characteristics also depends to a large extent on how well certain sectors and value chains are covered by academic and industry publications, but also on how much attention they receive from media and public debate. Typically, sectors and value chains that deliver products and/or services to consumers are better observable through media and public debate, because NGOs and consumer organisations can leverage the interest and attention of the general public to generate media coverage of these value chains and sectors, as well as their products.

Of course, all characteristics can be made observable, as long as sufficient field research on the specific target group of businesses is conducted. Practical considerations – such as limited time and resources for research on the part of the policymakers and limit to cooperation by the businesses that make up the target group – are likely to impose restrictions to the extent to which all business characteristics can be made observable.

2.3 Findings on behaviour and motivation

2.3.1 Types of business behaviour(al change)

Information shared during the round-table discussion with academic experts and our findings in appendix D on behavioural literature focused on business behaviour suggest that influencing business behaviour requires attention on two levels. On one level, influencing business behaviour requires attention for the difference between decisions made for the business as a whole on the one hand and implementation on the other hand (which can, in itself, imply numerous decisions being made at the department, team and individual levels). On another level, influencing business behaviour seems to vary in the degree of complexity of the intended (change in) behaviour of businesses. Both levels are elaborated on below.

2.3.1.1 Differentiation between decision making and implementation

The round-table discussion with academic experts shows that a substantial difference exists between decision makers deciding to change their business' behaviour and then acting according to this decision on the one hand, and realising the required behavioural changes with their organisation's staff on the other. Policies may be aimed at stimulating change by influencing the decision-making unit within a business, but oftentimes this seems not to be enough for businesses to also implement the change. Implementing change successfully depends on the power to change, which differs per business, and even between teams in the same business. The power to change relates to the circumstances around three aspects: 1) the motivation to accept or reject the change intended by decision makers, 2) the knowledge (know-how) and required to effectively implement change, and 3) the means (e.g. financial means, but also change management capabilities in the organisation) to be able to implement the measures, and often a combination of those aspects. This implies the importance of acknowledging the distinct experiences within businesses between the decision to change and then act upon the decision.

As introduced in section 1.3, we will limit our conclusions and recommendations to the manners in which governments can attempt to influence decisions made on behalf of an entire business by its decision.



2.3.1.2 Easy-to-influence versus difficult-to-influence behaviour

From the round table discussion, the interviews with different businesses and our own experiences in working with businesses, many of the changes in terms of policy to realize important social goals, such as food safety, resilience to climate change and the use of scarce natural resources, may be first-time changes for businesses. Effectively changing behaviour therefore requires an understanding of how difficult it is for a business to change a certain type of behaviour.

The model presented in **Figure 12** seeks to find an understanding for the degree of difficulty of influencing businesses to alter specific behaviour that needs to be changed. It differentiates between behaviour that is relatively straightforward to change, and behaviour that is highly complex to begin to influence. This differentiation is not binary; rather it consists as a spectrum on which specific behaviour can be situated. EY et al. (2016, pages 29-30) also broach on this aspect when they discuss how the importance and complexity of a decision for the company, combined with the perceived costs and benefits of various options, determine whether the decision is more likely to be taken based on routines and by a single person (system 1) or consciously and involving more people (system 2).

On the more straightforward end of the spectrum, behaviour can be situated that needs only a single decision to change (e.g. one-off, as opposed to everyday anew), and for which that decision requires only a single decision-making unit. For example, changing a fleet of company cars from gasoline-driven cars to electrical cars requires an executive board (a single decision-making unit) to decide on making this investment and ordering its implementation (a one-off decision).

On the more complex end of the spectrum, behaviour can be situated that requires repeated decision-making (e.g. every day, every week or every time a specific situation occurs), and that involves a large number of decision makers (e.g. all individual employees of a department or all members of a specific layer of middle management). For example, getting all office-floor employees within a company (a large number of individual decision-makers) to separate their organic waste, paper coffee cups and plastic spoons and knives when disposing of them (a situation that occurs on a daily basis), can be seen as a relatively complex change ambition.

Within the model, seven factors are important when considering complexity in altering a behaviour pattern⁸⁵:

- **One-off or repeated behaviour** – Repeated behaviour is typically more complex to change in practice.
- **Number of decision-makers** involved in the behaviour change – The higher this number, the more complex a change ambition can be to realise.
- **Strategic decision or implementation** – Implementation efforts typically require repeated decision making and change of routines. This adds to the complexity of change efforts.
- **Compliance behaviour versus voluntary change behaviour** – The perception of the desired behavioural change differs fundamentally between behavioural changes that are the direct result of rules and regulations or (legally binding) commitments made by the business on the one hand and behavioural changes that are 'merely' desired by the government, or another actor. As a result of previous studies much is already known about influencing individuals and businesses to comply with regulations, whereas very little is known about influencing businesses in particular to do things that are not legally required. This makes designing interventions to achieve the latter more complicated.
- **Level of alignment with existing capabilities** – If a change ambition fits with existing capabilities within an organisation, this helps a change effort. If people within an organisation will need to learn new skills, a change ambition becomes more complex to realise, and any potential success will be influenced by:
 - the presence of a sense of urgency among staff;
 - the level of self-efficacy among staff;
 - the presence of a learning component in the change effort.
- **Organisational readiness for change** – Change ambitions are more complex to realise in an organisation that is not ready for change. A variety of reasons can lead to an organisation not being change-ready, including the organisation being in disarray, staff being resistant to organisational change (especially after repeated change efforts that were less than successful, or the organisation being placed under severe financial or regulatory pressure).

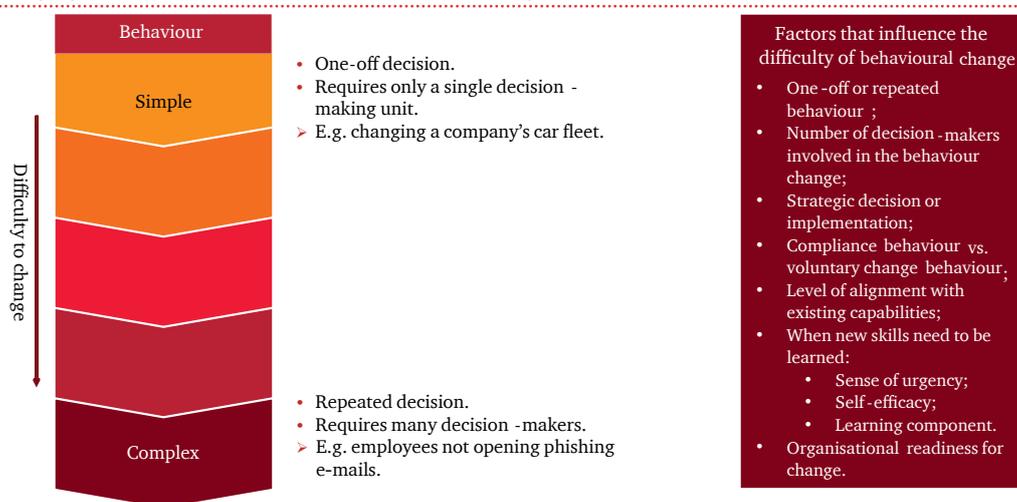
For policymakers, the above implies that it is important to gain insight in what DMU needs to make a change that has never been made before. Results that the government aims to achieve imply a change for businesses. With change comes

⁸⁵ In the course of this study, we identified several key factors that underpin this degree of difficulty (cf. Figure 12), while other elements may play a role as well.

uncertainty, which policymakers should take into account. Also, with change comes the notion of motivation as a function of expectancy and values, effectively the idea among people that need to effectuate the change of whether they can expect their efforts to succeed, and whether they should (in a normative sense) want their efforts to succeed. Very relevant in this sense are expectancy-value theory and the theory of planned behaviour, both described in appendix D.

In addition, as referred to above, in the context in which businesses operate, there is a difference between decision making on new business behaviour and adoption of the intended behaviour. Decision making for new business behaviour arises from top management level, and is aligning with the initial effect policies have. Adopting the intended behaviour throughout the business also takes more time, and depending on the complexity of the new behaviour and the type of organisation may take months or even years to implement. Both the decision-making process and any barriers to implementing a type of behaviour should be effectively influenced by policies.

Figure 12: Changing different types of behaviour – understanding the need of complexity-based differentiation



Source: PwC, based on findings from the literature in appendices B, C and D, the round-table discussion with experts and PwC's expertise in change management

2.3.1.3 Interdependencies between the behaviour of businesses

Business behaviour also depends on the behaviour of other businesses. Organizations do not act and behave in isolation, but their behaviour relies on engagement with stakeholders ranging from clients and suppliers to social partners and the government (Pfeffer and Salancik, 2003). Businesses encounter interdependence whenever they do not fully control all conditions necessary for achieving an action or obtaining a desired outcome. Because of this interdependence, behaviour is a result not just of the intentions and capabilities of the organisation itself, but also of the intentions, capabilities, and relative position of the organisations on which it depends. Influencing business behaviour thus requires understanding the organisation's interdependences and modifying actions accordingly.

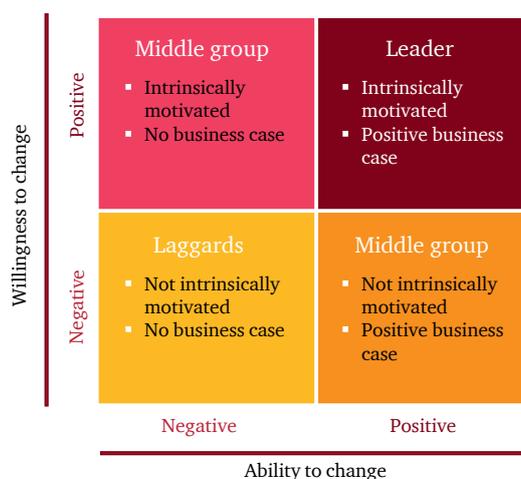
In line with the argument on interdependence, isomorphism is an important aspect of business behaviour. Isomorphism can be understood as 'the similarity in processes or structures between multiple organisations as a result of imitation or independent development under similar constraints' (DiMaggio et al., 2000). Two forms of isomorphism are important, namely institutional and competitive isomorphism. Institutional isomorphism has three mechanisms capable of initiating changes:

1. Force, such as regulation from the government.
2. Imitation of businesses. Organisation A wants to look like organisation B, due to the competitive advantage organisation B has in comparison with organisation A.
3. Normative mechanisms, which in the context of the EZK-research means that businesses are conforming themselves to the existing common norms and values given by the society.

2.3.2. Motivation for behavioural change

Based on our interviews with businesses, literature research and previous experiences, businesses can have different degrees of motivation to fulfil their societal duties when it comes to compliance with regulations⁸⁶. Based on these examples and the case study on the EPK (presented in appendix E.2), we expect that similar degrees of motivation exist when it comes to businesses adopting behaviours desired by the government, that are not the subject of regulation. The starting attitudes of businesses to adopt or reject change may be divided among three categories: leaders, middle group and laggards based on their willingness and ability to change (see Figure 13 below). Both aspects related to the study of motivation for behavioural change will be discussed.

Figure 13: Willingness and ability to change together determine the desired speed of adoption



Source: PwC

2.3.2.1 Intrinsic motivation and goal alignment

Firstly, we discuss the findings from literature on intrinsic motivation of businesses. Then we place the dimensions of the decision matrix from the study by EY et al. – which contains the dimensions of importance and cost/benefit trade-off – next to it, to finally arrive at a model that reflects the relationship between the intrinsic motivation and goal alignment, and the different approaches needed for each group.

Intrinsic motivation

From a governance perspective, understanding the intrinsic motivations of businesses is important. Policymakers can then apply effective ways for businesses to go beyond their regulated duties. The presented literature review⁸⁷ provides an integrative overview of key insights on the motivation literature:

- Businesses can be either **proactive and personally engaged** (i.e., intrinsically motivated) or **passive, alienated, and instrumentally focused** (i.e., extrinsically motivated) in following policy.
- **A continuum from extrinsic to intrinsic motivation exists.** A more nuanced and extensively tested perspective of motivation is the self-determination theory⁸⁸. This classifies behaviour regulation into four different regulations, with external being the most controlled type of motivation and introjected, identified, and integrated as different forms of intrinsic motivation. However, extrinsic motivation can be integrated into organisational self-image, thereby making the task meaningful and intrinsic driven. For example, a business may implement measures to protect the environment

⁸⁶ The Intervention Toolbox of the Inspectorate SZW, the Dutch Inspectorate of a.o. labour laws, builds on these differences, by recommending different approaches to 1) businesses/sectors that have shown to be compliant with labour laws in the past 2) businesses that are willing to comply with labour laws but do not know how and 3) businesses that are unwilling to comply with the laws. The Intervention Toolbox is not publicly available, but its launched was announced by the Inspectorate SZW in 2017 (cf. <https://www.rijksinspecties.nl/actueel/nieuws/2017/06/20/kijkje-achter-de-schermen-de-interventietoolbox>).

⁸⁷ Literature Review Leadership, Leroy (2018), included in appendix C. Much of the theory appointed in this review describes research on motivation of both individual human beings as well as larger group of people. The present literature review provides an overview of the extant literature on motivation and presents actionable recommendations to increase the government's influence on businesses.

⁸⁸ There are many alternative theories of motivation (e.g., expectancy-value theory, theory of planned behaviour) than those discussed here. As a metatheory of motivation, this perspective already includes decades of research into a unifying perspective. More importantly, we understood the question originating from the government as to what extent they can move businesses more from an extrinsic orientation towards an intrinsic orientation. This framework (self-determination theory) most directly answers this question.



simply because it views itself as an environmentally friendly business. Because motivation based purely on reward and punishment, as is the case for extrinsic motivation, is hard to sustain over time, we suggest that political leaders should pay increased attention to self-determined motivation (i.e., focus on integrated extrinsic motivation and the different forms of intrinsic motivation).

- **Moving from extrinsic to intrinsic motivation**, there are three essential factors behind motivation to drive commitment, namely autonomy, competence, and relatedness. Positive organisational systems and structures can be encouraged to give rise to intrinsic motivational behaviour while at the same time keeping the benefits in terms of cooperativeness, revenue and performance outcomes of a business. **Table 2** shows techniques to tap into businesses' potentials for intrinsic motivation.

Table 2: Techniques to tap businesses' potentials for intrinsic motivation

Underlying factor of intrinsic motivation	Technique	How to apply?
Need for autonomy	Encourage co-determination	Offer businesses the opportunity to participate in decision making in order to harmonize preferences Pay attention to a non-controlling communication with businesses
Need for competence	Affirm competence	Provide businesses with completion-contingent rewards that imply some level of competence (e.g., attaining status through points)
	Utilize pride as a strategic asset	Describe a change or implementation of a new policy as a matter of pride that serves the purpose of becoming more competitive
Need for relatedness	Personal communication	Develop strong connections with relevant stakeholders, inform and consult industry as much as possible

Source: Literature Review Leadership, Leroy (2018). See appendix C.

- **Combining intrinsic and extrinsic motivation.** Intrinsic and extrinsic types of motivation can be successfully combined for policy-makers to be able to achieve an optimum of motivational effect. As explained before, motivation comes in all shapes and sizes (from introjected to internal) and intrinsic motivation can be fostered by increased attention for the three fundamental basic needs (autonomy, competence and relatedness).

Goal alignment

The concept of goal alignment originated in the management literature to describe the adjustment of individual and team performance goals to fit with the strategic goals of the organisation.⁸⁹ In recent years, goal alignment (also referred to in this context as “strategic alignment”) has also been studied in the context of business alliances and (public-private) partnerships.⁹⁰ Our findings from the literature review and case studies suggest that the degree of goal alignment influences the effectiveness of policy interventions. Therefore, we explore alignment between the goals of government and the goals of businesses in the following sub-section.

2.3.2.2 Leaders, middle group and laggards

The extent to which businesses and their decision makers are open to specific changes differs. Based on the interviews with businesses, in general, the starting attitudes of businesses to adopt or reject a specific change can be divided in three categories: leaders, middle group and laggards, as presented in **Figure 14**: Willingness and ability to change together determine the desired speed of adoption. After adding the dimensions of EY et al., we can describe each group as follows:

- **Leaders** are businesses that are highly motivated to adopt a specific change, and have the means and knowledge to do so. These businesses can be recognised, as they are already successfully implementing measures on some scale without being

⁸⁹ E.g. Sørensen, J. B. (2002). The strength of corporate culture and the reliability of firm performance. *Administrative science quarterly*, 47(1), 70-91.

⁹⁰ E.g. Stephen, A. T., & Coote, L. V. (2007). Interfirm behavior and goal alignment in relational exchanges. *Journal of Business Research*, 60(4), 285-295.

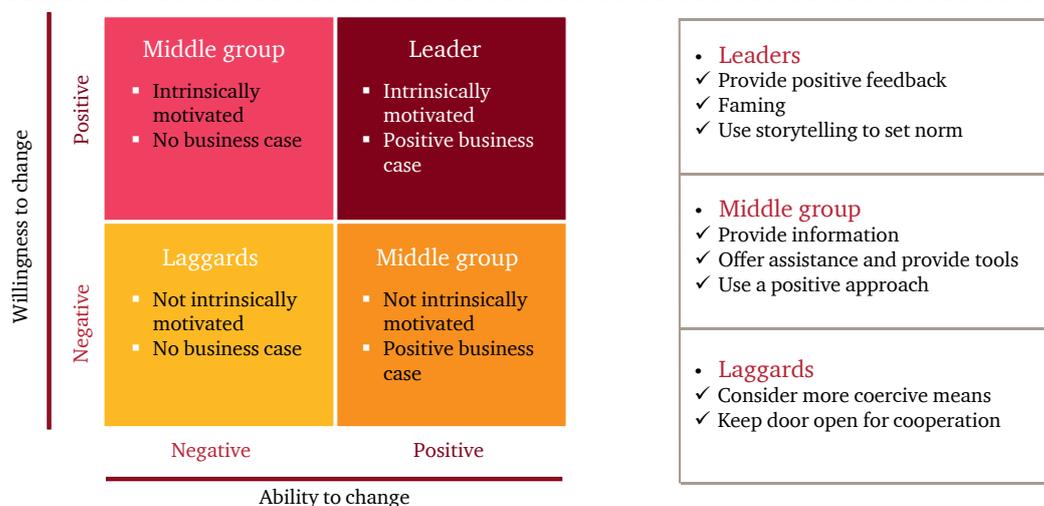
provided incentives by the government.

- The **middle group** consists of businesses that do not yet implement the specific change expected on the scale that leaders do. They lack either the means or knowledge to do so. With support and encouragement,⁹¹ they implement measures with some degree of success.
- **Laggards** are businesses that do not implement changes even after being offered support that enabled some businesses (members of the middle group) to successfully implement the change. This active resistance is likely to be rooted in a lack of motivation (e.g. no goal alignment), often combined with a significant lack of (financial) means to implement measures and/or a significant knowledge gap.

An important take-away from the round-table discussion is that government policies should be more attuned to the proactivity of firms: leaders, followers, and laggards should be approached differently. The EPK case study (presented in appendix E.2) shows an example of how each group may be approached in practice.

Combining the elements introduced above, we arrive at a model that reflects the relationship between the intrinsic motivation and goal alignment, and the different approaches needed for each group. In sum, influencing behaviour of businesses through policies can be possible when the degree of intrinsic motivation and goal alignment of a business group with a specific attitude is taken into consideration. We present this model in **Figure 14** that shows an approach for each of the different groups of businesses. For example, simplifying the implementation process for the middle group of businesses (as opposed to leaders and laggards) can be effective to stimulate businesses. More ways to approach a business, depending on the specific group, is by creating a dialogue, facilitating information, making the communication simple and clear and persuading large businesses as good examples all contribute to influencing business behaviour.

Figure 14: Intrinsic motivation and goal alignment - Different approaches for leaders, middle group and laggards



Source: PwC

2.3.2.3. Findings from the case studies with regard to motivation

The case studies on influencing organisational decision-making reflect the relevance of conceptualising degrees of motivation to businesses behaviour. Three interventions in particular leverage differences in motivation: the “beefed-up chickens” campaign, the EPK tool, and the private-sector quality assurance system for food safety. The two other case studies either demonstrate a universal mechanism that awards good behaviour, or focus exclusively on promoting and inspiring well-behaving actors to do even better.

The “beefed-up chickens” campaign

The animal rights NGO ‘Wakker Dier’, the initiator of the “beefed-up chickens” campaign, distinguishes between organisations already (somewhat) on board with better treatment of animals and those that are not. In its campaigns, its staff reach out to companies that they recognise as front-runners on the issue of livestock treatment throughout the agri-

91 Ibid.



food value chain, to promote and discuss opportunities to substitute food products based on beefed-up chickens with food products based on chickens that receive better treatment. Part of the campaign is to identify companies that improve their conduct regarding the treatment of chickens within the agri-food value chain, and to rank them accordingly. Wakker Dier communicates this ranking to consumers and to the general public through a combination of media channels that together have considerable reach.

Wakker Dier staff also reach out to companies that they recognise as laggards on this topic, to discuss substitution opportunities and argue issues of morality and legality. They reach out specifically to laggards that have considerable market power. Also part of the campaign is to draw attention to companies that Wakker Dier thinks do not do enough to improve their conduct regarding the treatment of chickens within the agri-food value chain. Wakker Dier has run ads on television, radio and social media naming A-brand food retailers that it considers as showing insufficient improvement in their conduct. Moreover, as part of the campaign Wakker Dier hands out awards to companies that it considers to report untruthfully on their conduct. These companies are nominated by Wakker Dier, and through online polling among the general public one company is selected to receive the 'liar award' (liegebeestverkiezing).

The EPK tool

The EPK tool (promoting energy-saving measures) delivers specific, separately identifiable incentives and stimuli to target organisations, and the extent to which these incentives and stimuli are relevant differs depending on the starting attitude of individual target companies. Front-runners in this case are companies that are highly motivated to implement energy-saving measures, that have the means and know-how to do so, and that have already successfully implemented energy-saving measures on some scale. The middle group consists of companies that do not yet implement energy-saving measures on the scale that front-runners do. They lack either the motivation, means or know-how to do so. With some support and encouragement, they implement energy-saving measures with some degree of success. Laggards are companies that resist implementation of energy-saving measures. This active resistance can be rooted in a lack of motivation to conserve energy, a lack of financial means to implement energy-saving measures, a significant knowledge gap, and often a combination of those aspects.

The EPK tool incentivises target companies accordingly, focusing on PR value for front-runners, feedback and advice for companies in the middle group, and on-site inspections to confront business owners and award penalties to companies and organisations that structurally fail to comply with legal environmental requirements.

The private-sector quality assurance system for food safety

The private-sector quality assurance system for food safety is part of a multi-layered government strategy. In the food processing sector, leading companies see a need to have external auditors review their quality controls and provide assurance to their clients and consumers that their products are of good quality. These leading companies also demand from their suppliers that they have their quality management externally validated, to minimise risk for the buying company of selling low-quality or even hazardous products to its customers. The Netherlands Food and Consumer Safety Authority (NFCSA) has begun to award formal recognition to those quality certificates available in the market it believes provide a robust assessment of food-processing companies quality management. This formal recognition thus serves as second-level or "meta" quality standard, and signals which food-processing companies comply with the strictest quality standards.

Companies who want to be in the 'champion's league' of food producers and processors can use the system's PKS certificate (awarded to high-performing quality auditors) to reinforce their brand and generate credibility in the market, demonstrating the quality of their products to their customers. In the long run, the NFCSA may start relying on the certificates of highest quality auditors as a signal of compliance with the legal requirements it enforces, but only if the quality audits will start incorporating all elements of its current enforcement strategy in their approach. If this happens, companies that have received the highest-standard quality certificates will be screened out by the NFCSA's risk analyses and will experience a reduced administrative burden of the Authority's enforcement activities. On the other hand, businesses that will not have a highest-standard quality certificate are likely to experience more intensive compliance monitoring and inspections (and possibly resulting prosecution based on legislation on food safety if it turns out they are not compliant).



Discount for sustainable ships

Differences in motivation are somewhat less relevant for the workings of the discount for sustainable ships of the Rotterdam Port Authority. The financial discount on docking fees and port dues is available for all fleet operators that meet the requirements, and these discounts can stack for ships that are especially green. The Port Authority's ranking of shipping companies through the Environment Ship Index (ESI) to some extent does help front-runners promote the sustainability of their fleet, while it can serve as a wake-up call to companies that are ranked less high.

The Dutch Floriculture Sustainability Initiative

The Dutch Floriculture Sustainability Initiative (FSI) also puts less emphasis on differences in motivation. It focuses specifically on companies in the floral sector that are ahead of the curve where sustainability is concerned, delivering information and awareness campaigns and actively inviting front-running companies to sign up to the initiative.

2.3.2.4 Potential application of revealed motivation in long-term government strategies

Building on the different approaches for each group, we propose that – if the government is willing to engage in a long-term commitment to achieving a policy goal – it should be possible to perform a long-term process that makes use of the distinction between the three groups. Such a process could for example go along the following steps:

1. Clearly communicate the policy objective (e.g. reduction of x% of greenhouse gas emissions by the year 2030) and the behaviour expected of businesses (e.g. reduction of y% consumption of energy that is generated from fossil fuels by the year 2030).
2. Monitor the responses of businesses, by studying the emissions over time. Publish a request for businesses that have succeeded in significantly reducing the consumption of fossil-fuel energy to make themselves known.
3. From the monitoring data and validation of the claims of businesses that respond to the request, identify the businesses that have succeeded to take important steps. These are leaders. Interview the decision makers of these businesses to collect their stories of how they managed to meet the challenge of reducing fossil-fuel energy consumption. Publish these stories.
4. Continue to monitor and collect further success stories, while also offering support to businesses that are willing to do the same as the leaders. Support can take the form of e.g.:
 - self-assessment tools, that provide a comparison with similar firms, as well as concrete suggestions for steps to reduce fossil-fuel energy use based upon the specific profile of the business;
 - detailed information in success stories of businesses that managed to achieve significant reductions; or
 - low-cost advice from a technical consultant subsidised by the government.
5. Continue this approach consistently, for a significant amount of time, allowing middle group businesses to gain confidence in the consistency of government support. Monitor uptake of the desired behaviour.
6. When, in the long run, the majority of businesses have taken steps to reduce their fossil-fuel energy consumption and reduction has become the de facto norm, consider developing legislation that imposes fines or other sanctions on businesses that refuse to reduce their fossil-fuel energy consumption (the laggards).

2.4 Findings on leadership styles and the application of types of government instruments

Policymakers explicitly or implicitly apply a leadership style when choosing which policy instrument to use and with which stakeholders to engage. This section presents the findings from the literature review (appendix C) on motivation and types of leadership styles that policymakers have at their disposal, in particular building onto Schwartz's value framework. The main takeaway is that the government's chosen leadership style and policy instruments should be aligned with the main motivation of companies in the policy's target group.

2.4.1 Leadership styles

Leadership has been the topic of extensive research, but the definitions of leadership and approaches to leadership are diverse. In this study, leadership refers to “the ability of an entity to influence, motivate, and enable others to contribute toward effective and successful goal attainment.”⁹² There are different kinds of leadership, and a commonly used taxonomy distinguishes four main types.⁹³ These four approaches are transaction-oriented leadership, stakeholder-oriented leadership,

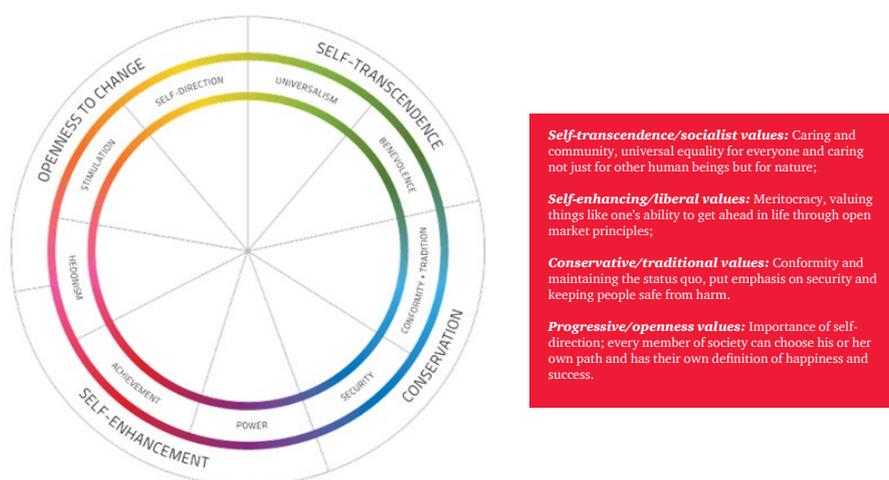
⁹² Literature Review Leadership, Leroy (2018). See appendix C.

⁹³ Ibid.

vision-oriented leadership, and normative leadership. A policymaker does not have to choose and stick to a single type of leadership, but can apply these approaches intermittently. A hierarchical structure of a business implies that political leaders can, for example, use a task-oriented leadership approach to first define duties and expectations, and then use a relations-oriented approach to motivate businesses to achieve the desired results.

Before applying a leadership style, it is important to consider the underlying goals or values that people and businesses may pursue.⁹⁴ Schwartz (1999) has developed and extensively tested a framework that lists the various values that underlie the behaviour of individuals as well as larger entities (e.g., businesses, political parties, cultures as a whole). **Figure 15** provides an overview of the Schwartz' value framework.⁹⁵ This value framework provides insight into what motivates businesses to engage in certain types of behaviour. While some businesses are mainly motivated by achievement and generating turnover, other businesses—increasingly more—are motivated by other goals, such as providing a healthy and inspiring workplace for their employees and caring about social justice and sustainability.

Figure 15: Schwartz' Value Framework



Source: Schwartz (1999)

2.4.2 Integration of leadership and motivation

Based on the four approaches to leadership and the Schwartz value framework, this study offers an integration of leadership and motivation (see **Figure 16**). Leadership styles (represented by the opaque/red circles) differ in the values that underpin them. Some approaches are more self-transcendent, others are more self-enhancing, some geared towards change while yet others aim at stability.

The leadership styles depicted in **Figure 16** can be classified according to two broad dimensions, namely openness to change and self-enhancing (e.g. meritocracy, open-market principle) or transcendent values (e.g. caring and community, universal equality). This leads to four categories of leadership styles: visionary leadership, stakeholder leadership, transactional leadership, and normative leadership.

Visionary leadership focuses on businesses that are strongly open to change and that have self-enhancing values. This approach is change-oriented, and components include envisioning change, encouraging innovation, facilitating collective learning, and advocating change. Visionary leadership includes transformational leadership and authentic leadership. An example of visionary leadership can be the government developing a vision for radically reducing greenhouse gasses, and organising knowledge exchange for businesses to achieve this goal.

⁹⁴ Ibid.

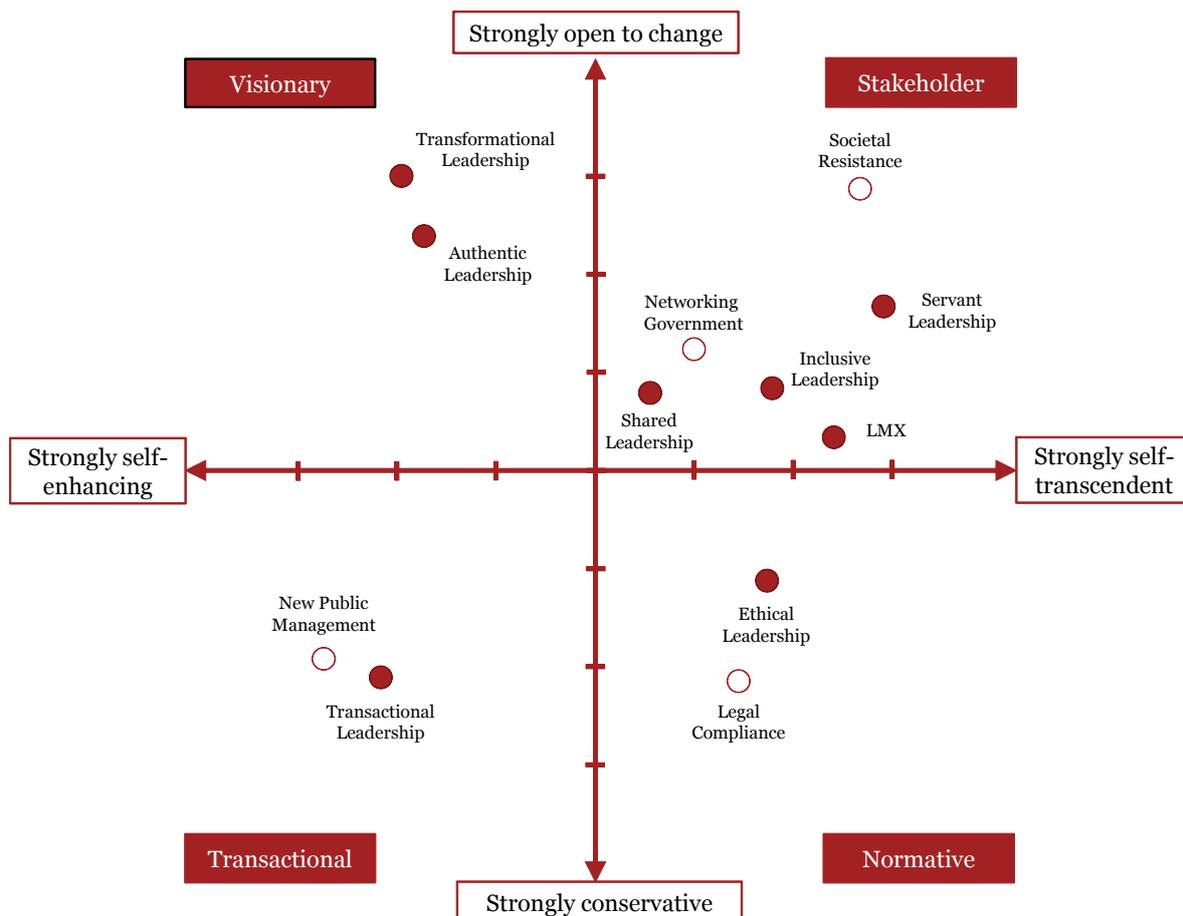
⁹⁵ Schwartz' value framework has been successfully applied to different cultures and sectors, highlighting its wide applicability. Therefore, governments can tailor this generic framework to specific corporate characteristics and public policy domains.

Stakeholder leadership is aimed at businesses that are strongly open to change and have self-transcendent values. This relationship-oriented approach centres on supporting, developing, recognising and empowering targeted businesses. Stakeholder leadership includes servant leadership, inclusive leadership, shared leadership and LMX. An example of stakeholder leadership can be establishing a strong network with businesses to co-create public policies.

Transactional leadership targets businesses that are strongly conservative and have self-enhancing values. This approach is task-oriented and component behaviours include planning of work-related activities, clarifying task objectives and role expectations, monitoring of performance, and problem solving. Transactional leadership includes New Public Management approaches and “quid pro quo” approaches. An example of transactional leadership can be designing financial incentive schemes to reward desired behaviour and punish undesirable behaviour.

Normative leadership applies to businesses that are strongly conservative and strongly self-transcendent. Normative leadership is ethics-oriented and includes the demonstration of normatively appropriate behaviour and treating others with consideration and respect. This type of leadership includes ethical leadership and legal compliance. An example of normative leadership can be when government leads by example on enforcing diversity norms in the recruiting process, and nudging or otherwise enticing firms to emulate this norm.

Figure 16: Leadership mapping⁹⁶



Source: Leroy, H. (2018), (appendix C)

96 Leader-member exchange (LMX) refers to the relationship-based approach to leadership that focuses on the two-way relationship between leaders and followers.



A comparison with the NSOB framework (represented by the open/white circles) highlights that the government approaches and incentives described in this framework are located in the Transactional, Normative and Stakeholder quadrants.⁹⁷ There are no examples in the NSOB publications on leadership styles and from government practice that belong to the Visionary quadrant.

Based on the leadership mapping above, policymakers can adjust their use of the different interventions at their disposal. While each intervention could be used within all four leadership approaches, interventions such as taxes and subsidies are more closely aligned with transactional leadership than stakeholder leadership, while for partnerships the opposite holds true. Coherence between the instrument considered most effective and the chosen leadership style thus strengthens government interventions.

2.4.3 Findings from the case studies on the application of leadership styles

The case studies on influencing organisational decision-making depict several leadership styles:

- The **Dutch Floriculture Sustainability Initiative (FSI)** features a **stakeholder leadership style** on the side of the government. A shared ambition was publicly announced in the beginning of the project. However, this was an ambition of private-sector companies in the sector, and it was announced through a private-sector initiative run by a not-for-profit organisation, with an aim to show the rest of the sector and the outside world what these companies envisioned. The role of the government is fairly limited.
- A similar analysis can be made for the campaign of the **animal rights NGO ‘Wakker Dier’**. By working to associate A-brands with a negatively framed concept, reaching out to companies that they recognise as front-runners and publicly singing their praise, and engaging laggards to discuss substitution opportunities and argue issues of morality and legality, they combine elements of **normative and transactional leadership**. Here also, the role of government is limited, to the worry of the NGO.
- The case of **energy performance assessments features the Dutch government** in a role that appears to combine **stakeholder leadership and transactional leadership**. Several aspects appear to be clearly in line with stakeholder-oriented leadership. Government here establishes an infrastructure that provides companies and organisations with information on the requirements of the Environmental Management Law and on the recognised energy-saving measures, that provides feedback and advice on how organisations perform regarding the implementation of energy-saving measures, and that facilitates a stamp of approval that can be awarded to companies that perform well. At the same time, regulators may opt to perform on-site inspections, confront business owners and award penalties to companies and organisations that structurally fail to comply with the requirements of the Environmental Management Law. Such a penalty generally takes the form of a fine. This appears to be partial to a transactional leadership style, which is targeted specifically at the group of companies that lag behind with regard to regulatory compliance.
- The case of the **Port of Rotterdam influencing organisational behaviour through a discount on port dues for sustainable vessels** features a **transactional leadership style** on the side of the port authority. By laying out the rules by which shipping companies are eligible for financial discounts, the port authority essentially offers these companies a straightforward transaction: qualify and get a discount, or do not qualify and do not get a discount. At the same time, however, the port authority ranks shipping companies that dock in its port on their level of sustainability, and this ranking is made public. This second element is in line with a **normative leadership style**. This is the same combination featured in the Wakker Dier case.
- The case of **private-sector quality assurance system for food safety features the Dutch government in a facilitating, stakeholder-oriented role**. Essentially, the Dutch food-safety authority expects to make use of on private-sector initiatives to monitor and guarantee food quality and safety in its risk analyses in the future. Only when these private-sector initiatives are not enough to ensure specific companies in the sector to comply with safety standards does the authority intervene in the form of on-site inspections and, if non-compliance is found, hefty fines – a transactional approach. This combination of leadership styles is similar to that of the government in the case of energy performance assessments.

⁹⁷ Steen, M. van der, Scherpenisse, J., Hajer, M., Gerwen, O.J. van, & Kruitwagen, S. 2014. Learning by doing: Government participation in an energetic society. The Hague: Dutch School for Public Administration. The NSOB-framework describes the leadership styles of the Dutch government that is mentioned here.

Based on the five case studies, we identify three main themes when it comes to the use of leadership styles:

- It is already common practice for both government bodies and NGOs to combine multiple leadership styles and adapt the leadership style and associated interventions applied to the revealed motivation of companies in the target group.
- In all of the four cases that feature a combination of styles, the transactional leadership style is always one of the two styles applied. It appears to be the style either combined from the outset with a normative style (Port of Rotterdam and Wakker Dier cases) or resorted to when a more facilitating, stakeholder-oriented leadership style does not encourage companies to change their behaviour to the government's preferences (EPK and private-sector quality assurance cases).
- It is interesting to note that the visionary styles of leadership are not featuring in any of the five cases we studied. Interestingly, no visionary styles are identified either by the NSOB in their studies of currently employed government leadership styles (cf. **Figure 16**). This seems to imply that in both government and NGO practice of influencing companies' behaviour, this style is either employed implicitly or not used at all. This may suggest potential for improving the effectiveness of government and NGO behavioural interventions by starting to appropriately employ this style.

2.5 Analysis and synthesis

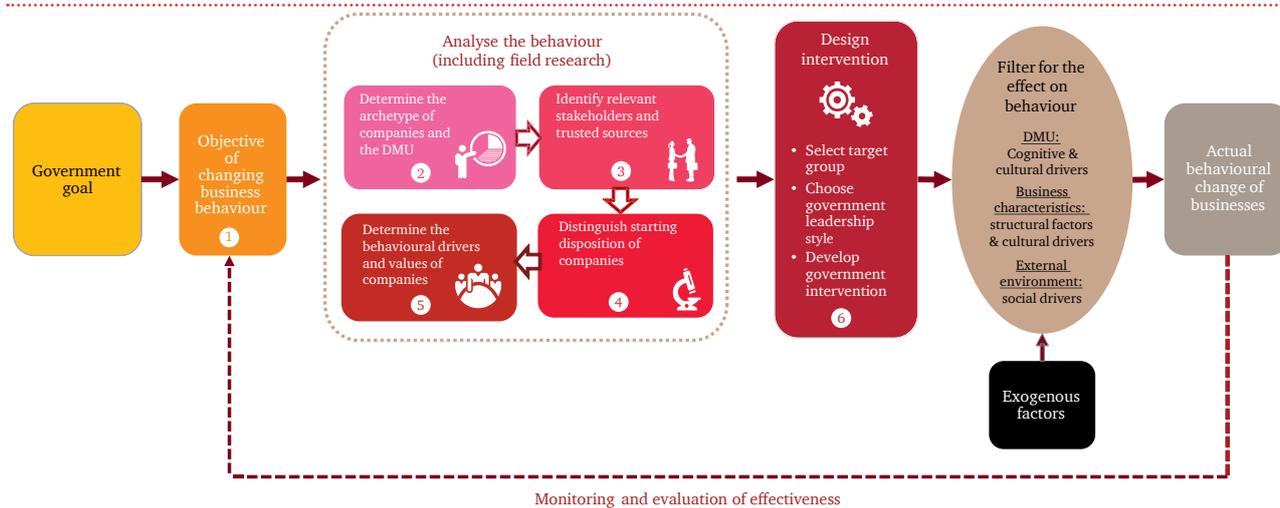
In this section, we combine the insights from the previous sections into two coherent frameworks:

- Section 2.5.1 introduces a step-by-step approach policymakers can apply in developing behavioural interventions specifically targeting businesses.
- Section 2.5.2 presents a matrix which shows how the insights from the previous sections can be combined when designing policy interventions targeting businesses.

2.5.1 Six steps to design behavioural interventions for businesses

In sections 2.2 to 2.4, we described different factors that need to be taken into account when designing interventions based on government goals that will help to realise actual behavioural change of businesses. **Figure 17** visualises our model for a step-by-step approach to developing behavioural interventions that takes the relevant factors into account.

Figure 17: Six-step plan to design behavioural interventions targeting businesses



Source: PwC



Figure 17 shows six steps that help government achieve actual behavioural change by businesses. These steps work on top of existing policy-making activities that aim to influence business behaviour.

1. **Understand the desired behavioural change.** The first step is to translate the government goal into the desired behavioural change of businesses. When considering behavioural change, we distinguish between behaviour that is relatively simple to influence, and behaviour that is more difficult to change. Behaviour that is relatively simple to influence includes one-off decisions, or behaviour that requires only a single decision maker or decision-making unit. An example could be changing a business's car fleet to electric cars only. Behaviour that is more difficult to change includes behaviour based on repeated (small) decisions, and behaviour that requires many decision makers in order to effectuate change. An example of this can be convincing all employees of a business to refrain from opening (potential) phishing emails.
2. **Determine the archetype of businesses and the DMU.** Influencing the behaviour of businesses is more complex compared to influencing behaviour of citizens. Moreover, how businesses behaviour can be influenced strongly depends on specific, observable business characteristics. We have identified six business archetypes: the listed multinational corporation or financial institution, the cooperative, the family business, the innovative (technology-driven) start-up, the Small and Medium-sized Enterprise (SME) in manufacturing or services, and the self-employed entrepreneur. Each archetype has its own DMU, and the DMU may vary depending on the type of decision to be taken.
3. **Identify relevant stakeholders and trusted source.** Business leaders and others involved in business decision making pay attention to influential stakeholders and trusted sources in their business environment. As such, policy makers need to be aware of the type of businesses they attempt to influence, which influential stakeholders are involved, and what target businesses consider trusted sources.
4. **Distinguish starting dispositions.** When influencing business behaviour, we distinguish three typical starting dispositions among target businesses. We identify leaders that are intrinsically motivated to make the desired change and are able to do so, laggards that are not motivated to make the change and unable to make any such change without help, and a group in the middle that lacks either motivation or the means to make the desired change. For policy makers, it is important to keep in mind what the starting disposition is of the businesses targeted by a specific change effort, since the effectiveness of change effort largely depends on this starting disposition.
5. **Determine the behavioural drivers and values of companies.** While not observable from the outside or identifiable based on the structural characteristics of a business, the behavioural drivers, such as biases and heuristics, and values of companies generally have an important role in influencing their decision making. Psychological aspects relevant to understanding individual behaviour and decision making are also important when influencing business behaviour. Based on pre-existing knowledge of the target group, policymakers may already have some insight about which behavioural drivers and values are crucial to take into account in specific business contexts. However, determining the full extent of these drivers and values requires extensive information-gathering through fieldwork and/or (big) data analysis. If this investment in understanding the target group can be made in advance, it is likely to pay off through larger impact of the resulting intervention.
6. **Select the right leadership style and design the intervention.** Policymakers consciously or subconsciously use a leadership style when choosing which policy instrument to use and with which stakeholders to engage. Leadership styles can be classified according to two broad dimensions, namely openness to change and self-enhancing (e.g. meritocracy, open-market principle) or transcendent values (e.g. caring and community, universal equality). This leads to four categories of leadership styles: visionary leadership, stakeholder leadership, transactional leadership, and normative leadership.

The final step is to design an intervention that fits the selected leadership styles. This can mean adopting a visionary leadership style to persuade a large multinational that shares policymakers' sustainability ambitions to join a round-table conversation with other likeminded multinationals and agree on a shared roadmap for future green projects. It can also mean displaying a transactional leadership style to alter the cost-benefit analyses of businesses that have shown reluctance to make necessary investments in green technology.

2.5.2 Applying the archetypes of businesses and their motivation when designing policy interventions

In **Tables 3 and 4**, we combine the insights from the previous sections to provide an overview of what could be called a contingency approach to applying behavioural insights to policymaking aimed at businesses. **Table 4** is set up along the two main dimensions of archetypes of businesses (introduced in section 2.2.2) and the motivation observed for adopting certain



behaviour (2.4.2). The rows consist of the six business archetypes and the columns consist of leaders, middle group and laggards, creating eighteen unique target groups in total. For each target group, **Table 4** describes which leadership style is most appropriate, which incentives are likely to yield the most results, what the businesses' sensitivities are, and how the DMU can best be targeted. Business sensitivity refers to the intrinsic or extrinsic motivation that is likely to be influential in shaping businesses' decisions.

Behavioural insights are likely to be most effective when applied to the middle group. According to experienced practitioners of behavioural insights in the Netherlands and the UK, the 'sweet spot' of applying behavioural insights is in achieving an increase in uptake of an intended behaviour, without going anywhere near to 100% uptake. This increase can be achieved at relatively little cost and is therefore an efficient way to "move the dial". This implies that in the context of the three groups we have defined, the middle group is the group of firms for which behavioural insights are the most relevant instrument. Leaders by definition pick up the intended behaviour based on intrinsic motivation and thus need little encouragement, while laggards will not respond to behavioural insights, but rather to more rational means representing similar to 'carrots' and 'sticks'. This is illustrated by the case study on Energy performance assessments, which is presented in appendix E.2.

Three points of caution are in order. Firstly, we alert the reader that there is no evidence for these ideas in the sense of scientific proof of effectiveness; these are our interpretations and suggestions based on findings from our qualitative research in this study⁹⁸. Secondly, we focus our analysis on influencing one-off strategic decisions of businesses, rather than multiple, repeating, smaller decisions at implementation level. This means that the insights in **Table 4** below focus on this type of decisions only. Thirdly, the table only incorporates information that can be gathered from observable characteristics. While unobservable characteristics are very likely to be relevant, keeping practical relevance in mind, these characteristics were not included. If the policymaker knows about the heuristics within the business to be targeted, however, building on these heuristics would be advisable (as ORGANISER also recommends).

When using **Table 4**, insights from the literature on contingent government influence on corporate behaviour (appendix B) should be kept in mind. Seven general points are worth highlighting:

1. SMEs require dedicated attention when considering outreach efforts (see 2.4.2). The effect of subsidies is larger for SMEs than for large corporations. SMEs are also likely to be underrepresented in the development of government interventions, because large firms have more resources and more leverage to lobby on their own behalf.
2. Next to SMEs, less coherent and concentrated industries deserve extra attention (see 2.4.2). There is a risk of underweighting their interests, because they are less well organised and do not influence policy-making as strongly as more coherent and concentrated industries.
3. Historic regulatory performance records are good predictors for future compliance behaviour (see 2.4.2).
4. While we can isolate the behavioural intervention for the purpose of the current analysis, it should be taken into account that decision makers in businesses combine scarce mental bandwidth with the daily influx of much information of different types and from different origins. This means that in order to be effective, behavioural interventions first need to be noticed by DMUs and subsequently considered sufficiently important to be taken into consideration and achieve their desired effect. One specific aspect to take into account is that business receive information from not one but many parts of the government (e.g. the Tax Authority, health and safety inspectors, the municipality, Chamber of Commerce etc.). It may be possible to tie a behavioural intervention to existing government communications of which it is known that they are noticed and taken into account.
5. A new government intervention does not occur in isolation, and existing rules and regulation and other behavioural constraints for the target business should be taken into account (ORGANISER).
6. The relative importance of organisational departments affects the corporate sensitivity to public policy (see 2.4.2). It is

98 Two notions are particularly relevant to our approach to this exercise:

- First, while the matrix is a visually attractive way of combining insights reported in sections 2.4 through 2.6, it is necessarily a simplification of the underlying relationships between these three types of insights. Each type is different in nature from the others, and therefore combining them as if they were equal implies the loss of nuance. Also, the structured nature of the matrix suggests a certain completeness that does not underlie the findings of an exploratory study, and therefore should be treated with much care. The matrix allows us to combine insights and present them together, but this does not mean they are exhaustive. Rather, the contents of the matrix form a starting point for further experimenting with the application of behavioural insights in policies aimed at influencing decision making by businesses.
- Second, the two classifications that distinguish the rows and columns of the matrix (archetypes of businesses and leaders/middle group/laggards) are simplifying models of the landscape of businesses in Dutch society. The choice to use six archetypes for instance, is a limitation imposed to arrive at a practicable segmentation and, according to our clients at the MEACP, gives a fairly accurate representation of the diversity in types of businesses a policymaker can reasonably be expected to distinguish when designing policies, without having to conduct extensive research of her own. It is with this intentional simplification that we can provide policymakers with practicable insights, but they do not do full justice to the diversity among the hundreds of thousands of businesses that exist in the Netherlands.

therefore important to identify change agents and departments sensitive to public policy;

7. **Table 4** does not reflect the relative importance of motives of individual businesses, of groups within businesses and of individual business staff within these groups. For very specific change ambitions that are targeted with very high accuracy, these will need to be analysed and evaluated separately. This is reflected in the steps in **Figure 17**.

We make three more, specific points to help the reader understand **Tables 3 and 4**:

1. Because the impact of subsidies is small for larger businesses (see 2.4.2), transactional leadership is not suggested when attempting to influence the behaviour of multinationals.
2. Firms closely observe their peers and are prone to behavioural change when similar firms are sensitive to government interventions (see 2.4.2). This is why peer comparison is a significant sensitivity for the middle groups of each archetype.
3. The identity of internationally operating firms is affected by their countries of origin and operation (see 2.4.2). This means that the sensitivity of multinationals (at least partially) relates to the origin country of the corporate.

Table 3: Taking the right stance – mapping archetypes, motivation and leadership styles

	Leaders Intrinsically motivated and have a positive business case	Middle Groups Either are intrinsically motivated but lack a business case, or the other way around	Laggards Have no intrinsic motivation and no business case
Multinational	Visionary	Stakeholder	Normative (legal compliance)
Family business	Normative (ethical leadership)	Stakeholder	Transactional
Cooperative	Normative (ethical leadership)	Stakeholder	Transactional
SME	Normative (ethical leadership)	Stakeholder	Transactional
Innovative Startup	Visionary	Stakeholder	Transactional
Self-employed entrepreneur	Visionary	Stakeholder	Transactional

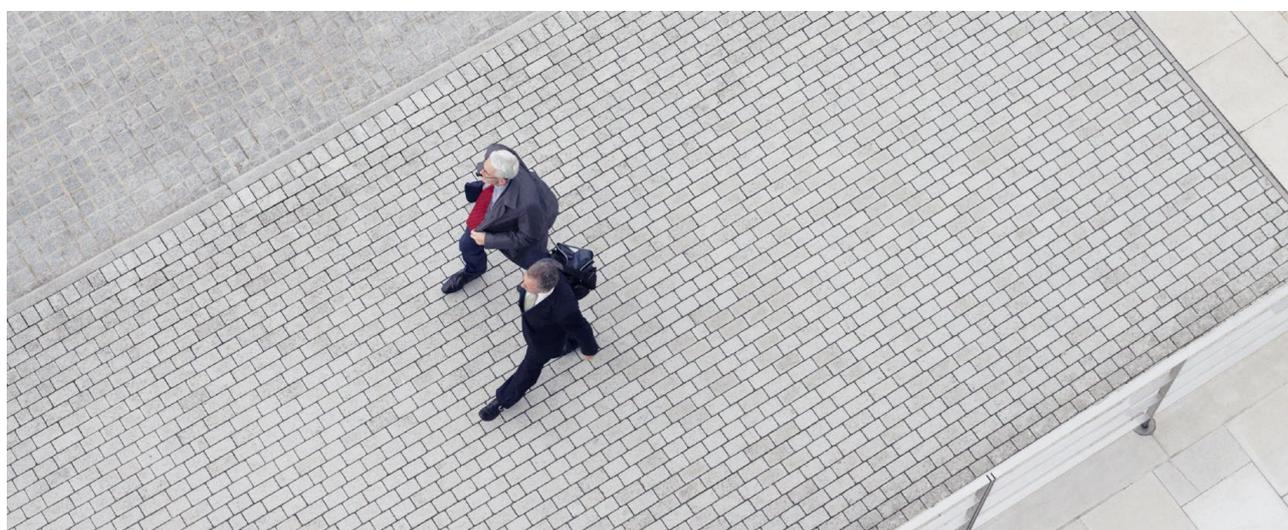




Table 4: Pulling the right lever – mapping archetypes, motivation and instruments

	Leaders Intrinsically motivated and have a positive business case	Middle Groups Either are intrinsically motivated but lack a business case, or the other way around	Laggards Have no intrinsic motivation and no business case	
Multinational	Leadership style	<ul style="list-style-type: none"> • Visionary 	<ul style="list-style-type: none"> • Stakeholder 	<ul style="list-style-type: none"> • Normative (legal compliance)
	Incentive	<ul style="list-style-type: none"> • Communicating a vision and call to action, including concrete steps businesses can take 	<ul style="list-style-type: none"> • Naming and faming • Providing success stories with information on how to 	<ul style="list-style-type: none"> • If large majority (e.g. >80%) of the market complies, create legislation to make compliance mandatory. • Advance notice followed by sanction(s) if necessary: <ul style="list-style-type: none"> – naming and shaming; – revoking license to operate.
	Susceptibility	<ul style="list-style-type: none"> • Doing the right thing (leaving a legacy) • Competitive advantage • Depends on country of origin 	<ul style="list-style-type: none"> • Peer comparison • Depends on country of origin 	<ul style="list-style-type: none"> • Reputation and right to operate • Depends on country of origin
	Targeting the DMU	<ul style="list-style-type: none"> • Mass communication and direct appeal from political leaders 	<ul style="list-style-type: none"> • Via trusted source, e.g.: <ul style="list-style-type: none"> – oversight board; – large shareholders; – personal relations; – aspect manager. 	<ul style="list-style-type: none"> • Direct to DMU
Family Business	Leadership style	<ul style="list-style-type: none"> • Normative (ethical leadership) 	<ul style="list-style-type: none"> • Stakeholder 	<ul style="list-style-type: none"> • Transactional
	Incentive	<ul style="list-style-type: none"> • Communicating a normative framework and describing which desired behaviour fits that framework 	<ul style="list-style-type: none"> • Naming and faming • Providing success stories with implementation plans • Targeted help, e.g.: <ul style="list-style-type: none"> – information sessions (incl. website and apps) – low-cost or free advice, tailored to the businesses specific situation 	<ul style="list-style-type: none"> • If large majority (e.g. >80%) of the market complies, create legislation to make compliance mandatory. • Advance notice followed by sanction(s): <ul style="list-style-type: none"> – naming and shaming; – revoking license to operate; – fines.
	Susceptibility	Doing the right thing (family values)	Peer comparison	Threat to profitability
	Targeting the DMU	Mass communication	Via trusted source (friend to the firm)	Direct to DMU



Table 4: Pulling the right lever – mapping archetypes, motivation and instruments (continued)

	Leader	Middle Group	Laggard	
Cooperative	Leadership style	<ul style="list-style-type: none"> • Normative (ethical leadership) 	<ul style="list-style-type: none"> • Stakeholder 	<ul style="list-style-type: none"> • Transactional
	Incentive	<ul style="list-style-type: none"> • Communicating a normative framework and describing which desired behaviour fits that framework 	<ul style="list-style-type: none"> • Naming and faming • Providing success stories with implementation plans • Targeted help, e.g.: <ul style="list-style-type: none"> – information sessions (incl. website and apps); – low-cost or free advice, tailored to the business-specific situation. 	<ul style="list-style-type: none"> • If large majority (e.g. >80%) of the market complies, create legislation to make compliance mandatory. • Advance notice followed by sanction(s) if necessary. <ul style="list-style-type: none"> – naming and shaming; – revoking license to operate, – fines.
	Susceptibility	<ul style="list-style-type: none"> • Doing the right thing (member values) 	<ul style="list-style-type: none"> • Peer comparison 	<ul style="list-style-type: none"> • Threat to profitability
	Targeting the DMU	<ul style="list-style-type: none"> • Mass communication 	<ul style="list-style-type: none"> • Via trusted source (local community) 	<ul style="list-style-type: none"> • Direct to DMU
SME	Leadership style	<ul style="list-style-type: none"> • Normative (ethical leadership) 	<ul style="list-style-type: none"> • Stakeholder 	<ul style="list-style-type: none"> • Transactional
	Incentive	<ul style="list-style-type: none"> • Communicating a normative framework and describing which desired behaviour fits that framework 	<ul style="list-style-type: none"> • Naming and faming • Providing success stories with implementation plan • Targeted help, e.g.: <ul style="list-style-type: none"> – information sessions (incl. website and apps); – low-cost or free advice, tailored to the business-specific situation. 	<ul style="list-style-type: none"> • If large majority (e.g. >80%) of the market complies, create legislation to make compliance mandatory. • Advance notice followed by sanction(s) if necessary. <ul style="list-style-type: none"> – naming and shaming; – revoking license to operate, – fines.
	Susceptibility	<ul style="list-style-type: none"> • Doing the right thing (leaving a legacy) • Competitive advantage 	<ul style="list-style-type: none"> • Peer comparison 	<ul style="list-style-type: none"> • Threat to profitability
	Targeting the DMU	<ul style="list-style-type: none"> • Mass communication 	<ul style="list-style-type: none"> • Via trusted source (industry association, local community) 	<ul style="list-style-type: none"> • Direct to DMU



Table 4: Pulling the right lever – mapping archetypes, motivation and instruments (continued)

	Leader	Middle Group	Laggard	
Innovative Startup	Leadership style	<ul style="list-style-type: none"> • Normative (ethical leadership) 	<ul style="list-style-type: none"> • Stakeholder 	<ul style="list-style-type: none"> • Transactional
	Incentive	<ul style="list-style-type: none"> • Communicating a vision and call to action, including concrete steps businesses can take 	<ul style="list-style-type: none"> • Naming and faming • Providing success stories with implementation plan • Targeted help, e.g.: <ul style="list-style-type: none"> – information sessions (incl. website and apps); – low-cost or free advice, tailored to the business-specific situation. 	<ul style="list-style-type: none"> • If large majority (e.g. >80%) of the market complies, create legislation to make compliance mandatory. • Advance notice followed by sanction(s) if necessary. <ul style="list-style-type: none"> – naming and shaming; – revoking license to operate; – fines.
	Susceptibility	<ul style="list-style-type: none"> • Doing the right thing • Disrupting status quo (from the founders' perspective) 	<ul style="list-style-type: none"> • Peer comparison 	<ul style="list-style-type: none"> • Threat to profitability
	Targeting the DMU	<ul style="list-style-type: none"> • Mass communication 	<ul style="list-style-type: none"> • Via trusted source (local community) 	<ul style="list-style-type: none"> • Direct to DMU
Self-employed entrepreneur	Leadership style	<ul style="list-style-type: none"> • Normative (ethical leadership) 	<ul style="list-style-type: none"> • Stakeholder 	<ul style="list-style-type: none"> • Transactional
	Incentive	<ul style="list-style-type: none"> • Communicating a vision and call to action, including concrete steps businesses can take 	<ul style="list-style-type: none"> • Naming and faming • Providing success stories with implementation help • Targeted help, e.g.: <ul style="list-style-type: none"> – information sessions (incl. website and apps); – low-cost or free advice, tailored to the business-specific situation. 	<ul style="list-style-type: none"> • If large majority (e.g. >80%) of the market complies, create legislation to make compliance mandatory. • Advance notice followed by sanction(s) if necessary. <ul style="list-style-type: none"> – naming and shaming; – revoking license to operate; – fines.
	Susceptibility	<ul style="list-style-type: none"> • Doing the right thing (personal values) 	<ul style="list-style-type: none"> • Peer comparison 	<ul style="list-style-type: none"> • Threat to profitability
	Targeting the DMU	<ul style="list-style-type: none"> • Mass communication 	<ul style="list-style-type: none"> • Via trusted source (other self-employed entrepreneurs and networks of self-employed entrepreneurs) 	<ul style="list-style-type: none"> • Direct to DMU

Source: PwC

3. Discussion of findings, conclusions and recommendations



The societal challenges that the Dutch and other governments face are substantial, and cannot be solved without businesses changing their behaviour in the right direction. This study sought to provide insights into how businesses behave and how the behaviour and choices of businesses can be influenced. Below we present our conclusions, limitations to this study, and our recommendations to policymakers.

3.1 Conclusions

This section presents the main findings of this study. This section answers our five research questions in two main conclusions.⁹⁹

Conclusion 1: Six steps to design behavioural interventions aimed at businesses

Government goals often require businesses to change their behaviour. To effect actual behavioural change of businesses, a successful intervention needs to consider differences between businesses, their relevant stakeholders and trusted sources, their starting disposition, and their behavioural drivers and values. Together, these factors help in selecting the appropriate leadership styles for the government to adopt, and designing interventions that have a high chance of being effective.

There are six steps that help government achieve actual behavioural change by businesses. These steps work on top of existing policy-making activities that aim to influence business behaviour.

- Understand the desired behavioural change;
- Determine the archetype of businesses and the DMU;
- Identify relevant stakeholders and trusted source;
- Distinguish starting dispositions;
- Determine the behavioural drivers and values of companies;
- Select the right leadership style and design the intervention.

Section 2.5.2 of this report features an extensive table that maps possible interventions across leadership styles, business types and predispositions. This information can help policymakers design well thought-out interventions.

Conclusion 2: Business archetype, their DMU and their disposition determine the susceptibility to government interventions

Two findings are consistent from our sources: 1) businesses differ greatly in terms of their organisational structure, decision-making process, culture and many other characteristics that are expected to influence the effects of applying behavioural insights and 2) with regard to the policy objectives of the government, businesses are likely to differ in terms of their motivation to contribute to them. This variation thus influences the potential effectiveness of applying behavioural insights.

In our contingency approach to applying behavioural insights to policy making aimed at businesses we have mapped our insights along six different archetypes of businesses and three different degrees of situational (i.e. related to a specific behavioural objective) motivation. The different archetypes each have a specific layout of their decision-making unit, which impacts what they respond to, to whom they listen and what norms and values underlie their behaviour. This provides policymakers with a rough decision framework when making first attempts to apply behavioural insights.

⁹⁹ See the introduction for the complete list of research questions. The first conclusion answers research question 1, the second conclusion tackles research questions 2 till 4. The fifth and final research question is addressed in the suggestions for future research in section 3.1.3 above.



3.2 Limitations

While this study has expanded on earlier reports, most notably EY et al.¹⁰⁰, the academic literature and policy practice on applying behavioural insights to influence businesses is still limited. Consequently, this report is exploratory in nature, drawing from different and disparate streams of literature and case studies. This means that our findings are helpful in furthering understanding, but are not based on strong empirical evidence.

A first limitation is that the research presented here builds on academic and practical findings that are themselves tentative in nature. For example, several contingencies on how business characteristics influence the way in which businesses respond to government initiatives, or on the role and mechanisms of biases and irrationality in businesses' decision making, have not been extensively studied. Also, consensus is not always present on the exact influence of specific contingencies. Another limitation is the context specificity of certain studies. Finally, what we have included represents today's state of play in academia and policy practice, but new insights are to be expected in the years to come. As a result, the insights from academia and policy practice that underpin our findings are susceptible to change.

A second limitation refers to the fact that this study has confined itself to considering six archetypes, while there are other types of businesses that a policymaker encounters as well. Moreover, the archetypes were constructed as a pragmatic segmentation of the Dutch business landscape, and additional research could refine these archetypes and add others. In a similar way, we presented the model of leaders, middle group and laggards as three categories to which a business belongs depending on its current context. In reality, however, motivation and capability are not categorical but continuous. This speaks to a trade-off between accuracy on the one hand and simplicity and practicality on the other. Later research might refine our findings and models to contribute to the former.

A third limitation is that, while we have attempted to relate different governmental leadership styles to business archetypes and the willingness and ability to change among businesses targeted by government intervention, this report does not cover the potential of matching leadership styles to specific goals, aims and change ambitions that governments may have. An interesting argument can be made to match leadership styles to thematic concepts, e.g. matching environmental ambitions to a visionary leadership style, or matching goals related to cyber-security capabilities to a networking leadership style.

A final limitation is of paradigmatic nature. This report is consciously written from the assumption that governmental actors are best capable and positioned to determine how, when and to what end private-sector organisations need to change their strategic decision-making. Other points of view have been omitted, yet can be very relevant to the question of how, when and to what end governments can and should try to influence private-sector decision-making. A specific point of view to consider is one where governmental actors do not have enough information, insights or influential power to change strategic decision-making in the private sector. This may lead to the notion that governmental actors are most effective when they encourage, facilitate and contribute to learning networks of private-sector and third-sector organisations, and communities of practice, leveraging existing and complementary information, insights and influential power within society. Moreover, this may feature the added benefit of generating ownership for behavioural change among private-sector and third-sector organisations – an important aspect to realising change ambitions. Starting point for an investigation into the topic of influencing strategic decision-making from this point of view could be the work of Jean Lave and Etienne Wenger on situated learning.¹⁰¹

3.2.1 Contextualisation

This report is the first to research the application of insights from the behavioural sciences on businesses with the goal of designing a tool to improve policymaking. Hence, the findings of this report contribute to the literature on behavioural sciences in general, and on using behavioural insights to shape business behaviour in particular. Furthermore, the report has brought together a number of different literatures and research agendas (see appendices), hence seeking to make a contribution to span disciplinary boundaries and encourage cross-fertilisation. On a practical note, this report contributes to the ambition shared by many governments to improve the policymaking process to make it more efficient and to enhance cooperation between the public and private sector. These insights would thus not be relevant only to BIN NL, but also to other governments.

100 Ernst and Young (EY), Jan Potters, Robert Dur and Stephanie Rosenkranz. 2016. "Applying behavioural insights in business." Available (in Dutch) at <https://www.rijksoverheid.nl/documenten/rapporten/2017/01/11/rapport-gedragbeïnvloeding-bij-bedrijven>.

101 Lave, Jean, and Etienne Wenger. 1991. *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press. pp. 33, 29, 40



3.2.2 Suggestions for future research

In the end, the best way to find out ‘what works’ is through testing insights and tools in practice. Methods to do so successfully when influencing individuals are plenty, and a similar empirical approach could greatly expand our understanding of influencing businesses as well. Cooperation with other behavioural insights teams and sharing of insights and best practices would be highly relevant too.

In conjunction with testing and trying to learn from experiments, it would be worthwhile to explore the areas where businesses can have a positive (social) impact on solving societal challenges. The most pressing societal challenges cannot be solved by the government or the private sector alone. Using insights from the behavioural sciences can help unlock the potential that the private sector has in adding social value. These areas can range from climate change and the transition to renewable energy, to fostering diversity and creating inclusive societies.

In addition to these two practical areas for future research, it is clear that more research is warranted to allow for more informed and rigorous policymaking. There are different research questions that require contributions. The most pressing questions concern the relation between business characteristics and responses to government policies (on which the available literature does not provide uniform answers), understanding what shapes decision-making processes of DMUs, and gaining insights into how leadership, use of specific policy instruments and different target audiences interact.

Moreover, while for individuals two sets of norms and values contribute to behavioural outcomes (e.g. the individual’s “own” norms and values, as well as the social context), for businesses a third set is likely relevant as well. Specifically, this is the influence of norms and values imposed by their organisational culture. Organisational culture can be strong or weak when compared to the culture of society at large, and tends to be stronger in larger and multinational businesses. Thus, the decision-making process of businesses adds at least two dynamics to that of an individual: 1) multiple individuals interact as part of the decision-making process and 2) organisational norms and values may have a distinct influence on the decision-making process and its outcome. This important, complex and multifaceted topic warrants further study and analysis.

From the perspective of a policymaker, the ethics of applying behavioural insights in a business context are different. When nudging individuals, a policymaker has to take into account whether changing the decision-making parameters is ethical and its end justifies the means, particularly when it comes to applying behavioural methods that leverage effects on the unconscious decision-making process of the individual. Applied to individuals, behavioural methods playing on the unconscious may make the subjects of a policy “less free” in their decision making as a result. In their report titled ‘policy making while understanding behaviour’, the Dutch Scientific Council for Governmental Policy (WRR) has listed four main objections to steering citizen behaviour through manipulating their choices:¹⁰²

- It limits individual freedom.
- Government cannot foresee the optimal choice for every individual in every circumstance.
- It might lead to infantilisation of citizens.
- It is invisible and therefore manipulative (sic).

The question whether steering the behaviour of businesses in ways the decision makers in those business are not aware of introduces additional ethical objections, has not been answered in our study. We think it is worthy of consideration for future research.

102 WRR, 2014, Met kennis van gedrag beleid maken, p. 65-69

3.3 Recommendations

Looking ahead, this study provides two main recommendations to help improve the efficiency and effectiveness of government policies when shaping business behaviour for the better.

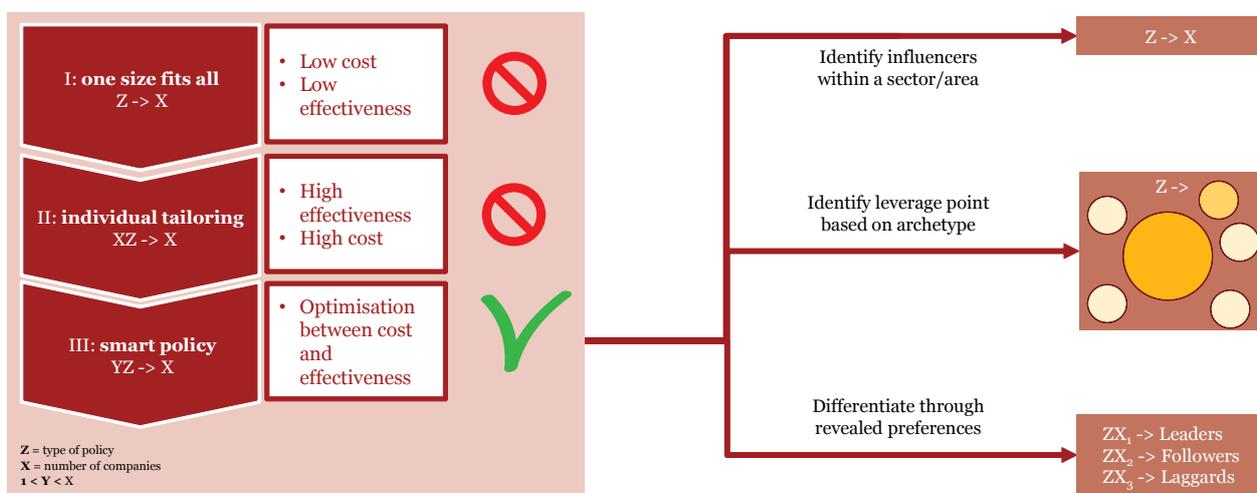
Recommendation 1: Leverage firm differences to increase efficiency

Starting from the insight that follows from our second conclusion, we can state that a one-size-fits-all type of behavioural policy, which would treat all types of businesses in the same way, is not likely to be very effective. This is because it does not take into account the differences between businesses that will make the application of behavioural insights more or less effective. On the other hand, tailoring behavioural interventions to individual businesses is not practically feasible and prohibitively costly.

Therefore, a middle road needs to be found, termed “smart policy” in the left-hand panel of **Figure 18**. We provide three suggestions in the right-hand panel that may be applied separately or in combination to effectively and efficiently influence business behaviour:

Government may multiply the effect of its resources by identifying businesses or individuals that have a large influence within a sector or geographical area, and focusing its efforts on influencing these influencers. While it takes more time to convince those who are aware of their influence on others, these efforts will pay off when these influencers turn out to be trusted and credible leaders in the eyes of other businesses and a bandwagon effect is created that contributes to the objectives of government.

Figure 18: Rightsizing policy by aligning behavioural goals with a target audience analysis



Source: PwC

- Each archetype of firm introduced in this report is likely to have one or more ‘leverage points’ – sources of information trusted by the members of its decision-making unit and/or types of information that are more positively regarded than others. If government is targeting multiple businesses of the same archetype with a behavioural intervention, it may be possible to focus on these leverage points to target a large number of businesses at once.
- The final concept is perhaps the most powerful, as it allows to target firms with different initial motivations towards a behavioural objective of government. By committing to behavioural change with a target audience of businesses over a longer period of time, government will be able to:
 - first influence ‘early adopters’ to commit to the desired behaviour, for instance by making it known that a societal challenge can be met if all business contribute by taking a certain action;
 - then adjust its approach towards the remaining businesses who have not taken action and approach them differently to convince the ‘followers’, for instance by providing insight into how the early adopters went about implementing the action and/or offering additional information or advice;
 - and finally, when the ‘early adopters’ and ‘followers’ have shown that the norm in the sector has changed by adopting



the desired behaviour, apply more coercive measure such as taxes, fines or revoking privileges or the licence to operate from businesses that have shown to be 'laggards'.

In practice, this means that policymakers make use of businesses' revealed preferences to adjust their approach and be most effective. Of course, the three approaches may also be applied simultaneously, but this would give off conflicting signals to businesses and be incoherent in terms of leadership style.

Recommendation 2: Apply available insights and study what works in practice

The six-step approach to designing behavioural interventions developed in this report can guide policymakers to create policies that are more efficient and yield higher impact. As part of our assignment, we will develop the insights presented in this report and the EY et al. report into content on which a practicable tool for policymakers and other interested practitioners can be built. We recommend this tool to be made available to this target audience under the auspices of the Behavioural Insight Network Nederland, as this group is best positioned to guide interested policymakers who may have follow-up queries and want to proceed with actually applying behavioural insights in a business context. In addition, the BIN NL is continuously building further insights and may thus be able to contribute to the future enrichment of the tool with new insights.

Practical applications of current understanding of how business behaviour can be influenced by using behavioural insights are limited to only a few examples. Even fewer of these examples have been evaluated using robust research methods, making it impossible to present insights about proven effects beyond the specific interventions studied. Therefore, we recommend the Dutch government to proceed with small-scale experiments applying behavioural insights in a business context, following the six-step approach, to shed more empirical light on what works and what does not. Wherever possible, we would suggest to involve academic researchers who can independently and rigorously assess the effectiveness of attempted interventions.

The only way to further our understanding is through trying things in practice. Through applying the approach in practice and through studying what works and what does not, learning-by-doing can emerge that will improve the quality of the policymaking process.



Appendices

A.1 Overall approach

The overall approach to the study is exploratory in nature, as set out in section 1.3 of this report. This means that we have to rely qualitative information from various sources (i.e. written documents, interviews, group discussions and informal conversations) that differ in their nature and the type of information they provide. This body of information should as much as possible be presented to the reader without interpretation, and may only be interpreted with caution if the interpretation is to be valid and reliable. We have therefore taken care to present in appendices B through E the data as they resulted from separate sources, and only bring these insights together in the main report. This allows the reader to consider the ‘raw’ data from each source separately and draw her own conclusions, thus not being forced to rely upon the interpretation of the research team in the main report.

Below we present our approach to each of the steps of the overall approach described in section 1.3.

A.2 Approach to literature review

The literature review was actually conducted as three separate literature reviews, the results of which are presented in appendices B, C, and D:

- **Dr. Frank Wijen** of the **Rotterdam School of Management** conducted the literature review on contingent government influence on corporate behaviour. Presented in appendix B, this literature review aims to answer the question which factors influence the effectiveness of government policy aimed at changing the behaviour of businesses, based on review of articles in top management journals in the past 20 years, as well as a small number of articles from the public management literature that are concerned with policy effectiveness. Further details of the approach are provided in the methodology box in appendix B.
- **Dr. Hannes Leroy** of the **Rotterdam School of Management** conducted the literature review on firm motivation and government leadership styles, presented in appendix C. This literature review focused on the key insights from the literature on motivation and leadership that are relevant to understanding the interaction between governments and their subjects, particularly businesses. In order to take into account existing insights on leadership styles applied by the Dutch government, this literature review takes into account two recent publications by the Netherlands School of Public Administration on the subject and compares the leadership styles identified in those publications to the evidence-based leadership styles based on Schwartz’s (1999) value framework. The figure in which this comparison has been made, has also been included in the main report, in section 2.4.2.

The PwC team conducted the review of the behavioural literature, which is included in appendix D. In this review, key insights from this body of literature with regard to the antecedents of business and team behaviour are presented and clarified, as well as insights into how organisational behaviour can be changed.

A.3 Approach to case studies

We present our findings from five case studies in appendix E. The objective of these case studies is to demonstrate the mechanisms that have been applied in recent years by public and private sector actors, as well as NGOs, who attempt to influence the behaviour of businesses. We stress here that the objective of the case studies in this study has not been to provide evidence or illustration of the mechanisms we have derived from the literature reviews or the interaction with experts. Rather, the goal was to identify existing practices in the influencing of behaviour of businesses to assess 1) whether some existing behavioural insights have already been applied and 2) to what extent actors attempting to influence business behaviour in these case could benefit from the application of behavioural insights.



These five case studies have been selected in close cooperation with our clients at the MEACP and have been developed by the PwC team using three types of information sources:

- publicly available information;
- interviews with the actors that attempted to influence the behaviour of targeted businesses, and whenever possible also with representatives of these businesses¹⁰³; and
- information provided by interviewees that is not publicly available.

All case studies are reported in a fixed format that we pre-agreed with the MEACP, allowing for a systematic cross-case comparison.

A.4 Approach to round-table discussion with academic experts

On 10 April 2018, a round-table discussion on the subject matter of the study took place at PwC's Amsterdam office with eight academic experts affiliated with five different Dutch universities and one government authority. The discussion was attended by the majority of the research team, as well as our clients in the MEACP.

The following experts participated in the discussion:

- Prof. Dr. Naomi Ellemers, professor of Social Psychology and Organisations at Utrecht University;
- Prof. Dr. Svetlana Khapova, professor of Careers and Organization Studies at the Vrije Universiteit Amsterdam;
- Dr. Adriaan Denkers, associate professor of Social Psychology at the Vrije Universiteit Amsterdam;
- Dr. Hanneke Grutterink, lecturer in Work and Organizational Psychology at the University of Amsterdam and independent consultant on team and organizational development;
- Dr. Eefje Rondeel, independent teacher and trainer in psychology and guest lecturer at Radboud University Nijmegen;
- Drs. Titia Meijer, senior lecturer in Work and Organizational Psychology at Radboud University Nijmegen;
- Judith Roumen MSc., behavioural scientist at the Authority for Consumers and Markets.

The discussion was prepared by providing the experts with the EY et al. and ORGANISER reports introduced in chapter 2 of this report, and guided by a presentation prepared by the research team. The discussion was facilitated by the research team by introducing various aspects of the topic of study. The discussion itself was conducted in an unstructured fashion, to allow different points of view to be raised. The discussion was minuted by the research team and the resulting minutes were shared with the participants.

On 12 July, Titia Meijer and Hanneke Grutterink, together with prof. dr. Johan Wempe, professor of Business Ethics at the Vrije Universiteit Amsterdam, met with the PwC team and the MEACP to comment on a draft version of this final report

A.5 Approach to interviews with policy-making practitioners

Conversations with policy-making practitioners in the Dutch government were conducted informally during and around meetings of the reference group for the study. Also, repeated meetings took place with our clients in the MEACP which repeatedly yielded insights and references to further information.

The interviews with policy-making practitioners in the UK were conducted via telephone by two experienced members of the research team and lasted around 60 minutes each. We guaranteed the interviewees anonymity, in order to elicit frank responses and possibly critical reflections on their own existing practice and experiences. During the interviews, we asked for references to publicised documentation where relevant and were provided with these references on multiple occasions. Where relevant, insights from these references have been included in literature reviews or the main text of this report.

¹⁰³ In some cases, several businesses and industry associations have been approached for an interviews, and all of them declined or did not respond. This is the case for case study #3. In case study #4 we were able to interview the industry association that represents the targeted businesses, but no individual businesses.



A.6 Approach to analysis of findings and reporting

The analysis of findings was conducted by combining the lenses applied in sections 2.3, 2.4 and 2.5 of this report in a matrix, which is presented in section 2.6. Two notions are particularly relevant to our approach to this exercise:

- First, while the matrix is a visually attractive way of combining insights reported in sections 2.3 through 2.5, it is necessarily a simplification of the underlying relationships between these three types of insights. Each type is different in nature from the others, and therefore combining them as if they were equal implies the loss of nuance. Also, the structured nature of the matrix suggests a certain completeness that does not underlie the findings of an exploratory study, and therefore should be treated with much care. The matrix allows us to combine insights and present them together, but this does not mean they are a complete whole. Rather, the contents of the matrix form a starting point for further experimenting with the application of behavioural insights in policies aimed at influencing decision making by businesses.
- Second, the two classifications that distinguish the rows and columns of the matrix (archetypes of businesses and leaders/middle group/laggards) are simplifying models of the landscape of businesses in Dutch society. The choice to use six archetypes for instance, is a limitation imposed to arrive at a practicable segmentation and, according to our clients at the MEACP, gives a fairly accurate representation of the diversity in types of businesses a policymaker can reasonably be expected to distinguish when designing policies, without having to conduct extensive research of her own. It is with this intentional simplification that we can provide policymakers with practicable insights, but they do not do justice to the diversity among the hundreds of thousands of businesses that exist in the Netherlands.

The draft final report was discussed during two meetings, one with the reference group and one with three experts who had participated in the earlier round-table discussion. The feedback received was reviewed by the authors of the report and incorporated where considered appropriate.

B. Literature review on contingent government influence on corporate behaviour



B.1 Introduction

Public policy aims to alter the behaviour of persons and organisations towards practices that they would not follow or that they would not have been able to do otherwise (Schneider & Ingram, 1990). Government's influence on corporate practices depends on the fit between public policy instruments used and corporate sensitivity to those instruments. Firms vary in many respects, and a public policy will meet with dissimilar responses by heterogeneous firms (Kagan, Gunningham, & Thornton, 2011). Important contingencies that may affect corporate sensitivity to government intervention include, but are not confined to, governance form (self-employed entrepreneur, family firm, publicly listed business, etc.), firm size (small, medium-sized, large businesses), internal organisation (corporate structure, culture, leadership), external organisation (industry structure, supply chain organisation, stakeholder relations), and geographic orientation (local operations, international activities, country of origin). We systematically perused the academic literature to chart government's influence against the backdrop of these contingencies (see Box 1 for the method used). We report our findings along the lines of the contingencies specified above, with a summary in Table 5.

B.2 Contingent government influences

B.2.1 Governance Form

The management literature has observed a differentiated receptivity towards government regulations based on the type of governance. Public and non-profit organisations are more likely to adopt practices related to equal employment opportunity laws (Dobbin & Sutton, 1998; Dobbin, Sutton, Meyer, & Scott, 1993). Organizations in the public sector and non-profit organisations are faster adopters of legislation than firms in the private sector (Sutton, Dobbin, Meyer, & Scott, 1994).¹⁰⁴ However, for-profit firms are more likely than non-profit organisations to comply with regulatory requirements that direct organisations to divergent change—i.e., the adoption of practices whose nature differs substantially from ongoing activities (D'Aunno, Succi, & Alexander, 2000). Firms in which customer influence prevails over top management influence are more inclined to adhere to voluntary quality standards programmes (Beck & Walgenbach, 2005). And entrepreneurial start-ups in policy-dependent industries are incentivized more by subsidies than corporate ventures (Georgallis & Durand, 2017).

Box 1: Methodology

The literature review sought to identify, categorize, and interpret the influence of government interventions on corporate behaviour from the vantage point of management science. While our search was broad, we privileged articles that appeared in top-tier management journals (including Academy of Management Journal, Academy of Management Review, Administrative Science Quarterly, Journal of Management, Journal of Management Studies, Organization Science, Organization Studies, and Strategic Management Journal) over the past twenty years, totaling some 8,200 articles. We perused tables of contents and used (Boolean combinations of) keywords (such as public policy AND compliance) to identify potentially relevant articles and inspected these articles to assess their relevance. Furthermore, we checked the reference lists of relevant articles to identify further sources. We retained only those writings that specifically addressed the impact of (a form of) government intervention on (a form of) corporate behaviour. We summarized and classified relevant insights in terms of 'drivers' (i.e., independent, moderating, and/or mediating variables), 'behavioural outcomes' (i.e., the dependent variables), empirical contexts (i.e., location and time), and empirical techniques (such as qualitative studies and surveys). It should be noted that the large majority of the identified empirical studies use correlational techniques, hampering the ability to draw hard causal inferences. We also differentiated the articles according to corporate characteristics: governance form, firm size, internal organisation, external organisation, geographic orientation, and other contingencies. Next, we clustered similar findings and identified patterns. Finally, we interpreted the (absence of) patterns and drew conclusions.

¹⁰⁴ The higher and quicker adoption propensity suggests that public and non-profit organisations are more sensitive to external social pressure than for-profit firms.



B.2.2 Firm Size

Several studies suggest that larger firms are more likely not to comply with government regulation. Dalton and Kesner (1988) found a positive relationship between firm size (in terms of sales) and involvement in corporate illegal acts such as price discrimination and market foreclosure. Larger firms are more than twice as likely to commit economic felonies as small firms. Furthermore, large businesses are more than three times as likely to commit multiple violations.¹⁰⁵ Bacus and Near (1991) also argued that larger businesses are more likely to engage in illegal activities than small or medium-sized firms.

By contrast, other studies suggest that larger firms are more compliant. Dobbin and Sutton (1998) argued that firms employing more personnel are more likely to implement human resources practices related to equal employment opportunity laws. In a similar vein, Marquis and Toffel (2011) found that larger firms are less likely to react to government pressure on environmental issues in a symbolic or non-substantive way, such as masking their actual performance.¹⁰⁶

Subsidies tend to be more effective for small and medium-sized firms. Several studies (González & Pazó, 2008; Hottenrott & Lopes-Bento, 2014; Lach, 2002) found that subsidies aiming to increase corporate R&D activities are effective for small and medium-sized firms but not for large businesses. One explanation is that large firms would also have undertaken the R&D efforts in the absence of government subsidies, whereas firms with fewer than 100 employees would not have done so (Lach, 2002). Furthermore, less generous and discontinued subsidies affect entrepreneurial start-ups more than corporate ventures in policy-dependent sectors (Georgallis & Durand, 2017).

Firms with a high proportion of customized and small-batch production are less likely to implement quality standards such as ISO 9000, because the latter reduce organisational flexibility. This effect is less pronounced in large firms, which are more visible and prone to be influenced by societal expectations as to certification (Beck & Walgenbach, 2005).

Scholars of political corporate activities found that larger firms are more likely to engage in political activities.¹⁰⁷ Firms with higher sales are more likely to engage in political actions to secure a competitive advantage and create a favorable political environment (Bhuyan, 2000; Hart, 2001; Mitchell, Hansen, & Jepsen, 1997). Furthermore, corporate size is positively related to the success of combining political actions in order to achieve the political goals of firms (Schuler, Rehbein, & Cramer, 2002). Also, firms with more employees have a higher propensity to get involved in horizontal and vertical trade associations so as to partake collectively, rather than individually, in legislative processes (Hillman, 2003). Firms with higher market shares are also more likely to be involved in legislative processes to obtain favorable legislative conditions (Schuler, 1996).

B.2.3 Internal Organization

Several structural features appear to affect corporate sensitivity to government interventions. The relative importance of corporate departments matters when firms are exposed to opposing pressures. Firms in which legal departments dominate are more receptive to government pressures, whereas firms with powerful marketing departments respond primarily to market pressures (Delmas & Toffel, 2008).¹⁰⁸ Personnel departments have a strong positive effect on the adoption of labor processes for equal employment opportunity laws (Dobbin et al., 1993). Legislative intervention fosters the development of structures to improve the employment status of women and minority groups,¹⁰⁹ but does not necessarily improve the status of those groups. Although identity-conscious structures are possibly implemented for symbolic reasons, they are positively related to workplace emancipation (Konrad & Linnehan, 1995). Firms with multi-divisional structures are more prone than stand-alone firms to adopt divergent practices owing to pressure from central governance bodies (D'Aunno et al., 2000).

Other studies have focused on the roles of top-level executives and governing bodies. Type of organisation (profit versus non-profit), ownership (executive versus external), rationality of decision making (low versus high), and attitude towards law (compliant versus resistant) do not affect an executive's propensity not to comply with legislation (Braithwaite & Makkai, 1991). An executive's degree of self-efficacy positively relates to legal compliance (Jenkins, 1994). And organisations are more likely to delay compliance with government demands when powerful constituents or organisation members do not support the requested new practice (Raaijmakers, Vermeulen, Meeus, & Zietsma, 2015). Furthermore, the composition

¹⁰⁵ The higher non-compliance rate may be driven by the higher visibility of larger firms, which enhances the likelihood of observing defection. Furthermore, large firms may have a stronger sense of immunity and are organisationally more complex, both of which hamper compliance.

¹⁰⁶ Large firms may be monitored more intensively, reducing their scope for evasive or symbolic actions.

¹⁰⁷ Reasons for the higher political activities may include the resource munificence and the higher stakes of large firms.

¹⁰⁸ Differences in interest and cognition may account for the dissimilar departmental sensitivity to external pressure.

¹⁰⁹ Organizations may have such structures to demonstrate compliance with regulatory requirements.



of the managing board (insiders versus outsiders) does not affect the engagement of the organisation in illegal activities (Kesner, Victor, & Lamont, 1986).

B.2.4 External Organization

The nature of external business environments influences corporate sensitivity to government interventions. Organizations in certain environments adapt faster to government pressure than those in uncertain environments (Raaijmakers et al., 2015). Firms in less munificent (i.e., resource scarcer) environments are more likely to deploy illegal activities when trying to acquire additional resources (Staw & Sz wajkowski, 1975). At the same time, firms operating in highly munificent environments are more likely to engage in illegal practices (Baucus & Near, 1991). This suggests that the relationship between resource munificence and corporate illegal activities is curvilinear, with peaks at environmental extremities (Baucus & Near, 1991).¹¹⁰ A U-shaped relation also exists between environmental turbulence and the likelihood of committing illegal activities, with firms in highly dynamic environments (i.e., rapidly changing business contexts) having the highest rates of illegal activities (Baucus & Near, 1991).¹¹¹ Regulatory requirements directing organisations towards divergent change are more likely to be adopted when firms imitate the practices of organisations in different sectors that were exposed to similar regulatory pressures (D'Aunno et al., 2000).

Industry structure is another determinant of corporate sensitivity. Organizations may ignore normative government pressures or interpret these pressures according to industry identity when an oligopoly structure is in place and when firms can rely on each other as sources of legitimacy (Dhalla & Oliver, 2013). Firms in a concentrated industry are more likely to successfully combine political effort in order to achieve their political goals (Bhuyan, 2000; Schuler et al., 2002). Similarly, coherent emerging industries (i.e., firms with similar backgrounds) are more likely to secure subsidies, at least when incumbent industries are concentrated (Georgallis, Dowell, & Durand, in press). Subsidizing is also more likely when emerging firms have a distinctive identity and when nascent sectors are populated by many firms (Georgallis et al., in press).¹¹² However, after a certain level of concentration, firms decrease their commitment, as the necessity of further actions to secure government support is lower (Bhuyan, 2000). The impact of public policies on organisations is contingent on the nature of competition. Marquis and Huang (2009) found that public policies seeking to increase the geographic dispersion of banks were less effective when competition among banks was higher. And firms in centralized markets are better able to survive major legislative reversals than those in fragmented markets (Wade, Swaminathan, & Saxon, 1998). Vermeulen, Büch, and Greenwood (2007) showed that large incumbents in the Dutch concrete industry have an interest in undermining alternatives and preserving the status quo, thereby impeding the success of public policies promoting corporate innovation. A study focusing on financial incentives for the stimulation of R&D activities demonstrated that subsidies induce especially smaller and low-technology firms to perform R&D activities (González & Pazó, 2008).

The type of sector may matter as well. Firms operating in the food, lumber, petroleum refining, and transportation equipment (automobile) industries are more likely to commit illegal economic activities such as price fixing than firms in other industries (Baucus & Near, 1991).

Other studies zoom in on the moderating impact of peers and other sectoral stakeholders on corporate responsiveness. Reid and Toffel (2009) found that the threat of government regulation induces both targeted large firms and other large firms in the same sector to voluntarily disclose their carbon performance and carbon strategies. Thornton, Gunningham, and Kagan (2005) observed that firms are more prone to compliance with regulation when their peers had been sanctioned in the past, even when they were not cognizant of the defection details. A study by Okhmatovskiy and David (2012) showed that firms are more likely to implement non-mandatory government standards when many of their peers have done so.¹¹³ However, if the firm's dependence on constituents that value these practices is low, the likelihood of mere symbolic implementation increases. And the presence of more political activists in an industry induces firms to successfully combine political efforts vis-à-vis the government to achieve their political goals (Schuler et al., 2002). The involvement of interest groups in legislation processes varies, depending on the level of standardization of the industry (Bartley & Schneiberg, 2002). Also, influential firms may use their professional associations to obstruct the success of policies aiming at behavioural changes

110 The higher propensity to commit illegal activities at the tails of environmental munificence may stem from compliance barriers (for resource-scarce firms) and from perceived immunity (for munificent firms).

111 Firms in highly dynamic environments may feel less induced to comply, because investments in compliant practices may become more quickly obsolescent.

112 The higher degree of political activity in concentrated, coherent, and distinctive sectors may stem from the relative ease of actors in such sectors to engage in collective action (cf. Olson, 1965).

113 The influence of peers on corporate adoption propensity points to the importance of sectoral social networks.



(Vermeulen et al., 2007).

Supplementary institutional arrangements can enhance government intervention. Laws authorizing bureaucracy in the savings-and-thrift industry did not live up to government expectations until supplementary news media and role model organisations were established, which made bureaucracy culturally acceptable (Haveman, Rao, & Paruchuri, 2007).

B.2.5 Geography

Physical location is another contingency that may affect corporate sensitivity. One study (Greenwood, Díaz, Li, & Lorente, 2010) found that firms with branches in regions governed by regional-national political parties or in regions with high regional government spending on industrial development are less likely to downsize than firms in other environments. Other research (Sutton et al., 1994) suggests that organisations operating in regions which are more concerned about employees' membership rights are more inclined to adopt relevant regulatory procedures (Sutton et al., 1994). Businesses are more likely to comply with environmental legislation when headquartered in countries that: are more active in environmental intergovernmental organisations; have citizens who are more connected to global society; and provide more political rights and civil liberties (Marquis & Toffel, 2011).¹¹⁴

Other studies have addressed the behaviour of internationally operating firms. Countries with very stringent or very lax environmental regulations deter incoming foreign direct investments (Kalamova & Johnstone, 2012).¹¹⁵ Multinational businesses originating from politically less stable countries or nation states with a high redistributive pressure have well-developed political capabilities, which render them more likely to invest in politically unstable host countries (Holburn & Zelner, 2010). Polluting firms are less likely to invest in countries with more stringent environmental legislation than in their home countries or other host countries; this relationship is negatively moderated by a firm's environmental compliance capabilities (Madsen, 2009). Multinational firms experiencing stakeholder pressure, including stringent legislation, are more likely to transfer irresponsible social practices to their subsidiaries when the latter are less clearly connected—reducing the likelihood to be associated with such practices (Surroca, Tribó, & Zahra, 2013). Firms discovering a negative policy change in their countries of operation are more likely to divest from such countries (Blake & Moschieri, 2017). Corporate divestment is also more likely following a political dispute against the firm in another country in the same region (Blake & Moschieri, 2017). Stringent regulation drives multinational firms to standardize their environmental practices globally (Christmann, 2004). Multinational firms with internationally interdependent supply chains or reputations standardize their environmental practices according to the most demanding regulatory regime (Wijen & Van Tulder, 2011).¹¹⁶ And subsidies aiming to increase the R&D activities of small and medium-sized firms are more effective for businesses that operate internationally and have an international collaboration network (Hottenrott & Lopes-Bento, 2014).¹¹⁷ Foreign firms are less likely than domestic businesses to engage in processes to influence legislation (Mitchell et al., 1997).¹¹⁸

B.2.6 Other Contingencies

Financial performance and dependence may impact corporate sensitivity to government pressure. Firms with a lower financial performance are more likely to violate antitrust laws (Asch & Seneca, 1976).¹¹⁹ Other studies found that firms with a higher proportion of sales to the government are more likely to engage in (Mitchell et al., 1997) or combine (Schuler et al., 2002) political efforts to influence legislation. Industries that are more profitable will have more firms participating in legislative processes (Bhuyan, 2000).¹²⁰

Some research points to the importance of **age**. Older organisations are less likely to implement human resources practices that comply with equal employment opportunity laws (Dobbin & Sutton, 1998).¹²¹ Older firms are better able to survive

¹¹⁴ The significance of the local environments of headquarters and branches points to the influence of physical working environments on corporate practices.

¹¹⁵ The propensity of internationally operating firms to eschew countries with more stringent regulations may be driven by higher compliance costs, whereas avoiding locations with very lax regulatory regimes may relate to the higher uncertainty associated with operating in such environments.

¹¹⁶ Scale economies and reputation maintenance drive the adoption of relatively stringent environmental standards.

¹¹⁷ This effect might stem from the combination of the typically lower resource munificence of small and medium-sized firms in conjunction with the need to be overcome the liability of foreignness (i.e., the competitive disadvantage of not knowing foreign markets as well as domestic firms).

¹¹⁸ The desire to be perceived as legitimate actors, which is harder for foreign firms, accounts for this lower level of political engagement.

¹¹⁹ The benefit/cost ratio of violating antitrust laws and the willingness to take risks may be higher for financially distressed firms, since they may have less to lose when getting caught.

¹²⁰ The higher stakes of government-dependent and profitable firms may drive such firms to be more politically active.

¹²¹ The imprinting effect (i.e., organisations tend to adopt and stick to practices that are common when they were set up) tends to keep older firms, created in periods of higher opportunity inequality, from offering equal job opportunities.



major legislative reversals than younger firms (Wade et al., 1998). And firms with a longer track record in a country are more likely to engage in collective, rather than individual, political processes (Hillman, 2003).

Several studies have highlighted the role of **compliance attitude**. Firms are more likely to self-report violations of certain legislation when they are subject to frequent monitoring (Short & Toffel, 2007). Firms violating the law three times or more in the recent past were more likely to commit new violations than firms that only defected once in the recent past (Baucus & Near, 1991; Short & Toffel, 2007). Firms that received penalties in the past first improved their environmental compliance performance directly after being penalized, but then returned to their non-compliant practices (Barrett, Lynch, Long, & Stretesky, 2017).¹²²

Visibility is another contingency that influences responsiveness to public policies. Firms whose practices are more visible—i.e., observable to key external stakeholders—are more likely to implement non-mandatory corporate governance standards, although they are more likely to adopt symbolically in case of low corporate dependence on external constituencies (Okhmatovskiy & David, 2012). Large and visible firms are more likely to meet government demands when headquartered in countries with more stringent environmental regulations (Marquis & Toffel, 2011).

Recent research (Wang, Wijen, & Heugens, 2018) addressed the importance of **administrative level**. When central and local public policy interests diverge, the level of government control affects corporate environmental practices, with firms controlled at very central and very decentral levels performing more poorly.¹²³ Moreover, public policies spread over multiple administrative levels may be ineffective when they are ambiguously crafted and inconsistently implemented, especially when business actors operate in concert (Vermeulen et al., 2007).¹²⁴

Some studies highlight the role of **time**. Governments stimulating firms to adopt the ISO 14001 environmental standard are more effective during early stages of standard adoption; government promotion magnifies the diffusion of the standard when there is not yet industry-wide consensus on the benefits of corporate adoption (Delmas & Montes-Sancho, 2011). Furthermore, policy duration and generosity affect corporate impact. Relatively sustained and substantive subsidies are more conducive to firm growth in policy-dependent industries (Georgallis & Durand, 2017).

Finally, the **means of communicating** policy content affects the odds of corporate action. Rosenkranz et al. (2017) found that businesses are much more likely to partake in an energy efficiency programme when nudged through simpler messages that stress the corporate self-interest of participation.¹²⁵

B.3 Discussion and conclusion

Governments can use a variety of policy instruments to influence corporate behaviour. For the present review, we draw on the widely used typology by Hood and Margetts (2007), who classify public policy instruments in terms of nodality, authority, and treasure.^{126,127} Nodality refers to brokering in relational networks, enabling governments to serve as an information clearing house that affects the knowledge and attitudes of its subjects. Informing firms on 'good practices' and communicating desired corporate behaviour are manifestations of nodality. Authority is the legal determination and enforcement of rules, which governments can use to confer or impose rights, status, and duties upon firms. Laws and regulations are common forms of authority. Treasure concerns financial incentives, which governments can use to steer corporate behaviour. Treasure materializes through fiscal stimuli such as taxes and subsidies. **Table 4** classifies the literature reviewed above per type of government intervention for each of the focal firm characteristics.

¹²² The higher defection propensity of past defectors suggests that non-compliance tends to be a persistent attitude, in which profit-seeking behaviour may override regulatory compliance imperatives.

¹²³ In the Chinese context, highly centrally (e.g., provincial-level) controlled firms were subject to only one layer of government control, involving limited pressure, whereas firms controlled at more decentral levels were exposed to the cumulative pressure of several bureaucratic layers, leading to higher environmental responsiveness. The cumulative effect was outweighed by the large distance from the central, environmentally-oriented government for very decentrally (e.g., county-level) controlled firms, which were mainly sensitive to the non-environmental priorities of the directly controlling local authorities.

¹²⁴ The non-alignment of government policies across administrative levels creates ambiguity for firms and enables firms to conform to the administrative regime most favourable to the corporate interests.

¹²⁵ This points to the importance of framing government policies in accordance with corporate cognition and interests.

¹²⁶ Hood and Margetts identify organisation—i.e., the physical supply of goods and services—as a fourth intervention type, which we omit since it is not relevant to our focus on the influence of governments on firms.

¹²⁷ These intervention types concur with three public governance types identified by Howlett (2009): network governance, legal governance, and market governance, respectively.



The studies we reviewed offer a number of convergent findings. First, the behavioural impact (in terms of corporate innovation, growth, etc.) of subsidies is larger for small and medium-sized firms than for large corporations. A public policy implication is that a focus on smaller firms tends to be more effective in inducing behavioural change. Second, large firms are more politically active, in the sense of trying to influence public policy. This implies that the voice of large enterprises may be overrepresented in the development of government interventions, possibly at the expense of the less vocal smaller firms—unless the latter are effectively represented via trade associations. Third, coherent and concentrated industries tend to secure more government support. A policy implication is that the ability of these industries to mobilize collective action may induce policy makers to overweigh their interests. Fourth, the relative importance of organisational departments affects the corporate sensitivity to public policy. This highlights the significance for governments to identify the ‘right’ corporate interlocutors—i.e., individuals and departments that are more sensitive to the focal public policies. Fifth, firms closely observe their peers and are prone to behavioural change when similar firms are sensitive to government interventions (such as financial sanctions and voluntary disclosure calls). A policy implication is that targeted interventions towards corporate outliers may spill over to the entire sector. In particular, governments stimulating frontrunners to adopt desired behaviours as well as deterring laggards from displaying non-compliant behaviours may lead other firms to follow suit. Sixth, the identity of internationally operating firms is affected by their countries of origin and operation. Multinationals with more stringent regulations in their home countries and other host countries are more likely to comply with focal host-country regulations, and vice versa. A policy implication is that firms originating from weaker regulatory regimes may need to be monitored more intensively. Seventh, historic regulatory performance records matter. Firms which failed to comply with regulations in the past are more likely to defect again in the future. A policy recommendation would be that past defectors warrant more scrutiny.

The body of literature reviewed shows a skewed distribution in terms of attention to both policy instruments and firm characteristics. The impact of regulatory interventions dominates; a much smaller number of studies addresses corporate sensitivity to informational and financial policy instruments. While this uneven focus may stem from the dominance of regulatory instruments, the higher availability of regulatory compliance data may also account for this skewed attention. Furthermore, the studies reviewed gravitate the impact of public policies toward firm size and external organisation, rather than governance form, internal organisation, and geography.

The literature review also reveals that the amount of studies targeting the focal relationship appears to be very limited. We found relevant insights in less than one percent of the articles examined. Even a review article entitled “The effects of governments on management and organisation” (Pearce, Dibble, & Klein, 2009) conveys few useful insights, addressing rather the reverse relation: corporate influence on governments to achieve a competitive edge. Mahoney, McGahan, and Pitelis (2009: 1041) echo the dearth of relevant studies, arguing that extant (economic) theories “acknowledge such concerns for policy yet do not explicitly incorporate the strategic responses of firms with diverse capabilities and activities into policy prescriptions.” The scant attention in the management literature to the focal relationship is remarkable, since the government—with its ability to determine market ‘rules of the game’ and to incentivize and inform firms—is generally recognized as a major stakeholder of firms.¹²⁸ One explanation is that the influence of public policy on corporate behaviour is particularly challenging to measure, since the relatively macro-level and indirect impact of the government is hard to gauge empirically in the context of firms that are exposed to myriads of influences. Reviewing the domain of regulatory compliance, Parker and Nielsen (2009: 64) argue that “to understand compliance adequately, researchers must collect data on information, processes, attitudes, motivations, and, finally and often most difficult and critical of all, actual behaviour and its policy outcomes.” In a review article on the intersection of public administration and organisation studies, Kelman (2007) notes a sharp drop of social scientists in the government from the 1980s onwards. At the same time, the orientation of those studies that do focus on governments have increasingly shifted their focus from performance (i.e., policy effectiveness) to constraints (i.e., the limitations of public interventions). This leaves important uncharted terrain to empirically assess government’s influence on corporate behaviour. The combination of limited academic insights and high policy relevance of such empirical studies yields important future research opportunities. Natural experiments, in which different types and extents of government interventions are compared across otherwise similar firms (e.g., Rosenkranz et al., 2017), have a clear potential to enrich academic understanding and offer guidance for effective public policies.

128 A global, cross-sectoral survey among 3,000 executives shows that 54% of executives perceive the government as a very influential or influential actor (Unruh et al., 2016).



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**Table 5: Overview of Management Literature on Government Interventions and Corporate Behaviour**

	Reference	Behavioural Outcome	Driver	Context of Study	Type of Study
Governance form	Georgallis & Durand (2017)	Subsidy-induced organisational growth	Entrepreneurial versus corporate-backed start-ups Generosity and continuity of subsidies	Solar cell producers in the EU between 1995 and 2012	Quantitative analysis Archival data
	Beck & Walgenbach (2005)	Implementation of voluntary quality standard	Influence of customers versus influence of top management Size	Mechanical engineering industry in Germany between 1991 and 1998	Quantitative study Survey data
	D'Aunno et al. (2000)	Divergent change	Nonlocal peers following same change in the market Free-standing organisations For-profit organisations Prior regulatory compliance	Rural hospitals in the USA between 1984 and 1991	Quantitative analysis Archival data and survey data
	Dobbin & Sutton (1998)	Adoption of labor market practices	Governance form Firm size Firm age	Organizations in California, New Jersey, and Virginia, USA in 1985	Quantitative study Survey data
	Mitchell et al. (1997)	Corporate political activity	Foreignness of firm Size of company Proportion of contracts related to government	Fortune 500 businesses between 1987 and 1988	Quantitative analysis Archival data
	Dobbin et al. (1993)	Adoption of labor market practices	Governance form	Organizations in California, New Jersey, and Virginia, USA between 1985 and 1986	Quantitative study Survey data
Internal organisation	Delmas & Toffel (2008)	Prioritizing between market and nonmarket pressures	Firm structure Internal influence of departments	Heavily polluting industrial sector in the US in 2003	Quantitative analysis Archival data and survey data
	Konrad & Linnehan (1995)	Effectiveness of symbolic processes	Formalized human resources management structures	Businesses of the Philadelphia metropolitan area, US in 1991	Quantitative study Survey data
	Carroll (1975)	Perception of business ethics	Managers' position within the organisation	Firms in the US sampled from Standard and Poor's Executive Register in 1974	Quantitative study Questionnaire



Reference	Behavioural Outcome	Driver	Context of Study	Type of Study
Georgallis et al. (in press)	Likelihood of subsidies for emerging industry	Number of firms in emerging industry Coherence in emerging industry Concentration of incumbent industry	The solar PV industry in the EU between 1987 and 2012	Quantitative and qualitative analysis Archival data and interviews
Raaijmakers et al. (2015)	Compliance and compliance delay	Environmental uncertainty Influence of constituents	Child care sector in the Netherlands prior to 2015	Qualitative study Experimental vignette study
Okhmatovskiy & David (2012)	Implementation of non-mandatory governmental business standards	Adoption of standards by competitors Firm visibility	250 largest industrial businesses and 50 largest banks in Russia between 2000 and 2007	Quantitative analysis Archival data
Marquis & Huang (2009)	Effectiveness of policies	Infrastructural factors Competition-related factors Geographical factors	State-level banking organisations in the US between 1896 and 1978	Quantitative analysis Archival data
Reid & Toffel (2009)	Corporate environmental practices	Corporate responsiveness to stakeholder pressure	S&P 500 firms in 2006 and 2007	Quantitative analysis Archival data
Haveman et al. (2007)	Business creation due to legislative change	Supplementary institutions Development	Thrifty in the US between 1891 and 1928	Quantitative analysis Archival data
Vermeulen et al. (2007)	Resistance to policies advocating change	Power of professional associations Government levels in policy Policy inconsistencies	The Dutch concrete industry in the 1990s and 2000s	Qualitative study Longitudinal case study
Thornton et al. (2005)	Regulatory compliance	Sanctions of non-compliant peer firms	Firms in sectors sanctioned by the US Environmental Protection Agency in 2000	Interviews Quantitative analysis
Bartley & Schneiberg (2002)	Involvement in political processes	Standardization of industry	States in the US between 1906 and 1930	Quantitative analysis Archival data
Wade et al. (1998)	Surviving legislative reversals	Industry concentration Firm age	Brewing industry in the US between 1845 and 1918	Quantitative analysis Archival data
Jenkins (1994)	Compliance to law	Self-efficacy of executives	Nursing home industry in Australia between 1988 and 1994	Quantitative and qualitative analysis Archival data and interviews
Sutton et al. (1994)	Adoption of labor market practices	Region of operation Proximity to government	Public and private organisations in the US between 1955 and 1985	Quantitative study Survey data

External organisation



	Reference	Behavioural Outcome	Driver	Context of Study	Type of Study
External organisation (continued)	Braithwaite & Makkai (1991)	Receptivity to deterrence	For-profit versus non-profit organisations Executive ownership Executive salience to sanctions Executive law devotion	Nursing home industry in Australia between 1988 and 1990	Qualitative study Interviews
	Kesner et al. (1986)	Compliance to law	Insiders versus outsiders in the managing board	Fortune 500 Businesses between 1980 and 1984	Quantitative analysis Archival data
	Staw & Sz wajkowski (1975)	Illegal activity	Environmental scarcity	Fortune 500 businesses involved in litigation cases between 1968 and 1972	Quantitative analysis Archival data
Geographic orientation	Surroca et al. (2013)	Transfer of irresponsible practices	Stakeholder influence Legislation	Multinational firms headquartered in 22 countries between 2003 and 2007	Quantitative analysis Archival data
	Kalamova & Johnstone (2012)	Foreign direct investment	Regulatory restrictions and uncertainty	Multinational firms from 100 countries between 2001 and 2007	Quantitative analysis Survey data
	Wijen & Van Tulder (2011)	Environmental practice standardization	International interdependence Host-country regulatory regime	Large multinational firms from developed and emerging countries	Theory development Case illustrations
	Greenwood et al. (2010)	Likelihood of downsizing	Regional national party governing Regional government spending on industrial development	Manufacturing businesses in Spain between 1994 and 2000	Quantitative analysis Archival data and survey data
	Holburn & Zelner (2009)	Foreign direct investment in countries with political risk	Political capabilities of foreign investors	Multinational firms in electric power generation industry globally between 1990 and 1999	Quantitative analysis Archival data
	Christmann (2004)	Environmental performance	Global environmental standardization	Chemical multinational firms in the US in 1995	Quantitative analysis Survey data



Reference	Behavioural Outcome	Driver	Context of Study	Type of Study
Hottenrott & Lopes-Bento (2014)	R&D spending	Size of company International collaboration networks	Firms in Flanders, Belgium between 2002 and 2008	Quantitative analysis Archival data and survey data
Marquis & Toffel (2011)	Symbolism of response to legislation	Firm size Country of origin	Firms listed on major stock indices between 2004 and 2007	Quantitative analysis Archival data
González & Pazó (2008)	R&D spending	Firm size Technology intensity of industry	Manufacturing businesses in Spain between 1990 and 1999	Quantitative analysis Archival data and survey data
Hillman (2003)	Corporate political activity	Number of employees Firm age Membership of trade union	US multinational businesses in Europe in 1996	Quantitative analysis Survey data
Lach (2002)	R&D spending	Firm size	Manufacturing firms in Israel between 1990 and 1995	Quantitative analysis Archival data
Schuler et al. (2002)	Corporate political activity	Political activists in company Industry concentration Firm size Proportion of government-related business	Publicly traded manufacturing firms in the US between 1991 and 1994	Quantitative analysis Archival data
Hart (2001)	Corporate political activity	Firm size	High-tech firms from Fortune 500 and Fortune 1000 between 1977 and 1996	Quantitative analysis Archival data
Bhuyan (2000)	Corporate political activity	Industry concentration Firm size Number of employees Profitability of industry Firm diversification	Firms in the US food industry between 1989 and 1992	Quantitative analysis Archival data
Schuler (1996)	Corporate political activity	Market share within industry	Firms in the US steel industry between 1976 and 1989	Quantitative analysis Archival data and interviews
Baucus & Near (1991)	Illegal activity	Industry munificence Firm size Prior compliance to law	Fortune 500 Businesses between 1974 and 1983	Quantitative analysis Archival data
Dalton & Kesner (1988)	Involvement in illegal activity	Firm size	Fortune 500 businesses between 1980 and 1984	Quantitative analysis Archival data

Firm size



Reference	Behavioural Outcome	Driver	Context of Study	Type of Study
Wang et al. (2018)	Corporate environmental practices	Regulatory Pressure Monitoring capacity Administrative levels	Listed Chinese firms between 2008 and 2012	Quantitative analysis Archival data Qualitative analysis
Barrett et al. (2017)	Compliance to environmental laws	Prior non-compliance with environmental laws (before and after receiving penalties)	Facilities committing violations to environmental laws in Michigan, US between 2014 and 2016	Quantitative analysis Archival data
Rosenkranz et al. (2017)	Participation in voluntary energy efficiency programmes	Means of communication (nudging)	Businesses voluntarily participating in an energy-efficiency programme in the Netherlands in 2014	Field experiment
Blake & Moschieri (2017)	Divestment due to detrimental policy change	Policy changes in other countries within the same region	Firms that lodged claims before ICSID between 1995 and 2012	Quantitative analysis Archival data
Dhalla & Oliver (2013)	Compliance to governmental normative pressure	Industry identity Oligopolistic structure	Banking sector in Canada between 1995 and 2009	Qualitative study Case study
Delmas & Montes-Sancho (2011)	Environmental certification	Adoption of the ISO 14001 environmental standard	All certified facilities in 139 countries between 1996 and 2006	Quantitative analysis Archival data
Madsen (2009)	Likelihood of investment	Institutional distance to home country regarding environmental laws	Global automobile industry between 1996 and 2004	Quantitative analysis Archival data
Short & Toffel (2007)	Compliance to law Self-reporting	Prior violations with law Likelihood of monitoring	Firms from pollution-intensive industries in the US between 1997 and 2003	Quantitative analysis Archival data
Asch & Seneca (1976)	Engagement in collusion	Profitability	Large manufacturing firms from Fortune 500 between 1958-1967	Quantitative analysis Archival data

Other contingencies

**Table 6: Classification of Management Literature on Government Interventions and Business Contingencies**

	Nodality	Authority	Treasure
Governance form	<ul style="list-style-type: none"> Beck & Walgenbach (2005) Mitchell et al. (1997) 	<ul style="list-style-type: none"> D'Aunno et al. (2000) Dobbin & Sutton (1998) Dobbin et al. (1993) 	<ul style="list-style-type: none"> Georgallis & Durand (2017) D'Aunno et al. (2000)
Firm size	<ul style="list-style-type: none"> Hillman (2003) Schuler et al. (2002) Hart (2001) Bhuyan (2000) Mitchell et al. (1997) Schuler (1996) 	<ul style="list-style-type: none"> Marquis & Toffel (2011) Dobbin & Sutton (1998) Baucus & Near (1991) Dalton & Kesner (1988) 	<ul style="list-style-type: none"> Hottenrott & Lopes-Bento (2014) Georgallis & Durand (2017) González & Pazó (2008) Lach (2002)
Internal organisation	<ul style="list-style-type: none"> Delmas & Toffel (2008) 	<ul style="list-style-type: none"> Delmas & Toffel (2008) D'Aunno et al. (2000) Konrad & Linnehan (1995) Carroll (1975) 	<ul style="list-style-type: none"> Delmas & Toffel (2008) D'Aunno et al. (2000)
External organisation	<ul style="list-style-type: none"> Okhmatovskiy & David (2012) Bartley & Schneiberg (2002) Schuler et al. (2002) Bhuyan (2000) 	<ul style="list-style-type: none"> Raaijmakers et al. (2015) Reid & Toffel (2009) Haveman et al. (2007) Thornton et al. (2005) D'Aunno et al. (2000) Wade et al. (1998) Jenkins (1994) Sutton et al. (1994) Baucus & Near (1991) Braithwaite & Makkai (1991) Kesner et al. (1986) Staw & Szwajkowski (1975) 	<ul style="list-style-type: none"> Georgallis et al. (in press) Marquis & Huang (2009) González & Pazó (2008) D'Aunno et al. (2000) Vermeulen et al. (2007)
Geographic orientation		<ul style="list-style-type: none"> Surroca et al. (2013) Kalamova & Johnstone (2012) Marquis & Toffel (2011) Wijen & Van Tulder (2011) Holburn & Zelner (2009) Christmann (2004) 	<ul style="list-style-type: none"> Hottenrott & Lopes-Bento (2014) Greenwood et al. (2010)
Other contingencies	<ul style="list-style-type: none"> Rosenkranz et al. (2017) Okhmatovskiy & David (2012) Delmas & Montes-Sancho (2011) Hillman (2003) Schuler et al. (2002) Bhuyan (2000) Mitchell et al. (1997) 	<ul style="list-style-type: none"> Wang et al. (2018) Barrett et al. (2017) Blake & Moschieri (2017) Dhalla & Oliver (2013) Madsen (2009) Short & Toffel (2007) D'Aunno et al. (2000) Wade et al. (1998) Dobbin & Sutton (1998) Baucus & Near (1991) Asch & Seneca (1976) 	<ul style="list-style-type: none"> D'Aunno et al. (2000)

C. Literature review on firm motivation and government leadership styles



C.1 Introduction

Before venturing into the various public policy instruments and their known efficacy, this literature review starts from a review of two related literatures: the literature on motivation (what moves individuals and businesses as a whole to orient themselves in a certain direction?) and the related literature of leadership (how can individuals and collectives motivate others towards collective goals?). Indeed, charting insights about psychological influence is warranted in order to advance the goal of better understanding how the government can best influence organisations. The frameworks (and related research) introduced next will serve as a framework that helps readers understand the policy instruments introduced later. Box 1 details the methodology adopted in this integrative review.

Box 1: Methodology

The literature review aimed to provide an integrative overview of key insights on the motivation and leadership literatures. Since the effectiveness of leadership is contingent on the motivation of actors who need to be engaged, we first charted the different types of motivation. We then addressed different orientations towards leadership. Our final step was to integrate insights on motivation and leadership. We drew on several authoritative reviews on this topic, including Antonakis & Day (2018), De Rue et al. (2011), and Yukl (2012). We integrated these and other relevant publications to develop a concise typology and explanation of the dominant approaches to leadership and motivation, such as encountered in the psychology and management literatures. While the literature on this topic is much more extensive than the writings covered, we did not seek to offer an exhaustive intervention review of specific contributions. Instead, we aimed to integrate key insights and present them in a format useful for public policy makers who seek to influence corporate behaviour.

Much of the theory and research used in the next section describes research on motivation and leadership of both individual human beings as well as larger group of people. The study of psychological influence is often derived from research conducted at the individual level of analysis, mostly so for practical reasons (i.e., it is much easier to set up an intervention on the effectiveness of certain leadership approaches at the individual than at the organisational level of analysis). This, however, does not imply that these theories do not apply to the collective level. A substantial body of research has validated that outcomes generated at the individual level similarly apply at the collective level. For instance, in terms of self-determined behaviour, literature has expanded this to how organisations influence their whole workforce (e.g., Kuvaas et al., 2017) or how governments influence the culture of their constituents (e.g., Kasser et al., 2007). This research suggests that many of the principles that describe the psychology of individuals are transferable to larger bodies of individuals. We highlight research at the collective level as much possible, but also draw on research at individual level in the absence of higher-level studies.

C.2 Motivation: understanding the why

From a governance perspective, very few ideas are more important than the dynamics of motivation. Organizations can be either proactive and personally engaged (i.e., intrinsically motivated) or passive, alienated, and instrumentally focused (i.e., extrinsically motivated) in following initiatives (Ryan & Deci, 2000). Understanding what moves organisations towards both extrinsic and intrinsic motivation is critical, only then can political leaders devise of effective ways to interact with organisations aimed at cultivating a climate that instils the desire in organisations to go above and beyond prescribed duties. To that end, the present literature review provides an overview of the extant literature on motivation and presents actionable recommendations to increase the government's influence on organisations.

C.2.1 Different forms of motivation: A continuum from extrinsic to intrinsic¹²⁹

Many theories of motivation view motivation as a unitary phenomenon, one that varies from very little to strong motivation (Ryan, & Deci, 2000). This view comes with several limitations, as individuals and organisations do not only vary across the

¹²⁹ There are many alternative theories of motivation (e.g., expectancy-value theory, theory of planned behavior) than those discussed here. It is beyond the scope of this project of discuss all of them. Furthermore, because of inherent tensions between various frameworks, we also believe that incorporating all these frameworks might be confusing to an end-user who does not have time to wrestle through all the nuances of the various literatures. For this reason, we explicitly chose to focus on the literature of intrinsic and extrinsic motivation as a guiding framework. As a meta-theory of motivation, this perspective already includes decades of research into a unifying perspective. More importantly however, we understood the question originating from the government as to what extent they can move organizations more from an extrinsic orientation towards an intrinsic orientation. This framework most directly answers this question.



extent of motivation but also across the kinds or orientations of motivation. For example, one organisation may be highly motivated to commit itself to environmental protection without even knowing the actual monetary return-on-investment, whereas a second organisation may only commit to a minimum effort in order to prevent hefty fines. In the first example, the motivational force at work can be described as intrinsic, as the organisation does something beneficial to the environment and society for the sake of the project itself (and the accompanying wave of excitement and enjoyment that comes with it). Put differently, the project or activity provides its own inherent reward, so motivation for these activities is not dependent on external rewards (Deci, 1971). The second scenario, in contrast, is an example of extrinsic motivation, which refers to doing something because it leads to a separate or external outcome (Ryan, & Deci, 2000).

Although very tempting, the distinction of motivational forces as either extrinsic or intrinsic is a substantial oversimplification (Cerasoli, Nicklin, & Ford, 2014). We therefore promote the more nuanced and extensively tested perspective of Ryan and Deci's (2000) self-determination theory, which classifies behaviour regulation in a more fine-grained manner. As such, extrinsic motivation can be broken down into four different regulations, with external being the most controlled type of motivation and introjected, identified, and integrated being progressively more self-determined (Gagné & Deci, 2005). External motivation is present when organisations act primarily out of economic considerations, in the sense of trying to achieve externally proposed rewards. With introjected motivation, formerly external controls are internalized and, consequently, applied through self-imposed pressures in order to avoid collective guilt. Translated to an organisational context, this means that organisational actions are chiefly a response to social expectations (e.g., to avoid negative publicity in the media). Third, identified motivation is present when organisations continuously accept the desired behaviour as being fundamental in order to achieve outcomes that are deemed important (e.g., to express their values). Lastly, extrinsic motivation can even be integrated into organisational self-image, thereby making the task meaningful. For example, an organisation may implement measures to protect the environment simply because it views itself as an environmentally friendly business.

Because motivation based purely on reward and punishment, as is the case for extrinsic motivation, is hard to sustain over time (e.g., Ben-Hur & Kinley, 2016), we suggest that political leaders should pay increased attention to self-determined, autonomous motivation (i.e., integrated extrinsic motivation and intrinsic motivation). The extant motivation literature has long emphasized the benefits of autonomous motivation, including increased goal commitment, satisfaction, citizenship, and performance (Gagné & Deci, 2005). Following the rationale of self-determination theory that both intrinsic and integrated motivation result from natural processes that require nutrients to function optimally, we begin by laying out those critical success factors.

C.2.2 Moving from extrinsic to intrinsic motivation

Decades of research on what drives internal commitment has shown that motivation involves three essential factors: autonomy, competence, and relatedness (Deci & Ryan, 2000). Autonomy refers to organisations' (key internal stakeholders') sense of choice, volition, and freedom from excessive external pressure toward behaving or thinking a certain way (Deci & Ryan, 1985). Competence concerns organisations' (internal stakeholders') perception of self-efficacy with respect to activities that are valued by the government and society. Relatedness is organisations' (internal stakeholders') feeling of belongingness and connectedness with others.

Several actionable recommendations can be derived to foster positive organisational behaviours, thereby giving rise to intrinsic motivation and various accompanying benefits in terms of cooperativeness and performance outcomes. These recommendations are summarized in **Table 7**.

C.2.3 Combining intrinsic and extrinsic motivation

It is important to understand that extrinsic motivation is not inherently bad as well as that both intrinsic and extrinsic motivation have their own advantages and limitations (Osterloh et al., 2001). Put differently, extrinsic and intrinsic motivation are not necessarily antagonistic (Cerasoli et al., 2014) but rather tightly coupled and can even occur at the same time. This is important from a public administration perspective, because the sole reliance on intrinsic motivation gives rise to two problems. First, changing intrinsic motivation is more difficult and takes more time than steering by means of extrinsically geared instruments such as carrots and sticks (Osterloh & Frey, 2000). Second, intrinsic motivation may give rise to undesirable behaviour that, while intrinsically driven, may not be aligned with the desired policy direction. Following Osterloh and Frey (2000: 540), "external interventions via carrots and sticks" are needed to discipline the undesired effects



of intrinsic motivation.

Table 7: Techniques to tap organisations' potentials for intrinsic motivation

Underlying factor of intrinsic motivation	Technique	How to apply?
Need for autonomy	Encourage co-determination	<ul style="list-style-type: none"> • Offer organisations the opportunity to participate in decision making in order to harmonize preferences • Pay attention to a non-controlling communication with organisations
Need for competence	Affirm competence	<ul style="list-style-type: none"> • Provide organisations with completion-contingent rewards that imply some level of competence (e.g., attaining status through points)
	Utilize pride as a strategic asset	<ul style="list-style-type: none"> • Describe a change or implementation of a new policy as a matter of pride that serves the purpose of becoming more competitive
Need for relatedness	Personal communication	<ul style="list-style-type: none"> • Develop strong connections with relevant stakeholders, inform and consult industry as much as possible

In all cases, political leaders should ensure that organisations do not perceive external interventions to be “controlling,” in the sense of reducing the extent to which they can determine actions by themselves. If this happens, intrinsic motivation may be substituted by extrinsic control, thereby undercutting motivation (Frey, 1997). Applied to an organisational context, this suggests, for example, that organisations that receive a monetary incentive to engage in environmentally conscious activities may feel less motivated to follow other environmentally sound practices without financial rewards (Frey, 2012). Consequently, external interventions crowd out intrinsic motivation if they are perceived to be controlling and they crowd in intrinsic motivation if they are perceived to be supporting.

In sum, this overview has highlighted that, in order to achieve an optimum of motivational effect, there is more opportunity to focus on autonomous motivation than has been previously the case, realizing that such autonomous motivation comes in all shapes and sizes (from introjected to internal) and is fostered by three fundamental basic needs (competence, relatedness, and autonomy). Furthermore, a focus on autonomous motivation does not exclude extrinsic motivation. Indeed, intrinsic and extrinsic types of motivation can be successfully combined, but this should be done with care.

C.3 Motivation: Understanding the what

Beyond the why of motivation (why do we do the things we do?), it is important to understand the ‘what’ or the underlying goals or values that people and organisations may pursue. It is important to note that this what is fundamentally different from the why. An example can help explain this. A business could pursue a laudable goal such as donating to charity, but could do so for intrinsic reasons (i.e., caring for that particular charity and goal) as well as extrinsic reasons (i.e., caring about the publicity and good name this brings the business). This difference is important to know because any corporate goal, as socially or societally oriented as it may be, could be pursued for different reasons.

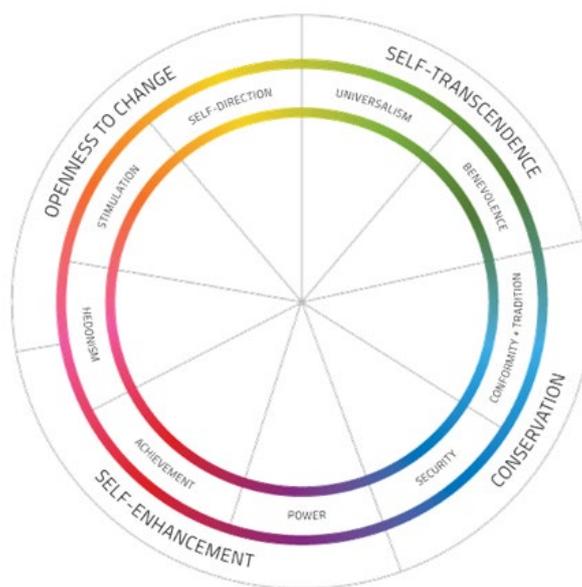
Understanding the different reasons why actors pursue objectives brings us into the realm of values. Values are defined as desired end-goals (Rokeach, 1990), or long-term goals, that are more fundamental or underlying to more concrete or specific sub-goals. Schwartz (1999) has developed and extensively tested a framework that lists the various values that may underlie the behaviour of individuals as well as larger entities (e.g., businesses, political parties, cultures as a whole). **Figure 19** provides an overview of this value framework. Depicting the values on a circle means that there are tensions between values, such that those furthest apart from each other have the highest propensity to conflict with each other. Beyond various sub-goals, we highlight the four higher-order dimensions.

Self-transcendence values are known as values that reflect caring and community, being close-knit, but also embracing more universal equality for everyone and caring not just for other human beings but also for nature. In sharp contrast are self-

enhancing values, which stand for meritocracy and valuing things like individuals' ability to get better in life and acquire more wealth and pay through open-market principles, such as reflected in the American Dream.

Conservative values are more stability-oriented values. These values reflect adhering to conformity and maintaining the status quo. This further manifests as an emphasis on pursuing security and keeping people safe from harm. In sharp contrast are openness-to-change values, which reflect the importance of self-direction, where members of society can choose their own paths and thus have their own definitions of happiness and success.

Figure 19: Schwartz' Value Framework



This value framework is important, because it provides insight into what motivates businesses to engage in certain types of behaviour. While one could assume that all businesses are mainly motivated by achievement and making money, they could just as well—and nowadays ever more—be motivated by other goals, such as providing a healthy and empowering workplace for their employees, caring about social justice and sustainability, as well as contributing to a more secure society. It is important to understand what motivates businesses differently to ensure that any attempt at influence aligns with their values. The more a mode of influence aligns with businesses' pre-existing values, the more likely that firms will pursue their courses of action for intrinsic reasons.

C.4 Leadership approaches

C.4.1 What is leadership?

A long tradition of almost 100 years of leadership research has proliferated a vast variety of definitions of leadership. More than 20 years ago, Rost (1993) listed as many as 221 definitions of leadership based on findings of 587 studies. The large number of different leadership definitions highlights the problem of lacking conceptual clarity, which is still relevant today (Bass & Bass, 2008). In order to take account of this issue, we propose a definition of leadership that results from a broad consensus among researchers and describes the concept as comprehensively as possible. As such, leadership refers to “the ability of an entity to influence, motivate, and enable others to contribute toward effective and successful goal attainment” (House et al. 2002: 5). Four aspects of this definition are particularly relevant. First, the word ability implies that a leadership position by itself does not make for successful leadership. It is rather the behaviour of the leader that informs the outcomes of leadership. Second, the word influence stresses that the task of a leader is to create a motivating influence for any follower, such that the follower fulfils the duties stemming from law or other structural measures. To that end, motivating the follower is a key element to achieving the objectives in question. The reliance on punitive measures,



in contrast, is oftentimes less effective with regard to the objective of influencing followers and bringing them to fulfil their duties on their own accord. Lastly, leadership is not an end in itself but rather aimed at a specific objective. Here, “effectiveness and success” suggests that clarifying and specifying the objectives of leadership is a critical part of any leadership task.

In line with House et al.’s (2002) leadership definition, the object of this study is leadership in the organisational context. More specifically, the present review examines leadership in the public sector (Van Wart, 2013), which entails the relevant foci of political leadership that deals with reforms initiated and driven by political leaders. Where possible, we will compare what is known in the leadership framework with the NSOB framework that highlights different modes of influence (new public management, network governance, public administration, and societal resilience). A comparison with the NSOB framework will allow us to highlight its strengths as well as what it potentially misses from decades of leadership research.

C.4.2 A behavioural perspective on leadership

The research on leadership over the last 100 years covers different levels of analysis. Van Wart (2011) lists five analytical perspectives, which range from a focus on tasks to an emphasis on behaviours and traits to a focus on leadership styles and meta-categories of leadership. The research on leadership styles has strongly influenced the literature in the second half of the last century, resulting in the definition of a vast number of different leadership styles. A widely used example is the transactional-transformational leadership paradigm (e.g., Burns, 1978; Bass, 1985), which was first introduced as a means to describe political leadership. Burns (1978) conceptualized the difference as one of transactional leaders focusing on the exchange of resources and transformational leaders offering a purpose that “transcends short-term goals and focuses on higher order intrinsic needs” (Judge & Piccolo, 2004: 758).

In contrast to the emphasis on leadership styles, the focus on leadership behaviour has the advantage of being less abstract and more detailed. Importantly, behaviour is immediately measurable. This minimizes problems of potential confounding with social desirability, as is often the case with leadership styles, where idealized behaviour is likely to be overstated. Another reason to promote a focus on leadership behaviour is that the latter enables summarizing multiple behaviours to meta-categories with a greater degree of abstraction. As such, we draw on Yukl et al.’s (2002) widely used leadership taxonomy, which in its original form comprises three meta-categories (i.e., task-oriented behaviours, relations-oriented behaviours, and change-oriented behaviours), to which we add a fourth category, compliance-oriented behaviour. The hierarchical structure of the categories implies that political leaders can, for example, use a task-oriented leadership style to first define duties and expectations, and then use a relations-oriented style to motivate organisations to achieve the desired results. Once a relational approach has led to a climate of mutual trust, political leaders can then promote change in organisations. In other words, we advocate a normative framework that ideally combines all four approaches to leadership. While this may not be ideal and, depending on situational circumstances, one perspective may need to be prioritized over the other, a combination of these approaches ensures the benefits we highlighted in the previous section: an ideal combination of intrinsic and extrinsic motivation.

C.4.3 Four approaches to leadership

In this section, we explain the four categories and apply them to the public sector. We build on motivational insights discussed earlier, in that we explain the underlying psychological mechanisms through which (political) leaders can motivate their followers (organisations). Importantly, while each meta-category has a different primary objective, all objectives involve determinants of performance and aim at changing the status quo (Yukl, 2012). Similar to the Schwartz framework, we have adapted the wording of some leadership approaches to better align them with the context of governmental influence. Specifically, we use the terms: transaction-oriented leadership, stakeholder-oriented leadership, vision-oriented leadership, and normative-oriented leadership. Furthermore, leadership studies stretch across different levels of analysis. Leadership has been studied essentially as a multi-level phenomenon (for a recent overview see Basticic et al., 2017), meaning it is not just a function of individual leaders influencing individual followers.

C.4.3.1 Task-oriented approaches: Transactional leadership

The primary purpose of transactional or task-oriented leadership is to accomplish work in an efficient and reliable way (Yukl, 2012). Specific component behaviours include: planning of work-related activities, clarifying task objectives and role expectations, monitoring of performance, and problem solving. The planning of work-related activities entails setting priorities and clearly defining specific objectives, including laying down timetables and responsibilities (Yukl, 2012).



Relevant for the leadership behaviour of clarifying task objectives and role expectations is to convey explicitly to followers what needs to be done, how it needs to be done, and what results to expect. This means that leaders need to allocate tasks, communicate targets and timelines, and explain relevant policies and processes. Once work processes have been identified and communicated, it is important to monitor whether the duties provided are carried out with due diligence. Finally, problem solving means that problems are identified as quickly as possible and measures are taken to prevent recurrence of the problem. These activities are transactional in that they focus on the work being done effectively and efficiently. This approach also operates through rewards, which are often contingent on performance. As such, governmental interventions focused more on financial incentives (such as taxes and subsidies) would fall under this category. Accordingly, there is an intuitive link between transactional leadership styles and more extrinsic motivation. However, it would be a misunderstanding that transactional leadership only serves extrinsic motivation. To the contrary, transactional leadership is also a necessary (but not sufficient) condition for intrinsic motivation. For instance, the government can influence businesses' self-regulatory focus by clarifying to organisations what they need to do in order to enable the task to move in a certain decided direction as well as by monitoring and controlling organisations in order to preserve stability. Consequently, they will focus on responsibilities, regulations, and deadlines.

C4.3.2 Relationship-oriented approaches: Stakeholder leadership

This approach resonates with networking governance or societal resilience. Leaders should use stakeholder- or relationship-oriented behaviours to enhance commitment to the mission (Yukl, 2012). This meta-category entails for behaviours: supporting, developing, recognizing, and empowering. Supporting followers is one of the key concerns of effective leadership and as such constitutes the basis of any cooperative relationship. To that end, it is important to listen and address the needs of organisations, support them during the development of new policies and processes, and signal confidence in the organisations' abilities. Also, recognizing organisational achievements and providing feedback (e.g., in form of an award etc.) in a proactive, specific, and timely manner can take the relationship between political leaders and organisations to the next level. Leaders can also empower organisations by giving them more autonomy and influence (Yukl, 2012), thereby increasing both decision quality and decision acceptance.

Relations-oriented behaviours directly satisfy organisations' need for both autonomy and competence and, as such, enhance the intrinsic motivation of followers. Specifically, strong connections with organisations can be invoked by offering organisations the opportunity to voice their opinion with regard to new policies and processes, ultimately leading to higher levels of follower satisfaction (Derue, Nahrgang, Wellman, & Humphrey, 2011). Moreover, organisations' need for competence is satisfied when political leaders provide organisations with completion-contingent rewards that imply some level of competence (Deci, Koestner, & Ryan, 1999). One specific way to do this is to establish and maintain a strong network with other organisations. For instance, the government can function as boundary spanner by connecting firms with which the government has dyadic relations, thereby enabling the transfer of 'good practices' between otherwise disconnected firms. The strong ties could bind organisations to public policies, as family members would remain connected to their parents or siblings. However, it is important to understand that those ties operate in both ways. It is important to highlight that a sole focus on stakeholder-management will not produce intrinsic motivation, it needs to be balanced by the other approaches.

C4.3.3 Change-oriented approaches: Vision-oriented leadership

Leaders who strive to nurture the growth and development of their followers through: envisioning change, encouraging innovation, facilitating collective learning, and advocating change. It is critical for firms that the objective sought by legislation or other governmental policies is sufficiently clear (Kotter, 1995). Hence, envisioning change is one of the central tasks of political leaders and entails not only developing and defining the respective vision, but also to articulating a clear, appealing vision of feasible organisational behaviours (Yukl, 2012). Furthermore, leaders should encourage innovation by inspiring organisations to look at problems from different perspectives and think outside the box (Yukl, 2012). Leaders facilitating collective learning will encourage the generation and dissemination of novel solutions. Next to developing a vision for change and encouraging innovation, they should also "establish a sense of urgency" (Kotter, 1995: 60) in order to stress/advocate the importance of change.

In terms of modus operandi, leaders frame the situation in terms of gains by establishing a vision for the future and challenging followers not to settle for the status quo. For instance, the government can unfold a vision of transformation towards a carbon-extensive economy in the next decade, so as to inspire firms to radically reduce their greenhouse gas emissions. Consequently, followers are likely to concentrate on "what they aspire to be as they work on tasks they want



to work on, attempting to achieve goals that they perceive they have set for themselves (Kark & Van Dijk, 2007: 511). Organizations' need for competence is addressed by describing a change or implementation of new policies as a matter of pride. Consequently, the emotional attachment of organisations (and their employees) to the new task will be promoted (Katzenbach, 2003). Some caution is warranted here: Leaders have sometimes produced visions that were focused on window-dressing (i.e., not embedded in day-to-day transactions or in interactions with stakeholders), having the vision for the vision's sake. In such cases, visionary leadership is a potential liability for intrinsic motivation, which may be stimulated in the short run but undermined in the longer term.

C4.3.4 Ethics-oriented leadership: Normative leadership

Because of recent scandals evoked by improper behaviours by leadership figures, leadership oriented towards ethical behaviour and compliance with those ethical norms emerged (Hernandez, Eberly, Avolio, & Johnson, 2011). First, ethical leaders should demonstrate ethical values such as honesty, integrity, and altruism (Hassan, Wright, & Yukl, 2014). By demonstrating normatively appropriate behaviours and treating others with consideration and respect (Brown, Trevino, & Harrison, 2005), they establish themselves as ethical role models for other people. Ethics-oriented behaviours also involve the active promotion of ethical behaviour among followers by clearly communicating ethical standards and expectations and holding followers accountable for ethical and unethical conduct (Brown & Trevino, 2006). For instance, the government can lead by example by embracing and enforcing strong ethical norms in the performance of its own tasks, nudging or otherwise enticing firms to emulate such norms.

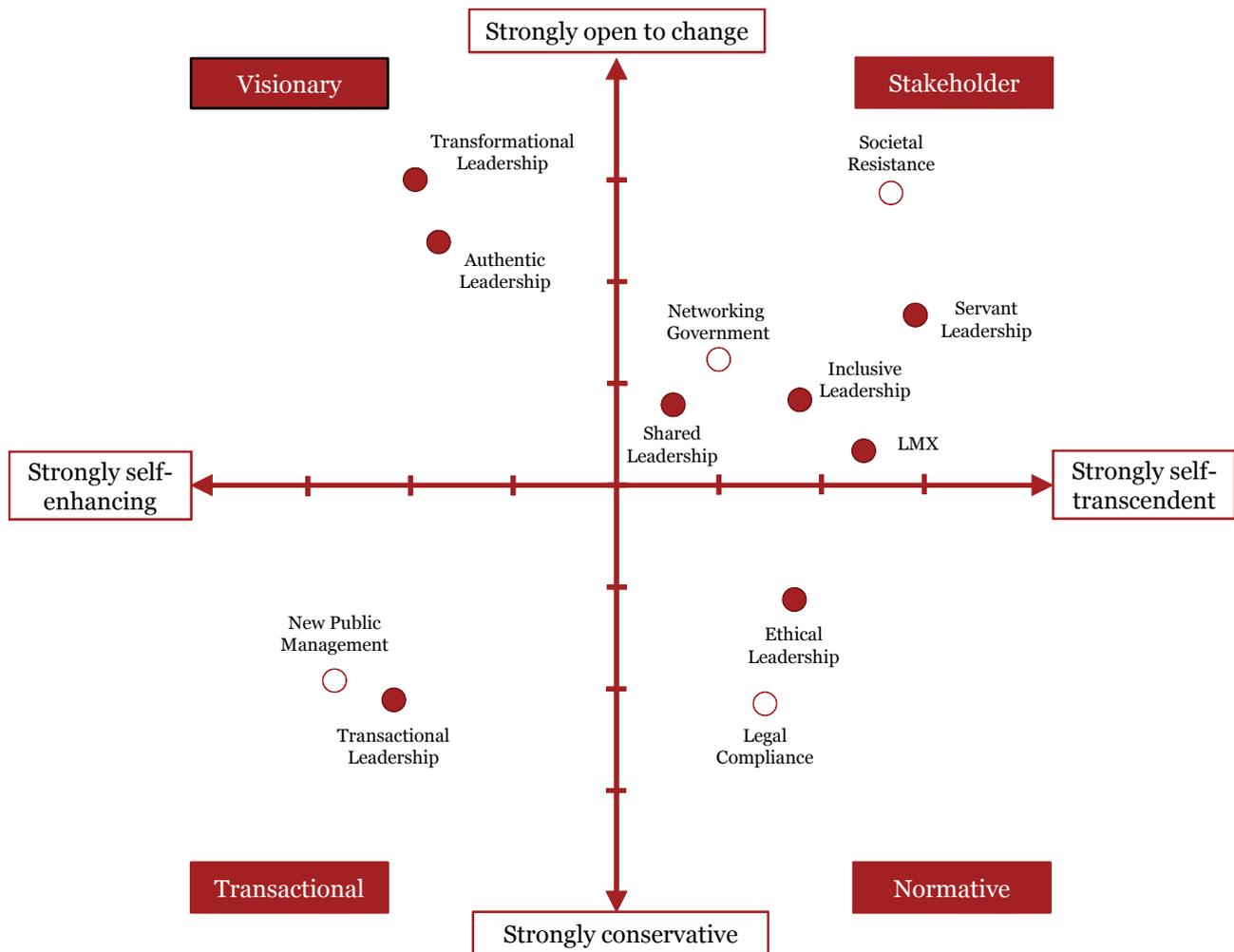
Ethics-oriented leadership has the potential to enhance followers' intrinsic motivation, for two reasons (Yidong & Xinxin, 2013). First, ethical leadership changes organisation members' view about the nature of their duties by incorporating job impact and autonomy in their work. Organizations and their members will share the agreement that their work has great impact, thereby encouraging organisational members to be more interested in their work. Second, followers will be more likely to display willingness to cooperate for the good of society (Avolio et al., 2004), because ethical leadership behaviours instil high moral standards, integrity, and altruism among followers (Yidong & Xinxin, 2013). Consequently, followers may become more concentrated on their duties, setting aside the "competition for external rewards" (Yidong & Xinxin, 2013: 446). Finally, compliance-oriented leadership can also produce more extrinsic motivation when legality is decoupled from reality. Again, this requires a combination with the other leadership approaches.

C.5 Conclusion

Although each of the four meta-categories aims at different primary objectives, it is important to note that there are significant spillover effects, not only within but also between categories of behaviour (Yukl, 2012). We therefore suggest that political leaders should employ all four (i.e., transaction, stakeholder, visionary, and compliance) leadership approaches in order to maximize positive outcomes such as increased organisational cooperativeness. Following the rationale that 'the whole is greater than the sum of the parts' (Kaplan, 1988), political leaders must not only clarify task objectives and monitor work, but also support and empower organisations, advocate change, and manage ethics. The full benefits of governmental influence on organisations can only be reaped if each dimension of leadership behaviour is sufficiently covered.

Figure 20 integrates all of the previous elements. This figure maps existing leadership styles (including the four behavioural approaches mentioned earlier) onto Schwartz' value framework. Indeed, leadership styles differ in the values that they emphasize and thus the values underpinning their leadership. Some approaches are more self-transcendent, others are more self-enhancing, some geared towards change while yet others aim at stability. Importantly, one leadership approach is not superior to others. Indeed, government interventions need to align with all four approaches to leadership, and are thus equal in terms of values, even though policies could be oriented more towards one particular approach given relevant contingencies, such as characteristics of focal sector or targeted organisational archetype. For instance, the hospitality industry is known to be more relational and the healthcare sector is relatively self-transcendent and change-oriented. In fact, Schwartz' value framework has been successfully applied to different cultures and sectors, highlighting its wide applicability. Therefore, governments can tailor this generic framework to specific corporate characteristics and public policy domains.

Figure 20: Leadership Orientations



Source: Leroy, H. (2018).



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D. Literature review on insights from behavioural literature



In this literature review, we provide an overview of key insights from literature on organisational psychology and sociology. We present the identified insights as follows:

- We start off with a description of the current insights on how the behaviour of business organisations can best be analysed and understood;
- We then proceed to describe how organisational change is currently understood in academic literature;
- Subsequently, we pay attention to current academic thought on the role of managers, leadership and motivation.

We have based our selection of literature on a search of the academic literature on the subject when we developed our proposal for this study, and further expanded the selection based on references and suggestions provided to us by experts during the course of the study. In the text below, we discuss the seminal papers and books at the foundation of each relevant strand of academic discourse, without referring to all subsequent papers. In each paragraph, all insights are from the source referenced in that paragraph, unless the text specifies otherwise. **Table 8** on page 102 provides an overview of the literature discussed below, classifying the type of academic literature in the right-hand column.

D.1 Understanding business behaviour

In this section, we describe current academic insights on how the behaviour of business organisations can best be analysed and understood. We touch upon rational choice theory; the transaction cost perspective; the observability of structural, hierarchical and behavioural factor; the importance of understanding interdependency between stakeholders; isomorphism as an important aspect of business behaviour; and the differences between hierarchical and network organisations.

A traditional way of understanding business behaviour is through the lens of rational choice (Vaughan, 1998). The rational choice approach postulates that calculating managers steer business behaviour by weighing decisions according to a market-informed cost benefit analysis. A competitive business environment forces businesses to optimise their business model with maximising profit as the ultimate goal. In this situation, government intervention follows a sticks-and-carrot approach, with subsidies or other financial incentives to reward positive behaviour, and penalties and other measures to deter negative behaviour. An important remark is that, even within the rational choice model, norms and institutions can constrain behaviour.

A similar approach towards understanding business behaviour is using a transaction costs perspective. This transaction costs approach argues that when making a decision on how to structure internal governance, a business considers the transaction costs and chooses the option that minimises these costs (Williamson, 1981). This would apply to all kinds of decisions, be it about the overall structure of the enterprise, the operation parts, or about the manner in which human assets are organised. Transaction costs can include many types of costs, such as drafting contracts for a transaction of services, the information cost of finding the right price, or transportation costs. This approach fits better with businesses than non-commercial organisations.

More recently, researchers argued that there are both structural factors and behavioural factors that influence business behaviour (Theodorakopoulos et al., 2015). Structural factors are more easily observable and consist of hierarchy, size and sector. Hierarchy plays a role, since there is evidence to suggest that flatter structures are more creative, while hierarchical structures are more risk-averse and process-driven. Size is relevant because smaller organisation value economic factors highly and reputation less so, while SMEs are more risk-averse. Finally, the sector in which a business operates should be considered as well, because e.g. public sector organisations are less concerned with seeking competitive advantage than businesses.

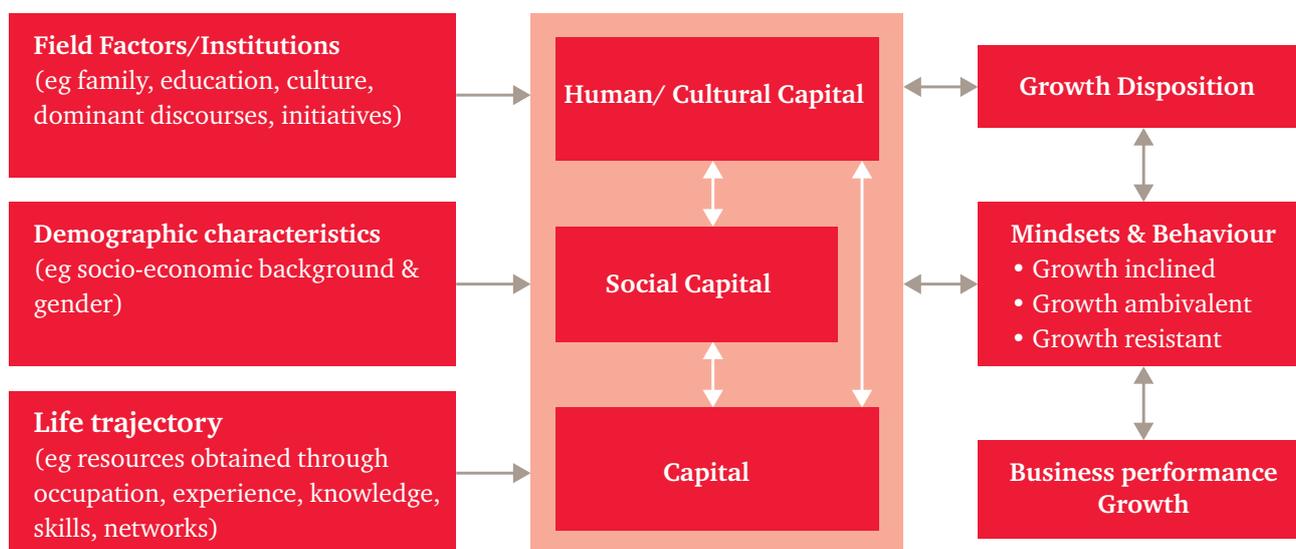
According to a Rapid Evidence Assessment, conducted by the UK government, behavioural factors are more difficult to observe and consist of three drivers, namely cognitive drivers, social drivers and cultural drivers (Wilson et al., 2016). Cognitive drivers are the ways in which businesses' decision making is partly rational and partly (predictably) irrational,

and how businesses like individuals use heuristics and satisficing strategies and are susceptible to groupthink¹³⁰ and other biases. Social drivers relate to the way in which groups make decisions, and how peer influence can occur between groups (e.g. competition). Finally, cultural drivers are the shared group norm (organisational culture) that shape a business's behaviour.

These structural and behavioural factors not only have an impact on the behaviour, but also on the business performance of Small and Medium-sized Enterprises (SMEs) (Theodorakopoulos et al., 2015). **Figure 21** provides a conceptual framework of the sociology of enterprises, where mindsets and behaviour are a crucial mediating factor between growth disposition and actual performance. Interestingly, the mindsets and behaviour of business owners is also shaped by structural factors. This model highlights the importance of understanding and shaping the dispositions of business owners next to policies that target structural factors that improve SME success. According to the authors, this conceptualisation suggests that:

- “owner-managers’ disposition to growth is related to their personal experiences and their possession of, or ability to access, different forms of capital and their ability to convert one form into another form of capital;
 - in this logic, contextual factors, demographic characteristics, as well as knowledge, skills, experience and relationships gained through life impact on the possession, access and convertibility of different forms of capital and disposition to growth; and
 - disposition to growth is associated with certain mindsets, which tend to be manifest in behaviours relating to management practice that shape business performance and growth”.
- (Theodorakopoulos et al. (2015), page 5)

Figure 21: A model of the sociology of enterprise



Source: Theodorakopoulos et al. (2015)

In their report, EY et al. (2016, paragraph 3.2) explore the way businesses make decisions. An important element in this process is the Decision Making Unit (DMU), which is the group of individuals or the single individual making the strategic decisions within a business. Given its strategic role, the DMU is the most likely target audience within the organisation for government intervention. The DMU does not operate in isolation, however, and the power distribution – the way the power is distributed within an organisation – has a significant role in the way the DMU operates. A select group of persons – the dominant coalition – has substantial influence on key decisions. This dominant coalition is influenced by the corporate

¹³⁰ Much has been written about the role of groupthink in group decision making. According to the seminal work on the subject by Irving Janis, groupthink has three main antecedents: high group cohesiveness, structural faults (such as hampered communication with others outside the group and a lack of impartial leadership), and the situational context (such as recent failures, difficulties in the decision-making process and time pressure). We do not go in to the topic of groupthink further here, as many of its antecedents and the actual presence of groupthink are very difficult to assess by outsiders, such as policymakers. For more information, see e.g. Janis, I. L. (1971). Groupthink. *Psychology Today*. 5 (6): 43–46, 74–76 or Park, W.-W. (1990). A review of research on Groupthink. *Journal of Behavioral Decision Making*. 3 (4): 229–245.

culture in its conceptions, composition and size. The dominant coalition also receives resistance by internal and external stakeholders ('countervailing power').

An important part of EY et al.'s model is the consideration of the internal context within which decisions are made, and understanding the rationale behind businesses' decisions to change their behaviour. **Figure 22** illustrates how within an organisation groups of people relate to one another. It distinguishes four organisational cultures based on two dimensions: degree of corporation and distance of power. These two dimensions depend heavily on the DMUs.

Figure 22: Organisational cultures along two dimensions



Source: EY et al. 2016

EY et al. (2016, paragraph 3.3) have theorised that businesses are more likely to take automatic and intuitive, or system 1, decisions, when the relative importance for the business is low. More conscious, System 2, decisions are expected to emerge when the importance for the business is high.

When discussing the drivers of business decision making, EY et al. also refer to the ORGANISER approach (Cabinet Office, 2016). The ORGANISER framework (presented in section 2.1.1 of this report) consists of 3x3 dimensions that influence the behaviour of businesses:

- **External dimensions:** operating environment, relationships, and gaining advantage & reputation;
- **Internal dimensions:** aims, norms & organisational culture, and internal structures;
- **Decision-making processes:** strategic processes, estimation, and relying on trusted resources.

According to EY et al.'s model, decision making in businesses does thus not occur in isolation but is mediated by environmental factors. Factors such as culture, power distribution and the existence of countervailing power in both the business and the sector are important contextual aspects in the organisation's decision making. These factors, which are also included in the ORGANISER report, can lead to success or failure of government interventions. The organisational structure is an important factor as well, which is closely related to the size of a business. The EY report makes the theoretical statement that large corporations are more sensitive for governmental actions, because of the larger impact (both positive as negative) it can have. This implies that success factors and failure factors may be affected by other factors, such as the size of the organisation (EY et al., 2016: pages 38, 45 and 46).

We note here that telephone interviews with policymakers in the UK Government (for whom the ORGANISER report was developed) seem to indicate that thus far, no interventions have been developed specifically to apply the insights the report offers. One interviewee indicated that while ORGANISER offers a comprehensive framework and is well known within the UK Government, it lacks a translation to practical applications, which could be a barrier to applying its insights. As a result, empirical support for the ORGANISER approach is not known to us at this time.

Business behaviour also depends on the behaviour of other businesses. Organizations do not act and behave in isolation, but their behaviour relies on engagement with stakeholders ranging from clients and suppliers to social partners and the government (Pfeffer and Salancik, 2003). Businesses encounter interdependence whenever they do not fully control all conditions necessary for achieving an action or obtaining a desired outcome. Because of this interdependence, behaviour is a result not just of the intentions and capabilities of the organisation itself, but also of the intentions, capabilities, and relative



position of the organisations on which it depends. Trying to change an business behaviour thus requires understanding the organisation's interdependences and modifying actions accordingly.

In line with the argument on interdependence, isomorphism is an important aspect of business behaviour. Isomorphism can be understood as 'the similarity in processes or structures between multiple organisations as a result of imitation or independent development under similar constraints' (DiMaggio et al., 2000). Two forms of isomorphism are important, namely institutional and competitive isomorphism. Institutional isomorphism has three mechanisms capable of initiating changes:

1. Force, such as regulation from the government.
2. Imitation of businesses. Organisation A wants to look like organisation B, due to the competitive advantage organisation B has in comparison with organisation A.
3. Normative mechanisms, which in the context of the EZK-research means that businesses are conforming themselves to the existing common norms and values given by the society.

Competitive isomorphism works through the actions of the system based on reason. Its main mechanism is the competition in the free market. This notion of isomorphism is in tension with the notion of strategic choice, which states that businesses have considerable discretion to design their internal structures. There is tentative evidence to suggest that while isomorphism does have an influence; businesses are only loosely coupled to their environment (Oliver, 1998). This implies that the influence of competitive isomorphism on a company's strategic decisions is relatively small.

A final point in understanding business behaviour is highlighting the differences between hierarchical and network organisations. Hierarchical organisations and network organisations operate differently and have different decision-making processes (Powell, 2003). Typically, hierarchical organisations emerge when a firm internalises transactions and resource flows that used to be conducted in the marketplace. In this setting, management uses a top-down approach, divides tasks and establishes a system of order. Network modes, on the other hand, appear when networks of individuals engage in mutually supportive and reciprocal actions. These networks can emerge within and between firms. These network organisations are more flexible and cooperative in nature, and have a more decentralised form of decision making. Examples of network organisations in the Netherlands are Buurtzorg Nederland, franchise organisations such as McDonald's or Bruna bookstores, and industrial clusters such as Brainport and Chemelot. Self-employed entrepreneurs may also cooperate in networks, for example in open-source software development or the creative industry.

D.2 The role of managers, leadership and motivation

In this section, we describe current academic thought on the role of managers, leadership and motivation. We touch upon cognitive simplifications; pitfalls to change; manager's interpretation of social reality; differences in decision making between managers and entrepreneurs; the importance of situational factors; understanding how teams make decisions; and motivation as a function of expectancy and values.

In businesses, managers are often responsible for the most important decision making. Managers regularly engage in cognitive simplifications when making strategic decisions. A review of the literature, including both laboratory and field experiments, finds that managers use cognitive simplifications, such as the representativeness bias, during the three phases of strategic decision making (problem identification; generation of alternatives; evaluation and selection) (Schwenk, 1984). Strategic decisions are a particular form of decision making, and are characterized by their lack of structure, novelty, complexity and open-endedness. This creates uncertainty and ambiguity for managers. To deal with this, managers engage in simplification processes that can be functional in the complexity of strategic decisions. During the problem identification, simplification could provide stability in business strategy. If there is only one politically viable strategy, single outcome calculations may be more efficient. Finally, during the evaluation phase, simplification could help successful implementation by increasing manager's confidence in their strategy and commitment to it.

While decision making and change management are among the main tasks a manager has, he or she should be wary of some pitfalls (Kotter, 2002). The most frequently made mistake concerns the vision. This can be having a lack of vision, poorly communicating the vision, or neglecting the removal of obstacles the new vision faces. Other mistakes include lacking the



feeling of urgency surrounding organisational change, failing to create a coalition for change, the absence of a systematic planning and creation of short-term wins, calling out the victory too fast, and lastly, the failure of not anchoring the changes in the organisational culture. In order to realize a proper organisational transformation the eight mistakes should be solved by taking proactive steps: regarding vision these include creating, communicating and empowering others to act on the vision, establishing a sense of urgency, forming a strong leading coalition, planning and creating short-term wins, consolidating improvements and producing more changes and lastly, and institutionalising new approaches.

The manager's interpretation of reality also plays an influential role. The manager's interpretation of the organisation's environment influences both the appearance and the behaviour of the organisation (Jackall, 1988). The managers of large businesses experience the reality in their own way, which influences their routine of working. Furthermore, the managers are very capable of manipulating their environment, causing the idea that they are the figurehead of the organisation and the obedient position of employees.

While there are many similarities between entrepreneurs and managers in large businesses, both groups show differences in their decision making, with entrepreneurs being more susceptible for biases and heuristics in their decision making than managers (Busenitz and Barney, 1997). This finding is based on research directly comparing both groups. Under conditions of environmental uncertainty and complexity, these biases and heuristics can actually be an effective way to guide decision making. In fact, without the use of biases and heuristics, entrepreneurs might be too hesitant to overcome initial barriers and make entrepreneurial decisions, since the window of opportunity would often have closed by the time all necessary information is available to make a more rational decision. Moreover, overconfidence might help the entrepreneur to be persuasive and more decisive in implementing decisions. In management settings, however, these biases could cause significant errors and lead to detrimental results. The use of biases and heuristics as simplifying mechanisms can thus be useful in some settings, but hurtful in others.

Behaviour is a result not only of individual but also of situational factors. Behaviour, both at the individual and at the organisational level, depends on specifics and particularities of both the individuals involved and the specific context in which the behaviour takes place (Terborg, 1981). How people behave is a result of both personal effects and situation effects. People vary in cognition, abilities and motivation, and situations vary in cues, rewards and opportunities, both leading to distinct situations. Hence, behaviour can be understood as a dialect between the individual and the situation, where the individual is an intentional and active agent in the interaction process, both changing and being changed by the situation. Interventions to change behaviour thus need to understand and consider not only the individual but also the situation in question.

Because many decisions are made in a team context, understanding how teams make decisions is relevant as well. Teams in command and control situations are susceptible to social contextual and group biases. Decision making in command and control teams (firefighters, military, medical emergency teams), at both the strategic and operational level, has a strong potential for being biased. Reviewing the literature, research suggests this bias could manifest itself in the form of groupthink, group polarization, group escalation of commitment, and false consensus (Jones and Roelofsma, 2000). According to the authors, these biases are particularly likely to emerge in situations where decisions are important, novel, taken under time pressure, and involving high levels of uncertainty. This statement is not based on empirical evidence, but rather a call for future research.

Next to the individual decision maker and the team that makes a decision, successful change often relies on employees' motivation (Berson et al., 2015). Leaders can motivate their employees effectively if they construct and communicate their messages in the right way. Leaders can do this through vision communication, where they centre their message on the desirability of actions and outcomes, using an abstract and super-ordinate vision for organisational members. Alternatively, leaders can use goal setting, focusing on the feasibility of actions and outcomes, and employing more concrete and subordinate goals for organisational members. Which of the two motivational approaches is more effective depends on the attributes of the message (concrete vs. abstract) and the attributes of the situation (social and temporal distance between leaders and the ones they lead).

Motivation is a function of expectancy and values. Expectancy-value theory states that an individual's motivation is a function of expectancy (belief effort results in performance), instrumentality (performance leads to outcome), and value



(the outcome has a positive or negative value) (Fishbein and Raven, 1962). This theory predicts motivation is high when expectancy and instrumentality are high, and values are positive. An individual only exerts effort if motivation is high. In a group context, two extra steps are added: dispensability (relation between individual performance and group performance) and evaluability (relationship between group outcome and personal outcome). Only when dispensability is low and evaluability is high, an individual will exert effort in a group context. It should be noted that expectancy-value theory only explains motivation when people are self-interested and do not enjoy their tasks. That means that meeting the conditions this theory sets are only relevant if external influencers (such as the government) wish to influence behaviour that DMUs are not intrinsically motivated for.

D.3 Understanding organisational change

In addition to the drivers of organisational behaviour, we briefly discuss organisational change below. We touch upon the linkages between change drivers and the organisational change process; interaction effects with institutional surroundings; and the process of debiasing.

Changing business behaviour from within the organisation requires a change vision and change drivers. Organisational change is a non-linear, iterative and complex process, involving both intended and unintended outcomes (Whelan-Berry and Somerville, 2010). Organisational change consists of five main steps: developing a clear and compelling vision (individual level); moving the change vision to the group level; individual employees adapting to the change vision; sustaining the momentum of the change implementation; and finally implementing the change. For change to be successfully implemented, leaders can use change drivers to facilitate change. There are at least seven change drivers, including establishing a change vision, change related training and aligned human resources practices. These change drivers facilitate employees' understanding of the desired change, hence improve the changes of successful implementation and institutionalisation.

When considering government interventions, it is important to note that the impact of reform is dependent on interaction effects within the type of capitalism in which the reform takes place (Hall & Soskice, 2003). There are different varieties of capitalism, most notably liberal market economies and coordinated market economies, that are distinguished by the way in which firms operate with each other and their environment. There are persistent cross-national differences in institutional contexts and practices, and these differences are persistent despite forces of convergence, such as liberalization. These institutional contexts provide idiosyncratic interaction effects. Similar reforms will produce different outcomes depending on the type of capitalism in which the reform is implemented.

A final article goes into the process of debiasing. While biases can be useful, as the last section highlighted, in other cases they can lead to disastrous outcomes. This is why debiasing strategies could be valuable. Debiasing is the active process of decreasing biases in decision making by switching between intuitive (system 1) and analytical decision making (system 2) at the right moment (Croskerry et al., 2013). This requires awareness, a willingness to change, and sufficient knowledge of solutions and strategies. Cognitive and affective biases compromise the process of decision making. These biases predominantly influence the fast intuitive processes of 'System 1' that typically drive decision making. System 1 processes are fast, easy and often effective, but also more susceptible to biases than the more analytical, slower and more energy-intensive System 2 processes. Biases in decision making are associated with heuristics to decrease the costs of the decision-making process, and are partly innate and a result of evolution, and partly acquired in the course of development and within the working environment. Furthermore, contextual factors could increase **the susceptibility to these biases, such as fatigue, sleep deprivation and cognitive overload**. All debiasing strategies feature a deliberate move from System 1 to System 2 processes to consciously examine potential biases.



D.4 References

Table 8 gives an overview of the literature referenced in the text above. For each reference, the type of evidence provided for its claims is classified in the right-hand column of the table.

Table 8: Classification of behavioural literature references to type of evidence

Reference	Type of evidence
Berson, Yair, Nir Halevy, Boas Shamier and Miriam Erez. 2015. "Leading from Different Psychological Distances: A construal-level Perspective on Vision Communication, Goal Setting, and Follower Motivation." <i>The Leadership Quarterly</i> 26: 143-155.	Theory building
Busenitz, Lowell W., and Jay B. Barney. 1997 "Differences between entrepreneurs and managers in large organizations: Biases and heuristics in strategic decision-making." <i>Journal of business venturing</i> 12, no. 1: 9-30.	Empirical
Cabinet Office. 2016. "ORGANISER – A behavioural approach for influencing organisations." Available at https://www.employment-studies.co.uk/resource/organiser-behavioural-approach-influencing-organisations . Accessed last, June 29, 2018.	Theory building
Croskerry, Pat, Geeta Singhal, and Sílvia Mamede. 2013. "Cognitive debiasing 1: origins of bias and theory of debiasing." <i>BMJ Qual Saf: bmjqs-2012</i> .	Review
DiMaggio, Paul J., and Walter W. Powell. 2000. "The iron cage revisited institutional isomorphism and collective rationality in organizational fields." In <i>Economics Meets Sociology in Strategic Management</i> , pp. 143-166. Emerald Group Publishing Limited.	Theory building
Ernst and Young (EY), Jan Potters, Robert Dur and Stephanie Rosenkranz. 2016. "Applying behavioural insights in business." Available (in Dutch) at https://www.rijksoverheid.nl/documenten/rapporten/2017/01/11/rapport-gedragsbeïnvloeding-bij-bedrijven . Accessed last, June 29, 2018.	Theory building
Fishbein, M., & Raven, B. (1962). The AB scales: An operational definition of belief and attitude. <i>Human Relations</i> , 15, 35-44.	Empirical
Hall, Peter A., and David Soskice. 2003. "Varieties of capitalism and institutional complementarities." In <i>Institutional Conflicts and Complementarities</i> , pp. 43-76. Springer, Boston, MA.	Empirical
Jackall, Robert. 1998. "Moral mazes: The world of corporate managers." <i>International Journal of Politics, Culture, and Society</i> 1, no. 4: 598-614.	Empirical
Jones, Paul E., and Peter HMP Roelofsma. 2000. "The potential for social contextual and group biases in team decision-making: Biases, conditions and psychological mechanisms." <i>Ergonomics</i> 43, no. 8: 1129-1152.	Review
Kotter, John P. 2012. <i>Leading change</i> . Harvard business press.	Theory building
Powell, Walter. 2003. "Neither market nor hierarchy." <i>The sociology of organizations: classic, contemporary, and critical readings</i> 315: 104-117.	Theory building
Oliver, Christine. 1998. "The collective strategy framework: An application to competing predictions of isomorphism." <i>Administrative Science Quarterly</i> : 543-561.	Empirical
Pfeffer, Jeffrey, and Gerald R. Salancik. 2003. <i>The external control of organizations: A resource dependence perspective</i> . Stanford University Press.	Theory building
Schwenk, Charles R. 1984. "Cognitive simplification processes in strategic decision making." <i>Strategic management journal</i> 5, no. 2 : 111-128.	Review
Terborg, James R. 1981. "Interactional psychology and research on human behavior in organizations." <i>Academy of Management Review</i> 6, no. 4: 569-576.	Theory building
Theodorakopoulos, N., Hart, M., Burke, G., Stephan, U., Braidford, P., Allinson, G., Houston, M. and Jones, S. 2015 "Sociology of Enterprise." BIS Research Paper 238.	Theory building
Vaughan, Diane. 1998. "Rational choice, situated action, and the social control of organizations." <i>Law and Society Review</i> : 23-61	Theory building
Whelan-Berry, Karen S., and Karen A. Somerville. 2010. "Linking change drivers and the organizational change process: A review and synthesis." <i>Journal of Change Management</i> 10, no. 2: 175-193.	Theory building
Williamson, Oliver E. 1981. "The economics of organization: The transaction cost approach." <i>American journal of sociology</i> 87, no. 3: 548-577.	Theory building
Wilson, Sjally and Silvia Sonderegger. 2016. "Understanding the Behavioural Drivers of Organisational Decision-Making. Cabinet Office.	Theory building

E.1 Key findings case study 1 - Discount Sustainable Ships

This case study report describes the way in which the Port of Rotterdam influences organisational behaviour through a Discount for Sustainable Ships (KDS). We describe the goal of introducing the discount for sustainable ships, the parties involved, and the specific behavioural change mechanisms in action. We also try to shed some light on the effectiveness and impact of the practice of offering these discounts, and the success factors and barriers associated with influencing organisational behaviour through the discount for sustainable ships.

E.1.1 Goal of the Discount for Sustainable Ships

The Port of Rotterdam aims to mitigate climate change while at the same time ensuring that the port area continues to make a major contribution to the Dutch welfare and employment.¹³¹ The Port of Rotterdam places a high priority on environmental performance of docking vessels

One of the most prominent sectors within the port is the shipping industry. A significant contribution towards reducing harmful emissions is expected from companies in this sector. To provide an incentive for this, the Port Authority offers the owners of sustainable vessels discounts on port dues based on their ranking on the Environment Ship Index and whether or not they have achieved a Green Award. Shipping companies can choose to apply for an ESI rating or a Green Award, and with these, they can become eligible for the discounts.

Environment Ship Index (ESI) – This index indicates vessels' environmental performance in terms of emissions of nitrous oxides (NO_x), sulphur oxides (SO_x) and carbon dioxide (CO₂). Ocean-riding vessels arriving in Rotterdam with an ESI score of 31 points or more are rewarded with a 10% reduction on the gross tonnage portion of the port fees. The discount is doubled if the vessel also has a good score on the ESI NO_x index. The Port of Rotterdam established the ESI discount system for clean vessels together with other Northwest European ports, under the partnership name of the World Ports Climate Initiative (WPCI).

The Green Award – Vessels with oil, liquefied natural gas, or product tankers with a load capacity of 20.000 tonnes or more, will receive an additional 6% seaport fee discount if they have a Green Award.¹³² Vessels and shipping companies can earn the Green Award if they make additional investments in the safety and quality of their vessel and crew. This certificate is issued by the independent Green Award Foundation.

E.1.2 Parties involved

In this section, we describe the most relevant parties involved with the Discount Sustainable Ships. For each party we briefly describe their role within the system of discounts and the contribution they make. We specifically describe ships and ship companies, World Ports Climate Initiative, the Green Award Foundation, and the Port of Rotterdam.

¹³¹ <https://www.portofrotterdam.com/en/news-and-press-releases/clean-vessels-real-discount>

¹³² It is not entirely clear how these discount rates compound, e.g. if they could result in an aggregate discount of 26% or 27.2%



Shipping companies	All companies in the shipping industry are expected to deploy sustainable, clean vessels. In order to encourage them to sail vessels that in fact are sustainable and clean, they are incentivised through a discount on port dues.
The Port of Rotterdam	The Port of Rotterdam is Europe's largest seaport. The port aims to be the leading port for sea-going vessels, to its intermodal connections and the 1.150 employees. The Port of Rotterdam awards discounts on port dues to ships that are eligible through the Green Award and the ESI rankings. The Dutch government is one of the large shareholders of the Port of Rotterdam.
The World Ports Climate Initiative	The World Ports Climate initiative has developed the Environment Ships Index (ESI), used to determine ships eligible for discounts. 55 ports from all over the world are partnered in the World Ports Climate Initiative (WPCI) to work together in reducing the threat of global climate change. They are involved in creating support for the non-binding environmental performance systems among the world's ports and are part of the International Association of Ports and Harbours (IAPH). All are committed to reduce gas emissions while continuing their role as transportation and economic centers where goods across oceans and within harbours are moved.
The International Maritime Organisation	The standards on environmental performance set by the International Maritime Organisation (IMO) and its members form the basis on which WPCI continues. The IMO is a specialised organisation of the United Nations and standard setting authority for safety, security and environmental performance of international shipping. The IMO has currently 174 member states (including the Dutch government), 3 associate members, 79 non-governmental organisations (including the IAPH) and 64 intergovernmental organisations.
The Green Award Foundation	The Green Award Foundation, an independent non-profit organisation, provides the conditions under which vessels can be audited by their certificate holders. The audit is based on the set of international standards in cleanliness and safety to benefit the marine environment and cleaner seas. In addition, the Green Award Foundation approaches authorities and industries in all seaports to create a platform for further growth of the number of incentive providers for the Green Award.

E.1.3 Behavioural change mechanism

In this section we describe the behavioural change mechanism at work with the Discount Sustainable Ships (KDS). We first describe the outlook of the typical decision-making unit that the KDS targets and the key stakeholders in their operating environment. Subsequently we describe the specific incentives and stimuli that the KDS delivers to the decision-making unit within target companies.

E.1.3.1 Decision-making unit

The decision-making unit is understood as the group of individuals that effectively makes important decisions that influence organisational behaviour. This group may include directors, aspect managers, line managers, supervisory boards, individual workers, and others. The make-up of this group differs across companies, although similar archetypical formations may be found for specific company types.

The KDS targets small, middle, - and large sized companies in the shipping industry. The discount on offer attempts to influence the behaviour of companies from two archetypes:

1. Large multinational corporations;
2. Small and medium-sized enterprises.

Large, multi-national fleet operators

The KDS discounts typically target large multinational companies in the shipping industry. Within these companies, high-ranking managers responsible for a specific domain or aspect within the company typically dominate the decision-making unit. Although final say is reserved for the board of the company, these managers have significant control over operational and tactical decision-making, and over the preparation of strategic decisions made at board level.

In some cases, other managers within the company may share the values of the campaign and attempt to influence organisational decision-making to improve the environmental impact of fleets of vessels. These individuals effectively can serve as change agents within the decision-making unit.

The members of such a decision-making unit typical for the large multinational companies targeted by the system of discounts are influenced by shareholders, regulators, labour unions, their clients, their suppliers, and their peers.

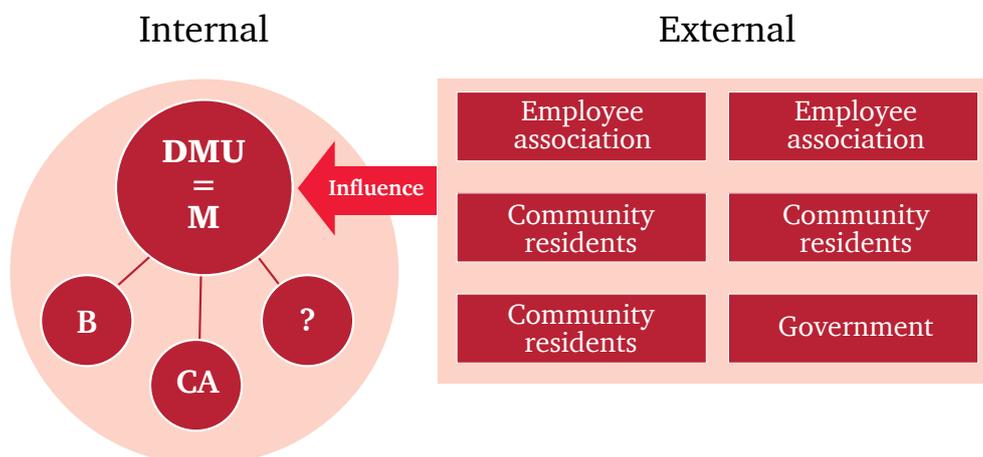
Shareholders – Large, multinational fleet operators typically tend to hold shareholder interests in high regard, focussing on the bottom line of their company. Consequently, a discount on reoccurring operational expenditures such as port dues are relevant to shareholders of these fleet operators. Through their formal power within a company, shareholders influence the decision making of large, multinational fleet operators.

Clients and suppliers – Clients and suppliers of large fleet operators may use the Green Award and the ESI rankings associated with the discounts to determine preferential fleet operators they choose to do business with. They may consider the absence of a Green Award or a low ranking on the ESI charts as reasons to forego business relations with specific operators, or as reasons to charge different rates or pay less for shipping services respectively.

Peers – Large fleet operators may hold up their Green Award or their high position on the ESI ranking as proof of their advanced and superior fleet of vessels. This can exert pressure on other large operators to improve the environmental impact of their fleet in order to also obtain a Green Award and climb the ladder of the ESI ranking.

The influence that regulators and labour unions have on decision-making within large, multi-national fleet operators is not leveraged through the system of discounts. They play no effective role in this interaction between the port authority and the shipping companies.

Large, multinational fleet operator



M = High-ranking Managers; **B** = 1- or 2-tier board; **CA** = Change Agent; **?** = other influencers

Small and medium-sized operators of vessels and fleets

The system of discounts typically also targets SMEs that operate vessels and fleets. Within these SMEs, the decision-making unit typically is dominated by the company's director or the board of directors, who play a strong and often-times decisive role in company decision-making. On matters that relate to the environmental impact of vessels and fleets, a dedicated sustainability manager or an operational manager who is also responsible for environmental impact typically supports the director or board of directors. In some cases, other members of the company might take interest in sustainability-related matters within the company. These individuals can serve as change agents who encourage implementation of energy-saving

measures.

Members of the typical decision-making unit in companies targeted with the system of discounts are influenced by the values of their company and their employees, by actors within their value chain, and by their financiers.

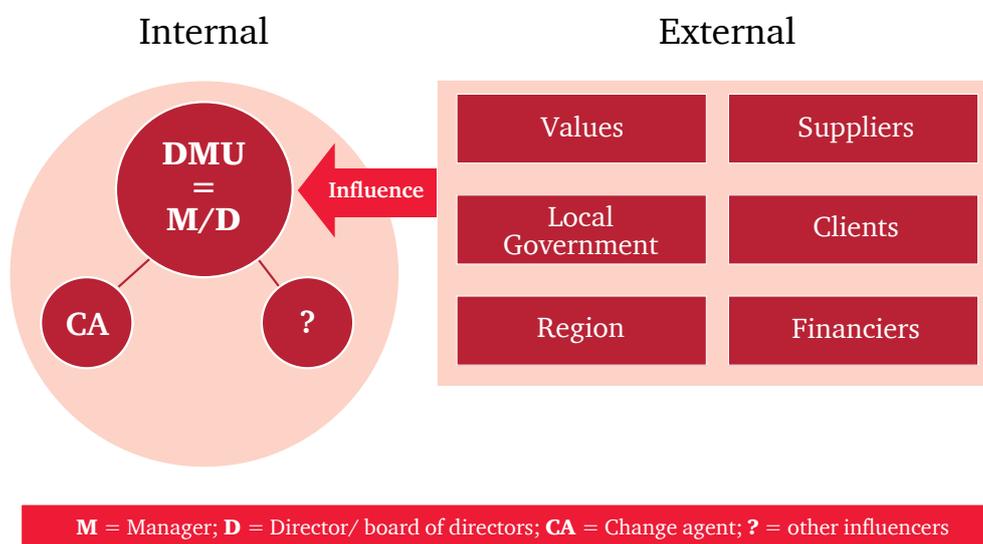
Organisational values – The values of their company and their employees influence the decision-making unit through formal and informal communication, consultation and deliberation within the company. In small and medium-sized operators of vessels and fleets, directors, managers and other workers typically work in relatively close proximity to one another compared to large corporations, financial institutions or government agencies. As a result, interaction may be expected to be more frequent and with less thematic constraints, and with more impact on company decision-making.

Value chain actors – Small and medium-sized operators of vessels and fleets typically depend for a good part on their suppliers and their clients for their commercial impact in the market. Decisions and preferences on the side of suppliers and clients can influence organisational decision-making, particularly of SMEs that have relatively limited market power.

Financiers – Small and medium-sized operators of vessels and fleets typically are in close contact with their financiers (e.g. their banks and other credit suppliers) to monitor and discuss working capital and investment opportunities. Through their decisions and expressed preferences, financiers can have direct impact on the decision-making of these SMEs on matters of sustainability and environmental impact.

The influence that regulators, local governments and regional actors have on decision-making within large, multi-national fleet operators is not leveraged through the system of discounts.

SME operators of vessels and fleets





E.1.3.2 Incentives and stimuli

The KDS delivers specific incentives and stimuli to target organisations. These include generating an increase in information and awareness, and direct monetary reward.

The extent to which these incentives and stimuli are relevant differs depending on the starting attitude of individual target companies. In general, the starting attitude of companies targeted with the system of discounts falls into one of two categories: front-runners and a group of followers.

- Front-runners are companies that are highly motivated to implement a robust environmental management plan, that have the means and know-how to do so, and that already successfully implement environmental measures on some scale;
- The group of followers consists of companies that occasionally obtain discounts for their ships, but do not implement an environmental system on the scale that front-runners do. They either lack the motivation, means or know-how to do so. With some support and encouragement, they implement environmental measures with some degree of success.

Below we offer a description of the identified incentives and stimuli, and note to what starting attitude they are most relevant.

Information provision – The ESI gives a rating on a scale from 1 to 100 and provides vessel operators insights on where they stand and what they could improve. These insights are a starting point for changes in decision making within the group of followers.

PR value and credentialism – The ranking of ships is publically available and accessible. This allows vessel operators with a high ranking to signal to their clients, suppliers and financiers that they may have operational excellence, advanced technology, or superior quality of their fleet. Carrying the Green Award holds similar value. It provides the front-runners with an option to market the fact that they are front-runners. This can influence organisational decision-making within the sector, as front-runners may double down on their efforts to maintain their status, while organisations within the group of followers may decide to play catch-up.

Monetary reward – The most direct incentive within the system of discounts is that vessel operators eligible for a discount on port dues actually have less operational expenditure than they would otherwise. This motivates them to improve the environmental footprint of their ships that dock in the Port of Rotterdam. As such, it influences organisational behaviour among the large share of vessel operators that think it is important to optimise their operational expenditure.

This incentive is relevant to both front-runners and for the group of followers, although the latter group may consider it more important compared to the former. For front-runners, the monetary reward is important alongside the PR value of both the Green Award and a high ESI ranking, and alongside other reasons they have to reduce the environmental footprint of their fleet, such as a genuine care for ocean health. For organisations in the group of followers, there is far less PR value to be enjoyed from a less-than-stellar position on the ESI ranking or from the absence of a Green Award. For them, the monetary reward through the system of discounts is a greater stimulus.

E.1.4 Effectiveness and impact

The results of the Discount for Sustainable Ships on the environmental performance within the maritime sector are part of a larger move to sustainability. As society places increased awareness on sustainability, there are multiple parts in play and it is therefore hard to purely link increased environmental performance to KDS.

The Port of Rotterdam reports that as part of the broader sustainability vision the number of vessels that qualify is growing and it seems that shipping companies also indicate that they consider ESI more often when purchasing new vessels. The number of vessels that qualify for ESI increased with 88% in the period of 2012-2016. In 2016, the Port of Rotterdam issued almost 3 million euro in discounts to vessels with high Environmental Ship Index scores.¹³³

In addition to this growing number of admissions and awareness for climate change, the air quality in the neighborhood area called Rijnmond is said to have improved in recent years. Interviewees point to decreasing figures on concentrations

133 <https://www.portofrotterdam.com/en/news-and-press-releases/clean-vessels-real-discount>



of nitrogen dioxide, particulate matter and sulfur dioxide, and attribute this development in part to cleaner marine engines among docking vessels. A similar case is made for the water quality. The proportion of contaminated dredging spoil, for example, is said to have dropped from 9% in 2015 to 6% in 2016 and the groundwater contamination in the subsoil also decreased by 10% during that period.

The Port of Rotterdam attributes this success to making regulations not too difficult. The ESI discount system is clear and straightforward: If a ship gets enough points, the ship receives a discount in affiliated ports. This claim is supported by an evaluation report on the maritime policy in 2008-2013.¹³⁴ From the evaluation, it appears that the shipping industry values clear, predictable regulations and attention for the international level playing field. Cooperation between policy, enforcement and implementation on environmental measures on the side of the maritime sector is important to respond quickly to changing international legislation and to take into account the specific interests of the Dutch high-quality (niche) sectors. Equally, it is important to prevent accumulation of environmental-related measures or burdens, but offer a coherence set of instruments.

E.1.5 Success factors and barriers

Specific success factors can be recognised for the system of discounts to influence organisational behaviour. These include the partnership between international seaports and the presence of existing certifying organisations and rankings.

Success factors

Partnership in maritime sector – The KDS offers the possibility to cooperate close with (international) seaports to organize the regulation of port fees and the environmental standards which within the maritime sector needs to qualify allied in the World Ports Climate Initiative, to work together sustainability initiatives, for example with the ESI discount.

Existing certifying organisations and rankings – The system of discounts is helped by the fact that international rankings and awards exist. Without these, the Port of Rotterdam would have to develop a system from scratch to determine which vessels are eligible for a discount. The existence of the Green Award, provided by Green Award Foundation, and the existence of the ESI ranking, make the development and implementation of the system of discounts far more feasible.

Barriers

The system of discounts also features specific barriers to changing organisational behaviour. These includes the financial burden and the fact that a company has to actively apply for KDS.

Financial burden – The costs of a new ship (or new engine) to implement environmental-measures are so great that a shipping company cannot immediately switch to a cleaner version. The difficult economic climate in which shipping companies have been involved in recent years is an additional obstacle in this respect. As such, there is a timing aspect to reducing the environmental footprint of a vessel or fleet of vessels that may weigh heavier on decision-makers compared to a reduction in operational expenditure through discounts on port dues.

Active application – Shipping companies have to apply for the discounts by themselves and from their own initiative. As such, only companies that are aware of the system of discounts and how it works will apply for discounts. Laggards in the industry are not directly incentivised to perform better through this system.

¹³⁴ Panteia, 2014. Evaluatie Zeevaartbeleid, <https://www.rijksoverheid.nl/regering/bewindspersonen/eric-wiebes/documenten/rapporten/2014/09/18/evaluatie-zeevaartbeleid-2008-2013>.



E.2 Key findings case study 2 - Energy performance assessments (EPK)

This case study report describes the way in which organisational behaviour is changed through the introduction of energy performance assessments (Energieprestatiekeuring – EPK). We describe the goal of introducing the assessments, the parties involved, and the specific behavioural change mechanisms in action. We also try to shed some light on the effectiveness and impact of the assessments, and the success factors and barriers associated with changing organisational behaviour through the energy performance assessments.

E.2.1 Goal of energy performance assessments

The Environmental Management Law in The Netherlands (Wet milieubeheer, hereinafter to be referred to as “EML”) requires companies to implement all energy-saving measures that can be financially recouped within five years. A significant number of companies in The Netherlands do not abide by this law. Also, enforcement of this law appears to be hard to effectively implement. As a result insufficient energy-saving measures are implemented by Dutch organisations both in the public sector and in the private sector to reach the government’s energy-saving objective of 76 petaJoule (PJ).

In response, the Ministry of Infrastructure and Water Management (Ministerie van Infrastructuur en Waterstaat) has developed the energy-performance assessment tool (“EPK” tool), in close cooperation with relevant industry associations. This tool is intended to motivate companies and organisations in The Netherlands to implement more energy-saving measures that can be financially recouped within five years.

The tool has been inspired by the legally required periodic assessment of the performance of automotive vehicles. This periodic assessment has stimulated private-sector initiatives that ensure cars, vans and motorcycles are assessed against legal requirements, through commercial provision of check-up, maintenance and repair services. Government authorities conduct spot checks to ensure the quality and reliability of private-sector checks, but has otherwise completely privatised the periodic assessments.

As such, the EPK tool has two goals:

1. To stimulate a market for the provision of assessments on energy saving within companies and advice on implementation of energy-saving measures;
2. To make it easier for companies to communicate their level of compliance with the EML Environmental Management Law to the authorities.

The EPK tool builds on a list of recognised energy-saving measures. This list is non-binding and has been developed by the Ministry of Infrastructure and Water Management in close cooperation with relevant industry associations. The EPK tool is available online and allows for assessment activities with several degrees of depth.

1. Companies can use the tool to perform a self-assessment on the energy-saving measures they have implemented to see how it compares to the list of recognised energy-saving measures. This self-assessment is for their own use and is not shared with regulators.
2. Companies can choose to share the results of their self-assessment with the regulators, allowing them to informally review what measures have been implemented. This informal review has no formal status.
3. Companies can choose to register the results of their self-assessment and have them audited by a formally recognised EPK auditor. The results of this audit then need to be registered in the online EPK tool. This audit allows companies to demonstrate their compliance with the law to other market parties and is to some extent useful for regulators to monitor legal compliance.
4. Companies can choose to hire an energy advisor to develop an energy efficiency plan based on their registered self-assessment results. A formally recognised EPK auditor can subsequently audit the extent to which this energy efficiency plan is implemented. The auditor’s report can be submitted to regulators to monitor legal compliance.



No formal theory of change has been developed for the EPK tool by any Dutch government body. Attempts have been made to identify the implicit theory of change, from which it can be understood that governments may have chosen to implement the EPK tool based on the following considerations:¹³⁵

- Even though company investments in energy-saving measures typically have good ROI, specific circumstances may lead to negative ROI for individual companies;
- Individual business leaders may not have an accurate perception of the positive ROI that these investments can carry;
- Individual businesses may lack access to finance for relevant and necessary investments in energy-saving measures;
- Individual businesses may include non-financial costs in their investment decisions, such as the perceived hassle of implementing new equipment or raw-material flows.

Parties involved

In this section we describe the most relevant parties involved with the EPK tool. For each party we briefly describe their role within the EPK tool and the contribution they make. We specifically describe energy-intensive SMEs, industry associations, regulators, private-sector energy advisors, local government, the Ministry of Infrastructure and Water Management, and the Netherlands Enterprise Agency.

Energy-intensive SMEs	The EPK tool is primarily directed at energy-intensive small and medium-sized companies. These are the companies that in the end will need to implement energy-saving measures in accordance with the Environmental Management Law.
Industry associations	Industry associations such as the Royal Metal Union (Koninklijke Metaalunie), the nationwide SME association MKB Nederland and employers association VNO-NCW, are involved in developing the non-binding list of recognized energy-saving measures and communicating the importance of the online tool to their constituents. Their involvement in developing the list is particularly important, as the extent to which measures are relevant to include on the list will differ across sectors.
Regulators	Regulators monitor the extent to which companies and organisations comply with the Environmental Management Law, and engage companies and organisations that explicitly and repeatedly do not comply with the requirements of the law.
Energy advisors	Energy advisors provide advice to companies and organisations that hire them on what energy-saving measures they can implement and what the resulting energy-efficiency gains will be. They use the results from the online self-assessments as a starting point.
Local government	Local government introduces and enforces local regulations on energy efficiency, facilitates regional development and cooperation initiatives related to the implementation of energy-efficiency measures, and sometimes offers financial subsidies to companies that hire energy advisors.
Ministry of Infrastructure and Water Management	The Ministry of Infrastructure and Water Management provides legal and policy frameworks within which the Environmental Management Law and the EPK tool are implemented. They work in close cooperation with industry associations to ensure operational relevance of the EPK tool across sectors.
The Netherlands Enterprise Agency (RVO)	The Netherlands Enterprise Agency (RVO) supports companies and organisations, including energy advisors, in working with the EPK tool. Their primary means of doing so is by providing information online.

135 Lessen voor de pilots Energie Prestatie Keuring (EPK), 2014, Harmelink Consulting



E.2.3 Behavioural change mechanism

In this section we describe the behavioural change mechanism at work within the EPK tool. We first describe the outlook of the typical decision-making unit that the EPK tool targets within energy-intensive SMEs and the key stakeholders in their operating environment. Subsequently we describe the specific incentives and stimuli that the EPK tool delivers to the decision-making unit within target companies.

E.2.3.1 Decision-making unit

The decision-making unit is understood as the group of individuals that effectively makes important decisions that influence organisational behaviour. This group may include directors, aspect managers, line managers, supervisory boards, individual workers, and others. The make-up of this group differs across companies, although similar archetypical formations may be found for specific company types.

The EPK tool typically targets energy-intensive SMEs. Within these SMEs, the decision-making unit typically is dominated by the company's director or the board of directors, who play a strong and often-times decisive role in company decision-making. On matters that relate to energy efficiency, a dedicated energy manager or an operational manager who is also responsible for energy usage and consumption typically supports the director or board of directors. In some cases, other members of the company might take interest in energy-related matters within the company. These individuals can serve as change agents who encourage implementation of energy-saving measures.

The decisions affected by the EPK tool typically are investment decisions on equipment, machinery and raw-material flows. The EPK tool attempts to influence these decision by enriching the underlying cost-benefit analysis.

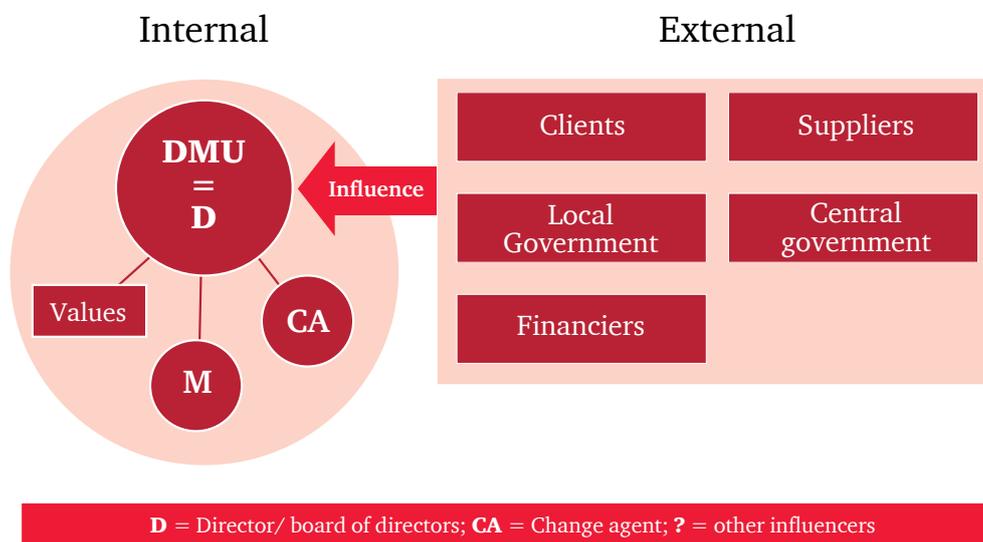
Beyond this cost-benefit analysis, members of the typical decision-making unit in companies targeted with the EPK tool are influenced by the values of their company and their employees, by actors within their value chain, and by other actors in their operational environment.

Organisational values – The values of their company and their employees influence the decision-making unit through formal and informal communication, consultation and deliberation within the company. In energy-intensive SMEs, directors, managers and other workers typically work in relatively close proximity to one another compared to large corporations, financial institutions or government agencies. As a result, interaction may be expected to be more frequent and with less thematic constraints, and with more impact on company decision-making.

Value chain actors – Energy-intensive SMEs typically depend for a good part on their suppliers and their clients for their commercial impact in the market. Decisions and preferences on the side of suppliers and clients can influence organisational decision-making, particularly of SMEs that have relatively limited market power.

Financiers and local government – Energy-intensive SMEs typically are in close contact with their financiers (e.g. their banks and other credit suppliers) to monitor and discuss working capital and investment opportunities. Also, they typically are involved with local government on topics that include permits, waste and environmental regulations, and subsidies and grants related to regional economic development. Through these decisions and preferences on the side of financiers and local government can have direct impact on the behaviour of energy-intensive SMEs.

Energy-intensive SMEs



E.2.3.2 Incentives and stimuli

The EPK tool delivers specific, separately identifiable incentives and stimuli to target organisations. These include generating an increase in information and awareness, providing tailored feedback and advice, facilitating PR value through credentials, and awarding enforceable penalties.

The extent to which these incentives and stimuli are relevant differs depending on the starting attitude of individual target companies. In general, the starting attitude of companies targeted with the EPK tool falls into one of three categories: front-runners, laggards and a middle group in between.

- Front-runners are companies that are highly motivated to implement energy-saving measures, that have the means and know-how to do so, and that already successfully implement energy-saving measures on some scale.
- The middle group consists of companies that do not yet implement energy-saving measures on the scale that front-runners do. They either lack the motivation, means or know-how to do so. With some support and encouragement, they implement energy-saving measures with some degree of success.
- Laggards are companies that resist implementation of energy-saving measures. This active resistance can be rooted in a lack of motivation to conserve energy, a lack of financial means to implement energy-saving measures, a significant knowledge gap, and often a combination of those aspects.

Below we offer a description of the identified incentives and stimuli, and note to what starting attitude they are most relevant.

Information and awareness – The online self-assessment provides companies and organisations with information on the requirements of the Environmental Management Law and on the recognised energy-saving measures. This also generates awareness on the requirements of the law and on the ways in which organisations can work towards legal compliance, depending on which representative of the organisation visits the digital portal and performs the online self-assessment. This stimulus in general is most relevant to organisations with a starting attitude of the middle group.

Feedback and advice – When users complete the online self-assessment, they receive feedback on how their organisation performs regarding the implementation of energy-saving measures. Also, they can forward their self-assessment to energy advisors and to regulators, who can provide additional feedback. Energy advisors can also be commissioned (for a fee) to develop a tailored energy efficiency roadmap and implementation plan. This stimulus in general is most relevant to organisations with a starting attitude of the middle group, as these can use this feedback and advice to learn and improve on



their current practices. This stimulus may also be relevant to front-runners that want to understand where they can improve even further.

PR value and credentialism – Formally recognised energy advisors can perform an audit on the extent to which an organisation adheres to an energy efficiency roadmap or implementation plan. In cooperation with regulators, a stamp of approval can be awarded to companies that perform well regarding the implementation of energy-saving measures. Companies can use this stamp of approval as a quality mark that allows them to signal their ‘green’ performance to their customers, suppliers and financiers. This incentive is typically relevant to companies that have the starting attitude of a front-runner, as it helps them communicate their environmentally conscious outlook and conduct to stakeholders that consider it an important feature.

Inspection and penalties – Regulators may opt to perform on-site inspections, confront business owners and award penalties to companies and organisations that structurally fail to comply with the requirements of the Environmental Management Law. Such a penalty generally takes the form of a fine. This incentive is most relevant to companies and organisations that have the starting attitude of a laggard.

E.2.4 Effectiveness and impact

The effectiveness and impact of the EPK tool appears to differ across sectors. No formal assessment are available of the effectiveness or impact of the energy performance assessments beyond a 2015 review of initial pilots.

From conversations it appears that the approach has taken off rather well in the Dutch metal industry, where the industry association has taken steps to make sure a sector-specific assessment tool is available. Energy-intensive companies in the Dutch metal industry have gone as far as to commission formally recognised energy advisors to audit their adherence to energy-efficiency roadmaps and implementation plans. Stakeholder interviews indicate this has been possible due to the strong role and relatively high status that industry associations have in the Dutch metal industry.

Similarly it is noted that in other sectors the EPK tool has increased awareness among energy-intensive companies of the legal requirements and their level of compliance. This appears to be the case for the Dutch healthcare sector, the textile industry and the technology sector.

We note that in other sectors the EPK tool appears to have generated less impact. For instance, in the printing industry it turned out to be difficult to organise the necessary financial arrangements that would fund sectoral tailoring of the assessment tool and the subsequent work of energy advisors. Interviewees from the sector indicate that this is partly due to the relatively limited access to capital overall in the sector, and to shifting priorities among policymakers involved.

E.2.5 Success factors and barriers

Specific success factors can be recognised for the EPK tool to influence organisational behaviour. These include involvement of industry associations, deploying energy advisors that are independent from regulators, and deploying regulators as ambassadors of the EPK approach.

Success factors

Involvement of industry associations – Industry associations can help the uptake and impact of the EPK tool in two areas. Firstly, the ways in which energy-intensive companies and organisations consume energy differs across sectors and industries. Consequently, the manner in which they can reduce their energy consumption varies as well. Because of this, identification and listing of energy-efficiency measures is best approached for each sector individually. This is where industry associations can play an important role. Secondly, involving industry associations can allow them to generate support for the approach among their constituent organisations, intermediating between government and the private sector and relaying worries and concerns. Often times, energy-intensive SMEs regard industry associations in their sector as a trusted source of information.

Independent energy advisors – Across a good number of sectors, energy-efficient SMEs appear wary of overt government involvement in their business operations. In some cases, this may lead to active resistance to the goals that the Environmental Management Law pursues. Because of this, energy advisors are involved that are independent from



government regulators to provide advice to energy-intensive companies and audit their implementation of energy-efficiency measures. This has been noted as a success factor for behavioural change amongst energy-intensive SMEs that are more welcoming to these independent advisors.

Regulators as ambassadors – One of the roles of regulatory officials is to perform on-site inspections and confront company representatives in case of structural failure to comply with legal requirements of the Environmental Management Law. It has been noted that regulatory officials are more effective (e.g. their site visits are better received and their conversations with energy-intensive companies appear to be more productive) when they conduct themselves as ambassadors of the law's policy goals. This concerns both the short-term effectiveness of a successful on-site visit and the long-term effectiveness in terms of sectorial acceptance of the energy efficiency assessments.

Barriers

The EPK approach also features specific barriers to changing organisational behaviour. These include its financial costs and the administrative burden it places on energy-intensive SMEs. It also includes the timing of investing in energy-efficiency measures.

Financial costs – Several aspects of the energy efficiency assessments come with a price tag. These include tailoring lists of energy-efficiency measures to individual sectors, developing online tools, paying for the work of energy advisors, and investing in the implementation of specific energy-efficiency measures. Some energy-intensive SMEs do not have the financial means to cover the fees of energy advisors and do not have the access to finance needed to make investments in energy-efficiency measures. In some cases, industry associations do not manage to free-up financial means among their constituent organisations to develop online tools or generate sector-specific content for the assessments.

Administrative burden – Especially for small and micro-enterprises, finding time for self-assessments, hiring energy advisors and implementing energy-efficiency roadmaps may appear to be too difficult. These companies would need to divert staff from their primary operational activities, which may negatively impact turnover, or hire additional staff to handle EPK work, which would increase payroll costs.

Timing of investments – Energy consumption in energy-intensive companies can be largely driven by large-scale equipment and machinery that represent significant investment sums. Replacement of such equipment and machinery is typically subject to decision-making that is timed with considerable scrutiny, and that deals with write-off periods, technological maturity of alternatives, financial performance of the company itself and its possibilities to access external finance. Any additional information from a performance assessment on the implementation of energy-efficiency measures may at times only very limitedly factor into these considerations.



E.3 Key findings case study 3 – Beefed-Up Chickens Campaign

This case study report describes the way in which organisational behaviour is changed through the campaign against beefed-up chickens by the Dutch NGO 'Wakker Dier'. We describe the goal of the campaign, the parties involved, and the specific behavioural change mechanisms in action. We also try to shed some light on the effectiveness and impact of the campaign, and the success factors and barriers associated with changing organisational behaviour through the campaign activities of the NGO.

E.3.1 Goal of the Beefed-Up Chickens Campaign

'Wakker Dier' is a Dutch NGO that strives to better the treatment of livestock in the agri-food industry in The Netherlands, and who's name loosely translates to 'Woke Animal'. They launched a campaign to stop the use of poultry that is selectively and unhealthily bred for the sole purpose of generating poultry meat within 6 weeks after hatching.

The goal of the Plofkip Campaign (somewhat translatable to 'beefed-up chicken') is to halt the use and sale of this specifically beefed-up poultry by restaurant chains, A-brand food producers, and grocers and retailers. Wakker Dier wants these organisations to replace it with poultry that has earned a recognised animal-welfare hallmark from the Dutch Society for the Protection of Animals – a Dutch animal protection organisation.

The campaign includes reaching out to value-chain actors to discuss animal welfare aspects and implementing several publicity campaigns targeted at consumers and the general public to inform them of animal welfare aspects to specific poultry-based food products.

The Wakker Dier NGO is an independent, privately funded organisation. It is not owned by any other private-sector actor and has no government involvement.

E.3.2. Parties involved

In this section we describe the most relevant parties involved in the campaign. For each party we briefly describe their role within the NGO's campaign and what contribution they make. We specifically describe the role of the NGO itself, and the role of retail companies, restaurant chains, consumer-goods labels, poultry-based product producers, poultry producers, consumers, donors and supporters, the media, columnists and advertisers.



It is important to note that, despite repeated efforts, no value-chain actors have been willing to contribute to this case study.

NGO Wakker Dier	Wakker Dier is the actor driving a change in organisational behaviour by engaging food retail companies, restaurant chains, consumer-goods labels and consumers to change their economic activity in a way that removes beefed-up chickens from the agri-food value chain. They do this through communication activities grouped in a campaign specifically named and framed to amplify their message.
Food retail companies	Food retail companies commercially sell poultry-based food products to consumers, which they procure from agri-food producers. They are specifically targeted by the campaign to stop procuring and retailing food products based on beefed-up poultry. Wakker Dier identifies them as a very powerful actor in the agri-food value chain to make this change.
Restaurant chains	Restaurant chains procure beefed-up chicken-based poultry products from poultry-based product producers and sell them to consumers through their points of sale. They are specifically targeted by the campaign to stop procuring beefed-up poultry and stop selling it in their restaurant offerings. Wakker Dier identifies them as another very powerful actor in the agri-food value chain to make this change.
Consumer-goods labels	Consumer-goods labels also procure beefed-up chicken-based poultry products from poultry-based product producers and sell them to food retail companies. They are specifically targeted by the campaign to stop procuring beefed-up poultry and stop selling it in their food products. Wakker Dier identifies them as a third very powerful actor in the agri-food value chain to make this change.
Poultry-based product producers	Poultry-based product producers procure beefed-up chickens from chicken farmers and work them into food products. They sell their food products directly to retailers, to restaurants, or to branded consumer-goods labels.
Poultry producers	Poultry producers are the agri-food producers that breed beefed-up chickens and sell them to food product producers or work them into food products themselves – essentially chicken farmers. Wakker Dier identifies them as a relatively weak actor in the agri-food value chain, facing considerable pressure from retailers to produce high quantities at relatively low cost. Wakker Dier identifies them also as a potential ally that cares for animal welfare and product quality, but faces economic constraints to living up to their ambitions.
Consumers	Consumers buy poultry-based food products from food retailers and restaurant chains. Wakker Dier identifies them as actors with enough power within the supply chain to force a change. Consumers are specifically targeted by the campaign to change their behaviour by stopping to buy food products based on beefed-up chickens. At the same time, Wakker Dier recognises that consumer choices are limited by what is supplied by food retailers and restaurant chains. Consequently, consumers are also targeted by the campaign to start expressing any dissatisfaction towards food retailers and restaurant chains regarding the availability of options other than food products that are based on beefed-up chickens.
Donors and supporters	Donors and supporters provide financial contributions to the NGO, from which Wakker Dier can fund its operational activities and targeted campaigns.
The Media	The media provide Wakker Dier the possibility to convey its message, and as such play a key role in the strategy behind the campaign. Through broadcast, print and socialmedia, the campaign can reach consumers, potential donors and supporters, and stakeholders within the poultry value chain. Wakker Dier keeps close contact with a network of relevant media actors and provides them with content that is newsworthy, relevant and reliable that they can use in their programming. Also, media outlets can sell advertisement space to Wakker Dier, allowing it to broadcast the campaign's message to a wide audience.
Columnists	Columnists can provide support to the message of Wakker Dier's campaign, and can help shape public discourse on the treatment of livestock in general and beefed-up chickens in particular. The NGO maintains a network of columnists with whom they discuss positions and ideas.



E.3.3 Behavioural change mechanism

In this section we describe the behavioural change mechanism at work within the campaign. We first describe the outlook of the typical decision-making unit that the EPK campaign targets within food-retail companies, restaurant chains and consumer-goods labels, and the key stakeholders in their operating environment. Subsequently we describe the specific incentives and stimuli that the campaign delivers to the decision-making unit within target companies.

E.3.3.1 Decision-making unit

The decision-making unit is understood as the group of individuals that effectively makes important decisions that influence organisational behaviour. This group may include directors, aspect managers, line managers, supervisory boards, individual workers, and more. The make-up of this group differs across companies, although similar archetypical formations may be found for specific company types.

Large multi-nationals

The campaign against beefed-up chickens typically targets large multinational companies in the food production, retail and restaurant sectors, oftentimes publically listed but not always. Within these companies, high-ranking managers responsible for a specific domain or aspect within the company typically dominate the decision-making unit. Although final say is reserved for the board of the company, these managers have significant control over operational and tactical decision-making, and over the preparation of strategic decisions made at board level.

In some cases, other managers within the company may share the values of the campaign and attempt to influence organisational decision-making to improve the treatment of livestock throughout the agri-food value chain. These individuals effectively can serve as change agents within the decision-making unit.

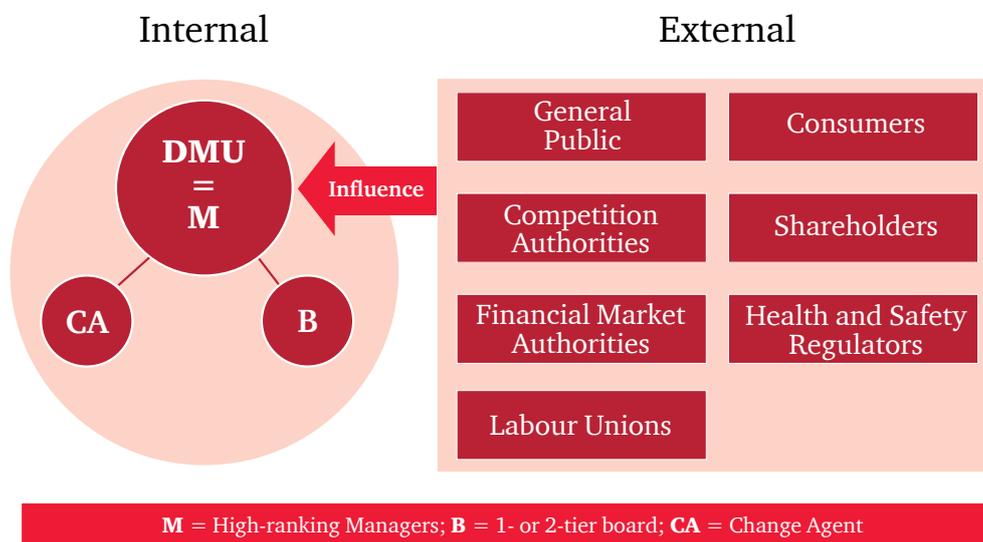
The members of such a decision-making unit typical for the large multinational companies targeted by the campaign are influenced by shareholders, regulators, labour unions, consumers and the general public. Through their substantial market power, they can exert influence over other actors within the value chain, such as chicken farmers and producers of poultry-based products.

Consumers – Consumers can influence the decision-making unit through the buying and spending decisions they make. If large numbers of consumers decide to reduce spending at a specific restaurant chain or retail company, this generally will influence company decision making to increase consumer spending. Similarly, consumer-goods labels may decide changes are in order if large numbers of consumers decide to reduce spending on their label or on specific products of their label.

The general public – The general public (which includes consumers but also extends to societal members that do not necessarily buy beefed-up chicken products) can influence the decision-making unit through the impact that public discourse may have on consumer behaviour and on regulatory developments. Intensification of public discourse, on the treatment of livestock and of chickens in particular can move multinational companies to make changes before lawmakers force them to and before consumers decide to vote with their wallets. Columnists can play a considerable role in this development.

The influence that shareholders, regulators and labour unions typically have on the decision-making unit of large, multinational companies is not directly leveraged by the campaign.

Large multi-national in the agri-food sector



Cooperatives in the agri-food sector

The campaign also targets cooperatives in the agri-food sector. Within these companies, the decision-making unit is typically dominated by the general assembly of the members of the cooperatives. On matters that relate to the treatment and welfare of livestock and the associated price elasticity, a dedicated manager or group of managers may support the general assembly in their decision-making.

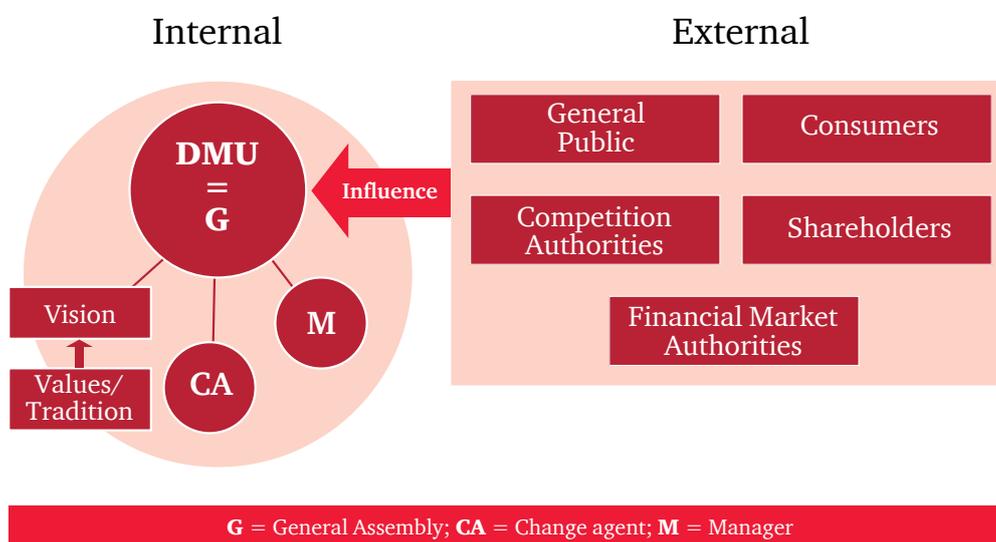
As in large multinational companies, change agents may influence the decision-making unit. In some cases, workers within the company may attempt to influence organisational decision-making to improve the treatment of livestock throughout the agri-food value chain.

The members of a decision-making unit typical for agri-food cooperatives are influenced by regulators, by labour unions, by their cooperative vision, by the values and tradition from which the vision is derived, by consumers and the general public, and by the need to have competitive advantage.

The influence that the need for competitive advantage, regulators and labour unions typically have on the decision-making unit of agri-food cooperatives is not directly leveraged by the campaign. As with multinational companies, the influence that consumers may exert by voting with their wallets and pressure that public discourse may generate, can lead to change in organisational decision-making within cooperatives. Consequently, the campaign leverages both also when targeting cooperatives.

Typically when dealing with agri-food cooperatives, the campaign appeals to their cooperative values and tradition, and to the vision built thereon. In general, these organisational aspects are in line with the ambitions of the campaign against beefed-up chickens. Subsequently, decisions and preferences based on organisational norms and ideas that are encoded in the oral and written history of a cooperative and its member organisations are helpful to the cause of the Wakker Dier NGO.

Cooperatives in the agri-food sector



E.3.3.2 Incentives and stimuli

The campaign against beefed-up chickens delivers specific, separately identifiable incentives and stimuli to target organisations. These include company campaigning elements such as associating A-brands with a negatively framed concept, engaging front-runners and singing their praise, and naming-and-shaming laggards. They also provide information and generate awareness among consumers and the general public.

Associating A-brands with a negatively framed concept – The campaign actively develops the concept of a beefed-up chicken. This is done by establishing a narrative that compares the natural biological way of life of chickens and their developmental trajectory with the breeding methods, living conditions and growth trajectories of specific chickens bred for the purpose of generating poultry meat within six weeks after hatching. The campaign then frames this narrative as a negative by introducing the ethical implications and potential consumer health consequences of this practice to the message of the campaign. Subsequently in its messaging, the campaign associates this negatively framed narrative with specific A-brand actors in the value chain for poultry-based food products.

Engaging front-runners – Wakker Dier reaches out to companies that they recognise as front-runners on the issue of livestock treatment throughout the agri-food value chain. In general, these companies are A-brands. Wakker Dier reaches out to promote and discuss opportunities to substitute food products based on beefed-up chickens with food products based on chickens that receive better treatment. They preferably promote and discuss these opportunities during meetings at boardroom level.

Engaging laggards – Wakker Dier also reaches out to companies that they recognise as laggards on this topic, to discuss substitution opportunities and argue issues of morality and legality. They reach out specifically to laggards that have considerable market power.

Singing praise – Part of the campaign is to list companies that improve their conduct regarding the treatment of chickens within the agri-food value chain, and to rank them accordingly. Wakker Dier communicates this ranking to consumers and to the general public through a combination of media channels that together have considerable reach.

Naming and shaming laggards – Also part of the campaign is to draw attention to companies that Wakker Dier thinks do not enough to improve their conduct regarding the treatment of chickens within the agri-food value chain. Wakker Dier has run ads on television, radio and social media naming A-brand food retailers communicating that these value-chain actors show not enough improvement in their conduct. Moreover, as part of the campaign Wakker Dier hands out awards



to companies that they think report untruthfully on their conduct. These companies are nominated by Wakker Dier, and through online polling among the general public one company is selected to receive the 'liar award' (liegebeestverkiezing).

Information and awareness – Wakker Dier actively provides information to the general public and tries to increase awareness among consumers on the issue of beefed-up chickens. As part of the campaign they have launched TV ads and radio commercials, published newspaper advertorials and deployed billboards in the public space. These were used to communicate both the narrative of beefed-up chickens and the message of the campaign. These communication efforts were specifically targeted at the share of the general public concerned with animal welfare, specifically highly educated women from the age of twenty-five up. Wakker Dier commissioned market research activities to receive feedback on this approach and improve it accordingly.

E.3.4 Effectiveness and impact

The campaign reached a television audience of approximately twenty-six million viewers, through news programmes, consumer-rights TV shows, and commercial ads. On average, Dutch viewers viewed eleven Wakker Dier ads on TV, and listened to twice as many on the radio.

According to Wakker Dier, all Dutch food-retail chains have stopped selling food products based on beefed-up chickens. The same is reported for almost fifteen A-brand consumer-goods labels and three smaller restaurant chains. With others, including large international restaurant chains, ongoing efforts are yet to yield results after two years of campaign activities.

Companies in the agri-food value chain that stop selling food products based on beefed-up chickens typically do not substitute them for products based on chickens recommended by Wakker Dier. Instead, they opt for substitutes that are more cost efficient and that according to Wakker Dier are associated with a type of animal treatment that fits somewhere between the beefed-up chickens and the chickens recommended by Wakker Dier.

The 'liar award' for companies Wakker Dier thinks report untruthfully on their conduct has resulted in at least one food retail company to change their behaviour and stop selling food products based on beefed-up chickens.

Wakker Dier also reports a growing share of people that adopt a 'flexitarian' diet and lifestyle, which is a semi-vegetarian diet that is plant-based with the occasional inclusion of meat. According to Wakker Dier this development is partly attributable to their campaign. Similarly, Wakker Dier reports that meat consumption both per household and per capita is dropping, while consumption of meat that carries an animal welfare hallmark is on the rise.

According to an industry association, the effectiveness and impact of the campaign is rather limited. In their view, companies in the agri-food value chain have been moving to improve the treatment of livestock for years already, and would also have done so without the involvement of Wakker Dier.

E.3.5 Success factors and barriers

Specific success factors can be recognised for the campaign to influence organisational behaviour. These include the naming and framing as part of the campaign, actively chasing feedback, an independent and agile approach, a credible image and sufficient financial support.

Naming and framing the campaign – Wakker Dier has deployed a company campaigning method that aims to clearly and directly communicate the essence of their message through conscious framing. This included deliberately selecting a confronting name with a negative connotation for the campaign that resonates with consumers and the general public. Industry representatives underline the importance of consumer behaviour for behaviour of organisations in the agri-food value chain.

Actively chasing feedback – Frequent contact with relevant stakeholders helps Wakker Dier to receive feedback on the nature of their campaign and how it is implemented. This includes visiting relevant sectoral conferences (e.g. those organised by Foodlog and by Food Policy), and talks with managers of large food retailers. They cover topics ranging from animal welfare to product selection and promotion activities. Wakker Dier also has an ongoing periodic dialogue with animal welfare organisations.



Independent and agile approach – The ability to quickly shift gears or change direction is an important feature of the campaign. This ability requires a high level of independency. In order to remain independent as much as possible, NGO Wakker Dier limits cross-organisational cooperation to incidental, casual and non-committing cooperative efforts. Also, Wakker Dier strives to make all financial expenditures by itself and without any complex cooperative constructions.

A credible image – To successfully reach out to consumers and the general public and have impact on the public opinion and on consumer behaviour, it is important for the campaign to carry a message that comes from an organisation that is credible. Among consumers, Wakker Dier has a positive image. Wakker Dier reports that 54% of the Dutch general public sees them as leading, persistent and vigilant. They also report that 85% of the general public knows Wakker Dier.

Independent financial support – Contributions from donors and supporters are a crucial success factor for the campaign, as these allow them to operate in the independent way described above. Wakker Dier reports to have 31,000 donors in 2016, of which 71% donates structurally. Contributions on average are € 64.31 per contributor per year. This does not include an annual contribution of € 500,000 from the Nationale Postcode Loterij, a Dutch lottery with country-wide appeal that supports charities from part of its revenues. Wakker Dier's 2016 budget totalled € 2.8 million.

E.4 Key findings case study 4 – Private quality systems (PKS) and regulation of NVWA

This case study report describes the way in which organisational behaviour is changed using Private quality systems (PKS) and the regulation by the Netherlands Food and Consumer Product Safety Authority (NVWA). We describe the goal of introducing the private quality systems, the parties involved, and the specific behavioural change mechanisms in action. We also try to shed some light on the effectiveness and impact of the quality systems, and the success factors and barriers associated with changing organisational behaviour through the private quality systems.

E.4.1 Goal of private quality systems

In the food value chain, there are cases of undesirable situations and sometimes food scandals. This has led to financial loss and damage of reputation for entrepreneurs, as well as some distrust among consumers about what they can buy in the supermarket. This is why companies in the food value chain feel the need for a form of quality certification that they can use to demonstrate the quality of their food products to their customers.

In response, they have developed a quality system that is driven by private actors in the food production value chain, so called private-sector quality systems (PKS). The Dutch food authority NVWA, part of the Dutch Ministry of Agriculture, Nature and Food Quality, tests these private quality systems against the legal requirements to ensure food safety in the food value chain and offers validation of quality systems that should help the private sector to safeguard food products.

The private sector quality systems are developed and managed by designated private organisations (schemabeheerders) that benchmark food quality systems to test national food safety standards. Once a system is implemented within a company, this should be a sustainable guarantee for quality.

By doing so, PKS benefits both government and the private sector:

- On one hand, the quality systems strengthen trade between companies in the food production chain;
- On the other hand, providing quality systems validated against the legal requirements ensures more effective regulation on companies in the food production chain, which aids NVWA in their monitoring and enforcement efforts.

Method of PKS

The private-sector quality systems contain solid criteria that meet the legal requirements to ensure food safety in the food production chain. These criteria are developed based on the risk management standard HACCP¹³⁶ that is required for the food industry. Implementing a food-safety system makes it easier to register the authenticity and traceability of food products.

136 HACCP (Hazard Analysis and Critical Control Points) is a systematic approach to prevent, eliminate, or reduce food risks to an acceptable level. Scheme organizations that develop and manage Private quality systems that have included HACCP in their food safety system certification include FSSC22000, BRC and Dutch HACCP.



The NVWA assesses whether private quality systems meet the set of criteria for food safety and lists them as accepted on the online portal www.ketenborging.nl, developed and maintained by the Dutch Food Industry Federation (Federatie Nederlandse Levensmiddelen Industrie). This portal also offers insight in recognised PKS certificates that companies in the food production chain can carry, places where these certificates can be obtained, and a listing of companies that have obtained such a certificate.

E.4.2 Parties involved

In this section, we describe the most relevant parties involved with the private-sector quality systems. For each party we briefly describe their role within the private-sector quality systems and the contribution they make. We specifically describe food-producing companies, trade associations, scheme managers (designated private organisations, schemabeheerders), certifying institutions, accreditation institutions, and the NVWA.

Food producing companies	All companies (small, medium and large sized) engaged in processing or manufacturing of food products are required to follow the Dutch law for food safety. This applies to a small bakery as well as to a multinational corporation. A company can choose if and which PKS certificate is relevant, to integrate in their food quality management.
Trade associations	Trade associations such as the Dutch Food Industry Federation (Federatie Nederlandse Levensmiddelen Industrie) are involved in creating support for the private-sector quality systems.
Scheme organisations	Scheme organisations are private-sector organisations that develop and maintain the set of criteria against which companies can be audited. These criteria are grounded on the statutory criteria for food safety and are specified for individual industries. Also, scheme organisation determine which institutions are allowed to carry perform audit and certification activities within individual sectors.
Certifying institutions	These are private-sector organisations that perform audit and certification activities on companies within the food production value chain. They perform these activities on specific quality systems, and for individual companies and upon their request. They require approval from a relevant scheme organisation before performing audit and certification activities.
Accreditation institutions	Accreditation institutions supervise certifying institutions to ensure that food companies are audited against the correct requirements.
Netherlands Food and Consumer Product Safety Authority (NVWA)	The Netherlands Food and Consumer Product Safety Authority (NVWA) assesses requests for quality systems from scheme organisations (such as the FSSC 22000-certificate), to see whether these comply with the legally established criteria for food safety, and they carry out unannounced inspections to monitor industry compliance on food safety issues. If something is wrong with for example a batch of meat or raw materials, the NVWA traces the origin of the product.

E.4.3 Behavioural change mechanism

In this section we describe the behavioural change mechanism at work within the PKS. We first describe the outlook of the typical decision-making unit that PKS targets within food producing SMEs and large companies and the key stakeholders in their operating environment. Subsequently we describe the specific incentives and stimuli that the PKS delivers to the decision-making unit within target companies.

Several reasons can be identified for companies to engage in fraud during food production.¹³⁷ These include a lack of transparency throughout global value chains, the ambition of meeting high demand for a specific product for which the raw materials are scarce, and the motivation to increase profits through bypassing safety requirements.

137 Inge de Jong Advies, 2016. Voedsel fraude, ingedejongadvies.nl/nieuws/voedsel fraude



E.4.3.1 Decision-making unit

A decision-making unit is understood as the group of individuals that effectively makes important decisions that influence organisational behaviour. This group may include directors, aspect managers, line managers, supervisory boards, individual workers, and more. The make-up of this group differs across companies, although similar archetypical formations may be found for specific company types.

The PKS targets food producing companies varying from small, middle to large sizes. This is why a PKS or a specific food quality system that is applicable to the company can be used by companies from different archetypes.

Decision-making units for archetypical companies in the food production chain

<p>Large (multinational) corporations</p>	<p>Within large companies, high-ranking managers responsible for a specific domain or aspect within the company typically dominate the decision-making unit. Although final say is reserved for the board of the company, these managers have significant control over operational and tactical decision-making, and over the preparation of strategic decisions made at board level.</p> <p>In some cases, other managers within the company may share the values of the campaign and attempt to influence organisational decision-making to improve the quality and safety of food products throughout the agri-food value chain. These individuals effectively can serve as change agents within the decision-making unit.</p> <p>The members of such a decision-making unit typical for the large multinational companies targeted by the campaign are influenced by shareholders, regulators, labour unions, consumers and the general public. Through their substantial market power, they can exert influence over other actors within the value chain.</p>
<p>Cooperatives</p>	<p>Within food cooperatives, the decision-making unit is typically dominated by the general assembly of the members of the cooperatives. On matters that relate to the quality and safety of food and the associated price elasticity, a dedicated manager or group of managers may support the general assembly in their decision-making.</p> <p>As in large multinational companies, change agents may be part of the decision-making unit. In some cases, workers within the company may attempt to influence organisational decision-making to improve the quality and safety of food products throughout the value chain.</p> <p>The members of a decision-making unit typical for agri-food cooperatives are influenced by regulators, by labour unions, by their cooperative vision, by the values and tradition from which the vision is derived, by consumers and the general public, and by the need to have competitive advantage</p>
<p>Family businesses</p>	<p>In family businesses in the food production chain, decision making typically is dominated by members of the family that owns the company. As in cooperatives, a dedicated manager or group of managers may support the family on matters that relate to the quality and safety of food and the associated price elasticity.</p> <p>Also here, change agents may be part of the decision-making unit. These can be workers that may attempt to persuade the family to change company behavior on matters relating to food safety and quality.</p> <p>Typically, the decision-making unit in family businesses is heavily influenced by values and traditions, and to some extent by the vision derived from these values and traditions. Regional aspects and preferences of clients and suppliers typically also influence organisational behaviour of family businesses.</p>



Decision-making units for archetypical companies in the food production chain

SMEs	Within SMEs in the food production chain, the decision-making unit typically is dominated by director or the board of directors, which plays a strong and often-times decisive role in company decision-making. On matters that relate to food quality and safety, a dedicated quality and safety manager or an operational manager that is also responsible for product quality and safety typically supports the director or board of directors. In some cases, other members of the company might take interest in quality and safety-related matters within the company. These individuals can serve as change agents that encourage implementation of quality and safety measures.
Innovative start-ups	<p>The decision-making unit within innovative start-ups in the food production chain typically consists of the founders and owners of the start-up, in close cooperation with dedicated and motivated managers of the start-up. Here also, passionate workers may attempt to influence the direction the start-up takes. The flat structure of most start-ups typically allows such change agents to do this with relatively high impact.</p> <p>The founders and owners of these start-ups are often heavily influenced by business angels. These are serial entrepreneurs and experienced investors that support start-ups through coaching and counselling on strategy development, and by offering access to finance through direct investments, loans or mezzanine funding schemes.</p> <p>Founders and owners are also influenced by the values they project on their products, by regional aspects and by preferences and strategies of their launching customers.</p>
Self-employed entrepreneurs	Among self-employed entrepreneurs in the food production chain, the decision-making unit consists of themselves as directors of their own enterprise. They are typically influenced by their clients, by their professional networks, and by the opportunities and limitations provided by their work space.

These members of the typical decision-making unit in companies targeted with PKS are influenced by several factors, such as the values of the company and their employees, by actors within their value chain (suppliers and clients), and by other actors in their operational environment (general public).

Organisational values/tradition – The decision-making around food quality in most companies are influenced by the organisational values, which are often been translated into the vision and conduct of a company. The more quality of food products are viewed as an important condition for business, the higher the number of companies that invest in their food quality system.

Value chain trust – To reduce food risks and prevent company damage, companies involved in producing and selling food products largely depend on the quality of these products. As a result, decisions and preferences on the side of both the producers and retailers can influence organisational decision-making. A PKS certificate guarantees the quality of a product during trading more, compared to products that are not been protected by a food quality system.

General public – Food producing companies typically deal with a unique actor, the so-called opinion from the general public. This is due to their direct relationship with consumers. Consumer wants to know how food is produced. Companies increasingly feel the responsibility to deliver quality. Decisions and preferences to safeguard food products can be influenced to ensure trust and credibility in the market is increased, by demonstrating a protected food quality system. This can be a necessity for all companies, irrelevant of the views on food safety from the leadership or the size of a company.

E.4.3.2 Incentives and stimuli

The PKS delivers specific, separately identifiable incentives and stimuli to target organisations. These include generating an increase in information and awareness, providing tailored feedback and advice, facilitating PR value through credentials, and awarding enforceable penalties.



The extent to which these incentives and stimuli are relevant differs depending on the starting attitude of individual target companies. In general, the starting attitude of companies targeted with PKS falls into one of three categories: front-runners, laggards and a middle group in between.

- Front-runners are companies that are highly motivated to implement a robust food safety management system, that have the means and know-how to do so, and that already successfully implement food safety measures on some scale;
- The middle group consists of companies that do not yet implement a food safety management on the scale that front-runners do. They either lack the motivation, means or know-how to do so. With some support and encouragement, they implement food safety measures with some degree of success;
- Laggards are companies that resist implementation of a quality system for food safety. This active resistance can be rooted in a lack of motivation to improve quality and safety, a lack of financial means to implement food safety measures, a significant knowledge gap, and often a combination of those aspects.

Below we offer a description of the identified incentives and stimuli, and note to what starting attitude they are most relevant.

Inspection and penalties – The NVWA applies incentives to companies by providing an infrastructure for compliance monitoring, investigation and prosecution based on legislation on food safety. The audit from a certification organisations does not replace the unannounced, on-site inspection from the NVWA. If there is food fraud indicated, there can be penalties made in the form of hefty fines. This stimulus is especially relevant for businesses that lag behind the curve.

Market share and credentials – Companies can purchase a PKS certificate to reinforce their brand and thus credibility in the market. Food producers can demonstrate the quality of their products with their customers. For retailers, this certificate can reduce the risk of food fraud among their suppliers. This stimulus is typically relevant for companies who want to be in the ‘champion’s league’ to show that they deliver the best quality.

Quality- and risk management – Some of the companies are intrinsically motivated to deliver high quality. With a certificate, food safety is secured in the best possible way. This stimulus is typically relevant to companies and organisations that have the starting attitude of a front-runner. In addition, a certificate can also be relevant for companies that want to avoid food scandals, limiting the risk of selling unsafe food and in the end preventing distrust among the consumers. Avoiding risk as a stimulus is typically relevant to companies and organisations that have the starting attitude of the middle-group or are a front-runner.

E.4.4 Effectiveness and impact

No effectiveness evaluations or impact assessments have been performed on the PKS-approach. From a pilot of the NVWA in 2017,¹³⁸ it seems that certified companies perform slightly better than non-certified companies, but that difference is not significant. As a result, regulation will continue to be required to the same extent.

However, the NVWA does see opportunities in the future to improve risk-based regulation in the food industry with PKS. Based on factual information from the audits, it may be possible to give companies with a certificate a different risk classification than companies that do not have a certificate. This should be specific information per scheme and per certification organisations, in order for the NVWA to know exactly what a certain certificate is worth when it comes to preventing and reducing risks.

This approach behind risk-based regulation makes it possible to assess companies differently. Companies that comply with the accepted list of quality systems are audited less frequently, while companies that withdraw from this accepted list are closely monitored. If there is food fraud indicated, there can be penalties made in the form of hefty fines.

At the beginning of 2018 a fact-finding mission of the European Commission took place, in which the certification schemes were described and compared in four EU member states. The final report has not yet been published.

¹³⁸ In 2017, the NVWA carried out a pilot among the three largest scheme organizations related to food quality certificates: FSSC 22000, BRC and IFS. Based on the pilot the possibilities are being investigated for file matching at the level of metadata between the scheme organisations and the NVWA.



E.4.5 Success factors and barriers

Specific success factors can be recognised for PKS to influence organisational behaviour. These include the origin of PKS, cooperation between government and the private sector and involvement of scheme organisations and certifying institutions as ambassadors of the PKS approach.

Success factors

Initiative from the private sector – PKS originated as an initiative of the private sector, without interference from the government. The market needed a widely shared certification system that would contribute to a smoother cooperation between retailers and producers, and to guaranteeing food safety within companies. PKS in the food industry were developed to provide in the need of guaranteeing the quality of food products.

Cooperation between government and private sector – PKS offers the possibility to cooperate close with private certifiers to organize the regulation of food-producing companies. Companies that can demonstrate a food quality system that meet the requirements of the law on food safety can receive a lower priority in regulation tasks by the NVWA. A lower priority can mean that monitoring is carried out in a more fitted way, this will be in many cases a reduced monitor intensity (duration and/or frequency) and/or allocation of facilities.

Involvement by scheme and certifying organizations – The NVWA views PKS as for now supporting in the duties of compliance monitoring. It has been noted that in the future the results of certification and accreditation can be taken more into consideration when prioritizing regulation tasks. NVWA can benefit most of PKS when the legally established requirements for food safety are audited, so that there would only be risk-based regulation needed.

Barriers

The PKS approach also features specific barriers to changing organisational behaviour. These include the administrative burden and the recognition of a certification, both on the side of NVWA.

Administrative burden – On the side of the NVWA, a well-functioning PKS is important but only when this can limit the administrative burden of the regulation. In the long term, the deployment of the NVWA inspectors can be limited, if the scheme organizations and certifying institutions can provide factual information showing that companies with a PKS-certificate comply better with the food safety requirements compared to companies without a certificate. This means that the capacity can mainly be used for companies indicated with higher risk. This may mean in practice, for example, that a company visit by NVWA can be shortened from eight hours to four hours.

Recognition of a certificate – The NVWA wants to take the results of certification more into account when prioritizing its regulation tasks, but some companies still do not comply with the law on food safety. The NVWA wants in these cases to inform the certifying organizations for them to consider this information in their audits and improve certification standards. Through recognition of a certificate in which the certified company manages its risks, certifying organisations can provide better information. This will in the end also benefit NVWA. In addition, once a year a company is audited by certification organisations. Since these audits give a chance that companies can prepare for the audit, the NVWA inspection is still needed. Only a few scheme managers include an unannounced inspection as part of the certification.



Key findings case study 5 – The sustainable trade initiative

This case study report describes the way in which the Sustainable Trade Initiative (IDH) changes organisational behaviour in one of the sectors, the floriculture sector through the Floriculture Sustainability Initiative (FSI). We describe the goal of the sustainable trade initiative, the parties involved, and the specific behavioural change mechanisms in action. We also try to shed some light on the effectiveness and impact of the method of the trade initiative and FSI, and the success factors and barriers associated with changing organisational behaviour.

E.5.1 Goal of sustainable trade initiative

The Sustainable Trade Initiative (IDH) drives sustainable trade in the agrifood sector. IDH focusses on different programmes through various sectors. One of these is the Fresh & Ingredients (F&I) sector.¹³⁹ This programme aims to mobilise demand from retailers and manufacturers to accelerate responsible production practices at large scale. Within the F&I sector, one of the six focus areas for IDH is on flowers and plants. Within this focus area, the Floriculture Sustainability Initiative 2020 (FSI) exists to confront sustainability challenges among companies. FSI forms a global platform that unites 35 key players within floriculture. IDH is a founding partner of FSI and is closely committed to its ambition since 2012.

Organisations involved with FSI 2020 want to provide sustainable solutions on issues that deliver high impact for farmers, the environment and for the future of the sector. Together with its partners in the floriculture sector (e.g. farmers, suppliers, financial institutions, governments and NGOs) they design, co-fund and innovate new economically viable approaches for sustainable trade.

Floriculture Sustainability Initiative

In 2012, 25 stakeholders from the floriculture sector initiated the Floriculture Sustainability Initiative (FSI). All share the goal of finding sustainable solutions for this sector. Together they created the ambition to produce and trade 90% of flowers and plants responsibly by 2020.¹⁴⁰

FSI focused in the first years on putting tools in place to create transparency and comparability of standards, define priorities and activate the network.¹⁴¹ With benchmarking at the core, the members started collecting results and focus work on increasing responsibly produced flowers and plants in the years thereafter. Additionally, they identified risk areas in the sector. In the following years towards 2020, the stakeholders aim to integrate sustainable development criteria further and implement responsible sourcing and best practices.

E.5.2 Parties involved

In this section, we describe the most relevant parties involved with the Sustainable Trade Initiative. For each party we briefly describe their role within the trade initiative and the contribution they make. We specifically describe the companies active in the floral sector, Floriculture Sustainability Initiative (FSI 2020), the Dutch Flower Group, and the Sustainable Trade Initiative.

¹³⁹ <https://www.idhsustainabletrade.com/sectors/>

¹⁴⁰ <http://fsi2020.com/>

¹⁴¹ <http://fsi2020.com/about/>



Companies in the floriculture sector	Companies in the floriculture sector (e.g. farmers, suppliers and retailers) are encouraged to produce and trade flowers and plants responsibly. This starts with companies involved with FSI initiatives. Initiatives that originate from FSI can have a ripple effect on the other parties in the sector. However, there is no legal obligation for them to follow these practices.
Sustainable Trade Initiative (IDH)	The IDH drives sustainability in mainstream (international) markets, such as the floral sector. One of the initiatives established by IDH and organisations in the sector is the Floriculture Sustainability Initiative to support a movement in the sector towards trading and producing more responsibly. IDH is actively involved in FSI through taking an advisory role to and providing the chairman of the FSI Board.
Floriculture Sustainability Initiative (FSI 2020)	The FSI 2020 is as an independent international non-profit association. FSI has two employees (each working part time) and various member organisations that are active in the floriculture sector. Together with their members, FSI actively works to achieve the shared ambition of creating a sector that produces and trades 90% in a responsible way by 2020.
Member organisations	Members of FSI commit to the ambition of the association. They work together on wide-ranging projects that bring the ambition of FSI closer. Organisations in the sector can apply for a membership, but not every organisation is admitted to FSI. Members are required to be actively involved in the association, because the association itself is very small and relies on the members to achieve its ambition.

E.5.3 Behavioural change mechanism

In this section we describe the behavioural change mechanism at work with IDH and FSI. As founding partner of FSI, IDH supports the sector initiatives largely through this association. We first describe the outlook of the typical decision-making unit in the floral sector and the key stakeholders in their operating environment. Subsequently we describe the specific incentives and stimuli delivered to the decision-making unit within target companies.

E.5.3.1 Decision-making unit

The decision-making unit is understood as the group of individuals that effectively makes important decisions that influence organisational behaviour. This group may include directors, aspect managers, line managers, supervisory boards, individual workers, and others. The make-up of this group differs across companies, although similar archetypical formations may be found for specific company types.

The IDH targets small, medium-sized and large companies who actively conduct business in the floral sector. For this reason, the trade initiative that is relevant for a company is primarily for four archetypes: family businesses, SMEs, cooperatives and self-employed entrepreneurs.



Decision-making unit for archetypical companies in the floral sector

Family businesses	In family businesses in the floral sector, decision making typically is dominated by members of the family that own the company. A dedicated board of directors or group of managers may support the family on matters that relate to running the daily business. Change agents may be part of the decision-making unit. These can be workers that may attempt to persuade the family to change company behavior on matters relating to sustainability. Typically, the decision-making unit in family businesses is heavily influenced by values and traditions, and to some extent by the vision derived from these values and traditions. Value-chain actors (e.g. clients, suppliers) and peers also influence organisational behaviour of these family businesses.
SMEs	Within SMEs in the floral sector, the decision-making unit typically is dominated by a director or the board of directors, which plays a strong and often-times decisive role in company decision-making. On matters that relate to responsible production and trade, an operational manager could support the director or board of directors. The sustainability role is often one part of the job description besides other responsibilities. In some cases, other members of the company might take interest in sustainability related matters within the company. These individuals can serve as change agents that encourage implementation of sustainability measures.
Cooperatives	Within cooperatives in the floral sector, the decision-making unit consists typically of a general assembly of the members of the cooperatives. On matters that relate to the sustainability, a dedicated group or committees may support the general assembly in their decision-making. Change agents could be part of the decision-making unit. The members of a decision-making unit of cooperatives are typically influenced by peers, customers, regulators, labour unions, their own vision, values and traditions and the general public.
Self-employed entrepreneurs	Among self-employed entrepreneurs in the floral sector, the decision-making unit consists of themselves as director-owners of their own enterprise. They are typically influenced by their clients, suppliers and peers.

Within each of these archetypes, the decision-making unit is typically lead by a director or board of directors, group of members or one or more owners. This unit plays a strong and oftentimes a decisive role in organisational decision-making. Organisations involved are typically flat and lean; they have limited hierarchy and not many staff functions. Responsibilities on sustainable production and trading matters are typically delegated to specific departments within the company. Sometimes an operational manager has a part-time role as sustainability manager, but it is often only part of their full responsibility.

These members of the decision-making unit are influenced by many factors, such as organisational values and traditions, value chain actors and their peers.

Organisational values and traditions – The decision-making around responsible production and trade in companies in the sector typically is influenced by organisational values and traditions, which have been translated into the vision and mission of a company. In a family business for example, these traditions have been part of the business for many years and are ingrained in daily business. These values and traditions often include elements of sustainability.

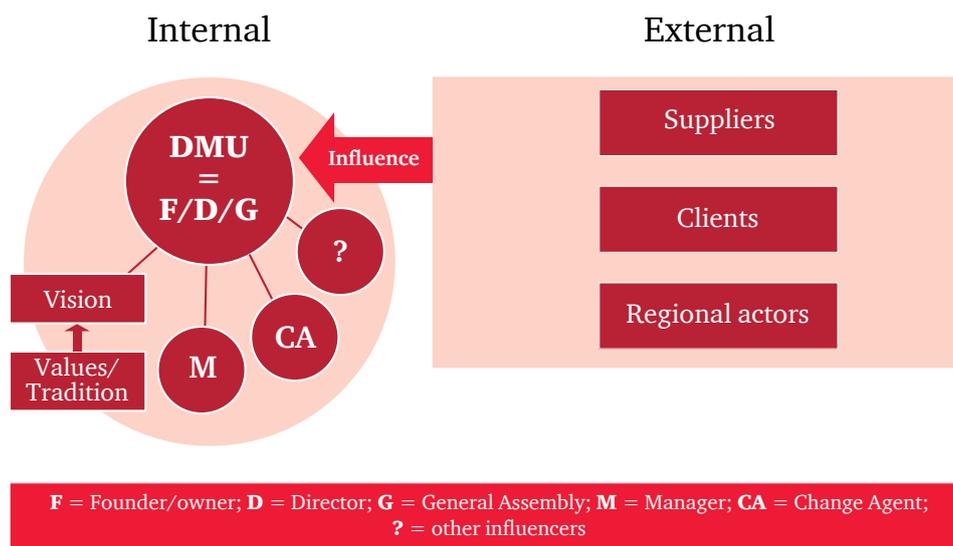
Value chain actors – Suppliers and clients can significantly influence companies in the floriculture sector. They are able to demand increased transparency, or require companies to adhere to an industry standard. The more value- chain actors demand these standards to be upheld or transparency to be increased, the more companies are likely to implement them.

Peers – Companies in this sector typically are influenced by the peers they meet and see in action in day-to-day business. As more of their peers join a movement to become sustainable and include standards and targets, the more companies are likely to follow suit.

Self-employed entrepreneurs

The situation for self-employed entrepreneurs is of course very different. They are solely responsible for all matters related to their work.

DMUs in the floral sector



The self-employed entrepreneurs as decision-making units are typically influenced by their clients, by their workspace, and by the people in their networks.

Clients – As the power dynamics between self-employed entrepreneurs and their clients typically is very lopsided, requests, preferences and requirements on the side of the client typically have significant impact on decision-making among self-employed entrepreneurs.

Workspace – Self-employed entrepreneurs typically are influenced both by the possibilities and limitations offered by their physical workspace, and by other people sharing their workspace. Physical workspace limitations may hinder self-employed entrepreneurs to adopt more sustainable practices, or even make it impossible. People sharing their workspace might similarly pose a barrier to the adoption of more sustainable practices. Conversely, the people sharing their workspace might encourage self-employed entrepreneurs to adopt more sustainable practices through peer pressure.

Networks – More than others, self-employed entrepreneurs rely on their social networks for lead generation, market intelligence and inspiration. Such networks can be valuable conduits for the spread of information and insights on sustainable practices and how to adopt and implement them. Similarly as above, these social networks can be sources of peer pressure, encouraging self-employed entrepreneurs to adopt more sustainable practices more quickly than they would otherwise have.

E.5.3.2 Incentives and stimuli

IDH delivers specific, separately identifiable incentives and stimuli to target organisations. These include generating an increase in information and awareness and a drive towards partnerships. The FSI initiative focuses specifically on companies in the floral sector that are ahead of the curve where sustainability is concerned. In 2012 when the initiative started, 25 stakeholders were invited to join the initiative based on their capacity to promote sustainable practices and to influence other companies to join sustainable initiatives.

Information and awareness – The shared ambition that was publicly announced in the beginning of the project showed the rest of the sector and the outside world what these companies envisioned. This created awareness in the sector and within



the participating companies. In the projects along the way, the members were transparent about what worked and what did not, and if they were on track to reach their goal. It also showed other parties in the sector what was happening. Together they encouraged more companies to follow their lead.

Drive to partnership – Companies can follow the example of the initial members of the initiative to become a member themselves. However, membership comes with obligation to be active and involved in sustainability initiatives. This requirement to show dedication and commitment typically creates a strong bond and drive for companies in the sector to change. Moreover, it motivates competitors to join forces and work together to implement and adopt sustainable practices.

E.5.4 Effectiveness and impact

One of the most important results generated by the sustainable trade initiative is a shared idea on what is meant by responsible production and trade. In a market space where sustainability has a different meaning for every person, company and country, FSI creates a common language.

As in many sectors, there are various standards on sustainability. FSI created a basket of standards, including fourteen standards that are now used globally. This creates transparency in the sector and builds on the shared conceptualisation of sustainability in the world of floriculture. This also helps organisations to comply to any standards that are applicable to them without redoing work.

The shared ambition created more internal commitment to the sustainability topics as well. Interviewed industry actors indicate that this topic is becoming more and more internalised throughout the floriculture market, resulting in a willingness within organisations to continue and grow their sustainable practices, without the pressure from outside actors.

The ambition of producing and trading 90% responsibly by 2020 is not yet achieved. However, interviewees from the sector mention that in 2016 the figure was at 41% and in 2017 the figure is 50%, alluding to a positive trend.

E.5.5 Success factors and barriers

Specific success factors can be recognised that help IDH to influence organisational behaviour. These include the involvement of a ‘coalition of willing’, the structure of the sector, standards on sustainable growth and create short term goals.

Success factors

Involvement of a ‘coalition of willing’ – IDH offers guidance to companies to work on sustainability goals in their sector in a concrete way. The companies themselves are more in the driving seat. For example, FSI only has two employees. This means that most of the work needs to be done by the organisations. This creates trust between companies and a shared commitment to improve. Getting organisations actively involved on sustainability and letting them execute and implement projects themselves strengthens the ambition of the sector. Because change is coming from within the sector, it increases credibility and persuades others to make an effort on sustainability as well.

Structure of sector – The structure of the sector or length of the value chain determines how easily impact can be achieved. The floral chain is fairly compact, which makes it possible to communicate quickly with the majority of the parties.

Standards on sustainable growth – The companies in the sector communicate and collaborate about available frameworks, standards and key areas of focus. The initiative started by creating a clear understanding of the topics included. This improved clarity throughout the sector. For example, a grower does not have to meet 20 different frameworks for each buyer separately, but instead use one starting point.

Short term goals – The initiative started pro-actively with the participating companies defining short term goals and actions. This created momentum early on and showed progress. Along the way it also showed differences in interpretation, that could then be mitigated.



Barriers

The IDH approach also features specific barriers to changing organisational behaviour. These include tight budgets, transparency of standards.

Tight budgets – The floral sector is a sector that operates under small margins. This results in a constant focus of resources in an effective and efficient way and tight budgets, leaving little room to invest heavily in new ways of working. The initiative countered this by creating a coalition of companies that were motivated to do something about sustainability. They were willing to invest time and money in this topic. And since they were all part of the sector, they were experienced in dealing with little resources and working efficiently. Additionally, it showed other parties in the sector that the push for sustainability was not coming from an outsider (who did not have the budget constraints they have).

Transparency of standards – although standards could potentially improve transparency, they are not always transparent themselves. This has a negative effect on the sector. Especially when there are multiple standards that overlap and different suppliers and clients that expect a company to comply with different standards. The initiative created a basket of 14 commonly used standards in the sector. This eliminates double work and helps organizations to comply more easily with each required standard. It also creates full transparency in understanding the basic requirements.



About this report

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This report has been prepared in accordance with the engagement letter between the Ministry and PricewaterhouseCoopers Advisory N.V. dated 4 December 2017. The report contains the findings and conclusions of the study described in the engagement letter. The contents of this report are the result of the methodological approach described in appendix A to this report, which has been developed in agreement with the Ministry of Economic Affairs and Climate Policy.

This report has been prepared under the responsibility of **Wendy van Tol**, partner at PwC.

Research team PwC & RSM

Wendy van Tol

Consulting leader PwC Netherlands

+31 62354450
wendy.van.tol@pwc.com



Bas Warmenhoven

Senior Manager Consulting

+31 623559123
bas.warmenhoven@pwc.com



Diederik Verzijl

Manager Consulting

+31 612049665
diederik.verzijl@pwc.com



Malika el Boudaati

Consultant

+31 610485377
malika.el.boudaati@pwc.com



Frank Wijen

Associate Professor of Strategic Management

+31 10 4081985
fwijen@rsm.nl



Hannes Leroy

Assistant Professor Human Resource Management

+31 10 4082627
leroy@rsm.nl



Contact persons for the Behavioural Insights Team of the Ministry of Economic Affairs and Climate Policy

Dr. Thomas Dirkmaat

t.dirkmaat@minez.nl

Dr. Bram van Dijk

a.vandijk@minez.nl