



A Wealth of Behavioural Insights: 2019 edition

Behavioural Insights Network Netherlands

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Colofon

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This publication is the English translation of '*Rijk aan gedragsinzichten: editie 2019*' which was published in November 2019.

This report is a joint publication by all ministries, united under the Behavioural Insights Network Netherlands (BIN NL). This report is published at BIN NL's own initiative.

BIN NL is a partnership of all ministries, aiming to apply behavioural insights to policies, implementation, supervision and communication. Its goal is to exchange knowledge and experience.

The cases in this report were carried out under the responsibility of the individual ministries and/or their implementing organisations and regulatory authorities. For more information about these cases, please contact the organisation in question; a list of contacts is provided in the back of this report.

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Foreword

The Behavioural Insights Network Netherlands (BIN NL) has existed for [five years](#) already. We published the first version of the report A Wealth of Behavioural Insights in 2017. At that time we expressed the hope that in the next edition we could give even more examples of cost-effective behavioural interventions with a [social impact](#). Now, two years later, we are proud to present the second edition of A Wealth of Behavioural Insights. We are pleased with the substantially higher number of completed projects submitted by the Ministries. We see that the application of behavioural insights in implementation and supervision is gaining ground. There are also some examples of application at the front end of the policy cycle. What has remained unchanged is the wide [variety](#) of areas in which use can be made of behavioural insights. From healthy food for military personnel to energy savings for consumers and from waste separation in high-rise buildings to preventing arrears in the payment of study debts.

As a network, we have focused strongly on our main task of sharing knowledge over the past two years. Not only do we inform colleagues about the added value of applying behavioural insights; we also inform behavioural experts of the latest developments. We have a successful series of monthly [lunch lectures](#) in place as well as a signature annual congress, *Dag van het Gedrag* (“Day of Behaviour”). Furthermore, it has been our honour to bring behavioural experts from the Netherlands and abroad together in The Hague during the second European Behavioural Insights Experts Meeting. We also share knowledge by providing manuals. In 2018, for example, the manual [Gedragstechnieken voor brieven en e-mails](#) (“Behavioural techniques for letters and emails”) was published, and simultaneously with this report, [Hoe is gedrag te onderzoeken?](#) (“How can behaviour be researched?”), an overview of 18 research methods for more effective policy.

The website www.binnl.nl has also been launched. In the course of 2020 a project database will be placed on this website, where the cases from A Wealth of Behavioural Insights can also be found. As soon as new completed projects have been submitted, we will include these, so that the knowledge gained can be shared even faster. In addition, we intend to publish a new edition of this report, including an interpretation of broader trends and developments. We hope that A Wealth of Behavioural Insights 2019 [will inspire you](#) to keep using behavioural insights – or to start using them. There is certainly great potential, as almost all government policy is about changing behaviour. We hope you enjoy reading!

Thomas Dirkmaat *Chairman of Behavioural Insights Network Netherlands (BIN NL)*

Marc van der Steeg *Deputy Chairman of BIN NL and Chairman of A Wealth of Behavioural Insights 2019 Working Group*

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**Applying behavioural insights:
where are we now, challenges and lessons**

First five-year anniversary

In December 2014, the Dutch Cabinet expressed its expectation that making stronger use of behavioural insights will make the government more effective and efficient. It then opted for an [empirical policy approach](#) in which the Ministries experimented with the application of behavioural insights on specific policy themes (Kamp, 2014). In 2014, the interdepartmental network BIN NL was set up to share knowledge of, and experience with, the application of behavioural insights within the central government. In late 2017 the first edition of A Wealth of Behavioural Insights was published, which compiled the results of the application of behavioural insights within the central government (BIN NL, 2017a). The first pilot projects have made clear that applying behavioural insights has added value.

In early 2018, the Cabinet – responding to the report [Weten is nog geen doen](#) (“Knowing is not acting”) by the Netherlands Scientific Council for Government Policy (WRR) – wrote that it is important that behavioural knowledge, including the perspective of the capability for action, be used in policies, supervision and communication (Dekker & Ollongren, 2018). It also committed itself to periodically informing the House of Representatives on the progress made. Now, two years after the first edition of A Wealth of Behavioural Insights, it is time to take stock.

Through this publication BIN NL provides an overview of the behavioural projects undertaken within the central government. The heart of the report is Chapter 3, which describes [35 behavioural projects](#), preceded by some highlights. We refer to the annexes for a list of contacts for each project, references, and an explanation of the abbreviations used. In the remainder of this chapter we provide an [analysis](#) and [reflection](#). We do this first by indicating in broad strokes the benefits ministries currently derive from using behavioural insights. We then present the most significant [challenges and lessons](#) for the future based on present experience. Lastly, we give an overview of the knowledge-sharing activities organised by BIN NL. Chapter 2 contains an explanation of [relevant developments](#) within the discipline.

Benefits of applying behavioural insights

The process of applying behavioural insights has a number of steps. It starts with problem analysis and behavioural analysis. On that basis, interventions are developed, which are then tested in practice, preferably in the form of an experiment. If that study shows that an intervention or a combination of interventions has a positive effect on the desired behavioural change, it can be scaled up.

All projects presented in this report are based on a behavioural analysis. The extent to which interventions have already been tested and/or scaled up varies per project. Together,

these 35 project descriptions provide a good picture of the current state of play in the application of behavioural insights in government. We have observed the following main features:

- Applying behavioural insights when implementing policies may save citizens and businesses from paying **unnecessary fines** because they forgot to carry out administrative actions on time. For example, with a few small cost-effective interventions in communication, we have saved a large group of freshly graduated students a total of several million euros in fines by having them cancel their “student travel product” on time (page 42). We have also managed to prevent farmers from having a penalty subject to non-compliance of up to 1,300 euros imposed on them for not submitting their combined statement (page 76).
- The application of behavioural insights leads to more **effective and efficient implementation**. Sums owed by citizens and companies to the government can be collected more efficiently. For example, by enticing graduates to opt for direct debit for the repayment of their student debts (page 40). And the return on existing policy efforts can be increased; see, for example, the increased use of online application training by jobseekers and the “inspiration days” offered to them by Employee Insurance Organisation UWV (pages 86 and 88).
- The application of behavioural insights in supervision leads to **better compliance** with regulations and thus to improved safety and legal equality in the Netherlands; see the examples on the decrease in fireworks violations (page 36), the reduction of copper levels in pig feed (page 64) and increased compliance with labour laws in the hospitality industry (page 62).
- Combining the application of behavioural insights with proper effect measurement provides **insight into the effectiveness** of current policy efforts. It offers pointers for interim policy adjustments where necessary. Examples of this are the Covenant 10 PJ on energy saving, which was partly set up as RCT (page 48), the study on the 20% bonus ceiling on risk-taking behaviour in financial enterprises (page 50) and the study into the effect of labelling child budget on spending behaviour by parents (page 80).
- The projects also include small-scale online and field experiments of an **exploratory nature**. These studies contain exciting results with pointers for future policy and have the potential to have a major impact when scaled up. These studies are about, for example:

- protecting consumers from unpleasant surprises because they have not taken sufficient notice of the general terms and conditions of an online purchase, by using icons and an urgency signal (page 22).
- enticing residents of high-rise buildings to separate their waste better and thus contribute to bringing about a circular economy (page 60).
- adapting the design of the creditworthiness assessment by telecom providers in such a way that it no longer contains a prefilled standard income amount so that the assessment will give a better picture of their clients' actual creditworthiness, and the goal of the assessment is achieved (page 26).
- Finally, there are projects in which a behavioural analysis was made with the aim of revealing the **potential** of the behavioural approach to a dossier, the application of which is still to take place in the future. The research into public support for natural gas-free neighbourhoods (page 44) and the research into the possibilities for interventions aimed at increasing the response rate to Statistics Netherlands surveys (page 34) are examples of this.

Lessons and challenges

The results of the 35 behavioural projects make clear that behavioural insights have added value in making central government more effective and efficient. A number of lessons and challenges emerge from experience with applying behavioural insights. We are presenting four of these.

1) Applying behavioural insights in communication leads to big gains

Many of the examples given in Chapter 3 lie in the field of communication (see, for example, the cases of the Education Executive Agency (DUO) of the Netherlands Ministry of Education, Culture and Science on pages 38-43 and Employee Insurance Organisation on pages 82-89). There are several reasons for this. Communications such as letters, e-mails and forms are relatively easy to adapt. Moreover, by testing several variants simultaneously side by side in a controlled experiment, the effectiveness of the adaptations can be measured properly. As a result, effectiveness can be improved using relatively simple interventions.

There are dozens of examples already where behavioural knowledge was used to communicate more effectively. Partly based on these experiences, BIN NL has developed the *Gedragstechnieken voor brieven en e-mails manual* ("Behavioural techniques for letters and emails") (BIN NL, 2019). By identifying with the recipient when communicating, by using one's knowledge of what type of communication encourages behavioural change and by experimenting with different alternatives, it turns out that the wording used can have a great impact on people's behaviour. Along this route, there is **still a great deal of 'low-hanging fruit'** to be picked, certainly when bearing in mind that every large imple-

menting organisation sends hundreds, if not thousands, of different types of letters and emails to their clients on an annual basis.

2) Which research method do I use?

As shown by the examples from Chapter 3, the application of behavioural knowledge often goes hand in hand with a thorough research design. This will help in determining whether the intervention changes behaviour. The results of a well-conducted study will enable the central government to gradually gain [a realistic picture of what works and what does not](#). This will prevent the continued use of policy interventions that do not work.

Choosing the right research method may involve many different aspects. For that reason, BIN NL will also present an overview of 18 different research methodologies this year. This publication discusses various methods; what do they entail? In what situation are they most useful? What are the strong and weak points in a method and how can the weak points best be overcome? Randomised Controlled Trials (RCTs), for example, are often the best way to determine an effect in a reliable way. This method, however, has a number of disadvantages. In an RCT, for instance, groups of people are temporarily treated unequally, often without their knowledge, in order to find out what works. Is that ethically right? However, after the trial has been completed, all the different groups may from then on still receive the most effective treatment. For example, if a trial shows that a home energy manager helps citizens to save energy, the control group that did not receive such a manager would still get one after completion of the trial. Being transparent about the RCT and its results afterwards is also important.

In general, a number of other lessons are useful to take on board when choosing a study method.

- Choose the best possible method in terms of evidence. An RCT, for example, is to be preferred over a quasi-experiment, and it is better to measure actual behaviour rather than self-reported behaviour (behaviour which people *say* they show).
- Combine research methods that produce complementary results. For example, add a questionnaire to be able to interpret the results of your RCT better.
- Also choose a method that suits the current policy phase, such as in-depth interviews or focus groups in the exploratory phase.
- Plan sufficiently ahead.
- Find out what the budget allows.

You can read more about these considerations in the publication *Hoe is gedrag te onderzoeken? Overzicht van 18 methodieken voor effectiever beleid* (“How can behaviour be researched? Overview of 18 methodologies for more effective policy”).

3) Applying behavioural insights is relevant for the entire policy cycle

In many of the examples in this report, behavioural insights are applied in the final stage of the policy cycle, i.e. when communicating about a policy instrument. However, applying behavioural insights is **also useful in earlier stages of the policy cycle**: namely during problem analysis and when choosing a policy instrument. The case of the Ministry of Finance on bonus ceilings on page 50 and the case of the Ministry of Social Affairs and Employment on child arrangements on page 80 are good examples.

Through a behavioural analysis, the policy maker gains insight into the relevant factors making the target group display the current behaviour as well as the barriers keeping the target group from showing the desired behaviour. This provides starting points for developing and testing policy interventions that are attuned to these behavioural factors and obstacles, thus increasing the likelihood of developing a more effective policy.

The Integraal Afwegingskader voor beleid en regelgeving (IAK) (Integrated Assessment Framework for Policies and Regulations) specifically addresses the importance of making a behavioural analysis. In practice, the application of behavioural insights to policy development still lags behind in comparison to implementation, supervision and communication. This can be explained in part by time pressure, routine behaviour and a traditional strong focus on financial and legal incentives. To make a behavioural analysis and to test interventions at the start of the policy cycle **requires time and room for experimentation**. More investment in this area would be very welcome.

4) Behavioural expertise must be embedded in government further and more concretely

Behavioural sciences are a relatively young discipline within the government. According to Feitsma (2019), the application of behavioural insights by the Dutch government is still for the most part in an **early and exploratory phase of development**. One of the consequences is that behavioural expertise is not yet as firmly embedded in most ministries, implementing bodies and regulators as established disciplines such as law, economics and public administration are. According to Feitsma, **most behavioural** experts and the behavioural teams that do exist, with a few exceptions, have no more than five members. However, we do perceive a positive upward trend in this regard. The application of behavioural insights has become part of the knowledge programmes of a number of ministries and implementing bodies in the past two years. In addition, we recently see that specific behavioural

science positions are being created in a number of organisations. Lastly, behavioural science has been a spearhead of the *Voorlichtingsraad* (Government Information Council) in the past three years.

In order to benefit from the behavioural sciences perspective within the entire government, it is important for this trend to continue. Having **sufficient and firmly embedded behavioural expertise** in place is a requisite for applying behavioural insights. In addition, it should also become a matter of course for policymakers, legislative lawyers and implementing officers without a behavioural sciences background to pay attention to this perspective when developing policy and legislation (Dekker, 2019).

BIN NL activities

BIN NL organises various activities to gather more knowledge about the application of behavioural insights and disseminate it among central government civil servants. The table below shows a list of these activities and their result.

Activity	Objective	Reach
Annual congress: de Dag van het Gedrag ("Day of Behaviour")	Sharing knowledge, offering new insights and perspectives in the field of behavioural knowledge, strengthening the mutual network and entering into new collaborations	First edition: 325 participants Second edition: 450 participants
Monthly lunch lectures	Sharing and deepening knowledge	Approximately 70 participants on average
Online platform: www.binnl.nl	Forum: discussions on the discipline, sharing articles and knowledge Who is who: providing a landing spot for questions and networking Knowledge bank: reference work for tested interventions (this component will follow in 2020)	The platform was launched on 1 October 2019
A Wealth of Behavioural Insights	Sharing knowledge of the results of projects at ministries, regulators and implementing bodies. Sharing lessons learned by BIN NL (BIN.nl, 2017a)	Print run: 600 Downloads: 2,000
Behavioural insights tools	Bundling the tools used by the central government to apply behavioural knowledge (BIN.nl, 2017b)	Print run: 900 Downloads: 1,700
Gedragstechnieken voor brieven en e-mails ("Behavioural techniques for letters and emails")	Manual for applying and evaluating behavioural knowledge in letters and emails (BIN.nl, 2019)	Print run: 1,600 Downloads: 500
Hoe is gedrag te onderzoeken? ("How can behaviour be researched?")	Overview of 18 research methodologies for more effective policy. Publication aimed at informing the debate on the study of behaviour	Print run: 800 Published in November 2019
Optional module in training programme for government trainees	Introducing trainees to behavioural insights	60 government trainees per year
International event: European Behavioural Insights Experts Meeting	Exchange of practical examples, operational lessons and bottlenecks and the latest developments in the field, between practitioners and scientists from different European countries	80 participants from 13 countries

2

**Relevant developments
within the discipline**

Nudging (Thaler & Sunstein, 2009), heuristics (Tversky & Kahnemann, 1974) and the principles of influence of Cialdini (1993) are well-known examples of behavioural insights. These methods are increasingly becoming a standard element of public policy. However, the behavioural sciences have more to offer and the relevance of other behavioural insights is also gradually being recognised in policy.

In this chapter, we describe four relevant developments that have recently occurred in this field.

Stronger focus on ‘feasibility’ of policy

Complementary to its 2017 report, the Netherlands Scientific Council for Government Policy (WRR) developed a capability-for-action test (WRR, 2017). This instrument enables policy makers to reflect on policy proposals and test them against more realistic assumptions about [mental resilience](#). The insight that policy must be feasible is slowly gaining ground and a number of pilots with a capability-for-action test have been carried out.

Examples are the introduction of the SME test and the capability-for-action test that was carried out when the Disablement Assistance Act for Handicapped Young Persons was amended (Keijzer, 2019; Ark, 2019). Examples in the current report such as reminder messages, decision trees and visual support also show that rules are better complied with when they place smaller demands on the capability for action. These examples include the cases of Fewer interest-only mortgages (AFM), Fewer fines for students (DUO/Education, Culture and Science), Smaller payment arrears (DUO/Education, Culture and Science), More payment arrangements (UWV) and Enthusiasm for inspiration days (UWV).

Life events affect the capability for action

In times of major life changes, such as job loss, divorce, the birth of child or the loss of a loved one, we see that people have a diminished capability for action. These [life events](#) limit the ability of citizens to plan, take deliberate action and fulfil obligations towards the government. Government policy is now mostly generic and remains the same in all situations, assuming stable capabilities on the part of citizens. These life events, however, have proven to be situations in which people need a little more goodwill and support to help them not get further in trouble.

This is increasingly being taken into account in policy development, like in the Bill on [Pension Division in the event of Divorce 2021](#) (Overheid.nl 2018). It stipulates that after a divorce, the pension administrator automatically proceeds to pension division, unless it has been specified that the ex-partners do not want this. Contrary to the current “no,

unless” arrangement, this change ensures a better division in the event of failure to act on the part of the ex-partners.

Psychological scarcity

In their work, Mullainathan and Shafir (2013) show that so-called psychological scarcity, resulting from experienced poverty for example, has negative effects: [a reduced IQ and more stress](#). As a result, people living in poverty are more likely to make sub-optimal decisions, which in turn makes it more difficult to escape from poverty. This illustrates that the likelihood of reaching a state of poverty or escaping it bears a closer relation to the situation people are in than to their motivation. In order to help citizens living in poverty and also experiencing poverty, a social safety net was developed. However, qualifying for this safety net requires this group to take many actions that make extra demands on their capabilities, while these capabilities are weakened as a result of their situation. This implies that simplifying the context of the social safety net (making it easy to understand and apply for it) may lead to more effective and legitimate public policies.

The [consumer credit market](#) policy objectives (Hoekstra, 2018) and the Amendment to the Municipal [Debt Counselling](#) Act (Overheid.nl, 2019) are good examples: they take account of the fact that the target group is in a scarcity situation. The example of the unemployment benefit award letter (page 84) also shows how simplified communication in the event of job loss can help the person affected to better assess his/her financial situation.

Boosting as a new type of behavioural intervention

Whereas nudging used to be the most well-known tool of behavioural science, boosting is also starting to gain a reputation for itself in policy (Hertwig & Grüne-Yanoff, 2017). One of the main differences is that nudging is aimed at changing behaviour, while boosting focuses on improving competencies. [Improving competencies](#) will make people better able to make conscious choices for the long term, whereas nudging usually has a one-off and sub-conscious influence. Examples of boosting include:

- a clear decision tree that helps citizens to make sound financial decisions;
- graphical representation of statistical information that makes it easier to understand and enables people to make more informed choices.

3

35 Behavioural Projects at the Central Government

Highlights of behavioural projects

This chapter describes 35 behavioural projects that have been implemented within the central government in the past years. This overview is not exhaustive. The process of applying behavioural insights has a number of steps (see also Chapter 1). All projects presented here are based on a behavioural analysis. The extent to which interventions have already been tested or scaled up varies per project. Moreover, this picture may change in the future, when a project enters the next phase.

An inherent feature of periodic progress reports is that they always provide a snapshot image. In the course of 2020 a project database will be placed on the website www.binnl.nl, which will also include the cases from A Wealth of Behavioural Insights. Through this database we hope to be able to give a more up-to-date picture of the progress of the individual behavioural projects.

The results of 16 behavioural projects with the most concrete and/or eye-catching results are summarised below. These results illustrate the added value for policy, implementation and supervision of applying behavioural insights to a wide range of themes.

Better understanding of general terms and conditions (ACM)



Consumers hardly look at the general terms and conditions in an online sales environment. [Icons and an urgency signal promote a better understanding of the terms and conditions and more interest in them.](#)

Movement in the health insurance market (ACM, NZa, EUR)



In order to make choosing between different health insurances easier, an experiment was held among more than 12,000 consumers. A comparison of the consumer's own basic policy with two similar (and often cheaper) policies particularly yielded results: [more people started to compare, although they did not switch.](#)

Good creditworthiness assessment (AFM)



Many telecom providers that check the creditworthiness of customers tended to use a prefilled standard amount for income and recurring expenses in forms. An experimental study shows that the [standard amounts feature much more often in the group that used the prefilled form](#) than in the group that did not use a prefilled form.

Healthy lunches (General Affairs/Defence)



Various interventions have been developed to entice military personnel to make healthy choices in the canteen. [Nudging through trays in combination with discounts leads to increased fruit sales.](#)

Fewer payment defaults (Tax and Customs Administration)



There is a group of entrepreneurs who, until now, always filed a tax return and paid their taxes, but who are now for the first time filing a tax return without paying. [An adapted reminder letter to these entrepreneurs leads to over 10% more payments](#)

Decrease in fireworks violations (DCMR)



Firework sellers commit relatively minor but persistent violations. [Various behavioural interventions caused the number of violations to decrease by half](#) compared to the previous year.

Smaller payment arrears (DUO/Education, Culture & Science)



Many people already get into arrears as soon as they have to start paying off their study debt. [An additional payment reminder with various behavioural insights leads to a significant increase in timely payments](#), as well as a 20% decrease in the number of cases referred to a collection agency.

Saving for a sustainable home (Economic Affairs & Climate Policy)



Approximately 70-80% of homeowners say they would rather save than borrow to make their home more sustainable. [In addition to financial incentives, the possibility of early withdrawals and a free home energy audit appear to be important factors](#) in opting for a savings instrument.

Food waste in containers (Infrastructure & Water Management/RWS et al.)



How can residents of high-rise buildings be encouraged to better separate their food waste? Three behavioural interventions were tested in Amsterdam. [The most successful intervention \(attitude change\) leads to a 30% increase in the use of food waste containers.](#)

Improved compliance by starting entrepreneurs in the hospitality industry (Inspectorate SZW)



Inspectors made visits to starting catering businesses, providing information to them on the relevant labour laws and how to self-monitor them. [Subsequently, violation rates were significantly lower than among uninformed start-ups](#)

Reduction of copper levels in pig feed (NVWA)



Pig feed may not contain too much copper. A campaign aimed at large pig farmers was effective: [92% of the companies were found to use feed with a copper content that complied with the legal standard](#); an increase of 25% compared to the previous year.

Benchmark for schools (Education, Culture & Science/NCO)



Many school boards do not consult relevant benchmark reports on their schools. **A short letter using various behavioural techniques in combination with an eye-catching envelope led to 40% more downloads** compared to the previously used letter with a standard envelope.

Higher response, fewer fines (RVO)



A letter emphasising how to avoid a fine leads to **25% fewer farmers having a penalty subject to non-compliance** imposed on them for failing to submit a “Combined Statement”.

Effective child arrangements (Social Affairs & Employment)



Does labelling financial allowances as “intended for the children” increase the likelihood that parents will actually spend the money on their children? Three experiments that were conducted provided no evidence for this. **However, as a result of this measure, parents seem a little more inclined to put money aside.**

More payment arrangements (UWV)



Clients are more likely to pay back any excess benefits they received to UWV if they receive a reminder. **In addition, if the email or text message points out the possibility of a payment arrangement, the number of arrangements increases by 44%.**

Enthusiasm for inspiration days (UWV)



A new invitation has been developed to enthuse jobseekers to come to the inspiration days: eye-catching, personal and with a reminder by text message. **This combination has doubled the number of registrations and that of attendees.**

Better understanding of general terms and conditions (ACM)

What makes consumers look at the terms and conditions?

Consumers hardly look at the general terms and conditions in an online sales environment. An experiment by ACM and BIT UK has shown that icons and an urgency signal promote a better understanding of the terms and conditions and more interest in them.

Background: *general terms and conditions are often not read*

Few consumers read the general terms and conditions of an online retailer before making a purchase. This may have negative consequences for both parties. Consumers may regret their purchase or be faced with costs they had not taken into account. Retailers on the other hand lose a great deal of time and money to resolve disputes about contractual conditions with consumers. The Authority for Consumers and Market (ACM) wants to find out how the understanding of, and interest in, general terms and conditions can be increased among consumers. With that knowledge, the ACM can give advice to companies.

Intervention: *icons and urgency signal*

In a simulated online store environment with a checkout page, a control situation (participants had to click on a link to see the conditions) was tested against three interventions:

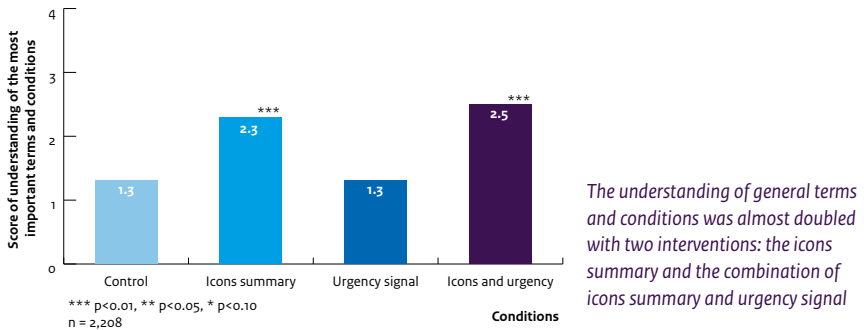
- icons summary: the most important conditions are shown with icons;
- urgency signal: an urgency signal was added calling the consumer's attention to the conditions;
- icons and urgency: a combination of both.

The length and complexity of the complete terms and conditions used in the experiment were representative for the Netherlands.

Method: *experimenting platform of BIT UK*

A representative sample of 2,208 Dutch adults participated in the online simulation. The ACM collaborated with BIT UK for the experiment. An RCT was held via the latter's online experimental platform Predictiv. The participants' understanding of the terms and conditions was tested by using multiple choice questions. How long participants looked at the content and whether they clicked to open the full terms and conditions was also recorded.

Figure 1: Extent of understanding of general terms and conditions in control and intervention conditions



Result: better understanding of and more interest in general terms and conditions

All interventions had a positive effect: understanding of the terms and conditions and the degree of interest in them increased.

- The icons summary and the icons and urgency approach were particularly effective in improving understanding of the key terms and conditions: participants answered 57.5% and 62.5%, respectively, of the understanding questions correctly, compared to 32% in the control condition.
- The urgency signal and the icons and urgency approach increased interest in the terms and conditions: 24.7% and 30%, respectively, of people clicked to open the full terms and conditions, compared to 8.6% in the control condition.

Figure 2: Icons summary and urgency signal



Movement in the health insurance market (ACM, NZa, EUR)

How can consumers be encouraged to compare insurances?

In order to make choosing between different health insurances easier, the ACM, the NZa and Erasmus University Rotterdam (EUR) held an experiment among more than 12,000 consumers. A comparison of a person's own basic policy with two similar (and often cheaper) policies particularly yielded results: more people started to compare, although they did not switch.

Background: *people find it difficult to choose a health insurance policy*

Many people find it difficult to compare and choose health insurances, which is why they often stick with the insurance they already have. The ACM, NZa and EUR want to break this pattern by facilitating the process. This will also encourage competition. How can obstacles for consumers at various stages of the selection process be removed?

Intervention: *three ways to make choosing easier*

Three interventions were tested:

- positive experiences (see Figure 1): one third of the sample received a message with an image that was tailored to their own demographic group. Message: a large part of the group is satisfied with their switch to a different health insurance. An explanation was given of why this was so, and that many people find that switching takes less time than they expected. This information came from a preliminary study.
- direct comparison (see Figure 2): one third of the sample was shown an overview of insurances that were similar to their own insurance including the premiums.
- reminder option: in addition, half of the sample (half of each of the two groups above and of the control group) was given the opportunity to sign up for one or more reminders.

Method: RCT

The experiment was set up as a Randomised Controlled Trial. A group of over 12,000 consumers from KantarPublic's panel was divided into six different experimental groups. The data were gathered through an online questionnaire at the beginning of the "switching season" (November 2017) and a second online questionnaire after the end of the switching season (February 2018). The researchers measured three outcome variables: the number of switchers, the number of consumers comparing health insurances and the number of steps completed in the orientation process.

Result: *direct comparison ensures better orientation, but does not result in more switchers*

The group who were given a direct comparison between their own policy and two similar policies indicated significantly more often that they had compared different health insurances. In addition, with regard to both the direct comparison and the positive experiences, the average number of steps completed in the orientation process was significantly higher than in the control group. None of the interventions led to an increase in the number of switchers. The reminder option was chosen by less than 10% of the people who were given that option and did not make a significant difference.

Figure 1: Positive experiences

Wist u dat meer dan 90% van de gezinnen met oudere kinderen tevreden is over hun overstap naar een andere zorgverzekering? Vooral omdat zij nu een lagere premie betalen en een betere service hebben. De meerderheid vindt de tijd en de moeite die het overstappen kost, meevallen.



We raden u aan om uw zorgverzekering te vergelijken met andere zorgverzekeringen voordat u uw keuze voor 2018 maakt. Dit kunt u bijvoorbeeld doen op een prijsvergelijgingswebsite.

Figure 2: Direct comparisons

Belangrijk!

U gaf aan dat FBTO Zorg basisverzekering restitutiepola uw basisverzekering is. Hieronder ziet u hoe uw basisverzekering verschilt van vergelijkbare basisverzekeringen op een aantal belangrijke kenmerken.

	FBTO Zorg basisverzekering restitutiepola	OHRA Zorgverzekering restitutie	Zorg en Zekerheid Zorg Vrij Polis
Premie per maand	€ 109,95	€ 117,34	€ 118,45
Ziekenhuizen*	Volledige keuze	Volledige keuze	Volledige keuze
Fysiotherapeuten*	Volledige keuze	Volledige keuze	Volledige keuze
Apotheken*	Volledige keuze	Volledige keuze	Volledige keuze

We raden u aan om uw zorgverzekering te vergelijken met andere zorgverzekeringen voordat u uw keuze voor 2018 maakt. Dit kunt u bijvoorbeeld doen op een prijsvergelijgingswebsite.

*: Veel zorgverzekeraars sluiten niet met alle zorgaanbieders een contract af. In dit overzicht ziet u per basisverzekering of u met die verzekering beperkte, ruime, zeer ruime of volledige keuze heeft uit ziekenhuizen, fysiotherapeuten en apotheken.

Good creditworthiness assessment (AFM)

Are prefilled amounts in forms used by telecom companies helpful?

Many telecom providers that check the creditworthiness of customers tended to use a prefilled standard amount for income and recurring expenses in forms. Research by the AFM shows that consumers often leave these amounts unchanged, so that the creditworthiness test does not achieve its goal.

Background: *mandatory creditworthiness test for credit from telecom providers*

Since 1 May 2017, telecom providers are obliged to ask customers for their income and recurring expenses if they grant them a credit in excess of € 250. In doing so, practically all providers used prefilled values in their online forms. They expected this would help customers fill in the correct information. However, other research shows that these types of anchors or standard options influence the choices made by consumers. For this reason, a field experiment was set up. What is the effect of prefilled values?

Intervention: *values prefilled/not prefilled*

More than 2,500 consumers who applied to Telfort for credit for a telephone of more than € 250 received one of the two variants of the creditworthiness test: the original form on which income and expenses were not prefilled, or the form on which they were. The prefilled values were based on family composition.

Method: *field experiment*

The AFM conducted a field experiment in which people were randomly assigned to one of the two variants. Their real income and recurring expenses were unknown. Due to the arbitrary assignment, there is no reason to assume that there were differences between the groups in terms of income and recurring expenses.

Result: *prefilling has a strong effect on behaviour*

It turns out that customers often leave the values in the form unchanged. The prefilled amount featured much more often in the group that used a prefilled form than in the group that did not use a prefilled form. An income approximating the prefilled amount (with a margin of 5%) featured 20% more often if that amount had already been filled in; for the recurring expenses this percentage was 16%. This effect occurs in the case of both existing and new customers as well as in all family compositions.

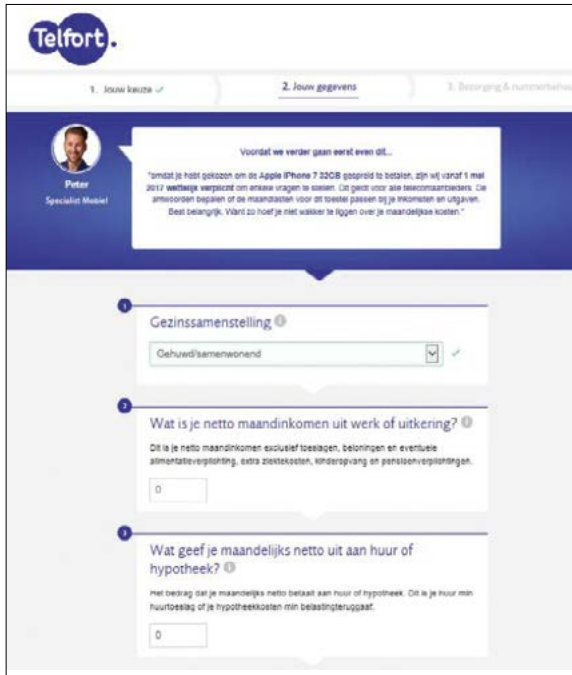
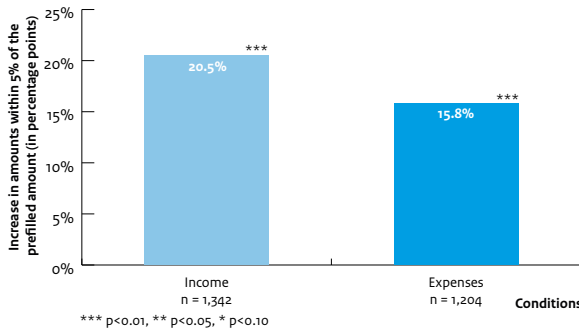


Figure 1: Screenshot of online choice environment without prefilled values

Figure 2: Increase of income and expenses amounts that correspond with prefilled amounts



The prefilled amounts featured significantly more often in the forms. The prefilled amount for income featured 20% more often than on the empty form. The prefilled amount for recurring expenses featured 16% more often. This results in a distorted creditworthiness picture

Fewer interest-only mortgages (AFM)

How do you encourage homeowners to take action?

An adapted letter to homeowners with an interest-only mortgage leads to more structural solutions, such as opting for a different type of mortgage. When they also receive a voucher for reimbursement of advice or mediation costs, many more homeowners take action.

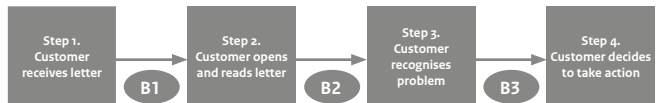
Background: *it is difficult to get people with interest-only mortgages to take action*

For homeowners with a (partly) interest-only mortgage, it is uncertain whether they will be able to continue to pay the mortgage costs and whether they will be able to repay their loan at the end of the mortgage term. The AFM wants to activate them to – where necessary – make earlier repayments or switch to another type of mortgage. However, it turns out to be difficult to get homeowners to act, even if it is in their own interest. The reason is that the problem in question is something that will – or may – occur in the future, while any adaptation for it takes effort and/or money now.

Intervention: *adapted letter and voucher*

Homeowners who receive a letter about their mortgage experience different barriers to taking action (Figure 1). An attempt was made to remove these barriers through an adapted letter (Figures 2 and 3). Customers received a standard letter, an adapted letter, or an adapted letter including a financial incentive to take action: a voucher for reimbursement of € 650 for advice and/or mediation costs.

Figure 1: Three barriers before homeowners take action



Method: RCT

Clients of mortgage lender Florius randomly received a standard letter (n=2,091), an adapted letter (n=2,789) or an adapted letter with a voucher (n=1,000). It was measured whether customers terminated or converted their mortgage, made one-off or periodical repayments, or had the interest-only part of their mortgage reduced. All this was monitored by Florius.

Result: *more structural solutions and more action*

The adapted letter leads to more structural solutions and the voucher leads to more action. The adapted letter and the voucher resulted in more customers converting their mortgage to a variety that involves redemption.

The voucher also increased the number of homeowners taking action: 8.7% in the voucher

group versus 4.8% in the standard letter group. In addition, more homeowners went to an adviser with both interventions: three times as often with the adapted letter, and five times as often with the voucher, compared to the standard letter. The absolute number of customers who go to an adviser remains limited in all groups.

Figure 2: Front and back of the adapted letter on the “mortgage gap”

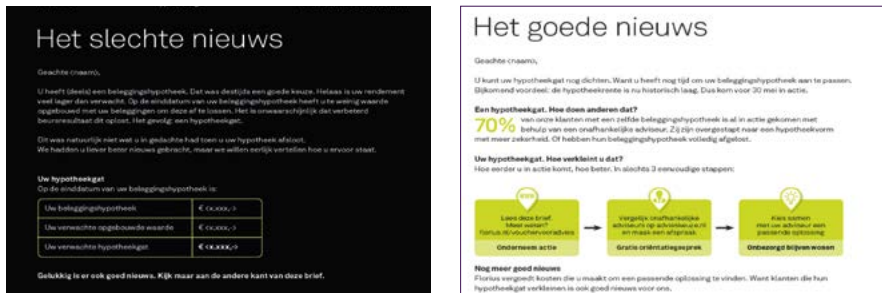


Figure 3: Voucher for reimbursement of advice and mediation costs

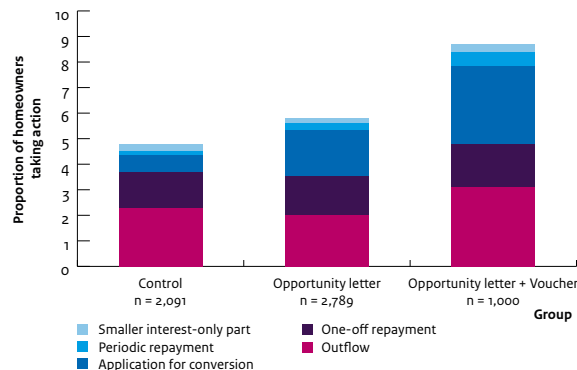


Figure 4: Percentage of homeowners taking action in control group and in two intervention groups, subdivided according to type of action

An adapted text (opportunity letter) will encourage more homeowners to change something about their interest-only mortgage. If a voucher is included this group is even bigger.

Healthy lunches (General Affairs/Defence)

How can military personnel be encouraged to make better choices?

The Ministry of Defence and the Behaviour Lab have developed various interventions to entice military personnel to make healthy choices in the canteen. Nudging by means of trays in combination with discounts leads to increased fruit sales.

Background: *military personnel can eat healthier*

The Netherlands Defence organisation believes healthy eating is important for military personnel. This is good for their deployability, both in the short and in the long term (i.e. upon their return to civilian life). As it stands, service members buy more white bread than brown bread and tend to prefer hamburgers over salads. They could therefore make healthier choices during lunch. The Defence organisation therefore asked the Behaviour Lab (an interdepartmental team of communication advisers with behavioural expertise) for strategic advice with concrete interventions.

Intervention: *nudging by means of trays in combination with price*

The trays at one of the Defence organisation's canteens had stickers applied to them depicting fruit and vegetables. The sticker acts as a prime and suggests a section of the tray where one can put fruit and vegetables. This was done by analogy with a separate compartment for fruit and vegetables in shopping trolleys as part of an experiment in supermarkets. The sticker was combined with a special discount on raw vegetables and fruit.

Figure 1: Sticker on trays



Figure 2: Discount offer in canteen



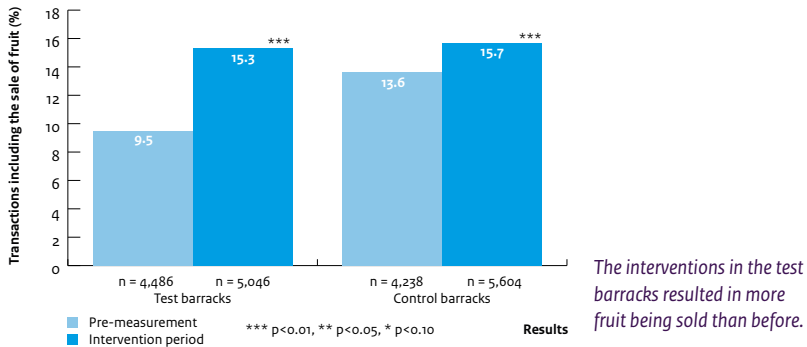
Method: practical experiment

The sales of raw vegetables and fruit was recorded through cash register data. Measuring was done before and during the intervention at two locations: the test barracks and a similar control barracks.

Result: more fruit sold

The cash register data show that the intervention leads to a substantial rise in the percentage of transactions including the sale of fruits. In the test barracks, this percentage rose from 9.5% in the weeks prior to the intervention to 15.3% during the intervention. Fruit sales remained more or less stable (13.6% versus 15.7%) in the control barracks. There was no effect with regard to raw vegetables. Research among the target group suggests that this may have to do with the appeal of the product, or the lack thereof.

Figure 3: Percentage of lunches including fruits in two barracks



Fewer payment defaults (Tax and Customs Administration)

How can entrepreneurs be encouraged to pay their tax returns?

A payment reminder based on behavioural insights can stimulate payment behaviour. The Tax and Customs Administration sent an adapted reminder letter to a group of entrepreneurs and received over 10% more payments after two months.

Background: *intervening upon first payment default of entrepreneurs*

There is a group of entrepreneurs who, until now, always filed their tax returns and paid, but who are now for the first time filing a tax return without paying. Usually, the first payment default is a sign that something may be going wrong at the entrepreneur involved. With the help of a letter based on behavioural insights the Tax and Customs Administration hoped to prevent payment defaults from increasing. The barriers to paying and to making contact had to become as low as possible, so that the entrepreneur would pay or discuss the situation in order to prevent it getting worse.

Intervention: *lower barrier to paying or making contact*

A new letter was drafted to stimulate the desired behaviour. The message in the old letter was complicated and legalistic, and the use of language and tone were impersonal. As a result, the barrier to paying or making contact was high. The intervention letter highlighted the desired behaviour by presenting the two choice options briefly and visually clearly: pay within 14 days, or contact us. The barrier to paying was also lowered by grouping all the necessary payment information together in one eye-catching text box. The layout thus supported the desired behaviour. In addition, the tone was mild and empathic, and the entrepreneur was given the possibility of personal contact.

Method: *field experiment with control and intervention group*

A field experiment with two groups was set up. 124 entrepreneurs received the behaviour letter (intervention group) and 125 entrepreneurs received the old letter (control group). The number of payments in that month per group was taken as the dependent variable. The difference between groups in paid assessments was statistically tested to determine whether it was significant.

Figure 1: Payment box

To be paid by you:
EU 00.00

Pay before:
01-02-2018

Into bank account no:
 NL86INGB0002445588

Payment reference:
 giro collection slip or online
 via the payment reference
 search assistant

Result: *the number of payments increased by almost 11% when the behaviour letter was used*
 Of the 124 entrepreneurs in the intervention group, 122, constituting 98.4%, paid all outstanding payment defaults. Of the 125 entrepreneurs in the control group, 111, or 88.8%, paid in full. This difference is significant, representing an increase of 10.8% compared to the control group. The behaviour letter clearly resulted in more payments, proving its effectiveness in promoting payment behaviour.

Figure 2: Percentage of entrepreneurs who paid outstanding payment defaults



When the adapted letter was used, a significantly higher number of entrepreneurs paid the outstanding defaults than when the old letter was used.

Appealing surveys (Statistics Netherlands)

How can response rates be increased?

A behavioural analysis has produced concrete suggestions for invitations to surveys by Statistics Netherlands. This should result in higher response rates. Experimental research is planned for the coming year.

Background: *one-fourth completes the internet questionnaire*

Currently, the response rate for a questionnaire sent out annually by Statistics Netherlands is 27% via the internet. This is the proportion of people who complete the questionnaire after having received a first invitation from Statistics Netherlands. The aim is to increase this response rate by adapting the cover letter in such a way that as few people as possible subsequently need to be approached by interviewers.

Intervention: *formulating new invitations*

In cooperation with BIT EZK/LNV, a behavioural analysis was carried out to learn why people do or do not participate in surveys by Statistics Netherlands. Using the insights gained from this, several letters have been drawn up that can be tested experimentally at a later stage. Various techniques have been applied in those letters: commitment & consistency, freedom of choice, social responsibility and reciprocity.

Method: *behavioural analysis, experimental research will follow*

The behavioural analysis took place on the basis of literature research and eighteen interviews with random citizens at The Hague town hall. This resulted in advice for adapting the letters. Experiments with these letters will be conducted in 2020.

Result: *insights for invitations*

Some recommendations from the behavioural analysis:

- Make sure the Statistics Netherlands logo is not mistaken for advertising: place the central government logo next to it on both the envelope and the letter.
- Make sure people do not forget to fill in the questionnaire or postpone it: include a closing date in the letter and urge people to fill it in immediately or put it on their agendas.
- Use reciprocity: emphasise, for example, what the government does for its citizens.

- Appeal to social responsibility: demonstrate, for instance, that we all share a responsibility to help.
- Use commitment and consistency: prompt people to take a small step. Once they have taken that step, they will be more readily prepared to take follow-up steps.
- Allow people who show resistance and value their autonomy the freedom of choice , for instance by letting them choose their own incentive.

Decrease in fireworks violations (DCMR)

What makes sellers comply with regulations better?

Firework sellers commit relatively minor but persistent violations. Various behavioural interventions by the Monitoring Lab of DCMR Rijnmond Environmental Protection Agency caused the number of violations to decrease by half compared to the previous year.

Background: minor safety violations

For years, DCMR inspectors have found that firework sellers do not comply with environmental legislation. This mainly concerns minor violations that can easily be prevented. For example, sellers do not keep the aisles sufficiently clear or stack fireworks too high or in the wrong way. The Monitoring Lab initiated behavioural interventions to reduce the number of minor violations.

Intervention: info package and Whatsapp messages

Several interventions were used. In November 2018 companies in the industry received an information package with:

- an information letter;
- a checklist of important legislation, which entrepreneurs could use for self-monitoring;
- tape to mark the correct safety distances in order to prevent violations. In addition, sellers received messages via Whatsapp on and just before the official selling days to inform them of the upcoming inspections and alert them to possible violations and how to prevent them.

Figure 1: Section of the checklist from the information package

Checklist veilige vuurwerkverkoop 2018

In deze checklist vatten we enkele belangrijke regels uit het Vuurwerkbesluit voor u samen. U kunt ze van te voren doornemen en controleren of u alles goed heeft geregeld.

Zorg ervoor dat de checklist op een zichtbare plek in uw bedrijf hangt zodat uw medewerkers ook op de hoogte zijn van de regels.

* Met vuurwerk wordt categorie 2 en 3 vuurwerk bedoeld, tenzij anders vermeld. >>>

In de (buffer)bewaarplaats...

- Is het gangpad tenminste 75 cm breed.
- Staan de stellingen/schappen minimaal 20 mm van de muren.
- Staat vuurwerk binnen bereik van de sprinklers.
- Blijft de stapelhoogte van het vuurwerk onder de toegestane hoogte.
- Zijn er geen scheuren groter dan 0,5 mm aanwezig.
- Staat enkel consumentenvuurwerk.
- Wordt de maximale toegestane opslagcapaciteit niet overschreden.
- Is de deur dicht of wordt deze opgehouden door toegestane kleefmagneten.
- Wordt vuurwerk direct na levering opgeborgen.
- Staan binnen 5 m van de (buffer)bewaarplaats geen licht, tot zeer licht, ontvlambare stoffen en drukhouders (brandblusmiddelen uitgezonderd).
- Is alles zo ingericht dat de inspecteur van de DCMR bovenstaande makkelijk kan controleren.

TIPS

- Markeer de minimale breedte van het gangpad en maximale stapelhoogte met tape.
- Gebruik plak om te voorkomen dat vuurwerk tegen de muur ligt.

DCMR
milieudienst
Rijnmond

Method: *survey and factual data*

Entrepreneurs were asked on the telephone what they thought of the interventions. In addition, the DCMR looked at the numbers of violations observed by inspectors in the industry and compared these with previous years.

Result: *fewer minor violations in 2018*

The number of violations observed decreased by half in 2018 compared to the previous year. In 2017, violations were observed at 31% of the companies; in 2018 this was 17%. The figures confirm the industry's and the inspectors' impression that there were fewer minor violations than the year before. Fewer aisles that were too narrow were found (decreased by half). In addition, the operation of sprinklers was obstructed less often, and inspectors appear to be able to see better than before what is stored (in 2017 on four occasions visual inspection was impossible; this did not occur in 2018).

Smaller payment arrears (DUO/Education, Culture & Science)

How can people who start repaying catch up on their arrears sooner?

DUO has experimented with an extra payment reminder for first-time payers who are in arrears with their study debt. This reminder led to more and more timely payments of both the instalments in arrears and the two following instalments.

Background: *a large proportion of first-time payers are immediately in arrears*

Two years after finishing their studies, people with a study debt have to start repaying it. A substantial part of them, almost half in 2017, are immediately in arrears. They first get payment reminders from DUO, but eventually they may also have to deal with a collection agency or a bailiff. The behavioural project serves two aims: to persuade first-time payers in arrears to pay their arrears, and to prevent them from falling into arrears again with the subsequent instalments.

Intervention: *extra mail and letter with various behavioural techniques*

The intervention consisted of a letter and an email asking the debtor to pay and to take action for subsequent payments. The techniques used included:

- scannable headings: “What do you do to get rid of your arrears?” and “Want to be sure you pay on time? Set payment by direct debit”;
- concrete step-by-step plans: see Figure 1;
- stating the consequences on time;
- acknowledging possible resistance: “Perhaps you cannot do without the money and are inclined to ignore this letter. This is understandable, but does not solve the problem; it even compounds it”.
- an implementation intention: “Don’t have time to go through the steps now? Then pick a moment in your agenda at a later time today or tomorrow”.

Method: RCT

The effectiveness of the intervention was tested using a randomised experiment among over 13,000 first-time payers who are in arrears. The experiment group received the extra payment reminder including the behavioural techniques and, where applicable, the regular payment reminders. The control group only received the regular payment reminders.

Result: more payments more on time

Response increased with the new payment reminder; not only in relation to the particular instalment involved, but also in relation to the subsequent instalments. The experiment showed that the extra payment reminder led to more and timelier payments. After two weeks (before the regular second reminder), the proportion of payers of the instalment in arrears was almost twice as high in the intervention group as it was in the control group (45 versus 24%). After nine months the effect was smaller, but still significant (81 versus 75%). The two subsequent instalments were paid more often and more on time (80 versus 73%, and 74 versus 71%). On average, the intervention resulted in a decrease by a quarter in payment reminders and one-fifth fewer referrals to the Central Fine Collection Agency (CJIB). Direct debit was also set sooner and more frequently: 25 versus 13% after one month and 42 versus 36% after nine months. The yields – more payments received and lower cost of referrals to the CJIB – exceeded the costs by more than seven times (134 versus 18 thousand euros) after nine months.

Figure 1: Extra payment reminder with step-by-step plan

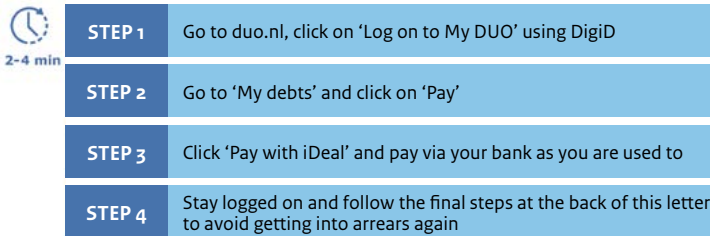
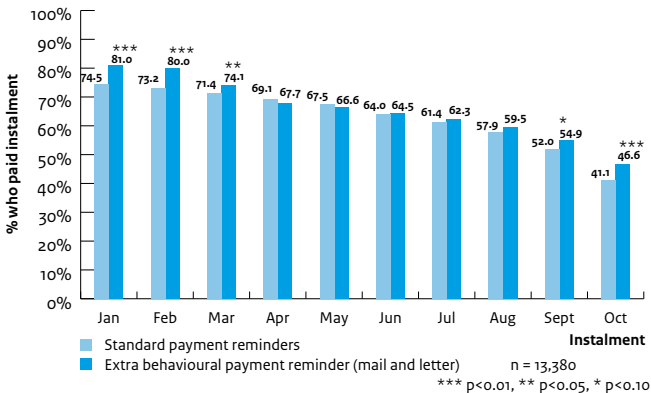


Figure 2: Difference in percentage of debtors who have paid



The extra payment reminder with several behavioural techniques triggers significantly more debtors to pay their instalments.

Quicker repayment of study debt (DUO/Education, Culture & Science)

How can direct debit be made more attractive?

Mails and letters with different behavioural techniques have been used to encourage debtors to repay their study debt by direct debit. The result of these interventions the number of direct debits has more than doubled on average.

Background: *payment arrears with non-direct debit payers*

Approximately 80% of arrears on study debts are concentrated in the group that does not pay by direct debit. A survey shows that only few debtors (27%) are aware of the obligation to repay by direct debit. And even fewer (20%) know about the discount associated with it. Data analysis shows that first-time payers might give permission for direct debit sooner. This behavioural project was aimed at having debtors repay more often and sooner via direct debit.

Intervention: *different mails/letters with different behavioural techniques*

DUO did an experiment with a basic text and three alternative mails/letters. The instructions were visualized in the basic email, without any further behavioural techniques. The three alternative emails each contain an additional technique, both in the subject line and in the text:

- social norm: “Activate direct debit, like 80% of debtors”;
- obligation: “Activate legally mandatory direct debit”;
- time: “Activate direct debit in only three minutes”.

For previous cohorts of debtors for whom direct debit was not mandatory, a test focusing on a discount instead of the obligation was carried out (Discount on your study debt? Activate direct debit). See Figure 1 for two example emails.

Method: *three RCTs*

For this study, three Randomised Controlled Trials were set up among three different target groups: first-time payers, debtors who have been repaying for less than 5 years and debtors who have been repaying for more than 5 years. Within these groups, subgroups were randomly assigned to the intervention group (basic text or alternative) or the control group.

Result: *average 107% increase in direct debits*

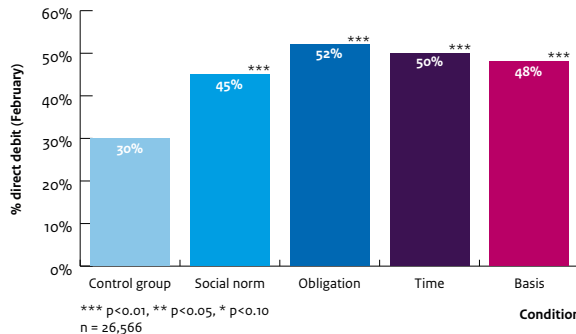
- First-time payers: all experimental conditions perform significantly better than the control group. The obligation condition scores best (52% direct debit versus 30% control group), whereas the social norm condition has the poorest effect (45%) though still sizeable.

- See Figure 2. Among the four intervention groups added up, an average of 53,000 euros per month was collected earlier.
- As to debtors who have already been paying off for a long time: all of the conditions led to an increase of direct debits. The discount yielded the most activations of direct debit (9% versus 4%), but did not differ from the other two conditions (8%).
- Among the debtors who have been paying off for a shorter time: here, too, all of the conditions led to a significant increase of direct debits. The obligation condition (28%) significantly outperforms the basic text condition (15%) and the control group (8%). For the obligation variant, an average of 5,500 euros per month was collected earlier.

Figure 1: Two example emails: emphasis on obligation (left) and discount (right)



Figure 2: Difference in direct debits between control group (no letter/no mail) and 4 different treatment groups



The adapted letters and emails ensure a sharp increase in the number of direct debits among first-time payers. The emphasis on the legal obligation is most effective.

Fewer fines for students (DUO/Education, Culture and Science)

How to ensure that student travel products are cancelled on time?

DUO carried out two experiments to prevent students from being fined for cancelling their student travel products too late. The most effective alternative email and a last-minute text message reminder both resulted in a 20% increase in timely cancellations.

Background: *many students fail to cancel their travel product on time*

In 2017, almost 20% of students cancelled their student travel product (public transport card) too late after finishing their studies. The group in question consists of 50,000 students. They incurred fines of 97 euros for every two weeks of being late. The behavioural analysis shows that a number of factors can influence cancelling behaviour, including: intention (motivation to cancel the product), inertia (intention but no action), lack of knowledge (who should cancel it, when and how) and attitude (whether it is believed to be important).

Intervention: *three alternative mails with behavioural techniques and text message reminder*

- In the first experiment, three new emails were designed. The effect of these has been compared to the email that DUO sent before to remind students to stop their student travel product. Irrelevant information was removed from all emails, the information was personalised, and a step-by-step plan was added. The subject line was also changed: “Avoid a 97 euros fine, cancel your student travel product by 7 June at the latest!” In the second email, Chippy was introduced, a public transport card with human characteristics who addresses the student (see Figure 1). The self-persuasion technique was also applied: “Think of all the things you can do with that money”. The third email incorporated the reward technique by drawing attention to discounts and calls on students to plan a specific time in their agendas to cancel the travel product.
- In a second experiment a text message reminder (see Figure 2) was tested one day before the deadline in addition to the regular reminder by email.

Figure 1: Email with Chippy

Hi Bas,
you may travel with your student travel card up to and including 31 May. You must cancel your student travel product by **no later than 7 June** in order to avoid a EUR 97 fine for every two weeks. Just think of all the things you can do with that money.



Method: RCT

The effectiveness of the emails compared to the regular email was tested in a randomised experiment with four groups in two months (n=4,257 in June and n=8,966 in July). The effectiveness of the text message compared to the regular email was tested in a randomised experiment with the regular email as control group (n=917).

Result: twice a 20% increase in timely cancellations

- The most effective email was the one with Chippy. It led to a 21% increase in timely cancellations in June (from 33 to 40%) and a 10% increase in timely cancellations in July (from 58 to 63%). Calculations show that if you could achieve the same effect over the whole year, the use of this email saves at least 1.65 million euros in fines on an annual basis. Based on the average fine of 2017, the amount saved in fines could even be around 6.9 million euros.
- The text message led to a rise in timely cancellations from 50 to 61%, also constituting a 20% increase. This intervention can be scaled up less easily, as DUO only has the mobile phone numbers of a limited proportion of its clients at its disposal. Efforts are underway to increase this proportion.

Figure 2: Text message reminder

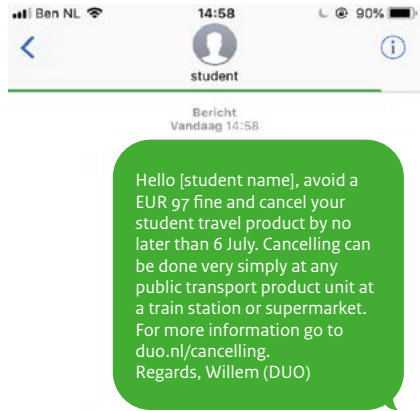
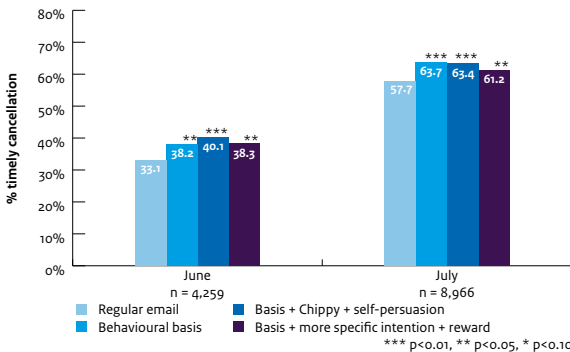


Figure 3: Difference in timely cancellations in June and July between the control group and three intervention groups



A greater number of students cancel their travel product in time when they receive an email with behavioural techniques, especially with Chippy.

Public support for natural gas-free neighbourhoods (Economic Affairs and Climate Policy)

How can residents' involvement in the energy transition be increased?

Public support is very important for the transition to natural gas-free neighbourhoods. The Ministry of Economic Affairs and Climate Policy has had research conducted among neighbourhood residents and municipalities. This has provided input for the Natural Gas-Free Neighbourhoods programme.

Background: *the upcoming energy transition*

Residents will feel the impact from the transition to natural gas-free neighbourhoods. They will have to adopt a different way of cooking and heating. The Ministry of Economic Affairs and Climate Policy wanted to get a better picture of their social commitment and their acceptance of the energy transition. What do they expect from the government and how do they want to contribute to the transition themselves?

Intervention: *n.a.*

Method: *participatory research and survey*

Between May 2017 and March 2018, BIT EZK/LNV conducted a participatory research among Green Deal municipalities. During the research period, municipalities were reluctant to approach residents for an interview or a questionnaire. This was partly due to uncertainties about costs, financing and the contribution to the transition required from individual residents of neighbourhoods. As a result, the field survey – a survey among residents – was limited to one neighbourhood.

Result: *residents put the initiative with the government, municipality may promote participation*

The survey showed that more than 84% of respondents are familiar with the government's goal of adapting the current system of energy provision in the Netherlands, and consider this to be a good cause. Ninety-seven percent of respondents feel that the municipality has a role to play in changing the energy system in their neighbourhood; 87% also see a role for the central government. Thirty-three percent see a role for themselves. Most residents thus put the initiative with the government. In addition, 50% expect this transition to have consequences for them personally in the medium term; 30% think this will only be in the long term.

The participatory research among the Green Deal municipalities showed that they set up the participatory process mainly traditionally, without prior analysis of the neighbourhood and specific points of attention, opportunities and possible inequalities in the neighbourhood. This is in spite of the fact that a thorough understanding of the neighbourhood would enable them to come up with the tailored approach that is needed. There is still a lot to be gained in terms of communicating about the transition if they would apply behavioural knowledge in doing so. The Ministry of Economic Affairs and Climate Policy makes use of the lessons learned from the Green Deal in designing the Natural Gas-free Neighbourhoods programme. Participation and communication receive a great deal of attention, in the knowledge and learning programme and in the design of the living labs.

Figure 1: Public support for natural gas-free neighbourhoods



Saving for a sustainable home (Economic Affairs and Climate Policy)

Which aspects of a financing instrument are attractive to owners?

Approximately 70-80% of homeowners say they would rather save than borrow to make their home more sustainable. In addition to financial incentives, the possibility of early withdrawals and a free home energy audit are important factors in opting for a savings instrument.

Background: *homes must be made more sustainable*

Insulating and switching to an alternative to natural gas are two examples of ways to make homes more sustainable. Attractive financing possibilities are crucial for public support for these climate measures. Little is yet known about saving for sustainability. For that reason, the Ministry of Economic Affairs and Climate Policy started a survey. How attractive do homeowners find saving compared to borrowing? And what characteristics would make a savings instrument for sustainability attractive?

Method: *choice experiment and survey*

An online choice experiment was carried out: in eight rounds homeowners had to make a hypothetical choice between three loans/savings accounts. The loans were existing loans (mortgage increase or Energy Savings Loan). The savings accounts varied randomly in terms of the characteristics below. The experiment was carried out among a representative sample of 1,559 Dutch homeowners. After the choice experiment, respondents were given a list of additional questions.

Intervention: *savings accounts with various options*

For possible savings accounts, the following characteristics were tested:

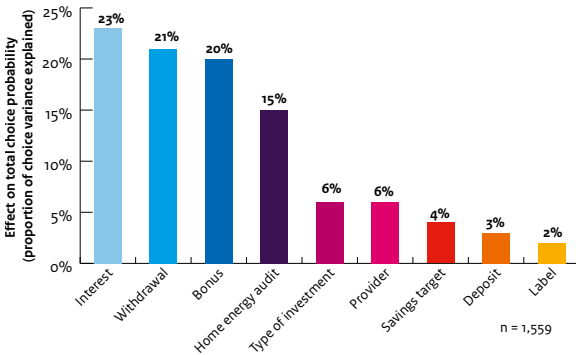
- interest: the interest rate received on the account;
- withdrawal options: the extent to which they commit to tying up the money to achieve the savings target;
- start bonus: a virtual bonus that owners receive when they open the account and that can be redeemed under certain conditions if they have achieved their savings target as well as the sustainability aimed for;
- free home energy audit: a free home energy audit if owners open an account;
- type of investment: the question of whether a provider may use the money only for green investments;
- provider: government, non-profit organisation or bank as provider of the savings account;

- savings target: the savings target to redeem the bonus, expressed in monetary terms or concrete targets;
- automatic deposit: transferring money into the account automatically or manually;
- framing: offering the account with or without the sustainable label.

Result: saving preferred to borrowing

The large majority of homeowners say they would rather save than borrow to make their home more sustainable. 70% in the survey, 80% in the choice experiment. Of the characteristics of a possible savings instrument studied, the monetary incentives (interest rate and bonus) have the greatest effect on the choice made (together 43%), followed by the freedom to withdraw the money before reaching the savings target (21%) and the free home energy audit (15%).

Figure 1: Effects of characteristics on the probability of choosing a savings instrument



In addition to financial incentives, the freedom to withdraw money prematurely and a free home energy audit increase the probability that a savings instrument is chosen.

Energy-saving consumers (Economic Affairs & Climate Policy)

Can the Energy Overview with monthly feedback stimulate them?

Goal: Three percent energy savings by consumers owing to better feedback on their energy consumption. To this end, four energy suppliers have set up an experiment in which the old energy consumption and cost overview is compared with a monthly Energy Overview developed on the basis of behavioural insights.

Background: *savings goal from the Energy Agreement*

The industry associations NVDE, Netbeheer Nederland, Techniek Nederland and Energie Nederland signed an agreement in 2017 with the Ministers of Economic Affairs & Climate Policy and the Interior & Kingdom Relations to collectively stimulate 10 PJ (petajoules) in energy savings to be achieved by consumers (see Figure 1). The actions initiated by the agreement parties are aimed at owner-occupiers, associations of owners, tenants and small business users. They are based on the assumption that greater insight into energy consumption will encourage this group to adopt energy-saving behaviour.

Intervention: *improved monthly Energy Overview*

Among the smart services provided (see Figure 2), the Energy Overview plays an important role. It provides customers with indirect feedback on their consumption. Suppliers have therefore done a great deal to improve this overview for customers. BIT EZK/LNV gave advice on the interventions and the research design. Some adjustments:

- The Energy Overview appears monthly; it is an alternative to the energy consumption and cost overview that appears every two months.
- Customers receive visual feedback on their own consumption, making it clear at a glance whether they have been consuming more or less since the previous year. Visual graphics are used to do so: smileys, flags and the colours red and green.
- The customer's energy consumption is measured visually against that of similar households, usually in the form of bar graphs. Gas consumption is compared with an average Dutch home (apartment, terraced house, corner house, detached house) and electricity consumption is compared with averages for the same family size.
- Customers receive monthly savings tips according to the season, including tips to reduce standby power consumption, for insulation or replacing lamps. Reference is also made to a consumer site for more information on saving energy.

Method: RCT and survey

The research is set up as an RCT. The four energy suppliers that took part in the research - together accounting for 80% of the market - each formed a control group of 6,100 customers who continued to receive the old energy consumption and cost overview. All other customers received the improved Energy Overview. Subsequently, comparable groups of 6,100 customers were drawn as intervention groups for the research. This brings the total sample of this experiment to 48,800. The measurement period was from 1 August 2018 to 31 July 2019. In addition, in 2019 a survey was conducted among customers who were part of the experiment, in order to gain a better picture of the factors that may explain the final result.

Result: effect of Energy Overview on consumption will soon be known

ECN and Statistics Netherlands, commissioned to perform the research by Energie Nederland, will publish the results in the spring of 2020. Positive developments could already be discerned in 2018. For example, awareness of the consumption and cost overview increased significantly in 2018 compared to 2017. This appears from a consumer survey carried out by Motivaction on behalf of RVO (RVO, 2019).

Figure 1: Convenant

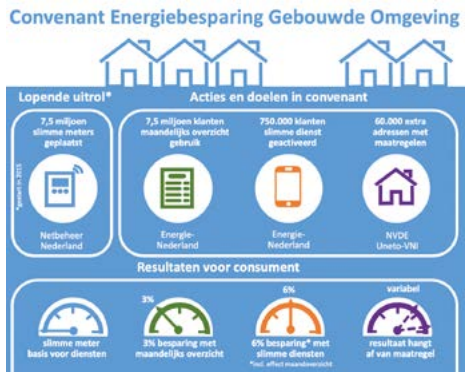


Figure 2: Energy-saving consumers



Less risky investments (Finance)

Does the bonus ceiling influence risk-taking behaviour in financial enterprises?

With a maximum bonus of 20%, employees of financial companies make less risky investments than with the European ceiling of 100%. It is therefore plausible that the Dutch bonus ceiling is partly effective. However, it does not serve clients any better.

Background: *is a 20% bonus ceiling effective?*

In 2018, the Ministry of Finance, in collaboration with the GXP Foundation, reviewed its legislation on remuneration. One of its important components is the bonus ceiling. This is the rule that financial companies may grant a maximum bonus of 20% on top of the fixed remuneration to their employees. One of the questions is: is this low bonus ceiling more effective than the European bonus ceiling of 100%? The low bonus ceiling was based on the assumption that employees would be less inclined to take irresponsible risks for the company, and that they would serve their clients better.

Intervention: *experiment with two ceilings*

One of the experiments was an investment task. In this experiment employees of financial companies from the Netherlands, the United States and Germany could earn money by investing, for a client or not for a client. Financial professionals were randomly assigned to one of the two conditions: one with a bonus ceiling of 20% and the other with 100%. Each professional went through eight investment rounds.

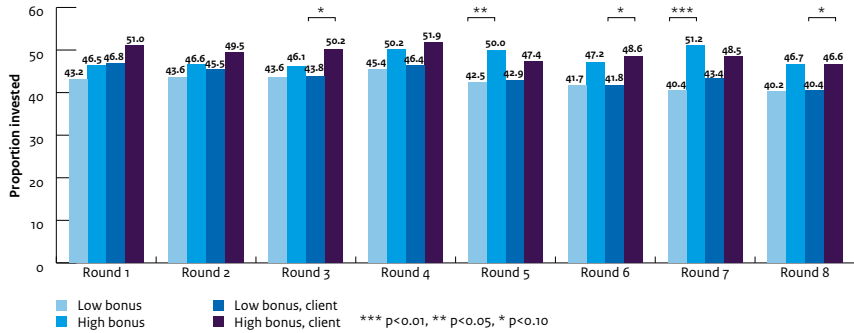
Method: *combination of questions, experiments and data*

In order to get the best possible idea of how the law works, different review methods were used. Parties involved were asked about their experiences with the law. Experiments were held to investigate causal relationships. Figures were collected and analysed to gain a better factual understanding.

Result: *less risky investments*

With the 20% bonus ceiling, the financial professionals made less risky investment choices than they did with the 100% ceiling. These findings are in line with previous studies: bonus structures under which people can only win and not lose may bring about higher risks and bubbles in capital markets. When people make investment decisions while being emphatically reminded they are investing for clients, a bonus ceiling of 20 or 100% makes no difference for the amount of risk they take. Results of other studies suggest that the context of the decisions is decisive: proper visibility of clients seems to lead to their interests being taken into account.

Figure 1: The effect of bonus ceilings on risky investments



Sound financial advice (Finance)

What role do advisory costs play in consumer choices?

Financial advice is more expensive than consumers think. When they receive information about costs in an experiment, they often opt for a cheaper form of advice. However, if they really have to choose (e.g. when taking out a mortgage), the price plays a limited role and other factors weigh more heavily in the choice of advice.

Background: *unknown whether advisory costs constitute a barrier*

Since the introduction of the ban on commissions in 2013, consumers pay directly to the advisor for financial advice on complex and high-impact financial products. As a result, advisors have no incentive to recommend certain products or providers and will be better able to act in the interest of the client. At the same time, there are concerns: to what extent is the cost of advice a barrier to consumers to seek advice? CentERdata conducted research to find an answer to this question.

Intervention: *exposure to cost information*

An experiment was conducted to look at the influence of cost information on the advice preferences of people wishing to take out a mortgage or disability insurance. Participants first indicated which form of advice they preferred. They then received cost information (see Figure 1) and again indicated their preference.

Method: *experiment and online questionnaire*

The advice choice experiment was conducted among over 1,200 consumers from Dynata's online panel expected to take out a mortgage or a disability insurance within five years. In order to find out people's real choices and experiences, an online questionnaire survey was conducted in the LISS panel of CentERdata among 550 people who recently took out these products.

Result: *advice is more expensive than people expect, but the role the price plays is limited*

Consumers who expect to take out a mortgage within five years think that advice costs are much lower than they actually are. When they receive cost information in an experiment, their preferences shift significantly towards cheaper forms of advice (Figure 2, first two columns). For consumers who actually took out a mortgage, however, the role played by costs in the choice of advice was only limited. The vast majority contemplated one or two service providers and made their choice mainly on the basis of "soft" factors, such as trust in the adviser (Figure 2, third column).

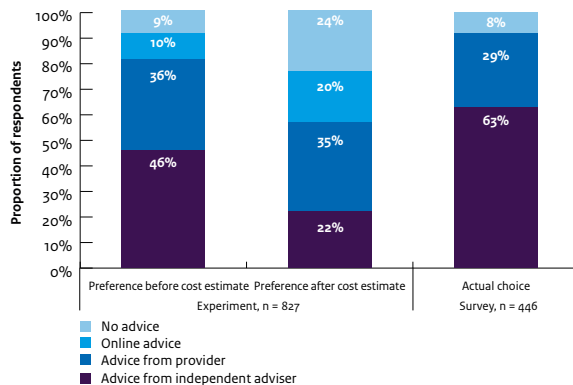
The actual choice behaviour thus more closely resembles the original preferences of people wishing to take out a mortgage or disability insurance, than their preferences after seeing price information.

Figure 1: Cost information per type of advice

	Kostenindicatie (advies* en afsluiten)
 <p>Persoonlijk advies van zelfstandig adviseur Hierbij krijgt u advies van een <u>zelfstandig financieel adviseur</u> (tussenspersoon). In een <u>persoonlijk adviesgesprek</u>, bespreekt u uw wensen en voorkeuren en uw financiële situatie met de adviseur. De adviseur bekijkt welke financiële oplossing het beste aansluit bij uw situatie en wensen, en gaat op zoek naar een passend product. Als u dat wilt, sluit de adviseur het product voor u af bij de gekozen bank of verzekeraar.</p>	€2500
 <p>Persoonlijk advies van bank of verzekeraar Hierbij krijgt u advies van een adviseur van een bank of verzekeraar. In een <u>persoonlijk adviesgesprek</u> bespreekt u uw wensen en voorkeuren en uw financiële situatie met de adviseur. De adviseur bekijkt welke financiële oplossing het beste aansluit bij uw situatie en wensen, en gaat op zoek naar een passend product. Als u dat wilt, sluit de adviseur het product voor u af.</p>	€2100
 <p>Online advies Hierbij krijgt u "advies op afstand" van een financieel adviseur. U <u>vult zelf alle belangrijke gegevens in op een internet-site</u>. Vervolgens hebt u een online (via de webcam) of telefonisch adviesgesprek met een adviseur. De adviseur loopt met u door de ingevulde gegevens, bekijkt welke financiële oplossing het beste aansluit bij uw situatie en wensen, en gaat op zoek naar een passend product. Als u dat wilt, sluit de adviseur het product voor u af.</p>	€1400
 <p>Geen advies ("execution-only") Hierbij zoekt u zelf alle zaken rondom uw hypotheek uit. U vergelijkt verschillende producten en <u>kiest zelf een product uit, inclusief alle productopties, zonder advies van een financieel adviseur</u>. U draagt zelf het risico dat u misschien niet het beste product kiest. Als u zonder advies een hypotheek wilt afsluiten, moet u eerst een (wettelijk verplichte) <u>kennis- en ervarings-toets</u> doen.</p>	€600

* Indien van toepassing

Figure 2: Difference in preferences for type of advice



Cost information plays a role in the orientation phase, but much less in practice. In the end, people tend to opt for – more expensive – advice from an independent adviser.

Enthusiastic e-cyclists (Infrastructure & Water Management)

Does personal choice assistance have an effect on the use of e-bikes?

How do you encourage employees to buy and start using an e-bike after a trial week?

The Ministry of Infrastructure and Water Management investigated a discount voucher and choice assistance, among other things. Particularly the latter had an effect: over 40% of users of the tool bought an e-bike.

Background: *trial week does not lead to sufficient e-bike use*

Employers are eager to offer their employees smart travel solutions. For example, employees in the southern part of the province of Limburg could participate in “Discover the e-bike”. Research showed that the participants are enthusiastic about e-bikes and often have the intention of buying one. However, participants do not always translate this intention into the desired behaviour. How to bridge the gap between intention and behaviour?

Intervention: *voucher, choice assistance and emails*

The Ministry of Infrastructure and Water Management developed an intervention to encourage participants of “Discover the e-bike” to continue to ride e-bikes after the trial period. This intervention consisted of:

- a discount voucher: 7.5% discount on the purchase of an e-bike, discount on maintenance and a second lock;
- choice assistance: a tool to help participants find an e-bike that suits their needs, including a button by which they can directly make an appointment with a bicycle dealer or schedule a call-back appointment;
- personal emails: different behavioural techniques have been included in the emails (see Figure) to encourage participants to actually use the vouchers and the choice tool.

Method: *pre- and post-measurement in intervention and control group*

From April to October 2017 a test was carried out to measure the effect of the intervention (personal choice assistance with discount voucher) compared to the existing situation (only the discount voucher). The Ministry of Infrastructure and Water Management assigned new participants to one of these two groups. The emails were the same in both situations. The effect measurement compared the self-reported e-bike behaviour ten weeks after the intervention with the self-reported e-bike behaviour before the intervention.

Result: *choice assistance leads to more frequent purchase and use of e-bikes*

Participants who used choice assistance indicated significantly more often that they had purchased an e-bike than participants who only received a discount voucher.

More than 40% of choice assistance users purchased an e-bike, compared to over 10% of the voucher group. The first group also indicated that they cycled to work on an e-bike more often: an average of 1.9 times a week, compared to 0.6 times a week in the voucher group.

Figure 1: Example mail including behavioural techniques

Hoi Karst Keijzers,

Jouw deelname aan de e-bike probeerperiode zit erop.

Na zo'n probeerweek zeggen veel deelnemers dat ze fietsen op een e-bike fijn vinden: 'het geeft me energie', 'ik ben lekker snel op m'n werk, zelfs even snel als met de auto', 'ik kom zo na een werkdag lekker tot rust'.

Wat vind jij fijn aan het fietsen op een e-bike?

De meeste deelnemers willen na de probeerweek een e-bike leasen of kopen. Zou jij dit ook willen?

Ik kan me voorstellen dat het lastig kan zijn om te kiezen uit alle verschillende e-bikeopties. Daarom hebben we een keuzehulp voor je gemaakt!

Als je op deze knop hieronder drukt en 10 vragen beantwoordt, krijg je binnen 5 minuten persoonlijk advies.

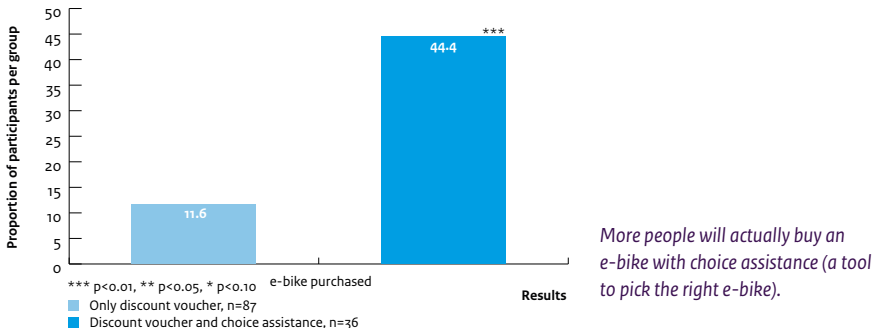
Naar de keuzehulp

Groet Joost
Team Ontdek de e-bike

Techniques identified:

- Persoonlijk aanspreken
- Sociaal bewijs
- Self-persuasion
- Sociaal bewijs
- Weerstand erkennen
- Persoonlijk afsluiten

Figure 2: Proportion of participants who bought an e-bike after ten weeks, per group



Pedal on until you are a hundred years old (Infrastructure & Water Management)

How can senior citizens be encouraged to cycle more safely?

The Ministry of Infrastructure and Water Management studied how to stimulate safe behaviour among elderly cyclists. On that basis the Pedal On programme was developed. A digital platform and a toolkit support senior citizens and local partners through materials and tips for local activities.

Background: *increase in elderly people with serious injuries*

It became evident as early as 2012 that the number of senior citizens suffering serious injuries in cycling accidents had increased by 50% since 2000. Projects to reach senior citizens did not have the desired effect in the past years. The Ministry of Infrastructure and Water Management therefore took the initiative to develop a different approach, entitled “Pedal On”, together with senior citizens, professionals and local partners. The aim is to make senior citizens aware of bicycle safety by bringing it up in places where senior citizens are already present. Next it is about getting them to adapt their behaviour, for example: lowering the seat, buying a bike that is easy to mount and has the motor in the centre of the e-bike, or installing a bicycle mirror.

Intervention: *digital platform and toolkit*

The new approach focuses on senior citizens and professionals, such as municipalities and regional coordinators. An online platform provides senior citizens with tips and stories from other senior citizens and about what is happening in their neighbourhood. Professionals can obtain knowledge and support via the platform and download practical tools that they can use locally.

Their toolkit contains:

- ready-to-use conversation cards, which helps start up a discussion, individually or in a group, about safe cycling, for example at member meetings of associations;
- a bicycle mechanic kit, including a handlebar card and poster, so that mechanics can advise senior citizens in purchasing or adapting their bike, for example during a bicycle safety check in the town square;
- messages, for example on notice boards in the local supermarket or sports canteen, but also during direct contact with the target group.

Method: *in-depth interviews and context mapping, among other things*

Qualitative research (in-depth interviews) combined with context mapping resulted in a certain picture of the elderly having been formed and their world having been mapped out.

Use was made of personas, journeys and an iterative development process. On that basis the Pedal On programme was developed, including the interventions mentioned. In 2017, four municipalities tested Pedal On in a pilot. Participants and performers of activities completed questionnaires afterwards.

Result: *five points of departure for Pedal On*

Several lessons were learned from the pilots. These resulted in five points of departure for the follow-up to Pedal On:

- recognisability and repetition
- from us and by us
- link between cycling safety and exercising
- work with local partners
- from non-awareness to ambassadorship.

Figure 1: Pedal On (“Doortrappen”) poster



Lighting fireworks more safely (Infrastructure & Water Management) *Can an influencer reach young people with “bang goggles”?*

Pointing out the dangers of fireworks has little effect on young people. Influencer-rapper Donnie has made fireworks goggles attractive. Many young people have been reached via social media.

Background: *handling fireworks more safely*

The Ministry of Infrastructure and Water Management wants to stimulate safer handling of fireworks by young people. First and foremost, it is about wearing fireworks goggles. Secondary action perspectives are: keeping distance, using a lighting wick and using a launching stand. There is not much point in trying to make young people aware of the risk of eye injury when lighting fireworks. Making safe handling of fireworks attractive to them is expected to be more effective.

Intervention: *cool goggles in rap by Donnie*

In 2018 the Ministry of Infrastructure and Water Management asked rapper Donnie to present fireworks goggles as a hip accessory: the “*knalplanga*” (“bang goggles”). Donnie had previously popularised a type of sunglasses with his hit “*Snelle planga*”. His *Knalplanga* rap has catchy beats, humorous lyrics and a video full of references to his previous hit. The video was distributed via the online channels of Top Notch and via Spotify. The clip and social content also feature other Dutch celebrities promoting the *knalplanga*. Every outlet sells the fireworks goggles under the name of *knalplanga*.

Method: *campaign effect survey*

The *Knalplanga*-campaign was studied using the campaign effect survey of the Public and Communication Service of the Ministry of General Affairs among approximately 900 fireworks users and bystanders between 13 and 25 years. They were surveyed online through a questionnaire. The outcome was compared to the benchmark of other campaigns without national government airtime.

Result: *the message comes across, but behaviour does not change*

Around New Year’s Eve of 2018-2019, 396 people came to emergency care departments of hospitals with fireworks injuries. That is 38 fewer than the year before, a decrease of about 9%, and a continuation of the downward trend of recent years. To what extent this has been the effect of the “*knalplanga*” is unknown.

The campaign effect study shows that the number of people wearing fireworks goggles this year was not higher than last year. Almost half of the people lighting fireworks self-reportedly wore fireworks goggles (47%); 16% of by-standers did so.

The campaign does convey the most important messages extremely well. Approximately two-thirds of the people lighting fireworks recognised at least one of the campaign communications, which is well above the benchmark. However, public support for the campaign is lower than for similar campaigns.

Figure 1: Rapper Donnie with the *knalplanga*



Food waste in containers (Infrastructure & Water Management, RWS et al.)

How to encourage high-rise residents to better separate their waste?

How can residents of high-rise buildings be encouraged to better separate their food waste? Three behavioural interventions were tested in Amsterdam. The most successful intervention (attitude change) leads to a 30% increase in the use of food waste containers.

Background: *separation of waste in high-rise buildings not sufficient*

Domestic waste is still not being separated sufficiently in urban areas. Separation of food waste in particular leaves a lot to be desired. If residents separate their waste properly, this will produce good outputs of raw materials that can be recycled, thus contributing to a circular economy. For that reason, a project was initiated to stimulate residents of high-rise buildings in Amsterdam to deposit their vegetable, fruit and food waste in a separate container. This project is part of a nation-wide project in six large cities. The aim is to provide cities with effective behavioural interventions for their high-rise residents. The project in Amsterdam is a collaboration between the Ministry of Infrastructure and Water Management, the Directorate-General for Public Works and Water Management (RWS), the Municipality of Amsterdam, Tilburg University, research agency Desan, Eindhoven University of Technology and the Dutch Waste Management Association.

Intervention: *influencing attitude, gift and anticipated reward*

Three behavioural options were tested:

- Influencing attitude: residents received two letters. The first one explained and visualised what happens to separated food waste, and what useful products, such as biogas and compost, it can produce. The second letter also stressed the usefulness of separating waste and included a concrete example of what can be made from it: a soap made from recycled citrus peel.
- Gift: residents received a bamboo cutting board. It was accompanied by a letter from the municipality with a praising comment for separators and encouraging words for non-separators. The idea was that the gift would lead to reciprocity.
- Anticipated reward: residents were promised a (one-off) reward if they would start actively separating their food waste or separate it even better. What exactly the reward would be was not specified. They were eventually given a soap made from coffee grounds.



Method: field experiment

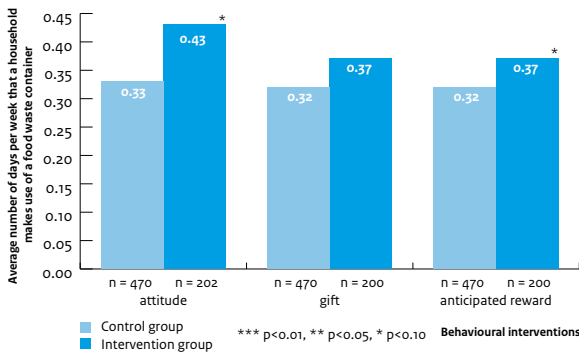
A field experiment was held in high-rise buildings on Java-eiland in Amsterdam. The study ran for 15 months. The study population consisted of 1,072 households. To test the effects of interventions, the population was divided into four groups: three intervention groups (A, G, R) and a control group.

Result: use of food waste container increased by up to a quarter

All three behavioural interventions have led to a significant increase in the separation of food waste by residents.

- Attitude (A): the average frequency with which inhabitants used the food waste container has increased by 30%. The effect is still observed in the months following the intervention. Particularly those households that had already separated food waste before at the time of the baseline measurement were now encouraged to resume this (“returners”).
- Gift (G) and Anticipated Reward (R): both interventions led to an increase of approximately 15% in the use of the food waste container compared to the control group. The effect appears to be mainly due to more intensive separation behaviour of households that already made frequent use of the food waste containers. However, the effect somewhat diminishes in the months following the intervention.

Figure 1: Effect on waste separation



The explanation (influencing attitude), gift or reward helps increase separation of waste compared to the control group.

Improved compliance by starting entrepreneurs in the hospitality industry (Inspectorate SZW)

How can labour market fraud be prevented?

Inspectors made visits to starting catering businesses, providing information to them on the relevant labour laws and how to self-monitor them. Subsequently, violation rates were significantly lower among informed start-ups.

Background: *lack of knowledge leads to labour market fraud*

Starting entrepreneurs appear to perform below average when it comes to knowledge of the rules, which increases the risk of labour market fraud, in the form of violations of the Minimum Wage Act, the Foreign Nationals (Employment) Act and the Working Hours Act. Moreover, as the economy picks up, many start-ups are emerging in the hospitality sector; the number of enterprises has increased by almost 12% in the past three years. The aim of the Inspectorate SZW is to enhance knowledge among new entrepreneurs in hospitality so that there are fewer violations of the rules.

Intervention: *information about legislation for starting entrepreneurs in hospitality*

Inspectors of Inspectorate SZW made visits to enterprises that started in 2018. With the help of an information sheet they gave an explanation of labour laws, of fair employment and how entrepreneurs themselves can check whether everything is in order. The entrepreneurs were given ample room to ask questions. The entrepreneurs' bookkeepers were also informed. A few months later, the inspectors inspected some of the companies. Was there a difference between the informed and the non-informed companies?

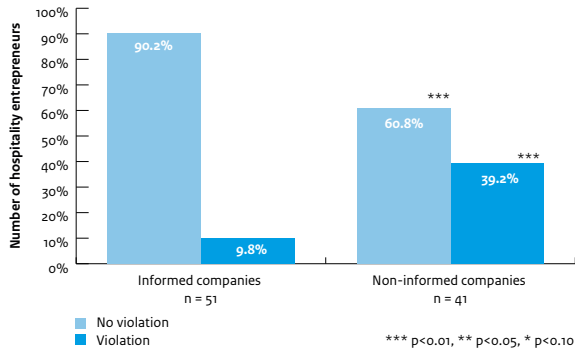
Method: *inspection in intervention and control group*

A selection was made of 198 companies that started a hospitality business in 2018. They were paid a "start-up" visit. The effect of the information was assessed through a total of 92 inspections. In this assessment, the violation rate among a random group of start-ups that received information was compared to a random group of start-ups that did not receive the information.

Result: *fewer violations*

The violation rate among informed start-ups was significant lower (10%) than among non-informed start-ups (39%).

Figure 1: Improved compliance by starting entrepreneurs in the hospitality industry



Significantly fewer violations among hospitality entrepreneurs who have been informed than among non-informed entrepreneurs.

Reduction of copper levels in pig feed (NVWA)

What makes pig farmers comply with the standard?

In 2015, the NVWA (Netherlands Food and Consumer Product Safety Authority) started a campaign for large pig farmers to reduce the amount of copper in pig feed. In 2016, 92% of farmers were found to use feed with a copper content that complied with the statutory norm, which was a 25% increase. Another monitoring action was held in 2017, and again in 2019.

Background: *combating environmental pollution*

In 2014, the NVWA found that 67% of pig farmers complied with the permitted norm for copper levels in pig feed. Copper contributes to the growth and health of pigs. The greatest effect is observed up to an age of 12 weeks. A survey showed that pigs older than twelve weeks were also fed feed containing too much copper. This is legally not permitted. Excess copper ends up in the manure and subsequently in the soil and surface water, which has a negative impact on the environment. The NVWA focused on increasing compliance and awareness among pig farmers.

Intervention: *information campaign and inspections*

A behavioural analysis among pig farmers revealed in particular that knowledge on this subject was lacking. The group appears sensitive to social and enforcement pressure. Before the inspections, the NVWA therefore launched an information campaign, aimed at 1,368 pig farmers who had more than 1,250 fattening pigs. The campaign was held in the summer of 2015, and consisted of a personal mailing including the social norm and a reminder, news reports in professional journals and banners in online trade media. In this manner, the NVWA informed pig farmers about the statutory norms for the use of copper and the 5,000 euro fine in case of violation. Pig farmers were also advised to start talking with their feed supplier. Lastly, it was announced that inspections would start.

Method: *pre- and post-measurement*

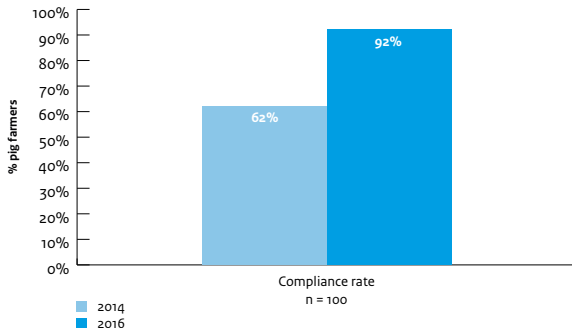
The NVWA held pre- and post-measurements around the time of the campaign among a representative number of pig farmers. The measurements consisted of inspections and sampling, and, as part of the post-measurement, the inspector asked questions about the information channel, the message and the effect of the campaign. This was done to investigate whether a possible change in regulatory compliance was related to the intervention mix used.

Figure 1: Emphasis on social norm



70% of pig farmers already complies with the permitted norm.
Read the letter to see what you can do to comply!

Figure 2: Increase in number of compliant pig farmers



In the year the campaign was held, more companies adhered to the correct copper content in pig feed.

Result: 25% more pig farmers use feed with a permitted copper level

In 2016, 92% of farmers were found to use feed with a copper content that complied with the statutory norm. Compared to 2014, this represents a significant increase (25%) in the number of compliant pig farmers. In addition, the evaluation of the campaign revealed that 76% of farmers started talking with their feed suppliers about the copper content. In 2017, the NVWA again monitored compliance. Compliance among fattening pig farmers was satisfactory. A new monitoring action will follow in the autumn of 2019.

Catch crop sown by maize growers (NVWA)

Does the use of satellite data increase compliance?

The NVWA has used satellite data to increase the effectiveness of monitoring whether maize growers sow catch crops after the maize harvest (as prescribed). Satellite images show that compliance was high in 2019 (98%). Communicating about the monitoring has an indirect positive effect on compliance.

Background: *little known about compliance among maize growers*

Maize growers on sandy and loess soils are obliged to grow a so-called catch crop immediately after the maize harvest: a crop such as grass or winter rye that prevents the nitrogen left in the soil from being washed out. This benefits groundwater quality and the environment. In 2017, it was unknown what proportion of maize growers complied with this rule. The NVWA only registered any violations found by inspectors. The total number of inspections was unknown and supervision could be more efficient and risk-based. In addition, there was a suspicion that the inspections had a limited effect on compliance due to the small number of plots inspected.

Intervention: *more targeted monitoring using satellite data*

In order to enable risk-based and more efficient inspections, the NVWA used satellite data to determine the plots where violation was most likely, namely those where little or no catch crops were observed. Physical inspections were carried out at some of these plots. Prior to these, the entire target group received a letter about this new form of supervision. The aim of this intervention mix was to determine current compliance rates, to examine whether satellite data can be used to conduct risk-based inspections, and to promote compliance by increasing the perceived chance of being inspected and possibly caught.

Method: *data, physical inspections and surveys*

Based on satellite data, the NVWA assessed which plots had been, or had not been, sown with catch crops.

Figure 1: Satellite photo showing the presence of catch crops

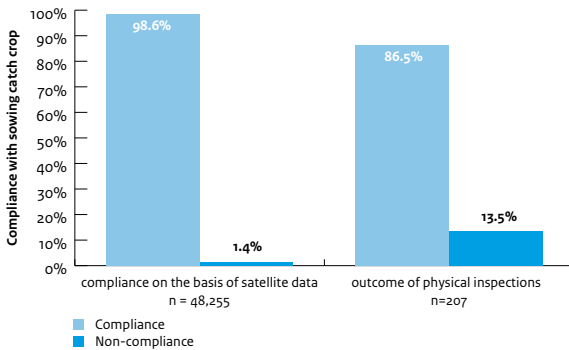


This assessment was subsequently verified with the help of physical inspections: 269 in crop year 2017 and 177 in crop year 2018. An assessment was thus made of whether the satellite data were sufficiently reliable for risk-based inspections. This turned out to be the case. Therefore, in 2019, the compliance rate was determined on the basis of satellite images. In addition, a survey was conducted among 421 maize growers and a number of inspectors were interviewed.

Result: *compliance is high, communication appears to promote it*

The inspection results show that compliance among maize growers is very high. In 2019, 98% of entrepreneurs sows a catch crop after harvesting maize. The NVWA is unable to determine whether compliance was increased by the intervention mix, because no baseline measurement was taken. However, it became clear from the survey that growers who received a letter about the new form of supervision consider the benefits of regulatory compliance to be significantly more important than growers who did not receive this letter. And the more important the grower finds those benefits, the more willing he is to comply. The letter therefore seems to have indirectly contributed to better compliance.

Figure 2: Compliance with rules for sowing catch crop



Food safety in Chinese restaurants (NVWA)

How can restaurant owners comply with regulations better?

A mix of interventions appears to have a positive effect on compliance with food safety regulations by Chinese restaurant owners in the Netherlands. This is the conclusion following extensive research within this target group.

Background: *food safety risks*

Compliance with food safety regulations by Chinese restaurants is structurally low. In 2012 it was found that 45% of the Chinese restaurants inspected complied with regulations, which is low in comparison to other groups within the hospitality industry and gives rise to risks for food safety. The NVWA wants to increase compliance with food safety regulations by adopting a new approach.

Intervention: *checklist, instruction videos, alternative to fining, connect with the culture*

A mix of interventions was chosen.

- The key points of the Dutch hygiene code are indicated in Dutch and Mandarin on the checklist. The inspector filled in for each point whether or not the business is compliant and what possible points for improvement there are. The checklist was left at the business so that the restaurant owner could start working on the points for improvement.
- Instruction videos in Mandarin were made. These videos focus on typical Chinese restaurant themes such as ‘the wok burner’ and the ‘bain-marie’ [see https://www.youtube.com/user/voedselwarenaut/videos](https://www.youtube.com/user/voedselwarenaut/videos).
- An alternative intervention was developed: instead of paying a fine, the entrepreneur hires a contractor or cleaning company, for example, to solve the problems in his business (substitute measure, see Figure).
- More account was taken of Chinese culture during inspections. For example, by handing over and accepting business cards with both hands or by giving compliments on what was going well in the business.

Method: *in-depth interviews*

The NVWA launched a qualitative research in which 23 in-depth interviews were held with three parties: entrepreneurs, inspectors and trade associations. A total of twelve entrepreneurs cooperated with the research. Owners of businesses which had measures imposed upon them were chosen for this, because they have experienced several aspects of the intervention mix.

Result: *positive development in compliance with food safety regulations*

Chinese restaurant owners appear to be more compliant with regulations after the intervention mix has been applied. However, the various parts appear to have different effects. For example, opinions on the alternative intervention are divided. Although most inspectors were enthusiastic about the options available, the results turned out to be disappointing in practice. Filling in the checklist is time-consuming in practice, whereas the entrepreneurs do not do much with it. Inspectors and entrepreneurs were mainly positive about the instruction videos and cultural elements. The videos show clear examples from practice, and the visual presentation is more appealing than a hygiene code printed on paper. The interventions that proved to be less effective have been removed or further improved.

Figure 1: Flyer on hiring a pest controller



The flyer is a vertical document with a white top half and a blue bottom half. At the top right, there is a logo for the 'Nederlandse Voedsel- en Warenautoriteit' (Dutch Food and Consumer Product Safety Authority) and the 'Ministerie van Economische Zaken' (Ministry of Economic Affairs). Below this, on the left, is a blue silhouette of a mouse. To the right of the mouse, the text reads 'Vervangende maatregel' in red, followed by 'inhuur ongediertebestrijder' in black. The bottom half of the flyer contains a list of four bullet points in white text on the blue background, providing instructions on how to find and hire a pest controller, including references to the website www.nvpb.org and the 'Toetslijst Hygiëncode Horeca'.

Nederlandse Voedsel- en Warenautoriteit
Ministerie van Economische Zaken

 **Vervangende maatregel**
inhuur
ongediertebestrijder

- Vind een erkende ongediertebestrijder via de website www.nvpb.org.
Klik op **Organisatie, Ledenoverzicht**.
- Huur de ongediertebestrijder in voor:
 - het bestrijden van ongedierte;
 - informatie en advies over het opstellen van een plan van aanpak om ongedierte blijvend te voorkomen.
- Laat de ongediertebestrijder de **Toetslijst Hygiëncode Horeca** invullen.
- Tijdens de herinspectie door de NVWA laat u aan de inspecteur het plan van aanpak zien. Ook toont u dan de ingevulde **Toetslijst Hygiëncode Horeca** aan de inspecteur.

Benchmark for schools (Education, Culture & Science/NCO)

How to get schoolboards to download reports on their schools?

The purpose of this project was to have more schoolboards download their benchmark reports. A short letter using various behavioural techniques in combination with an eye-catching envelope led to 40% more downloads.

Background: *schoolboards do not download the benchmark in the first year*

NCO has developed school reports in which primary and secondary schools are compared with the national average in many different areas and with schools that resemble them in terms of pupil population. A letter is sent to school boards to prompt them to download their schools' benchmark reports. However, the majority of the boards failed to do this in the first year. To what extent can behavioural insights raise the download rate?

Intervention: *two variants of an alerting letter and an alternative envelope*

Four new conditions were tested in comparison with the letter from the first year:

- concise intervention letter + standard envelope;
- concise intervention letter + intervention envelope;
- intervention letter with extra visual information + standard envelope;
- intervention letter with extra visual information + intervention envelope.

Techniques used in the concise intervention letter include: emphasising the importance ("The report contains essential information about your school/schools'") and the desired behaviour ("You can now download your report for free"), social proof ("More than 3000 schools downloaded their reports last year") and an eye-catching step-by-step plan with time indication ("1-2 minutes"). The more detailed intervention letter also contains two examples of figures from the report. The intervention envelope (see Figure 1) emphasises the urgency of the matter and stands out visually among all the other envelopes that are mainly white.

Method: RCT

A Randomised Controlled Trial (n=1,187 school boards) was set up with five conditions: the control group and the four alternatives. Prior to designing the interventions, a concise preliminary study was carried out through interviews with school boards, an analysis of the customer journey and literature research.

Result: short letter with an alternative envelope leads to 40% more downloads

A combination of the concise intervention letter and the eye-catching envelope proved most effective. Measured one month after the letters were sent, this variant produced 40% more downloads compared to the old letter (49% versus 35%). The striking envelope therefore seems to have an extra effect compared to the standard envelope, because the download percentage for the concise letter with the standard envelope was 45%. The two variants with the more detailed letter were relatively less effective with download rates slightly over 40%.

Figure 1: Alternative envelope with salient header

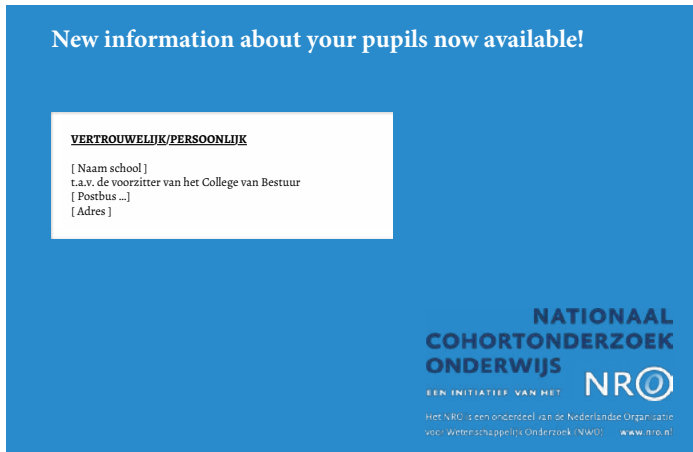
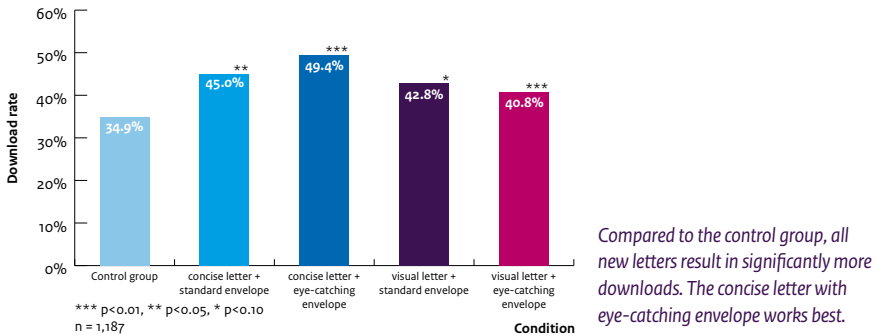


Figure 2: Difference in benchmark reports download rates between control and intervention groups



Clear WBSO applications (RVO)

What application form helps companies supply the best information?

The application form for WBSO (tax incentive under the Dutch Research and Development (Promotion) Act) was adapted to help businesses supply the right information. Contact by email, telephone and letter between RVO (Netherlands Enterprise Agency) and applicants became less frequent.

Background: *many question letters*

Companies wishing to make use of WBSO (a tax scheme for Research & Development) must fill in an application form in which they answer a number of questions about their intended R&D projects. The quality of the answers varies. The result is that RVO assessors have to send questionnaires to about one third of the applicants to obtain clarity about, for example, technical bottlenecks and as to why a project is technologically innovative. In addition, there is a great deal of contact by email and telephone with applicants.

Intervention: *adapted application form*

Interviews were held with RVO assessors and with intermediaries who submit a large number of applications. On the basis of these discussions, the application form was adapted in cooperation with BIT EZK/LNV. For example, a question was removed because it did not provide any new information that could be used to help assess the application. The order of the questions was also changed. In addition, questions and explanations were worded in a way that made it more specifically clear which information the companies had to supply in order to simplify application.

Method: *pre- and post-measurement*

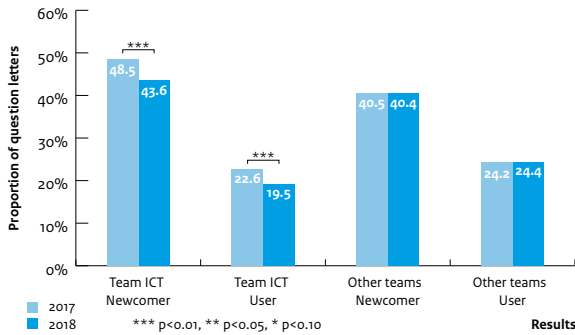
A pre- and post-measurement was held. The number of letters, emails and telephone calls in 2018 (with the modified form) was compared with the numbers in 2017 (with the previous form).

Result: *fewer letters, emails and telephone calls*

One of the three assessment teams had sent 15% fewer question letters than the year before. There was no significant difference in the other two teams. The number of emails and telephone calls per application fell by 12% and 21% respectively in all three teams collectively. Other changes were also adopted in 2018 to make the implementation of WBSO more efficient. It is therefore unclear to what extent the decrease in the number of contacts with applicants can be attributed to the changes in the form. The fact that the effects differed considerably from one team to another also suggests that other factors played a role.

However, pre- and post-measurements do not make it possible for any further distinction to be made.

Figure 1: Clear WBSO applications



The new 2018 application form ensures that RVO needs to send fewer question letters. This only the case for one team.

Well-informed about the Combined Statement (RVO)

How does the newsletter encourage farmers to visit the website?

RVO has included various interventions in newsletters for farmers to stimulate them to learn more about the Combined Statement on the RVO website. This led to a 45% increase in web page visits compared to the newsletter without behavioural interventions.

Background: *keeping up to date on changes to the statement*

Farmers are required to submit data annually for subsidy applications and agricultural censuses in the so-called Combined Statement. Previous years have shown that many farmers postpone doing this until the last deadline. RVO emails newsletters before and during the submission period with links to web pages about the Combined Statement and any changes to it. They help farmers inform themselves and also submit correct Statements on time. How can behavioural insights be used to stimulate farmers to inform themselves in more detail?

Intervention: *various changes in the newsletter*

RVO, in collaboration with BIT EZK/LNV, has experimented with various behavioural interventions. For examples, see Figure.

Method: *various RCTs*

The interventions were tested in a number of randomised experiments in 2018 and 2019. Farmers were randomly assigned to one of the two versions of the newsletter (n = around 25,000 per group). The response to both newsletters was measured via campaign links. Several changes were tested in one newsletter: the effect of each change could nevertheless be made visible because measurements could be made through each link. The open rate (proportion that opened the newsletter) could not be measured.

Result: *more visits to web page*

The newsletter that included behavioural insights led to a 45% increase in web page visits from the links in the newsletter compared to the control version (2018 experiment). The absolute number of web page visits was low in both versions. The two most successful interventions were: putting topics relevant for the whole target group at the top, and emphasising the desired behaviour and the consequences of submitting an incorrect statement. In the experiments in 2019, the more urgent headings and placement of relevant topics at the top had a major effect: 264% and 300% more visits to web pages, respectively. The absolute number of page visits was also higher in 2019.

Small adjustments can therefore have a major effect on the extent to which farmers obtain further information. RVO uses these insights to tailor its communication to the target group in the best possible way.

Figure 1: Examples of interventions applied

Intervention	Example text
Adapt the order of information in the newsletter	Place topics that are relevant for the entire target group at the top, and links at the beginning of the text
Emphasise desired behaviour and possible consequences rather than the frequency of errors	<i>"If you state an incorrect crop code, this may have consequences for your subsidy application." instead of "Stating grassland in the Combined Statement is not always done correctly."</i> <i>"Through these checks, we hope to make it easier to state grassland correctly" instead of "Through these checks, we hope that fewer mistakes will be made."</i>
Make text more personal	<i>"What has changed for you this year in the Combined Statement?" instead of "Changes in the Combined Statement"</i>
Active word usage	<i>"Look at the overview page with ..." instead of "We have a handy overview page with..."</i>
Urgent headings	<i>"Avoid reduction of your CAP subsidy" instead of "Tips about CAP preconditions"</i>

Higher response, fewer fines (RVO)

What stimulates farmers to submit the Combined Statement?

“Avoid a fine.” More farmers will submit their Combined Statement if this is emphasised in a letter. Of the group that received such a letter, 33.1% had a penalty subject to non-compliance imposed on them for failing to respond to the notice. In the group that received a letter emphasising the social norm this applied to 44,8%.

Background: *small group of farmers does not submit the Statement*

Every year, farmers provide information for, among other things, subsidy applications, agricultural censuses and manure legislation. They submit this information through the so-called Combined Statement. Over 96% of them submits the Statement before the set deadline. A small group of farmers does not submit a Statement, in spite of their obligation to do so. The question was what motivates them more to submit their statement after their initial failure to do so: communicating about avoiding a fine, or communicating about the submitting behaviour of industry peers (social norm)?

Intervention: *two versions of reminder letter*

RVO, in collaboration with BIT EZK/LNV, developed two versions of a reminder letter to increase response rates and thus reduce the group that becomes subject of an enforcement procedure:

- Focus on social norm: in this letter (see Figure 1), a social norm is used by mentioning the proportion of fellow farmers who have already submitted the Statement in a text box at the top of the letter and in one of the headings in the main text. The letter also mentions the fine they may incur if they do not submit the Statement.
- Focus on fine: in this letter (see Figure 1), the principle of loss aversion is applied by mentioning in a text box and in one of the headings that they can avoid a fine.

Figure 1: Emphasis on social norm (left) and avoiding a fine (right)

We have not yet received your Combined Statement 2019.

More than 96% of your colleagues from the agricultural sector have already submitted the Statement. Please submit your Statement no later than 17 June.

We have not yet received your Combined Statement 2019.

Avoid paying a fine of up to € 1,300. Please submit your Statement no later than 17 June.

Method: RCT

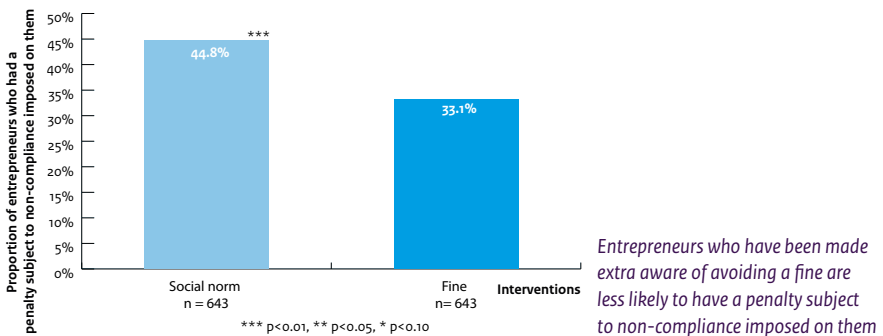
The interventions were tested in a randomised controlled experiment. The recipients are 1,286 entrepreneurs who did not submit the Combined Statement before the deadline. RVO sent the two versions of the reminders to them by post.

Result: fewer penalties subject to non-compliance when avoiding a fine is emphasised

Emphasising that entrepreneurs can avoid a fine was significantly more effective than emphasising the social norm. Of the group that received the reminder that emphasised the fine, 48.2% submitted the Statement and 33.1% had a penalty subject to non-compliance imposed on them. Of the group that received the reminder that emphasised the social norm, 37% submitted the Combined Statement and 44.8% had a penalty subject to non-compliance imposed on them. (The number of entrepreneurs who adjusted their Chamber of Commerce registration and were therefore no longer obliged to submit the Combined Statement was the same in both groups.)

Therefore, through the ‘penalty letter’, a quarter fewer farmers had a penalty subject to non-compliance imposed on them. This is a good thing for the entrepreneurs (a maximum of € 97,500 in fines has been saved), but it is good for the RVO too, since the procedure of imposing a penalty subject to non-compliance involves much higher implementation costs than sending an effective reminder. The net saving in implementation costs is estimated at € 30,000 plus the additional costs of handling letters of objection.

Figure 2: Difference in the proportion of entrepreneurs who had a penalty subject to non-compliance imposed on them using two different types of letter



Energy savings as a business case (RVO)

How can management be convinced?

Through interactive training, energy coordinators of large companies learn how to better “pitch” energy measures to management.

Background: *uncertainty about return*

Many companies do not yet consider energy saving as a business case. Boards know that reducing energy consumptions leads to saving costs, but often do not take action because they are uncertain about the return on such investments. How can that wait-and-see attitude be changed?

Intervention: *training energy coordinators with game simulation*

RVO has developed a training course with game simulation to teach energy coordinators how to convince their management. In late 2017, a total of 35 energy coordinators from large companies attended this training course. They calculated the effects of energy measures on energy savings: what do they contribute to at least one of the KPIs, the company's key drivers? They also learned to present this contribution in terms of such a KPI.

During the course, groups of four to five coordinators together draw up an integral business case for a steam measure, under the supervision of a moderator. They do this by identifying with a different officer each, for example the production manager, the quality officer or the procurement officer. While they are talking, they together discover the Non-Energy Benefits that better weigh the value, costs and risks of steam measures in relation to the KPIs. Finally, they present the business case to a jury, which provides feedback.

Method: *literature review, Behaviour Change Wheel, interviews etc.*

A literature study was performed on, among other things, Non-Energy Benefits, the Behaviour Change Wheel behavioural tool was applied, interviews were held with six companies from the manufacturing industry, and there was a sounding board consisting of a group of experts who validated the interim results. The intervention was developed with the help of Design Thinking and Brainwriting, in collaboration with Stoomplatform, the trade association for Steam.

Result: *inspired energy coordinators*

According to one of the course participants: “As an energy coordinator you predominantly think in terms of savings, payback periods, technical feasibility and legislative risk.

The course taught me to also emphasise other benefits of energy savings: the beneficial impact they have on KPIs.

The game simulation gave me an even clearer picture of the factors influencing the success of a business case. I applied that in my work immediately. I gave my old way of thinking a 180-degree turn and thought: how can I make a colleague from the Production department enthusiastic about an energy saving measure? A number of our installations do not receive enough steam, so that they do not achieve their production output. If, by achieving a higher output, you are also very likely to reduce steam loss, you have a win-win situation. This was the key factor in getting approval from my management”.

Effective child arrangements (Social Affairs & Employment)

Is there a labelling effect?

Does labelling financial allowances as “intended for the children” increase the likelihood that parents will actually spend the money on their children? Three experiments that were conducted provided no evidence for this. However, as a result of this measure, parents seem a little more inclined to put money aside.

Background: *unclear whether labelling child budget has the intended effect*

The names of the financial allowances ‘child benefit’ and ‘child budget’ indicate that the money is intended for children. However, parents are not obliged to spend the money on their child or children. The aim of the study was to find out whether labelling provides an incentive to actually spend the money on children, thus increasing the effectiveness of the child arrangements.

Intervention: *labelling child budget*

Two online experiments examined the effect of the word “child” in financial allowances for children (e.g. “child benefit”) on parents’ spending patterns. One group of parents received a (fictitious) allowance called “child allowance”, while the other group received the same allowance as “general allowance”. They then made spending choices. In addition, the influence of changes in the amount of the child budget on actual spending patterns of parents was analysed.

Method: *online and natural experiment*

The online experiments were carried out in the LISS panel of CentERdata among more than 1000 parents of minors. Databases from the Budget Survey by Statistics Netherlands were used to analyse actual spending patterns. In 2015 certain groups of parents had their child budgets reduced or increased due to substantial changes in regulations (natural experiment). CentERdata investigated whether there was a connection between these changes and changes in spending on children.

Result: *label has no influence on spending on children; it may influence saving*

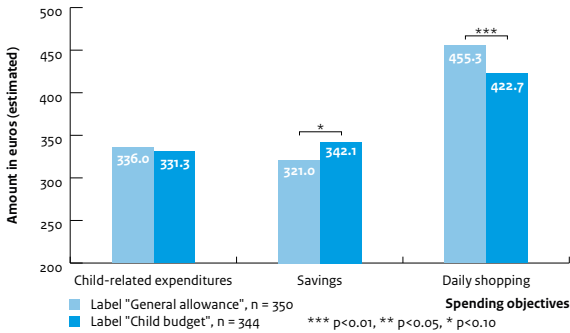
In the experiments, the label and the amount of the labelled child budget had no influence on spending on children. However, there are indications that labelling encourages parents to save a little more. One of the online experiments shows that this extra saving behaviour mainly comes at the expense of daily shopping (see Figure 2). This pattern – sacrificing something in the present for the future – suggests that parents began to think more of the future when they saw the label “child allowance”.

Figure 1: Labelling as general allowance or as child allowance

Inkomsten		Vaste lasten	
Algemene toeslag	€200	Woning (hypotheek/hu	
Andere inkomsten	€3400	Gas, water, licht	
Totaal inkomsten	€3600	Verzekeringen	

Inkomsten		Vaste lasten	
Kindertoeslag	€200	Woning (hypotheek/h	
Andere inkomsten	€3400	Gas, water, licht	
Totaal inkomsten	€3600	Verzekeringen	
		Lokale heffingen/bela	
		Vervoer	

Figure 2: Amounts spent with two different labels



Child-related spending did not vary per label. However, the labelled child budget does lead to higher savings amounts

More payment arrangements (UWV)

Can reminders activate clients if they received too much benefit?

Clients are more likely to pay back the excess amount they received to UWV if they receive a reminder. In addition, if the email or text message points out the possibility of a payment arrangement, the number of arrangements increases by 44%.

Background: *not responding leads to extra costs for clients*

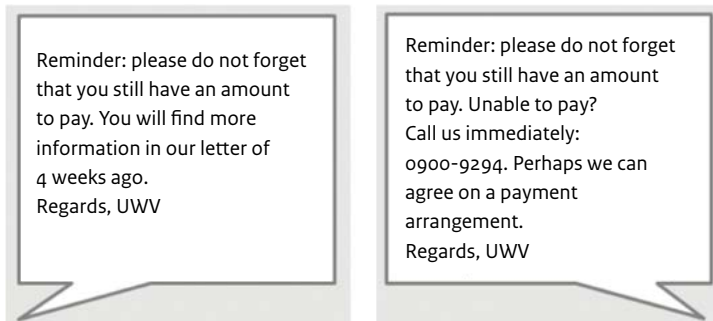
Sometimes clients receive benefits that are too high; for example, if they do not report changes in their situation in time. They will then receive a request from UWV to repay the excess amount. If clients do not respond in time to collection and reminder letters, they will also incur additional costs (e.g. costs of demand and interest on the outstanding amount). In order to avoid these costs, an investigation of how clients can be activated at an early stage was conducted.

Intervention: *reminders with/without possible payment arrangement*

UWV tested four different types of reminders:

- a neutral email: this message reminded the client that he or she had to repay an outstanding amount. Reference was made to the letter that the client had received earlier.
- email with an emphasis on the payment arrangement: this email was the same as the neutral email, plus a paragraph about the possibility of the payment arrangement if the client is unable to repay the amount.
- neutral text message.
- text message with an emphasis on payment arrangement.

Figure 1: Two text message versions: neutral (left) and reference to payment reminder (right)



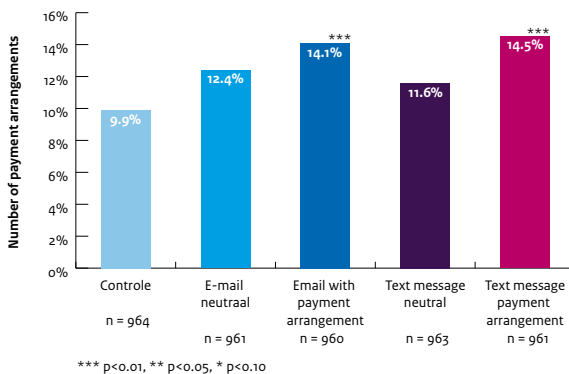
Method: RCT

The research group consisted of 4,809 UWV clients who had to repay an amount. They received one reminder, the medium (email versus text message) and the content (whether or not pointing out the payment schedule) of which could vary. In addition, there was a control group that received no reminder. Clients were randomly assigned to one of the five groups.

Result: more payment arrangements, and agreed upon sooner

The reminders pointing out the payment arrangement resulted in a 44% increase in the number of payment arrangements concluded in the following two weeks. In addition, the frequency with which clients telephoned increased by 48% in the week after a reminder. The reminders pointing out a payment arrangement led to a doubling in the number of questions about the arrangement. No conclusion can be drawn from the results as to whether the interventions had an effect on repayment behaviour of clients (the time, proportion, or duration of repayment). It is also impossible to reliably determine whether the number of demands and injunctions sent has been reduced. The reminders were not implemented structurally because their observed effect on payment transactions was not convincing. However, in most collection letters UWV now informs clients of the possibility of payment arrangements in an accessible manner.

Figure 2: The number of payment arrangement two weeks after reminder



The emails and text messages that pointed out the payment arrangement to UWV clients increased the number of arrangements concluded.

Improved letter on award of unemployment benefit (UWV)

What type of communication do people entitled to a benefit understand and appreciate?

UWV has adapted the current letter about awarding unemployment benefit into a shorter version with the main message in a box. Research has shown that this adapted letter was better appreciated and better understood.

Background: unclear communication

The unemployment benefit award letter is the first letter people who are entitled to a benefit receive from UWV and is therefore a decisive moment of communication. Questionnaires, customer signals and telephone data showed that people entitled to an unemployment benefit found the awarding process unclear. It was therefore decided to adapt this first letter from a behavioural perspective.

Intervention: shorter letter with main message in a box

The standard letter was compared to an adapted letter. The letters differed in length and in the way the most important information was presented:

- standard letter: this letter consisted of two pages and contained information divided into headings;
- adapted letter: this letter consisted of one page and included three annexes divided over two pages, which explained a number of details, such as how the amount of the benefit was calculated. In addition, the main message was placed at the top and important information - the amount and duration of the benefit - was boxed. See Figure 1.

Figure 1: Adapted letter with important information at the top and boxed

Geachte heer Visser,

Wij hebben uw aanvraag voor een WW-uitkering goedgekeurd. In deze brief leest u welke periode u de WW-uitkering krijgt en hoe hoog deze is. In de bijlagen vindt u de berekeningen hiervan en belangrijke informatie over wat u moet doen en weten als u WW krijgt.

Uw WW-uitkering

Periode	1 april 2017 tot en met 30 november 2019.	
Bedrag	Van 1 april tot en met 31 mei 2017:	€ 1.875 bruto per maand.
	Vanaf 1 juni 2017:	€ 1.750 bruto per maand.

De periode en bedragen gelden zolang uw situatie niet verandert. Wat u netto overhoudt, ziet u op de betaalspecificatie die na iedere betaling voor u klaarstaat op Mijn UWV. Ga daarvoor naar uwv.nl/mijnuwv.

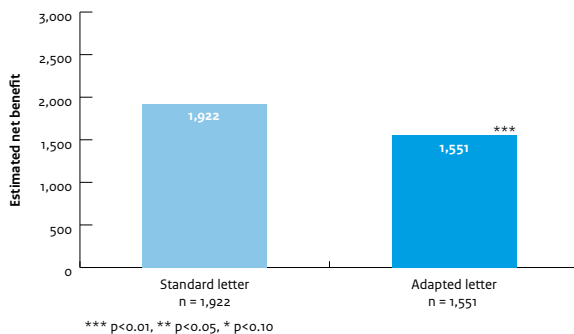
Method: questionnaire

Unemployment benefit clients from the UWV panel received an online questionnaire randomly containing the standard letter (n=103) or the adapted letter (n=105), addressed to a fictitious person. The content of the two letters was the same; they differed only in terms of presentation and wording. Respondents were then asked to what extent they appreciated and understood the letter and to what extent it was conducive to action.

Result: adapted letter was better understood and more appreciated than the standard letter

People who had read the adapted letter made a more realistic estimate of the amount of the monthly net benefit (€ 1,551) than people who received the standard letter (€ 1,922); the correct answer was € 1,360. The fact that the most important message of the letter was the award of the unemployment benefit was recognised more often by people who received the adapted letter (by 86%, compared to 50% of the people who received the standard letter). Moreover, the adapted letter was assessed more frequently as being pleasant to read (62%) than the standard letter (44%). It also made a more open and honest impression (61% versus 42%). Based on these results, UWV will gradually replace the standard letter - which was sent an average of 30,000 times a month - with the adapted letter.

Figure 2: Estimated net benefit per month in euros



People who received the adapted letter make a more realistic estimate of the benefit (lower) than people who received the standard letter.

Well-attended webinars (UWV)

How can jobseekers be encouraged to participate in online job application training?

Three types of invitations to attend webinars were sent (conditions: emphasise added value, authority, control). The invitation highlighting the added value of the webinar for jobseekers resulted in a 60% increase in the number of participants compared to the control message.

Background: *room for more participants in webinars*

UWV offers jobseekers free webinars on job application skills. They can follow online group training live at home via the computer to improve their chances on the job market. Jobseekers register for it voluntarily. There is room for 600 participants per webinar, but the average number of participants was around 120. This was the reason for conducting research into how UWV could encourage jobseekers to follow a webinar.

Intervention: *invitations focused on added value or authority*

The subject of the standard invitation was “Do you know the webinars of UWV?” and it explained what a webinar is and how clients can register for one. The UWV made two variants of this invitation:

- invitation with added value (see cut-out in Figure 1): its subject was “Increase your job application skills with the webinars of UWV”. The text emphasised what a webinar brings to the job seeker.
- invitation from authority (see cut-out in Figure 2): its subject was “Tip from Arne (behavioural scientist at UWV): Follow a webinar.” The text introduced Arne as an expert, and he explained why the webinars are useful for jobseekers.

Figure 1: Invitation with an emphasis on added value

Dear Sir/Madam,

Would you like to learn more about successfully applying for jobs, where the opportunities are in the job market or how to present yourself to employers? Then a webinar from UWV might be something for you.

Figure 2: Invitation with an emphasis on authority

Dear Sir/Madam,

Arne works for UWV as a behavioural scientist and is conducting research into the motivation of jobseekers. His research shows that the way jobseekers apply for jobs is decisive for their chances of finding work. It is therefore very important that jobseekers know which ways of applying for a job work, and which ones do not. The job market is changing and applying for jobs is increasingly done online. How do you deal with that effectively as a jobseeker? This is what you learn in UWV's webinars.

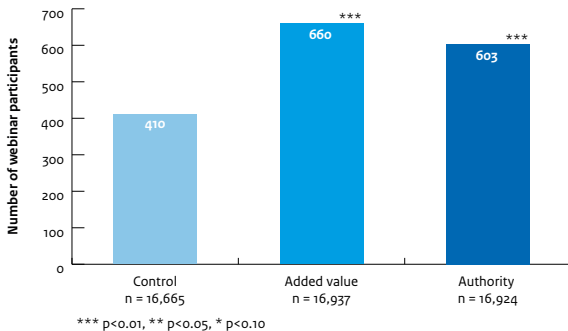
Method: RCT

Beneficiaries of an unemployment benefit (n=50,526) were randomly classified into one of the three conditions: standard, added value, authority. They received the invitation in their personal Work folder on werk.nl. It was recorded whether they registered for the webinar, whether they participated and for how long.

Result: emphasis on added value increases number of participants by 60%

Both variants resulted in higher numbers of registrations for the webinars, higher numbers of participants and longer online presence at the webinars. Figure 3 shows that the message emphasising the added value was the most effective. This message resulted in a 60% increase in the number of participants compared to the standard invitation. Therefore, this variant has now been implemented as the new standard.

Figure 3: Difference in webinar visit after three different invitations



If an invitation emphasises the added value of a webinar for the job seeker, the number of participants is much higher. Emphasising authority also works.

Enthusiasm for inspiration days (UWV)

How can the invitation attract more jobseekers?

UWV developed a new invitation to enthruse jobseekers to come to the inspiration days: eye-catching, personal and with a reminder by text message. This combination has doubled the number of registrations and that of attendees.

Background: *little enthusiasm for inspiration days*

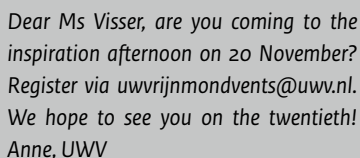
Jobseekers are regularly invited to information meetings in the region. Examples of such meetings are the inspiration days organised by UWV to bring jobseekers into contact with employers. In spite of the fact that jobseekers like to be put in touch with employers, enthusiasm for such meetings is often fairly low. For this reason, UWV developed a new way of inviting.

Intervention: *personal and striking salient invitation and reminder*

The standard invitation was substituted with another approach:

- striking invitation: the invitation was sent by post and included two annexes. Annex 1 was a visually striking and attractive description of the event and the programme. Annex 2 contained directions to the event location.
- personal attention: the invitation was written from the perspective of one person (Anne) instead of from the organisation (Employer Service Point). Anne has already reserved a place for the invitee and asks the invitee to confirm. The invitee is addressed by his or her own name and Anne explains why she is inviting him or her to this event.
- reminder: one week after the invitation, invitees received the following reminder text message: “Dear Ms Visser, are you coming to the inspiration afternoon on 20 November? Register via uwvrijnmondvents@uwv.nl. We hope to see you on the twentieth! Anne, UWV”. See Figure 1.

Figure 1: Reminder text message



Dear Ms Visser, are you coming to the inspiration afternoon on 20 November? Register via uwvrijnmondvents@uwv.nl. We hope to see you on the twentieth! Anne, UWV

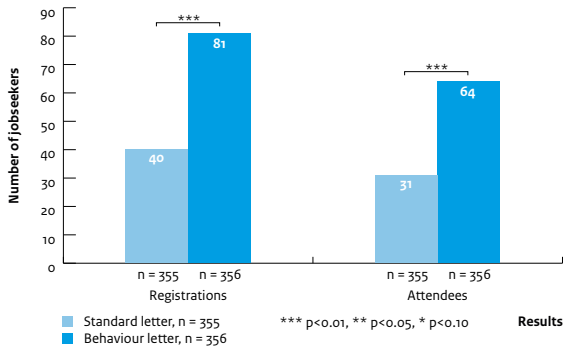
Method: RCT

A randomised experiment was held among jobseekers (n=711) who were eligible for a particular inspiration day. A randomly selected half received the standard invitation (control group), the other half the new invitation with reminder (intervention group).

Result: doubling of the number of registrations and attendees

This new way of inviting proved to work much better. As a result of the invitation that included behavioural insights, the number of applications rose significantly from 40 to 83. The number of attendees rose from 31 to 64. Based on these results, a tool has been developed to help UWV personnel write invitations for similar meetings.

Figure 2: Number of registrations for, and attendees of, inspiration day



Thanks to the letter with behavioural insights, twice as many jobseekers come to the inspiration days.

Business trips booked on time (3W/Economic Affairs & Climate Policy/ Foreign Affairs/Infrastructure & Water Management)

How can civil servants be encouraged to book their business trips sooner?

Civil servants of the central government should book their business trips no later than three weeks before departure. A campaign email and pop-ups that were tested turned out to have no significant effect on timing.

Background: *saving cost by booking on time*

Civil servants of the central government book their own business trips in the TEM 3W program, the Travel and Expense Management system of shared service organisation 3W. The time of booking partly determines the price. In order to keep business travel costs as low as possible, the guideline is to book the trip at least 21 days before departure. Figures from 2016 showed that 60% exceed this period. Research showed that 45% stated other priorities or low motivation as reasons for this. Only 16% were able to recall the three-week guideline. Based on these results, BIT EZK has developed two behavioural interventions.

Intervention: *campaign email and pop-up notification*

Two interventions were used to encourage booking on time:

- a campaign email: sent once to 1,215 government personnel. The email was intended to remove resistance and to communicate the guideline (see Figure 1).
- a pop-up notification in TEM: 1,214 employees in the system were designated to receive a pop-up notification when they started booking. When the booking was consistent with the guideline, the following text appeared: “Booking successful! Thank you for booking at least 3 weeks before departure. Increasing costs are thus avoided.” If the booking was later than three weeks before departure, this text appeared: “We understand that it is not always possible, but the guideline is to book your trip in TEM no later than 3 weeks before departure. Do you know the date of your next trip? Then please book your tickets as soon as possible in TEM. Increasing costs are thus avoided. Thank you!”

Method: *RCT*

A Randomised Controlled Trial has been conducted. A research group of 2,429 people was selected for this purpose. Being equally distributed across ministries and in terms of numbers of trips and average cost per business trip, they were randomly assigned to one of four conditions: campaign email, pop-up notification, campaign email and pop-up notification, and control group. The measurement period ran from November 2018 to June 2019. A total of 1,141 people had made business trips during that period and could therefore be included in the analysis.

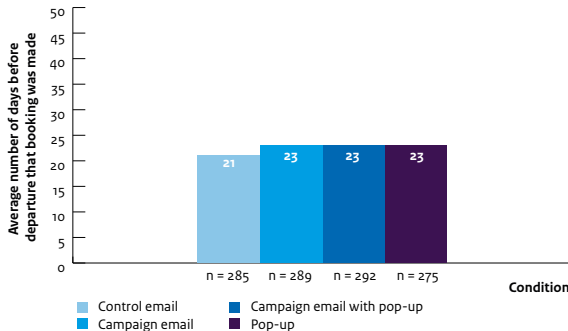
Result: no significant effect

No significant effect of the campaign email or the pop-up notifications at the time of booking was measured. On average, the control group booked 21 days before departure and each of the three intervention groups 23 days before departure. This difference is not significant; the interventions therefore had no effect on the average number of days before departure that bookings were made. A single email may not be enough to get people to book earlier, and they may see the pop-up notification too early before the intended date of their next trip. Follow-up research is needed.

Figure 1: Campaign email



Figure 2: Difference in time of booking



The campaign emails and pop-up notification had no significant effect: business trips were not booked earlier.

BIN NL and list of contacts

The Behavioural Insights Network Netherlands (BIN NL) is a partnership of all ministries, aiming to apply behavioural insights to policies, implementation, supervision and communication. Its goal is to exchange knowledge and experience.

Behavioural insights

In response to reports by the Scientific Council for Government Policy (WRR), the Council for Social Development (RMO) and the Council for the Environment and Infrastructure (Rli), the Cabinet has indicated that it wishes to encourage application of behavioural insights in policy, for example by conducting pilots at all departments and by means of an interdepartmental network that drives this process. This pilot phase has been completed. In response to the WRR report *Weten is nog geen doen* (“Knowing is not acting”), the Cabinet views the application of behavioural insights as a method for solving problems of people and to enhance the effectiveness and legitimacy of government action.

Who are we?

BIN NL is the interdepartmental network for the application of behavioural knowledge. Behavioural knowledge coordinators of all departments are members of the network. They call attention to behavioural insights at the departments and, where necessary, offer guidance in their application.

What do we do?

The network is used for exchanging knowledge and experience. In addition, BIN NL plays a supporting and driving role regarding the application of behavioural knowledge in policy, implementation, supervision and communication. BIN NL also develops a series of activities aimed at knowledge sharing, knowledge development and facilitating cooperation. Examples are the annual congress “The Day of Behaviour”, the online community at www.binnl.nl, the monthly lectures series, this publication, and the development and facilitation of a module in the training programme for government trainees.

Contacts for projects

Organisation	Project(s)	Contact	Email address
ACM	Better understanding of general terms and conditions	Mareille de Bloois	<i>mareille.de.bloois@acm.nl</i>
ACM/NZa/EUR	Movement in the health insurance market	Annemieke Tuinstra	<i>annemieke.tuinstra@acm.nl</i>
AFM	Good creditworthiness assessment. Fewer interest-only mortgages	Arnoud Plantinga	<i>arnoud.plantinga@afm.nl</i>
General Affairs/ Defence	Healthy lunches	Joost Loef	<i>j.loef@minaz.nl</i>
Tax and Customs Administration	Fewer payment defaults	Dana Schreur	<i>dj.schreur@belastingdienst.nl</i>
Statistics Netherlands	Appealing questionnaire survey	Thomas Dirkmaat	<i>t.dirkmaat@minezk.nl</i>
DCMR	Decrease in fireworks violations	Eva Whyte	<i>toezichtslab@dcmr.nl</i>
DUO/Education, Culture & Science	Smaller payment arrears Quicker repayment of study debt Benchmark for schools Fewer fines for students	Marc van der Steeg	<i>marc.vandersteeg@minocw.nl</i>
Economic Affairs and Climate Policy	Public support for natural gas-free neighbourhoods	Thomas Dirkmaat	<i>t.dirkmaat@minezk.nl</i>
Economic Affairs and Climate Policy	Saving for a sustainable home	Evelien van de Veer	<i>e.vandever@minezk.nl</i>
Economic Affairs and Climate Policy	Energy-saving consumers	Thomas Dirkmaat	<i>t.dirkmaat@minezk.nl</i>
Finance	Less risky investments Sound financial advice	Janneke Toussaint	<i>j.toussaint@minfin.nl</i>
Infrastructure and Water Management	Enthusiastic e-cyclists Pedal on until you are a hundred years old	Lysanne de Gijt	<i>lysanne.de.gijt@rws.nl</i>
Infrastructure and Water Management	Lighting fireworks more safely	Jessica Vuijk	<i>jessica.vuijk@minienw.nl</i>

Organisation	Project(s)	Contact	Email address
Infrastructure and Water Management/ RWS et al.	Food waste in containers	Suzanne Pietersma	<i>suzanne.pietersma@minienw.nl</i>
Inspectorate SZW	Improved compliance by starting entrepreneurs in hospitality industry	Muriel Smink	<i>msmink@inspectieszw.n</i>
NVWA	Reduction of copper levels in pig feed Catch crop sown by maize growers Food safety in Chinese restaurants	Linda van den Bos	<i>l.vandenbos@nvwa.nl</i>
RVO	Clear WBSO applications	Bram van Dijk	<i>a.vandijk@minezk.nl</i>
RVO	Well informed about the Combined Statement Bigger response, fewer fines	Evelien van de Veer	<i>e.vandeveer@minezk.nl</i>
RVO	Energy savings as a business case	Marlies Kok	<i>marlies.kok@rvo.nl</i>
Social Affairs & Employment	Effective child arrangements	Frans de Haan	<i>HdHaan@minszw.nl</i>
UWV	More payment arrangements Improved letter on award of unemployment benefit	Arne Meeldijk	<i>arne.meeldijk@uwv.nl</i>
UWV	Well attended webinars Enthusiasm for inspiration days	Yvonne Engels	<i>yvonne.engels@uwv.nl</i>
3W/Economic Affairs	Business trips booked on time	Aletta Boele	<i>a.m.boele@minezk.nl</i>

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Abbreviations

ACM	Netherlands Authority for Consumers and Markets
AFM	Netherlands Authority for the Financial Markets
AZ	Netherlands Ministry of General Affairs
BIT	Behavioural Insights Team
BIT UK	Behavioural Insights Team United Kingdom
BZ	Netherlands Ministry of Foreign Affairs
BZK	Netherlands Ministry of the Interior and Kingdom Relations
CAP	Common Agricultural Policy
CBS	Statistics Netherlands.
CJIB	Central Fine Collection Agency
CoC	Chamber of Commerce
DCMR	Rijnmond Environmental Protection Agency
DPC	Public and Communication Service
DUO	Education Executive Agency
ECN	Energy Research Centre of the Netherlands
EUR	Erasmus University Rotterdam
EZK	Netherlands Ministry of Economic Affairs and Climate Policy
I&W	Netherlands Ministry of Infrastructure and Water Management
KPI	Key Performance Indicator
LISS	Longitudinal Internet Studies for the Social Sciences, panel of CentERdata
LNV	Netherlands Ministry of Agriculture, Nature and Food Quality
NCO	National Education Cohort Survey
NVDE	Dutch Renewable Energy Association
NVWA	Netherlands Food and Consumer Product Safety Authority
NZa	Netherlands Healthcare Authority
OCW	Netherlands Ministry of Education, Culture and Science
R&D	Research & Development
RCT	Randomised Controlled Trial
RVO	Netherlands Enterprise Agency
RWS	Netherlands Directorate-General for Public Works and Water Management
SZW	Ministry of Social Affairs and Employment
TUE	Eindhoven University of Technology
UWV	Employee Insurance Agency
VoRa	Government Information Council
WBSO	Research and Development (Promotion) Act
WRR	Scientific Council for Government Policy
WW	Unemployment Insurance Act

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