Government Communication Service

IN CASE: A behavioural approach to anticipating unintended consequences

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Foreword

I am very proud of the campaigns we run and the behavioural science which supports our campaigns that create opportunities for people, recruit public servants, change behaviour and save lives. As communicators, we will all be able to recall many policies and campaigns that led to expected outcomes, and perhaps some that lead to unexpected consequences. This guide is designed to help you consider, reduce, mitigate, or even eliminate those unintended consequences. From the incidental to the significant, unexpected outcomes can greatly influence the success or failure of a campaign or intervention, and it's vitally important that we consider them as part of any campaign or policy planning process.

Any intervention that aims to change behaviour in a complex system can lead to so-called "unintended consequences", and as communicators, we should aim to anticipate as many of them as possible. That's what this guide is all about, thinking through the actual response of people, communities and businesses to the ask that public service makes of them.

Never has this been more timely. The ongoing COVID-19 pandemic has necessitated unprecedented Government intervention into the private lives of UK citizens, saving tens of thousands of lives but also generating a wide array of secondary consequences – from mental health challenges, to missed education, to new daily habits and routines - that will likely take years to fully comprehend.

Communications is one of the five levers the Government uses to achieve its aims and deliver public policy alongside legislation, regulation, taxation and public spending. While this guide was written with communicators in mind, the framework will be useful for anyone working on campaigns or interventions that aim to change behaviour so as to improve lives.

So next time you are developing a campaign or policy with a behaviour change goal, as you work through the early planning stages, use the framework set out in this guide to identify potential unanticipated consequences - just "IN CASE"!

Alex Aiken, Executive Director of Government Communication

Introduction

All government campaigns and interventions should aim to make a difference and improve the lives of the public, and many campaigns do just that. However, campaigns and policies can sometimes lead to unintended consequences - outcomes that are not anticipated or desired.

Most Government campaigns or interventions aim to change behaviour within complex systems, and any intervention made in a complex system can lead to unanticipated outcomes. Anticipating and mitigating these consequences requires policymakers and communicators to systematically consider the behaviours, attitudes, and emotions that a campaign or intervention might cause.

Traditionally, to minimise the risk of negative unintended consequences, policymakers and communicators can adopt tools like red teaming[1] and systems thinking to identify and mitigate potential unintended consequences. Research and insight can also be used to ensure a full understanding of current behaviours, the environmental and social context, and the barriers and motivators to behaviour change.

However, these traditional activities don't always analyse unintended consequences on the level of how people will *behave*. The "IN CASE" framework supports our work, by encouraging communicators and policymakers to consider consequences from a behavioural perspective.

Our previous guide, The Principles of Behaviour Change Communications[2], set out how to adopt a behavioural approach to campaign design using the COM-B framework. The IN CASE framework builds on this work by setting out a behavioural approach to anticipating, understanding and mitigating unintended consequences when a policy or campaign is under development.

This guide begins with an introduction to the types of consequence from a campaign or policy, and then sets out our "IN CASE" framework for anticipating these consequences. This is followed by some suggestions for how identified unintended consequences might be mitigated, and the guide finishes with two worked examples to demonstrate how the framework might be used in practice.

If communicators are planning their campaigns using the "OASIS" framework, "IN CASE" is best used at the "Strategy/Ideas" stage to explore potential consequences of campaign approaches once an idea is under development. For advice on behavioural science approaches to be used at the "Audience" stage, see our guide, the Principles of Behaviour Change Communications.
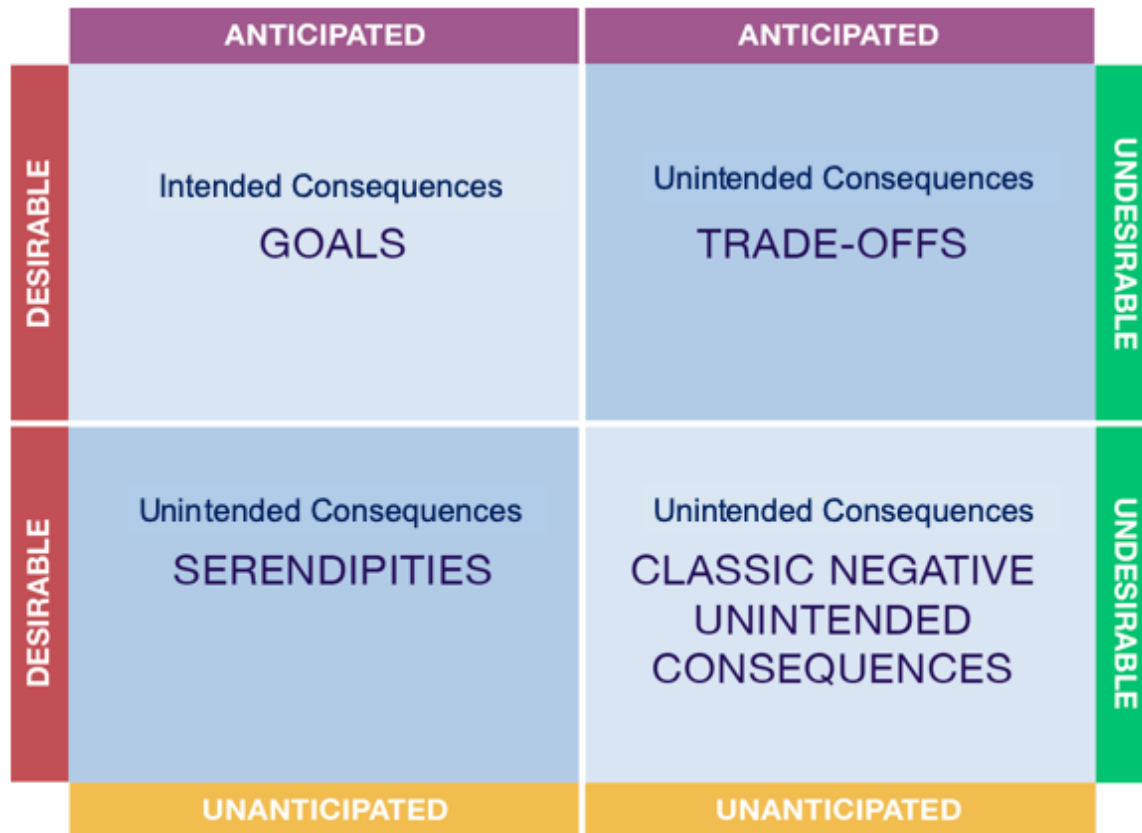
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[1] Red teaming: a guide to the use of this decision making tool in defence, GOV.UK

[2] The Principles of Behaviour Change Communications, GOV.UK

1. Types of consequences

This table sets out the four types of consequence that can result from a campaign or intervention.

Figure 1: Categorising consequences of campaigns or policies[3]

- **Goals** are the desirable and anticipated outcomes of a policy
- **Trade-offs** are anticipated negative outcomes, which are *expected* but not *intended.*
- **Serendipities** are *unanticipated* but *desirable* consequences.
- Consequences that are both *unanticipated* and *undesirable* can be considered **classic negative unintended consequences.**

You can use the "IN CASE" framework to identify any of these types of consequence, although in most cases the "Goals" of the campaign or intervention will already be defined. Once potential consequences are identified, policymakers and communicators can decide whether to tolerate them as a "Trade-off", or attempt to mitigate them.

It's important to understand that all public policy interventions will involve trade offs of some sort - there is no intervention or campaign that will achieve its goals without having any other

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[3] Toma M, Dreischulte T, Gray NM, et al (2018) "Balancing measures or a balanced accounting of improvement impact: a qualitative analysis of individual and focus group interviews with improvement experts in Scotland" BMJ Quality & Safety

impact at all. The goal of this guide is not to set out how to avoid all unintended consequences of an intervention - but rather how to anticipate them, so that policymakers and communicators can decide whether to tolerate these consequences or take action to mitigate them.

2.   The "IN CASE" framework

The "IN CASE" framework was developed by the Cabinet Office Behavioural Science Team as a simple tool to help policymakers and communicators anticipate potential unintended **behavioural** consequences of a campaign or intervention.

It is not intended to be fully exhaustive, but rather to provide useful prompts for consideration early in the design and planning process.

The framework can be used on its own where time and resources are tight, or as a prompt to guide Red Teaming, systems mapping or research and monitoring activities.

The framework is however not a replacement for other behavioural science considerations such as clear definition of target behaviours and an understanding of barriers in the way to changing behaviours. Rather, this framework is meant to apply where initial interventions have been chosen to assess them for behavioural unintended consequences.

All examples given in the framework are fictional, and are intended to illustrate the principles with hypothetical scenarios.

I	**Intended behaviour**
N	**Non-target audiences**
C	**Compensatory behaviours**
A	**Additional behaviours**
S	**Signalling**
E	**Emotional impact**

2.1.   Intended behaviours

Even when a campaign or intervention leads to the desired and intended behaviour change, this can cause unintended consequences if relevant systems, processes, places, or services cannot cope with the level or frequency of behaviour change and additional demand.

Examples:
- A campaign encouraging people to use alternatives to plastic water bottles may inadvertently lead people to immediately dispose of their plastic water bottles, rather than reusing them.
- A financial incentive for upgrading home insulation is offered, but the process for claiming is difficult to navigate and customer services cannot keep up with demand for support.

2.2.   Non-target audiences

Campaigns and interventions cannot always be precisely targeted to the specific target audience, and thus it is likely that some people outside the target audience will see a campaign or hear about an intervention. This may lead to unintended behaviour changes from audiences outside the target group.

Examples:
- A campaign puts out a "mythbusting" message that vaccines do not cause fertility problems. The myth is thus brought to the attention of large numbers of people who were previously unaware of it, creating worry and confusion.
- A financial incentive is offered for people to install certain types of solar panels. Some people who already have solar panels replace them early in their lifespan with eligible panels in order to claim the offered incentive.

2.3.   Compensatory behaviours

A campaign or intervention might lead to the intended behaviour change, but may lead people to "compensate" for the behaviour change by engaging in undesirable behaviours.

This may take the form of "moral licensing[4]", when engaging in a positive behaviour or making progress toward a goal may make people feel justified in doing things that go against the objective of the intervention.

It might also take the form of an intervention creating perverse incentives. This can lead to behaviour changes that are ostensibly in line with the policy or campaign, but actually undermine its broader objectives.

Examples:

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[4] Merritt, A. C., Effron, D. A., & Monin, B. (2010) "Moral self-licensing: When being good frees us to be bad." Social and Personality Psychology Compass

- A financial incentive is offered to those who purchase electric vehicles. People who take up the scheme subsequently feel justified in taking more long-haul flights than they otherwise would *(moral licensing).*
- Random drug testing in a workplace aims to encourage employees to abstain from drugs. Instead, employees choose to take drugs that are not easily detectable in a random test, rather than less harmful drugs that are more easily detected.

Compensatory behaviours can be considered a subcategory of "Additional behaviours."

2.4.   Additional behaviours

A campaign or intervention may lead to additional behaviour changes beyond those originally intended. These may directly undermine the objective, support the objective, or they may be completely separate.

Sometimes, additional behaviours are carried out to directly or indirectly enable the target behaviours.

Additional behaviours may also be caused by a change in an individual's self perception brought on by the original behaviour change. While it is commonly assumed that people simply behave in accordance with their attitudes and opinions, *Self Perception Theory*[5] suggests that people can develop attitudes and opinions by observing their own behaviour.

Examples:
- An incentive is provided for gym membership and sport. Participants who take up the scheme observe their new health-promoting behaviours and develop an identity as a healthy individual. This leads them to subsequently increase their protein intake. *(positive spillover behaviours, resulting from a change in self perception)*
- A campaign encourages individuals to shop on the local high street. The high street is served poorly by public transport, and thus car usage increases to enable local shopping *(behaviour that enables the target behaviour)*

2.5.   Signalling

Any campaign or intervention will send some sort of signal to the public about what behaviours are currently happening, what behaviours the Government wishes to encourage, and the type of relationship between the Government and the public.

These signals can sometimes drown out the intended message of the campaign or intervention, and can evoke attitudes or beliefs that lead to unintended behaviour changes.

Examples:

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[5] Bem, D. J. (1972). Self-perception theory. In Advances in experimental social psychology (Vol. 6, pp. 1-62). Academic Press.

- An anti-binge drinking advert starts with a scene showing a lot of people having fun with alcohol at a party. People who are not fully concentrating on the advert walk away with the impression that alcohol is both popular and enjoyable.
- A telephone helpline starts with the warning message "Abuse of our agents will not be tolerated." This signals to new callers that many customers are argumentative and abusive, leading them to expect a more confrontational conversation and interpret the agent's words in a more negative light.
- A university campaign states "Any student found to be under the influence of alcohol will be immediately disciplined." This may signal that the university is taking an authoritative stance and is positioning itself in an "enforcement" role rather than a "carer" role. This may lead students who have difficulties with alcohol to avoid seeking support from the university.

2.6. Emotional impact

Campaigns and interventions can lead to an emotional response from people, which may sometimes be anticipated and desired. However, negative emotions like fear can in some circumstances lead to disengagement from the message or maladaptive behaviours (see *Protection Motivation Theory*[6]).

Similarly, a perceived threat to an individual's freedom or identity can evoke *psychological reactance*[7], leading in some circumstances to people not engaging in desired behaviours out of defiance.

Examples:
- A campaign encouraging uptake of smear tests runs TV adverts with alarming statistics about cervical cancer. This leads to fear, causing many people to mute the advert soon after it begins and disengage with other campaign materials.
- A Local Authority bans tobacco smoking in public parks. Habitual smokers feel frustrated and persecuted, leading them to experience psychological reactance (feeling that they are being pressured to give up smoking) and their intention to continue to smoke increases.

3. "IN CASE" reference table with prompting questions

The following pages set out the elements of the "IN CASE" framework with prompting questions to help communicators and policymakers consider and anticipate potential unintended consequences early in a policy or campaign's development. Once these prompting questions have been used to identify potential unintended consequences, the next step is to assess each one by the likelihood of it occurring, and its expected impact. This will make it possible to identify which unintended consequences pose the highest risk, and will enable communicators and policymakers to develop mitigation plans.

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[6]Rogers, R. W., & Prentice-Dunn, S. (1997) "Protection motivation theory" in D. S. Gochman, Handbook of Health Behavior Research, Plenum Press
[7]Brehm, J. W. (1966) "A theory of psychological reactance". Academic Press.

I N C A S E

INTENDED BEHAVIOUR

A campaign or intervention successfully drives the intended behaviour change, which leads to further unintended consequences.

- Will infrastructure and systems be able to cope if the behaviour change occurs?
- What could happen if more people than expected change their behaviour?
- What could happen if people change their behaviour more quickly or more frequently than expected?

I N C A S E

NON-TARGET AUDIENCES

A campaign or intervention causes unintended behaviour or attitude changes among audiences that were not the intended target.

- What might people outside the target audience think or do in response to the intervention?
- Will people recognise themselves as the target audience, or not?
- What could happen if people mistakenly believe that an intervention or communication is targeted at them?

I N C A S E

COMPENSATORY BEHAVIOURS

A campaign or intervention leads people to change their behaviour in undesirable ways in response to perverse incentives.

- How might people seek to compensate for the suggested behaviour change?
- What loopholes might there be that mean the behaviour change is being fulfilled, but due to additional behaviours that undermine the objective?
- If an individual or organisation wanted to exploit the intervention for gain, how might they do that?
- What perverse incentives might be created?

I N C **A** S E

ADDITIONAL BEHAVIOURS

A campaign or intervention leads to the intended behaviour change, but this leads to changes in other behaviours that may have undesirable consequences.

- What other additional behaviours might be triggered by the intended behaviour change?
- What additional behaviours might the audience need/choose to take up to enable themselves to complete the intended behaviour change?
- What will people think the intended behaviour has achieved, and what might they do as a result?
- How might people perceive themselves when they engage in the intended behaviour change, and what other behaviour changes might this lead to?

I N C A **S** E

SIGNALLING

A campaign or intervention sends a signal to the public about current behaviours, expectations, and norms.

- What signals does the campaign or intervention send about the current situation and the messenger?
- What expectations and attitudes might the public form as an outcome of the communication or intervention?
- What signals does it send about the relationship between the messenger and the receiver?

I N C A S **E**

EMOTIONAL IMPACT

A campaign or intervention induces an emotional response that may lead to maladaptive behaviour changes, or disengagement/fatalism.

- What emotional response might we observe and what behavioural consequences could this cause?
- If people feel negative emotions, will this help or hinder the intended behaviour change?
- How might individuals of a particularly positive or negative attitude towards the behaviour respond to the intervention or campaign?
- Could the intervention cause psychological reactance by being perceived to limit people's freedoms?

4. Worked examples

The following two worked examples demonstrate how the "IN CASE" framework can be used in practice, for both a communications campaign and a policy intervention.

Communication campaign example

Goal: Reduce carbon emissions by encouraging local travel.
Communication: *"Visit your local beach or woodland this summer - avoid travelling to other regions, and make the most of what's on your doorstep."*

"IN CASE"	Potential unintended consequences to explore
I **INTENDED BEHAVIOUR**	● Local beach overcrowding, littering, and pressure on facilities ● If local sites are only accessible by car while more distant attractions are convenient by train, behaviour change may lead to higher emissions
N **NON-TARGET AUDIENCES**	● Frustration from those who do not live close to such sites and/or lack transport options ● Induces additional travel from those who initially planned to not travel at all
C **COMPENSATORY BEHAVIOURS**	● People travel to farther destinations for their next holidays, having "saved up" their environmental impact ● People feel like they can treat themselves more while on holiday, booking more luxurious accommodation and shifting demand patterns.
A **ADDITIONAL BEHAVIOURS**	● People discover new local sites and travel to them frequently, increasing emissions ● People feel justified in reducing other pro-environmental behaviours on the basis that they have made sacrifices
S **SIGNALLING**	● Signals that local sites are normally unpopular and that people require persuading to use them

	● Signals that many people typically travel to other regions for leisure ● Signals that local travel is an "environmentally conscious" choice and doing so makes you an environmentally-conscious person
E **EMOTIONAL IMPACT**	● If the messaging is perceived as too directive, this could cause psychological reactance, lowering people's intention to stay local

Policy intervention example

Goal: Encourage people to eat more fresh fruit and vegetables
Intervention: *Receive a £1 voucher every time you spend £10 on fresh fruit and vegetables in participating supermarkets.*

"IN CASE"	Potential unintended consequences to explore
I **INTENDED BEHAVIOUR**	● Supermarkets face increased demand for fresh fruit and vegetables and cannot keep shelves stocked ● Demand for fruit and vegetables shifts away from small shops and non-participating supermarkets ● People buy more fruit and vegetables than they can reasonably eat, leading to food waste ● People shift from buying frozen or tinned vegetables to fresh vegetables that are more expensive and spoil more quickly
N **NON-TARGET AUDIENCES**	● Those who already buy a lot of fruit and vegetables will be able to claim the reward without changing their behaviour (trade off)
C **COMPENSATORY BEHAVIOURS**	● People buy unhealthy snacks with the voucher (as £1 can easily be spent on an impulsive checkout purchase) ● People make less healthy choices (for example, buying potatoes to fry as chips) and still be able to claim the reward

A **ADDITIONAL BEHAVIOURS**	● People travel to the shop multiple times in order to spend the voucher ● People buy large amounts of fruit and vegetables and sell these on to others, in order to claim the reward
S **SIGNALLING**	● Signals that people spend around £10 for fresh fruit and vegetables, lowering consumption for those that usually spend more ● Signals that most people do not eat very many fruit and vegetables and thus a reward needs to be offered ● Signals that fruit and vegetables are generally expensive ● Signals that the Government has a goal of increasing fruit and vegetable consumption
E **EMOTIONAL IMPACT**	● Frustration at receiving a voucher rather than a discount applied to the initial purchase ● Feeling that the Government is overstepping by explicitly rewarding this behaviour, leading to resistance

5. Approaches for mitigating undesirable consequences

This table summarises possible approaches to mitigate any undesirable consequences identified while using the "IN CASE" framework.

"IN CASE"	Mitigation approaches to consider
I **INTENDED BEHAVIOUR**	• Check the capacity and performance of systems and processes that are required to enable the desired behaviour change. • Roll out interventions or campaigns gradually. • Establish and communicate clear eligibility criteria for any service or incentive.
N **NON-TARGET AUDIENCES**	• Target campaigns or interventions as precisely as possible to your target audience. • Use channels that are likely to reach your target audience, and messages that will resonate with them. • Adjust campaign messaging.
C **COMPENSATORY BEHAVIOURS**	• Introduce rules, incentives, or guidance that disallow or discourage specific compensatory behaviours. • Ensure that safeguards against abuse of a policy are in place and communicated.
A **ADDITIONAL BEHAVIOURS**	• Introduce rules, incentives, or guidance that disallow or discourage specific additional behaviours. • Use guidance or communications to help people carry out any behaviours required to enable the target behaviour.
S **SIGNALLING**	• Target campaigns or interventions as precisely as possible to your target audience. • Use a consistent tone, narrative, and voice across communications. • Be transparent with the audience about your motives.
E **EMOTIONAL IMPACT**	• Make sure that any communication about a risk or threat is accompanied by clear and empowering instructions on how people should behave to avert it. • Enable people to take action both straight away and at a later date, according to emotional needs. • Signpost people to further emotional and practical support where needed.

6. Conclusion

The "IN CASE" framework offers policymakers and communicators a straightforward and simple approach to anticipating the consequences of interventions and campaigns.

Since developing it, we have already found it useful in our own work, and we hope that this guide will bring it to a wider audience across Government and beyond, to aid in the development of behaviour change campaigns and interventions that achieve their objectives and have a positive impact on the wider public.

If you've used the "IN CASE" framework, we would really like to hear about your experience and feedback. For this and any other questions or suggestions regarding this guide, you can get in touch with us at behavioural-science@cabinetoffice.gov.uk.

About the GCS Behavioural Science Team

This guide was developed by the GCS Behavioural Science Team based in the Cabinet Office. The team provides expert support to central government campaigns, and additionally offers behavioural science consultancy services across government, covering communications, policy and operations.

Our approach involves breaking problems down into their constituent parts to understand the desired behaviours and how barriers to their completion manifest themselves to different groups of people. Most behaviours can be explained by individuals responding to their situation and environment in a way that makes sense to them. We believe that most people endeavour to do the best they can, given their circumstances. Detailed exploration often reveals that behaviour that may look "irrational" is often a perfectly logical response to complexity, stress, ambiguity, or uncertainty.

We see our role as designing communications that help people make decisions and take actions. To achieve this we go further than merely applying solutions from the behavioural science literature - we instead analyse the problem using behavioural science frameworks, and develop bespoke, contextual solutions. The team then develops recommendations designed to systematically overcome those barriers in psychologically relevant ways.

Acknowledgements

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