



Ministerie van Infrastructuur
en Waterstaat

Toolbox river cruises



Toolkit for river cruises

How you, as a cruise operator, can contribute to solving the plastic problem in rivers

This guide provides tips for interventions that you can apply on your river cruise. With behavioural interventions, you can influence passengers' habits regarding their use of wet wipes and how they dispose of them. Ready to get started? Scan the QR code and download the toolkit for river cruises!

Wet wipes are a popular product. They are convenient and hygienic to use. However, they also cause problems, as wet wipes often contain plastic fibres. After usage, many wipes end up in the environment, posing a danger to flora and fauna.

It often goes wrong during disposal: used wet wipes are often flushed down the toilet instead of being thrown in the bin. This can cause blockages in the sewage system. However, not all problems are immediately visible. The plastic fibres in wet wipes break down and enter the environment as microplastics. These issues occur both by use of wet wipes on land and on water, for example, during river cruises.

The improper disposal of wet wipes calls for both policy adjustments and consumer education. As a cruise operator, you can also help reduce the flow of wet wipes into rivers, by implementing this toolkit.



Scan the QR code to download the toolkit or visit www.schoudersonderschoon.nl/toolboxen



1 The captain, the figurehead of the cruise ship, should include in their welcome speech the importance of disposing of wet wipes in the bin and not flushing them down the toilet.



2 Invite all passengers who are checking in to sign a pledge promising that they will dispose of their wet wipes in the bin.



3 After submitting the signed pledge at the reception, passengers receive a branded cardholder to keep their room key in.



4 Place a commitment counter at the reception showing how many passengers have committed to the pledge.



5 Hold a raffle with fun prizes for all passengers who submit the signed pledge.



6 Display a poster with a poem opposite the toilets and in private cabins. The text reminds passengers to dispose of wet wipes properly. In public toilets, place a sticker on the bins that says: "Dispose of your wet wipes here."

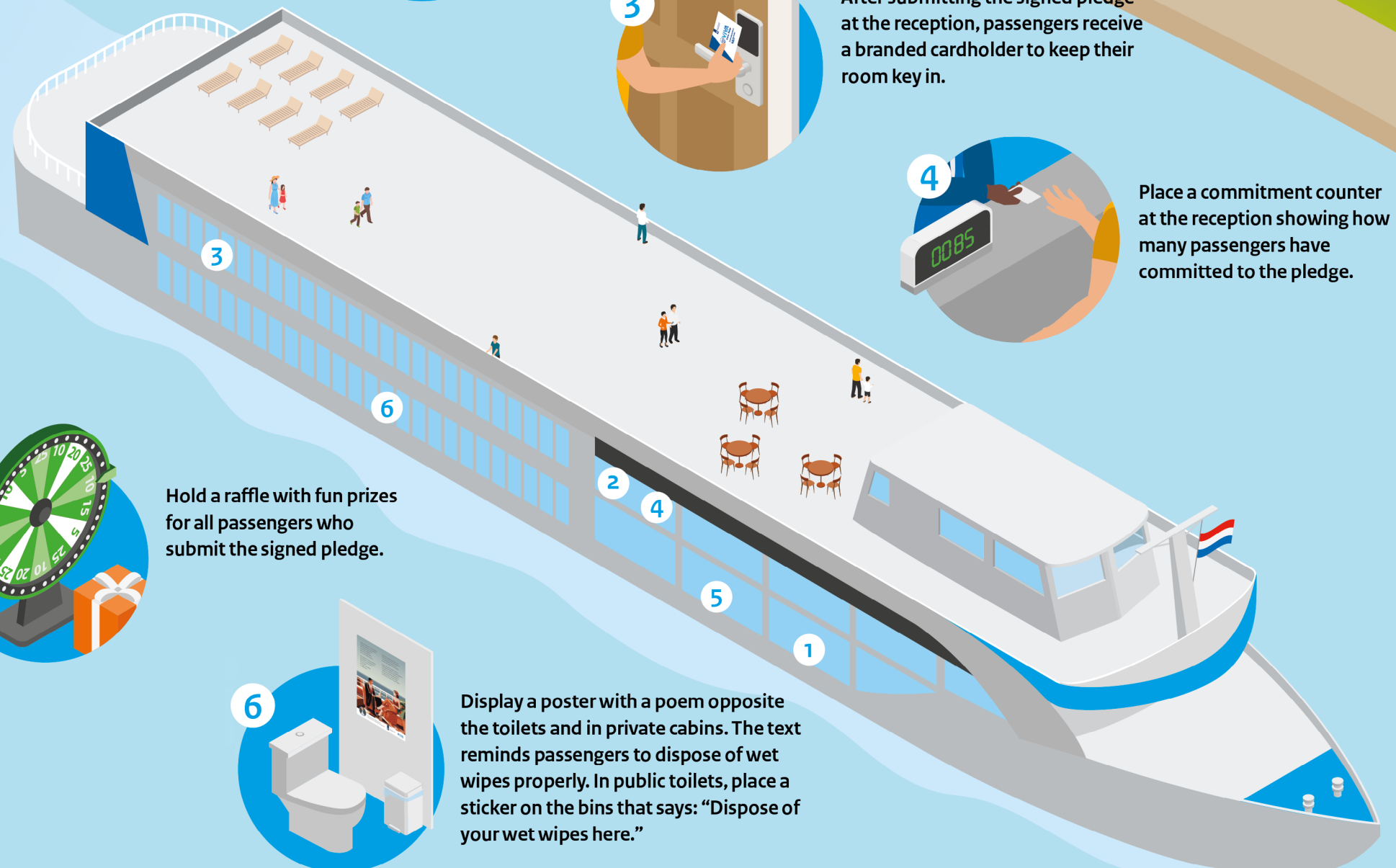


Table of Contents

Introduction	5
1. Benefits of Participation	6
2. Why a Behavioural Intervention?	7
3. The Interventions	8
4. Costs of Measures and Operations	19

Introduction

Influencing passenger behavior on river cruise ships regarding the disposal of wet wipes is more important than you might think!

Rivers are a major route for plastic waste to reach the sea. But this pollution also causes significant issues within the rivers themselves: numerous studies have demonstrated the presence and effects of plastics in rivers. Plastic litter poses a choking hazard for animals, and ingesting it increases the risk of disease and premature death. Once plastic breaks down into microplastics, it can penetrate beyond animals' digestive systems and be absorbed by plants, negatively impacting freshwater biodiversity and the ecosystem services of rivers.

From an economic perspective, plastic waste in rivers leads to high societal costs. In addition to pollution and environmental damage, it forces authorities to carry out more frequent clean-ups to keep waterways safe and navigable—requiring substantial time and money. For the shipping industry, plastic litter also creates hazards when it becomes entangled in a ship's propeller.

The Plastic-Free Rivers program by the Ministry of Infrastructure and Water Management aims to monitor and tackle various sources of plastic in and around rivers. Our monitoring and additional research show that wet wipes are a significant source of (micro)plastic in rivers. Wet wipes often contain microplastic fibres, even when packaging claims they are flushable. These microplastics enter the water in various ways.

One of the sources of wet wipes in rivers is river cruise ships. Research indicates that passengers on these ships frequently flush wet wipes down the toilet instead of disposing of them in a bin. These products can then enter the water through wastewater or unintended discharge, leading to unintentional microplastic pollution. Before reaching the water, wet wipes often cause issues for the ship itself, regularly clogging the sewage systems on river cruise vessels, much to the frustration of passengers and on-board technicians.

To address this, we are assisting river cruise operators in preventing the flushing of wet wipes on board. The Plastic-Free Rivers program developed this toolbox based on a pilot project—a cost-effective method for influencing passenger behaviour on river cruise ships, encouraging them to dispose of wet wipes correctly.

This toolbox enables you to implement these proven behavioural methods on board your vessel. It raises awareness among passengers about the microplastics problem, reducing sewage system disruptions on board. This results in a better travel experience for passengers and less work for technicians. Additionally, passengers may carry this changed behaviour forward in other contexts a win-win situation!

Using the design files available at www.schoudersonderschoon.nl/toolboxen, you can customize the interventions to fit your ship's branding, seamlessly matching the luxurious atmosphere of your river cruise.

¹ <https://www.mdpi.com/2073-4441/14/12/1978>

1. Benefits of Participation

Sustainable Policy

By taking a clear stance against the improper disposal of wet wipes, you help reduce the plastic problem in rivers. This strengthens the river cruise industry's sustainability policies and image, aligning well with the luxurious appeal of river cruises.

Enhanced Customer Journey

Applying this toolbox can help reduce blockages or disruptions in toilet drainage systems by decreasing the amount of wet wipes passengers flush. Fewer disruptions mean less inconvenience and a more enjoyable journey for everyone on board.

Ripple Effect

A "clean message" inspires people to contribute to a clean environment. Research shows that repeating this message increases the likelihood that people will actively help maintain cleanliness. By applying this behaviour-based approach on your cruise, you increase the chances that passengers will adopt the desired behaviour—not only on your ship now and in the future but also beyond the cruise. A true snowball effect!

"Guests began asking about this project, and we received positive feedback. What I enjoyed was the open discussion among guests about microplastics: 'Can I trust an industry claim that a product is 100% flushable?' This project made me feel that guests are now more attentive to plastic waste."

Hotel Manager on the Pilot Ship

Cost-Effective Measure

Implementing this toolbox requires only a small investment, yet it has a substantial positive impact on the environment and, by extension, on human and animal welfare.

For more information on the costs of implementing this toolbox, see Chapter 4.

2. Why a Behavioural Intervention?

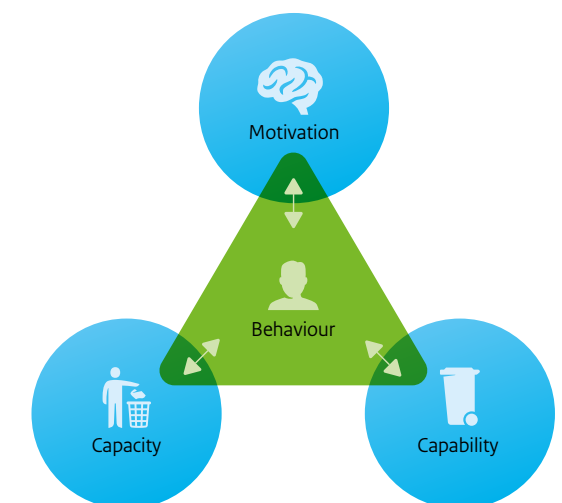
There are many reasons why people display certain behaviours. Through a behavioural intervention, you can effectively address the primary factors driving these behaviours. Interventions can help boost both the motivation and opportunity for people to perform the desired behaviour. Additionally, behavioural interventions are proven to be both effective and efficient.

To understand passenger behaviour regarding the use and disposal of wet wipes on river cruise ships, we conducted an extensive behavioural study. We explored questions such as, "What are the main reasons why passengers do or do not dispose of wet wipes in the bin?" and "Which of these reasons can be most effectively influenced?"

We designed interventions based on literature review and interviews with both passengers and crew. The interventions target the key reasons why passengers flush wet wipes instead of placing them in the bin. These interventions were tested on board a cruise ship.

The interventions focus on psychological factors influencing the desired behaviour. By applying this toolbox, you can reinforce the value passengers place on properly disposing of wet wipes and increase their intention to do so. Where possible, we've also minimized any barriers to the behaviour, creating the strongest possible effect.

Start using this toolbox today! Implement cost-effective measures to address the key factors influencing passenger behaviour around the disposal of wet wipes.



² For more information about this pilot, see the full research report on our website: <https://www.afvalcirculair.nl/zwervafval-microplastics/kennisbibliotheek/rivier/gedragspilot-riviercruiseschepen-passagiers/>

3. The Interventions

Currently, most cruise ships already provide their passengers with information about the fragile sewage system on board. The request not to flush unwanted materials down the toilet is often part of this communication. By applying insights from behavioural psychology, this message can be made more effective.

Below, we introduce various interventions. Consider these as a way to enhance your current approach to informing passengers, and adapt them to fit your existing policies on this topic.

Before implementing the measures from this toolbox, it's important to have the basics in order. Otherwise, it's like mopping with the tap running. Therefore, first apply the principles below before you start with the interventions!

Basic Principles for a Successful Environment

In an environment where the basics are in place, interventions have the greatest chance of success. Always follow these rules on board your ship:

- Wet wipes are not available on the ship, or at the very least, they should always be out of sight of the passengers.
- Opaque trash bags are used in the bathrooms instead of transparent ones.
- If you communicate about blockages on board, label them as exceptions rather than normal occurrences.
- Trash bins in the bathrooms are placed within sight and always within reach of someone using the toilet. Ideally, the bins should have a foot pedal for hands-free operation, also within reach.
- Trash bins are regularly emptied to prevent unpleasant odours.

How Not to Do It: Bin Out of Reach

Explanation from the Behavioural Expert

“On the cruise ship, we observed before introducing the interventions that the bins next to the toilet were out of reach (see image) or hidden in the bathroom cabinet. As a result, they were not immediately visible, which reduces the likelihood of use. When sitting on the toilet, the trash bin is out of reach and possibly even invisible. This makes it difficult to dispose of wet wipes properly, leading to them being flushed down the toilet instead.”



How Not to Do It: Prompt in the Wrong Place

Explanation from the Behavioural Expert:

“This message informs passengers about disposing of waste. A passenger who understands the desired behaviour is more likely to engage in that behaviour. However, we see some areas for improvement with this message:

- 1 The message is located by the flush button. There's a high chance that the wet wipes are already in the toilet, making it impossible to perform the desired behaviour.
- 2 Not all passengers are aware that wet wipes count as waste, which may lead them to flush them regardless.
- 3 It's more effective to communicate what someone should do rather than what they shouldn't. For example: *'Please throw any litter in the bin.'*”



Interventions

Now that you know how to establish the basics, it's time to introduce the behavioural interventions!

- 1 The Pledge: Ask all passengers checking in to sign a pledge stating that they will dispose of their wet wipes in the bin. With a commitment tracker, visibly keep track of how many passengers have submitted the signed pledge. A lottery among participants increases the likelihood of passengers filling out the pledge.
- 2 The Captain's Speech: The captain, as the primary visible authority on board, should include in their welcome speech why it's important to dispose of wet wipes in the bin rather than flushing them down the toilet.
- 3 The Prompt: Place a reminder (poem) opposite the toilets in private cabins that encourages passengers to dispose of wet wipes in the bin instead of the toilet. In public restrooms, also place a sticker on the bins reminding passengers to "Throw your wet wipes here." Note: A prompt above the flush button of the toilet has proven ineffective for behaviour change.

The interventions are most effective when introduced simultaneously. This way, one message reinforces the other. Have you ever met someone who doesn't know Coca-Cola? Exactly, the power lies in repetition!

Below, we explain what the measures entail and why they work according to behavioural psychology. In the attachments, you will find a link to the design files for the interventions, allowing you to customise the designs to match your organisation's branding.

Intervention 1: The Pledge

Signed Pledge + Key Holder

What?

During check-in on board the cruise ship, passengers receive a card: the pledge. This card contains a commitment regarding the disposal of wet wipes. Passengers are invited to sign the pledge and submit it at the reception. After submitting the signed pledge, passengers receive a key holder, where they can keep their room key during the cruise.

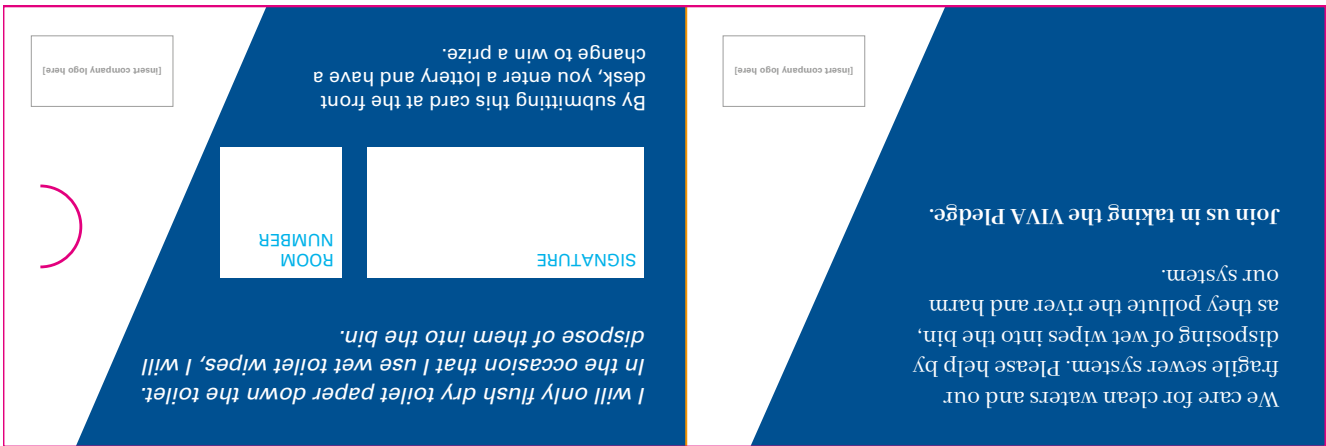
Why the Intervention Works According to Behavioural Psychology

This intervention employs the commitment behaviour technique. When individuals commit to something, they feel it is important to behave consistently with that commitment. Commitment is most effective when individuals make a public promise. That's why passengers submit their signed pledge at the reception and receive a visible key holder. This allows others to see that the passenger is participating in the pledge.

The key holder also acts as a prompt for the passengers themselves. Each time they use the key to unlock their private cabin, they are reminded of the promise they made and the desired behaviour associated with it.



The Commitment Card and Key Holder

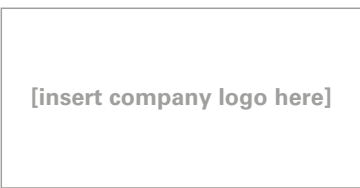


Commitment Card



Key Holder

Instructions for Reception Staff on Using the Pledge and Commitment Counter



Pledge Instructions

Dear reception,

Welcome to the Pledge. We want passengers to flush only dry toilet paper and dispose of wet wipes in the bin. This is better for the boat's sewer system and better for the river. You can help with this improvement! On this instruction, we will explain everything about the role of the reception staff in the Pledge.

What do we ask of you?

The reception staff plays an important role in the Pledge. The step-by-step plan for the reception staff is as follows:

1. When a passenger checks in, provide one commitment-card per person (photo 1). Do not provide the commitment-sleeve yet; that comes in step 3.
2. When handing out the commitment-card, briefly explain that the boat is running a campaign regarding toilet paper and that they can participate in a small lottery by signing and returning the commitment-card. Tell them that it is okay to read, sign and return the card to the reception at a later moment.
3. Does a passenger return a signed commitment-card? Ask for their room key and slide it in the commitment-sleeve (photo 2). Return the room key including the commitment-sleeve back to the passenger.
4. Inform the passenger that they can win a 50-euro voucher for a future trip with our cruise. Tell them that the winner will be selected with a lottery at the end of the cruise, and the winner receives the voucher during check-out.
5. Instruct the passenger to personally press the button of the commitment-counter located on the reception desk (photo 3). The commitment-counter will now increase by one.
6. Thank the passenger for participating in the Pledge.
7. Keep all signed commitment-cards of every cruise together. Choose a moment towards the end of the cruise to randomly select a winner. Hand over the voucher of 50 euro to the winner during check-out.

Intervention 1: The Pledge (Commitment) Commitment Counter + Lottery

What?

Set up a commitment counter at the reception area that displays the number of passengers who have committed to the pledge regarding the disposal of wet wipes. This counter should be clearly visible to all guests.

Passengers who submit their signed commitment cards at the reception are invited to press the button on the counter. Each press increases the displayed number by one, providing a visual representation of participation.

Organize a lottery for all passengers who have submitted their signed pledge cards. The prize could be an attractive discount voucher (e.g., €50 off a future cruise with your ship), which encourages more passengers to participate.

Tip

Start the Counter High: instead of beginning the commitment counter at 1, set it to a higher number (e.g., 10 or 20). This creates an illusion of widespread participation and can significantly boost motivation among passengers to join in on the initiative.

Why This Intervention Works According to Behavioral Psychology:

The commitment counter communicates a positive descriptive norm, indicating that many passengers have already made the pledge. This serves as a signal that supporting this behavior is the norm on the ship, motivating others to conform to this standard. People are naturally inclined to follow social norms, so seeing that others have committed encourages them to do the same.

The lottery incentivizes passengers to submit their completed pledge cards at the reception. It taps into the hedonistic values of guests enjoying their cruise experience, making participation feel more rewarding. Additionally, it aligns with the crew's motivation to enhance the passenger experience, promoting a fun and engaging atmosphere.



Commitment Counter



Intervention 2: The Captain's Speech

What?

The captain explains in his welcome speech why it is important to dispose of wet wipes in the bin rather than flushing them down the toilet. Ideally, he should present this information in a narrative form. The captain can conclude with a rallying cry.

Why the Intervention Works According to Behavioural Psychology

People are more likely to accept a message from an authority figure or expert. The captain's speech leverages the captain's authority to widely disseminate the intervention message.

By encouraging the captain to use storytelling in his communication about the positive descriptive norm (disposing of wet wipes in the bin instead of the toilet), you prompt people to engage with the story. This makes the communication about the risks of flushing wet wipes down the toilet more impactful. Additionally, stories are easier to remember and help in establishing the norm more effectively.

Communicating a positive descriptive norm illustrates the behaviour exhibited by the passengers on the ship. People are inclined to conform to this norm. In this way, the speech can motivate new passengers to adopt the desired behaviour as well.

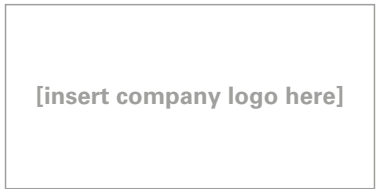
The rallying cry serves as a means to gain public commitment to the new behavioural guideline. When people demonstrate public commitment, they are more likely to follow through with the intended behaviour.

"The captain explained it very well with a lot of drama: the entire system will get blocked, and we'll then have to share 2 toilets with 200 people."

Passenger on board the pilot ship



Notes for the Captain's Speech



Pledge Script During the welcome speech

As the cruise authority you play a crucial role in persuading passengers to keep the boat and river clean. The welcome speech is a great opportunity to highlight the importance of using dry toilet paper or disposing of wet toilet wipes in the bin. Please mention the topics below during the speech to get the best result. Feel free to add your own flair to it.

- **Tell a (dramatic) story.** People like to listen to stories, and stories are better memorised. For example: *“we once had a cruise where the sewage system got blocked, and all 200 passengers and staff members had to share only two toilets”*.
- **Normalize dry toilet paper.** People are influenced by the actions of others. For example: *“all of our staff and passengers only use dry toilet paper or dispose of wet toilet wipes in the bin. This way we keep our sewer system and river clean”*.
- **Mention that the package might be wrong.** For example: *“the package of wet toilet wipes might say that the wipes are flushable, but that’s not true for this ship”*.
- **Refer to the Pledge.** Remind the passengers of the card they received at check-in, and ask if they want to sign this Pledge. For example: *“During your check-in you received a card of the Pledge, which is about your role in keeping our sewer system and river clean. Please make sure to read and sign this card and return it to the reception for participation in the lottery”*.

Please think about where in your speech you could implement these topics.

Intervention 3: The poem

Wat?

Place a poster with a poem opposite the toilets in the private cabins. The text reminds passengers not to flush wet wipes down the toilet. Passengers will see the poem when they use the toilets. The poster serves as a prompt, reminding passengers of the correct behaviour. This interrupts habitual actions.

Why This Intervention Works According to Behavioural Psychology

When people engage with your story, their emotions, attitudes, and intentions change (narrative transportation). The message you want to convey is better retained in story form: “Wet wipes pose a risk. It is nice, clean, and normal to throw wet wipes in the bin.”

Additionally, with the poem, you use the technique of framing. You present the message in a way that is more easily accepted by the target audience. Disposing of wet wipes in a bin may feel unsanitary and unusual to some people. This is framed in the poem as something normal that contributes to a clean and enjoyable experience. The desired behaviour is already present in the poem but is also made more concrete with both a call to action and a visual representation on the poster.

Final Tips

You now know which behavioural interventions you can introduce to influence the behaviour of passengers aboard your cruise ship. You can adapt the interventions to your own branding. Download the design files at www.schoudersonderschoon.nl/toolboxen.

- A few final tips to enhance the success of your intervention:
- Appoint an ambassador on board the cruise ship. This person will be responsible for implementing the interventions. Ideally, the ambassador should be someone with authority on board, such as the head of the crew.
 - Direct your intervention towards the crew and their departures as well. This will help prevent them from flushing wet wipes, which can still cause disruptions in the plumbing system aboard your cruise ship.



The poster with the poem

Amidst these river's tranquil flow,
A gentle reminder, so you know.
Wet wipes belong in the
waste bin's embrace
Keep our fragile sewer
clean, our cruise in grace.

Wet wipes too, with no disdain,
In the bin, it's completely sane
Because on river cruises
we all agree
We want our holiday
problem-free.

An diesem wunderschönen Fluss
erfreuen wir uns gern auch morgen,
weswegen jeder wissen muss
wie wir den Abfall hier entsorgen.

Feuchte Tücher schaden der See,
verschmutzen Flüsse, verstopfen Röhren,
weshalb sie auf keinen Fall ins WC
sondern in den Restmüll gehören.
So mach dir dies zur guten Sitte
zum Schutze unserer Umwelt. Bitte!





Dispose of your wet wipes in the bin.
Entsorgen Sie Ihre Feuchttücher im Mülleimer.

[Insert company logo here]

4. Costs of Measures and Activities

In this chapter, we provide an overview of the estimated costs for introducing the interventions on board a cruise ship. The amounts are based on the pilot that took place for the development of this toolbox.

The costs consist of two parts. On one hand, there are the costs incurred to physically develop the interventions. On the other hand, there are project management costs. We have not elaborated on the project management costs in this document as they depend on many variables; moreover, economies of scale occur when the intervention is implemented on multiple ships simultaneously. Therefore, we have only outlined the activities for project management.

Example Budget for Interventions		
Intervention	Specification	No Damage Costs
Pledge: badge holder and pledge cards	1,000 badge holders * Size: 90x60 mm * Material: 30 grams MC Silk (mat) * Printed in full colour Pledge cards: * 1,750 cards * Size: 85x55 mm * Material: 400 grams MC, 4/4 printed	£ 550
Commitment counter	Material costs (housing, physical button, power banks, and small materials)	£ 1.250
Prompt (poster with poem)	92 posters with poem * 92 frames, size A3, 25 mm border, silver * 92 visuals, size A3, material 250 grams (extra sturdy)	£ 1.150
Sample Budget for Interventions		
Captain's speech	-	-
Total Behavioural Interventions (per ship):		£2,950

Project Management

The project management for the implementation of this toolbox consists of coordination and training of the crew, adaptation of the design files for the interventions, and execution activities to install the interventions on board the ship. Below is an overview.

- Coordination and Training**
- Coordination with management
 - Coordination with the ship's crew
 - Location visit to the ship/training of the crew
 - Communication about the project
- Adjusting Design Files**
- Adjusting the design for the pledge: badge holder and cards
 - Adding logo to the design of the counter, badge holder, pledge cards, and poem
- Installing and Implementing the Interventions**
- Complete coordination and alignment with execution and management
 - Assuming installation by two persons: one long working day for the installation of the interventions

Colofon

This toolbox has been developed on behalf of the Plastic-Free Rivers programme of the Dutch Ministry of Infrastructure and Water Management.

The Plastic-Free Rivers programme focuses on monitoring and addressing various sources of plastic in and around rivers. This ensures that rivers and banks remain cleaner and that less plastic waste ends up in the sea via the rivers. The aim of the river cruise toolbox is to reduce emissions of plastic originating from moist toilet paper on board cruise ships.

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