Time Travel Through Trash

A Visual History of Rotterdam's Waste Messaging

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Introduction

Waste is a constant presence in human life, but how societies deal with it has changed significantly. As urban populations have grown and lifestyles have modernised, the quantity and complexity of waste have increased, making its management not just a logistical concern but a social and environmental one. In 2022, the world generated approximately 2.12 billion tons of waste, 1.3 billion tons of food waste.[1] Waste management today is no longer limited to removing unwanted materials; it is increasingly about developing sustainable, responsible systems that reflect broader social values and environmental priorities.

In the Netherlands, waste management is central to the country's broader sustainability ambitions. Known for its progressive environmental policies and technical innovations, the Netherlands has implemented a combination of advanced recycling, composting, and waste-to-energy systems. Within this context, municipal waste management is not just a technical issue but a domain through which civic values, public participation, and environmental ethics are communicated. Rotterdam stands out as a significant case study in this regard. As one of the country's largest and most dynamic cities, it has developed a long tradition of municipal waste regulation and public communication, particularly through the efforts of Roteb, the city's former waste management company. Founded in 1876, Roteb was responsible for Rotterdam's waste collection, cleaning, and later, recycling efforts for over a century. Until its absorption into Schone Stad in 2013, Roteb played a crucial role in shaping not only the infrastructure of waste disposal but also how residents were informed, guided, and persuaded to participate in this civic task. Visual materials, such as posters, pamphlets, stickers, and public campaigns, were essential in that process. These materials communicated changing ideas about hygiene, civic responsibility, environmental care, and public order. As such, they offer a valuable lens through which to examine how waste management practices reflect broader shifts in society's values.

This thesis examines the development of these visual campaigns from 1876 to 2013, focusing on how they sought to shape public behaviour and awareness around waste disposal. The central research question is:

[1] "How Much Do We Waste? A Data-Driven Guide to Waste and Landfills," MeuResiduo, 26 July 2022, https://www.meuresiduo.com/blog-en/how-much-do-we-waste-a-data-driven-guide-to-waste-and-landfills/.

What does the evolution of visual communication around waste disposal in Rotterdam from the establishment of Roteb in 1876 to 2013 reveal about the city's approach to fostering sustainability and social awareness?

To guide the research, two sub-questions are posed:

1. *How have the design and messaging of visual campaigns for waste disposal in Rotterdam reflected changing social and environmental priorities?*
2. *What broader attitudes toward sustainability and civic engagement are revealed through the evolution of these visual campaigns?*

Each of the three main chapters works toward answering these two sub-questions and, ultimately, the research question, using different historical periods as entry points. In Chapter 1, early visual campaigns (1876–1950) are analysed to understand how hygiene and authority were communicated in a pre-environmental context. Chapter 2 (1950–2000) explores the growing influence of environmental awareness and behavioural design, including how mascots, slogans, and school-based campaigns reflected and shaped changing cultural norms. Chapter 3 (2000–2013) investigates how digitalisation, policy shifts, and civic pride shaped more modern approaches to visual messaging and sustainability.

This topic holds relevance not only from a historical standpoint but also in contemporary debates around environmental communication. By studying how visual materials were used to educate and motivate citizens in the past, we can better understand the role of public messaging in building sustainable cities today. Furthermore, this thesis demonstrates how something as seemingly mundane as waste advertising can reveal much about the relationship between government, citizen, and the environment.

Given that the thesis includes an applied component in the form of an exhibition plan, *Dirty Work, Clean City: A Visual History of Waste and Citizenship in Rotterdam,* the societal relevance of the topic must be clearly articulated. Waste management continues to be a pressing urban concern, and public communication remains central to encouraging sustainable behaviours. By analysing the visual history of waste messaging in Rotterdam, this project provides insights into how civic engagement and sustainability have been visually framed over time, and how these insights can inform future public-facing campaigns. The exhibition is aimed at a broad urban audience: residents of Rotterdam, students, educators, municipal workers, and policymakers. It connects historical practices with contemporary challenges, encouraging reflection on civic identity and environmental responsibility. Through interactive design, the exhibition invites audiences to consider their role in the city's ecological history and future.

Main Theoretical Concepts

Before proceeding with the analysis, it is essential to establish the theoretical framework that underpins this study. The following chapter, therefore, defines and contextualises the key concepts central to this research: waste and waste management, environmental awareness, and visual communication.

Waste/Waste Management

Waste management is a broad term, so it is necessary to define it specifically for this thesis. The idea of waste and how it is managed will follow the approach outlined by researchers Ebikapade Amasuomo and Jim Baird. They break waste into three main categories: its physical state (whether it's solid, liquid, or gas), its source (like household/domestic, industrial, agricultural, commercial, demolition and construction, or mining), and its environmental impact (hazardous or non-hazardous).[2] These categories provide a structured approach to understanding waste in a way that aligns with the objectives of this research. This framework clarifies what constitutes waste and highlights the diverse challenges inherent in its management.

While waste can be divided into many types, this research will focus specifically on municipal waste, often called household waste. Every category of waste has its unique management methods and extensive research behind it, but municipal waste is the central topic of this study. The European Union provides a legal definition of municipal waste in the Directive on the Landfill of Waste 1999/31/EC.[3] According to this directive, municipal waste includes household waste and other waste that is similar to household waste due to its nature or composition.[4] This broader definition means that waste from commercial premises can also be classified as municipal if it resembles household waste in its composition. Furthermore, solid waste is a priority in this research because it represents the most visible and sizable portion of municipal solid waste (MSW). It is tangible, often accumulating in public spaces and posing immediate challenges to urban cleanliness, public health, and environmental sustainability.[5] Solid waste includes household items, packaging, and organic materials,

[2] Ebikapade Amasuomo and Jim Baird, "The Concept of Waste and Waste Management," *Journal of Management and Sustainability*, Vol. 6, No. 4, (2016): 89.
[3] Amasuomo and Baird, "The Concept of Waste and Waste Management," 90.
[4] Amasuomo and Baird, "The Concept of Waste and Waste Management," 90.
[5] Amasuomo and Baird, "The Concept of Waste and Waste Management," 90.

making it a significant focus of waste management systems worldwide. Liquid waste, while important, is typically addressed through separate systems like wastewater treatment plants and sewage infrastructure.[6] Its integration into this research could be considered in future studies, especially where it overlaps with solid waste management, such as sludge treatment, and becomes relevant. Gaseous waste is excluded from this study due to its different nature and management requirements. It is often tied to industrial emissions or energy production and is regulated under air quality standards rather than municipal waste frameworks.[7]

MSW generally refers to waste collected by local authorities, including household refuse and non-hazardous materials from industrial, commercial, institutional, and hospital sources.[8] It is often associated with waste from domestic and commercial activities, representing a small portion of total solid waste.[9] MSW also provides a glimpse into the lifestyles and customs of the people who generate it, reflecting consumption patterns and social behaviour.[10] However, it can negatively affect public health and the environment when not properly managed. Understanding these impacts underlines the importance of effective waste management strategies, especially as urban populations grow. For this research, the focus on MSW aligns with its role as a key indicator of urban living conditions and waste management practices. While it is a smaller fraction of total waste, its complexity and potential risks make it an essential area of study.

Environmental Awareness

Another key theoretical concept in this research is environmental awareness, reflecting how individuals perceive and understand the complex relationships between humans and the environment (annotation needed). Academics Chengquan Zhang, Xifeng Wu, Kun Qian, Sijia Zhao, Hatef Madani, Jin Chen, and Yu Chen provide a comprehensive framework for exploring environmental awareness, focusing on its connection to behaviour, methods of evaluation, and influencing factors. The relationship between environmental awareness and behaviour is intricate. While individuals with higher awareness often consider price and personal preferences when adopting sustainable practices, awareness alone does not guarantee

[6] "Liquid Waste," Term, European Environment Agency, https://www.eea.europa.eu/help/glossary/gemet-environmental-thesaurus/liquid-waste.
[7] "Gaseous Carbon Waste Resources," in *Gaseous Carbon Waste Streams Utilization: Status and Research Needs*. Washington, DC: National Academies of Sciences, Engineering, and Medicine. (The National Academies Press, 2019), 27.
[8] Amasuomo and Baird, "The Concept of Waste and Waste Management," 90.
[9] Amasuomo and Baird, "The Concept of Waste and Waste Management," 90.
[10] Amasuomo and Baird, "The Concept of Waste and Waste Management," 90.

eco-friendly behaviour.[11] In some cases, greater awareness can paradoxically increase demand for non-eco-friendly products.[12] On a larger scale, awareness influences the supply and demand of greener products, though these often face higher costs requiring subsidies to remain viable in the market.[13] Regulatory frameworks are critical in converting awareness into actionable change, especially within macroeconomic contexts.[14] Evaluating environmental awareness involves assessing public concern, attitudes, willingness-to-pay, and other indicators of human-environment interactions. For instance, studies have measured national awareness through purchasing behaviours related to eco-friendly products like electric vehicles and green electricity.[15] Various factors shape environmental awareness, such as education, gender, socioeconomic status, and cultural context. Education and mass media campaigns are particularly effective in fostering awareness, as is social learning through networks and community interactions.[16] Governments play a vital role by integrating environmental governance and regulation, amplifying awareness on a national scale and improving policy outcomes.[17]

Visual Communication

Visual communication is an essential concept in this research, particularly concerning public service pamphlets, posters, and campaigns for waste management. It conveys messages through visual elements that engage the audience's sight, making it a powerful tool for influencing perceptions and behaviours. While visual communication has a long history, ranging from maps and paintings to illustrations, it continues to be highly relevant in today's digital age.[18] Public service materials addressing waste management rely on visual communication to effectively engage their target audience. By presenting messages in visually appealing and accessible ways, these materials can leave lasting impressions, motivate behavioural changes, and enhance awareness of critical issues.[19] The effectiveness of visual communication depends on understanding the audience's needs, preferences, and

[11] Chengquan Zhang, Xifeng Wu, Kun Qian, Sijia Zhao, Hatef Madani, Jin Chen, and Yu Chen, "Environmental Awareness and Social Sustainability: Insights from an Agent-Based Model with Social Learning and Individual Heterogeneity," in Sustainability 16, nr. 17 (January 2024).
[12] Zhang et al., "Environmental Awareness and Social Sustainability."
[13] Zhang e.a., "Environmental Awareness and Social Sustainability."
[14] Zhang e.a., "Environmental Awareness and Social Sustainability."
[15] Zhang e.a., "Environmental Awareness and Social Sustainability."
[16] Zhang e.a., "Environmental Awareness and Social Sustainability."
[17] Zhang e.a., "Environmental Awareness and Social Sustainability."
[18] Nida Ijaz, "Art of Visual Communication, Evolution and its Impact," in *Indian Journal of Public Health Research and Development* (2018), 1-4.
[19] Ijaz, "Art of Visual Communication, Evolution and its Impact," 1-4.

cultural contexts. For waste management campaigns, this might include using relatable imagery, clear messaging, and impactful designs to encourage sustainable practices.[20] This research explores how the evolution of visual communication, particularly in graphic design, shapes public attitudes and behaviours towards waste management. It highlights how visuals can bridge complex information and audience understanding, making them a key tool in promoting something like environmental awareness.

[20] Ijaz, "Art of Visual Communication, Evolution and its Impact," 1-4.

Literature Review

What Remains: The Shifting Order of Waste in Society

Waste management has long reflected the interaction between human society and its environment. As populations grew and urbanisation intensified, so did the complexities of managing waste.[21] The historiography of waste management illustrates how societies have grappled with the environmental and health-related challenges posed by increasing volumes of waste. Early approaches focused primarily on safeguarding public health and ensuring sanitary conditions in urban areas.[22] The shift from viewing waste as merely a nuisance or resource issue to recognising it as a critical environmental concern underscores a broader societal transformation as proposed by Researchers Sintana E. Vergara and George Tchobanoglous.[23]

As Elizabeth Allison observes, the material realities and limitations of bodies inevitably shape human interactions with the natural world.[24] Yet, attention must also be paid to those bodies and substances classified as impure, polluting, or out of place, those elements that societies seek to exclude from dominant cultural systems.[25] In this context, waste is not merely a byproduct of material processes but a reflection of moral, aesthetic, and social boundaries. Religious and cultural traditions have long played a role in drawing distinctions between the pure and the impure, the valuable and the abject.[26] As anthropologist Mary Douglas argued, the concept of dirt embodies disorder, with societal efforts to remove or manage waste functioning as attempts to preserve symbolic and material order.[27]

This framing invites a deeper examination of how notions of waste perform critical social and political work, shaping perceptions of value, purity, and responsibility. Waste, far from being a static category, is understood as relational and context-dependent; what one

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[21] Rebekah Tauritz and Arjen Wals, "A History of Environmental Education and Youth Participation in the Netherlands," in *Education and Sustainability: Learning for Change*, ed. Daniella Tilbury and John Huckle (Paris: UNESCO, 2006), 248.

[22] L. Giusti, "A review of waste management practices and their impact on human health," Waste Management 29, nr. 8 (1 August 2009).
Nicolas Buclet and Olivier Godard, "Introduction," in *Municipal Waste Management in Europe: A Comparative Study in Building Regimes* (2002), 1.

[23] Sintana E. Vergara and George Tchobanoglous, "Municipal Solid Waste and the Environment: A Global Perspective," Annual Review of Environment and Resources 37, nr. Volume 37 (21 november 2012): 277-309.

[24] Elizabeth Allison, "The Reincarnation of Waste: A Case Study of Spiritual Ecology Activism for Household Solid Waste Management: The Samdrup Jongkhar Initiative of Rural Bhutan," in *Religions* 10, no. 9 (September 2019), 2-3

[25] Allison, "The Reincarnation of Waste," 2-3.

[26] Mary Douglas, "Purity and Danger: An Analysis of Concepts of Pollution and Taboo," Routledge & CRC Press, Taylor & Francis 2001 (originally published in 1966), 36-37.

[27] Douglas, "Purity and Danger," 36-37.

society discards as valueless, another might incorporate into systems of regeneration or symbolic meaning.[28] As Amasuomo and Baird highlight, waste management practices have shifted over time between disposal, processing, and valorisation. They argue that traditional methods, such as landfilling, were increasingly seen as unsustainable. This was due to the growing volume of waste and the limitations of landfills, which could no longer manage the increasing waste output. As a result, waste management strategies expanded to include recycling, composting, and the conversion of waste to energy. Waste processing techniques became essential to protect both public health and the environment, which Amasuomo and Baird claim is a growing concern worldwide.[29] However, it can be stated that waste and its concept shifted in ways that respond not only to technological developments but also to evolving cultural attitudes toward waste, pollution, and the environment. Such oscillations reveal that conceptions of waste are never neutral; they are tied to broader efforts to assert control over what is deemed disorderly or undesirable, often reflecting deeper ecological, ethical, and political concerns.[30]

The academic discussions surrounding waste management have emphasised the importance of adapting to rising waste volumes, implementing sustainable waste processing methods, and integrating various technologies and policies to safeguard public health and the environment. The shift from traditional disposal techniques like landfilling to more sustainable approaches, such as recycling and waste-to-energy conversion, reflects the growing urgency of addressing waste in an environmentally conscious manner. The literature on waste management and its various categories is extensive, making it challenging to cover every relevant contribution in this study.

From Cesspits to Circularity: The Dutch Approach

The Netherlands has a long-standing and well-documented history of waste management and disposal practices, characterised by continuous adaptation to environmental and societal challenges. Academics Diana D. Boermans, Agnieszka Jagoda, David Lemiski, Jana Wegener and Malgorzata Krzywonos demonstrate in their research on ecological awareness and sustainable behaviour that environmental consciousness appears deeply embedded in both

[28] Allison, "The Reincarnation of Waste," 2-3.
[29] Amasuomo and Baird, "The Concept of Waste and Waste Management," 93.
[30] Allison, "The Reincarnation of Waste," 2-3.

Dutch culture and policy frameworks.[31] The country's commitment to sustainability is reflected in its advanced recycling infrastructure, widespread use of renewable energy, and high public participation in environmental initiatives. Furthermore, Dutch citizens are widely recognised for their environmentally conscious lifestyles, exemplified by the prevalence of cycling and policies that promote green urban planning and sustainable mobility.[32]

To fully understand this contemporary environmental engagement, examining the historical foundations of waste practices in the Netherlands is essential. Exploring earlier periods of waste disposal reveals continuities and changes over time and enriches our understanding of how current values and systems have evolved. Dutch archaeologists have shown that urban household waste from the medieval and early modern periods is remarkably well-preserved, providing valuable insights into past waste practices.[33] From the 14th to the 19th century, households in the Netherlands used these cesspits, huge underground pits made of bricks mainly located at the backs of houses, to get rid of their residue, like food, broken plates, cups, glasses, and textiles.[34] They give great insight into these people's lives; for example, they provide information on typologies of pottery and glass and also give ideas about the social status and consumption patterns of individual households.[35] The cesspit was a groundbreaking feature in Dutch cities, offering households a private, reusable space for managing human waste. By isolating and concealing faeces underground, it reflected a growing cultural discomfort with bodily functions, as seen in contemporary literature and art, which ridiculed or censored such topics.[36] This shift symbolised the rise of an urban, bourgeois morality, challenging traditional authorities like the church and nobility. Unlike 19th-century door-to-door waste collection or ancient and modern sewer systems, medieval cesspits managed waste at the household level rather than collectively.[37] City councils oversaw conduct, but waste management was left to individuals, embodying the 15th-century Dutch emphasis on personal responsibility and independent governance.[38]

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[31] Diana D. Boermans, Agnieszka Jagoda, David Lemiski, Jana Wegener, and Malgorzata Krzywonos, "Environmental Awareness and Sustainable Behavior of Respondents in Germany, the Netherlands and Poland: A Qualitative Focus Group Study," *Journal of Environmental Management* 370 (1 November 2024), 6.
[32] Boermans et al., "Environmental Awareness and Sustainable Behavior of Respondents in Germany, the Netherlands and Poland," 6.
[33] Maartje Hoogsteyns, "Netherlands," in *Encyclopedia of Consumption and Waste: The Social Science of Garbage* (2012), 584.
[34] Hoogsteyns, "Netherlands," 584.
[35] Hoogsteyns, "Netherlands," 584.
[36] Hoogsteyns, "Netherlands," 585.
[37] Hoogsteyns, "Netherlands," 585.
[38] Hoogsteyns, "Netherlands," 585.

Since the late 19th century, waste has been primarily viewed as a public health and safety issue.[39] Legislation addressing waste aimed to protect people from its hazards, but the precise origins of such laws in the Netherlands remain debated. Some cite the Nuisance Act of January 7, 1875, as the first Dutch environmental law, while others point to the imperial directive on odour nuisance from the early 19th century.[40] The Nuisance Act, designed to regulate activities that caused disturbances like foul odours, noise, or pollution, was a significant step in codifying waste and environmental management.[41] It sought to limit nuisances impacting public health and the quality of life in urban areas. Despite its intentions, the Act is often criticised for being ineffective in its early decades, particularly between 1875 and 1952.[42] While these early laws reflect an initial acknowledgement of waste management's importance, they do not necessarily demonstrate consistent progress in environmental awareness. The Nuisance Act's limited impact underscores ongoing debates about such legislation's role and effectiveness in addressing public health and environmental concerns.

According to Patrick Kalders and Wim Hafkamp, waste management in the Netherlands evolved significantly in the late 19th and early 20th centuries. Initially managed by private companies, waste collection shifted to municipal control between 1870 and 1880, as cities like Rotterdam created organisations such as Roteb.[43] This period reflected the consensus-driven Dutch political landscape, shaped by cooperation among government levels and religious divisions.[44] By the late 19th century, composting household waste and cesspool contents was standard, but demand fell with the rise of fertilisers, prompting a shift to landfilling.[45] Large cities built incinerators, while smaller ones relied on landfilling due to limited budgets. By 1960, the country had many incinerators and around 1,100 landfill sites. [46] These technological shifts exposed the limits of the Nuisance Act, leading to the introduction of laws like the Surface Water Pollution Act and Air Pollution Act.[47]

The evolution of Dutch waste management practices laid a solid foundation for influencing broader European policies in subsequent decades. According to Leonidas Milios, the Netherlands demonstrated notable foresight in tackling the environmental and spatial

[39] Patrick Kalders and Wim Hafkamp, "Chapter 2: Waste management in the Netherlands," in *Municipal Waste Management in Europe: A Comparative Study in Building Regimes* (2002), 63.
[40] Kalders and Hafkamp, "Chapter 2: Waste management in the Netherlands," 63.
[41] "Public Health Act 1875," Policy Navigator, accessed 21 January 2025, https://navigator.health.org.uk/theme/public-health-act-1875.
[42] Kalders and Hafkamp, "Chapter 2: Waste management in the Netherlands," 63.
[43] Kalders and Hafkamp, "Chapter 2: Waste management in the Netherlands," 63.
[44] Kalders and Hafkamp, "Chapter 2: Waste management in the Netherlands," 63-64.
[45] Kalders and Hafkamp, "Chapter 2: Waste management in the Netherlands," 64.
[46] Kalders and Hafkamp, "Chapter 2: Waste management in the Netherlands," 64.
[47] Kalders and Hafkamp, "Chapter 2: Waste management in the Netherlands," 64.

challenges associated with waste, most clearly reflected in the adoption of Lansink's Ladder.[48] First proposed in 1979 and formally embedded in legislation in 1994, this hierarchical framework prioritises waste prevention, material recovery, energy generation through incineration, and, as a last resort, environmentally responsible landfilling.[49] The principles of Lansink's Ladder shaped national policy and contributed significantly to the European Waste Framework Directive by promoting a waste hierarchy aligned with sustainable development.[50] Complementing this strategic vision, the Netherlands built a strong record in recycling and composting municipal waste. Since the mid-1990s, municipalities have been required to collect compostable waste at the curbside, and early studies highlight the role of unit-based pricing systems in increasing the separation and recovery of compostable and recyclable materials.[51] These policies emerged in response to escalating consumption, limited landfill space, and rising environmental concerns, helping to position the Netherlands as a pioneer of circular economy principles that later informed European practice.[52]

However, waste management in the Netherlands, particularly in Rotterdam, can also reflect, for some academics, broader historical and policy-driven shifts that have shaped contemporary approaches to recycling and waste valorisation. With a current recycling rate of 51%, academics Maarten Goorhuis, Pieter Reus, Ellen Nieuwenhuis, Natascha Spanbroek, Mario Sol and Jørgen van Rijn state that the Netherlands is a leader in Europe for household waste recycling.[53] However, progress in this area has stagnated over the past decade, with few significant advancements since introducing producer responsibility for electronic waste in 1999 and packaging in 2005.[54] To address these challenges, Dutch municipalities have developed innovative strategies to increase recycling rates. For example, the reverse collection system has successfully reduced residual waste, particularly in pilot projects such as Hoonhorst, which has sparked enthusiasm among municipalities.[55] Similarly, the Waste Pays system incentivises individuals, including youth and charities, to collect recyclables,

[48] Leonidas Milios, "Municipal waste management in the Netherlands," *European Environment Agency* (2013), 5.
[49] Milios, "Municipal waste management in the Netherlands," 5.
[50] Milios, "Municipal waste management in the Netherlands," 5.
[51] E. Dijkgraaf and Raymond Gradus, "Waste Management in the Netherlands," in *Handbook on Waste Management*, 2014, 311.
[52] Milios, "Municipal waste management in the Netherlands," 5.
[53]Maarten Goorhuis et al., "New Developments in Waste Management in the Netherlands," Waste Management & Research 30, nr. 9_suppl (1 September 2012), 67-68.
[54] Goorhuis e.a., "New Developments in Waste Management in the Netherlands," 67-68.
[55] Goorhuis e.a., "New Developments in Waste Management in the Netherlands," 67-68.

showcasing its potential as an effective urban solution.[56] These initiatives illustrate how public engagement and localised innovation can reinvent waste separation practices. In Rotterdam, construction and demolition waste (CDW) provides a distinct historical lens for understanding waste management. Historically regarded as a negligible byproduct of urbanisation, CDW has become a key resource within circular economy frameworks, particularly in land reclamation and infrastructure projects.[57] Regulatory changes have transformed CDW into a commodified input for sustainable development, though this valorisation risks fostering reliance on waste production to sustain urban growth.[58] These examples from Rotterdam and the Netherlands reveal how historical shifts, policy innovation, and public participation have shaped contemporary waste management practices.

Over time, waste management practices in the Netherlands have developed alongside an increasing environmental awareness embedded within society and policy. This awareness appears to have evolved gradually through historical developments, legislative changes, and technological advancements, supported by ongoing public participation. Environmental concerns are reflected in consistent sustainable behaviours across generations, including waste segregation and support for cycling and public transportation.[59] The country's established recycling infrastructure and adoption of renewable energy, coupled with policies promoting green urban planning and sustainable mobility, indicate a broad and sustained engagement with ecological issues.[60] These patterns suggest that environmental awareness in the Netherlands has become a stable feature of its social and policy landscape, shaped by cumulative experience over many decades.

Picturing Waste

In this thesis, I aim to examine the visual communication strategies employed by the municipality of Rotterdam for waste management services and public engagement through pamphlets, posters, and visual campaigns. However, scholarly research on such visual communication remains scarce, particularly at the municipal level. Academics such as Nurrizky Nabila, Rahmadsyah Rangkuti, and Muhammad Yusuf have analysed public service

[56] Goorhuis e.a., "New Developments in Waste Management in the Netherlands," 67-68.
[57] Viktor Wildeboer and Federico Savini, "The State of the Circular Economy: Waste Valorization in Hong Kong and Rotterdam," in *International Journal of Urban and Regional Research 46*, nr. 5 (2022): 749-750.
[58] Wildeboer and Savini, "The State of the Circular Economy," 749-750.
[59] Boermans et al., "Environmental Awareness and Sustainable Behavior of Respondents in Germany, the Netherlands and Poland," 7.
[60] Boermans et al., "Environmental Awareness and Sustainable Behavior of Respondents in Germany, the Netherlands and Poland," 7.

advertisements in their study of UK governmental campaigns against alcohol and cigarette consumption.[61] While their research offers insights into the use of imagery in public service advertising, it is relatively limited in scope. It does not extensively explore historical or localised visual communication strategies. Similarly, researchers Muhammad Rudi Kurniawan, Sahrul N., and Syafwandi conducted a visual semiotic analysis of waste-related public service advertisements, focusing primarily on digital media such as television and YouTube.[62] Although they note that public service advertising historically originated in print ads, ambient media, and radio calls, their analysis does not delve deeply into these earlier forms.

My research diverges from these studies by concentrating on the visual communication of waste management in Rotterdam, specifically through physical media like pamphlets and posters, and situating it within a municipal context.[63] Further academic literature review revealed little comparative analysis that aligns closely with my approach. In this regard, the work of Ellyana Mohd Muslim Tan, Valerie Anak Michael, Muhamad Hafiz Hassan, and Muhammad Fauzan Abu Bakar offers a valuable reference point. Their study highlights the importance of strategically designed visual communication in shaping pro-environmental attitudes and behaviours.[64] They propose that impactful visual strategies, such as integrating sensory learning tools, participatory social media campaigns, and emotionally resonant storytelling, can play a critical role in promoting sustainability. While their research focuses on developing a framework for cross-disciplinary visual strategies, they also acknowledge key limitations, including small sample sizes and the need for more evidence of direct behavioural outcomes.[65] This points to the necessity of further empirical studies, particularly at the local level, to assess the real-world impact of visual campaigns on environmental practices.

By focusing on Rotterdam's waste management visual campaigns, this study provides insights into how local governments employ visual media to influence public behaviour regarding waste disposal. Unlike previous research that primarily examines digital advertising or national-level initiatives, this paper explores tangible, community-centred visual

[61] Nurrizky Nabila, Rahmadsyah Rangkuti and Muhammad Yusuf, "A Semiotic Analysis of Visual Public Service Advertisemnets," in *journal of Language, Literature, and Teaching,* (2022), 96-99.
[62] Muhammad Rudi Kurniawan, Sahrul N. and Syafwandi, "Semiotic Analysis of a Public Service Advertising "I compost food waste"," (2019), 93.
[63] Kurniawan, et al., "Semiotic Analysis of a Public Service Advertising," 91.
[64] Ellyana Mohd Muslim Tan, Valerie Anak Michael, Muhamad Hafiz Hassan, and Muhammad Fauzan Abu Bakar, "Visual Communication in Sustainability Action: Public understanding through human behavior and attitude," in *Environment-Behaviour Proceedings Journal 8*, 2022, 168-169.
[65] Tan, "Visual Communication in Sustainability Action," 168-169.

communication strategies. This localised focus expands the scope of waste management communication research and offers valuable lessons for other municipalities seeking to engage their citizens in sustainable waste practices.

Methodology

This research will primarily adopt a qualitative approach, focusing on public service advertisements' visual and verbal elements related to waste management in Rotterdam. The aim is to analyse the use of pamphlets, posters, and other visual campaigns produced by the municipality and their waste company Roteb, exploring how these materials convey messages about waste disposal, sustainability, and social awareness. Through qualitative methods, the research will employ visual semiotics and discourse analysis to interpret these materials' denotative and connotative meanings, examining how they influence public behaviour and attitudes toward waste management.[66]

To conduct my research, I have gathered 56 materials from the Rotterdam City Archive, primarily focusing on post-WWII advertisements due to the loss of earlier materials in the bombing of Rotterdam's headquarters during the Second World War.[67] This study will analyse a corpus of 56 visual materials, including pamphlets, posters, and campaigns, produced in the post-war period and distributed by the municipality of Rotterdam or Roteb. These materials will be systematically categorised by date of publication and by type, distinguishing between those aimed at regulation and those focused on raising public awareness. The criteria for this categorisation will be discussed in greater detail in the following sections.

The analysis of different visual representations in public service advertisements presents various challenges in interpretation. For instance, in his article "The Analysis of Verbal and Non-verbal Signs of Printed Public Service Advertisements," I Komang Edy Sudiantara emphasises the difference between commercial and public service advertisements. Commercial ads typically promote products or services, while public service ads promote something positive for society, such as new regulations or social awareness campaigns.[68] In the case of my research, I will focus on both types of public service advertisements: those that communicate government regulations (e.g., new waste disposal laws) and those that aim to raise awareness or promote social responsibility (e.g., recycling or litter reduction). These will be analysed based on their visual and verbal signs, utilising denotative and connotative analyses to interpret their messages and influence on behaviour.

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[66] Kurniawan, et al., "Semiotic Analysis of a Public Service Advertising," 97.
[67] Roteb, *125 jaar werken aan een schoon Rotterdam* (Rotterdam: Roteb, 2001), 23-24.
[68]Komang Sudiantara, "The Analysis Verbal and Non-Verbal Signs of Printed Public Service Advertisements," (Humanis, 2014), 2.

As Sudiantara mentions, visual and verbal signs are critical in advertisements, which can significantly influence how an audience interprets the message.[69] The analysis will then focus on two types of public service advertisements:[70]

1. Regulation-based ads - These are government advertisements used to introduce or explain laws and rules regarding waste management.
2. Awareness-based ads - These are government-distributed ads that aim to change behaviour or raise awareness about issues like recycling and waste reduction, without introducing legal requirements.

With the sorted materials, I will use a combination of visual semiotics and discourse analysis to analyse the visual and verbal elements of the advertisements. Building on research by Nabila, Rangkuti, and Yusuf on alcohol and cigarette public service ads, I will similarly analyse the interplay between images and text and how they convey persuasive messages.[71] This approach will allow me to explore the core elements that make public service advertisements effective in promoting behaviour change. This includes analysing visual signs like images, colours, layout, icons, and verbal signs such as text, slogans, and tone. I will first describe the denotative (literal) meaning of each ad, such as the imagery used (e.g., trash bins, recycling symbols) and the specific text (e.g., "Don't litter!"). I will then explore the connotative (symbolic or emotional) meaning behind these elements, considering how these visuals and words aim to evoke certain feelings or actions (e.g., guilt, urgency, or social responsibility).[72] I will also analyse the tone and language used in the verbal elements through discourse analysis, looking at how the message is communicated and how it might influence public behaviour. Of course, I will not come to discuss all these different things from the ads, but I will try to give examples of the essential aspects.

To organize the findings, I have created an Excel sheet where each ad will be categorized and described with the following information: The picture of the advertisement, Year, Title or Description, Type (Regulation/Awareness), Visual Elements, Verbal Elements, Denotative Meaning, Connotative Meaning, Target Audience, Distribution Method, Notes/Context.

After filling out the Excel sheet, I will have a comprehensive overview of all Roteb advertisements, both regulation-based and awareness-based, that I have found and that were

[69]Komang Sudiantara, "The Analysis Verbal and Non-Verbal Signs of Printed Public Service Advertisements," (Humanis, 2014), 2.
[70] Sudiantara, "The Analysis Verbal and Non-Verbal Signs of Printed Public Service Advertisements," 2.
[71] Nabila, Rangkuti and Yusuf, "A Semiotic Analysis of Visual Public Service Advertisemnets," 95-99.
[72] Roland Barthes, *Image Music Text*, trans. Stephen Heath (London: Fontana Press, 1977), 18-19.

accessible to me. This will allow me to construct a detailed picture of the various strategies used across different campaigns. By examining the visual and verbal elements in these materials, I will gain insights into the recurring themes, symbols, and language employed by Roteb over time. This will help me understand how the municipality adapts its messaging to influence public behaviour, from promoting compliance with waste management laws to encouraging voluntary actions like recycling. Through this in-depth analysis, I can track how advertising strategies evolve to engage better and motivate the public.

One of the challenges in this research is the limited availability of historical material, particularly from earlier decades. As mentioned earlier, Roteb's headquarters were bombed during the Second World War, losing much of the archival material.[73] This makes it challenging to conduct a comparative study with earlier campaigns, so my research will primarily focus on post-WWII materials. Additionally, comparing government-led campaigns with non-government campaigns will require careful consideration. While non-government campaigns may also be relevant, my research will primarily focus on government and government-distributed campaigns, given that the municipality of Rotterdam and Roteb produces these materials. I will be cautious in differentiating these two contexts to ensure accurate analysis.

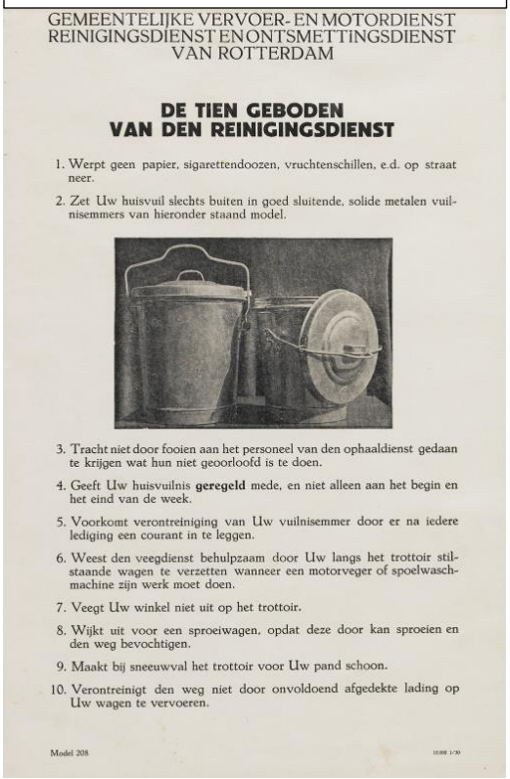
In conclusion, this research will examine the visual communication strategies employed by the municipality of Rotterdam in promoting waste management through pamphlets, posters, and campaigns. By integrating visual semiotics and discourse analysis, I will analyse both these materials' visual and verbal elements to understand how they influence public attitudes and behaviours toward waste management and sustainability. This qualitative approach will address gaps in the existing literature, where most studies focus on national campaigns, digital media, or public service advertising. Still, it will contribute original insights into how municipal-level, physical visual media have historically and currently been deployed to shape pro-environmental behaviours. By concentrating on Rotterdam's unique local context, this research will enrich understanding of how community-centred and historically situated visual communication strategies can foster sustainability, offering a model that may inform future initiatives in other urban settings.

[73] Roteb, *125 jaar werken aan een schoon Rotterdam* (Rotterdam: Roteb, 2001), 23-24.

Chapter 1: The Beginning of Waste Disposal Visual Campaigns in Rotterdam (1876-1950)

In the early period of the Rotterdam waste management company, visual campaigns were also distributed throughout the city. As noted previously, much of this material did not survive the destruction caused by the bombing of Rotterdam during the Second World War. Nevertheless, a few visual campaigns from this period have been preserved. This selection is limited; only five items were identified, two of which consist solely of text. Although these materials do not comprehensively represent the company's visual communication between 1876 and 1950, they nonetheless offer insight into how waste management messages were conveyed to the urban population during this period. These surviving campaigns may also serve as valuable points of reference for analysing and contextualising the visual strategies employed in the post-war years.

Visual campaign 1:



GEMEENTELIJKE VERVOER- EN MOTORDIENST
REINIGINGSDIENST EN ONTSMETTINGSDIENST
VAN ROTTERDAM

DE TIEN GEBODEN VAN DEN REINIGINGSDIENST

1. Werpt geen papier, sigarettendoozen, vruchtenschillen, e.d. op straat neer.
2. Zet Uw huisvuil slechts buiten in goed sluitende, solide metalen vuilnisemmers van hieronder staand model.
3. Tracht niet door fooien aan het personeel van den ophaaldienst gedaan te krijgen wat hun niet geoorloofd is te doen.
4. Geeft Uw huisvuilnis **geregeld** mede, en niet alleen aan het begin en het eind van de week.
5. Voorkomt verontreiniging van Uw vuilnisemmer door er na iedere lediging een courant in te leggen.
6. Weest den veegdienst behulpzaam door Uw langs het trottoir stilstaande wagen te verzetten wanneer een motorveger of spoelwaschmachine zijn werk moet doen.
7. Veegt Uw winkel niet uit op het trottoir.
8. Wijkt uit voor een sproeiwagen, opdat deze door kan sproeien en den weg bevochtigen.
9. Maakt bij sneeuwval het trottoir voor Uw pand schoon.
10. Verontreinigt den weg niet door onvoldoend afgedekte lading op Uw wagen te vervoeren.

Model 208

The first visual campaign poster I identified dates from 1913 and was issued by the precursor to Roteb: the Gemeentelijke Vervoer- en Motordienst, Reinigingsdienst en Ontsmettingsdienst van Rotterdam (GVMROD), translated as the Municipal Transport and Motor Service, Cleaning Service, and Disinfection Service of Rotterdam (Visual Campaign 1). This early campaign is particularly notable for its textual focus. The poster prominently displays ten regulations, including directives such as keeping the streets clean and using designated metal bins, which are illustrated for clarity. These rules are framed as the "Ten Commandments" of the cleaning service, an apparent reference to a central biblical narrative familiar to the Netherlands' predominantly Catholic and Protestant population at that time.[74] As academics Patrick Kalders and Wim Hafkamp observe, municipal policymaking during this period was shaped by a consensus-driven approach, reflecting a society divided along

[74] 'Nederlandse kerkgeschiedenis', KRO-NCRV, accessed 6 May 2025, https://kro-ncrv.nl/katholiek/encyclopedie/n/nederlandse-kerkgeschiedenis.

religious lines.[75] Within this context, the spiritual symbolism in the campaign not only aligned with dominant cultural values but also served as a persuasive tool for promoting civic responsibility.

Although the poster incorporates both denotative elements (such as the image of the bin) and connotative meanings (such as moral and religious duty evoked by the "Ten Commandments"), it is primarily regulation-based rather than aimed at raising broader environmental awareness. The content of these rules, such as making way for spray carts or clearing snowy sidewalks, suggests that the poster was designed for long-term use, offering clear and enduring instructions rather than temporary or seasonal guidance. [76] This reflects the city's focus on securing continuous public compliance with civic hygiene standards through authoritative messaging. This authoritative and religious framing likely aimed to leverage prevailing social norms and moral frameworks to ensure compliance in a society where church and community values strongly influenced everyday behaviour.

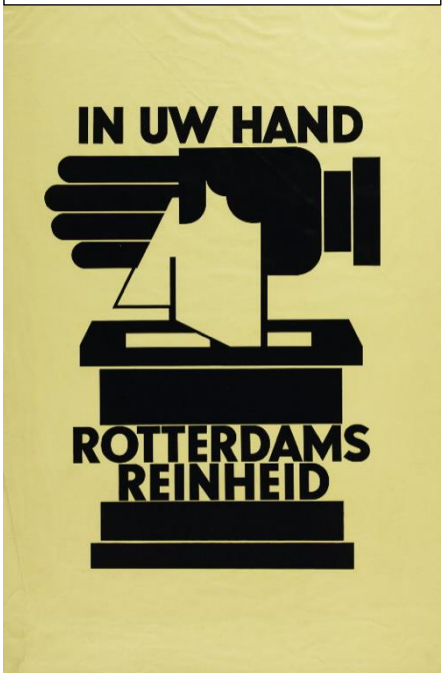
Visual campaign 2:

The next poster (Visual Campaign 2), dating from approximately 1920–1940, offers valuable insight into the evolving nature of visual campaigns over time. Unlike the first poster from 1913, which was black and white and primarily regulation-based, this example incorporates red to enhance visual impact. The text reads: "Throw away what no longer benefits you, not carelessly on the street, but keep it in hand, to the nearest basket." In Dutch, the rhyming structure makes the message more memorable and engaging. This poster moves beyond strict rule-setting to elicit an emotional response and promote awareness of responsible waste disposal. The imagery, depicting hands, one gloved, likely connoting a higher social status, placing rubbish into a bin, suggests that proper waste behaviour is a shared civic duty across social classes. In contrast to the denotative, directive tone of the first poster, with its clear rules framed as 'commandments,' this second poster relies more on connotative meanings, using colour, rhyme, and inclusive imagery to appeal to collective responsibility. This shift illustrates how awareness-raising became a growing focus in Rotterdam's public messaging

[75] Kalders and Hafkamp, "Chapter 2: Waste management in the Netherlands," 64.
[76] Roteb, *125 jaar werken aan een schoon Rotterdam* (Rotterdam: Roteb, 2001), 11-21.

on waste, reflecting a broader cultural transition from authoritative instruction to fostering voluntary civic engagement. This also highlights a significant change from the pre-1876 period, when waste management was primarily the responsibility of private individuals rather than a collective or municipal concern.[77]

Visual campaign 3:



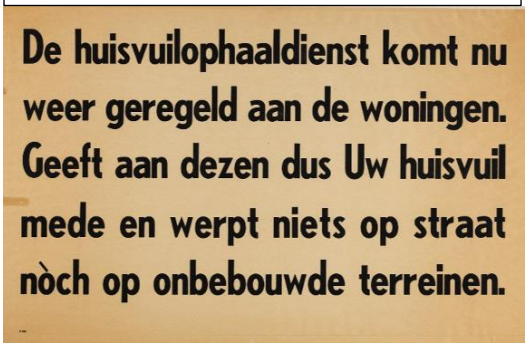
Another notable awareness-based advertisement from 1931, Visual Campaign 3, further illustrates the municipality's efforts to discourage littering. Similar to Visual Campaign 2, it depicts a hand holding a piece of paper positioned above a bin, reinforcing the visual association between individual action and proper waste disposal. The accompanying text, "IN YOUR HAND ROTTERDAM'S PURITY," conveys a striking message: purity invokes strong connotations of moral and civic cleanliness. This term not only alludes to the collective responsibility for maintaining a clean urban environment but also resonates with the historical mission of the cleaning service established in 1876, for which the Dutch term for purity aligns with cleaning.[78] Denotatively, the poster presents clear and practical instructions, while connotatively, it appeals to a sense of civic virtue and shared moral duty.

The emphasis on purity in this campaign aligns with what anthropologist Mary Douglas later theorised in *Purity and Danger* (1966): that dirt is not simply a matter of hygiene, but "matter out of place," representing a violation of a structured order.[79] In this sense, litter in the urban space can be seen as a disruption of the city's intended pattern of cleanliness, and visual campaigns like this one seek to symbolically and practically restore that order. Douglas's argument that dirt is the by-product of systematic ordering underscores how such municipal communication was not only functional but also deeply symbolic, linking physical cleanliness to moral and social values.[80] Compared to Visual Campaign 2, this poster adopts a bold, more minimalist style, using stark contrasts and large typography to deliver its

[77] Gemeente Rotterdam, *Jubileumboeken/-rapporten over de geschiedenis van ROTEB. 100-jarig bestaan. Datering: 1876–1976* (Rotterdam: Gemeente Rotterdam, 1976).
[78] Gemeente Rotterdam, *Jubileumboeken/-rapporten over de geschiedenis van ROTEB. 100-jarig bestaan. Datering: 1876–1976* (Rotterdam: Gemeente Rotterdam, 1976).
[79] Douglas, "Purity and Danger," 36-41.
[80] Douglas, "Purity and Danger," 36-41.

message with immediacy. These campaigns demonstrate a growing reliance on graphic clarity and symbolic messaging to promote collaborative civic behaviour and urban order.

Visual campaign 4:



The final two campaigns I identified from this early period date from 1945, the final year of the Second World War. These black-and-white, text-only messages were likely distributed as small pamphlets, cards, or printed in newspapers. *Visual Campaign 4* delivers a precise regulation: "The household waste collection service will come to the homes regularly. So, give them your household waste and do not throw it on the street or undeveloped land." While this message may raise some awareness, it primarily functions as a regulation-based appeal, setting out specific behavioural instructions. *Visual Campaign 5*, in contrast, is more awareness-focused. It states: "A good citizen cares about the cleanliness (or 'purity') of his city and points out his fellow citizens, who fall short in this, to their duty. When everyone works together in this, the pollution of the streets will soon be over." Like earlier campaigns, it highlights civic responsibility and collective action.

Visual campaign 5:

Both messages must be understood in the context of 1945, a period when Rotterdam was still grappling with the destruction caused by the 1940 bombing. Roteb had lost its head office, archive, vehicles, and essential facilities, yet waste collection was a vital public service.[81] During the war, the Ontsmettings Dienst (Disinfection service) also dealt with a scabies epidemic, while many residents struggled with fleas and lice.[82] Using terms such as cleanliness and purity during this time evoked more than hygiene; they became symbols of resilience, renewal, and collective responsibility in rebuilding the city and its people. Much like public health posters used during epidemics, as Ginny A. Roth, curator at the National Library of Medicine, notes, these are designed to catch the eye in passing moments, delivering concise, persuasive messages reinforced by repeated exposure in key locations, these pamphlets served as visual

[81] Roteb, *125 jaar werken aan een schoon Rotterdam* (Rotterdam: Roteb, 2001), 23-24.
[82] Roteb, *125 jaar werken aan een schoon Rotterdam* (Rotterdam: Roteb, 2001), 69-71.

reminders of the shared duty to restore civic order.[83] In this sense, the campaigns of 1945 paralleled the role of health posters during epidemics: they addressed an urgent public need, combined practical guidance with symbolic meaning. They sought to unite the population in confronting a collective challenge.[84]

The evolution of Rotterdam's visual campaigns on waste management reveals a city deeply engaged in cultivating practical compliance and evolving social consciousness around sustainability. Early campaigns, such as the 1913 "Ten Commandments," emphasised authoritative messaging grounded in shared religious and moral frameworks, reflecting a society reliant on regulation and collective norms to maintain urban hygiene. Over time, the shift toward more emotive and inclusive visuals, rhyme, and colour in later posters highlights an increasing emphasis on voluntary civic participation and awareness, illustrating a move from mere compliance toward fostering a shared environmental ethic. This progression mirrors broader societal changes, from a divided religious community to one unified by common urban challenges and emerging ecological values.

Moreover, the persistence of themes like "purity" and "cleanliness" across decades underscores their symbolic power, linking physical waste management with notions of moral order, resilience, and communal responsibility, especially poignant during times of crisis such as the Second World War. These campaigns collectively demonstrate that Rotterdam's approach to sustainability has been holistic, intertwining practical guidance with cultural meaning to engage citizens deeply. Despite their limited number, these campaigns highlight how the relationship between government and citizen was carefully shaped through visual and verbal messages, laying necessary groundwork for the postwar years to come.

[83] Ginny A. Roth, "Prevention Posters Push the Message," in *Circulating Now from the NLM Historical Collections*, 9 July 2020, https://circulatingnow.nlm.nih.gov/2020/07/09/prevention-posters-push-the-message/.
[84] Roth, "Prevention Posters Push the Message."

Chapter 2: The Rise of Environmental Concerns and Changing Designs (1950–2000)

From 1950 to 2000, Roteb (known as GVMROD at the start of this period) and Rotterdam underwent profound changes, almost too many to count. A notable development came in 1948 with the introduction of standardised garbage cans provided by GVMROD at just one guilder per year, making proper waste disposal affordable and accessible for all residents.[85] This innovation simplified household waste disposal and collection by the waste management company. A year later, construction began on the new GVMROD headquarters at Kleinpolderplein, the very site where today's waste management company, Schone Stad (Clean City), still has its headquarters. By 1951, the company had officially moved into this new building.[86] In 1956, another major shift occurred: GVMROD changed its name to Roteb, short for Reiniging, Ontsmetting, Transport en Brandweer (Cleaning, Disinfection, Transport, and Fire Brigade). Interestingly, this marked the addition of the fire brigade to its services and the transformation of the motor service into a dedicated transport division.[87] Despite these changes, the name Roteb became deeply embedded in the identity of Rotterdam. Even today, although the company is officially called Schone Stad, many Rotterdammers still affectionately refer to it as Roteb, a name that has truly stood the test of time.

The '70s: When Clean Got Clever

The early 1970s marked a pivotal moment in Dutch environmental consciousness, with the government introducing the concept of "ecologically adjusted behaviour" in 1972.[88] This reflected a growing awareness that economic growth needed to be balanced with critical consumption and responsible living. Over time, environmental considerations became integrated into everyday life, influencing consumer habits such as paying ecological taxes, separating waste, and choosing green energy.[89] This shift signalled a broader cultural transformation in which sustainability began to shape societal values, even as the environmental impact of domestic consumption remained a pressing challenge.

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[85] Roteb, *125 jaar werken aan een schoon Rotterdam* (Rotterdam: Roteb, 2001), 43.
[86] Roteb, *125 jaar werken aan een schoon Rotterdam* (Rotterdam: Roteb, 2001), 47.
[87] Roteb, *125 jaar werken aan een schoon Rotterdam* (Rotterdam: Roteb, 2001), 49.
[88] Susan Martens and Gert Spaargaren, "The Politics of Sustainable Consumption: The Case of the Netherlands," *Sustainability: Science, Practice and Policy* 1, no. 1 (1 April 2005), 29.
[89] Martens and Spaargaren, "The Politics of Sustainable Consumption," 29.

As noted earlier, the Rotterdam City Archive holds an extensive collection relating to the history of Rotterdam. Nevertheless, the available material presented certain limitations, particularly regarding documentation from the 1950s to the early 1970s. The next identified visual campaign dates from 1969, coinciding with the introduction of a free bulky waste collection service. This initiative emerged from the efforts of the municipal working committee Rotterdam Schoon Schip (Rotterdam Clean Sweep), which sought to enhance street cleanliness and improve the city's appearance.[90] Although waste collection in bins placed in front of residences was already standard practice, issues arose when bins were left out for extended periods, leading to litter being dispersed by rain or disturbed by children and scrap dealers. Additional waste was also frequently deposited beside the bins without being properly secured.[91] In response, Rotterdam, Schoon Schip and Roteb initiated a pilot programme for free bulky waste collection in 1969. While this approach demanded greater resources in terms of funding, staffing, and vehicles, the pilot indicated a marked increase in the amount of bulky waste collected.[92] The scheme was considered effective in improving urban cleanliness and subsequently formed the basis for future waste management practices in the city.

Visual campaign 6:

Visual campaign 6 (see next page) marks a significant development in Rotterdam's public cleaning efforts with the introduction of *Holle Bolle Gijs*, a figure well-known from Dutch children's stories and the Efteling amusement park, on the Lijnbaan-Stadhuisplein, in the city centre.[93] The campaign, launched by the working committee *Rotterdam-Schoon Schip* in collaboration with Roteb, employed this familiar character as an interactive waste bin that encouraged proper litter disposal through the friendly phrase "Paper here!" and

[90] Stadsarchief Rotterdam, "Inzamelen afval, sectie 88: Correspondentie over de instelling van een gratis grofvuil ophaaldienst, 1969–1970," Rotterdam.
[91] Stadsarchief Rotterdam, "Inzamelen afval, sectie 88: Correspondentie over de instelling van een gratis grofvuil ophaaldienst, 1969–1970," Rotterdam.
[92] Stadsarchief Rotterdam, "Inzamelen afval, sectie 88: Correspondentie over de instelling van een gratis grofvuil ophaaldienst, 1969–1970," Rotterdam.
[93] "Holle Bolle Gijs - Eftepedia - Alles over de Efteling," accessed 8 May 2025, https://www.eftepedia.nl/lemma/Holle_Bolle_Gijs.

rewarded the act with a cheerful "Thank you!"[94] The denotation of this campaign is clear: it presents a bin designed to collect waste. However, the connotation adds deeper cultural and symbolic meaning. By choosing *Holle Bolle Gijs*, a figure associated with childhood, play, and positive reinforcement, the campaign aimed to evoke feelings of friendliness, fun, and shared responsibility, turning waste disposal into an engaging and voluntary act.

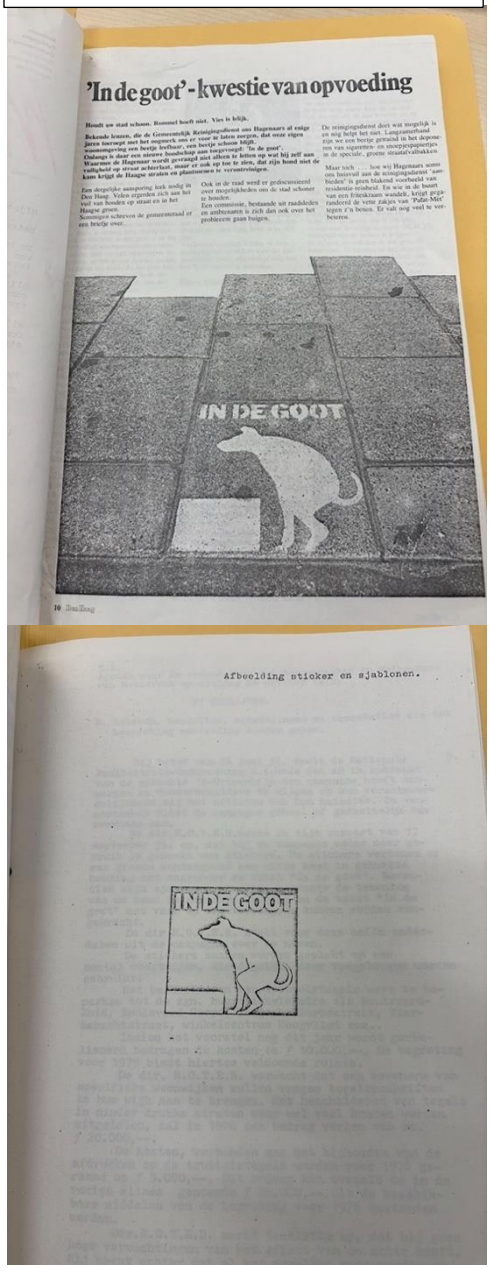
This approach aligns with the broader developments in environmental education in the Netherlands as outlined by academics Rebekah Tauritz and Arjen Wals in *A history of environmental education and youth participation in the Netherlands*. From the 1960s and 1970s onward, environmental education shifted from its earlier focus on reconnecting with nature toward promoting specific environmental behaviours, such as waste reduction and recycling.[95] Campaigns like *Holle Bolle Gijs* illustrate this emerging "grey" focus: rather than emphasising ecological awareness alone ("green" focus), they sought to subtly encourage behavioural change in everyday practices, aligning with the growing societal urgency around pollution and waste management.[96] This reflects a time when environmental education and communication increasingly aimed at shaping public habits, often through creative means that avoided the more prescriptive or regulatory tone of earlier campaigns. At the same time, as Tauritz and Wals note, such initiatives had to balance fostering environmental responsibility and avoiding the pitfalls of indoctrination, instead promoting participation and voluntary engagement, precisely what the *Holle Bolle Gijs* campaign modelled through its interactive, voluntary design.[97]

Between 1975 and 1979, a significant visual campaign in Rotterdam addressed the problem of dog fouling, reflecting broader concerns about urban cleanliness and public hygiene. The city and Roteb adopted the "In de goot" ("In the gutter") campaign from The Hague, utilizing stickers and posters featuring an image of a dog accompanied by the slogan "In de goot" to encourage dog owners to ensure their pets relieved themselves in designated areas such as gutters, rather than on sidewalks or in front of shops (Visual campaign 7, see next page).[98] These materials were also planned for public transportation, expanding the

[94] "Holle Bolle Gijs - Eftepedia - Alles over de Efteling."
[95] Rebekah Tauritz and Arjen Wals, "A history of environmental education and youth participation in the Netherlands," in *Young people, education, and sustainable development*, 2009, 248-250.
[96] Tauritz and Wals, "A history of environmental education and youth participation in the Netherlands," 248-250.
[97] Tauritz and Wals, "A history of environmental education and youth participation in the Netherlands," 248-250.
[98] Stadsarchief Rotterdam, "Bestrijding van verontreiniging, sectie 96: Stukken betreffende de publiciteitscampagne 'In de goot' activiteiten ter bestrijding van straatverontreiniging door honden, 1975–1979," Rotterdam.

campaign's visibility across the urban landscape. This campaign primarily functions as an awareness-based appeal rather than strict regulatory enforcement, emphasising civic responsibility and social norms over legal compulsion. The connotation of "In de goot" invokes a spatial ordering, designating a specific place for impurity and reinforcing the cultural expectation that maintaining public cleanliness is a shared duty. The placement of these images on sidewalk tiles and shop windows physically embedded the message into daily urban experience, making the desired behaviour both visible and normative.

Visual campaign 7:



Environmental historian Chris Pearson's research on twentieth-century Paris provides crucial cultural context to this campaign. Pearson highlights how dog excrement emerged as a public hygiene issue in the early twentieth century, particularly during the interwar period, when it symbolised urban disorder and uncivilised behaviour.[99] Dog fouling was viewed as a nuisance and a threat to the modern, hygienic cityscape, an emblem of ineffective governance and a stain on the city's reputation. Pearson notes that dog excrement, like human waste, carries strong cultural and political meanings as a "matter out of place," invoking disgust and social anxieties about cleanliness in public space.[100] This historical framing underscores that concerns about animal excrement and urban hygiene persisted well into the twentieth century, with campaigns like "In de goot" reflecting ongoing efforts to negotiate the boundaries of public cleanliness and communal responsibility.

Contemporary observations from The Hague, where the "In de goot" campaign originated, indicate gradual improvements in public behaviour around litter disposal, though

[99] Chris Pearson, "Combating Canine "Visiting Cards": Public Hygiene and the Management of Dog Mess in Paris since the 1920s," in *Social History of Medicine* 32, no. 1 (February 2019), 143-144
[100] Pearson, "Combating Canine "Visiting Cards"," 143-144.

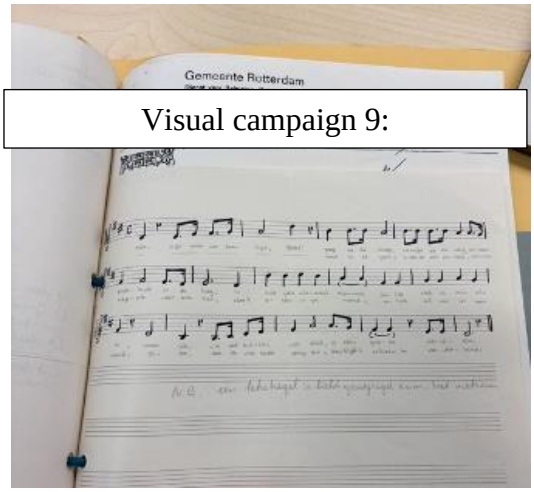
significant challenges persisted.[101] By linking the phrase “In the gutter” with the image of the dog, the campaign effectively extended the message of public cleanliness into every corner of the city, symbolically including dogs, and by extension, their owners, in the collective effort to maintain urban hygiene. This connotative framing parallels earlier campaigns, such as the *Holle Bolle Gijs* initiative targeting children’s littering, highlighting how 1970s visual campaigns sought to cultivate a broad civic responsibility. Through these efforts, the city aimed to reduce visible dirt and embed a shared cultural norm around cleanliness, reflecting evolving expectations of public behaviour and the demands of modern urban life.

Visual campaign 8:

Closing out the 1970s, several visual campaigns emerged that reflect a shift toward more accessible, behaviour-focused public messaging on cleanliness. Among these was a national campaign represented by visual campaign 8 (see next page), featuring a minimalist black-and-white sticker depicting a stick figure disposing of waste in a bin. [102] Later adopted by Rotterdam’s Roteb, this. The simple design, costing just seventeen cents per sticker, carries significant connotative meaning: It demonstrates that effective environmental education can rely on subtle, repeated cues rather than costly or elaborate campaigns, quietly reinforcing civic responsibility in everyday life. This campaign functions primarily as an awareness-based ad, gently reminding citizens of their role in maintaining public cleanliness without explicitly enforcing regulations.

Complementing these visual efforts, the decade’s final campaign, visual campaign 9, targeted young audiences through an innovative audio-based medium. “The Garbageman Song,” designed for toddlers, uses playful yet direct language to instil early awareness about littering, linking personal cleanliness at home with public cleanliness outdoors. Supported by classroom initiatives like “Weg met de smeerpoetsen” (“Away with the Dirty Grubs”), which included stories and lesson materials, these efforts represent awareness-based ads aimed at shaping future generations'

Visual campaign 9:



[101] Stadsarchief Rotterdam, “Bestrijding van verontreiniging, sectie 96: Stukken betreffende de publiciteitscampagne ‘In de goot’ activiteiten ter bestrijding van straatverontreiniging door honden, 1975–1979,” Rotterdam.
[102] Stadsarchief Rotterdam, “Bestrijding van verontreiniging, sectie 97: Stukken betreffende de publieksacties ter voorkoming van straatverontreiniging, 1976–1979,” Rotterdam.

attitudes and behaviours towards the environment.[103]

"The Garbageman Song," which goes with the music notes, is as follows:[104]

Look what's lying there…
Yuck! Poop on the sidewalk,
a cigarette butt on the road,
and an apple core in the hedge.
At home no one makes a mess,
you don't, and neither do I.
But whoever does it outside,
is a filthy little guy!
Look what's lying there…
Yuck! Bread in the gutter,
a greasy bag of fries,
a tasty snack for the rats.
Put food in your mouth,
and trash in the bin.
If you just do those two things,
the Netherlands stays clean!

These campaigns align with the observations of Tauritz and Wals, who emphasise that during this period, environmental education in the Netherlands balanced awareness-based ads with regulation-based ads, aiming to shift behaviour through normative encouragement and clear rules.[105] By embedding educational content within schools and public spaces, these initiatives fostered a culture of responsible citizenship grounded in everyday actions, reflecting broader societal aims to address environmental challenges through awareness, regulation, and participatory engagement.

From the late 1960s through the 1970s, the visual campaigns in Rotterdam illustrate a deliberate shift from purely regulatory messaging toward nuanced, awareness-based strategies

[103] Stadsarchief Rotterdam, "Bestrijding van verontreiniging, sectie 97: Stukken betreffende de publieksacties ter voorkoming van straatverontreiniging, 1976–1979," Rotterdam.
[104] Stadsarchief Rotterdam, "Bestrijding van verontreiniging, sectie 97: Stukken betreffende de publieksacties ter voorkoming van straatverontreiniging, 1976–1979," Rotterdam.
[105] Tauritz and Wals, "A history of environmental education and youth participation in the Netherlands," 248-250.

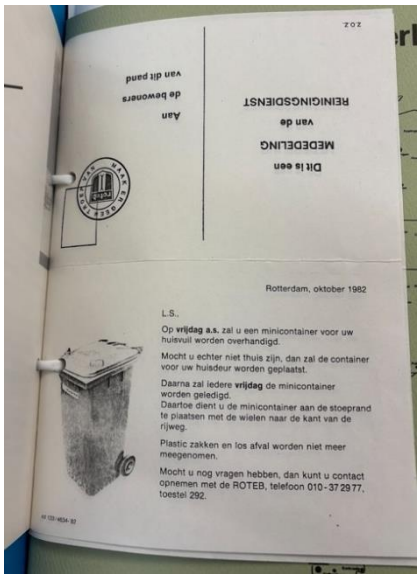
that engage citizens emotionally and culturally. By integrating familiar symbols, child-friendly characters, and accessible messaging, these campaigns, like *Holle Bolle Gijs*, the simple yet effective “In de goot” campaign and the charming Garbageman Song for toddlers, reflect evolving social priorities, emphasising shared responsibility and everyday sustainable behaviour. This progression reveals a broader civic ethos where environmental stewardship is framed as compliance and active participation in a collective urban identity. Such an approach was vital for embedding long-term behavioural change, recognising that sustainability depends on social awareness as much as regulation.

The ’80s and ’90s: From Mascots to Mandates

In the 1980s, Roteb’s advertising efforts expanded noticeably, with more colourful campaigns influenced by popular media, reflecting a shift between awareness-based and regulation-based strategies. Yet despite these initiatives, Dutch waste management still struggled with small-scale operations and poor environmental protections. Sociologist and economist Rene Kamp states that landfills lacked soil safeguards, and incinerators emitted harmful pollutants, sparking public outrage after scandals like Lekkerkerk (1980), where homes were built on toxic land, and Lickebaert (1989), where dioxins contaminated local milk.[106] As capacity shrank and waste volumes grew, emergency measures such as storing waste in push barges became necessary. The systematic collection of most recyclable waste and organic materials would only become established during the 1990s.[107] This crisis led to national reforms and inspired new campaigns to rebuild public trust and promote better waste practices. In the 1990s, these efforts continued, with modernisation of the waste system and further integration of national strategies. Campaigns increasingly focused on chain management and sustainability, aligning with growing public and political demands for cleaner, safer waste disposal solutions.[108]

Between 1982 and 1985, Roteb introduced a pilot mini-container system in Hoek van Holland, communicated through a flyer (visual campaign 10) that exemplifies regulation-based messaging.[109] Designed as a folded postcard, the flyer combined functional clarity, explaining bin use and collection times, with subtle cultural cues. The shield-shaped Roteb logo, appearing for the first time, alongside a mock stamp square, evoked formality and civic responsibility, positioning waste management as a shared public duty. This visual strategy reflects broader 1980s efforts to reinforce authority and trust amid growing anxieties about waste scandals and environmental

Visual campaign 10:



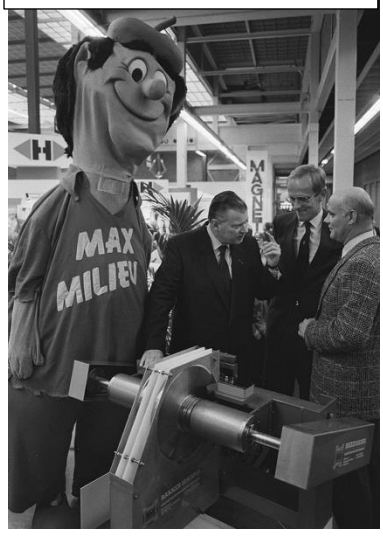
[106] René Kemp, “An Example of a “Managed Transition”: The Transformation of the Waste Management Subsystem in the Netherlands (1960–2000),” in *Innovations Towards Sustainability* (Physica-Verlag HD, 2007), 87-91.
[107] Kemp, “An Example of a “Managed Transition”,” 89-91.
[108] Kemp, “An Example of a “Managed Transition”,” 89-91.
[109] Stadsarchief Rotterdam, “Inzamelen afval, sectie 110–111: Stukken betreffende het houden van een proef met het plaatsen van minicontainers in Hoek van Holland, 1982–1985,” Rotterdam.

mismanagement.[110] The flyer illustrates how regulatory communication increasingly drew on connotative elements to shape public perception, combining official instructions with familiar visual forms to encourage compliance and strengthen the link between cleanliness and civic identity.

Visual campaign 11:

Around the same time these mini containers were tested, another experiment was underway. Between 1983 and 1986, Roteb launched the "chemo-car" pilot to improve the collection of small hazardous waste (Klein Chemisch Afval, or KCA).[111] The chemo-car, a mobile bus where residents could drop off items like batteries, paint, or chemicals, was meant to stimulate better disposal habits. However, the initial phase did not attract much public participation, prompting Roteb and the municipality to adjust the program by increasing its frequency and setting up fixed stops.[112] From 1987 to 1988, the project was continued and evaluated. Despite the rocky start, Roteb saw a gradual increase in collected KCA. Some stops were moved or cancelled to optimise the route, and public awareness campaigns helped make the chemo-car a well-known and accepted service.[113] The campaigns from this period brought a particular figure to life: Max Milieu, also known as "The Man of the Roteb." Interestingly, Max Milieu was never mentioned or used before this campaign and, just as abruptly, disappeared afterwards; no further traces of the "Man of the Roteb" can be found in later materials or records. On the flyer (campaign 11), Max Milieu appears as an ordinary Rotterdam citizen doing his

Visual campaign 12:



[110] Kemp, "An Example of a "Managed Transition"," 89.
[111] Stadsarchief Rotterdam, "Inzamelen afval, sectie 112–113: Intensivering van de inzameling van Klein Chemisch Afval, 1983–1988," Rotterdam.
[112] Stadsarchief Rotterdam, "Inzamelen afval, sectie 112–113: Intensivering van de inzameling van Klein Chemisch Afval, 1983–1988," Rotterdam.
[113] Stadsarchief Rotterdam, "Inzamelen afval, sectie 112–113: Intensivering van de inzameling van Klein Chemisch Afval, 1983–1988," Rotterdam.

part for the environment. Max is always portrayed in the same pose: holding a trash bag in his right hand, smiling, and pointing a finger upwards with his left, as if ready to explain something important. The text on the flyer, "Harmful substances: keep them separate for the chemo-car," clearly shows that Max Milieu's role was to raise awareness about separating hazardous waste (KCA). Every time Max appeared, it was in a context where he was giving a rule or tip: in newspapers with the line "keep them separate," on Roteb trucks explaining what could go to the chemo-car, at battery collection points with large signs, and even as a full-body mascot. Notably, the mascot (visual campaign 12[114]) was less successful: its exaggerated proportions and unsettling appearance made it look more like a horror character than the friendly, cartoon-like Max seen in the flyers.

However, all these ads worked together to reinforce Max Milieu as a figure of guidance and regulation. This entire campaign can therefore be understood as regulation-based. Denotatively, Max Milieu presented clear instructions for responsible waste disposal; connotatively, he symbolised the city's effort to shape civic behaviour, combining everyday responsibility with a touch of personality to make environmental care feel approachable yet essential. This aligns with what René Kemp identifies as a response to the fragmented and small-scale nature of waste management during this period, where campaigns sought to restore trust and improve compliance amid public concerns over hazardous waste and ineffective governance.[115] Similarly, as Tauritz and Wals note, environmental education in this era increasingly balanced prescriptive messages with efforts to engage citizens voluntarily, using figures like Max Milieu to encourage participation without provoking resistance, and to embed sustainable habits into everyday life.[116]

[114] 'File: Minister Winsemius Opent Afvaltech, Links Max Milieu, Bestanddeelnr 933-4827.Jpg - Wikimedia Commons', accessed 9 May 2025, https://commons.wikimedia.org/wiki/File:Minister_Winsemius_opent_Afvaltech,_links_Max_Milieu,_Bestanddeelnr_933-4827.jpg.
[115] Kemp, "An Example of a "Managed Transition"," 87-91.
[116] Tauritz and Wals, "A history of environmental education and youth participation in the Netherlands," 248-250.

Visual campaign 13:

The next two ads from visual campaign 13 continue the cartoony and playful tone already seen with Max Milieu, reflecting a broader cultural trend from the mid-1980s where cartoon characters were widely popular in comics, television, and advertising.[117] These two 1986 ads exemplify Roteb's approach to lighthearted and engaging public communication on waste disposal and cleanliness. Denotatively, the first ad shows a casually dressed man tossing a bottle with a straw into a bright yellow trash can featuring the Roteb logo in green and white, colours reflecting Rotterdam's city flag. Connotatively, this detail links the act of disposing of waste to local identity and civic pride. The man holding a cage with a yellow bird and casually walking by reinforces that keeping the city clean should be a natural, effortless part of everyday life. The slogan, "Doe gewoon houd het schoon" ("Act normal, keep it clean"), conveys a simple but powerful message: environmental care is an ordinary responsibility of citizenship.

The second ad depicts a blonde girl with braids joyfully throwing a piece of paper into a yellow trash can, bearing the green and white Roteb logo. Wearing orange skates, she appears to burst energetically from the mouth of a stylised lion's head, creating a playful and dynamic image that associates waste disposal with fun and active urban life. The campaign's consistent slogan, "Doe gewoon houd het schoon" ("Act normal, keep it clean"), reinforces the message. Notably, limited background information exists about these ads' usage or context. The girl-on-skates image was printed as a sticker, suggesting deployment in public spaces such as bus stops, shops, or schools to engage younger audiences and families. In contrast, the distribution and context of the ad featuring the man with the birdcage remain uncertain.

Both ads can be categorised as awareness-based campaigns. They do not present rules or regulations but aim to shape attitudes and behaviours through light, everyday examples and

[117] '80-'89: Comics' Greatest Decade – ImageTexT', accessed 9 May 2025, https://imagetextjournal.com/80-89-comics-greatest-decade/.

positive messaging. Denotatively, they show ordinary people disposing of their waste properly; connotatively, they suggest keeping the city clean is calm, joyful, and part of a modern urban lifestyle. They tap into the broader cultural energy of the 1980s, when cartoons and playful visual language were deeply embedded in popular media.[118] This made the message accessible and appealing to a broad audience, particularly younger generations. Like the Max Milieu campaign, these ads reflect how the Roteb was evolving its communication strategies, moving away from formal instructions and toward more engaging, emotionally resonant public outreach. The collaboration with Poetry International in 1988, with putting poetry on garbage trucks, further demonstrates an innovative blending of environmental goals with cultural expression, reinforcing waste management as a civic duty and a shared cultural experience. Together, these efforts reflect an evolving communication strategy aimed at embedding sustainable practices within the social and cultural fabric of Rotterdam.

The two 1990s posters from visual campaign 14 reflect a clear technological and stylistic shift in Roteb's communication, marking one of the earliest uses of digital design in public messaging. Denotatively, the posters deliver precise instructions: one urges residents to use textile bins for old clothing, the other to call Roteb for bulky waste collection. Connotatively, their cool blue tones, bold typography, and polished aesthetic convey seriousness and authority, signalling a move away from the lighter, mascot-driven campaigns of the 1980s toward formal regulation-based appeals. These design choices reinforce civic responsibility through clarity and command rather than emotional engagement.

Visual campaign 14:

The first poster shows a female mannequin sitting on a chair with the headline "Trek 'ns iets uit voor het milieu" ("Take something off for the environment"). Below, the text reads "Textiel in de textielbak. Haal de Roteb folder bij uw gemeente" ("Textiles in the textile bin.

[118] '80-'89: Comics' Greatest Decade – ImageTexT', accessed 9 May 2025, https://imagetextjournal.com/80-89-comics-greatest-decade/.

Get the Roteb brochure from your local municipality"). This ad encourages residents to dispose of their old textiles properly, emphasising the use of designated textile bins.

The second poster features a black dial telephone with the bold headline "Grof vuil? Even de Roteb bellen!" ("Bulky waste? Just call Roteb!"). The message underneath explains, "Als u eerst even belt voor een afspraak, haalt de Roteb uw grof vuil gratis bij u weg. Haal de Roteb-folder bij uw deelgemeente" ("If you first call for an appointment, Roteb will collect your bulky waste for free. Get the Roteb brochure from your local district office"). This ad focuses on the procedure residents should follow when disposing of bulky items, reinforcing rules and proper channels rather than general awareness.

As Kemp explains, this change aligns with broader national efforts. The Dutch government introduced a differentiated waste-stream approach to reduce landfill volumes by prioritising the recycling of paper and glass.[119] Despite initial resistance from municipal waste services, NGOs and private companies began new collection activities, setting the stage for institutionalised recycling systems in the 1990s.[120] Roteb's posters visually embody this shift toward more systematic, regulated waste management, embedding clear behavioural guidelines within a modernised communicative framework.

The evolution of Roteb's visual communication from the 1980s to the 1990s reveals Rotterdam's response to mounting environmental challenges by blending regulatory clarity with culturally engaging figures like Max Milieu. Early campaigns used approachable icons and playful imagery to build public trust and encourage everyday responsibility, reflecting shifting social and environmental priorities. By the 1990s, the shift toward digital design and formal, directive messaging, seen in textile and bulky waste posters, signalled a commitment to systematic, institutionalised waste management aligned with broader national reforms. These campaigns informed and cultivated civic identity and sustainable habits essential for lasting engagement.

[119] Kemp, "An Example of a "Managed Transition"," 87-91.
[120] Kemp, "An Example of a "Managed Transition"," 87-91.

Chapter 3: Digital Design and Civic Engagement (2000-2013)

In 2012, Maarten Goorhuis, Pieter Reus, Ellen Nieuwenhuis, Natascha Spanbroek, Mario Sol, and Jørgen van Rijn noted that the Netherlands maintained a leading position in Europe in terms of household waste recycling, with a recycling rate of 51%. However, they also pointed out that few significant developments have taken place to improve this rate over the previous 10 to 15 years.[121] The introduction of producer responsibility for waste electrical and electronic equipment in 1999 and for packaging in 2005 marked the most significant changes during this period, though these measures had not yet led to a noticeable increase in overall household recycling figures.[122] While waste management practices themselves may have seen only limited change, this period was characterised by a clear shift in how waste disposal messages were communicated to the public. Visual campaigns became more modern in appearance, reflecting new design trends and the growing use of digital tools. Posters, advertisements, and educational materials from this era increasingly showed the influence of computer-based design, with cleaner layouts, stronger colour contrasts, and more polished imagery, signalling a move towards more contemporary, professional communication strategies.

In 2001, to mark its 125th anniversary, Roteb launched a series of awareness-based campaigns aimed at strengthening its public image and fostering civic pride. Visual campaigns 15 exemplify this approach through two digitally produced posters, reflecting the growing normalisation of computer-edited designs in the 1990s and early 2000s, replacing the predominantly hand-drawn or printed styles of earlier decades.[123]

Visuals campaign 15:

[121] Goorhuis e.a., "New Developments in Waste Management in the Netherlands," 67, 77.
[122] Goorhuis e.a., "New Developments in Waste Management in the Netherlands," 67, 77.

[123] "Graphic Design - Digital Revolution, Typography, Visual Communication - Britannica," 14 May 2025, https://www.britannica.com/art/graphic-design/The-digital-revolution.

Denotatively, the first poster features a Roteb worker in an orange safety vest holding a cake topped with candles. The accompanying text reads, “125 jaar samen werken aan een schone stad” (“125 years working together for a clean city”), alongside Roteb’s website link inviting viewers to explore the anniversary activities. The second poster, promoting an open day, depicts the same worker wearing a festive hat and holding a sign that says, “open day,” with event details provided at the bottom. Connotatively, both posters combine celebratory and professional imagery to present Roteb as both an integral civic institution and a friendly, approachable organisation. Confetti, bright colours, and party symbols evoke inclusivity and shared achievement, aligning the company’s identity with community values and long-term public service. Digital manipulation is visible in adding confetti and superimposed text, which were standard practices during this period that allowed for cleaner, more adaptable visual messaging.[124] This development mirrors broader trends in Dutch municipal messaging, where visual professionalism and interactive narratives became central to fostering transparency and audience engagement. As researchers Marita Vos and Evelyn Westerhoudt note, by 2004, Dutch municipalities increasingly invested in digital communication and prioritised citizen interaction and transparent public dialogue.[125]

Visual campaign 16:

In 2003–2004, Roteb introduced the poster from visual campaign 16, continuing its shift towards photographic imagery that had become more standard in municipal communication since the 1990s. While the layout of this poster appears somewhat less polished than the digitally designed anniversary materials of 2001, it similarly places Roteb workers at the centre of the visual narrative. The image shows a Roteb employee holding a broom in the foreground, while colleagues can be seen in the background collecting waste at a well-known location in Rotterdam. The accompanying slogan, “Wij werken aan een schone stad” (“We work on a clean city”), together with the phrase “Rotterdammers vinden hun stad schoner” (“Rotterdammers find their city cleaner”), presents municipal workers as the

[124] “Graphic Design - Digital Revolution, Typography, Visual Communication - Britannica,” 14 May 2025.
[125] Marita Vos and Evelyn Westerhoudt, “Trends in Government Communication in The Netherlands,” *Journal of Communication Management* 12, no. 1 (1 January 2008), 18–29.

visible agents of urban cleanliness. The latter phrase, printed in green and linked by a star to a note referencing a survey of 13,000 residents, draws authority from public opinion to reinforce the campaign's message. The poster's composition connotes reliability, collective effort, and civic pride. The campaign humanises municipal services and underscores their integration into everyday life by placing real workers in a familiar urban setting. The choice of wording is particularly noteworthy, as "Schone Stad" anticipates the company's renaming in 2013, suggesting an emerging alignment between Roteb's organisational identity and the city's self-image as clean and well-maintained. The poster exemplifies an awareness-based approach, aiming less to instruct specific behaviours and more to foster public appreciation for the work of Roteb and enhance a shared sense of responsibility for the urban environment.

Visual campaigns 17:

One of the most striking campaigns from this period is the "Waarom? Daarom!" ("Why? That's why!") series launched in 2004, as seen in visual campaign 17. Each poster pairing tells a visual story contrasting a problem and its solution. The "Waarom?" poster depicts an underground bin surrounded by litter, with animals such as a seagull and a dog attracted to the mess. The background features dark skies and withered greenery, denoting neglect and environmental decay. In contrast, the "Daarom!" poster presents the exact location now clean and orderly, with the seagull flying away, blue skies above, lush green grass, connoting restoration, civic order, and a healthier urban space. The contrast of these scenes communicates a clear cause-and-effect message that encourages residents to reflect on the consequences of irresponsible waste disposal and the benefits of proper behaviour. The accompanying slogan, "Rotterdam MOET schoon, heel en veilig" ("Rotterdam MUST be clean, intact, and safe"), reinforces the city's commitment to these values. This campaign is best understood as awareness-based. While it does not prescribe specific rules or penalties, it aims to influence attitudes by making visible the positive and negative outcomes of citizens' actions, thus fostering voluntary compliance and shared

responsibility for the urban environment. The design reflects early 2000s trends in municipal communication, where visual storytelling became a key strategy to engage the public emotionally and ethically, supporting a culture of civic pride and accountability.

Visual campaign 18:

The final poster in this study, part of a 2006–2007 campaign (visual campaign 18), aimed to encourage Rotterdam residents to bring unwanted household items to the *Milieupark*, where objects could be repurposed or recycled rather than discarded irresponsibly. The poster presents a stark, minimalist composition: a white chair against a plain white background, creating a sense of neutrality and focus on the object. Partially obscured behind the chair, the text reads "Als die ouwe in de weg staat…" ("When that old thing is in the way…"), a phrase that colloquially addresses the viewer's experience of unwanted furniture as a nuisance. The design relies on computer editing to integrate this text visually behind the chair, a stylistic choice that both literalises the message (the chair is in the way of reading the text) and demonstrates the increasing sophistication of digital design tools in municipal campaigns during this period. Beneath the image, within a blue border that adds structure and authority, the message "Het Milieupark. Dan ben je er snel vanaf" ("The Milieupark. Then you'll quickly be rid of it.") reinforces the solution offered. Denotatively, the poster depicts nothing more than a chair and text; however, connotatively, it taps into ideas of cleanliness, order, and civic responsibility by presenting disposal at the Milieupark as an easy and responsible act. The minimalist aesthetic and absence of clutter signal a modern, efficient solution to urban waste challenges. White evokes purity and renewal, aligning with environmental values of reuse and sustainability. This campaign is best classified as awareness-based. Rather than issuing directives or detailing regulations, it appeals to residents' sense of convenience and responsibility by presenting a clear, positive alternative to improper disposal. The messaging seeks to shape attitudes and encourage voluntary use of city recycling infrastructure, aligning with broader national goals of reducing landfill waste through citizen participation in circular economy practices. This reflects what Goorhuis, Reus, Nieuwenhuis, Spanbroek, Sol, and Van Rijn observed as the Netherlands' sustained leadership in European household waste

recycling despite relatively few significant developments in improving that figure over the preceding decade.[126] The poster embodies the cultural and policy shift toward promoting individual agency and behavioural change, complementing structural measures.

The period from 2000 to 2013 marks the culmination of a long tradition of waste-related visual communication in Rotterdam, where design and messaging evolved with broader shifts in social values and technological possibilities. As the examples discussed in this chapter show, visual campaigns increasingly adopted polished, digitally produced formats that reflected advancements in design technology and a growing emphasis on transparency, professionalism, and civic dialogue. The focus moved beyond instructing citizens in specific behaviours to fostering awareness, pride, and voluntary engagement with municipal services. The progression from celebratory anniversary posters to narrative-driven campaigns such as *Waarom? Daarom!* and minimalist designs promoting recycling solutions illustrate how the city's communication strategies aligned with changing priorities in urban governance, particularly the desire to position cleanliness, order, and sustainability as shared responsibilities rather than imposed duties. This development signals a more profound cultural shift in Rotterdam's approach to sustainability, which relies increasingly on persuasion, inclusivity, and partnership between the city and its residents. The transition from Roteb to Schone Stad in 2013 can be seen as the culmination of this shift. Roteb and its predecessors laid the groundwork for a future in which municipal cleanliness and sustainability were more closely integrated into the city's identity and collaborative vision.

[126] Goorhuis e.a., "New Developments in Waste Management in the Netherlands," 67, 77.

Conclusion

This research has aimed to answer the central question: *What has the evolution of visual communication around waste disposal in Rotterdam from the establishment of Roteb in 1876 to 2013 revealed about the city's approach to fostering sustainability and social awareness?* This thesis has traced and analysed the changing visual strategies in Rotterdam's public waste campaigns over nearly a century. It has demonstrated how the city's waste communication evolved from rule-based instruction to more inclusive, emotionally resonant appeals. Each chapter has contributed to understanding how visual communication served practical purposes and reflected and shaped broader social, cultural, and environmental attitudes.

In the first historical chapter (1876–1950), we saw how early visual campaigns primarily used regulatory, often moralistic messaging, drawing on religious metaphors like the "Ten Commandments", to secure compliance. These posters framed waste as disrupting civic and moral order, linking cleanliness to virtue and obedience. This foundational period was crucial in establishing Waste Communication's visual and verbal tone, where authority and public hygiene were intertwined.

The second chapter (1950–2000) demonstrated a significant shift. Environmental awareness and civic responsibility emerged as central themes, especially during the 1970s and 1980s. Campaigns like *Holle Bolle Gijs* and *In de goot* used familiar imagery, humour, and emotional appeal to encourage voluntary behaviour change. Mascots such as Max Milieu showed that regulation could be combined with relatability. The increasing use of playful, culturally embedded characters and school campaigns marked the shift toward engaging citizens, especially children, in building sustainable habits. Here, the city began to speak not only in terms of rules, but also in terms of identity and shared responsibility.

The final chapter (2000–2013) explored how digital tools and professional design further transformed the city's messaging. While regulation remained present, campaigns increasingly emphasised participation, pride, and collective effort. Posters from this period encouraged citizens to see themselves as part of the solution, highlighting the role of municipal workers, the value of tidy public spaces, and accessible services like the Milieupark. The *Waarom? Daarom!* The series encapsulated the use of visual storytelling to link cause and effect, connecting daily behaviour with larger environmental outcomes. This shift suggested that Rotterdam was not just cleaning its streets but reshaping how its citizens saw themselves in relation to the environment.

These chapters show a straightforward narrative: Rotterdam's visual waste campaigns evolved with shifting ideas about authority, environment, and citizenship. These campaigns' design and messaging mirrored changing priorities and actively contributed to shaping them. Where early posters instructed, later campaigns invited. Where once waste was an issue of order and obedience, it became one of identity, responsibility, and even creativity. This conclusion brings together the two sub-questions. First: *How have the design and messaging of visual campaigns for waste disposal in Rotterdam reflected changing social and environmental priorities?* The answer lies in the move from rigid, top-down instruction toward inclusive and participatory communication. As social and environmental concerns grew, so did the sophistication of these campaigns, incorporating elements of humour, aesthetics, and interactivity to align with new values. Second: *What broader attitudes toward sustainability and civic engagement are revealed through the evolution of these visual campaigns?* The campaigns reveal a city that increasingly saw sustainability as a shared cultural task, not just a regulatory obligation. The gradual shift from instructive to motivational messaging suggests growing confidence in the public's ability and willingness to participate in shaping a cleaner, more sustainable city. In answering the central question, we see that visual communication in Rotterdam was not merely a reflection of changing waste policies but a dynamic tool in building the city's environmental and civic identity. The evolution of these campaigns tells the story of a municipality learning to listen and instruct, and the public is gradually invited to see itself not just as a policy target, but as a partner in sustainability.

The exhibition plan, *Dirty Work, Clean City: A Visual History of Waste and Citizenship in Rotterdam,* that accompanies this thesis transforms historical research into a tangible, engaging format for public audiences. It bridges academic insights and everyday experience, helping visitors connect with history through visual culture, familiar spaces, and shared civic concerns. The exhibition format makes waste management accessible and emotionally resonant, using storytelling, design, and interactivity to foster dialogue and reflection. Where academic historiography emphasises critical analysis and contextual depth, public history, especially in an exhibition format, prioritises accessibility, engagement, and emotional impact. Both forms rely on rigorous research but diverge in audience and method. While academic work often speaks to scholars, the exhibition is designed to talk with the public. It trades footnotes for visual cues, and complex argumentation for experiential learning. Yet both share the goal of understanding how the past shapes the present. The applied history component thus enriches the academic work by mobilising it for broader

societal benefit. It underscores the importance of waste messaging not only as a research topic but as a tool for civic reflection and environmental action in the present.

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