Sustainability and awareness:

a survey on unsorted waste and how communication can change behaviour

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The revival of civic spirit among Italians by Paolo Natale

For many decades, perhaps even centuries, our country has been criticised for its chronic lack of a widespread and deep-rooted civic culture, both before and after its unification in 1861. This judgement, which sometimes borders on prejudice, has been used by many authors and commentators to explain the persistence of historical problems in our democracy. These include the socio-economic backwardness of certain regions, significant corruption at various levels, and a marked amoral and opportunistic individualism ("*Franza o Spagna purché se magna*" — "France or Spain, as long as we eat"), as the great Guicciardini sarcastically pointed out as early as the 16th century.

The importance of civic-mindedness for the proper functioning and stability of democracy is contrasted with a syndrome or culture of particularism. This culture is characterised by localism and familism, for example, and considers one's own limited sphere (such as family, economy or territory) to be the sole basis for values and behaviour.

This approach to the theme of civic spirit enables us to consider more carefully how interaction between individual attitudes and behaviours and the public sphere is generated and what results this interaction brings about. What better litmus test for gauging the strength of this sentiment than the practice of separate waste collection? It can be used as a specific 'indicator' of civic virtue.

As can easily be understood, this is a particularly relevant issue because behaviour relating to separate waste collection is a clear indication of civic-mindedness. This behaviour is solely driven by citizens' willingness to improve community conditions, seemingly without expecting anything in return.

From this point of view, the above preconception appears to have undergone a significant and surprising revision, if not been completely overturned, in recent times. Italy has been at the forefront of Europe's efforts to separate paper, glass, aluminium, and plastic waste for years.

This is thanks to the introduction of effective environmental policies and awareness campaigns, as well as door-to-door waste collection. This system of incentives, excellent communication and partial sanctions has transformed collective behaviour and how the average Italian perceives themselves.

This last point is of great importance as it relates to 'social desirability': the obligations that we internalised during adolescence through primary and secondary socialisation also shape our attitudes and behaviours in adulthood. Even when no one is watching, we know that stealing sweets from a supermarket is wrong and it makes us feel guilty.

The same is true today regarding the collection of separate waste. Leaving plastic bottles on the beach and littering are behaviours that we have long known are wrong. However, we have also felt uncomfortable about failing to separate organic waste from other types of waste for some time now.

These were the first significant steps toward overcoming that long-standing prejudice. Nevertheless, we must improve our behaviour in other areas of waste collection since we are not setting an example for the rest of Europe in this regard. For example, although the amount of WEEE collected separately in Italy has increased in recent years, it is still far from the European target. According to official data from 2023, collection amounted to just 34% of consumption compared to a target of 65%. Italy shares this figure with the rest of Europe, where only a few countries have achieved the collection target. How can we improve the results of the separate collection of WEEE, portable waste batteries, textile waste and packaging materials? How can we also prevent cigarette butts from being discarded on our streets and in our parks?

This is the subject of the research promoted by Erion, which takes an ambitious approach that goes beyond the scope of a traditional survey. The report is based on the realisation that decisions regarding the management of 'special' types of waste cannot be based on perceptions or clichés, but rather require solid, in-depth, integrated data.

The results presented in this report are very interesting. They accurately reflect the current situation, providing a map of the causes and diagnosis of the barriers. Most importantly, they offer a toolbox containing concrete, measurable solutions

Enjoy reading it!

Paolo Natale

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1. Introduction: moving beyond collection towards understanding. The strategy behind the data

In a world where the circular economy has become an urgent necessity, success is measured not only by the number of tonnes collected, but also by the ability to understand and influence the behaviour of millions of people. This report is based on the understanding that decisions regarding the management of complex systems, such as the types of waste covered by this survey, cannot be based on perceptions or clichés, but require solid, in-depth, integrated data.

For this reason, Erion has launched an ambitious research project which goes beyond the scope of a traditional survey.

This document brings together two approaches to analysis.

1. The **'Actual'** figures: a technical-scientific study conducted by Erion on unsorted waste[1]. This study quantified the presence of WEEE (Waste Electrical and Electronic Equipment), portable waste batteries, textile waste, cigarette butts and EEE packaging waste in municipal waste bags in 15 Italian municipalities through 38 product analyses. This study enabled us to take a scientific approach to examining what is improperly disposed of.
2. The **'Declared'** figures are based on an opinion poll which provided insight into how citizens think and act, and what they know. It also revealed what they need to change.

The following paragraphs provide a detailed analysis of the results of the opinion poll, which was developed alongside the product analyses.

This work aims to do more than just photograph reality. It also aims to provide a map of the causes, diagnose the barriers and, above all, offer a toolbox full of concrete, measurable solutions.

1 '*Untapped potential in unsorted waste: a technical and scientific investigation into recyclable materials in unsorted municipal waste*' (Erion, 2025).

2. Declared figures: the opinion poll

The methodology used to conduct the opinion poll is presented below.

Objective

Measure knowledge and recent behaviour relating to WEEE, waste batteries, textile waste, cigarette butts and EEE packaging, as well as the associated barriers and opportunities. Also measure the impact of awareness campaigns on these waste streams. Provide a national overview focusing on five cities for which unsorted waste sampling has been conducted.

Research design

- Survey technique: CAWI (online) in all areas, with CATI (telephone survey) in Verona only.
- Structured questionnaire taking approximately 15 minutes.
- Universe and quotas: the Italian population aged 18 and over, selected using representative quotas based on gender, age, geographical area of residence and educational qualification.

Sampling:

- National: n = 1,000 interviews
- Cities: n = 2,500 interviews in total. 500 interviews were conducted in each of the following cities: Milan, Turin, Verona, Rome and Naples.

The five cities were selected from those in which sampling of unsorted waste had been carried out. This was done to ensure north/south comparability and allow triangulation between 'declared' and 'actual' figures. The territories investigated through unsorted waste sampling coincide with those of Milan, Turin, Verona, Rome and Naples. This enables the behaviour declared by citizens to be analysed alongside the actual presence of waste in urban streams,

Fieldwork: July–August.

The stimuli shown in the survey included the following: 6 awareness campaigns that were consistent with the topics under study, comprising three videos, one radio advertisement and two static boards.

3. Opinion poll results

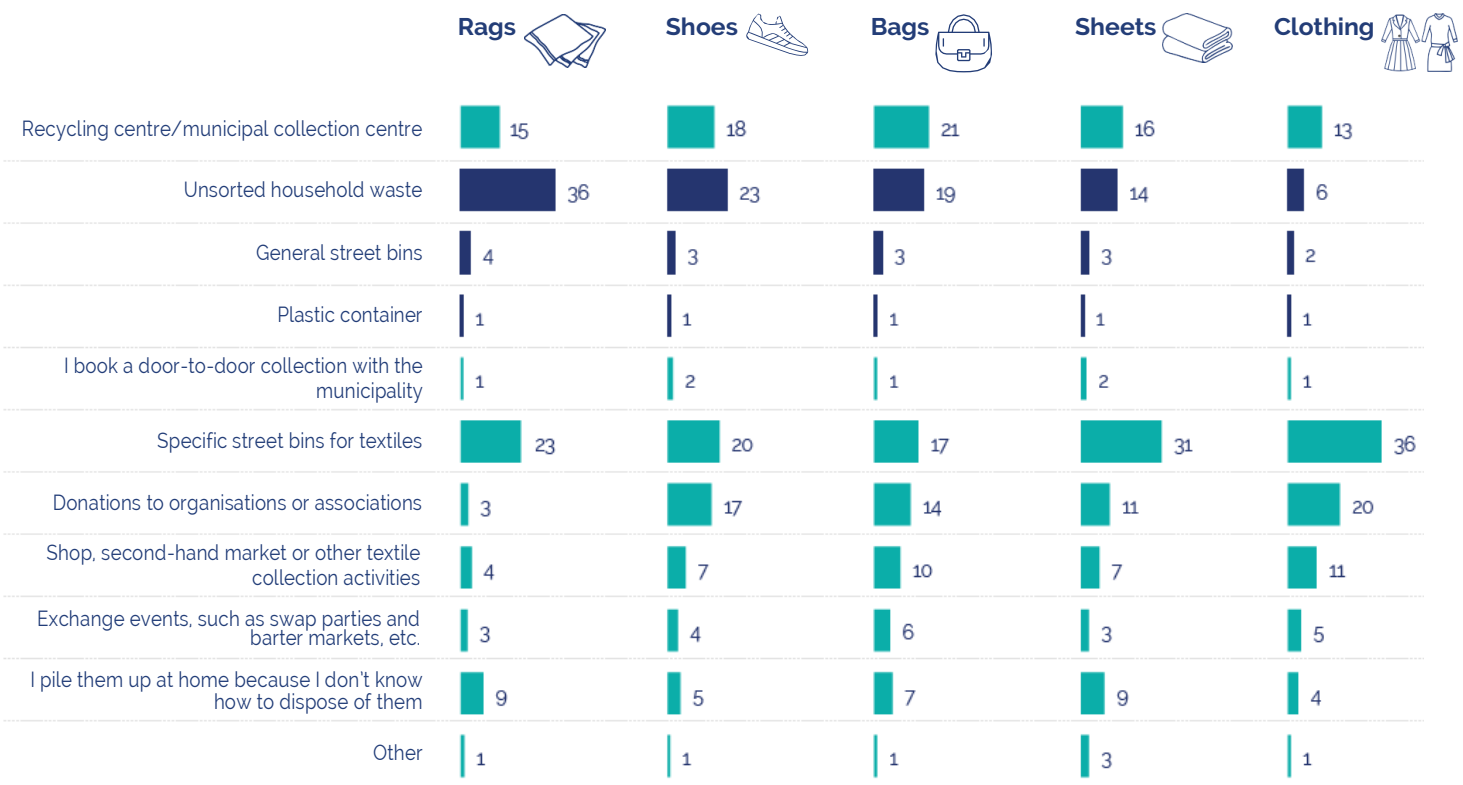
3.1 Disposal habits: where and why mistakes are made

The survey began with an investigation into behaviour, followed by an analysis of the responses. The first two areas of focus revealed where waste disposal errors were concentrated.,

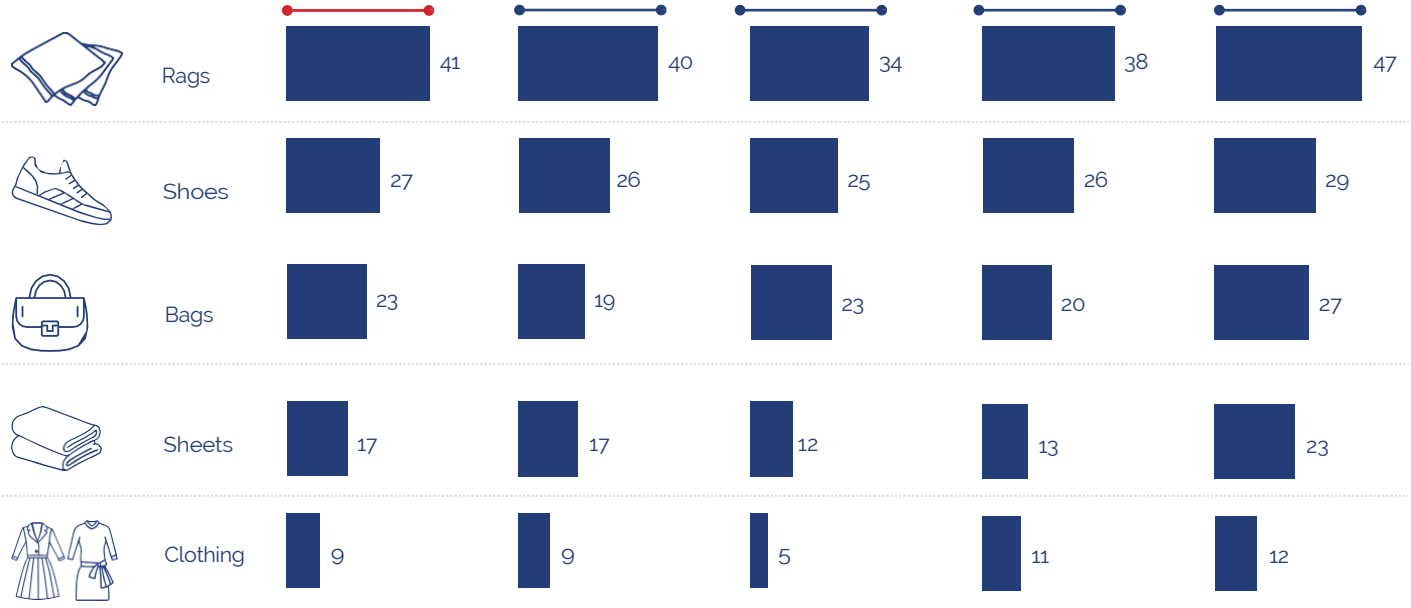
Textiles are the most critical area: 'rags' make up 41% of the total, followed by shoes (27%) and bags (23%). These items are often treated as worthless waste and therefore end up in unsorted waste streams.

Graph 1. Textile waste disposal habits

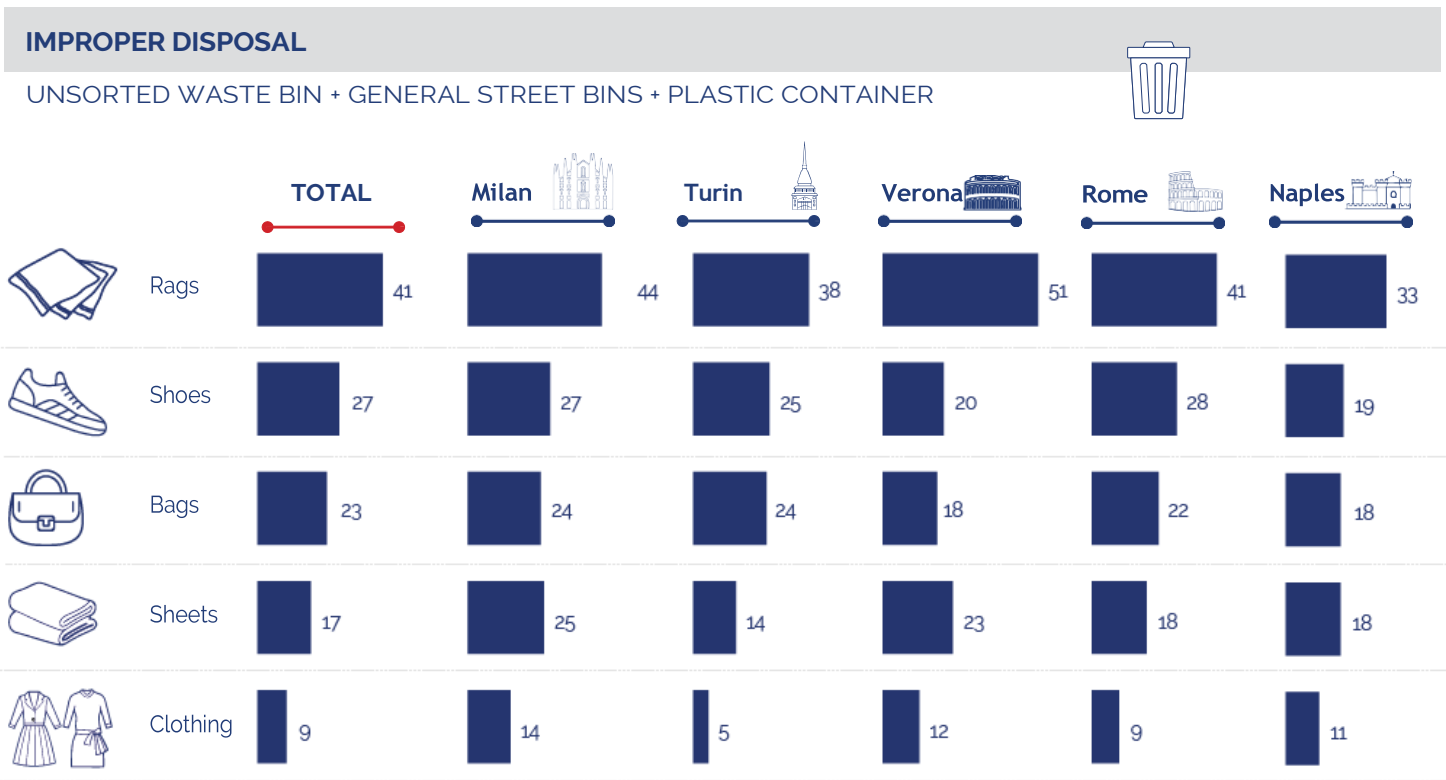
Where would you dispose of the following items when they reach the end of their useful life, need to be disposed of, or are no longer needed?



Graph 2. Improper disposal of textile waste – Italy level



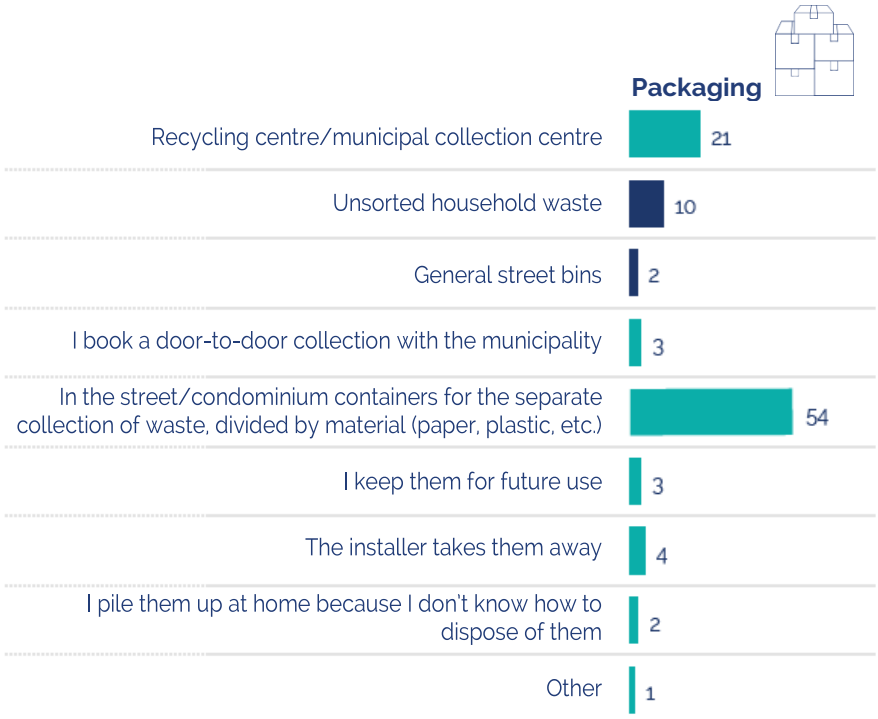
Graph 3. Improper disposal of textile waste – City level



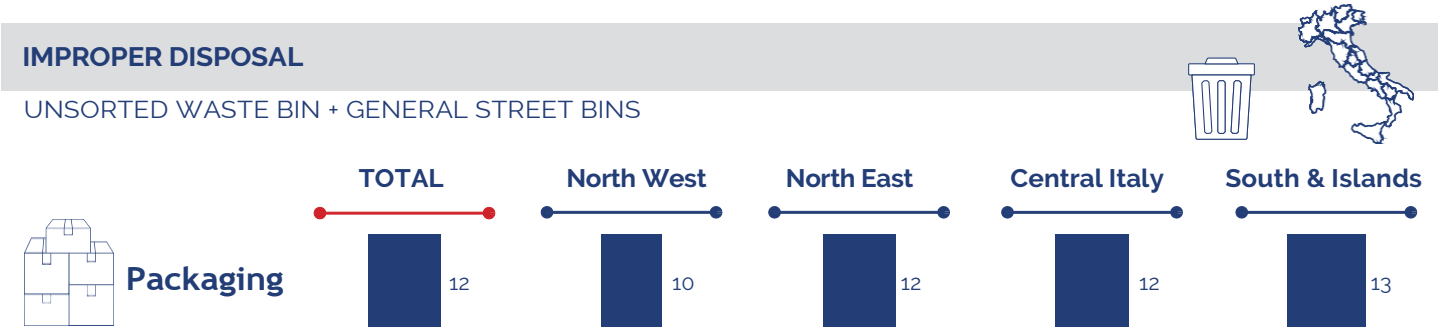
The error rate is lower for packaging, at 12%

Graph 4. Packaging waste disposal habits

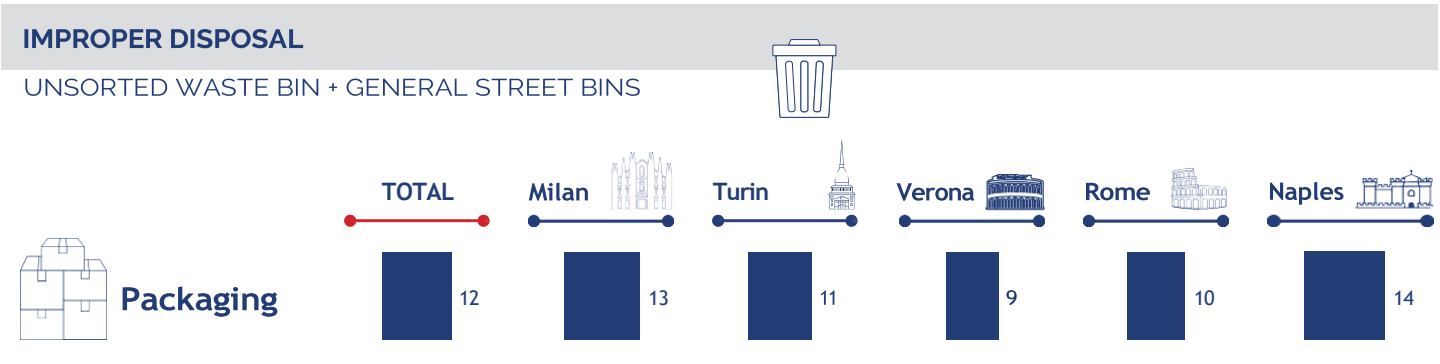
Where would you dispose of the following items when they reach the end of their useful life, need to be disposed of, or are no longer needed?



Graph 5. Improper disposal of packaging waste – Italy level



Graph 6. Improper disposal of packaging waste – City level



When it comes to WEEE, it is mainly small items that cause problems: electric toothbrushes (21%) and chargers (13%) being the most problematic.

Graph 7. WEEE disposal habits

Where would you dispose of the following items when they reach the end of their useful life, need to be disposed of, or are no longer needed?

	Electric toothbrush	Mobile phone charger	Hair dryer	Blender	Mobile / smartphone	Tablet
Recycling centre/municipal collection centre	57	56	66	67	49	54
Unsorted household waste	11	6	4	4	3	3
General street bins	1	2	1	1	1	1
Plastic container	3	2	2	1	-	1
In the street/condominium containers for the separate collection of waste, divided by material (paper, plastic, etc.)	5	4	4	5	4	3
I take them to electronics shops	10	15	12	10	22	20
I book a door-to-door collection with the municipality	2	2	3	4	1	3
I keep them for future use	4	8	3	3	9	8
I pile them up at home because I don't know how to dispose of them	5	6	4	4	9	6
Other	2	1	1	1	1	1

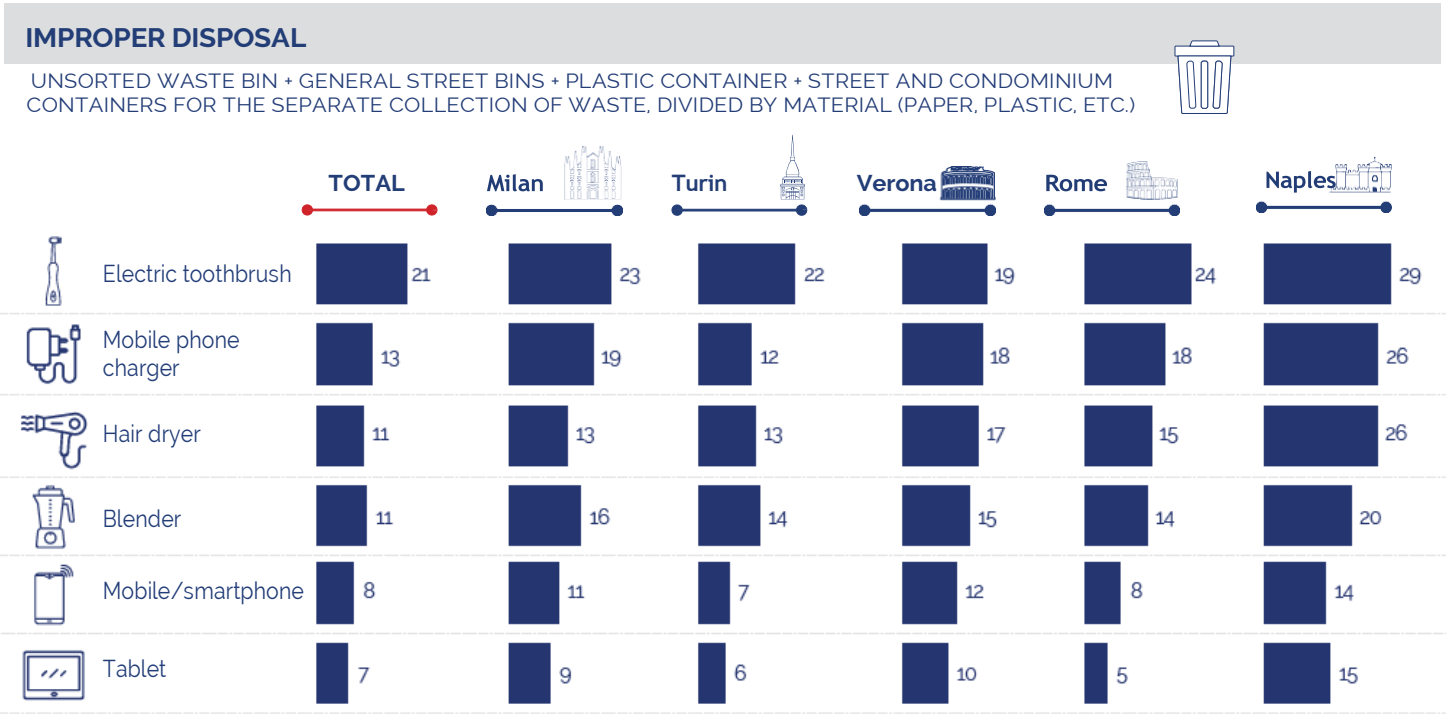
Graph 8. Improper disposal of WEEE – Italy level

IMPROPER DISPOSAL

UNSORTED WASTE BIN + GENERAL STREET BINS + PLASTIC CONTAINER + STREET AND CONDOMINIUM CONTAINERS FOR THE SEPARATE COLLECTION OF WASTE, DIVIDED BY MATERIAL (PAPER, PLASTIC, ETC.)

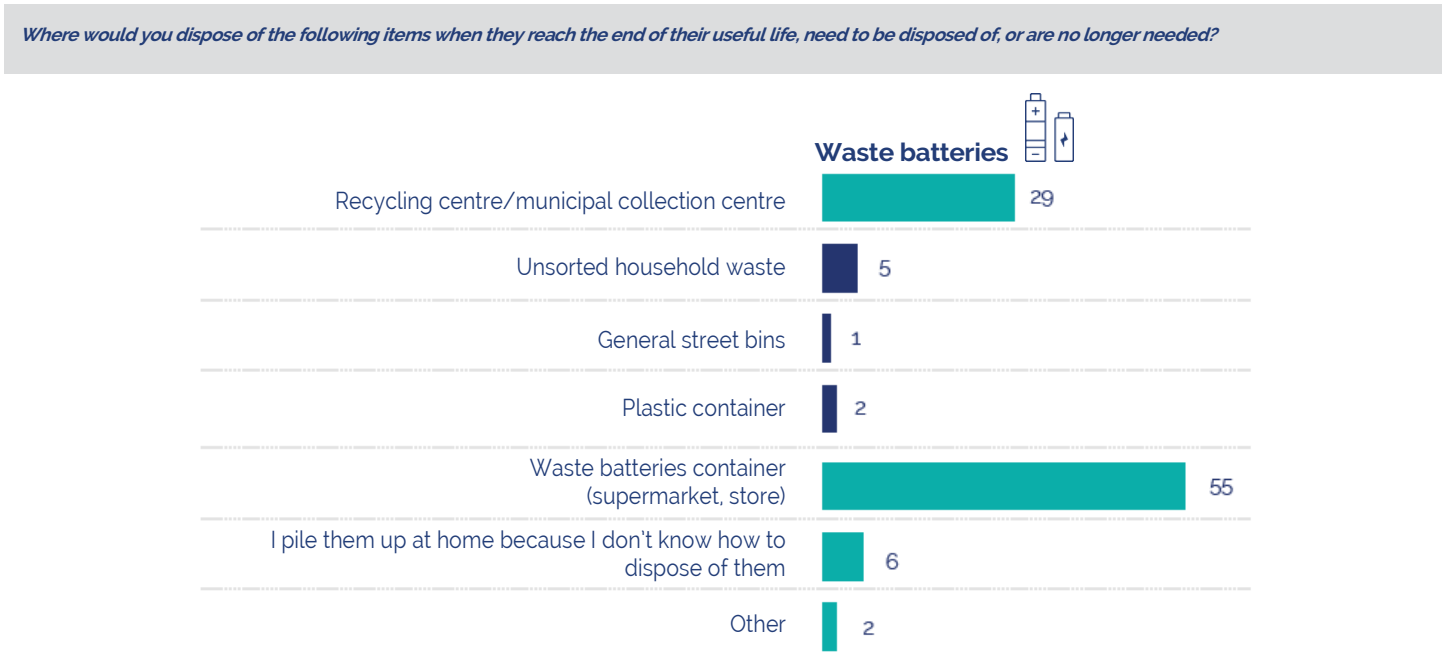
	TOTAL	North West	North East	Central Italy	South & Island
Electric toothbrush	21	13	13	23	29
Mobile phone charger	13	10	9	12	17
Hair dryer	11	6	8	10	16
Blender	11	8	10	11	15
Mobile/smartphone	8	4	7	9	12
Tablet	7	5	6	8	9

Graph 9. Improper disposal of WEEE – City level

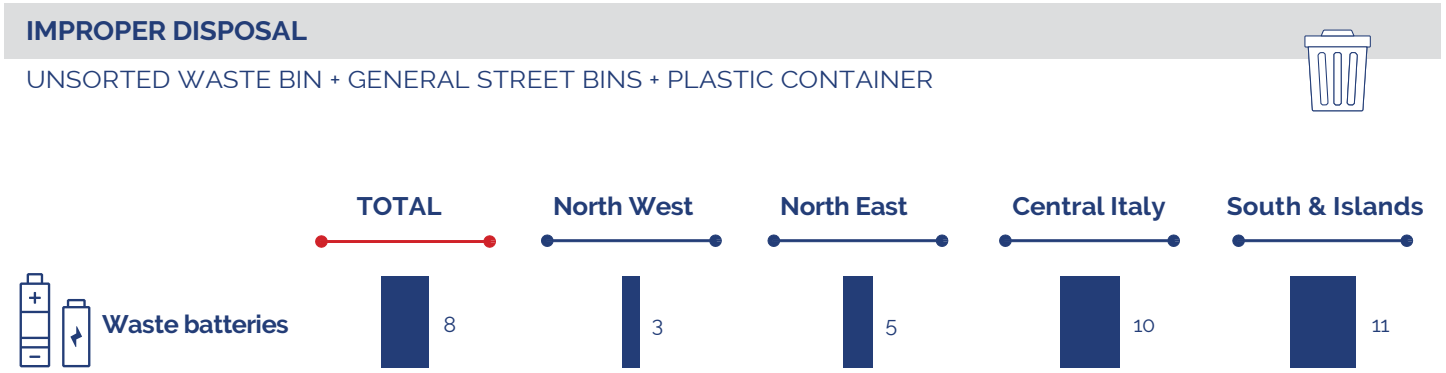


Although batteries are the least critical item, accounting for only 8% of the total, there is room for improvement

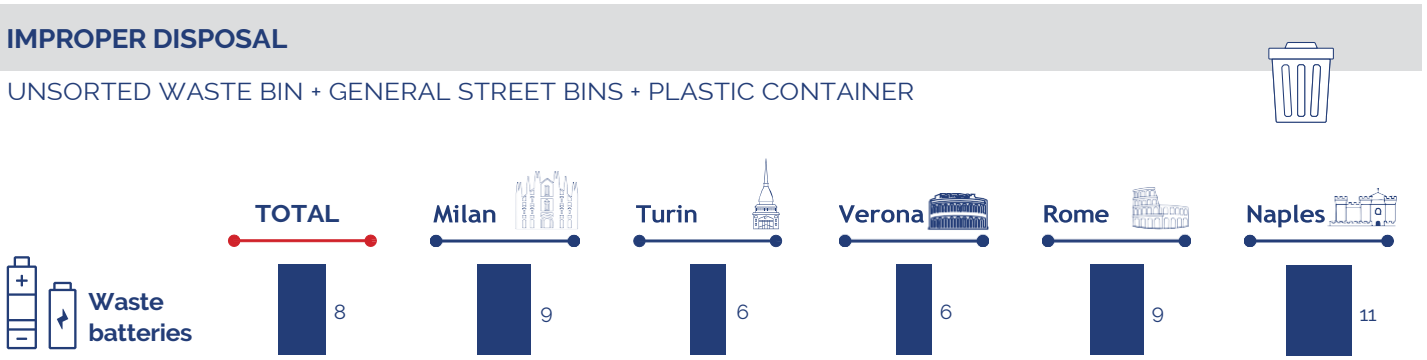
Graph 10. Disposal habits of waste batteries



Graph 11. Improper disposal of waste batteries – Italy level



Graph 12. Improper disposal of waste batteries – City level



The common thread is clear: mistakes are more likely to be made with items that are perceived as 'end-of-life' and worthless, such as rags and broken shoes, or with small or hybrid items that are difficult to categorise, such as electric toothbrushes and chargers.

At the regional level, the South and the Islands have higher error rates, particularly for WEEE. Naples consistently ranks at the top among cities. In textiles, the South still tops the rankings, although Verona is an anomaly with a high proportion of rags (51%). The error rate for batteries is low everywhere, but the gradient is the same, with southern regions performing slightly worse.

But why are people getting it wrong? It's not laziness; on average, 70% of people who dispose of waste in the unsorted waste bin say they do so because they believe it is the right thing to do. The problem is therefore primarily cognitive rather than behavioural or infrastructural. It is fuelled by a knowledge gap caused by inaccurate information, ambiguous rules, and long-standing habits. This explains the errors on 'borderline' items and territorial differences: the less familiar the rules are, the greater the likelihood of error. The conclusion is clear: there is ample opportunity to improve understanding, and consequently behaviour.

3.2 Awareness of the obligation

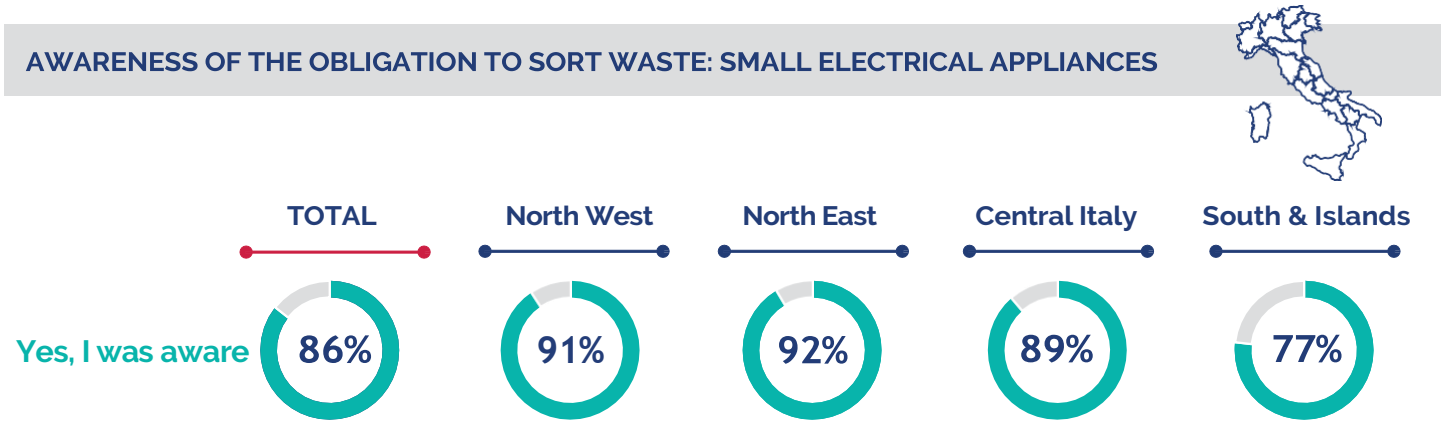
This section is crucial because it allows us to evaluate the discrepancy between citizens' theoretical awareness and their practical needs

The analysis reveals a complex and non-homogeneous picture, which we have organised into three sections:

- the level of awareness;
- the sources of this awareness;
- the desired practical solutions.

3.2.1 A picture showing varying levels of awareness of the obligation

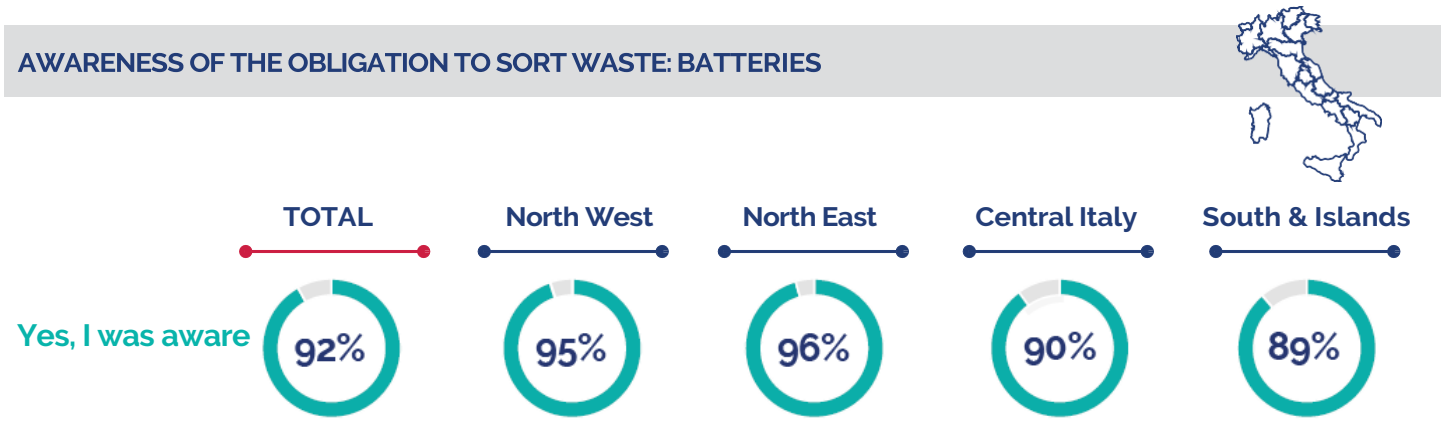
Graph 13. Awareness of the obligation to separate WEEE for recycling – Italy level



Graph 14. Awareness of the obligation to separate packaging waste – Italy level

Graph 15. Awareness of the obligation to separate textile waste – Italy level

Graph 16. Awareness of the obligation to separate waste batteries – Italy level



When asked whether citizens are aware of their obligation to separate waste, the analysis reveals a more nuanced picture. There is not just one level of awareness: different levels emerge depending on the type of waste, and a clear hierarchy becomes apparent.

The top category is waste batteries, with a response rate of 92% indicating a high level of awareness. Immediately below are small electrical appliances (WEEE), with a response rate of 86%. While this level is high, there is a slight dip, probably due to the wide variety of items included, ranging from blenders to USB cables, which causes uncertainty. The term 'packaging' is broad and the variety of materials used (such as poly-laminates and different types of plastic) can be confusing, despite waste sorting being a daily issue. Textiles are at the bottom of the list at 71%. The recent obligation and historically ambiguous communication ('only clothes in good condition') have resulted in widespread misinformation.

A clear regional divide emerges, with the South and the Islands demonstrating consistently lower levels of knowledge across almost all waste streams. This is particularly evident in WEEE (77% compared to 89–92% elsewhere in the country) and packaging (69% compared to 78–82%). Therefore, targeted and reinforced communication and training strategies are required at a regional level to close the knowledge gap in these areas.

3.2.2 Different types of waste require different information channels

It is crucial to understand where citizens learn the rules in order to plan effective campaigns. Analysis shows that there is no universally valid channel: each waste stream has its own most credible and relevant source of information. Therefore, communication must be multi-channel and tailored to the type of waste.

When it came to waste batteries, 36% of respondents highlighted signs and displays at collection points as the main source of information. Proximity matters, and clear, visible signage can encourage more people to dispose of their batteries properly. Awareness campaigns dominate the small electrical appliances (WEEE) category (35%). As this is a broad and complex category, structured communication via TV, radio, billboards and digital channels is required to raise awareness and simplify the rules, which are often perceived as difficult. For packaging, the sources are more fragmented: campaigns and signage have a similar impact, but direct observation and word of mouth also play a role. Here, citizens believe that practical instructions and daily reminders are highly effective. For textiles, signs and signage at collection points are considered the most important factor (31%), followed by campaigns (26%), which are crucial for changing established habits.

3.2.3 Demand for convenience from citizens

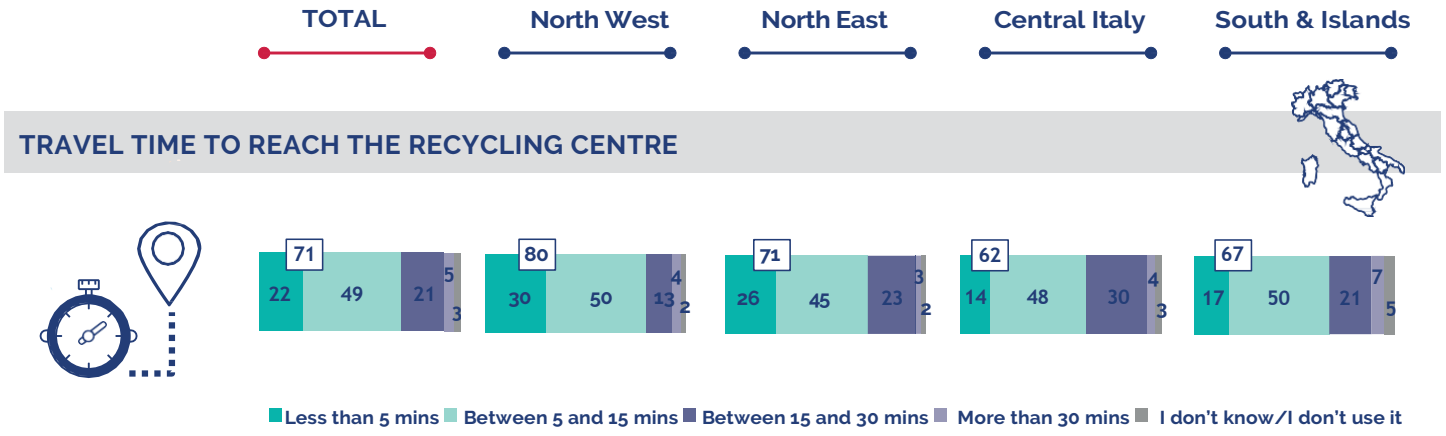
This is where we assess the factors that influence behaviour. It is not enough to know what to do; you also need to be able to do it easily. People do not want to 'go out of their way' to dispose of waste properly — they want the process to be convenient and integrated into their daily routines. In short, they want convenience.

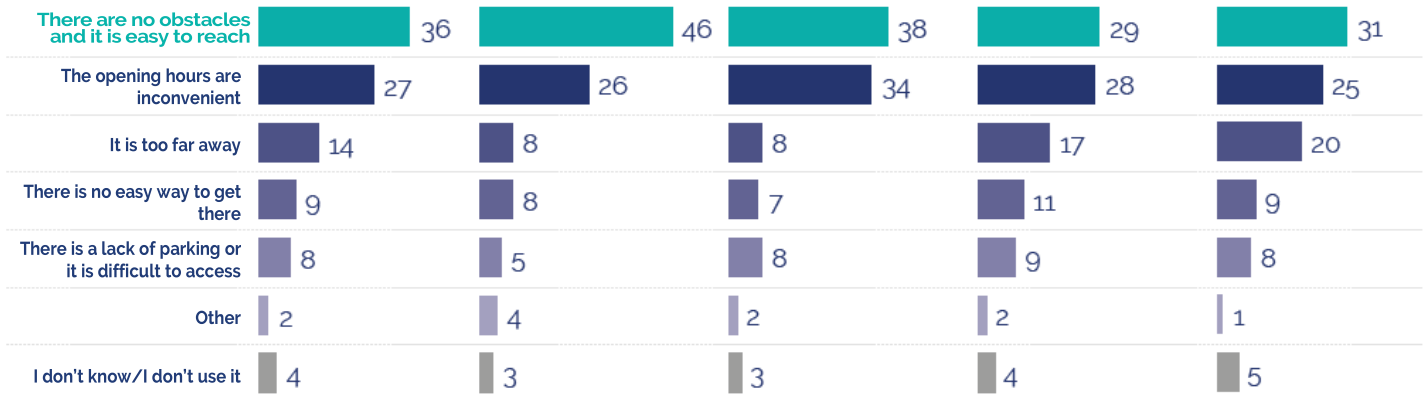
When we analyse the responses by waste stream, it becomes clear that the most popular choice for WEEE is to leave it in shops without buying anything else (40%). This confirms that the '1:0' principle is the simplest and most straightforward solution. However, when it comes to waste batteries, people prefer dedicated containers in supermarkets (49%), as these are places that people frequently pass through, making it easier to dispose of batteries properly. Finally, when it comes to textiles, the picture is more balanced, but the message remains the same: people prefer containers in shopping centres (30%), supermarkets (26%), and shops (26%), as these are places for shopping and socialising.

There is a shared demand for 'convenient' solutions, but the emphasis varies across the country. In the south of the country and on the islands, home collection by appointment is becoming increasingly popular, with 33% of people choosing this option for WEEE and 30% for textiles. This could indicate a greater perception of the distance to fixed collection points, or of the difficulty in reaching them. Therefore, when access is difficult, the 'come to your home' solution encourages the right action.

3.3 Accessibility and obstacles at the recycling centre

Graph 17. Recycling centre: travel times and obstacles – Italy level

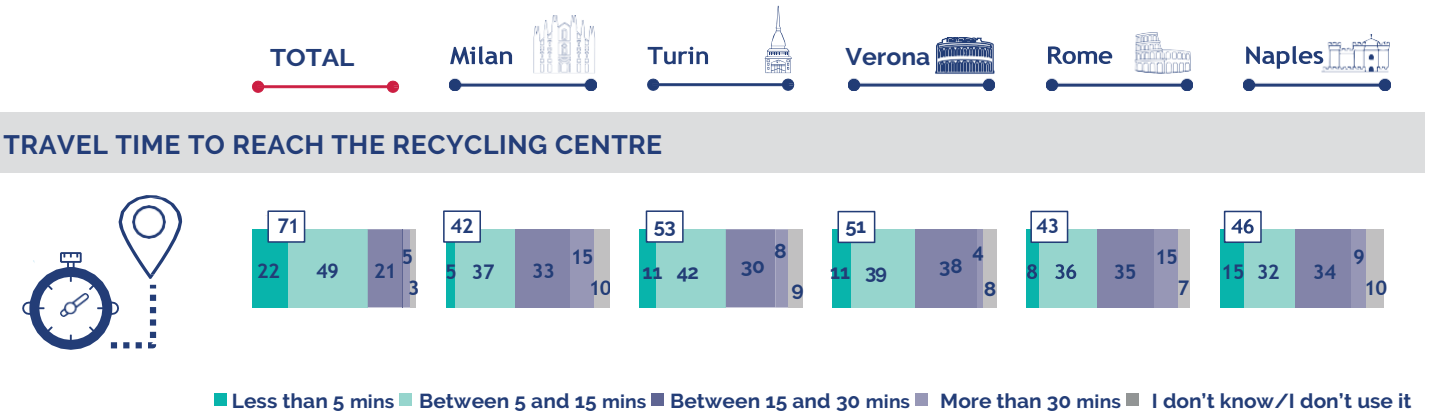


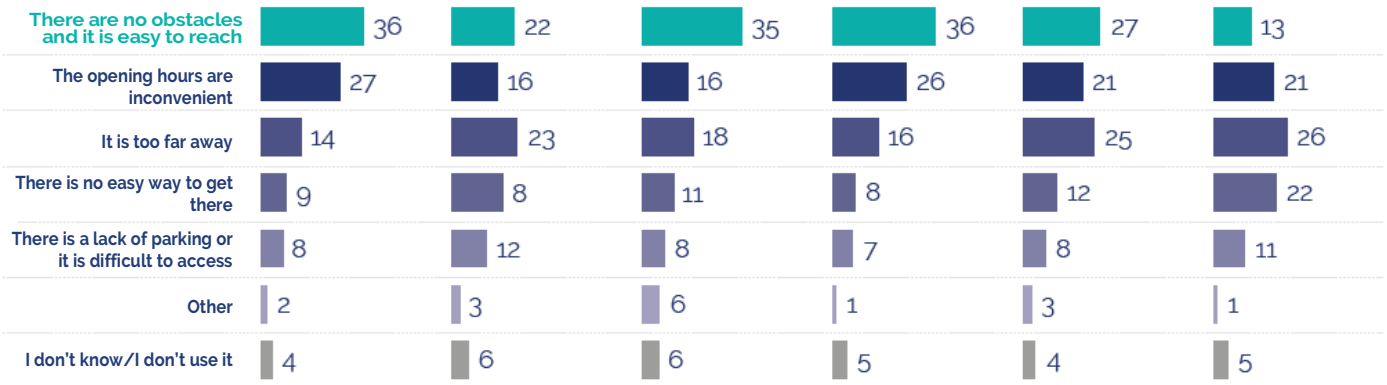


For most people, accessing the recycling centre is not difficult. In fact, around 70% of Italians can reach it in under 15 minutes (22% in under 5 minutes, and 49% between 5 and 15 minutes). However, the average journey time of 13 minutes is often by car, which is practical for bulky items but costly for small waste items, such as battery chargers and used shoes, which require frequent disposal. Therefore, it is not surprising that manageability is cited as the most frequent obstacle rather than distance. 27% of people find the opening hours inconvenient, while 14% cite distance as an issue. Nevertheless, over a third of the population (36%) are satisfied with the current service.

However, two different scenarios emerge in Italy. In the North, people perceive the service as more accessible (46% of people in the North West and 38% of people in the North East report no obstacles), with the main issue being the opening hours of the recycling centre. These are considered inconvenient, with the highest percentage (34%) in the North East. In Central Italy and the South, perceived ease of access decreases (to 29% and 31%, respectively), while structural barriers increase. Distance becomes a more relevant issue here, affecting 17% of people in Central Italy and 20% in the South.

Graph 18. Recycling centre: travel times and obstacles – City level





The situation is even worse in large urban areas: accessibility is below the national average in all five of the analysed cities. In Milan and Rome, for example, the average journey time is close to 19 minutes, suggesting that the service is inconvenient in relation to daily routes. However, each urban context has its own critical issues that require different solutions.

In Naples, the service is perceived as being the most dysfunctional. Only 13% of people find it easy to access, compared to 36% nationally. Taking into account factors such as distance, inconvenient timetables and difficult access, the situation is the worst possible, requiring structural, managerial and logistical interventions.

In Milan, the main limitations are structural and logistical. Distance (23%) and poor public transport accessibility (18%) are significant factors, whereas opening hours are less important (16%). Decentralisation is the priority here, as simply extending opening hours is not a viable solution.

Verona presents a very different picture. Manageability issues are more important here, with inconvenient opening hours (26%) and distance (16%) being the main obstacles. However, a third of citizens do not report any obstacles at all (36%). Greater flexibility in opening hours could have a rapid effect.

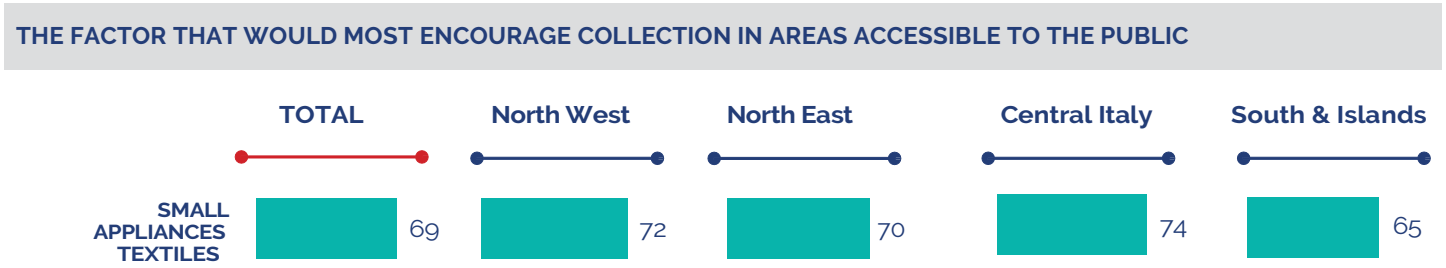
Rome has high levels of distance and timetable barriers (25% and 21% respectively), as well as a low perceived ease of access (27%). Improved timetable accessibility and greater coverage are needed.

Finally, Turin is one of the most 'virtuous' contexts. 35% of respondents reported no obstacles, and critical issues remained limited and balanced (distance: 18%; opening hours: 16%). This provides an ideal foundation for 'fine-tuning' interventions.

These reflections can be summarised in two ways. Firstly, the centralised model of the recycling centre is still useful for bulky items and scheduled disposals. However, it is becoming increasingly ineffective in large cities and is struggling to intercept small waste streams. Secondly, it's not just the distance that matters, but also how convenient the act is. Even 10–15 minutes can seem like too much effort when leaving the waste unsorted requires no effort at all. Respondents seem to favour a hybrid, decentralised model that brings collection services closer to people. Examples of this include shops offering a '1:1' or '1:0' take-back service for WEEE; battery collection points in large retail outlets; textile containers in high-traffic areas; local micro-hubs; and mobile recycling centres. This model would also involve extended opening hours, multimodal accessibility and, where necessary, home collection by appointment. Large cities are at the heart of the problem and should be the first priority for action.

3.4 The proximity revolution as an incentive for convenient waste collection by citizens

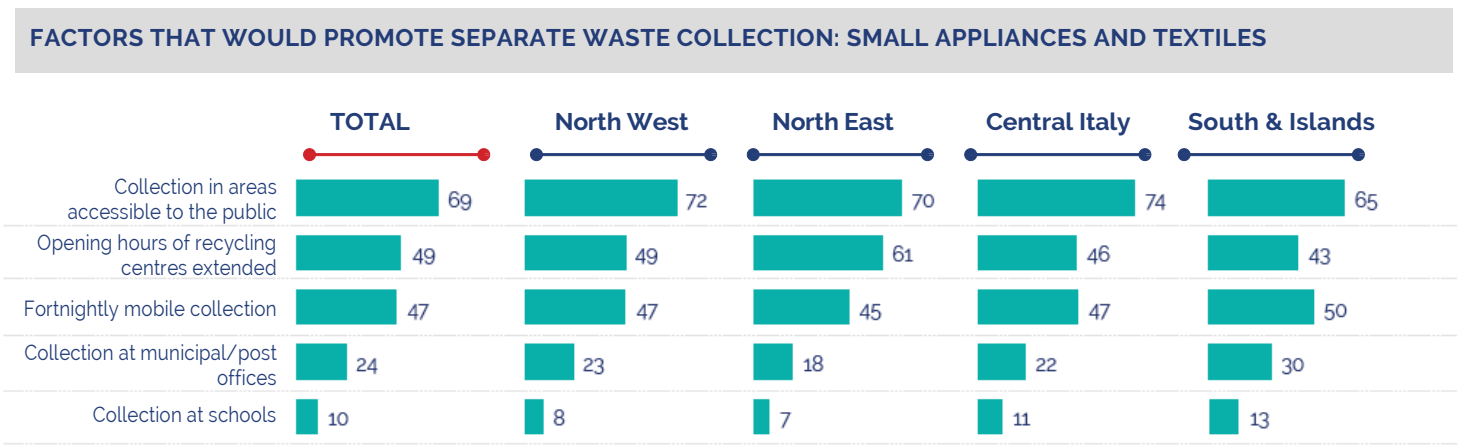
Graph 19. Proximity collection as the main incentive for WEEE and textile waste – Italy level



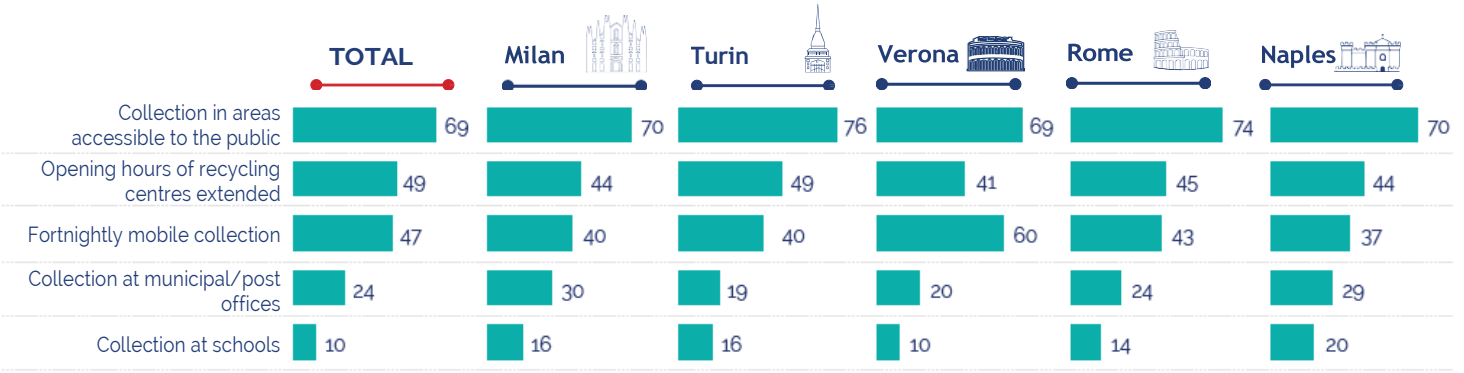
The message from respondents regarding WEEE and textiles is clear: when asked what would motivate them to dispose of these types of waste correctly, citizens prioritise convenience and integration into their daily lives. The idea of making a special trip to a recycling centre is being replaced by the concept of a widespread and comprehensive network of collection points located along everyday routes.

Proximity is the top priority: 69% of people want collection points to be located in public areas such as shops, squares, parks, fairs and train stations. Immediately behind these are two factors that reveal a dual need. Firstly, almost half of those interviewed (49%) would like recycling centres to be open for longer: they do not reject the model, but would prefer it to be more practical. Secondly, 47% indicated a preference for fortnightly mobile collections, which involve visiting people in residential neighbourhoods. This is an intermediate solution between fixed structures and hyper-proximity. Although options such as municipal or post offices (24%) and schools (10%) are less popular, they demonstrate the potential of using familiar, frequently visited locations as additional, low-cost collection points.

Graph 20. Incentives for the separate collection of WEEE and textile waste – Italy level



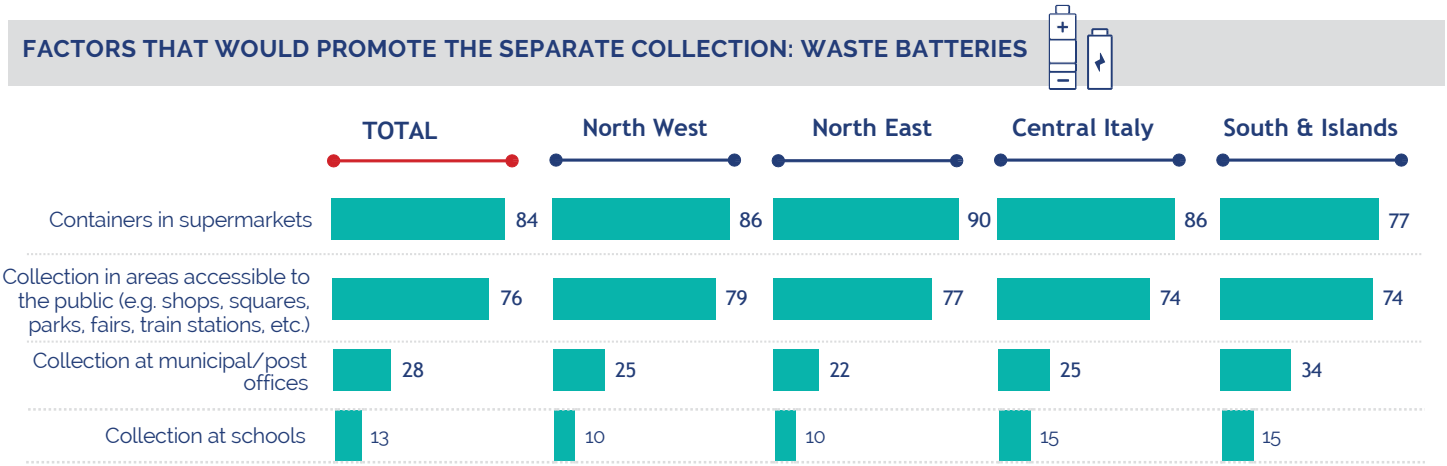
Graph 21. Incentives for the separate collection of WEEE and textile waste – City level



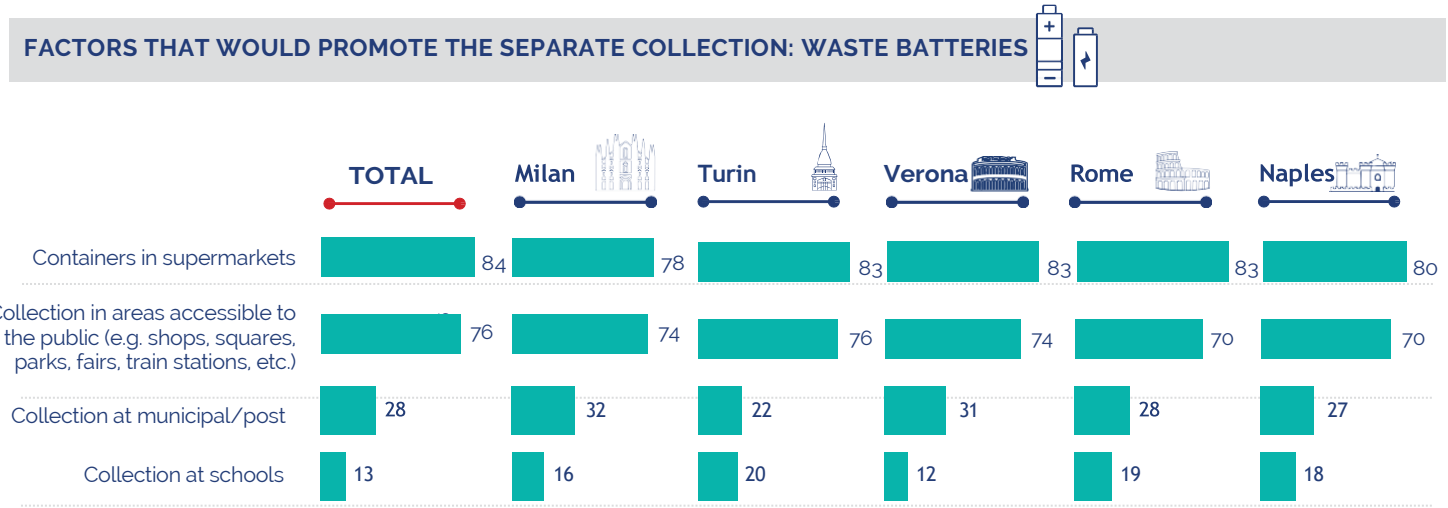
Preferences vary by region and must be translated into targeted strategies. In the South and on the Islands, for example, there is a prevailing desire for services that are available 'on the doorstep': This reflects a perception of greater distance from the recycling centres, with 50% of people opting for mobile collection and 30% choosing collection at municipal/post offices. In the North East, where the problem is more managerial than structural, demand for extended opening hours has increased by 61%.

Verona stands out among cities for mobile collection (60%, which is 13 points above average), while Turin mainly requests public areas and shops (76%), indicating a strong demand for hyper-proximity. Rome is in line with the average, but there is a strong emphasis on accessible areas (74%). Milan and Naples show above-average interest in schools (16% and 20%, respectively) and municipal offices (30% and 29%, respectively). In complex metropolitan areas, any public, reliable hub is seen as a useful solution.

Graph 22. Incentives for the separate collection of waste batteries – Italy level



Graph 23. Incentives for the separate collection of waste batteries – City level



When it comes to waste batteries, citizens indicate that supermarket containers are their preferred solution, confirming the importance of proximity and of locations that are frequently visited. Second place goes to public areas (e.g. shops, train stations and squares), followed by institutional spaces (e.g. municipal/post offices) and schools as additional channels.

Preferences vary by region. In the South and on the Islands, there is a growing interest in municipal/post offices, as well as services that bring collection closer to home. In the North East, however, there is a marked preference for the retail model. Across the sample cities, supermarkets are popular, with some local interest in schools and municipal offices as additional collection hubs.

3.5 Some strategic guidelines

The analysis presented so far confirms and reinforces the key insight that **there is a gap between abstract knowledge** ('I know it has to be done') **and operational knowledge** ('I know exactly how and where to do it for this item'), **and that this gap is subject to a demand for convenience**.

In conclusion, the strategy must therefore have two strands, with targeted actions:

1. **A differentiated communication approach that abandons the 'one-size-fits-all' method**
   - For textiles, a large-scale basic literacy campaign is needed to bridge the knowledge gap, particularly in the South.
   - For WEEE, communication should be more practical, explaining what falls into this category and where to dispose of it. This information should be shared via traditional campaign channels.
   - For batteries, communication should build on existing systems by focusing on improving the visibility of collection points, which are already the primary source of information.
2. **Local infrastructure: the real turning point lies in responding to the demand for convenience.** The most requested priority for all waste streams is strengthening the collection network in retail outlets (shops, supermarkets and shopping centres). This is considered the most effective way to overcome logistical challenges and intercept waste where and when citizens are most receptive. There is high demand for on-demand services, such as home collection, particularly in southern regions, and could complement existing services in areas with less coverage.

3.6 Discarded cigarette butts: despite high awareness of the issue, this incorrect behaviour has become normalised. How can we change this?

The analysis of cigarette butts is extremely interesting because it reveals psychological and behavioural dynamics that differ completely from those observed with WEEE and textiles. While the issue with other types of waste was a lack of knowledge, here we are confronted with the paradox of full awareness and deviant behaviour.

When it comes to cigarette butts, there is no information problem: almost 9 out of 10 Italians are aware that they pollute, release microplastics and contaminate water if thrown into drains. Awareness is uniform across the country. However, the perception that people often throw them on the ground is widespread, with 85% considering this to be either very or extremely common. This is not a marginal phenomenon, but something that citizens observe daily.

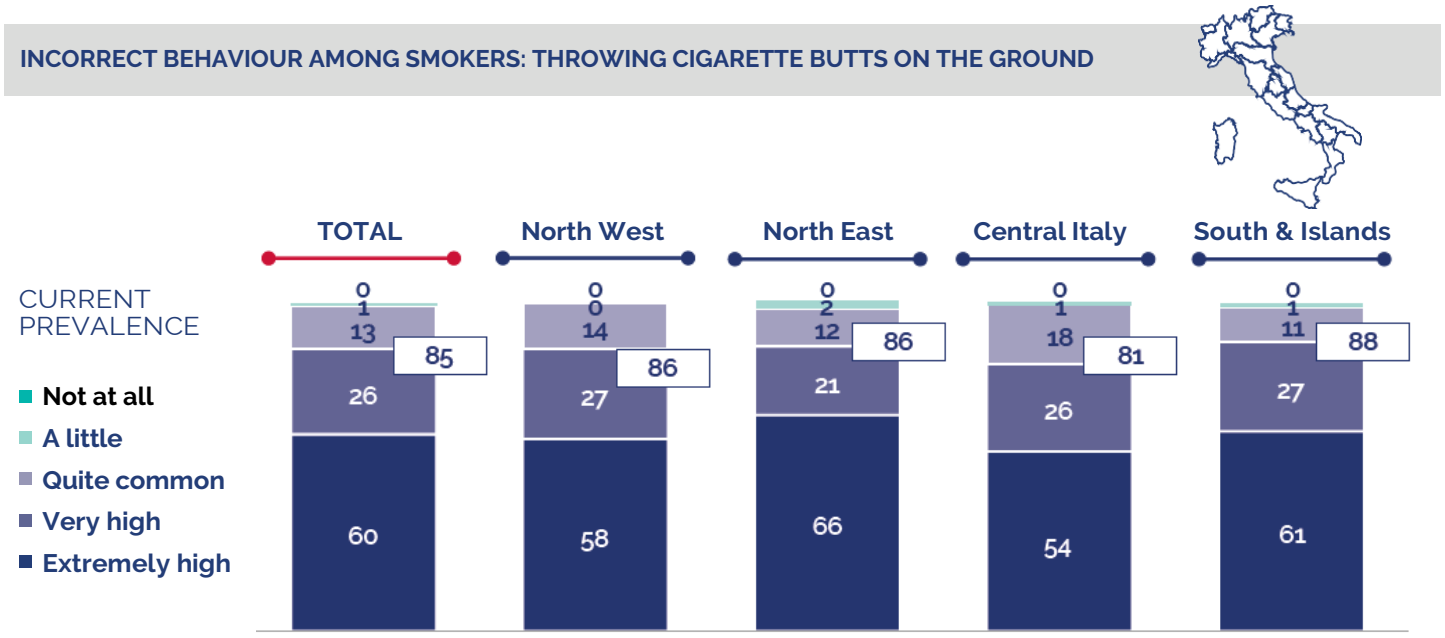
Graph 24. Knowledge of the environmental impact of cigarette butts – Italy level

KNOWLEDGE ABOUT THE ENVIRONMENTAL IMPACT OF CIGARETTE BUTTS

	TOTAL	North West	North East	Central Italy	South & Islands
Discarded cigarette butts release microplastics and other harmful substances into the environment	92 ✓	90 ✓	94 ✓	92 ✓	92 ✓
As cigarette butts are biodegradable, they do not pollute the environment	91 ✓	94 ✓	92 ✓	90 ✓	89 ✓
Throwing cigarette butts into drains can pollute groundwater and waterways	91 ✓	93 ✓	91 ✓	90 ✓	90 ✓
Once extinguished, cigarette butts are harmless when thrown on the ground or into the environment	88 ✓	89 ✓	94 ✓	87 ✓	86 ✓
Cigarette butts can contaminate soil, which can compromise plant growth	87 ✓	86 ✓	87 ✓	88 ✓	87 ✓
It's not a problem to throw cigarette butts into the sea because they get diluted by the water	85 ✓	86 ✓	87 ✓	85 ✓	84 ✓

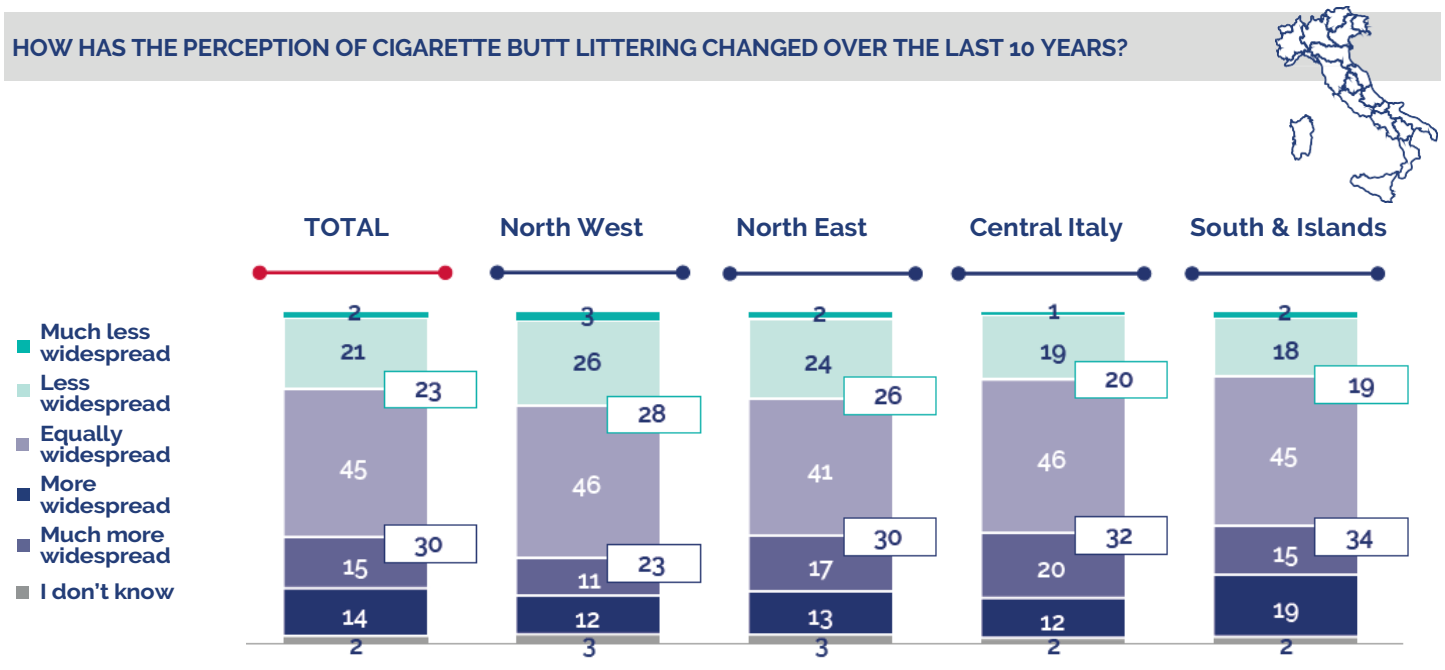
✓ Percentage of correct answers

Graph 25. Perception of the current prevalence of cigarette butt littering – Italy level



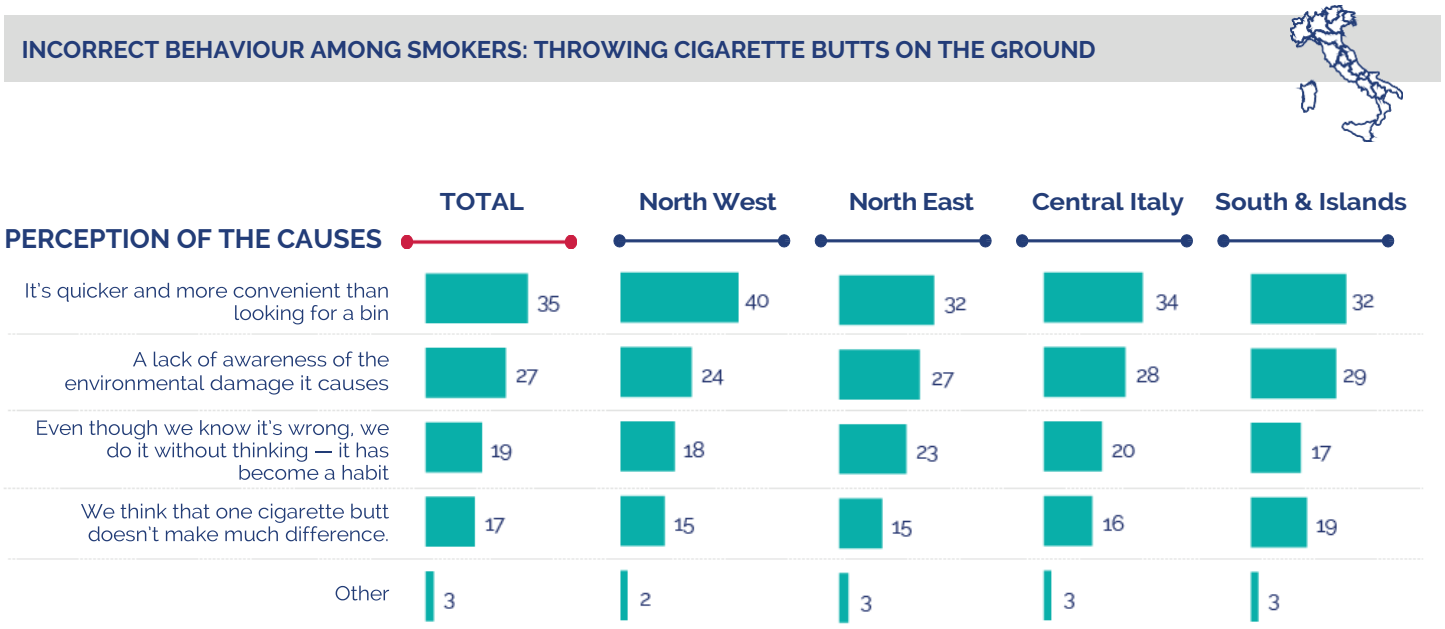
The situation is also rather discouraging in terms of time: 45% believe that the situation is the same as it was ten years ago, 30% believe that it has worsened, and just 23% see an improvement. The proportion of those who see an improvement is slightly higher in the North, at 26–28%, compared to 20% in Central Italy and 19% in the South. This negative evolution carries the risk of fostering resignation. If 'nothing ever changes', the value of individual action decreases.

Graph 26. Perception of cigarette butt littering compared to 10 years ago – Italy level



So why do we continue? The main answer is convenience. 35% cite speed and practicality as the reason, peaking at 40% in the North West. This is followed by habit and the belief that individual actions have little impact. In other words, there is a conflict between a widely accepted moral principle ('it's wrong') and common, practical behaviour ('everyone does it; it's easier and more convenient').

Graph 27. Perception of the causes of cigarette butt littering– Italy level

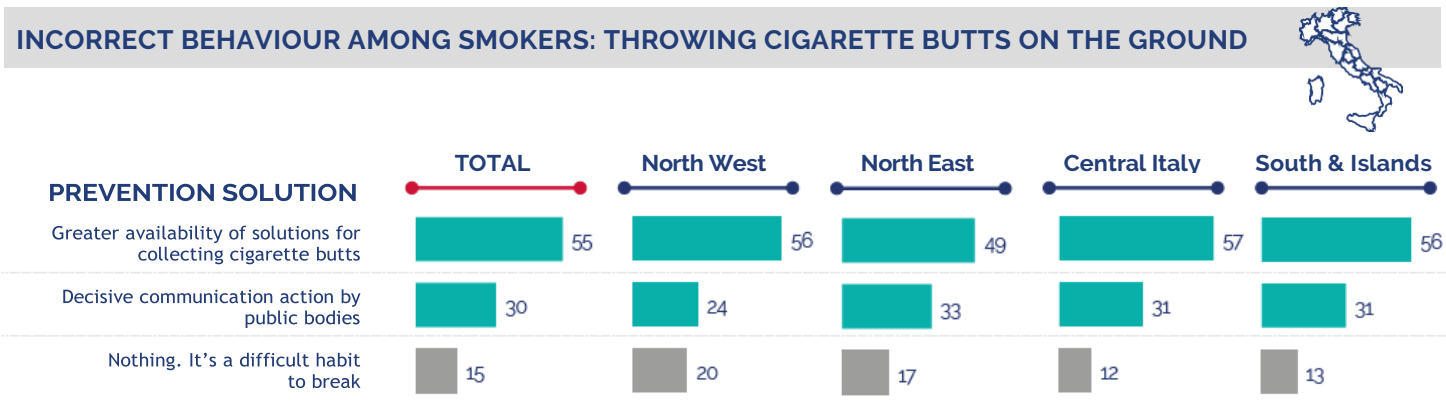


The responses from the interviewed citizens reveal a demand for more solutions for collecting cigarette butts, such as specific containers in strategic locations and pocket ashtrays (55%). While communication is considered important, it is seen as less important than the need for practical tools.

The solution suggested by the citizens themselves is clear: changing behaviour that is rooted in habit and convenience requires more than moralising; practical solutions are needed.

Effective communication is essential for encouraging the use of infrastructure, such as bins and ashtrays, and for challenging the normalisation of harmful behaviours. Consistent messaging can educate people on proper waste disposal, discourage littering, and show how individual actions affect the cleanliness of shared spaces. Only in this way can awareness be translated into daily practice.

Graph 28. Incentives to prevent cigarette butt littering – Italy level



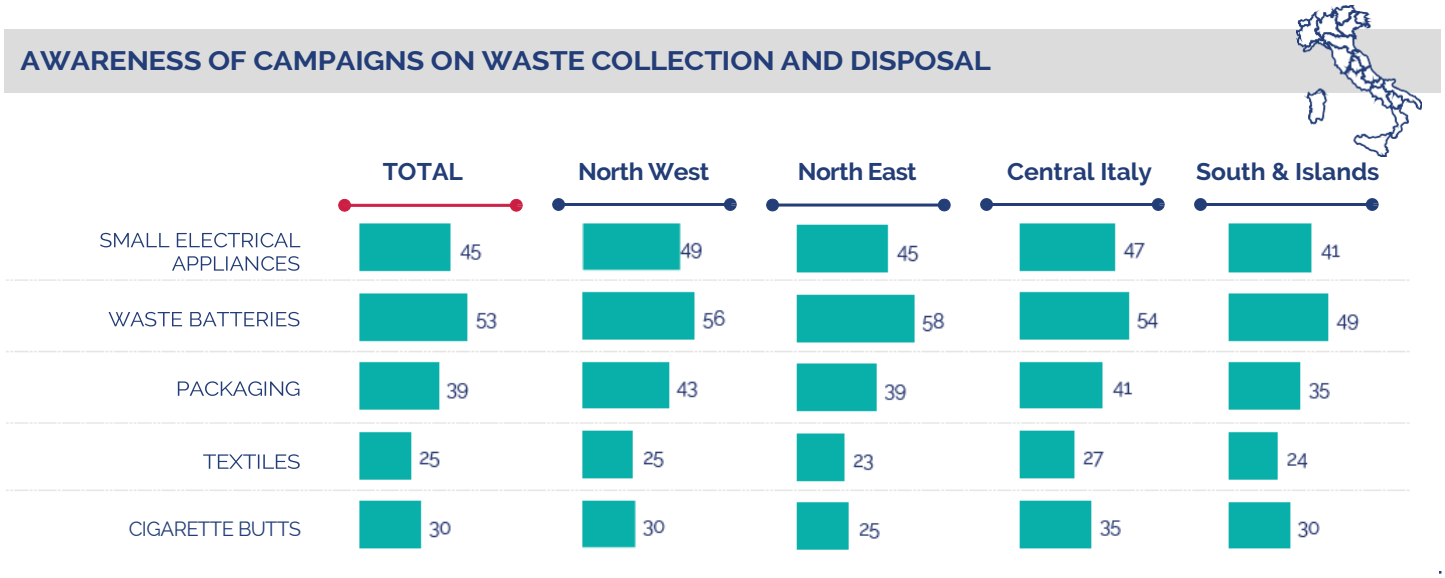
3.7 A geography of communication campaigns that require bespoke strategies

Analysis of the memory of the communication campaign reveals an inconsistent and disjointed picture: there is no single strategy that is effective across all channels and throughout the whole country. People's memories are selective and change over time in response to pressure and how relevant an issue is perceived to be. There are also significant variations between different regions and cities.

The hierarchy of awareness (spontaneous recall) is clear. Waste batteries top the rankings with 53%, followed by small electrical appliances (WEEE) with 45%. While this is a strong showing, it is not yet as widespread as batteries. Packaging accounts for 39%: an everyday issue, which is often addressed in a generic way. Cigarette butts account for 30%, with more recent campaigns. Textiles are at the bottom with a limited recall rate of 25%, consistent with the lower level of awareness observed. The challenge lies in making the message more specific and widespread.

Regional differences confirm this. Compared to the national average, the South and the Islands have a memory gap of 41% for WEEE, 49% for batteries, and 35% for packaging. The North East stands out with regard to batteries, suggesting a more widespread culture of collection. Awareness of cigarette butts littering is higher in Central Italy (35%), likely due to effective local initiatives.

Graph 29: Awareness of waste collection and disposal communication campaigns – Italy level



Which messages get through? At a national level, television remains the mainstay, but in cities, the 'battle for attention' is won using a combination of local media. Overall, TV is the most frequently cited channel. It is ideal for raising basic awareness on a large scale, reaching around 40–55% of people, depending on the stream. Billboards are the second most important channel, covering the territory and reaching people who make decisions 'here and now' while on the go. Radio and print now play a supporting role (10–19%). Digital media such as Instagram and Facebook (8–14%) and YouTube (10–14%) have become stable components, particularly for reaching young people and covering specific topics. Schools (7–11%) have long-term strategic potential as they influence habits and engage families.

Local readings indicate that a different media mix is required for each city.

Although TV remains essential for achieving widespread awareness, the plan needs to be adapted for local areas. In metropolitan areas, for example, billboards play a vital role in any campaign because they dominate transport hubs and locations where decisions about gestures are made. Digital advertising is proving effective in certain situations. Schools have been identified as a channel through which ongoing projects can be implemented to encourage the development of stable behaviours over time.

In practice, the solution that emerges from the results is to abandon the 'one-size-fits-all' media mix and confirm: TV as the basis for coverage, with more refined city strategies built on top of it; signage (billboards, maxi LED walls, digital totems, etc.) as standard in large cities; digital media where traction is shown; partnerships with schools in the most receptive contexts. In this way, communication reaches its target audience and has an impact by speaking to the right people through the right channel in the right place at the right time, encouraging them to take the desired action.

3.8 Knowledge and perception of campaigns: what works, where and why

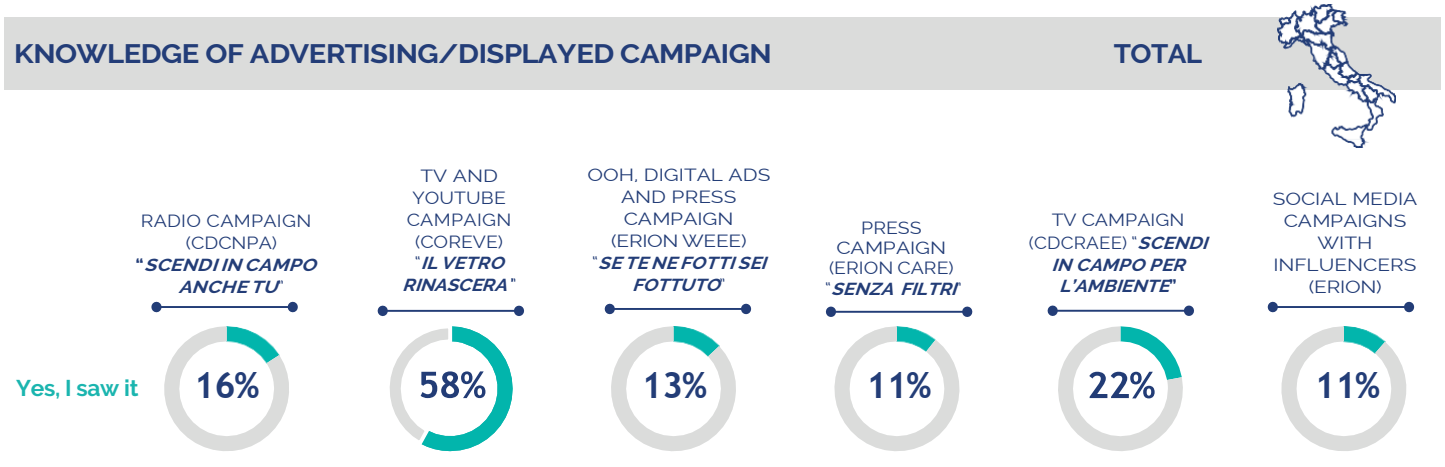
The crux of our analysis of respondents' knowledge of campaigns is the moment when we put the 'tools of the trade' of communication to the test to understand what works and what doesn't — and, above all, why.

In order to investigate recall, post-exposure sentiment and overall behavioural effectiveness, respondents were shown 6 communication campaigns that were conveyed through different channels.

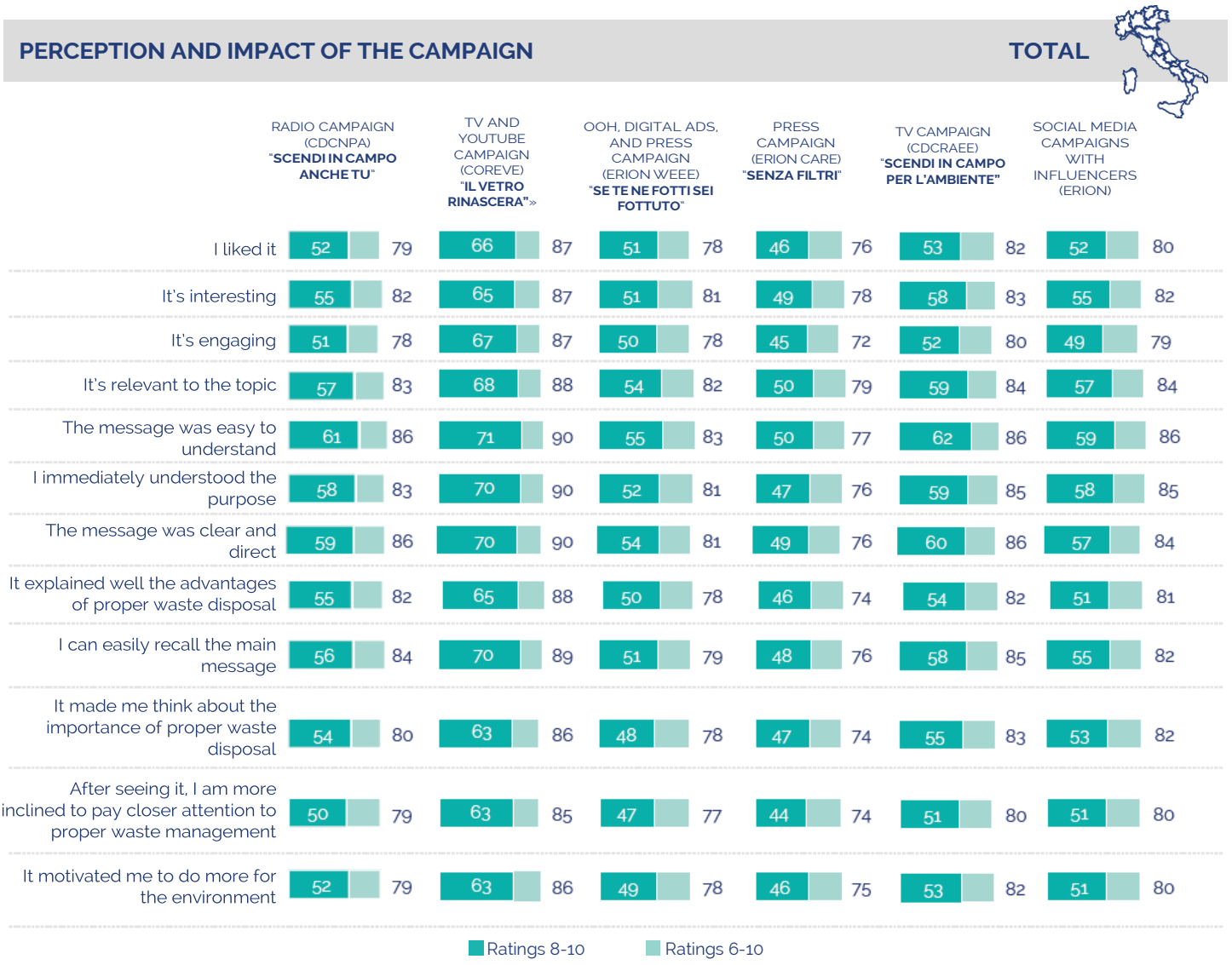
The data tells a simple story: format makes all the difference. Video has the widest reach and is the most effective at stimulating memory. If well written, radio can convey clear information, but it struggles to attract large audiences. Static images alone are not attention-grabbing, but are most effective as reminders in locations where the action is taking place. However, public opinion is clear on one point: people believe that campaigns are useful and want more of them. The majority believe that campaigns are powerful tools capable of influencing behaviour. Seven out of ten people want them to be more frequent and visible.

3.8.1 What can we learn from the results of the analysed campaigns?

Graph 30. Awareness of the analysed communication campaigns – Italy level



Graph 31. Perception and impact of the analysed communication campaigns – Italy level



Campaigns work when they are seen, and the content is considered clear, understandable and effective in prompting action. The main limitation is how many people we can reach, not what is said.

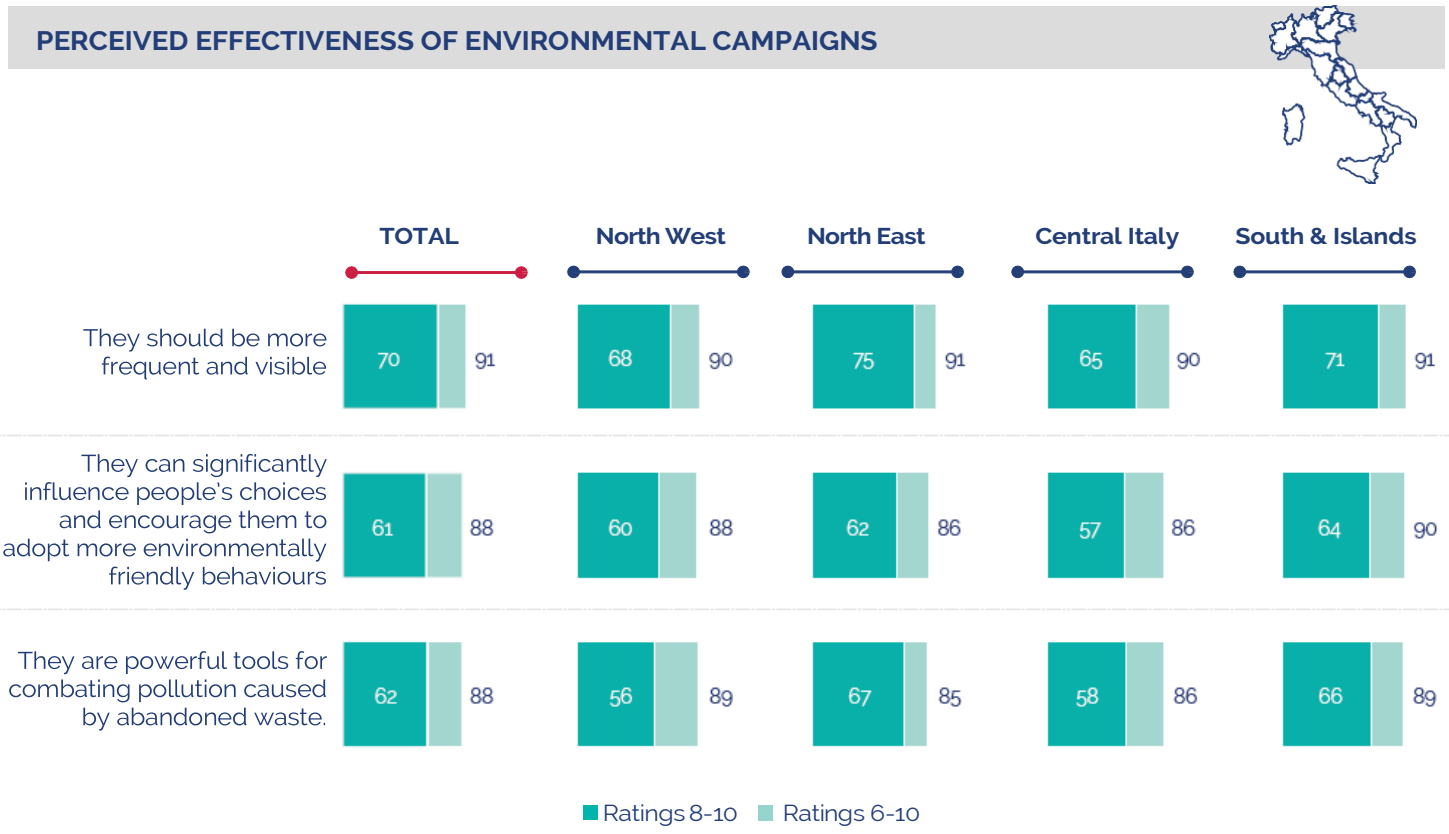
These results highlight the varying effectiveness of different channels and the quality and disreputability of the content. The performance of each medium is summarised below:

- **Radio** (National Clearing House for Batteries and Accumulators (CDCNPA) campaign): recall rate of around 16%, consistent with the performance of the medium. Around 60% of people perceive the message as clear, and around 50% as easy to remember. It has a positive call to action. It is an effective way of reiterating simple information.
- **Television** (WEEE Clearing House (CDC RAEE) campaign): the use of audiovisual media increases memorability, achieving a recall rate of around 22%. Perceived quality remains solid (in the 50–60% range for clarity and comprehension), and the call to action improves slightly.
- **Social media campaigns featuring influencers** (various Erion campaigns) have a low recall rate of around 11%. This suggests either insufficient distribution or an inadequate fit. Ratings among those who saw the campaigns are good, in line with campaigns featuring testimonials. The content is there; it just needs a more effective media plan and more relevant creators, including micro-influencers, to promote it.

- **Billboards, social ads and newspapers** (e.g. the Erion WEEE campaign on WEEE 1:1/1:0 focus and the Erion Care campaign against cigarette butt litter) have a low recall rate of around 11–13% and weaker quality indicators. They are most effective as proximity reminders (e.g. collection centres, shops, large-scale retailers, bus stops) rather than as drivers of awareness. They should be simplified and enhanced with clear calls to action, such as information on where and how to dispose of items, and, in the case of WEEE, a QR code that takes citizens directly to a map of collecting points.
- **The external benchmark of TV and YouTube adverts** (Coreve video on packaging) demonstrates an excellent recall rate of around 58%, as well as top-quality scores of between 65% and 71%. This shows that excellent results can be achieved by combining creative quality, a simple message and adequate media investment. This is a useful standard by which to calibrate ambition and pressure thresholds.

3.8.2 An audience that demands more communication

Graph 32. Perception of the effectiveness of analysed communication campaigns – Italy level



This section reveals the most encouraging data. The majority of respondents believe that campaigns are an effective and useful tool for changing behaviour. Notably, 70% explicitly requested more frequent and visible campaigns. The message is clear: there is a social demand for environmental communication. People want clear, practical and repeated messages that tell them what to do and where to do it.

3.9 Some strategic guidelines

The data show that video is the most effective format. Video campaigns are more memorable than radio campaigns, and Coreve's high-quality videos outperform all others. Investments should focus on video content with strong storytelling and high production value to generate emotional engagement.

Campaigns based solely on static images have been shown to be both ineffective and difficult to remember. Therefore, they are not an effective large-scale awareness tool. While they can be effective in specific contexts, such as at collecting points or as reminders, they should not form the main focus of an awareness campaign.

Campaigns featuring a famous personality tend to be popular. The challenge lies in creating the most memorable and engaging content possible to accompany these testimonials, with the aim of increasing approval and motivation scores from 50% to 60–70%.

What is the most encouraging finding? Citizens believe in the power of communication and want more of it.

Table 1. Strategic guidelines for effective communication across different channels

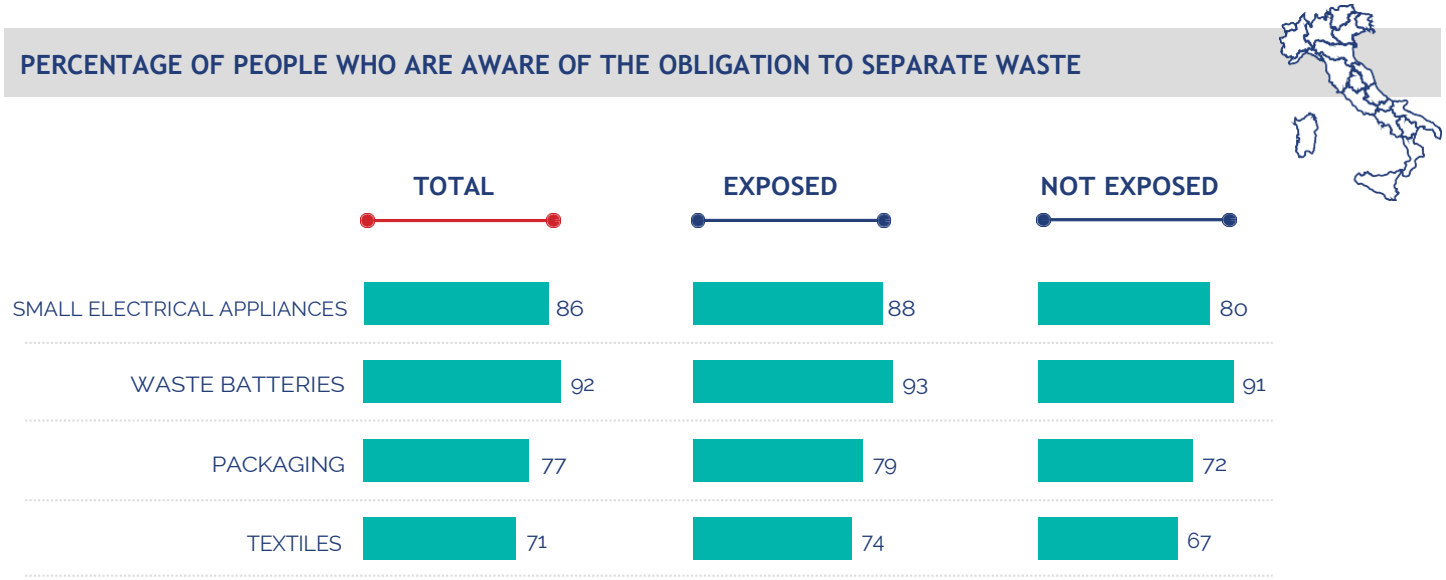
STRATEGIC USE OF CHANNELS	GUIDELINES FOR CONTENT DEVELOPMENT
Video as an awareness driver	Use simple, single-minded storytelling, taking one action at a time, and finish with a clear call to action. Examples include 'What goes where?' and 'Where should I take it?' Apply sufficient pressure to achieve a recall rate of 20–30%. Use visual features that are recognisable within the sector, such as colours and icons. Include a QR code that leads to a map showing the locations.
Radio as a reminder	Use a linear copy that contains one key piece of information and a memorable conclusion. This is an effective way of reinforcing habits, such as reminding people to take their batteries with them when they go shopping.
Out-of-home as a bridge from saying to doing	Display ultra-simple messages in busy areas and near collection points to help people understand what to do and where to do it.
Static and proximity conversion materials	Use standardised, consistent signage in shops, collection centres and large-scale retail outlets. Clear calls to action and QR codes should also be used for guidance.
Digital channels for precision and frequency	Focus on short, memorable videos and 'why —> how —> where' sequences, targeting specific audience segments with precise measurement. When it comes to influencers, prioritise credible creators and adequate paid support.

3.10 The transformative power of effective communication on the behaviour of citizens

The aim of this section is to verify the effectiveness of communication with citizens and determine if it has had a tangible impact. This is achieved by comparing two groups: those who remember at least one campaign (Exposed; n = 644) and those who do not ('Not exposed; n = 356). While this is not a laboratory experiment, it is an inferential analysis that allows us to observe how knowledge, behaviour and attitudes change when citizens receive an effective message.

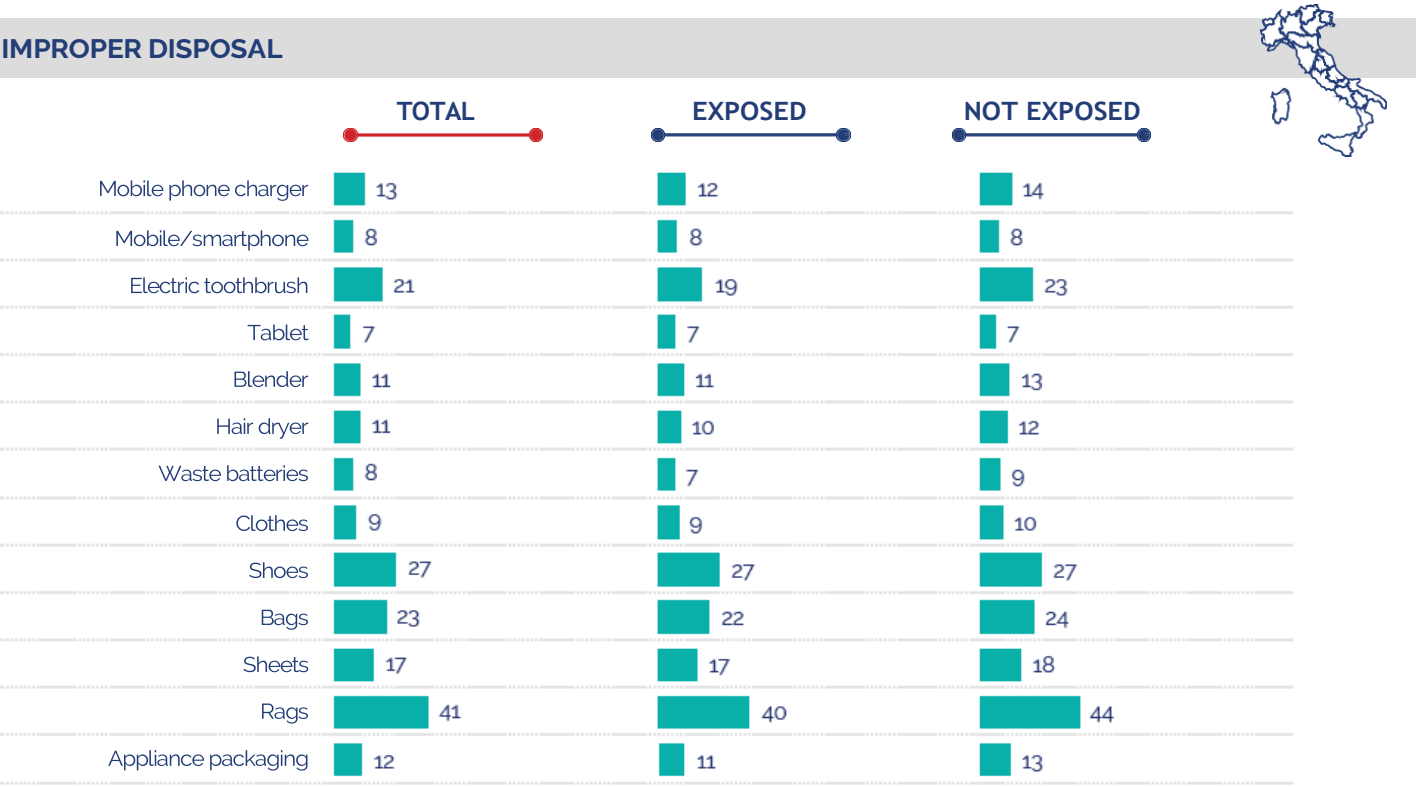
The first identified effect is an improvement in knowledge. Those exposed to the campaigns 'know more' about separate collection obligations, with an advantage of up to 8 percentage points over those not exposed to them. This is particularly useful when the subject matter is complex or recent. Examples include WEEE due to the variety of objects involved, and textiles due to the recently introduced dedicated collection obligation. Without this knowledge, the correct action is not taken — it is communication that flips this switch.

Graph 33. Exposed vs. Not exposed: awareness of the obligation to separate waste for recycling – Italy level



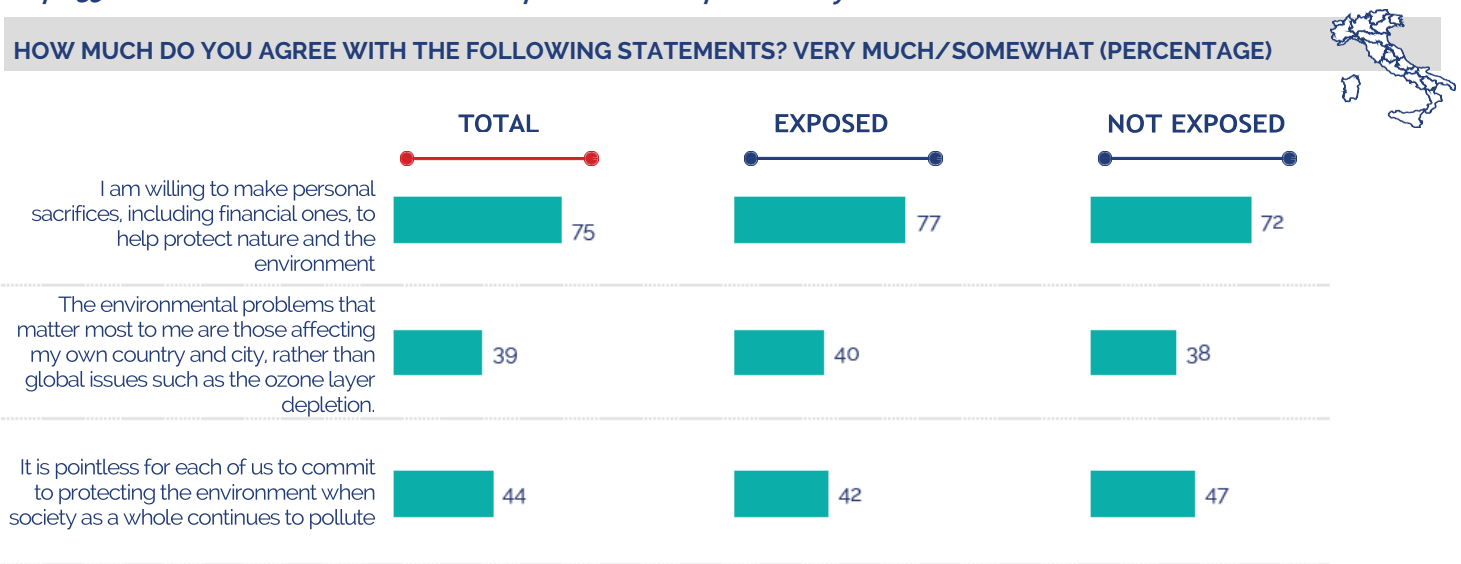
The second finding relates to declared disposal behaviour. Among those exposed to the campaigns, errors decreased almost everywhere: more people indicated the correct disposal channel, and fewer mistakes were made. For certain items, such as electric toothbrushes and rags, reductions of up to 4 percentage points were observed. In practice, clearer messages at the point of disposal mean that less waste ends up in the wrong place, with more waste reaching the correct disposal channel. This provides tangible environmental and economic benefits.

Graph 34. Exposed vs. Not exposed: declared incorrect waste disposal behaviour – Italy level



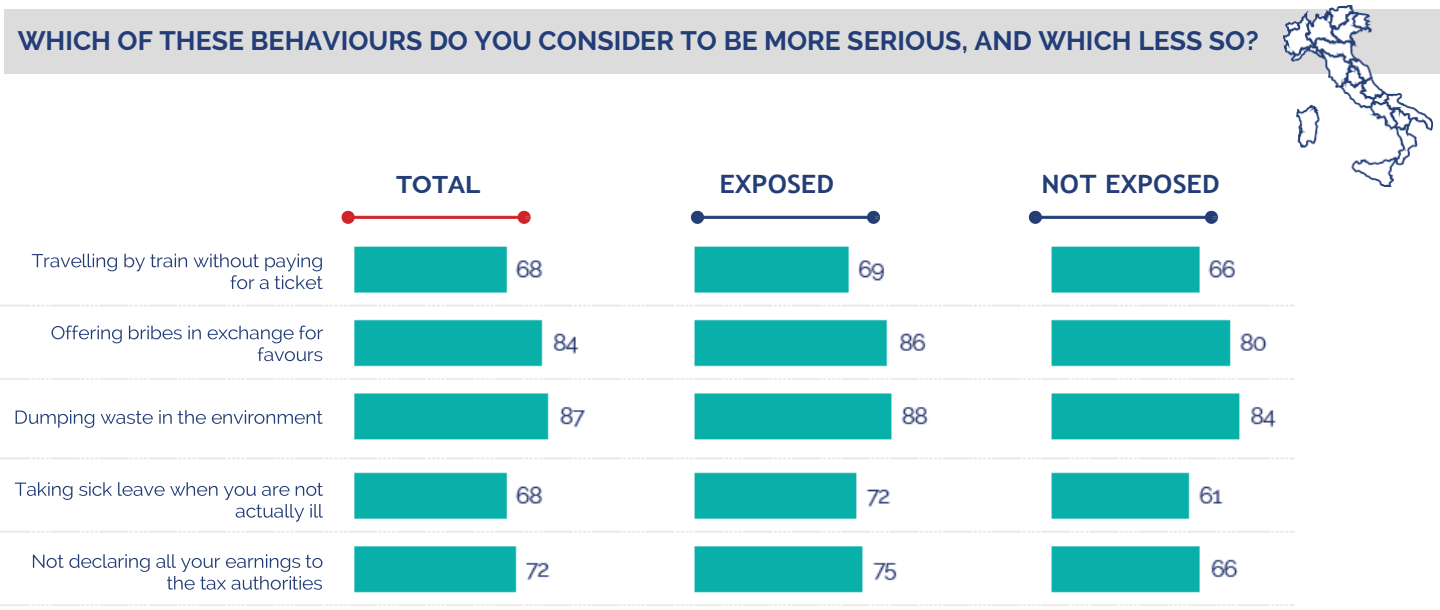
The third level that emerges is attitudinal and arguably the most profound. People exposed to the campaigns are more willing to make personal sacrifices for the environment (77% vs. 72%) and exhibit less fatalism. The proportion of people who believe that 'individual commitment is useless' falls from 47% to 42%.

Graph 35. Attitude towards the environment: Exposed vs. Not Exposed – Italy level



There has also been a shift towards harsher responses to inappropriate behaviour. For instance, 88% of those exposed consider littering to be 'very serious', compared to 84% of those not exposed. There has also been a slight shift in attitude, with a decline in the tendency to 'blame the system' and an increase in the sense of individual responsibility (37% vs. 35%). In summary, people are less resigned and more aware of their civic responsibilities, and are more willing to take action.

Graph 36, Exposed vs. Not exposed: attitude towards improper behaviour – Italy level



Graph 37. Exposed vs. Not exposed: individual responsibility – Italy level

So, what does this mean in practice? It means that communication not only informs, but also empowers and motivates. It is most effective when it is specific and conveying one message at a time. It should always conclude with a clear call to action, such as 'What goes where?' or 'Where should I take it?'. Information should be easy to find along everyday routes and repeated frequently enough to overcome any 'interference'.

Evidence shows that investing in communication pays off by providing a measurable return at three levels. It generates knowledge, reduces sorting errors and encourages a civic mindset. Specifically, it increases knowledge by up to 8%, reduces sorting errors by up to 4% and decreases fatalism by 5%. It also increases the willingness to commit and the severity of responses to misconduct. This is how the circular transition takes root 'from the bottom up', turning intentions into behaviours and ensuring that rules become habits. The next step is to reinforce operational calls to action and continuously monitor proximity and impact to facilitate further improvements.

3.11 Key insights from the opinion poll as a guide to understanding and taking action

The survey provides a comprehensive and insightful overview. Six key areas emerge beyond the individual figures that explain current performance and provide direction for future communication and service strategies.

1) The citizen's paradox: high moral awareness and low trust in the system.

Although 87% of surveyed citizens consider waste dumping to be a very serious issue (almost as serious as corruption), widespread distrust of the system remains. 44% believe that individual commitment is 'useless', while 36% think that responsibility should be distributed among citizens (33%), the service organisation (31%), and downstream management. Although there is a moral basis for change, fatalism and mistrust can undermine calls for responsibility. Therefore, it is crucial to demonstrate that the system works by providing visible evidence of traceability and information about 'what happens next', as well as conveying clear messages about shared roles and responsibilities.

2) The real enemy is mainly the knowledge gap, not laziness

In 70% of cases of incorrect waste disposal, the error stems from misconceptions about what constitutes the 'right' thing to do. This is a cognitive challenge, not just an ethical one. Therefore, priority should be given to operational knowledge, particularly for ambiguous waste streams such as WEEE and packaging. There should also be a focus on promoting strong literacy around textiles, with the message that even non-reusable items should be placed in the dedicated circuit. Communication materials should provide concrete examples of items and explicitly state how they should be disposed of.

3) Using proximity as a lever to encourage collection

Citizens want waste to be collected along their daily routes. For WEEE and textiles, 69% of citizens prefer areas that are accessible to the public, whereas for batteries, 84% prefer containers in supermarkets. Although recycling centres are useful for bulky items and scheduled disposals, they are not practical for small, continuous waste streams, particularly in complex urban areas (e.g. opening hours, distance and accessibility). An integrated strategy that brings the collection service closer to people, such as through shops with a 1:0/1:1 take-back system for WEEE, large-scale retailers for batteries and textile containers in high-traffic areas, alongside extended opening hours and mobile recycling centres can turn intentions into actions. Home collection services can be provided by appointment where necessary.

4) The cigarette butt paradox: a problem of behaviour, not thought

Awareness of the environmental damage caused by discarded cigarette butts is high, with approximately 90% of people being aware of the issue. Furthermore, 85% of people perceive littering as widespread and persistent. The main motivations are 'convenience/speed' (35%), followed by habit and the belief that it makes no difference. Rather than increasing the number of disposal options, there needs to be greater recognition of the existing ones. Citizens have two requests: more practical solutions, such as bins with ashtrays and portable ashtrays (55%), and better communication (30%) indicating where to dispose of waste and normalising the idea of not littering. This communication should act as an 'activator' for the existing infrastructure, making collection points visible and reminding people of the importance of correct waste disposal, while also discouraging littering.

5) Proof that communication works: increased knowledge, fewer errors and a more positive mindset

Those exposed to the campaigns demonstrate greater knowledge of their obligations (+8%), particularly with regard to WEEE and textiles. They also make fewer disposal errors (a 4% decrease for electric toothbrushes and rags) and exhibit a more positive mindset characterised by a greater willingness to make sacrifices (an increase of 5%), a stricter attitude towards incorrect behaviour, and less fatalism (a decrease of 5%). For communication to be effective, the message must be clear and unambiguous. It should conclude with a clear call to action, indicating what to do and how to do it. Effective communication encourages the right action and reinforces civic responsibility — it's about more than just 'information'.

6) Batteries and cigarette butts are the most challenging cases and require different approaches

Both batteries and cigarette butts are small objects that are disposed of frequently. Although people are generally aware of the correct disposal method for batteries, they often act inconsistently in their everyday behaviour. In contrast, the disposal of cigarette butts has become normalised.

The main reason for the incorrect disposal of waste batteries is often routine: they are often thrown away in the wrong place without thinking. Proposed solutions include well-positioned, clearly marked containers for increased proximity and visibility, simple reminders such as 'take your batteries with you when you go shopping', micro-containers for collecting waste batteries at home, and an up-to-date public map of active collecting points.

The problem of cigarette butt littering stems from convenience and habit. Rather than increasing the number of ashtrays, the priority should be to make the existing ones more visible and identifiable. These should be accompanied by contextual messages encouraging the correct disposal of cigarette butts and raising awareness of the importance of protecting public spaces ('The city is your home'). These messages should also demonstrate the positive impact of doing the right thing.

In summary:

- Although citizens have values, these must be protected from fatalism and mistrust by ensuring transparency throughout the waste management process and taking action at an operational level.
- The main challenge lies in operational knowledge rather than motivation. What is needed are simple rules, concrete objects, and clear instructions on where to take what.
- For small streams, proximity is the key factor. Integrating collection into everyday life increases its effectiveness.
- Dedicated, practical solutions are needed for cigarette butts and batteries, involving visible infrastructure and routine reminders.
- Effective communication campaigns increase knowledge, reduce errors and improve attitudes. When the right formats and messages are used, they facilitate circular 'bottom-up' transitions and are a worthwhile investment.

The opinion poll provided a comprehensive and multifaceted overview of the relationship between Italian citizens and waste management. Beyond the individual data, several key themes emerged that explain current collection performance and provide clear direction for future communication and service strategies.

4. Comparing the 'declared' and 'actual' figures to inform decisions

This chapter establishes links between the findings of our waste product analysis and what citizens know, think and say they do, as investigated through the opinion poll. It marks a shift from 'what' to 'why' and, above all, 'how' to intervene. The collected data provides a coherent overview of the causes and offers practical guidance on how to unlock value, minimise errors and foster trust.

Municipal waste data is integrated with citizens' knowledge, habits, barriers and preferences. While the identified associations are robust, they do not constitute experimental causality. Although product sampling is not representative at a national level, it provides valuable insights into where and how to intervene.

1) Textiles: the imbalance stems from a lack of clear communication

Product analysis data indicates that more than 17 kg of textile waste is present in unsorted waste, compared to an official collection rate of 2.74 kg per capita. This equates to a ratio of approximately 1:6.5. This is not the result of 'incivility', but rather the consequence of years of messaging that has focused solely on 'clothes in good condition', implying that everything else does not need to be sorted. The declared figures confirm this: textiles are the type of waste that respondents know the least about how to dispose of correctly. While 71% are aware of their obligation, mistakes are often made in good faith. For instance, rags (41%) and shoes (27%) are often thrown away with general waste because people mistakenly believe this to be the correct procedure. In line with future EPR legislation and developments in recycling technologies, there is a need for 'zero-year' literacy. This involves conveying a single, unequivocal message ('all textiles, even those that cannot be reused, should be placed in the dedicated collection system), providing straightforward disposal instructions, and ensuring that clearly labelled containers are placed in high-footfall areas. Foundational communication can have the greatest impact in this sector.

2) WEEE in large cities: bringing collection closer to home

Small WEEE is more prevalent in municipal waste, where the dominant disposal method is the 'single destination', such as a recycling centre. While this works for bulky items and scheduled disposals, people perceive it as being outside their daily routine for smaller items due to the long average travel times, inconvenient opening hours, and the fact that it does not fit in with their daily lives. As expected, the sample revealed that there is 1.98 kg of small WEEE per inhabitant per year in unsorted waste, compared to the officially collected figure of just 1.34 kg per inhabitant per year. The opinion poll shows that citizens want facilities in places they already visit. When the collecting point is close by and easily identifiable, friction decreases and behaviour improves. When it comes to small WEEE, the logic of proximity involves using 1:0 and 1:1 take-back schemes in shops and neighbourhood micro-hubs, as well as mobile recycling centres, and extending opening hours. This is supported by uniform signage and updated public mapping, which translates intention into action. Effective communication is essential for implementing a new proximity model. This should make it clear that very small WEEE can be delivered 'at any time and without obligation to purchase' (1:0) and that all WEEE can be delivered 'when purchasing' (1:1). It also clarifies where waste can be disposed of.

3) Packaging: where everyday life meets complexity

Ambiguous packaging regulations often conflict with good intentions. Analyses of EEE packaging waste confirm the presence of these materials in unsorted waste, but the data remains inconsistent. More generally, historical product data indicates that packaging accounts for a large proportion of municipal waste, suggesting recurring errors and contamination ('dirty' or multi-material packaging). The situation remains consistent in terms of 'declared' figures: awareness of the obligation to separate waste remains low (77%), and information sources remain fragmented. The critical issues remain unchanged: poly-laminates, plastic films, expanded polystyrene, blister packs, etc. The rules should be simplified, with clear disposal instructions visible upon unboxing. These options should be indicated by clear icons and colours, and there should be QR codes providing access to a local map. Messages must be clear and sequential, covering one material and one action at a time, and always ending with the call to action:' where do I take what?'.

4) Batteries: clear preference for the retail sector, but the gap between intention and behaviour must be closed

Although citizens prefer to deliver batteries to supermarkets or shops, which are considered proximity points, product analysis data shows that many batteries still end up in unsorted waste. For instance, 0.06 kg of waste batteries per capita are collected through the correct channels, whereas 0.12 kg are found in unsorted waste. Although awareness is high, behaviour is fragile. To make the solution viable, collection points must be positioned at an optimal density per square kilometre in areas such as entrances, exits and checkouts, and clearly marked with visible reminders. Containers must also be operational at all times. Providing an up-to-date public map showing the locations of active collection points would encourage people to act on their preferences. Only then will the preferred solution become the practised solution.

5) The 'urban mine': value locked away in cupboards that only becomes accessible when it is convenient

Some people keep small WEEE items and waste batteries in their homes because they think it is too much trouble to dispose of them properly. The solution involves two things: temporary initiatives, such as 'Empty your cupboard day', and, most importantly, establishing a widespread, stable, visible and reliable network. This makes the right choice the easiest option.

6) Effective communication involves a consistent logical chain

A comparison of citizens interviewed who are and are not exposed to the campaigns highlights the benefits to the entire waste chain

- more operational knowledge (up to +8% on WEEE and +7% on textiles);
- fewer reported errors (reductions of up to 4 percentage points on electric toothbrushes and cloths);
- better attitude (less fatalism and a greater willingness to commit).

Although we cannot speak of causal proof, the message is clear: greater exposure to communication campaigns improves understanding of what to do and where to do it, thereby reducing errors. Communication is not just about providing information; it also encourages the right actions.

5. Conclusion: infrastructure and communication as a lever for integrated action

This document clearly highlights the fundamental principle that effective waste management requires complementary infrastructure and communication. Simply setting up collecting points or informing citizens is not enough. What is needed is an integrated model that encourages the correct action to be taken easily, immediately and intuitively.

In order to intercept smaller waste streams and move beyond the traditional recycling centre model, waste collection must become an integral part of people's daily lives. This can be achieved by installing collection points in shops and large retail outlets, placing clearly visible textile containers in neighbourhoods, setting up micro-hubs and mobile recycling centres, extending opening hours and providing on-demand services when necessary. Clear and consistent visibility must accompany physical proximity. This can be achieved by using uniform signage and recognisable icons, as well as public mapping of locations and QR codes to make identification easy. Regular maintenance is also essential to ensure that the infrastructure is reliable and perceived as an integral part of daily life.

Communication is the second lever that turns intention into action. In the case of textiles, a simple and unambiguous 'year zero' founding message is required. With the new EPR legislation and the development of recycling technologies, all textiles can now be diverted into the dedicated circuit, including those that cannot be reused, accompanied by practical disposal instructions. Clear and specific communication is essential when it comes to WEEE and packaging, indicating exactly what can be disposed of and where. It should always conclude with a call to action. People need to be reminded of battery collection points along their daily shopping routes, and the discrepancy between stated preferences and actual behaviour must be addressed. Finally, messages about cigarette butts should focus on correct disposal methods, such as using visible ashtrays, and highlight the positive effects of correct behaviour by making improper practices seem abnormal.

Research shows that a combination of physical networks and communication is essential. Without proximity, even the best message risks going unnoticed, while without clear communication, the network will not be used. A network's effectiveness is measured by increased public awareness, greater use of collecting points, and a reduction in the per capita weight of unsorted waste.

Batteries and cigarette butts are emblematic of this dual intervention. These two types of waste streams deserve particular attention because the associated behaviours are deeply ingrained and difficult to change. Even when people are aware of the environmental impact, routine and convenience can lead to a discrepancy between their words and actions when it comes to small waste items, as demonstrated by batteries and cigarette butts. To achieve real and lasting change, targeted communication must clearly indicate the correct behaviour and the consequences of incorrect action.

In short, citizens are potential allies waiting for the right conditions to be met, not adversaries to be persuaded. With visible, nearby infrastructure and targeted, repeated and clear campaigns, bins are emptied, waste dispersion is reduced, and trust is built. This makes sustainable choices intuitive and natural, aligning the 'declared' and 'actual' figures and clearly demonstrating where and how efficiency and impact can be generated.

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