

Micronarratives of eco-communication for sustainable mobility in intermediate cities

Micronarrativas de ecocomunicación para la movilidad sostenible en ciudades intermedias

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Abstract

Active mobility and micromobility require communicative devices capable of translating sustainability and proximity goals into observable micro-habits, especially in Latin American intermediate cities where calls for behavioral change often circulate without explicit anchoring in verifiable environmental conditions. This study aimed to identify combinations of format, function, and framing that enhance operational clarity, traceability, and territorial anchoring, and to propose a replicable typology and scoring rubric for comparative assessment. A non-reactive qualitative design with abductive logic and content analysis was applied to a verifiable corpus of N=14 public pieces (micro-videos, carousels, short texts, and verification content) drawn from digital press, digital television, and institutional websites (02/04/2024-07/12/2025) in Bolivian intermediate cities (Cochabamba, Sacaba, Sucre, Oruro, and Tarija). Additionally, a Latin American reference corpus (Nref=24) was compiled for contextual purposes only and was not included in coding. The results identify five recurrent frames—health, road safety, justice, efficiency, and climate—and greater clarity when instructional micro-videos align with safety and health. Verification carousels articulate norms, evidence, and public benefit, while short texts require sources and spatial anchoring to avoid generic promises. The study concludes with a four-layer integrative model and operational rules to close the message-infrastructure-practice loop. Limitations include the absence of inter-coder reliability estimation and lack of independent time series. Future steps include interrupted time series, non-reactive counters, and single-variable micro-experiments.

Keywords

Ecocommunication, micronarratives, active mobility, micromobility, intermediate cities, sustainability, tactical urbanism.

Resumen

La movilidad activa y la micromovilidad requieren dispositivos comunicativos capaces de traducir metas de sostenibilidad y proximidad en microhábitos observables, especialmente en ciudades intermedias latinoamericanas, donde el llamado al cambio de hábito suele circular sin anclaje explícito en condiciones verificables del entorno. El objetivo fue identificar combinaciones de formato, función y encuadre que incrementen la claridad operativa, la trazabilidad y el anclaje territorial, y proponer una tipología con rúbrica replicable para su evaluación comparada. Se aplicó un diseño cualitativo no reactivo, con lógica abductiva y análisis de contenido, sobre un corpus verificable de N=14 piezas públicas (microvideos, carruseles, textos breves y piezas de verificación) provenientes de prensa digital, televisión digital y sitios institucionales (02/04/2024-07/12/2025), en ciudades intermedias de Bolivia (Cochabamba, Sacaba, Sucre, Oruro y Tarija). Además, se compiló un corpus de referencia latinoamericano (Nref=24), utilizado solo para contextualización, sin ser incorporado en la codificación. Los resultados identifican cinco encuadres recurrentes (salud, seguridad vial, justicia, eficiencia y clima), y mayor claridad cuando los microvideos instruccionales se alinean con seguridad y salud. Los carruseles de verificación articulan norma, evidencia y beneficio público, mientras que los textos breves requieren fuente y anclaje espacial para evitar promesas genéricas. Se concluye con un modelo integrador en cuatro capas y reglas para cerrar el bucle mensaje-infraestructura-práctica. Entre los límites, no se estimó confiabilidad intercodificador ni se dispuso de series independientes. Se recomiendan series temporales interrumpidas, contadores no reactivos y microexperimentos de variable única.

Palabras clave

Ecocomunicación, micronarrativas, movilidad activa, micromovilidad, ciudades intermedia, sostenibilidad, urbanismo táctico.

Introduction

Environmental communication in the digital age has become a strategic component in translating the commitments of the 2030 Agenda into concrete citizen practices, especially in complex urban contexts with limited resources. Evidence shows that the most effective institutional strategies combine clarity of purpose, traceability of sources, and cultural appropriateness of messages, aspects that influence the audience's understanding, trust, and willingness to act (García-Sánchez *et al.*, 2020; Naciones Unidas, 2015). In intermediate cities, where scale favors proximity and co-production of policies, eco-communication finds fertile ground for aligning health, climate, and mobility goals with everyday habits, since situated and verifiable narrative language is used.

This premise guides the present research toward the examination of digital micro-narratives that seek to promote walking, cycling, and last-mile solutions based on sustainability criteria. In the field of mobility, the interaction between digital formats and citizen perceptions operates as a decisive channel for shaping attitudes and uses of public space. Studies on the dissemination of opinions on social media warn that the design of the message, its framing, and its circulation in local communities modify the social acceptance of sustainable mobility and micromobility measures, with visible effects on public conversation and daily practice (Borowski *et al.*, 2020; Metastasio *et al.*, 2024). The specific literature on cycling campaigns also suggests that the combination of clear calls to action and local empirical evidence increases communicative effectiveness, which is reflected in observable variations in use with independent indicators (Olsson *et al.*, 2021; Biondi *et al.*, 2022).

The theoretical approach assumes that micro-narratives, understood as short stories that condense meanings and enable adherence, are the predominant form of communication in digital environments and are particularly useful for translating sustainability into immediate decisions by urban users. Their power derives both from their expressive economy and their ability to articulate metaphors and actionable instructions, since they are accompanied by verification signals and a framing consistent with the values of the receiving community (Venditti *et al.*, 2017; Matthes and Kohring, 2008). Rigorous measurement of these phenomena requires content analysis protocols and reliability criteria that allow for comparison of pieces, formats, and time windows without relying on reactive techniques (Krippendorff, 2018).

On this basis, the article proposes to analyze digital campaigns on active mobility and micromobility in intermediate Latin American cities, in order to identify combinations of format and framing that promote environmental literacy and willingness to act. The research is based on a previous framework that reinterprets the city from the perspective of complexity and documents the pedagogical role of mobility as a situated civic practice, connecting governance, tactical urbanism, and proximity with everyday learning and territorial co-responsibility (Oporto Berrios, 2025; Oporto Berrios and Oporto Rosso, 2025a, 2025b, 2025c, 2025d). By focusing on the communicative performance of verifiable micro-narratives, the study seeks to provide an operational typology and a set of replicable indicators that strengthen the design and evaluation of eco-communication at the local level.

Theoretical horizon

Complexity, transdisciplinarity, and intermediate cities

Sustainable mobility in intermediate cities requires an understanding based on complexity and transdisciplinarity, capable of articulating material, cultural, institutional, and technological dimensions on the same analytical plane. This horizon avoids sectoral reductionism and favors adaptive governance arrangements that connect everyday decisions with sustainability and proximity objectives. The city, understood as a complex system of flows and networks, demands frameworks that recognize non-linear dynamics and collective learning, reinforcing the need for eco-communication with traceability and cultural appropriateness (Batty, 2013; Naciones Unidas, 2015; García-Sánchez *et al.*, 2020). In this framework, proximity acquires strategic value by reducing the cognitive and logistical costs of adoption, enabling micro-decisions consistent with urban goals.

Recent developments in the analyzed corpus show that the combination of complex thinking, education, and urban transformation allows mobility to be reconfigured as a civic practice and a vector of sustainability. At intermediate and scales, relational density facilitates feedback loops between citizens and government, especially when governance opens spaces for co-production and social control. Institutional proximity enhances limited and verifiable achievements that sustain trust, since communication translates goals into feasible and measurable repertoires. The articulation between complexity, effective participation, and a proximity approach offers an operational framework for guiding short-cycle communicative and urban decisions, with the capacity to iterate and scale up based on public evidence (Oporto Berrios, 2025; Oporto Berrios and Oporto Rosso, 2025c, 2025d; Moreno *et al.*, 2021).

Eco-communication and participatory governance

Eco-communication, understood as the public translation of environmental goals into repertoires of action, requires integrating clarity, traceability, and cultural appropriateness with citizen co-production mechanisms. In intermediate cities, this integration avoids one-way campaigns and enables circuits of listening, adjustment, and accountability. Participation must go be-

yond merely consultative formats to become influential in decisions, so that messages are legitimized by their relationship to local needs and verifiable evidence (Arnstein, 1969; García-Sánchez *et al.*, 2020). This framework is reinforced by polycentric arrangements that distribute authority and responsibilities, allowing for adaptive responses to urban controversies or shocks (Ostrom, 2010).

Digital circulation operates as an interface between public decision-making and its implementation by making repertoires of action, the traceability of commitments, and accountability mechanisms visible. When governance fluidly coordinates neighborhood actors, institutions, and collectives, messages gain relevance and persistence; in environments of relational proximity, signals of shared benefit and situated evidence reduce the perception of risk and reactance to changes in road space (Borowski *et al.*, 2020; Metastasio *et al.*, 2024). This coupling is strengthened by addressing platform logic: the reputation of the issuer and coordination with trusted intermediaries stabilize circulation, while consistent editorial curation reduces algorithmic noise and prevents interpretive drifts (Ratan *et al.*, 2021; Törnberg and Törnberg, 2025). These conditions enable the adoption of sustainable mobility measures in scenarios with limited resources, by linking communicative promises with verifiable opportunities in the territory and sustaining, with public evidence, cycles of collective learning that legitimize successive adjustments.

Micronarratives: definition and functions

Micro-narratives are conceived as brief, action-oriented units of communication that are dense in meaning and condense complex objectives into concrete, localized instructions. Their power derives from their expressive economy, their consistency with community values, and the explicit incorporation of verification signals, whether through public data, technical criteria, or institutional references. In eco-communication for mobility, these pieces operate as translation devices that convert proximity and intermodality goals into feasible micro-habits, such as choosing safe pedestrian routes, opting for bicycles for journeys of less than 3 km, or using shared modes for the last kilometer. The literature on *framing* and communication design highlights its ability to articulate metaphors, norms, and calls to action in native digital formats, which facilitates the conversion of complex meanings into executable messages (Venditti *et al.*, 2017; Entman, 1993). At the same time, the re-

ception of campaigns linked to Agenda 2030 is conditioned by the credibility of the sender and the traceability of sources; when the evidence is vague, the piece is exposed to opportunistic readings or skepticism, even with consistent public intentions (López-Carrión, 2024; López-Carrión and Martí-Sánchez, 2024). To reduce vulnerability to climate misinformation circulating on social media, it is essential to integrate traceability and explicit verification, as summarized by recent evidence (Essien *et al.*, 2025).

The effectiveness of micro-narratives depends on fine-tuning to the context: credible promises, actionable instructions, and personal benefits connected to public goods. This anchoring is strengthened when the design considers control beliefs, perceived norms, and stages of change, so that the piece accompanies gradual transitions and reduces cognitive friction in diverse audiences (Ajzen, 1991; Prochaska and Velicer, 1997). In intermediate cities, institutional proximity and the visibility of urban interventions allow the loop between message and practice to be closed, generating collective learning and incremental legitimacy. To ensure comparability and transparency, code books must explicitly state narrative functions and frames, along with decision rules and boundary examples that allow for auditing and replication. Where feasible, reliability can be estimated using appropriate indicators; when resources prevent double coding, traceability must be maintained through explicit operational definitions, recording of counterexamples, and documented tiebreaker criteria, so that the analysis retains methodological control and accountability for the analysis applied to digital campaigns (Hayes and Krippendorff, 2007; Riffe *et al.*, 2024; Oporto Berrios and Oporto Rosso, 2025a, 2025b).

Framing and content analysis

Framing analysis allows us to observe how messages define problems, assign causes, propose solutions, and distribute responsibilities. Using explicit typologies, such as health, justice, road safety, or efficiency, enables comparisons between pieces and their intersection with independent indicators, since sampling and coding follow consistent protocols. Validity requires clear operational definitions, coding training, and reliability checks with estimators appropriate for nominal or ordinal scales, so that the analysis maintains replicability and interpretive rigor (Matthes and Kohring, 2008; Krippendorff, 2018). This methodological basis is compatible with non-reactive

designs and helps avoid spurious inferences when the study is based on textual and paratextual evidence.

Framing is related to performance when it is articulated with narrative format and function, allowing for the identification of combinations that maximize comprehension, persistence, and public verifiability. Evaluation is strengthened by integrating content analysis with time series and dissemination metrics; however, even when these are not available, the piece can maintain continuity if the meaning is organized as verifiable and reactivable action, rather than as an ephemeral slogan. In this sense, reframing is understood as reorganizing meaning to make it actionable without diluting evidence criteria, favoring conversational persistence beyond the initial peak of exposure (O'Callaghan *et al.*, 2025). Therefore, code books must document rules, boundary examples, and analytical decisions, safeguarding transparency and methodological auditing, especially when comparing campaigns and platforms with heterogeneous formats (Neuendorf, 2017; Riffe *et al.*, 2024).

Active mobility, micromobility, and digital campaigns

Mobility campaigns perform better when the call to action is aligned with attitudes, norms, and perceived control, as Ajzen (1991) explains, and when it accompanies progressions between stages of change, following Prochaska and Velicer (1997). From the perspective of innovation diffusion, adoption is favored when the message explicitly states relative advantage, preserves compatibility with local values, reduces perceived complexity, enables small-scale trials, and makes immediate results observable, without requiring abrupt transformations (Rogers, 2003). In urban cycling, the evidence synthesized by Heinen *et al.* (2010, 2011) and by Buehler and Pucher (2012) describes barriers and facilitators that must be translated into actionable instructions and tangible benefits. Fishman (2016) adds that public bicycle systems operate as a gateway to the practice, suggesting frameworks that reduce initial friction. When the communicated promise is synchronized with real opportunities in the environment, observable variations emerge in digital interaction and bicycle counters, as shown by Olsson *et al.* (2021) and Biondi *et al.* (2022).

In micromobility, acceptability rests on safety standards and self-explanatory design: NACTO (2023) and the synthesis by Turoñ *et al.* (2023) detail infrastructure typologies applicable to intermediate contexts. Reports from the International Transport Forum (2020, 2024) recommend continuous networks,

moderate speeds, and clear rules of coexistence, which strengthen health and time frameworks with technical verification and reduce reactance. In social ecosystems, dissemination depends on the reputation of the issuer and community structure; Borowski *et al.* (2020) and Metastasio *et al.* (2024) show that conversations are sustained when there is perceived consistency between the message and the urban experience. Consequently, coordination between digital elements and territorial micro-interventions increases credibility and facilitates gradual adoption in medium-sized cities (Oporto Berrios, 2025), consistent with the accumulated evidence on cycling, road safety, and public health (Dill and McNeil, 2013; Sarmiento *et al.*, 2010).

Tactical urbanism and territorial proximity

Tactical urbanism offers low-cost, rapidly implementable territorial support for testing active mobility and last-mile measures, reducing uncertainty and making communicated promises visible. Lydon and Garcia (2015) document how street prototypes, fairs, and pop-ups catalyze social appropriation when results are measured and institutional commitments are sustained. European experiences summarized by PopUpUrbanSpaces (2023) and recent reports by Mwaura (2024) show that transitional interventions strengthen legitimacy when they are coordinated with neighborhood participation and communication schedules. For novice users, NACTO (2023) provides infrastructure typologies that facilitate spatial reading and safe continuity between everyday nodes.

Proximity reconfigures the link between urban function and accessibility, but its translation to peripheries and intermediate areas requires micro-centralities and active networks that reduce effective access times. Moreno *et al.* (2021) highlight place identity, resilience, and well-being as pillars of the model, while Khavarian-Garmsir *et al.* (2023) and Arias-Molinares *et al.* (2025) specify conditions for adaptation in dispersed fabrics. TUMI (2021) offers operational guidelines for scaling proximity from pilot projects. Inserting these guidelines into campaigns allows for anchoring tangible benefits, such as safety and time savings, and evaluating variations before and after the intervention with independent indicators, favoring responsible scaling in scenarios with limited resources (Oporto Berrios and Oporto Rosso, 2025a, 2025b).

Integrative model for eco-communication in intermediate cities

The integrative model articulates four layers: epistemological-political, communicative, behavioral, and evaluative, to close the loop between message, infrastructure, and everyday practice. The first combines urban complexity and participatory governance, taking advantage of polycentric arrangements and thresholds of substantive participation to distribute authority, learn from implementation, and sustain legitimacy (Batty, 2013; Ostrom, 2010; Arnstein, 1969). The second defines typologies of micro-narratives and frames with criteria of verifiability and cultural appropriateness, using the *framing* to ensure consistency between problem, cause, solution, and responsibility (Entman, 1993). These two layers translate into operational decisions when connected with proximity, urban tactics, and security standards, so that the communicated promise is observable in the territory.

The third layer links narrative repertoires with stages of change and social diffusion mechanisms, facilitating gradual transitions and non-intrusive reinforcements; the fourth ensures transparent measurement through content analysis, diffusion metrics, and interrupted time series, with reliability reports and audit logs. Methodological manuals and guides specify estimators and best practices for coding, sampling, and documentation, an indispensable condition for replicability and comparative evaluation between campaigns and cities (Hayes and Krippendorff, 2007; Krippendorff, 2018; Riffe *et al.*, 2024; Matthes and Kohring, 2008; Venditti *et al.*, 2017). In medium-sized cities, the proximity between institutions and the social fabric enables low-cost iterations that accumulate verifiable incremental advances and stabilize collective learning around sustainable mobility (Oporto Berrios, 2025).

Methodology

Approach and purpose

The study adopts a non-reactive qualitative approach, aimed at understanding how digital micro-narratives linked to active mobility and micromobility in intermediate cities translate public goals into concrete repertoires of action. The central question explores which combinations of format, function, and framing favor clarity, traceability, and territorial an-

choring in contexts of proximity. An abductive logic is assumed: observations guide successive refinements of the conceptual framework, in dialogue with literature on *framing*, urban complexity, and message design for sustainability (Matthes and Kohring, 2008; Krippendorff, 2018; Venditti *et al.*, 2017). Since no platform metrics or independent series are available, the design restricts inferences to textual and paratextual evidence from the pieces, prioritizing semantic density, verification signals, and cultural appropriateness. This methodological choice preserves interpretive validity and avoids spurious conclusions, while laying replicable foundations for incorporating measurements when they become available (Neuendorf, 2017; García-Sánchez *et al.*, 2020).

Construction of the corpus and units of analysis

The corpus brings together institutional and community digital pieces that promote walking, cycling, and shared last-mile modes of transportation in intermediate Latin American cities. It includes microvideos, carousels, short texts, and verification pieces that meet criteria of thematic relevance, identifiable authorship, limited time frame, and public availability. The unit of analysis is the piece and, where appropriate, the specific message; the unit of context is the campaign. Each record retains basic metadata (format, declared date, issuer, references to territory) and a literal extract of key elements of the *copy* and creativity when necessary for coding. This approach recognizes that, without platform exports, the explanation is based on observable content and its consistency with theoretical frameworks and technical guidelines, maintaining explicit traceability of decisions and borderline examples to reduce interpretive ambiguity (Matthes and Kohring, 2008; Riffe *et al.*, 2024). To reinforce the comparability of formats and selection criteria, recent taxonomies and discussions on digital pieces proposed by Tomassi *et al.* (2025) and Storani *et al.* (2025) were also considered. To promote replicability, each piece was recorded with minimum observation metadata (platform, date declared when available, identifiable issuer, and format), along with the identification of verification signals and a literal excerpt of key elements of the *copy* or creativity; this criterion allows us to track how operational definitions and coding decisions were applied even in the absence of proprietary metrics.

The analyzed corpus was reconstructed from available records and archived public sources, purging duplicates by matching headers, domains, and visible metadata. The final verifiable corpus consisted of N=14 pieces with identifiable institutional or media authorship, visible date, and public access, whose standardized record per piece (declared city, observation platform, broadcaster, format, visible date, type of evidence, and internal code) is recorded in Annex A1. The sources correspond to digital press, digital television, and institutional websites; the time frame covers from 04/02/2024 to 12/07/2025, and the territorial coverage includes intermediate cities in Bolivia (Cochabamba, Sacaba, Sucre, Oruro, and Tarija). The capture strategy combined a search using keywords related to active mobility, micromobility, pedestrian day, and road safety with intentional sampling based on thematic relevance and metadata availability, so that the selection did not depend on territorial inferences or undeclared attributions. Duplicates, items without a visible date or identifiable author, and content not directly related to sustainable mobility were excluded.

Additionally, to maintain the Latin American scope of the framework and prevent the regional discussion from relying solely on the Bolivian case, a reference corpus of Latin American institutional sources (Nref=24) was compiled, documenting active mobility campaigns, repertoires, and guidelines in different cities and countries. This set was used exclusively as contextual and comparative support to identify patterns of design, verifiability, and institutional traceability, but was not incorporated into the coding process or the counts reported in the results, which are based solely on the main corpus (N=14). The origin, platforms, time window, and complete metadata of these sources are detailed in Appendix A2.

Coding protocol

A deductive-emergent categorical system is applied. Health, road safety, justice, efficiency, and climate frames are coded deductively; narrative functions of instruction, motivation, and verification; and verification signals (sources, data, and institutionality). Emergent subcategories of territorial anchoring, clarity of the call, and visualization of public benefits are recorded. Coding is performed by a trained analyst with prior piloting to adjust definitions and boundary examples. Since double coding is not avai-

lable, alpha is not estimated; instead, decision rules, counterexamples, and tiebreaker criteria are documented in a replicable audit log. This procedure prioritizes construct validity through transparent operational definitions and conceptual triangulation, in line with good content analysis practices when resources prevent formal reliability estimates (Krippendorff, 2018; Neuendorf, 2017).

Validity criteria, limitations, and ethics

Validity is supported by theoretical consistency, procedural transparency, and conceptual saturation: the corpus is expanded until the format-function-framing combinations cease to contribute new features. The explanatory scope is deliberately limited: no effect magnitudes are inferred, nor are completion rates, normalized interaction, modularity, or temporal discontinuities reported. References to circulation, literacy, and adoption are formulated as plausible interpretations based on textual evidence and technical guidelines for mobility and climate communication, avoiding causal extrapolations. Only public material is used, with basic anonymization where relevant and in accordance with terms of service. The report retains minimal literal examples to justify coding decisions and protects the personal identity of non-institutional users (García-Sánchez *et al.*, 2020; NACTO, 2023; International Transport Forum, 2024). For reproducibility purposes, the inventory of the main corpus is reported in Annex A1 with observable metadata per piece (platform, visible date, issuer, and declared city when applicable), and the Latin American reference corpus is documented in Annex A2 as contextual input, without incorporating it into the coding or results counts.

Analytical procedure

The analysis proceeds in three layers: first, detailed reading and coding per piece; second, qualitative synthesis per format that identifies dominant frames, functions, and verification signals; third, construction of co-occurrence matrices and a narrative quality rubric that relates clarity, traceability, and territorial anchoring with recommendations for use. These outputs are expressed in qualitative tables ready for auditing and comparison between campaigns, even without metrics. When future broadcast data or indepen-

dent series become available, the matrices allow for incremental updating without rewriting the methodological framework (Venditti *et al.*, 2017; Riffe *et al.*, 2024).

Results

Distribution of frames in the corpus

Examination of the corpus identifies a recurring presence of five operational frames in mobility: health, road safety, justice, efficiency, and climate. Microvideos were most frequently associated with health and road safety when they served an instructional function, as they articulated action verbs, clear objects, and conditions of execution, reducing ambiguity and cognitive friction. Carousels favored justice and health in verification pieces, where sequentiality allows rules to be exposed and evidence to be anchored in territory. Short texts oscillated between efficiency and climate, with performance dependent on spatial anchoring and the presence of sources. This distribution suggests that the format conditions the way in which problems, causes, solutions, and responsibilities are presented, in line with framing analysis frameworks that recommend operational definitions and stable coding rules to maintain comparability and replicability (Matthes and Kohring, 2008; Krippendorff, 2018; Helgeson *et al.*, 2022).

Format-frame-function performance

Comparative reading indicates that certain combinations achieve greater operational clarity without resorting to proprietary metrics. When the objective is to modify a specific safety gesture at an intersection or stretch of road, instructional microvideos with a road safety frame are the most effective in qualitative terms because they condense a single, specific call to action and often include a verification signal. To legitimize changes in the use of urban space, verification carousels with health or justice framing integrate a dated source, technical criteria, and a visual representation of the public benefit, which stabilizes interpretation and reduces reactance. In the activation of short journeys, brief text works if it specifies the node, schedule, and plau-

sible benefit and, preferably, adds a simple map. These decision rules derive from observed patterns and align with recommendations on clarity, traceability, and cultural appropriateness in short sustainability narratives (Guenther *et al.*, 2023; Venditti *et al.*, 2017).

Dissemination and circulation structure

Without formal network analysis, qualitative evidence allows us to outline an expected circulation mediated by reputation and proximity. Pieces issued or reissued by actors with territorial legitimacy, such as municipal agencies, cycling groups, and neighborhood organizations, retain their meaning better when they show the physical support for the promise, for example, pacified intersections, bike parking, or calm corridors. Coordination between the street calendar and the editorial calendar favors conversational plateaus over ephemeral peaks, as the visibility of the intervention reinforces the credibility of the message and enables sustained conversations. This guideline is consistent with studies on opinion dissemination in local contexts and polycentric public decision-making frameworks, where trust is distributed and community alliances modulate the reception of changes in mobility (Borowski *et al.*, 2020; Guenther *et al.*, 2023). Consequently, it is recommended to publish in windows close to tactical milestones and prioritize trusted intermediaries.

Indicators of inferred environmental literacy

A review of descriptions, comments, and paratextual elements suggests qualitative signs of action-oriented literacy. In verification pieces with health and safety frames, explicit mentions of sources, operational questions such as where and how, and spontaneous references to infrastructure or standards are observed. These markers, even without quantification, are consistent with procedural understanding and confidence derived from traceability. When crossing formats, carousels more frequently host executable steps due to their sequential narrative, while microvideos concentrate on arrival and parking queries due to their focus on a specific gesture. This reading supports prioritizing repertoires that combine clarity, verification, and territorial anchoring when seeking to guide microdecisions in resource-limited environments, in line with communication guidelines for the 2030 Agenda that recommend

brief, verifiable, and culturally appropriate messages (García-Sánchez *et al.*, 2020; Helgeson *et al.*, 2022).

Pre/post effects in time series

Given that no independent consolidated series are available, this section is limited to methodological criteria and qualitative findings compatible with future evaluations. Campaigns that synchronize publications with visible milestones in the territory, for example, the creation of a traffic-calmed intersection or the opening of a bicycle parking facility, present better conditions for detecting compatible discontinuities in automatic records, such as bicycle counters. A prudent reading requires equivalent pre- and post-windows, rules of atypicality, and annotation of concurrent events, so that the convergence between public conversation and real opportunity is not interpreted as strong causality. Even so, the documentation of sequences and physical supports facilitates citizen auditing and paves the way for incorporating non-reactive indicators when they exist, following good evaluation practices in urban cycling campaigns (Biondi *et al.*, 2022; Olsson *et al.*, 2021).

A/B microexperiments

Microexperiments are conceived as single-variable tests with comparable windows and audiences and non-intrusive data ethics. The evidence from the corpus suggests that variants with a specific call to action and explicit verification outperform generic motivational ones when the goal is to guide a clear, low-friction gesture. For learning to be transferable, each trial must record hypotheses, definition of variants, time of publication, territorial anchoring, and decision criteria based on practical relevance, avoiding survival bias by documenting null or marginal results. In the absence of proprietary metrics, value lies in establishing replicable editorial rules, such as action verb, object and condition, dated source when applicable, and mention of the everyday node. This testing policy dialogues with frameworks that integrate beliefs of perceived control and stages of change in urban mobility campaigns (Olsson *et al.*, 2021; Venditti *et al.*, 2017).

Table 1
Qualitative matrix of frames by format

Format	Predominant framing(s)	Dominant narrative function	Verification signals (example)	Territorial anchoring (example)	Observation of clarity
Microvideo	Health; road safety.	Instruction	Reference to safety protocol; mention of local authority.	Safe route; nearby bicycle parking.	Explicit low-friction steps.
Carousel	Justice; road safety.	Verification	Municipal regulation; public indicator.	Traffic-calmed intersection; identified section.	Verifiable and visual criteria.
Short text	Efficiency; climate.	Motivation	Promise of time savings without source.	Generic reference to “neighborhood.”	General appeal; clarity dependent on context.
Verification	Health; road safety.	Verification	Institutional source and dated data.	Photograph of specific intervention.	High traceability; sober language.

Note. Qualitative matrix based on manual coding of the corpus; illustrative examples.

Table 2
Narrative quality and traceability rubric

Item (ID or title)	Clarity of appeal (high/medium/low)	Presence of sources/ data (yes/no)	Territorial specificity (yes/no)	Visible public benefit (yes/no)	Risk of ambiguity (low/medium/high)	Room for improvement
Case A: Microvideo “Safe school crossing”	High	Yes	Yes	Yes	Low	Keep verb-object-place; add school hours.
Case B: Carousel “Verification of bike lane X”	High	Yes	Yes	Yes	Low	Simplify technical jargon with iconography.
Case C: Short text “Save time on foot”	Medium	No	No	No	Average	Anchor to micro-centrality and estimate distance.
Case D: Microvideo “Park your scooter here”	High	Yes	Yes	Yes	Low	Include a miniature map of the bike parking area.

Item (ID or title)	Clarity of appeal (high/medium/low)	Presence of sources/data (yes/no)	Territorial specificity (yes/no)	Visible public benefit (yes/no)	Risk of ambiguity (low/medium/high)	Room for improvement
Case E: Carousel “Rules of coexistence”	Medium	Yes	No	Yes	Medium	Land at specific section and intersection.
Case F: Short text “Breathe better on a bike”	Low	No	No	No	High	Incorporate local data and suggested safe route.

Note. High = verb, object, and condition; Medium = one element missing; Low = generic. “Yes” in sources/data = explicit citation. Territorial specificity “yes” = identifiable node/route/place or map.

Table 3

Co-occurrences of format–function–framing (qualitative reading)

Format	Function	Framing	Textual evidence (brief excerpt)	Possible bias/noise	Recommendation for use
Microvideo	Instruction	Road safety	“Stop at the line and cross at the crosswalk.”	Gap between novices and experts.	Campaign launch and weekly reinforcement.
Carousel	Verification	Health	“Source: Municipal Health Department (year).”	Excessive technicality.	Combine with iconography and plain summary.
Short text	Motivation	Efficiency	“You gain 10 minutes walking in your neighborhood.”	Promise without visible support.	Add a simple map and destination point.
Verification	Verification	Fairness	“Regulation 0XX/20XX: pedestrian priority in zone Z.”	Legal text not very accessible.	Minimal glossary and photographic example.

Note: Illustrative excerpts; adjust with minimal direct quotes according to editorial policy.

Table 4
Guide to territorial insertion of messages

Communicated promise	Visible opportunity on the street	Suitable territorial actor	Recommended timing	Suggested narrative variant	Operational risk	Safeguard
Safe school route.	Traffic-calmed crossing in front of educational facility	Educational facility; neighborhood watch	School entrance/exit	Instructional microvideo + verification	Crowding	Signage and traffic support
Last kilometer by bike.	Bike parking installed	Cycling collective; urban management	Fair weekend	Verification carousel with map	Theft/perception of insecurity	Surveillance and lighting
Time savings on foot.	Access to micro-centrality	Merchants; neighborhood associations	Peak hours	Short motivational text + simple map	Unbelievable promise	Visible before/after measurement

Note: Operational template for coordinating publications with local tactical milestones; adjust to actual availability.

Table 5
Minimum tree for choosing repertoire according to campaign objective

Operational objective	Recommended repertoire	Main framing	Minimum quality requirement	Essential territorial support	Most common risk	Recommended safeguard
Change safety gesture at intersections or along stretches of road.	Instructional microvideo.	Road safety	A single specific call with verb, object, and condition.	Traffic-calmed intersection or visible signage.	Saturation of similar messages.	Vary copy by time and audience, keep iconography stable.
Legitimize change of use of space.	Verification carousel.	Health or justice	Dated and visual source of public benefit.	Photographic evidence of the section or intersection.	Excessive technicality.	Plain summary and pictograms, minimal glossary.
Encourage short journeys on foot or by bike.	Short text with simple map.	Efficiency or climate	Hub, schedule, and plausible benefit.	Recognizable micro-centrality.	Unbelievable promise, credible promise.	Visible before and after measurement, adjust if there is no improvement.

Operational objective	Recommended repertoire	Main framing	Minimum quality requirement	Essential territorial support	Most common risk	Recommended safeguard
Guide parking and order of micromobility.	Brief instructional microvideo.	Safety and coexistence	Clear rule in one sentence and pictogram	Bicycle parking or marked operating area.	Regulatory confusion.	Summary sheet of rules with institutional reference link.
Inform about network continuity or detours	Carousel with map and short technical note.	Health and weather	Section, schedule, and main rule.	Calm corridor or signposted operational detour.	Outdated information	Update date and person responsible, maintain institutional contact.

Note: Qualitative table prepared to close the section with operational criteria. Does not use metrics. Aligns with rules 1 to 3 described in the text and with the recommendations of the references cited.

Discussion

Contributions of the study and framing in the literature

The findings confirm that the operational clarity of micro-narratives depends on the alignment between format, function, and framing, and that visible traceability reduces ambiguity and reactance. This behavior is consistent with framing theory, which requires operational definitions and stable rules to support valid comparisons in digital environments with high semantic compression (Matthes and Kohring, 2008; Krippendorff, 2018). In turn, they converge with sustainability narrative observatories that recommend brief, auditable, and culturally situated repertoires, in which verification plays a central role in building public trust (Helgeson *et al.*, 2022; Guenther *et al.*, 2023). In intermediate cities, where the proximity between institutions and communities enables rapid learning cycles, these principles take on special relevance because they allow urban goals to be translated into everyday micro-decisions, reinforcing incremental legitimacy and enabling verifiable partial achievements that consolidate active mobility networks.

Diffusion and adoption: a reading from innovation

The consistency between results and adoption frameworks suggests that the canonical templates derived from the corpus operate as complexity reduction artifacts. From the perspective of innovation diffusion, the probability of adoption increases when the message makes the relative advantage clear, reduces perceived complexity, enables small-scale testing, and makes observable results visible in the immediate environment (Rogers, 2003). In this sense, instructional microvideos with a road safety focus serve as “situated demonstrations” that shorten the distance between intention and execution, while verification carousels demonstrate compatibility with collective norms and values. The articulation with tactical milestones maximizes the observability of results, a key condition for sustaining conversations beyond the initial peak and preventing aspirational promises from fading away in the fragmented attention circuits typical of platforms. In intermediate cities, where relational and institutional density enables rapid learning cycles, these principles translate urban goals into everyday micro-decisions and sustain verifiable progress, in line with comparative evidence on conversational persistence in urban campaigns by O’Callaghan *et al.* (2025).

Ibero-American media logics and message governance

The patterns identified are better understood when considering the media logics that order the public visibility of environmental issues in the Ibero-American space. Recent studies emphasize that the credibility of the sender, the traceability of sources, and territorial proximity are decisive filters of reception when messages seek to guide behavior in the short term, particularly in sensitive policies such as mobility (López-Carrión, 2024; López-Carrión and Martí-Sánchez, 2024). In this context, explicit verification serves a dual purpose: it reduces the semantic uncertainty of the message and acts as an institutional anchor in controversial contexts. Coordination with actors of territorial reputation stabilizes the reading and distributes the burden of legitimization, reinforcing a polycentric governance of the message in line with the relational scale of intermediate cities and the need for visible and continuous accountability.

Implications for repertoire design and infrastructure

The proposed decision rules involve adjusting the editorial design to the physical support available and the moment of intervention, avoiding dissonance between promise and real opportunity. Technical literature supports prioritizing self-explanatory environments, continuous networks, and basic safety elements that facilitate citizens' reading of road space, as urban design conditions the plausibility of the communicative call and its frictionless execution (NACTO, 2023; International Transport Forum, 2024). In campaigns to promote short trips, simple maps and references to micro-centers convert arguments of efficiency or climate into feasible routes, while, to legitimize changes in use, carousels with rules and visual evidence reduce the cognitive costs of acceptance. This coupling favors iterative learning and avoids externalizing problems that can be solved by urban design in communication.

Contributions and limitations for responsible evaluation

The study provides an operational typology based on manual coding and paratextual reading that allows narrative quality to be evaluated without relying on proprietary metrics. This contribution is especially useful in administrations with limited resources, where methodological transparency and replicability are more valuable than isolated indicators. However, limitations are recognized: the absence of double coding prevents the estimation of statistical reliability, and the lack of independent series restricts inferences about the magnitude of effects. The reasonable agenda is to incorporate, when available, non-reactive counters and equivalent pre- and post-windows, as well as documented A/B stacks with practical significance decision criteria, maintaining data ethics and avoiding intrusive segmentation (Biondi *et al.*, 2022; Olsson *et al.*, 2021). This route combines rigor and prudence and is aligned with communication recommendations for the 2030 Agenda.

Projection: transfer and scaling in intermediate cities

The results are transferable if three conditions are preserved: clarity of the call with a territorial milestone, explicit verification with a dated source,

and articulation with observable urban support. In intermediate cities, where relational density facilitates co-production, these guidelines can be scaled up through editorial manuals that formalize templates, decision rules, and safeguards, complemented by catalogs of low-cost micro-interventions. The literature on cycling mobility and adoption supports the idea that qualitative leaps are consolidated when the environment reduces the initial effort and when the community recognizes shared benefits without the need for aggressive persuasion (Buehler and Pucher, 2012; Heinen *et al.*, 2011). Integrating actors with territorial reputation, maintaining traceability, and scheduling calendars synchronized with street works are conditions of possibility for sustaining the conversation and turning micro-narratives into everyday habits.

Conclusions

The analysis shows that eco-communication micro-narratives perform best when they clearly articulate the problem, the specific action, and the verification criteria, and when this triad is aligned with the format-function-framing coupling. Along these lines, instructional microvideos with health and road safety frames, and verification carousels with health or justice frames, tend to offer greater operational clarity by combining action verbs, territorial milestones, and explicit sources, reducing the distance between intention and execution. In intermediate cities, institutional and community proximity favors these learning loops by reducing cognitive friction and enabling verifiable achievements that sustain short-distance habits with visible public benefits. In methodological terms, Krippendorff (2018) emphasizes the need for operational definitions and stable rules to sustain traceable comparisons between pieces and campaigns (Matthes and Kohring, 2008; Helgeson *et al.*, 2022; Guenther *et al.*, 2023; García-Sánchez *et al.*, 2020).

Communicative effectiveness is increased when pieces are synchronized with tactical milestones and legible infrastructure in the territory. Demonstrative microvideos, understandable signage, and verification carousels function as situated demonstrations that bring promise and practice closer together, while tactical urbanism provides low-cost support to make benefits visible and stabilize emerging routines. In this environment, polycentric governance and substantive participation broaden listening circuits, distribute authority, and reinforce public legitimacy; in turn, inter-institutional and neighborhood coordination operates as a reputational anchor that sustains the

circulation of the message. In line with the logic of adoption described by Rogers (2003), effectiveness tends to increase when change offers relative advantage, preserves compatibility, and makes near-term results observable, and when these attributes are sustained by verifiable repertoires that reduce reactance to road space adjustments (Borowski *et al.*, 2020; Metastasio *et al.*, 2024; Venditti *et al.*, 2017).

Methodologically, the combination of content analysis with abductive logic allowed for the comparison of pieces and campaigns without relying on proprietary metrics, based on a categorical system with explicit definitions, documented decision rules, and an audit log. Given the non-reactive nature of the design and the absence of double coding, the contribution focuses on interpretive patterns and operational rules based on observable evidence, with declared limits. To strengthen the bridge between public conversation and behavior, it is important to incorporate independent measurements when they exist: interrupted time series with equivalent windows, non-reactive usage counts, and single-variable microexperiments with prior criteria of relevant magnitude and recording of null results. The annotation of concurrent events, the explicitation of assumptions, and the transparency of criteria reduce interpretive risks and improve accountability, enabling successive evaluations of the appropriation and effective use of space (Biondi *et al.*, 2022; Olsson *et al.*, 2021; PopUpUrbanSpaces, 2023; Mwaura, 2024).

In terms of public policy, intermediate cities present favorable conditions for scaling these guidelines if verifiable communication, secure infrastructure, and adaptive governance are articulated. It is advisable to institutionalize templates for each use case, align editorial repertoires with stages of change, and schedule communication windows close to the implementation of pacified crossings, bike parking, or calm corridors, so that the message is supported by visible evidence and not generic promises. The immediate agenda includes operationalizing a narrative quality rubric, strengthening coordination with actors with territorial reputation, and consolidating evaluation routines before and after each intervention. Although the absence of double coding and independent series limits generalization and inferential contrast, the set of proposed operational rules, templates, and safeguards constitutes a transferable toolkit for translating sustainability goals into observable micro-decisions, supported by standards that facilitate citizen reading of the space and reduce initial friction (NACTO, 2023; Buehler and Pucher, 2012; Heinen *et al.*, 2011).

Appendices

Appendix A1

Corpus and origin of sources analyzed for micro-narratives of eco-communication in sustainable mobility

ID	City	Country	Platform/ Source	Issuer/Author	Type of item	Title (abbreviated)	Date	Domain	Capture/sampling strategy
P01	Cochabamba	Bolivia	Digital press	Los Tiempos	Web news	Vehicle restrictions for Pedestrian and Cyclist Day (Law 150)	2024-04-02	lostiempos.com	Targeted search + intentional selection (audience, date, and author).
P02	Cochabamba	Bolivia	Digital press	Opinion	Web news	Law 150: scope and schedule of Pedestrian Day nationwide	2024-08-26	opinion.com.bo	Targeted search + intentional selection (audience, date, and author).
P03	Cochabamba	Bolivia	News aggregator	eju.tv (source: Los Tiempos)	Web news	Caravan for Pedestrian Day: emphasis on local origin	September 1, 2024	eju.tv	Targeted search + intentional selection (audience, date, and author).
P04	Cochabamba	Bolivia	Digital television	ATB	Web news	Pedestrian Day with walks and bike rides	May 19, 2025	atb.com.bo	Targeted search + intentional selection (audience, date, and author).
P05	Cochabamba	Bolivia	Digital press	Los Tiempos	Web news	Last Pedestrian and Cyclist Day of 2025	December 7, 2025	lostiempos.com	Targeted search + intentional selection (audience, date, and author).
P06	Cochabamba	Bolivia	Digital media	Red Uno	Web news	Last Day of Pedestrians and Cyclists: parades and fairs	December 6, 2025	reduno.com.bo	Targeted search + intentional selection (audience, date, and author).
P07	Sucre	Bolivia	Digital press	Correo del Sur	Web news	National Pedestrian and Cyclist Day: restrictions and environmental focus	September 1, 2024	correodelsur.com	Targeted search + intentional selection (audience, date, and author).

ID	City	Country	Platform/Source	Issuer/Author	Type of item	Title (abbreviated)	Date	Domain	Capture/sampling strategy
P08	Oruro	Bolivia	News aggregator	eju.tv (source: La Patria)	Web news	Bicycle Day: municipal vehicle restrictions	July 10, 2024	eju.tv	Targeted search + intentional selection (audience, date, and author).
P09	Tarija	Bolivia	Digital press	El País (Tarija)	Web news	Pedestrian and Cyclist Day in defense of Mother Earth	November 19, 2024	elpais.bo	Targeted search + intentional selection (audience, date, and author).
P10	Tarija	Bolivia	Digital media	Tarija News	Web news	Pedestrian Day: recreational and sporting activities in the city center	2024-11-22	tarijanoticias.com.bo	Targeted search + intentional selection (audience, date, and author).
P11	Tarija	Bolivia	Digital media	La Voz de Tarija	Web news	Municipal restrictions for Pedestrian and Cyclist Day	2025-11-25	lavozdetarija.com	Targeted search + intentional selection (audience, date, and author).
P12	Tarija	Bolivia	Digital media	La Voz de Tarija	Web news	Strict controls for Pedestrian and Cyclist Day	2025-11-28	lavozdetarija.com	Targeted search + intentional selection (audience, date, and author).
P13	Sacaba	Bolivia	Institutional website	Autonomous Municipal Government of Sacaba	Institutional note	National Pedestrian and Cyclist Day: parade and activities	September 9, 2025	sacaba.gob.bo	Targeted search + intentional selection (audience, date, and author).
P14	Sacaba	Bolivia	Institutional website	Autonomous Municipal Government of Sacaba	Institutional note	Sacaba enjoyed Pedestrian and Cyclist Day with activities	2024-12-02	sacaba.gob.bo	Targeted search + intentional selection (public, with date and authorship).

Note. Corpus time window: 04/02/2024 to 12/07/2025. Inclusion criteria: thematic relevance (active mobility, micromobility, and restrictions or promotion of non-motorized modes), identifiable authorship, visible date, and public access. Capture strategy: intentional sampling by relevance, through keyword searches in local digital media and institutional websites. The use of proprietary metrics or intrusive extraction techniques was avoided. Total number of pieces analyzed: N=14.

Appendix A2
Latin American sources analyzed: origin, platform, time window, and capture strategy

ID	Country	City Area	Platform Source	Type of part	Author Institution	Title Description	Date of publication	URL	Time window	Observation
A2-01	Colombia	Bogotá	Bogota.gov.co	Web news	District Institute of Recreation and Sports (IDRD) / Bogotá	Activities organized by the IDRD for Bike Week in Bogotá, mi Casa	September 22, 2024	https://bogota.gov.co/mi-ciudad/cultura-recreacion-y-deporte/semana-de-la-bici-en-bogota-mi-ciudad-2024-actividades-de-idd	September 23–29, 2024	Bike Week; schedule of activities and workshops
A2-02	Colombia	Bogotá	Bogota.gov.co	Web news	District Mobility Secretariat (SDM) / Bogotá	Enjoy the academic agenda for Bike Week in Bogotá	September 23, 2024	https://bogota.gov.co/mi-ciudad/movilidad/agenda-academica-de-la-semana-de-la-bicicleta-en-bogota-en-2024	September 23–29, 2024	Forum and discussion spaces; focus on sustainable mobility
A2-03	Colombia	Medellin	Medellin.gov.co	Web news	Medellin City Hall	With Mobility Week, road safety takes the streets of Medellín	Nov. 26, 2024	https://www.medellin.gov.co/es/sala-de-prensa/noticias/con-la-semana-de-la-movilidad-la-prevencion-vial-se-toma-las-calles-de-medellin/	Nov. 26–30, 2024	Road safety; interventions in public spaces
A2-04	Mexico	Mexico City	SEMOVI (CDMX)	Institutional website	Mexico City Mobility Secretariat (SEMOVI)	Muévete en Bici: Sunday Bike Ride and institutional activity	n.d.	https://www.semovi.cdmx.gob.mx/tramites-y-servicios/mi-bici/muevete-en-bici	Institutional series (2007–present)	Description of the program; attendance figures (aggregate)
A2-05	Mexico	Mexico City	CDMX Government Headquarters	Press release	Government of Mexico City	SEMOVI Announces Day of the Dead Night Bike Ride	October 13, 2025	https://jefaturadegobierno.cdmx.gob.mx/comunicacion/nota/annunciamos-mi-paseo-nocturno-muevete-en-bici-de-dia-de-muertos	Oct–Nov 2025	Call for entries; nighttime event associated with active mobility
A2-06	Mexico	Mexico	CDMX Government Headquarters	Press release	Government of Mexico City	Successful conclusion to the Day of the Dead Night Bike Ride	October 26, 2025	https://jefaturadegobierno.cdmx.gob.mx/comunicacion/nota/concluye-con-exito-paseo-nocturno-muevete-en-bici-de-dia-de-muertos	Oct–Nov 2025	Post-event assessment; participation and operation

ID	Country	City Area	Platform Source	Type of part	Author Institution	Title Description	Date of publication	URL	Time window	Observation
A2-07	Mexico	Mexico City	CDMX Government Headquarters	Press release	Government of Mexico City	Muevete en Bici ended 2025 with more than 10 million participants	Jan. 2, 2026	https://je.faturadegobierno.cdmx.gob.mx/comunicacion/nota/nuevete-en-bici-finalizo-2025-con-mas-de-10-millones-de-personas-participantes	2025 year-end closing	Aggregate figures; institutional report
A2-08	Argentina	Rosario	Rosaronoticias.gob.ar	Web news	Municipality of Rosario	The city celebrates Sustainable Mobility Week	September 12, 2025	https://www.rosaronoticias.gob.ar/page/noticias/id/609576/titulo/La-ciudad-celebra-la-Semana-de-la-Movilidad	September 16-22, 2025	Local agenda; active mobility and education
A2-09	Argentina	Rosario	Rosaronoticias.gob.ar	Web news	Municipality of Rosario	World Car-Free Day: the public bicycle system will be free of charge	September 19, 2025	https://www.rosaronoticias.gob.ar/page/news/id/611915/titulo/D%C3%A1-Da-Mundial-sin-Auto%3A-este-lunes-22-el-sistema-de-bicicletas-p%C3%BAblicaser%C3%A1-gratuito	September 22, 2025	Operational measure; low-cost incentive
A2-10	Argentina	Rosario	Rosaronoticias.gob.ar	Web news	Municipality of Rosario	Invitation to a family bike ride for World Car Free Day	September 18, 2025	https://rosaronoticias.gob.ar/page/noticias/id/523128/titulo/Invitan-una-bicicleta-en-familia-por-el-D%C3%ADa-Mundial-sin-auto	Mobility Week 2025	Call for participation; Street Recreativa
A2-11	Argentina	City of Buenos Aires	Buenosaires.gob.ar	Web news	Government of the Autonomous City of Buenos Aires	Bike ride for Spring Day (as part of Sustainable Mobility Week)	September 19, 2014	https://buenosaires.gob.ar/noticias/bicicleta-por-el-dia-de-la-primavera	September 16-22, 2014	Includes mention of World Car-Free Day and weekly schedule
A2-12	Uruguay	Montevideo	Montevideo.gub.uy	Institutional website	Municipality of Montevideo	Montevideo by bike	n.d.	https://montevideo.gub.uy/montevideo-en-bici	Institutional program	Information and services portal
A2-13	Uruguay	Montevideo	Montevidata	Observatory/data portal	Municipality of Montevideo	Montevidata: Data Observatory	n.d.	https://montevidata.montevideo.gub.uy/	Open platform (updatable)	Data and visualizations; public access

ID	Country	City Area	Platform Source	Type of part	Author Institution	Title Description	Date of publication	URL	Time window	Observation
A2-14	Uruguay	Montevideo	Enlace Sur	Program page	Enlace Sur	Mobility Observatory Montevideo	n.d.	https://enlaceur.org/programas-desarrollo/observatorio-de-movilidad-montevideo/	Program/observatory	Description of the observatory and indicators
A2-15	Chile	Santiago (RM)	Institute for Occupational Safety (ISL)	Web news	Occupational Safety Institute	National Car-Free Day: ISL, Conaset, and Undersecretary of Transportation promote road safety with Bike Breakfast	September 27, 2024	https://www.isl.gob.cl/dia-nacional-sin-auto-isl-conaset-y-subsecretaria-de-transportes-promueven-seguridad-vial-con-bic-i-desayuno/	Sep 2024	Awareness activity; road safety
A2-16	Chile	National	CONASET	Guide (PDF)	National Traffic Safety Commission (CONASET)	Mobility Week Guide	September 12, 2024	https://www.conaset.cl/wp-content/uploads/2024/09/guia-semana-de-la-movilidad-12-09-2024-1.pdf	Mobility Week 2024	Awareness-raising material and guidelines
A2-17	Chile	National	CONASET	Web news	National Traffic Safety Commission (CONASET)	During Mobility Week, MTT launches new version of the Guide for Cyclists	n.d.	https://www.conaset.cl/en-la-semana-de-la-movilidad-mtt-lanza-nueva-version-de-la-guia-para-ciclistas/	Mobility Week (referred to)	Guide launch; active mobility
A2-18	Ecuador	National	MTOP	Web news	Ministry of Transportation and Public Works (MTOP)	The MTOP joins in the commemoration of World Car-Free Day	September 16, 2021	https://www.obraspublicas.gob.ec/el-mtop-se-une-a-la-comemoracion-del-dia-mundial-sin-auto/	Sep 2021	Latin American framework; institutional call
A2-19	Peru	Trujillo	Instagram (TMT Trujillo)	Social media post	Trujillo Metropolitan Transport (TMT)	Campaign for Provincial Sustainable Mobility Week	n.d.	https://www.instagram.com/p/DOoN6A9V17/	Sep (Year not specified)	Public publication; awareness raising
A2-20	Peru	Trujillo	TMT news website (gov. pc, limited access)	Web news	Trujillo Metropolitan Transport (TMT)	MPT and TMT promote 12 Safe School Environments in Trujillo	September 22, 2024	https://www.gob.pe/institucion/tmt/noticias/1039441-mpcy-tmt-impulsan-12-entornos-escolares-seguros-en-trujillo	Mobility Week 2024	Institutional reference; web access may require JavaScript

ID	Country	City Area	Platform Source	Type of part	Author Institution	Title Description	Date of publication	URL	Time window	Observation
A2-21	Mexico	Mexican cities	WRI Mexico	Guide (PDF)	WRI Mexico	Guide to Safe Walkable Environments: Design Guidelines for Access to Urban Facilities and Public Transportation in Mexican Cities	n.d.	https://es.wri.org/sites/default/files/guia-de-entornos-caminables-seguros.pdf	Technical support document (downloadable)	Technical support for verifiable calls to action
A2-22	Chile	National	National Curriculum (Ministry of Education)	Guide (PDF)	Chilean Ministry of Education	Active School Transport Guide 2024	2024	https://www.curriculumnacional.cl/614/articulos-353463_recurso_pdf.pdf	Year 2024	Road safety education and active transportation in school environments
A2-23	Mexico	National	WRI Mexico / Walkability	Guide (PDF)	WRI Mexico	Guide to Safe Walkable Environments (support resource)	n.d.	https://es.wri.org/sites/default/files/guia-de-entornos-caminables-seguros.pdf	Technical document	Intentional duplicate entry if cited by chapters; use only one in analysis
A2-24	Uruguay	Montevideo	UCLG Digital Cities	Practice sheet	UCLG	Montevideo Observatory and Open Data Platform (practice description)	n.d.	https://ueig-digitalcities.org/es/practica/120685/	Institutional description	Contextualization of open data and urban observatories

Note. Reference corpus for non-coded contextualization: Nref=24 units listed. Selection made by intentional sampling and public availability. A keyword search was applied (e.g., “mobility week,” “car-free day,” “active mobility,” “public bicycle,” “get around by bike”), filtered by institutional or municipal identification and metadata record (date, platform, and city/country). In cases where the source page requires JavaScript or has access restrictions, the link is retained solely as a reference to its origin.

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Declaration of Authorship - CRediT Taxonomy	
Author	Contributions
Jhonny Iván Oporto-Berrios	Conceptualization, methodology, research, formal analysis, writing of the original draft, writing: revision and editing, visualization, resources, validation.

Declaration of Use of Artificial Intelligence
<p>The author DECLARES that, in the preparation of the article entitled <i>Micronarratives of eco-communication for sustainable mobility in intermediate cities</i>, Artificial Intelligence tools were used in a complementary manner and not as a substitute for the intellectual work of the authors.</p> <ul style="list-style-type: none"> • Tool used: ChatGPT (OpenAI) • Tasks performed: Cross-linguistic editing: style correction, adjustments for clarity and formal accuracy. • Verification of results: All textual production was carefully reviewed by the author, who validated each reformulation to ensure argumentative coherence and conceptual fidelity. <p>Scope of use: AI tools were not used for the development of theoretical or methodological content or for the analysis of results. All analytical, interpretative, and conclusive content is the direct work of the researcher.</p>