GEA21, S.L.

Grupo de Estudios y Alternativas 21

Company profile

Sustainable Mobility Planning Section

gea21
GRUPO DE ESTUDIOS
Y ALTERNATIVAS

COMPANY PROFILE

Grupo de Estudios y Alternativas 21, S.L. (www.gea21.com) is a consultancy company (with the legal form of limited company) founded in 1995 over the experience of 15 independent professionals with a common interest in all dimensions of urban life, and environmental issues and social justice as a shared concern.

Throughout years of experience in the fields of sustainable urbanism, sustainable mobility, urban metabolism, social and gender issues, etc.; it soon became evident to GEA21 members that the urban dimension encompasses a wide number of mutually-influencing factors, which requires a common methodological approach that considers ecological, economic, social and technological aspects.

Currently, GEA21 is a truly multidisciplinary endeavour, bringing together members from diverse backgrounds (academic, public administration, research,...), with a solid experience in the development of integrated projects dealing with a wide number of inter-related fields: transport, energy, waste, water management, wildlife, rural and urban planning, socially and environmentally responsible business and governance.

Throughout its life, GEA21 has developed consultancy services as its main field of work, but knowledge transfer and professional training activities are also part of its work. This is considered a horizontal task in all technical developments undertaken by GEA21, and capacity building skills are considered a prerequisite to all its staff members.

GEA21 staff also includes members with expert skills in participative processes and communication and dissemination activities.

EXPERTISE[1]

Participative and environmental urban and transport planning is now one of their main areas of expertise. Over the last decades GEA21 has acquired an extensive expertise in the development of Sustainable Urban Mobility Plans (SUMP), non-motorized transport (NMT) plans and walk-to-school/safe routes to school campaigns at national, regional and local level. With this background GEA21 has developed a solid methodological ground in the provision and evaluation of this kind of schemes which has leaded GEA21 to be commissioned by diverse administrative bodies to develop technical guidelines in mobility issues such us walk-to-school, traffic calming and, especially related to the topic of the project, NMT infrastructure design (e.g. Ministry of Transport of Spain, Gipuzkoa Regional Government). In addition, GEA21 has provided advisory services in the matter to all levels of the public administration (national, regional and local), as well as to international bodies (e.g. one of GEA21 experts is currently working as International Technical Assistant in the development of a Bikeways Network in Nicaragua, an UN funded project aimed at the design of a cycling network in Managua's metropolitan area).

At a European level, GEA21 has been awarded with several European projects dealing with sustainable mobility issues, being the most recent CIVITAS-ECCENTTRIC (H2020), CIVITAS-PROSPERITY (H2020), STARS (IEE), ENDURANCE (IEE), TRANSPORT LEARNING (IEE), EPOMM-PLUS (IEE), CIVITAS-ARCHIMEDES (FP7) and SNOWBALL (STEER).

Gea21's team members after receiving the CSCAE* award to the company's career

(*CSCAE: Spanish Society of Professional Associations in Architecture)

[1] Only the mobility related expertise is highlighted in this section

Relevant projects related to GEA21 fields of expertise[2]	
International projects on sustainable mobility	• CIVITAS ECCENTRIC. Horizon 2020. European Commission. 2016-2020 • CIVITAS-PROSPERITY. Horizon 2020. European Commission. 2016-2019 • EU-wide establishment of enduring national and European support networks for sustainable urban mobility - ENDURANCE. Intelligent Energy Europe. European Commission. (2013-2016) • Sustainable Travel Accreditation and Recognition for Schools - STARS. Intelligent Energy Europe. European Commission. (2013-2015) • International Technical Assistant for Bikeways Network in Nicaragua. UN Development Programme (2013-2014)
Sustainable Urban Mobility Plans and Studies	• Sustainable Urban Mobility Plan for Xàtiva. Municipality of Xàtiva (2017-2018) • Sustainable Urban Mobility Plan for Lorca. Murcia Regional Government and Municipality of Lorca. (2016-2017) • Sustainable mobility study for Torrelavega's Master Plan. Municipality of Torrelavega. 2015. • Sustainable Urban Mobility Plan for Zumárraga. Municipality of Zumárraga (2014-2015) • Sustainable Urban Mobility Plan for Villabona. Municipality of Villabona (2014)
Non-Motorized Transports	• Non-Motorized transport network study for Comunidad Valenciana. Valencia Regional Government (2017-2018) • Evaluation and update of Madrid's bicycle master plan. Municipality of Madrid (2016) • Pedestrian and cycling improvement plan in Donostia-San Sebastian. Municipality of Donostia-San Sebastián (2016) • Bicycle strategy for Gipuzkoa. Diputación de Gipuzkoa (2014-2015) • Non-Motorized Master Plan for Galicia. Galicia Regional Government. (2010-2013)
Public transport	• Scenario workshops for public transport in Valencia. Public Transport Company of Valencia (2017) • Participatory process for the update of the bus network in Terrassa. ALSA (2017) • Update of the bus network in Arrecife de Lanzarote. Municipality of Arrecife de Lanzarote (2016)

[2] Only the most recent references are included

Relevant projects related to GEA21 fields of expertise[2]	
	• Accessibility improvements to the BRT system in Lima. Protransporte (2014)
Mobility Plans and studies in natural spaces, coastal and touristic areas	• Sustainable Urban Mobility Plan for Costa Teguise y Las Caletas. Municipality of Teguise (2016-2017) • Management plans for the mobility and accessibility of the Sites of Community importance Cabo de Gata-Nijar Natural Park and Punta Entinas-Sabinar Natural Landscape (2014) • Sustainable Mobility Plan for Levante Almeriense. Andalucía Energy Agency and Almería Provincial Government (2012) • Sustainable Mobility in the natural protected area of La Geria. Cabildo de Lanzarote (2011) • Sustainable Mobility Plan for Uribe Kosta. Mancomunidad de Servicios Uribe Kosta (2010)
Infrastructure Projects	• Project for two cycling paths in Pamplona (2016-2017) • Construction projects for pedestrian areas in Torrelodones (2014-2015) • Project for urban space re-configuration in Laubide Neighbourhood(Legazpi). Municipality of Legazpi (2014) • Project for a pedestrian and cycling itinerary in Torrelodones. Municipality of Torrelodones (2013) • Project for the cycling network in the Urban area of Santa Lucía de Tirajana (2011)
Others	• Safety Tunes. Traffic. European Commission (2015-2017) • Traffic Snake Game. Intelligent Energy Europe. European Commission (2014-2015) • Wat to school initiative in Santa Lucía de Tirajana. Municipality of Santa Lucía de Tirajana (2014-2015) • Way to school initiative in Torrelodones. Municipality of Torrelodones (2013-2014) • Sustinable mobility strategy in Tamaraceite. GEURSA (2013) • Promotion of sustainable mobility in the school community of Terrassa. Municipality of Terrassa (2012) • Study for the implementation of 30-km-zones in Sant Just Desvern. Barcelona Provincial Government (2012)

AWARDS

Along these years Gea21's career and its staff has been recognized by several awards:

- CSCAE's[3] award to the company's career (2017)
- "Women and traffic management" award of the Traffic Engineers Association to Marta Román (2017)
- CONBICI's "IV Sustainable Mobility Award" to Alfonso Sanz (2006)
- 1st Prize of the "Eco-neighbourhoods" contest promoted by CSCAE to the project Residential Park "Soto del Henares" in Torrejón de Ardoz (Madrid) (2006)
- 3rd Prize of the "Sustainable Urbanism" contest promoted by Empresa Municipal de la Vivienda y Suelo de Madrid EMVS (2006) to the project Residential Park "Soto del Henares" in Torrejón de Ardoz (Madrid) (2006)
- "City, Urbanism and Ecology" Award of the "Vasvonavarros" Professional Association for Arquitechture to the project "Donostia Camina" (2001)
- "VI Mª Angeles Jiménez Memorial" Award on Traffic Safety of the City of Barcelona and RACC to the project "Donostia Camina" (2001)
- "Fernández de los Ríos"Accesit Prize to the book "Traffic Calming" (Author: Alfonso Sanz) (1997)
- "City, Urbanism and Ecology" Award of the "Vasvonavarros" Professional Association for Arquitechture to the project "LIFE PROJECT. Recovery of the Urban Environment and Biological Diversity Aranjuez " (1997)
- Conservation Foundation's Award on "Nature Conservation and Historical-Artistic Heritage" to Javier Hernández Gómez and Alfonso Sanz Alduán for the project "Bicycle lane connecting Glorieta de Bilbao and University Campus" (1984)
- Healthy Life Association's Award to Alfonso Sanz Alduán (1982)

[3] CSCAE: Spanish Society of Professional Associations in Architecture

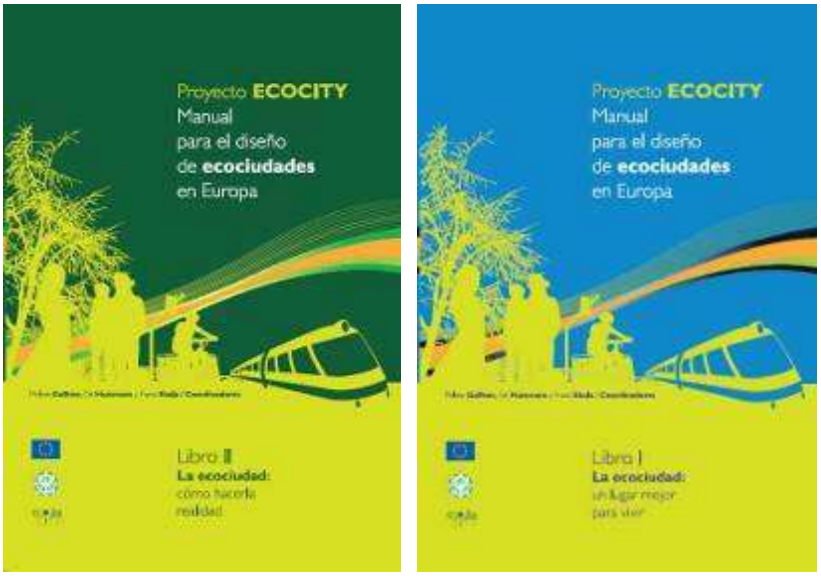
GEA21's APPROACH TO SUSTAINABLE URBAN MOBILITY

Integration of Land Use and Transport planning

The links between urban planning and transport are at the core of the methodological approach to sustainable mobility developed by GEA21. Over the last years, GEA21 has intensively worked both in the theoretical definition of the mutual implications of these two disciplines and its practical application.

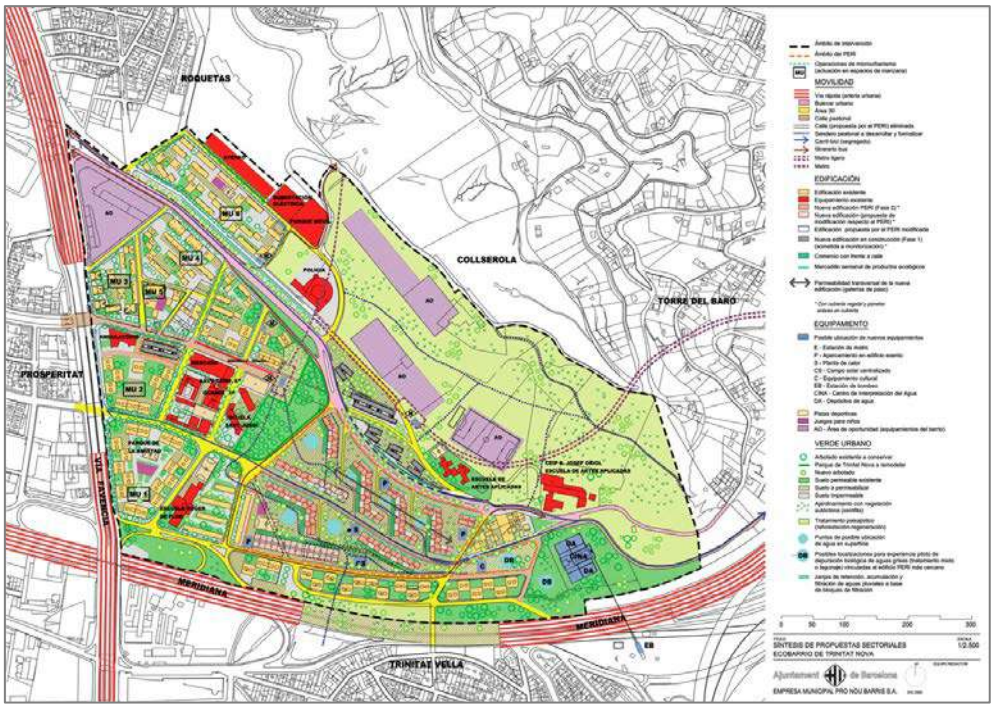
Through its participation in the ECOCITY[4] project, GEA21 contributed to the development of a Guidebook aimed at the definition of urban structures to favour sustainable mobility.

Following this experience, GEA21 also participated, in the framework of the Pro.Motion project[5], in the definition of a Checklist to be used by urban developers in the design of urban structures under sustainable mobility criteria.

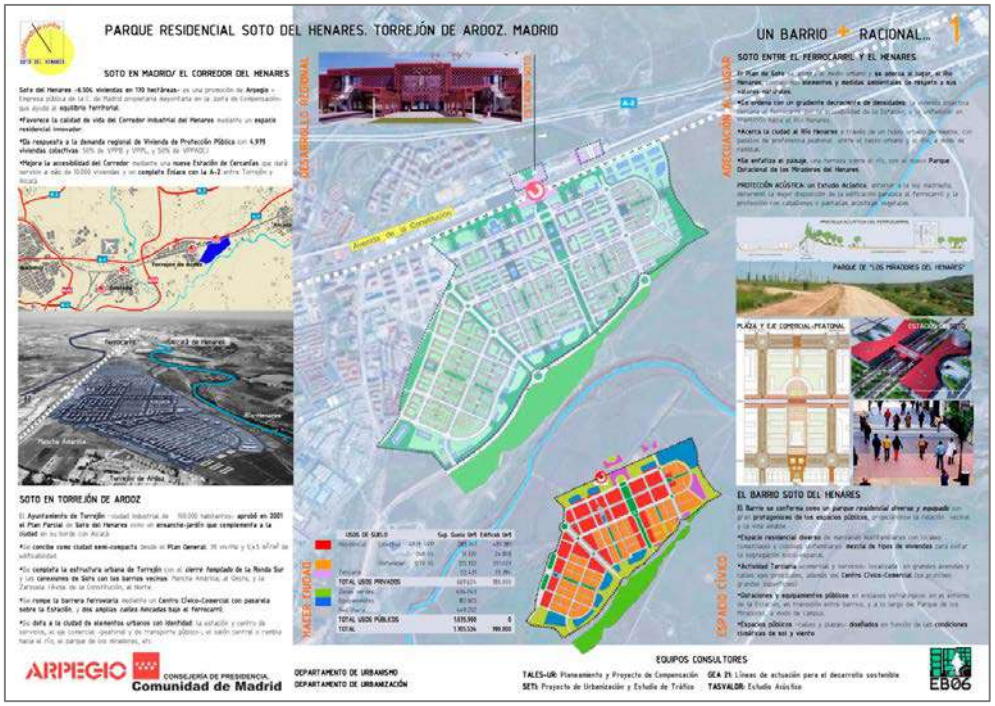


European ECOCITY Design Manual. Book I & II.

[4] ECOCITY - Urban Development towards Appropriate Structures for Sustainable Transport. 5th Framework Programme. European Commission.
[5] PRO.MOTION. Intelligent Energy Europe. European Commission.



Trinitat Nova Eco-neighbourhood (Barcelona).



Soto del Henares Urban Development(Madrid).

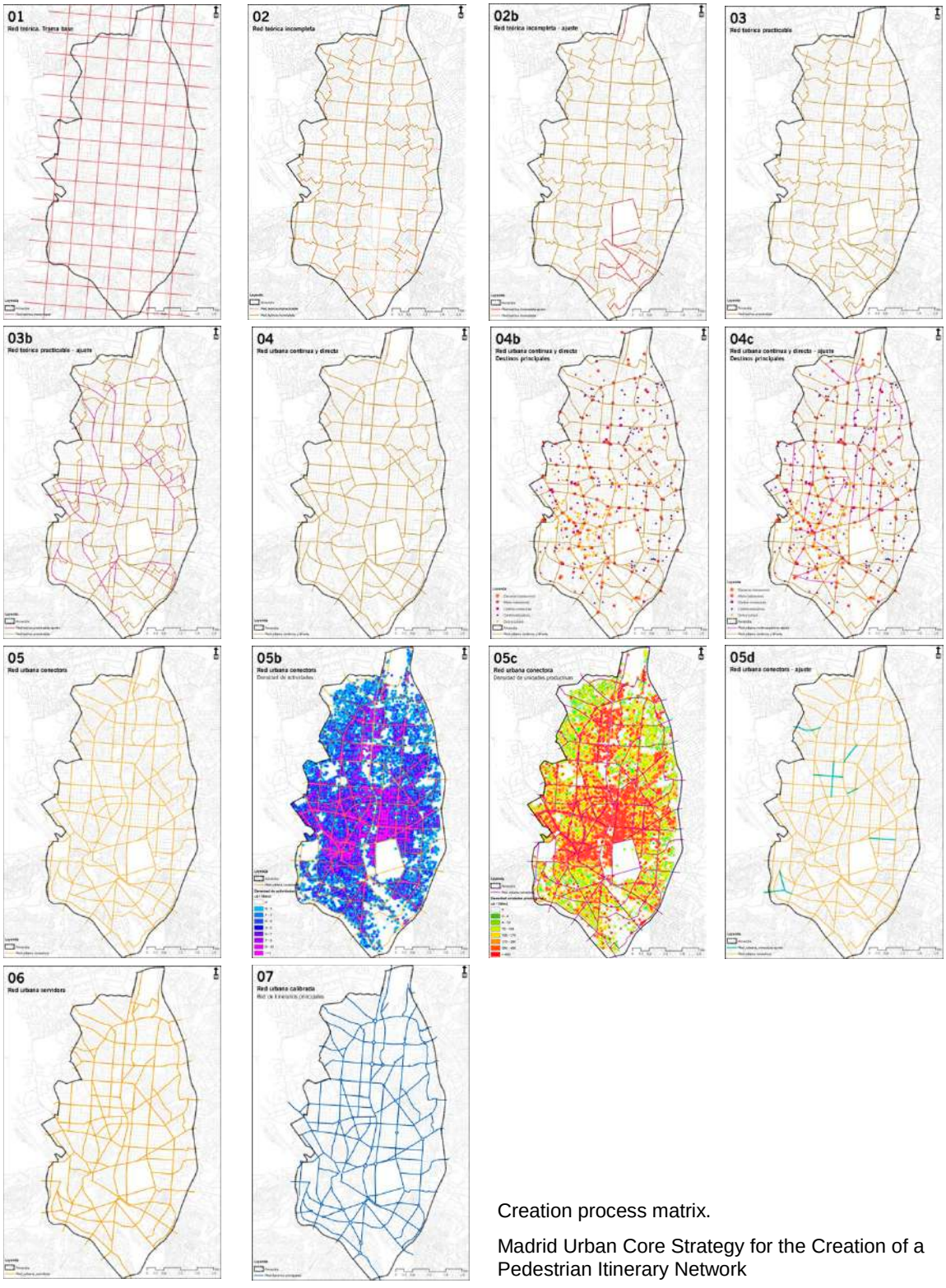
Pedestrian mobility and public space

In GEA21's work, pedestrians are the first consideration. Mobility is approached with the belief that, when pedestrian needs are placed at the top of the planning agenda, social, economic and environmental sustainability is more easily achieved.

In order to do so, the urban environment is analysed and restrains to pedestrian mobility identified. Based on this analysis, pedestrian needs are addressed through the development of a network of safe and comfort pedestrian itineraries, complying with universal design standards.

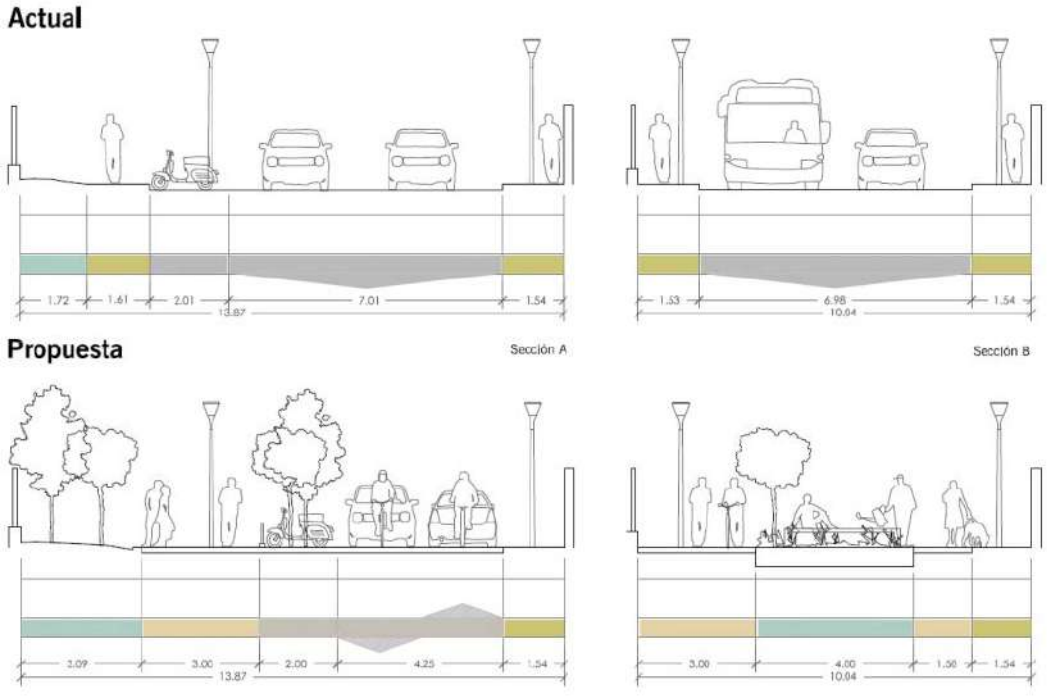
But the adequate consideration of pedestrian needs also includes the role of urban space as a driver for social relations and interaction with others. The design of liveable and attractive public spaces is also at the core of GEA21 planning procedures.

'Before and After' illustration of the application of the 'Pedestrian itinerary' concept



Creation process matrix.

Madrid Urban Core Strategy for the Creation of a Pedestrian Itinerary Network



Executive Project for the Construction of a Pedestrian and Bicycle Lane Connecting Centre of Town and High School. Torrelodones (Madrid)

'Before and After'. Executive Project for the Construction of a Pedestrian and Bicycle Lane Connecting Centre of Town and High School. Torrelodones (Madrid)

'Before and After'. Executive Project for the Construction of a Pedestrian and Bicycle Lane Connecting Centre of Town and High School. Torrelodones (Madrid)

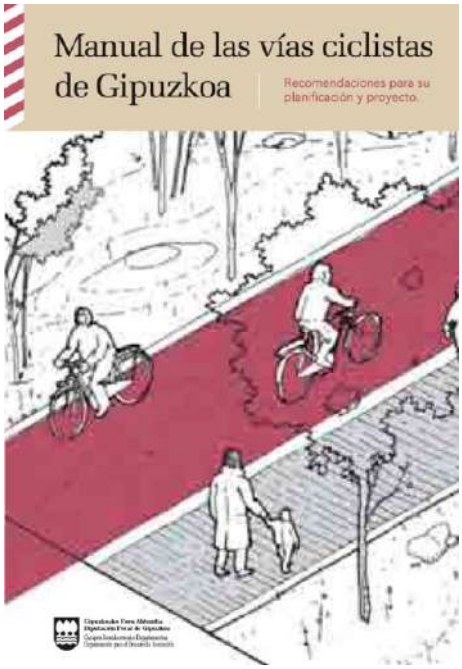
Cycling

Together with pedestrian mobility, the promotion of cycling is another cornerstone of GEA21's approach to sustainable mobility. Under a certain distance range (up to 7-8 km), the bicycle is considered the most efficient mode of transport in urban areas in terms of travel time, while environmental friendly and very cost-effective.

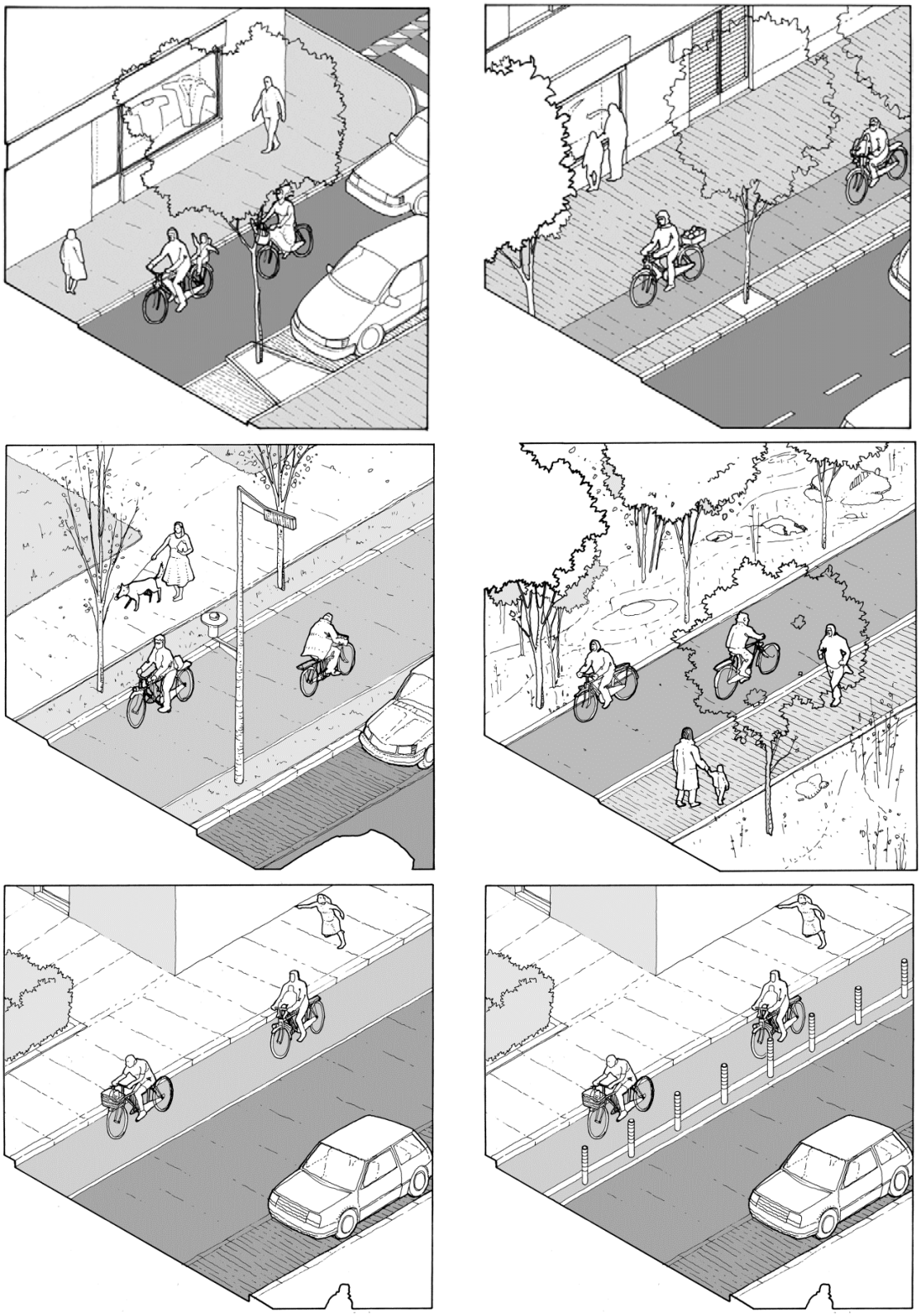
Alike pedestrian mobility, a detailed analysis of the constrains to the use of the bicycle form the basis of the planning and design of a secure and comfort cycling infrastructure network. The definition of adequate traffic management schemes to favour cycling is also a relevant asset of cycling promotion.

Over the years, GEA21 has acquired an extensive expertise in the development of all kinds of cycling initiatives, from Master Plans to promotional campaigns, also including the detailed infrastructure design and project construction.

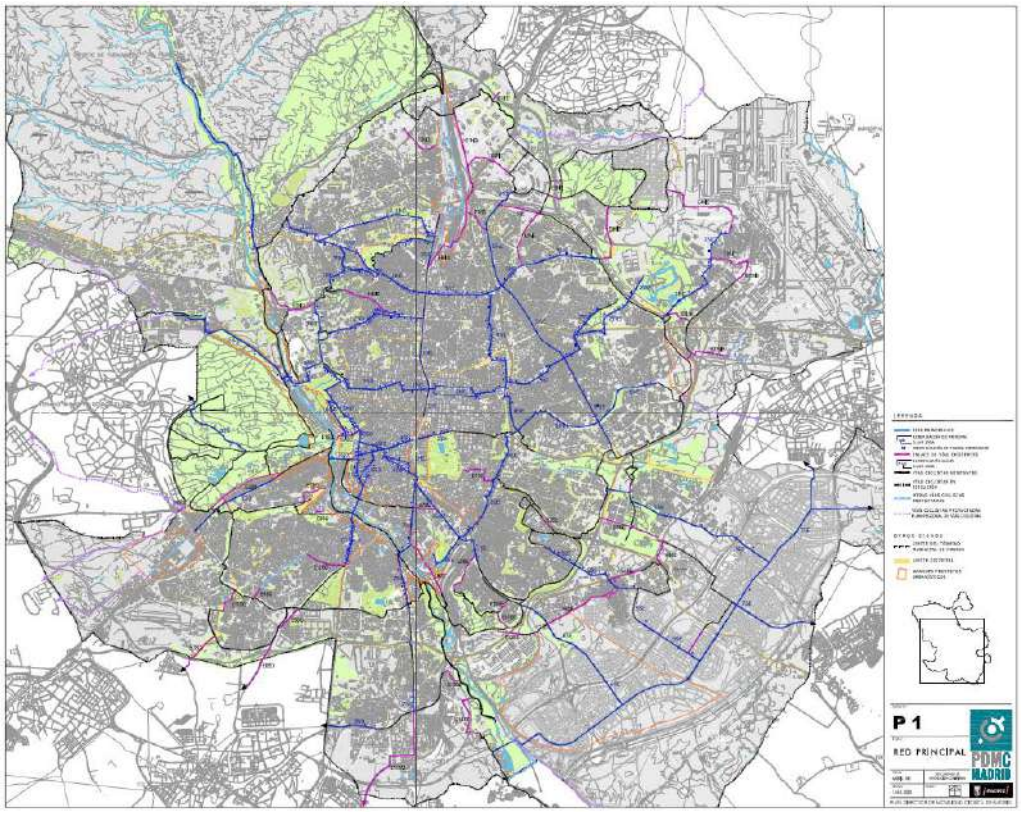
This solid methodological ground has leaded to the production of technical guidelines and recommendations to diverse administrative bodies, including the Spanish Transport Ministry and several regional governments.

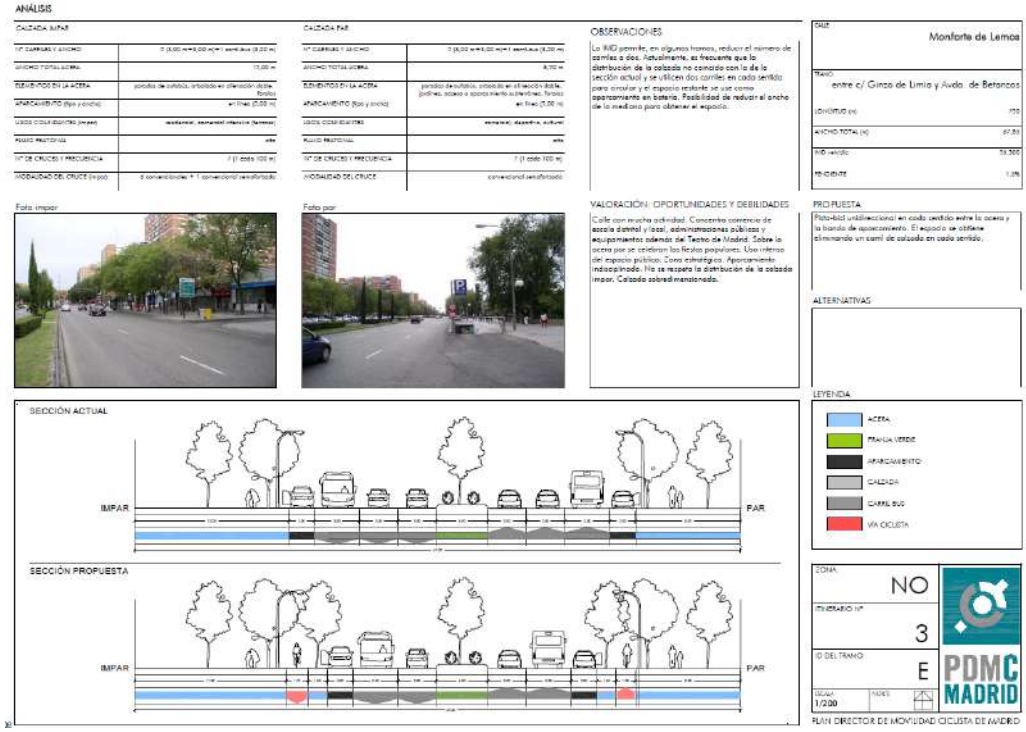


Cycling technical guidelines and recommendations.



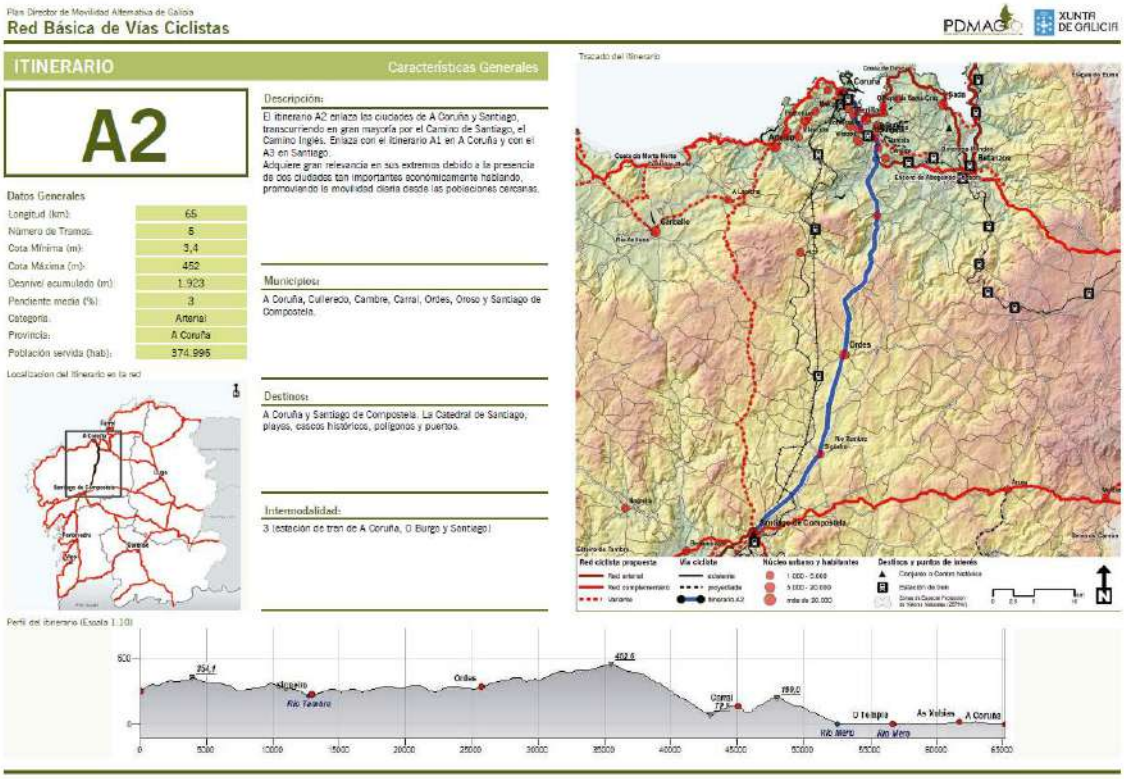
Cycle Lane Types. Drawings from "Manual de vías ciclistas de Guipuzcoa".





Bicycle Master Plan for Madrid

Non-Motorized Transportation Master Plan for Galicia



Traffic calming

In line with the widely embraced “New mobility culture” concept, GEA21 believes that some restrictions should be placed over the operation of private cars in order to effectively promote sustainable mobility in urban areas. Consequently, GEA21 makes use of Traffic Calming and Context Sensitive Solutions tools to provide the adequate environments for the take-up of sustainable means of travel, particularly non-motorized modes.

GEA21 is a leading expert in the application of Traffic Calming schemes in the Spanish context, having been commissioned by the Transport Ministry to deliver technical guidelines in this particular field[6].

Technical guide to the development of Traffic Calming schemes.
"Calmar el tráfico"
Front cover.

[6] “Calmar el tráfico: pasos para una nueva cultura de la movilidad” (2008) Ministerio de Fomento. Gobierno de España.

Padre Poveda School pedestrian access

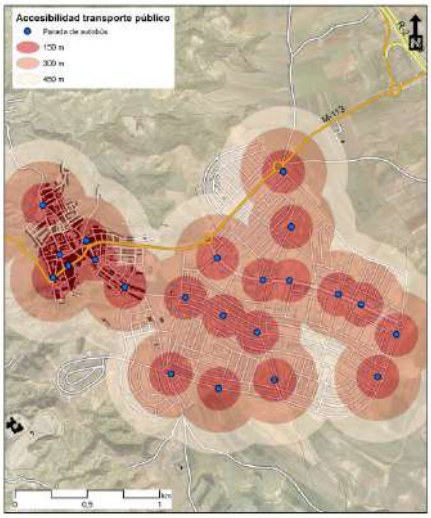
Padre Poveda School pedestrian access

Examples of proposed actions based on Traffic Calming and Context Sensitive Solutions

Public transport

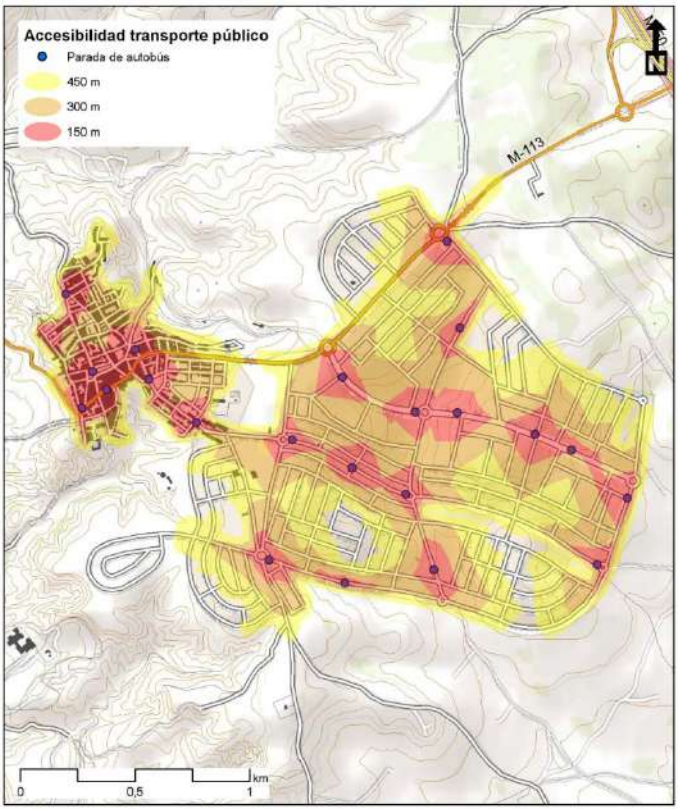
Usually, when addressing public transport, most of the attention is placed over the improvement of its performance operation. With this being important, GEA21's approach to this issue is enlarged with the consideration of the accessibility conditions to public transport services; both form the vehicle design perspective (favouring its use by all kinds of people, regardless of their physical and cognitive conditions) and the accessibility to its terminals and stops.

Particularly, an innovative approach to audit non-motorised accessibility conditions to public transport terminals and stops based on micro-scale context conditions is used by GEA21, considering that this is a relevant deterrent factor to its use.



Non-motorised accessibility conditions to public transport terminals and stops maps

Coverage area and real distance



Work based mobility

Work based mobility represents a wide share of the overall mobility in urban areas. Its particular characteristics, with temporal and spatial confinement as major relevant variables, require particular approaches to its analysis and planning. One of the major assets of the particular approach to work based mobility developed by GEA21 deals with the provision of the adequate procedures for the implication of all relevant stakeholders (employers, labour unions, administration,...) whose participation is a critical factor for the efficient management of commuter mobility.

Promotion and awareness raising activities are also integral part of GEA21's approach to work based mobility management. Whose expertise in this field has leaded to the publication of a methodological guide to the development of this kind of schemes commissioned by one of the major labour unions in Spain.

Methodological guide to the development of work based mobility management.
"El transporte al trabajo. I y II"
Front covers.

Mobility Management

According to the definition endorsed by EPOMM[7], “Mobility Management (MM) is a concept to promote sustainable transport and manage the demand for car use by changing travellers’ attitudes and behaviour. At the core of Mobility Management are "soft" measures like information and communication, organising services and coordinating activities of different partners. “Soft” measures most often enhance the effectiveness of "hard" measures within urban transport (e.g., new tram lines, new roads and new bike lanes). Mobility Management measures (in comparison to "hard" measures) do not necessarily require large financial investments and may have a high benefit-cost ratio.”

GEA21 acts as National Focal Point of EPOMM in Spain and, as such, fully addresses this definition and considers Mobility Management[8] an integral part of its methodological approach to sustainable mobility.

European Platform on Mobility Management (EPOMM) brochure.

[7] European Platform On Mobility Management
[8] Usually referred to as Demand Management, too.

Universal design and “invisible” mobility

For decades, transport planners have centred its field of action in the analysis and management of traffic flows, with a strong focus on car operation. But car users share, to a great extent, a similar profile: employed male individuals with a significant economic status.

Sustainable mobility claims to address the mobility needs of all kinds of individuals, including those who have remained ‘invisible’ to the planning agendas for many years. GEA 21 develop particular approaches that suit the particular needs of the different target groups: impaired people, women, immigrants, elder, children,...

Particularly, GEA21 has a wide experience in the integration of Universal Design standards to its planning activity and has participated in the development of technical guidance in this regards, including the elaboration of the Spanish Green Book on Accessibility and a guidebook on Accessibility to Bus Services.

Guidebook on Accessibility to Bus Services.
"La accesibilidad del transporte en autobus: Diagnóstico y soluciones"
Front cover.

Walk-to-school and children autonomy

One of the most relevant consequences of car based communities is the change in children mobility behaviour experienced in many cities across the world.

GEA21 is contributing to curve a situation where more and more children is being driven to school every day by their parents (in a process which is leading to more deteriorated urban environments and less autonomy from children) through the provision of technical guidance to school communities and parents in the development of 'walk-to-school' and 'safe routes to school' campaigns. Particularly, GEA21 is author of the first guidebook on this kind of schemes published in Spain[9], whose elaboration was commissioned by the Spanish Transport Ministry.

Technical Guidebook for the development of 'walk-to-school' and 'safe routes to school' campaigns.
"Camino escolar. Pasos hacia la autonomía infantil"
Front cover.

[9] "Camino Escolar: pasos hacia la autonomía infantil" (2010) Ministerio de Fomento.

Mobility and municipal structures

As an horizontal activity, mobility issues are affected by diverse municipal disciplines, such as urban planning, education, health,... Mechanism should be designed in order to integrate mobility implications in all municipal activities. The development of sustainable mobility strategies should be envisaged as an opportunity to update municipal structures aiming at guaranteeing that mobility implications are adequately addressed in all action fields.

Within the Spanish framework, GEA21 has provided guidelines to the Spanish municipalities to undertake this process by issuing a Guidebook on sustainable mobility and local governance[10], commissioned by the Spanish Federation of Municipalities and Provinces.

Guidebook on sustainable mobility and local governance.
"La estrategia española de Movilidad Sostenible y los Gobiernos Locales"
Front cover.

[10] Estrategia Española de Movilidad Sostenible y los Gobiernos Locales (2010) Red Española de Ciudades por el Clima. FEMP.

Participatory approach

As already said before, the new mobility culture claims to address the mobility needs of all. This means that everyone's voice should be heard in order to better understand their corresponding needs.

GEA21 integrates intensive participatory processes in the technical development of its work, making use of the EASW[11] methodology for that purpose.

Images of the participatory process made at Torrelodones school as part of the 'walk-to-school' program.

[11] European Awareness Scenario Workshop

Dissemination and awareness raising

Believing that promotion and awareness rising are also essential for the success of any sustainable mobility initiative, GEA21 makes extensive use of all possible dissemination tools, including exhibitions and videos. Particularly, Gea21 has developed different exhibitions and videos in the field of urban issues and mobility.

Itinerant exhibition: "Caperucita (Little Red Riding Hood) Walks Alone"

The main objective of this exhibition is to disseminate ideas about children's mobility and autonomy.

This exhibition, inspired by a fairy tale, talks about the adventures of a little girl who wants to cross the city on her own to reach her grandmother's house. Through this story, children can understand the difficulties they have nowadays for occupying public spaces. There is additional information for adults that talks about the effects of the lack of child autonomy.

View of the "Caperucita (Little Red Riding Hood) Walks Alone" itinerant exhibition organised at La Casa Encedida (Madrid)

Video: "Camino Escolar" (Safe Routes to School)

The aim of this video is to help scholar communities to reflex about the autonomy and mobility of children in their daily routes to school.

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