

# NMT POLICY DEVELOPMENT

Lessons Learned from  
the "Share the Road"  
Programme



## Share the Road Programme

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## Introduction

This policy brief provides guidance on Non-Motorized Transport (NMT) Policy Development from the perspective of lessons learned from the “**Share the Road Programme**” (StR) in East Africa and selected international experiences. StR is a UNEP initiative developed in partnership with the FIA Foundation for the Automobile and Society with the overall goal to **catalyse sustainable and systematic investments in walking and cycling road infrastructure**.

Find more information about the programme here: [www.unep.org/Transport/sharetheroad/](http://www.unep.org/Transport/sharetheroad/)

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## Understanding the Problem

**We are all pedestrians.** Every single trip, even those in private vehicles, and especially those in public transport, start and end with walking. But around the world, despite the high societal costs, prioritizing road infrastructure for cars continues to be the focus of investors and governments. In regions like Africa, where only a small fraction of the population own or have access to a car, the development of road infrastructure neglects the needs of the majority of road users – pedestrians and cyclists. Investing in infrastructure for walking and cycling leads to massive benefits:

- **Environmental**, it reduces emissions of air pollutants and greenhouse gases.
- **Safety** it protects road users from motor traffic.
- **Accessibility**, it increases affordable access to vital services such as health, education and employment.

“A city is more civilized, not when it has more highways, but when a child on a tricycle is able to move about everywhere with ease”. Enrique Penalosa ~ *former Mayor, Bogota*

**An NMT policy** (either stand alone or as part of an integrated transport policy) is one of the enabling conditions necessary to redress this negative investment cycle through:

- **Setting out the intent** of a Government regarding NMT.
- **Increasing recognition** of the importance of walking and cycling in transport planning, design, and infrastructure provision.
- **Acting as a catalyst** for provision of safe infrastructure for pedestrians and cyclists.
- **Prioritising** integrated investment for NMT into government financial planning.

Development of an NMT Policy provides the basis for provision of the required infrastructure, information and conditions to make cycling and walking infrastructure a reality.



# The Power of Data

## Case Study 1 – The role of data in the UN Avenue demonstration corridor, Nairobi, Kenya

UN Avenue was selected in 2009, in collaboration with the Kenya Urban Roads Authority (KURA), as the first StR project. This demonstration project was chosen to promote inclusion of NMT facilities on urban roads through rehabilitation of the NMT infrastructure. UNEP and KURA worked together to develop the design for the rehabilitation, which featured high-quality walking and cycling facilities, the first of its kind in Kenya. An outstanding impact of the initiative was the close cooperation between UNEP and KURA, which led to not only the showcase road, but also KURA's adoption of a policy change in 2011, to integrate walking and cycling facilities on all new urban road projects. Since then UNEP has worked with Nairobi City County Government to develop an NMT Policy for Nairobi.



Data on NMT infrastructure in Africa is scarce, and yet fundamental for ensuring that appropriate solutions for NMT are found. This case study identifies the issues surrounding data collection to inform design and implementation of the demonstration corridor.

A variety of data was collected to evaluate the success of the UN Avenue upgrade as summarized in box 1 which were successful in some ways and also demonstrated limitations.

[See Box 1.](#)

### Pre and post data collected to evaluate the success of the UN Avenue upgrade involved

- Traffic counts to determine changes in traffic volumes
- A qualitative survey on travel patterns and perceptions of safety by those using the road
- A behavioural analysis of road users
- An International Road Assessment Programme (IRAP) Star Rating Engineering Analysis.

#### Box 1



## Successes

- The IRAP data collection and assessment was very useful in demonstrating the improvements to the infrastructure through the IRAP Star rating system which recognises the best performing category as 5-star (green) and the worst as 1-star (black). In principle, a 5-star road is one where the probability of a crash and death or serious injury is very low. A road's Star Rating is based on an inspection of infrastructure elements that are known from extensive research to influence the likelihood of crashes occurring and the severity of those crashes that do occur. The focus of the Star Ratings is on the infrastructure elements which influence the most common and severe types of crash on roads for car occupants, motorcyclists, bicyclists and pedestrians. Each road infrastructure element is assigned to one of a number of categories by the raters according to its condition.
- The user perception and traffic rate data collection and analysis were also useful in demonstrating success from the perspective of civic appreciation of the facilities.



## Limitations

- No data was collected to determine which pilot area would most benefit from the improvements. That decision was made based on stakeholder discussions only
- Emissions monitoring is not active in Nairobi and whilst there are models available to measure energy consumption and greenhouse gas (GHG) emissions reductions – they require extensive data (such as vehicle types and speeds) which were not collected for the UN Avenue pilot. Consequently it was not possible to evaluate the GHG emissions of the pilot project.

There can be many challenges in collecting data to inform NMT Policy Development - data may be partial and fragmented, and therefore policy makers may not be able to compare the relative cost-effectiveness of different interventions. However, it is critical to undertake data collection and analysis as part of NMT policy development and to inform decision making. It can be time intensive but if done appropriately it can provide exceptional added value

- Data can be used by policy makers to guide them in decision making and setting and prioritizing goals.
- It provides the ability to prioritise use of resources effectively
- It provides the ability to monitor and evaluate progress and success.
- The data collection process supports the justification for sustainable and systematic investment in NMT facilities; by demonstrating what % of trips are made by pedestrians and cyclists (and also showing % of accidents impacting pedestrians and cyclists), a further evidence base is provided for the importance of providing infrastructure and enhancing investment.



A thorough tool that evaluates NMT in terms of all externality considerations (environment; road safety; and accessibility) does not currently exist; and addressing this deficit should be a priority goal to support government decision makers.

Data-driven and evidence based decision making ensures decisions are grounded in reality and take account of the needs of the citizens who will use the NMT infrastructure.

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## Pilot or Network Approach

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### Case Study 2 – The success of an independent bicycle network in Zwolle, Netherlands

An excerpt from the publication 'Cycling in the Netherlands'

Zwolle (113, 000 inhabitants) figures among the top Dutch cities in terms of bicycle use and 'bicycle street climate'. To Willem Bosch, the face of cycling policy in Zwolle for almost fifteen years, it is more than clear: the success of Zwolle can be explained primarily by the structural, continuous improvement of facilities for cyclists. Simply making bicycle use more attractive is what it is about. "For decades we have been working towards according cycling a prominent place. This is a consistent policy; not just something from the past few years." Continuous efforts from the '70s onwards enabled the municipality to produce most of the main bicycle route network, largely segregated from the busiest parts of the car network. Efforts had always been consciously directed at segregating car and bicycle networks. The concept of separate bicycle paths running along traffic arteries has therefore become a relatively unimportant phenomenon in Zwolle. A great advantage for cyclists of these segregated structures is that the main routes contain fewer traffic light crossings – in fact only where bicycle routes cross the most frequented car routes. Thus the municipality has been working for years on transforming these crossings into flyovers or underpasses. The result is a main network virtually without barriers.



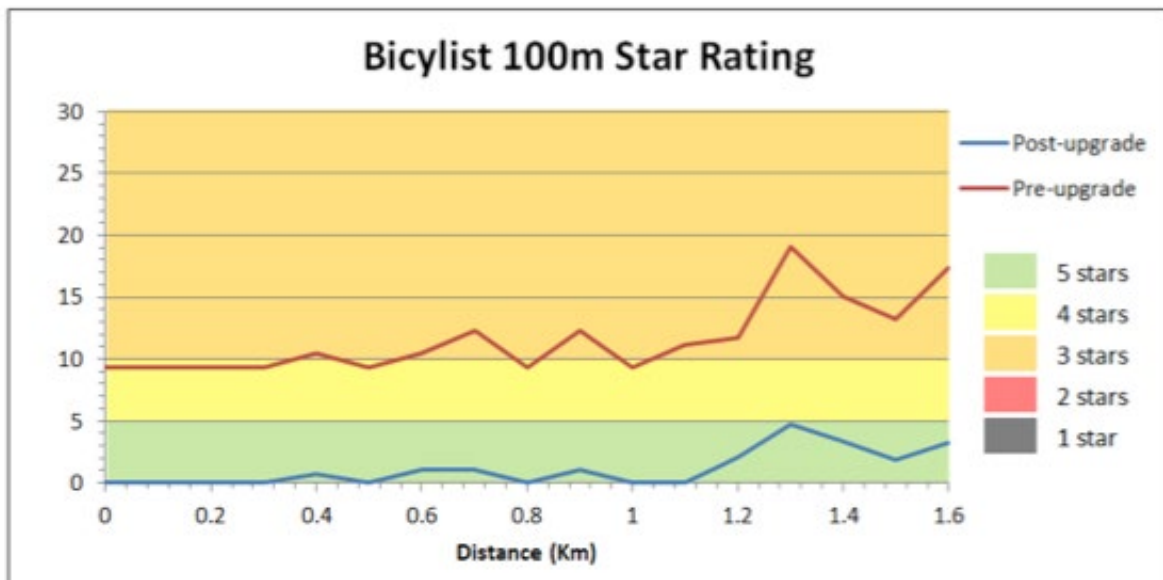
Carlos Felipe Pardo  
Netherlands

### Case Study 3; Choosing a pilot approach in Nairobi, Kenya

On UN Avenue in Nairobi the decision was taken to proceed with a single pilot NMT corridor. At the time of this decision there was no NMT network design nor was there an NMT Policy in place; either at city or national level. This decision was made to take advantage of the political willingness to rehabilitate the identified corridor and due to the simplicity of the road and frequent use by pedestrians and cyclists as well as recent accidents identifying it as a problem area for Road Safety. The overall aim of the pilot was that by demonstrating at a small scale the positive impact of NMT investment, this would act as a catalyst for wider scale investment in the future. The benefits of proceeding with a pilot in Nairobi were:

- Being able to demonstrate best practice design at a low cost.
- Providing a tangible example to government policy makers to support the lobbying for NMT policy development
- To help generate data which helps in countries/cities where there is a data deficit.

The successful rehabilitation of the UN Avenue pilot resulted in improved access and safety for pedestrians and cyclists. There was a notable reduction in the number and severity of accidents involving pedestrians and cyclists following the incorporation of walking and cycling infrastructure and as demonstrated in the IRAP Star Rating results – For example, there was no cycling infrastructure before the upgrade resulting in bicyclists having to use the carriageway or existing footpaths and half of the road (59%) before the upgrade rated as 3-star. There was a dramatic improvement for cyclists after the upgrade with all the sections of the road rated as 5-star. This is attributable to the dedicated 2-way cycling lane constructed during the upgrade. The dedicated cycle path completely separates the bicyclists from motorized traffic, and dramatically reduces their risk.



The pilot also acted as a catalyst to introduce an NMT soft policy for Nairobi and opened discussed and agreement with Nairobi County Government for a formalised NMT Policy for Nairobi. So in many ways the pilot was a success.

However, experiences from the pilot also revealed the importance of giving thought to a city-wide perspective, even when implementing a pilot.



The UN Avenue pilot did not take into account the larger road network and how this might have a negative effect on some of the road users. For instance, the number of cyclists who used UN Avenue as a throughway drastically reduced after the upgrade; After road improvements, the proportion of bicycle trips in the modal split experienced a sharp decrease from 14% to 4.4% of the total non-motorised trips.

An explanation for this change may be found on the road works building the Northern Bypass during the same period of time. The construction of this new urban highway included a flyover that modified the mobility patterns of the nearby population. The different grades at the junction require cyclists to carry the bicycle uphill making this task insurmountable for cyclists carrying loads.

### Pilot Advantages

- Can be achieved in a short time period
- Demonstrate the need for a city-wide network to decision makers and general public
- Simplified planning process
- Supports in generating and collecting data

### Network Advantages

- Can be achieved in a short time period
- Demonstrate the need for a city-wide network to decision makers and general public
- Simplified planning process
- Supports in generating and collecting data

It is important, even when making a decision to choose a pilot site, that it is done so with an understanding of the wider network and long term objectives.

## The Challenge of Institutional Complexities

The institutional framework for transport and NMT in particular (the inter-connecting system of organizations, formal laws, regulations, procedures, and informal conventions, customs, and norms, that shape decisions and behaviour) has an influence (either positive or negative) on NMT policy development and implementation. This can include

- Political will and commitment (or lack thereof).
- Governance and institutional arrangement in place.
- Financing processes and mechanisms,
- Government agencies responsible for constructing NMT infrastructure to specified design standards.

NMT Policy development (and subsequent strategy development and implementation) will be positively or negatively impacted depending on the strength of the institutional framework in place.

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### Case Study 4 – An institutional mapping of NMT in Nairobi

In early 2015 the University of Nairobi undertook a study on behalf of the StR Programme aimed at **creating an institutional mapping of formal and informal organizations, institutions and practices which play a role in conceptualization,**

**planning, implementation, governance and funding of NMT infrastructure and operations.** These organizations included county and national governments, related government agencies, Civil Society and development partners. This study and subsequent mapping consisted of two parts:

- The first section based on literature established the context for the provision of NMT infrastructure by describing the actors and drivers in general and NMT road infrastructure, as well as discussing some of the factors informing the provision of road infrastructure. It also provides a conceptual framework and description of the research methodology
- The second section reported the findings of the study concentrating on NMT policy, planning, provision, advocacy, conclusions and recommendations.

*"The Ministry of Transport continued to use the Integrated National Transport Policy of 2012 as a working document, without the provisions on NMT being incorporated into any policy, law, or regulation. This has resulted in lack of harmonized approach, standards, and designs, with elitist perspective dominating the road infrastructure development. The lapse in coming up with relevant policy and legislation undermines NMT infrastructure development and has to change as the world enter the post 2015 sustainable development era which puts high premium on green development"*

*Excerpt from the study of Institutional Framework of Non Motorised Transport (NMT) in Kenya, Winnie Mitullah, Risper Orero, and Dorothy McCormick, Institute for Development Studies*

The study was very useful in analysing the institutional situation and its conclusions included that key stakeholders are handling NMT issues without policy direction, the study further identified that policy is critical in determining the direction development of NMT does (or doesn't) take.

The study completed by the University of Nairobi was useful in a number of ways:

- As it was produced by a University following a qualitative research , the study lends itself a certain credibility by all stakeholders.
- It is useful to have the information on the institutional complexities in one document which can then be used as a reference point for any future work relating to NMT in Nairobi.
- Content from this study were able to be used in the NMT policy for Nairobi which was subsequently developed by the Nairobi City County Government and direct policy solutions were identified in the policy to address the institutional issues.

**An NMT institutional analysis is a good starting point for NMT policy development. It can act like a 'snapshot' of the present which can be used to plan for the future and should include gathering and analysing of data, information and discussions which can be used to inform future NMT decision making.**

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## Case Study 5 - The Power of the Political Champion in London, UK

The promotion of cycling as a means of transport in London has become part of the political as well as environmental agenda (as it has in many other urban centres in Europe and the rest of the world). A strong factor which resulted in an increase in modal shift for bicycles as well as the perception of cycling as an accessible transport alternative, was the launch of Barclays Cycle Scheme in July 2010. Barclays Cycle Hire is now transforming the way that people make short trips around central London, and has become the most sustainable and environmentally-friendly form of public transport ever seen in the UK. The launch of BCH has been a great success;

*"Just three months after its launch 58% of users stated they would start commuting by work on a bicycle regularly and six months after its launch, there was registered a shift in modes of transport with 35% of those who usually took the tube, 29% who usually walked and 23% who took the bus moving to cycling using the bike share scheme".*

Spearheading the implementation of the Cycle Share Project was the Mayor of London, Boris Johnson. It was a government led initiative pushed by Johnson who had enough political power and financing to see the scheme implemented. Johnson is a keen cyclist and has supported cycling in London since coming to office in 2008. In March 2013 Johnson also announced plans to invest nearly £1 billion of investment in a variety of cycle infrastructure over the coming years.



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## Case Study 6 – Political support at a National and City level in Uganda

In October 2011, the Ministry of Works and Transport agreed there was a need to develop a policy for Non-Motorised Transport (NMT) in Uganda. The intention of the policy would be to raise the profile of NMT within planning and programming for transport in general, to provide guidelines for the inclusion of NMT needs within transport projects, and to provide an over-arching advocacy document for the Government both to consider and approve. A Steering Committee chaired by the Ministry of Works and Transport was formed to oversee the study. This included representatives of many stakeholders including the Kampala Capital City Authority (KCCA), Uganda National Roads Authority, Uganda Traffic Police, road safety specialists, First African Bicycle Information Organisation (FABIO) and UNEP.





The national NMT policy was published in October 2012. Subsequently, at a city level, through the Kampala Capital City Authority (KCCA), the detailed design for a pilot NMT project has now been completed (supported by the UN-Habitat Sustainable Transport for East African Cities Project, funded by GEF). With construction due to start in 2015.

The work to date in Uganda shows how political support at a national and city level can provide successes all around.

NMT policy development can not succeed without the necessary political will and support. Some of the biggest successes in NMT policy development and implementation are the result of active championing by those in positions of political power.

# Stakeholder Participation

## Case Study 7 – Challenges in consultation for the UN Avenue demonstration corridor, Nairobi, Kenya



Enforcement against the encroachment of pedestrian and cyclist space continues to be a challenge on the UN Avenue demonstration corridor. Until these facilities are utilized effectively and appropriately, the full benefits of having pedestrian infrastructure will not be achieved. Enforcement is closely related to the participation and socialization of the project prior to implementation. Stakeholder meetings were undertaken during the design phase. Yet, not all road users were included in the discussions from the early stages of the project. Although there is a recognized demand for the services of taxi and motorcycle-taxis; as well as business opportunities for street commerce, the conflict resides on their use of pedestrian facilities as parking space.

Their use of infrastructure has led to conflict with other road users. Their requests and considerations were not considered during the planning phase. There have been further consultation meetings with representative of taxi and motorcycle-taxi associations, but a final solution has not yet been found. An important lesson in this regard is need for genuine and ongoing stakeholder involvement

For future projects, the incorporation of the needs of other road users will be beneficial. Designing specific spaces for taxi or motorcycle-taxi operators could turn into an income-generating activity for the city. Likewise, the provision of space for commercial kiosks adjacent to the bus stage or at strategic points that respect the sidewalk could become an asset to the city. Participation and inclusion of all stakeholders can turn threats into opportunities.

Stakeholder Participation should also provide opportunities to consult fully with vulnerable groups and women. For example, the use of bicycles within Nairobi in general and on UN Avenue in particular is mostly by men.



### The Uganda Perspective

A similar situation to what happened in Nairobi was also cited for Uganda, where a pedestrian sidewalk was built and very quickly, a business began operating a garage. This demonstrates the need for robust stakeholder engagement and awareness building as well as the need for consistent enforcement. It is also necessary to focus on internal stakeholder engagement to influence an attitude shift. Often decision makers, with a historically engineering background, don't always understand the need to for NMT. It is necessary to engage to make decision makers aware of NMT and why it is an important modal option for the majority of citizens.

Out of a user survey on the corridor, no woman were found to use the bicycle. Future consultation could explore the physical and socio-cultural barriers preventing women from benefiting from cycling infrastructure and discover appropriate gender-sensitive ways to encourage its use.

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### Case Study 8 - Asking cyclists what they need in Rustenburg, South Africa

Case study provided by Gail Jennings, Sustainable and urban mobility Specialist, South Africa



Rustenburg is a mid-size city in the centre of North West Province, South Africa, Primarily a mining town – built on the richest platinum reserves in the world – in 2011 more than half of its residents were employed or worked in some way in the mining industry. In 2007, South Africa's Cabinet approved the National Department of Transport's Strategy & Action Plan, which identified 12 cities that would benefit from an Integrated Rapid Public Transport Network (IRPTN), usually including a Bus Rapid Transport (BRT) system. Rustenburg was identified as one of these cities, with the inception of the Rustenburg Rapid Transport (RRT) system in 2011. The RRT included the requirement to develop an NMT policy and network plan to be associated with the BRT trunk and feeder system.



Although the project included a comprehensive and systematic stakeholder engagement process, with regular and well-attended community meetings and briefings, it turned out that few typical utility cyclists attended the events. Typical utility cyclists in the area are largely commuter cyclists who use bicycles to travel to their places of employment; delivery cyclists (employed to collect and transport supplies, as messengers for businesses in the city centre); or micro-entrepreneurs (stocking up on food supplies and water for stores or home).

In order to collect the primary data required to develop an NMT policy, and develop a network that accurately reflected cyclists' needs, the project team therefore decided to conduct intercept interviews, spending approximately two weeks over a period of three months riding a bicycle in the RRT catchment areas, stopping cyclists, talking informally about collective riding experiences, and discussing trip purpose, fears and barriers to cycling, and possible interventions. A more formal questionnaire was also used when possible, and at other times the team asked cyclists to draw their current and desired routes on a map carried with the interviewing team. Although such methodology might lack in sampling rigour, the project team were confident that most of the input we received was honest, and representative of Rustenburg's marginalised utility cyclists.



Genuine, robust and continued stakeholder engagement and consultation is essential for the success of any project but is often overlooked or concerns are ignored. A good NMT Policy development process includes stakeholder participation so that the policy is an articulation of the various views and responsibilities of all stakeholders involved in the provision of NMT (including National Government, Local or County Government, Media, Enforcement Services, Civil Society, Educational Institutions and the Private Sector).

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## Investment in NMT

No matter how well an NMT Policy is written, without funding being made available, it will be a challenge for the policy to become a reality. It is critical to engage the Ministry of Finance in NMT Policy Development and enter into dialogue for including investment in the budget cycle. Lack of transparency in financing can also be a challenge.

Whilst NMT Policies have been created as part of the StR Programme countries there is still a lack of investment by the city and national authorities in developing and improving infrastructure for pedestrians and cyclists. Whilst, for example, Uganda has made good progress with adoption and launch of an NMT Policy in 2013, and work to commence on pilot site construction in July 2015, the majority of the policy cannot currently be implemented due to lack of funds.

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### Case Study 9 – Including a funding commitment in the NMT Policy for Nairobi, Kenya

The NMT Policy for Nairobi identifies that recent and on-going road improvement projects in Nairobi have included Non-Motorised Transport provisions to cater for existing users. However, there is still a lot of scope to be covered as far as NMT provisions are concerned. The policy goes on to recommend that a special NMT Fund should be created to address the backlog until such time that NMT becomes an integrated part of the Nairobi transport system. The Fund will help to shift the attention of transport planners and engineers to the specific needs of NMT-users, and to catch up with the existing arrears in provision of facilities.

Like other modes of transport, the special NMT Fund should be financed from the public sector through taxation and long term loans from international development banks. Public sector funding should be generated from County service fees, annual business licences and land rates, and property development levies. Maintenance funds should come from the Road Maintenance Levy Fund (RMLF) managed by the Kenya Roads Board (KRB).

The policy also offers options for funding NMT from existing revenue sources such as infrastructure development fees, property rates, and business licences, which are most justified because as they are related to land uses that generate traffic, including NMT, and therefore revenues from these sources should be used to improve transport conditions.

Other potential sources of funding identified include

- Trade licences for businesses along proposed NMT streets
- Rent from businesses on existing on-street parking spaces
- Direct developer construction and maintenance
- Community contributions in form of labour or materials for construction and maintenance
- Parking fees and fines in the short term

Ultimately the political decision makers at Nairobi City County Government will be required to make the decision on how NMT is funded but it is important that as a minimum funding options are highlighted as part of an NMT policy, and ideally a solid commitment could be included on funds available for NMT investment.

Investment strategies traditionally focus on moving cars, not people. So even though the majority of citizens are walking or cycling in Africa there continues to be a lack of investment in NMT infrastructure and therefore poor quality walking and cycling facilities prevail. It is critical to include plans for how NMT will be funded as part of NMT policy development.

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## Key Lessons

Development of an NMT policy at a national or local government level is a complex and complicated process that requires a whole host of challenges to be considered and overcome in order to make the policy. It is critical that policy and decision makers consider how they will develop an NMT Policy which gives the best chance of success; not just on paper but in reality. In summary, the key lessons from the Share the Road Programme to date are:



Development of an NMT Policy provides the basis for provision of the required infrastructure, information and conditions to make cycling and walking infrastructure a reality.



Data-driven and evidence based decision making ensures decisions are grounded in reality and take account of the needs of the citizens who will use the NMT infrastructure.



It is important, even when making a decision to choose a pilot site, that it is done so with an understanding of the wider network and long term objectives planned.



An NMT institutional analysis is a good starting point for NMT policy development. It can act like a 'snapshot' of the present which can be used to plan for the future and should include gathering and analysing of data, information and discussions which can be used to inform future NMT decision making.



NMT policy development cannot succeed without the necessary political will and support. Some of the biggest successes in NMT policy development and implementation are the result of active championing by those in positions of political power.





Genuine, robust and continued stakeholder engagement and consultation is essential for the success of any project but is often overlooked or concerns are ignored. A good NMT Policy development process includes stakeholder participation so that the policy is an articulation of the various views and responsibilities of all stakeholders involved in the provision of NMT (including National Government, Local or County Government, Media, Enforcement Services, Civil Society, Educational Institutions and the Private Sector).



Investment strategies traditionally focus on moving cars, not people. So even though the majority of citizens are walking or cycling in Africa there continues to be a lack of investment in NMT infrastructure and therefore poor quality walking and cycling facilities prevail. It is critical to include plans for how NMT will be funded as part of NMT policy development

## Further Reading

Sustainable Transport: A Sourcebook for Policy-makers in Developing Cities, Module 3d: Preserving and Expanding the Role of Non-motorised Transport, GTZ Transport and Mobility Group, 2003

This Sourcebook on Sustainable Urban Transport addresses the key areas of a sustainable transport policy framework for a developing city. The Sourcebook consists of 20 modules

Available at: <http://www.sutp.org/>

Share The Road: Design Guidelines for Non- Motorised Transport in Africa, 2013

Share the Road Booklet, UNEP Transport Unit, 2011

Share the Road: Investment in Walking and Cycling Road Infrastructure Global Report, 2010

All Available at: <http://www.unep.org/transport/sharetheroad/library>

UN-Habitat Promoting Non-Motorized Transport in Asian Cities: Policymakers' Toolbox,

Available at: <http://unhabitat.org/books/promoting-non-motorized-transport-in-asian-cities-policymakers-toolbo/>

iRAP Road Safety Toolkit

Free information on the causes and prevention of road crashes that cause death and injury.

Available at: <http://toolkit.irap.org/>

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## References

For more information on IRAP

[www.irap.net/en](http://www.irap.net/en)

Cycling in the Netherlands, Ministerie van Verkeer en Waterstaat, 2009

<http://www.fietsberaad.nl/library/repository/bestanden/CyclingintheNetherlands2009.pdf>

Representation of urban cycling in media: A case study of London before and after the launch of the Cycle Hire Program,

[http://www.academia.edu/5594573/Representation\\_of\\_urban\\_cycling\\_in\\_media\\_A\\_case\\_study\\_of\\_London\\_before\\_and\\_after\\_the\\_launch\\_of\\_the\\_Cycle\\_Hire\\_Program](http://www.academia.edu/5594573/Representation_of_urban_cycling_in_media_A_case_study_of_London_before_and_after_the_launch_of_the_Cycle_Hire_Program)



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