

DEVELOPING LOCAL ROAD SAFETY PLANS FOR CITIES: LESSONS LEARNT IN ETHEKWINI

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ABSTRACT

The eThekwini Transport Authority has recently completed the development of a comprehensive and integrated road safety plan to begin to address the high accident rate that characterises most South African cities. The paper will give a brief overview of the process followed and main strategies, targets, projects and institutional arrangements finally adopted in the plan.

A number of lessons were learnt with regard to developing the plan and especially co-ordinating, integrating and operationalising road safety activities at a local level. The focus of the paper will therefore be to give practical guidelines on preparing local road safety plans. Key projects for the engineering, enforcement and education sectors will be highlighted. The types of institutional arrangements and essential data systems will also be discussed. Included in this will be some of the difficulties encountered.

Lastly, the paper will present some critical success factors in developing a road safety plan and giving effect to it.

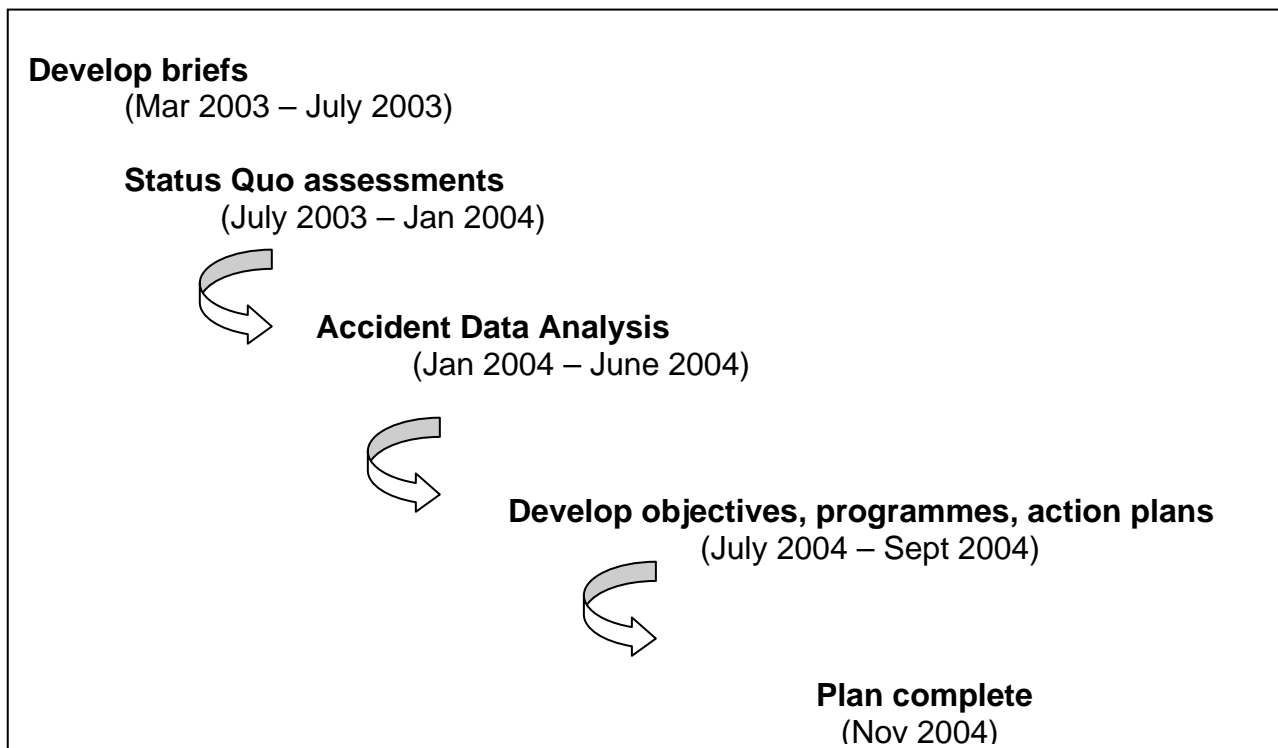
1. INTRODUCTION

The eThekwini Transport Authority has recently completed the development of a comprehensive and integrated road safety plan to begin to address the high accident rate that characterises most South African cities.

A number of lessons were learnt with regard to developing the plan and especially co-ordinating, integrating and operationalising road safety activities at a local level. The focus of the paper will therefore be to give practical guidelines on preparing local road safety plans.

2. PROJECT DETAILS: PROCESS, COST AND PROGRAMME

2.1 Project process, programme and costs



Stage 1: Development of the briefs

A fairly standard planning approach was adopted to develop the plan, and Professor CS Roebuck was appointed to develop the overall phasing of the plan and the detailed briefs¹.

(Cost: R 40 000)

Stage 2: Status Quo assessments of current road safety activities and resources

Detailed status quo assessments of current road safety activities and resources for all spheres of government and other key stakeholders have been done. These included:

- Current related plans
- Highway and traffic Engineering
- Education, publicity and community liaison
- Enforcement and judiciary
- Emergency services
- Current evaluation of road safety measures
- Current accident records and the analysis typically done
- Current road safety legislation (Legal situation)

(Cost: R 497 000)

Stage 3: Detailed accident and risk analysis (Current accident situation)

The value of the analysis is almost entirely dependent on the accuracy of the accident database. In this regard, eThekweni has invested many years and resources into developing its current accident record database. This database is considered to be one of the best in the country, and is a tremendous asset to eThekweni.

Risk analysis was also carried out to identify high-risk groups and help with prioritisation of strategies and actions.

(Cost: R 253 000)

Stage 4: Development of objectives, programmes and action plans

This stage included developing the integrated and co-ordinated programmes and detailed actions to respond to the main accident types and high-risk groups. Accident reduction targets were also set.

(Cost: R 384 000)

Stage 5: Plan finalised

The draft plan was workshopped with key stakeholders, comments received and the plan finalised.

(Total project cost: R 1,174 mil)

3. OVERVIEW OF THE ETHEKWINI ROAD SAFETY PLAN

A very brief overview of some of the main features of the plan is given in this section.

3.1 Results of the accident analysis

Main focus areas of the plan:

- Pedestrian accidents are the most critical accident type (high risk areas are Umlazi, Chatsworth, KwaMashu, Phoenix and Durban CBD. Children aged 5-19 identified as most at risk are very vulnerable).
- Passenger fatalities and serious injuries in minibus taxi accidents.
- Drivers under the age of 30.

Speed, alcohol and lack of seatbelt usage are contributing factors to the high accident rate.

3.2 Three strategic thrusts were identified

3.2.1 Getting the basics right

Some of the key strategies are listed below:

- Collect good data for reporting and strategic deployment of resources.
- Enforcement: higher levels of traffic enforcement, dedicated road safety units and dedicated road safety education officers are required.

- Engineering: a formal high accident frequency elimination programme including a prioritisation procedure is required. Also, a traffic calming programme focused on schools and routes to schools was identified.
- Education: a systematic targeting of schools with particular educational programmes is essential to address the high pedestrian accidents amongst children.

3.2.2 Road Safety Management Areas

Schools in Umlazi, Chatsworth, KwaMashu, Phoenix have been identified for an intensive education drive. This will be complimented by co-ordinated enforcement and engineering measures on routes to schools (as mentioned above). There will also be a focus on minibus taxi safety in these areas. In the Durban CBD older pedestrians and driver behaviour will be targeted. Crossings and intersections are high risk areas.

3.2.3 Area-wide strategies

Two general area wide strategies have been identified.

Firstly, general enforcement focusing on speed, alcohol and seatbelts need to receive regular attention.

Secondly, minibus taxi roadworthiness and safe driver behaviour needs to be addressed through education and enforcement.

3.3 Targets

The following targets have been set, which are believed to be challenging yet achievable. It needs to be remembered that the statistics reveal that the accident rates still seem to be increasing.

By 2010:

- A general 10% reduction in the number and severity of accidents;
- A 10% reduction in pedestrian accidents in the five focus areas.

3.4 Institutional Arrangements

Four institutional “levels” have been identified to achieve commitment to road safety, integration and implementation.

The eThekweni Road Safety Council: this is mainly a political body that will meet once every two years, with the purpose of committing the respective departments and resources for road safety activities and ensuring that there is an official mandate for the activities.

The eThekweni Road Safety Technical Committee: this body will ensure co-ordination across all stakeholders (3 E’s), and meet once a quarter.

The Education, Enforcement and Engineering Working groups will drive the respective programmes and meet on at least a monthly basis. The focus will be on implementation and monitoring progress.

Community Road Safety Committees will be established on a phased in basis to ensure community involvement.

4. EVALUATION OF PROJECT: KEY LESSONS

As shown above, substantial resources were put into developing eThekweni's Road Safety Plan. It is anticipated that local councils will not always have similar resources. Also, an analysis of the project, its outcomes and how the information was used has shown that similar resources are not necessary for local Councils to develop effective road safety plans.

4.1 Extensive status quo investigations are not necessary

Almost every stakeholder and all departments at all spheres of government were assessed in terms of current resources and budgets, current activities, critical gaps, future plans etc. In retrospect, not all of this information was necessary. Many of the departments cannot predict subsequent years budgets, and some even had difficulty in establishing their current budgets.

Also, as it turned out the initial focus of the plan is on co-ordinating and integrating the activities of the "strategic alliance" departments that the local council has most control of. It became apparent that local councils have little influence on how other departments from other spheres of government motivate for and spend their resources.

The activities of national and provincial departments generally can simply be obtained from their annual business plans.

Status quo assessments should therefore be focussed on the main departments giving effect to engineering, education and enforcement activities in the local council area. Only an overview of the activities of provincial and national departments is needed to ensure co-ordination.

4.2 Elaborate, detailed and comprehensive programmes are not necessary

The comprehensive list of actions required to improve road safety is overwhelming, and the ability to implement many of these does not reside with any particular local council. It became apparent in eThekweni that some of the basics of road safety were not in place, and these need to be addressed as a priority. Once these are in place and solid foundations have been laid, then the programmes can be extended to other necessary but less critical activities.

5. CRITICAL SUCCESS FACTORS

5.1 Local council commitment from the highest level

The success of road safety programmes primarily hinges upon integrating and co-ordinating the actions of the various stakeholders around a single plan. Working from a local government level, it is difficult to get full cooperation from all stakeholders and all spheres of government. Their interests and responsibilities often extend well beyond the local council boundaries, and many of the departments have wider responsibilities than just road safety.

However, local councils usually have many of their departments contributing to road safety, and these need to be co-ordinated and brought under the ambit of the road safety plan as a matter of priority. Commitment to the plan from the City Manager or Mayor, preferably both, is therefore essential to ensure alignment of at least all local government departments.

In eThekweni, the following local council departments were essential to the plan:

Engineering: eThekweni Transport Authority

Enforcement: Durban Metropolitan Police Services

Education: Durban Metropolitan Police Services

5.2 Strategic alliances and buy-in

Realistically, it is not possible to get buy-in and cooperation from all stakeholders at once. However, an assessment needs to be made of the main role-players in education, enforcement and engineering. These need to be seen as “strategic alliance partners” and brought under the ambit of the road safety plan in the first instance. All of these three sectors are essential to the success of the plan. It may be that some of these partners are sitting in another sphere of government, and then every effort needs to be made to get these departments to buy-in to the local road safety plan.

In the eThekweni case, the Provincial Department of Transport Road Safety Education section was identified as a strategic alliance partner because of their current education activities in schools and communities in eThekweni.

5.3 Good data

In an environment of scarce resources, good data and sound analysis is essential to guide spending for maximum benefit. If good data does not exist, a programme should be developed to start collecting the data. This data can be prioritised to collect fatal and serious accidents in the first instance.

Also, some data around current road safety activities is very useful. Basic statistics of schools reached, major roadblocks carried out, or engineering measures, are helpful. This information correlated with accident data will help to establish the effectiveness of programmes and actions and also assists with the development of key performance indicators. Both the use of quantitative and qualitative data should be considered and integrated to measure progress.

It should be noted that capturing all enforcement efforts related to traffic violations would be a very difficult and onerous task. A decision was taken in eThekweni to initially only capture speed timing activities, specific roadblocks and the school related enforcement activities.

5.4 Simple institutional arrangements

Institutional arrangements are essential to ensure the initial and ongoing co-operation and integration of the stakeholders.

These structures should as a minimum:

- Have a structure to ensure the co-ordination and integration of the education, engineering and enforcement programmes (in eThekweni this is called a Technical Committee)
- Sector working groups that operationalise the detailed programmes and actions. For example, in eThekweni, the Road Safety Education WG ensures the relevant schools are reached within the required time frames, and that the relevant statistics are collected.

The role of the community is now universally acknowledged as being very important to give effect to road safety initiatives, and local community structures should be set up in areas of high accidents rates as a matter of priority.

6. PRACTICAL GUIDELINES FOR PREPARING PLANS

This section will take the insights and lessons mentioned above and organise them into a simplified, practical methodology for local councils to develop road safety plans. It assumes that there will not be abundant resources to develop or implement the plan. It also assumes that realistically full buy-in from ALL stakeholders will not be obtained in year one.

6.1 Local Council commitment to the plan at the highest level

As noted above, it is critical that there is commitment from the local council to implement the plan. This should be from the City Manager or Mayor, preferably both. This will ensure the full cooperation and participation of at least the key departments at the local level, which should be able to deliver on enforcement, engineering and education activities.

6.2 Obtain in principle commitment from the key governmental agencies

Depending on the circumstances of the particular local authority, it may be that resources for enforcement and road safety education are at a Provincial level. In this instance it is critical to get early commitment from them to the plan during the formulation stage so that their plans can be integrated to avoid duplication. These departments should be seen as “strategic alliance partners.”

6.3 Quick status quo assessments of key sectors

As noted above, elaborate and comprehensive status quo assessments are not essential. Rather, quick status quo assessments need to be done of the key sectors. The main departments that will be responsible for education, enforcement and engineering need to be assessed to get a basic understanding of:

- Current activities
- Current resources
- Any critical gaps
- Future plans

6.4 Analysis of critical accident data

Any road safety initiatives need to be driven by factual accident data so that limited resources are used most effectively. While comprehensive, detailed and accurate data is

desirable, it is often lacking. Where it is lacking, the available data must be used to determine main accident types and locations.

It has been noted that the analysis of eThekweni's accident data did not reveal any surprises. It is almost certain that the following problems dominate nationally, and will be found in most local authorities:

- Pedestrian accidents are the most pressing problem, giving rise to the most deaths and serious injuries (high risk areas will be the CBD and previously disadvantaged dense residential areas). It is almost certain that children will be a high-risk category because of their developmental limitations.
- Accidents involving minibus taxis will be significant. Roadworthiness of vehicles and driver behaviour will be target areas.
- Male drivers under the age of 30 will be a high risk group.
- Speed, seatbelts and drunken driving will be key focus areas.

If there is a lack of comprehensive data, the above provides useful focus areas for initial action and can be confirmed as accident data becomes available.

If accident data is lacking, a programme needs to be put into place to collect data. If resources are an issue, the data can be prioritised to ensure that in the first instance all fatal and serious accidents are collected properly.

6.5 Develop strategic programmes and actions

After the focus areas have been determined from the accident analysis, integrated programmes and actions around enforcement, education and engineering need to be developed. It is critical that the engineering, education and enforcement programmes / actions support and complement each other for maximum impact.

It is believed that in a scenario of limited resources for road safety, the success of a local road safety plan will depend on the ability to align the current enforcement, engineering and education actions. This is a key deliverable for the plan.

From the eThekweni experience, the following were found to be key programmes.

A pedestrian programme with a focus on the previously disadvantaged residential areas. Education of school children is the key activity in this regard. The engineering programme focuses on traffic calming at schools and is timed to coincide with the education school programme. An enforcement programme ensues in the following weeks after a school has been targeted. This pedestrian programme is therefore a core programme which provides a holistic and integrated strategy for school children in the high risk zones.

Data collection and integration: Although accident data in eThekweni is considered to be very good, the activities of the various disciplines are generally not being captured. A database was therefore developed to capture education activities (which schools were being targeted with which material), enforcement (location and time of speed timing, road blocks etc) and engineering projects (which roads or intersections targeted with what engineering measures to address what problems). All this data needs to be collected and stored centrally so that integrated analyses and evaluation can be undertaken.

6.6 Identify strategic alliances and secure complete co-operation

The programmes developed above integrate and align the key activities of enforcement, education and engineering.

The main departments in the local council responsible for these activities need to be identified, and their full cooperation secured. If local council departments mainly carry out these activities, the task is much easier and the commitment of the City Manager and Mayor should ensure that there is full cooperation. If one or a few of these activities are mainly carried out by Provincial departments, then the plan needs to be workshopped with them and full cooperation secured.

It is essential that these programmes and actions are developed to a level of detail that gives meaningful direction to the departments. They need to include as a minimum:

- Actions required and the behaviour targeted
- Location
- Timing

6.7 Establish institutional arrangements

The amount of integration and cooperation between the stakeholders and departments required can only be achieved by establishing structures.

The following structures are considered to be the minimum required:

- (i) A Technical Steering Committee that includes engineering, education and enforcement. This body is responsible to ensure the co-ordination and integration and across all stakeholders in conformance to the plan. This group needs to meet at least every quarter.
- (ii) Separate enforcement, education and engineering working groups to operationalise the programmes. This groups needs to meet at least every month.

If there is a strong community programme, then community groupings also need to be set up.

6.8 Implement key programmes

The above Committee and working groups need to follow through with the required actions, monitor the progress and deal with any problems that arise.

6.9 Monitor and evaluate effectiveness of actions

It is required that each of the working groups collect basic data on the activities of the departments. For example, how many schools (and learners) were targeted in a particular month with what programmes. This data is fed back to the Technical Committee and consolidated into a centralised information system. This allows the effectiveness of the road safety activities to be tested against accident data.

6.10 Build on success and expand the programmes

The above guidelines establish a basic “core” of integrated road safety programmes to begin to address the main problem areas. It is not comprehensive, but seeks to put in place a basic framework which can be built upon as resources become available.

This “core” road safety plan therefore needs to be developed to become more and more comprehensive as resources permit.

7. CONCLUSION

Road safety remains a critical issue in South Africa. Current efforts do not seem to be very effective in achieving substantial reductions in accident rates. Something more needs to be done. The lessons learnt in developing the eThekweni Road safety Plan are presented in this paper and then arranged into a practical guideline to assist other Cities to develop similar plans.

This will ensure that the current national and provincial road safety initiatives are supported by strong local council actions.

8. REFERENCES

[1] eThekweni Road Safety Study, eThekweni Transport Authority