

URBAN SAFETY MANAGEMENT

What is Urban Safety Management?

Urban Safety Management (USM) is a method of reducing road accident casualties in a town or city by bringing a variety of approaches to bear on the accident problems. The IHT published Guidelines (IHT 1990), following a research project which applied the method in five towns.

USM uses an area-wide and multi-disciplinary approach that considers safety in the whole urban area and involves all aspects of urban management - safety, enforcement, traffic, public transport, planning, engineering, environment, road construction and maintenance, land use, development, health, education, welfare and land use. The overall road hierarchy is considered according to the road function with the aim of getting traffic onto appropriate routes.



USM uses the following principles:

- ◆ Consider all kinds of road user, especially the most vulnerable.
- ◆ Consider the function and use of different kinds of road.
- ◆ Formulate a safety strategy for the urban area as a whole.
- ◆ Integrate existing accident reduction efforts into the safety strategy.
- ◆ Relate safety objectives to other objectives for the urban area – particularly transportation, land use and planning.
- ◆ Encourage all professional groups to help achieve safety objectives.
- ◆ Guard against adverse affects of other programmes on safety.
- ◆ Use the expertise of road safety specialists effectively.
- ◆ Translate strategy and objectives into local area safety schemes.
- ◆ Monitor progress towards safety objectives.

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(This Network Management Note is one of a series to be published.)

Major objectives are to raise the importance of road safety, change attitudes of residents, officers and elected members, and to produce a strategy that is supported by all parties. The champions of USM need to convince local highway authority officers from different Departments of the value of the programme and to gain the trust and support of the residents in the town.

What can USM do?

USM can reduce casualties in road accidents in towns by tackling accident problems on a broad front. It requires all Local Authority Departments to work together and will raise the profile of safety in the town management and planning environment. A good vision and strategy encourages the support of the residents and allow measures to be implemented with a minimum of objections.

What is the Research Background?

The 1980's Urban Safety Project, led by TRL, implemented local area safety schemes in five towns over a period of five

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years and measured the casualty benefits. This project showed that installing low-cost measures on an area-wide basis in towns of various kinds reduced injury accidents by an average of about 13% compared to similar areas in which road safety activity occurred as before. Many of the safety benefits were achieved by using traffic management techniques such as installing mini-roundabouts and banning right turns.

Traffic calming in residential areas has been shown to reduce casualties by over 50%, with greater benefits to children. Residential areas make up around 30–40% of the road network in towns and traffic calming is a major element in many recent local area safety schemes.

Many accidents in towns occur on the more major roads and these have in the past proved quite difficult to treat. Speed management programmes that use signs, publicity, cameras, anti-skid surfacing and road engineering measures such as lane narrowing, can be used to obtain casualty reductions of over 50%.

The SAFER CITY project in Gloucester aims to demonstrate that casualty savings of over 30% are possible from the development and implementation of an area-wide USM strategy.

Why should we use USM?

Because it is a proven strategy for dealing with all kinds of accidents in urban areas.

Methods exist for dealing with clusters of accidents (high-risk sites), but as more of these are treated every year, the number of sites that it is cost-effective to treat by themselves are likely to become fewer. The remaining accidents are more likely to be “scattered” over the urban area, and Urban Safety Management is the way to treat these.

Small road safety schemes that look at safety problems in isolation can bring benefits within the scheme, but sometimes cause problems in surrounding areas – the accident migration effect. An area-wide strategy overcomes this by considering the whole area, taking accident migration effects into account. The identification of boundaries, both external to the area and within the area in the design of local area schemes, is an important part of the USM process.

There is benefit in having all professional groups involved in dealing with safety problems. There are often several ways of tackling a safety problem, and often indirect

How do we use USM?

- A) Get the Chief Executive/Council Leader committed to road safety.
- B) Ensure dialogue among all professional groups – set up a safety committee or similar.
- C) Consult with the public and interested parties. What are the public's concerns about safety? Engineering schemes and the road safety activity must be acceptable to the local people.
- D) Identify the accident problems across the whole area – plot the accidents on a map. Look at problems in relation to traffic and pedestrian flows in the area and public perception of safety.
- E) Assess road network performance – aim to identify roads which are carrying inappropriate traffic.
- F) Develop an improved but attainable road hierarchy.
- G) Formulate a safety management strategy. This should be long-term and area-wide. It needs to be “owned” by all parties, who need to make a commitment to achieving the targets set by the strategy.
- H) Set safety objectives for each part of the network – both casualty reduction and traffic flow/management objectives. Objectives may be needed for different user groups, road types and local sub-areas. These should be the foundation for local area safety schemes.
- I) Produce a road safety plan which details what actions are necessary to achieve the objectives of the strategy. This should include timescales for implementation and resources needed.
- J) Monitor safety schemes against the objectives to assess effectiveness.



methods, like traffic management, publicity campaigns, training and cooperation with developers, can be used to achieve safety objectives. The Urban Safety Management strategy includes all these approaches.

A major benefit of USM is that it encourages the use of a range of treatments for dealing with accident problems. For example pedestrian casualties along a distributor road may be reduced by either reducing vehicle speeds by installing humps or cameras, or by reducing vehicle flow by altering traffic signal timings to deter vehicles from using the road unnecessarily, or by installing pedestrian crossing facilities, or by educating the drivers and pedestrians, etc. The list goes on.

How can USM be funded?

It is important to embark early on a USM programme, even though lack of funds may delay implementation. Creation of the strategic plan will help direct and justify efforts to provide commitment and funds.

Once the momentum has been achieved and the profile of safety has been raised, then other budgets can be used to contribute to the USM programme. For example, by timing

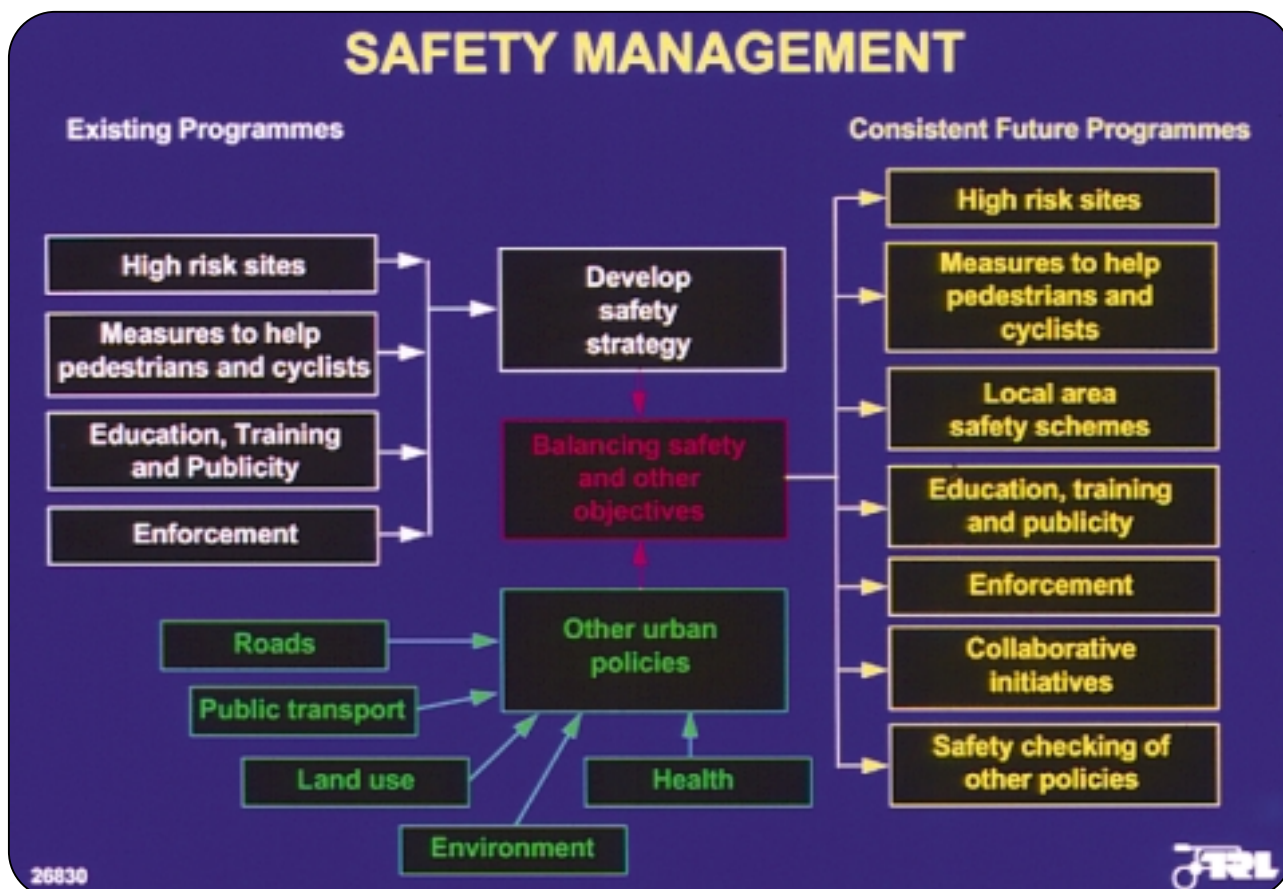
traffic calming to coincide with urban development or road maintenance, savings can be made in constructing road humps and speed cushions.

It is to be hoped that Central Government support for local road safety schemes will continue in the future, in which case on-going schemes that have already been designed may well be strongly placed for funding. This is especially true where benefits can be predicted with confidence, as is the case with schemes developed within a USM strategy designed following the IHT Guidelines.

The way ahead

USM is a proven method that can gain the support of all Departments of the Local Authority, and the residents of the town. A long-term area-wide strategy is needed to ensure the most effective treatment of urban accident problems.

As the USM method is multi-disciplinary, it lends itself well to fit in with integrated transport strategies. Many of the objectives can be shared, and measures selected that can benefit safety and the environment, while taking account of mobility. For example, vulnerable road users are a vital element of the USM method, as well as being an important issue in an integrated transport strategy.





There are currently two USM initiatives that will improve our understanding of the methods and hopefully generate new interest in the approach – the UK Safer City project in Gloucester and the EC DUMAS project.

Reference

Urban Safety Management Guidelines, 1990. The Institution of Highways & Transportation.

Safer City – Gloucester



The DETR sponsored SAFER CITY project in Gloucester is now in year three of a five year demonstration of applying the Urban Safety Management technique. A strategy has been written, a plan of action produced and measures are being installed in residential areas and on main routes. The aim is to reduce casualties by over 30% by the end of the five year period. TRL is responsible for the evaluation.

The City and County Council have forged strong links and involved all parties, including the police, health, traffic management, planning, development, environment, safety, education and the magistrates. A Forum ensures all interested groups have an input to the process.

EC Project DUMAS

A three year European Commission project DUMAS (Developing Urban Management And Safety) started in January 1997 with 10 partners from nine countries, including the Czech Republic. This project aims to bring together European experience and then look towards producing design and assessment frameworks for urban safety projects. As well as looking at the effectiveness of safety engineering measures, the project will focus on the political difficulties and the management of the processes.



A range of European towns will be studied and the draft frameworks produced early in the project will be tested and developed using experience gained in the towns.

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