

# eSUM Action Pack

## for developing Powered Two Wheeler Road Safety Programmes: Summary version

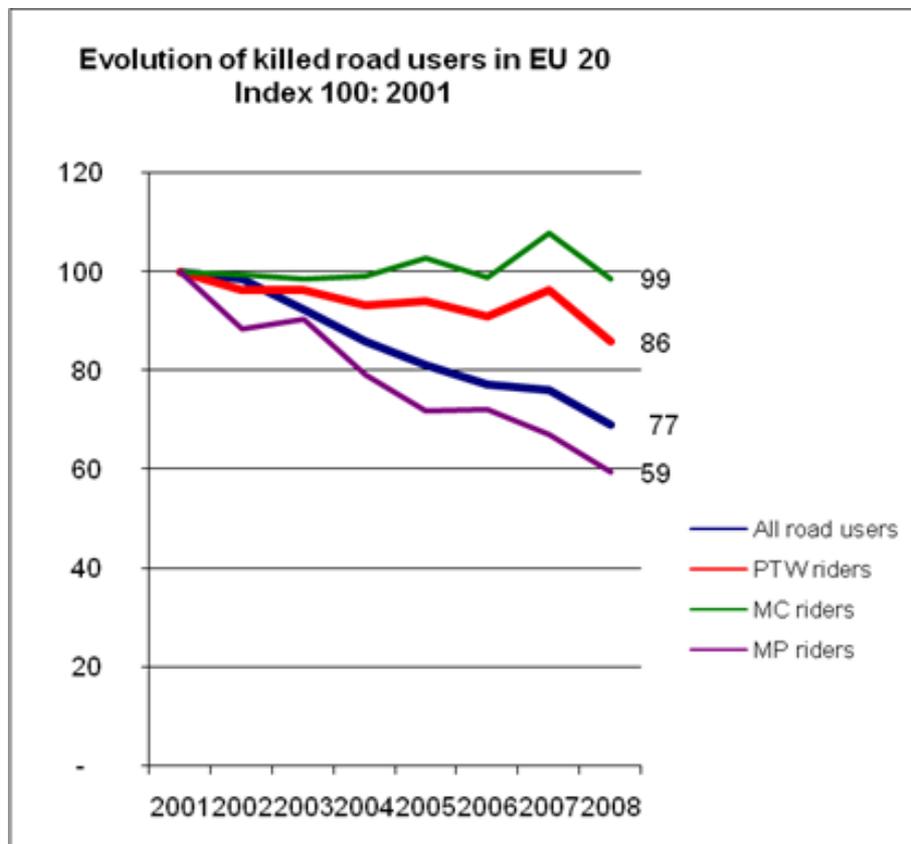
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## Introduction



For many EU citizens the Powered Two Wheeler (PTW) offers affordable personal mobility and an alternative to cars for many urban trips. Figures provided by the Association des Constructeurs Europeens de Motocycles (ACEM) show an increase in the number of motorcycles on the roads in many European cities over the last decade and indicate the potential for greater PTW use in the future.

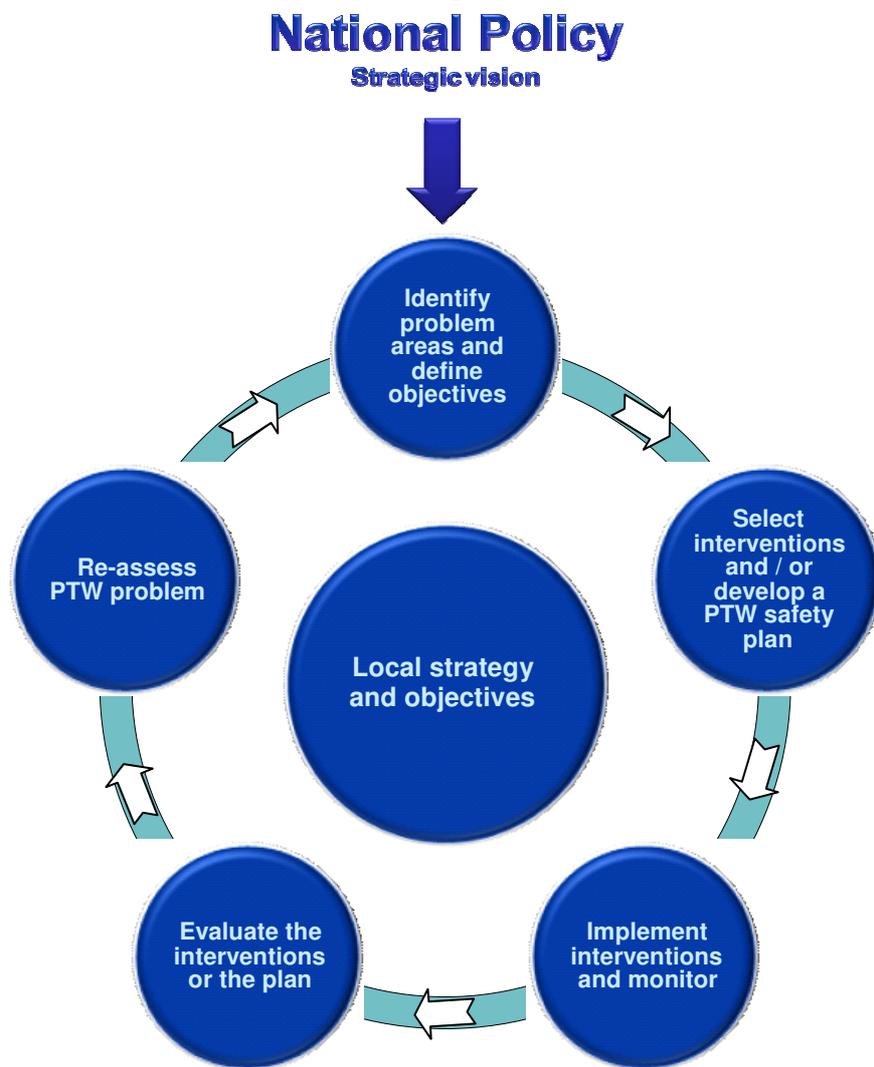
Compared to other modes of transport, PTWs have shown a slower progress with a reduction of 14% in fatalities (for all types of PTWs), in a context of a 17 % increase in fleet over the period 2001-2008 (IRTAD – EU-20 data, see Figure 1). The proportion of PTW fatalities in the overall EU total has increased due to the better results achieved by other groups. In 2006, motorcycle and moped riders, comprised 21% of the fatalities on urban roads.



**Figure 1: Evolution of total fatalities and of motorcycle fatalities in EU20, 2001-2008. (Source: IRTAD)**

The European Safer Urban Motorcycling Project (eSUM) was initiated to identify interventions to help reduce this risk, whilst maintaining the mobility advantages offered by PTWs in urban areas.

The (eSUM) Action Pack is a guide to help politicians and professionals responsible for road safety to develop effective PTW casualty reduction programmes. This document summarises the full report, available on the eSUM website ([www.esum.eu](http://www.esum.eu)), and provides guidance to assist those municipalities interested in building on the knowledge gained from eSUM when developing their own PTW Road Safety Action Plans. The process is summarised in Figure 2.



**Figure 2: Planning Process**

The PTW Road Safety Action Pack summarised in this document is probably of most use if it is applied within the structure of a general Road Safety Action Plan. Nevertheless the guidance is set out without assuming prior knowledge of

developing road safety plans, and provides insights regarding the detailed consideration that should be given to PTWs within overall strategy.

The Action Pack sets out a simple methodology for designing and implementing a PTW casualty reduction programme. Essentially there are 6 stages:

Stage	Action
1	Gather data required for analysis of PTW casualty problems
2	Analyse data
3	Identify casualty issues
4	Develop targets and select interventions
5	Implement interventions and monitor
6	Evaluate effectiveness

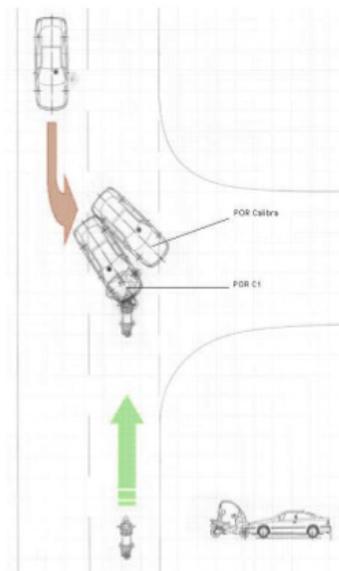
Sections 1 to 7 describe how this methodology might be applied.

## Section 1: Data Required

As a minimum the data required to assess the scale of the PTW casualty problem will be:

**Collision Data** for PTW casualties killed or seriously injured (KSI) as defined using the Maximum Abbreviated Injury Scale (MAIS) [Score 3 or greater] for at least 5 years. (CARE Database)

- Location, including plan of site and description of layout;
- Date/Time;
- Weather/surface conditions;
- Age/gender of casualty;





- Type of vehicle involved;
- Vehicle manoeuvre leading to collision;
- Text description of collision.

**Contextual Data** giving the background to the use of PTWs in the area.

- Number of PTWs registered in the city area;
- Kilometres (km) ridden by PTWs;
- Trends of PTW use over at least 5 years.

**Sources:** There are several potential sources depending on national process and responsibilities. The primary source of collision data is likely to be the **Police**, with supplementary data possibly available from local **hospitals**.

Contextual data should be available from **municipal authorities** and/or national **government transport administrators**.

## Section 2: Data Analysis

Analysis of the casualty data should focus on:

- Overall collision rate trends over the last 5 years (KSI/vehicles registered and KSI/km ridden);
- Locations of Collision clusters;
- Distribution by time/day/date;
- Weather/surface factors;
- Collision rates for age/gender groups;
- Key causation factors/manoeuvres/locations;
- Other vehicle involvement.

## Section 3: Identification of Casualty Issues

From the analysis it should be possible to identify common causation factors to assist in selecting appropriate interventions:

- Overall casualty trend for the city area to determine if casualty rates are falling or rising;
- Locations of clusters of PTW collisions can be identified using local criteria and investigated to identify common factors which may be rectified by remedial action at the site;
- An assessment of time/day/date, weather or surface related causes can be undertaken on a city wide and location basis;
- High risk groups can be identified by age, gender or vehicle type;
- Other vehicle involvement can be assessed to provide an indication of cause and potential targeting data for any interventions.



## Section 4: Selection of Interventions

Appropriate interventions may be identified using the eSUM project. The Good Practice Guide (GPG), already set up as a searchable tool on the eSUM website. The Action Pack (complete-version) provides further guidance on how to apply this and other knowledge bases developed in the project ([www.esum.eu](http://www.esum.eu)) to help match interventions to the problems defined by the analysis of data. It is emphasised that selection should be based on the identification of collision causation factors from the data.

The GPG is set out to provide guidance on potentially successful casualty reduction projects based on 6 themes:

- Rider Training and Awareness;
- Highway Features and Policy;
- Targeted Enforcement;
- Specific Highway Remedial Measures;
- PTW Design and Protective Equipment;
- 'Softening' the Highway Infrastructure.



**Work Package 3**  
**WORK PACKAGE 3 - IDENTIFYING GOOD PRACTICE - Updated May 2010**

eSUM Work package 3 identifies good practice projects which contribute to reducing urban powered two wheeler casualties. This forms a comprehensive resource for anyone working to improve road safety for PTW riders.

A literature search was completed to locate and access PTW safety projects. This was followed by a questionnaire distributed to organisations involved in PTW safety requesting information on any successful projects.

In total over 200 projects from across the world were assessed for their potential to contribute to a reduction in URBAN PTW casualties. The Good Practice Guide includes 107 projects. Work Package 3 was carried out by Transport for London as one of the eSUM partners.

**PROJECT THEMES**

The projects were classified into 6 themes.

- BPF1 Training and Awareness
- BPF2 Highway Features and Policy
- BPF3 Targeted Enforcement
- BPF4 Specific Highway Remedial Measures
- BPF5 PTW Design and Protective Equipment
- BPF6 'Softening' the Highway Infrastructure

**USING THE GUIDE**

1. Clicking onto one of the Project Themes in the table above will take you to a summary of good practice projects in that theme.
2. Next click on the project required. This will download a PDF document of the good practice example.
3. Use the back button on your browser to return to the summary page.

Careful consideration of the potential interventions is required to ensure that they are both appropriate to the local city area and to the casualty problems identified.

## Section 5: Setting up a Monitoring Framework for Interventions

A robust monitoring framework should be established in order to accurately evaluate the effectiveness of any interventions implemented. As a minimum a 'baseline' should be established based on at least 3 years' data.

The effectiveness of the intervention should be assessed through a comparison of the baseline with data for 3 years following the implementation of the intervention.

For highway engineering schemes this should be a relatively simple process which can be adjusted to reflect changes in PTW use over the period.

For awareness/training and targeted enforcement projects, monitoring may be enhanced by incorporating other indicators, for example from attitude surveys or observed behavioural change but evaluation will primarily rest on changes in casualty rates.



## Section 6: Implementation of Interventions

A named individual should be responsible for the project management of implementation.

Interventions selected from the GPG should be suitably modified to ensure that they are appropriate to national/city conditions.

Sufficient resources should be in place to ensure that implementation can be completed as intended and monitoring undertaken over the following 3 years.

## Section 7: Evaluation and Reporting

The effectiveness of the intervention implemented should be assessed using the monitoring framework described in Section 5.

A brief report should be completed detailing the process of data gathering and analysis, the identification of casualty problems and the selection and implementation of interventions.



The quantitative results should be reported to indicate how the casualty data has evolved since implementation. A qualitative assessment of the intervention should also be included outlining any problems with implementation or evaluation.

This report should be shared with other road safety professionals by publishing on the web to help others learn from your experience.

Measures that achieve outstanding results may well be “good practice” and you are invited to share these examples by presenting them for inclusion in future updates of the eSUM Good Practice Guide ([www.esum.eu](http://www.esum.eu)).

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Note to readers: If you have not been able to find this document in your native language but you would be willing to translate it so as to help to disseminate its contents, please contact us via the [www.esum.eu](http://www.esum.eu).