

## Advice for Experts, Stakeholders and Decision Makers



**DO YOU KNOW,  
THAT EVERY DAY,  
85 PEOPLE ARE  
DYING ON  
EUROPEAN  
ROADS?**

**HELP SAVING  
LIVES!**

[www.sol-project.eu](http://www.sol-project.eu)

# 00 INTRODUCTION

English / Czech / German / Hungarian

A major objective of the SOL project is to produce guidance for both experts and practitioners and road safety decision makers on the key road safety concepts, including the principles of a Safe System approach to road safety management.

This guidelines document has two main sections: a guidance manual for experts and practitioners, and a shorter manual that highlights the key issues for decision makers. Some material is common to both manuals but as each is designed as a freestanding document their complete texts are included in these Guidelines.

The manuals describe the global road safety situation in the context of the Decade of Action, and the current road safety situation in Central European countries compared with other EU countries, showing the need for urgent action to address the road safety problem. They include details of the SOL project's aims and methodology and how it has been implemented through a range of pilot actions.

A major section in the manual for experts describes the steps to be undertaken in developing and implementing a road safety strategy, and the importance of monitoring results. Wider issues such as community engagement, sustainable transport and land use policy are also included. There is also a detailed section that describes the transnationally replicable tools that are a key output from the SOL project.

The manual for decision makers concentrates on the need for action and how roads can be made safe.

Both manuals include sections on the most important road safety interventions but it is not the purpose of the manuals to provide comprehensive guidance on interventions. There are many existing sources of information, including the manuals published by WHO that focus on how to develop and implement programmes to address the key risks such as speed and drink driving. Primary information sources are referenced, and a full bibliography is included.

SOL Partnership wish you a enjoyable reading...!

Hlavním cílem projektu SOL bylo vytvořit příručku pro dopravní experty, odborníky na všech úrovních státní správy a samosprávy a všechny další zodpovědné osoby o klíčových konceptech bezpečnosti silničního provozu včetně principů systémového přístupu k řízení bezpečnosti silničního provozu

Tato příručka má dvě základní části, manuál pro dopravní experty a odborníky a kratší manuál, který zdůrazňuje klíčové otázky, a který je určen osobám s rozhodovací pravomocí.

Manuály popisují globální situaci v bezpečnosti silničního provozu v kontextu Dekády Aktivit a stávající situaci v bezpečnosti silničního provozu zemí z regionu střední Evropy v porovnání s ostatními evropskými zeměmi. Ukazují potřebu nezbytného zvýšení aktivit k dostatečnému zvýšení bezpečnosti silničního provozu. Obsahují detaily o cílech projektu SOL, jeho metodologii a implementaci této metodologie skrze různé pilotní aktivity.

Největší část manuálu pro experty je věnována popisu kroků, které je nutno podniknout pro vývoj a implementaci strategie bezpečnosti silničního provozu a důležitosti monitoringu jejich výsledků. Součástí jsou také související otázky zapojení veřejnosti, udržitelného rozvoje dopravy a dopravního plánování. Detailní sekce popisuje mezinárodně přenositelné nástroje pro zvýšení bezpečnosti silničního provozu, které jsou jedním z klíčových výstupů projektu SOL.

Manuál pro osoby s rozhodovací pravomocí se koncentruje na potřebu zvýšení bezpečnosti silničního provozu a na to, jak udělat silnice bezpečnými.

Oba manuály obsahují části věnované nejdůležitějším opatřením pro zvýšení bezpečnosti silničního provozu, ale není jejich účelem, aby byly vyčerpávajícím zdrojem informací o možných opatřeních. Je mnoho jiných, již existujících, zdrojů informací, včetně manuálů WHO, které se zaměřují na vývoj a implementaci programů na odstranění klíčových faktorů nehodovosti, jakými jsou nepřiměřená rychlost a řízení pod vlivem alkoholu. V textu manuálů SOL jsou uvedeny příslušné reference a jejich součástí je i seznam použitých zdrojů.

Partneři projektu SOL Vám přejí užitečné čtení .....!

Ein Hauptziel des EU-Projektes SOL ist es, einen Leitfaden für VerkehrssicherheitexpertInnen und PraktikerInnen sowie für EntscheidungsträgerInnen auf Basis bestehender Schlüsselkonzepte zu entwickeln. Bei der Entwicklung wurden mit dem „Safe System Approach“ Prinzipien aus der Straßenverkehrssicherheit berücksichtigt.

Der vorliegende Leitfaden besteht aus zwei Teilen: der erste Teil wendet sich an ExpertInnen und Fachleute und der zweite Teil an EntscheidungsträgerInnen. Dabei überschneiden sich die Inhalte teilweise und finden sich daher in beiden Handbüchern wieder.

Beide Leitfäden beschreiben sowohl die weltweite Verkehrssicherheitssituation in Hinblick auf das von den Vereinten Nationen erklärte Jahrzehnt der Verkehrssicherheit („Decade of Action for Road Safety“), als auch den status quo in den Zentraleuropäischen Ländern im Vergleich zu den restlichen EU-Ländern. Dabei zeigt sich die dringende Notwendigkeit zu handeln, um die hohen Unfallzahlen im Straßenverkehr zu senken. Dies ist das erklärte Ziel des Projektes SOL. Mit welchen Methoden dieses Ziel verfolgt wurde, wird genauso erläutert wie die Aktionen, die zur Erreichung dieses Ziels umgesetzt wurden.

Der „Leitfaden für ExpertInnen“ zeigt auf, welche Schritte zu unternehmen sind, um eine Verkehrssicherheitsstrategie zu entwickeln bzw. umzusetzen, und wie wichtig es ist, die Ergebnisse dieser Strategie zu beobachten und zu evaluieren. Themen, wie die aktive Beteiligung von Gemeinden, die Berücksichtigung von nachhaltiger Mobilität sowie die Raumordnungspolitik werden angesprochen. Besondere Aufmerksamkeit wird dabei den im Projekt SOL entwickelten Maßnahmen gewidmet, welche transnational angewendet werden können.

Der „Leitfaden für EntscheidungsträgerInnen“ zeigt den dringenden Handlungsbedarf auf, geeignete Maßnahmen zu ergreifen, um die Anzahl der Verkehrstoten in Europa nachhaltig zu senken.

Beide Leitfäden konzentrieren sich dabei auf die wichtigsten Verkehrssicherheitsmaßnahmen, haben aber nicht den Anspruch einen umfassenden Überblick über sämtliche Maßnahmen zu geben. Hierfür eignen sich bereits existierende Quellen, wie z.B. der Leitfaden der Weltgesundheitsorganisation (WHO), in dem beispielsweise Strategien zur Reduktion der Hauptrisikofaktoren wie überhöhte Geschwindigkeit und Alkohol am Steuer erläutert werden.

Quellenangaben und eine umfassende Bibliographie befinden sich im Anhang der Leitfäden.

Wir wünschen Ihnen viel Spaß beim Lesen!

A “SOL-Save Our Lives” (Mentsétek meg az életünket!) projekt egyik fő célja olyan útmutató megalkotása volt közlekedésbiztonsági szakemberek és döntéshozók számára, amely bemutatja a fő közlekedésbiztonsági koncepciókat, beleértve a „Safe System (Biztonságos rendszer)” elv megközelítési módját a közlekedésbiztonság irányításának oldaláról.

Ez a dokumentum két fő részből áll, egy kézikönyvből, szakemberek és közlekedésbiztonsági területen dolgozók számára, és egy rövidebb útmutatóból, amely a döntéshozókat érintő főbb kérdéseket taglalja. Néhány helyen átfedés tapasztalható a két útmutató között, mivel mindkettőt úgy terveztük, hogy önálló dokumentumként is megállja a helyét, így adott szövegrészek mindkettőben megtalálhatóak.

Az útmutatók ismertetik az átfogó közlekedésbiztonsági helyzetet a „Cselekvések Évtizede a Közlekedésbiztonságban 2011-2020” ENSZ program törekvéseinek fényében és a közép-európai országok közlekedésbiztonsági helyzetét napjainkban a többi európai országéval összehasonlítva. Ezzel is hangsúlyozva, hogy sürgető beavatkozásokra van szükség a közlekedésbiztonsági problémák kezelésére. A kézikönyvek részletesen bemutatják a SOL projekt céljait és módszertanát, és hogy ez milyen módon valósult meg a projekt keretében végrehajtott mintaprogramok formájában.

A szakemberek számára írt kézikönyv egyik fő fejezete leírja a közlekedésbiztonsági stratégia megalkotásának és végrehajtásának lépésit, továbbá a monitoring (figyelemmel kísérés) és kiértékelés szükségességét és szerepét. Tágabb kérdéskörök - mint például a helyi közösség bevonása, fenntartható közlekedés és a területhasználat - is figyelembe vételre kerültek. Egy teljes fejezetet szenteltünk a SOL projektben kidolgozott, több országban is megvalósítható eszközöknek és módszereknek.

A döntéshozóknak szánt kézikönyv a beavatkozások szükségességét helyezi előtérbe, és azt, hogyan lehet útjainkat még biztonságosabbá tenni.

Mindkét kézikönyv foglalkozik a legfontosabb közlekedésbiztonsági beavatkozásokkal, de egyiknek sem célja, hogy átfogó útmutatást adjon ezekről. Számos egyéb információforrás érhető el, a WHO által kiadott kézikönyveket is beleértve, amelyek azzal foglalkoznak, hogyan dolgozzunk ki és valósítsunk meg kiemelt közlekedésbiztonsági problémák megoldására irányuló programokat, mint például a sebesség nem megfelelő megválasztása, vagy az ittas vezetés. Az elsődleges információforrásokat referenciaként jelöltük meg és a teljes irodalomjegyzék is megtalálható.

A SOL partnerek kellemes időtöltést kívánnak az olvasáshoz!

# 00 INTRODUCTION

Italian / Polish / Slovakian / Slovenian

Il progetto SOL, Save Our Lives, intende migliorare le capacità degli attori locali e regionali al fine di prevenire il più possibile gli incidenti stradali. Il principale obiettivo del progetto consiste nel dare un orientamento siaad esperti e professionisti, che ai decision makers in merito ai concetti chiave della sicurezza stradale, inclusi i principi di un approccio di “Sicurezza di Sistema” alla gestione della sicurezza stradale.

Questo documento sulle Linee Guida ha due sezioni principali: un manuale per esperti e professionisti e un più breve manuale che evidenzia i temi chiave per i decisori politici. Alcuni dei contenuti sono comuni ad entrambi i manuali ma, dato che ciascuno è ideato come un documento a sé stante, i loro contenuti sono integralmente inclusi in queste Linee Guida.

I manuali descrivono la situazione generale della sicurezza stradale nel contesto della Decade of Action delle Nazioni Unite, e la situazione attuale nei paesi del Centro Europa, comparata con gli altri paesi dell’Unione Europea: tutto questo evidenzia il bisogno di un intervento urgente per affrontare il problema della sicurezza stradale. I manuali comprendono in dettaglio gli obiettivi e la metodologia del progetto SOL, e come questo sia stato implementato tramite una serie di azioni pilota.

Una parte importante del manuale per gli esperti descrive i passi da intraprendere per lo sviluppo e l’implementazione di una strategia sulla sicurezza stradale, e l’importanza del monitoraggio dei risultati. Coinvolgimento delle comunità, trasporto sostenibile e politiche di pianificazione territoriale sono gli altri temi trattati. C’è anche una sezione particolareggiata che descrive gli strumenti replicabili a livello transnazionale, uno dei risultati principali del progetto SOL.

Il manuale per i decision makers si concentra invece sulla necessità di intervento e su come le strade possano essere rese più sicure dall’intervento del settore pubblico.

Entrambi i manuali includono sezioni sui più importanti interventi per la sicurezza stradale, ma non è intenzione dei manuali fornire una guida generale per tali interventi. Vi sono infatti molte fonti di informazione esistenti, compresi i manuali pubblicati dal WHO, che si concentrano su come sviluppare e implementare programmi per affrontare i fattori di rischio, quali la velocità eccessiva e la guida in stato di ebbrezza. All’interno del testo sono inoltre citate le maggiori fonti di informazione ed è inclusa una bibliografia esaustiva. La partnership di SOL vi augura una piacevole lettura...!

Jednym z ważnych celów projektu SOL jest opracowanie wytycznych dla ekspertów, praktyków oraz decydentów bezpieczeństwa ruchu drogowego obejmujących problematykę zagrożeń w ruchu drogowym i odnoszących się do głównych zasad systemowego podejścia do zarządzania bezpieczeństwem ruchu drogowego.

Opracowane w ramach projektu wytyczne składają się z dwóch głównych części: podręcznika dla ekspertów i praktyków oraz krótszego opracowania, koncentrującego się na wybranych zagadnieniach bezpieczeństwa, skierowanego do decydentów. Część materiału pokrywa się, nie mniej jednak są to oddzielne dokumenty.

Oba opracowania opisują stan bezpieczeństwa ruchu drogowego na świecie w kontekście Dekady Działań oraz bieżącą sytuację w krajach Europy Środkowej, odnosząc ją do stanu bezpieczeństwa ruchu drogowego w pozostałych krajach UE, wskazując tym samym na pilną potrzebę podjęcia działań w celu rozwiązania problemu zagrożeń w ruchu drogowym w krajach Europy Środkowej. Opracowania zawierają również informacje o projekcie SOL, jego celach i zastosowanej w projekcie metodologii, a także sposobach wdrażania poszczególnych działań pilotażowych.

Dużą część wytycznych dla ekspertów zajmuje opis kroków, które należy podjąć w celu opracowywania i wdrażania strategii bezpieczeństwa ruchu drogowego na poziomie lokalnym oraz monitorowania ich efektów. Dokument odnosi się również do kwestii zaangażowania społeczności lokalnych, zrównoważonego transportu oraz polityki zagospodarowania przestrzennego. Ponadto opisuje szczegółowo zestaw transnarodowych, możliwych do powielania, środków poprawy bezpieczeństwa, jako kluczowy wynik projektu SOL.

Podręcznik dla decydentów koncentruje się na wykazaniu konieczności podejmowania działań na rzecz poprawy bezpieczeństwa ruchu drogowego oraz sposobach ich prowadzenia.

Oba dokumenty zawierają rozdziały dotyczące najważniejszych środków poprawy bezpieczeństwa ruchu drogowego, choć nie jest to głównym celem tych wytycznych. Istnieje bowiem wiele innych źródeł informacji o kompleksowych działaniach na rzecz bezpieczeństwa ruchu drogowego, jak chociażby podręczniki wydawane przez WHO, koncentrujące się na działaniach i programach skierowanych na konkretne zagrożenia w ruchu drogowym, takie jak: nadmierna prędkość, czy uczestnictwo w ruchu drogowym pod wpływem alkoholu. Nieniejsze dokumenty zawierają informację o tego rodzaju opracowaniach oraz pełną bibliografię.

Partnerzy projektu SOL życzą przyjemnej lektury! ...

Hlavným cieľom projektu SOL je vypracovať odporúčania pre odborníkov, profesionálov a „tvorcov rozhodnutí“ v oblasti kľúčových konceptov bezpečnosti cestnej premávky, vrátane princípov a zásad Systémového prístupu k riadeniu bezpečnosti cestnej premávky.

Tento dokument s odporúčaniami sa skladá z dvoch hlavných častí: príručky odporúčaní pre odborníkov a profesionálov a kratšej príručky, ktorá zdôrazňuje kľúčové otázky pre osoby s rozhodovacou právomocou. Niektoré materiály sú spoločné pre obidve príručky, ale keďže je každá spracovaná v samostatnom dokumente, ich kompletné texty sú zahrnuté v týchto odporúčaniach.

Príručky popisujú globálnu situáciu v oblasti bezpečnosti premávky v kontexte „Decade of Action“ a aktuálnu situáciu v oblasti bezpečnosti cestnej premávky v krajinách Strednej Európy v porovnaní s ostatnými krajinami EÚ. Poukazujú tiež na potrebu urýchlene prijať viaceré opatrenia, zamerané na riešenie problémov bezpečnosti cestnej premávky. Obsahujú aj informácie o cieľoch a metodológii projektu SOL a o jeho praktickej implementácii prostredníctvom série pilotných akcií.

Hlavná časť príručky pre odborníkov popisuje kroky, ktoré musia byť splnené pri vývoji a implementácii stratégie bezpečnosti cestnej premávky a zdôrazňuje dôležitosť monitorovania výsledkov. Sú v nej zahrnuté aj širšie otázky, ako je angažovanosť komunit, udržateľná doprava a politika územného plánovania. K dispozícii je tiež časť, ktorá poskytuje podrobný popis nadnárodné „replikovateľných“ nástrojov, ktoré sú kľúčovým výstupom z projektu SOL.

Príručka pre osoby s rozhodovacou právomocou sa zameriava na zdôraznenie potreby prijatia opatrení pre zvýšenie bezpečnosti na našich cestách.

Hoci obe príručky obsahujú časti s najdôležitejšími opatreniami pre zvýšenie bezpečnosti cestnej premávky, ich účelom nie je poskytovať komplexné poradenstvo v oblasti intervencií. Existuje množstvo zdrojov informácií, vrátane návodov zverejnených Svetovou zdravotníckou organizáciou (WHO), ktoré sú zamerané na to ako sa vyvíjať a implementovať programy na riešenie kľúčových rizík, akými sú napr. neprimeraná rýchlosť a riadenie pod vplyvom alkoholu. Príručky obsahujú odkazy na primárne informačné zdroje ako aj úplný zoznam použitej literatúry.

V mene SOL partnerstva Vám prajeme príjemné čítanie ...!

Eden glavnih ciljev projekta SOL je izdelati Priročnik, ki vsebuje tako navodila in smernice o ključnih konceptih varnosti v cestnem prometa, kot tudi načela varnega sistemskega pristopa k upravljanju varnosti v cestnem prometu. Priročnik je namenjen predvsem strokovnjakom s področja cestnega prometa in vsem tistim, ki imajo pooblastilo za odločanje na področju prometne varnosti.

Priročnik je sestavljen iz dveh segmentov, in sicer vsebuje Smernice za strokovnjake in krajša Navodila, ki izpostavljajo ključna vprašanja za odločujoče. Nekatere vsebine so skupne obema segmentoma, vendar sta vsak zase oblikovana v popolnoma samostojna dokumenta.

Priročnik zajema opis globalnih razmer varnosti v cestnem prometu v okviru Decade of Action - “Desetletje za večjo prometno varnost” in trenutno stanje varnosti v cestnem prometu v državah srednje Evrope v primerjavi z drugimi državami EU. Rezultati primerjave kažejo na potrebo po takojšnjem ukrepanju in reševanju problematike varnosti v cestnem prometu. V Priročniku so zajeti tudi vsi cilji in metodologija projekta SOL ter način izvedbe s pomočjo različnih, opisanih pilotnih aktivnostih.

Večji del Priročnika za strokovnjake je namenjen opisu pomembnih korakov, ki bodo pripeljali do razvoja ter implementacije strategije varnosti v cestnem prometu in pomenu spremljanja rezultatov aktivnosti. Priročnik usmerja tudi širše, kot je sodelovanje lokalnih skupnosti, trajnostna mobilnost in politika rabe zemljišč. Podrobno pa so opisana transnacionalno ponovljiva orodja, ki so eden ključnih izdelkov projekta SOL.

Navodila za odločujoče so osredotočena na nujnost ukrepanja in na vprašanje, kako bi lahko bile ceste varnejše.

Tako Smernice kot Navodila vsebujeta poglavje o najpomembnejših ukrepih za varnost cestnega prometa. Namen priročnika pa ni zagotoviti celovitega procesa ukrepanja, torej od razvoja do implementacije programov, ki naslavljajo ključna tveganja, kot so neprimerna hitrost, vožnja pod vplivom alkohola ipd.. Tovrstne celovite procese opisujejo npr. priročniki, ki jih je izdala WHO - Svetovna zdravstvena organizacija in druge. Glavni viri informacij in bibliografija so v dokumentu navedeni.

SOL partnerji vam želimo prijetno branje!

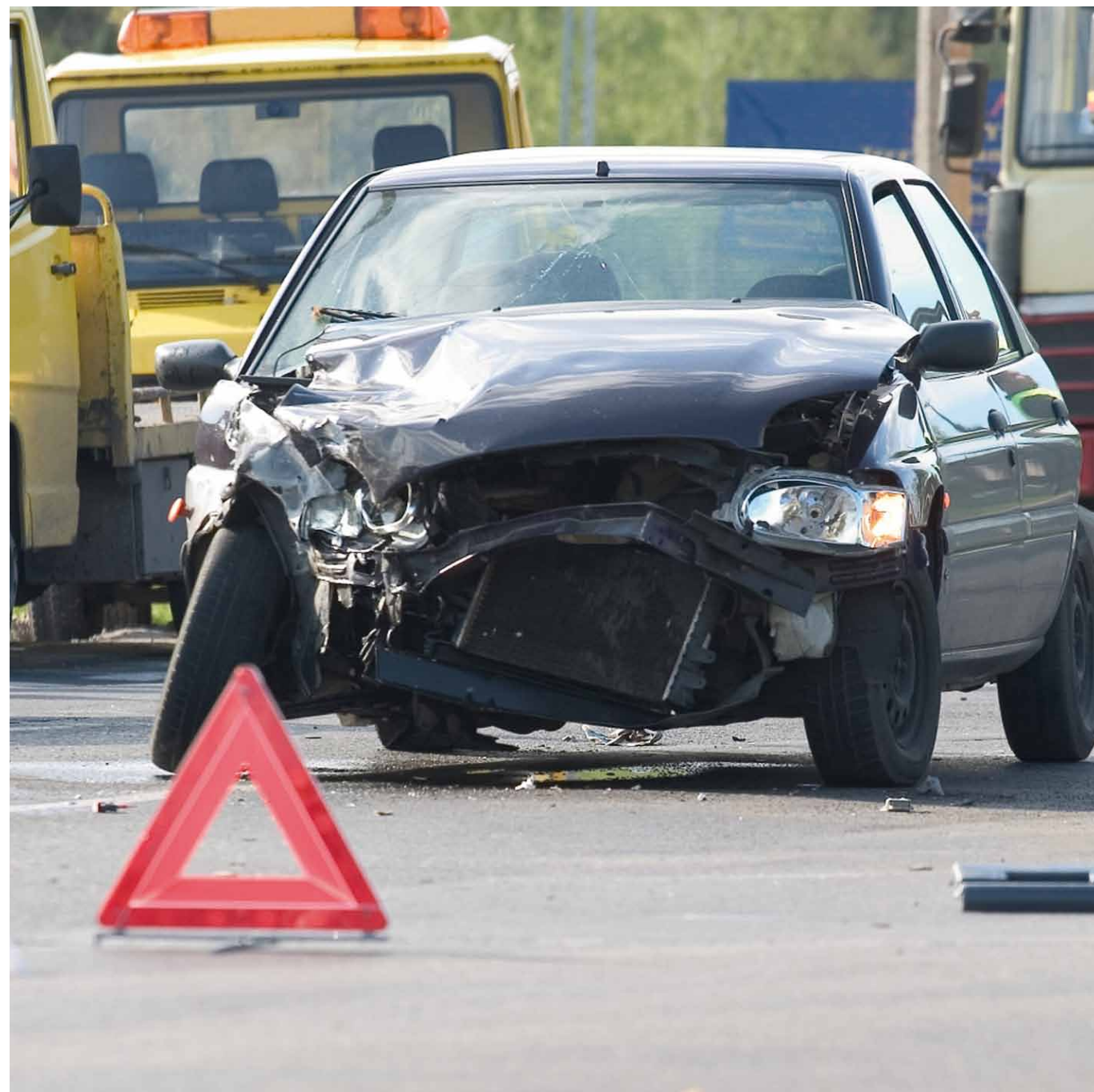


## TABLE OF CONTENT

|              |                                                                                         |    |
|--------------|-----------------------------------------------------------------------------------------|----|
| <b>1.</b>    | Background .....                                                                        | 10 |
| <b>1.1</b>   | The global road safety situation .....                                                  | 11 |
| <b>1.2</b>   | Road safety situation in Central Europe .....                                           | 12 |
| <b>1.3</b>   | A Safe System approach to road safety .....                                             | 14 |
| <b>1.4</b>   | The SOL project .....                                                                   | 16 |
| <b>2.</b>    | Road safety strategies and targets .....                                                | 18 |
| <b>2.1</b>   | Key steps in developing a road safety strategy .....                                    | 19 |
| <b>2.1.1</b> | Situational assessment .....                                                            | 19 |
| <b>2.1.2</b> | Strategic policy framework .....                                                        | 21 |
| <b>2.1.3</b> | Role of a Lead Agency .....                                                             | 22 |
| <b>2.1.4</b> | Partnerships .....                                                                      | 24 |
| <b>2.2</b>   | The SOL project approach .....                                                          | 25 |
| <b>2.2.1</b> | Situational assessment .....                                                            | 26 |
| <b>2.2.2</b> | Creating multi-stakeholder teams .....                                                  | 29 |
| <b>2.2.3</b> | Developing community-based road safety strategies .....                                 | 31 |
| <b>2.3</b>   | Delivery and implementation planning .....                                              | 33 |
| <b>2.3.1</b> | Stakeholders and partnerships .....                                                     | 33 |
| <b>2.3.2</b> | Action Plans for strategy implementation .....                                          | 35 |
| <b>2.3.3</b> | Interventions to deliver targets .....                                                  | 36 |
| <b>2.3.4</b> | Building capacity, training and skill creation .....                                    | 38 |
| <b>2.4</b>   | Reporting and monitoring .....                                                          | 39 |
| <b>2.4.1</b> | Importance of monitoring .....                                                          | 39 |
| <b>2.4.2</b> | Monitoring and evaluation tools .....                                                   | 39 |
| <b>2.5</b>   | Communications and use of media .....                                                   | 42 |
| <b>2.6</b>   | Getting community engagement and participation .....                                    | 45 |
| <b>3.</b>    | Integrating road safety into wider policy initiatives and urban development .....       | 46 |
| <b>3.1</b>   | Sustainable transport policy .....                                                      | 47 |
| <b>3.2</b>   | Land use policy .....                                                                   | 48 |
| <b>4.</b>    | Guidance for transnationally replicable tools .....                                     | 50 |
| <b>4.1</b>   | Description of transnationally replicable tools for road safety actions .....           | 51 |
| <b>4.2</b>   | Transnational networking model on road safety issues developed and assessed by SOL .... | 54 |
| <b>5.</b>    | Conclusions and recommendations .....                                                   | 62 |
| <b>6.</b>    | Bibliography .....                                                                      | 58 |

# 01 BACKGROUND

*Nearly 1.3 million people die each year on the world's roads and between 20 and 50 million suffer non-fatal injuries. Over 90% of these fatalities occur in low-income and middle-income countries. In 2004, road traffic injury was ninth in the leading causes of death, but it is estimated by WHO that by 2030, without concerted action, road traffic will be at fifth place ahead of such diseases as tuberculosis and HIV/AIDS resulting in an estimated 2.4 million deaths each year.*



*In March 2010, the United Nations proclaimed the Decade of Action for Road Safety 2011-2020 with the goal of stabilizing and then reducing global road deaths.*

## 01.1 THE GLOBAL ROAD SAFETY SITUATION

Nearly 1.3 million people die each year on the world's roads and between 20 and 50 million suffer non-fatal injuries. Over 90% of these fatalities occur in low-income and middle-income countries. In 2004, road traffic injury was ninth in the leading causes of death, but it is estimated by WHO that by 2030, without concerted action, road traffic will be at fifth place ahead of such diseases as tuberculosis and HIV/AIDS resulting in an estimated 2.4 million deaths each year. Road traffic injuries are already among the three leading causes of death for people between 5 and 44 years of age. The economic consequences of motor vehicle crashes have been estimated between 1% and 3% of the respective GNP of the world countries, reaching a total over \$500 billion.

In March 2010, the United Nations proclaimed the Decade of Action for Road Safety 2011-2020 with the goal of stabilizing and then reducing global road deaths. Resolution 64/255 also invites all Member States to set their own national road traffic casualty reduction targets to be achieved by the end of the Decade, in line with a global plan of action to be prepared by the World Health Organisation and the United Nations regional commissions, in cooperation with other partners in the United Nations Road Safety Collaboration.

The Global Plan<sup>1</sup> sets out specific objectives for the achievement of the Goal that include developing and implementing road safety strategies and targets; strengthening road safety management structures; improving the quality of data collection and monitoring progress; encouraging increased funding to road safety; and building capacity at regional, national and global level to improve road safety. The Global Plan is based on the "safe system" approach (see Section 1.3 below) and encourages countries to implement activities, within the legal constructs of national and local governments, according to five pillars. The five pillars for national activities are: Road safety management, Safer roads and mobility, Safer vehicles, Safer road users, and Post-crash response.

Countries should consider these five areas within the framework of their own national road safety strategy. Activities in each of the five areas should be based on the recommendations of the *World report on road traffic injury prevention*<sup>2</sup> and should address the key road crash risks: speeding, drink driving, and lack of use of helmets, seat belts, and child restraints. The WHO has produced a series of manuals for decision makers and practitioners to address these key risks, as well as a manual giving

guidance on data systems<sup>3</sup>. Within the framework of the five pillars each country's priorities for action will depend on local conditions, and road safety measures should be adapted accordingly.

In 2009, the WHO published the first Global Status Report on Road Safety that assessed the road safety situation in 178 countries, using data drawn from a standardized survey. The results show that road traffic injuries remain an important public health problem, particularly for low-income and middle-income countries. Pedestrians, cyclists and motorcyclists make up almost half of those killed on the roads, highlighting the need for these road users to be given more attention in road safety programmes. The results suggest that in many countries road safety laws need to be made more comprehensive while enforcement should be strengthened.

The *Global status report on road safety*<sup>4</sup> results clearly show that significantly more action is needed to make the world's roads safer. An updated report that will serve as a baseline for monitoring national and international progress towards the achievement of the objectives of the Decade of Action for Road Safety 2011-2020 will be published in 2012.

<sup>1</sup> WHO (2011)  
<sup>2</sup> WHO (2004)  
<sup>3</sup> WHO (2006-2010)  
<sup>4</sup> WHO (2009)

# 01.2 ROAD SAFETY SITUATION IN CENTRAL EUROPE AREA

| Country     | 2001   | 2010   | 2011   | % Change  |           | Deaths per million population |      |      |
|-------------|--------|--------|--------|-----------|-----------|-------------------------------|------|------|
|             |        |        |        | 2010-2011 | 2001-2011 | 2001                          | 2010 | 2011 |
| Austria     | 958    | 552    | 523    | -5.2      | -45.4     | 119                           | 66   | 62   |
| Czech Rep   | 1,334  | 802    | 707    | -11.8     | -47.0     | 130                           | 76   | 67   |
| Hungary     | 1,239  | 740    | 638    | -13.8     | -48.5     | 121                           | 74   | 64   |
| Italy       | 6,691  | 4,090  | 3,800* | -7.1      | -43.2     | 125                           | 66   | 63   |
| Poland      | 5,534  | 3,907  | 4,189  | +7.2      | -24.3     | 145                           | 102  | 110  |
| Slovakia    | 614    | 353    | 324    | -8.2      | -47.2     | 116                           | 65   | 60   |
| Slovenia    | 278    | 138    | 141    | +2.1      | -49.2     | 140                           | 67   | 69   |
| Germany     | 6,977  | 3,648  | 4,002* | +9.7      | -42.6     | 85                            | 45   | 49   |
| Belgium     | 1,486  | 840*   | 875*   | +4.2      | -41.1     | 145                           | 77   | 80   |
| Bulgaria    | 1,011  | 755    | 658    | -12.8     | -34.9     | 124                           | 102  | 88   |
| Denmark     | 431    | 255    | 221*   | -13.3     | -48.7     | 81                            | 48   | 40   |
| Estonia     | 199    | 78     | 101    | +29.4     | -49.2     | 146                           | 58   | 75   |
| Ireland     | 412    | 212    | 186    | -12.6     | -54.9     | 107                           | 47   | 42   |
| Greece      | 1,880  | 1,258  | 1,087* | -13.6     | -42.2     | 172                           | 113  | 96   |
| Spain       | 5,517  | 2,478  | 2,056* | -17.0     | -62.7     | 136                           | 54   | 45   |
| France      | 8,162  | 3,992  | 3,970* | -0.5      | -51.4     | 138                           | 62   | 63   |
| Cyprus      | 98     | 60     | 71     | +18.3     | -27.5     | 140                           | 75   | 88   |
| Latvia      | 558    | 218    | 179    | -17.9     | -67.9     | 236                           | 97   | 80   |
| Lithuania   | 706    | 299    | 297*   | -0.7      | -57.9     | 202                           | 90   | 92   |
| Luxembourg  | 70     | 32     | 33     | +3.1      | -52.9     | 159                           | 64   | 64   |
| Malta       | 16     | 15     | 17     | +13.3     | +6.2      | 41                            | 36   | 41   |
| Netherlands | 993    | 537    | 661    | +23.1     | -33.4     | 68                            | 39   | 40   |
| Portugal    | 1,670  | 937    | 785    | -16.2     | -53.0     | 163                           | 79   | 74   |
| Romania     | 2,461  | 2,377  | 2,018  | -15.1     | -18.0     | 109                           | 111  | 94   |
| Finland     | 433    | 272    | 292*   | +7.4      | -32.6     | 84                            | 50   | 54   |
| Sweden      | 583    | 266    | 319    | +19.9     | -45.3     | 60                            | 28   | 34   |
| UK          | 3,598  | 1,905  | 1,958* | +2.8      | -45.6     | 61                            | 31   | 31   |
| EU          | 54,302 | 31,016 | 30,108 | -2.9      | -44.6     | 113                           | 62   | 60   |

Table 1. Trends in road traffic fatalities in EU countries 2001-2011

As shown in Table 1, in all EU countries road deaths fell between 2001 and 2010, but in 2011 performance was variable with 12 of the 27 countries experiencing an increase in deaths, including three of the SOL countries, Poland, Slovenia and Germany. Hungary and the Czech Republic on the other hand had falls in deaths of 14% and 12% respectively, significantly above the EU average. The EU average reduction in road deaths over the period 2001-2011

was 45%, and seven SOL countries had reductions within about +/-10% of the EU average, with the largest falls in Hungary and Slovenia. Only Poland had a significantly worse than average performance with deaths falling by only 24%. On 20th June 2012 the Road Safety PIN Award for Outstanding Progress in Road Safety 2012 was awarded to Hungary in recognition of the reduction of 49% in road traffic deaths since 2001.

In the ETSC 5th PIN Report 2011 an estimate of the monetary value of the human losses avoided by preventing one fatality was also published, based on updated values in use in ten European countries. It was calculated that if no one had been killed in road traffic collisions in 2010, the benefits to the society would have been valued at 53 billion euro. If no one had been killed nor seriously injured, the benefits to society would have been of the order of 105 bil-

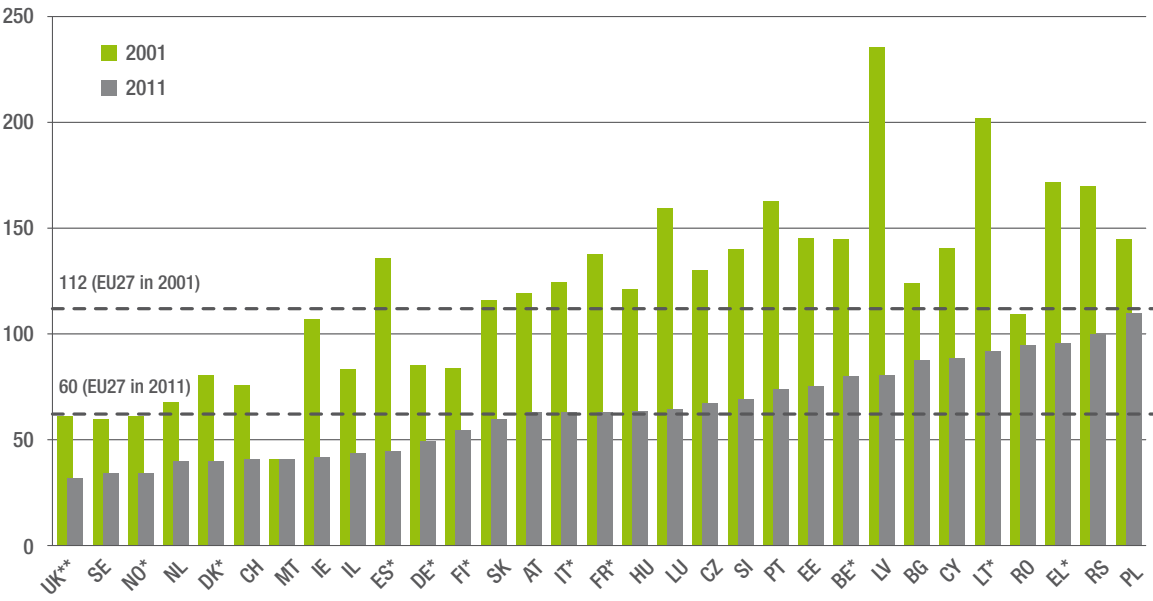


Figure 1. Road traffic fatality rates in EU countries 2001 and 2011

Source: ETSC PIN Report 6 June 2012

\*Provisional estimates used for 2011, as the final figures for 2011 were not available at the time of going to print.

\*\*UK estimate based on 3% increase in killed in 2011 Q1-3 compared with 2010 Q1-3.

lion euro and they would have been of the order of 210 billion euro if there had been no collisions at all on EU roads. The value of preventing all road collisions in 2010 would have been more than 50% greater than the EU budget or 1.8% of EU GDP (Source 5th ETSC PIN Report 2011).<sup>5</sup> Figure 1 shows road traffic fatalities per million inhabitants in 2001 and 2011. The average for the EU was 60 in 2011, and the lowest rates were in Sweden, the UK, Denmark and the Netherlands where fatality rates ranged from 31 to 40. Fatality rates fell over the period in all EU countries. In 2011 in the SOL countries, rates were at or up to 10% above the EU average in Italy (63), Austria (62), Hungary (64), and Slovakia (60), and higher than average in Slovenia (69), and the Czech Republic (67), with the highest rate in Poland (110) which is now the worst performing country in the EU, and the only one with a fatality rate over 100 per million. Conversely, in Germany the rate of 49 was significantly below the EU average. Table 1 shows that performance in the SOL countries in 2011 compared with 2010 was mixed. Fatality rates fell most in Hungary and the Czech Republic, and also fell in Austria,

Italy, and Slovakia, but increased in Germany, Poland, and Slovenia. However, over the decade 2001-2011 performance the SOL countries, except Poland, compares favourably with countries such as Belgium, Bulgaria, Estonia, and Romania that were at similar levels in 2001, or in the case of Romania lower, but in 2011 all had fatality rates well above the SOL countries, except Poland.

Although, with the exception of Poland, the seven countries with pilot activities in the SOL project (Germany is also a partner country but there is no pilot in Germany) have made significant progress and are now broadly average performers in terms of reductions in deaths and in fatality rates, there is a considerable gap between them and the best performing countries, Sweden, the UK, and the Netherlands. There is therefore great potential for road safety improvement in this group of Central European countries. However, due to lack of comparable data, the population based comparisons in Table 1 and Figure 1 above do not take account of different levels of motorisation that will affect performance.

*The EU average reduction in road deaths over the period 2001-2011 was 45%, and seven SOL countries had reductions within about +/-10% of the EU average, with the largest falls in Hungary and Slovenia.*

# 01.3 A SAFE SYSTEM APPROACH TO ROAD SAFETY

The World Report (op. cit.) highlights the need for all sections of society – government, industry, business, non-governmental organisations, and the wider community – to take responsibility for road safety. The road transport system is complex and needs to be designed and operated to compensate for human frailty and vulnerability. The Report recommended the adoption of a Safe System approach that integrates road safety strategies with those relating to the environment, accessibility and mobility. The idea of shared responsibility and accountability in a Safe System approach dedicated to the long-term ambition of the elimination of death and serious injury, and shifting the emphasis of blame from the road user to the traffic system, is now recognised as the key to achieving ambitious road safety goals.

The Safe System approach seeks to identify and rectify the major sources of error or design weakness that contribute to fatal and serious road crashes and to mitigate the severity and consequences of injury. A key principle is that the road transport system must be designed to accommodate human failings that lead to error and crash risk. Road design must take account of the biomechanical limits of the human body and better manage crash forces, for example

by determining speed limits that reflect the use of the road. But this does not mean that road users are no longer to be responsible for their actions or that they can ignore traffic rules such as speed limits.

The principle of shared responsibility underpins the Safe System approach for reducing crash risk. This means that system designers are responsible for building in safety; road users must abide by the rules; and continued efforts must be made to improve user compliance through information and enforcement. System design includes licensing policy, fleet operating policies, road and vehicle design, speed limits, new road rules, and land use planning. Road Safety decisions should not be taken in isolation but should be aligned with broader community values – economic, human & environmental health, and consumer goals.

The 2004 World Report made six key recommendations for achieving improved road safety performance within a Systems Approach:

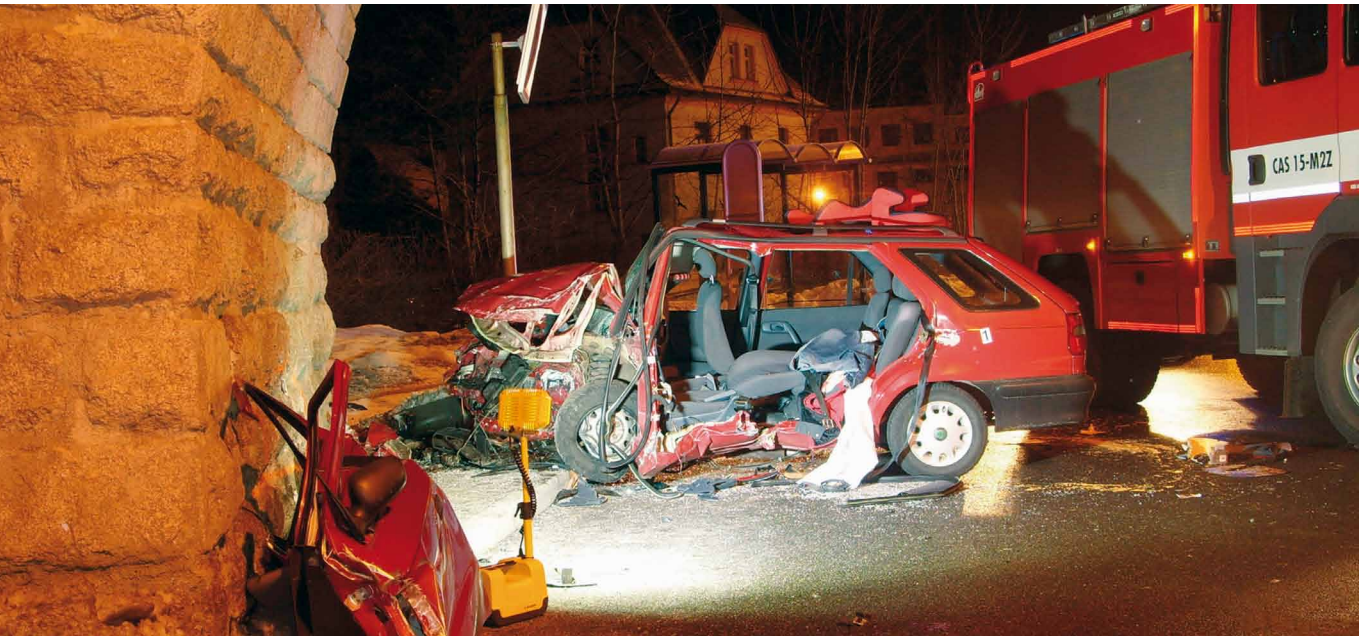
- Identify lead agency to guide road safety effort.
- Assess road safety problems, policies and capacity for injury prevention.
- Prepare a national road safety strategy and

action plan.

- Allocate financial and human resources to address the problem.
- Implement road safety measures and evaluate their impact.
- Support development of national capacity and international cooperation.

The shift to a Systems Approach requires a more coordinated and systematic approach to road safety management. It builds on the targeted approach already adopted in some countries, but reinterprets and revitalises what is known about road safety, promotes wider adoption of proven road safety measures, whilst promoting innovation as a priority to achieve long-term ambition.

An OECD report Towards zero: ambitious road safety targets was published in 2008.<sup>6</sup> It recommended that countries should adopt ambitious long term casualty reduction visions, for example Vision Zero, interim targets, and a Safe System approach for safety improvement. An effective road safety programme that is focused on achieving results requires the development of a road safety strategy and the setting of quantified casualty reduction targets. Section 2 describes road safety strategies and targets in more detail.



Two countries were early adopters of the Systems Approach – the Netherlands and Sweden. They realised in the late 1990s that radical new thinking was required in order to move beyond their current targets to a more ambitious approach underpinned by the premise that road deaths and injuries are an unacceptable price to pay for increased mobility.

**Sustainable Safety** in the Netherlands is based on safety principles that are underpinned by human capacities and limitations. Road safety is pursued within a total transport context of sustainable mobility that requires the road infrastructure to be designed to meet human capacities and limitations, and the vehicle to support the execution of traffic tasks and provide protection in the event of a crash. It is a holistic proactive approach that seeks to integrate road user, vehicle and road into a safe system.

**Vision Zero** in Sweden is based on two premises: that human beings make mistakes, and that there is a critical limit beyond which survival and recovery from an injury are not possible. Therefore the road transport system should take account of human failings and should mitigate the consequences of those mistakes in such a way as to avoid deaths and

serious injuries. In Vision Zero responsibility for safety means that everyone is accountable in the road system from the government to the providers of the system and the road users. Road users must follow basic rules such as speed limits, BAC limits and wearing of seat belts, while the system providers are responsible for the safe functioning of the road system. When road users make errors the responsibility lies with the system designers to ensure that these failings do not result in death or serious injury.

Implementation of the Safe System approach requires countries to strengthen their institutional management capacity for road safety, and in 2009 the World Bank Global Road Safety Facility published a report containing guidelines on *Implementing the recommendations of the World Report on road traffic injury prevention*.<sup>7</sup> The World Bank Report sets out three inter-related elements for a recommended road safety management system: institutional management functions, interventions, and results. It places an emphasis on the production of road safety as a process with a management system at three levels, with management functions that produce interventions that in turn produce results. This is discussed further in Section 2.

*Implementation of the Safe System approach requires countries to strengthen their institutional management capacity for road safety.*



# 01.4 The SOL-SAVE OUR LIVES project

The project “Save our Lives – A comprehensive road safety strategy for Central Europe,” (SOL) is supporting twelve pilot communities in seven countries in the region to strengthen their approaches to road safety and sustainable mobility in order to prevent death and injury caused by road crashes. The project vision is “A region free of road-crash death and injury, safe for all road users in every community”.

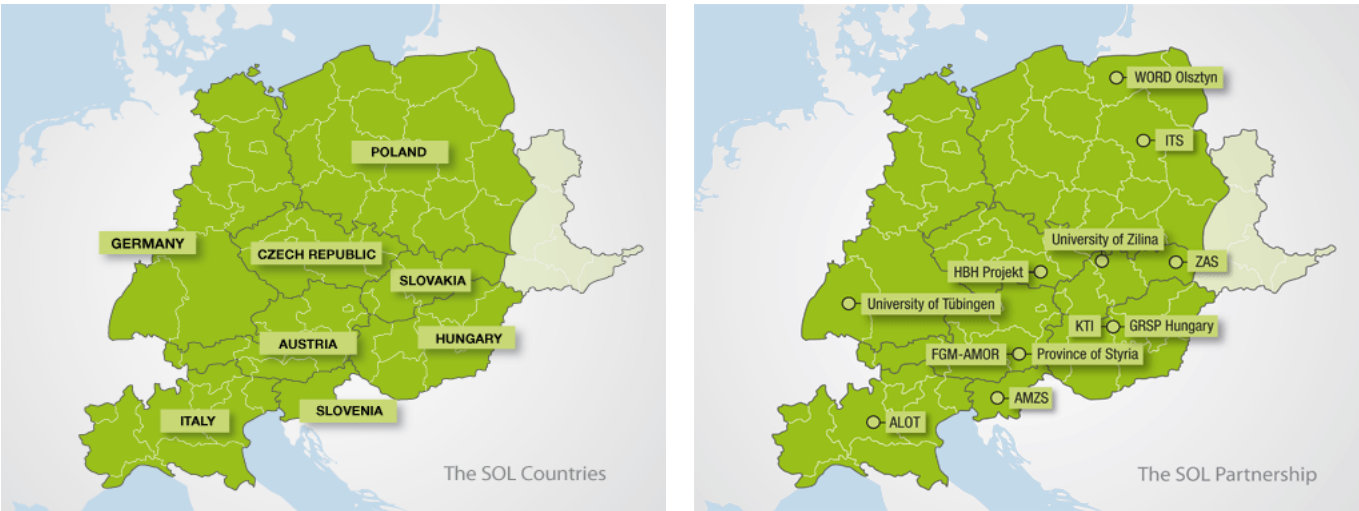
The supporting principles of this vision are interdisciplinary and self-completing: multi-stakeholders partnership, road safety management, good practice analysis, transnational learning and networking, active involvement of SOL communities, evidence based, data driven and results focused activities, development of innovative projects and programmes. Table 2 lists the pilot areas and the focus of activities in each. Road safety and sustainable transport are community issues. Forty percent of fatalities in the EU occur in built-up areas. Pedestrians account for more than 30% of these deaths. Motorized transport also creates pollution, noise and congestion in built-up areas. The threat of road crashes presents a significant public health and economic problem to communities and influences people’s travel choices. According to a report by WHO Europe “Preventing road traffic injury: a public health perspective for Europe” (2004) real and perceived safety concerns are an important barrier preventing many people from choosing walking and cycling as means of transport. Communities that manage their transport systems with road safety, environmental and public health objectives in mind are more liveable, attractive and offer their citizens higher living standards. SOL’s main objective is to reduce road crashes

and trauma in the context of sustainable transport by:

- empowering the participating communities in Central Europe with knowledge, skills and networks derived from global good practice experience;
- strengthening road safety management and coordination in the participating communities by improving the capacity of multi-sector/disciplinary teams to plan and coordinate action to develop more sustainable, safer and healthier transport systems for their communities;
- implementing behaviour change programs to reduce risk taking behaviours;

| Country        | 2001                          | 2010                                                                                                                                                                                                                                                                                                                                                                         |
|----------------|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Austria        | Styria                        | <ul style="list-style-type: none"><li>• Training of Communicators for regional Road Safety Programmes on a local level to communicate road safety strategies and the new Styrian Road Safety Programme.</li></ul>                                                                                                                                                            |
| Czech Republic | Liberec                       | <ul style="list-style-type: none"><li>• Development of the innovative campaign for road safety and increasing sustainable mobility awareness.</li><li>• Implementing a full version of Safe journey to school program and developing an updated version</li><li>• Increasing infrastructure safety for vulnerable road users through short road safety inspections</li></ul> |
| Hungary        | Gyor                          | <ul style="list-style-type: none"><li>• Information campaign about the risks of driving under the influence of alcohol.</li><li>• Improve the safety of children on the journey to and from school.</li><li>• Increasing the safety of children as cyclists.</li></ul>                                                                                                       |
| Italy          | Brescia and Mantua            | <ul style="list-style-type: none"><li>• Campaigns on road safety and public transport (Province of Brescia) and on road safety and truck mobility (Province of Mantua).</li><li>• Training of professional truck drivers (Province of Mantua)</li><li>• Safety at bus stops (Province of Brescia).</li></ul>                                                                 |
| Poland         | Olsztyn, Barczewo and Nidzica | <ul style="list-style-type: none"><li>• Drink driving prevention in Olsztyn</li><li>• Child injury prevention in Barczewo and Nidzica.</li></ul>                                                                                                                                                                                                                             |
| Slovakia       | Prešov                        | <ul style="list-style-type: none"><li>• Road safety education</li><li>• Young driver safety training/campaigns</li></ul>                                                                                                                                                                                                                                                     |
| Slovenia       | Tolmin, Kočevje, and Maribor  | <ul style="list-style-type: none"><li>• Road safety management</li><li>• Child injury prevention.</li></ul>                                                                                                                                                                                                                                                                  |

Table 2: SOL Pilot communities and activities



- optimising public education programs to increase knowledge and to motivate behaviour change;
- increasing political commitment for road crash and road trauma prevention within the context of sustainable and healthy mobility;
- integrating in already existing transnational platforms to exchange experience, lessons learned, local success stories and promote cross fertilisation of successful regional interventions such as the CEE Road Safety round table (<http://www.kfv.at/departement-transport-mobility/international-cooperation/4th-cee-road-safety-round-table/>) and Cities for Mobility network (Cfm: <http://www.cities-for-mobility.net>).

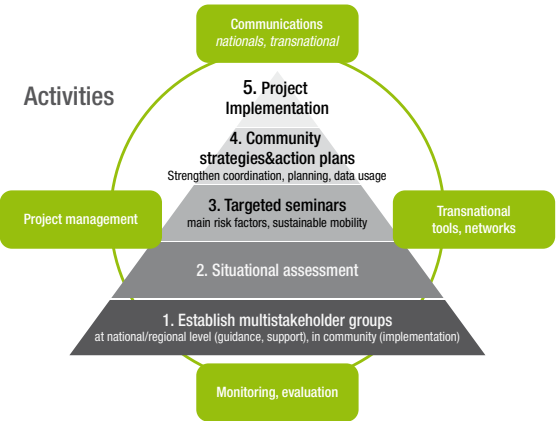
established. The focus of the project was on implementing the measures in the RS strategy and action plans and/or to transfer regional RS programmes to the local level through communicators who foster local awareness and action. Action plans chosen for implementation within the SOL project focused on the main road user risk factors. However, all pilot activities had to sustain the overall objective of the SOL project of developing effective and tailored measures under a transnational perspective and methodology, to improve the RS situation in Central Europe and to provide validated tools for RS management to a greater number of follower organisations. Materials and tools produced within SOL will help benefit road safety in the region and can inform and contribute to similar action in other regions of the world.

- member states in Central Europe;
- There is a lack of skilled professionals at community level in the region;
  - Pedestrians in urban areas are particularly vulnerable.

- Expected outcomes from the activities in the SOL project illustrated above are:
- Stronger road safety planning and management in the pilot communities;
  - Coordinated, multisector and multidisciplinary cooperation on road safety and sustainable mobility in the communities;
  - Implementation of projects that are evidence based and results focused;
  - Development of a transnational network on road safety with a shared vision for road safety;
  - Production of a road safety toolkit for the region.

In each of the selected areas individual community RS Strategies and Action Plans have been produced and pilot road safety activities

- The SOL project addresses three key concerns:
- Motorisation rates are increasing in the new



SOL puts communities at the center of solution!

# 02 ROAD SAFETY STRATEGIES AND TARGETS

One of the main recommendations of the World Report is that countries should prepare a national road safety strategy and plan of action. The strategy should take account of the needs of all road users, and should be linked to strategies in other sectors.



A fundamental requirement for a robust road safety strategy is that it should be evidence-based and data driven. Therefore the first step in strategy development is to undertake a detailed situational assessment.

## 02.1 KEY STEPS IN DEVELOPING A ROAD SAFETY STRATEGY AND TARGETS

One of the main recommendations of the World Report is that countries should prepare a national road safety strategy and plan of action. The strategy should take account of the needs of all road users, and should be linked

to strategies in other sectors. Its development should involve groups from government, the private sector, nongovernmental organizations, the mass media and the general public. The strategy needs to set ambitious but realistic

targets for casualty reduction, and should have measurable outcomes, and should be supported by an action plan for implementation.

### 02.1.1 SITUATIONAL ASSESSMENT

#### Road Safety Statistical review

A fundamental requirement for a robust road safety strategy is that it should be evidence-based and data driven. Therefore the first step in strategy development is to undertake a detailed situational assessment. Analysis of crash data should be carried out to identify the most important road safety problems in order to establish priorities for action. It is important to disaggregate data so that target groups, locations and causal factors can be identified.

Trends in the crash data are an important element so that both growing problems and areas where action has shown results can be understood. The aim is to have a thorough understanding of what the key issues are, what has worked in the past, where the greatest gains may be achievable in the future, which

road user groups and behaviours pose the highest risk, and to identify emerging problems. Analysis of the current situation will then need to be followed by consideration of possible solutions in terms of their effectiveness in reducing casualties and their costs, in order to identify a potential programme of cost-effective measures.

Guidance on data analysis for a situational assessment is contained in the *WHO Data Systems Manual* that was published in 2010.<sup>8</sup> The manual provides practical guidance for developing and improving data systems, and assessing the situation in relation to road safety data. The main types of information that are needed for a thorough situational assessment are final outcomes in terms of numbers of deaths and injuries resulting from road crashes;

exposure measures, including demographic data and information on vehicle fleet and traffic volume (number of vehicle kilometres); intermediate outcomes or performance indicators (helmet and seat belt wearing, traffic speeds etc.); socio-economic costs associated with road traffic injuries; and output measures of policy implementation.

#### Road safety management capacity review

In parallel with the analysis of crash data, a road safety management capacity review should be carried out to assess the state of road safety management capability. Guidelines for carrying out a review are contained in the World Bank Report (op. cit). The Report sets out three inter-related elements for a recommended road safety management system: institutional management functions, interventions, and results.

It places an emphasis on the production of road safety as a process with a management system at three levels, with management functions that produce interventions that in turn produce results. Seven institutional management functions provide foundation for road safety management systems:

- **Results focus:** setting the level of safety that the country wishes to achieve in terms of a long-term vision, goals, objectives and quantified targets.
- **Coordination:** harmonisation of delivery arrangements for safety interventions across partner agencies led by the lead agency.
- **Legislation:** the legal and regulatory framework for land use, road, vehicle, and user safety standards and rules and compliance with them.
- **Funding and resource allocation:** to ensure that there are sufficient funds for road safety and sustainable means to obtain funding.
- **Promotion:** the sustained communication of road safety as a priority for government and society, emphasising shared responsibility to support the delivery of interventions required to achieve the desired focus on results.
- **Monitoring and evaluation:** the systematic and ongoing measurement of road safety outputs and outcomes, and the evaluation of interventions to achieve results.
- **Research and development and knowledge transfer:** the creation of the knowledge base to contribute to the improved efficiency and effectiveness of the road management system.

The road safety management system outlined above is designed to enable countries to build the capacity needed for implementation of the recommendations of the World Report in order to make real progress in reducing deaths and injuries on the roads. The World Bank recommends that countries should approach capacity building in two stages:

- Stage 1:** Carry out a road safety capacity review.
- Stage 2:** Develop and implement Safe System projects.

A capacity review aims to:

- assess the lead agency role;
- specify an investment strategy;
- identify projects to launch the strategy;
- identify weaknesses in the road safety management system, and recommend ways to overcome them;
- identify responsibilities and accountabilities for road safety measures;
- set out a framework for working in partnership with stakeholders.

The World Bank report includes detailed checklists giving guidance on carrying out a capacity review. These checklists appraise:

1. The road safety system in terms of organisation, target setting, data availability, lead agency, performance review.
2. Planning, design, operation and use of the road network: safety standards, speed limits, performance targets.
3. Entry and exit of vehicles to and from the road network: safety standards and rules for vehicles and safety equipment.
4. Entry and exit of road users to and from the road network: driver licensing standards, training and testing.
5. Recovery and rehabilitation of crash victims: standards for pre-hospital rescue and emergency treatment, hospital care and post-hospital medical care and rehabilitation.
6. Coordination: systems for coordination of road safety activity across different layers of government, agencies and stakeholders, to achieve partnership to deliver results.
7. Legislation: adequacy of instruments and procedures to support road safety activity.
8. Funding and resource allocation: existence and sustainability of funding mechanisms and resource allocation decisions that support interventions that deliver results.
9. Promotion of road safety to achieve goals, support interventions, and target groups.
10. Monitoring and evaluation: data collection and analysis, and monitoring of adherence to safety standards and rules; monitoring and evaluation of progress towards achievement of targets.
11. Research and development and knowledge transfer: research programmes, demonstration projects.

12. Lead agency role: the functions and structure of the lead agency and its effectiveness in managing and coordination of road safety activity.

The output from a capacity review is an assessment of the current capability of a country, and the identification of areas where improvement is needed. The next phase is to specify an investment strategy that will strengthen road safety management capacity. This will involve:

- Identifying funding sources;
- Setting priorities and a timetable for action;
- Identifying Safe System projects to implement the investment strategy.

Whilst the World Bank methodology for a capacity review and the checklists have been developed primarily for use at national level, the principle underlying the need for a capacity review is also relevant at sub-national and municipal level. The range of functions to be assessed will differ and are likely to be narrower, and therefore some elements of the checklists will not be appropriate for the assessment. The key point is that assessment of the current situation and the capacity to manage road safety efficiently is an essential foundation for developing a road safety strategy.

A new International Standard, ISO 39001, Road traffic safety management systems provides a tool to help organisations to reduce, and ultimately eliminate, the incidence and risk of death and serious injury in road traffic crashes. See Section 2.6.

*A new International Standard, ISO 39001, Road traffic safety management systems provides a tool to help organisations to reduce, and ultimately eliminate, the incidence and risk of death and serious injury in road traffic crashes.*

## 02.1.2 STRATEGIC POLICY FRAMEWORK

### I. Vision

Paragraph 2.1.1 above describes the evidence gathering approach that is needed for strategy development. The data led situational assessment and the capacity review will provide the evidence base on which a road safety strategy and targets can be built. Another important element is the identification of a vision for the future that will define the level of ambition in the long-term. The road safety vision should be the product of underlying community values that indicate the degree to which road trauma is tolerated by society. Examples of Safe Systems visions are Sweden’s Vision Zero and the Netherlands’ Sustainable Safety described in Section 1. Other examples are New Zealand’s “affordable, integrated, safe, responsive, and sustainable transport system”, and Canada’s Road Safety Vision 2010 to “have the safest roads in the world”.

### II. Targets

Whilst a road safety vision sets the level of ambition that is the long-term aim, the road safety strategy will be most useful if it covers a specified time period and contains quantitative targets.<sup>9</sup> Research has shown that countries that set quantitative targets perform better than countries without targets . Ideally such targets should be for a specific target year, empirically based on time series analysis of past trends and forecasts of the outcome of future measures, and linked to a strategy for delivery of interventions.



Targets help to save lives because the target setting process:

- Focuses on casualty reduction as policy priority.
- Indicates commitment Government to casualty reduction and motivates stakeholders.
- Raises public awareness and strengthens political resolve.
- Generates activity to deliver road safety improvements.
- Generates demand for data collection for forecasting and monitoring.
- Leads to better performance.

National and regional targets are motivating because they encourage cooperation between countries, provide a stimulus for activity through competition, and help to encourage political will to prioritise road safety in poorer performing countries. Sub-national targets widen the sense of ownership and accountability at all levels, encourage road safety partnerships, and generate more action. Targets raise the level of commitment to road safety in the wider community and encourage authorities with responsibility for road safety at all levels to set their own targets in support of national targets.

Road safety targets can include targets for final outcomes and for intermediate outcomes. **Final outcome targets** usually refer to the total annual number of road casualties or deaths, and can include both long term visions such as zero deaths and serious injuries, as well as



interim targets to be met over a set period of time. **Intermediate outcome targets, or safety performance indicators**, set goals for specific elements of a road safety strategy such as seat belt wearing rates and speed limit compliance.

Targets have little value unless they are backed up by a road safety strategy that sets out how the targets are to be achieved. Development of the strategy is integral to the target setting process as the level of ambition of the target should be empirically based on the estimated impact of a programme of interventions, as well as analysis of past trends. The strategy should contain a clear programme for delivery of road safety measures together with a means of monitoring progress.

### III. Identification of a Lead Agency

A key recommendation of the World Report, reinforced by the World Bank Guidelines, is that a Lead Agency in Government should be identified to guide the national road safety effort. Each country needs to create an agency that is appropriate to its own circumstances and organization of government. It could be a stand-alone entity, a coordinating committee representing several government agencies, or part of an existing transport department. Wherever it is located, however, it is important that it should have authority and responsibility to make decisions, control resources and coordinate efforts by all sectors of government.



## 02.1.3 ROLE OF A LEAD AGENCY

Strong institutional management capacity with a clear focus on achieving results is essential for a country to make progress in road safety. Strong leadership is required to achieve desired results and the lead agency will need to take responsibility within government for the development of the national road safety strategy and for coordination of road safety policy and activity. Shared responsibility is a key requirement for a Safe System approach, and the lead agency will need to build partnerships and involve a wide cross-section of stakeholders, both within and outside government. It has the following main functions:

- Carrying out a high-level strategic review to assess current road safety performance;
- Adopting a far-reaching road safety vision or goal for the longer term;
- Analysing what can be achieved in the medium term;
- Setting targets by mutual consent across the road safety partnership;
- Coordinating activity by all Government/non-government bodies to achieve targets;
- Making sure that there is shared partner and stakeholder accountability for results.

A key function of the lead agency is the development of a road safety strategy and targets in collaboration with stakeholders, and the allocation of responsibilities to ensure that the strategy is supported by a clear delivery plan. The lead agency must take responsibility

for all the institutional management functions that are needed for the development and successful delivery of the national road safety strategy. This requires a strategic orientation that links all actual and potential interventions with results, analyses what can be achieved over time, and sets out a performance management framework for the delivery of interventions and their intermediate and final outcomes. It defines the level of safety that a country wishes to achieve expressed in terms of a vision, goals, objectives, and related targets.<sup>10</sup>

The Lead Agency usually takes responsibility for:

- **coordination** within government, both horizontally and vertically at national, regional and local level;
- **coordination** of delivery partnerships between government partners and stakeholders, professional, non-governmental, business sectors and parliamentary groups and committees;
- ensuring a comprehensive **legislative framework**;
- securing sustainable sources of annual funding and creating a rational framework for **resource allocation**;
- high-level **promotion** of the road safety strategy across government and society;
- periodic **monitoring and evaluation**;
- direction of **research** and knowledge transfer.

The key functions are:

Results focus

1. Appraising current road safety performance through high-level strategic review;
2. Adopting a far-reaching road safety vision for the longer term;
3. Analysing what could be achieved in the medium term;
4. Setting quantitative targets by mutual consent across the road safety partnership;
5. Establishing mechanisms to ensure partner and stakeholder accountability for results.

Coordination

1. Horizontal coordination across government offices;
2. Vertical coordination from municipal to local (district) levels of government;
3. Specific delivery partnerships between government, non-government, community and business at the central, regional and local levels;
4. Parliamentary relations at central, regional and local levels;
5. Supporting the production of road safety guidance for locally elected representatives to encourage local leadership and evidence based practice at the local level in partnership with NGOs, local authority association.



Legislation

1. Reviewing the scope of the legislative framework;
2. Developing and updating legislation needed for the road safety strategy;
3. Consolidating legislation;
4. Securing legislative resources for road safety.
5. Funding and resource allocation
6. Ensuring sustainable funding sources;
7. Establishing principles and procedures to guide the allocation of resources across safety programmes.

Promotion

1. Promotion of a far-reaching road safety vision or goal;
2. Championing and promotion at a high level;
3. Multi-sectoral promotion of effective interventions and shared responsibility;
4. Leading by example with in-house road safety policies;
5. Developing and supporting safety rating programs and the publication of their results;
6. Carrying out national advertising;
7. Encouraging promotion at the local level by supporting local leadership and supporting local programmes and road safety coordinators.

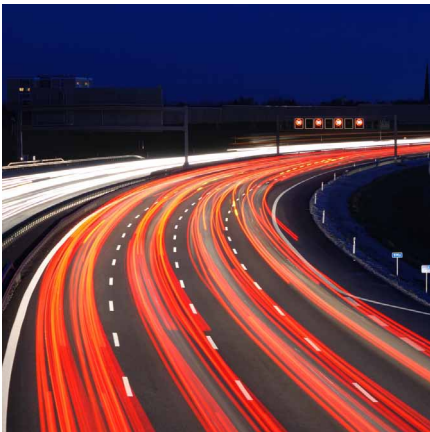
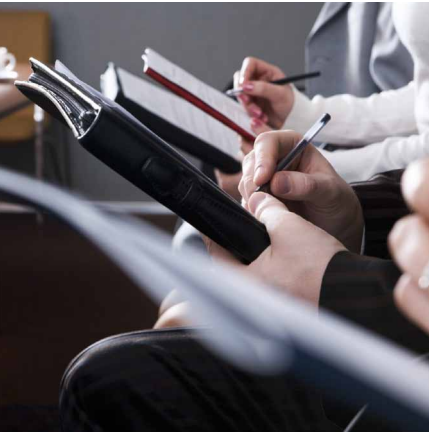
Monitoring and evaluation

1. Establishing and supporting data systems to set and monitor final and intermediate outcome and output targets;
2. Transparent review of the road safety strategy and its performance;
3. Identifying and introducing any necessary adjustments to achieve the desired results.
4. Research and development and knowledge transfer
5. Developing capacity for multi-disciplinary research and knowledge transfer;
6. Creating a national road safety research strategy and annual programme;
7. Securing sources of sustainable funding for road safety research;
8. Training and professional exchange;
9. Establishing good practice guidelines;
10. Setting up demonstration projects.

Specific efforts should be made by the agency to engage all significant groups concerned with road safety including the wider community. Active encouragement and promotion from a high-level political figure who becomes a champion for the cause of road safety is vital for success. An effective Lead Agency will have a strong committed leader who has real political clout and who can ensure that road safety has high priority on the political agenda. At national level this may be a Minister, or at municipal level

a Mayor, but the choice should be appropriate to the structure of government, and the key requirement is that there is real decision-making power and an adequate budget. It is important to recognize that effective injury reduction strategies often require measures that seek to curb high-risk behaviours that are widely tolerated by the public due to lack of awareness of the true level of risk, e.g. speeding. It is necessary therefore for road safety professionals to provide politicians with the empirical evidence both of risk and of the benefits of policies that may seem at the outset unpopular. This is where the role of a high-level champion can be invaluable in persuading political leaders of the need for action.

A Lead Agency, however well resourced, cannot achieve success in isolation. Support is needed from all levels of government and from the wider community. Effective lobbying can influence the political profile of road safety, and can create a dialogue with government that can allow progress to be made. A two-way process is often most effective with pressure from the informed public influencing politicians and giving them the backing needed to persuade the wider community of the need for action. It will always be easier for a government to make road safety a priority if the public supports the effort and demands safer roads.



10 Bliss; Breen (2009)

10 Bliss; Breen (2009)  
11 Website GRSP (access 2012)

## 02.1.4 PARTNERSHIPS

Stakeholders and partners are vital to all road safety programmes and building partnerships is an essential part of a strategic approach to casualty reduction. UN Resolution 64/255 that proclaimed the Decade of Action for Road Safety 2011-2020 recognised that **“a solution to the global road safety crisis can be achieved only through multisectoral collaboration and partnerships among all concerned in both the public and the private sectors, with the involvement of civil society”** A key priority for the Lead Agency is to identify all relevant potential partners and the contribution that they can be expected to make to developing and implementing the Strategy. A successful road safety strategy is developed in consultation with all relevant parties so that they feel ownership for it and take responsibility for their role in its implementation. Targets are a vital part of this progress as establishing common goals and time horizons for achieving casualty reduction provides a clear focus for activity.

At national level many countries have National Road Safety Councils that include representatives of all key stakeholders, but unless they have clear lines of responsibility and specific implementation roles that go beyond a purely advisory remit, together with resources, they may not be effective partnerships.

Below the national level there is increasing emphasis on partnership building in many countries. In Brazil, the Proactive Partnership Strategy (PPS), developed by the Global Road Safety Partnership since 2002, is one model that has been used to address the road safety problem. PPS is based on an acknowledgement that the road safety problem can be most effectively addressed through partnerships between government sectors, business and civil society, and a social context where the people are connected to the decision making process and are empowered to participate in a process to bring about change. It requires a political environment where the Mayor, (or equivalent), and the key players (Transport, Health, Education) in local

government, and essential partners (Police, Accident Emergency Services, Fire Brigade, Hospitals) see the connection between road safety, quality of life for those in the Community and prevention of death and disability through pre-hospital care and in hospital trauma departments, and are prepared to commit publicly to improving it.

In the UK, local Road Safety Partnerships have been established between Highway Authorities, Police, and Emergency Services to work collaboratively to reduce casualties and to promote road safety. They combine activities in education and publicity, enforcement, engineering, and emergency response within the framework of a targeted casualty reduction strategy. Such collaboration is particularly valuable where resources are limited as it helps to ensure that they are used efficiently without wasteful overlap due to lack of coordination.

Another approach is the 'WHO Safe Communities' model for the prevention of injury in whole populations. The World Health Organization (WHO) Manifesto for Safe Communities<sup>12</sup> states that “All human beings have an equal right to health and safety”. The emphasis of the Safe Communities approach is on collaboration, partnership and community capacity building to reduce the incidence of injury and promote injury-reducing behaviours. Approximately 150 communities throughout the world have been designated as 'Safe Communities', in countries as diverse as Sweden, Australia, China, South Africa and the Czech Republic. Programmes target high-risk groups or environments and promote safety for vulnerable groups. They range from bicycle helmet promotion in Sweden to anti-violence programmes in South Africa, traffic safety initiatives in South Korea and indigenous community injury prevention programmes in New Zealand.



*At national level many countries have National Road Safety Councils that include representatives of all key stakeholders, but unless they have clear lines of responsibility and specific implementation roles that go beyond a purely advisory remit, together with resources, they may not be effective partnerships.*

## 02.2 THE SOL PROJECT APPROACH

SOL aims to prevent road crash deaths and injuries and increase sustainable mobility in the participating SOL communities in Central Europe by supporting the development of targeted strategies, up-skilling road safety professionals, implementing effective road safety interventions and building a transnational road safety network. The main goal of the project is to promote sustainable mobility and increase awareness for safety issues as well as contributing to the achievement of higher quality of living conditions.

The approach of SOL sees **Road Safety within the context of sustainable mobility**, i.e. to make walking and cycling safe and to promote a modal shift from the private car to public transport. The multi-sector partners from eight countries of Central Europe area have jointly developed a strategy that supports the region in catching up with highest EU standards in road safety through

1. Assessment of the problem, policies and institutional settings relating to road safety and the capacity for road injury prevention;
2. Strengthening institutions and creating effective horizontal and vertical multi-sector partnerships;
3. Preparation of regional/local strategies and action plans;
4. Implementation of specific actions to prevent road traffic crashes, minimize injuries and their consequences;

5. Creation of a greater level of awareness, commitment and informed decision-making at all levels;
6. Development of replicable tools for Central Europe and the EU;
7. Putting road safety policies in the context of promoting sustainable forms of mobility.

The key activities were: carrying out a situational assessment, creating multi-stakeholder teams, developing community level Road Safety Strategies, producing Action Plans, implementing pilot projects, and monitoring and evaluation. This section describes the approach taken in the SOL project as a case study in how to promote road safety in communities.

The methodology adopted a five-stage process:

1. Establish multistakeholder groups at community level using national guidance and support;
2. Undertake situational assessment including road traffic crash data, insitutional capacity, public knowledge and opinion, and a stakeholder map;
3. Deliver targeted training workshops on road safety management, sustainable safety management, road safety data systems, risk factors and high risk groups;
4. Develop community strategies and action plans on priority issues;
5. Implement integrated projects.

*SOL aims to prevent road crash deaths and injuries and increase sustainable mobility in the participating SOL communities in Central Europe by supporting the development of targeted strategies, up-skilling road safety professionals, implementing effective road safety interventions and building a transnational road safety network.*



11 Website GRSP (access 2012)  
12 WHO (1989)

02.2.1 SITUATIONAL ASSESSMENT

The objective of the SOL community situational assessment was to compile and present the data that are needed to assess the road safety situation in each of the pilot areas, including road crash and injury data, institutional capacity, public opinion and knowledge, and a stakeholder map, using specially designed survey tools. The purpose of the assessment was to identify priority road safety issues for each community, to inform the development of a road safety strategy, to create an action plan that is well targeted, value for money and achievable, and to serve as a baseline for monitoring and evaluating the impact of the SOL project and the SOL interventions taken.

| Category |                                   | Purpose of the assessment                                                                                                                                                                                                                                                                                 |
|----------|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | Road safety assessment            | To strengthen understanding of the road crash and road crash injury situation in specific geographical area of the pilot community. The information is vital for road safety management and advocacy purposes.                                                                                            |
| 2        | Institutional capacity assessment | To understand institutional strengths/gaps for delivering and managing a systems approach to road safety including multi-stakeholder interventions and for encouraging safe and sustainable mobility.<br>To understand training needs of road safety professionals and community road safety stakeholders |
| 3        | Public opinion survey             | To understand public knowledge, opinion about road safety, and to understand travel preferences. The road safety plan must be acceptable to the local population. The results will help in preparation of the road safety plan reflecting on expectations of the local population.                        |
| 4        | Stakeholder map                   | To identify stakeholders in the community who can <ul style="list-style-type: none"><li>participate in the SOL community teams</li><li>contribute to delivery of the SOL and community road safety objectives</li></ul>                                                                                   |

Table 3: SOL Situational Assessment

The **road safety assessment** in each area used a standard questionnaire to collect data on numbers of crashes, and casualties by severity, between 2005 and 2010, and fatality rates per 100,000 population. Road traffic fatalities were shown by age group, road user, road type, time of day, in crashes involving alcohol, and speeding. Additional indicators were also collected as well as information specific to the pilot activity that was to be carried out. The primary source of data was police reports, supplemented, where available, with hospital data. A minimum dataset was required from each SOL partner to ensure that there could be consistency in transnational comparison.

**The collected data can be divided into three groups according to their availability:**

I) All countries were able to provide basic data:

- Number of accidents, killed and injured in the past 5 years

II) Only half of the partners could find detailed data on those killed disaggregated by:

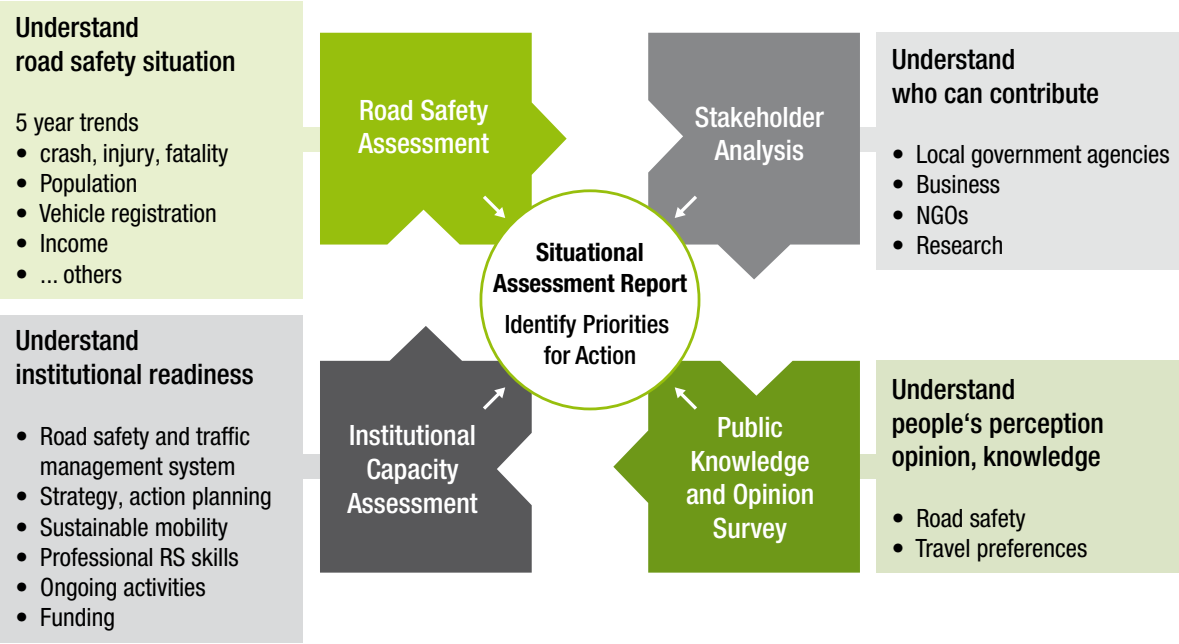
- age – total

III) The following data were not available in any countries:

- Risk indicator: killed per 100 000 population
- Severity index: fatalities per 100 personal injury accidents
- Motorization rate: number of passenger cars per 1000 inhabitants
- Number of seriously and slightly injured



Situational Assessment  
(Components)



age – pedestrians  
age - in passenger cars  
age – motorcyclists  
age – bicyclists  
in accidents involving drivers / road users impaired by alcohol  
in accidents due to inappropriate speed  
road type  
time of day

III) The following data were not available in any countries:

- Risk indicator: fatalities per 1000000 vehicle kilometers
- Number of hospitalized for more that 24 hrs due to a road accident
- Performance indicator: safety belt wearing rate and child restraint usage rate
- Performance indicator: % of drivers exceeding the speed limit
- Performance indicator: % of drivers under the influence of alcohol

The **institutional capacity assessments** used standard checklists, based on the World Bank recommendations, that covered Results focus;

Coordination; Funding and resource allocation; Promotion; Infrastructure planning, design, operation and use; Recovery and rehabilitation of crash victims; Monitoring and evaluation; Training needs for road safety professionals; Sustainable mobility; and the existence and function of a Lead Agency at regional/municipal level. Information was also collected on mechanisms to address risk factors, including speed, alcohol related crashes, seat belt and child restraint use, vulnerable road users, child injury prevention, and work related road safety.

The aim was to find out:

- whether sectors and disciplines already collaborate on road safety improvement;
- whether the community has a government approved road safety programme, if so how effective it is, whether it follows a safe system approach, and what are the gaps;
- whether there is already a management and planning link between traffic and mobility planning and road safety;
- whether the community has a dedicated department/organisation coordinating road

safety or if road safety is managed through other departments such as traffic and transport management, roads or urban planning;

- what is the level of knowledge and skills of local professionals in road safety field and what are the gaps in their knowledge and skills; how is road safety currently funded in the community.

A body fully responsible for road safety was present in only half the sixteen communities and varied in robustness, although most of the communities had some form of government department or agency that oversees road safety implementation in the community. Only six had training programmes for road safety professionals, and only four had a road safety strategy. The SOL project aimed to address these deficiencies.

**A public knowledge and opinion survey** was conducted in each of the SOL areas. The questionnaire was distributed electronically using local entities such as universities, local



authorities and companies, through local mass media, social media etc. It covered travel patterns, opinions on safety measures and facilities, enforcement, frequency of illegal activities including lack of seat belt wearing, speeding, and exceeding the alcohol limit. A total of 2,721 responses were received.

The main objective of the public opinion survey was to understand respondents’ attitudes regarding:

- Travel preferences and the link between road safety and sustainable mobility;
- General road safety attitudes;
- Perception of child injury risks in traffic;
- The highest risk factors in a region and whether government is tackling safety issues.

The survey revealed concern about drivers exceeding the speed limit, children being transported without using proper child restraint systems and, to a lesser extent, lack of use of seat belts. Respondents said they would walk more if drivers were more careful and there was more safety monitoring, and would be more willing to ride a bicycle if there were better facilities such as cycle lanes and parking places.

**Situational assessment workshops** took place in each community and findings from the comprehensive assessment were presented

including local data about road crashes and casualties, institutional capacity, public opinion and activities of road safety stakeholders in the community. A key objective of the situational assessment workshop was to build consensus among the stakeholders about high priority road safety issues. These high priority issues were to be at the centre of the community strategies that were developed.

A standard format community situational assessment report was prepared for each of the partner areas. The reports provided details of the current road safety situation and identified priority issues for action. They also served as a baseline for monitoring and evaluating the impact of the SOL project and the SOL interventions in the communities.

**The road safety assessments produced three key outcomes:**

- **In each area the main risks and problems are similar, but the main priorities differ widely even within a single country;**
- **Police data on road crashes/injuries at community level are difficult to obtain;**
- **None of the communities are collecting safety performance indicator information regularly, and most not at all.**

More info on the Situational Assessment is available on SOL website [www.sol-project.eu](http://www.sol-project.eu) .

*A key objective of the situational assessment workshop was to build consensus among the stakeholders about high priority road safety issues.*

## 02.2.2 CREATING MULTI-STAKEHOLDER TEAMS

An important element in the situational assessments was to **create a Stakeholder Map** in order to understand who is able to contribute to improving road safety. Table 4 below shows the stakeholder map for Brescia in Italy as an example. Similar assessments were carried out for the other pilot communities. Workshops and meetings were held to identify stakeholders

and to build up teams to focus on the proposed pilot activities. For example, in Poland, multistakeholder teams were created by means of conferences, workshops and meetings with potential partners, including police units, educational departments, road administration, rescue services, decision makers, and media. Three working groups were built for the three pilot

communities, Barczewo, Nidzica and Olsztyn with representatives of education, enforcement including policemen, teachers, road engineers, specialists on alcohol prevention, and decision makers from each town.

|   | Stakeholder                                                      | Sector     |                |              | Discipline       |                 |             |        |           |       |       | Goals motivations and interests                        | Power and influence (high, limited, none) | Importance to impact on SOL |
|---|------------------------------------------------------------------|------------|----------------|--------------|------------------|-----------------|-------------|--------|-----------|-------|-------|--------------------------------------------------------|-------------------------------------------|-----------------------------|
|   |                                                                  | Government | Private sector | NGO research | Roads, Transport | Law enforcement | Environment | Health | Education | Media | Other |                                                        |                                           |                             |
| 1 | A.B.A. - associazione bresciana autoscuole                       |            | X              |              | X                |                 |             |        | X         |       |       | They are interested in teaching hos to drive safely    | High (at provincial level)                | High                        |
| 2 | Automobile Club Brescia                                          | X          |                |              | X                |                 |             |        | X         |       |       | They are involved data collection on accidents         | High (Provincial level)                   | High                        |
| 3 | Provincia di Brescia assessorato al trasporto pubblico           | X          |                |              | X                |                 |             |        |           |       |       | Public body directly involved in road safety           | High                                      | Very high                   |
| 4 | FIA Brescia                                                      |            | X              |              | X                |                 |             |        |           |       |       | Association directly involved in freight transport     | High (provincial level)                   | Very high                   |
| 5 | Commune die Brescia                                              | X          |                |              | X                |                 |             |        |           |       |       | Public body directly involved in road safety           | Limited (only at municipal level)         | High                        |
| 6 | Regione Lombardia, Protezione civile, polizia locale e sicurezza |            |                |              | X                |                 |             |        |           |       |       | Public body directly involved in road safety           | High                                      | High                        |
| 7 | Associazione Industriale Bresciana (AIB)                         |            | X              |              |                  |                 |             |        |           |       | X     | Involved in road safety for the private sector         | High                                      | High                        |
| 8 | ASL Brescia                                                      | X          |                |              |                  |                 |             | X      |           |       |       | Public body for health interested in injured reduction | High                                      | High                        |
| 9 | Bresia Mobilita                                                  |            | X              |              | X                |                 |             |        |           |       |       | Directly manages public transport in Brescia           | Limited (only at municipal level)         | High                        |

Table 4 Stakeholder map for the Province of Brescia

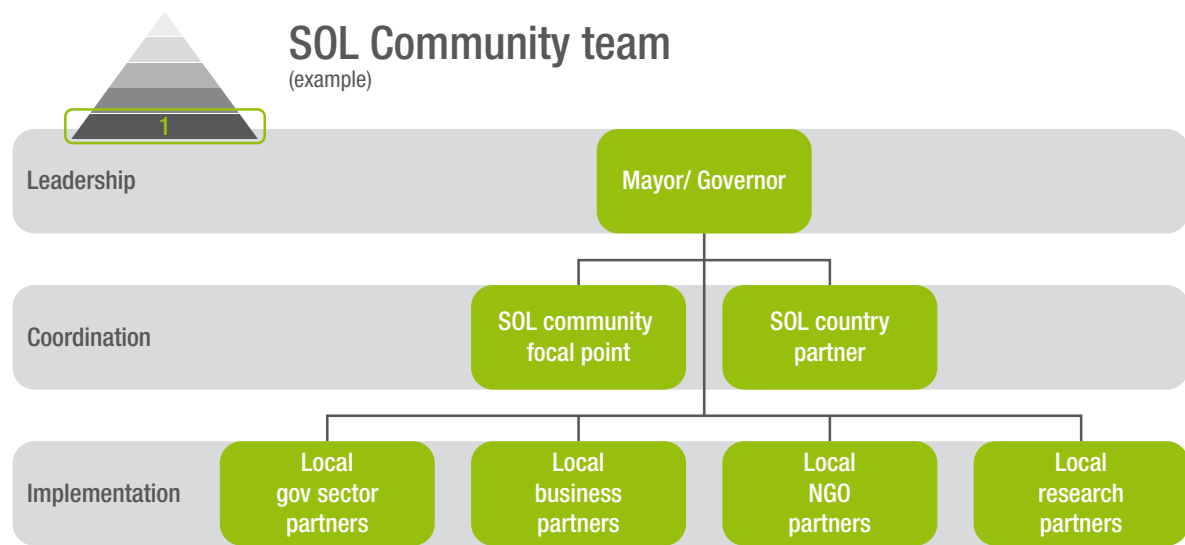


Figure 3: Community team example

In all the communities diverse stakeholders relevant to road safety were found to exist, and the police are active in crash prevention. However, health, education, justice and media are seldom involved or active, and although a platform for multisector, multidisciplinary coordination may exist on paper it is often lacking in practice.

Figure 3 gives an example of a SOL community team structure.

The aims of the community teams were to:

- Ensure SOL is linked into the road safety structure in the community;
- Strengthen the overall capacity of the community to coordinate and implement multi-component road safety interventions;
- Strengthen general road safety management from the development phase through delivery, evaluation and refinement of multi-component road safety interventions.

The main tasks to be carried out in cooperation with the SOL project partner were:

- Situational assessment in the community and monitoring and evaluation;
- Facilitate links to relevant departments and individuals to provide data and information and actively assist with data collection;
- Workshops, strategy and action plans;
- Support in organising workshops including identifying and inviting relevant participants;
- Active participation in strategy and action plan development or strengthening;
- Project implementation;
- Lead implementation including co-financing;
- Communications and SOL tools and networks;
- Support with communications and knowledge transfer activities;
- Possibly participate in transnational workshops where budgets are available.

*In all the communities diverse stakeholders relevant to road safety were found to exist, and the police are active in crash prevention.*

## 02.2.3 DEVELOPING COMMUNITY-BASED ROAD SAFETY STRATEGIES

The SOL local road safety strategies were central to ensuring that an evidence-led approach was taken to understanding the local road safety problems and in setting priorities and actions into the future. The strategy was a good way to build local partnerships and structures that would ensure effective delivery of value-for-money schemes. The development of local strategies also ensured that the SOL legacy would provide a sound base on which to build for future road safety successes.

A guidance document set out the process for strategy development that should be done at the local level, relevant to the local situation. The strategy should take account of the wider picture including national road safety policies and aspirations, and other local policies such as sustainability. It should look forward and aim to stay relevant for a period of time – around 5 years is usual, but local communities could have their own time-frames, depending upon the local situation.

The strategies should, as far as possible, be evidence-based. The analysis should identify the most important road safety problems, which then need to be considered in terms of solutions and the cost of achieving the benefits. The aim of the strategy is to ensure, as far as possible, that the actions proposed are part of an opti-

mized road safety intervention programme that gives the best value for money. The strategy must be supported by all the relevant stakeholders. It should be inspirational, motivating, and get local commitment for road safety improvements.

The objective of the community road safety strategies was to develop, update or confirm the community's vision for road safety, the road safety objectives and targets for the community, and to provide an agreed framework for delivering road crash and road crash injury prevention programmes.

The SOL guidance sets out the key steps for strategy setting:

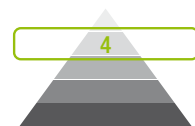
- Gather and analyse road crash and other data (e.g. exposure data)
- Identify the major road crash problems
- Prioritise problems
- Identify and involve stakeholders
- Consider the wider European road safety initiatives (ex. UN Decade of Action).
- Define and agree strategic objectives
- Identify targets
- Compare with national strategy/targets
- Formulate an Action Plan
- Set in place monitoring and reporting back systems and specific review points.

The strategy should be introduced by a senior political Champion in order to highlight the importance of road safety to the local government and to demonstrate the will to take action. It should include a vision that sets the ambition for the programme, allied to targets and timescales. Strategic objectives and priorities should be identified, and the recommended approach is to follow the structure of the five pillars in the Decade of Action plan:

- a) Road safety management and coordination
- b) Safer road infrastructure
- c) Safer vehicles
- d) Safer road users
- e) Post-crash care

*The strategy should take account of the wider picture including national road safety policies and aspirations, and other local policies such as sustainability..*





## Strategy and action plans

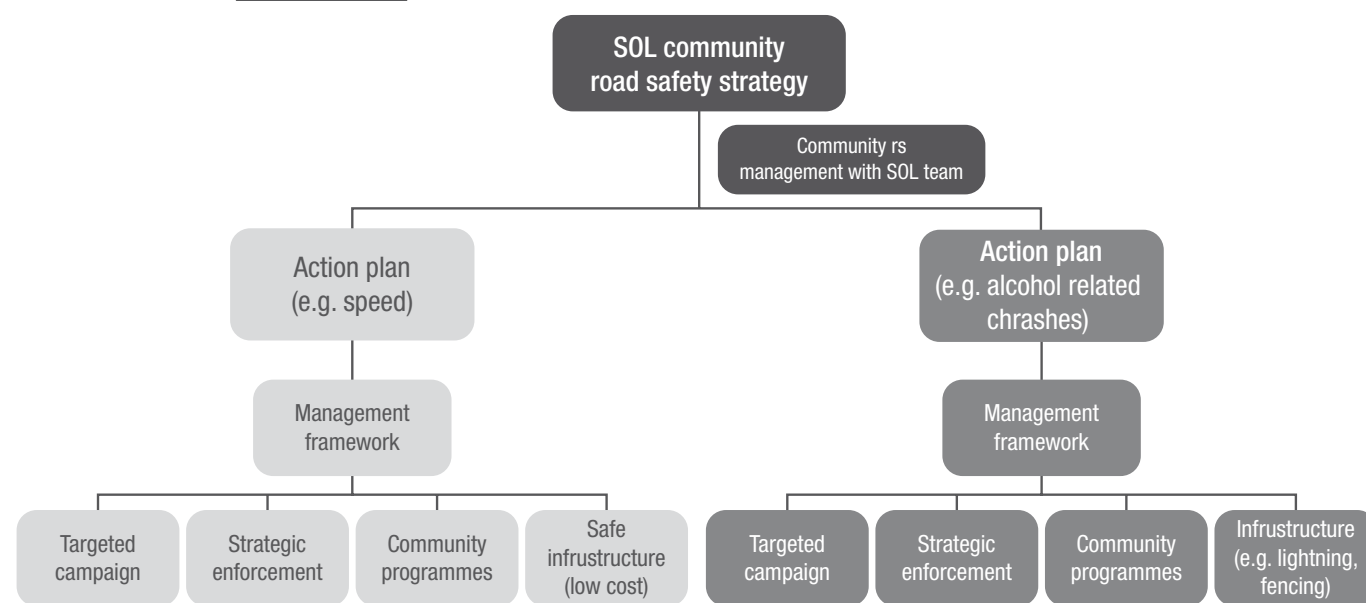


Figure 4 Structure for SOL strategy and action plans.

The strategy should include:

- The community vision for road safety;
- Clear road safety objectives;
- Targets and performance indicators;
- Priority issues with measurable outcomes;
- Responsible agencies;
- Contributing stakeholders;
- Reporting process, outputs, timelines and budgetary sources.

It should take account of national legislation and procedures, local capacity, both financial and human, and local interests. To ensure com-

mitment to implementation local government approval may be sought.

The strategy needs to take account of available resources in formulating an Action Plan that is realistic and focused on achieving the targets. It is important to identify budget and funding into the future, so that the whole strategy (say 5 years) is covered. It should set out the major issues and measures that can be used to reduce casualties in the identified areas of priority.

*The strategy needs to take account of available resources in formulating an Action Plan that is realistic and focused on achieving the targets.*

## 02.3 DELIVERY AND IMPLEMENTATION PLANNING

### 02.3.1 STAKEHOLDERS AND PARTNERSHIPS

**Stakeholders and partners are vital to all road safety programmes and a road safety strategy needs to ensure that it identifies all relevant parties and how they are expected to contribute to the programme.** Forming relationships with these partners needs to be considered carefully and regular meetings at both strategic and tactical level are often important ways of getting commitment. Wherever possible the strategy should identify who is responsible for what and when things are expected to be achieved. Sometimes it may be appropriate to create new job titles so that the responsibilities are clear to all.

Road safety partnerships commonly involve key players in the public sector including local government, police, and emergency services. Other sectors such as education and health may also be involved, and are especially valuable in terms of education and prevention activities. Such partnerships ensure that there are common objectives and facilitate sharing of information and cooperation on programmes.

**Inclusion of a wider range of organisations from NGOs and the private sector take this approach further and such wider partnerships that include all stakeholders have the advantage of taking road safety into the broader community.** The involvement and support of the local population are most important. The strategy needs to remember that any interventions must be acceptable to and preferably actively wanted by the local communities. Local media should be included as they can be a vital stakeholder in getting local support. The local political situation is also important and getting a local political 'champion' can often prove critical in ensuring that the strategy is delivered successfully.

The Brazilian Proactive Partnership Strategy (PPS) described in Section 2.1.3 above recognises the value of involving the people who are affected by road safety problems in their solution. PPS partnerships involve government, business and civil society in the implementation of road safety projects. For example, in the town of Guaiba 62 organisations including government bodies, schools, private companies, and civil society groups such as motorcyclist organisations and youth groups are involved. Each project has project team that meets regularly and has responsibility for achievement of results and for monitoring and evaluation.

Results are achieved through:

- Continuous top political commitment;
- A PPS Champion;
- Reliable data to provide an evidence base;
- A multisector partnership approach;
- Focus on key local problems;
- Increasing partnership and community involvement.

The key to its success is cooperation between city agencies (transport, health and education) on comprehensive data collection of road-crash death and serious injury, followed by implementation of targeted and specific road safety actions (based on detailed data analysis) and rigorous, continual evaluation. The strategy also establishes a progressive volunteer system for awarding schools with safety certificates, as well as „safe driver“ quality stamps for taxi and bus drivers if they take pro-active steps to improve safety and have records free of road-crashes.

In the Australian state of Victoria a partnership was developed between traffic law enforcement and traffic injury compensation schemes. The Traffic Accidents Commission (TAC) compensates victims of road crashes through a no-fault system funded by premiums that are levied as part of the annual vehicle registration charge. The TAC decided to invest in road injury pre-



vention measures, including remedial measures at high risk sites, enforcement technology, and public campaigns, in order to reduce compensation payments. State government ministries of transport, insurance and justice jointly set policy and coordinated the programme.

**Building partnerships for implementation of pilot projects is a key element** of the SOL project and all the SOL partners have involved stakeholders from the outset. In addition to local government organisations, schools, police and other public sector bodies, private sector stakeholders such as driving schools, freight transport operators, automobile clubs, and the media have been involved, as illustrated in Figure 5 below.

For example, in Slovenia the national SOL partner AMZS has established a strong partnership with local stakeholders by giving them ownership of the process. In both locations: Kočevje and Tolmin, workshops were organized in the towns to ensure local ownership of the content and the outcome. The leader of each workshop was one of the local stakeholders so that the discussions could be driven by the local community, with the SOL partners providing support and technical input. Participants included the mayor, police, local automobile club, insurance, media and other community stakeholders. The discussions focused on key road safety risks in the community. The situational assessment workshop sparked a sense

of urgency and opportunity and generated an understanding of the need and benefits of working together, across disciplines and sectors, to make their communities safer.

In Hungary, stakeholders include the Győr Municipality and the Police, the Győr Accident Prevention Committee, the Győr Road Management Company, the local public transport company, and the Department of Transportation of Széchenyi István University. Three national private companies – Michelin Hungary, For-Vid Ltd, and 3M Hungary - also offered their support in the pilot projects.

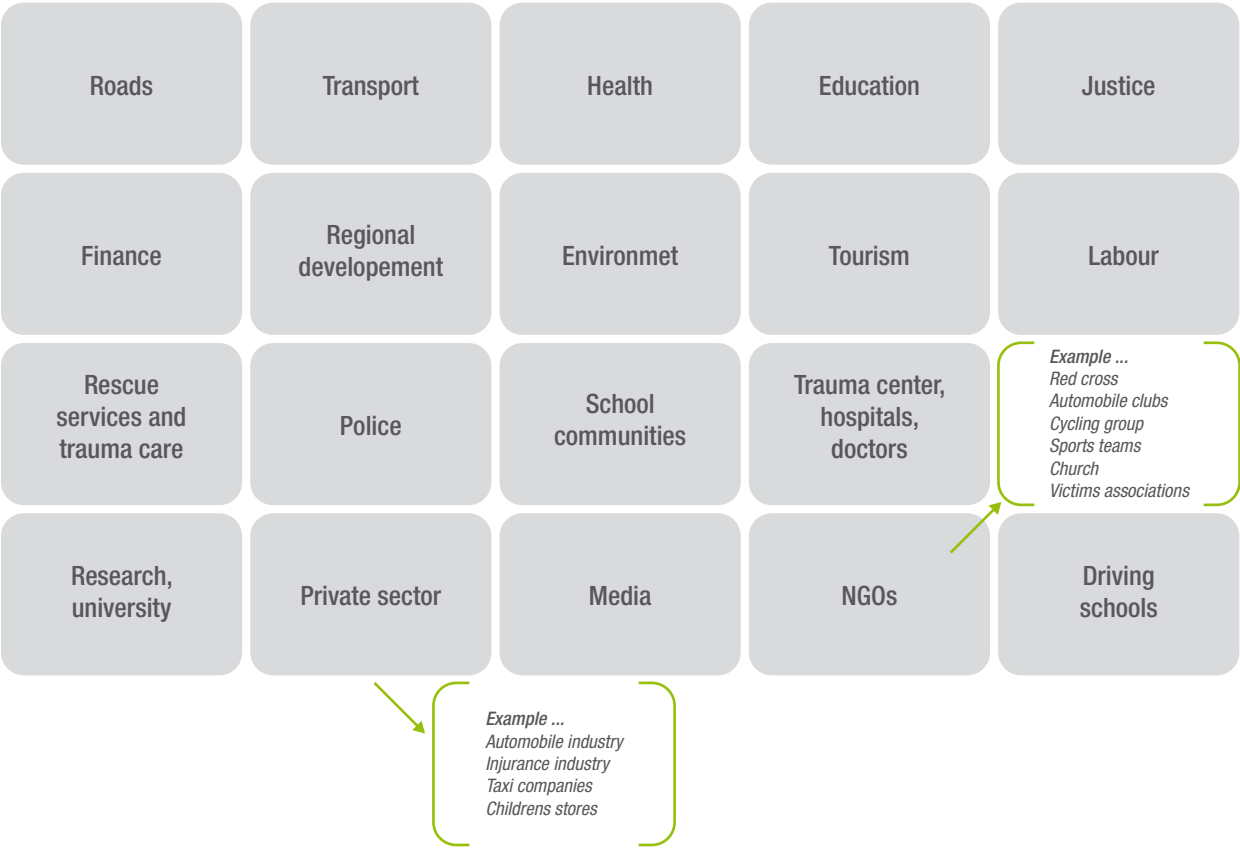


Figure 5: Possible stakeholder groups

02.3.2 ACTION PLANS FOR STRATEGY IMPLEMENTATION

A road safety strategy is only useful if it is part of a process for implementing road safety activity to produce results in terms of casualty reduction. The Strategy may incorporate an Action Plan or the plan may be a separate document. Whichever format is chosen, it is important that the Strategy and the Action Plan should be clearly linked and there should not be a delay in backing up the Strategy with the required plan of action in order to maintain momentum. The Action Plan should be holistic and use a Safe System Approach (see Section 1.3) that addresses road safety activity using the five pillars in the Global Road Safety Plan (see Section 2.2.2). The aim of the Action Plan is to deliver the objectives and targets in the Strategy with a results focused approach. It should be based on analysis of key problems and measures addressing the main priorities and key risks. The Action Plan will provide a clear framework for action on the selected priority issues, and help to channel road crash risk and road crash injury prevention efforts in the community on selected priority issues to reduce overlap, focus

efforts on high outcome actions, and maximize impact and outreach. Where possible it should include a cost-benefit or cost-effectiveness analysis that demonstrates value for money of the proposed programme.

- The Action Plan should contain the following elements:
- Objectives and targets;
  - Performance indicators;
  - Details of measures to be implemented to address specific problems and target groups based on analysis in the Strategy;
  - Time schedule for activity;
  - Resource requirements;
  - A coordination framework with a clear Project Management structure, lead agency, stakeholders, partners and responsibilities;
  - Data collection, Monitoring and evaluation methods.

The Action Plans in the SOL Project focused on implementation of the pilot projects in each partner country. A template was provided to

structure the Action Plans. For example, the Action Plan for Nidzica in Poland sets out the objectives and activities for a child injury prevention programme with a clear programme with milestones, partner responsibilities, deliverables, and target groups and stakeholders.

**Coordination and lines of responsibility**

A key element in a successful Action Plan is a clear management structure that provides an implementation plan with lines of responsibility for specific activities. . It should help diverse stakeholders to identify how they can most efficiently and effectively contribute to the community’s road safety priorities. In the Nidzica example above, the safety programme focused on four key activities: improving data collection; education for children 6-17; infrastructure improvement; and public campaigns. For each activity the main actions with milestones and the responsible partner is set out, see Table 6.

Activity leader: Municipal Road Administration (MRA) in Barczewo

| Activity |                                                          | Main milestones | Partner responsible          |
|----------|----------------------------------------------------------|-----------------|------------------------------|
| 8.4.1    | Working group set up                                     | 01.2013         | MRA                          |
| 8.4.2    | Working group meetings and workshops                     | 1 per 2 months  | MRA                          |
| 8.4.3    | Infrastructure rs audit and road safety assessment       | 01-02.2013      | Regional Road Administration |
| 8.4.4    | Developing of infrastructure improvement action plan     | 02-04.2013      | MRA                          |
| 8.4.5    | Implementation of infrastructure improvement action plan | 05.2013-12.2014 | MRA                          |
| 8.4.6    | Monitoring of the activity development                   | 1/half a year   | WORD Olsztyn                 |

Table 6: Nidzica Activity 3 Infrastructure improvement

A structured approach such as this helps to ensure that there is clarity on roles and responsibilities and accountability for making progress and achieving results.

**Finance and resources**

It is also essential to establish the budget and human resources that will be available to implement the Action Plan. There is little value in an ambitious plan that has inadequate

resources to back it up. It may be necessary to plan for budget periods with specific activities shown with budgetary requirements that are feasible within the overall road safety budget. For example, in the Italian projects in SOL, in Brescia and Mantua, in recognition of the lack of available funds the main actions that were proposed were low cost activities in accordance with the strategic objectives.

Where increases in funding are required for implementation this should be clearly shown, together with an indication of proposed sources of funds. Examples of sources of funding for road safety measures include fuel taxation, road and parking charges, vehicle registration fees, fines for traffic violations, as well as general taxation.

## 02.3.3 BUILDING CAPACITY, TRAINING AND SKILL CREATION

The core of the Action Plan is the programme of interventions that will deliver the required results in order to achieve objectives and meet targets. It is not the intention in this manual to describe the wide range of road safety activities that are available as there are several good resource documents available. A good starting point is the Global Plan for the Decade of Action (op. cit.) that sets out activities under each of the five pillars (Road safety management, Safer roads, Safer vehicles, Safer road users, and Post-crash response), guided by the principles of a Safe System approach (see Section 1.3). Effective interventions that are in accordance with a Safe System approach include:

- incorporating road safety features into land-use, urban planning and transport planning;
- designing safer roads and requiring independent road safety audits for new construction projects;
- improving the safety features of vehicles;
- promoting public transport;
- effective speed management by police and through the use of traffic-calming measures;
- setting and enforcing laws requiring the use of seat-belts, helmets and child restraints;
- setting and enforcing blood alcohol concentration limits for drivers;
- improving post-crash care for victims of road crashes.

Public awareness campaigns also play an important role in supporting the enforcement of legislative measures, by increasing awareness of risks and of the penalties associated with breaking the law.

The following previously cited references are also good sources of information on best practice road safety measures:

- World Report on road injury prevention. WHO.
- Towards Zero: Ambitious Road Safety Targets and the Safe System Approach, OECD.<sup>13</sup>

The Transport Research Centre of the OECD and the European Conference of Ministers of Transport (ECMT) has also produced road safety reports on Young Drivers and Speed Management,

and there are earlier reports on Child Safety and Older road users. Information is available at <http://www.internationaltransportforum.org/jtrc/safety/safety.html>.<sup>14</sup>

The second edition, published in 2009, of the „Handbook of Road Safety Measures“ by Rune Elvik<sup>15</sup> (previously published in 2004) gives state-of-the-art summaries of current knowledge regarding the effects of 128 road safety measures. It covers all areas of road safety including: traffic control; vehicle inspection; driver training; publicity campaigns; police enforcement; and, general policy instruments. With many original chapters revised and several new ones added, extra topics covered in this edition include: post-accident care; drink-drive legislation and enforcement; environmental zones; and speed cameras.

In conjunction with the International Road Assessment Programme, iRAP, an online Toolkit has been developed that provides information on best practice measures to address a wide range of road safety problems. The Road Safety Toolkit provides free information on the causes and prevention of serious road crashes. Building on decades of road safety research, the Toolkit helps engineers, planners and policy makers develop safety plans for car occupants, motorcyclists, pedestrians, bicyclists, heavy vehicle occupants and public transport users. It can be accessed at <http://toolkit.irap.org>.<sup>16</sup>

### Addressing key risks

The World Report includes a comprehensive discussion of road traffic risk factors in terms of exposure to risk, crash involvement, crash severity and severity of injury outcomes post-crash. The key risk factors that influence crash involvement are speed, lack of provision for vulnerable road users, young drivers’ age and lack of experience, alcohol and drugs, fatigue, mobile phone use, road factors and vehicle defects and design. Injury severity is also determined by speed, road factors such as roadside objects, and also by the use or non-use of secondary protection measures in vehicles, seat belts and child



*The core of the Action Plan is the programme of interventions that will deliver the required results in order to achieve objectives and meet targets.*

restraints, and motorcycle and bicycle helmet wearing. Other sources are the WHO road safety manuals, previously referenced in Section 1, on Helmets, Speed management, Drinking and driving, and Seat belts and child restraints, that give details on the need for and benefits of such measures and how to implement a programme. These manuals are available on the WHO website in English, French, Spanish and Russian languages <http://www.who.int/roadsafety/projects/manuals>. They are aimed at decision makers and practitioners and address the key road safety risk factors.

The World Report recommends that all countries should implement the following measures:

- Incorporating safety features into land-use and transport planning and road design;
- Setting and enforcing appropriate speed limits;
- Setting and enforcing laws requiring seat belts and child restraints for all vehicle occupants;
- Setting and enforcing laws on helmet use for two-wheeler riders;
- Setting and enforcing blood alcohol limits for drivers;
- Requiring daytime running lights for

- vehicles;
- Designing motor vehicles for crashworthiness to protect occupants and vulnerable road users; Requiring safety audits for new road projects;
- Managing road infrastructure to promote safety, through provision of safer routes for pedestrians and cyclists, traffic calming measures and low-cost remedial measures, and crash protective roadsides;
- Improving post-crash care;
- Carrying out public information and education campaigns to increase risk awareness and support law enforcement.

A common approach to implementation of a road safety programme, that is compatible with a Safe System approach, is to consider measures in the broad categories of Education, Enforcement, and Engineering under each of the Pillars in the Global Plan. However, these categories should not be seen as discrete solutions to be used in isolation, as road safety problems often require a holistic approach that combines individual measures in a coordinated programme that is the essence of a Safe System approach. Taking the example of increasing seat belt usage, successful programmes combine education and promotion to explain risk and

publicise new laws and penalties, high profile enforcement, and effective laws and penalties, with engineering standards on the design and fitment of belts.

### SOL Pilot projects

A key element of the SOL project was the implementation of pilot projects as listed in Table 2.

The objectives of the pilot implementation are:

- to implement the measures in the individual community road safety strategy and action plans;
- In Austria, to transfer regional road safety programmes to the local level through communicators who foster local awareness and action;
- To drive road safety improvement in the community.

The details of all the pilots are contained in a separate report. Topics covered in the pilots include the key risk areas of drink-driving, speed, and child injury. The pilot actions were selected by the SOL community teams and differ amongst the communities depending on the outcome of the situational assessment and the content of the strategies and action plans which are tailored to the specific local situation.



13 OECD/ITF (2008)  
14 OECD/ECMT (2004-2006)  
15 Elvik et al. (2009)  
16 iRAP website (access 2012)

02.3.4 BUILDING CAPACITY, TRAINING AND SKILL CREATION

Whilst financial resources are an important requirement for the implementation of a road safety programme, they are not the only requirement. An efficient road safety programme will only be possible if it is planned and implemented by practitioners with the right skills. Human resources with the right mix of skills are often lacking and training programmes need to be developed. The training should cover specialist fields such as statistical analysis, road design and trauma care, as well as cross-cutting fields such as urban and regional planning, education, policy analysis and development, road traffic management and health planning. WHO has produced the *Road Traffic Injury Prevention Training Manual*<sup>17</sup> that was officially launched in New Delhi on 4 December 2006 by the Transport Research and Injury Prevention Programme (TRIPP) of the Indian Institute of Technology and WHO. The training manual is designed to equip users with useful information on how to:

- Measure the magnitude and impact of road traffic injuries
- Assess the key risk factors
- Strengthen the evidence base for prevention
- Implement promising interventions
- eliver post-crash care
- Foster multisectoral collaboration
- Formulate and implement road safety policies

The manual has been designed for a multidisciplinary audience including medical doctors and nurses, transport and road engineers, vehicle safety professionals, law enforcers, policymakers, urban planners and social scientists. The WHO manuals listed above are also designed to build knowledge and provide guidance for the implementation of measures to address key risk factors. They provide practical steps that have been identified as good practice and are important capacity building tools.

An important element in the SOL project is **capacity building and training**. To strengthen the ability of the citizens and professionals in the SOL communities to implement effective road safety interventions, SOL has developed an extensive training programme covering issues ranging from road safety management to child injury prevention. All courses follow the same methodology. They are designed for 2 days of training and include a mixture of lecture, interactive workshops, quizzes and on-road exercises. Training packages were developed covering:

- Preventing Alcohol Related Road Crashes
- Speed Management
- Road Safety in the context of Sustainable Mobility
- Child Injury Prevention
- Occupational Road Safety
- Safety of Unprotected Road Users
- Seat Belts and Child Restraints

To support the SOL partners in the delivery of the workshops, a train-the-trainer workshop was held in Budapest in January 2012 to introduce the future trainers to the methodology and components of the courses. Two trainers participated from each of the 7 SOL implementing countries.

In Hungary, working relations were established with stakeholders in Győr. NGOs, driving schools, teachers and local authorities were invited to an information session to spread the results of the situational assessment. Three capacity development training sessions, two for a purely professional audience of which one was in Budapest (child safety) and the other one in Győr (VRUs), and one for a mixed audience of teachers, parents and NGOs in Győr (child safety) were organised with very positive feedbacks.

In Styria in Austria, one of the main objectives of the SOL project was to increase knowledge about the road safety programme in the community with the help of „communicators“. Training for communicators covered five modules, shown in Table 7, designed to give participants the skills and knowledge needed in order to support the local strategy through mobilising people, explaining and informing, and motivating people to act.

The Communicators raise awareness in their community about the Programme, key risk factors, mobility education, and road crash and injury prevention in the context of sustainable mobility. 110 communities were visited by an „External Communicator“ to motivate the Mayors to implement Road Safety Strategies. Mayors, municipal employees, teachers district council members and police were trained in three regional workshops to be „local communicators“, and teams of „young communicators“ were trained to visit schools to raise awareness.

| Module 1                              | Module 2                | Module 3                | Module 4                    | Module 5                         |
|---------------------------------------|-------------------------|-------------------------|-----------------------------|----------------------------------|
| Road safety management                | Safe System approach    | Speed management        | Vulnerable road user safety | Road safety awareness            |
| Strategy and action plan development  | RSP measures            | Consulting know-how 1   | Campaigns                   | Mobility behaviour               |
| Road safety programme Styria          | Infrastructure          | Campaigns               | Consulting know-how 2       | Campaigns                        |
| European/National/Regional strategies | Traffic law enforcement | Alcohol related crashes | Child injury prevention     | Sustainable mobility             |
| Community structures                  | Accident statistics     |                         | Bicycle traffic             | Public transport                 |
|                                       |                         |                         | Shared space                | Trends:lifestyle,mobility and RS |
|                                       |                         |                         | Seat belts                  | Means of transport               |

Table 7: Training modules for Communicators in Styria

02.4 REPORTING AND MONITORING

02.4.1 IMPORTANCE OF MONITORING

Previous sections have stressed the importance of an evidence-based approach to developing a road safety strategy and action plan. Of equal importance is monitoring the effects of a road safety programme. Monitoring and evaluation completes the management loop in a country results-based management system and comprises systematic performance of all the elements of the road safety management system and is addressed by 3 main functions<sup>18</sup>:

- Establishing and/or supporting a range of data systems to set and monitor final and intermediate outcome and output targets.
- Transparent review of the national road safety strategy and its performance along

the dimensions of results, interventions and institutional management functions.

- Making any necessary adjustments to interventions and institutional outputs needed to achieve the desired results.

Good practice programmes include targets that are linked to a timetable of activities and have clear milestones. Periodic monitoring and evaluation of road safety targets and programs is essential to assess performance and to allow adjustments to be made. Regular reviews of progress should be carried out to alert policy makers to any problems and to ensure that measures are delivering the expected results. A road safety strategy should be a living document that can respond to changing circumstances and new problems. Stakeholders should be involved in the review process as their delivery performance is crucial for the success of the programme.

Monitoring progress is also important to demonstrate success. Implementation of road safety measures requires political commitment and leadership and this is easier to sustain if it can be shown that road traffic deaths and injuries are being reduced in accordance with the road safety strategy and that trends are going the right way to achieve the targets.

02.4.2 MONITORING AND EVALUATION TOOLS

The Global Plan sets out how progress towards the Decade goal will be monitored through:

- Monitoring of indicators;
- Tracking milestones linked to the Decade;
- Mid-term and end-term evaluation of the Decade.

A similar process is appropriate at national and sub-national level. Section 2.1.2 described the different types of targets and indicators that are recommended for an effective road safety strategy.

The first level of monitoring using final outcome measures is directed at progress towards an overall target, often set in terms of reductions in the numbers of people killed or injured. For this, a good database is required that provides reliable and comprehensive data at a disaggregated level. Whilst the overall totals of road traffic deaths and injuries are an important indicator, disaggregated data allow for more detailed monitoring of specific policies that target specific road user groups, age groups or road types. However, crash data are insufficient on their own, particularly when for example motorisation is increasing rapidly. As well as absolute numbers, crash and casualty rates are needed to assess real performance, and therefore information needs to be collected on levels of activity by travel mode, vehicle sales and registrations.

Measuring performance using a Safe System approach requires supplementing final outcome data with performance data in terms of Safety Performance Indicators that measure intermediate outcomes that are directly linked to interventions. For example, monitoring of the Swedish 50% fatality target in the period

up to 2007 used the following performance indicators:

- Increasing the proportion of traffic on busy state roads protected from serious head-on and single vehicle crashes from 10% to 90%;
- Reducing travel speed by 6kph on the state road network;
- Increasing seat belt use to 91%
- Reducing the proportion of drivers under the influence of alcohol involved in fatal crashes from 28% to 17%.
- Increasing the proportion of cars with at least four stars in EuroNCap ratings from 17% to 50%.

**Safety Performance Indicators (SPIs) need to be set that reflect the key problems that the road safety strategy is designed to address.**

18 Bliss; Breen (2009)

The advantage of such indicators is that they are a more direct indicator of the success of road safety measures than final outcome data that are difficult to link to specific activities. SPLs can give a more complete picture of the level of road safety and can detect the emergence of problems at an early stage, before these problems result in crashes. They enable early target-oriented adjustments of specific interventions. They use qualitative and quantitative information to help determine a road safety programme’s success in achieving its objectives, and allow for a more detailed understanding of the reasons for safety problems than is possible by looking at crash frequency alone. However, even a combination of crash data and SPLs may not be sufficient to provide a full understanding of road safety performance. Economic and demographic factors, political changes and changes in levels and efficiency of enforcement are additional influences on road safety outcomes.<sup>19</sup>

The EU SafetyNet project was designed to build the framework of a European Road Safety Observatory, which will be the primary focus for road safety data and knowledge. One of the work packages in SafetyNet had the goal of developing a set of SPLs. Seven domains for these indicators were defined covering: Alcohol and drug-use, Speeds, Protection systems, Daytime running lights, Vehicles (passive safety), Roads, and Trauma management.

Whilst SafetyNet focuses on comparisons between countries, the SPLs are also appropriate for use at national and sub-national level. A Road Safety Performance Indicators manual<sup>20</sup> has been produced that defines quantitative SPLs, demonstrates existing practices for their measurements, provides best practice examples (when available), and details the procedures which are necessary to collect and process the required data for the estimation of the SPLs’ set on a national level. Further information is available at [http://www.dacota-project.eu/Links/erso/safetynet/content/wp\\_3\\_safety\\_performance\\_indicators\\_1.html](http://www.dacota-project.eu/Links/erso/safetynet/content/wp_3_safety_performance_indicators_1.html) where a link to the manual can be found.

Intermediate outcomes are not desired for themselves but for what they entail - better final outcomes. They include average traffic speeds, the proportion of crashes involving drivers over the alcohol limit, seatbelt-wearing rates, helmet-wearing rates, and the physical condition of the road network and the standard of the vehicle fleet. Along with final outcome data, they provide a firm basis for multi-sectoral working to achieve road safety results. Where fragmentary arrangements exist for the collection and analysis of country-wide data on road traffic deaths and injuries, intermediate outcome data can provide, in the interim, a useful starting point for the measurement of country safety performance in the development to inform the national road safety strategy. Most intermediate outcome data comprises the carrying out of periodic national surveys of key safety indicators in normal traffic. Typical indicators in use include<sup>21</sup>:

- Average travel speed on urban and rural roads
- Percentage of front seat belt use in cars
- Percentage of rear seat belt use in cars
- Percentage of child restraint use in cars
- Percentage of drivers over the alcohol limit
- Percentage of motorized two wheeler users wearing crash helmets
- Percentage of cyclists wearing crash helmets
- Percentage of motor vehicles using daytime running lights
- Ambulance response times within the emergency medical system
- Percentage of cars in the national fleet with NCAP four or five star safety ratings

The EuroRAP and iRAP road assessment programmes<sup>22</sup> use risk mapping to compare crash rates over time which enables evaluation of the road safety impacts of road investment programmes. For example:

- In Poland, researchers at the Technical Institute of Gdansk, together with experts from the motoring club PZM and the Foundation for Civil Engineering found that although 42% of total national roads were rated as high risk for the period 2008-2010, this was 19% (3,000km) less than in 2005-2007.

*Economic and demographic factors, political changes and changes in levels and efficiency of enforcement are additional influences on road safety outcomes.*



- In the Czech Republic, UAMK and CityPlan published risk rates on national roads from 2003 to 2010 within the Czech EURORAP. They found that the number of lower-risk sections was increasing and the number of highest risk ones was decreasing.
- Even much less expensive measures after short road safety inspections developed by Heinrich in 2008 for the region Liberec, and evaluated within the pilot activity of the SOL project, proved to be very effective in increasing infrastructure safety at regional and local levels.
- Also, iRAP Star Ratings provide a set of SPLs for road infrastructure. In Malaysia, the road authority (JKR) used Star Ratings to estimate rapidly the change in infrastructure-related risk as a result of improvements at several high-risk sites under the black spot program.
- In Slovenia, AMZS is one of the partners EuroRAP. The AMZS and PTI with support of Police, DARS and Ministry of infrastructure and spatial planning published risk rates on motorways, and highways, first and second class main roads and for regional roads based on data on the state road network, data on traffic volume and data on traffic accidents for the period from 2006 to 2008 and the period from 2009 to 2011. It was

found that the low risk, low medium risk and medium risk rates were increasing and the high and medium high risk rates were decreasing.

**Monitoring and evaluation to assess the effectiveness of measures that were implemented, and to communicate benefits to stakeholders was a key element in the SOL project. The situational assessment established the “before” baseline and a similar assessment was used to establish the “after” situation.** A complicating factor was that the quality and availability of data necessary for a full set of performance indicators and for risk assessment was variable. For example, the best measure of fatality risk, based on deaths per distance travelled, was not always available at local level and as a compromise a population based risk measure was the minimum requirement. Therefore a minimum dataset and a preferred dataset of road safety indicators that represents a compromise between the ideal and the real circumstances were developed. The data covered both disaggregated crash and casualty data and a set of SPLs.

In Győr in Hungary speed measurements and behavioural observations were carried out in the vicinity of schools, and roadside observations of

seat belt and child restraint usage were made, before designing and implementing the pilot activities.

Observational surveys were also carried out in the Slovenian pilot towns to assess seat belt and child restraint use before and after campaigns to promote use.

The implementation of the Styrian Road Safety Programme will be monitored until 2020 by the Road Safety group that will meet 3-4 times a year. The main indicator will be crash data.

The pilots in the Liberec region in the Czech Republic were monitored according to schedules setting out the expected impact on target groups. For example, the pilot on Safe journeys to school as an additional or alternative way of road safety education included observations of the use of child restraints, the percentage of children sitting on the nearside in cars, the level of failure to give way to children on crossings near schools, and the level of speeding near schools.

19 Holló et al. (2010)  
20 European Road Safety Observatory website (access 2012)  
21 Bliss; Breen (2009)  
22 Website iRAP (access 2012)



## 02.6 GETTING COMMUNITY ENGAGEMENT AND PARTICIPATION

The examples of community participation through the PPS schemes in Brazil and the WHO Safe Communities approach (see Section 2.3.4) and the value of a local political champion to promote road safety have already been cited. Grass roots support for road safety is a vital component in a successful road safety programme. NGOs and pressure groups can make a positive contribution that should be encouraged. Community involvement should start at the stage of Strategy development so that public support can be created for measures to improve safety. Whilst it is quite usual for key stakeholders to be consulted, wider public consultation is less usual but can be vital. A good example of this comes from Western Australia. When the current road safety strategy Towards Zero was being developed a range of policy options were consulted on through comprehensive community forums and surveys in order to get feedback on the proposed measures. A key outcome was that there was significant resistance to certain speed limit reductions and it was concluded that these should be delayed until more public education had been carried out.

Road Safety Weeks such as those sponsored by BRAKE and the Child Accident Prevention Trust in Great Britain, aim to stimulate road safety

awareness in local communities through local campaigns and activities. Also in GB, Community Speed Watch schemes encourage communities to help to reduce excessive vehicle speeds on local roads. The schemes are set up in collaboration with the police who advise on choice of sites, and groups of volunteers monitor vehicle speeds and employ equipment that displays travel speed to drivers who are speeding. Data are collected on the details of speeding vehicles, collated by the police, and warning letters sent out by the police to registered keepers.

In the State of Victoria in Australia, the Community Road Safety Partnership Program seeks to increase the participation of local communities in addressing road safety issues, in support of the Victorian Government's road safety targets. It aims to increase the engagement and opportunity for local communities and stakeholders to become involved in effectively addressing road safety needs and issues.

School based road safety schemes are another way of increasing community involvement through School Travel Plans and Safe Routes to School programmes. School Travel Plans (STPs) have the aim of showing how travel to and from school can be made safer and more sustainable

for pupils, parents and teachers. They are an important tool in reducing the number of pupils who travel to school by car. In addition to safer travel, STPs are about improving health, broadening education, combating social exclusion, and making the local community greener. They improve the quality of life for everyone. STPs are created in consultation with the whole school community. They vary according to the local situation and current trends.

Community Volunteers in several countries including GB and the US run „Walking Bus“<sup>23</sup> schemes to encourage children to walk to school in safety, and child pedestrian training programmes such as Kerbcraft<sup>24</sup> in GB also use volunteers. Kerbcraft is a practical training scheme designed to teach pedestrian skills to children aged 5-7 that takes them out of the classroom to real life situations at the roadside. Groups of two or three children with a trained volunteer are taught how to develop safe road behaviour. The training focuses on choosing safe places to cross and safe routes; crossing safely at parked cars and near junctions. An evaluation of the programme showed significant gains in the safe behaviour of children.

**Such community road safety schemes not only have the potential to improve road**



**safety directly, but also have wider effects in terms of promoting safe behaviour beyond the specific schemes.** They increase risk awareness and through peer to peer promotion can be more acceptable and effective than official publicity programmes. By creating a climate in a community where unsafe behaviour on the roads is seen as unacceptable and anti-social there is greater pressure to conform through creating new social norms.

Businesses can also be encouraged to participate in road safety through workplace safety initiatives. Employers have a duty of care for their employees when they are driving as part of their work in the same way that they must ensure safety in the workplace. Such schemes should start by encouraging employers to monitor incidents involving their drivers and to provide assessment and training for new employees and for those who have been crash involved. Employers also need to ensure that drivers' schedules take account of safety and do not require unsafe behaviour such as speeding and driving when fatigued. Whilst goods vehicles in many countries have tachographs to enforce drivers' hours legislation, no such controls exist at a statutory level for car drivers such as salesmen. Increased safety in driving for work schemes has benefits beyond road safety. Employers

benefit from reduced costs in terms of insurance, vehicles and drivers being off the road, and reduced staff turnover.

A new International Standard for Road Safety Management for employers, ISO 39001:2012, gives employers in companies and public authorities a clear set of guidelines to help them to improve road safety management. The ISO 39001:2012 standard requirements enable organisations that interact with road traffic to implement a management system that allows them to reduce the number of road deaths and serious injuries in collisions which they can influence. The standard can be adopted by a public authority or company and can also be used to cover transport services contracted in the supply chain. Any player with an influence on road safety should be able to use the standard as guidance in its efforts of contributing to safe road traffic. One opportunity is for road safety considerations to be included as key criteria in public and private procurement tenders and contracts. By integrating this requirement other benefits, can be reaped. Large employers either public or private can influence policies in Small and Medium Enterprises (SMEs) when they subcontract out work further along the supply chain by insisting that subcontractors adopt the same conditions and standards in relation to driving for work.

More information about the ISO 39001:2012 standard, and the full text of its requirements, can be found at<sup>25</sup> [http://www.iso.org/iso/home/store/catalogue\\_tc/catalogue\\_detail.htm?csnumber=44958](http://www.iso.org/iso/home/store/catalogue_tc/catalogue_detail.htm?csnumber=44958)

**Community involvement is an integral part of the SOL project. Workshops and other events were held in all the pilot areas to inform and involve the local communities in the pilot projects, and to raise awareness of road safety problems.** The Styrian Road Safety Programme (RSP) in Austria will include a chapter on “road safety work within the communities” and developing community-based strategies is an objective. The road safety communicators mentioned in Section 2.3.4 are working in their communities. A main focus of the RSP is to increase mutual responsibility of all road users through awareness campaigns to sensitise road users to risk.

*Businesses can also be encouraged to participate in road safety through workplace safety initiatives.*



23 Websites walking bus schemes (access 2012)  
24 Website British Department for Transport (access 2012)

25 Website ISO (access 2012)

# 03 INTEGRATING ROAD SAFETY INTO WIDER POLICY INITIATIVES AND URBAN DEVELOPMENT



*One of the objectives of the SOL project is to strengthen road safety management and coordination in the participating communities by improving the capacity of multi-sector/disciplinary teams to plan and coordinate action to develop more sustainable, safer and healthier transport systems for their communities.*

## 03.1 SUSTAINABLE TRANSPORT POLICY

One of the objectives of the SOL project is to strengthen road safety management and coordination in the participating communities by improving the capacity of multi-sector/disciplinary teams to plan and coordinate action to develop more sustainable, safer and healthier transport systems for their communities. This is in line with a Safe Systems approach that integrates road safety strategies with those relating to the environment, accessibility and mobility.

The European Union Council of Ministers of Transport, defines a **sustainable transportation system** as one that:

- Allows the basic access and development needs of individuals, companies and society to be met safely and in a manner consistent with human and ecosystem health, and promotes equity within and between successive generations.
- Is affordable, operates fairly and efficiently, offers a choice of transport mode, and supports a competitive economy, as well as balanced regional development.
- Limits emissions and waste within the planet's ability to absorb them, uses renewable resources at or below their rates of generation, and uses non-renewable resources at or below the rates of development of renewable substitutes,

while minimizing the impact on the use of land and the generation of noise.

A sustainable transport policy involves consideration of transport objectives in a holistic way so that demand management, modal choice and infrastructure development are considered together to achieve goals that include increased safety, reduced pollution and congestion, and healthier people. In 1996, an OECD Conference in Vancouver, Canada set out guiding principles for Sustainable Transportation that included „ Transportation systems should be designed and operated in a way that protects the health (physical, mental and social well-being) and safety of all people, and enhances the quality of life in communities.“

Safety and sustainability can be designed into roads by rethinking the balance between motorised and non-motorised users. Share the Road is a joint initiative of the United Nations Environment Programme (UNEP), the FIA Foundation for the Automobile and Society, and partner organisations, that aims to improve safe access to sustainable transport by advocating road design and finance that is inclusive of all users and benefits all. It develops practical tools and design guidelines for the implementation of projects that incorporate the environment, safety and accessibility. It calls for a minimum

of 10% of road investments to be devoted to safety measures in order to ensure that the safe, low-carbon mobility of all road users, including pedestrians and cyclists is considered the ultimate aim of roads as a matter of course.

A report by the OECD and the International Transport Forum, „*Pedestrian safety, urban space and health*“<sup>26</sup> includes recommendations to support and encourage walking as an integral part of the road transport system. A joint OECD/ ITF/ Korea Transport Institute (KOTI) seminar in April 2011 addressed the issue of cycle safety in the context of the promotion of cycling as an alternative low carbon transport mode. In May 2011 the ITF Annual Forum on the theme “Transport for Society” discussed the future of mobility, including road safety, accessibility, and sustainable urban travel. Environmental and safety objectives are complementary as switching to less polluting non-motorised modes supported by safety measures, promoting public transport use, and promoting alternatives to travel through the use of information and communications technologies and flexible working practices will provide both safety and environmental benefits.

Energy saving driving practices such as lowering speeds, and accelerating and braking smoothly, that are promoted for fuel efficiency

26 OECD/ITF (2011)

27 Website British Department for Transport (access 2012)

28 Website Auckland Regional Transport Authority (access 2012)



also have safety benefits and should be part of driver training programmes. In GB the Safe and Efficient Driving programme promotes driver training for commercial vehicle drivers and has produced both environmental and safety benefits as well as cost savings for participating firms.<sup>27</sup>

An example of a city level Sustainable Transport Plan is that published by the Auckland Regional Transport Authority.<sup>28</sup> It outlines strategies to promote walking and cycling, develop travel

plans for schools and workplaces to provide travel choices, encourage public transport use, reduce traffic and traffic speeds, and implement safety engineering programs. The School Travel Plans initiative described in Section 2.6 above has sustainable safety objectives as well as aiming to improve safety. A key objective is to promote safe walking and cycling to school in order to reduce car use and pollution around schools.

*Exposure to road injury risk can be reduced by land-use policies that take account of safety by reducing the volume of motor vehicle traffic and carrying out safety impact assessments of planning proposals*

## 03.2 LAND USE POLICY

Exposure to road injury risk can be reduced by land-use policies that take account of safety by reducing the volume of motor vehicle traffic and carrying out safety impact assessments of planning proposals.<sup>29</sup> Land use influences safety in several ways. The spatial distribution of origins and destinations of road journeys and their lengths affect the volume of traffic and the distribution of traffic across the network. Exposure to risk can be minimised by ensuring that trips are short and routes are direct and safe. Urban developments planned with easily accessible services and amenities will help to minimise travel demand and vehicle use.

Area-wide safety assessments of land-use planning proposals should be routinely carried out. For instance locations of new schools should take account of where pupils live and how they will journey to school and the safety of the surrounding road network. Accessibility by walking and cycling should be considered together with provision of convenient safe crossing facilities and cycle routes.

The Global Plan for the Decade of Action (op. cit.) includes safety-conscious planning: Promoting the needs of all road users as part of sustainable urban planning, transport demand management and land-use management by:

- Planning land use to respond to the safe mobility needs of all, including travel

demand management, access needs, market requirements, geographic and demographic conditions;

- Including safety impact assessments as part of all planning and development decisions; and
- Putting effective access and development control procedures in place to prevent unsafe developments.

Planning Policy Guidance<sup>30</sup> published by the GB Department for Communities and Local Government sets out guidelines for integrating planning and transport at the national, regional, strategic and local level. Its objectives include promoting more sustainable transport choices both for carrying people and for moving freight, promoting accessibility to jobs, shopping, leisure facilities and services by public transport, walking and cycling, and reducing the need to travel, especially by car. It sets out the actions that Local Authorities should take when preparing development plans and considering planning applications in order to meet these objectives.

*Exposure to road injury risk can be reduced by land-use policies that take account of safety by reducing the volume of motor vehicle traffic and carrying out safety impact assessments of planning proposals*



29 WHO (2004)  
30 Website UK Government archive (access 2012)

# 04 GUIDANCE FOR TRANS-NATIONALLY REPLICABLE TOOLS

Following the 4th Road Safety Action Programme (RSAP), the European Commission declared that the exchange and dissemination of good practice is an important strategy to transfer and improve local solutions for better road safety.



Each implemented SOL pilot activity comprises replicable good practice road safety measures, the so called “tools”.

## 04.1 DESCRIPTION OF TRANSNATIONALLY REPLICABLE TOOLS FOR ROAD SAFETY ACTIONS

Following the 4th Road Safety Action Programme (RSAP), the European Commission declared that the exchange and dissemination of good practice is an important strategy to transfer and improve local solutions for better road safety. Therefore each implemented SOL pilot activity comprises replicable good practice road safety measures, the so called “tools”. Before replication the “tools” need to be adapted to the specific local conditions. They are integrated in a holistic road safety concept and can be divided into the following four categories: social marketing campaigns, road safety training, infrastructure safety measures and road safety programmes as well as action plans.

Table 8 on page 49 presents an overview of the good practice tools that may be adapted to the specific local conditions when replicated:

To ensure general replicability the above good practice tools were systematically described, evaluated and validated to ensure highest standards of innovation and practicability. The following text gives a short overview of four good practice tools. The others are available online on the SOL website.

**Social marketing campaign:**  
**Step by step in traffic without injuries**  
The campaign is divided into two main parts: the drawing competition for children and the campaign on billboards. The pilot is focused on increasing children’s understanding of wrong (unsafe, unsustainable) behaviour in traffic and through that indirect teaching of safe behaviour, working in teams (classes) as well as on greater promotion of use of public transport. Evaluation of the competition is based not only on the quality of drawing, but mostly on the sense of the idea behind the proposal and its possibility to be transferred to the billboard. The winning proposals are then transferred onto the billboard and placed on the tram/bus, which is in daily traffic in the given area for one month. Other proposals are putting information into the tram/ bus instead of all other “normal” advertisements. A special event is dedicated to opening of the “on road” exhibition, including the invitation of media and politicians. The event may be connected to a Car Free Day or similar events. The campaign is implemented through a moveable exhibition in a bus or more buses in daily traffic on regular lines. In this way all passengers and many other people around those lines may be reached directly. It is a very

low cost way to spread children’s thoughts and wishes about road safety and sustainability of traffic to many people.

**Road safety training:**  
Road safety training Materials for Communicators are subdivided into 5 modules (see chapter 2.3.4). Every module is divided into 4 units and contains: Overview, Presentations, Factsheets, SOL additional materials, Supplements. The 5 modules are:  
**M1:** Road Safety Programmes  
**M2:** Infrastructure and legal measures  
**M3:** Speed, Alcohol and consulting  
**M4:** Unprotected and vulnerable road users  
**M5:** Awareness raising and sustainable mobility

**The road safety workshop (“Wir fahr’n ab”) in vocational schools** was held by “young communicators” who have been trained with the training materials for communicators. The peer education approach with young communicators is a very valuable finding. Education may become more interesting, especially with the choice of “cool” communicators.

**Road Safety Programme: Styrian Road Safety Programme 2011-2020** (Styria – Austria): a Road Safety Programme (RSP) is a guideline for road safety work within a region. The RSP comprises a set of measures with due political backing which have to be implemented within a determined timeframe. With the help of a road safety programme accident rates can be systematically decreased. The main objective of the Styrian Road Safety Programme 2011 – 2020 is a 50% reduction of road accident fatalities, a 40% reduction of serious injuries and a 20% reduction of accidents with personal injury. 67 measures within the programme will sustain these results. The Styrian Road Safety Programme<sup>31</sup> is available online: <http://www.verkehr.steiermark.at/cms/bei-trag/11658908/11160351/>

There are also two transnationally replicable tools included in the SOL project which do not need any adaption for their replicability, the SOL case-studies/good practices training materials on 7 thematic fields:

- Preventing Alcohol Related Road Crashes,
- Speed Management,

- Road Safety in the context of Sustainable Mobility,
- Child Injury Prevention,
- Occupational Road Safety,
- Safety of Unprotected Road Users,
- Seat Belts and Child Restraints

The SOL good practices were collected through an internet survey by using existing road safety connections and a desk study based on findings on the internet. The results were evaluated, and some measures were chosen for further analysis. The presented case studies provide possibilities for the SOL communities to look at replicable good practice in detail and to make connections with the organisations that implemented the measure. They are available online on the official SOL website<sup>32</sup> under search of good practice: <http://www.sol-project.eu/index.php?id=2638&ID1=2587&ID2=2638>

The seven sets of training packages (see Section 2.3.4), were developed as a basis for road safety training in order to build more capacity for professionals in the SOL communities in the seven areas. Based on these materials the goals of the training are to structure and broaden knowledge, show new approaches and share international good practice about how to tackle different issues on road safety. The training materials are equipped with many interactive activities, including workshops and notes and guidelines for the future trainers. Sustainable use of this training should be delivered by professionals who are

capable of carrying out the training in their own countries/communities and are open to new approaches. Local trainers will deliver the desired road safety training for different groups of stakeholders depending on the needs of the community. Therefore the trainers have to be very familiar both with the structure and the professional content of the training materials. The goal of the training is to demonstrate the variety of topics developed within the package, and the breadth of workshop activities included within each package, along with available training techniques for potential trainers.



*The SOL good practices were collected through an internet survey by using existing road safety connections and a desk study based on findings on the internet.*

| Tool category                           | Tool name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Social marketing campaigns              | <ul style="list-style-type: none"><li>• Educational campaign on road safety and public transport (Province of Brescia, Italy)</li><li>• Campaigns about the influence of alcohol on drivers (Győr, Hungary)</li><li>• Educational campaign for road safety and truck mobility (Province of Mantua, Italy)</li><li>• Public campaign on alcohol prevention in road traffic for young drivers (Warmia Mazury region, Poland)</li></ul> For children and youth: <ul style="list-style-type: none"><li>• Step by step in traffic without injuries (Liberec region, Czech Republic)</li><li>• Child injury prevention and road safety management campaign (Slovenia)</li><li>• Road safety campaign for children/youth (Prešov’s region, Slovakia)</li><li>• Public campaign on child safety (Warmia Mazury region, Poland)</li></ul>                                                                                                                                                                                                                                                                                                                          |
| Road safety training                    | Training materials: <ul style="list-style-type: none"><li>• Road safety training Materials for Communicators subdivided into 5 modules (Styria, Austria)</li><li>• Training with young communicators in schools:</li><li>• “Wir fahr’n ab”: road safety workshop in vocational schools held by “young communicators”- peer education approach (Styria, Austria)</li><li>• Road safety education of pupils with communicators (Prešov’s region, Slovakia)</li></ul> For children: <ul style="list-style-type: none"><li>• Safe routes to school (Győr, Hungary)</li><li>• Safe journey to school – full implementation (Liberec region, Czech Republic)</li><li>• Educational road safety training for pupils (Warmia Mazury region, Poland)</li><li>• Training on road safety for children (Slovenia)</li></ul> For young drivers: <ul style="list-style-type: none"><li>• Road safety training for young drivers (Prešov’s region, Slovakia)</li><li>• Road safety training for young drivers (Poland)</li></ul> For truck drivers: <ul style="list-style-type: none"><li>• Road safety training for truck drivers (Province of Mantua, Italy)</li></ul> |
| Infrastructure safety measures          | <ul style="list-style-type: none"><li>• Road infrastructure inspection and improvement in school surroundings (Warmia Mazury region, Poland)</li><li>• Short Road Safety Inspection (Liberec region, Czech Republic)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Road safety programmes and action plans | City level <ul style="list-style-type: none"><li>• Road safety action plan on city level (Kočevje, Slovenia)</li><li>• Road safety strategy and action plan on city level (Warmia Mazury region, Poland)</li><li>• Community road safety strategy (Győr (Hungary)</li></ul> Regional level <ul style="list-style-type: none"><li>• Styrian Road Safety Programme 2011-2020 (Styria – Austria)</li><li>• The East Lombardy local strategy and action plans (Province of Brescia, Province of Mantua - Italy)</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

Table 8: Overview of good practice tools that may be adapted to the specific local conditions when replicated

31 Das Land Steiermark 2012  
32 Website SOL case studies

# 04.2 TRANSNATIONAL NETWORKING MODEL ON ROAD SAFETY ISSUES DEVELOPED AND ASSESSED BY SOL

Finally, transnational networking is a powerful tool to spread know-how on road safety and good practices. Therefore, the following developed model tool assessed through the SOL project may guide followers for implementing comparable networks in other regions.

The model tool that was developed to build up cooperation for mutual learning in various regions aims to create a sustainable transnational road safety network, that stakeholders across Central Europe area can benefit from. The cooperation aims to support mutual learning through knowledge transfer, by exchanging good practice and experiences, as well as bringing policy-makers, researchers, experts and private organizations from transnational to local level together, to exchange their respective experiences and strategies in the field of road safety. It is vital for knowledge generated in the concerned administrative bodies, institutions, universities and private organizations to be disseminated and transferred to a broader range of practitioners. The key questions are how to build up a cooperation consisting of interested stakeholders, and how to sustain this cooperation over a long period of time. Guidance is given by the following model

tool for the establishment of cooperation for mutual learning. Cooperation for mutual learning is an approach supported by the European Commission's 4th Road Safety Action Programme. The benefits are numerous for example:

- Sharing innovative solutions, lessons learned, good and bad practices; therefore mutual support is guaranteed
- Constantly updated knowledge through high level capacities and expert knowledge
- Exchange of knowledge
- Build together strategies to establish priorities for action,
- Find new interested actors and contacts
- Awareness raising that there exists a group of stakeholders that is sharing the same perspective and goals
- Identify new funding possibilities and lobby for action.

*The model tool that was developed to build up cooperation for mutual learning in various regions aims to create a sustainable transnational road safety network, that stakeholders across Central Europe area can benefit from.*

Model tool for the establishment of cooperation for mutual learning

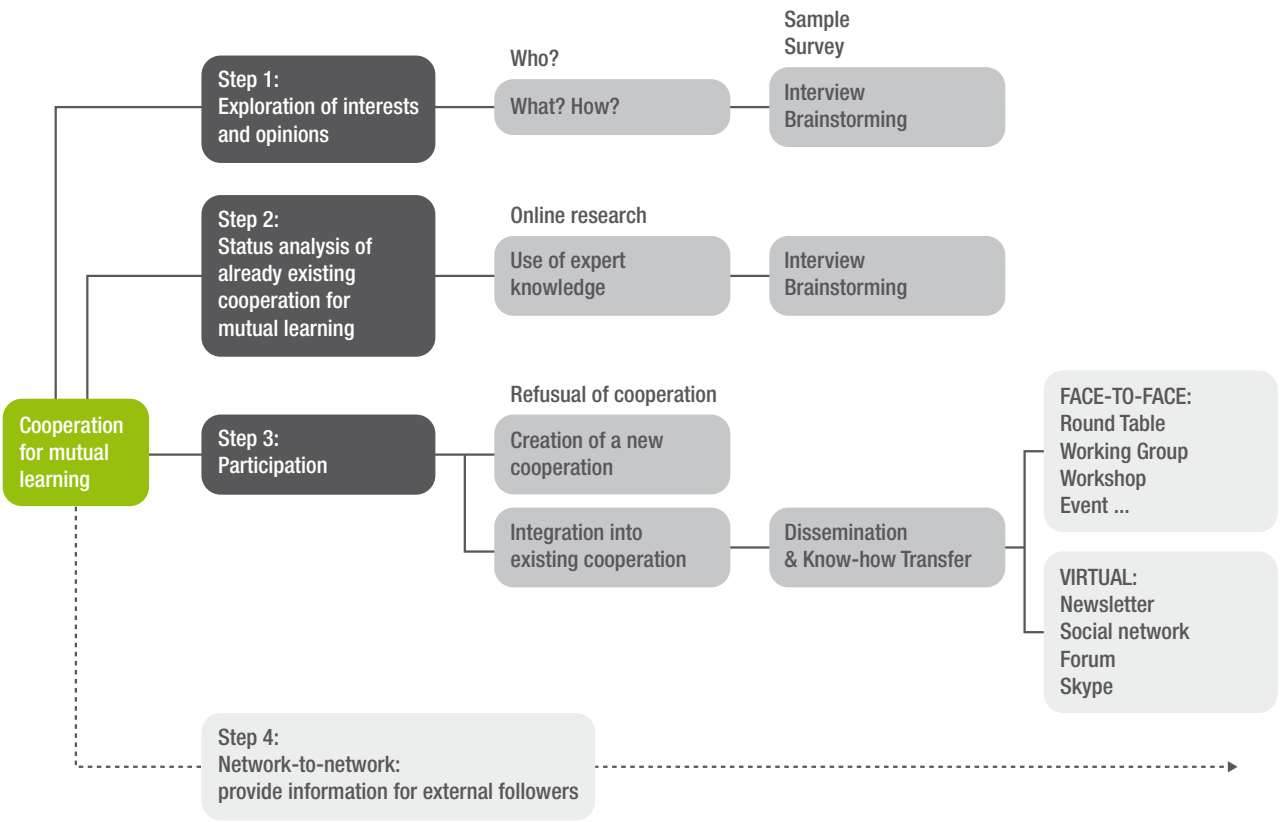


Figure 1: Model tool for the establishment of cooperation for mutual learning

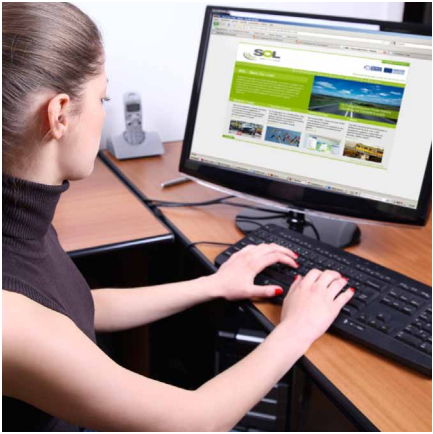
Figure 1 presents the general model tool to create cooperation for mutual learning in four steps. These complement each other and lead to the overall goal to achieve a vital exchange of experiences, good practice and strategies. This tool can be used either at transnational or at regional and local level. Crucial for this are the selected sample of participants and the general focus of the cooperation.

Step 1 implies the exploration of interests and opinions from the future participants of the cooperation. Therefore the question “who” is important, since a selection of possible candidates for cooperation is determined. For this a sample of stakeholders involved in the focus area is negotiated. Selection criteria are mainly of relevance for the candidates taking part, meaning whether they can relate to the topic

and take it to the next level. Once a selection of possible candidates is launched, a survey needs to be sent to the candidates to evaluate if there is willingness to be part of the cooperation. This may be performed through a questionnaire, investigating the need and the conditions under which the cooperation can benefit the participants, and whether they are already participating in transnational/national networks. Within the framework of the questionnaire, the interest of joining cooperation for mutual learning is distinguished, and in addition the expectations of participating, the aims/objectives/contents most relevant to them, and their contribution within the cooperation are identified. Furthermore a key question for implementing cooperation for mutual learning is “what” main objectives/aims/goals it should have and “how” it can be built around these. This can be tackled by interview-

ing experts, who are already participating in existing networks concerning the focus area and brainstorming with the possible stakeholders on what “vision” they have for participating. Step 1 therefore takes a significant stride in achieving a general framework for the cooperation on who participates, what aims it would like to accomplish and how it can be constructed.

Step 2 deals with a status analysis of already existing cooperation for mutual learning. This will determine whether cooperation in the focus area exists and if so, how they mediate their objectives and learning potentials. Therefore these can be shown as examples for the development of a cooperation and can facilitate the construction phase. Online researches can identify the existence and the use of expert knowledge





within the focus area through interviews and brainstorming sessions that will guide the analysis and give important information as well as details of cooperation.

Step 3 deals with the actual participation in the cooperation for mutual learning. Three alternatives exist while this step is in place. Either there is a refusal to cooperate from the possible participants side, meaning there is no further interest in cooperating in the focus area. This would imply the end of efforts in building up the cooperation. On the other side a willingness to create a completely new cooperation may be present, perhaps due to the fact that there is not a comparable cooperation in existence or other existing cooperation does not meet the terms of the possible participants. This would bring in several issues and targets, which cannot be discussed in this framework. The third alternative for participation is highly possible. This implies a willingness to cooperate and resolve for integration into an existing cooperation, since comparable networks dealing with the focus area are present and therefore it would make no sense to create a new network with similar objectives. Therefore a suitable network must be identified and selected as well as requested if integration would be feasible. Possible participants herein can contribute with their experiences and good practices while using already existing structures, resources and conditions. Integration means assimilating the willing participants into already existing and probably sustainable constitutions, where already motivated actors are linked in and an exchange of know-how is guaranteed. Best case of this integration would be success in dissemination of experiences and good practice as well as know-how transfer to the members of the cooperation. Dissemination and know-how transfer can either take place face-to-face or virtually. Possible face-to-face actions can be for example round tables, working groups, workshops dealing with the focus area as well as events such as congresses, conferences, meetings etc. Virtually there are many ways in transferring knowledge to others, by sending regular newsletters, using social networks such as Facebook, LinkedIn, Friends of Eltis, as well as exchanging thoughts in internet forums and exchanging contributions by calling the respective person by phone or Skype. Due to this cooperation for mutual learning a network of policy-makers, researchers, experts and private organisations can be formed and enlarged to exchange vital experiences and good practices. By doing so the stakeholders can improve the situation of the focus area and innovation processes can be taken further on.

Step 4 deals with the openness of the cooperation for mutual learning to other comparable networks dealing with the same or similar topic,

also known as a network-to-network process. Information, knowledge and experiences are provided to external followers. These interested actors in the focus area are invited to integrate into the cooperation. On the other hand dissemination work consisting of e.g. presentations at workshops and conferences, attending congresses and meetings, can draw attention to the cooperation externally and therefore attract followers committed to the same area. This way a sustainable and successful exchange between different networks can be achieved, and new members may feel invited to take part to guarantee the renewal and permanency of this expert cooperation.

These four steps offer guidance on how to build up cooperation for mutual learning in general, referring to the steps that have been assessed by the SOL project. Therefore SOL can be seen as an example for the building of cooperation focussing on road safety. This is why the following figure presents the exact steps SOL has been accomplishing to implement cooperation for mutual learning in the field of road safety to enable the exchange of experiences and good practice on expert level with a transnational focus. This vital information benefits local stakeholders from public and private sectors and facilitates improving the road safety situation in the respective region. It is a field where transnational cooperation for mutual learning, exchange of good practice, definition of stan-

## SOL Procedure and results for a transnational cooperation for mutual learning in the field of RS

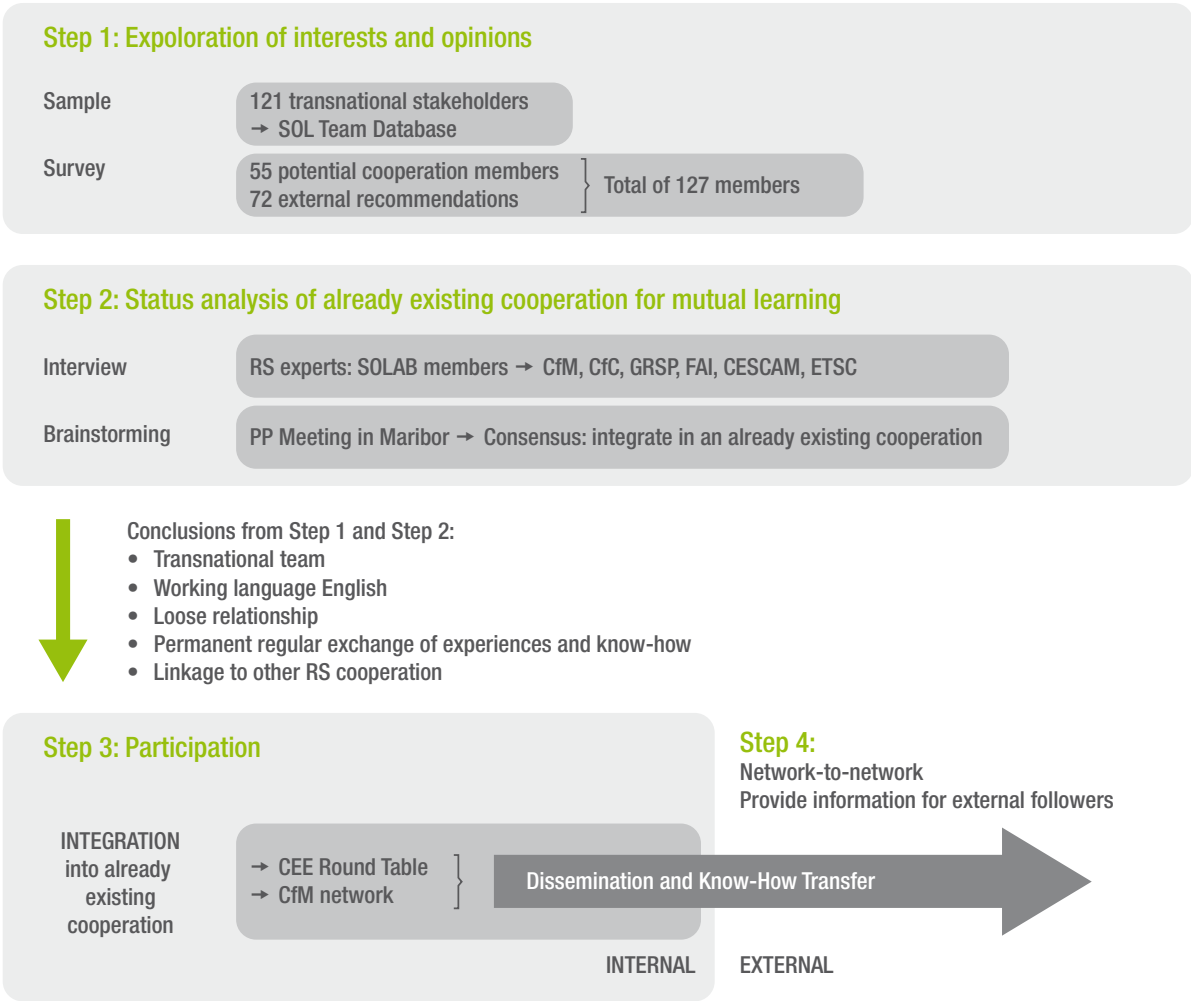


Figure 2: SOL procedure and assessment for a transnational cooperation for mutual learning in the field of road safety

standardised assessment methods and statistics as well as the development of replicable management structures, campaigning tools and political awareness raising methods may improve the road safety situation in Central Europe. A questionnaire has been developed asking whether the possible network stakeholders are already participating in national/transnational networks. The outcome shows, that only a fraction are present in networks dealing with road safety and coordinated efforts in road safety issues are rare. Therefore it makes sense highlighting the SOL procedure and results for a transnational

cooperation for mutual learning in the field of road safety.

As mentioned in Step 1, interests and opinions on road safety have been explored to identify the need for cooperation for mutual learning. Also the main community views have been evaluated to find out if there is a general interest in exchanging experiences and good practice in the field of road safety. In a situational assessment the SOL project partners have selected local and regional stakeholders to build up teams to focus on the proposed pilot

activities, and therefore a sample in the form of a SOL Team Database has been produced with 121 stakeholders from eleven different countries. These stakeholders all contribute to road safety in their respective region. A questionnaire concerning the investigation of the need and conditions under which a sustainable transnational road safety network can benefit SOL stakeholders in improving road safety across Central Europe Area has been sent out. Following the analysis, interested partners are contacted to discuss a possible membership. The main question of this survey asks if the

stakeholders are willing to participate in a transnational network concerning road safety, and therefore cooperate for mutual learning. Furthermore the questionnaire identifies the expectations of participating, the aims/objectives/contents most relevant to them and their contribution within the cooperation. This allows a detailed analysis on what to expect and what requirements the cooperation has to have. The outcome of the SOL survey covers 55 potential members out of the 121 SOL Team Stakeholders. In addition 72 recommendations from the Project Partners of other possible participants from various countries have been added in this step, since these could also contribute to the network. Due to the survey 127 possible members for the cooperation have been identified following the SOL Vision for “a region free of road-crash death and injury, safe for all road users in every community”. The survey provides 22 supplementary SOL stakeholders interested in joining a transnational cooperation for mutual learning, if the outcome is translated into their native language. Unfortunately this group cannot be considered, since the purpose of this cooperation implies only one language, which in this case would be English. Additionally costs for translation of materials produced within the cooperation would be too high to enable this group to participate. Still this group is welcome to participate in the cooperation.

In practice Step 1 and Step 2 are complementary and have been running in parallel. Therefore it has been easier to combine both by interviewing road safety experts, who are members of transnational road safety networks,

on how to build up cooperation for mutual learning and figuring out if cooperation for mutual learning already exists in the field of road safety. Online researches also identified these. The use of expert knowledge has been substantial in Step 2, since their inside know-how is a vital component of cooperation. The road safety experts are among many global and European road safety initiatives and in addition belong to the SOLAB members, such as CfM, CfC, GRSP, FAI, CESCAM and ETSC. Due to the large amount of pre-existing transnational road safety networks (e.g. CfM, CEE Round Table, FERSI, ICTCT), at the project partner meeting in Maribor in September 2011 it was agreed to integrate the interested SOL stakeholders into an already existing transnational road safety network. Thus, existing structures and ties to other road safety experts can be adapted and additionally SOL stakeholders can benefit from them.

Conclusions of Step 1 and Step 2 are:

- A transnational team is needed that focuses on cooperation for mutual learning in the field of road safety.
- Working language is English, due to the international team members.
- The Team is bound into a loose relationship of various team members – they may contribute to the network, but they do not have to.
- A permanent regular exchange of experiences and know-how is focused.
- There should be a linkage to other road safety cooperation, to ensure a vital exchange of relevant facts, experiences and good practice.

*The road safety experts are among many global and European road safety initiatives and in addition belong to the SOLAB members, such as CfM, CfC, GRSP, FAI, CESCAM and ETSC.*



Step 3 deals with the actual participation of the cooperation for mutual learning in the field of road safety. Due to the consensus by the SOL project partners to integrate into a pre-existing cooperation, the two alternatives (refusal of cooperation and creation of a new cooperation) will not take place. Integration into the CEE round table has been requested. This round table meets annually to discuss topics and measures concerning road safety (e.g. infrastructure management, integrated road safety management and programmes) and includes the CEE countries. The participants comprise ministries, research institutions and NGOs and therefore have a vital exchange of experiences in road safety. Joining this transnational network means disseminating their experiences and good practice developed in their respective area and benefitting from the network outcomes. This takes place internally by attending the annual round table or through using the available contacts from the network and getting in touch with them. The official CEE Website provides information about previous annual meetings. Moreover the presentations given are available to download: <http://www.kfv.at/departement-transport-mobility/international-cooperation/4th-cee-road-safety-round-table/><sup>33</sup>

Furthermore the SOL stakeholders have been invited to join the Cities for Mobility (CfM) and to contribute to this efficient network. In the global

CFM network the main objective is to search for common ways towards sustainable mobility – meaning mobility which is accessible to all, environmentally-friendly and economy-focused. There is close cooperation with economic experts, universities and research institutions, as well as non-governmental organisations. This network combines social activities by using social platforms such as Facebook. Therefore it would be a huge benefit for the SOL stakeholders to take part in this globally active network focused on sustainable mobility. Both the CEE round table and the CfM network comprise the requirements based on the formulated conclusions of step 1 and step 2.

Step 4 includes network-to-network know-how transfer and provides information to external followers. A continuously innovative network should never be isolated but should be linked to other road safety initiatives searching for further innovative measures and actions as well as possible new members outside the already known platforms. For example the CEE round table is an initiative from the KfV (Austrian Road Safety Board) which is a well presented partner continually exchanging experiences with partner organisations within Austria and abroad. Close contacts exist with international organisations such as ETSC and FERS. Consequently, a continuous exchange with other road safety initiatives is guaranteed.

Therefore, the transnational replicable tools on road safety actions as well as the developed and assessed model tool for transnational cooperation for mutual learning may guide followers to improve their road safety situation in the respective regions. Additionally these tools are in harmony with the European Commission’s objective of creating a common road safety area and comply with the UN Decade of Action for Road Safety from 2011 to 2020.



# 05 CONCLUSIONS AND RECOMMENDATIONS

*Road traffic crashes are predictable and can be prevented. Many european countries have shown sharp reductions in crashes and casualty numbers over the past decades.*



*Conclusions and recommendations of the SOL consortium for the improvement of Road Safety in Europe.*

1. Action to reduce road crash deaths and injuries in accordance with the aims of the Decade of Action for Road Safety should be a priority for all countries.
2. Progress has been made in EU countries but Central European countries still lag behind the best performers and there is great potential for improvement.
3. The SOL project has focused on improving road safety through community based pilot projects and has produced transnational tools and solutions that are replicable.
4. The recommended good practice way to achieve the Decade's goals is through a Safe System Approach.
5. A Road Safety Champion and a strong Lead Agency are key requirements to achieve results.
6. Partnerships should be set up involving a wide range of stakeholders and the broader community.
7. Road Safety Strategies and targets are an essential element together with an action plan for implementation.
8. The Strategy should be underpinned by thorough evidence of the road safety situation in terms of analysis of casualty data and assessment of road safety management capacity.
9. A capacity review should be carried out using the method recommended by the World Bank Guidelines.
10. Best practice road safety measures are well known and advice is available from several sources shown in this manual.
11. Measures should focus on the five pillars as set out in the Global Action Plan, and on the key risks: speed, restraint use, and drinking and driving.
12. Monitoring and evaluation of the effects of measures that are implemented and progress towards meeting the targets is essential.
13. Exchange and dissemination of good practice is an important strategy for the transfer and improvement of road safety measures at the local level.
14. Existing cooperation between stakeholders should be assessed and taken into account in recommendations for new road safety systems to share information and work cooperatively.

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A grayscale map of Europe is the background. It is covered with numerous small white crosses, representing road deaths. The crosses are distributed across the entire continent, with a higher density in central and western Europe.

DO YOU KNOW, THAT EVERY DAY,  
**85 PEOPLE**  
**ARE DYING**  
ON EUROPEAN ROADS

**SAVE OUR LIVES**  
**JOIN THE NETWORK**

# MANUAL FOR DECISION MAKERS

# TABLE OF CONTENT

|     |                                                |    |
|-----|------------------------------------------------|----|
|     | Foreword .....                                 | 03 |
| 1.  | The global road safety situation .....         | 04 |
| 2.  | The SOL project .....                          | 06 |
| 3.  | Road safety situation in Central Europe .....  | 08 |
| 4.  | How can we Make Roads Safe? .....              | 10 |
| 4.1 | A Safe System approach .....                   | 11 |
| 4.2 | Road safety strategies and targets .....       | 12 |
| 4.3 | Interventions to deliver targets .....         | 14 |
| 4.2 | Communications and community involvement ..... | 15 |
| 5.  | Conclusions .....                              | 16 |



# FOREWORD

Growing awareness of the human and economic cost of the rising toll of death and injury on the world's roads has led to road safety rising up the political agenda internationally. Increased motorisation has resulted in more casualties, particularly amongst vulnerable modes of walking and cycling. But the news is not all bad. This seemingly inexorable trend has been arrested and reversed in many developed countries, and solutions to the road safety problem are available and well known. With a concerted effort in all countries lives can be saved. This manual outlines how decision makers can act to make the roads in their communities safe.

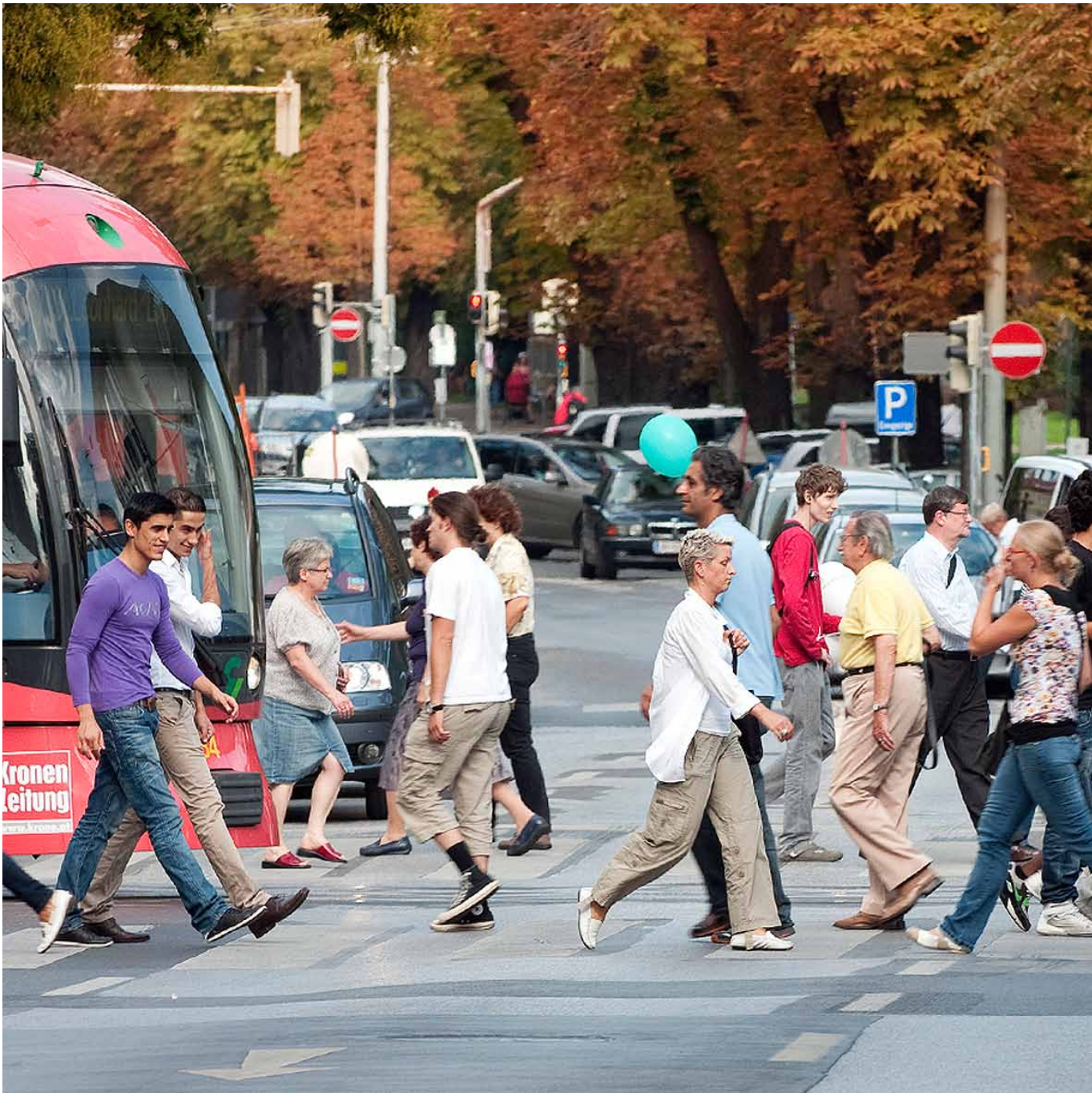
Experience in countries that have achieved substantial improvements in road safety despite continuing traffic growth has shown that a key requirement is for road safety to be recognised

as a top priority at the highest political level. Death and injury on a nation's roads must be seen as unacceptable causing huge human costs as well as economic losses. Improved road safety makes a major contribution to the quality of life in a country, particularly for children and young people who are so often the casualties.

This manual describes the processes for developing a road safety strategy and highlights the organisational changes that are needed to implement measures. At the heart of this is the need for a „Road Safety Champion“ who can raise the profile of road safety, raise risk awareness across the whole of society, and get political attention for the need for action to make roads safe for all road users as called for by the Commission for Global Road Safety.

# 01 THE GLOBAL ROAD SAFETY SITUATION: A GLOBAL EPIDEMIC

Nearly 1.3 million people die each year on the world's roads and between 20 and 50 million suffer non-fatal injuries. Over 90% of these fatalities occur in low-income and middle-income countries.



In 2009, the WHO published the first Global Status Report on Road Safety<sup>37</sup> that assessed the road safety situation in 178 countries, using data drawn from a standardized survey

Nearly 1.3 million people die each year on the world's roads and between 20 and 50 million suffer non-fatal injuries. Over 90% of these fatalities occur in low-income and middle-income countries. In 2004, road traffic injury was ninth in the leading causes of death, but it is estimated by the World Health Organisation (WHO) that by 2030, without concerted action, road traffic will be at fifth place ahead of such diseases as tuberculosis and HIV/AIDS resulting in an estimated 2.4 million deaths each year. Road traffic injuries are already among the three leading causes of death for people between 5 and 44 years of age. The economic consequences of motor vehicle crashes have been estimated between 1% and 3% of the respective GNP of the world countries, reaching a total over \$500 billion. Growing concern about the growing loss of life on the world's roads was highlighted by the publication of the *World report on road traffic injury prevention*<sup>34</sup> in 2004 and the call for action from the Commission for Global Road Safety in 2006<sup>35</sup>. The second Make Roads Safe report<sup>36</sup> in 2009 proposed a "Decade of Action" and in November 2009 the First Ministerial Conference on Road Safety was held in Moscow and endorsed the call for the Decade. The conference brought together transport and health ministers from 80 countries and officials and delegates from more than 130 countries.

In March 2010, the United Nations proclaimed the Decade of Action for Road Safety 2011-2020. The overall Goal of the Decade is to stabilize and then reduce the forecast level of road traffic fatalities around the world by 2020. It is estimated by the Commission for Global Road Safety that if this ambitious goal can be achieved up to 5 million lives could be saved

and 50 million serious injuries could be prevented over the course of the Decade.

In 2009, the WHO published the first Global Status Report on Road Safety<sup>37</sup> that assessed the road safety situation in 178 countries, using

data drawn from a standardized survey. The results show that road traffic injuries remain an important public health problem, and that in many countries road safety laws need to be made more comprehensive while enforcement should be strengthened.

| Key facts:                                      |                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>A global problem</b>                         | Over 90% of the deaths on the roads occur in low-income and middle-income countries, which have only 48% of the world's registered vehicles.                                                                                                                                                                                                                                                               |
| <b>High proportion of vulnerable road users</b> | Pedestrians, cyclists, and riders of motorized two-wheelers and their passengers (who are collectively known as „vulnerable road users“) account for around 46% of global road traffic deaths. This proportion is greater in low-income countries than in high-income countries.                                                                                                                           |
| <b>Speed</b>                                    | Controlling speed is an important way of reducing road traffic injuries, particularly among pedestrians, cyclists and motorcyclists. Less than one-third of countries have taken necessary measures - for example low-speed zones - to reduce speed in urban areas.                                                                                                                                        |
| <b>Drinking and driving</b>                     | Drinking and driving increases the risk of a crash, which could result in death or serious injury. WHO recommends a blood alcohol concentration limit of no higher than 0.05 gram per decilitre (g/dl) for adult drivers. Less than half of countries worldwide have drink-driving laws set at this limit or below.                                                                                        |
| <b>Helmet use</b>                               | Wearing a good-quality helmet can reduce the risk of death from a road crash by almost 40% and the risk of severe injury by over 70%. Only 40% of countries have motorcycle helmet laws that cover both riders and passengers, and mandate quality standards for helmets.                                                                                                                                  |
| <b>Seat-belt use</b>                            | Wearing a seat-belt reduces the risk of death among front-seat passengers by 40-65% and can reduce deaths among rear-seat car occupants by 25-75%. Only 57% of countries require seat-belts to be used in cars by both front-seat and rear-seat passengers.                                                                                                                                                |
| <b>Child restraint use</b>                      | The use of child restraints (infant seats, child seats and booster seats) can reduce deaths of children by between 54% and 80% in the event of a crash. Less than half of all countries have laws requiring the use of child restraints in vehicles.                                                                                                                                                       |
| <b>Pre-hospital care</b>                        | Prompt, good-quality pre-hospital care can save many people injured in road traffic crashes. About 76% of countries have pre-hospital care systems, ranging from those with highly qualified staff to those that rely on bystanders. Around the world there are about 90 different pre-hospital care access telephone numbers that need to be harmonized into one global number or a few regional numbers. |

Source: WHO <http://www.who.int/features/factfiles/roadsafety/facts/en/index5.html>

34 WHO (2004)  
35 Commission for Global Road Safety (2006).  
36 Commission for Global Road Safety (2009)  
37 WHO (2009)

# 02 THE SOL PROJECT

The project “Save our Lives – A comprehensive road safety strategy for Central Europe,” (SOL) is supporting twelve pilot communities in seven countries in the region to strengthen their approaches to road safety and sustainable mobility in order to prevent death and injury caused by road crashes.



SOL will help to benefit road safety in the region and can inform and contribute to similar action in other regions of the world.

The project “Save our Lives – A comprehensive road safety strategy for Central Europe,” (SOL) is supporting twelve pilot communities in seven countries in the region to strengthen their approaches to road safety and sustainable mobility in order to prevent death and injury caused by road crashes. The project vision is “A

region free of road-crash death and injury, safe for all road users in every community”.

Table 2 lists the pilot areas and the focus of activities in each. There is also a SOL partner in Germany, but there is no pilot project there. In each of the selected areas individual community

RS Strategies and Action Plans have been produced and pilot road safety activities established. Materials and tools produced within SOL will help to benefit road safety in the region and can inform and contribute to similar action in other regions of the world.

| Tool category  |                                | Tool name                                                                                                                                                                                                                                                                                                                    |
|----------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Austria        | Styria                         | <ul style="list-style-type: none"><li>• Training of Communicators for regional Road Safety Programmes on a local level to communicate road safety strategies and the new Styrian Road Safety Programme.</li></ul>                                                                                                            |
| Czech Republic | Liberec                        | <ul style="list-style-type: none"><li>• Strengthening road safety management structure.</li><li>• Development of the innovative campaign for road safety and increasing sustainable mobility awareness.</li><li>• Road Safety public education campaigns on speed, safe routes to school and sustainable mobility.</li></ul> |
| Hungary        | Gyor                           | <ul style="list-style-type: none"><li>• Road safety capacity building training.</li><li>• Developing specific campaigning material for drink drivers.</li><li>• Education, campaigns and events on safe routes to school and sustainable mobility (child cyclists).</li></ul>                                                |
| Italy          | Brescia<br>Mantua              | <ul style="list-style-type: none"><li>• Training of public transport drivers.</li><li>• Safety at bus stops.</li><li>• Accidents involving heavy goods vehicles.</li></ul>                                                                                                                                                   |
| Poland         | Olsztyn<br>Barczewo<br>Nidzica | <ul style="list-style-type: none"><li>• Drink driving</li><li>• Child safety</li><li>• Speed</li></ul>                                                                                                                                                                                                                       |
| Slovakia       | Prešov                         | <ul style="list-style-type: none"><li>• Road safety education</li><li>• Young driver safety campaigns</li></ul>                                                                                                                                                                                                              |
| Slovenia       | Tolmin<br>Kočevje<br>Maribor   | <ul style="list-style-type: none"><li>• Child safety education and campaigns.</li><li>• In-car safety for children.</li><li>• Young driver training.</li><li>• Safety awareness raising for parents.</li><li>• Safety driving events for older drivers.</li></ul>                                                            |

# 03 ROAD SAFETY SITUATION IN CENTRAL EUROPE

Road deaths fell between 2001 and 2010 in all EU countries, the EU average reduction in road deaths over the period 2001-2011 was 45% and seven SOL countries had reductions around the EU average, with the largest falls in Hungary and Slovenia.



In March 2010, the United Nations proclaimed the Decade of Action for Road Safety 2011-2020 with the goal of stabilizing and then reducing global road deaths.

Road deaths fell between 2001 and 2010 in all EU countries, the EU average reduction in road deaths over the period 2001-2011 was 45%, and seven SOL countries had reductions around the EU average, with the largest falls in Hungary and Slovenia. Only Poland had a significantly worse than average performance with deaths falling by only 24%. However in 2011 performance was variable with 12 of the 27 countries experiencing an increase in deaths, including three of the SOL countries, Poland, Slovenia and Germany. Hungary and the Czech Republic on the other hand had falls in deaths of 14% and 12% respectively, significantly above the EU average. On 20th June 2012 the Road Safety PIN Award for Outstanding Progress in Road

Safety 2012 was awarded to Hungary in recognition of the reduction of 49% in road traffic deaths since 2001.

Figure 1 below shows road traffic fatalities per million inhabitants in 2001 and 2011. The average for the EU was 60 in 2011, and the lowest rates were in Sweden, the UK, Denmark and the Netherlands where fatality rates ranged from 31 to 40. Fatality rates fell over the period in all EU countries. In 2011 in the SOL countries, rates were around the EU average in Italy (63), Austria (62), Hungary (64), and Slovakia (60), and higher than average in Slovenia (69), and the Czech Republic (67), with the highest rate in Poland (110) which is now the worst performing

country in the EU, and the only one with a fatality rate over 100 per million. Conversely, in Germany the rate of 49 was significantly below the EU average.

Although, with the exception of Poland, the seven countries with pilot activities in the SOL project have made significant progress and are now broadly average performers in terms of reductions in deaths and in fatality rates, there is a considerable gap between them and the best performing countries, Sweden, the UK, and the Netherlands. There is therefore great potential for road safety improvement in this group of Central European countries.

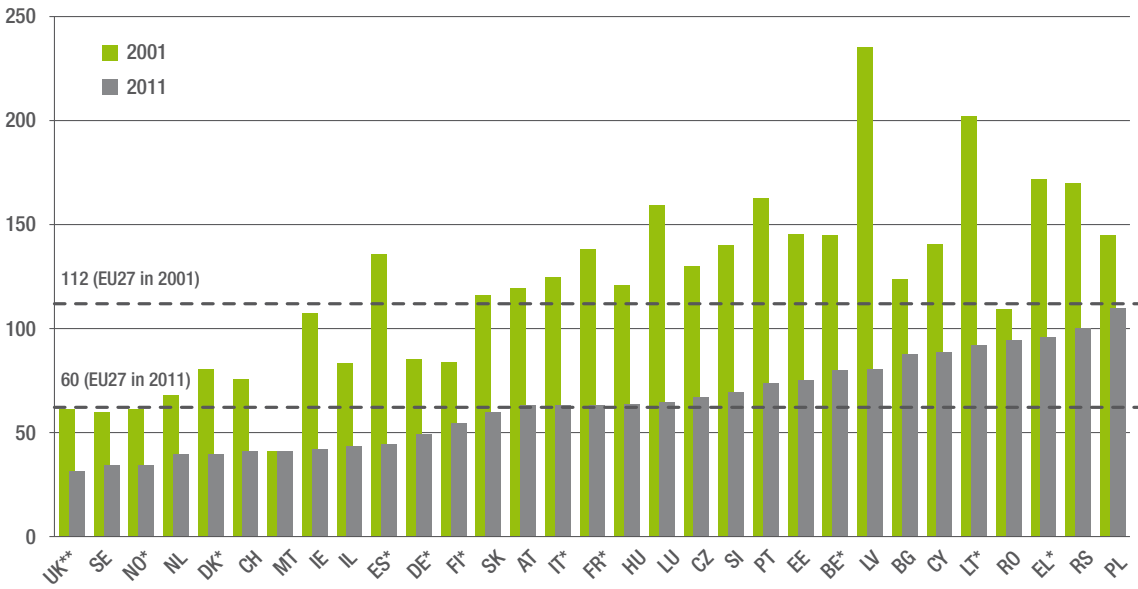


Figure 1: Road traffic fatality rates in EU countries 2001 and 2011; Source: ETSC PIN Report 6 June 2012

\*Provisional estimates used for 2011, as the final figures for 2011 were not available at the time of going to print.

\*\*UK estimate based on 3% increase in killed in 2011 Q1-3 compared with 2010 Q1-3.

# 04 HOW CAN WE MAKE ROADS SAFE?

*The goal for the Decade of Action will be achieved if all countries address their key road safety problems using the best practice that has been developed in successful countries.*



*The Safe System approach seeks to identify and rectify the major sources of error or design weakness that contribute to fatal and serious road crashes and to mitigate the severity and consequences of injury.*

The progress that has been made in EU countries that is demonstrated in Figure 1 shows that the epidemic of road traffic death can be arrested. There is a wealth of knowledge, based on research and experience, of the measures and systems that are successful. The goal for the Decade of Action will be achieved if all countries address their key road safety problems using the best practice that has been

developed in successful countries. Profile raising by a Champion for road safety will provide the necessary impetus to get road safety up the political agenda.

A best practice approach to road safety includes:

- A Safe Systems approach;
- A road safety strategy, action plan, vision

and targets;

- An evidence-based and data driven approach;
- Road safety management focused on results with an effective Lead Agency;
- Legislation that addresses key road safety risks;
- Monitoring and evaluation to track progress.

## 04.1 A SAFE SYSTEMS APPROACH

The World Report recommended the adoption of a Safe System approach that integrates road safety strategies with those relating to the environment, accessibility and mobility. The Safe System approach seeks to identify and rectify the major sources of error or design weakness that contribute to fatal and serious road crashes and to mitigate the severity and consequences of injury. A key principle is that the road transport system must be designed to accommodate human failings that lead to error and crash risk. Road design must take account

of the biomechanical limits of the human body and better manage crash forces, for example by determining speed limits that reflect the use of the road. But this does not mean that road users are no longer to be responsible for their actions or that they can ignore traffic rules such as speed limits.

The principle of shared responsibility underpins the Safe System approach for reducing crash risk. This means that system designers are responsible for building in safety; road users

must abide by the rules; and continued efforts must be made to improve user compliance through information and enforcement. System design includes licensing policy, fleet operating policies, road and vehicle design, speed limits, new road rules, and land use planning. Road Safety decisions should not be taken in isolation but should be aligned with broader community values – economic, human & environmental health, and consumer goals.

# 04.2 ROAD SAFETY STRATEGIES AND TARGETS

One of the main recommendations of the World Report is that countries should prepare a national road safety strategy and plan of action. The strategy should take account of the needs of all road users, and should be linked to strategies in other sectors. Its development should involve groups from government, the private sector, nongovernmental organizations, the mass media and the general public.

An OECD report *Towards zero: ambitious road safety targets*<sup>39</sup> recommended that countries should adopt ambitious long term casualty reduction visions, interim targets, and a Safe System approach for safety improvement. An effective road safety programme that is focused on achieving results requires the development of an evidence-based road safety strategy and the setting of quantified casualty reduction targets.

- Key steps in developing a road safety strategy are:
- Reviewing the road safety situation
  - Setting a long-term vision
  - Developing targets for the short to medium term
  - Creating a Lead Agency and management capacity to implement the strategy
  - Producing an evidence-based action plan
  - Setting up monitoring and review arrangements

### Road Safety Statistical review

Analysis of crash data should be carried out to identify the most important road safety problems in order to establish priorities for action: who is being injured, where, when and why. The aim is to have a thorough understanding of what the key issues are, what has worked in the past, where the greatest gains may be achievable in the future, which road user groups and behaviours pose the highest risk, and to identify emerging problems.

Guidance on data analysis for a situational assessment is contained in the WHO Data Systems Manual that was published in 2010.<sup>39</sup> The manual provides practical guidance for developing and improving data systems, and assessing the situation in relation to road safety data.

### Road safety management capacity review

In parallel with the analysis of crash data, a road safety management capacity review should be carried out to assess the state of road safety management capability. Guidelines for carrying out a review are contained in a World Bank Report.<sup>40</sup> The report includes detailed checklists giving guidance on carrying out a capacity review. A capacity review aims to:

- assess the lead agency role;
- specify an investment strategy;
- identify projects to launch the strategy;
- identify weaknesses in the road safety management system, and recommend ways to overcome them;
- identify responsibilities and accountabilities for road safety measures;
- set out a framework for working in partnership with stakeholders.

The output from a capacity review is an assessment of the current capability of a country, and the identification of areas where improvement is needed.

### Vision

The data led situational assessment and the capacity review will provide the evidence base on which a road safety strategy and targets can be built. The strategy should be underpinned by a vision for the future based on underlying community values that indicate the degree to which road trauma is tolerated by society. Examples of Safe Systems visions are Sweden’s Vision Zero that has the aim of zero deaths and serious injuries, New Zealand’s “affordable, integrated, safe, responsive, and sustainable transport system”, and Canada’s Road Safety Vision 2010 to “have the safest roads in the world”.

### Targets

Whilst a road safety vision is the long-term aim, the road safety strategy will be most useful if it covers a specified time period and contains quantitative targets. Research has shown that countries that set quantitative targets perform better than countries without targets.<sup>41</sup> Ideally such targets should be empirically based, for a specific target year, and linked to a strategy for delivery of interventions.

Targets help to save lives because the target setting process:

- Focuses on casualty reduction as policy priority.
- Indicates commitment of Government to casualty reduction and motivates stakeholders.
- Raises public awareness and strengthens political resolve.
- Generates activity to deliver road safety improvements.
- Generates demand for data collection for forecasting and monitoring.
- Leads to better performance.

Targets raise the level of commitment to road safety in the wider community and encourage authorities with responsibility for road safety at all levels to set their own targets in support of national targets. Road safety targets often refer to the total annual number of road casualties or deaths, but can also set goals for specific elements of a road safety strategy such as seat belt wearing rates and speed limit compliance.

Lead Agency and management for results  
A key recommendation of the World Report, reinforced by the World Bank Guidelines, is that a Lead Agency in Government should be identified to guide the national road safety effort. Each country needs to create an agency that is appropriate to its own circumstances and organization of government. It could be a stand-alone entity, a coordinating committee representing several government agencies, or part of an existing transport department. Wherever it is located, however, it is important

that it should have strong leadership, authority and responsibility to make decisions, control resources and coordinate efforts by all sectors of government. It will take responsibility for legislation and for promotion of road safety. It will also need to build partnerships and involve a wide cross-section of stakeholders, both within and outside government.

Active encouragement and promotion from a high-level political figure who becomes a champion for the cause of road safety is vital for success. An effective Lead Agency will have a strong committed leader who has real political clout and who can ensure that road safety has high priority on the political agenda. At national level this may be a Minister, or at municipal level a Mayor, but the choice should be appropriate to the structure of government.

It is important to recognize that effective injury reduction strategies often require measures that seek to curb high-risk behaviours that are widely tolerated by the public due to lack of awareness of the true level of risk, e.g. speeding. This is where the role of a high-level champion can be invaluable in persuading political leaders of the need for action.

A Lead Agency, however well resourced, cannot achieve success in isolation. Support is needed from all levels of government and from the wider community. Effective lobbying can influence the political profile of road safety, and can create a dialogue with government that can allow progress to be made. A two-way process is often most effective with pressure from the informed public influencing politicians and giving them the backing needed to persuade the wider community of the need for action. It will always be easier for a government to make road safety a priority if the public supports the effort and demands safer roads.

### Action Plan

An Action Plan is needed to show how the road safety activities in the road safety strategy will be implemented to reduce casualties. The Action Plan should contain the following elements:

- Objectives and targets;
- Details of measures to be implemented to address specific problems and target groups based on analysis in the Strategy;
- Time schedule for activity;
- Resource requirements;
- Legislative requirements;
- Project Management structure, lead agency, stakeholders, partners;
- Data collection, Monitoring and evaluation methods.

The Action Plan should be realistic and focused on achieving the targets. It is also important to identify budgets and funding into the future, so that the whole term of the strategy is covered. Human resources also need to be considered as an efficient road safety programme will only be possible if it is planned and implemented by practitioners with the right skills. Stakeholders and partners are vital to all road safety programmes and the Action Plan needs to ensure that it identifies all relevant parties within government, police, and emergency services, NGOs and the private sector, and how they are expected to contribute to the programme, including who is responsible for what and when things are expected to be achieved. Partnerships that include all stakeholders have the advantage of taking road safety into the broader community. The involvement and support of the local population are most important, and interventions must be acceptable to and preferably actively wanted by them.

### Monitoring and evaluation

Periodic monitoring and evaluation of road safety targets and programs is essential to assess performance and to allow adjustments to be made. Regular reviews of progress should be carried out to alert policy makers to any problems and to ensure that measures are delivering the expected results. A road safety strategy should be a living document that can respond to changing circumstances and new problems. Stakeholders should be involved in the review process as their delivery performance is crucial for the success of the programme.

Monitoring progress is also important to

demonstrate success. Implementation of road safety measures requires political commitment and leadership and this is easier to sustain if it can be shown that road traffic deaths and injuries are being reduced in accordance with the road safety strategy and that trends are going the right way to achieve the targets.

Progress towards a road safety target is usually assessed by tracking reductions in numbers of people killed and injured. Information on levels of activity by travel mode and demographic trends are also needed to monitor crash rates. Safety Performance Indicators (SPIs) such as seat belt and helmet wearing rates, speed distributions and extent of speeding, drinking and driving levels, and safety engineering schemes are a more direct indicator of the success of road safety measures. The EU SafetyNet project<sup>42</sup> that was designed to build the framework of a European Road Safety Observatory, includes the development of a set of SPIs.

*An OECD report Towards zero: ambitious road safety targets<sup>38</sup> recommended that countries should adopt ambitious long term casualty reduction visions, interim targets, and a Safe System approach for safety improvement.*

39 WHO (2010)  
40 Bliss; Breen (2009)  
41 Wong et. al. (2006)

# 04.3 INTERVENTIONS TO DELIVER TARGETS

The core of the Action Plan is the programme of interventions that will deliver the required results in order to achieve objectives and meet targets. An essential element is to ensure that there is a sound legislative framework of road traffic law. All countries need to set out the rules and regulations that road users must adhere to, and the procedures for enforcement and penalties for deterrence, detection and punishment. Good road traffic law is underpinned by an understanding of the key risks and causes of road crashes and how they can be prevented or their consequences mitigated. At minimum there should be legislation to enforce use of seat belts, child restraints, and motorcycle helmets; speed limits that are appropriate to road use and conditions; and control of alcohol and drug use by drivers.

It is not the intention in this manual to describe the wide range of road safety activities that are available as there are several good resource documents available. A good starting point is the Global Plan for the Decade of Action<sup>43</sup> that sets out activities according to five pillars: Road safety management, Safer roads, Safer vehicles, Safer road users, and Post-crash response, guided by the principles of a Safe System approach. Effective interventions that are in accordance with a Safe System approach include:

- incorporating road safety features into land-use, urban planning and transport planning;
- designing safer roads and requiring independent road safety audits for new construction projects;
- improving the safety features of vehicles;
- promoting public transport;
- effective speed management by police and through the use of traffic-calming measures;
- setting and enforcing laws requiring the use of seat-belts, helmets and child restraints;
- setting and enforcing blood alcohol

- concentration limits for drivers; and improving post-crash care for victims of road crashes.
- Public awareness campaigns also play an important role in supporting the enforcement of legislative measures, by increasing awareness of risks and of the penalties associated with breaking the law.
- The following references are also useful sources of information on best practice road safety measures:
- World Report on road injury prevention. WHO.
- OECD Towards Zero report
- OECD reports<sup>44</sup> on Young Drivers, Speed Management, Child Safety and Older road users.
- The „Handbook of Road Safety Measures“ by Rune Elvik<sup>45</sup>
- The International Road Assessment Programme, iRAP, online Road Safety Toolkit<sup>46</sup> information on best practice measures.
- WHO road safety manuals<sup>47</sup> on Helmets, Speed management, Drinking and driving, and Seat belts and child restraints aimed at decision makers and practitioners.

The World Report includes a comprehensive discussion of road traffic risk factors in terms of exposure to risk, crash involvement, crash severity and severity of injury outcomes post-crash. The key risk factors that influence crash involvement are speed, lack of provision for vulnerable road users, young drivers’ age and lack of experience, alcohol and drugs, fatigue, mobile phone use, road factors and vehicle defects and design. Injury severity is also determined by speed, road factors such as roadside objects, and also by the use or non-use of secondary protection measures in vehicles, seat belts and child restraints, and motorcycle and bicycle helmet wearing.

A common approach to implementation of a road safety programme, that is compatible with a Safe System approach, is to consider measures in the broad categories of Education, Enforcement, and Engineering under each of the Pillars in the Global Plan. However, these categories should not be used in isolation, as road safety problems often require individual measures to be combined in a coordinated programme that is the essence of a Safe System approach. Taking the example of increasing seat belt useage, successful programmes combine education and promotion to explain risk and publicise new laws and penalties; high profile enforcement; effective laws and penalties; and engineering standards on the design and fitment of belts.

*A good starting point is the Global Plan for the Decade of Action<sup>43</sup> that sets out activities according to five pillars: Road safety management, Safer roads, Safer vehicles, Safer road users, and Post-crash response, guided by the principles of a Safe System approach.*

# 04.4 COMMUNICATIONS AND COMMUNITY INVOLVEMENT

Public opinion is a key stimulus to political will for road safety. Therefore increasing public support for road safety through effective communication and education campaigns is an essential element in a comprehensive road safety strategy. To be effective, a publicity campaign should have clear objectives and should be directed at a specific target audience.

- Possible objectives for a campaign may include:
- Informing the public about new legislation;
  - Telling them about increased enforcement activity e.g. speed cameras;
  - Educating them about crash risk and injury;
  - Emphasising the social unacceptability of behaviour e.g. drinking and driving;
  - Warning about the adverse consequences of being detected.

The WHO Manuals for Decision makers and Practitioners already cited each have detailed sections on developing and carrying out campaigns to promote use of seat belts and helmets, and to reduce drinking and driving, and speeding. The growth of social networking sites such as Facebook and Twitter mean that the traditional ways of reaching the public may need to be rethought, especially when young people are being targeted.

Monitoring and evaluation is an essential part of publicity campaigning. Monitoring may take the form of surveys, for example of seat belt wearing rates before and after a campaign. Regular surveys of people’s attitudes and knowledge of road safety issues can also be used to trace changes over time. Surveys can also be used to assess the impact of a campaign in terms of recall and understanding of the campaign itself. These less direct monitoring measures are useful where behavioural change is likely to happen slowly and repeated campaigns are necessary.

Grass roots support for road safety is a vital component in a successful road safety programme. NGOs and pressure groups can make a positive contribution that should be encouraged. Community involvement should start at the stage of Strategy development so that public support can be created for measures to improve safety. Whilst it is quite usual for key stakeholders to be consulted, wider public consultation is less usual but can be vital.

In Brazil, the Proactive Partnership Strategy (PPS), developed by the Global Road Safety Partnership since 2002, is one model that has been used to address the road safety problem.<sup>48</sup> It involves whole communities led by local Mayors in a partnership approach to improving road safety. Another approach is the ‘WHO Safe Communities’ model to reduce the incidence of injury and promote injury-reducing behaviours through collaboration, partnership and community capacity building. Approximately 150 communities throughout the world have been designated as ‘Safe Communities’, in countries as diverse as Sweden, Australia, China, South Africa and the Czech Republic.

Road Safety Weeks such as those sponsored by BRAKE and the Child Accident Prevention Trust in Great Britain, aim to stimulate road safety awareness in local communities through local campaigns and activities. In the State of Victoria in Australia, the Community Road Safety Partnership Program aims to increase the opportunity for local communities and stakeholders to become involved in effectively addressing road safety needs and issues.

School based road safety schemes are another way of increasing community involvement through School Travel Plans and Safe Routes to School programmes. Community Volunteers in several countries including GB and the US run

„Walking Bus“<sup>49</sup> schemes to encourage children to walk to school in safety, and child pedestrian training programmes such as Kerbcraft<sup>50</sup> also use volunteers.

Such community road safety schemes not only have the potential to improve road safety directly, but also have wider effects. By creating a climate in a community where unsafe behaviour on the roads is seen as unacceptable and anti-social there is greater pressure to conform through creating new social norms.

Businesses can also be encouraged to participate in road safety through workplace safety initiatives. Employers have a duty of care for their employees when they are driving as part of their work in the same way that they must ensure safety in the workplace. Such schemes should start by encouraging employers to monitor incidents involving their drivers and to provide assessment and training for new employees and for those who have been crash involved. Employers also need to ensure that drivers’ schedules take account of safety and do not require unsafe behaviour such as speeding and driving when fatigued.

*Public opinion is a key stimulus to political will for road safety. Therefore increasing public support for road safety through effective communication and education campaigns is an essential element in a comprehensive road safety strategy.*

43 WHO (2011)  
44 OECD/ECMT (2001-2006)  
45 Elvik et al. (2009)  
46 Website iRAP (access 2012)  
47 WHO (2006-2010)

48 Website GRSP (access 2012)  
49 Website Walking bus schemes (access 2012)  
50 Website British Department for Transport (access 2012)

# 05 CONCLUSIONS

*The SOL project has aimed to promote the latest knowledge and techniques in road safety through community-based road safety strategies and pilot activities.*



*That is what the Decade of Road Safety is aiming to achieve and every country can contribute by declaring that no longer will death and injury be tolerated on their roads.*

The SOL project has aimed to promote the latest knowledge and techniques in road safety through community-based road safety strategies and pilot activities. The project has worked with all sections of society to highlight how death and injury can be prevented and how local communities can be made safe, healthy and pleasant places to live. An accompanying manual for practitioners includes examples of SOL activities.

The threat of road crashes presents a significant public health and economic problem to communities and influences people's travel choices. Real and perceived safety concerns are an important barrier preventing many people from choosing walking and cycling as means of transport. Communities that manage their transport systems with road safety, environmental and public health objectives in mind are more liveable and attractive and offer their citizens higher living standards.

The good news is that the knowledge of what works in road safety is well established based on a large body of international research. What is needed is for a concerted effort to be made to raise awareness and promote road safety as a key political priority. That is what the Decade of Road Safety is aiming to achieve and every country can contribute by declaring that no longer will death and injury be tolerated on their roads.



# CONTACTS

## PROJECT COORDINATOR

**A.L.O.T. - Agency of East Lombardy for Transport and Logistics**

Guido Piccoli  
guido.piccoli@alot.it

Alberto Milotti  
alberto.milotti@alot.it

## AUSTRIA

**Austrian Mobility Research FGM-AMOR**

Elke Weiss  
weiss@fgm.at

Volker Hoffmann  
hoffmann@fgm.at

**Province of Styria - Traffic Department, Competent Department 18A,  
Department of the Styrian Provincial Government for Traffic Safety**

Dr. Maria Knauer-Lukas  
maria.knauer-lukas@stmk.gv.at

## CZECH REPUBLIC

**HBH Projekt spol. s r.o.**

Jaroslav Heinrich  
j.heinrich@hbh.cz

Jitka Heinrichova  
j.heinrichova@hbh.cz

## GERMANY

**Eberhard Karls Universität Tübingen, Geographisches Institut**

Patricia Hammer  
patricia.hammer@uni-tuebingen.de

Rainer Rothfuss  
rainer.rothfuss@uni-tuebingen.de

## HUNGARY

**Global Road Safety Partnership Hungary**

Mária Bognár  
maria.bognar@grsphungary.hu

Agnes Orsolya Kiss  
kiss.agnes@kti.hu

**KTI Institute for Transport Sciences Non-profit Limited Liability Company**

Péter Holló

hollo.peter@kti.hu

## POLAND

**Motor Transport Institute**

Justyna Wacowska-Slezak  
justyna.wacowska-slezak@its.waw.pl

Dagmara Jankowska  
dagmara.jankowska@its.waw.pl

**Regional Road Traffic Centre - Road Safety Centre in Olsztyn**

Joanna Zukowska  
joanna@pg.gda.pl

Krzysztof Piskorz  
brd@word.olsztyn.pl

## SLOVAKIA

**ZAS - The Association of the Driving Schools in the Slovak Republic**

Andrej Buday

zas-sr@nexta.sk

**University of Zilina**

Miroslava Mikušová  
miroslava.mikusova@fpedas.uniza.sk

## SLOVENIA

**Automobile Association of Slovenia**

Ana Gračan  
ana.gracan@amzs.si

Robert Štaba  
robert.staba@amzs.si

**Imprint:**

**Authors:** Kate McMahon and Patricia Hammer

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**Contact Data:** [katemcm@btinternet.com](mailto:katemcm@btinternet.com)

[Patricia.hammer@uni-tuebingen.de](mailto:Patricia.hammer@uni-tuebingen.de)

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