Study for the redesigning of the contents of the urban traffic accident data questionnaire

Survey on Urban traffic accident Data management

Valencia, June 14th 2007

MINISTERIO DEL INTERIOR

DGT Dirección General de Tráfico

Observatorio Nacional de Seguridad Vial

INstituto de TRAfico y Seguridad Vial
VNIVERSITAT DE VALÈNCIA

Planning modification statistical questionnaire of accidents in urban zone

PLAN TYPE OF URBAN ROAD SAFETY

Working group

- Local police
- Dirección General Tráfico
- University of Valencia

1	Survey development	May 2006
2	Survey evaluation	September 2006
3	Redesigning of the urban accident statistical questionnaire	March 2007
4	Implementation of a pilot test	June 2007
5	Modification of the regulations	December 2007

Survey on urban traffic accident data management

The survey study

Goal: diagnosis of the procedure situation, systems and quality of the collected information

Analyse current information needs. Analyse and identify main deficits and shortages when using the register and when we encode the data.

Survey: 87 different items referring to

- **Municipality descriptive characteristics**
- **Accident evaluation**
- **Police forces and traffic management**
- **Specific training**
- **Procedures (record, management, analysis of the information…)**
- **Resources (materials, questionnaires, programmes…)**
- **Representativity (under-reporting)**
- **Data quality (under-recording, biases,…)**
- **Possibility of information analysis and usefulness**
- **Monitoring to 30 days**
- **Identify strong and weak points, new ideas**
- **Reporting and acting in accidents prevention**
- **Compile the documents used**

Survey on urban traffic accident data management

The sample

	CENSO				MUESTRA				
Tamaño	Munic	% mun. totales	habitantes	%habit.	Munic	% mun. totales	Habitantes	% habit. totales	% mun por grupo
<= 4999	6.892	85%	6.053.828	14%	0	0%	0	0%	0%
5000 – 19999	878	10,8%	8.530.702	19,7%	120	1,5%	1.233.942	2,9%	13,7%
20000 – 49999	207	2,6%	6.131.649	14,2%	72	0,9%	2.182.424	5,1%	34,8%
50000 – 149999	91	1,1%	7.069.917	16,4%	55	0,7%	4.323.290	10,0%	60,4%
150000 – 499999	35	0,4%	8.056.743	18,7%	35	0,4%	8.056.743	18,7%	100%
500000+	6	0,1%	7.354.845	17%	6	0,1%	7.354.845	17,0%	100%
Total	8.109	100%	43.197.684	100%	288	3,6%	23.151.244	53,6%	3,6%
Total>4999	1.217	15%	37.143.856	86%	288	23,7%	23.151.244	62,32%	23,7%

- **Population to study**: Municipalities which have their own management in road safety → 15% Spanish municipalities - 86% Spanish population.

- Sample size: 288 municipalities → 24% of the population to study.

All the province capitals have been included.

Survey on urban traffic accident data management

Surveys received

	SAMPLE		SAMPLE RECEIVED			
Size	Municipalities	inhabitants	Municipalities	%of municipalities in this sample	Inhabitants	% Inhabitants of the sample
<=4.999						
5.000 - 19.999	120	1.233.942	35	29,2%	344.293	27,9%
20.000 - 49.999	72	2.182.424	26	36,1%	798.254	36,6%
50.000 - 149.999	55	4.323.290	14	25,5%	1.100.930	25,5%
150.000 - 499.999	35	8.056.743	18	51,4%	4.034.964	50,1%
500.000 +	6	7.354.845	3	50,0%	4.442.836	60,4%
Total	288	23.151.244	96	33,3%	10.721.277	46,3%
Total >4.999	288	23.151.244	96	33,3%	10.721.277	46,3%

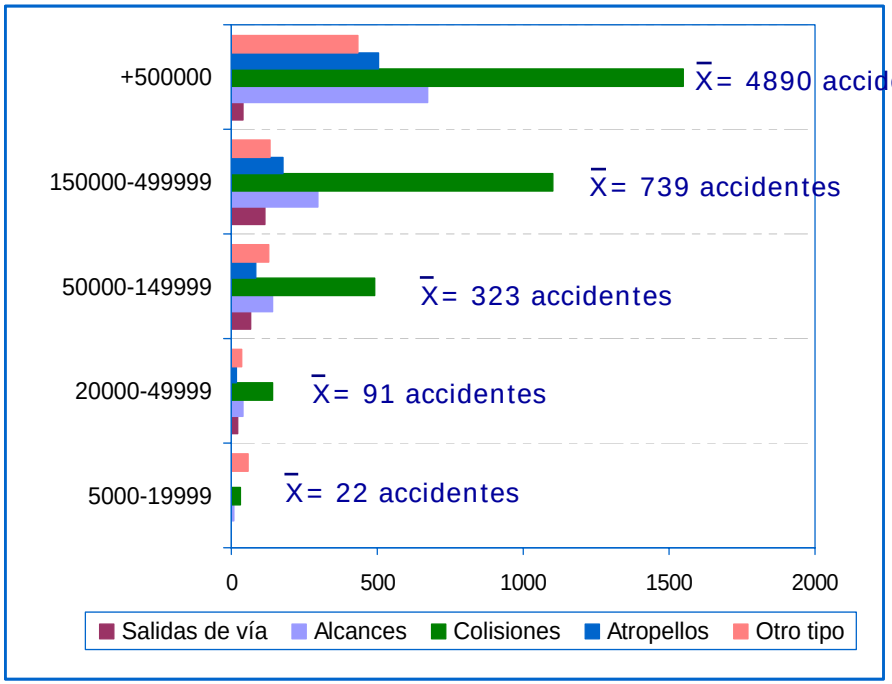
About the 288 surveys sent:

- **96 surveys have been received (33,3% of the sample); 46% of the inhabitants who are living in municipalities with more than 5,000 inhabitants.**
- An unequal answer rate. We have received more surveys coming from populated municipalities. An unequal geographic representation.

Survey on urban traffic accident data management

Accidents:

Accidents average in each municipality, regarding the population size



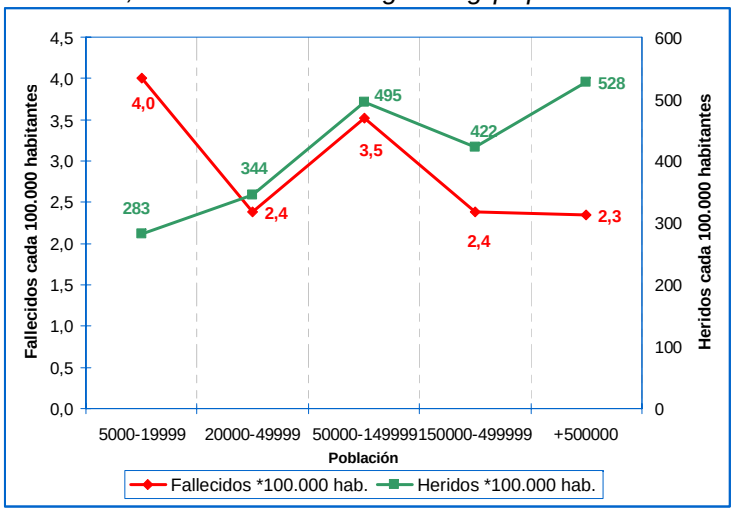
- Accidents which are more common in urban zone: head collisions, head-side collisions, side collisions, accidents with obstacles on the road, overtaking, run over events.

- If we use “other accidents”, it can be difficult to classify or to investigate this variable.

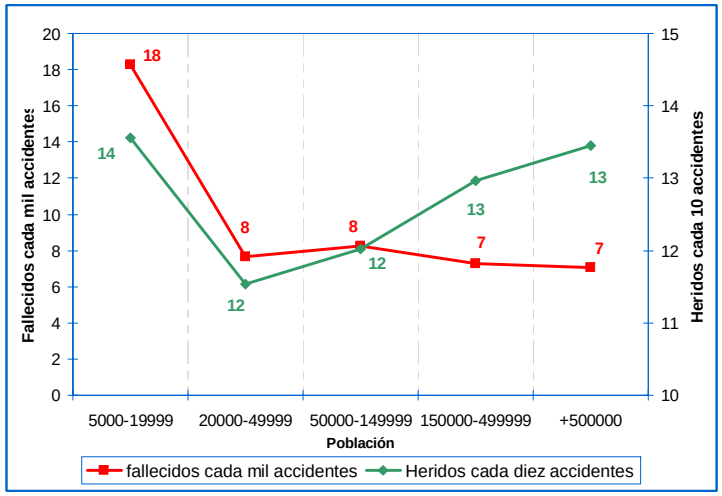
- The kind of accident less considerate is: “Leaving road”. However, it’s very common in big municipalities. After reading the information, we realize that “Leaving road” is not reflected in urban reports and it should be a variable to take into account (specially with crossings, ring roads, beltways, where the Local Police is also responsible of roads accidents).

Survey on urban traffic accident data management

Victims each 100,000 inhabitants regarding population size



Victims in road accidents regarding population size



Accidents:

- The number of fatalities each 100,000 inhabitants is higher in little municipalities. This rate decreases depending on the increase of population size.

- The number of injuries each 100,000 inhabitants is higher, when the municipality size is also higher.

- **In little municipalities we find that fatality and injury rates are quite higher than in other municipalities. However, we realize that in these municipalities, the number of injuries each 100,000 inhabitants is the lowest.**

This could be a problem to represent the reported data. Report of the most serious accidents.

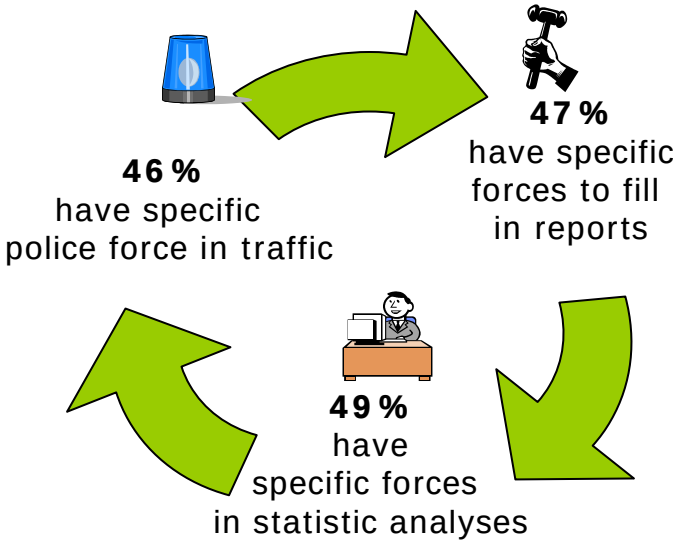
- **Apart from this under-report, the consequence of a bigger seriousness in little municipalities is due to:**

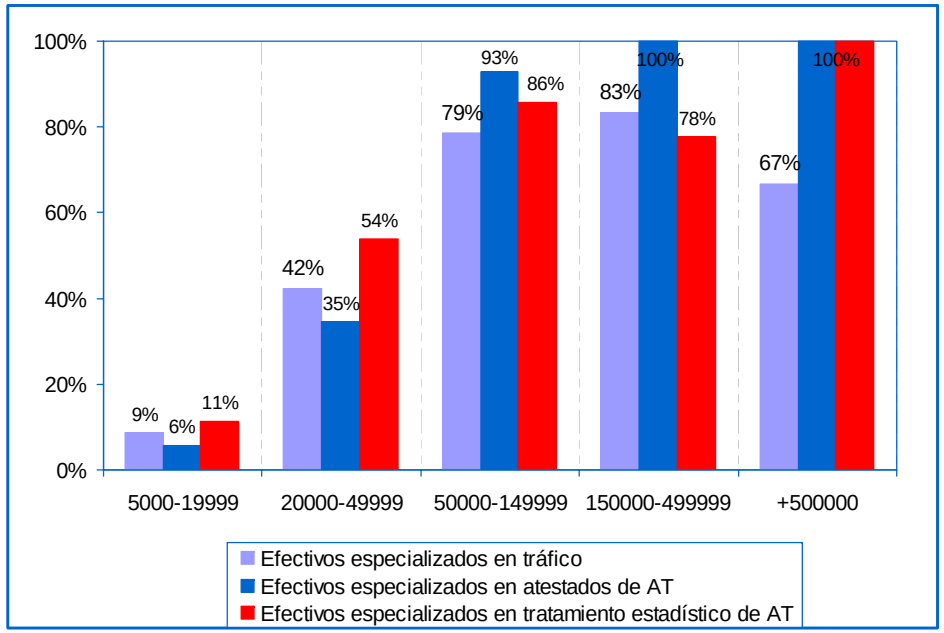
  - **Average age of vehicles**
  - **Inhabitants are older**
  - **Hospitals are further**
  - **"SAMU" ambulances take too much time to arrive**
  - **Accidents in carriageways controlled by the municipality**
  - **Shortage of road infrastructure (traffic lights, roundabouts,…)**
  - **Less police control (complaints, campaigns,…)**

Survey on urban traffic accident data management

Police force and traffic management

Percentage distribution of cities which have some specific police force





- The lack of forces and the fact that they are not very specialized is more obvious in police forces of little municipalities.

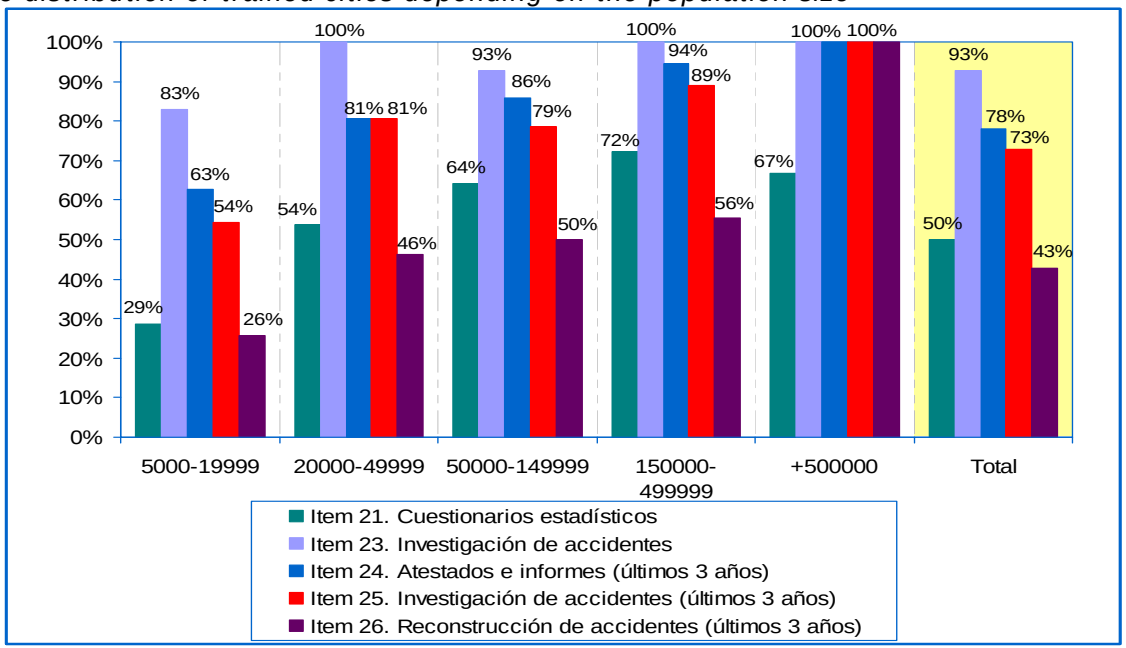
- This implies that we need to improve human and technical resources. It's also important to train our forces, in order to have an appropriate service and traffic control.

- We remind you that the fatal rate (4 fatalities each 100,000 inhabitants and 18 fatalities each 100 accidents) in littler municipalities is high. This kind of municipalities represent 11% of all the Spanish municipalities and the 20% of all the Spanish population.

Survey on urban traffic accident data management

Specific training received:

Percentage distribution of trained cities depending on the population size



•Statistical and state questionnaire: less training. Only 50% is trained. It seems that we are talking about a statistical-administrative report. It isn't considered as a diagnostic tool to suggest some actions from a deep analysis. It doesn't take into account the own characteristics and personal needs of each urban zone.

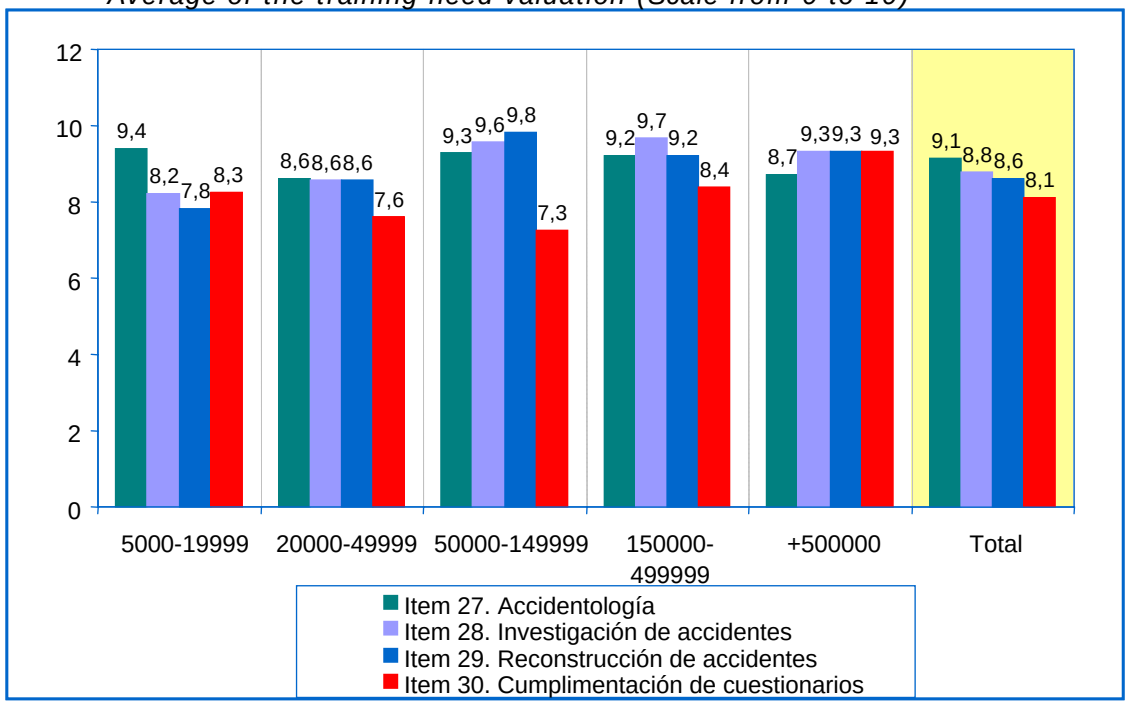
•More training since 2004 in elaborating reports. An administrative and judicial training of the accident.

•Little municipalities are receiving less training, specially if it deals with statistical questionnaires and reconstruction.

Survey on urban traffic accident data management

Specific training required:

Average of the training need valuation (Scale from 0 to 10)



- We can see a high valuation in all the courses (more than 7).
- Scale from 0 to 10 about the need of getting a course: the one which deals with filling-in questionnaires is the worst valued by all the groups (except the biggest one).
- The accidentology training is an item well punctuated, specially in the littlest group.
- The accident investigation and reconstruction is the highest item punctuated in groups with more than 50,000 inhabitants.

Survey on urban traffic accident data management

Statistical state questionnaire

- ***The statistical questionnaire which deals with road accidents with injuries:***
  - 83% of the people know about it / 17% don't know about it.
  - 65% fills in the questionnaire / 17% know about it but they never fill in it.
  - According to the severity of the accident (94% fatal - 65% slight injuries), we found a different rate of filling in.

Cuestionario estadístico DGT							
	Conocimiento del cuestionario		Lo rellenan siempre…			En caso de rellenarlo siempre…	
	Lo conocen	Lo rellenan siempre	Hay algún muerto	Hay algún herido grave	Hay algún herido leve	Lo envian siempre	Sirve como soporte
5000-19999	60%	40%	93%	79%	64%	100%	21%
20000-49999	87%	65%	94%	88%	76%	88%	18%
50000-149999	100%	85%	91%	91%	45%	91%	27%
150000-499999	100%	94%	94%	82%	59%	88%	12%
+500000	100%	100%	100%	100%	100%	100%	0%
Total	83%	65%	94%	85%	65%	92%	18%

- ***Why don't they fill in the questionnaire?***
  - They have to do it manually. It is a paper questionnaire.
  - It is quite hard to do it.
  - The information is quite redundant.
  - The police don't have access to the information.
  - It's a vain and an useless task.
  - The central organism is operating these data with an important delay and with a high level of aggregation. That provokes the loose of its utility for the people in charge of the compilation in the local field.
  - Local administrations are carrying out their own reports and their own data used by themselves.
  - This questionnaire doesn't consider its own characteristics and personal information needs in urban zones.

Survey on urban traffic accident data management

Software and information technology

- 35,4% of people don't use any technology tool to run in and store statistical accident data
- 63% of littler municipalities don't use any technology tool to run in and store the information.
- Data bases, office information systems and specific programs elaborated by themselves are the most used. Specially, in municipalities with more than 50,000 inhabitants.
- Municipalities with a population among 20,000 and 50,000 inhabitants: they are using mainly spreadsheets.

Statistical data exploitation and analysis

- For statistical analysis, we are using mainly spreadsheets. The biggest municipalities are using Access.
- Calculator and other traditional methods are still used, not only by little municipalities, but also by the biggest.
- **32% doesn't operate or analyze statistically accident data.**
- 57% of littlest municipalities and 30% of municipalities with a population among 20,000 and 50,000 don't analyze statistically the information.

Survey on urban traffic accident data management

How to improve:

- **Make a specific definition of the contents found in the state urban accident statistical questionnaire, with:**
  - New proposal of an own field of accidents in urban zone
  - To eliminate specific road fields
  - Definition of “the kind of accident”, in order to surpass present limitations
  - Adaptation to the new technologies and space information (GIS)
  - To report fatalities to 30 days (8 of each 10 municipalities considers it viable)
- **Applications and computer systems availability for accident reports, for the statistical analysis and management**
  - Easiness and flexible
  - Easy to maintain and adaptable
  - Automation of information . Consistent and quality mechanisms
  - Possibilities of statistical operation from reported data
  - Import – export
  - Information integrated. Cohesion with the rest of procedures
- **Better collaboration**
  - The participation of city councils has increased
  - We need a better cooperation between local field and central administration
  - Collaboration and exchange among local organizations
- **Training and stimulation programs**
  - To improve the procedure of data taking
  - To analyze accidents, in order to reduce them locally

Urban accident questionnaire

Goals:

- **Main goal**: To develop an urban accident report system, which would be the same for all the local and policeman.

- **Specific goals**:
  - To improve accidents data quality.
  - To have some representative data from real accident rate.
  - To adjust the information to urban accident rate characteristics.
  - To improve the analysis and the investigation in traffic accidents, in order to satisfy user needs.
  - To reduce time, resources and effort invested.
  - To blend police reported information criterions, when an accident with victims has happened.

Urban accident questionnaire

Main novelties:

To define reported information, regarding the seriousness of the accident:

SLIGHT ACCIDENTS

Problems: Not enough time to compile the information.
There are many fields which need a special study.

Solution: The information demand should correspond to the reality situation.
A MINIM DATA GROUP WHICH IS COMMON FOR ALL THE ACCIDENTS.

- **The number of fields is decreasing a lot**
- **Leak applications which reduce the quantity of information**
- **Consistency rules to improve quality**

FATAL AND SERIOUS ACCIDENTS

We have many reported information and administrative documents which can be used.

- **We have a bigger number of fields**
- **Most data are present in the reports**

Urban accident questionnaire

Main novelties:

- Improvement of some fields: the date, signs, junctions, typical lanes of urban ways, kind of vehicles, traffic offenses, etc.
- To include geographic coordinates
- To include residential zone, pedestrian zone, 30 zone as a function of way
- Road signs, boards, milestone edge aren't compulsory in urban zone anymore.
- Factors which have some effects in accidents
- Accident typology – Accident sequencing
- To include urban elements in accident typology (accident with: a tree, a streetlamp, a bin, urbanization elements, etc.)
- Automatic fields from the vehicle identification (brand, vehicle type, color) and driver (kind of license).
- To include new elements of passive safety (airbag)
- Elements which could have an effect in driver attention
- Alcohol level and drug test
- To include the ID identification
- Injury type classification
- Injury evolution in 30 days

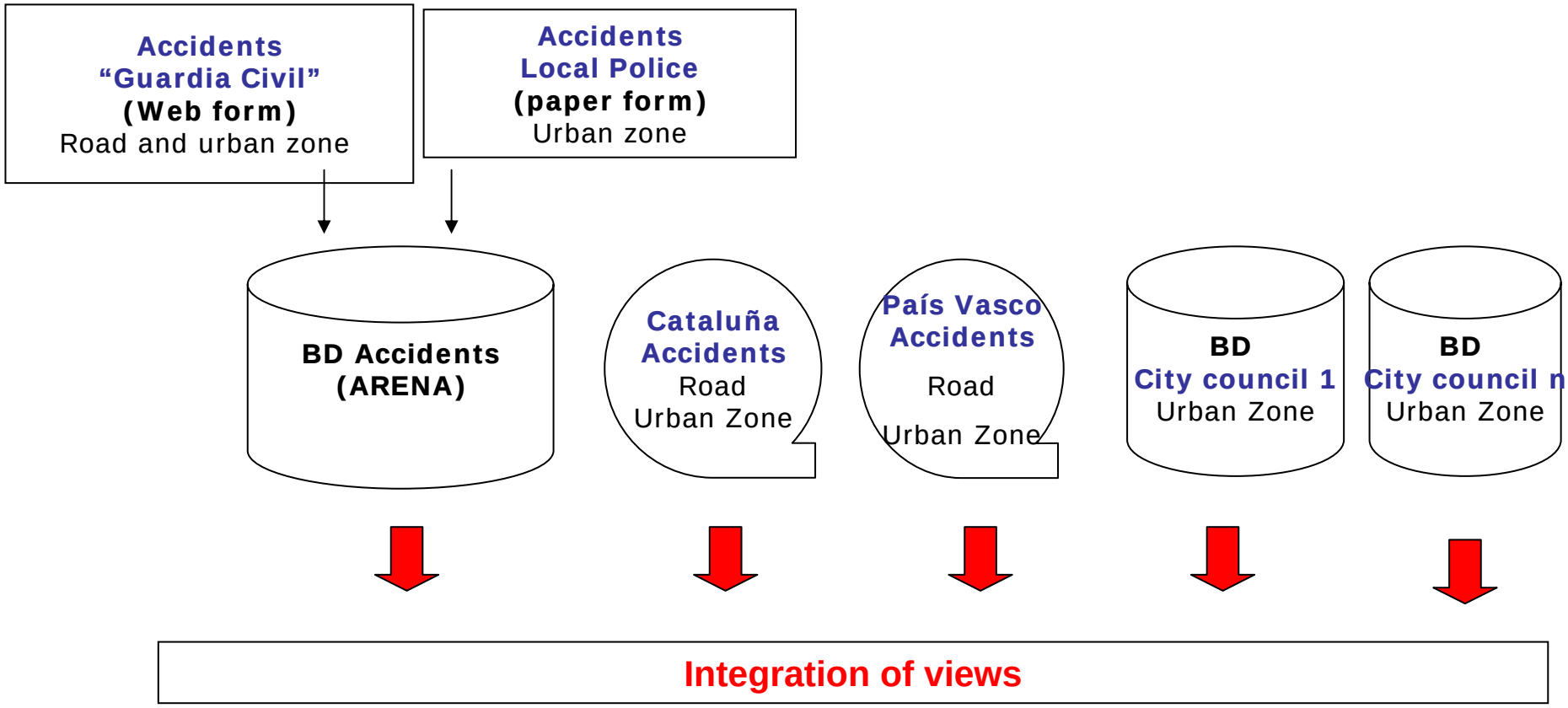
Urban accident questionnaire

Pilot test:

SUMMARY TABLE OF ACTIVITIES TO CARRY OUT THE TEST (made in 17 municipalities)		
	-1º PHASE- **In June, from 4th to 10th**	**-2º PHASE-** **In June, from 11th to 17th**
Who is going to take part?	The police in charge of reporting traffic injury accidents.	The police who took part in the 1º phase and who are witness of accidents happened this week and who report information about these accidents.
The phase deals with:	-To know all the materials -The officer chooses 7 fatal or serious accidents and complies the information. - Each policeman chooses 2 of these accidents and fill in fatal and serious data statistics to analyze them.	-Policemen will fill in the statistical questionnaires of accidents happened this week. - In each reported accident, they will indicate in a specific document some of the difficulties found. - Finally, each policeman will fill in an evaluation document of the questionnaire. This document can also be filled by policemen who took part in the 1º phase.
Documents ready to fill in and to send.	- Statistical fatal and serious questionnaires. - Reported and administrative documentation of the 7 selected accidents.	-Statistical slight questionnaires. -Statistical fatal and serious questionnaires. -Document of difficulties found in each accident. -Document of general evaluation for each policeman. - Reported and administrative documentation of recorded accidents.

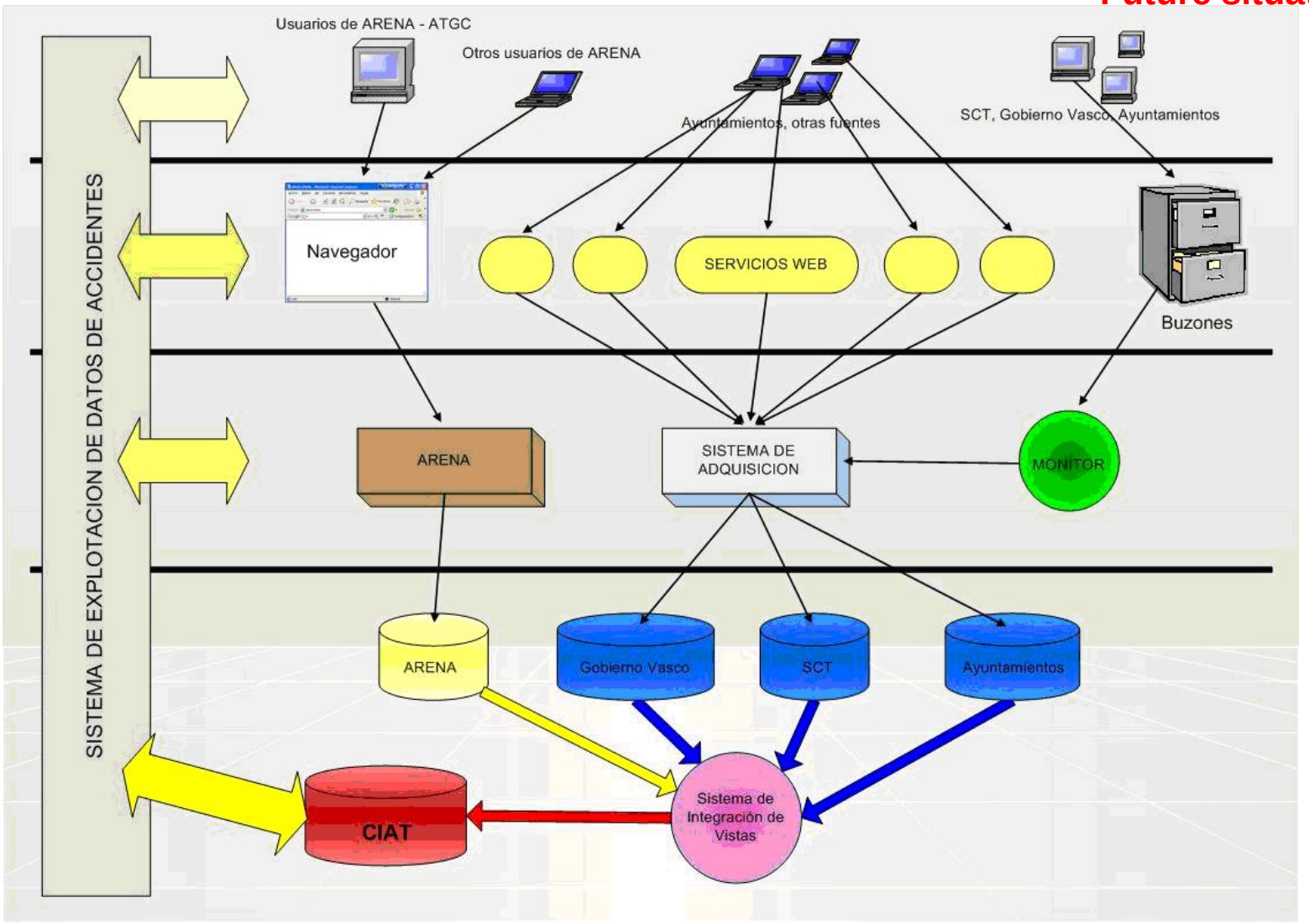
Accident data collection system

Current situation



Accident data information system

Future situation



TYPE PLAN OF URBAN ROAD SAFETY

Valencia, June 14th 2007

MINISTERIO DEL INTERIOR

DGT Dirección General de Tráfico

Observatorio Nacional de Seguridad Vial

Main data

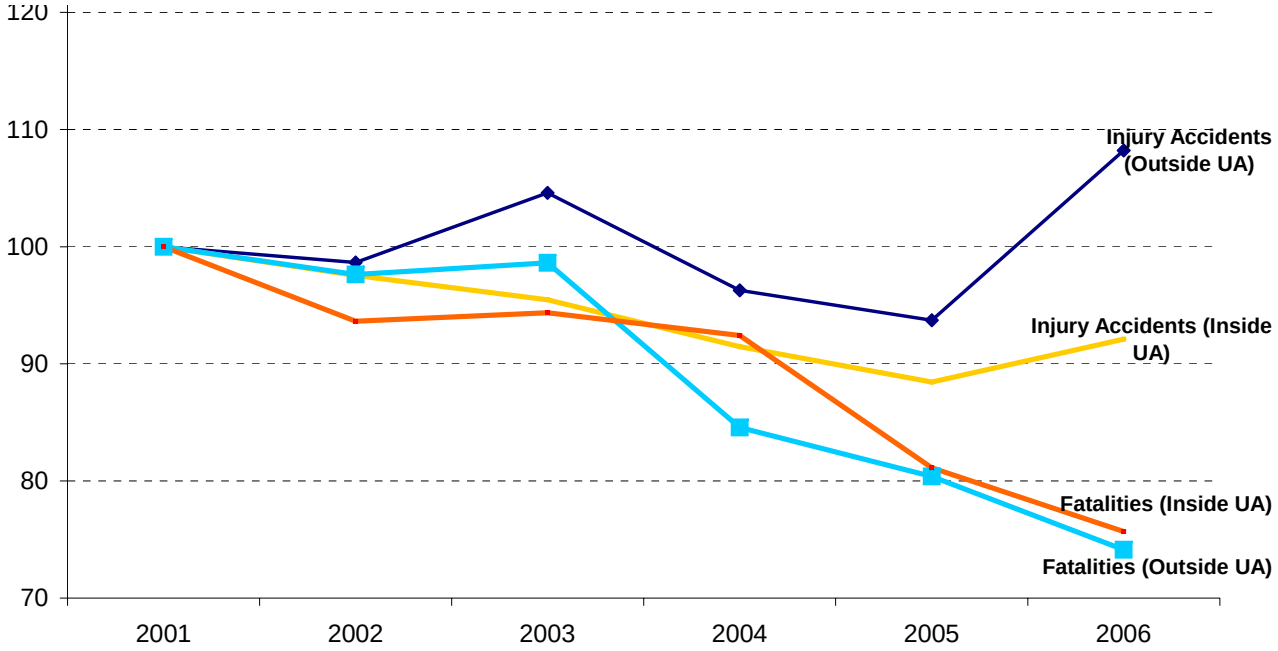
Urban zone accidents : 51% of the total

Fatalities: 18% of the total

Changes in urban zone accidents 2001-2006: -8%

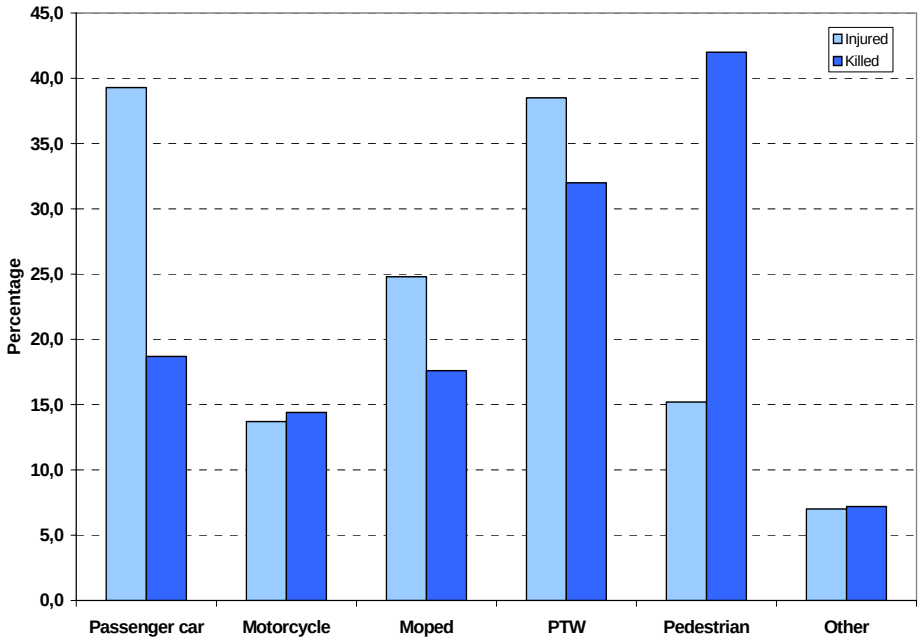
Changes in urban zone fatalities 2001-2006: -24%

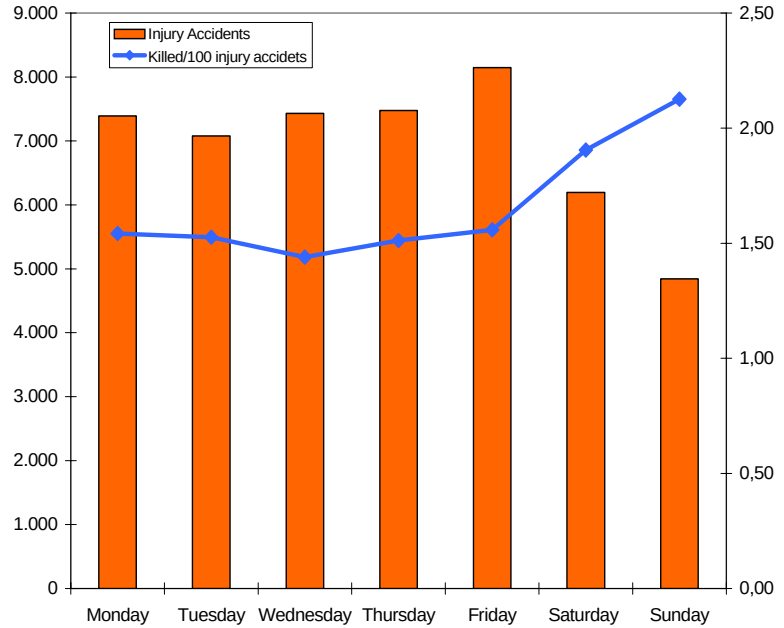
	Road	Urban Zone	Total
Injury accidents	49.221	50.576	99.797
	49%	51%	100%
Fatalities	3.367	737	4.104
	82%	18%	100%
Serious injuries	14.763	6.619	21.382
	69%	31%	100%
Slight injuries	62.306	59.762	122.068
	51%	49%	100%



Main data

- **41,4% of injury persons are between 16 - 29 years old.**
- **62% of injury persons are men.**
- **42% of urban zone fatalities were pedestrian. 32% were motorcyclists. The percentage of motorcyclists fatalities has increased 5 points between 2000 and 2005.**
- **In the week-end we have less accidents, but they are more serious.**





REFERENCE TABLE

THE PROBLEM	HOW TOO CARRY OUT THE PROBLEM	INSTITUTIONAL LEVEL	MESURES
Traffic accidents in urban zone	Institutional collaboration Subsidiarity	European Union State Autonomous regions Municipalities	Town-planning Educational Techniques Legislatives Police coordination Control

DIAGNOSTIC OF THE PROBLEM

RISK FACTORS

Speed
Alcohol or drugs
Tiredness
Dangerous road areas

INJURY RISK FACTORS

Misuse of restraint systems
The vehicle has not a suitable fail-safe system

RISK GROUPS

Younger people from 16 to 29 years old

VULNERABLE USERS

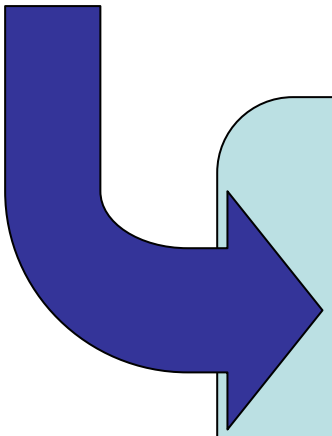
Pedestrians
Cyclists
Motorcyclists

EUROPEAN STRATEGY

White book of the European transport

policy with a view to 2010

European Road Safety Action Program



Methodological framework

Best practices

Problem diagnostic

SPANISH STRATEGY

1 Medidas Especiales de Seguridad Vial 2004 - 2005

Results obtained rapidly

2 Plan de Acciones Estratégicas Claves 2005-2008

Lasting effects of special measures

3 Plan de Seguridad Vial Urbana Tipo

To tackle urban road accident rate

RESPONSABILITY OF THE MUNICIPALITIES IN ROAD SAFETY

Conservation and improvement of roads, signs and introduction of centralize traffic control systems, belonged to these municipalities.

Management and promotion of personal public transport, if it is in the municipal district.

Our owners agents are in charge of: traffic control, planning and vigilance in municipal district ways. Formal complaints and penalties if they are made in our district and if it is not up to an other authority.

The use of urban ways are controlled by municipal regulations.

When there is a traffic offense which could provoke serious risks. When there are big working site zones related not authorized or polluting a lot (failing to carry out ITV norm). We have to stoppage vehicles which are parked in limited areas, until the driver could be identified.

In case of accident, carelessness, obstacle, parked vehicles in a limited area, exceed paid time, illegal insurances : we have to pull in vehicles from public ways.

To authorize sports in urban zone.

Alcohol and drug tests.

To close urban roads when it is necessary.

To elaborate statistical studies of accidents in municipal ways.

To develop a road safety plan.

URBAN ROAD SAFETY PLANNING

ACTIONS AND GOALS

Action field	
1	Development of public area and signs
2	Traffic and coexistences of all the urban transports
3	Accidents of two-wheel vehicles
4	Mobility of vulnerable groups
5	Vigilance and control of traffic offenses
6	Medical and social care to traffic injuries
7	Mobility study according to urban road accidents
8	To train and inform about urban road safety
9	Coordination and collaboration among the administrations
10	Social participation in urban road safety

URBAN ROAD SAFETY PLANNING

Action fields and goals

ACTION FIELD		MAIN GOAL
1	Development and design public area and signs.	To share the road area. To improve street designs and road signs to have a great coexistence of all kind of transports.

URBAN ROAD SAFETY PLANNING

Action fields and goals

ACTION FIELD		MAIN GOAL
2	Traffic and coexistences of all the urban transports.	**To reduce the number of vehicles. To promote public transports and sustainable mobility systems.**

URBAN ROAD SAFETY PLANNING

Action fields and goals

ACTION FIELD		MAIN GOAL
3	Accidents of two-wheel vehicles.	**To reduce the number of two-wheel vehicle accidents and its consequences.**

URBAN ROAD SAFETY PLANNING

Action fields and goals

ACTION FIELD		MAIN GOAL
4	Mobility of vulnerable groups.	**Pedestrian (specially children and elders) and cyclists must have an appropriate safety.**

URBAN ROAD SAFETY PLANNING

Action fields and goals

ACTION FIELD		MAIN GOAL
5	Vigilance and control of traffic offenses and its causes.	**Take action on** vigilance and control of traffic offenses and avoid the lack of road discipline**.**

URBAN ROAD SAFETY PLANNING

Action fields and goals

ACTION FIELD		MAIN GOAL
6	Medical and social care to traffic injuries.	**To improve medical and social care and see the urban road safety as a public health issue.**

URBAN ROAD SAFETY PLANNING

Action fields and goals

ACTION FIELD		MAIN GOAL
7	Mobility study according to urban road accidents.	**To introduce computer systems to improve the collection and analysis information dealing with mobility and urban road accidents.**

URBAN ROAD SAFETY PLANNING

Action fields and goals

ACTION FIELD		MAIN GOAL
8	To train and inform about urban road safety.	**Take action in citizens training and inform them of road safety values in each social community.**

URBAN ROAD SAFETY PLANNING

Action fields and goals

ACTION FIELD		MAIN GOAL
9	Coordination and collaboration among the administrations.	**Stimulate the coordination and collaboration among municipal administrations.**

URBAN ROAD SAFETY PLANNING

Action fields and goals

ACTION FIELD		MAIN GOAL
10	Social participation in urban road safety.	**Stimulate social participation and citizen debate about local mobility and urban road safety. Motivate social agreements.**

URBAN ROAD SAFETY PLANNING

PRIORITIES RANK

Pedestrians and persons with reduced mobility	**Highest priority**
Public transport	
Cyclists	
Heavy-goods vehicles	
Two-wheel vehicles	
Private vehicles	**Less priority**

METHODOLOGY

1º Phase DIAGNOSIS	2º Phase PROPOSALS
Municipality identification. Set out problems related to the causes of road accidents.	From the goal decalogue and taking into account municipalities priorities, several actions are suggested. Local administration is in charge of these actions.
3º Phase ACTION PLANNING	**4º Phase ACTION PLANNING EVALUATION**
To specify: action schedule, agents, resources.	To define information system, in order to monitor the action planning, the action evaluation and the goal achievement.

1.- DIAGNOSIS

ACTIONS TO CARRY OUT TO DEVELOP THE DIAGNOSIS

1. **Municipality identification**
2. **Municipal information files**
3. **Identification of the problems and its causes**
4. **To define local goals**

1.- DIAGNOSIS

MUNICIPALITY IDENTIFICATION

- To set pros and cons, regarding urban road safety.
- To observe the trends from the previous years up to now.
- To define the background adjusted to geographic, town-planning, economical and social elements.

Important: to have an appropriated information system.

1.- DIAGNOSIS

MUNICIPAL INFORMATION FILES

We are collecting risk factors which could have an effect in accidents:

- Risk exposure factors: economic, demographic, town-planning, etc.
- Factors that have an influence on the development of the collision: speed, alcohol, tiredness, weather conditions, etc.
- Factors that have an influence on the severity of the collision: impact type, misuse of helmet or restraint systems, belt ineffective, etc.
- Factors that have an influence on the severity of the injuries: sanitary services, ineffective hospital service, a difficult rescue, etc.

1.- DIAGNOSIS

MUNICIPAL INFORMATION FILES

Example of a data collection file
VEHICLE PARK

- Active vehicle fleet.
- Vehicle type: passenger cars, motorcycles, trucks, vans, buses, etc.
- Vehicles each 1,000 inhabitants (total and vehicle type).

1.- DIAGNOSIS

IDENTIFICATION OF THE PROBLEM AND ITS CAUSES

PROBLEMS	POSSIBLE CAUSES
A high number of children accidents	Lack of good roads
High number of injury in a two-wheel vehicle	Speed Bad roads Bad driving
High number of run over	A lack of safety areas for pedestrians and persons with reduced mobility

1.- DIAGNOSIS

LOCAL GOALS DEFINITION

EXAMPLES OF LOCAL GOALS
To increase public pedestrian areas
To improve municipal assistance to disabled persons
To improve accident information systems

2.- WRITING THE PROPOSAL

PROPOSAL EXAMPLE

Proposal example
To improve vertical and horizontal signs
Examples of related actions
➢To keep tidy all the signs. Drivers must perceive signs appropriately (without trees in the middle, for example). ➢To keep tidy pedestrian crossings, bicycle lanes, areas for public transport. ➢To avoid driving speed, specially at a junction or with amber traffic lights. ➢To place traffic lights at junctions, specially in pedestrian crossings and in bicycle lanes. ➢To oversee working site signs.
Action fields
1.- development of public areas and signs 2.- traffic and coexistence of different urban transports 4.- mobility of handicapped persons 9.- coordination and collaboration among administrations

2.- WRITING THE PROPOSAL

PRIORITY ACTIONS: RANKING OF ROADS

	TYPE	FUNCTION	IMD DIRECTIONS	SPEED LIMIT
Roads to stay	For pedestrians	Resident traffic, services and destination traffic	< 1.000 vehicles/day	10 km/h
	Priority zone for pedestrians	Destination traffic	< 2.000 vehicles/day	20 km/h
	30 Zone	Destination and approximation traffic	< 5.000 vehicles/day	30 km/h
Roads to cross	Priority zone for vehicles (basic net)	Connections between zones and interurban net	According to the population	30 – 50 km/h

2.- WRITING THE PROPOSAL

PRIORITY ACTION: SOME EXAMPLES

- Publicity campaigns to advise all the drivers of vulnerable communities, specially in school areas.
- Publicity campaigns to promote the use of helmet and the use of safety belt, specially with children.
- Develop immediate actions in case of having an accident in urban zone.
- To check working site signs.

3.- DEVELOPMENT OF THE ACTION PLAN

ACTIONS TO CARRY OUT
➢To specify the actions ➢To define indicators

3.- DEVELOPMENT OF THE ACTION PLAN

TO SPECIFY THE ACTIONS

Set out:

- Schedule for actions related to each action proposal.
- Action budget.
- Training staff in order to develop and evaluate the actions appropriately.

Take into account:

- External agents in charge of this planning.
- Period of carrying out.
- Material resources.
- To define starting location to follow each action development and its results or profits.

3.- DEVELOPMENT OF THE ACTION PLAN

DEFINITION OF INDICATORS

THE INDICATORS ALLOW:

- To value municipal strategy success.
- To revise global and local goals.
- To reformulate proposal actions if it's necessary.

IT IS IMPORTANT:

- Indicators should be easy to estimate.
- The information should be true.
- To allow making comparisons among municipalities.

The development of these indicators should make easier the evaluation and its checks. Otherwise, they are going to be pure statistical data.

3.- DEVELOPMENT OF THE ACTION PLAN

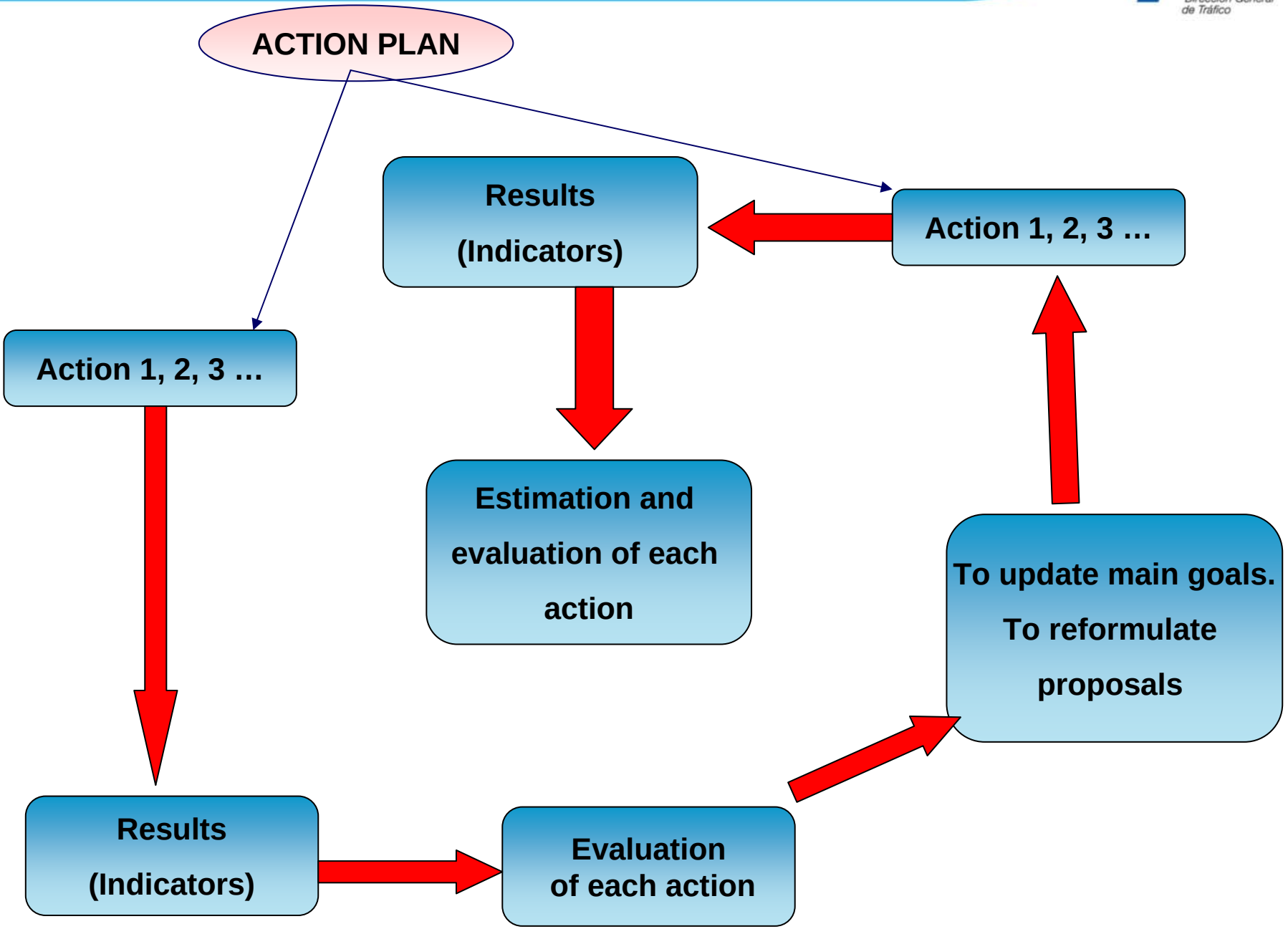
DEFINITION OF INDICATORS

CATEGORY	INDICATORS
Accidents with casualties	•Total accidents •Regarding vehicle type (%) •Accidents/100.000 inhab. •Accidents/10.000 vehic. •Accidents/10.000 vehic. X km covered
Number of victims	•Total victims •Victim/100.000 inhab. (total, pedestrians, cyclists…) •Victim/10.000 vehic. (total, pedestrians, cyclists …) •Slight and serious injuries, fatalities (%, number/10.000 accidents) •Victims of the total of public transport users •Hospital admitted x 1.000 victims
Fatality rate	•Fatality global rate (fatalities/ total) x 1.000 •Vehicle rate: passenger vehicle, motorcyclists, motorists •Users of public way rate: pedestrians, cyclists and persons with reduced mobility
Accident data	•Accident place: junctions, crossings, pedestrian crossings…(% of the total) •Accident date: holiday, working day, holiday eve… (%of the total) •Accident time: morning, afternoon, dusk/ night (% of the total) •Accident type: head collision, side collision, running over… (% of the total) •Vehicle type: passenger vehicle, motorcyclists, pedestrians, cyclists … (% of the total)
Risk factors	•Speed •Misuse of safety belt •Misuse of helmet •Misuse of restraint systems •Alcohol

4.- EVALUATION OF THE ACTION PLAN

It should be taken into account:

- The process of planning development (political and technical areas). All the institutions should be involved.
- Impact of measures, regarding local goals set out in the Local Planning of road safety. Y
- The results in each proposal action carried out. Level of citizen satisfaction.


ACTION PLAN
Results
(Indicators)
Action 1, 2, 3 …
Action 1, 2, 3 …
Estimation and
evaluation of each
action
To update main goals.
To reformulate
proposals
Results
(Indicators)
Evaluation
of each action

KEY TO SUCCESS

- Municipal leadership, with the collaboration of politics, technical experts and local administration.
- Collaboration and coordination among institutions and civil society.

KEY TO SUCCESS

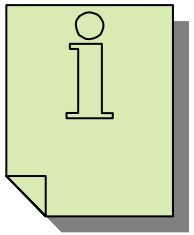
ACTIONS OF MUNICIPAL LEADERSHIP

- The approval of municipal collaboration (in road safety) in the Municipal Plenary.
- To check Municipal Planning of road safety.
- To develop a road safety budget.
- Participation of the Mayor or the Councilor in road safety.
- Approval of the Sustainable and Safe Mobility Plan, and revision of the municipal By Laws.
- Appointment of technical experts to coordinate road safety environments.
- Periodical reunions among departments.

KEY TO SUCCESS

COLLABORATION AND COORDINATION ACTIONS

- Creation of a Municipal Council in road safety.
- Approval of a Mobility and a road safety Plan.
- To be informed. To have some public debates dealing with municipals actions in road safety environment.
- Financing actions developed by agents of civil society.



www.dgt.es

observatorio@dgt.es