Summary

• Background
• ISIDE features
• Conclusions
Improving road safety

- How many crashes?
- Which causes?
- Which measures?
- Which effects?
Improving road safety: needs

Data

Knowledge

Actors involved
Issues in Italy

• Issues with accident data:
  – Crash data were not easy available to local government and not geographically localized

• Issues in finding effective road safety solutions:
  – Road safety were not included in a structured way in the local government planning
  – Poor availability of tools and evaluation methods

• Lack of coordination among actors responsible for road safety
Background

• In 2006 Perugia Municipality took part to a regional Call for tenders for the implementation of road safety measures.

• The municipality of Perugia in partnership with University of Rome and the local Public Transport Agency won with a project called PIU’ Sicurezza, meaning “More Safety”.
• PIU’ Sicurezza project included:
  – Roundabouts and raised pedestrian crossings
  – Enhancement of bus stops safety and accessibility
  – Constitution of a *Road Safety Monitoring Center* at municipality level
  – Development and implementation of tools to support the road safety management at local level → ISIDE
ISIDE: A Road Safety Decision Support System

• The system has been developed by the research Center for Transport and Logistics of the University of Rome La Sapienza

• It is fed by data acquired from the local police crash database

• It works with tools and knowledge taken from literature
ISIDE: Main features

• ISIDE is a web-based system to support the local government in:
  – Monitoring trends and distribution of road accidents
  – Identifying high concentration roads and intersections
  – Analizing road safety issues
  – Identifying most effective countermeasures
Monitoring trends and distribution of road accidents

- Possibility to analyze crash data through maps and diagrams
Identifying high concentration roads and intersections

- Ranks road sections or intersections of the road network based on different road safety indicators
Analyzing road safety issues

- Identifies the most critical crash type on a road section or intersection
- Links crash type and road safety issues and proposes feasible countermeasures
Identifying most effective countermeasures

- Supports the user in analysing the effectiveness of selected measures through Benefit/Cost Analysis
- Makes use of *Crash Reduction Factors* to estimate the benefits of a countermeasure
- Produces a report of the main steps of the analysis
Lesson learned

• Importance of data:
  – Analysis results strongly depend on data availability and quality → Strong effort on data management and localization
• Not only data!
  – Importance of a structured approach to deal with road safety issues
• Political will is needed
Limitations of use

- Knowledge about effects of road measures has been transferred from literature to Perugia → Calibration to local context
- Presentation of information and ease of use
Conclusions

• Enhancement of knowledge about spatial distribution of the phenomenon
• Road safety decisions supported by data
• The system is still under development
  – Enhancement of the user interface
  – Further functions and analysis tools, e.g. Safety Performance functions (PIU’ Sicurezza 2)
A Road Safety Decision Support System for the Municipality of Perugia

THANK YOU FOR YOUR ATTENTION!