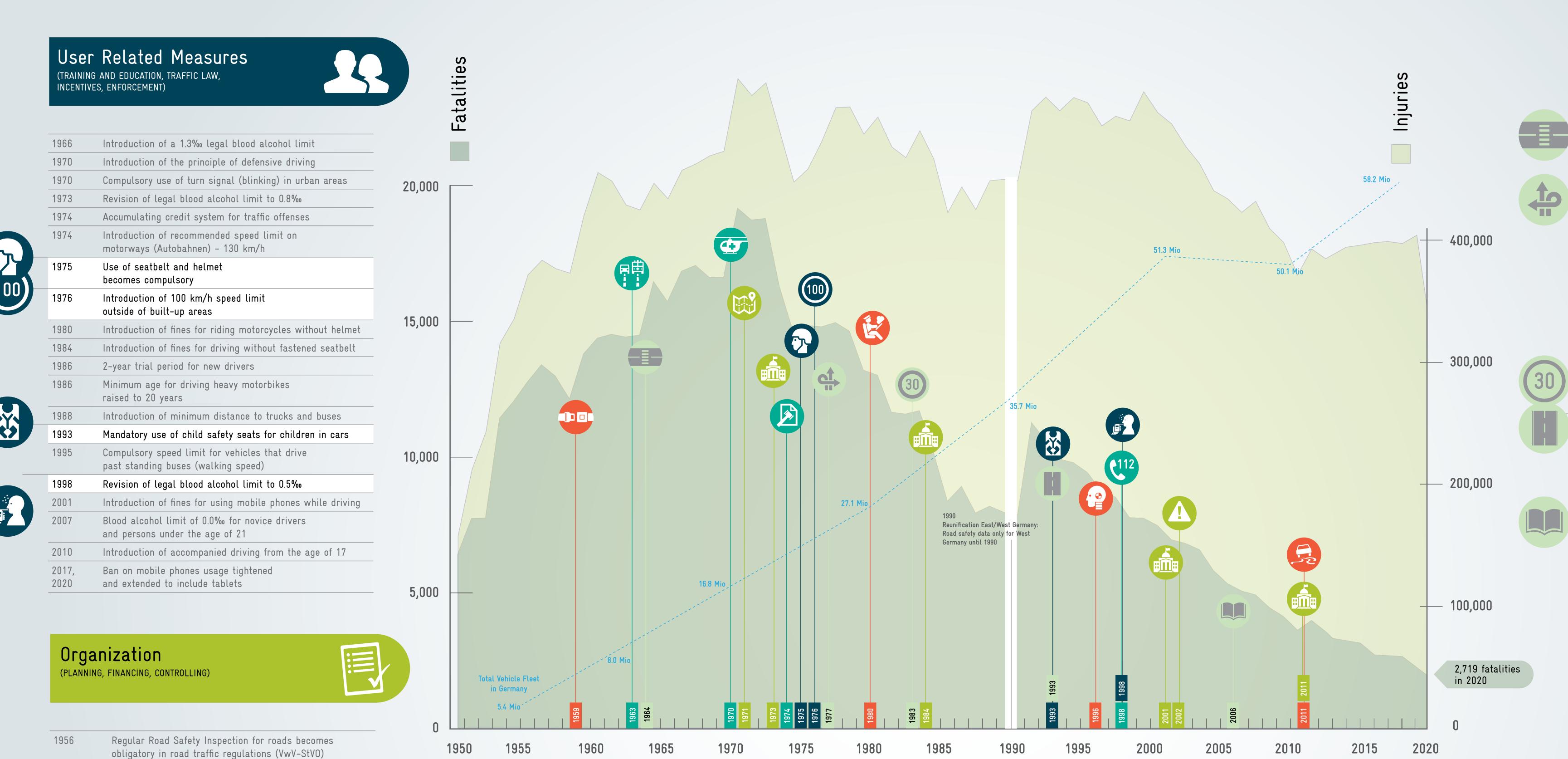
A comprehensive approach to road safety - The example of Germany



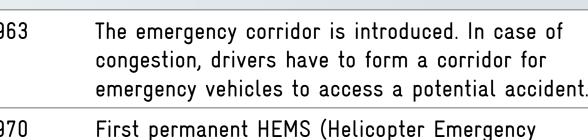
Infrastructure Related Measures (ROAD DESIGN, ROAD CONSTRUCTION, MAINTENANCE)



	1964	Introduction of zebra crossings for pedestrians
	1973	Introduction of standards for geometric layout, gradients, cross sections and design speeds to be integrated into design guideling
	1977	Introduction of general principles of road network design, classification of roads according to road categories (i.e. interstate, arterial, collector, local) and connection type (urban vs rural, expected volume etc.)
	1980	Introduction of zones with traffic calming ("Spielstraßen", or play streets), designed to be oriented towards pedestrians
	1981	Publication of German Road and Transportation Research Association (FGSV) recommendations on traffic calming in residential areas
	1982	Introduction of guidelines on cross-sections for roads (RAS-Q) including determining the dimensions of the roadway components based on physical and volume characteristics
	1983	First trials for zones with 30 km/h speed limit in residential are
	1990	Increasing use of roundabouts as alternative form of intersectio
	1993	New design recommendations for urban main roads (including consideration of urban design and requirements of pedestrians and cyclists)
	1995	Revised guidelines on road alignment including updates on overtaking sight distance requirements
	1996	Introduction of 2+1 lane road design for high level rural roads to prevent overtaking accidents
	2006	Introduction of concepts for self-explaining (i.e. standardized) roads and forgiving roadsides in design guidelines
	2007	Dedicated recommendations on improving road safety on popular motorbike routes through improved road design and enforcement measures
	2008	First shared space project in Germany (City of Bohmte)
	2008	Safety audit and safety management for road infrastructure by the EU (2008)
	2009, 2011, 2018	Analysis and evaluation of traffic accidents and identification of accident black spots using EUSKa recording system, e.g. in North Rhine-Westphalia since 2018
	2011	Introduction of "Design for All" principle to provide accessible transportation facilities (HBVA)
	2012	Undeted midelines of the Areffe socident commissions

Rescue Services (ALERT, RESCUE)





Updated guidelines of the traffic accident commissions

Medical Services) base is established in Munich

Introduction of emergency telephones along highways and major roads

Introduction of country-wide emergency call numbers 110 (police) and 112 (fire brigade), although regional numbers for EMS continue to exist

First EMS law introduced in the Federal State of Bavaria, outlining requirements for staff, equipment and response times. Other federal states follow soon.

EU-wide mandatory introduction of emergency call number 112 for EMS

Mandatory introduction of the automatic emergency call system eCall for all new cars in the EU, which automatically dials 112 and sends the location in case of an emergency

The challenge of road safety

About 3,700 people die every day in road traffic accidents around the world. A further 50 million people are injured every year. Despite comparatively low levels of individual motorisation, emerging economies and developing countries in Africa, the Middle East and Asia are particularly affected, with more than 90 per cent of traffic-related deaths occurring in these countries. By now, road accidents are the leading cause of death for children and young adults aged 5—29 years and have surpassed HIV, Malaria and tuberculosis as global health threats.

By launching the Decade of Action for Road Safety 2011-2020, the United Nations have called on the member states to step up their efforts to improve road safety. This infographic illustrates the comprehensive approach that Germany has taken as a response to sharply rising fatality rates since the 1950s. Along with many other European countries, Germany has succeeded in reducing fatalities significantly - thanks to a bundle of measures that can be

Regular vehicle safety inspections (TÜV) become mandatory

The German Road Safety Council (DVR) is founded,

bundling the efforts of all parties involved in road

Publication of the German Road and Transportation

transport plans (introduction of accident analyses,

Adoption of the Municipal Transport Financing Law,

Introduction of safety audits to avoid shortcomings with

regard to road safety during the planning process

Directive 2008/96/EC of the European Parliament

and of the Council of 19 November 2008 on

road infrastructure safety management

1973, 1984, Road Safety Programmes of the Federal Government.

2001, 2011 In 2019, in the amount of 14.9 million €

introducing federal financing schemes for urban

transport and mandatory local transport plans

planning instead of supply-oriented planning

Research Association (FGSV) bulletin on local

consideration of non-motorized transport)

Introduction of target-oriented transport

in guidelines for local transport plans

safety in order to achieve efficient action

Vehicle Related Measures

Introduction of three point seat belt

the event of a heavy frontal impact)

Introduction of anti-lock braking system

Introduction of Brake Assist System (BAS)

Introduction of energy absorbing steering column

First introduction of an air bag (in driver seat only)

above 3.5 tons to protect two-wheel drivers and pedestrians

Mandatory introduction of side guards on trucks

(avoiding excessive injuries to the driver in

(ACTIVE SAFETY, PASSIVE SAFETY, TELEMATICS)

for a Mercedes car

Deutsche Gesellschaft für Internationale Zusammenarbeit Design: Julia Klasen

Data source for injuries and fatalities: DESTATIS With special thanks to Prof. Dr.-Ing. Jürgen Gerlach, University of Wuppertal, and Dr. Markus Lerner, Federal Highway Research Institute (BASt), for the helpful suggestions. All errors and omissions remain with GIZ.



Introduction of Euro.NCAP testing procedures

Commitment by european car manufacturing industry

to equip all new cars with anti-lock braking system

Mandatory introduction of Electronic Stability

Control in all new cars and trucks in the EU

Increasing use of windowbags (protecting

for vehicle passive safety devices

Mandatory introduction of daytime

Anti-lock braking system becomes

mandatory for all new motorbikes

running lights for new passenger cars

All new heavy-goods vehicles have to be

Mandatory introduction of the turning

assistant for new long trucks

equipped with emergency braking systems

passengers from head injuries)











Further information and the infographic as pdf Our iNUA paper on Enhancing Road Safety

Sector Project Sustainable Mobility

Concept & Editing: Dominik Schmid

Contact: transport@giz.de