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Road traffic safety — Good practices for implementing commuting safety management

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 241, *Road traffic safety management systems*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

0.1 General

The high proportion of road traffic crashes involving commuting, in many countries, is a global concern. Organizations should take proactive actions to improve safe commuting on roads. This principle is applicable to any organization to help it protect commuters including vulnerable road users (VRU).

Organizations can influence and inculcate road safety culture among their employees/students. They can also help to minimize commuting crashes through the provision of adequate and relevant policies, processes and training on road safety, use of safer modes of transport and vehicles, and planning of safe journeys. A systematic assessment should also be developed for assessing commuting crash prevention and initiatives to ensure their effectiveness.

There is also a need to emphasize extensive commuting safety management outreach programmes. Organizations should be fully committed in building a 'safety first' culture, which will consequently promote the prevention of commuting crashes.

It is recognized that implementation of this document could deliver societal, environmental and economic benefits to the organization in addition to the safety deliverables addressed therein.

This document gives guidelines for good practices that can be adopted by organizations around the world to manage their commuting safety management with a systematic and flexible approach while at the same time ensuring continual improvement to their practices and systems. It highlights measures and initiatives that can be taken to mitigate commuting risks. Organizations are encouraged to adopt as many good practices as possible in this document.

0.2 Concept of implementing good practices for commuting safety management

This document recognizes the use of an iterative Plan-Do-Check-Act (PDCA) approach to guide organizations toward achieving maximum commuting safety management results (see Figure 1).

Plan: Establish objectives and targets on commuting safety management in accordance with the organization's policy under top management's leadership and commitment and plan the processes necessary to achieve them.

Do: Ensure that sufficient capacity and resources are provided and implement the processes for commuting safety management as planned.

Check: Monitor and measure the process performance against objectives and targets and identify the opportunities for continual improvement.

Act: Take actions to continually improve process performance with the aim of reducing the incidence and risk of death and serious injuries in road crashes.

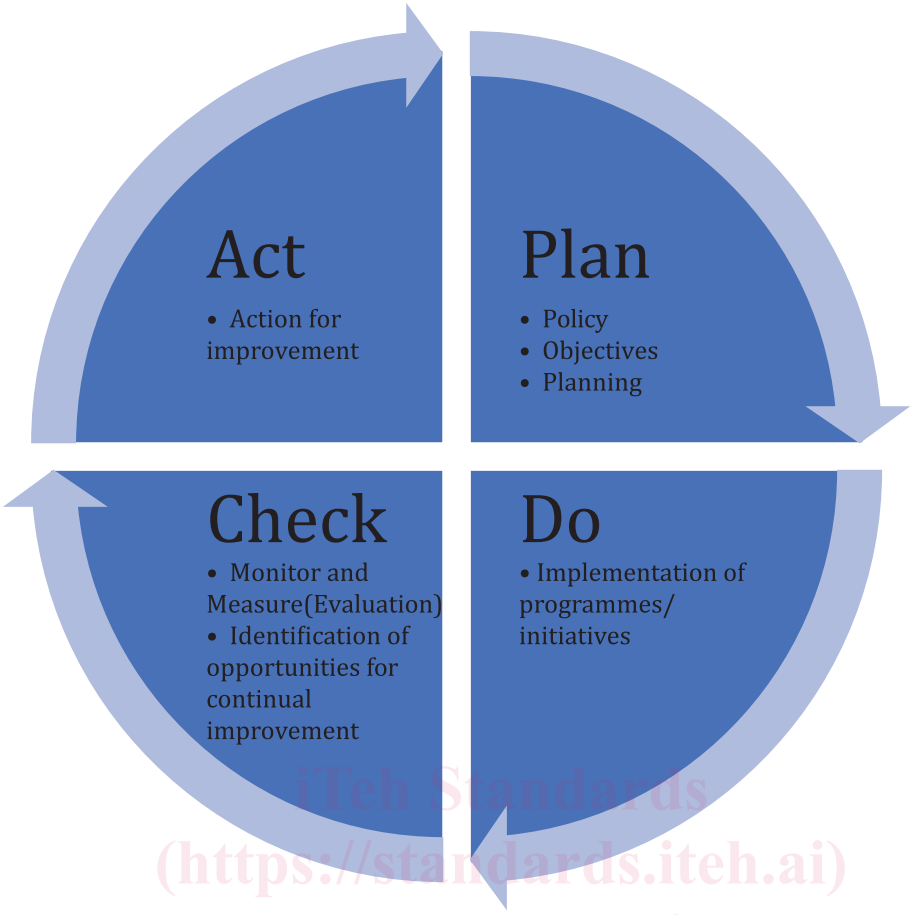

Figure 1 — PDCA approach to commuting safety management

0.3 Implementation of good practices

The implementation of good practices for commuting safety management and road safety can be categorized into different levels. They can be used to educate, to increase awareness and to consistently remind about the importance of always inculcating a 'safety first' culture (see Figure 2). Organizations may consider engineering approaches (for example, vehicle procurement and modal shift) to improve road safety performance.

The implementation of continual and sustainable road safety programmes and initiatives will positively affect the mindset and behaviours. These programmes and initiatives should be conducted periodically, scheduled, and assessed to examine their adequacy and effectiveness, while opportunities for continual improvement should also be identified.

The organization should establish a process(es) for the recognition, evaluation, implementation and control of new technological solutions that may impact upon road-traffic safety and commuting.

The evaluation should give due consideration to the potential benefits of such technology in respect of crash avoidance, and injury/damage minimization. It should also ensure that potential risks such as driver distraction or complacency are fully assessed.

The organization should communicate to the management team and its commuters the outcomes of assessments of the technological advancements on road and commuting safety and provide appropriate influence regarding the adoption of such technologies. The organization should take proactive measures to make adoption possible.

The management team and employees/students are encouraged to be continually exposed to the technological advancements on road and commuting safety, especially those proven scientifically, and the organization can influence the adoption of such in commuting activities.

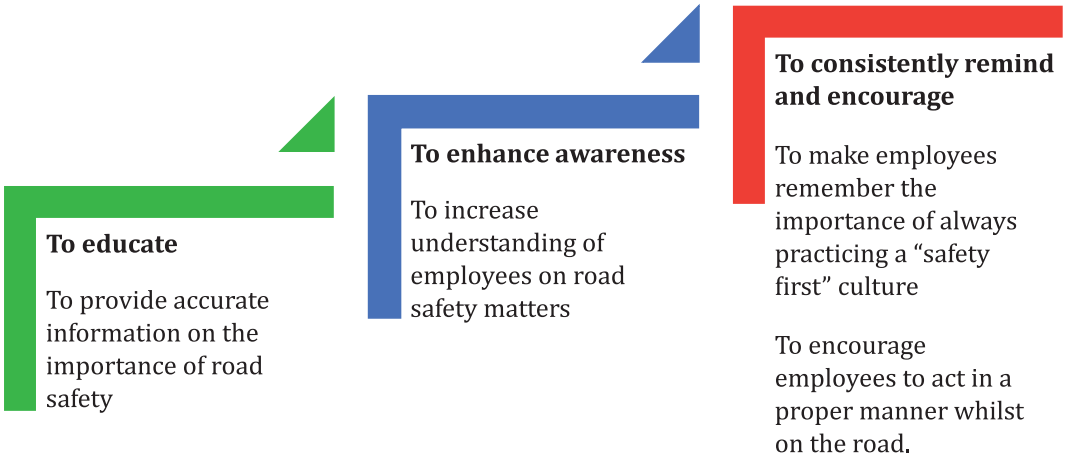

Figure 2 — Steps towards the safety-first culture

Road traffic safety — Good practices for implementing commuting safety management

1 Scope

This document provides guidelines for good practices that can be adopted by organizations for the implementation of commuting safety management. These practices are intended to reduce the number of fatalities and serious injuries, the severity of injuries, and further to minimize damage to property and economic loss due to road crashes.

This document is applicable to any organization to help it protect commuters including vulnerable road users (VRU) through the adoption of a proactive approach to manage commuting risks.

This document is also applicable to commercial transport organizations including fleet operators, as well as schools.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 39001, *Road traffic safety (RTS) management systems — Requirements with guidance for use*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 39001 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

3.1
commuting crash
crash in which a commuter is involved while travelling:

— between their home or temporary lodgings and place of work / study;

— on a journey made that is connected to their employment / study;

— between their place of work and the place where they eat during an authorised break

3.2
organization
person or group of people that has its own functions with responsibilities, authorities and relationships to achieve its objectives, which includes school and other education establishment

4 Factors affecting commuting crashes

Three main factors that contribute to commuting crashes are road users (i.e. driver, rider, bicyclist, pedestrian and passenger), vehicles and road and environment.

Collect and analyse all information directly or indirectly related to road safety, brought to the attention of the organization by authorities, employees and users or customers, or actively gathered in enquiries or interviews, and cross-reference them against publications available locally or by the means of information technologies.

4.1 Road users

There are three elements that influence the physical and psychological conditions of road users:

a) Competency

Riding/driving knowledge and skill are essential for safe commuting.

Riders/drivers should have the ability to adopt a safe driving style and to take prompt and appropriate actions to avoid road crashes or minimize the impact of a road crash.

Riders/drivers should understand the limitation of their vehicles, within the context of the road facilities and the environment, to ensure appropriate riding/driving.

Pedestrians should keep to segregated pedestrian zones or sidewalk, behind safety barriers/fences or on designated footways whenever possible. Whilst walking along, or crossing, roads, they must always be fully alert and face the traffic. In the absence of a sidewalk, and unless there is any special circumstance or specific danger, pedestrians should be on the side of the road and facing the oncoming traffic.

b) Health and fitness

Health conditions, fatigue, sleepiness, influence of alcohol and drugs, visual problems (e.g. short- or long-sighted, astigmatism, glare), etc. are factors that can affect road safety.

Unstable state of emotion (especially anger), stress, lack of motivation, etc. are examples of psychological conditions that can cause commuting crashes. Road users need to be in a stable state of emotion before and throughout their journey.

c) Behaviour

The unsafe or inappropriate behaviour of road users such as the act of speeding, tailgating, weaving and red-light running are major causes of road crashes.

The focus of road users can be distracted if they are eating, drinking, smoking, texting, answering or making calls, etc. while on the road.

Organizational factors (such as pressure for staff to be 'reachable' during their commute) can negatively influence driver behaviour.

Passengers of any on-road public transport need to ensure that their behaviour and conduct is safe at all times of the journey, particularly when:

i. Waiting at designated public transport stops (to minimize disruption to other road users and traffic in the road environment).

ii. Alighting and disembarking from public transport at the designated public transport stops.

iii. Obeying traffic rules and regulations on the way (either as cyclist or pedestrian or other) to the public transport stops.

iv. Before alighting or after disembarking from the public transport, cross at designated cross walks or make use of the provided channelling to cross at safe places.

4.2 Vehicles

Vehicle safety devices, suitability and condition are three factors that can contribute to commuting crashes, and they are described in detail below:

a) Safety features and devices, including:

— vehicle engineering, design and structure;

— passive and active safety devices (e.g. Electronic Stability Control (ESC), Anti-lock Braking System (ABS), Side Impact Protection or seatbelt reminder system); and

— materials used for the vehicle.

b) Suitability

The selection of vehicle should fit and be compatible with its purpose (e.g. a four-wheel drive should be used in an agricultural place or snow-covered areas of work).

NOTE 1 Please note the possible existence of local legislation regarding the modification of vehicles (e.g. for persons with disabilities).

c) Condition

Comprehensive periodical vehicle maintenance is critical to ensure that the vehicle is functioning correctly and has a long-life expectancy.

NOTE 2 Please note the possible existence of local legislation regarding vehicle roadworthiness.

4.3 Road and environment

In addition to road users and vehicle factors, road and environment conditions are also considered as contributing factors to crashes. Hence, it is important for road users to be aware of environmental factors such as road and topographical conditions and road type (e.g. single-or dual carriageway, etc.) throughout the entire commuting route.

The potential hazards and risks along the route should be identified so that appropriate actions and extra care can be taken when commuting. Attention should be given to:

a) Road conditions:

— road surface (e.g. potholes, slippery, greasy);

— geometric features (e.g. sag curves, crest curves, lane width); and

— road construction work.

b) Road furniture along the route (e.g. type of guardrail used, road signage, road markings).

c) Road environment:

— topographical condition (e.g., flat, undulating, hilly, mountainous);

— signage (e.g. inadequate, confusing or blocked road signages);

— lighting;

— haze;

— thick fog;

— weather condition (e.g. snow, ice, heavy rain, flood, landslide, crosswind);

— animal crossing;