

Delft Road Safety Courses 2012 — 2024

**Road Safety Capacity Development Achievements
in Low and Middle Income Countries**



Document Title

Delft Road Safety Courses 2012 — 2024: Road Safety Capacity Development Achievements in Low and Middle Income Countries

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DECISIO





Executive Summary

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Road Safety is a significant issue around the world, with low- and middle-income countries being disproportionately and increasingly affected with respect to high-income ones.

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Improving road safety has the potential to contribute to several other sustainable development areas such as the promotion of healthy lifestyles, reduction of local air pollution and the fight against climate change, the reduction of traffic congestion and the creation of happier and safer neighbourhoods.

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Capacity development plays a fundamental role in improving road safety as it creates an environment where context-specific solutions can be developed and thrive.

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Delft Road Safety Courses (DRSC) has been active since 2012 and has delivered high quality training to more than **600 professionals** from over **90 countries**.

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The DRSC approach is focused on teaching the **Safe System Approach**, that acknowledges that humans make mistakes, but that no-one should ever die or be seriously injured as a result of these mistakes

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Several alumni have been interviewed for this work and have shared the most relevant **contributions** that attending DRSC has had on their careers and on their organization, as well as **relevant projects they have been empowered to work on** after attending the courses.

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What is this document, and what does it aim to do?

Delft Road Safety Courses is entering its 14th year of operation since beginning in 2012, during which time they have organized around 20 courses and taught more than 600 graduates from over 90 countries around the world.

The activity of Delft Road Safety Courses (DRSC) has always been driven by its mission to support the implementation of the UN Sustainable Development Goals and the Global Plan of the UN Decade of Action for Road Safety to reduce road traffic deaths and injuries by 50% by 2030.

The work of DRSC focuses on low- and middle-income countries (LMICs), which account for more than 90% of all road traffic deaths worldwide, and is driven by the knowledge that the disproportionate impact of such preventable incidents

causes substantial pain and grief for individuals, families, and communities as well as significant social, economic, and environmental costs.

DRSC's expectation, therefore, is that their capacity development and training activities across the globe have helped, and will continue to help, to build safe and sustainable transport systems, which have been proven as key drivers to improving economic development, access to education, gender equality, health and wellbeing, as well as mitigating the impacts of climate change.

The present document summarises efforts to evaluate DRSC's activities and assess their impact through interviewing of some of the most successful alumni about how participating in DRSC courses has impacted their careers and the work of

their organizations. In short, in this document DRSC tries to explore whether their activities are meaningful, whether they align with their stated mission, and whether they achieve the desired results.

After a short introduction, the document presents the case for why road safety is an important issue, especially in low- and middle-income countries, and what role capacity development programs can play in tackling such an issue. The document then describes the activities of DRSC, its mission and the centrality of the Safety System Approach in its teaching. The last section is then focused on assessing the impact(s) of DRSC through the testimonies of ten alumni of different editions of the course.

How could you determine the impact and the effectiveness of the Delft Road Safety Courses ?

Assessing whether capacity development and training programs such as DRSC “achieves its targets” is far from straightforward, mainly because their effects are not directed at the ‘final’ desired impact but to an intermediate link of the cause-effect chain.

In the case of DRSC, this means that although its mission concerns the reduction of road traffic death and injury, its actions aim mainly at providing the tools and empowering other actors (professionals and organizations) to then directly work on those aspects.

When it comes to assessing the impact of the DRSC, then, it is not possible to draw a straight arrow of dependency from direct actions (the delivery of courses) to the road

safety impacts those actions aim at having (the reduction of traffic death and injury), because many actors, policies, actions, and effects lie between the two.

At the same time, it is possible to study the impact that DRSC are having on the people who attend their courses — in terms of knowledge, career perspectives, network etc. - and in turn understand the impact that those people are having on their organizations, their colleagues, the contexts they work in, and the projects they carry out.

In this document, therefore, an Output-Outcome-Impact framework (described on the next page) is used to structure the analysis and explain its scope, as well as what it can - and cannot - achieve.

It cannot, as previously mentioned, link the DRSC activities to X% reduction of road traffic deaths or injuries in any country or city, or similar quantitative precise results.

Trying to establish such direct link would be disingenuous at best, dishonest at worst. What can be done is to establish a link to its Outputs, Outcomes and Impact through a description of the difference DRSC has made, and continues to make, on the people who attend the courses, their organizations, and how DRSC has empowered its alumni to carry out, and collaborate in, quality road safety projects around the world.

The Output - Outcome - Impact framework



Output

The Output of a project is what is directly produced by the activity that is carried out, in the shape of an object, a service or any other deliverable.

Outputs are usually easily identifiable and thus relatively straightforward to measure in a quantitative manner.

For a capacity development program, outputs would include hours of lectures and number of attending professionals over the years.



Outcome

The Outcome of a project is the short- to medium-term effects on the served people or addressed issues that arise as a consequence of the Output being produced.

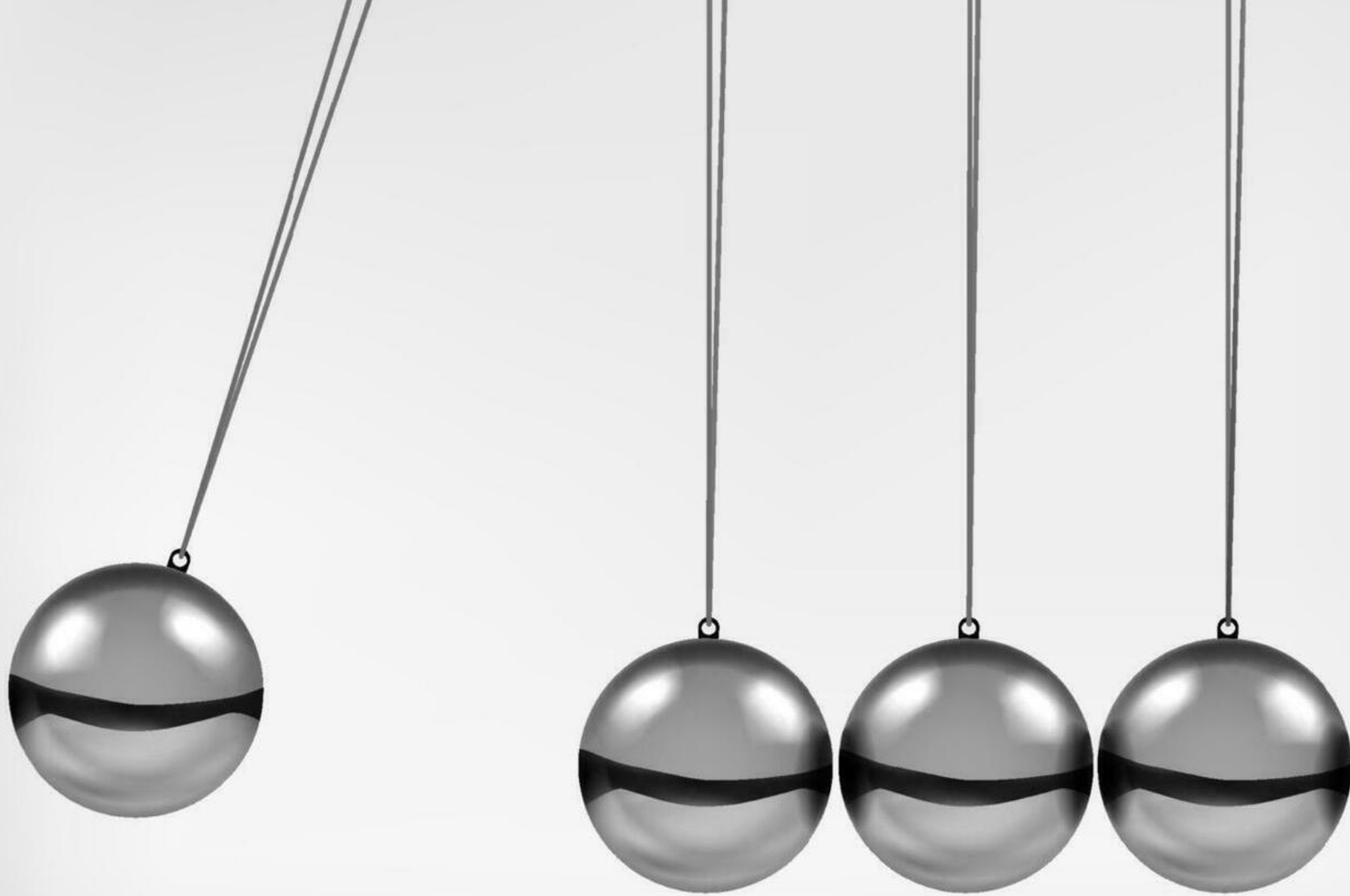
In the case of programs such as DRSC, Outcomes are the changes for the alumni, such as anticipated changes in knowledge, skills, attitudes, behaviour, condition, or status. Outcomes can usually be measured and monitored and linked directly to the program.



Impact

The Impact of a project consists of the results that are directly due to its outcomes and represent the long-term and often indirect effects of such outcomes. Because of this indirectness and their long-term nature, Impact is usually hard to measure.

For the DRSC, impact is directly linked to the mission of improving road safety in low- and middle-income countries in terms of reduced traffic death and injury.



Road Safety Matters

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**its importance,
the international effort
to improve it and its
burden on low- and
middle-income
countries.**



Global road casualties

A heavy toll to move

2/3 deaths
are people of
working age

More than half
are vulnerable
users

12th cause of death
across all ages

1st cause of death
5 - 29 years

92%
in Low- and
Middle-Income
Countries

1.19
MILLION
FATALITIES
in 2021

20-50
MILLION INJURIES
in 2023

with many incurring in disabilities

In 2023, the latest *Global Status Report on Road Safety* published by the World Health Organization (WHO) confirmed that, despite the efforts poured in the last decade, road traffic injuries remain a major global health and development problem.

According to the latest data available, the year 2021 witnessed 1.19 million deaths worldwide, which means that approximately 15 in every 100'000 people were killed on the road. These astonishing figures place road injury as the 12th cause of death across all ages, claiming more lives than Tuberculosis and HIV/AIDS. Roads are even more dangerous for children and young people aged 5 to 29 years, for whom injuries deriving from crashes represent the leading cause of death.



The Social and Economic Toll of Road Casualties

The social toll of road deaths would be unbearable alone. However, it also comes with a heavy financial cost which hinders economic development, especially in emerging economies. With more than two-thirds of fatalities affecting people aged between 18 and 59 years, road crashes deprive individuals of their most productive years, posing a serious economic burden on the whole society. Even when crashes do not result in death, they often cause disabilities that hinder participation into the workforce. The direct and indirect costs of such losses have been estimated between 1 and 3% of most countries' gross domestic product, reaching 6% in worst case scenarios.

Moreover, road crashes amplify social injustices, penalizing the more vulnerable and the poorer. More than half of road deaths involve vulnerable road users, such as cyclists, pedestrians, or drivers of powered two-wheelers. Additionally, the socio-economic burden born by low- and middle-income countries, counting more than 9 out of 10 victims, is disproportionate to their motorization rate and spread of transport infrastructure.



3%

OF GDP
in 2023

The estimated economic cost incurred by most countries



1.8

TRILLION \$

The global economic burden between 2015 and 2030 (equivalent to Canada's GDP)

LOW- AND MIDDLE-INCOME COUNTRIES PAY A DISPROPORTIONATE TOLL

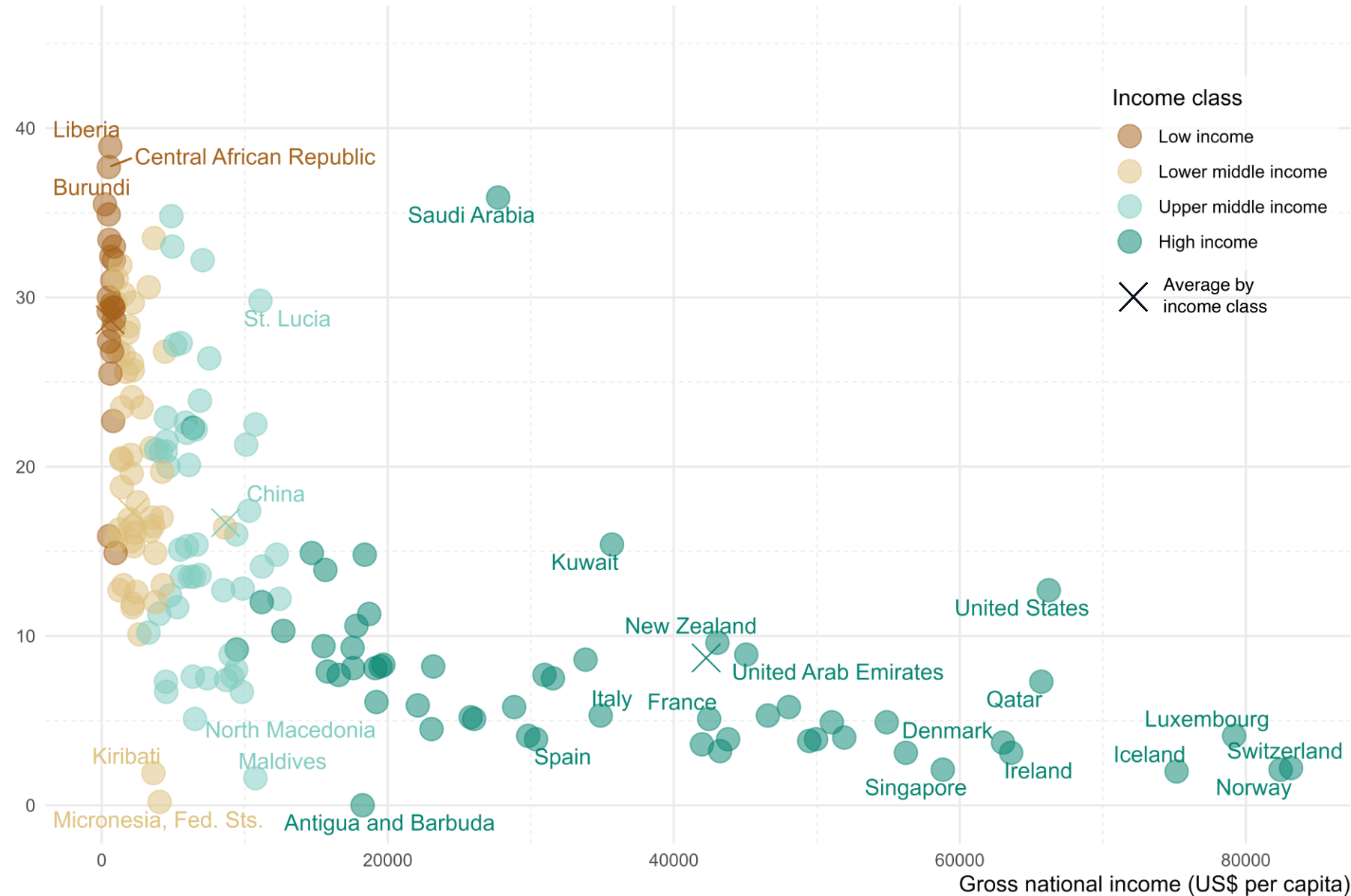
The socio-economic burden of road crashes is much more pronounced for low- and middle-income countries compared to high-income countries. More than 90% of road victims are in these emerging economies and, although they account for about 80% of the world population, the death toll paid by these countries for mobility remains disproportionate when compared to motorization rate and the spread of road networks.

At the root of this imbalance is the lack of implementation of best road safety practices in emerging economies, inadequate enforcement of traffic laws, unsafe vehicles and roads, and insufficient post-crash care [1].

As a result, in low- and middle-income countries the death rate of road crashes is much higher than in high-income countries. For high-income countries this is on average 12 deaths per 100'000 people every year, with several countries below 10. This inflates to more than 20 for middle-income countries, and increases again to about 30 -nearly three times higher - for low-income countries.

Road accidents mortality rate in 2019 (deaths per 100'000 inhabitants)

Each data point represents a world country. Crosses indicate average fatality rates per income group.



Data source: Elaboration of World Bank data on population and road accidents mortality rate

[1] World Health Organization, Global status report on road safety, 2023.



Towards Road Safety and beyond

**The connection
between road safety
and many other
policies within the
sustainable
development realm.**



Safety concerns are a barrier to sustainable mobility

Concerns about road safety and related issues contribute significantly to why many people choose to drive a car as their primary and daily means of transport. In particular, the perception of unsafe roads plays a crucial role in the decision to engage in active transportation, i.e. walking and cycling. Fear of traffic crashes due to inadequate infrastructure, together with aggressive driver behaviour, limit the potential for more and cycling and walking across the world.

For this reason, improving road safety would not only generate the direct benefit of saving lives and preventing injuries from crashes, but it would also contribute to unlocking the potential for more walking, cycling, and use of public transport instead of private cars, in turn

unlocking the many social, economic and environmental benefits that characterize sustainable mobility, among which are:

- **Decreased environmental impacts** associated with the consumption of fossil fuels, such as local air pollution, as well as reduction of GHG emissions.
- **Improved physical and mental health**, with a reduction in direct health costs, as well as an increase in life expectancy and quality of life.
- **A reduction in traffic**, thanks to the increased space allocation and efficiency of cycling and walking with respect to private cars.
- **More competitive public transport**

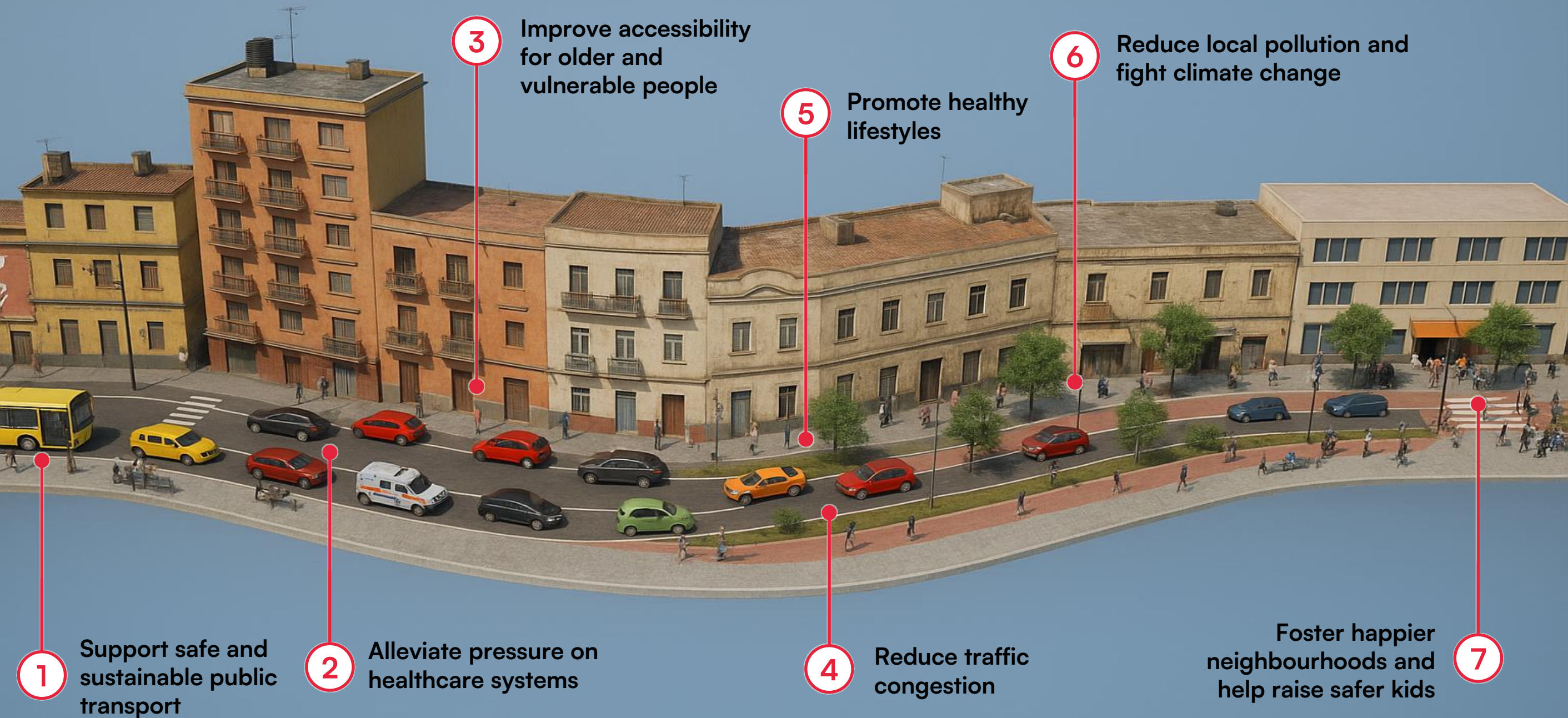
because of the increased efficiency of road space allocation and use.

- **A more equitable means of transport** that guarantees cheap mobility to everyone.
- **Regenerated public space and improved accessibility** to the most relevant places in every territory.
- A more **forgiving and democratic transport system** that allows **independent mobility to children, older people, and disabled and vulnerable people**.

Improving road safety is thus “not just about road safety” but about unlocking sustainable mobility as a whole.

Transforming transport beyond road safety

Implementing best road safety design practices fosters the transition to a more sustainable and inclusive society



3

Improve accessibility
for older and
vulnerable people

6

Reduce local pollution and
fight climate change

5

Promote healthy
lifestyles

1

Support safe and
sustainable public
transport

2

Alleviate pressure on
healthcare systems

4

Reduce traffic
congestion

7

Foster happier
neighbourhoods and
help raise safer kids

1 Incentivize safe and sustainable public transport

Moving by bus, train or metro is by far safer and more sustainable than private motorized mobility. Ensuring road safety therefore incorporates a shift from cars to public transport.

2 Alleviate pressure on healthcare systems

Hospitalization and emergency calls consequential to road traffic incidents put an extra-pressure on health systems. Improving road safety is crucial to ensure the correct functioning of healthcare.

3 Improve accessibility for older and vulnerable people

Roads are especially dangerous for older people and those with limited mobility. Making streets safer fosters their ability to move autonomously, supporting their independence and participation in social life.

4 Reduce traffic congestion

Best road safety practices pursue a shift away from private mobility, which is a major determinant of traffic congestion, causing loss of time (hence, productivity) and stress among citizens.

5 Promote healthy lifestyles

When roads are safe, more people choose active transport modes, such as cycling and walking, which, in turn, make roads even safer. Further, the shift to active mobility spreads the practice of physical activity, improving the well-being of citizens.

6 Reduce local pollution and fight climate change

A pivotal point of each road safety strategy is a shift away from private motorized mobility, which is a major determinant of poor air quality and significantly contributes to climate change.

7 Happier neighbourhoods and safer kids

Unsafe, congested roads are perceived as barriers, discouraging social interactions among citizens living a few blocks apart. A transport network designed with people at its centre strengthens solidarity and fosters the development of local communities.

Rethinking the urban environment is especially important to provide children with safe spaces to play and grow without concerns.



SUSTAINABLE DEVELOPMENT GOALS

TARGET 3.6

HALVE THE NUMBER OF GLOBAL DEATHS AND INJURIES FROM ROAD TRAFFIC CRASHES



TARGET 11.2

PROVIDE ACCESS TO SAFE, AFFORDABLE, ACCESSIBLE AND SUSTAINABLE TRANSPORT SYSTEMS FOR ALL, IMPROVING ROAD SAFETY

Potential Synergies

Integrating road safety into other policy areas

Ensuring the safety of roads is a responsibility shared across several sectors. Moreover, the principles of the recommended Safe System Approach to road safety are in harmony with many other societal objectives. The necessity of integrating road safety in other policy areas is ever more pressing. The United Nations' Sustainable Development Goals (SDGs) offer a valuable framework to understand the potential synergies and conflicts between road safety and other policy areas.

Road safety is explicitly addressed by SDGs 3 and 11, concerned with *Good Health and Well-Being* and *Sustainable Cities and Communities*. SDG 3 aims to ensure healthy lives and promote well-being for all at all ages. Acknowledging the heavy human cost imposed by road traffic crashes, the goal includes a specific target to halve the number of road deaths and injuries by 2030.

SDG 11 aims to make cities and communities inclusive, safe, resilient and sustainable. The crucial issue of urban mobility is directly addressed: seeking to realize a system providing access to safe, affordable, accessible and sustainable transport for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.

Besides these direct links between road safety and SDGs 3 and 11, many other potential synergies emerge. One important connection is with Goal 1, *End poverty in all its forms everywhere*, as road death and injury disproportionately affects vulnerable people living in the poorest countries of the world.

Most of these people are young workers who often represent the only source of income for their families. Ensuring the safety of roads thus contributes to fighting poverty by safeguarding the economic stability of fragile social groups.

Shared objectives also exist with SDG 8, which aims to deliver *Decent work and economic growth*, as road safety is a concern for many commuters worldwide, for whom it is important to ensure safe trips to and from work, as well as for professional drivers.

However, road crashes primarily affect vulnerable individuals, such as cyclists and pedestrians. In addition to the social and economic costs these users incur as a result of crashes, this reinforces a widespread sense of anxiety about road safety, deterring others from engaging in active mobility. In this respect, a strong link exists between SDG 16, *Peace, Justice and Strong Institutions*, which aims to eradicate any sort of violence, including road violence.

While the list of potential synergies could go on and on, it is worth highlighting a final link with sustainable transport. Best road safety practices, such as the promotion of active mobility and public transport, are also effective means to reduce the reliance on fossil fuels, local pollution and greenhouse gases. In these respects, the improvement of road safety presents promising synergies with SDG 13, *Climate action*, and strengthens its link with SDG 11, *Sustainable cities*.

Capacity development

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The potential for capacity development and education to foster the adoption of road safety practices and policies world-wide.



Capacity development for road safety

Low- and middle-income countries will face a decisive challenge in the coming years, with the ever-increasing motorization rate poised to further compromise road safety. In order to prevent an escalation in the number of casualties, it is pivotal to support countries developing appropriate strategies to counteract this phenomenon.

To accomplish this goal, developing local, competent road safety leadership is crucial. Thus, the focus on financing and capacity development for safe mobility is one of the core pillars of the Global Plan for Action on Road Safety 2021-2030.

Training a new generation of decision-makers and advocates on safe mobility is fundamental to develop awareness within the political consciousness, strengthen local institutions and transfer knowledge to low- and middle-income countries. In this

respect, *training* should not only be seen as the individual development of one's skills and abilities. Its impact should be seen under the broader lens of *train-the-trainer* principles, potentially contributing to the spread good practices across the whole system in which a trainee will operate.

Acting early on this educational process presents the unique opportunity to orient the development of countries' transport system towards evidence-based principles, promoting the diffusion of the Safe System Approach and supporting planning for active mobility.

It is in this area that DRSC aims to make a difference. The mission of DRSC is to provide high quality courses, tailored on the local needs of low- and middle-income countries and promoting good practices based on the Safe System Approach, a

globally recognized set of principles based on the concept of road safety as a responsibility shared by all the involved stakeholders, rather than by individual road users.

The next sections of this report will dig deeper into the mission, values and achievements of DRSC in delivering high quality courses based on the Safe System

“Capacity-development for road safety professionals working for the government, the private sector, civil society and research institutions *should be given top priority*, as the lack of specialist knowledge of creating safer roads, vehicles and road user behaviour, and for designing and operating a well-functioning post-crash systems is a major barrier in many countries.”

World Health Organization,
Global Plan for the Decade of Action for Road Safety

Delft Road Safety Courses

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**Activities, story,
projects and
numbers**



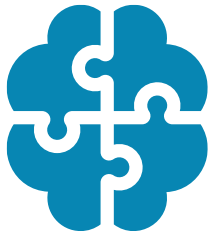


About DRSC



VISION

To nurture professional capacity in low- and middle-income countries to support the development and implementation of evidence-based road safety strategies and action plans that are relevant to each country's unique local context.



APPROACH

Delft Road Safety Courses focus on the core principles of the Safe System Approach and how this can be tailored according to local need. Participants are encouraged to think critically and use their own experiences in group discussions and peer learning.



GOAL

DRSC strives to develop and enhance participants' road safety research skills and empower them in contributing to structures that support the organization and governance of road safety management in their countries.



NETWORK

Through its vibrant alumni network, DRSC provides opportunities for research, cross-border networking and knowledge sharing for ongoing capacity development of participants, their organizations, and their countries.

Core Sponsor



Main Partners

roadsafety
forall.org

SWOV
WETENSCHAPPELIJK
ONDERZOEK VERKEERSVEILIGHEID


TUDelft



DRSC Story

DRSC started as a collaboration between Delft University of Technology, the Netherlands Institute for Traffic Safety Scientific Research, the Post Academic Education Foundation, and the Road Safety for All Foundation.

With support from the FIA Foundation and Sensys Gatso, DRSC organized its first annual road safety course.

2012

Before 2012

DRSC has its roots in the FIA Foundation road safety scholarship course.

DRSC is officially registered as a 'Stichting' according to Dutch Law, becoming a Netherlands-based NGO.

2016

2014

With support of the World Bank's Global Road Safety Facility, DRSC began organizing annual tailor-made training courses in Brazil, Cambodia, and Ghana.

2015

The FIA Foundation became the core donor of DRSC, supporting the annual course for road safety professionals from low- and middle-income countries.

2020

As a result of the COVID-19 pandemic, DRSC began offering more online learning. Today, in addition to the core annual course, DRSC offers continuous learning and capacity development opportunities for DRSC's alumni through online webinars and discussion forums.

DRSC in numbers

Since its inception in 2012, DRSC has been constantly delivering high quality courses to hundreds of professionals from all around the world.

DRSC has reached out to over 600 students coming from more than 90 countries all around the world.

The vast majority of alumni come from, or are active in, low- and middle-income countries. In particular, the impact of DRSC extends to the African region, Central and Southern America and South-East Asia.

21

Courses

600+

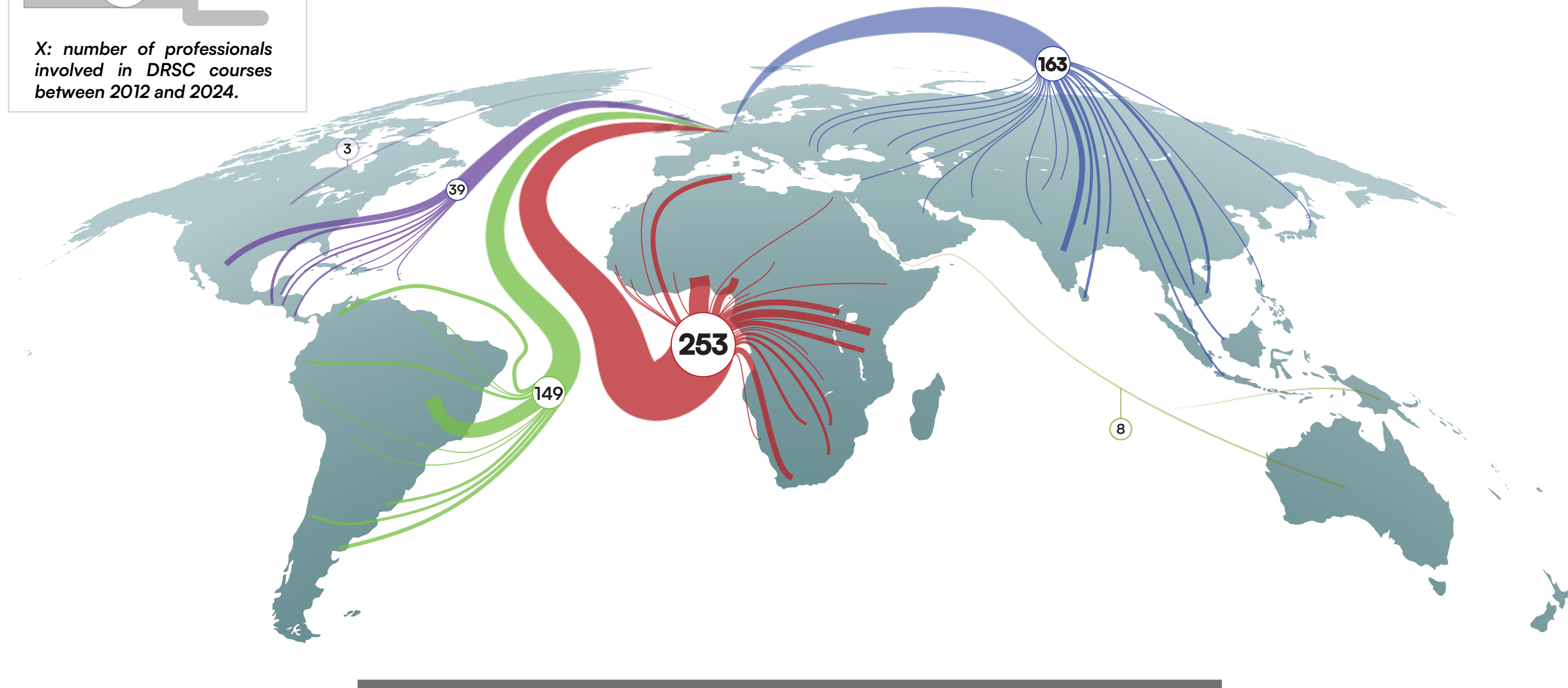
Graduates

90+

Countries

X

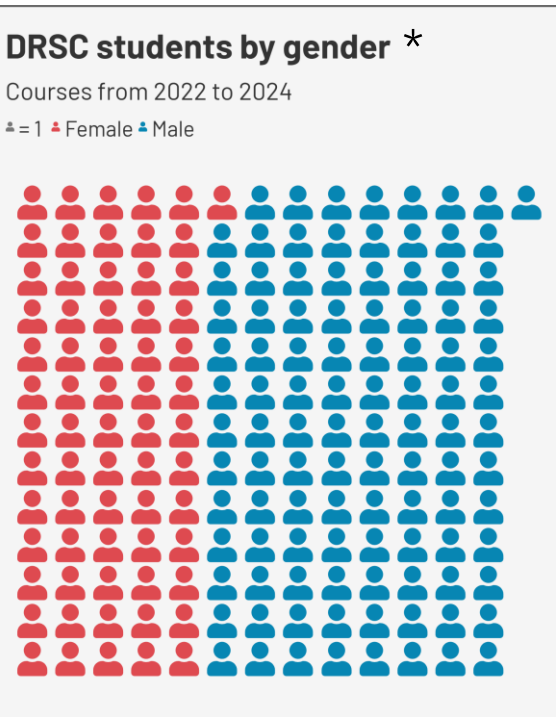
X: number of professionals involved in DRSC courses between 2012 and 2024.



DRSC has reached out to professionals from all world regions.

Widening the impact **and courses offer** of DRSC

Starting in 2012, DRSC has been constantly delivering its annual road safety course for low- and middle-income countries to a solid base of at least 20 students per year. Access to the course has been supported through the provision of scholarships to a selected number of participants. Since the Covid-19 pandemic in 2020, DRSC has moved some of its core modules online, extending the opportunity to take part in the course to professionals for whom travelling to the



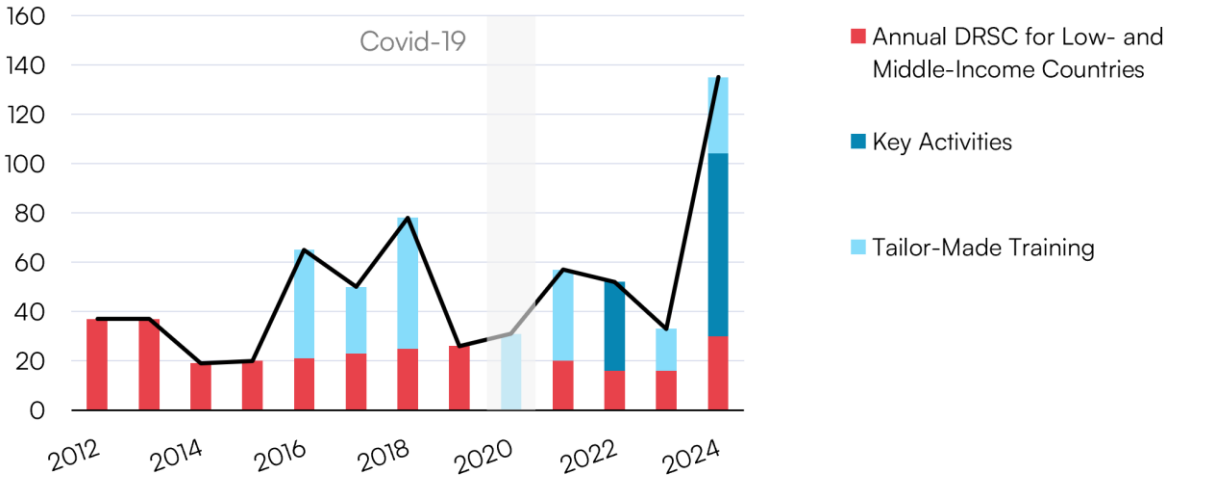
*as of 2024, DRSC forms do not yet include gender neutral options

Netherlands is difficult for practical or economic reasons.

In parallel, DRSC has widened its courses on offer, delivering webinars and training on specific themes such as research in road safety and the Safe System Approach.

Number of DRSC alumni -

DRSC has been involving an increasingly larger audience of students through the years, while widening its courses offer.



Courses offer

- Annual DRSC for Low- and Middle-Income Countries
- Key Activities
- Tailor-Made Training

DRSC also provides Tailor-Made Training to address specific organisations' and local needs.

DRSC's effort to improve access to its courses has resulted in a steady increase in the number of students involved. In 2024, DRSC lectured nearly 140 people, compared to about 40 in 2012. DRSC also supports gender equality in low- and middle-income countries: in the period 2022-2024, nearly 40% of participants were women.

Why people choose DRSC?

“I wanted to gain insight on road safety interventions and strategies for implementation”

“My objectives were to deepen my knowledge of road safety, build new relationships, and expand my professional network”

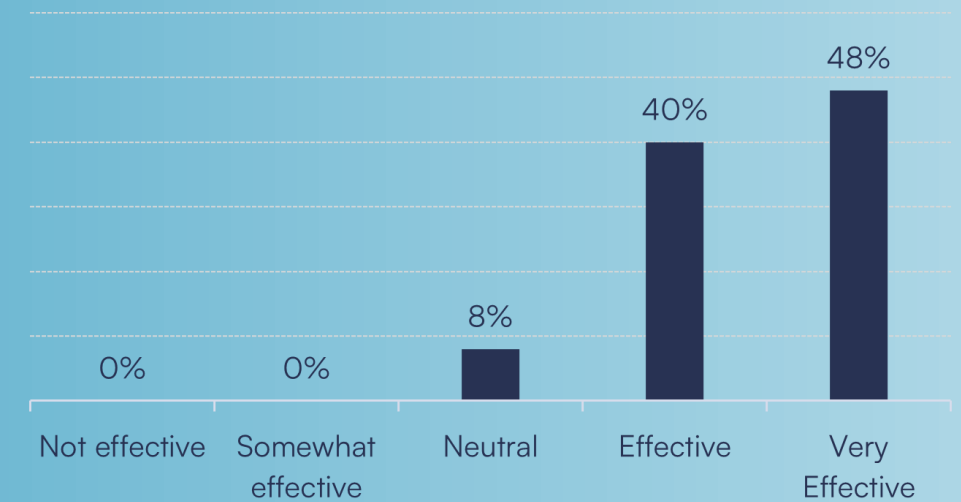
“I aimed to enhance my understanding of road safety principles, particularly the Safe System Approach, and to build practical skills in evidence-based decision-making”

“I aimed to enhance my ability to implement the Safe System Approach within my professional spheres of influence, focusing on education, capacity building and research”

“Understand how the Safe System Approach can be applied in low- and middle-income countries”

The professionals who attend DRSC courses expect to gain insight on road safety in low- and middle-income countries, learning how to devise strategies and interventions according to the principles of the Safe System Approach. Moreover, many recognize the value of building a network of people passionate about the topic.

How would you rate the course effectiveness?



The vast majority of alumni believe that DRSC courses are *Effective* or *Very Effective* in delivering the expected learning outcomes.

What makes DRSC unique?

“What makes it unique is the up-to-date material delivered by the speakers and their expertise in their respective topics“

“I think that having the opportunity to talk to people who have implemented the Safe System Approach on a national, regional and local level is very valuable”

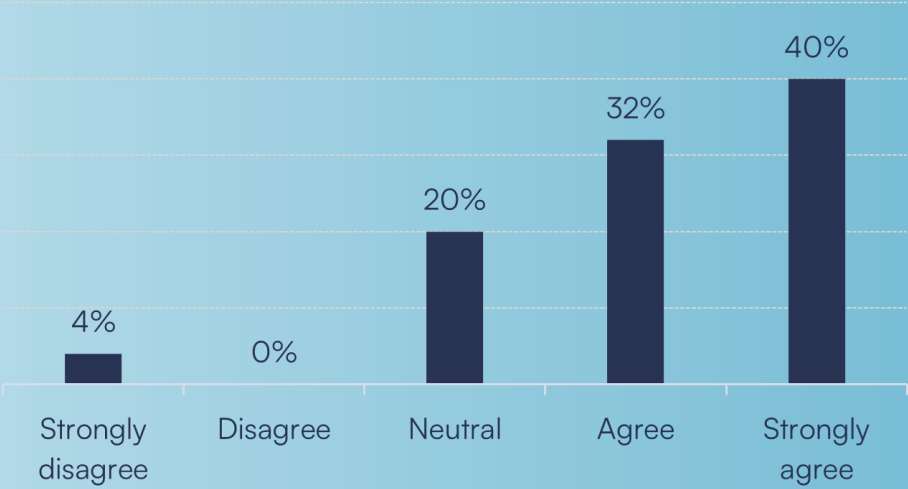
“It opens the eye about vision zero and road safety being a multisectoral responsibility”

“It taught me how to harness more information to be able to argue adequately about road safety and persuade political leaders“

“To me the DRSC course is truly unique because it gives the opportunity to learn directly from a country that has been a pioneer of the Safe System Approach”

“The DRSC course was very up-to-date with global issues, providing practical problems and solutions. It focused on the Safe System Approach and stood out by offering first-hand exposure to the Netherlands' world-leading road safety and cycling system.”

Did you use the Safe System more after the course?



There are several reasons why our alumni believe DRSC courses are unique. The recognised expertise of the teachers and the up-to-date material used for lectures are much appreciated by the students. Additionally, many of them think that DRSC courses broaden their vision of road safety as an interdisciplinary and multi-sectoral topic.

But a key characteristic which makes DRSC courses unique is the attention dedicated to the Safe System Approach. 72% of the interviewed alumni declared to have increased their use of the Safe System Approach after the course, proving the effectiveness of the course in fostering these road safety principles.

The ratings and quotes come from a survey conducted in 2025 on a sample of 24 alumni.

Activities of DRSC

The teaching effort of DRSC can be summarised in **three groups of activities**. The **Core Activity** of DRSC is the Road Safety Course for Low- and Middle-Income Countries, held annually and aimed at post-graduate professionals. Other **Key Activities** include specialised courses focusing on various topics, from the application of the Safe System Approach, to

active mobility, to research in road safety, and powered two-wheelers. As a final teaching activity, DRSC organizes **Tailor-Made Activities** together with alumni and partners. These courses are delivered locally and financed through project-based funds.

CORE Activity

Annual Road Safety Course for Low- and Middle-Income Countries.

KEY Activities

Specialised teaching activities focused on various topics, from the application of the Safe System Approach, to active mobility, to research in road safety, and powered two-wheelers.

TAILOR-MADE Activities

Teaching activities developed together with alumni and partners and delivered locally. These courses are financed through project based funds.



Courses on offer

Annual Delft Road Safety Course for Low- and Middle- Income Countries



The course is aimed at post-graduate professionals working in road safety and related fields and offers a holistic approach to the problem. Participants are trained to understand the origin of crashes and to design effective safety management strategies based on the Safe System Approach and the established and validated knowledge in the field.

 TU DELFT or Online

2 weeks



Road Safety Research & Policy Making in Low- and Middle-Income Countries



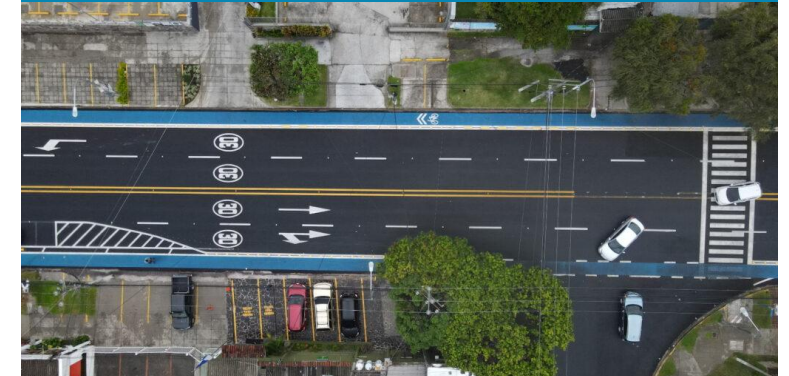
The course brings together *Research* and *Policy* professionals in the field of road safety to discuss and share best practices in linking knowledge and action. The final goal of the course is to provide participants with the necessary means to put evidence-based policy making into practice.

 Online

15 hours



DRSC Alumni Course: Pro-active Road Safety Assessment



This specialized course is aimed at participants involved in the preparation and development of infrastructure projects, policies, campaigns, and/or plans where it is necessary to understand the audit and assessment process and have insight into the role that they play in improving road safety.

 Online

15 hours



Courses on offer

Safe System and Active Mobility



The aim of the course is to provide road and mobility engineers, designers, planners, decision-makers and advocates with both theoretical knowledge and practical instruments needed to work on road safety issues in the context of their own location, focusing on active mobility. The course aims to give a robust introduction to the Safe System Approach and its relevance to promote active

 Online

15 hours



Delft Road Safety Course for Africa



In 2017 and 2018, Delft Road Safety Courses organized two dedicated training courses for road safety professionals in Africa. The course aimed to build the capacity of road safety professionals by sharing knowledge, experiences, and learning of how to develop an effective road safety strategy and implement a local action plan.

 Accra, Ghana

Tailor-made Learning



DRSC also works with local organizers in low- and middle-income countries to offer tailor-made courses and educational support to develop a curriculum meeting local needs and involving local expertise.



Tailor-made learning

Tailor-made activities represent an important part of DRSC's efforts to make best road safety principles widespread across the world. As they are rolled-out locally in low- and middle-income countries, these opportunities bring road safety principles to the places in which they will be applied, addressing the specific needs of the area.

Since 2012 DRSC has delivered more than 10 tailor-made courses in the following world areas:

- Abu Dhabi
- Ghana
- Africa
- Latin America
- Cambodia
- Eastern Europe
- Asia
- Oceania





The approach of DRSC **towards teaching**



DATA-DRIVEN, EVIDENCE BASED

DRSC uses methodologies and materials that are evidence-based and scientifically sound, supporting a holistic approach to data collection, problem analysis, research and innovation, monitoring and evaluation.



LEADING EXPERTS

The courses of DRSC are delivered by world leading researchers and professionals with experience of working in and with low- and middle-income countries to improve road safety and sustainable mobility.



PEER LEARNING

The learning environment within DRSC encourages professionals to exchange knowledge and share experiences. This helps in identifying creative, locally relevant solutions to common challenges and issues.





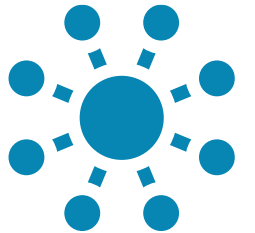
TAILORED FOR LOW- AND MIDDLE-INCOME COUNTRIES

Learning within DRSC is based on the Safe System Approach and how this can be tailored and adapted to local contexts, with a focus on the specific challenges faced by low- and middle-income countries.



TRAIN THE TRAINER

DRSC supports local development and the governance of road safety management by developing capacity amongst practitioners and professionals who will return home and share their learning with others.

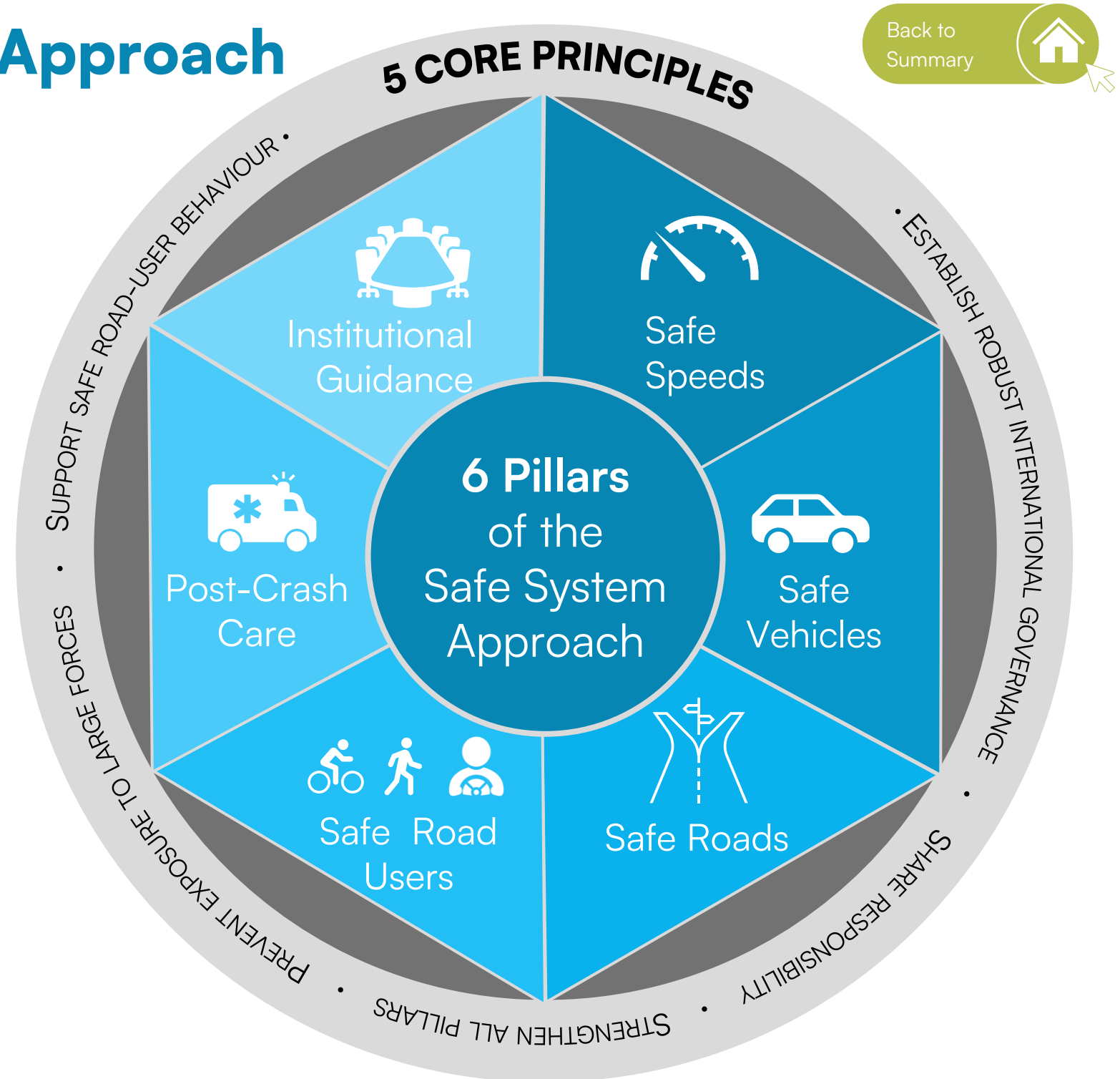


Teaching the Safe System Approach

Delft Road Safety Courses bases its teaching on the Safe System Approach, which is regarded as best practice to reduce road traffic casualties. Evidence from the revision of current road safety programs by the WHO have shown that the greatest gains in terms of lives saved have been achieved in those countries aligning their policies to this approach.

Other traditional lines of action strive to improve the behaviour of single road users, while the Safe System Approach acknowledges human error, it seeks to counter these mistakes through forgiving road design and management systems that are less dependent on individual choices. It sets out **Six Core Principles**, here briefly introduced, and acknowledges that the human body has a limited ability to tolerate crash forces before harm occurs. The road system should thus **Prevent exposure to large forces**.

While the Safe System recognizes that *humans can make mistakes*, and that the system should thus be forgiving, it nonetheless, holds as one of its key components, **Support to safe road-user behaviour**, in order to minimize these errors.



In the Safe System vision, road safety is a **Shared responsibility** among all the entities who design, build, manage and use roads and vehicles, and provide post-crash care. All have the duty to prevent crashes resulting in serious injury or death.

This participation of different stakeholders is key to realizing another core principle of the Safe System, which is the **Strengthening of all the road-safety pillars**. Under this perspective, reinforcement of all the components that support road safety have a multiplying effect: if one part of the system fails, road users are still protected.

Finally, the Safe System welcomes as one of its key components the **Establishment of robust international governance**, which is required to organize government interventions in research, funding, legislation and regulation with a maintained focus on the delivery of improved road safety.

The Safe System Approach translates into a series of concrete design actions. Examples from early adopter countries like Sweden and Netherlands include: low speed limits in areas where vulnerable road users and traffic mix, physical separation of fast moving traffic from vulnerable road users, safe vehicle design, and many others.

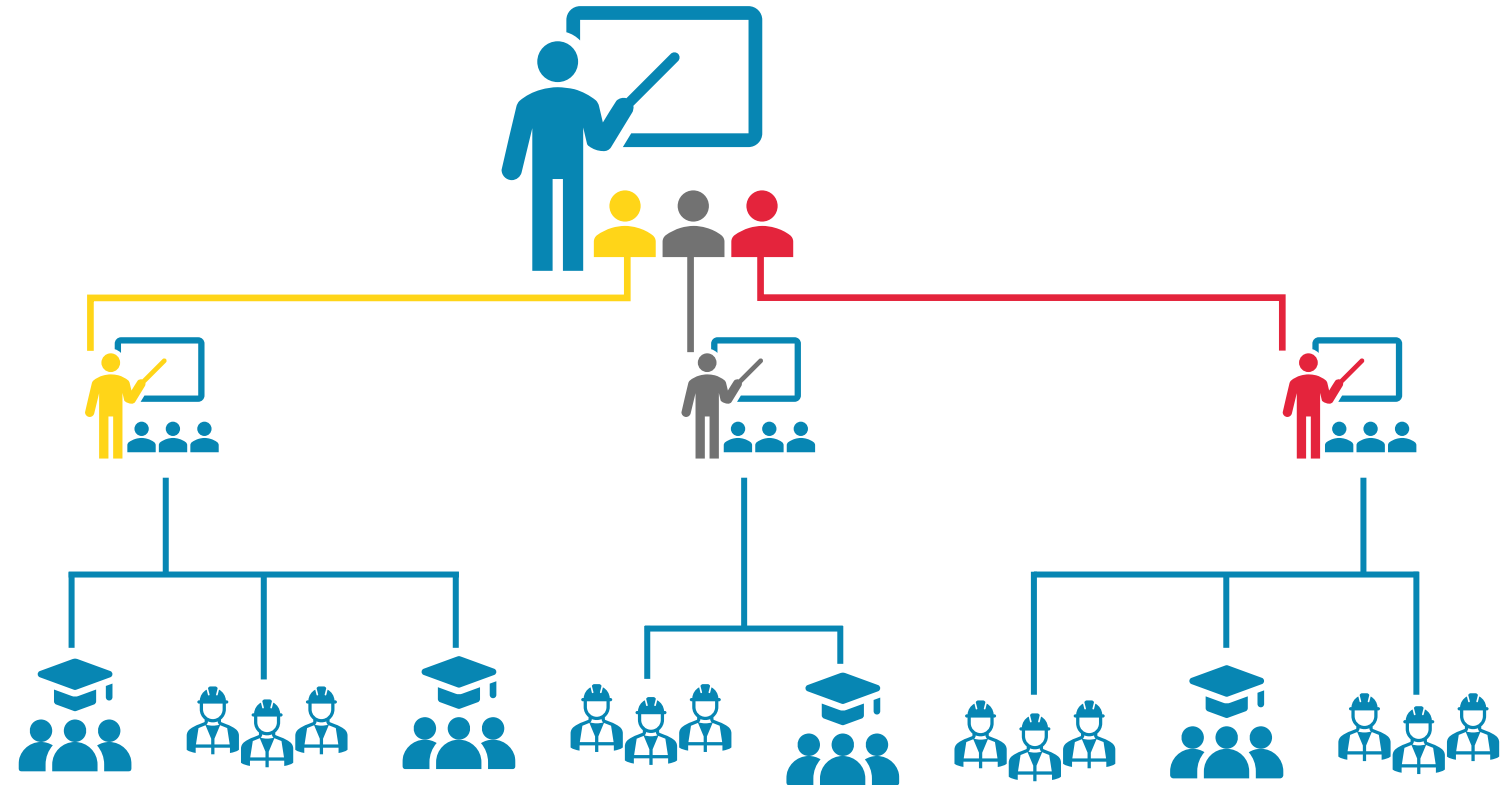
The range of actions identified by the Safe System Approach can be summarized into **6 safety pillars**:

- 1 **Safe Speeds:** Human bodies are unlikely to survive high speed crashes. It is therefore pivotal to reduce the kinetic energy of the transportation system, thereby limiting impact forces, providing drivers additional time to stop and improve visibility.
- 2 **Safe Vehicles:** The design of road vehicles should be oriented to minimizing the occurrences and severity of collisions, incorporating latest technological innovations.
- 3 **Safe Roads:** Once acknowledged that people can make mistakes, it is fundamental to design roads (and roadsides) able to accommodate these errors.
- 4 **Safe Road-Users:** People make mistakes, but good drivers help in keeping the road safe. Road users need to be properly trained and informed of the road rules.
- 5 **High-Quality Post-Crash Care:** Whenever crashes eventually happen, fatalities and serious injuries can still be avoided through swift and compete medical assistance. Medical facilities and ambulance services should therefore be strengthened and granted quick access to road crash sites.
- 6 **Road safety management:** Road safety activity is based on a funded, integrated, multi-sector strategy and action plan and appropriate regulation.

Train the trainers

Participation in DRSC courses represents an excellent opportunity to enrich one's set of skills and knowledge. However, the benefits of the training cannot be reduced to the education of expert professionals.

In order to understand the broader benefits of the training, it is necessary to look at the context in which these individuals will operate. Most of DRSC's alumni belong to road organizations and institutions based in low- and middle-income countries. Once they have completed the course, these experts, trained according to the best practices in road safety, will collaborate with other local experts, exchanging ideas and further transferring the body of knowledge accumulated during their experience at DRSC, becoming, themselves, trainers.





The global impact of DRSC

[Back to
Summary](#)



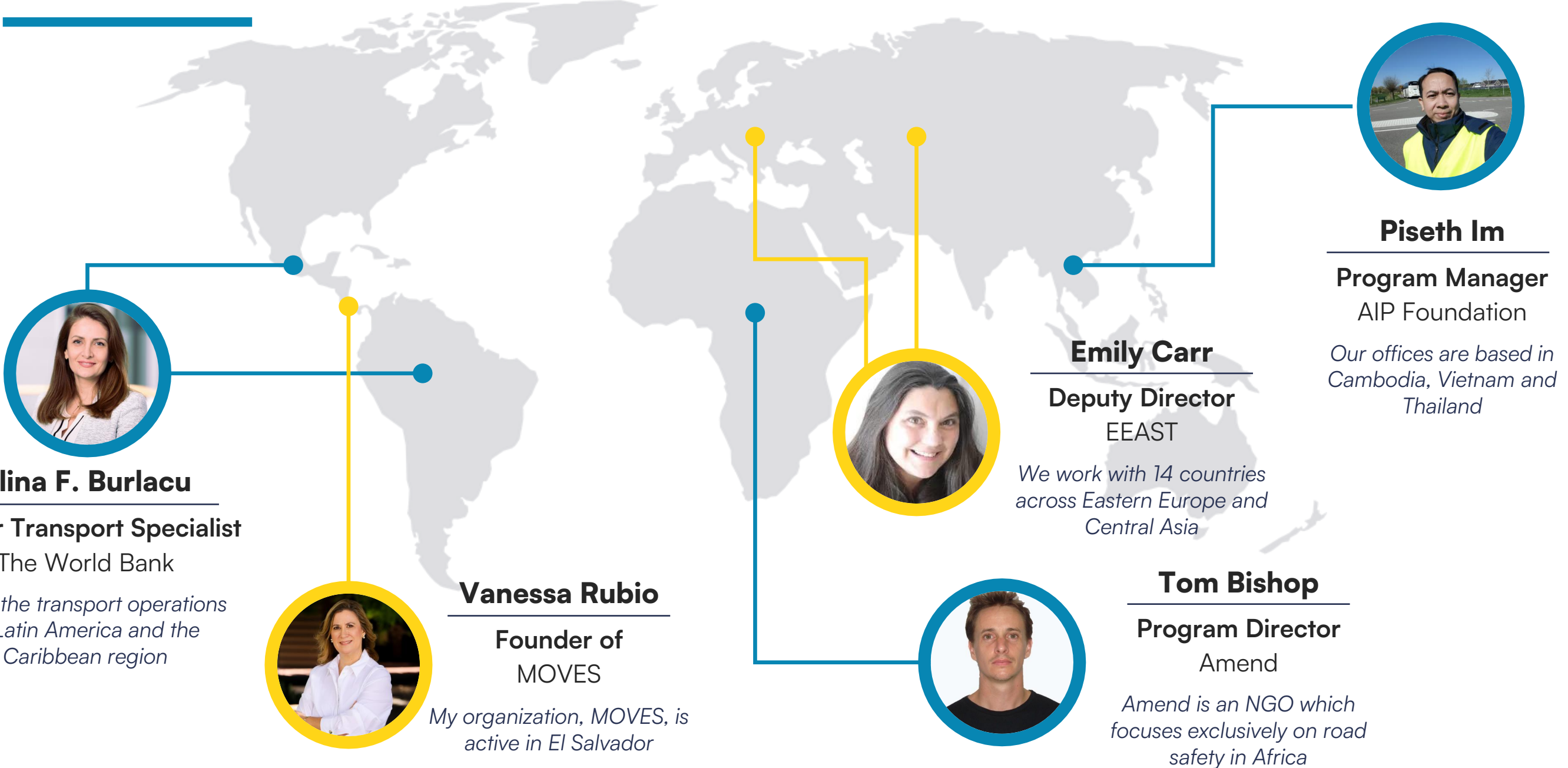
**Empowering people
around the world to
contribute to road safety
by building a strong
network of confident
and competent
professionals.**





Understanding the **impact** of DRSC courses

Through the words of ten alumni from all over the world





Ahmed Ksentini

Road Safety Expert, Academic lecturer

KSR, World Bank, UNOPS & UNDP

We develop and teach road safety auditing and management programs while consulting on international road safety strategies.

Zacharie Ngoumbe

Secretary General

*Economic & Social Council,
Cameroon*

We design and oversee national road safety strategies, reducing traffic fatalities and advising on transport policy at the highest governmental level



Prerana Arona Singh

Professor and Director

*Centre for Road Safety
Management Nirwan University
and Asian Road Safety
Academy*

I work on road safety education, advocacy, and policy design in India, focusing on capacity building and research.



Natalie Tanan

**Directorate Generale of
Highways**

*Ministry of Public Works and
Housing Indonesia*

We work on improving road safety through guidelines, audits, inspections, and dissemination of safety practices to municipalities across Indonesia.

Robert Oyoo

Program development officer

*Ministry of Roads and Transport, Kenya —
Kenya Institute of Highway Technology*

I train engineers and technical officers in road safety and coordinate regional transport safety programs

What is your **role in road safety?**

Emily Carr

I work for EASST, the Eastern Alliance for Safe and Sustainable Transport, leading on a number of projects relating to children's road safety, like safe school zones. We work with several NGO partners across Eastern Europe and Central Asia, and I'm the main contact point for them.



Alina F. Burlacu

I have been interested in road safety since I was a student. I am a civil engineer by training but I had different roles in my profession. After leading the development of the National Health Strategy for Romania, I started a position in the World Bank in 2017. Now I'm working on improving coordination between the Bank and other international institutions in the Latin and Caribbean region.



Tom Bishop

In 2006 I moved to Africa and started doing some independent work in the field of transport. Then I was advised that, if I wanted to make a difference, I had to work on road safety. After few years I was contacted by Amend and started working on road safety with more than 20 countries in Africa. Now I work as program director, still for Amend, and my main role is the development of proposal in the African region.

Vanessa Rubio

I have always been a passionate advocate for road safety. After many years spent on the board of the Automobile Club of El Salvador I saw that we needed special attention to road safety, because the country was becoming very dangerous. So I founded my own organization, MOVES, with which we empower road safety supporting public policy.



Piseth Im

The AIP Foundation is a road safety organization working on engineering prevention in Cambodia, Vietnam and Thailand. Our mission is to improve road safety, reducing fatalities and casualties. Our focus is on ensuring safe transport for different groups of people and communities, from children to adults and factory workers.

Ahmed Ksentini

I began my career as an academic in Tunisia, teaching and researching engineering and transport safety. Over time, I expanded into consulting, working on road safety diagnostics, auditing, and infrastructure projects. My work spans national universities, collaborations with international firms, and assignments with the World Bank, all focused on safer transport systems.

Robert Oyoo

I was trained as a civil engineer and built my expertise in the Ministry of Roads and the Institute of Highway Technology in Kenya, where I now work mainly as a principal lecturer. I have been involved in international projects across the world and since a few years I also work as a freelance consultant as well as with IT Transport in the UK.



Zacharie Ngoumbe

I am an engineer in statistics and economics and built my career in Cameroon's Ministry of Transport, where I became Director of Land Transport and Inspector General. Later I was appointed Secretary General of the Economic and Social Council, where I have overseen road safety strategies, coordinated with international partners, and guided national policy.



Prerana Arona Singh

I am a road crash survivor myself, having been saved by an helmet during a 2-wheeler crash when I was a graduate student. I started working in 2004 and developed my path at the intersection of management, advocacy, and road safety. Today, I lead a university center and an NGO, combining education, policy design, and community outreach to strengthen the road safety ecosystem in India.



Natalie Tanan

I have served at the Ministry of Public Works and Housing in Indonesia since 2006, initially focusing on transport infrastructure. Gradually, my career broadened to include road safety leadership, where I design and apply guidelines for pedestrian and cyclist safety, perform audits and inspections, and spread safety concepts across municipalities.

When and Why did you attend the DRSC?

Emily Carr

Before moving to EASST in 2015, I had worked for a good governance program, building a good international and development background. But I was not working in road safety. I attended the course in 2017 and that was one of the key bits of my training.



Alina F. Burlacu

I attended DRSC in 2015, after my Ph.D in civil engineering. I had technical training, but through DRSC I got exposed to other pillars of road safety. The scholarship really made the difference, they were able to reach out and say 'Look, we really like your profile, we think you're good'.



Tom Bishop

When I moved to Africa and started working with Amend my background was in urban studies and I didn't have any technical training in road safety. I felt the need for a deeper knowledge and a more professional qualification, so I attended the FIA Foundation course on road safety [the precursor of DRSC] in 2013.



Vanessa Rubio

I like to be trained. Moreover, building links, networking with people from around the world is an important part of my job. So I chose to attend the DRSC in 2022, because it was the most visible course on road safety and offered a scholarship.



Piseth Im

I have worked at AIPF since 2012 but my background is in Education Science. I attended the DRSC course in 2023 in order to build more knowledge and capacity in the field of road safety. I was able to take part in the course, both online and face-to-face, thanks to the scholarship.

Ahmed Ksentini

I attended the Delft Road Safety Course in 2021, thanks to a scholarship, to strengthen my expertise beyond engineering practice. The course allowed me to connect academic work with consulting, aiming to integrate international safety strategies into country-specific transport projects.

Robert Oyoo

I took the course in 2019 with a scholarship from the organizing committee, shortly after starting my Master's studies. I wanted to specialize in road safety, shifting from structural engineering to protecting vulnerable road users, which shaped my thesis and later projects.



Zacharie Ngoumbe

I attended in 2017 while heading up road safety in Cameroon's Ministry of Transport. A former alumnus recommended the course, and I was able to attend with partial scholarship support, which provided the theoretical foundation to strengthen national safety strategies.



Prerana Arona Singh

I attended in 2016 with a scholarship, driven by a commitment to strengthen road safety in India. After years of advocacy and NGO work, I sought structured learning to guide policy, education, and post-crash care, helping me scale my impact from local initiatives to national reforms.



Natalie Tanan

I joined the Delft Road Safety Course in 2016 to deepen my knowledge while serving at the Ministry of Public Works. I wanted to move beyond engineering fixes and learn systemic approaches, enabling me to design guidelines and influence safety practices nationwide.



DRSC trains people to **make a difference**

In all its years of activity, DRSC has contributed to empowering passionate people with the technical and multidisciplinary skills needed to tackle the problem of road traffic injury with a broad perspective. The confidence developed after the course has helped these people progressing in their careers and making the difference in their area.

“

Before I joined the DRSC course I was in a technical position. There I got exposure to other pillars of road safety and how it should be approached as an interdisciplinary field.

”



“

It was very academic but in a good way, the teachers mastered their field. It was very robust. It was very thorough. But engaging. And well thought out.

”



“

Attending the DRSC course was really important for me. I got a lot of usable knowledge that I could apply through my career and to the situation in my country.

”



“

In the DRSC course there are a lot of things you know that you know. But sometimes it refreshes you. I still have my book from the session. Still have it, still use it.

”



“

The DRSC changed my way of thinking. Let's progress on that and make change in the university, in the professional world and in capacity building capacity. This is for me the only way to change things so that people start thinking in a different manner.

”



“

This course is the best one because it is a combination of theory and real world examples. The teachers are very experienced and explain things in a way that is practical and easy to understand. It really changed my point of view on road safety; it changed my mindset a lot for sure.

”



“

What I find different in Delft course is that what was shown was quite global. You could apply it everywhere. It was adaptable, very scientific, and you can put it in your own context.

”



“

They made us visit different parts of the Netherlands; [it was] my first chance to discuss road safety in a global scenario. After coming back, I contributed a lot in policy designing and running the helmet law. This learning from Delft helped me in my journey and how to make policymakers aware.

”



“

This course to me, this was everything because this changed the direction of my career. [...] I've always wished that one day my child will study in Delft just because of the experience I had there.

”



Beyond knowledge: **building links**

The biggest recurring theme mentioned by the alumni is the role that the course had in building links among fellow alumni. DRSC supports the creation of an international community of people passionate about road safety, fostering the opportunity to share ideas and collaborate on impactful projects across the world.



“

I think the most valuable long-term impact was about relationships. After all these years, I still see the same people. Feeling part of a community that has continued to be committed to road safety gives me a sense of reassurance.

”



“

We had speakers from all over the world. We had participants from all over the world. The networking events offered an opportunity to bond with people passionate about the topic of road safety.

”



“

The course was particularly useful to create a cohort of people working in the same area. We're still in touch with each other, sharing what we're doing, which is very positive in terms of technical knowledge.

”



“

The networking opportunities were very important for me.

You got the chance to meet both professionals and leaders.

”



Inspiring and spreading knowledge

The mission of DRSC goes beyond teaching the technical aspects of road safety. Several alumni reported of having been positively inspired by the course's presenters and fellow students. After completing the course, all of them in turn have been involved in teaching activities, contributing to spread their learning to their colleagues and partners.

“

Seeing presenters from different institutions.

For me that made a big difference.



“

That is also when I realized that it is not necessarily the information that you are sharing that is important, but how you are able to connect with your audience and make them feel the content of what you are saying.

“

”

They said ‘you are going back to your country, and they are going to tell you no, no and no. You have to push, push and push. Do not stop because that is what you have to do.’

Meeting people with similar experiences from all over the world made me realize ‘This is more than just what I’m doing’.



”

”

“

We work with a lot of partners across the region, trying to advance our knowledge and sharing it with them to deliver effective capacity development projects.



We like to make sure that our projects have that kind of ripple effect, going out across our partners.

”

“

We don't have a school, but training is part of our job.

Sometimes we organize sessions, through volunteering, especially for motorcycle training.



”

“

I am glad of the opportunity to share my knowledge with my colleagues, university students, the community and the stakeholders.



”

Inspiring and spreading knowledge

“

I suggested to some colleagues teaching in the mechanical department to investigate crash tests. They weren't very interested and asked me for guidance. I told them what I learned in the Delft course, shared presentations and documents, and now every year they ask me to work with them and teach together

”



“

I always still refer to the Delft course materials.

I used those lessons when training engineers in India on safe system approaches and post-crash care.

”



“

We could ally theory with practice. I even stayed connected with lecturers, tried projects with them in Cameroon, and also connected with global partners like the UN Secretary in charge of road safety.

”





What projects have the interviewed alumni worked on after attending the courses?



**National Road Safety Strategy for Romania
Rehabilitating Guyana's Road Infrastructure**



National Road Safety Strategy



**The Wheels of Change:
Safe and Sustainable Motorcycles for
Sub-Saharan Africa**



**Ibero-American Congress on Mobility
and Road Safety**



**Occupational Safety for Garment Factory
Workers in Cambodia**



**Road Safety Education Pack
Safe School Zone Policy Change**



IRAP Methodology Training



**Training engineers from the Highway
Department on Safe System approach**



**Bus Rapid Transit (BRT) in Dakar, Senegal
Mobility within the Lome-Ouagadougou-
Niamey (LON) corridor**



**Cycling, walking and Road Safety
Guidelines in Indonesia**



National Road Safety Strategy for Romania

The National Road Safety Strategy for the period 2016-2020 had as major objective to halve the number of deaths from road accidents by 2020 compared to 2010.



“

The part of the course that helped me the most was the multidisciplinary approach. I actually created working groups as we were taught. Putting everybody around the same table and being able to discuss with education, health and so on.

”



It was the **1st** road safety strategy adopted by the Romanian Government

Rehabilitating the Road Infrastructure in Guyana

The project aims to support Guyana in upgrading the country's road infrastructure, ensuring it is better equipped against natural hazards and to provide safer mobility for people.



“

We've developed a framework with 9 criteria for road prioritization for investments, including road safety, climate vulnerability, access to schools, access to hospitals, access to tourist facilities.

So, making sure that we provide safe connectivity and climate resilience.

”



Pictures come from previous projects, as the Guyana's one was only recently approved.

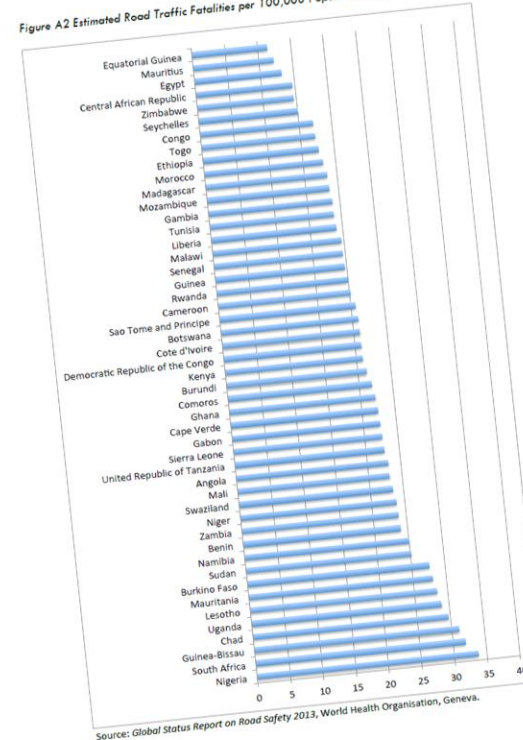
National Road Safety Strategy in Cameroon

Cameroon's National Road Safety Strategy includes building capacity for infrastructure safety assessments and implementing road safety management. Key areas of focus are strengthening institutional governance, implementing a Safe System Approach to road design, supporting safe road-user behavior, and developing national data systems for better accident management.



I think the impact was great as we succeeded in renewing the National Road Safety Strategy in Cameroon. It was a combination of factors, but I think my training in Delft was part of the element that counted in favor of such combination.

Figure A2 Estimated Road Traffic Fatalities per 100,000 Population in Africa (2010)



Source: Global Status Report on Road Safety 2013, World Health Organisation, Geneva.

Annex 3 Global Road Safety Facility checklist on Lead Agency role and institutional management functions, within overall road safety management review³⁰

Checklist: Lead agency role and institutional management functions				
Questions	Yes	Partial	Pending	No
Does the lead agency (or de facto lead agency/agencies) effectively contribute to the results focus management function?				
• Appraising current road safety performance through high-level strategic review?				
• Adopting a far-reaching road safety vision through longer term?				
• Analyzing what could be achieved in the medium term?				
• Setting quantitative targets by mutual consent across the road safety partnership?				
• Establishing mechanisms to ensure partnership accountability for results?				
Does the lead agency (or de facto lead agency/agencies) effectively contribute to the coordination management function?				
• Horizontal coordination across central government?				
• Vertical coordination from central to regional and local levels of government?				
Specific delivery partnerships between government, non-government, community and business at the central, regional and local levels?				
• Parliamentary relations at central, regional and local levels?				
Does the lead agency (or de facto lead agency/agencies) effectively contribute to the legislation management function?				
• Defining the scope of the legislative framework?				
• Identifying legislation needed for the road safety management?				
• Prioritizing legislation?				
• Allocating resources for road safety?				
Does the lead agency (or de facto lead agency/agencies) effectively contribute to the funding and resource management function?				
• Ensuring sustainable funding?				
• Establishing procedures for funding?				
• Allocating resources?				



The Wheels of Change: Safe and Sustainable Motorcycles for Sub- Saharan Africa

The report offers, for the first time, a comprehensive review of all the good and bad issues about motorcycles in Africa, launching an Action Agenda which highlights the highest-priority opportunities to save lives.



“

Another big area of our work is around motorcycles and motorcycle safety.

Our focus there is about training.



”



+50% of road deaths concern motorcycle riders in some African countries.

More than half of injured child pedestrians are hit by a motorcycle.

Ibero-American Congress on Mobility and Road Safety

The congress is a forum for meeting and debating among road safety professionals from municipalities, private companies, the government, multilaterals and the youth, with the aim to establish a promotional window on awareness and responsibility for the improvement of public policies.



“

We have an annual event with panel discussions.

In 2023 we had eight international speakers. We engage the private and public sector, municipalities and NGOs.

And we always have someone from the government.

”

Jean Todt, UN Special envoy for Road Safety, at the 2023 congress.



Vanessa takes the stage at the 2024 Congress.

Every year since 2020 MOVES has been organizing the annual Ibero-American Congress, engaging a wide public of road safety professionals. In 2024 the Congress gathered **over 230 people**.

Occupational Safety for Garment Factory Workers in Cambodia

In the context of the *Garment and Footwear Sector Road Safety*, this project aimed to improve the safety of commuting workers in five factories.



“

We also work on commuting safety programs for workers.

We promote our shared knowledge. That's why I work with factories to produce road safety polices.

So, this is the real impact from what we have learnt so far.

”



In Cambodia, an estimated **600-700 thousand** workers are employed in the garment and footwear sector.

80% of them are women.

Road Safety Education Pack

The Road Safety Education Pack is a global teaching resource that provides stimulating and engaging activities to introduce road safety messages and behaviours to kids.



This was one of the projects I was working on right after the course.

I remember I worked with one of my fellow course members to translate it into Arabic. Then he employed another member of our cohort.

In the end, it was four of 'us' working on the project.



Over **30'000** children reached

Translated into **12** languages

Won the **Prince Michael International Road Safety Award**



Safe School Zones

The project aims to improve the safety of school roads in Eastern Europe and Central Asia, advocating for speed reduction and 30 km/h zones.



“

We've had about 800 school zones changing their speed limit, adopting traffic calming elements and implementing 30 km/h areas.

”



IRAP methodology training in Nairobi

A 3-day workshop was organized in 2023 with several partners to deepen understanding of iRAP standards and their application in assessing road safety. This involved an analysis of survey data identifying safety deficits and potential improvements.



“

I worked with the Faculty for Transport and Traffic Sciences of the university of Zagreb as a local transport expert.

I think this is one of the most significant projects that I have contributed to, and it has changed the way we do things concerning road safety.

”



Training engineers from the State Highway Authority on the Safe System Approach

33 officers participated in a seminar aimed at introducing new approaches which can be used in road design to minimize road fatality on Jharkhand roads. This project perfectly exemplifies the 'train the trainer' principle at work.

“

My work was to train the engineers who are working on the state highway system and explain them how safety criteria can be included in such design, and that different users of the road should be included in those elements.

”

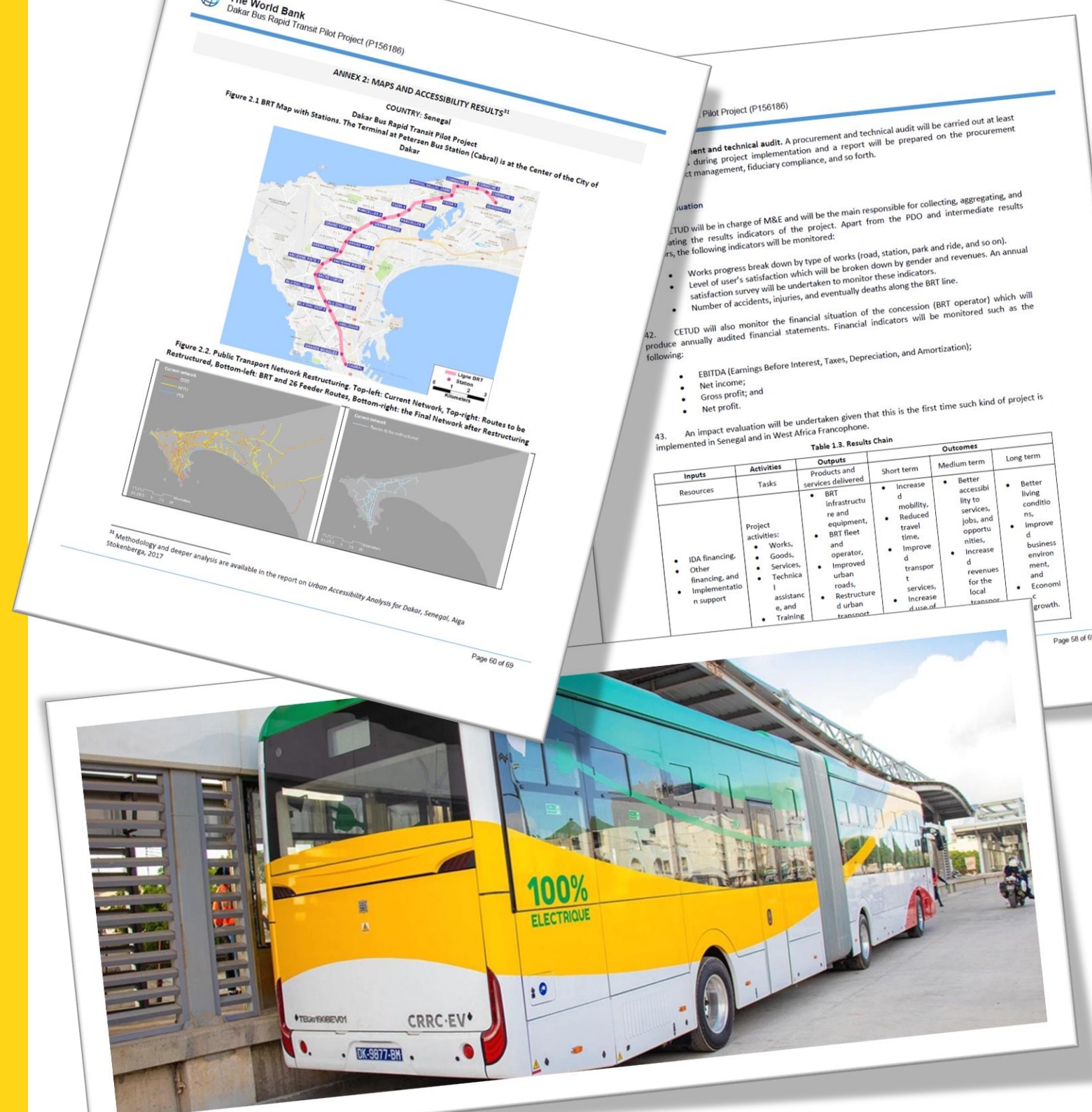


Bus Rapid Transit (BRT) in Dakar, Senegal

The Project Development Objective (PDO) is to enhance urban mobility between Dakar and Guédiawaye through the development of a BRT corridor, so that the influenced population will have access to a safe, reliable, affordable and less pollutant mass-transit transport system.



“ They asked me to define a strategy using the full Safe System Approach. So we've defined the strategy for children, for young people, for older people and so on. So this was the first project in which I was very happy to apply what I had learned during DRSC. ”



Mobility within the Lome-Ouagadougou-Niamey (LON) corridor

The development objective of the Lome-Ouagadougou-Niamey (LON) Economic Corridor Project for Burkina Faso, Niger, and Togo is to improve regional connectivity and socio-economic community infrastructure along the corridor between the capital cities of Togo, Burkina Faso, and Niger.



I am trying to help the unit managing the project to define components for road safety in which we integrate the human factor, the vehicles, the infrastructure, the environment, the speed enforcement, the load.

I am working more on strategic action, more than defining technical action on the road.

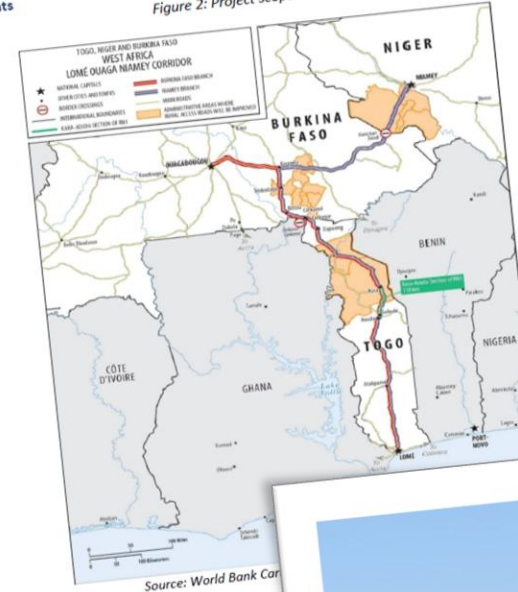


- (ii) Travel time for containerized freight on the corridor from ship arrival at the Port of Lome to final clearance in Ouagadougou (days);
- (iii) Reliability of travel time for containerized freight on the corridor from ship arrival at the Port of Lome to final clearance in Niamey (days);
- (iv) Reliability of travel time for containerized freight on the corridor from ship arrival at the Port of Lome to final clearance in Ouagadougou (days).

- b) **Improved socio-economic community infrastructure:**
- (i) Population of beneficiary communities able to access a local market by motorized transport within 30 minutes (aggregated by participating country) (percent).

B. Project Components

Figure 2: Project scope



Source: World Bank Corridor



Cycling, walking and Road Safety Guidelines in Indonesia

The guidelines set national technical standards in Indonesia for evaluating walkability, designing inclusive pedestrian facilities, and planning safe bicycle infrastructure to promote sustainable, accessible, and equitable urban mobility.



“After the course I developed within my organization several guidelines on cycling, walking and road safety. This is the chance for me to disseminate what I learned from DRSC not only within the central government, but also to municipalities all over Indonesia.”

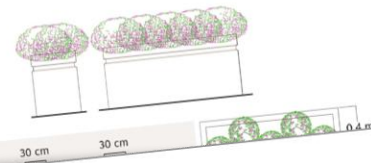
4.2.6.3 Jalur Sepeda Terproteksi dengan bak tanaman (Planter box)
Bak tanaman (planter box) dapat dipasang sebagai proteksi dari jalur sepeda tipe A. Dimensi bak tanaman adalah 1,2 m x 0,4 m dengan pemasangan jarak antar bak tanaman adalah 30 cm sebagai fungsi tali air



Gambar 15. Perspektif Jalur sepeda dengan proteksi Bak Tanaman (Planter Box)

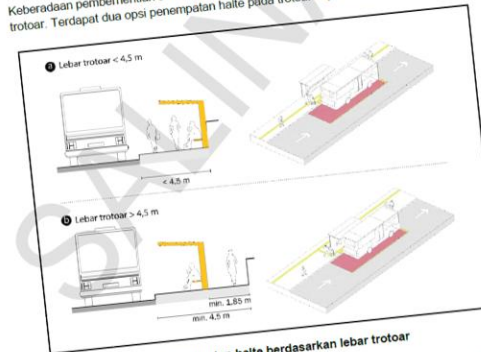


Gambar 16. Tampak Atas Proteksi jalur sepeda menggunakan Bak Tanaman (Planter Box)



Gambar 7 - Contoh halte yang terletak di belakang jalur pejalan kaki

Keberadaan pemberhentian sementara atau halte tidak boleh mengurangi lebar efektif trotoar. Terdapat dua opsi penempatan halte pada trotoar seperti pada Gambar 8.



Gambar 8 - Penempatan halte berdasarkan lebar trotoar

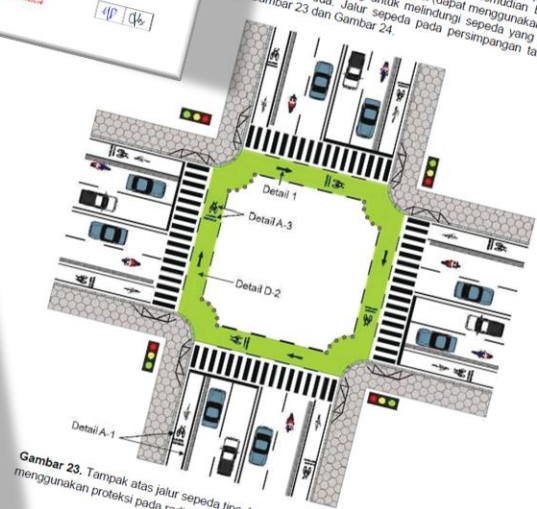
Penempatan halte juga perlu memperhatikan keberadaan jalur sepeda untuk meminimalisir konflik, penempatan jalur sepeda tersebut terbagi ke dalam beberapa tipe seperti pada Gambar 9.



Gambar 1 - Ilustrasi gambar trotoar dengan ketinggian sama dengan badan jalan



Gambar 2 - Trotoar dengan ketinggian sama dengan badan jalan



Gambar 23. Tampak atas jalur sepeda tipe A di persimpangan tanpa pulau jalan menggunakan proteksi pada radius tikung berupa delineator post atau stick cone





Who would you **recommend** the course to?



Tom Bishop

Young professionals in their 20s-30s, relatively early in their road safety career.



Natalie Tanan

I would recommend it to both people working for the Ministry of Public Works and to teachers in academic institutions, since they have the opportunity to teach many people in turn.



Piseth IM

I recommend the course to all the colleagues under my supervision.



Alina F. Burlacu

I think the younger the better. Government officials, students and academia, these are the main groups.



Vanessa Rubio

I strongly recommend it to people from government.



Ahmed Ksentini

I recommended this to colleagues in the Ministry of Equipment and also in private sector. I really recommend that in the universities who teach road safety at least one or two teachers attend the course.



Emily Carr

We often recommend the DRSC course to our network of NGOs. I think it is a very good course for young road safety professionals.



Conclusions

Safe roads are key to improving living conditions and supporting global development, especially in low- and middle-income countries, which pay a disproportionate toll because of road crashes. To address this issue it will be crucial, among other things, to develop proper road safety capacity in these countries in the coming years and decades.

The mission of Delft Road Safety Courses aligns with this challenge: training professionals from low- and middle-income countries to support the development and implementation of road safety strategies according to data-driven, evidence-based practices.

This report presents the activities of DRSC from its inception in 2012 to 2024 and provides several elements to evaluate whether these activities align with the mission of the organization.

To this end, DRSC's core principles, learning activities, and the evaluation of past courses were reviewed.

Moreover, an attempt was made to depict the impact of DRSC's courses by interviewing a selection of its alumni. In fact, since 2012 DRSC has trained more than 600 professionals from over 90 countries; the vast majority of these alumni acknowledge the effectiveness of the courses in delivering the expected learning outcomes.

The courses on offer have been expanded through the years, with the core annual course on road safety in low- and middle-income countries being flanked by specialised and tailor-made teaching activities.

The Safe System Approach, internationally regarded as a best practice to reduce road traffic casualties, was confirmed as the cornerstone of the teaching activities of DRSC.

Recurring themes emerged from the interviews with the alumni:

1. Beyond technicisms, DRSC offers a multidisciplinary and broad perspective of road safety.
2. Beyond knowledge, DRSC supports the creation of a network of people committed to road safety.
3. Beyond the courses, alumni perpetuate the knowledge they acquired in their countries and organisations.

The activities of DRSC show a global coverage and wide audience. The variety of courses, based on solid principles and best road safety practices, were appreciated and considered effective by the alumni. Moreover, the reach of DRSC was found to extend beyond its training activities, proving to be a source of inspiration and helping with the construction of a sprawling network of road safety professionals.

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