



## Re-thinking how we teach traffic safety: Safe System curriculum

Aliaksei Laureshyn<sup>1\*</sup>, Haneen Farah<sup>2</sup>, Jaqueline Masaki<sup>3</sup>, Enoch F. Sam<sup>4</sup>,  
Ronald Fisa<sup>5</sup>, Filbert Francis<sup>1</sup>, Marjan Hagenzieker<sup>2</sup>, Laxman Singh Bisht<sup>2</sup>,  
Carmelo D'Agostino<sup>1</sup>, Andras Varhelyi<sup>1</sup>, Torkel Bjørnskau<sup>6</sup>, Aslak Fyhri<sup>6</sup>,  
Tor-Olav Nævestad<sup>6</sup>, Sonja Forward<sup>7</sup>, John-Fredrik Grönvall<sup>8</sup>, Tejas Chandran<sup>9</sup>

\*lead presenter: [aliaksei.laureshyn@tft.lth.se](mailto:aliaksei.laureshyn@tft.lth.se)

<sup>1</sup> Lund University, Sweden

<sup>2</sup> Delft University of Technology, the Netherlands

<sup>3</sup> University of Dar es-Salaam, Tanzania

<sup>4</sup> University of Education, Winneba, Ghana

<sup>5</sup> University of Zambia, Zambia

<sup>6</sup> Institute of Transport Economics, Norway

<sup>7</sup> The Swedish National Road and Transport Research Institute, Sweden

<sup>8</sup> Chalmers Industriteknik, Sweden

<sup>9</sup> Autoliv Inc., Sweden

### Background

This work has been done within the scope of the Horizon Europe project 'AfroSAFE: Safe System for radical improvement of road safety in African countries' ([www.afrosafe-eu.africa](http://www.afrosafe-eu.africa)). The project is focused on finding effective and sustainable ways of building the local capacity in African countries, which to high degree has to do with education of traffic safety professional. With this task in mind, the project team develops a curriculum and supporting materials for an academic course that will be freely available for African (though we see our target audience much broader than just Africa) universities willing to engage in traffic safety education. It is our intention to firmly base the course on the Safe System approach to traffic safety, which is currently considered to be the state-of-the-art and is endorsed by the leading experts worldwide.

### Method

While many traffic safety researchers are also involved in teaching the subject, it became apparent that we do not always do as we preach. A small survey among universities providing some kind of education in 'traffic safety fundamentals' revealed that the traditional view on the subject is still quite prominent. For example, motor vehicle accidents are often in focus and engineering-enforcement-education are seen as the main solutions, while the 'soft aspects' such as pre-requisites for effective traffic safety management, social, organizational and cultural aspects of traffic safety are often neglected.

Therefore, the work started with an open brainstorming on what topics are relevant to provide a holistic coverage of the Safe System view on traffic safety. The list was further structured into 24 topic areas, and the contents and organization was elaborated in a series of iterative

discussion sessions. Finally, the curriculum draft was shared with several leading experts in traffic safety and Safe System for additional feedback.

## **Results**

The course consists of the three major themes with corresponding sub-topics:

- **Framing the challenge:**
  - Traffic safety—problem scope
  - Evolution of traffic safety theory and practice
  - Safe System approach
  - How to measure traffic safety
  - Traffic safety data
  - Why accidents happen?
  - Accident typology
  - Injury biomechanics
- **Solutions and implementation areas**
  - Traffic safety measures: principles
  - Where traffic safety knowledge comes from?
  - Pillar 1: Traffic safety management
  - Pillar 2: Safe speeds
  - Pillar 3: Safe road users
  - Pillar 4: Safe vehicles
  - Pillar 5: Safe infrastructure
  - Pillar 6: Post-crash care
- **Perspectives**
  - Traffic safety as part of sustainable development
  - Meeting preconditions of various groups
  - Economical aspects of traffic safety
  - Social aspects of traffic safety

Additionally, some of the topics were found to fit better not as individual units, but rather integrated across already existing topics. Such cross-sectional themes include:

- Traffic safety in low- and middle-income countries
- Active mobility
- ITS and technology
- Suicide in traffic

For each of the topics, supporting materials including summary of take-away messages, suggestions for practical exercises, knowledge-testing quizzes, and recommended reading for students as well as the teachers are compiled.

## **Discussion**

We invite the conference attendees to get involved into the discussion on what and in which way we teach traffic safety. In particular, we encourage to think whether your current education is truly based on the Safe System foundation and whether the suggested curriculum comes closer to this goal. Your feedback and suggestions for improvements are most welcome.