NATIONAL SAFER ROADS' PARTNERSHIPS' CONFERENCE 2023
A SHARED FOCUS
Utilising Technology on the Road to Vision Zero

ROAD SAFETY SUPPORT
Saving lives
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Monitoring the Safe System Approach

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Objective and Outline

Objective

To explore a standardised process for Monitoring the Safe System approach

Outline

- Safe System in National Strategies
- Safe System Monitoring - Current Practice
- The Concept
- A Standardised Process
- Conclusion

Safe System in National Road Safety Strategies

National Road Safety Strategies

A survey within ITF-IRTAD, 2022

- Most of the OECD Countries **adopt and implement strategic plans** with specific targets for more than two decades as a key success tool to continuously improve safety.

- Reducing road **fatalities and serious injuries by 50%** by 2030 is the target adopted in the EU and several European Countries.

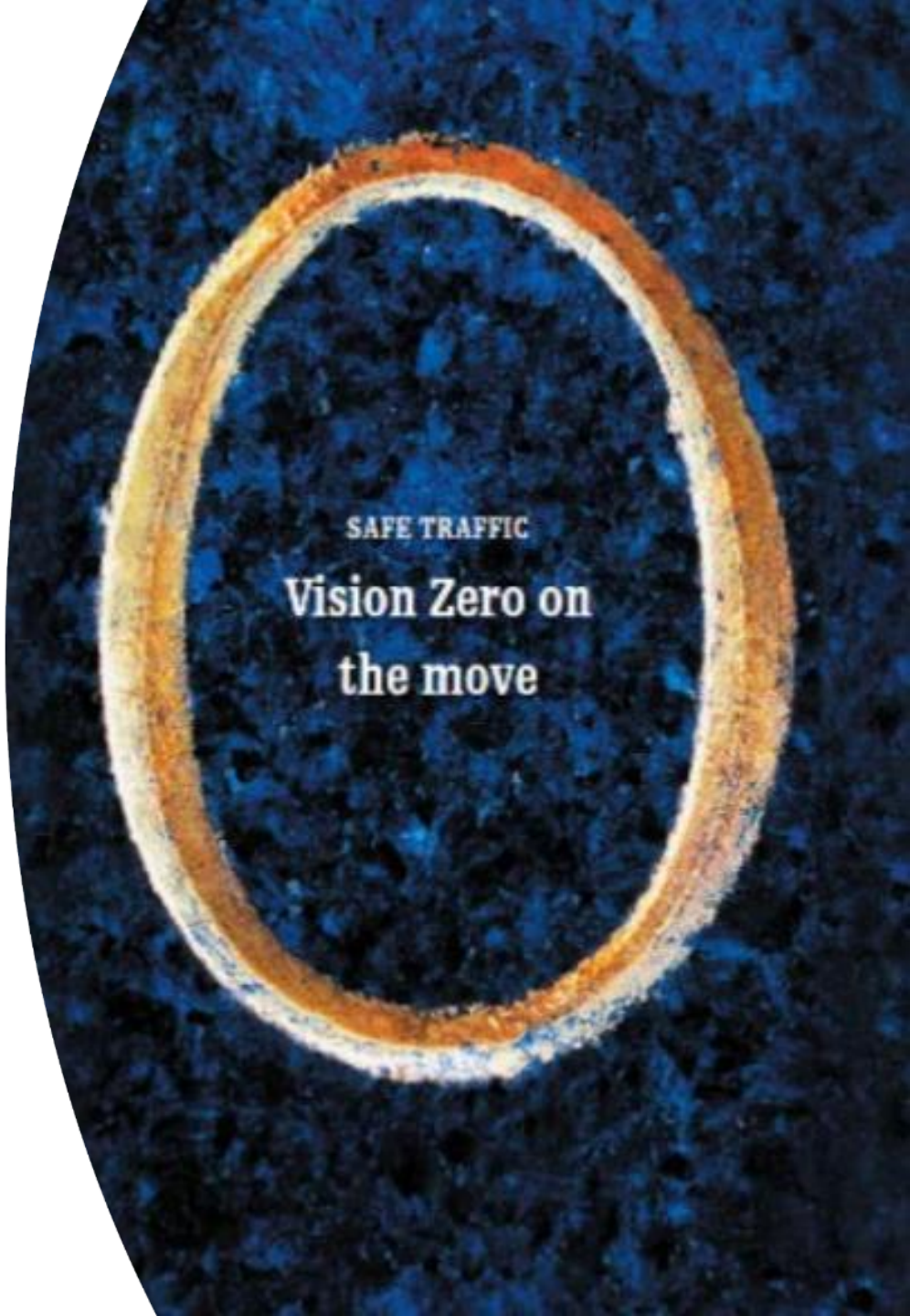
- **Safe System Approach** and **Vision Zero** are being adopted in the vast majority of these Strategic Plans.

All strategic plans gathered are available at: NationalRoadSafetyStrategies

Safe System Approach - Vision Zero

- **Safe System Approach: 16 countries**
  (Australia, Austria, Canada, Chile, Croatia, Cyprus, Denmark, Greece, Italy, Lithuania, Netherlands, New Zealand, Portugal, Slovakia, Spain, Sweden)

- **Vision Zero: 20 countries**
  (Australia, Austria, Canada, Chile, Croatia, Cyprus, Czech Republic, Estonia, Germany, Greece, Hungary, Lithuania, Luxembourg, Netherlands, New Zealand, Portugal, Slovakia, Slovenia, Spain, Sweden)



				Target		Adoption			
Countries	National Strategic Plan	Period	Authority	Fatalities	Serious Injuries	Safe System Approach	Vision Zero	Baseline	Actions - Measures
EU Countries									
Belgium	Yes	2021-2025	Ministry of Mobility, Ministry of Justice, Ministry of Interior	-50%	-50%	Yes	Yes	2019	32 Measures
Czechia	Yes	2021-2030	Ministry of Transport (and other organisations defined in Action Plan)	-50%	-50%	Yes	Yes	Average 2017-2019	65 measures within 5 priority areas
Denmark	Yes	2021-2030	Danish Road Safety Commission	max 90	max 900	Yes	-	Average 2017-2019	52 Actions
Germany	Yes (more than 1, federal structure)	2021-2030	Ministry of Transport and Digital Infrastructure (contribution of various stakeholders	-40%	significant reduction	Yes	Yes	2021	12 fields of Action
Estonia	Yes	2016-2025	multidiscipline working groups leaded by the Transport Administration	max 40 (as a 3-year average by 2025)	max 330 (as a 3-year average by 2025)	-	Yes	Average 2012-2014	19 Measures
Ireland	Yes	2021-2030	Road Safety Authority	-50%	-50%	Yes	Yes	Average 2017-2019	50 Actions and 136 support Actions
Greece	Yes	2021-2030	Ministry of Infrastructure and Transport (commissioned to NTUA)	-50%	-50%	Yes	Yes	2019	200 Measures within 44 Actions (5 pillars)
Spain	Yes	2021-2030	Ministry of Interior (developed by DGT)	-50%	-50%	Yes	Yes	2019	61 Actions within 9 areas
Croatia	Yes	2021-2030	Ministry of Interior, Police department for road safety (drafted by FPZ)	-50%	-50%	Yes	Yes	2019	190 Activities within 13 areas
Italy	Yes	2021-2030	Ministry of Infrastructure and Sustainable Mobility (drafted by 5 universities)	-50%	-50%	Yes	Yes	2019	29 Actions
Cyprus	Yes	2021-2030	National Road Safety Council	-50%	-50%	Yes	Yes	Average 2018-2020	178 Actions
Lithuania	Yes	2020-2030	Ministry of Transport and Communication	-50%	-50%	Yes	Yes	2019	-
Luxembourg	Yes (Action Plan)	2019-2023	Government (Road Safety Working Group)	-	-	-	Yes	-	31 Measures
Hungary	Yes	2023-2025	the Interior & the State Secretary for Transport in the Ministry for Innovation and Te	-50%	-50%	Roughly (names 10 pillars)	Yes	-	-
Netherlands	Yes	2018-2030	Ministry of Infrastructure and Transport (joint effort of various organisations)	0 in 2050	0 in 2050	Yes- "Sustainable Safety"	Yes	-	9 themes
Austria	Yes	2021-2030	Ministry of Transport (with the support of KFV)	-50%	-50%	Yes	Yes (for child fatalities)	Average 2017-2019	7 fields of Action - 86 potential Measures
Poland	Yes	2021-2030	National Road Safety Council	-50%	-50%	Yes	Yes	2019	16 priorities of activities
Portugal	Yes - Under preparation	2021-2030	Portuguese Road Safety Authority	-50%	-50%	Yes	Yes	Average 2017-2019	-
Slovenia	Yes	2013-2022	Ministry of Infrastructure	-50%	-50%	-	Yes	2011	-
Slovakia	Yes	2021-2030	Ministry of Transport and Construction, Road Safety Department	-50%	-50%	Yes	Yes	2020	70 Measures within 5 pillars
Finland	Yes	2022-2026	Ministry of Transport and Communication	-50%	-50%	Yes	Yes	2020	103 Measures within 7 areas
Sweden	Yes (but not in a traditional sense)	2020-2030	Swedish Transport Administration	-50%	-25%	Yes	Yes	Average 2017-2019	-
Bulgaria	Yes	2021-2030	Ministry of Interior of Republic of Bulgaria	-50%	-50%	Yes	Yes		176 Measures within 6 thematic pillars for 2021-2023
France	Yes	2030	Prime Minister level, who chairs the Interministerial Committee for Road Safety	-50%	-50%				
Latvia	Yes	2021-2027	Ministry of Transport	-50%	-50%		Yes	2020	
Malta	Yes	2014-2024	Ministry of Transport and Infrastructure	-50%	-30%	-	-	2014	7 fields of Action
Romania	No	-	-	-	-				
EFTA Countries									
Norway	Yes	2022-2025	Norwegian Public Roads Administration	max 50 by 2030	max 350 KSI by 2030	Yes	Yes		
Switzerland	Yes	No time limit	Swiss Federal Council	5 fatalities among human-powered forms	ax. 500 seriously injured among human-p	Yes			
Iceland	Yes	2020-2034	Ministry of Transport	reduce the sum of killed by 5% each year	reduce the sum of seriously injured by 5% each year				
Non EU-EFTA Countries									
UK	Yes - Under preparation	-	Department of Transport	-	-	-	-	-	-
Australia	Yes	2021-2030	Office of Road Safety	-50%	-30%	Yes	Yes	Average 2018-2020	9 Priorities and 8 Enabling Actions
Canada	Yes	2016-2025	Council of Ministers Responsible for Transportation and Highway Safety	ownward trends in the rate-based numbe	ownward trends in the rate-based number	Yes	Yes	-	7 Interventions
Chile	Yes	2021-2030	National Road Safety Commission (CONASET)	-30%	-	Yes	Yes	Average 2011-2019	51 Actions
Japan	Yes	2021-2025	inistry of Land, Infrastructure, Transport and Tourism, National Police Agency (dev	max 2000 (24h)	max 22 000	No	No	-	-
Morocco	Yes	2017-2026	Ministry of Transport and Logistic	-50%	-	Yes	-	2015	-
New Zealand	Yes	2020-2030	Ministry of Transport	-40%	-40%	Yes	Yes	2018	e & speed management, vehicle, work-related safety,
South Africa	Yes	2016-2030	National Department of Transport and Road Traffic Management Corporation	-50%	-	Yes	Yes	2010	82 interventions within 17 themes
USA	Yes	-	Department of Transportation	-	-	Yes	Yes	-	29 Actions
Bosnia & Herzegovina	Yes - Under preparation	2021-2025	Ministry of Communications and Ministry of Transport	-50%	-50%	-	Yes	-	-
Colombia	Yes - Under preparation	2022-2031	National Road Safety Agency , ANSV	-50%	-	Yes	-	-	-
Israel	Yes - Under preparation	2020-2030	ad Safety (developed by the National Road Safety Authority (NRSA) in collaboratio	-50%	-50%	-	-	-	-
Moldova	Yes - Under preparation	-	Ministry of Infrastructure and Regional Development, Ministry of Internal Affairs	-	-	-	-	-	-

Safe System Monitoring - Current Practice

Safe System Monitoring - Current Practice

- The Safe System Approach in Action
  by the International Transport Forum (OECD)
- Road Safety Strategies Monitoring Tool
  European Commission – DG Move
- Accountability Toolkit
  by the Global Alliance of NGOs for Road Safety
- Road Safety Index
  by the Federation Internationale de l'Automobile
- Road Safety Activities Review
  By National Authorities (Annual, Biannual, Mid-term)
- IRTAD WG on Monitoring Strategies
  by ITF/OECD to develop a framework
- WHO Global Road Safety Status Report
  by WHO monitoring Countries performance and progress

The Safe System Approach in Action International Transport Forum (OECD)

- A Safe System for drastically reducing road fatalities
- Recommendations:
  - Commit to a long-term Safe System initiative,
  - Build Safe System initiatives on data and evidence of effectiveness,
  - Start at a manageable level of activity and then scale up,
  - Build capacity for practical implementation of the Safe System approach, especially in low- and middle-income countries,
  - Use pilot projects to further test and develop the Safe System framework
  - Use the framework to assess projects, organisations and policies, identify gaps, and plan effective strategies
- An Implementation assessment Framework is under development

Safe Road Safety Strategies Monitoring Tool
European Commission – DG Move

- A **comprehensive tool** for monitoring and assessing national road safety strategies & actions is under development to assist EU Member States to increase the effectiveness of their road safety policies

- Progress of the implementation of the **EU Road Safety Policy Framework** will also be monitored

- Monitoring will be based on **quantitative** and **qualitative** data and information from the EU Member States

- A specially designed **Dashboard** with the performance and progress results will be open to all

Accountability Toolkit
Global Alliance of NGOs for Road Safety

- A set of practical, web-based tools.
- It offers tangible steps to equip NGOs to hold their governments accountable for the safety of all road users.
  - Assess what the government is doing or not doing using the Accountability Checklist
  - Prioritize interventions using the Alliance Priority Interventions
  - Define a Government To Do List
  - Utilize NGO Talking Points to meet and influence officials.
  - Track government's progress using the Advocacy & Accountability Tracker
- Underpinned by five Priority Interventions.

30 km/h limits | Lower speed limits | Pedestrian facilities | Traffic calming | Motorcycle helmet law + enforcement + promotion

Alliance Accountability Toolkit

Road Safety Index
Federation Internationale de l'Automobile

- A tool that organisations and companies can use to **determine their impact** on road safety, report on their activities in that field, and improve their results.
- **Structure & Methodology**
  0. Supply and Value Chain Analysis: It aims to establish an organisation's sphere of influence in relation to road safety.
  1. Commitment: The organisation is expected to make commitments through policies and targets.
  2. Footprint: This step focuses on the ability to collect and define data related to casualties in the organisation's value chain.
- **Five rating elements:** Commitment, Footprint, Planning, Monitoring of safety performance and Safety culture management.
- Currently the FIA RSI manual only covers the rating elements **Commitment and Footprint**.

Road Safety Activities Review By National Authorities

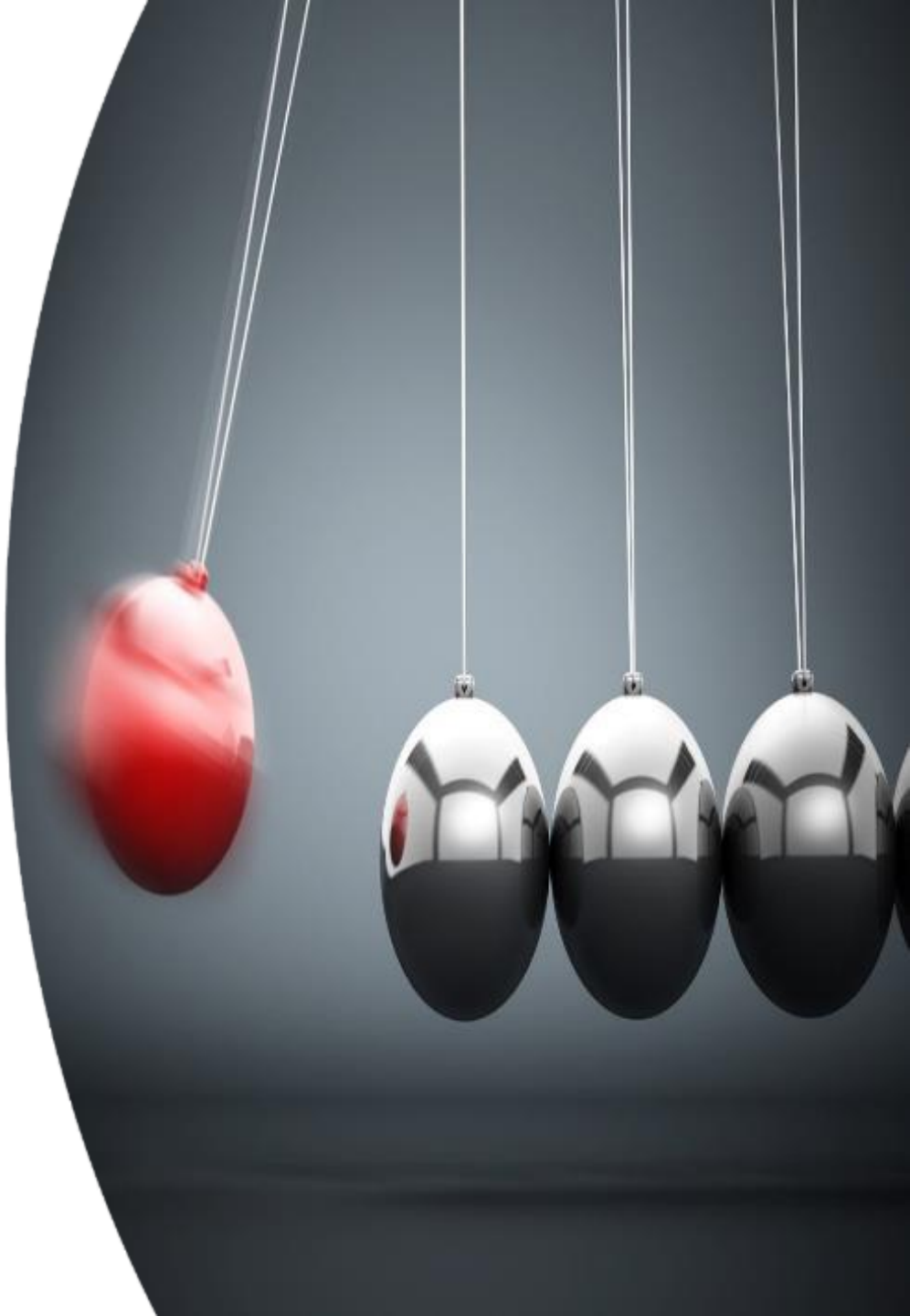
- In several EU countries, there is a **steady monitoring** of road safety strategies/ plans on an annual or biannual basis
  - based on road safety outcomes, KPIs and/or progress of implementation of measures
- Fewer countries have performed **evaluation of specific key measures/actions** at the end of the implementation of road safety strategy
- Ex-post evaluation in most countries is mainly based on **road safety outcomes** compared to the targets set
- More complete evaluation reports include also:
  - evaluation of the **performance** achieved based on the KPIs
  - **degree of completion** of the actions of the strategy
  - **qualitative** assessment

Monitoring the Safe System - the Concept

A Process to support Authorities

A Standardised Monitoring Process is necessary for motivating and assisting Authorities but also Industry and all Stakeholders, by:

- Supporting policies, programmes and measures (capacity building)
- Exchanging best practice (learning from each other)
- Benchmarking performances (motivating people)



Fundamental principles

- **Culture Change**
  responsibility is shared between Authorities, Industry and Road Users

- **Transparency**
  Make safety efforts and results public to inform, educate and motivate

- **Accountability**
  Monitoring and publishing progress creates trust and engagement

- **Adequate Effort**
  what we put is what we get
  people, structures, budgets

A periodic review of progress

a frequent process

- carried out by the Authorities/Organisations
- annual and multi-annual reviews
- using standardised procedures

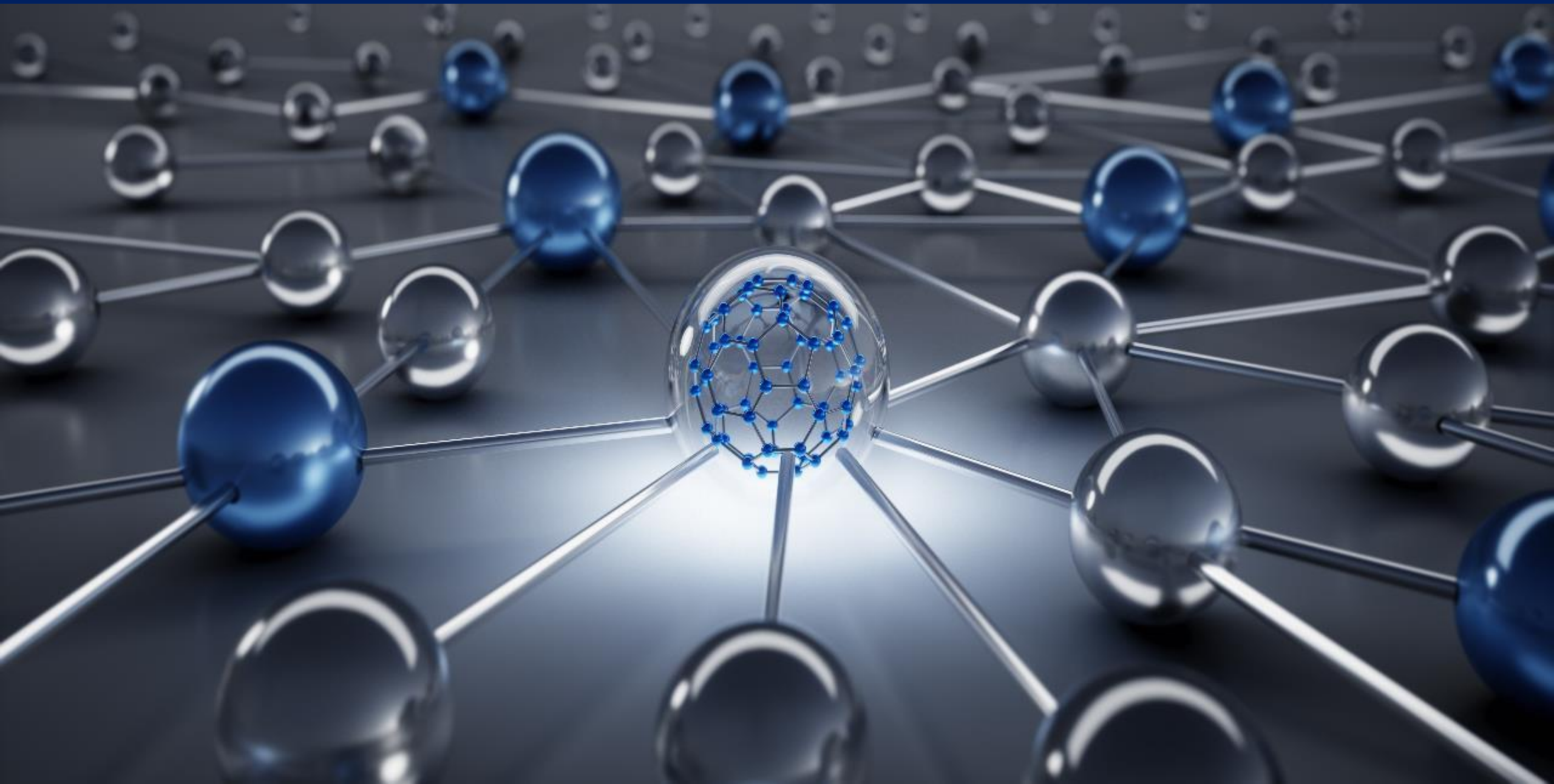
attempting balance between:

- accuracy of results and simplicity of use
- recent results and available data
- quantitative (data) and qualitative (estimations) results

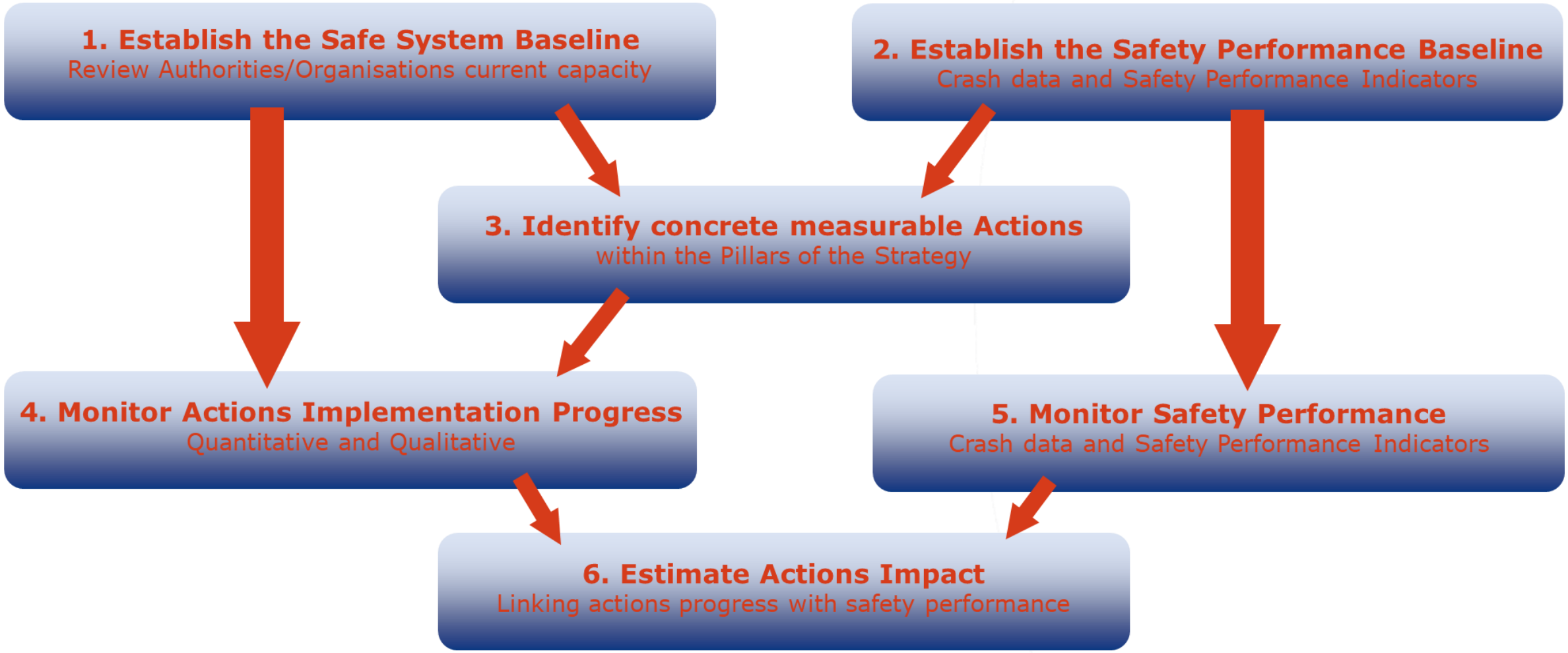
Key Process Components

- Authorities participation at all levels (National, Regional, Local)
- A specially designed Monitoring Process to be uniformly used by all Authorities/Organisations
- Use of the appropriate specially designed set of Quantitative and Qualitative Data and Information (more data higher usefulness)
- Specially designed Dashboard (and communication policy) to properly and widely demonstrate the performance and progress results

Reviewing the Safe System – A Standardised Process



Standardised Monitoring Process



Step 1. Establish the Safe System Baseline

- Assess baseline capacity of all levels of Authorities/Organisations
  - appropriate governance structure
  - adequacy of people
  - dedicated budgets
  - available data and information

Step 2. Establish the Safety Performance Baseline

- Data to establish the safety performance baseline:
  - Crash data
  - Risk exposure
  - Road safety performance indicators
- Crash data provide a broad picture of the size of the problem
- The real dimension of the problem is highlighted when crash data are combined with exposure data (crashes per km/time driven, per traffic characteristics, etc.)
- Crash causalities are revealed only when crashes are correlated with Road Safety Performance Indicators (behaviour, infrastructure, traffic, vehicles, safety management)

Road Crash Data

- Data on road crash fatalities and serious injuries
- Data provided by national crash datafiles
- Aggregate and detailed data per type of:
  - user, road, vehicle,
  - region/country,
  - evolution in time, etc.
- The higher the detail of the data is, the more critical and hidden road safety properties are revealed

Safety Performance Indicators

- Safety Performance Indicators are directly related to the prevention of road crash fatalities and serious injuries (e.g. Speed, Safety belt, Protective equipment, Alcohol, Distraction, Vehicle safety, Infrastructure, Post-crash care)

- Data collected through dedicated surveys and datafiles
  - Roadside Observations/Measurements
  - Questionnaires

- Detailed data (where appropriate/available) per type of:
  - road user
  - road
  - vehicle
  - time period
  - region

Step 3. Identify concrete measurable Actions

- Identification of challenges
  - priority safety issues
  - SWOT analysis

- Definition of strategy
  - programmes, actions and measures
  - roadmaps, timeplans, budgets

- Definition of programs and actions within the 6 Pillars of UN decade of action:
  - Road Safety Management
  - Safe Road User Behaviour
  - Safe Vehicles
  - Safe Roads
  - Safe Speeds
  - Post Crash Care

Step 4. Monitor Action Implementation Progress

- Development of a set of specially designed Quantitative and Qualitative Data and Information

- For each road safety area, the following estimations will be monitored (starting with the strategy baseline year):
  - foreseen
    (according to the strategy)
  - implemented
    (estimation of the Authorities on the implementation progress of all related actions)
  - effectiveness
    (*estimation based on impact assessment*)

Step 5. Monitor Safety Performance

- Systematic collection and **time-series analysis** of data contribute to a better assessment of the performance and progress made over time

- Appropriate **disaggregation** of data allows the comparison of the safety performance of different parts of the transpor system, different transport modes and road users

- Risk exposure and crash data, when combined with road safety performance indicators, can identify **causes of crashes** in relation to all aspects of the road transport system

Step 6. Estimate Actions Impact

- The strategy implementation impact is estimated by attempting to link the actions progress with the respective safety performance

- In order to achieve this, linking with road safety developments is needed on the basis of:
  - all crashes
  - certain types of crashes (whenever possible)

- Targeted analyses linking also road safety progress with other developments (demographic, economic, technological, etc.) can reveal the real impact of road safety actions

- There is high need for analysis expertise

Methodological Challenges

- Explore interrelation between Safe System and Strategies
- Need for systemic approach on road safety measures
- Tackle complexity of different types of measures
- Focus on key (most promising) measures/areas
- Combined analysis of quantitative and qualitative Indicators
- Statistical significance
- Assessing the role of Actors
- The role of new systems / technologies

Conclusion

Key Challenges

- Detailed **crash data and SPIs** are often not available either on-time or in sufficient detail
- Actions' **implementation progress** is not easy to quantify budgets are not safety exclusive, non-linear progress
- Estimating **actions' impact** is scientifically challenging difficulty in separating combined effects
- Standardised **monitoring procedures** are mostly missing both for progress monitoring and impact assessment

Conclusions

- Monitoring the Safe System is highly beneficial for policy implementation, as it motivates Authorities, Organisations and the users to engage seriously on implementing road safety measures

- Transparency and accountability are key drivers for the acceptance and success of such Monitoring efforts

- There is need for standardized processes, commonly established, understood and used

- Identifying implementation progress, linking road safety performance to measures progress and estimating impacts are highly challenging, requiring good data and appropriate expertise

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