Saving lives on roads
A cost curve to prioritise road safety actions

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Road crashes are one societies primary causes of premature death, and costing society >$500 Billion

- Road crashes are the second highest cause of premature death and disability for children
- Road traffic crashes kill 1.3 million and seriously injure 50 million annually
- The annual cost to society is $520b, more than 1.6% of global GDP

Global road traffic fatalities
Millions

<table>
<thead>
<tr>
<th>Year</th>
<th>2010</th>
<th>2020</th>
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<td>1.3</td>
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SOURCE: World Bank; WHO
2011-2020 will be the “Decade of Action for Road Safety”

UN Proclaims 2011-2020 as Decade of Action for Road Safety

Goals:
- Reduce deaths in 2020 by 50%
- Save 5m lives and prevent 50m injuries over decade

EU endorse the ‘road safety orientation 2011-2020’

Goals:
- Reduce deaths in 2020 by 50%

The commission invite the state members to allocate necessary resources to develop coherent and cost-effective action plans

SOURCE: UN General Assembly, Commission for Global Road Safety
Fatality rates are very different across the world.

Road fatalities per 100,000 people
2007/8

Source: World Health Organisation
Why is road safety a difficult problem to tackle?

Many stakeholders are involved – adding significant complexity to problem

Key sources of complexity

- Many decision makers with different agendas
- Much room for improve coordination among stakeholders
- No direct link between beneficiaries and investors
McKinsey has used economic science to approach other global burdens

**Case Study – Water scarcity**

- ‘Global economics of water’ delivered a comprehensive view of the challenges and solutions facing water sector
- Impact has been the implementation of water scarcity reduction initiatives in several countries + global recognition (Davos)

**Case Study – Water scarcity**

- ‘Pathways to a low carbon economy’ created a universal language for GHG policy design and negotiation
- GHG curve playing an instrumental role in COP governmental negotiations and policy design

SOURCE: Water Resources Group, GHG cost curve
Our five-step approach to building a road safety strategy

1. **Involve stakeholders**
   - Gather commitment from all relevant stakeholders

2. **Create ‘crash profile’**
   - Identify **root causes** of the region’s fatalities

3. **Develop library of initiatives**
   - Map all potential **relevant initiatives**

4. **Build Cost Curve**
   - Rank by **impact** and cost effectiveness

5. **Develop Strategy & implementation plan**
   - Prioritise initiatives and build detailed strategy and action plan

*Source: McKinsey*
To ensure ownership of plan, it is crucial to involve all stakeholders from day 1.

- Responsible government official
- Police
- Infrastructure authority
- Transport authority
- Healthcare (hospitals)
- NGOs, associations
- Academia
- Private sector (automobile, insurance, suppliers, other)

The ultimate decision maker in the region should be involved, either as:

- the project sponsor
- Or the head of the steering committee to ensure implementation

Stakeholders will be involved in:
- Data collection
- Solution development
- Ownership of implementation

SOURCE: McKinsey
Specific ‘crash profiles’ support the identification of root causes

Crash dashboard

Road accidents/fatalities dashboard

Day of the week, Percent

Time of the day, Percent

Other vehicles involved and alcohol use

Crash dashboard

Benchmarking tree

Higher rate of mortality for PTW1 vs. car and higher stock of PTW penalize overall Italian and Florence ranking

Behavioural factor contribution

Geographical analyses

SOURCE: McKinsey
A library of suitable countermeasures is structured along six dimensions:

- **Infrastructure**
  - Bank of over 200 initiatives from academic and corporate literature
  - Roughly **100 initiatives** categorised and ready to use
  - **Continuous update** driven by technology, legislation, new ideas

- **Regulation**
  - Regulation
  - Enforcement
    - Initiative
      - Increase speed controls
      - Randomization of control sites and time of the day
      - Increase automatic speed controls
      - Doubling speed controls
      - Seatbelts use (front and rear)
      - Increase of patrols
      - Red light cameras
      - Increase alcohol and drug tests check points
      - Roadside controls
      - Controls on appropriate mobile phone usage
      - Helmets
      - Dangerous driving for motorcycles
      - Fine pedestrians crossing out of the zebra crossings
      - Fine cyclists on the wrong side of the road
      - Controls on U-turn and lane changes
      - Control on proper use of lights during the day/night
      - Children seatbelt enforcement
      - Control on mopeds

- **Technology**
  - Technology

- **Post-accident care**
  - Post-accident care

- **Education**
  - Education

- **Enforcement**
  - Implementation time

**Impact** categorized and ready to use.

**Cost estimate**

**Continuous update**

**DISGUISED CLIENT EXAMPLE**

**McKinsey & Company**
A Cost Curve enables economic comparison and prioritisation of initiatives

1 ICC = Information, Communication and Control campaign

SOURCE: European city road safety plan
A detailed strategy and implementation plan is built on five cornerstones

Five cornerstones of a road safety strategy

1. Clearly defined strategy and aspiration
   - Comprehensive, cross sector, evidence-driven
   - Targets/goals broken down into sub-sectors

2. Implementation plan
   - Concrete and prioritised initiatives to launch backed by adequate scientific evidence
   - Implementation plan: actions, responsibilities, timeline

3. Clear metrics and effective monitoring
   - Effective data collection and aggregation
   - KPIs per sub sector /root cause /stakeholder

4. Governance
   - Interdisciplinary steering committee
   - Transparent lines of accountability

5. Clear communication
   - Communication strategy in place
   - Planned and ad-hoc communication of success and failures
   - "You cannot communicate enough!"

Example 10-year implementation plan for a European city

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1. ICC: Incident Countermeasures

SOURCE: Team analysis, European city road safety plan 2020
World Health Organisation are encouraging National Action along 5 pillars

This Plan is intended as a **guiding document** that will facilitate **coordinated and concerted action** towards the achievement of the goal and objectives of the Decade of Action for Road Safety.

At a **national level** countries are encouraged to implement the following **five pillars**

<table>
<thead>
<tr>
<th>National activities</th>
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<tbody>
<tr>
<td>Pillar 1 Road safety management</td>
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<td>Pillar 2 Safer roads and mobility</td>
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<td>Pillar 3 Safer vehicles</td>
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<td>Pillar 4 Safer road users</td>
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<td>Pillar 5 Post-crash response</td>
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SOURCE: WHO, FIA
Yet the exact methodology and approach to implementation is still unclear in many countries

Decade of Action ‘road map’

**Phase 1**
- Global alignment & acknowledgement of need for action
  - FIA and partners bring Road Fatalities to the centre of the international agenda
  - More than a million people support call for UN action

**Phase 2**
- Global aspiration and goals; Global action plan
  - Clear goals are set:
    - Reduce deaths in 2020 by 50%
    - Save 5 mn lives and prevent 50 mn injuries over decade
  - Goals are externally communicated and agreed upon
  - Global Plan facilitates action towards achievement of goals – globally and nationally

**Phase 3**
- Concrete methodology for National Action Plans
  - Develop concrete methodology for ensuring selection of impact oriented solutions
    - Scientifically based methodology that enables cost-effective solution development
    - Holistic, fact based, quantified list of potential countermeasures
    - Implementation tools that everyone can use and understand
  - Build implementation scenarios based upon different levels of adoption across countries

**Phase 4**
- Implementation of action plan
  - Countries will need to take action:
    - Declare own targets
    - Build country specific action plans
    - Be accountable for implementation
  - International body will coordinate implementation, as well as reinforce and monitor for goal achievement (FIA, other?)
  - Global funding models for developing countries will be decided upon

**Partners in promoting Decade of Action**
- FIA Foundation for the Automobile and Society
- World Health Organization
- Commission for Global Road Safety
- UN General Assembly
Thank you