



# Road safety audit as a tool on a way to Zero Vision. Latvian practice

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Road safety audit - an independent and systematic procedure for the inspection of projects (including construction projects) and the road network, in which potential dangerous places are assessed from the point of view of traffic safety.



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**What is a Road Safety Audit**

- In Latvia since January 1, 2001
- This is done by the CSDD
- The audit is conducted by certified road safety auditors in a team of at least 2 people



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**Audit Team**

- Stage 1 (Initial feasibility design)
- Stage 2 (Draft design)
- Stage 3 (Detailed design)
- Stage 4 (Pre) Opening)
- Stage 5 (Monitoring)



The Latvian Road Safety Audit Regulation determines to which objects the audits are subjected.

➤ Main roads of state road network:

- Length is  $> 1000$  m
- At least 1 intersection
- There are bicycle lanes, footpaths, lighting, bridges, toll road sections, border crossing



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**Audit stages**

The Latvian Road Safety Audit Regulation determines to which objects the audits are subjected.

- Regional and local roads of state road network:
  - Length is > 2000 m (also less if there are 2 intersections)
  - At least 2 intersections
  - There are bicycle lanes, footpaths, lighting, bridges, toll road sections, border crossing



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**Audit stages**

The Latvian Road Safety Audit Regulation determines to which objects the audits are subjected.

➤ Main streets in cities:

- Length is  $\geq$  500 m
- At least 1 intersection
- There are bicycle paths, footpaths, pedestrian crossings, lighting, bridges



The Latvian Road Safety Audit Regulation determines to which objects the audits are subjected.

➤ City and local streets:

- Length is  $\geq$  1000 m
- At least 2 intersections
- At least 1 signalized intersection



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**Audit stages**

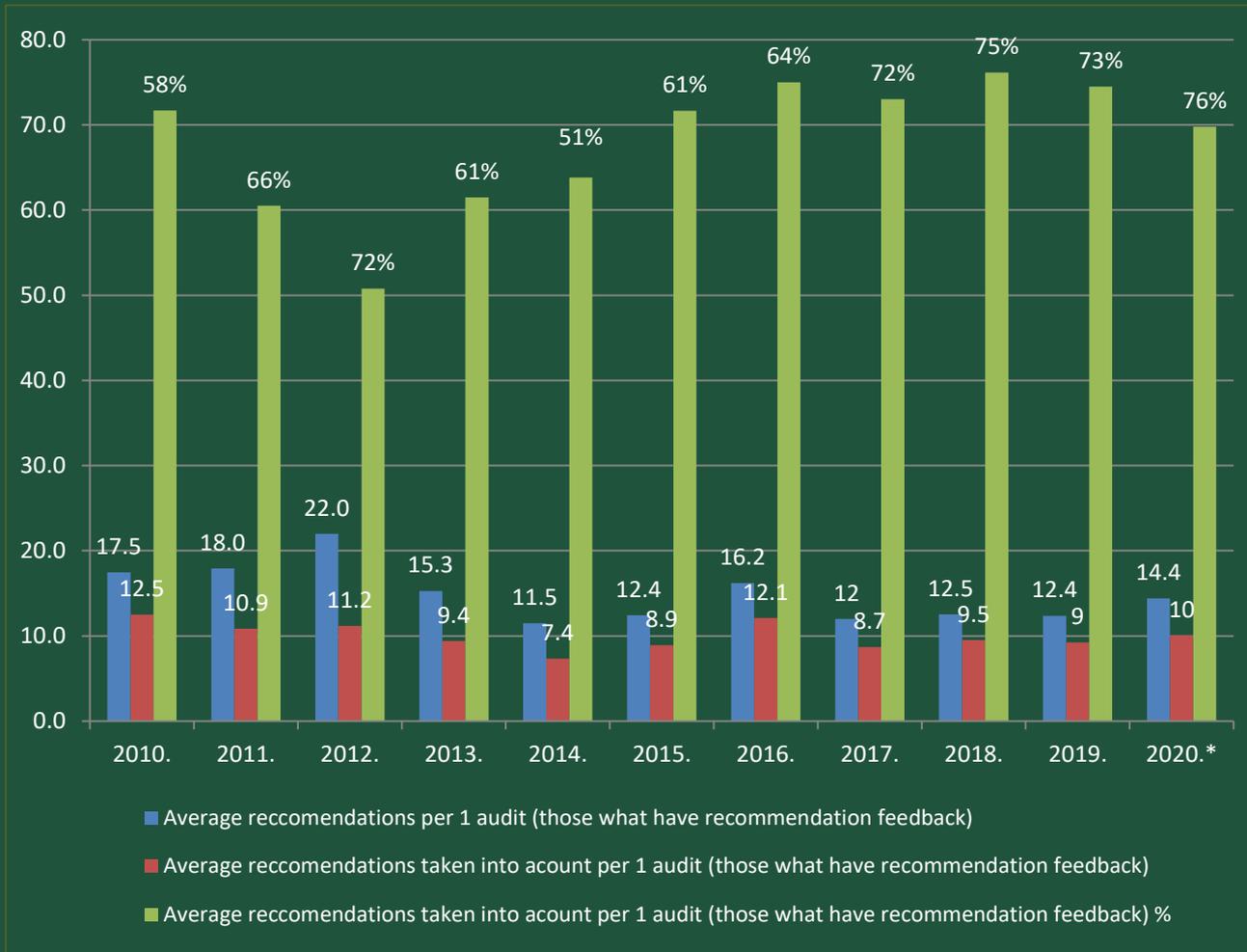
The Latvian Road Safety Audit Regulation determines to which objects the audits are subjected.

➤ Design projects:

- At least 50 parking lots
- There is a new connection to the state road network or main streets

It is also allowed to order an audit with smaller criteria





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## Scope and effectiveness of road safety audit



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**Road profile/pedestrian crossing (before)**



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**Road profile/pedestrian crossing (after)**



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**An impact of the audit – living zones (before)**



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**An impact of the audit – living zones (after)**



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An impact of the audit (before)

| No | Recommendations of RSA  | Recommendation accepted/rejected |
|----|---|----------------------------------|
| 1. | Wrong place of buss stop. – it may create dangerous situations when two busses are stoped at buss stop.   | Accepted                         |
| 2. | In aproaching of junction must be pedestrian crossing and pedestrian barriers.  | Accepted                         |
| 3. | The intersection must be transformed into a rondabout.  | Accepted                         |
| 4. | Optimize an approaching visibility from all directions. Audit recommends to organize circular movement. Before action, calculate perspective traffic intensity. Based on calculations, choose roundabout's parameters – diameterer and lane of carriageway. | Accepted                         |
| 5. | Remove parking place near the shop.   | Accepted                         |
| 6. | Carriageway must be 4,00 m on streets with public transport.  | Accepted                         |





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**An impact of the audit (after)**

## TRAFFIC ACCIDENT PROGNOSE AND ACCIDENTS IN FACT



**An impact of the audit (after)**

Number of traffic accidents after junction reconstruction is reduced. 2 years after reconstruction were 5 accidents less than before reconstruction.

| Average economic losses per accident (Eur) |         | Number of average heavy and slight accident per year | Yearly losses (benefit), if reconstruction wasn't done |
|--|---------|--|--|
| Heavy accident                             | 4920,29 | 2  | 9840,58  |
| Slight accident                            | 2225,37 | 3  | 6676,11  |
| Sum:                                       |         |  | 16516,69   |



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**An impact of the audit (after)**