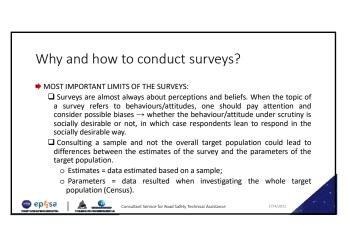


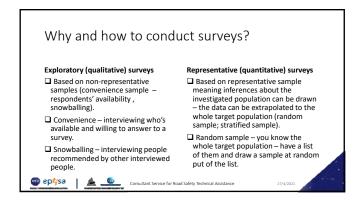
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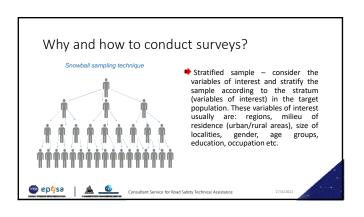
# Content Why and how to conduct surveys? Conducting surveys on road safety - Designing the sample • Conducting surveys on road safety - Developing the research tools Conducting surveys on road safety - Data collection The specificity of the evaluation surveys

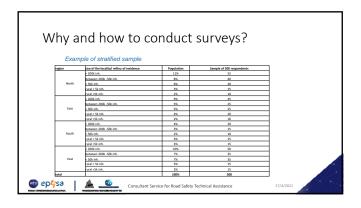
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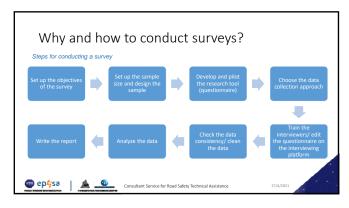
## Why and how to conduct surveys? Surveys are always explanatory tools for various topics – explain what is happening at a certain moment within a group of people (community, nation etc.). For the road safety topic, surveys are the explanatory tool for the crash data. Surveys = consulting samples of target populations ⇒ better cost-efficiency approach than to investigate the whole target populations. ▶ Investigating the whole target population whatever its scale requires significant human and financial resources, plus time Besides, interviewers are considered an important source of errors; on the one hand, data based researches reveled that respondents' answers are influenced by the perceived interviewers' socio-demographic profile; on the other hand, it depends on how the interviewer record a respondent's answer $\Rightarrow$ back-checking needed, to check the quality of the work done by the interviewers.











## Conducting surveys on road safety - Designing the sample

- $\blacktriangleright$  Road safety concerns everybody, we are all road users  $\Rightarrow$  the target population is the entire population from a specific place.
- The sample is always set up in close connection with the objectives of the surveys:
  - if only nationwide drivers are targeted then the sample should be drawn from the nationwide population of drivers etc.;
  - if all road users are under concern, then the sample should be drawn from the entire population;
  - there are ethic rules with regard to surveying under-age people (less than 16-18 y/o), case in which the consent of the parent/tutor is needed





### Conducting surveys on road safety - Designing the sample

- The size of the sample is determined depending the objectives of the
- a reprehensive survey vs. an exploratory survey;
- a representative survey for the overall population vs. a reprehensive survey for the overall population but also for various sub-samples (e.g. young drivers, female drivers etc.)
- the precision of the data collected through the survey in the case of a representative
  survey => the data need to be reported at a confidence level of 90% or 95%, meaning that in 90 or 95 cases out of 100 the survey data are the same within the established margin of error.
- the margin of error of data collected through the survey in the case of a representative survey ⇒ the data need to be reported within a +/-3%, +/-4% etc. margin of error, meaning that a percentage of 10% could be either 13% or 7% within +/-3% margin of error.





### Conducting surveys on road safety - Designing the sample

- The size of the sample is never linked to the scale of the target population, the sample doesn't have to be a percentage of the target population.
- The size of the sample is determined by the formula:

$$n = z^2 * p * (1 - p) / e^2$$

### Where:

- z = 1.96 for a confidence level ( $\alpha$ ) of 95%, or 1.65 for a confidence level ( $\alpha$ ) of 90%; p = population proportion (expressed as a decimal), usually used as maximum variance 50%, meaning that 50% of the respondents will choose an answer and the other 50% the other;
- e = margin of error.





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### Conducting surveys on road safety - Designing the sample

- Whereas, if you collected data from a representative sample of 1200 people decided not taking into account the margin of error but just the number of people, you need to report the margin of error for the reader to know how reliable the survey data are
- The margin of error is determined by the formula:

ME = 
$$z^2 * \sqrt{p} * (1 - p) / \sqrt{n}$$

z = 1.96 for a confidence level ( $\alpha$ ) of 95%, or 1.65 for a confidence level ( $\alpha$ ) of 90%; p = population proportion (expressed as a decimal), usually used as maximum variance 50%, meaning that 50% of the respondents will choose an answer and the other 50% the other; n = sample size

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### Conducting surveys on road safety -Developing the research tools

- ◆ Crash data is a valuable tool to identify causes of road accidents, perpetrators and sports of most of the accidents occur.
- A survey helps identify why people break the traffic rules and how to tackle this issue. A survey on road safety is usually a KAP survey (knowledge, practices and attitude). Therefore a questionnaire about road safety should include the extent to which people are aware of the traffic rules, what's their attitude towards these rules, how and why do they behave the way they behave in traffic, plus sociodemographic data (gender, age, education, residence, occupation, household size etc.).





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## Conducting surveys on road safety -Developing the research tools

- For knowledge the questions should be asked directly such as:
  - Could you tell us what is the speed limit on the highway in your area/country etc.?
  - Could you please tell us what the red light on the traffic light means?
- Could you please tell us what's the speed limit on the residential street in your city?
- For attitude the questions should be Likert scale type question (strongly agree →strongly disagree) in order to give the respondents the confidence that s/he is not judge by the answer s/he gives.
- For practices, as well, the questions should be very carefully designed in order to give the respondents the confidence to tell the truth.



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### Conducting surveys on road safety - Data collection

- Choosing the best data collection approach/ technique always should be based on the quality of the data gathered, the available resources and time.
  - In person interviews: need for checking the interviewers' work; questions regarding practices (self-reported behaviours) should benefit of full anonymity and confidence, meaning that they must be self-completed by the respondent without the interviewer's interference;
  - \*\*Molline interviews or not sincere and argued data collected the respondents feels the confidentiality and anonymity. Online interviewing platform (e.g. Alchemer (https://www.alchemer.com/), SoGosurvey (https://www.sogosurvey.com/), VoxCo, (https://www.wxoxco.com/), Qualtrics (https://www.laultrics.com/uk/core\_xm/survey-software/?rid=ip&prevsite=en&newsite=uk&geo=RO&geomatch=uk/) etc.), online panels and interlocking quota sample (gender, age, education, residence satisfied sample) needed.







### Conducting surveys on road safety - Data collection

- ◆Telephone interviews: random digit dialing system, contact list and interlocking quota sample needed; training for the interviewers and checking the interviewers' work needed.
- ◆ For surveys on the topic of road safety it's recommended to conduct the surveys either face-to-face (Pen and Paper Personal Interview) or online (Computer Assisted Web Interview CAWI) due to the sensitivity of some questions (e.g. in traffic self-reported behaviour).
- Specialized human resources are needed for carrying out a survey start to finish. Therefore, it is recommended to commission at least the data collection to a specialized agency. But it's always best to have the knowledge regarding sampling design, research tools development and data analysis.





### The specificity of the evaluation surveys

- Any evaluation survey necessarily implies:
  - → a control group against which the data from the target group should be
  - a baseline assessment / initial situation assessment in order to track whether and how much difference the campaign/ initiative has made.
- Target group = people exposed to the intervention/ campaign.
- Control group = people who were not exposed to the intervention/ campaign
- The control group sample must be a mirror of the target group sample.
- The sample design and research instruments should be similar for both target population and control group, as well as for the baseline and impact evaluation su



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### The specificity of the evaluation surveys

- The questionnaire for the baseline and evaluation surveys should include questions regarding KAP and, in addition, the evaluation questionnaire should have a separate branch of questions regarding the campaign/initiative:
  - was the campaign/ initiative seen/ heard of?
    how frequently has it been seen?

  - where has it been seen?
  - what was the general impression of it? what was the impact (in terms of AIDA)?
- The impact of the campaign drawn through the AIDA question/s should always be compared against the data showing the evolution of KAP.





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