

# Treatment of walking in travel surveys: the case for an international standard

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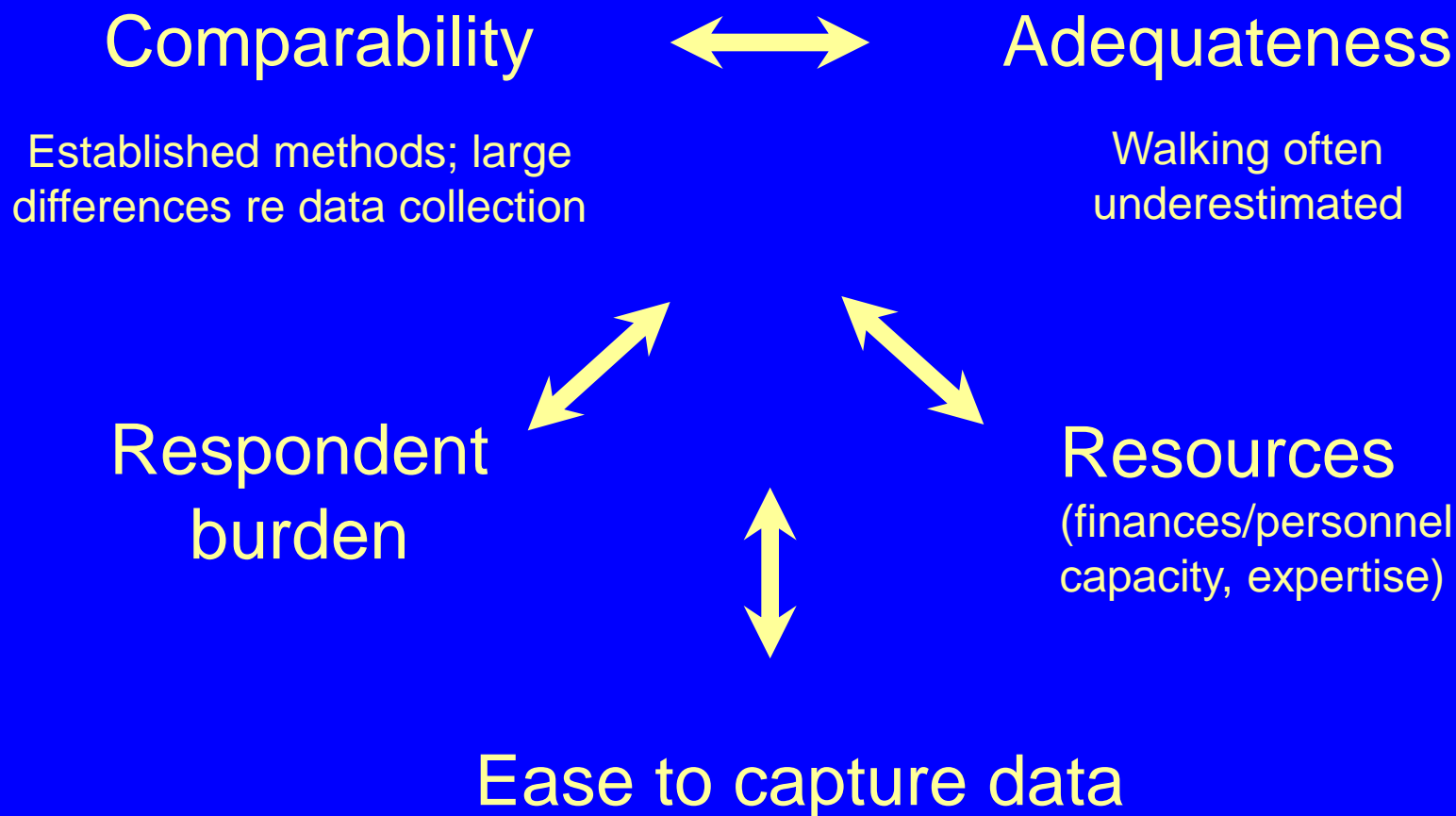
# Background (1)

- Part of **Measuring Walking** efforts to “establish a set of international guidelines for the collection, analysis and dissemination of quantitative and qualitative techniques for measuring walking.” (*WALK21 conclusions Melbourne 2006*)
- Collaborative effort by many international experts, particularly:
  - Miles Tight, University of Birmingham, UK
  - Tim Pharoah, Urban Transport and Planning Consultant, London, UK
  - Ryan Martinson, Stantec, Calgary, Canada
  - Martin Wedderburn, Wedderburn Transport Planning, London, UK

## Background (2)

- Collecting information about walking is essential and provides crucial input for planning interventions and investment decisions.
- At the same time, walking presents particular challenges for accurate measurement.
  - large differences in data collection methods
  - Questions about validity and reliability of data
  - Some poorly developed methods and tools
  - Data can be patchy or non-existent.
  - Difficulties relating to scale

# Challenges of setting an international standard for travel surveys



# Key issues 2013

- Stages, trips, trip chains, whole day mobility?
- Minimal length of stage/trip (distance/time)?
- Minimum age – are children included?
- Definition of a pedestrian?
- Time of year and days of week?
- Purpose – all or just commute?
- How is leisure defined – walking for health/hiking?
- Functional mobility vs mobility for its own sake
- Geo-coding – handling small-scale movements?
- Escorting?

# 2014 work

Focus on:

- Sampling
- Data collection
- Analysis and presentation
- Travel surveys at regional and city level

# Sampling

- Key issue is limiting data collection to a manageable level
- Solution – to use a ‘layering’ system – information which is essential, but also some indications of additional data which would be useful / possible / desirable:
  - basic level (minimal requirements),  
=> comparability-oriented
  - elaborate level (desirable additions/elements),  
=> walking-oriented

# Indicators

- Average daily walking **trips** per person based on trip stages
- Average daily **time** walked per person based on trip stages
- Average daily **distance** walked per person based on trip stages
- Mode share of walking based on **trip** stages
- Mode share of **trips based on main mode** should also be included as a baseline. (Reason: some data sets do not include trip stages).

- For trip stages use a minimum distance of 100m as cut



## Some specifics

- Trip purpose – we suggest including those trips which have a specific destination – leisure, work, shopping etc.
- What about dog walking, hiking etc – should these be included? We have conflicting views!
- Seasonality – aim to cover seasonal effects – maybe structure surveys to collect data in a different ‘season’ each year.
- Data collection by phone, written, face to face, internet? What about GPS, Bluetooth et cetera?

# Who to survey?

- Focus on residents within the urban area
- If possible capture other walking in other ways – visitors, commuting from outside the urban area, tourists etc.
- Random selection of people from each household.
  - How to ensure we include children?
- All trips within the city and beyond?

# Scales of travel surveys / needs

## 1) Larger scale / national travel surveys

- often not adequate to walking (underestimation)
- no or little local data
- expensive

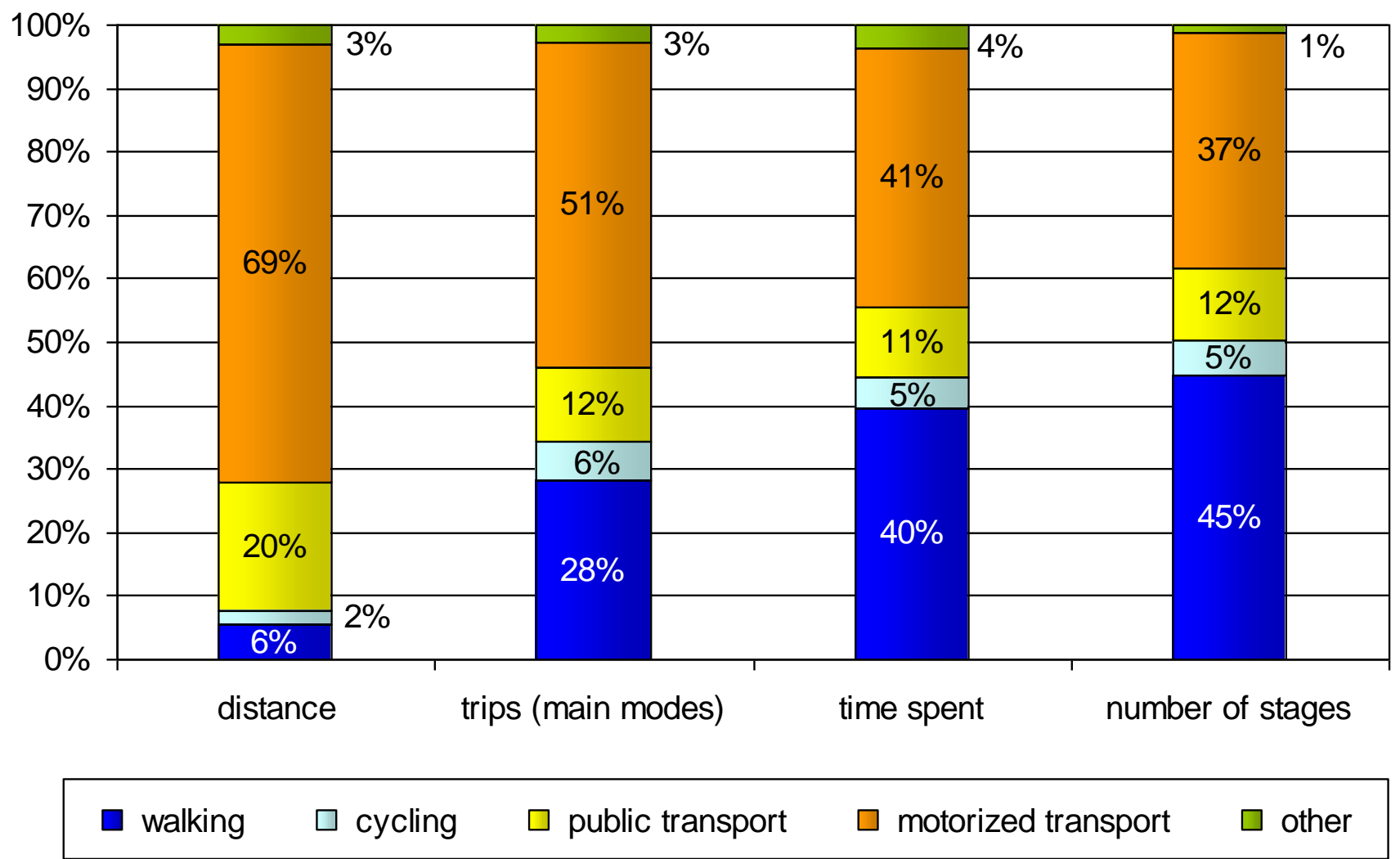
## 2) Smaller scale / regional and city travel surveys

- many difficulties to collect information (e.g. sampling)
- comprehensiveness, precision vs. cost
- expensive

### 2 objectives:

- => minimal requirements (+add-ons) for national surveys
- => find ways to do local surveys: reliable yet inexpensive  
e.g. school surveys, alternative info sources

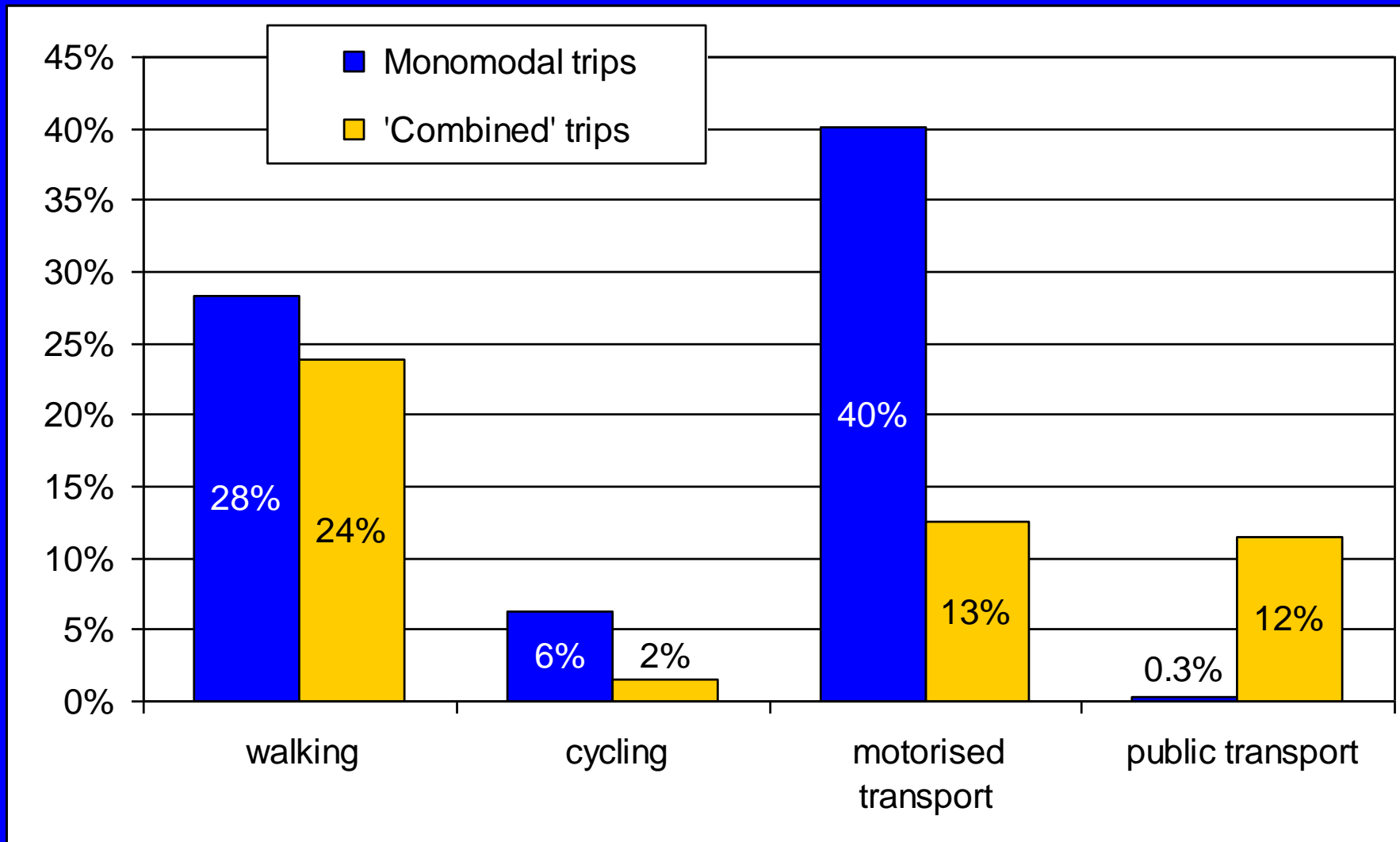
# Presentation of data: example mode share



Source: FSO, ARE, Swiss Mobility and Transport Microcensus 2005

Common effects and assumptions: “The longer the trip the more important it is”  
 “If it looks negligible it will be neglected”

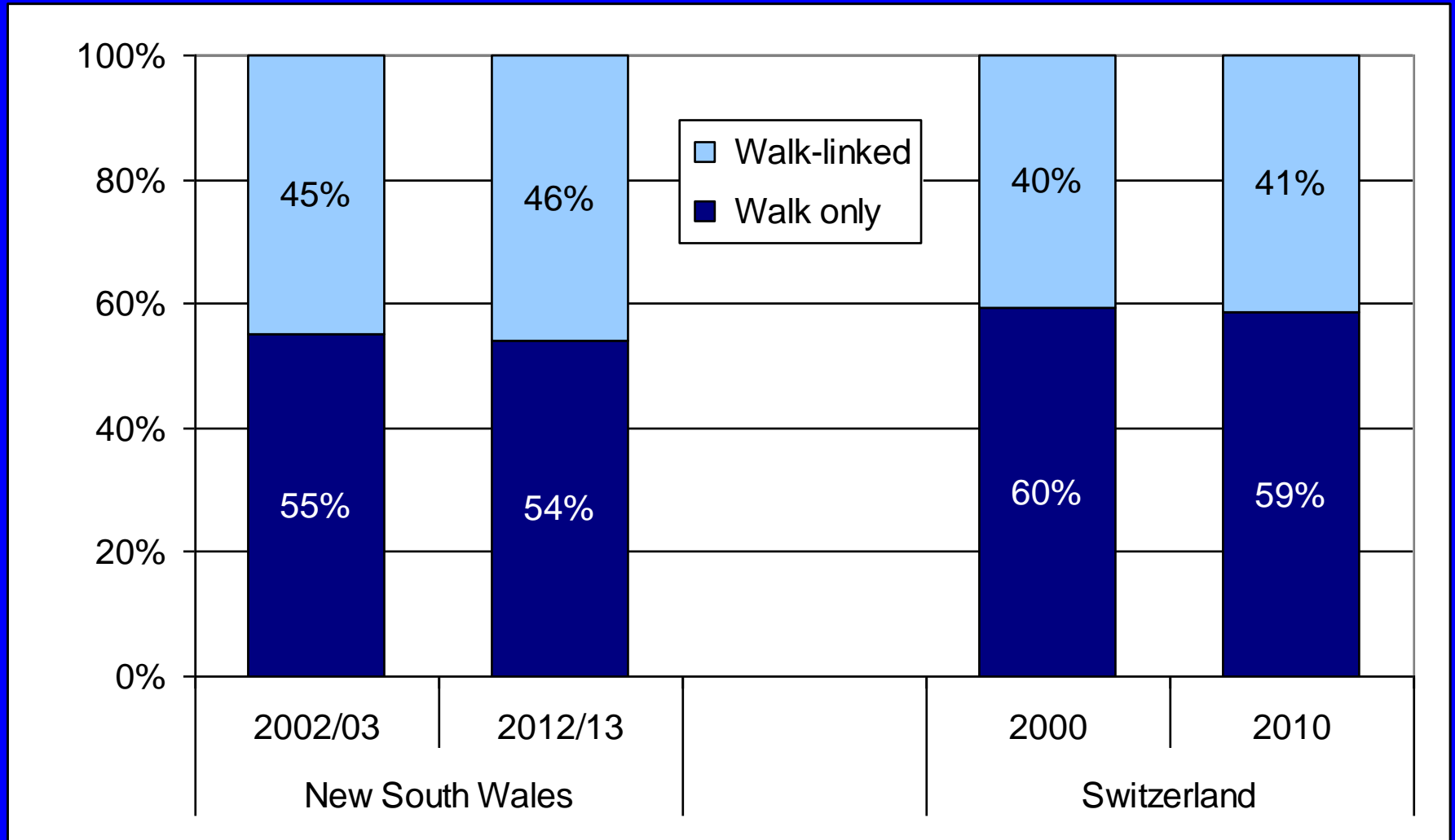
# Presentation of data: monomodal vs. combined trips (Swiss data 2005)



Source: FSO, ARE, Swiss Mobility and Transport Microcensus 2005

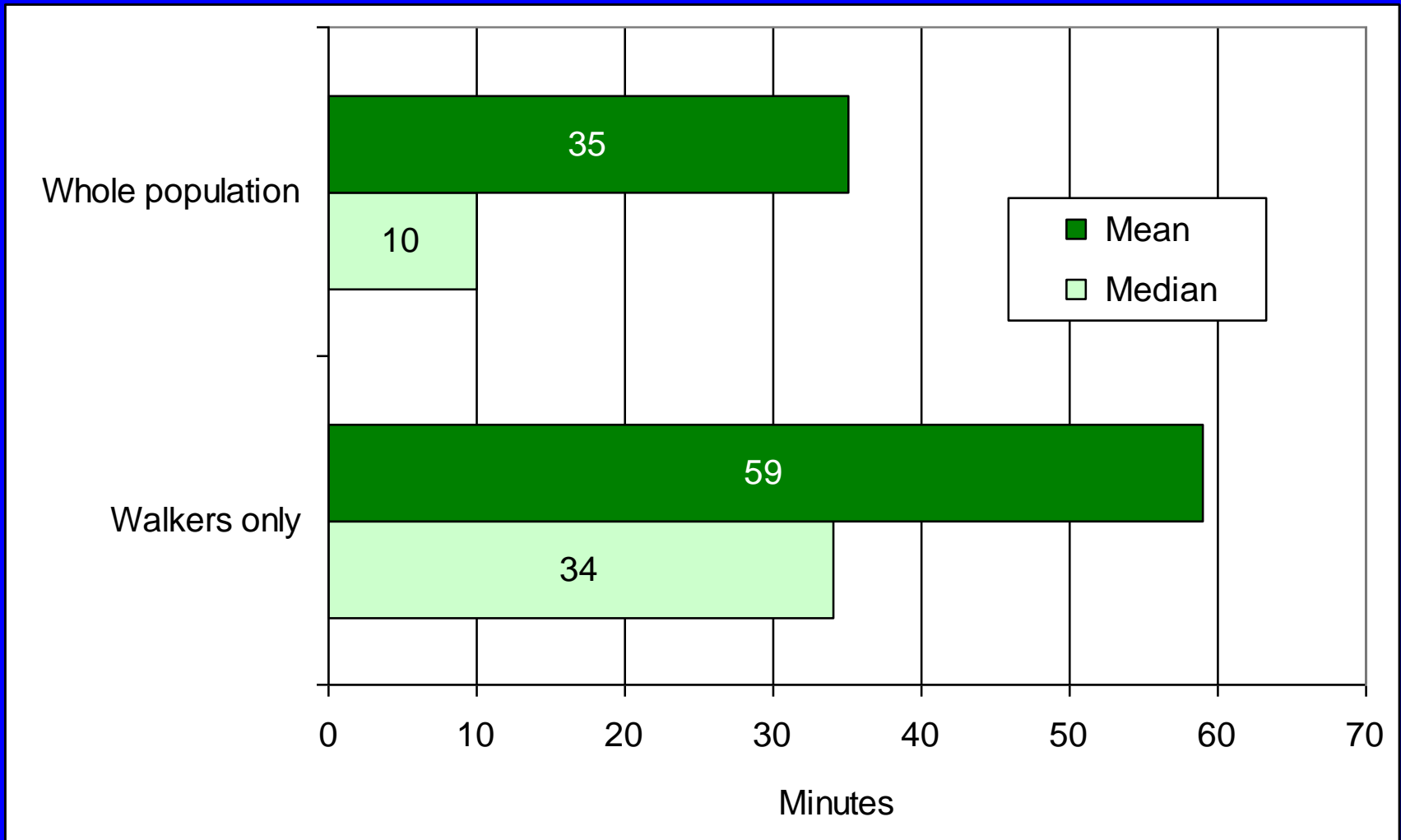
# 'Walk only' vs. 'Walk-linked' trips in NSW and Switzerland

(NSW data: 2002/03 & 2012/13; Swiss data: 2000 & 2010)



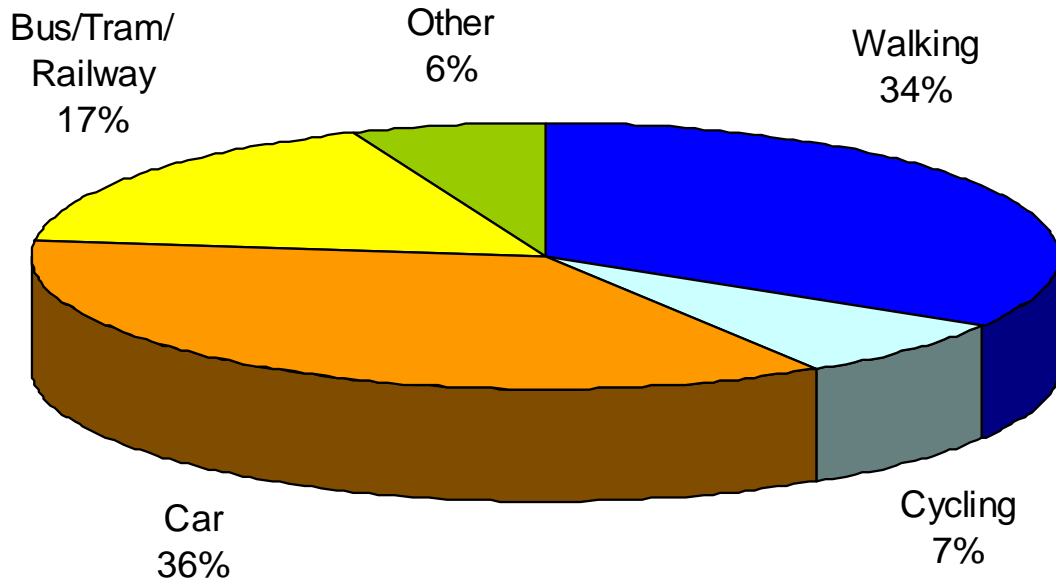
Source data NSW: Grace Corpuz, 2014; Source Swiss data: BFS/ARE, own calculation

# Presentation of data: mean and median walking time (Swiss data 2005)

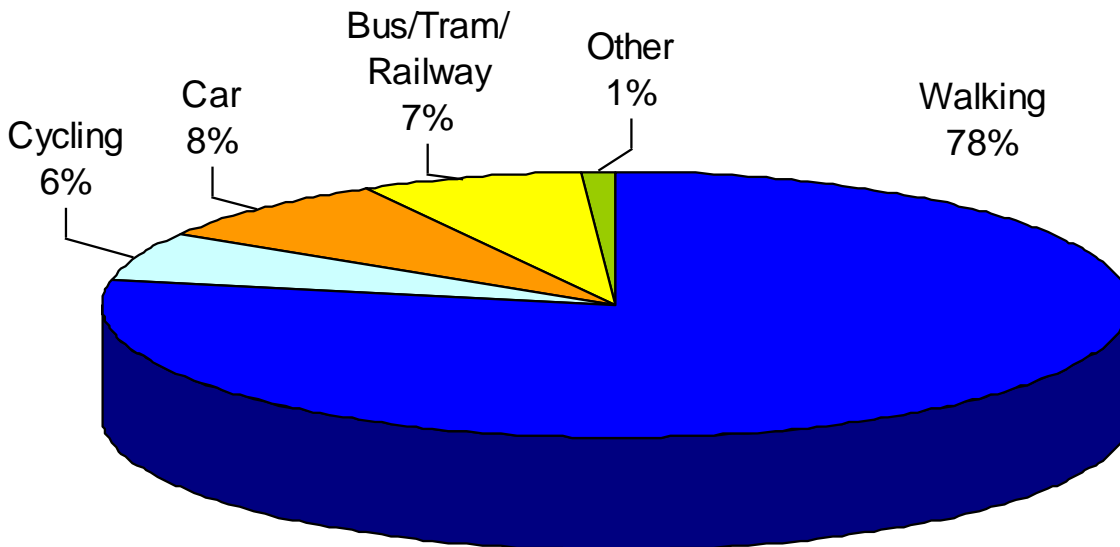


Source: FSO, ARE, Swiss Mobility and Transport Microcensus 2005

### Distances



### Stages



## Trips to school

mode share according  
to distances and stages

(example from 1994)

6 to 9 year old children  
Swiss data



# Questions for discussion

- What about dog walking, hiking etc – should these be included in leisure trips?
- What to do best on local level to capture data at low cost?
- 100 meter threshold for stage distance? Realistic?
- ....
- Feedback most welcome anytime – see contact details on the final slide

# Thank you!



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