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Driver secondary tasks in Germany: Detailed analysis of face-to-face interviews

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Secondary task types

Integrated devices

Passenger related tasks

Self-initiated tasks

Outside distractions

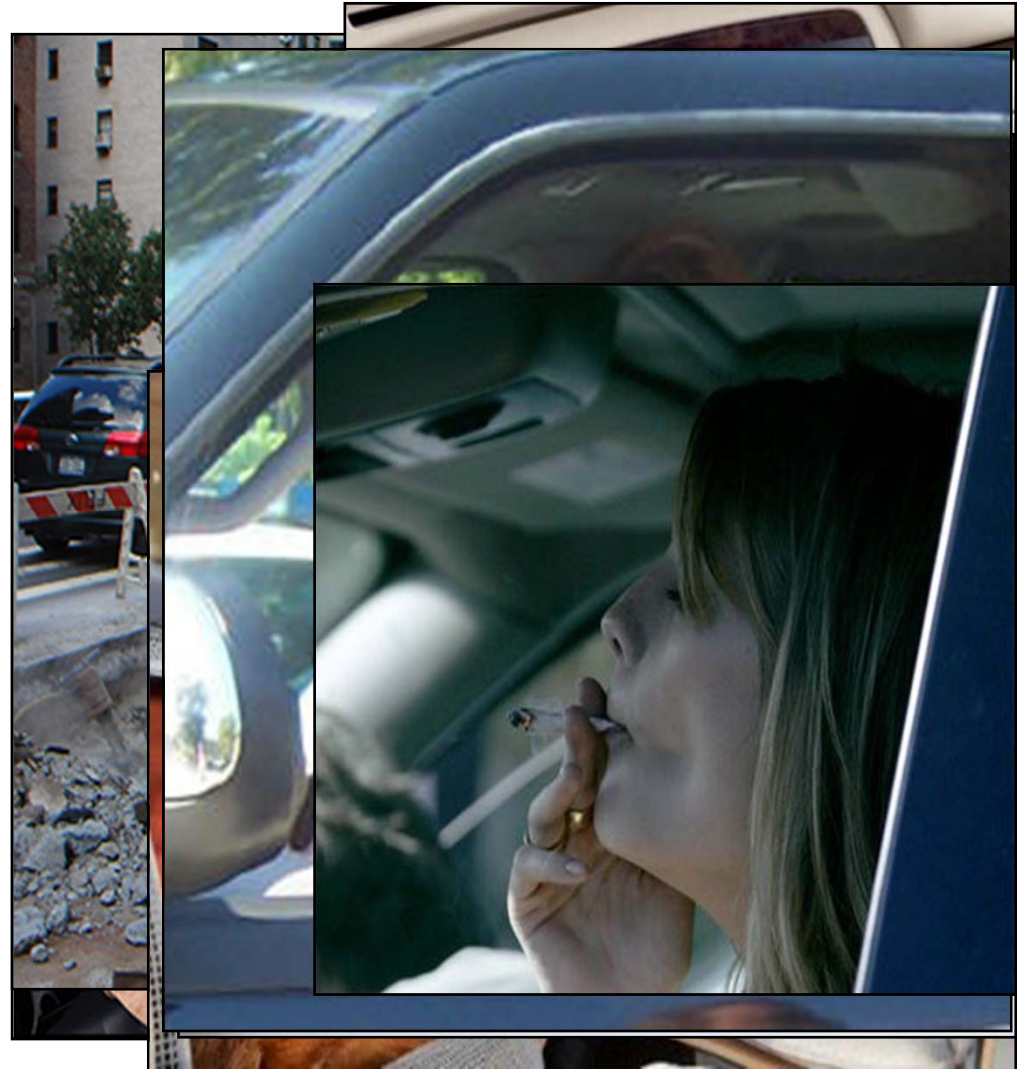
Other devices

Eating and drinking

Smoking related

Clothing & Body Care

Other tasks



Procedure: Face-to-face Interviews

Why?

- Some secondary tasks are internal (e.g. daydreaming)
- Driver himself is the observer (cost effective)

How?

- Two-part interview with hierarchical questioning
- Ask instantly after the trip to keep environment and context
- Only let them report the last 30 minutes (whole trip, if shorter)

Where?

- 4 parking areas at the motorway
- 3 parking areas in the city of Braunschweig

When?

- July – August 2009 (vacation time)
- Monday – Friday ; 8.00 a.m. – 5.00 p.m.

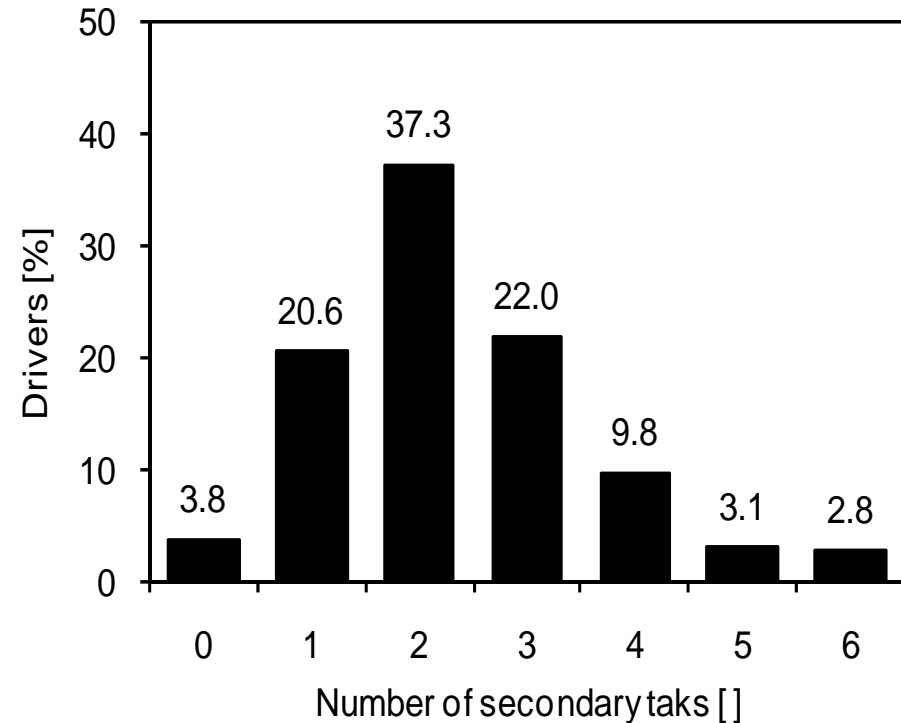
Who was interviewed?

- Asked: N= 343 drivers
- First part: N= 289 drivers (83% responders)
- Detailed: N= 271 drivers (79% responders)



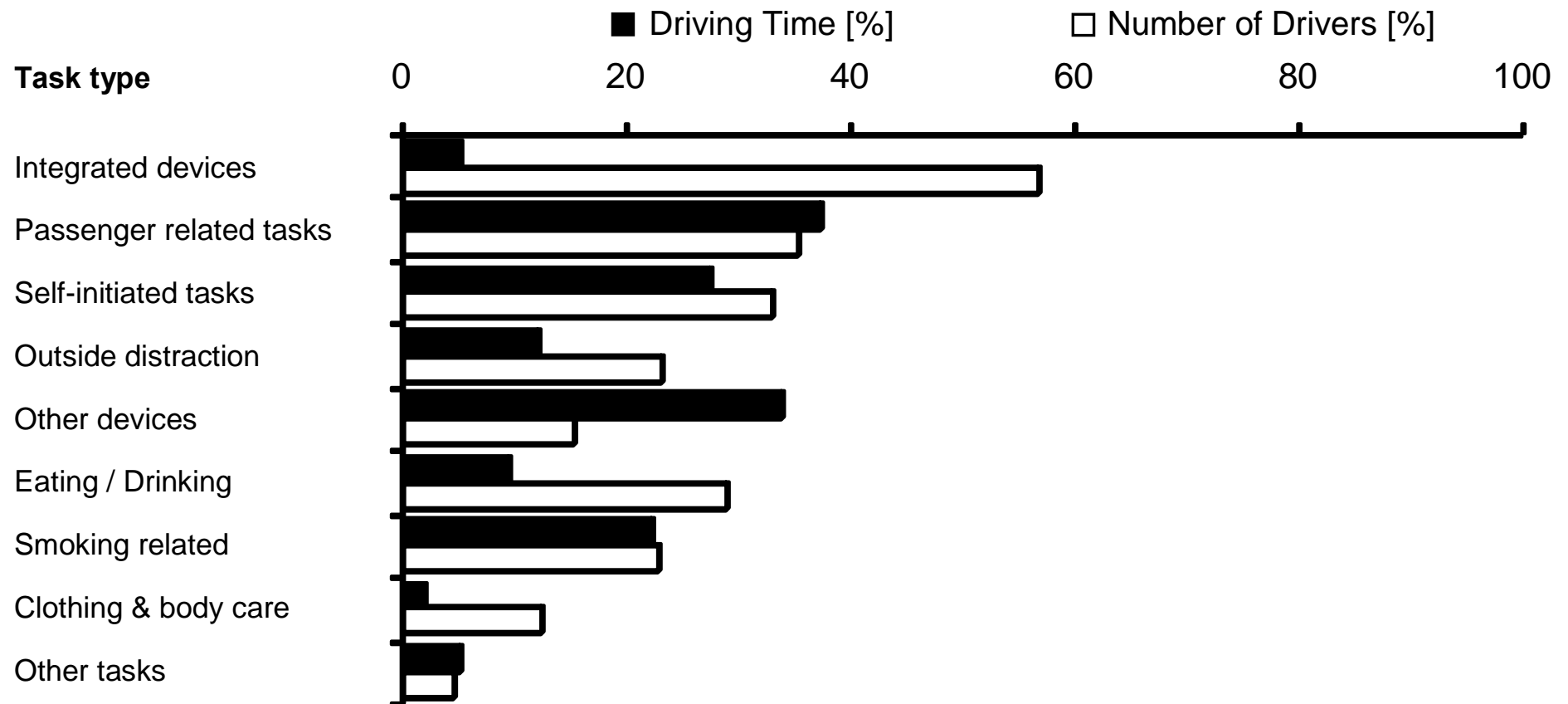
Drivers & Tasks

Vehicle Type and Location		Driving Purpose		Total
		Occupational	Private	
Car	Motorway	29	71	100
	City	12	85	97
	Total	41	156	197
Truck	Motorway	90	1	91
	City	1	0	1
	Total	91	1	92
Total		132	157	289



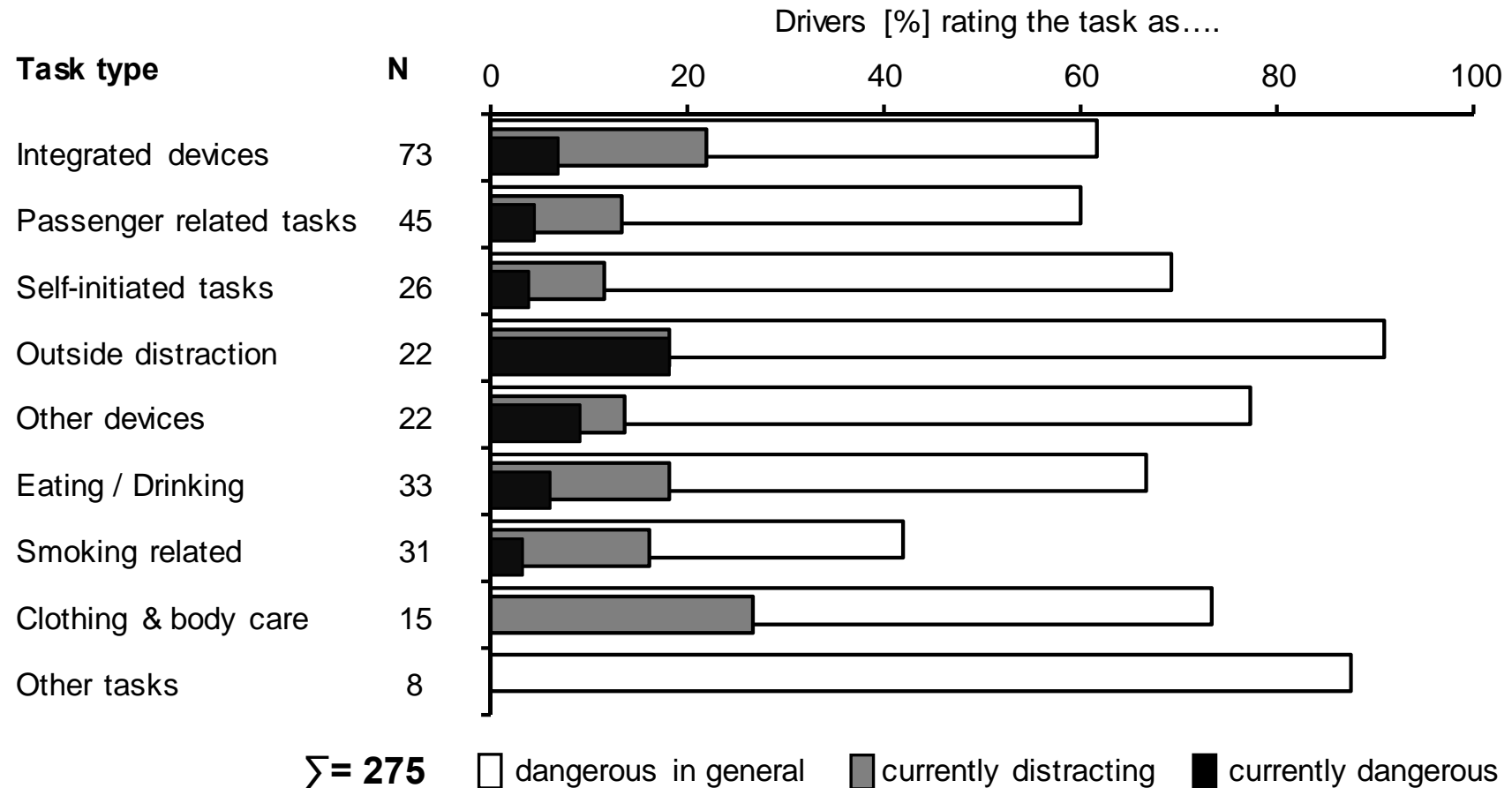
Huemer, A.K. ,& Vollrath, M., (2011). Driver secondary tasks in Germany: Using interviews to estimate prevalence. Accident Analysis and Prevention, 43, 1703–1712.

Frequency & Duration of tasks



Subjective evaluation of tasks

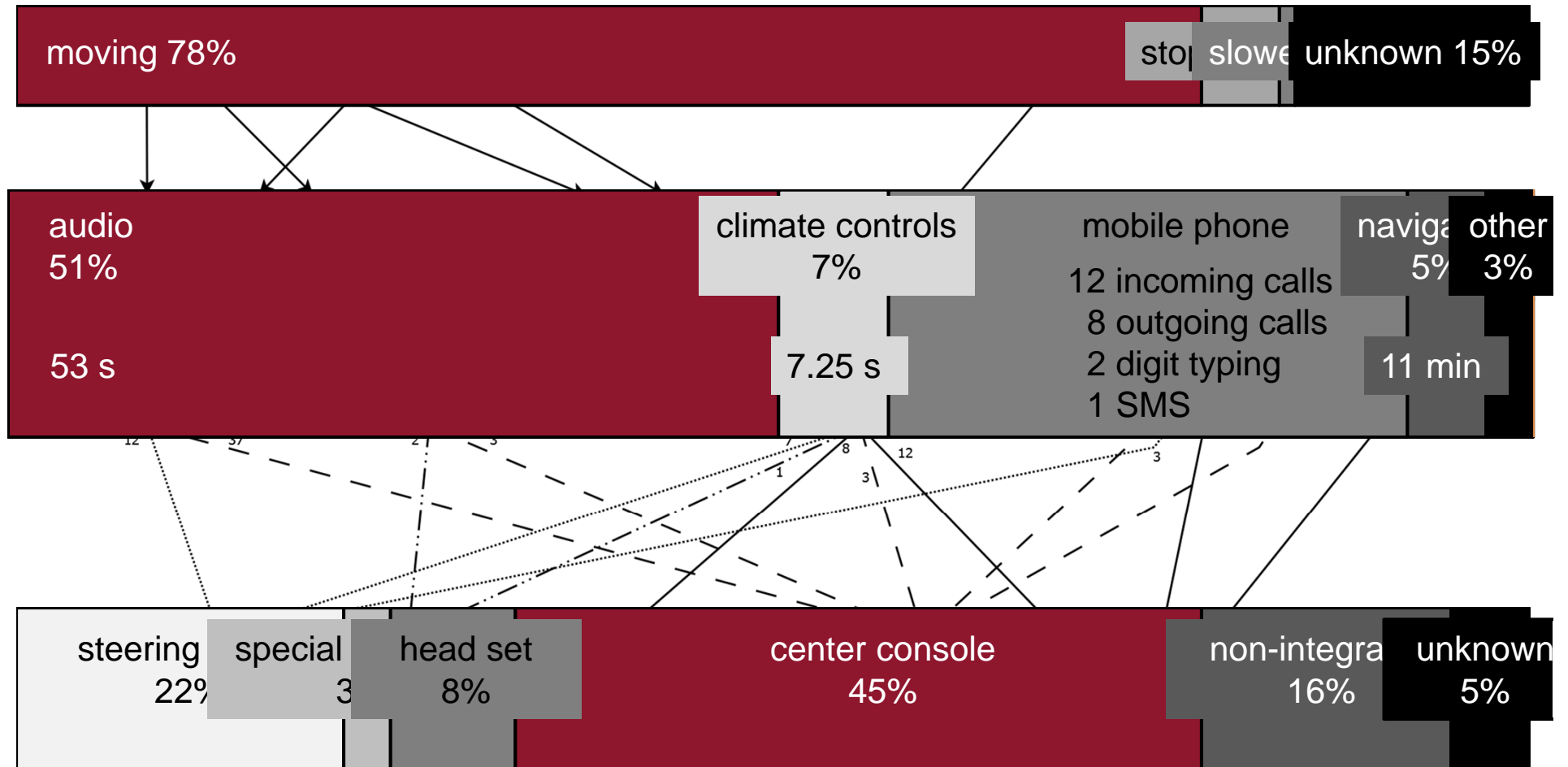
Do you think, the task you carried out, is dangerous while driving?



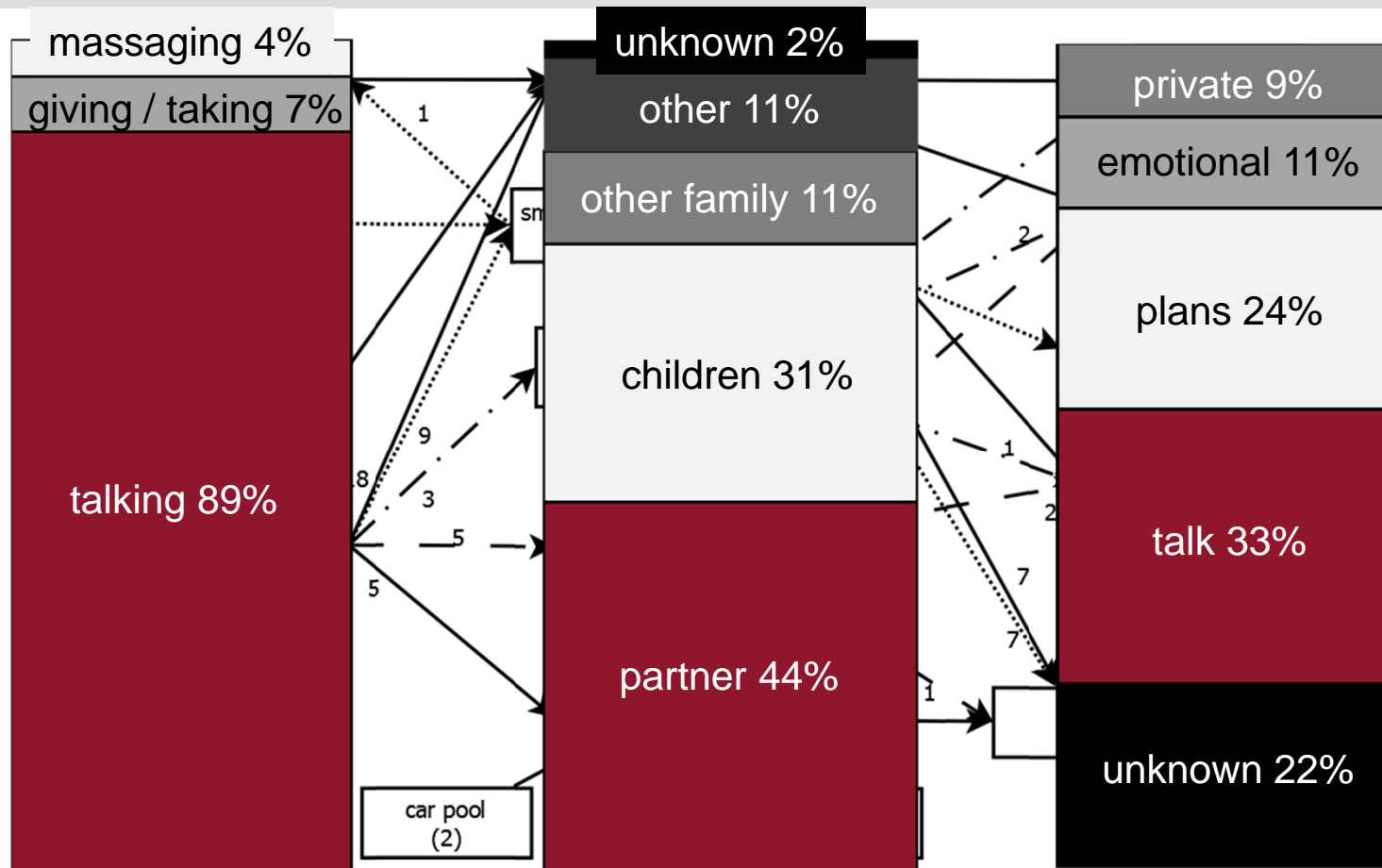
TASK TYPES IN DETAIL



Operating integrated devices

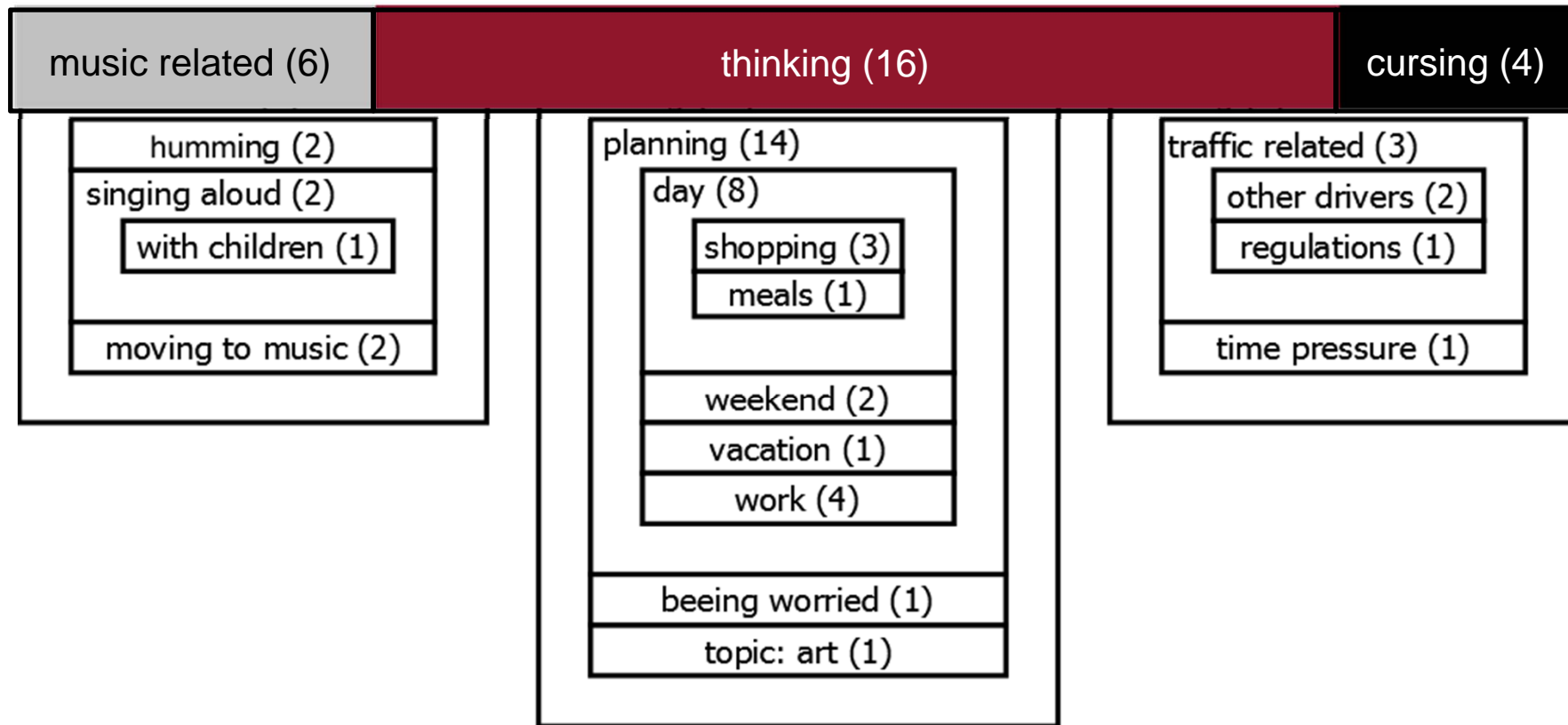


Passenger related tasks



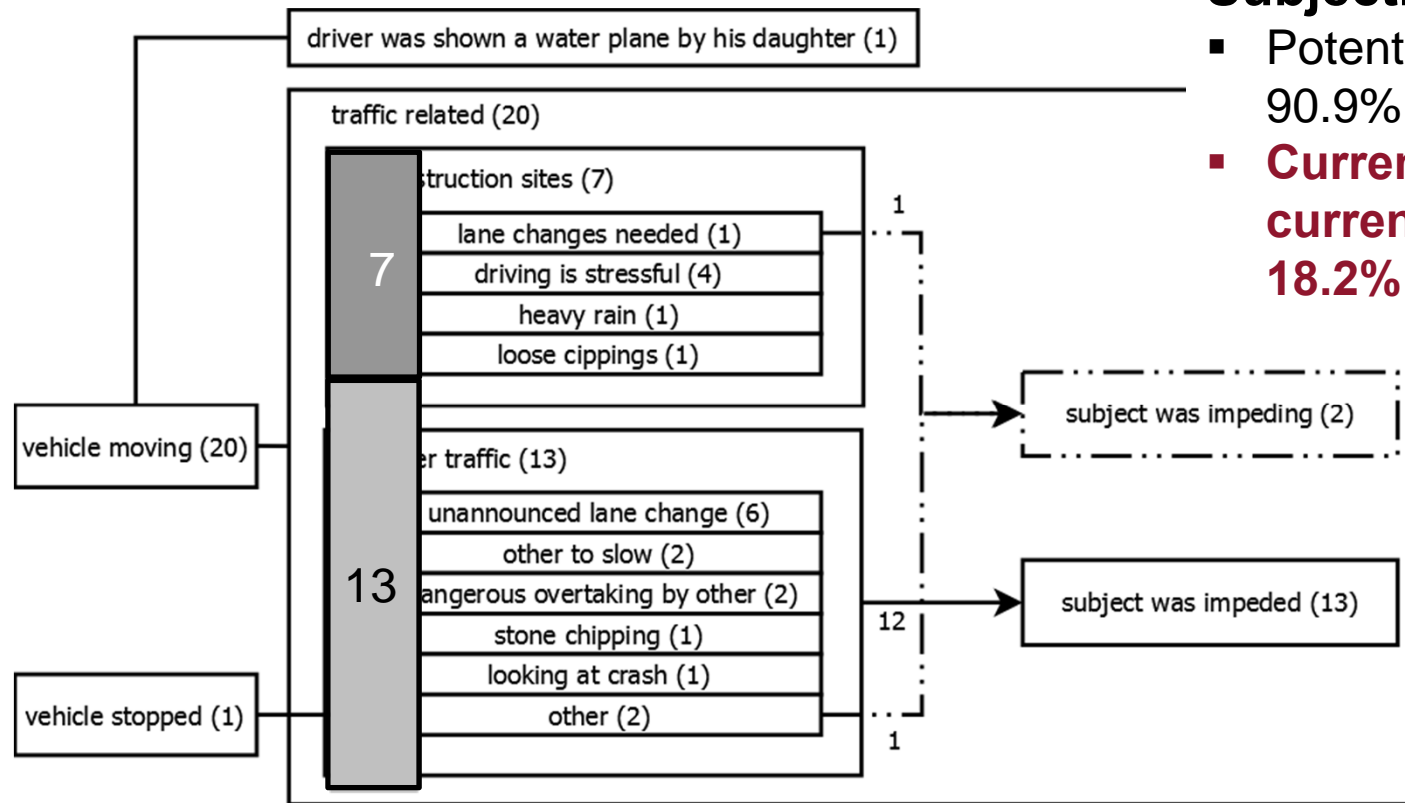
Duration: M= 11,67 min

Self-initiated tasks



- 74.2% of reported driving time (20 min)
- 76% of these drivers were alone in the vehicle

Distractions from outside the vehicle

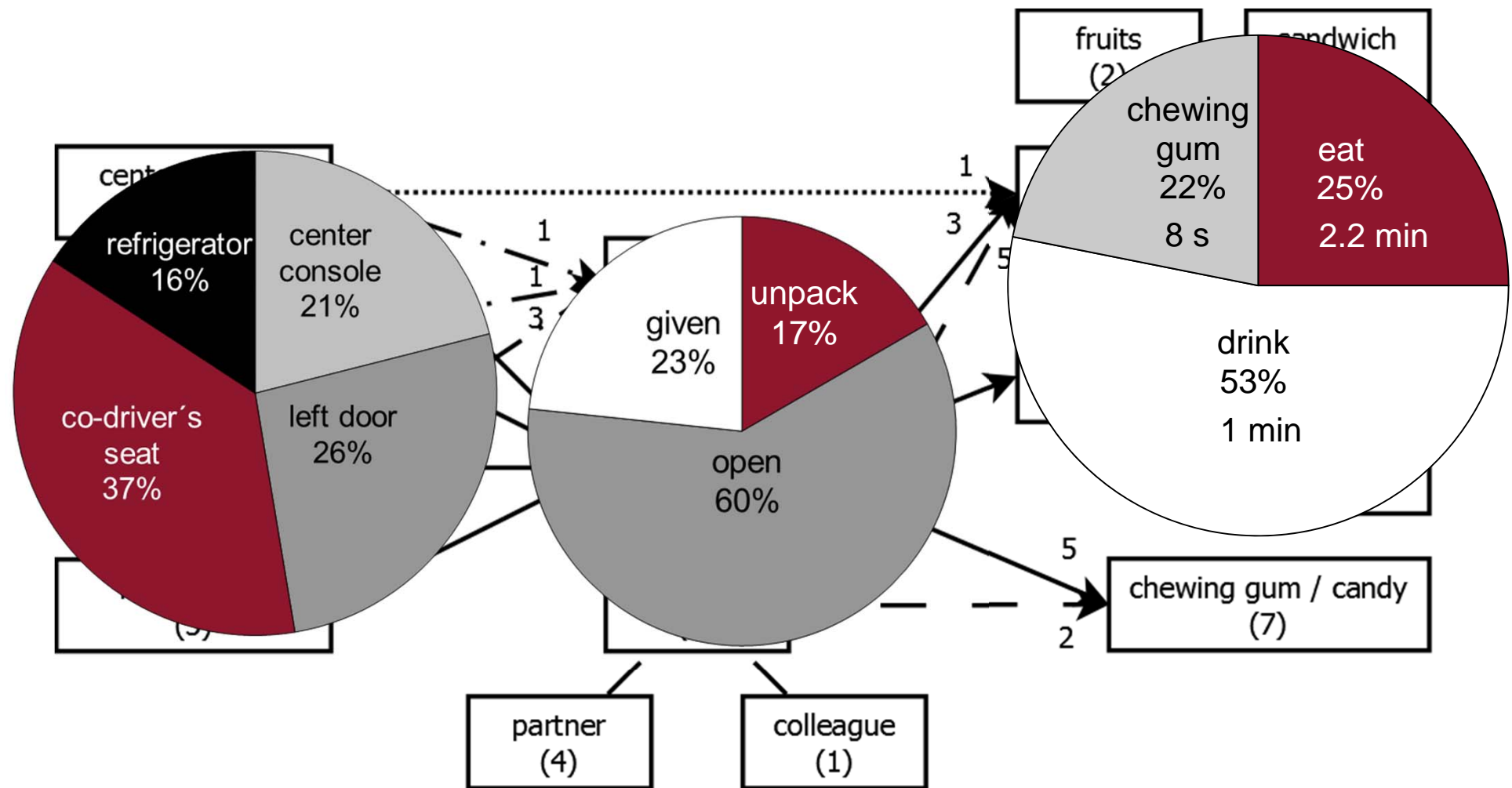


Subjective ratings

- Potentially dangerous 90.9%
- **Currently distracting & currently dangerous 18.2%**

Duration: M= 4 min. (SD= 7.3 min)

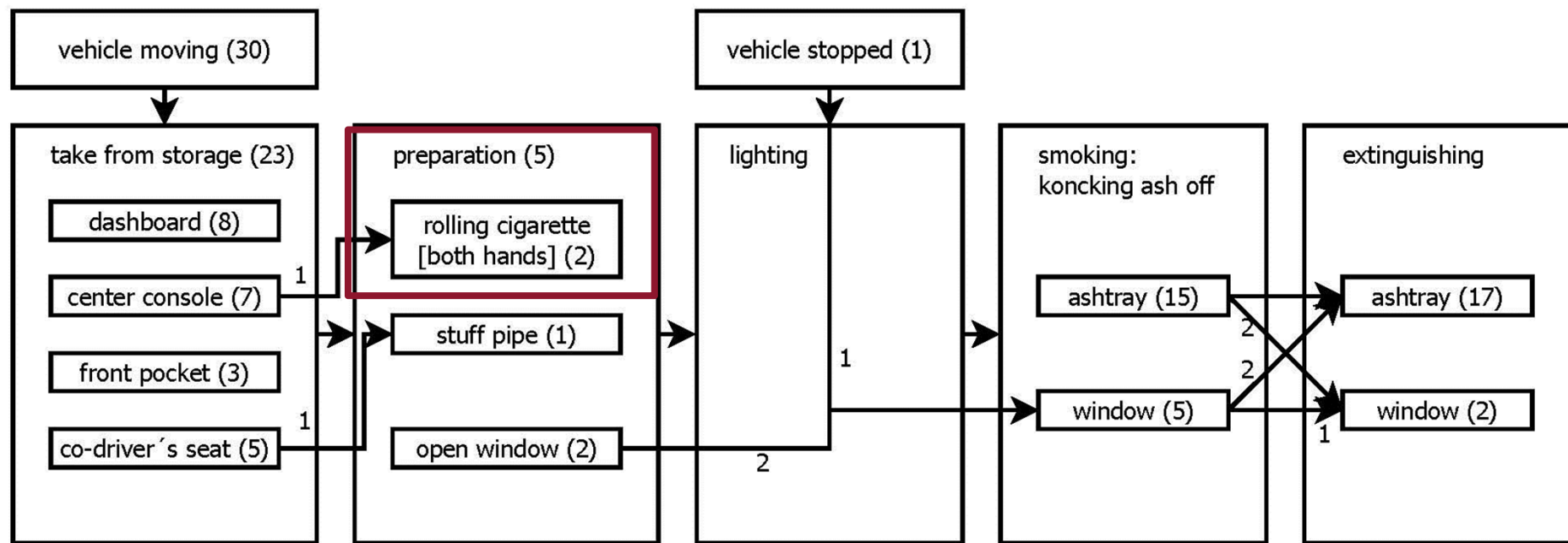
Eating and drinking



Smoking

Smokers

- 8.2% of private drivers in the city
- 4.3% of private drivers on motorway
- 16.7% of occupational cars in the city
- 13.8% of occupational car drivers on motorway
- **55.6% of truck drivers**

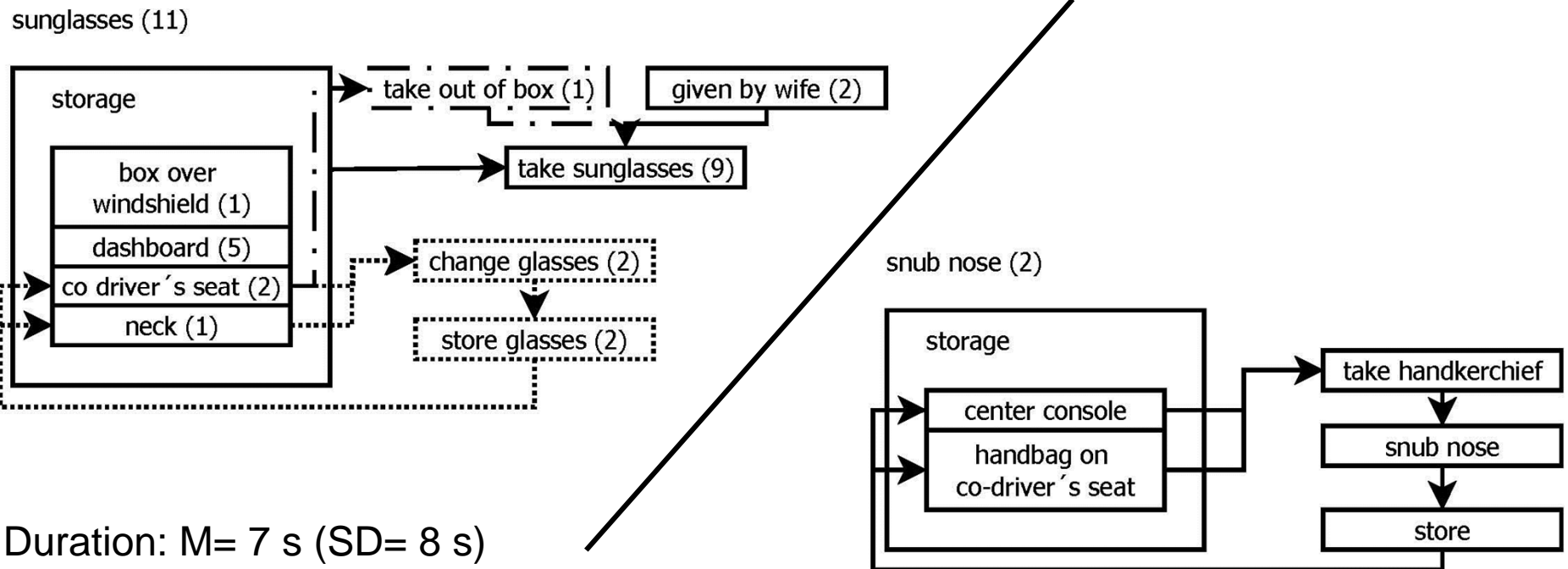


- longer trips (M=3.3 hrs; SD=2.7 hrs) compared to non-smokers (M=1.8 hrs, SD=1.8 hrs).

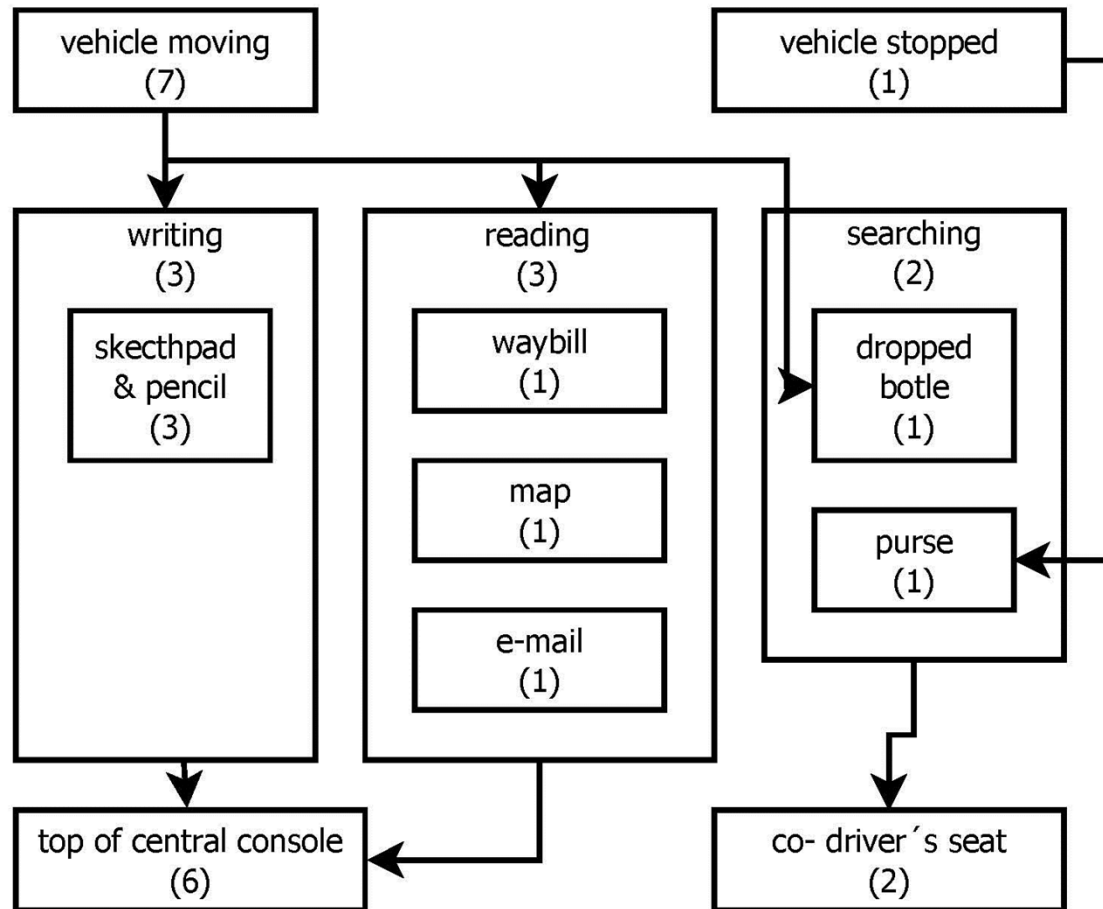
Clothing and body care tasks

- Occupational cars drivers in city 25% of driving time
- Other groups <1% of driving time

What was reported?



Other tasks in the car



- Potentially dangerous: 87.5%
- **Currently distracting: 0%**
- **Currently dangerous: 0%**

CONCLUSIONS



Summary & Discussion

- **Operating devices**
 - Audio and vehicle control tasks – riskiness
- **Self-initiated tasks**
 - Objective risk measures needed
- **Outside distractions**
 - High-risk tasks; drivers seem to be aware
 - Countermeasures needed
- **Eating and drinking**
 - Prominent on long occupational trips, potentially risky
 - Promote drivers to take a rest
- **Other tasks**
 - High risk tasks done by truck drivers
 - Technical support or legislation

Conclusions

Research and awareness needs

- Audio & vehicle control tasks
- Outside distractions
- Internal tasks
- Eating and drinking

Investigation in *circumstances of tasks becoming dangerous* as well as *awareness of these tasks by the responsible parties* is needed.

Underestimated risk

- Passenger tasks (excluding talking only)
- Internal tasks
- (Mostly complex) other tasks

Drivers *are needed to be made aware* of the dangers posed in everyday-tasks.

Limitations

Interview study

- Biases

Detailed descriptions

- Small sample for some tasks

Sample

- Driver groups missing
- Other driving contexts



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Thank you for your attention

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