

IMPROVER

PUBLIC TOLERANCE LEVELS OF TRANSPORTATION RESILIENCE: A FOCUS ON THE ORESUND REGION WITHIN THE IMPROVER PROJECT

9 – 11 October 2017

CRITIS

Lucca, Italy

Laura Petersen, Laure Fallou, Elisabete Carreira, and Andrei Utkin

www.improverproject.eu

@improverproject



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 653390





Public tolerance levels

- Critical infrastructure resilience:
 - Providing a minimum level of service as well as recovering quickly after a shock
- “Expectation gap”?
 - Few studies have asked the public just what they expect
 - Expectation for maintained mobility during disasters



Background on the Oresund Crossing



Methodology



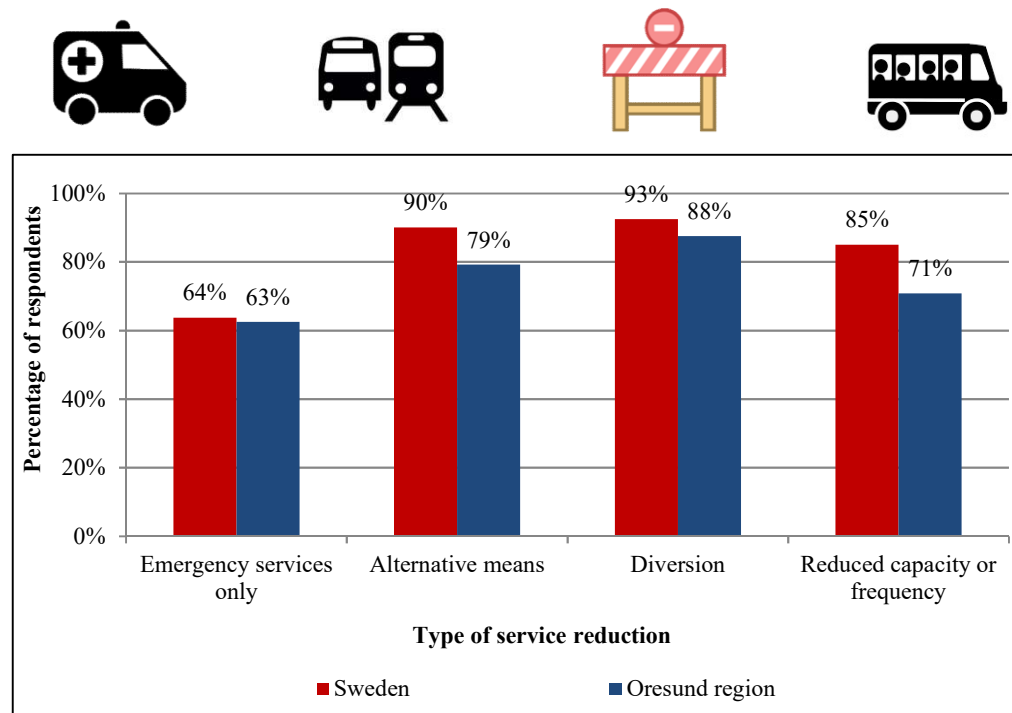
- Research questions:
 - 1) What do Swedish citizens consider as an acceptable level of disruption to transportation infrastructure during a crisis?
 - 2) How have Oresund region residents reacted to the change in service of the Oresund Crossing?
 - 3) How do these declared expectations compare to the change in habits following the initiation of the ID checks at the Oresund Crossing?

- Online questionnaire: 88 respondents
 - Sample:
 - 51% men, 48% women
 - 71% university level or higher
 - Younger and older people underrepresented

- Case study
 - 24 newspapers, social media sites, online reviews, Øresundsbro Konsortiet and Scandlines Helsingborg-Helsingör PR departments

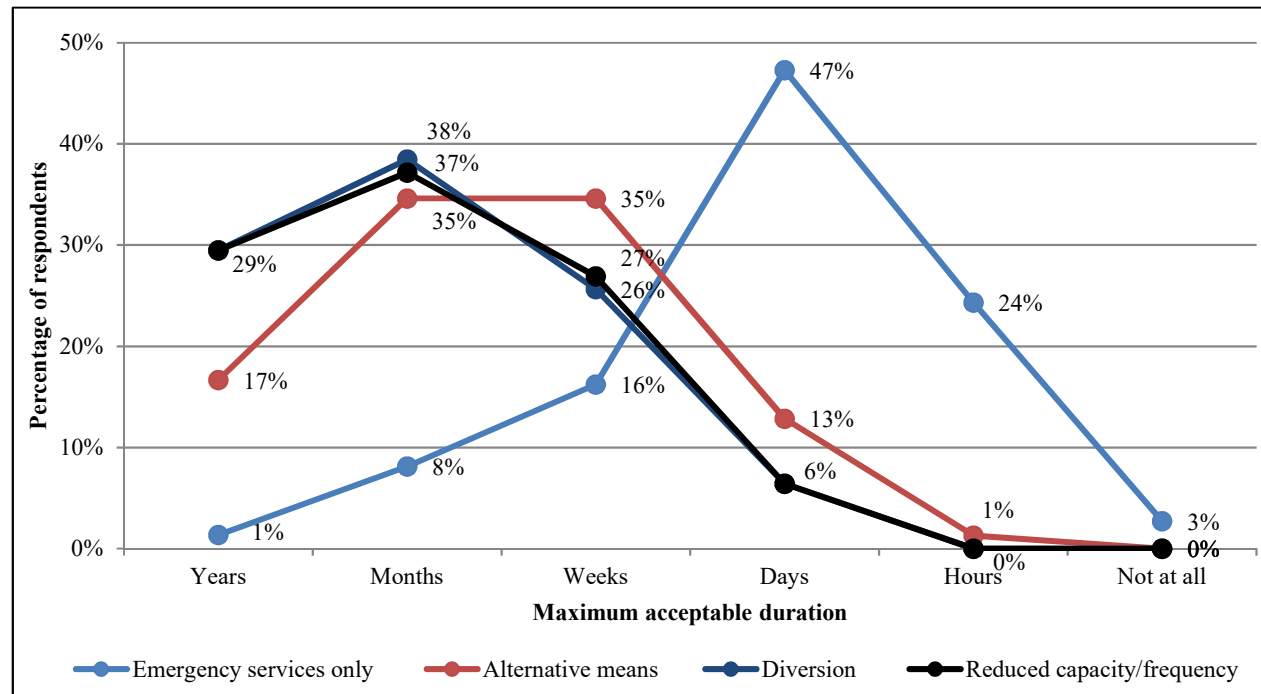


Minimum level of acceptable service



Acceptability of service reduction for Swedish and Oresund region respondents

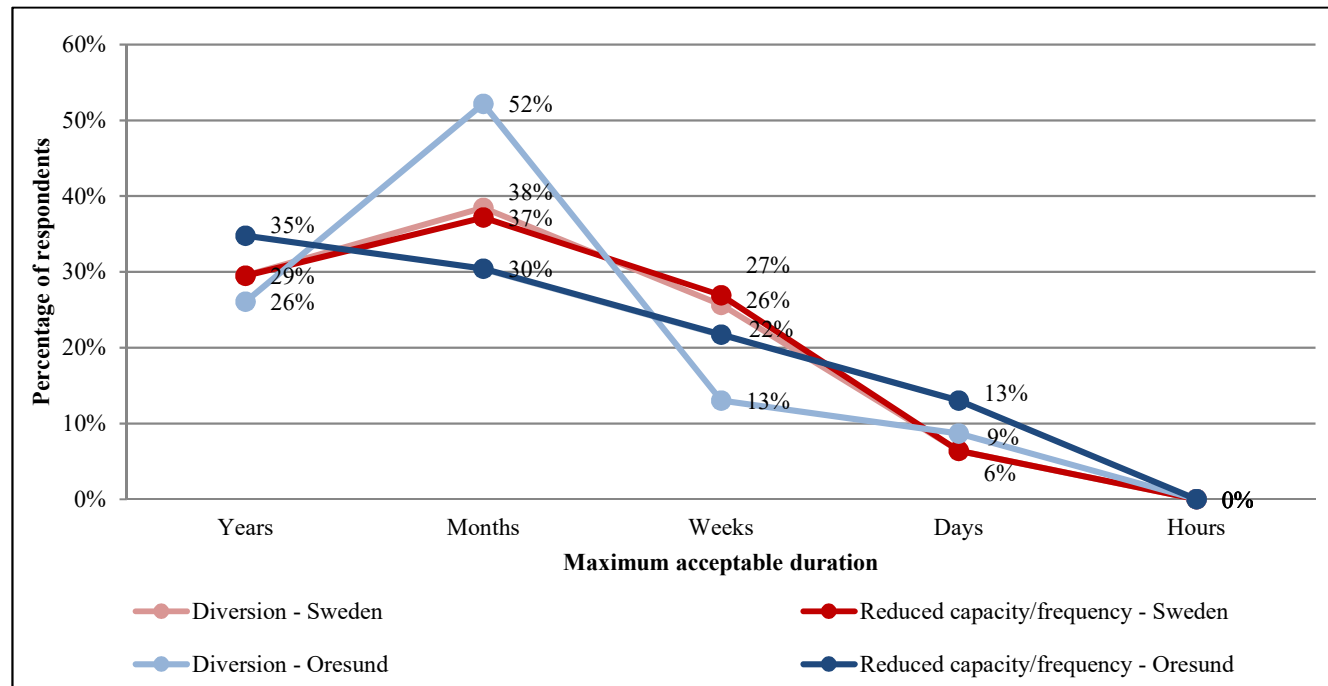
Maximum acceptable duration 1/2



Maximum acceptable duration of the service reduction for Swedish respondents



Maximum acceptable duration 2/2



Maximum acceptable duration for *Diversion* and *Reduced capacity* for Swedish and Oresund region respondents





Case study on change of service

- Public opinion
 - Initial public reaction: negative and disgruntled
 - Reviews of the service positive; no mention of border control
- Use of alternative means (road and ferry)

"I won't manage this for very long. I will have to look for another job."

Road traffic development for
the period January-March
2016.

Type of payment	Traffic development
Cash payment	0.9%
BroPas	12.8%
Commuters	-1.2%
Business	5.8%



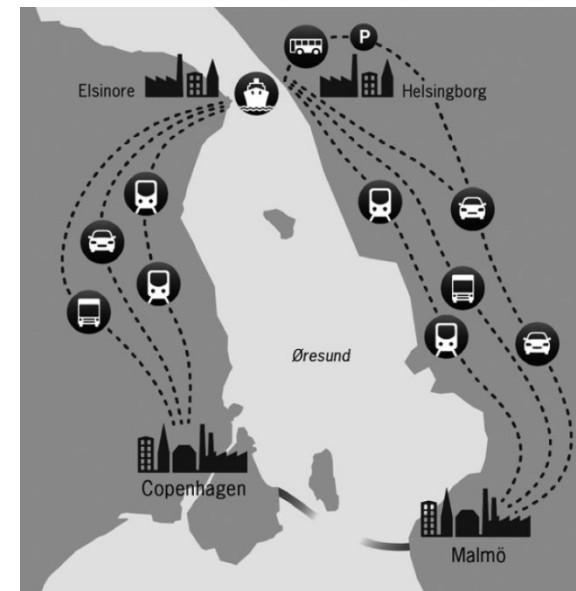
Ferry traffic development for
the period January-March
2016.

Type of client	Traffic development
Transported cars	4%
Passenger	6%



Discussion

- Service reductions appear well tolerated by Swedish respondents
- Oresund region respondents appear more willing to accept service disruptions in the long term
- Quaterly reports for road and ferry transit reflect willingness to use alternative means
- Limitations





Conclusion

- Expectations are less high than was previously imagined
- Declared expectations reflect actual habits of the Oresund region residents
- Results demonstrate the public's resilience
 - Declared willingness to tolerate service disruptions is quite high even in the long term
 - Most users of the Oresund Crossing train continued to take it
 - Users of the train were also willing to take alternative means



Thank you!



Laura Petersen

EMSC Environment, Resilience and Risk Engineer



Email: petersen@emsc-csem.org

Twitter: @petersen_laura_



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement no. 653390

