



**NOMAD**

Nordic Open Mobility Digitalization

**Problemfri mobilitet på tværs af de Nordiske grænser  
– The Whys, the Whos and the Hows of Mobility Roaming**

Hans Arby, RISE

# NOMAD

**Roaming according to Webster:**

- 1) To go from place to place without purpose or direction**
- 2) To travel purposefully unhindered through a wide area**
- 3) To use a cellular phone outside one's local calling area**

NOMAD

## The Whys:

What's in it for the **users**, the society and the business

travellers in the Nordic countries  
can seamlessly  
plan  
book  
and pay  
for multiple mobility services  
in multiple service areas  
in multiple Nordic countries  
without....



# NOMAD

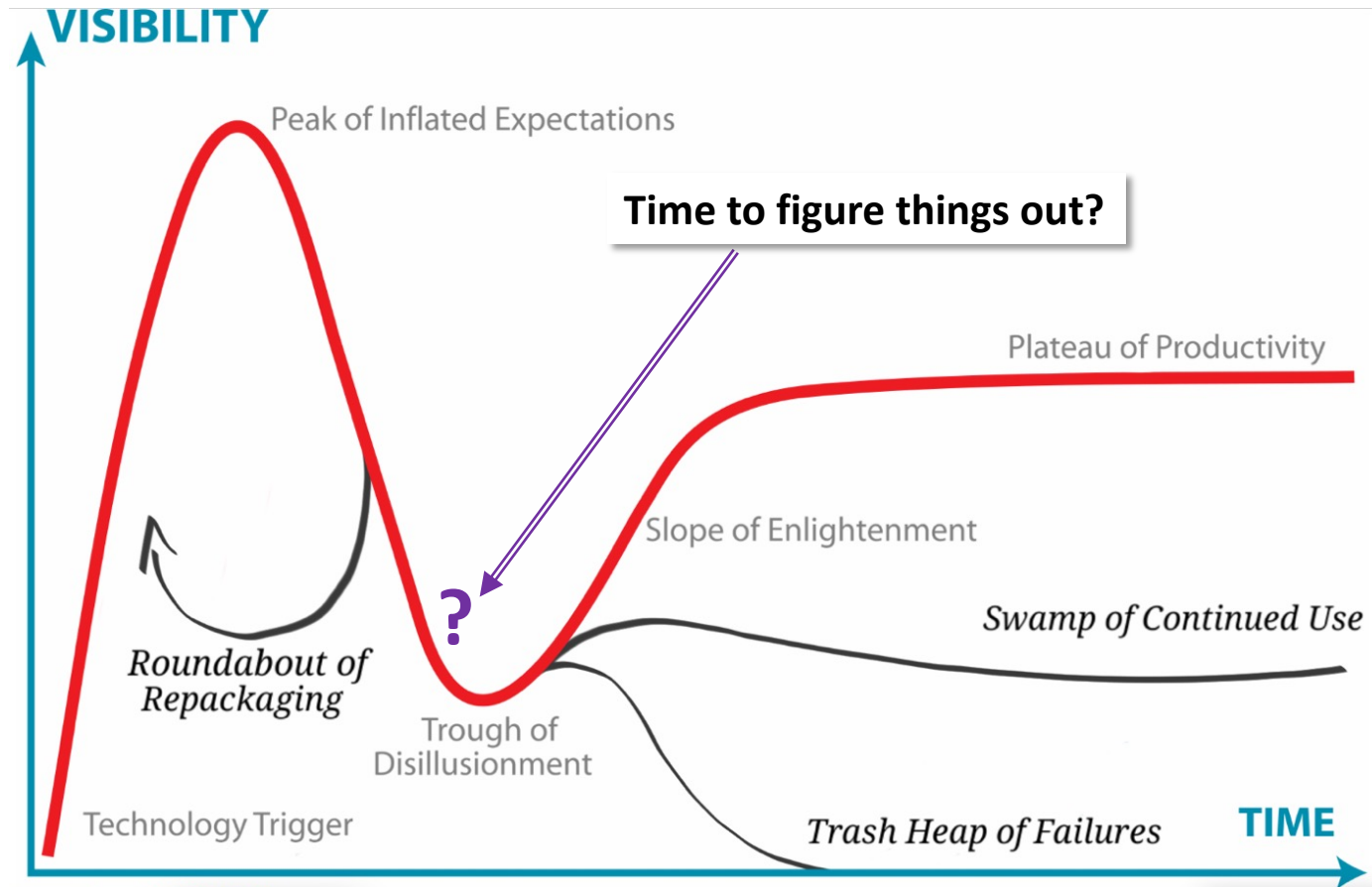
But first:

## MaaS and the mobility market

- Not Netflix for mobility
- Full of legacy stuff
- Dependant on public-private co-operation
- Sceptic service providers
- Anchored in the physical world



# The Gartner Group Hype Curve – Where is MaaS?



Source:  
Dave Algosio

## MaaS and the mobility market

- Not Netflix for mobility
- Full of legacy stuff
- Dependant on public-private co-operation
- Sceptic service providers
- Anchored in physical world
- >95% of the trips are done in the home city...
- **...so why do roaming on top of all this?**

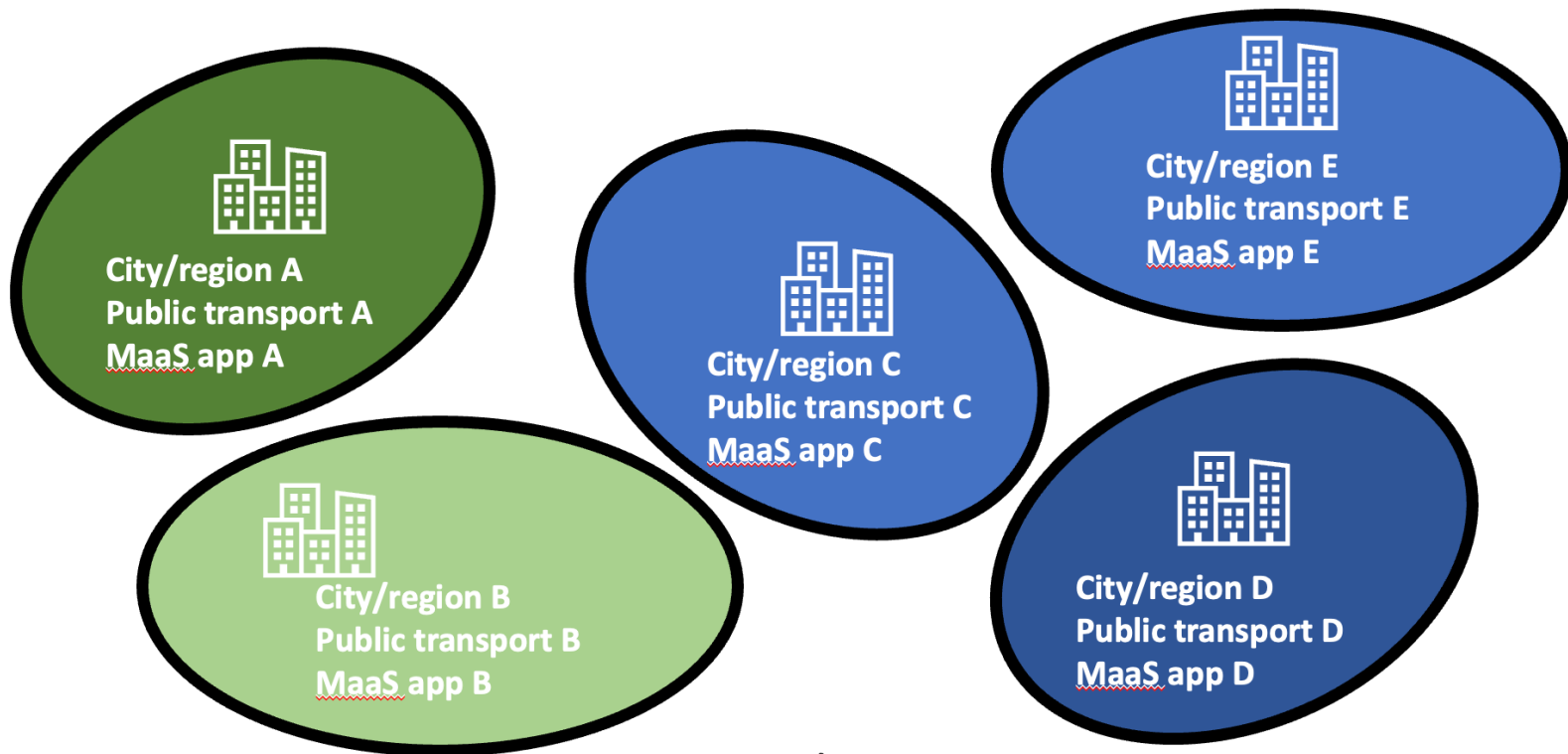


## Roaming: The Whys:

- Seamless mobility for the users
- Larger, common mobility markets for service providers
- Increased share of sustainable travel
- Supporting governance

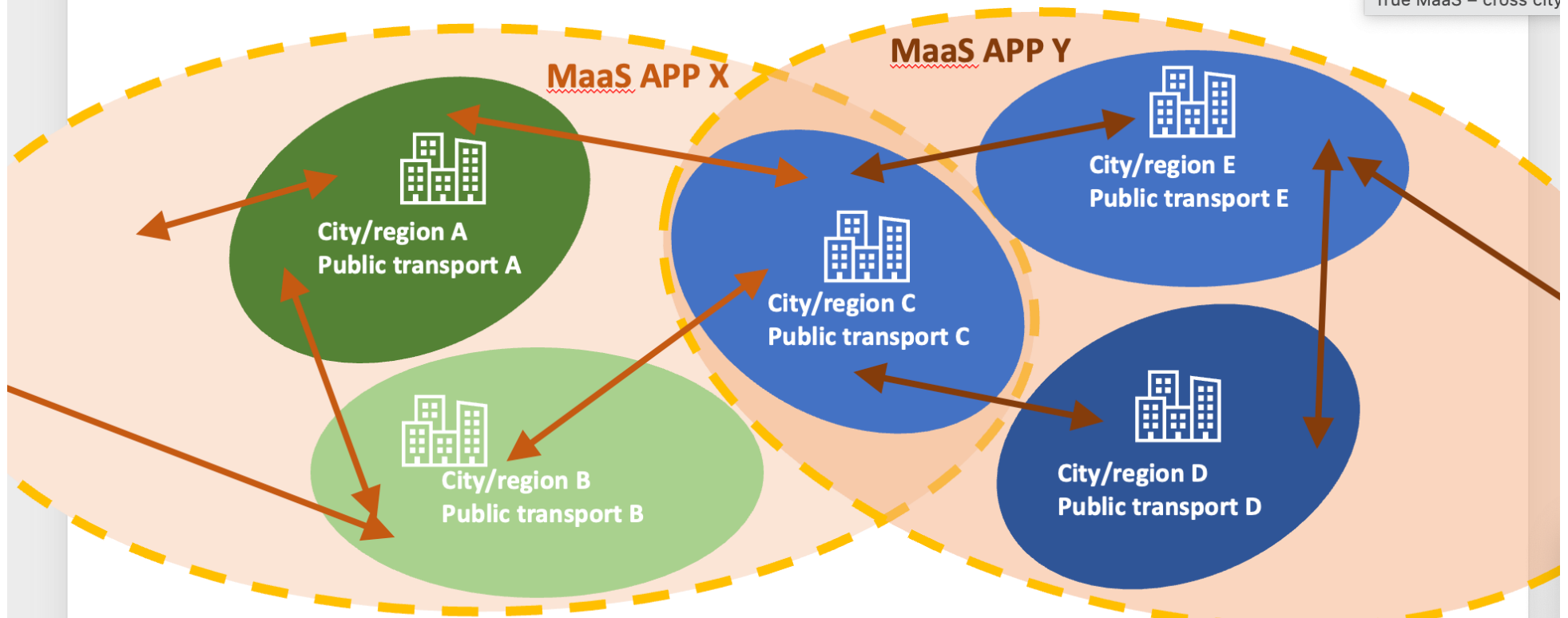


# Myth: each city needs its own MaaS More walled gardens of public transport





# True MaaS – cross city, regions, borders



# The Whos and Hows:

Technical solutions and business practises



## MaaS topology (Sochor, Arby, Sarasini, Karlsson, Holmberg)



# NOMAD

Level	Front-end	Back-end	
3	D	Use home app	Commercial & technical integration, Nordic level (“ <b>Nordpool</b> ”)
	C	Use home app	Commercial & technical integration, National level (“ <b>Swepool</b> ”/“ <b>Finpool</b> ” etc”)
	B	Use home app	Commercial & technical integration, <b>same platform</b>
	A	Use home app	Commercial & technical integration, <b>bilateral agreements</b>
2	Download local app - use home account	Commercial integration ( <b>no technical</b> ), <b>bilateral agreements</b>	
1	Referral (within app)	<b>List and/or marketing co-op</b> - no commercial or technical integration	
0	Find local app – good luck	No support or agreements at all	

Levels of Roaming – from NOMAD Pre-study

## Main challenges

- The business case
- The locality of Public Transport
- Standardisation
- New roles
- The supply side
- The demand side

### But things are moving:

- EU: MDMS (Multimodal Digital Mobility Services)
- EU: Review of the ITS directive
- EU: NUMF (SUMPs)
- Nordics: ODIN, NOMAD
- 2<sup>nd</sup> gen National Access Points (as discussed)

# NOMAD

2019 - 2023



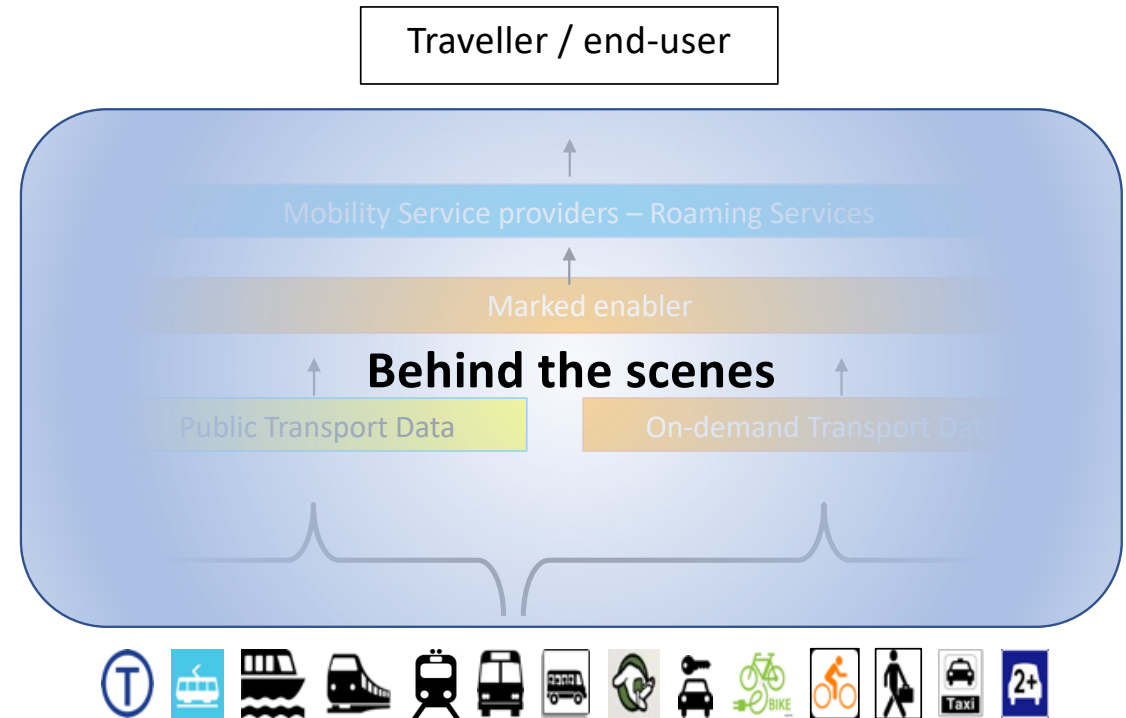
## Core-partners:

- ITS Nordics (all ITS associations)
- The Capital Region of Denmark
- RISE, Sweden
- TØI, Norway
- UbiGo, Sweden
- Kyyti Group, Finland
  
- Associated Partners
- Supporters

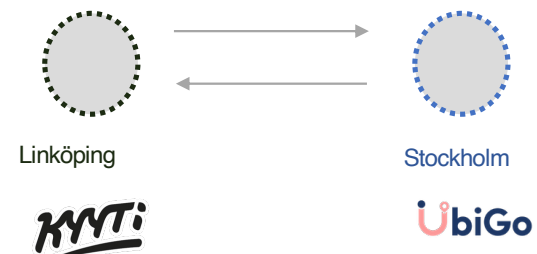
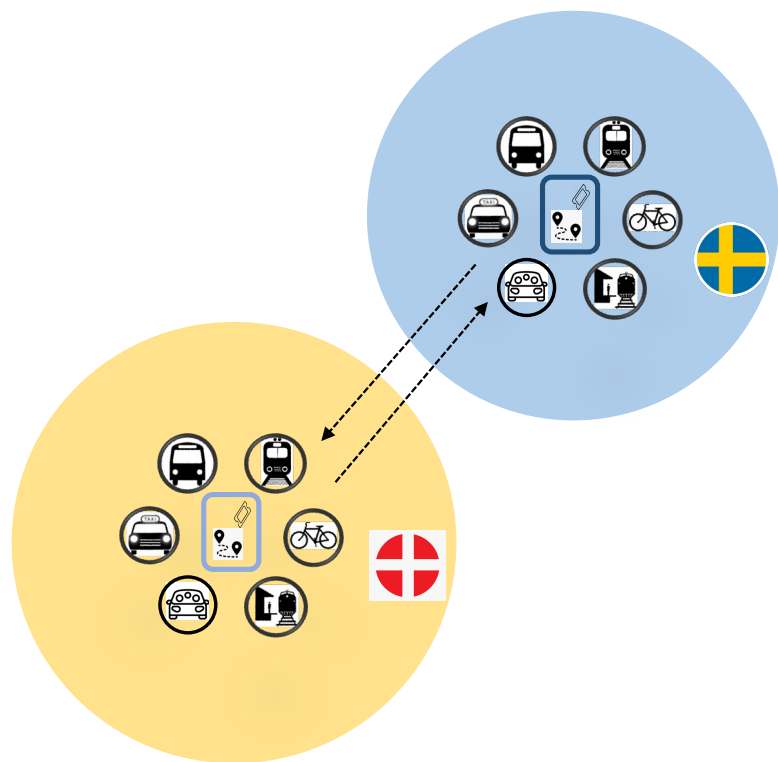
# NOMAD-compliant MaaS (Roaming)



”Technical and organizational convergence of technical standards & business practises”



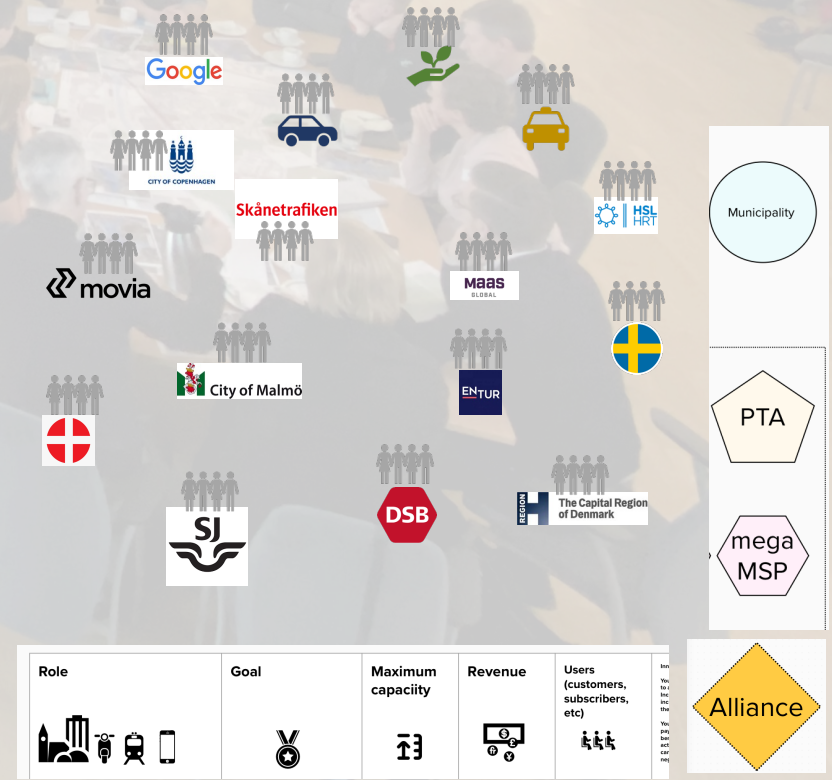
## NOMAD – The pilot (WP5). The year was 2020....

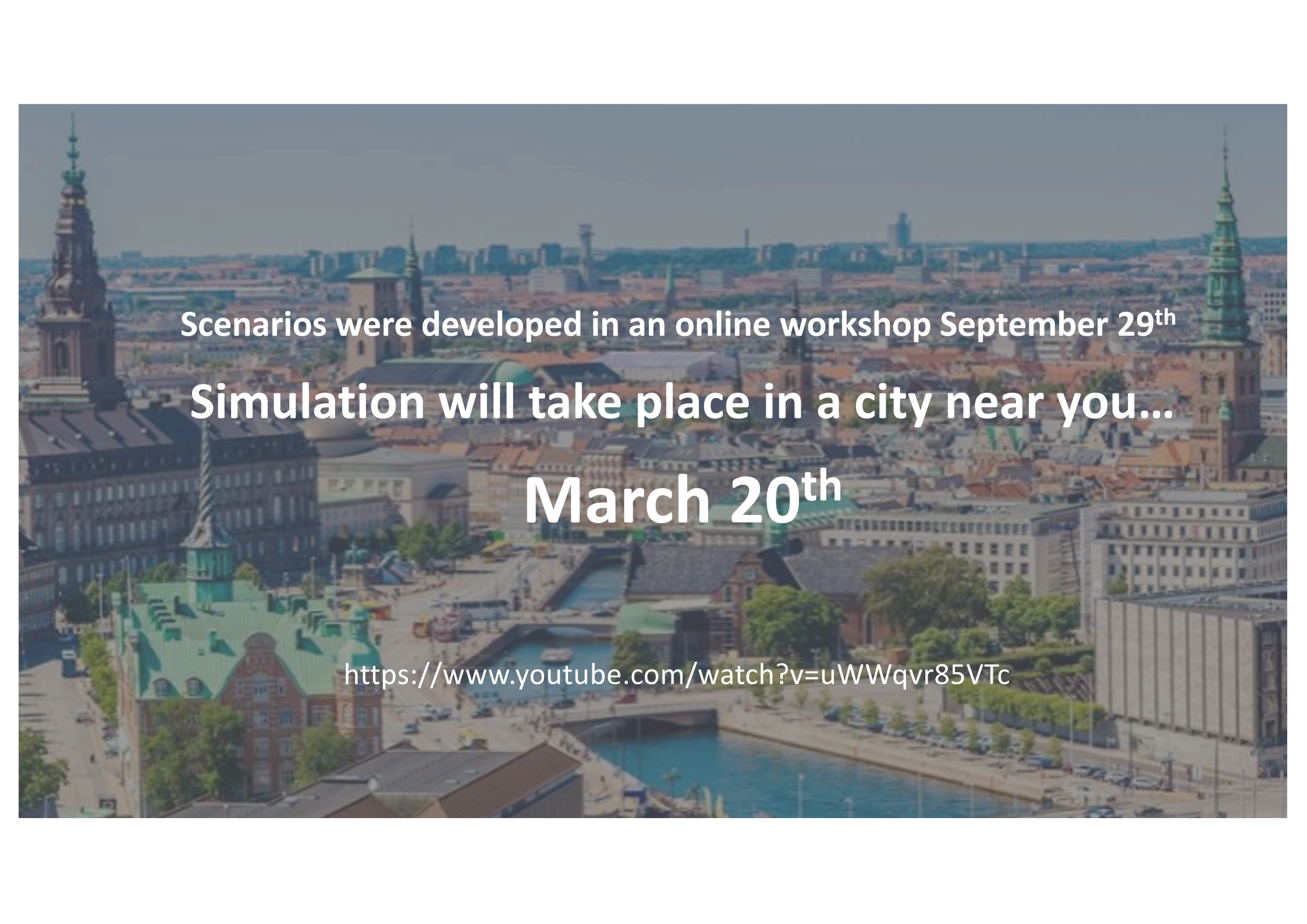




## NOMAD – The simulation

- Participants will be assigned a role on a team, representing a real Nordic mobility ecosystem actor.
- Your simulation role will *not* be your real-life role 😊
- Teams will be given a dossier with their organization’s goals (e.g. “increase customers by 100k”, “remove 50,000 cars from the road” etc )
- Teams will each try to achieve their own goals by working with other teams.
- We will test multiple scenarios during the day.



An aerial photograph of a city, likely Copenhagen, showing a river winding through the center. The city is filled with historic buildings, many with red-tiled roofs and prominent spires. The sky is clear and blue. The text is overlaid on the image in white, bold font.

Scenarios were developed in an online workshop September 29<sup>th</sup>

Simulation will take place in a city near you...

March 20<sup>th</sup>

<https://www.youtube.com/watch?v=uWWqvr85VTc>

**Thanks!**



Photo: iStock

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