ReVeAL webinar, May 18
Koos Fransen, Ghent University
Automobile ads, advertising the benefits of the modern transport mode: freedom, status and increased travel speed and quality.
‘All roads lead to Rome’, a common proverb that illustrates our extensive road infrastructure network
The automotive city and suburban sprawl, leading to inefficient spatial planning, reduced efficiency/safety for alternative transport modes, (highway) road congestion and detrimental effects, such as smog.
Mobility disruptions during the pandemic

Congestion in kmh/day (blue lines, source: Verkeerscentrum Vlaanderen)

Distancing and public space (source: Post Corona Talks - VRP)

Pop-up cycling street Ghent (source: Filip Watteeuw)
(1) Building block methodology
(2) UVAR development process

Different UVAR strategies will be developed, implemented and tested in the cities of: Helmond (NL), Jerusalem (IL), London (UK), Padova (IT), Vitoria-Gasteiz (ES) and the project leader Bielefeld (DE)

Urban change management through UVAR assessment

ReVeAL building block schematic (source: Lucy Sadler)
8 exemplary ‘best’ practice case studies: Barcelona (Ajutament de Barcelona), Ghent (city of Ghent), Mechelen (ReScape), Milan (ETSC), London (The Telegraph), La Rochelle (city of La Rochelle), Bologna (Parkimeter), Amsterdam (city of Amsterdam)

More information: ReVeAL website (https://civitas-reveal.eu) or Urban Access Regulations website (https://urbanaccessregulations.eu/)
Building block methodology: long list

Long list 70 options
In 26 building block categories

For example:
- Speed regulated school streets
- Distance-based congestion charge
- Regulations by vehicle emissions
- Dynamic traffic management
- Grants towards adaptation
...
Spatial Interventions
1. School street
2. Cycling street
3. Traffic filter
4. Removing parking/road
5. Cycle lane
6. Pedestrian street
7. Bus/tram priority lane
8. Woonerf

Pricing measures
9. Congestion charge
10. Pollution charge
11. Parking charge
12. Traffic flow management
13. Urban logistics charge

Pathways to ZEZ/LTZ
14. Regulation by emissions
15. Regulation by vehicle type/dimension
16. Regulation by trip purpose
17. Scheme timescale
18. Regulation by permit
19. Regulation by other

Future options
20. Enablers
21. Indirect UVAR
22. Promoting alternatives

Complementary measures
23. Financial incentives
24. Exemptions
25. Increased mobility options
26. Individual solutions

Building block methodology: long list
Building block methodology: spatial interventions

Spatial Interventions

1. School street
   a. Car-free school area
   b. Kiss&Ride
   c. Speed regulated
2. Cycling street
3. Traffic filter
   a. Road block
   b. Capacity restraint
   c. Visual barrier
   d. Through traffic ban
   e. One-way street
4. Removing parking/road
   a. Parklet
   b. Widen pavement
   c. Drop-off zone shared mobility
   d. Logistics bay
5. Cycle lane
   a. Redistribution of road space
   b. Conversion of parking lane
6. Pedestrian street
   a. Mixed used cycling-pedestrians
   b. Residents only vs other groups
   c. Temporal
7. Bus/tram priority lane
8. Woonerf
### Spatial Interventions

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2. Cycling street  
3. Traffic filter  
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5. Cycle lane  
6. Pedestrian street  
7. Bus/tram priority lane  
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#### 1. School street
- a. Car-free school area
- b. Kiss&Ride
- c. Speed regulated

#### 2. Cycling street
- a. Road block
- b. Capacity restraint
- c. Visual barrier
- d. Through traffic ban
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- a. Parklet
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#### 4. Removing parking/road
- a. Redistribution of road space
- b. Conversion of parking lane

#### 5. Cycle lane
- a. Mixed used cycling-pedestrians
- b. Residents only vs other groups
- c. Temporal

#### 6. Pedestrian street
- a. Mixed used cycling-pedestrians
- b. Residents only vs other groups
- c. Temporal

#### 7. Bus/tram priority lane
- a. Mixed used cycling-pedestrians
- b. Residents only vs other groups
- c. Temporal

#### 8. Woonerf
- a. Mixed used cycling-pedestrians
- b. Residents only vs other groups
- c. Temporal
9. Congestion charge
   a. Applied to perimeter or area
   b. Applied to specific points
   c. Distance-based charge
   d. Workplace levy

10. Pollution charge
    a. Applied to perimeter or area

11. Parking charge
    a. Dynamic price (real time)
    b. Fixed price
    c. From on-street to off-street

12. Traffic flow management
    a. Time-based charge
    b. Distance-based charge
    c. Number plate regulation schemes

13. Urban logistics charge
    a. Mobility credits
Pricing measures

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    b. Distance-based charge
    c. Number plate regulation schemes

13. Urban logistics charge
    a. Mobility credits
14. Regulation by emissions

15. Regulation by vehicle type/dimension
   a. Vehicle type
   b. HDV/LDV
   c. Vehicle weight
   d. Vehicle length

16. Regulation by trip purpose
   a. Delivery
   b. Residents and specific users

17. Scheme timescale
   a. Programmed time window
   b. Reactive operation
   c. Phasing

18. Regulation by permit
   a. Permit to travel
   b. Car park or ownership permit
   c. Permit to build car park space

19. Regulation by other
   a. Load factor
   b. Vehicle safety features
   c. Company size
   d. Removing road space
Pathways to ZEZ/LTZ

14. Regulation by emissions
15. Regulation by vehicle type/dimension
16. Regulation by trip purpose
17. Scheme timescale
18. Regulation by permit
19. Regulation by other

14. Regulation by emissions
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Building block methodology: pathways to ZEZ/LTZ Ghent
**Future options**

- 20. Enablers
- 21. Indirect UVAR
- 22. Promoting alternatives

**Complementary measures**

- 23. Financial incentives
- 24. Exemptions
- 25. Increased mobility options
- 26. Individual solutions

**20. Enablers**

- a. Geofencing
- b. Connected vehicles and infrastructure
- c. Autonomous vehicles
- d. Digital twins/data sharing platforms, stand. and systems

**21. Indirect UVAR**

- a. Dynamic traffic signalling/management/ITS/rerouting
- b. Dynamic curbside management

**22. Promote alternatives**

- a. MaaS system
- b. Mobility hub
- c. Easy access micro-mob renting
- d. Transit, waterways, freight consolidation center
- e. High occupancy vehicles

**23. Financial incentives**

- a. Economic incentive for fleet renewal
- b. Economic incentive for mobility
- c. Grants towards adaptation

**24. Exemptions**

- a. Essential exemptions
- b. User needs exemptions
- c. Retrofits
- d. Permit/exemption charge
- e. Time slots

**25. Increased mobility options**

**26. Individual solutions**

- a. Individual solutions based on the local situation
# Future options

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
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<td>b. Dynamic curbside management</td>
<td>b. Mobility hub</td>
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<td>c. Autonomous vehicles</td>
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<td>e. High occupancy vehicles</td>
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# Complementary measures

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<td>a. Individual solutions based on the local situation</td>
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<td>e. Time slots</td>
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# Building block methodology: extra Ghent
Why?
Exploration of the different pathways to implementation (and their effects during the process)

“Scenario planning techniques are increasingly gaining attention in the process of spatial and urban planning because of their usefulness in times of uncertainty and complexity. Scenario planning encourages strategic thinking and helps to overcome thinking limitations by creating multiple futures.” (Ljubenovic et al., 2014)
Definition complementary to SUMP definition:
an UVAR scenario is a high-level plan, which starts from the current city context (e.g., existing mobility networks and services, population, city functions, spatial layout, political support, public opinion, plans) and sketches out what a ReVeAL strategy could look like within the current city context with high-level estimates on impact.

A strategy:
a combination of different UVAR measures (or building blocks) to make a complete and robust UVAR scheme.
What?
Many different ways of achieving a similar aim are possible
- UVAR development process helps find the right one for your city
- herein, the development process is not linear, but co-creative, dynamic and interactive
Strategy description for ReVeAL pilot cities

⇒ area, challenges and chances, targets, indicators

Differences in cities in early vs later phase of the UVAR process

<table>
<thead>
<tr>
<th>Early phase (i.e., ideation)</th>
<th>Later phase (i.e., design, implementation)</th>
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<tbody>
<tr>
<td>The existing situation considering the interventions without UVAR UVAR scenario’s Implementations of UVAR strategies that mix and match different building blocks at:</td>
<td>A description of the situation based on the decisions made in the ideation phase UVAR scenario’s Adaptations of the chosen UVAR strategies that can differentiate in:</td>
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<tr>
<td>- different geographical areas</td>
<td>- building block combinations</td>
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<td>- different phasing parts of the project</td>
<td>- location of interventions</td>
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<td>- different foci of the strategy, ambitions or desired targets</td>
<td>- implementation conditions</td>
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<td>- timing</td>
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## Existing (E), planned (P) and considered (C) UVAR measures in the six ReVeAL pilot cities

<table>
<thead>
<tr>
<th>Building block category</th>
<th>Bielefeld</th>
<th>Helmond</th>
<th>Jerusalem</th>
<th>London</th>
<th>Padua</th>
<th>Vitoria-Gasteiz</th>
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<tbody>
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<td><strong>Spatial interventions</strong></td>
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<td>E/P</td>
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<td>Cycling street</td>
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<td>E/P</td>
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<td>Traffic filter</td>
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<td>E/P</td>
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<td>Removing parking/road</td>
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<td>E/P</td>
<td>E/P</td>
<td>E/C</td>
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<td>Cycle lane</td>
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<td>E</td>
<td>E/P</td>
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<td>Pedestrian street</td>
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<td>E/P</td>
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<td>Bus/tram priority lane</td>
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<td>Regulation by vehicle type</td>
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<td>C</td>
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Co-creation session workshops
a. Define (most) interesting building blocks
b. Combine building blocks into possible strategies
c. Envision impact of possible strategies

Workshop with various stakeholders
Mobility, planning, energy, environment, communication, local police, local businesses, ...

+ follow-up meeting with various stakeholders and experts

(ReVeAL Toolkit when it arrives)
Policy support for the pilot city:
Support policy decisions for the UVAR implementation

UVAR development process:
Tested within ReVeAL
Many similarities to the SUMP process

⇒ holistic methodology for guiding cities through implementation and evaluation of UVAR strategies
⇒ feeds as much as possible into the ReVeAL Decision support tool for cities outside of ReVeAL
Some conclusions from the UVAR development process workshops

Been found really useful by pilot cities, bringing together departments into a joint process, as opposed to suggestions from one department, followed by reactions and resistance from others

- Gathering all stakeholders together for the UVAR process is crucial in discussing the possibilities and needed compromises = the most important step in the exercise was engaging in a dialogue
- Colleagues were keen to continue the discussion (follow up workshops)
- The building block methodology is more flexible than a scenario roadmap
- Participants evolved in their thinking during the workshop => the exercise supported unity in decision making, and a willingness to be (better) involved with the yet harder step of implementation
- Good preparation gave better outputs

Building blocks enable the development of complete UVAR Strategies, from neighborhood to citywide levels
Building blocks enable the development of complete UVAR Strategies, from neighborhood to citywide levels

Some lessons learned from the UVAR development process

- The building block long list should be translated to the local context, habits, rules and language of the participating cities
- Not all stakeholders have the same knowledge, views and perspectives
- Impact assessment is difficult and confusing: what scale? What type of impacts? ...
- The city’s aims need to be clear
- The selection of scenarios (as building block combinations) follows a different process for different cities
- Making choices is often not easy
- The BBs open up other options, not previously considered - particularly SI (often not considered UVARs), either as complementary measures, or additional/alternative UVARs
- UVAR development takes time => it is an on-going process
Watch out for our ReVeAL UVAR Development Toolkit when it comes!

Subscribe to our newsletter
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Thank you for your attention

Koos Fransen
Ghent University

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