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# Building adaptivity in urban logistic plans

EUROCITIES Mobility Forum 2021  
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# Agenda

- › **Why** and **How** to better equip Sustainable Urban Logistics Plans (SULPs) in dealing with (unforeseen) change?

## Main takeaways:

1. Urban logistics is a highly dynamic sector with generates **uncertainties** for city planners
2. SULPs that are able to deal with change need **adaptive capacity**
3. Variety of **adaptive actions**: prepared in advance + responsively deployed



## Warming up statement

“ More than something cities can plan for, Urban Logistics is an organically evolving sector to which cities can only respond and adapt”



# How city planners are challenged by uncertainties



# The rapid change in urban logistics

› Booming

› Transforming

# ↑ 178%

Last mile delivery by  
 2030 (WEF, 2020)





# SUMP/ SULPs: Guiding change into more sustainable directions





# Tackling big challenges...



...in a volatile context





# Recasting the image of the city



(Batty, 2013)





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# How to bridge the tension between...

**Deliberate policy  
 interventions**



**Fundamental  
 uncertainties**



# Intermezzo I

Which uncertainties do you face as city planner?



# Intermezzo I

How do you keep an eye for unexpected development?



Becoming more resilient =  
 building adaptive capacity



## Consequences for planning & public policy

*The transition towards  
sustainable city logistics  
emergences from the **interplay**  
**between planned and un-**  
**planned processes** on various  
scales and moments in time*

- › Impossible to fully anticipate
- › Resilient cities & regions

**“Uncertainty is an  
uncomfortable position.  
But certainty is an  
absurd one.”**



# The mission: building adaptive capacity

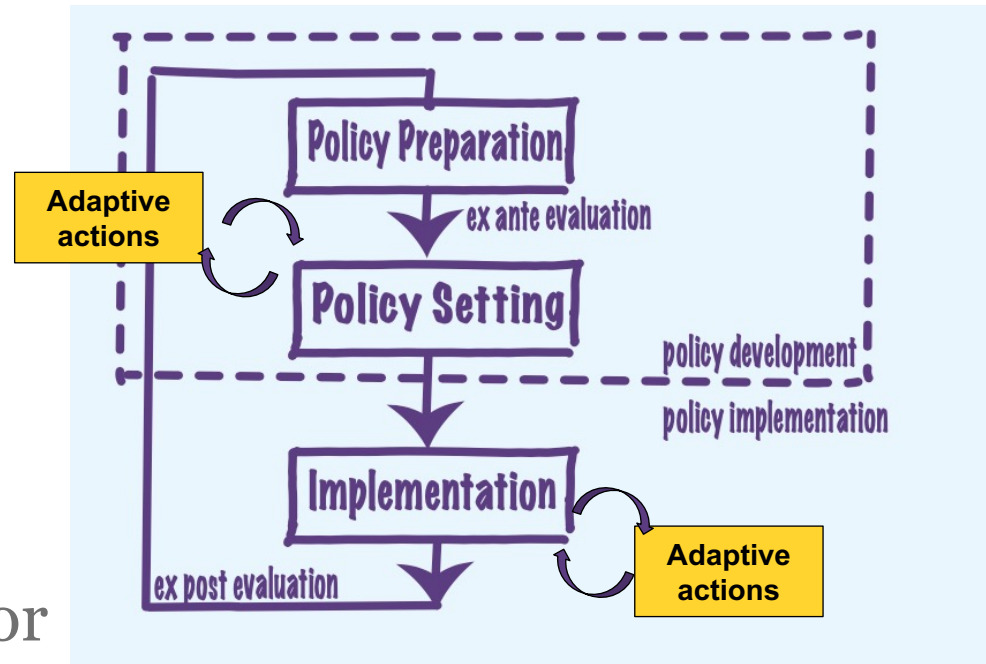
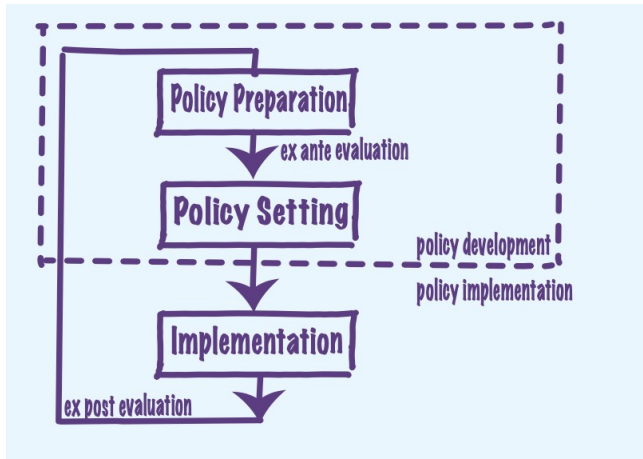
## Why?

- 1) Keeping your Sulp effective under changing conditions
- 2) Revising your Sulp if needed



# The mission: building adaptive capacity in SULP

## How?



From a linear plan process for one preferred future...

...towards a planning process that cater **multiple futures** due to shorter feedback loops



# Type of actions to improve adaptive capacity of Sulp

*Example 1:*

**Defending the  
 plan against  
 disturbances**



*Example 2:*

**Exploiting  
 potential  
 opportunities**

*Example 3:*

**Mitigating  
 negative side-  
 effects**

*When do I use which type of action?*





# Example: implementation microhubs



## Type of action

## Uncertainty

## Possible action

**Defending** the plan  
 against disturbances

Sufficient demand

Convenant Public  
 organizations to guarantee  
 demand

**Exploiting** potential  
 opportunities

Synergy with other  
 services

Setup experiments to test  
 potential

**Mitigating** negative side-  
 effects

Intensification of traffic on  
 mirco hub supply routes

Flexitbility in  
 coordination by window  
 times

Etc...

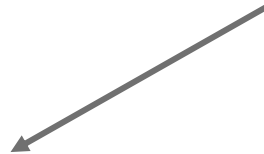
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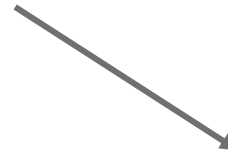


# A two-stage approach

## Adaptivity in SULPs



**Pro-actively included  
 in the design**



**Responsively deployed  
 during implementation**





# Pro-actively included in the design

## Prepare by having a ‘plan B’

### 1)SULP + Uncertainty scan:

- High – low uncertainty?
- Threat or opportunity?
- Degree of influence?



### 2) Define actions



Zero-emission  
 zones

# Uncertainty scan

Opportunity / Threat	Degree of uncertainty	Action if change arises	Example: Zero-Emmision Zone
Opportunity	Low uncertainty	<b>Seizing</b> likely opportunities	Improved air quality <ul style="list-style-type: none"> <li>➤ Awareness campaign with citizens science app</li> </ul>
	High uncertainty	<b>Exploiting</b> potential opportunities	Alternative use public space <ul style="list-style-type: none"> <li>➤ Temporal street furniture</li> </ul>
Threat	Low uncertainty	<b>Mitigating</b> expected negative side effects	Protest SMEs <ul style="list-style-type: none"> <li>➤ Provide shared electric vehicles</li> <li>➤ Transition period</li> </ul>
	High uncertainty	<b>Reducing</b> likelihood potential undesired effects	Cost overruns surveillance systems <ul style="list-style-type: none"> <li>➤ Pilots</li> <li>➤ Use proven technology</li> </ul>





# Responsively deployed during implementation

## Be ready and alert

- 1) Monitoring & Sense making
- 2) Ensure means and mandate to be able respond





# Repertoire of response action

Degree of adaptation	Action	Example
Adapt within the Sulp's objectives	<b>Defensive</b> against disturbances	Illegal entries <ul style="list-style-type: none"> <li>➤ Information campaign</li> <li>➤ Intensify Surveillance &amp; Fines</li> </ul>
	<b>Corrective</b> to unexpected changes	Spontaneous informal cross docking <ul style="list-style-type: none"> <li>➤ adjusting coverage Zero-Emission Zone</li> </ul>
	<b>Capitalization</b> embracing changes to add value	Furthering health benefits <ul style="list-style-type: none"> <li>➤ Greening the city</li> <li>➤ Foster walkability</li> </ul>
Reconsidering Sulp's objectives	<b>Reassessment</b> Redesign of the Sulp	Ongoing societal protest, structural technical failures





## Intermezzo II

- › Thinking about logistics in your city, what would you need to boost adaptability?



# Takeaways

1. Urban logistics is a highly dynamic sector with generates uncertainties for city planners
2. SULPs that are able to deal with change need adaptive capacity
3. Variety of adaptive actions: prepared in advance + responsively deployed





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# Thank you for your attention!

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