

## Miasto w ruchu

## Commuting in the city and delivery of goods in 2050 in Poznan agglomeration

Cezary Brudka, Klaudia Chomiak, Adam Rozynkowski

#### Agenda

- 1. Methodological background
  - a. Approach to innovation
  - b. Approach to design
  - c. Intervention logic
- 2. Vision of the target system
  - a. Fundamentals
  - b. Mobility+
  - c. Delivery+

3. Role of key actors in target system and transition towards it

- a. Poznań City Hall
- b. Volkswagen Poznań
- 4. Summary

OR

#### USE NEW THINGS IN THE SAME WAY

#### USE SAME THINGS\* IN A NEW WAY

(\*or any future functional equivalent)

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#### TECHNOLOGICAL REVOLUTION

OR

#### BETTER ORGANISATION

(supported by technological advance)

OR

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(\*or any future functional equivalent)

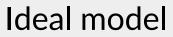
## TECHNOLOGICAL REVOLUTION

OR

#### BETTER ORGANISATION

(supported by technological advance)

### Approach to design process





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#### FINAL PRODUCT

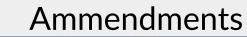
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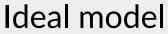


#### FINAL PRODUCT

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Diagnosis









#### FINAL PRODUCT



Diagnosis

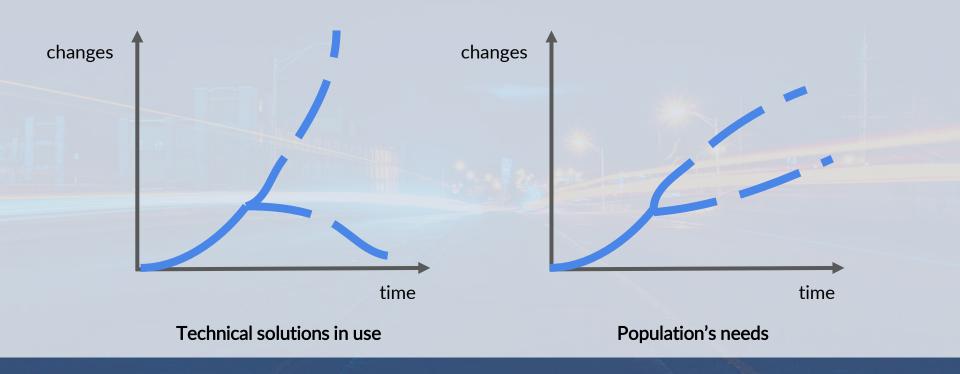
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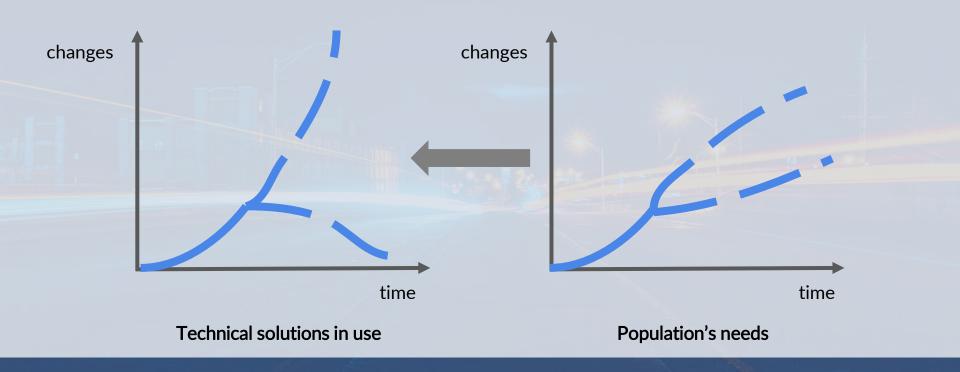
Ammendments

### **User-centred** perspective

#### Prognosing trends in 2050 perspective



#### Prognosing trends in 2050 perspective









Bring children to school/kindergarten

Do the shopping

Move from home to the office

Attend meeting in client's office

Carry own tools from one site to another

Bring raw materials





Bring children to school/kindergarten

Do the shopping

Move from home to the office

Attend meeting in client's office

"I HAVE TO use my own car"

Carry own tools from one site to another

Bring raw materials

## Intervention logic

# Current amount of travel





#### Maximum network capacity

#### Maximum network capacity



Current amount of travel

leave 'as is'

Future amount of trave

#### Maximum network capacity



Current amount of travel

leave 'as is'

Future amount of trave

# Current amount of travel



#### Maximum network capacity



Future amount of travel







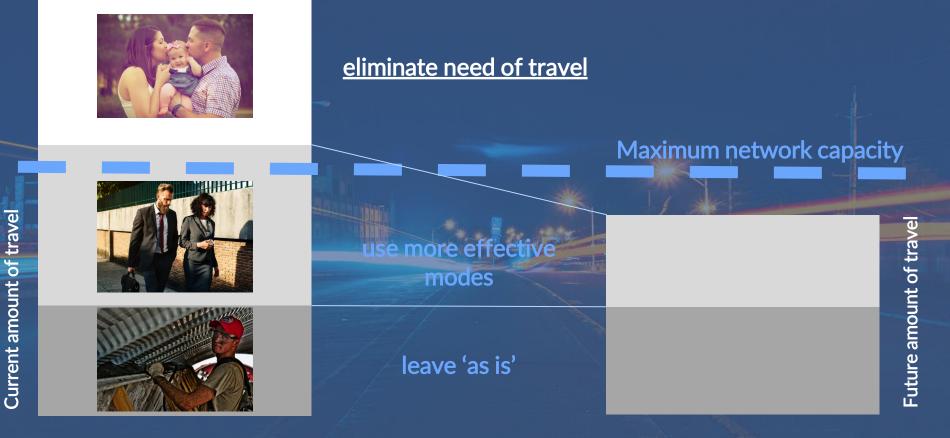
Current amount of travel

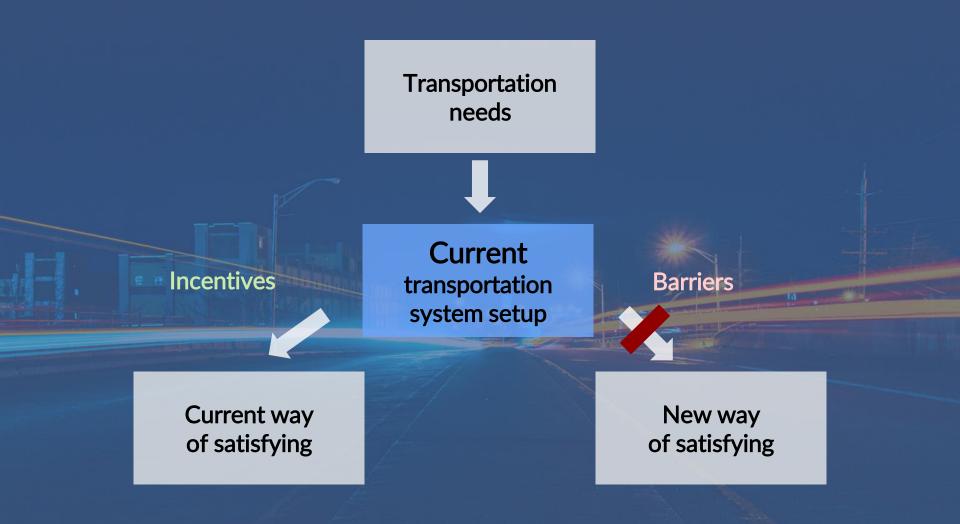


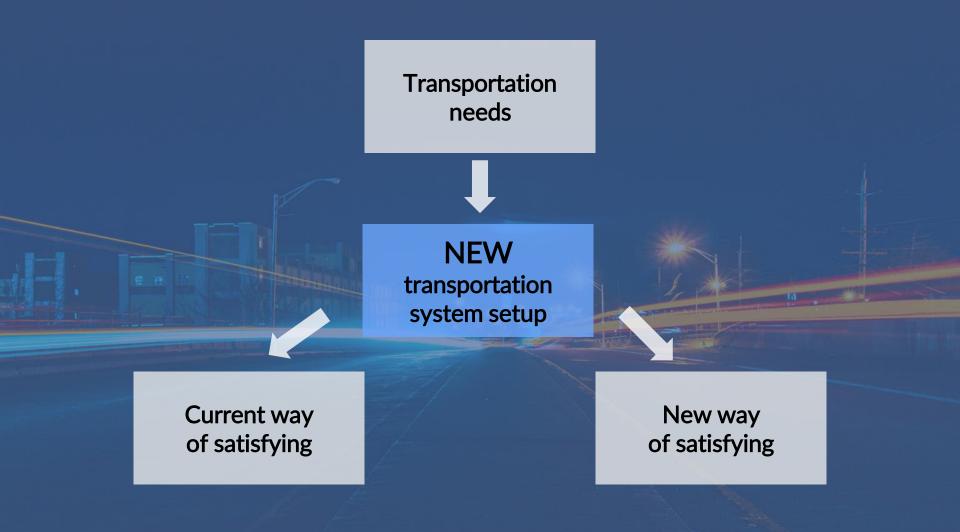
#### use more effective modes

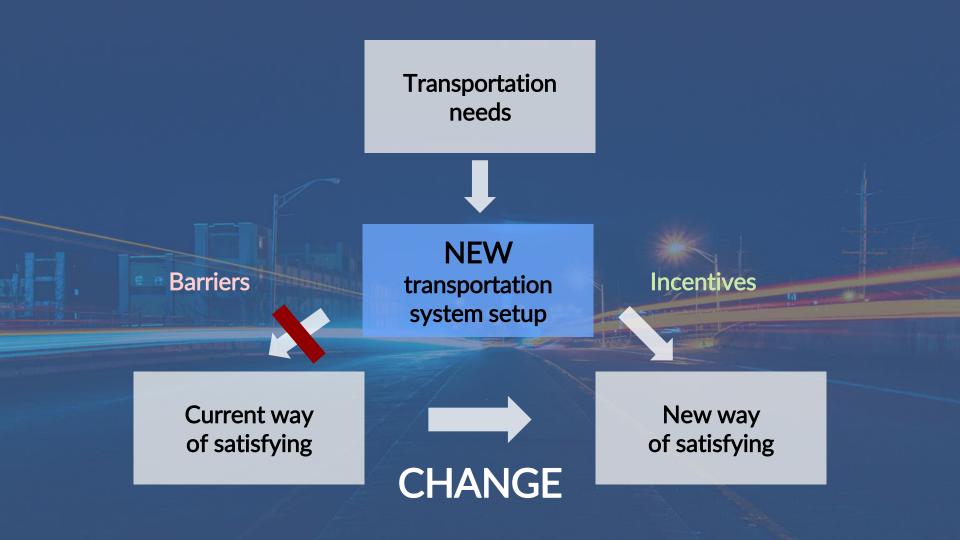
leave 'as is'

#### Maximum network capacity

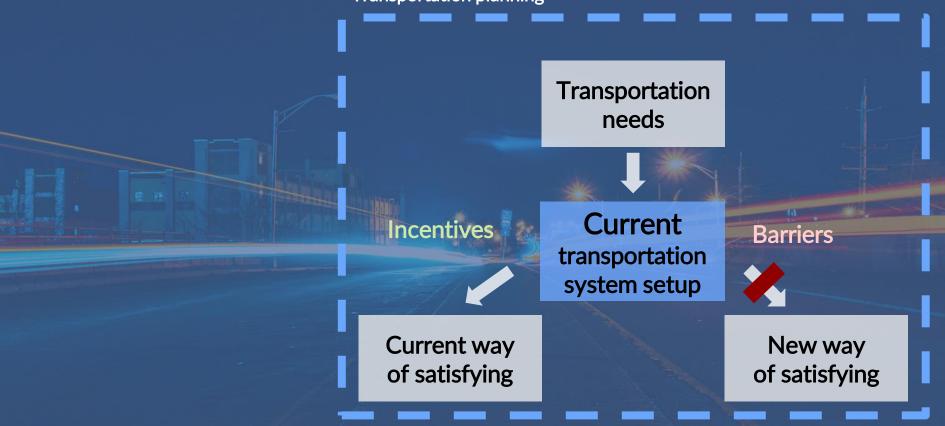


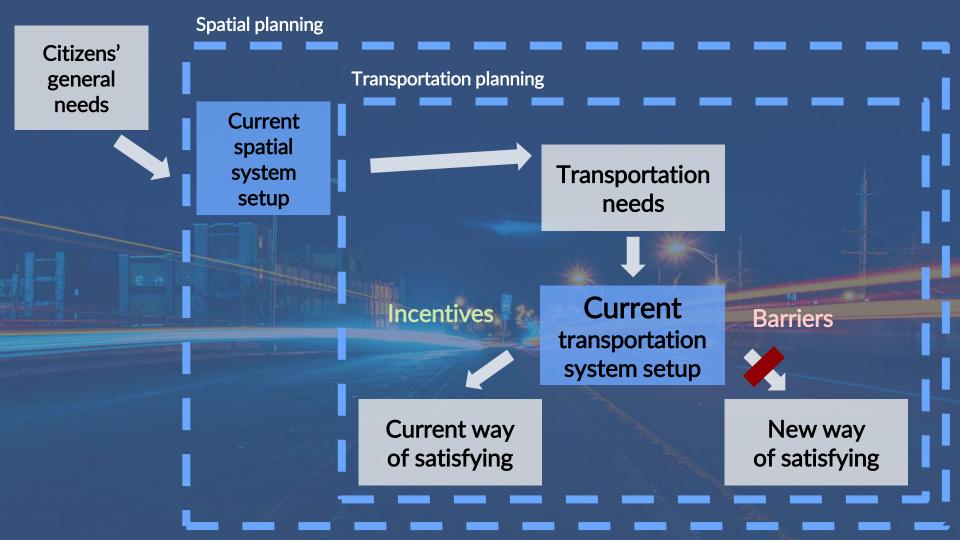


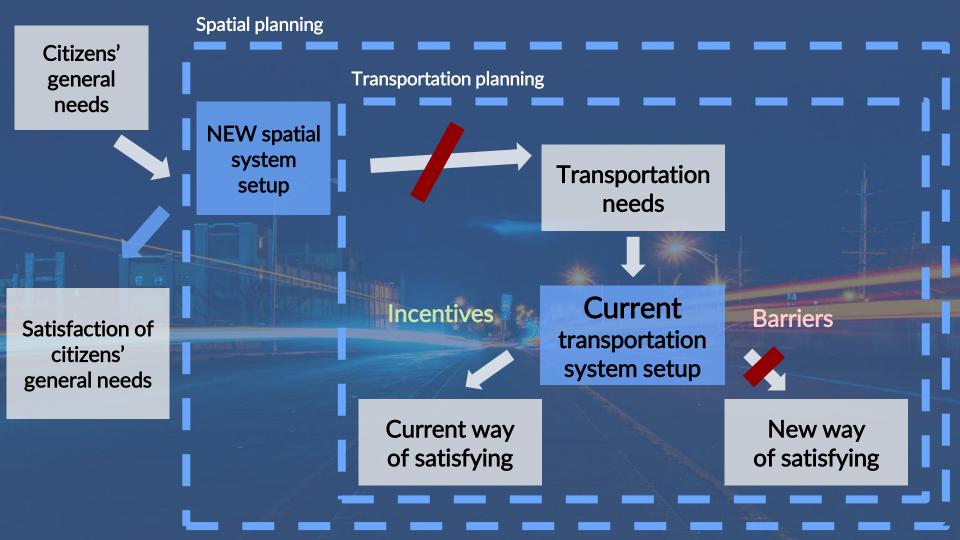


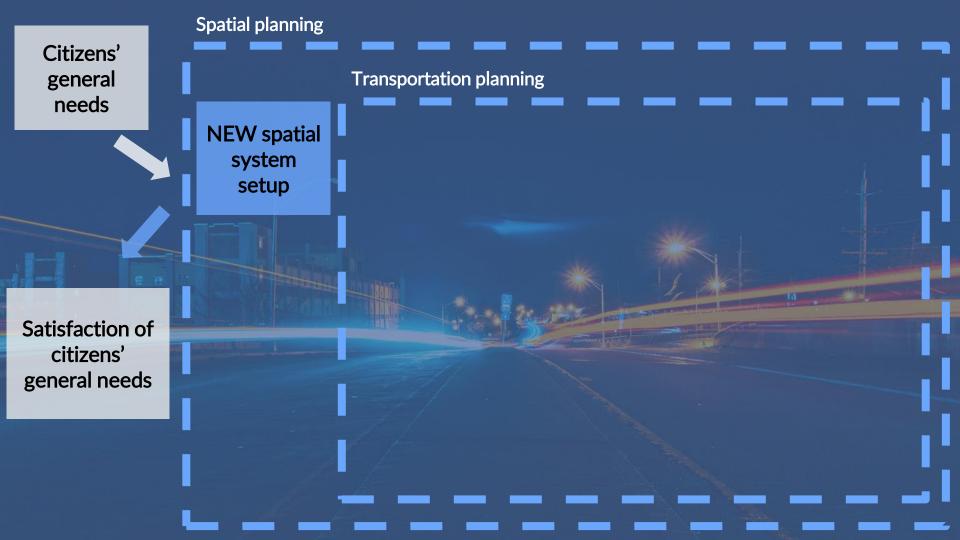


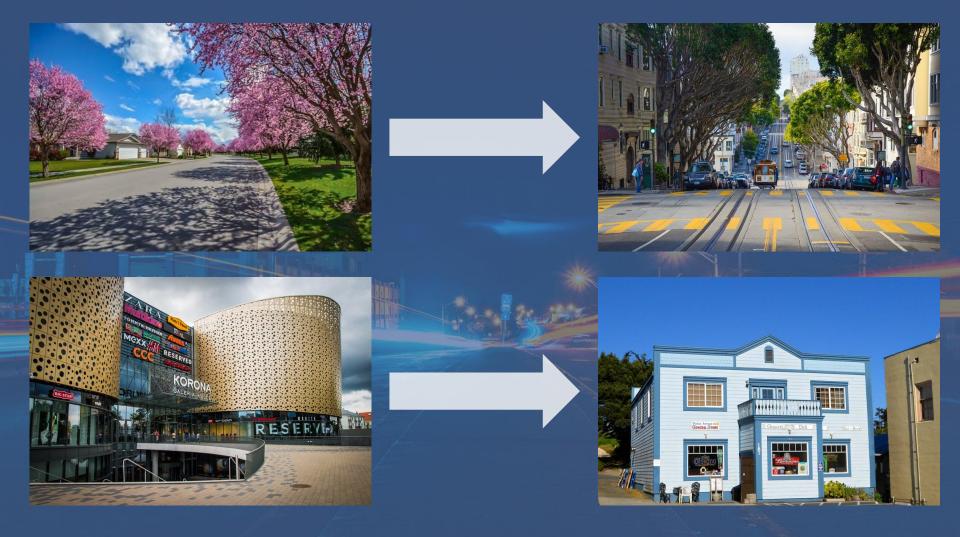
#### Transportation planning











## Vision of the target system

## **Fundamentals**

## Sustainable transportation of the future

Effective transportation of people

Effective transportation of people

Effective transportation of goods

#### \*mobility+ 🗲

Effective transportation of people Effective transportation of goods \*delivery+

# \*mobility+





#### Brand





#### RESERVED





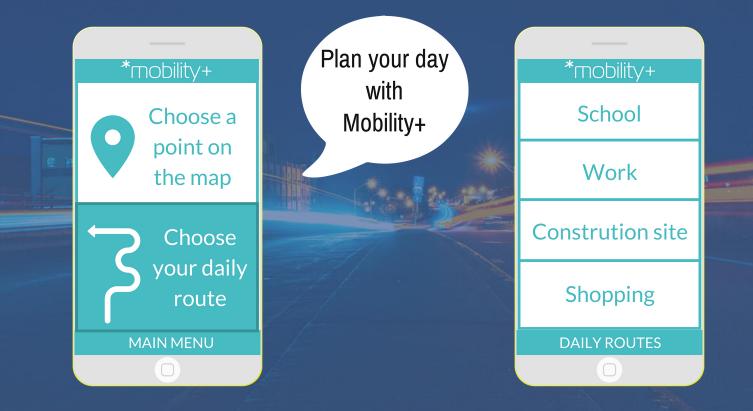




### User story









#### FRIDAY



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Where do you want to deliver your goods?



GROCERY







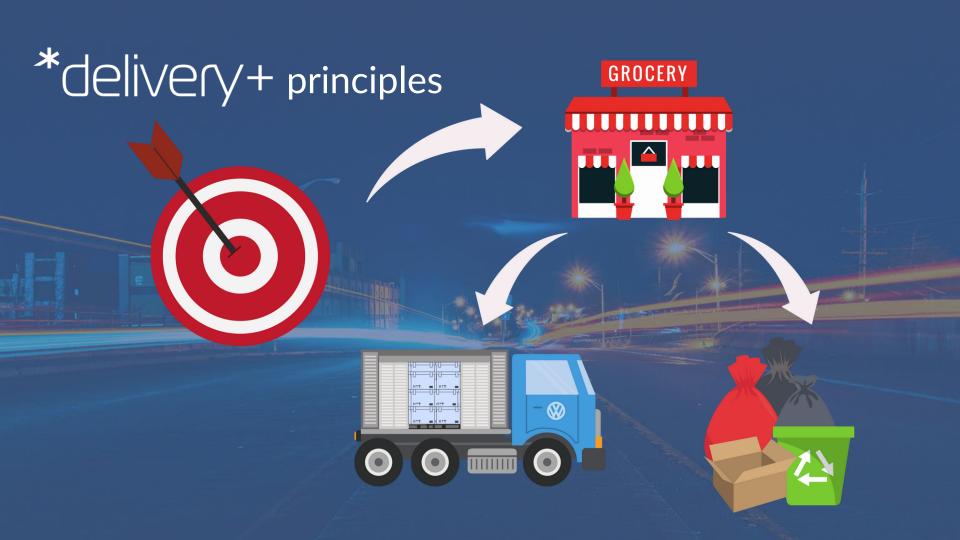


## \*mobility+ exemplary tariff plan

	Basic plan	Extended plan	Full plan
Public mass transit	Without limitations	Without limitations	Without limitations
Public bicycle	30 min/day	Without limitations	Without limitations
Тахі	1 travel/month	1 travel/week	5 travels/week
Home delivery	1 deliver/month	1 delivery/week	5 deliveries/week
Short-term car sharing		3h/week	10 h/week
Long-term car sharing		2 days/month	10 days/mont

Usage of services not included in the plan (or after reaching the plan's limit) is charged on a per-use basis, according to specific tariffs

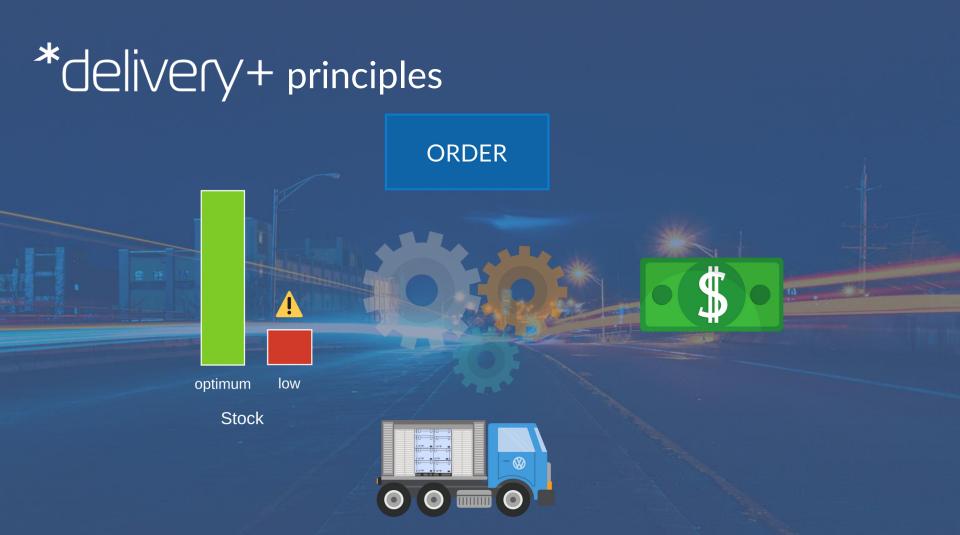
# \*delivery+



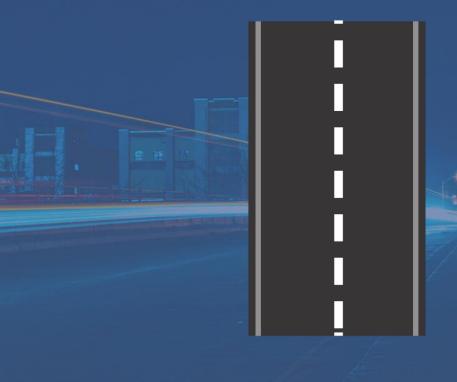


#### Brand











### User story



#### Stock management system

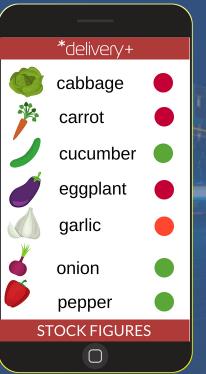






Do you want to remember your choice?



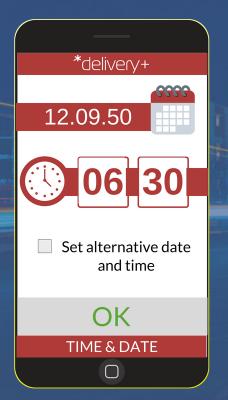




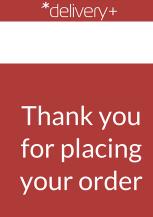


Order commodity





Confirm your fixed time of delivery or set alternative one



MAIN MENU

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Your order is processed





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\*delivery+ system case

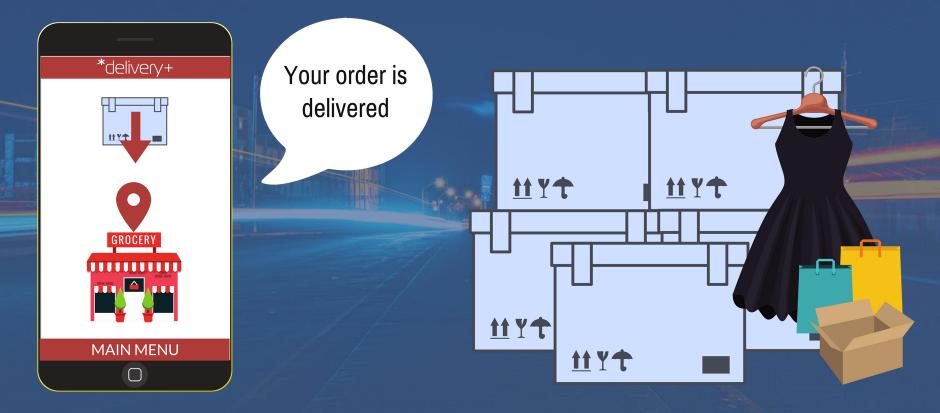
#### Wholesaler



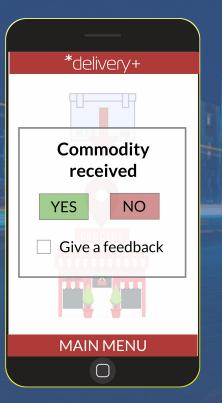








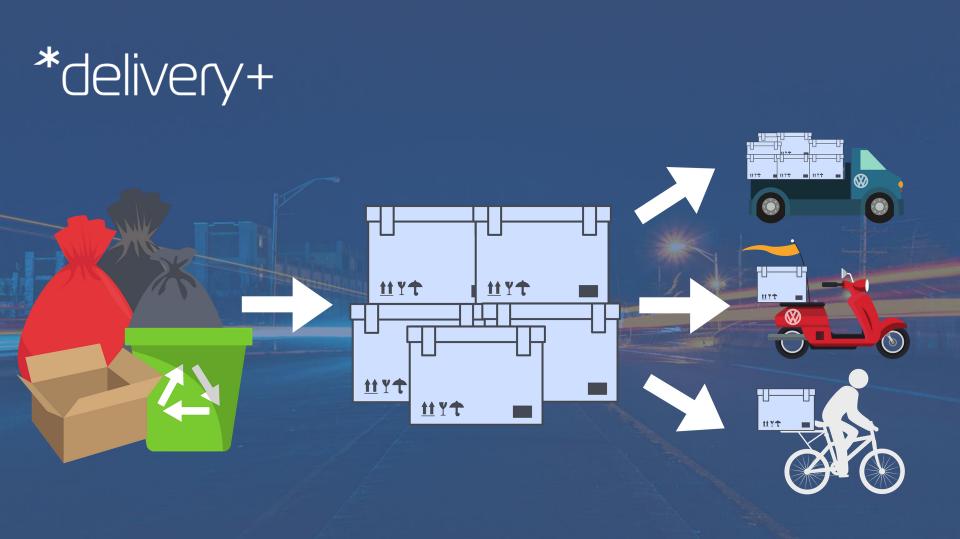




Did you receive your order?

\*delivery+ 30 kg BCR 12.09 20 kg BCR 12.09 30 kg PS 07.09 10 kg BCR 12.09 10 kg BCR 12.09 15 kg PS 07.09 20 kg PS 07.09 **PAST ORDERS**  $\Box$ 

Check your orders



# \*delivery + exemplary tariff plan

	Basic plan	Extended plan	Full plan
Daily delivery, on a fixed time a day, ordered with 1 day notice	5 deliveries/month up to 6 standard cases	25 deliveries/month, up to 6 standard cases	30 deliveries/month, up to 12 standard cases
Second daily delivery, on fixed times a day, ordered with 1 day notice		5 deliveries/month, up to 6 standard cases	30 deliveries/month, up to 12 standard cases
Ad-hoc delivery, same day,		4 deliveries/month	4 deliveries/month
Daily collection of leftovers	Up to the number of cases delivered same day	Up to the number of cases delivered same day	Up to the number of cases delivered same day
Ad-hoc collection of leftovers			4 collections/month, up to 6 standard cases

Usage of services not included in the plan (or after reaching the plan's limit) is charged on a per-use basis, according to specific tariffs

### Role of key actors

# **POZnan**\* City Hall

### **POZnan**<sup>\*</sup> City Hall as a policy maker

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### **POZnan**<sup>\*</sup> City Hall as a system organiser

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### Volkswagen Poznań

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B2C

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### Volkswagen Poznań as a MaaS/DaaS provider





#### Volkswagen Poznań as a MaaS/DaaS provider





### Volkswagen Poznań as a MaaS/DaaS provider





### Summary

Effective transportation of people Effective transportation of goods

#### Spatial planning - city of short distances

Poznań Metropolitan Area of 2050:

- a. dense urban organism developing according to the principles of *city of short distances*
- b. able to support its transportation system on efficient transportation modes
- c. actively managing population's demand for travel

Effective transportation of people Effective transportation of goods

#### Spatial planning - city of short distances

### Integrated transportation system of 2050:

- a. Consumption of mobility and delivery services
- b. Reduction of private vehicle ownership
- c. Based on publicly-provided service bundles
- d. Benefiting from the effects of scale by coordinating individual travels

Effective transportation of people Effective transportation of goods

Spatial planning - city of short distances

Measures of transition:

(1) reducing overall transportation needs,

(2) shifting from vehicle ownership to more efficient service consumption(3) utilizing effects of scale from the integration

Effective transportation of people Effective transportation of goods

Spatial planning - city of short distances

• **reduction** of negative effects of 'transport over-consumption'

will contribute to:

 rise in life quality in cities of the developed world C FORUM ROZWOJU MIAST

#### Thank you for your attention

#### Adam Rozynkowski, Klaudia Chomiak