

BIKING INTO THE FUTURE

COOKING UP A CONTAINER FEAST

THE TEAM

BORDER SESSIONS MAKE CITY LAB - 13.6.2018

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THE CHALLENGE

- ▶ DHL recently replaced 30 cargo vans with 30 cargo bikes, reducing 152 tonnes of CO2 emissions on, with over 400,000 Euros of savings. To help facilitate the transition from combustion-power to human-power for the first and last mile of deliveries, new transportation logistics solutions are required. One of the ideas behind this transition lies in the containerization concept. Today's challenge focuses on this idea: how do we take containerization from the drawing board to the street corner? How many cargo containers and bikes would be required to deliver fresh food from the Haagse Markt to every university in the city? What if every flower in the Netherlands was transported by bike for the last mile?

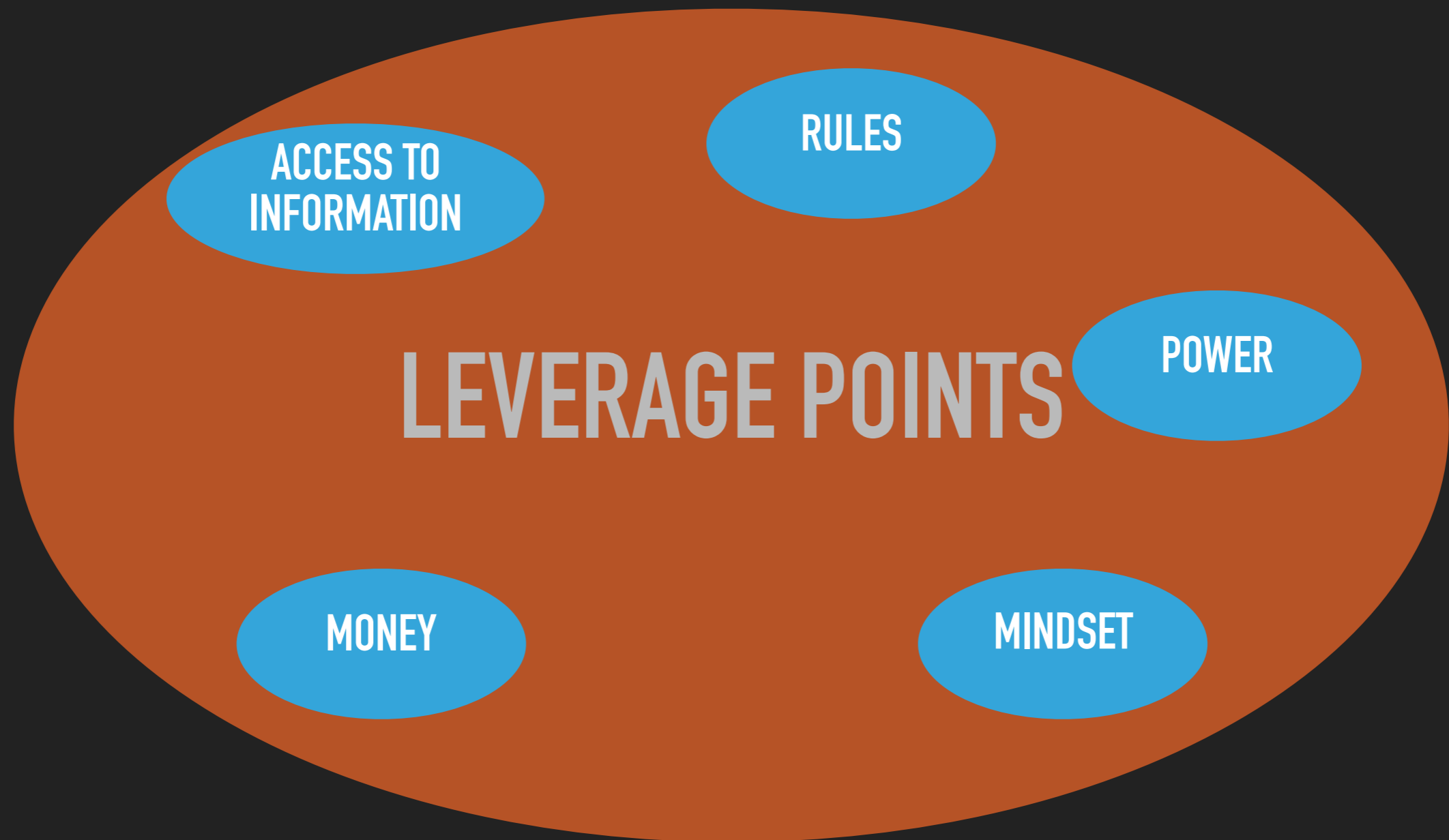
THE SOLUTION

**NOT JUST CYCLE DELIVERY.
NOT JUST CONTAINERIZATION.
NOT JUST LOGISTICS.**

**IT'S A MATTER OF COMBINING ALL 3 FOR AN
EFFICIENT, EFFECTIVE LAST MILE OF DELIVERY!**

THE RECIPE

FIND THE LEVERAGE



MONEY

- ▶ We know it works, otherwise they wouldn't do it!
- ▶ How to find the right market at the right place at the right time?

RULES & REGULATIONS

- ▶ Many cities are already adopting low-emission zones
 - ▶ Key is to identify places that have/are/will recently transitioning to emission-based vehicle zoning
 - ▶ Develop standards/best practices based on experiences of other cities
 - ▶ Continue to keep an eye on global development to avoid the VHS/Betamax problem
 - ▶ Best is to develop international standard for unified container design

POWER – ALREADY IN THE MARKET

- ▶ High-Power Players
 - ▶ Logistics Companies (DHL, Hermes, UPS, etc.)
- ▶ Niche Players
 - ▶ Foodora / Deliveroo (Prepared Food Delivery)
 - ▶ Cool Blue (Electronics)
 - ▶ Social Initiatives

MINDSET – DELIVERY CUSTOMER VALUES

- ▶ Low Hassle
- ▶ Fast Delivery
- ▶ Low Cost

MINDSET – CONTAINER-DELIVERY VALUES

- ▶ “Green” technology
- ▶ Low Cost?
- ▶ Faster Delivery

HOW TO TRADE-OFF THESE VALUES?

ACCESS TO INFORMATION (CHECK RIPPL.BIKE!)

- ▶ Positives

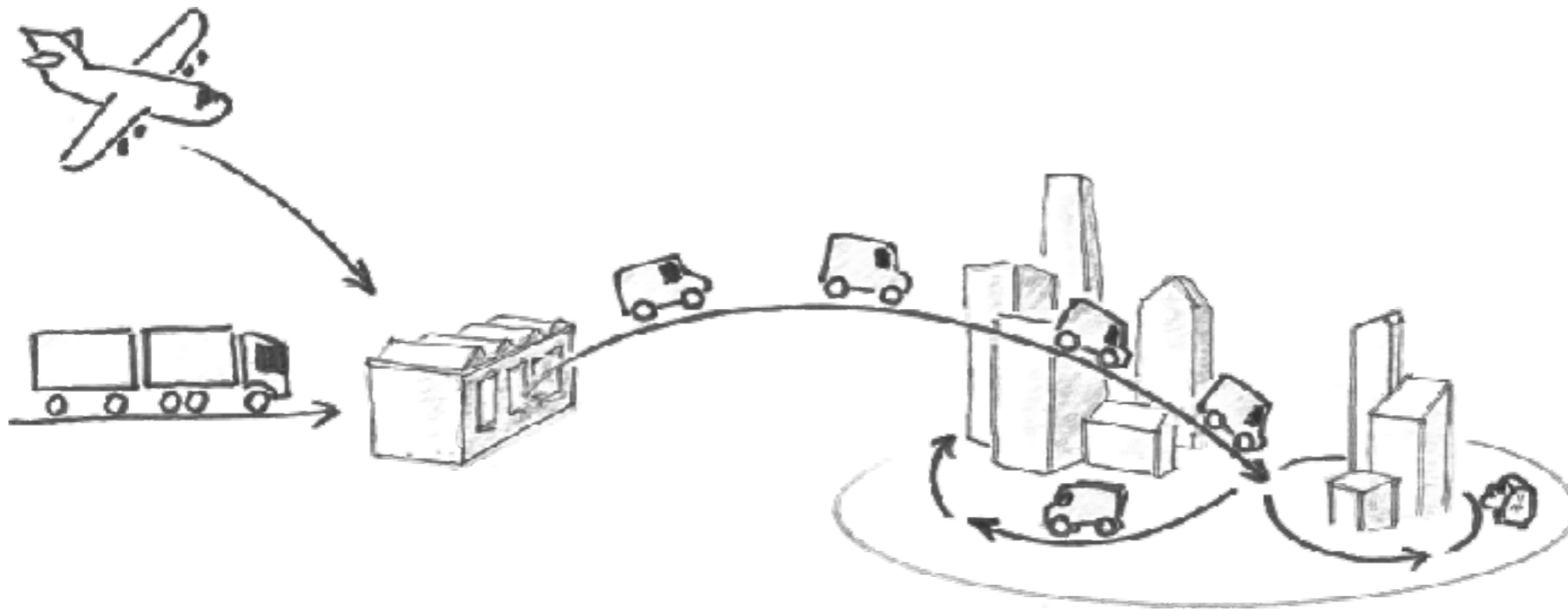
- ▶ Good balance capacity vs. access
- ▶ Low Fuel Cost/Emissions
- ▶ Reduced handling of products

- ▶ Negatives

- ▶ Additional material & logistics cost (less over time)
- ▶ Change is hard!

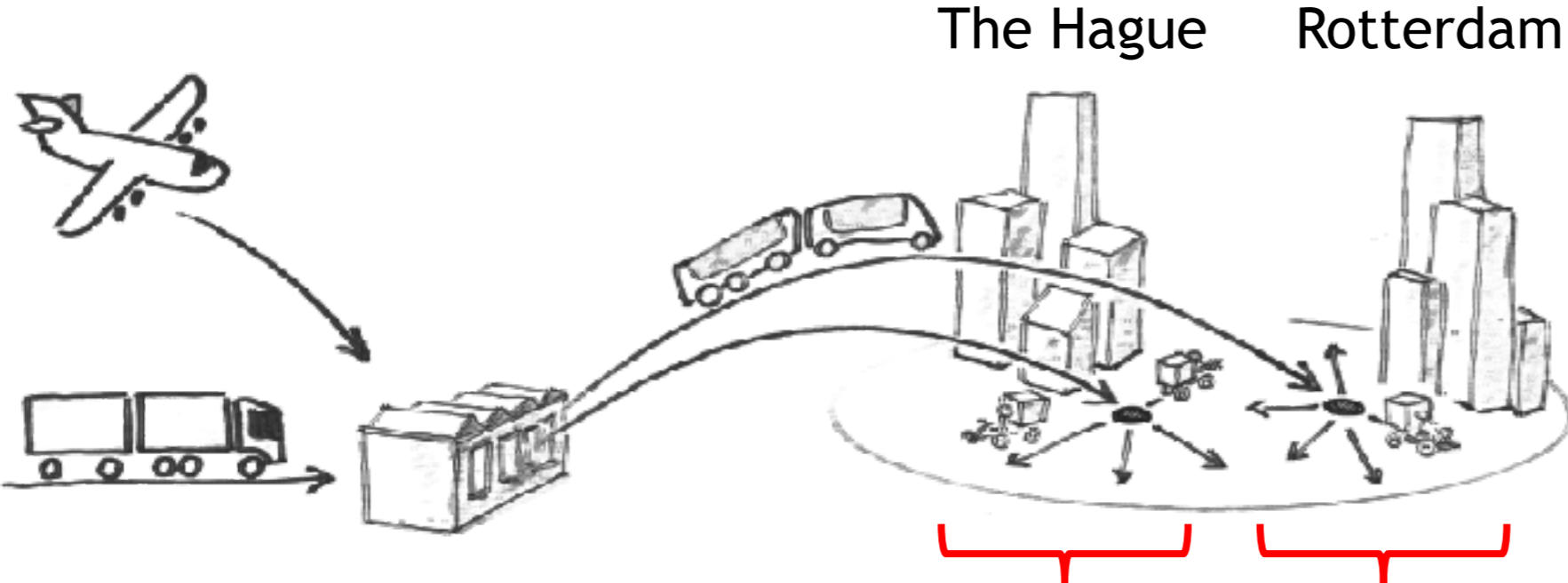
THE MENU

FROM THIS NOW...



TO THIS FUTURE...

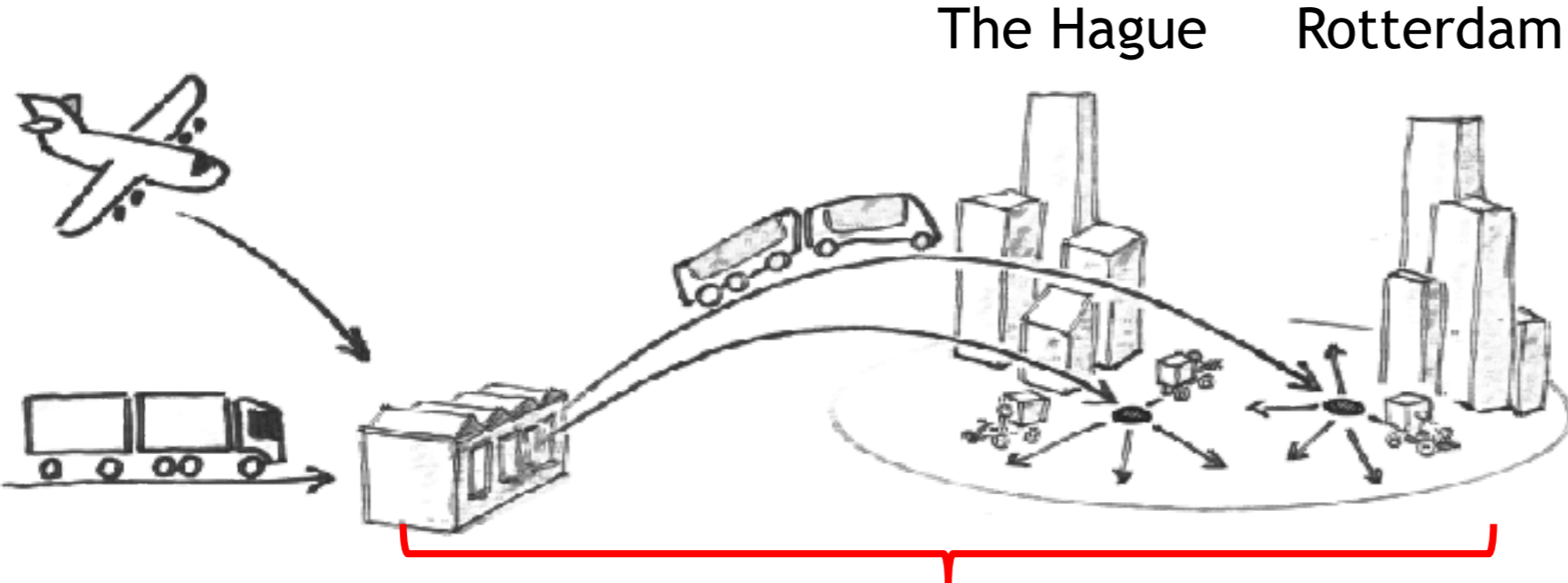
WHOLE SALES AND INTRA-CITY LOGISTICS



Level of coordination/info:
Local network per city
Few hubs connected

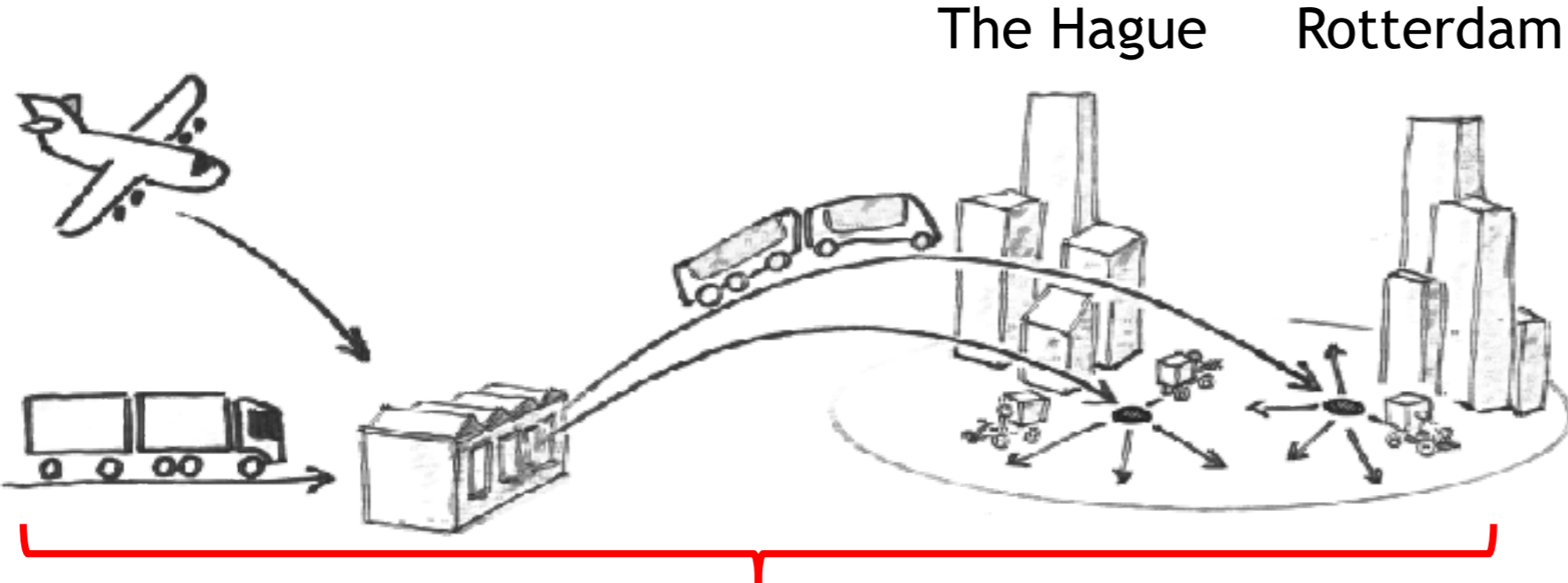


INTERCITY DELIVERY AND APP-BASED DELIVERY



Level of coordination/info:
Multiple city coordination

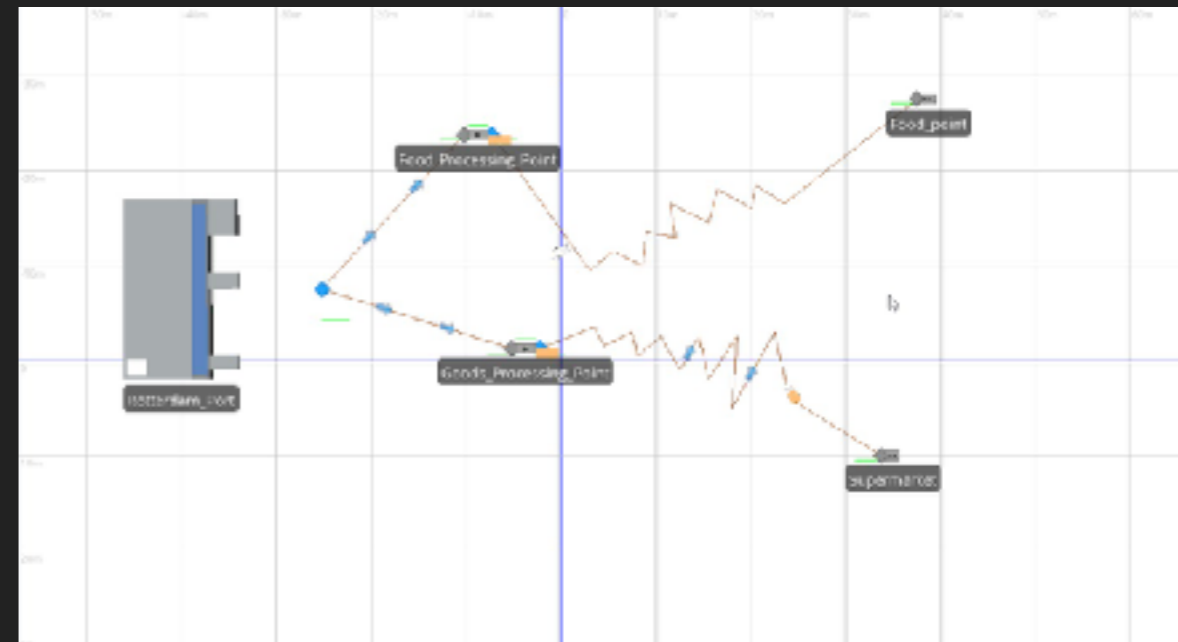
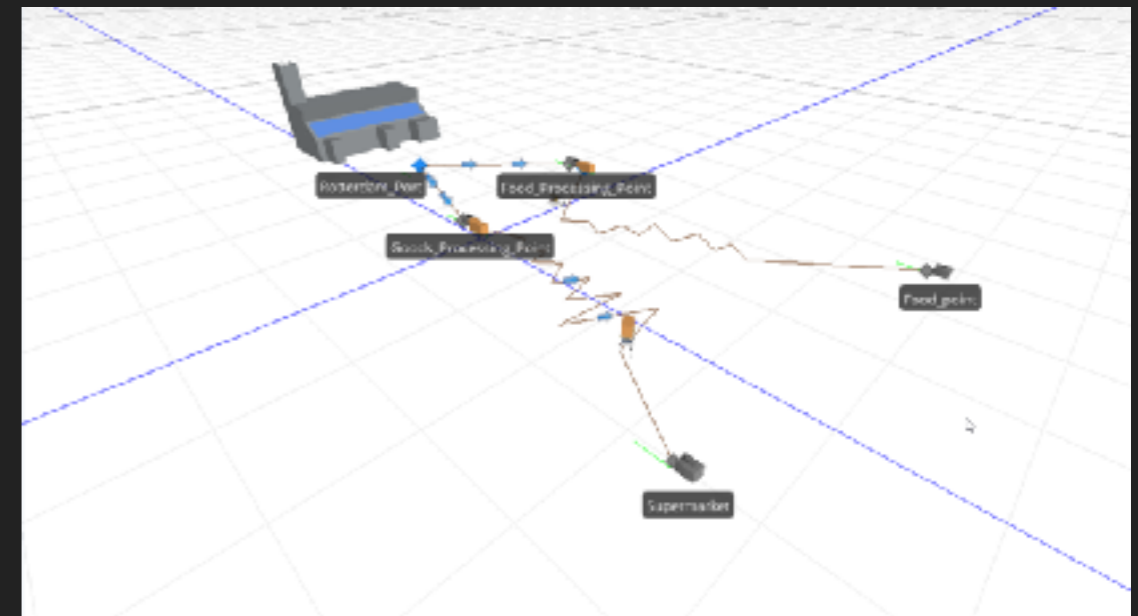
INTERNATIONAL LOGISTICS (IKEA – DHL)



Level of coordination/info:
International coordination

FIND A PROJECT, BUILD A MODEL

- ▶ Can test many types of scenarios and implementations of various container and cycle delivery systems
- ▶ Outputs of studies can estimated include: cost, delivery time and personnel requirements (among other variables)



RECOMMENDATIONS / NEXT STEPS

1. Evaluate specific cases of goods delivery to compare the benefits of cargo bike with different containerization configurations in the cities. This could be done through simulation models.
2. Work with key players to develop one global standard for containers.
3. Find key partners in transitioning cities to leverage punctuation points in the equilibrium.
4. The results of academic simulation in point 1 can help selling the idea more to similar markets.