

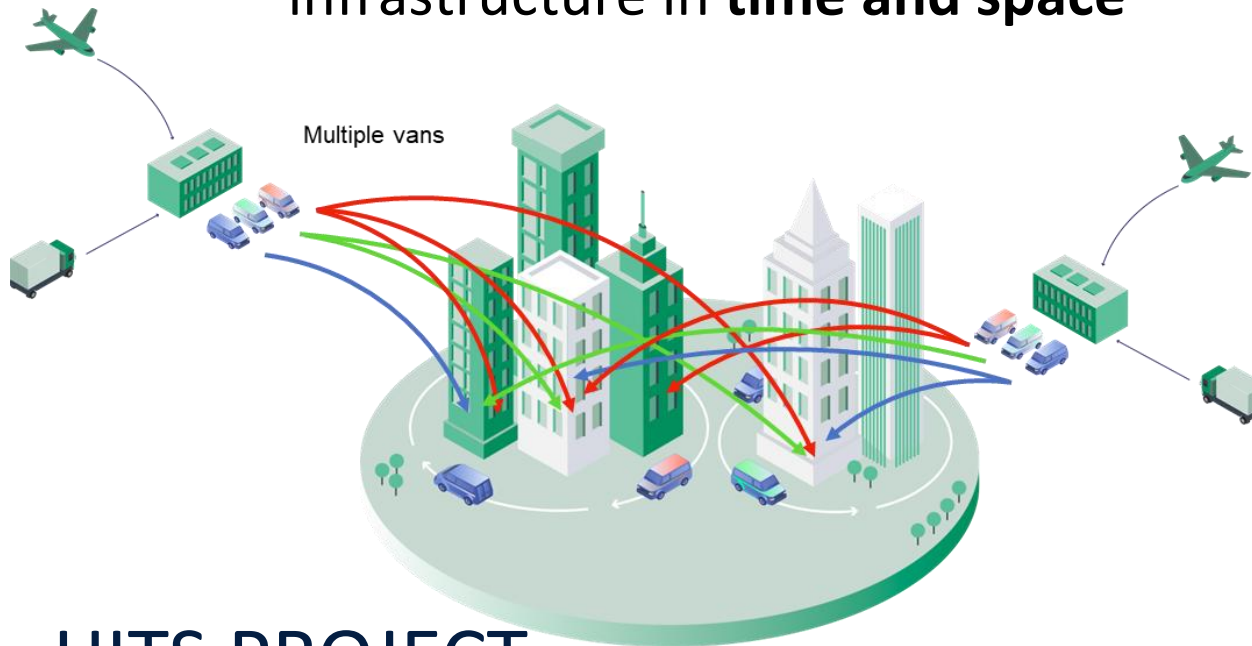


magnus blinge

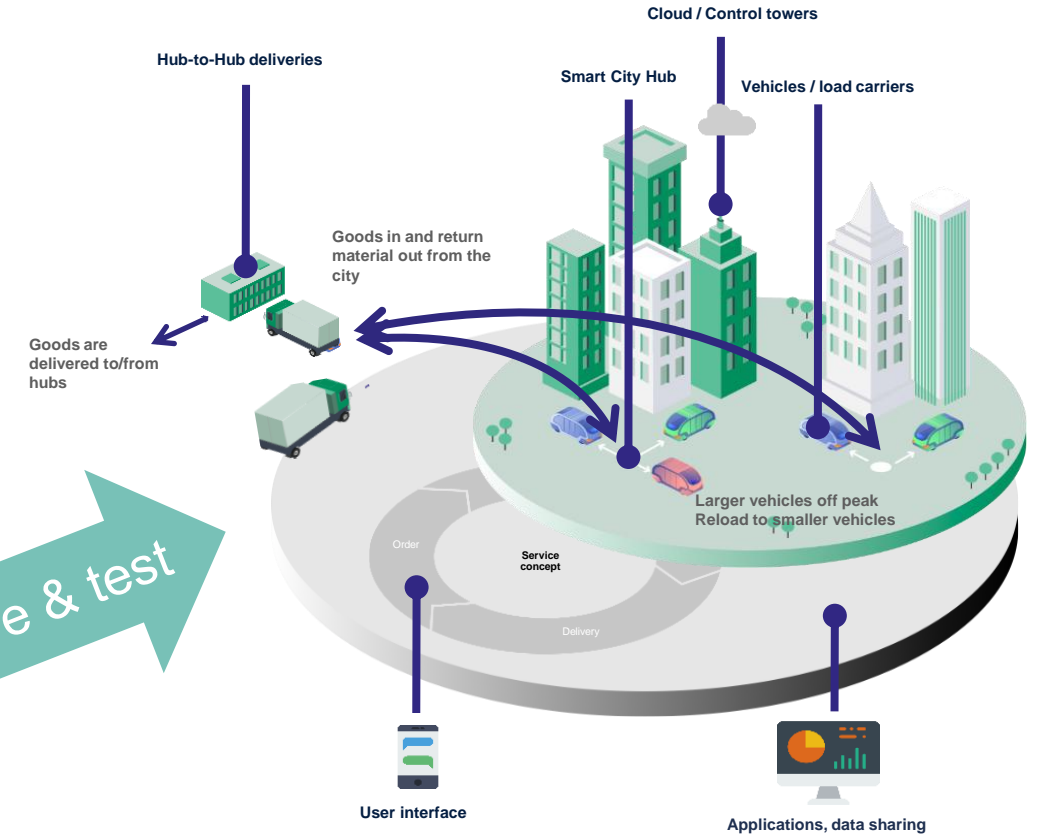
Results HITS

SCANIA

The vision is to **demonstrate, explore and accelerate** a system for urban freight transport that meets the **agenda 2030** goals and increases the **efficiency in the system** in terms of increased utilization of vehicles and infrastructure in **time and space**



Explore & test



HITS PROJECT

Urban transport system of goods and waste



ACADEMIA AND INSTITUTES



Part-Financed by:



BUSINESS



PROJECT MANAGEMENT



MUNICIPALITIES

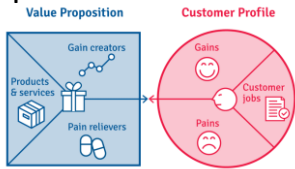
Södertörnskommunerna



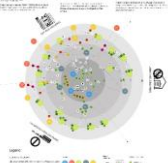
How HITS has approached the system perspective

How might (HM) we use unused space – to transport goods?

Value capture shared data



Interview:
Recipient of goods off peak



Increment I:4 starts

FIRST RESEARCH MEETING

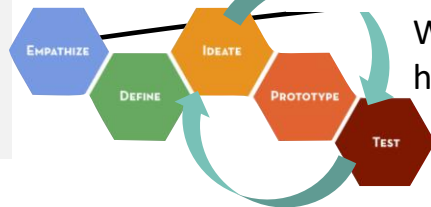
State of art studies – What is going on and what has they learned in research



Crash course
Design thinking

Increment I:5 s

Starting two pilots



How can we share data?
How can we connect data?

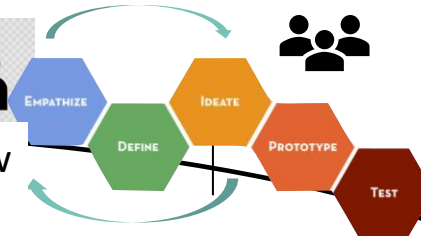
Where can we place a city hub in Stockholm?

HM transshipment between vehicles and
- a fixt system as pneumatic dispatch
- city bike system

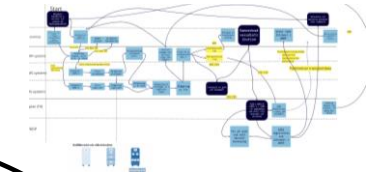


Gallery Walk:
Visualize, feedback and build on

Interview
Off peak



"Define, -Why, what, who?"



Off peak "Ideate"

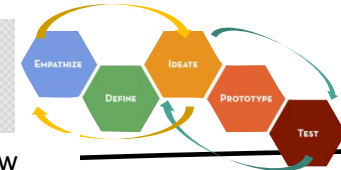
Gallery Walk:



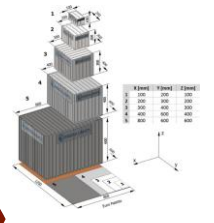
Increment I:6 starts



Interview
Stakeholders



Three possible future scenarios of city distribution



Starting new pilot

Unmanned recipient of goods in Stockholm



Increment I:3 starts

All 3 WP starts ups in parallel
City hub/Data sharing/Vehicle

HITS WS 2 6 October

- To find a starting point
- Looking into different scenarios





WP Hub concept & Off-peak delivery

Hundreds of city hub projects with promising results

Obvious potential in off-peak solutions shown in several tests





Off-peak deliveries

- Incentives are necessary for ALL stakeholders. Expensive to have personnel and lack of storage facilities.
- Off-peak doesn't really fit traditional forwarders.
- Sound is still an important issue, and it is site specific.
- **Keys for success:**
 - ✓ **Digital solutions for unmanned reception.**
 - ✓ **Trust and clear responsibilities and jurisdiction**
 - ✓ **Intermediate and adapted storage facilities.**



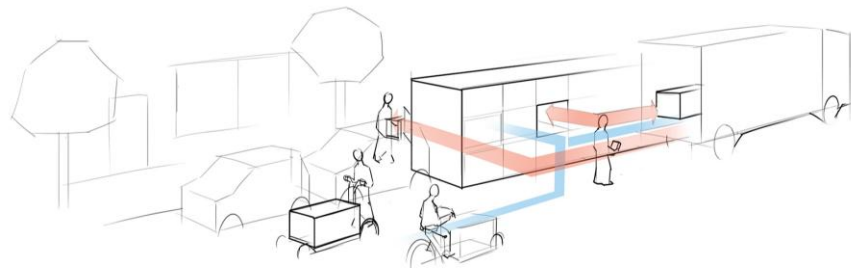
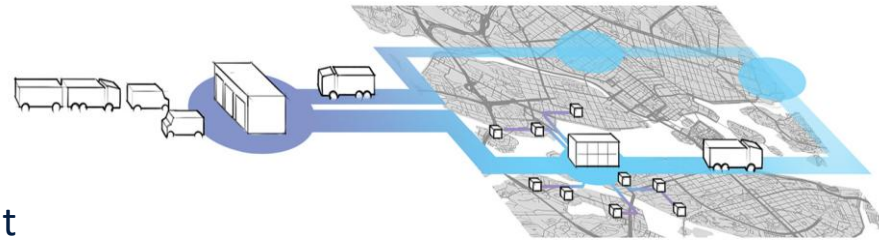
Results

- **Tested connected goods – pallets – vehicles - buildings**
- Un-manned off-peak solutions can start to be implemented for many applications and can reduce the delivery time by 30%.
- No regulative hinders for digitalization. Responsibility issues can be solved with agreements.
- Regulations must be updated regarding electric vehicles!



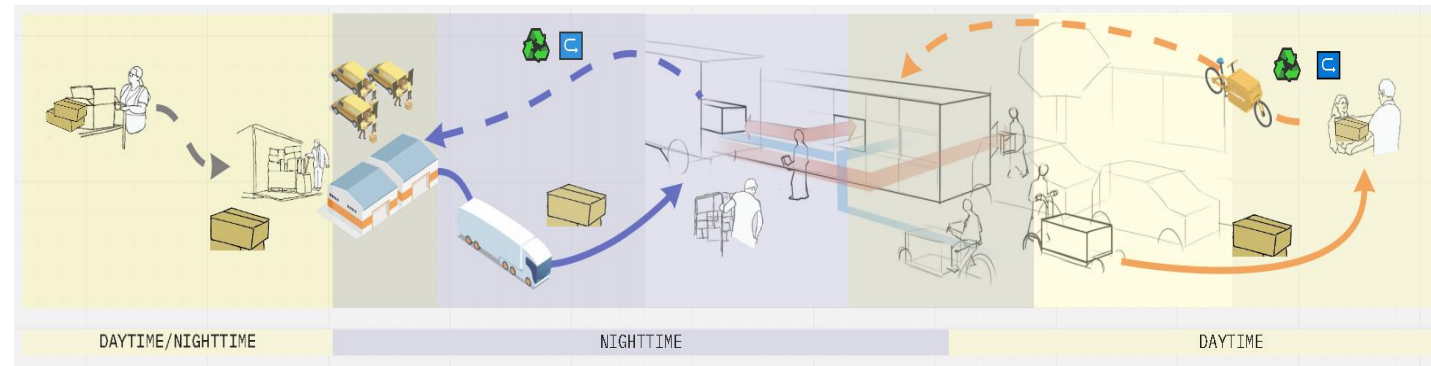
Hub concept

- Promising concept with high interest especially from cities, but public space cannot be used for storage.
- Who will run it? Is there a business case?
- The freight forwarders don't see any value for them. For whom and for what purpose?
- No one-size-fits-all solution, type of goods and receiver are important.
- Data sharing is a prerequisite, no legal obstacles.



Results

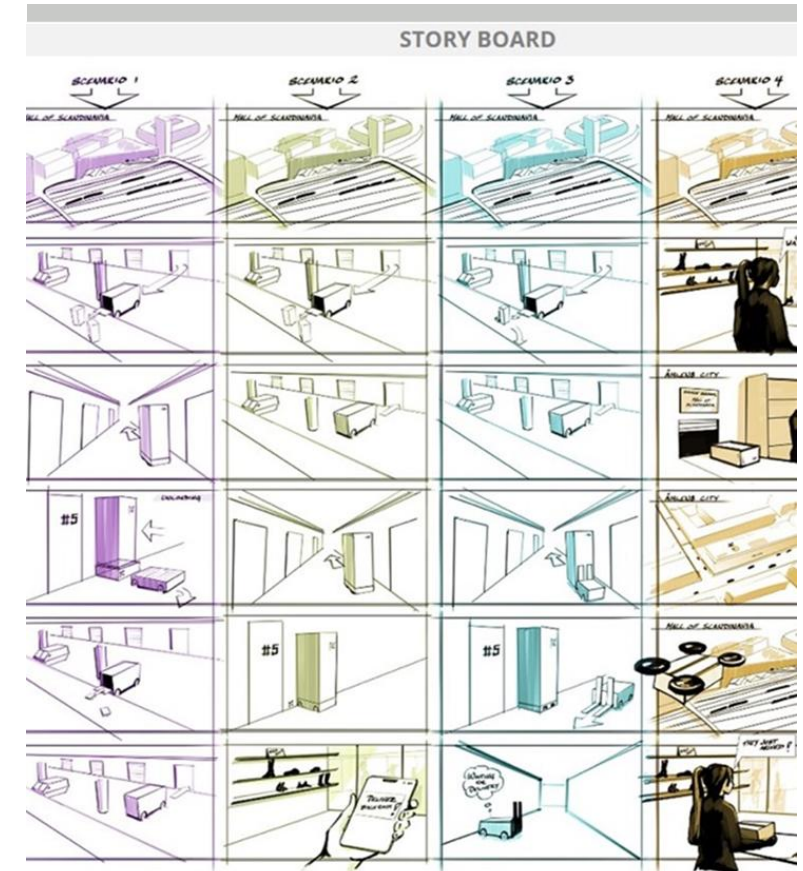
- Stakeholder collaboration has given us **valuable insights and a common problem framing**
- 3 hub concepts evaluated.
 - Building
 - Flexible Hub
 - Mobile Hub
- Start simple and add on complexity...





WP Vehicles and load carriers

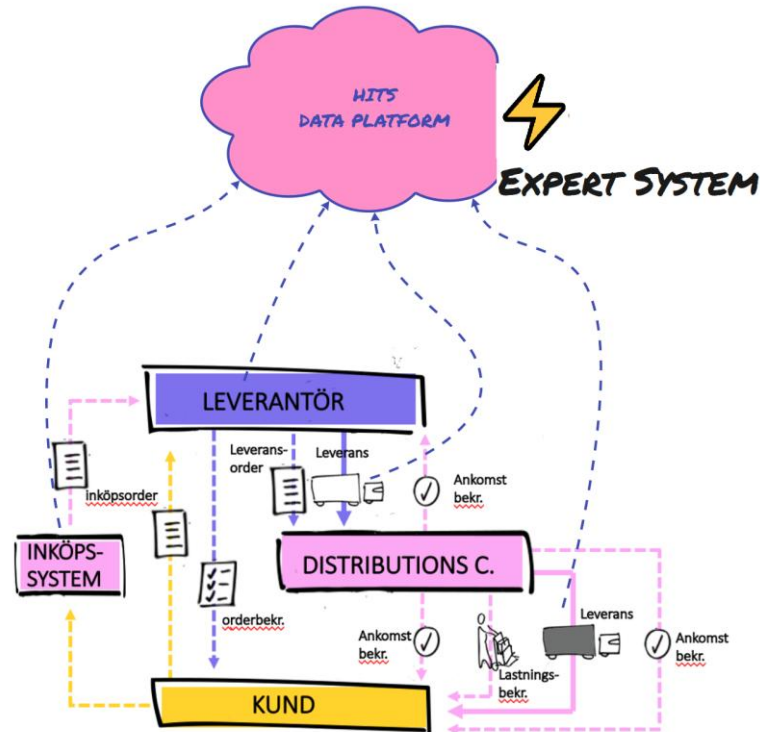
- Different concepts and interfaces Vehicles-carriers/stores were defined, evaluated and refined.
- Vehicles and carriers shall be modular, flexible, with minimal vehicle sizes and with maximum load capacity. Automation as a step towards autonomy.





WP Digital services

- **Data sharing is a prerequisite** for designing an efficient supply chain. Unplanned deliveries must today be done separately.
- Data sharing is **problematic** as owners has no clear benefit form sharing them openly.
- Data is not always digitalized, **standardized** and cannot easily be connected.
- It is possible to collect data automatically real-time to be used at a systems level. Legal aspects can be overcome if priority is given.



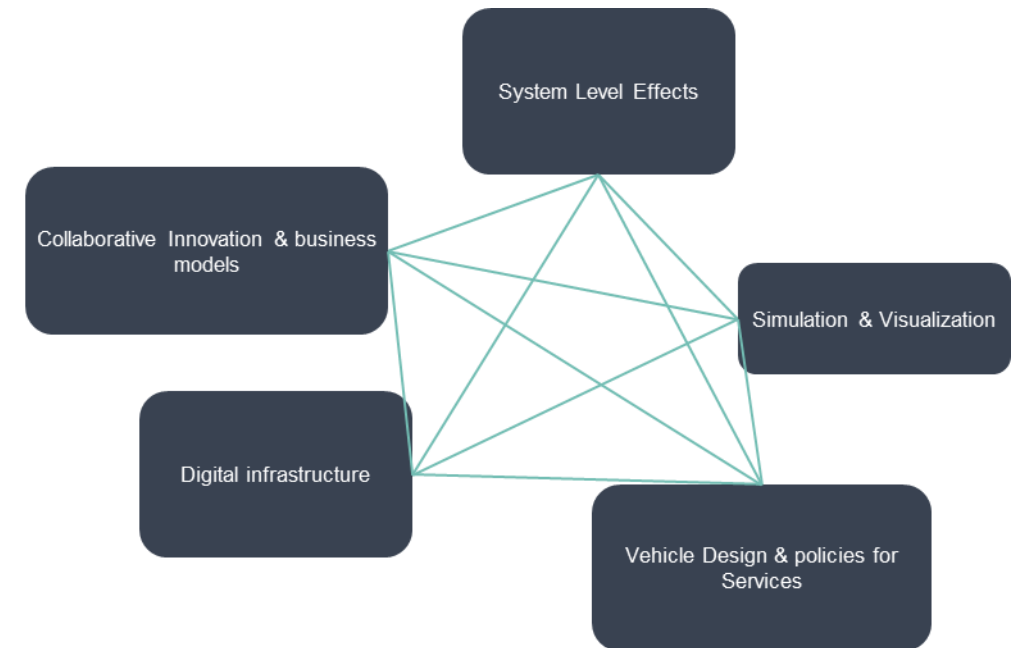
Results

- Developed a specification of an improved system solution for the distribution of freight in the municipality (Södertörn) and in Arenastaden (Real Estate Developer).
- Data-platform services are identified, data has been collected, analysed and challenges are documented.



WP Research

- **System level effects**
 - ✓ Framework methodology for sustainability assessment
 - ✓ Model on "city hubs"
- **Modelling of modular vehicle concepts, impact on flows**
- **Logistics Data-sharing eco system**
 - ✓ - Prerequisites
 - ✓ - Actor's relationship mapping
 - ✓ - Technical & analytical platform
- **Collaborative innovation in Logistics**
 - ✓ barriers and potentials to collaborate,
- **Vehicle concepts-Vehicle design**
- **City freight model**
 - ✓ Freight flows, vehicles and deliveries
 - ✓ External costs





Next steps HITS (Draft)

- **B2B Industrial flows (tests)**
 - Continue and expand off-peak solutions, Find **all** barriers
 - Charging infrastructure and electric drive 24/7
- **B2C E-commerce (Innovation)**
 - Consolidation of fragmented deliveries – Customer preferences, etc.
 - Digital platforms and data sharing
- **Urban freight 2030+. (prototyping)**
 - Seamless delivery of goods with smart transports and smart load units, automation both flexible and sustainable
- **Policy development (Innovation)**
- **Research** – Sustainability, freight data, simulation models, business models, customer preferences, etc.