



CiViTAS
Cleaner and better transport in cities



THE CIVITAS INITIATIVE
IS CO-FINANCED BY THE
EUROPEAN UNION



LONG-TERM EFFECTS OF INNOVATIVE CITY LOGISTICS MEASURES

TRB

January 7th 2018, Washington DC

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In this presentation:

- CIVITAS: The Initiative
- Evaluation and long-term evaluation
 - General outcomes CIVITAS II
 - Two case studies (CIVITAS Plus) :
 1. The Beer boat
 2. The Cargohopper
- Analysis and conclusion



CIVITAS - Introduction

CIVITAS is an EU initiative for the implementation of integrated **sustainable and energy efficient** urban transport strategies in European cities

Objectives

- Sustainable, clean and (energy) efficient urban transport measures
- Integrated technology and policy measures
- Critical mass and markets for innovation

Key elements

- Living “laboratories” for conducting innovative urban sustainability measures
- Mobility measures implemented and evaluated in cities
- 10 categories, including city logistics



Evaluation in CIVITAS

The evaluation within CIVITAS (at the end of a project) consists of a framework with two parts:

- **Impact evaluation** of measures (30 common core indicators, defining scenarios, up-scaling)
- **Process evaluation** of measures (collecting information for preparation, implementation and operation stage of the measure, defining factors for success and unexpected barriers)



Participating cities in CIVITAS

Long-term evaluation

- Long term evaluation takes place after the project life time.
- Investigate whether the long-term impacts of measures have been different from short-term impacts.
- Scaling up of measure or transformation into a newer version?
- Two studies were carried out last two years:
 - General LTE of all CIVITAS II measures (2005-2009)
 - In-depth LTE of some CIVITAS Plus measures (2008-2013)



Methodology Long term evaluation (LTE) studies:

General LTE:

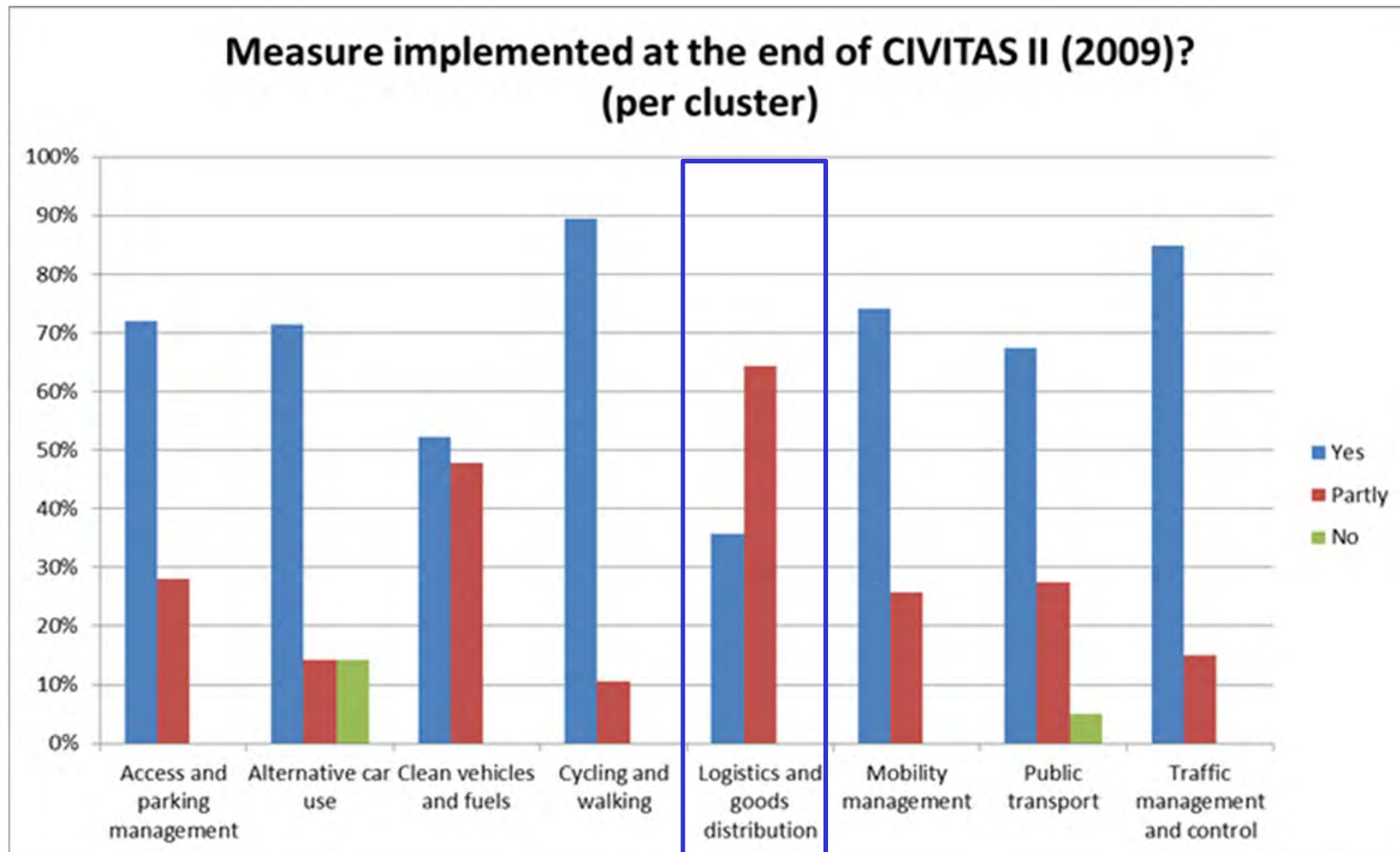
- Study of status and results of all measures at the end of demo phase (2009)
- Selection based on questionnaires and 10 site visits with interviews
- Qualitatively, because impacts could not be assessed

In depth LTE

- The goal was to do the same evaluation as in 2013 with the same indicators.
- Both impact and process.
- Cities could apply for funding to carry out a LTE. So, more likely that successful measures were evaluated
- For 8 measures an LTE was conducted, two city logistics measures in Utrecht.

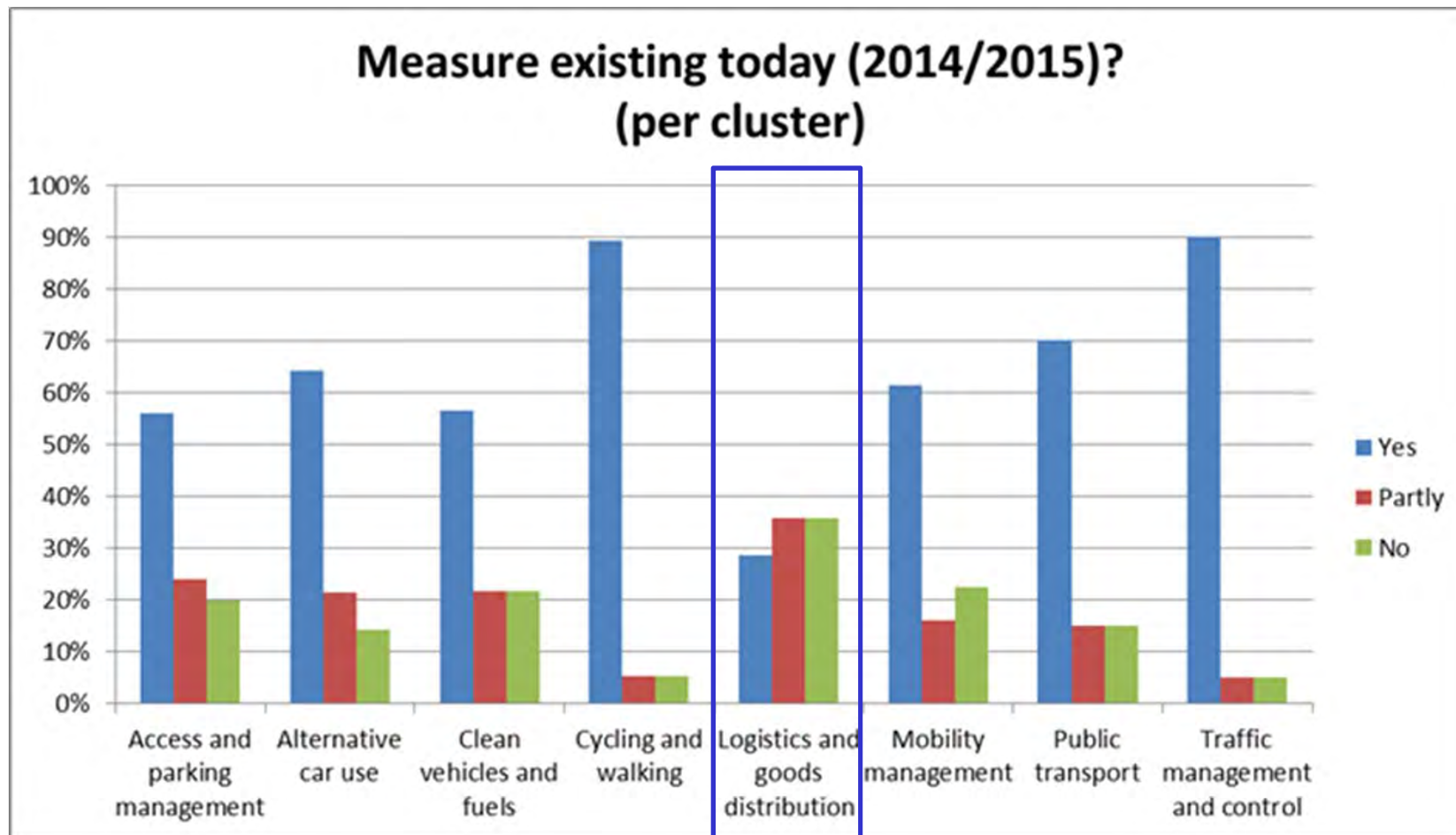
Implementation rate at end of CIVITAS II

- 36% of the city logistics measures was fully implemented, 64% partly.



Existing rate CIVITAS II measures 6 years later

- 29% of the city logistics measures still exist, 36% partly and 36 % not anymore



City Logistics LT Effects in CIVITAS II

- The bad score of city logistics measures can be explained by:
 - Complex schemes
 - Expensive
 - Involved effort from stakeholders
- Measures often designed by municipality, without sufficient commercial understanding.
- No value for private sector
- Partnerships between city logistics stakeholders are essential to create successes, also after the demo phase.



Case study CIVITAS Plus: The Cargohopper Utrecht

Status 2013

- Low emission zone in city centre of Utrecht. Only clean vehicles may enter.
- The electric Cargohopper is a multi-trailer, 16-metre long, 1.25-metre wide lorry which has been designed to fit into the small street network of the city centre.
- It was a success and generated worldwide attention.
- It delivered freight from a City Distribution Centre to the inner-city. No subsidy needed to operate
- Implementation strategy: work in collaboration with a well established transport provider that integrate the Cargohopper into the existing transport system
- Impacts: a decrease of 4 080 freight trips, saving of 88 332 kilometres driven.
- This is a reduction of:
 - CO₂ (-73%), NO_x (-27%), PM10 emission (-56%)
- 2nd Cargohopper developed that can also deliver pallets (Costs 85k euro).



Case study CIVITAS Plus: The Cargohopper Utrecht

Current situation and how it evolved

- There is no Cargohopper anymore in Utrecht. After the demo project many problems occurred:
 - There was an economic crisis, which resulted in around 25% less deliveries but with similar cost levels.
 - The hub close to the city centre had to be left.
 - The second version of the Cargohopper was not profitable because it was not well designed.
 - There was less organisational power at the municipality and the transportation company who were the initial success factors.
 - The strict access and environmental regulations, to which Cargohopper had anticipated, were not enforced enough.
 - The idea of bundling goods from other companies appeared to be a difficult



Case study CIVITAS Plus: The Cargohopper

Other locations

- In 2014 a trial started in Enschede with an improved version for environmental benefits. It runs on subsidy as local entrepreneurs do not want to pay extra costs. Now, more a showcase than real alternative.
- 3rd version of the Cargohopper was used in Amsterdam. This appeared to be a success:
 - A good hub location and bigger city
 - Further improved Cargohopper (4 vehicles)
 - Support of the city (launching customer + start-up subsidy), regulations and privileges in place (and enforced).
- Delivery of 1300 tons of goods a year in Amsterdam. 50km on average daily trip length with 60 to 70 drops a day.
- Cargohopper stopped operations in 2017 in Amsterdam



Case study CIVITAS Plus: The beer boat in Utrecht

Status 2013

- Utrecht has a city centre with canals with unique low quays and historic wharves. Only small (and clean) freight vehicles may enter.
- Zero-emission electric vessel to transport goods to clients, shops, bars and restaurants in the city centre. Most efficient way to deliver.
- Operated by the municipality 6 times on 4 days per week, supplying more than 60 catering businesses.
- Reduction of emissions
- Positive NPV (30y, 3,5%)



Case study CIVITAS Plus: The beer boat in Utrecht

Current situation

- Not much has changed since 2012. Almost the same amount of customers. No extra efforts to find additional customers.
- Results: 1560 van trips of 8 km (avg.) a year saved. NPV positive.
- Still operated by the port department of the city. The breweries and wholesalers rent the boat including boatman for a time slot.
- 95% of the work week booked, 5% maintenance. But on average 30 roll containers at a boat capacity of 48
- Improvements to the operations possible:
 - Brewers share time slots
 - Deliveries on geographical order



Analysis

- In general setting up city logistics measures in CIVITAS is difficult. It could help to build partnerships, define regulations together and provide initial funding and assistance.
- In the longer term, some measures are still continuing, but a considerable part did not continue after the demo project.
- City logistics measures take place in a heavy competitive market.
- Also after the demo project the provision of support could be helpful and needed for innovative and clean measures. CIVITAS II showed that after the demo phase the focus on the cooperation between stakeholders decreased.
- The Utrecht cases show that a sustainable business case at the end of the demo phase is crucial to have the measure still existing in the period after.

Conclusion

- Long-term evaluation is a valuable tool to assess effects of city logistics innovations a few years later after the demo phase.
- Performing a sound impact evaluation is difficult, but process evaluation is useful to understand what happened and why.
- The majority of innovative and sustainable city logistics measures does not exist anymore after a decade. Main reasons for that are:
 - Cooperation between public and private parties requires effort;
 - Measures need also after the demonstration phase some support and a sustainable business case to be able to operate in a competitive market.



Thank you!

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