



CIVITAS FORUM 2016
CIVITAS ANNUAL CONFERENCE | 28-30 SEPTEMBER | GDYNIA

Collaborative logistics models in urban areas: Current status and evidence from the Fast Moving Consumer Goods sector

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Gdynia

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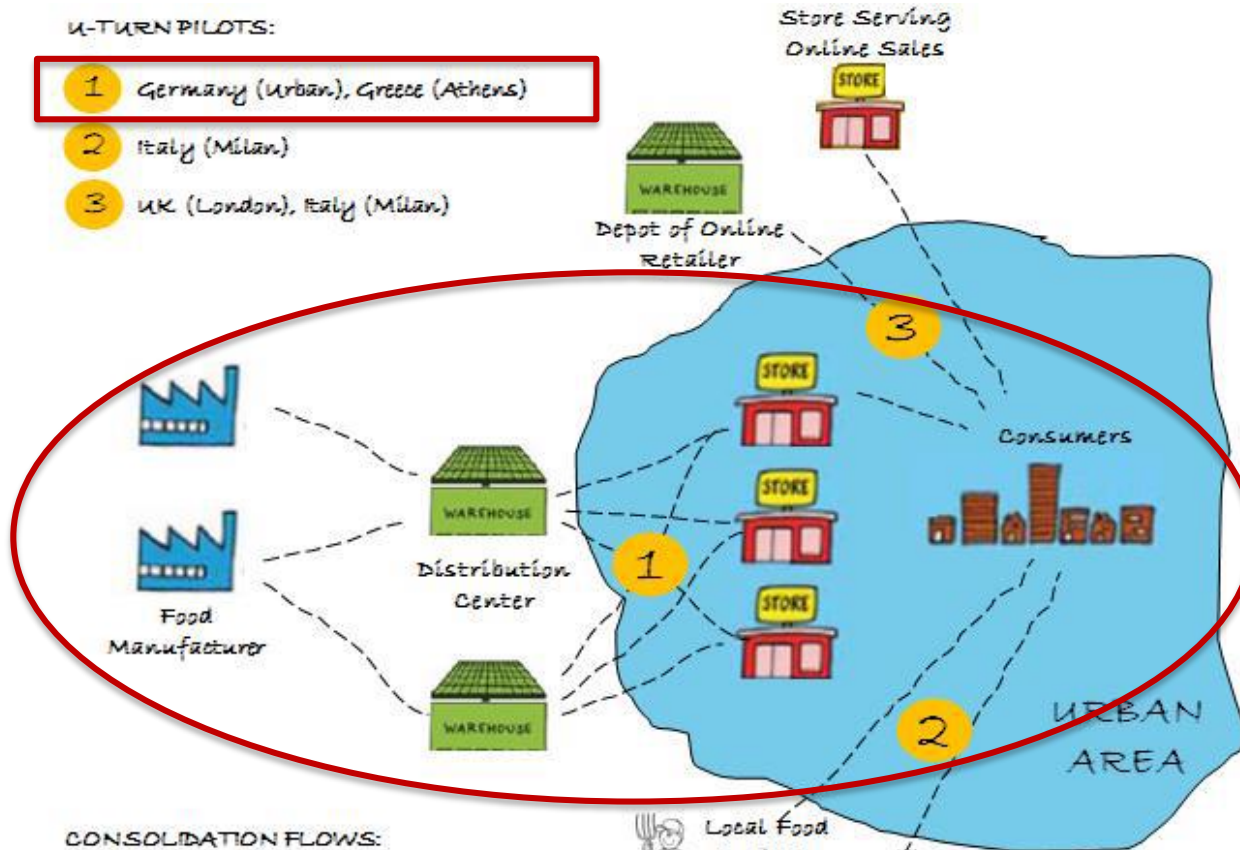


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U-TURN Concept and Pilots

U-TURN PILOTS:

- 1 Germany (Urban), Greece (Athens)
- 2 Italy (Milan)
- 3 UK (London), Italy (Milan)



CONSOLIDATION FLOWS:

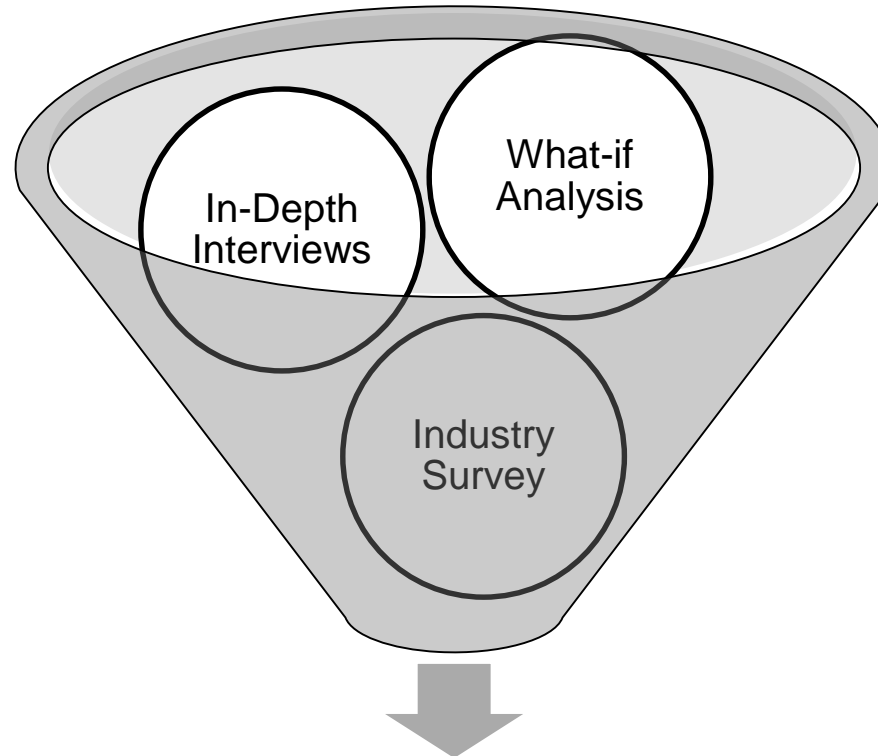
- 1 From DC's to Stores in Urban Areas
- 2 From Local Producers to Consumers
- 3 From Online Retailers to Consumers



Pilot 1: Distribution of packaged goods from food manufacturers to retail outlets located in urban areas

Pilot 2: Distribution of fresh food from local producers in urban areas

Pilot 3: Distribution of packaged goods from food manufacturers to retail outlets located in urban areas



- ✓ Capture industry's current interest on shared logistics practices and shared logistics platforms
 - ✓ Specify various shared logistics scenarios
 - ✓ Investigate their implementation challenges
 - ✓ Define a set of pilot scenarios
- ✓ Estimation of the potential benefits for the various scenarios

Various stakeholders perspectives

Manufacturers



3PLs



Retailers



ECR Working Group



EEL Working Group

Working groups participants

EEL Working Group














ECR Hellas Working Group















- **Highly competitive sector and unhealthy competition**
- **Suspiciousness and mistrust**
- **Immature collaboration culture and market**
- **Already adequate loading factors in some cases**
- **Fragmentation of the logistics services market as few companies have more than 20 trucks, while two-thirds of the operators follow the “one-truck, one - owner” model**
- **Excessive regulation of the logistics services market**
- **Loss of perceived competitive advantage and/or loss of control by employing shared logistics**
- **Worries about the quality of customer service**
- **Opposition by trucks’ owners and trade unions**
- **Road transport is the primary mode used for freight domestically (accounts for 98% of all land transport)**

Shared logistics pilot execution

Step 1

Step 2

Step 3

Step 4

Step 5

Depict the current distribution processes

Identify potential models

Define the stakeholders for each scenario

Define the pilot data requirements

Evaluate the pilots

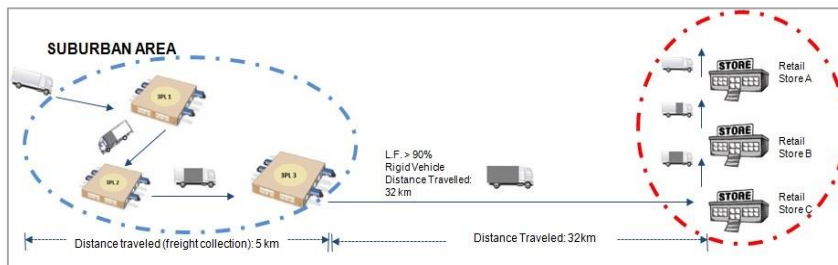
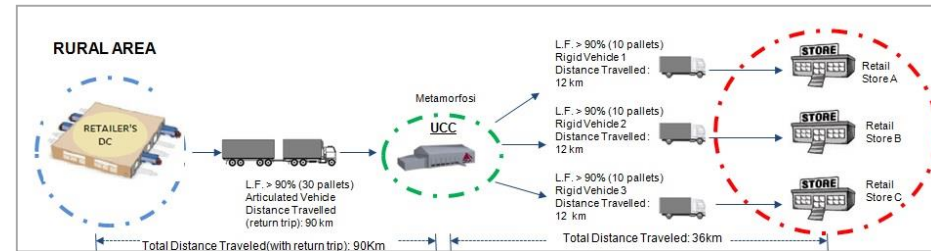
- ✓ A set of 8 has been conducted.
- ✓ A set of data has been collected and analyzed

- ✓ A complete set of shared logistics scenarios has been formulated.

EEL WORKING GROUP
(September 2015)

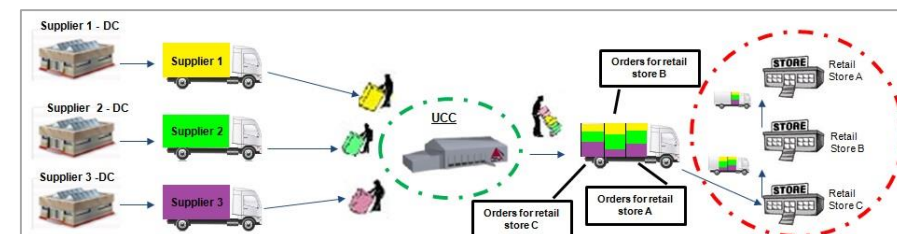
Shared logistics models

MODEL 1: Consolidating in a UCC and distributing in urban retail stores - The case of a supermarket



MODEL 2: Collecting freight from different 3PL companies and distributing with a common vehicle

MODEL 3: Consolidating supplier's goods in a UCC and distributing with a common vehicle



Proposed Models Feasibility

MODEL 1

- Consolidating in a UCC and distributing in urban retail stores - The case of a supermarket

MODEL 2

- Collecting freight from different 3PL companies and distributing with a common vehicle

MODEL 3

- Consolidating supplier's goods in a UCC and distributing with a common vehicle

A trustworthy independent party or a consortium that will support the UCC is required

Enhancing collaboration culture

Providing empirical evidence about the benefit of the various models

A shared logistics platform could facilitate Model 2 implementation

EEL IWG Data received

- We have requested a series of data from an Industrial Working Group (IWG) formulated by 3PL companies, forwarders, suppliers and retailers (described below).
- We have collected data for a 6 months period.

Trip/Transport

- Transport ID
- Date of transport
- Transport start point
- Vehicle Code
- Distance travelled (in km)

Delivery

- Transport ID
- Delivery point
- Carried load per delivery point (in Kg)
- Carried load per delivery point (as volume)
- Carried load per delivery point (in pallets)
- Load type

Vehicle

- Vehicle ID
- Vehicle's Engine Technology
- Fuel type
- Vehicle's gross weight
- Vehicle's payload
- Vehicle's capacity in pallets

- **E-commerce logistics in** scenario where **two 3PLs** distribution will consolidate them jointly.

Simulation

- **Environment scenario** focus on FMCG products their deliveries and ship them jointly.

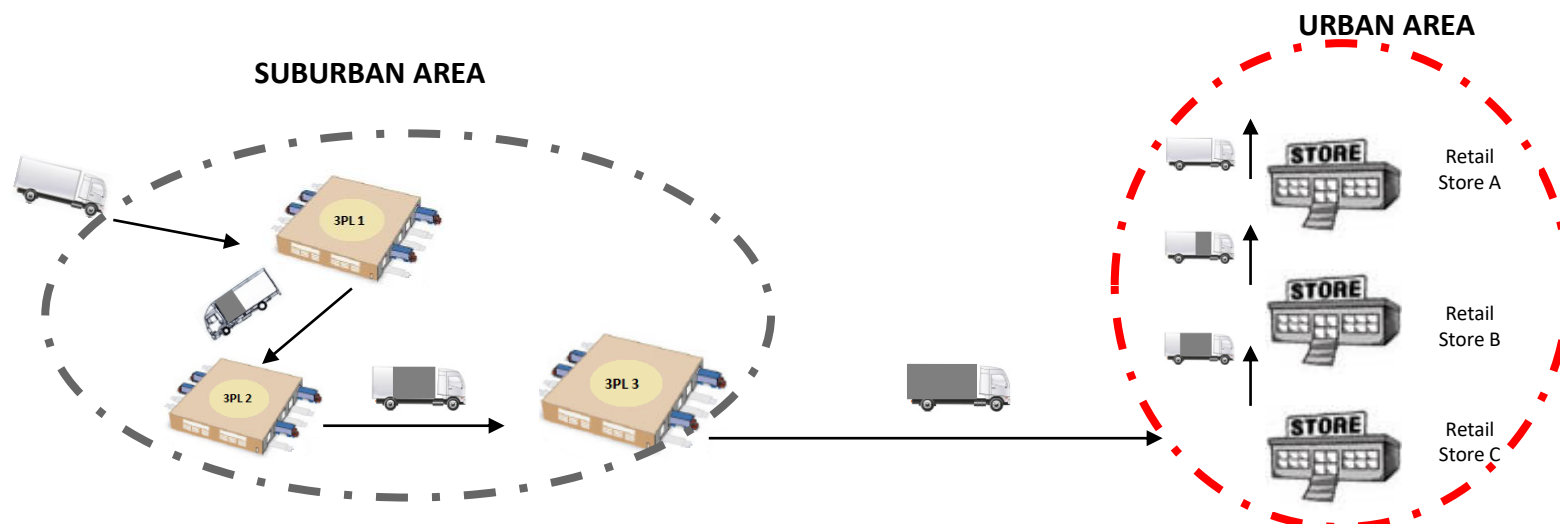
Stable matching

- **Urban consolidation center in Athens city center** scenario that involves five

What-if analysis

Experimental design

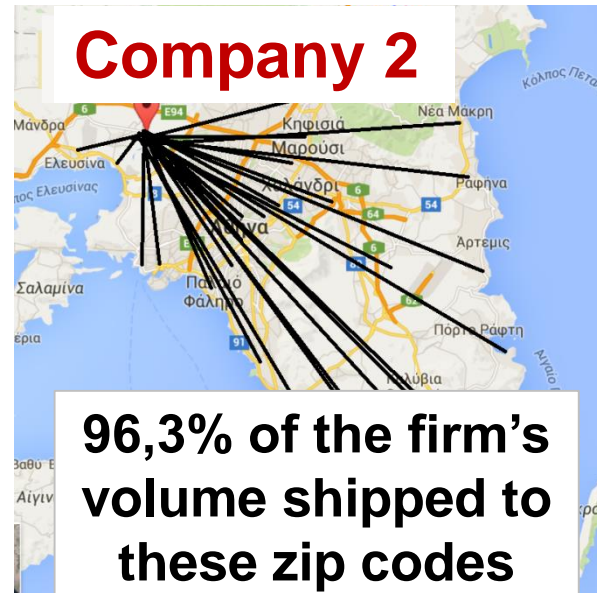
E-commerce City Logistics	FMCG logistics in Urban Areas
2 firms operating in e-commerce logistics	3 big firms operating in FMCG and other retail goods logistics
Warehouses in the same area	Warehouses in the same area
Same type of products (mainly clothes)	Same type of products (FMCG, retail products)
Similar distribution inefficiencies (many delivery points, low vehicle fill rates)	Similar distribution characteristics (mainly supermarkets and retail stores, often high waiting time to service)
Shipping in packets	Shipping in pallets



FMCG logistics in urban environment

350 unique zip codes
→ 350 or more delivery points
10248 transports

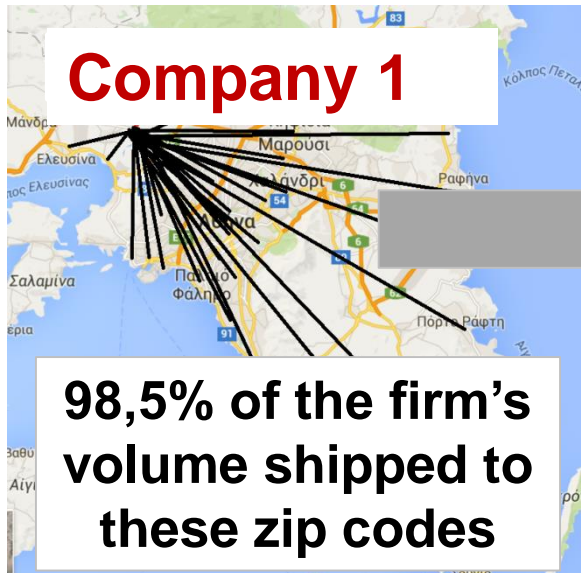
Company 2



96,3% of the firm's volume shipped to these zip codes

378 unique zip codes
→ 378 or more delivery points
10350 transports

Company 1

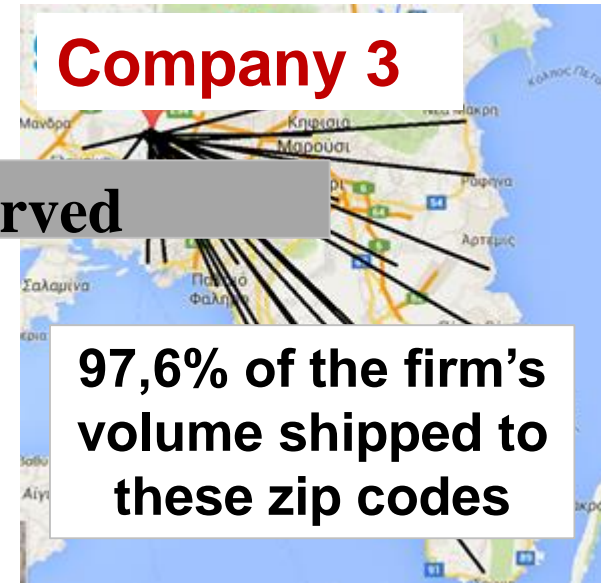


98,5% of the firm's volume shipped to these zip codes

341 common zip codes served

386 unique zip codes
→ 386 or more delivery points
2663 transports

Company 3

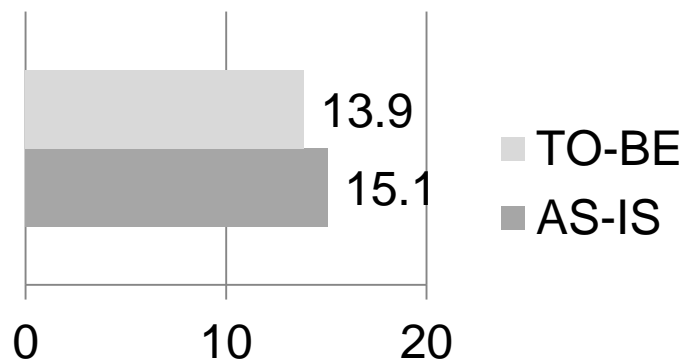


97,6% of the firm's volume shipped to these zip codes

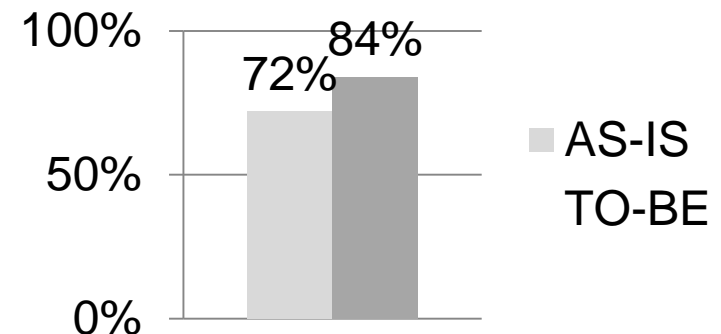
Collaborative transport among 3 neighboring 3PLs

- Transport pooling for the same type of products and to the same or close zip codes
- 100% of volume served

Delivery points



Fill rate



- Transports are decreased by 9%



Thank you!

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