

**Bologna metropolitan area practices:
Policy guidelines for the rationalization of freight traffic**

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THE SPATIAL PERSPECTIVE

GEOGRAPHIC TARGET:

Metropolitan area Focus

Wider perspective than the sole urban centre

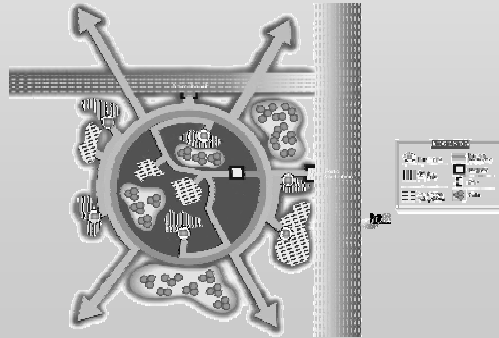
KEY CONCEPT:

Complex urban system

overlapping and strict spatial interactions between the urban and the production systems

SPATIAL EVOLUTIONARY TREND:

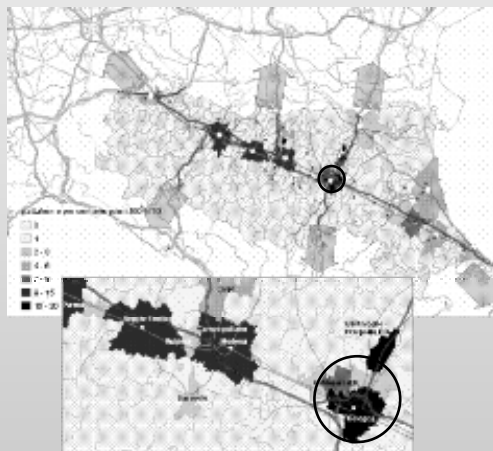
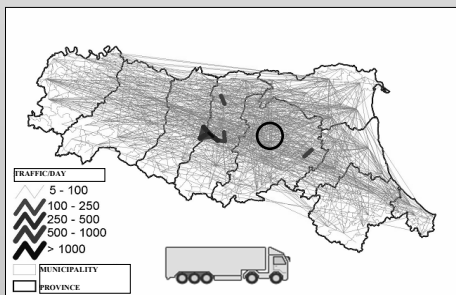
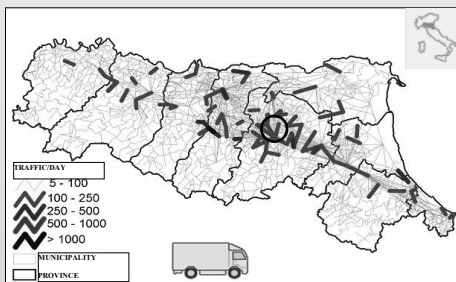
On a total of 1291 industrial areas at regional level, 908 have dimension included in the 2 - 10 hectares range, while 71 are bigger than 50 hectares



Source: Regione Emilia-Romagna, PRIT 98-2010



THE TRANSPORT PERSPECTIVE



Sources: Regione Emilia-Romagna, Transport Planning and Logistics Department, 2003



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THE ECONOMIC PERSPECTIVE

LOGISTICS means:

right materials, right quantity, right quality, right place, right time, right method, right impression, right cost

(SOLE - Society of Logistics Engineering)

COMPANIES' TRANSPORT & LOGISTICS NEEDS



IMPACTS AT METROPOLITAN LEVEL

The metropolitan area is the origin/destination point of regional, national and international supply chains.

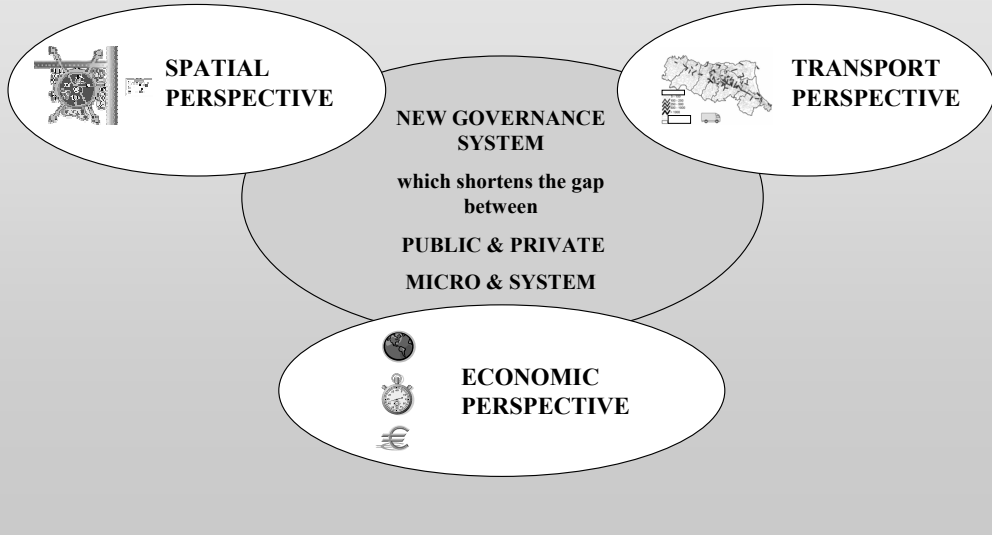
Time is the critical success factor to be on the market – more frequent shipping – lower vehicles load factor.

Cost/service trade-off, nomadic logistic behaviour and fragmentation of the transport & logistic supply.

SEPARATION BETWEEN THE MICRO AND THE SYSTEM RATIOS



THE 4TH PERSPECTIVE



THE NEW GOVERNANCE SYSTEM

THE REGIONAL FORUM ON LOGISTICS: key issues

BODIES

PUBLIC - PRIVATE INTERFACE, IN TERMS OF COORDINATION AND STRATEGIC ALLIANCE BETWEEN THE REGIONAL/LOCAL PUBLIC AND PRIVATE STAKEHOLDERS:

- Regione Emilia-Romagna
- Provinces and Municipalities
- Associations of enterprises
- Manufacturing companies
- Transport and logistics operators
- Universities

GOALS

- > ADEQUATE REPRESENTATION OF COMPANIES' NEEDS IN POLICY MAKING: ONGOING COLLECTION OF COMPANIES' NEEDS IN ORDER TO CHANNEL THESE NEEDS TO POLICIES (BOTTOM-UP APPROACH)
- > SHORTEN THE GAP BETWEEN THE MICRO AND THE SYSTEM RATIOS

ATTITUDE

listen to companies, enter their day-by-day logistics management, set up laboratories – pilots, deliver useful services

THE NEW GOVERNANCE SYSTEM

THE REGIONAL FORUM ON LOGISTICS: steps

PHASES

1. IDENTIFICATION AND COLLECTION OF COMPANIES' NEEDS (*open activity*) – COMPANY CASES

2. SET UP OF LOCAL LABORATORIES, DEFINITION OF JOINT WORKING PLANS: ANALYSIS AND TEST

3. DEFINITION OF PUBLIC POLICIES, DISSEMINATION AND TRAINING

BODIES

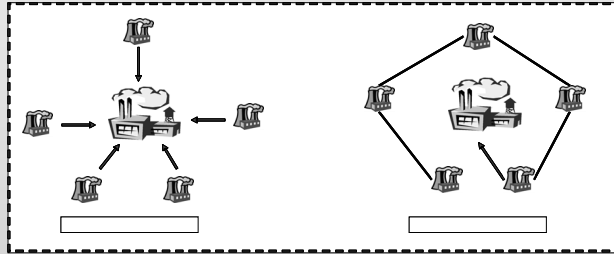
- Regione Emilia-Romagna starts-up the Forum by asking to the Associations of enterprises to contact Manufacturing companies and Transport and logistics operators and identify specific problems which are representative of local/regional issues (meetings of the Forum)

- Regione Emilia-Romagna, the Local Public Bodies and the Associations of enterprises define a joint working plan with companies thanks to the support of Universities and experts.
- Data collection, analysis of flows and of the logistic organisation.
- Solutions identification and test.

- The companies cases are generalized and long term intervention leverages are identified.
- The laboratories outcomes are presented to other companies to generate imitation processes.

THE LABORATORIES IN BOLOGNA METROPOLITAN AREA

THE MILK RUN SYSTEM: concept



A transport and logistic technique for the collection and transport of goods from suppliers with a defined delivery route, in which various stops are planned and executed in terms of quantities and timing.

It can present different levels of complexity:

- Consolidation hubs for clusters of suppliers.
- Different geographic levels (local, regional, national and international suppliers).

THE LABORATORIES IN BOLOGNA METROPOLITAN AREA

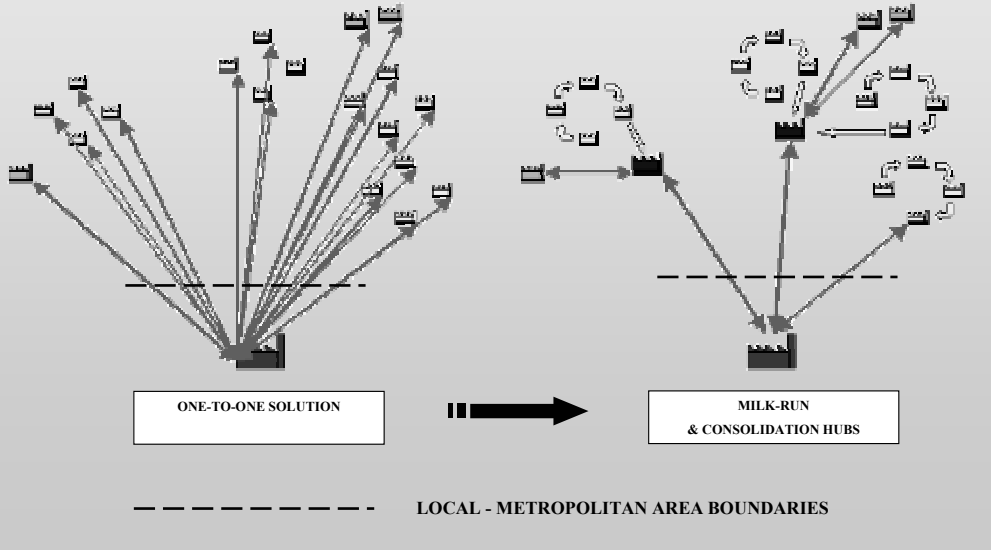
THE MILK RUN SYSTEM: results [1]

	Before the Milk-Run	After the Milk-Run
<i>Incoming trucks</i>	14 daily	2 every two days
<i>Waiting time</i>	Queque	No waiting time
<i>Transport cost reduction</i>		- 37%
<i>Stock turn over</i>		+13% (consumption on stock)
<i>On time deliveries</i>	50 %	92 %
<i>Staff reduction</i>	9 (from 10-12 to 4-5)	6
<i>Extra work</i>	2 hours per day	0 hours per day
<i>Lead time</i>	5 days	2 days

Source: Ducati Consulting for Regione Emilia-Romagna, I-Log Project (Interreg IIB CADSES), 2005

THE LABORATORIES IN BOLOGNA METROPOLITAN AREA

THE MILK RUN SYSTEM: results [2]



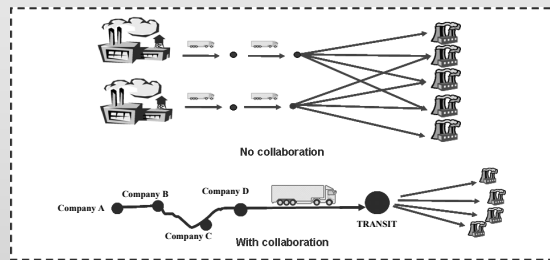
Regione Emilia Romagna

BESTUFS.NET
Best Urban Freight Solutions

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THE LABORATORIES IN BOLOGNA METROPOLITAN AREA

INTEGRATED OUTBOUND LOGISTIC PLANNING: concept



The intelligence of a single company does not imply the system intelligence

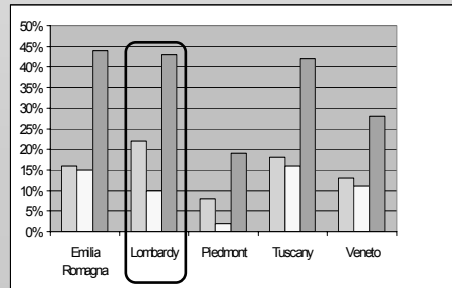
- **Solution TO BE 1a** – Benchmark analysis for selecting the cheapest provider on each weight class, on the basis of the actual contractual tariff lists of the current transport service providers of the companies.
- **Solution TO BE 1b** – Benchmark analysis for selecting the cheapest provider in terms of average weighted tariff taking into account the % of shipments on each weight class, on the basis of actual contractual tariff lists. The selected provider is active on all provinces of each region and it is suitable for moving shipments of any weight class.
- **Solution TO BE 2** – Aggregation of the outbound flows on weekly basis, by coordinated planning of the pickings and departures to destination provinces. The number of departures/week and the size of the vehicle is determined by the total quantity of outbound freight (kg) per province.

THE LABORATORIES IN BOLOGNA METROPOLITAN AREA

INTEGRATED OUTBOUND LOGISTIC PLANNING: results [1]

% SAVINGS on AS-IS COST

REGION	TO BE 1a	TO BE 1b	TO BE 2
Emilia Romagna	16%	15%	44%
Lombardy	22%	10%	43%
Piedmont	8%	2%	19%
Tuscany	18%	16%	42%
Veneto	13%	11%	28%



Source: PricewaterhouseCoopers Advisory for Regione Emilia-Romagna, I-Log Project (Interreg IIIB CADSES), 2005



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THE LABORATORIES IN BOLOGNA METROPOLITAN AREA

INTEGRATED OUTBOUND LOGISTIC PLANNING: results [2]

	LOAD FACTOR	
	TO BE 2 solution	RER data 2003
Lombardy	71,0%	40,1%
Emilia – Romagna	66,3%	
Veneto	67,7%	
Piedmont	52,9%	
Tuscany	53,8%	

Source: PricewaterhouseCoopers Advisory for Regione Emilia-Romagna, I-Log Project (Interreg IIIB CADSES), 2005

KEY ISSUES OF THE LABORATORIES

- **CONCRETE INITIATIVES WHICH COMPLY WITH THE METROPOLITAN AREA NEEDS**
- **SUSTAINABILITY**
- **TRASFERABILITÀ**
- **LASTING PUBLIC-PRIVATE COOPERATION**
- **PUBLIC BODIES COOPERATION AT DIFFERENT TERRITORIAL LEVELS**
- **COOPERATION AMONG COMPANIES**
- **ATTRACTION OF DIFFERENT FINANCIAL SOURCES (EU, NATIONAL, REGIONAL, LOCAL, PRIVATE)**

CRITICAL SUCCESS FACTORS

- **Identify laboratories which are representative of the problems and of the transport and logistic bottlenecks at metropolitan level.**
- **Define a joint working path with companies, which area often busy with their day-by-day management.**
- **Do not supply pre-packed solutions.**
- **Develop a trust relationship with companies: government – citizen.**

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