RegioneEmilia-Romagna
Assessorato Mobilità e Trasporti

THE EMILIA-ROMAGNA REGION TRANSPORT & LOGISTICS POLICIES

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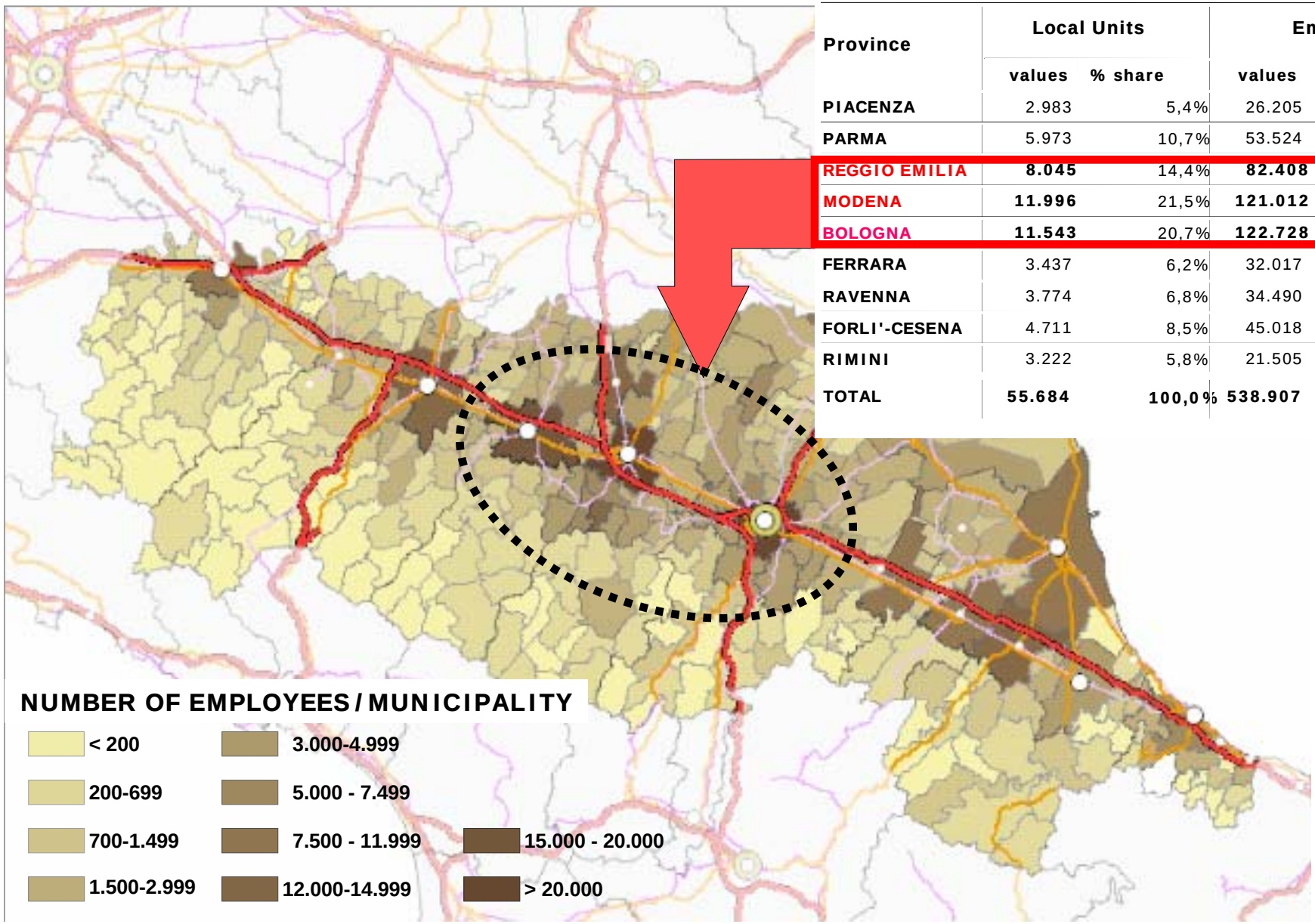
Institute for Transport and Logistics

The Economic Structure

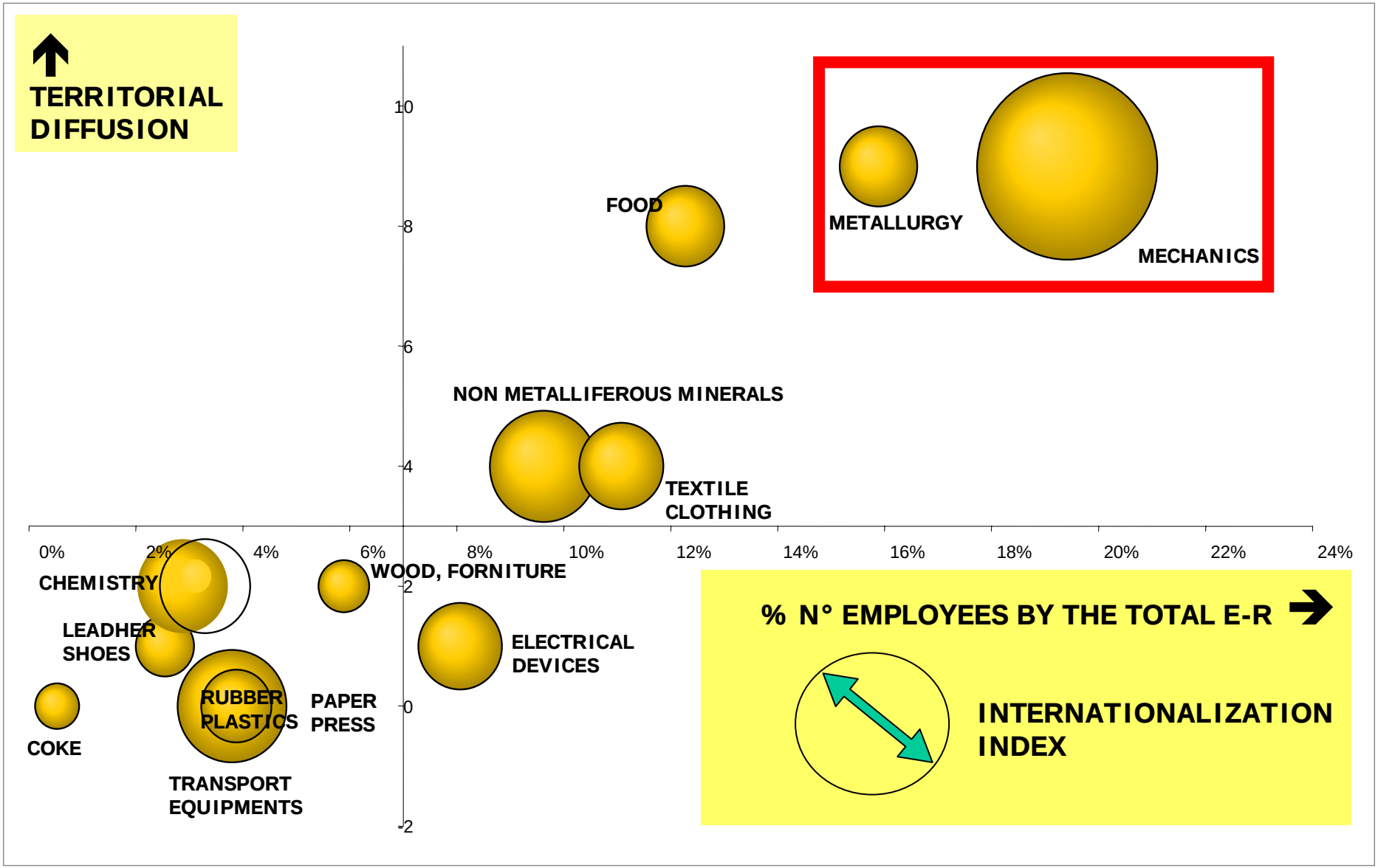
- Over 400.000 active firms
  (almost 1 every 10 inhabitants)
- Characterised by SMEs
- More than 90% have less than 50 employees
  (the average firm has 3.5 employees: 7.4 in manufacturing, 2.6 in service sector)
- There are more than 110.000 firms in the industrial sector

Emilia Romagna economic outlook: employees in the manifacturing sector (ISTAT, 2001) by municipality



Province	Local Units		Employees	
	values	% share	values	% shares
PIACENZA	2.983	5,4%	26.205	4,9%
PARMA	5.973	10,7%	53.524	9,9%
REGGIO EMILIA	**8.045**	14,4%	**82.408**	15,3%
MODENA	**11.996**	21,5%	**121.012**	22,5%
BOLOGNA	**11.543**	20,7%	**122.728**	22,8%
FERRARA	3.437	6,2%	32.017	5,9%
RAVENNA	3.774	6,8%	34.490	6,4%
FORLI'-CESENA	4.711	8,5%	45.018	8,4%
RIMINI	3.222	5,8%	21.505	4,0%
TOTAL	**55.684**	**100,0%**	**538.907**	**100,0%**

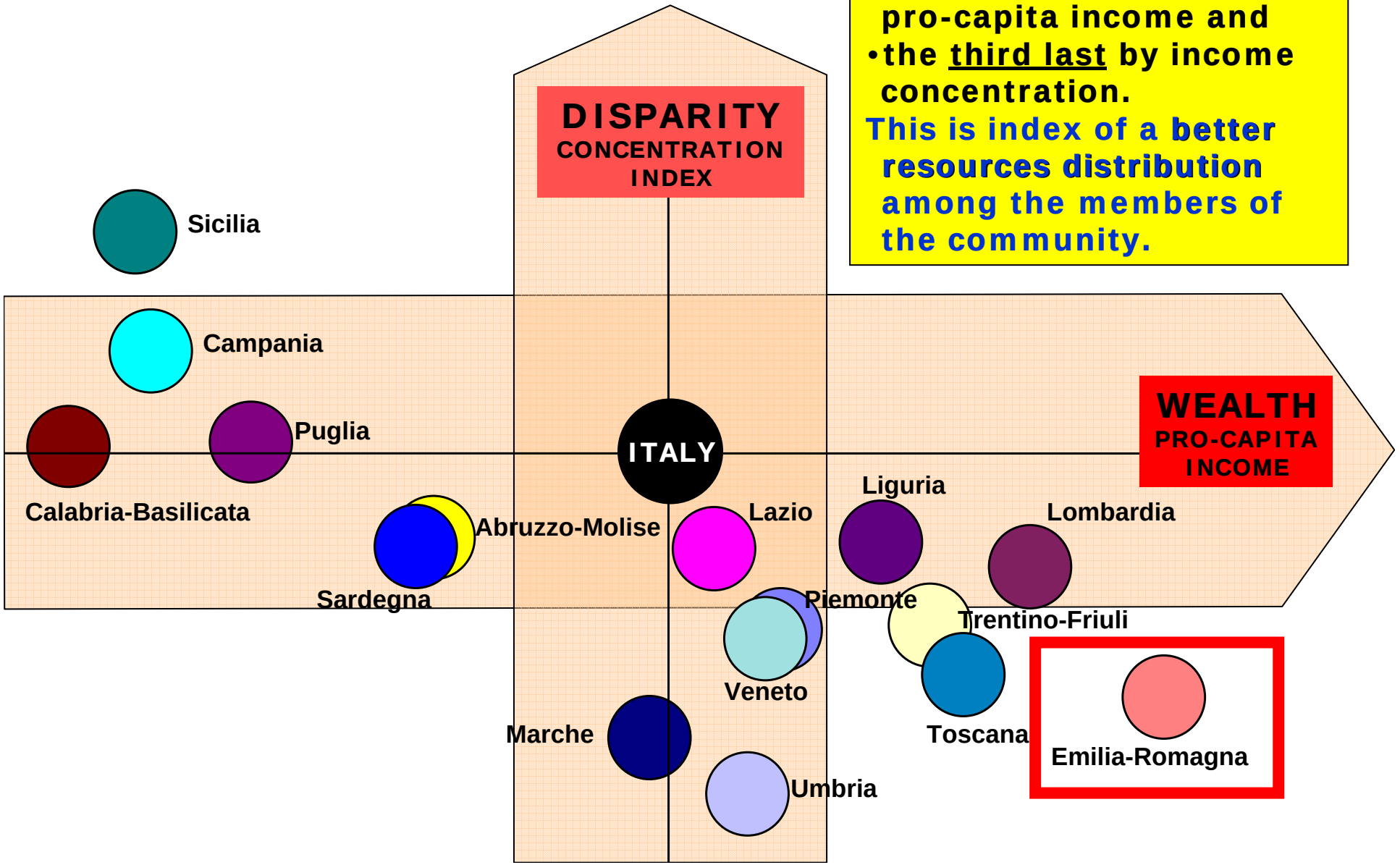
Manufacturing Sector Divisions



Towards a sostainable economic growth ?

Among the Italian regions Emilia-Romagna is
- **the <u>first</u> by the equivalent pro-capita income and**
- **the <u>third last</u> by income concentration.**

This is index of a better resources distribution among the members of the community.

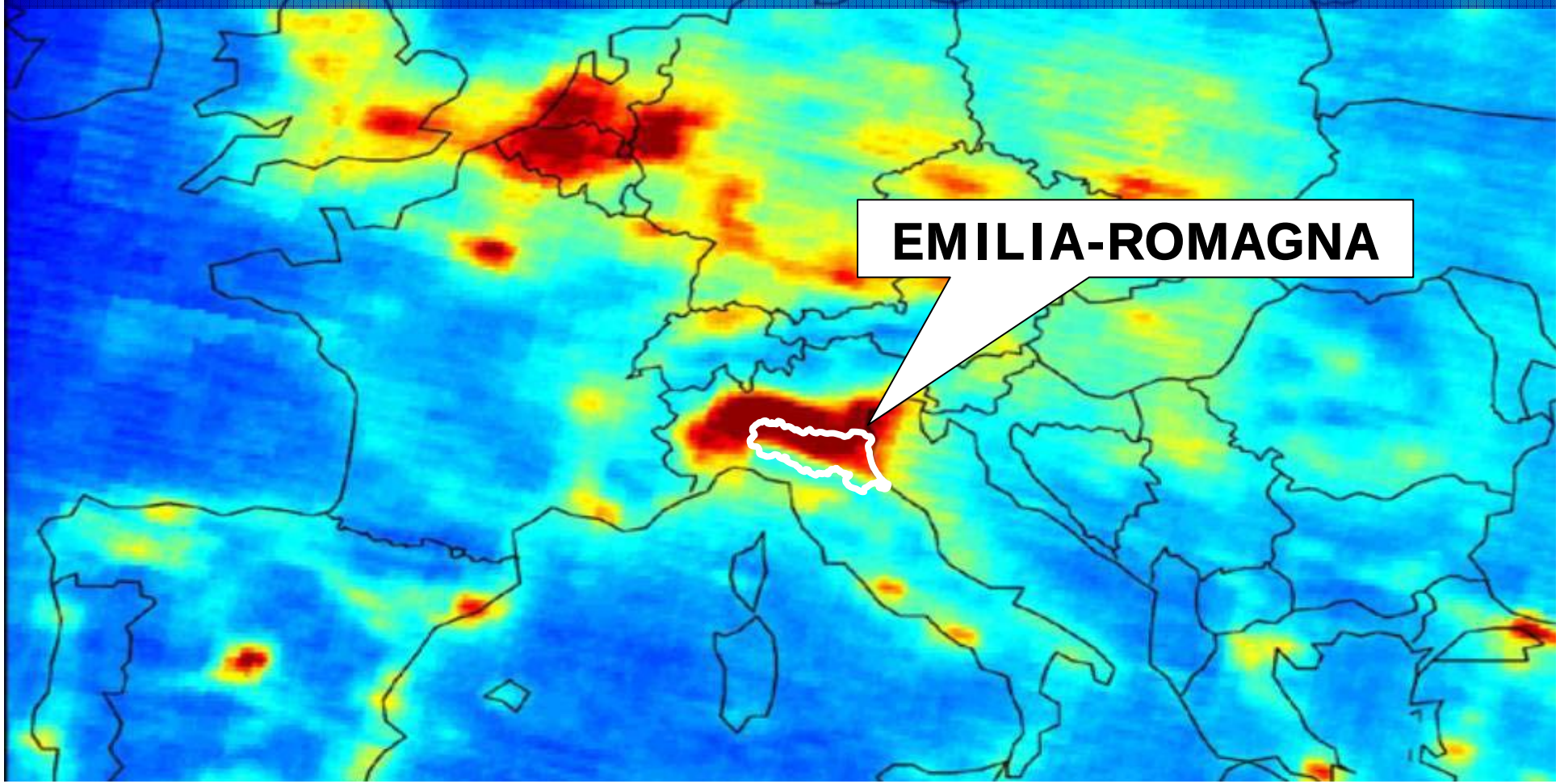


NO_2 CONCENTRATION LEVELS IN EUROPE

NITROGEN DIOXIDE concentrations taken by ENVISAT satellite in 18 month (January 2003 -June 2004).

NO_2 is responsible for the ozone production in the biosphere.

NO_2 is produced by the emissions of the electrical plants, by the heavy industry, and by the road transport , besides biomasses combustion.

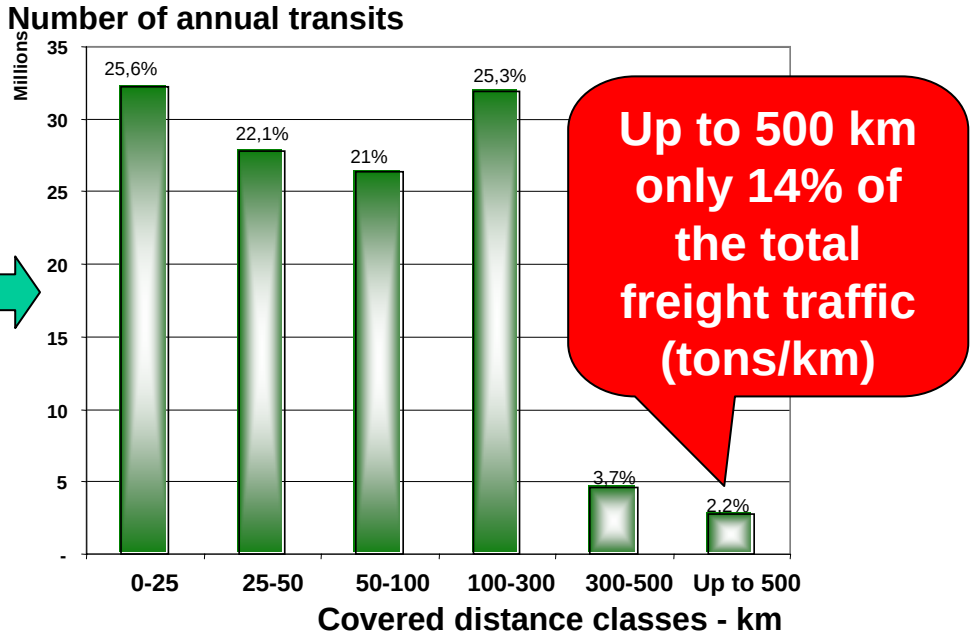


SIDE EFFECTS TO BE FACED

- **POLLUTION (maximum level in Europe: PM10, NOx, CO, …)**
- **DISEASES (very high health costs on regional&local budgets)**
- **CONGESTION (traffic jams and waste of time all over the entire transport network, not only at urban level)**
- **HIGH COSTS OF PRIVATE AND PUBLIC TRANSPORTS (lot of money wasted by industry, services and public administration)**
- **LOSS OF COMPETITIVENESS BY COMPANIES IN THE GLOBAL MARKET**

HEAVY-TRUCK TRAFFIC ON THE MAIN MOTORWAYS (Italy - 2003)

The distribution of the heavy-truck traffic is fairly omogeneous among the different covered distance classes (up to 300 km), but it decreases rapidly beyond 300 km



- **In 2003 the total number of heavy-trucks covering more than 500 km was 1.7 million (average distance covered: 662 km)**
- **The quantity of goods carried by these trucks was 32.000 mln tons/km, equal to:**
  - **22% of total freight road traffic**
  - **14% of total freight traffic**

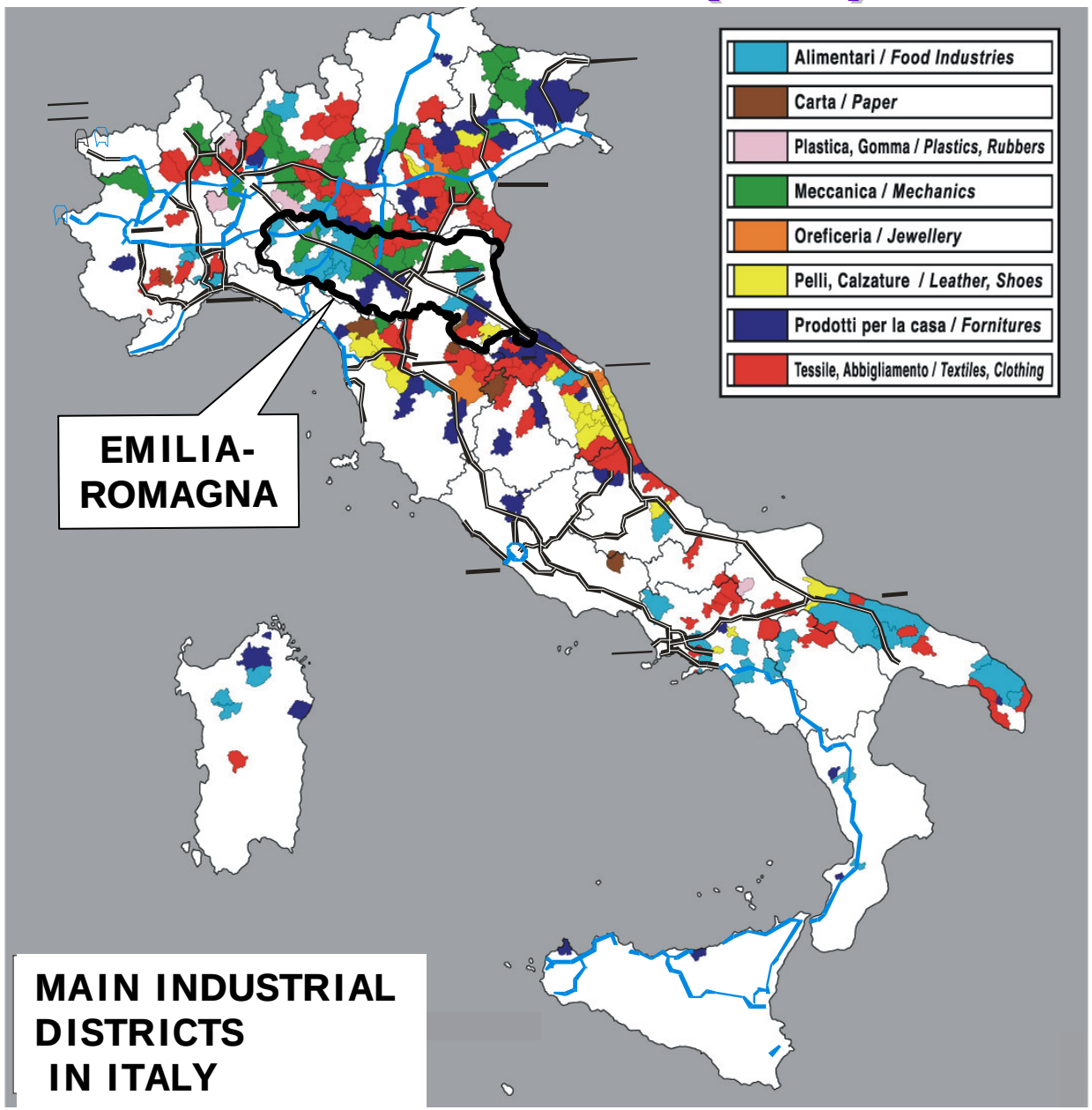
HIGH DIFFUSION OF THE LOCAL PRODUCTION SYSTEMS (LPS)

In Italy, the industrial system is highly differentiated and widespread over the territory.

It requires complex linking infrastructures and transport services to maintain its competitiveness.

Logistics and intermodality are the main issues for:

- **access to ports, airports, dry ports and freight villages**
- **access to border countries**
- **access to sea routes**
- **access to Eastern European countries**



INTERMODALITY FOR SUSTAINABLE ECONOMY ?

There is room for a significant freight transfer from road to rail or ship: in theory in Italy we can transfer the 22% of the freight road traffic (tons/km)

BUT THIS (LONG TERM) PERSPECTIVE

- **require huge investments in rail/ship transport facilities and technologies so that the services become definitely competitive with the road transport (lead time, reliability, costs, ...)**
- **having not practical outstanding results on road traffic: in Italy only 3-4 % less in terms of vehicles number on roads (2002 data)**

ROAD FLOWS (1)
REGIONAL DATA COLLECTION CAMPAIGN 2003

12.000 INTERVIEWS TO VEHICLES DRIVERS OF:

C2 VEHIC. TYPE: 3,5 tons load < Vans < 11.0 tons load

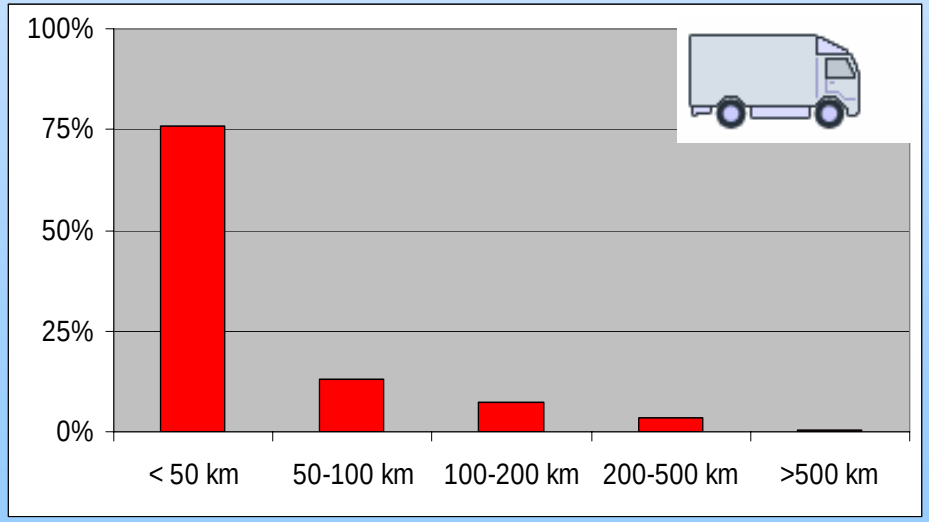
C3 VEHIC. TYPE: Heavy trucks>11,0 tons load

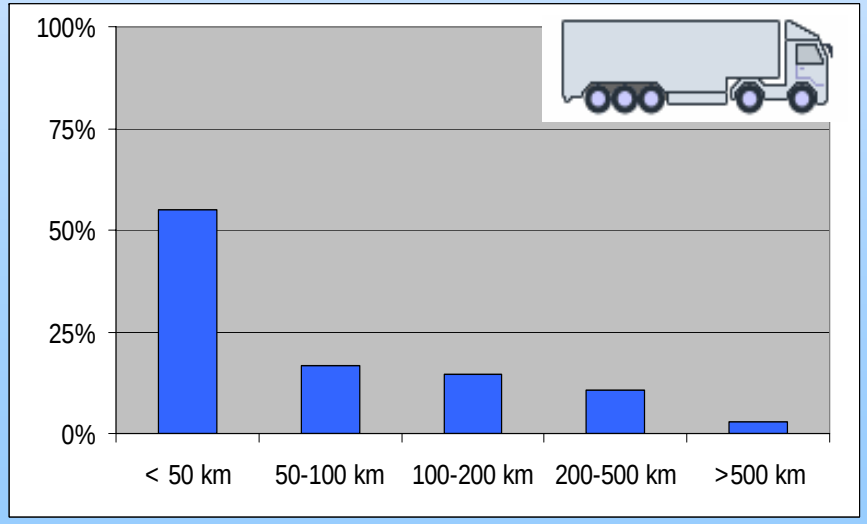
LOAD FACTOR

8.141 (69%) → **68% loaded** **32% unloaded**

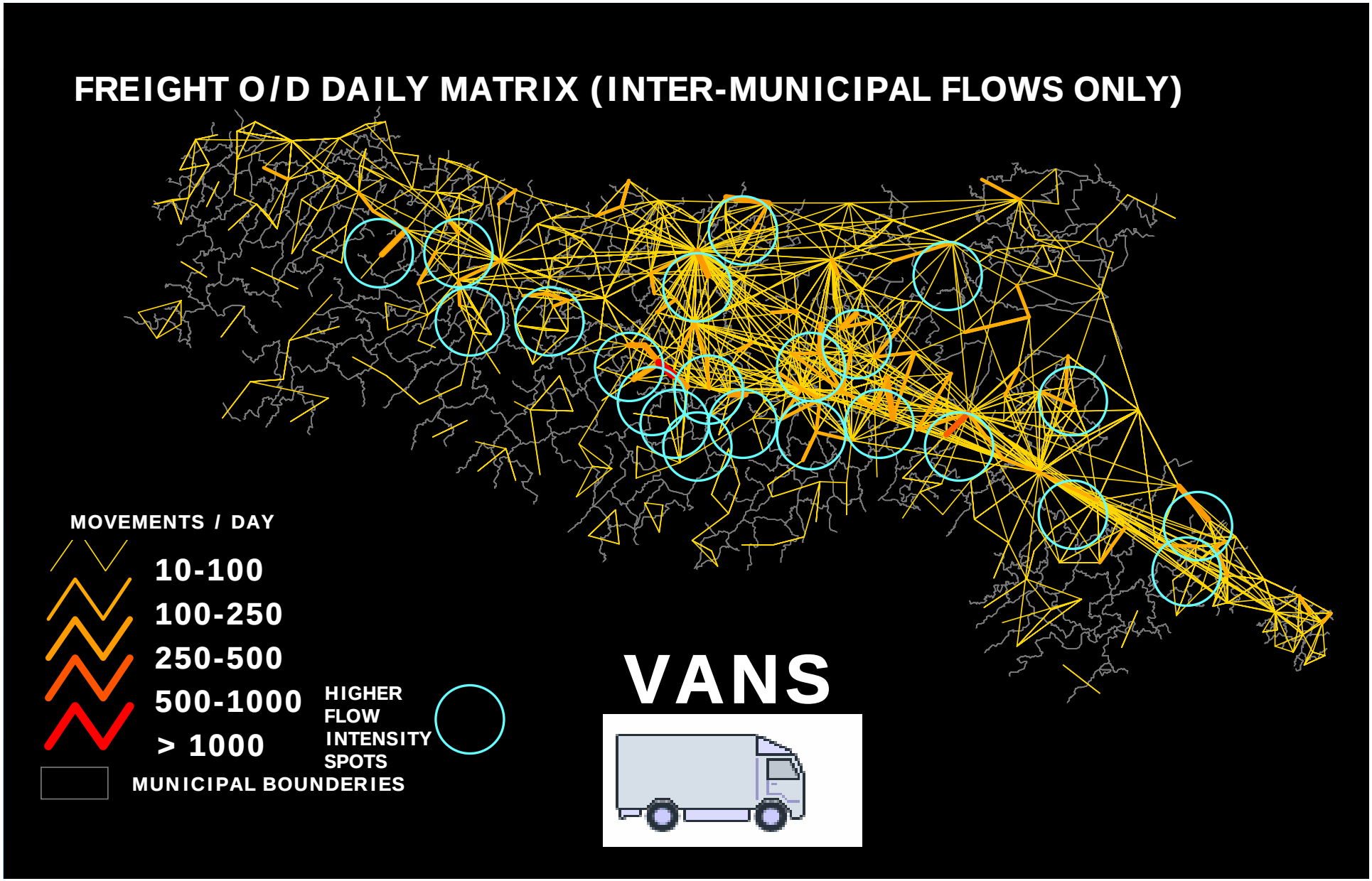
3.704 (31%) → **56% loaded** **43% unloaded**

DISTANCE RANGES



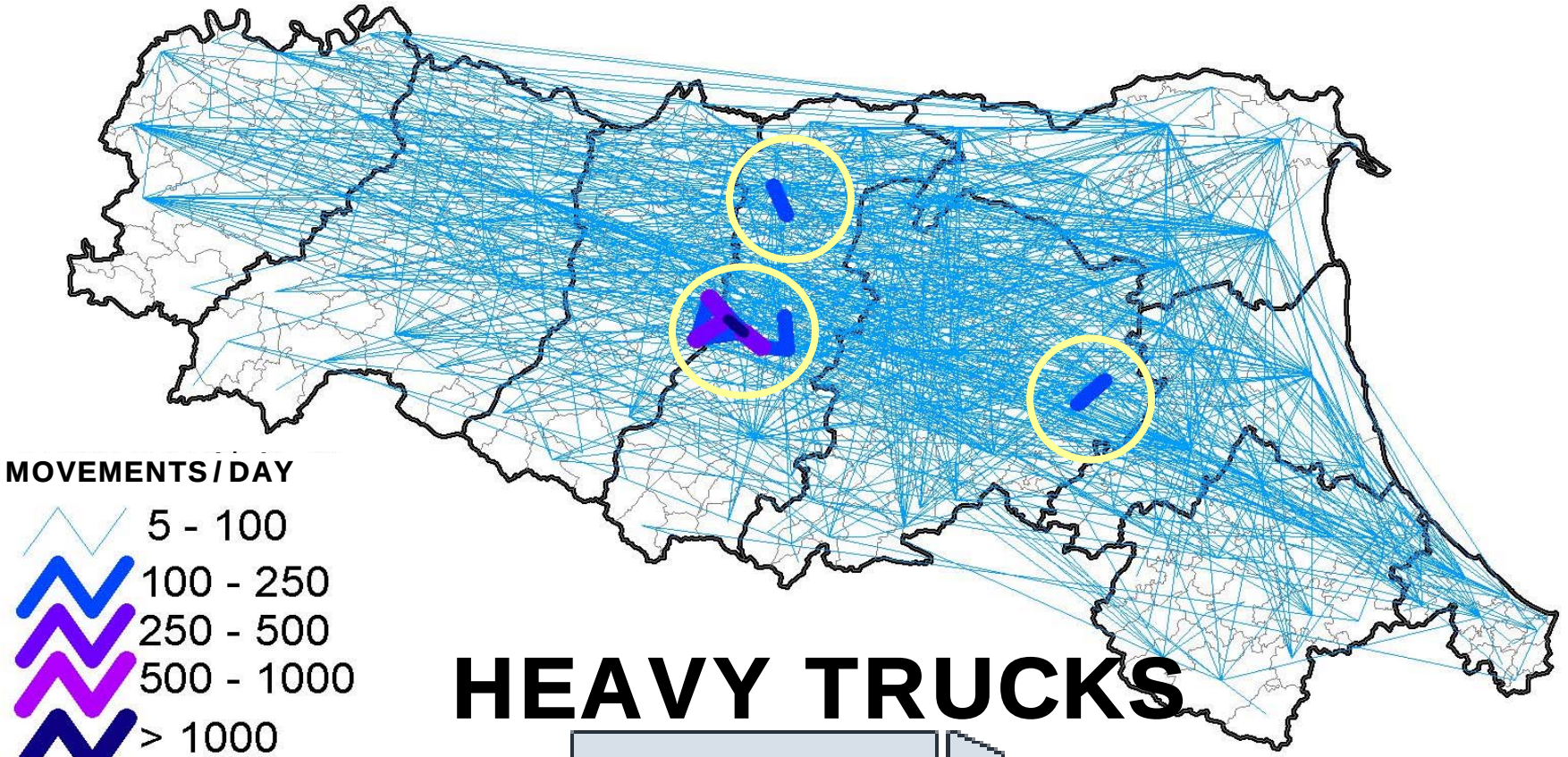


ROAD FLOWS (2)
REGIONAL DATA COLLECTION CAMPAIGN 2002



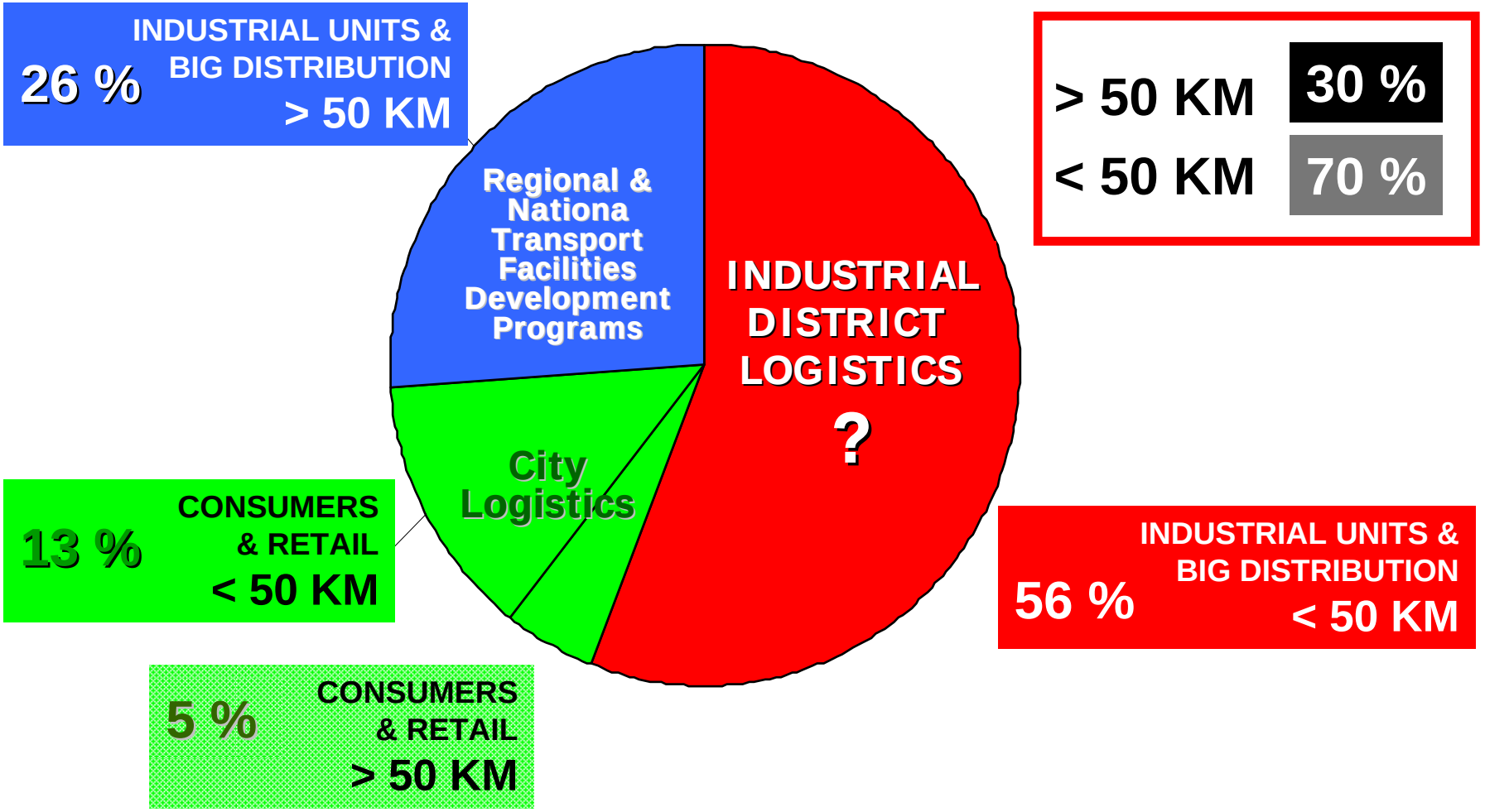
ROAD FLOWS (3)
REGIONAL DATA COLLECTION CAMPAIGN 2002

FREIGHT O/D DAILY MATRIX (INTER-MUNICIPAL FLOWS ONLY)



WHICH REGIONAL POLICIES ?

% LOCAL FREIGHT TRAFFIC VOLUMES IN EMILIA-ROMAGNA BY DESTINATION TYPE AND DISTANCE CLASSES (2002)



Participation of Emilia-Romagna Region in EU funded projects on freight transport and logistics

NAME	POSITION	EU PROGRAMMES AND INITIATIVE	BUDGET TOT. (EURO)	RER BUDGET (EURO)	FOCUS OF THE PROJECTS				
					ICT FOR FREIGHT TRANSPORT	TEN-T TRANSPORT CORRIDORS AND NODES	REGIONAL LOGISTICS	INDUSTRIAL DISTRICTS LOGISTICS	CITY LOGISTICS CLEAN AIR
ADRIATIC CORRIDOR	LP	TEN-T	1.500.000	300.000					
GILDA	LP	INTERREG IIC CADSES	6.531.000	2.500.000					
CITY PORTS	LP	INTERREG IIIB CADSES	4.774.334	542.600					
GILDANET	LP	INTERREG IIIB CADSES	4.363.150	816.800					
MEROPE	P	INTERREG IIIB MEDOCC	2.702.060	403.854					
SESTANTE	P	INTERREG IIIB MEDOCC	2.624.430	401.940					
IMONODE	P	INTERREG IIIB CADSES	4.891.500	340.000					
I-LOG	P	INTERREG IIIB CADSES	4.300.386	221.510					
ENLoCC	P	INTERREG IIC WEST	1.423.000	300.000					
CITEAIR	P	INTERREG IIC WEST	1.988.000	100.000					
CORELOG	LP	INTERREG IIIB CADSES	1.486.600	300.000					
MATAARI	LP	INTERREG IIIB MEDOCC	2.467.320	396.000					
PORT-NET	P	INTERREG IIC NORTH	1.710.000	100.000					
FREIGHTWISE	P	VI FP - IP	14.301.478	148.500					
START	P	EIE PROGRAMME	1.786.483	47.220					
REDECON	P	INTERREG IIIB CADSES	1.818.000	300.000					
MADAMA	P	INTERREG IIIB MEDOCC	1.306.000	240.000					
MOSES	P	VI FP - IP	18.566.361	269.249					
TOTAL			78.540.102	7.727.673					

LP	LEAD PARTNER
P	PARTNER

	MAIN FOCUS
	SECONDARY FOCUS

CITY & INDUSTRIAL DISTRICT LOGISTICS

AXIS 1: LOGISTICS SOLUTION FOR SMEs
AXIS 2: ROAD FREIGHT TRANSPORT RATIONALIZATION
AXIS 3: INTERCOMPANY FREIGHT FLOWS OPTIMIZATION
AXIS 4: INTERMODALITY FOR SMEs

INSTITUTIONAL BODIES AND TOOLS

AXIS 15: REGIONALFORUM ON LOGISTICS FOR STAKEHOLDERS INVOLVEMENT
AXIS 16: OBSERVATORY ON FREIGHT FLOWS
AXIS 17: TRANSPORT AND LOGISTICS INSTITUTE

"Regional Logistics" main axes

SPATIAL PLANNING

AXIS 5: REGIONALGUIDELINES FOR LOCAL ACTION PLANS
AXIS 6: URBAN PLAN GUIDELINES
AXIS 7: PILOT PROJECTS FOR INDUSTRIAL AND LOGISTICS SETTLEMENTS
AXIS 8: LAWS AND REGULATIONS FOR COMPANY LOCALIZATION

INTERMODALITY

AXIS 9: TRANSPORT AND LOGISTICS REGIONAL PLAN ADOPTION (FACILITIES NETWORK)
AXIS 10: REGIONAL RAILWAY PLAN APPROVAL
AXIS 11: TRANSPORT INFRASTRUCTURE FINANCE (RAIL, ROAD, PORTS, DRY PORTS, WATERWAYS)
AXIS 12: ICT SOLUTIONS FOR FREIGHT TRANSPORT DEVELOPMENT (GILDANET, SESTANTE, SPIL)
AXIS 13: INTERMODALITY COST REDUCTION
AXIS 14: LOGISTIC SERVICES PROMOTION

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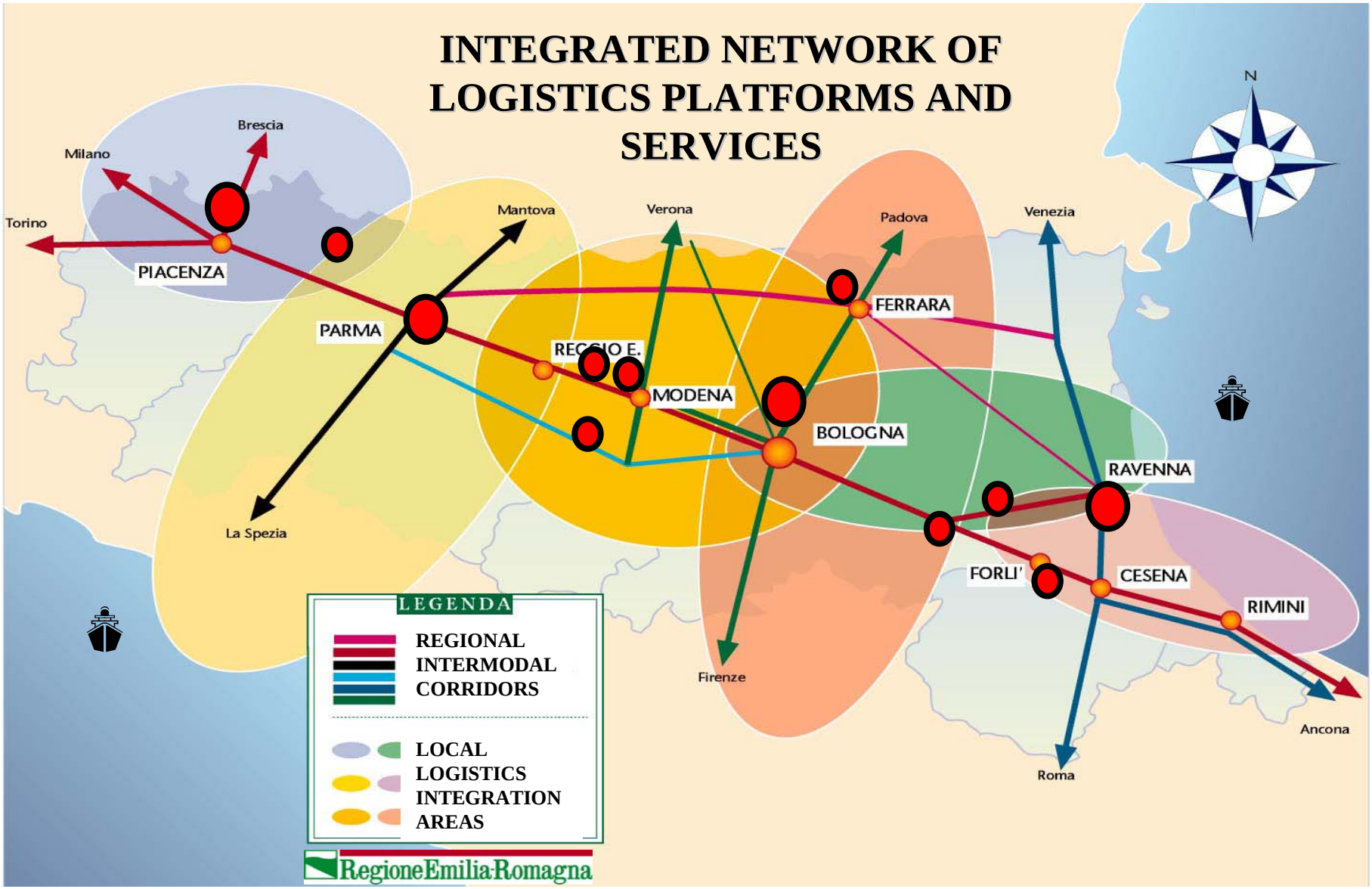
SPATIAL PLANNING
&
FACILITIES DEVELOPMENT

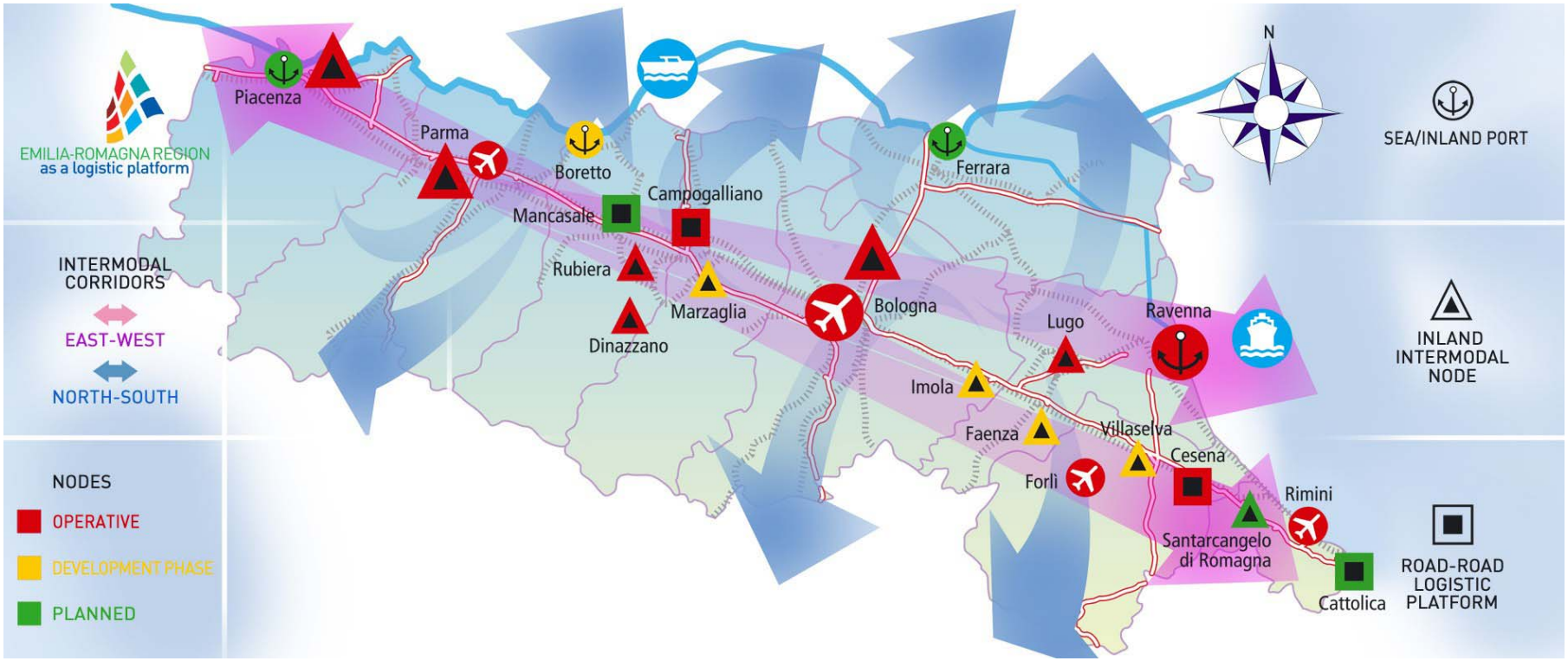
TRANSPORT AND LOGISTICS PLAN 1995-2010

STRATEGIC INTERVENTION POLICIES



STRATEGIC INTERVENTION POLICIES

EMILIA-ROMAGNA REGION AS E LOGISTIC PLATFORM



AN INTEGRATED NETWORK OF LOGISTICS PLATFORMS AND SERVICES

RegioneEmilia-Romagna

SPATIAL PLANNING
INDUSTRIAL LOCATION
&
FACILITIES DEVELOPMENT

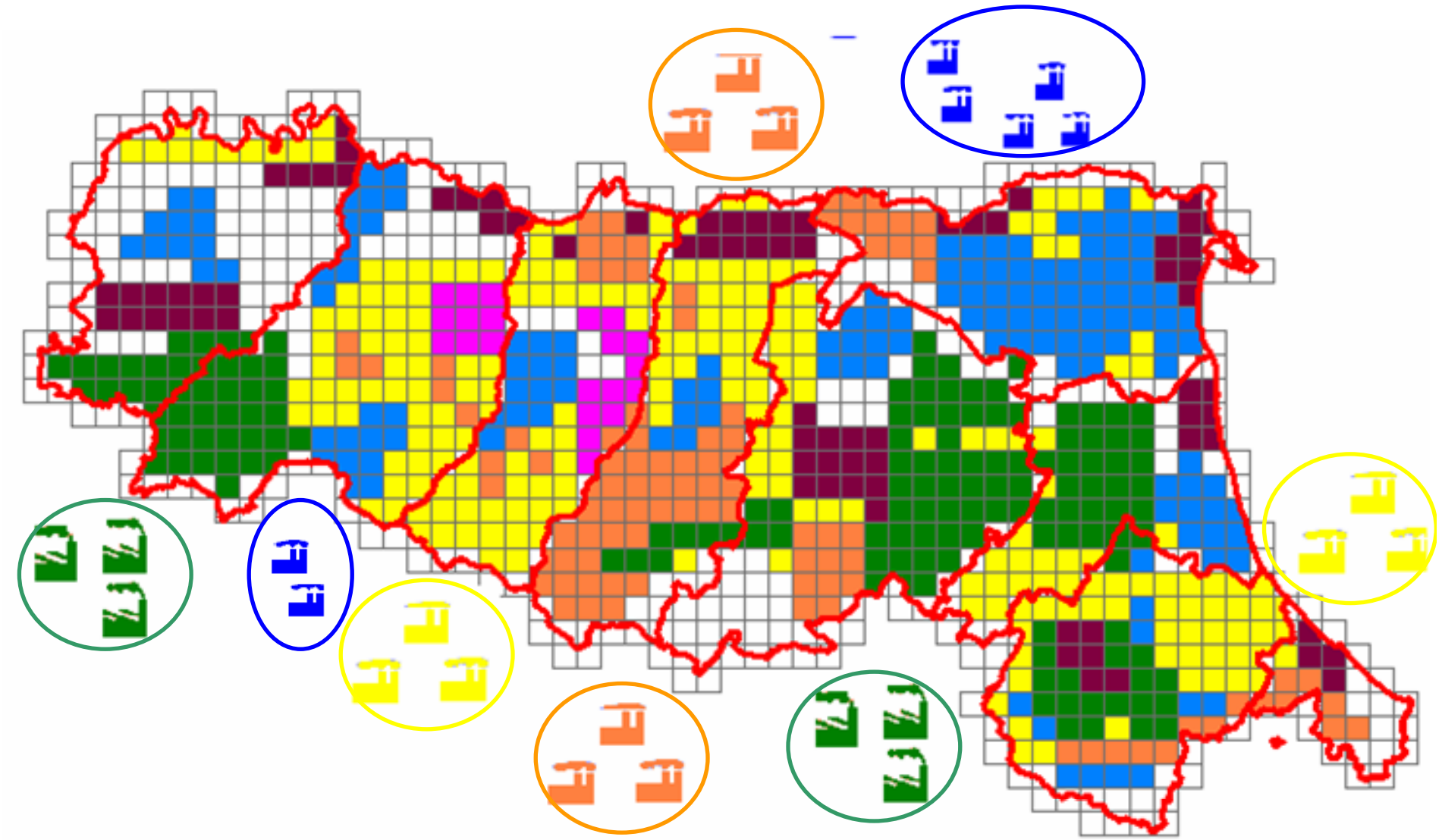
REDECON

Regional Development along Corridors and Nodes

REDECON

Regional Development along Corridors and Nodes

A.L.Q. MODEL
ACTIVITY LOCATION QUALITY



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CITY LOGISTICS

ON JULY THE 15TH, 2002 STARTED AN
EXTRAORDINARY ACTION PROGRAMME
FOR SUSTAINABLE MOBILITY
2003-2005

CITYPORTS

CITY PORTS FOR 12 CITIES
METHODOLOGY & GUIDELINES

Intervention priorities → **Integrated solution** → **"extension" of the solution** → **evaluation of the solution**

DESCRIPTION

A **priority level** is assigned to every intersection "zone-supply chain" according to the number of loading/unloading operations

One or more **integrated solutions** are defined for the "zone-supply chain" intersections with the highest priority level

Consider if a solution defined for a specific intersection zone-supply chain can be **applied to other intersections**, for example:

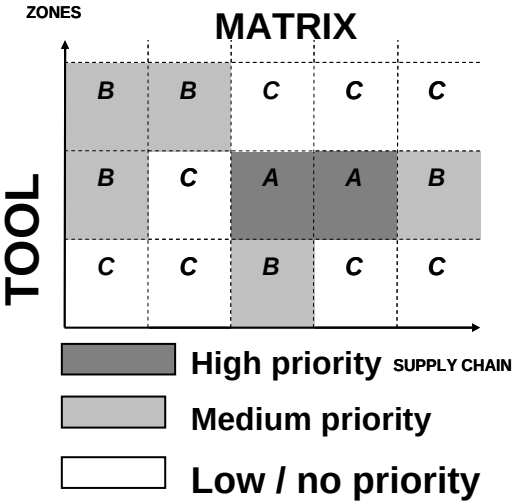
- to the same supply zones in other zones with similar characteristics;
- in the same zone to different supply chains

Evaluate the **effectiveness** of the solution through:

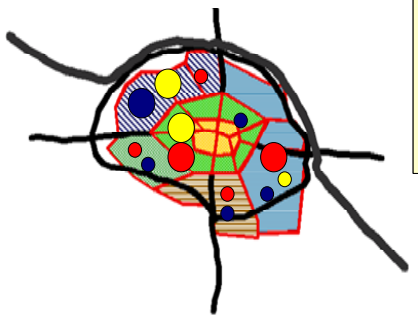
- Comparing the solution with the original objectives
- selecting a solution if more alternatives were found

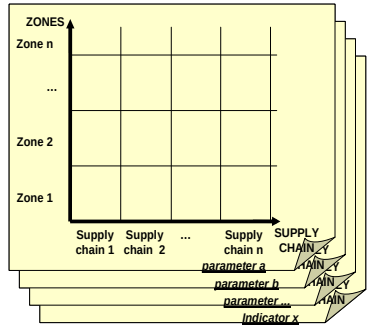
TOOL

SUPPLY CHAIN - ZONE MATRIX



- Review of main **logistics solution**
- Criteria to identify the necessary **regulatory aspects**
- Strategies for involving **stakeholders**





AGREEMENT BETWEEN REGION AND CITIES
INTERVENTION TIME TABLE

October 2002 - March 2003:

Strong **limitation of the vehicles access** to the centre of the main cities for two days a week

short term (2003-2004):

New rules for road traffic and urban circulation to promote the use of public/collective transport (car sharing, car pooling, ecc.)

medium term (until 2005):

Coordinated **regional and local investments** for

- reduction of exhaust emissions
- reduction of fuel consumption
- substitution of public and private vehicles responsible for the air pollution
- realization of new systems for freight distribution in cities (logistic platforms, new logistic service organization) – **CITY LOGISTICS**

MEASURE 5
CITY LOGISTICS
REGIONAL PROGRAMME 2003-2005 (Euros)

13 CITIES (12 over 50.000 inhabitants)	URBAN DISTRIBUTION ANALYSES AND SYSTEM PROJECTS			Freight Vehicle Substitution	Urban logistic platform realization	TOTAL
	European Funds		Regional Funds	Regional and Local Funds (50% - 50%)		
	City Ports Project	Merope Project				
CESENA			309.874,14	300.000,00	1.650.000,00	2.259.874,14
FORLI'			309.874,14	300.000,00	1.200.000,00	1.809.874,14
MODENA		150.432,00		350.000,00	550.000,00	1.050.432,00
SASSUOLO					200.000,00	200.000,00
RAVENNA	150.400,00			432.000,00	200.000,00	782.400,00
FAENZA			103.291,38	150.000,00	757.000,00	1.010.291,38
RIMINI			85.720,00	200.000,00	1.470.000,00	1.755.720,00
PIACENZA		150.432,00		440.000,00	1.900.000,00	2.490.432,00
BOLOGNA			147.000,00	1.608.000,00	1.652.000,00	3.407.000,00
IMOLA					600.000,00	600.000,00
PARMA	150.000,00			400.000,00	1.300.000,00	1.850.000,00
FERRARA			147.560,00	-	2.700.000,00	2.847.560,00
REGGIO E.			103.291,38	300.000,00	4.120.000,00	4.523.291,38
TOTAL	300.400,00	300.864,00	1.206.611,04	4.480.000,00	18.299.000,00	24.586.875,04

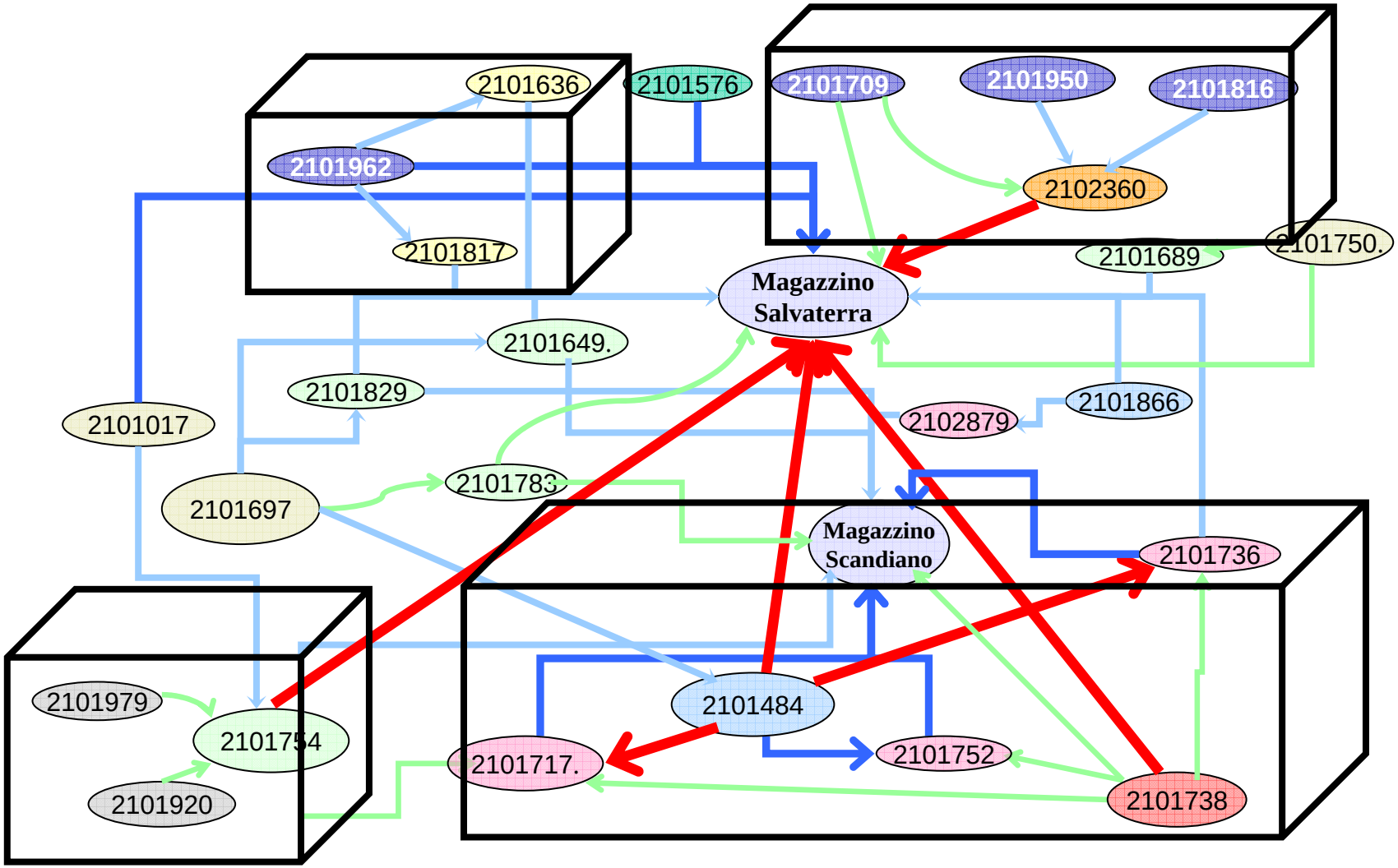
24.500.000 Euros

RegioneEmilia-Romagna

INDUSTRIAL DISTRICT LOGISTICS

SACMI (Reggio Emilia)

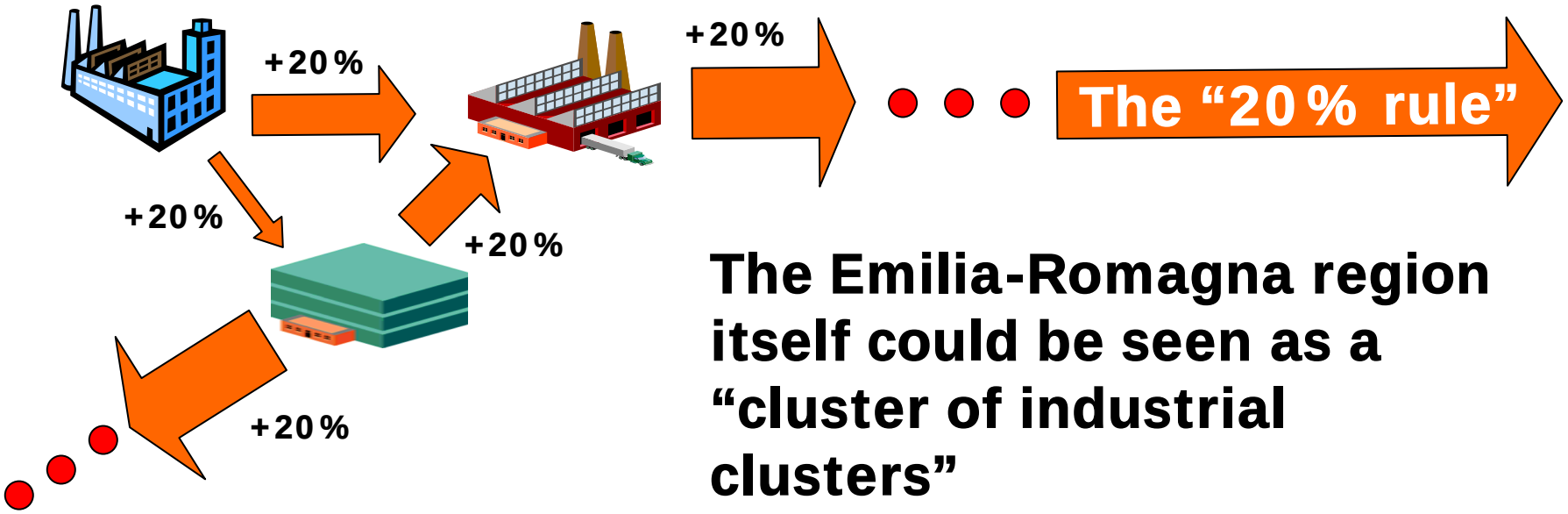
MAIN SUB-SUPPLY LINKS AND CLUSTERS



Emilia-Romagna is dealing with very complex clusters of SMEs (especially in the mechanical sector)

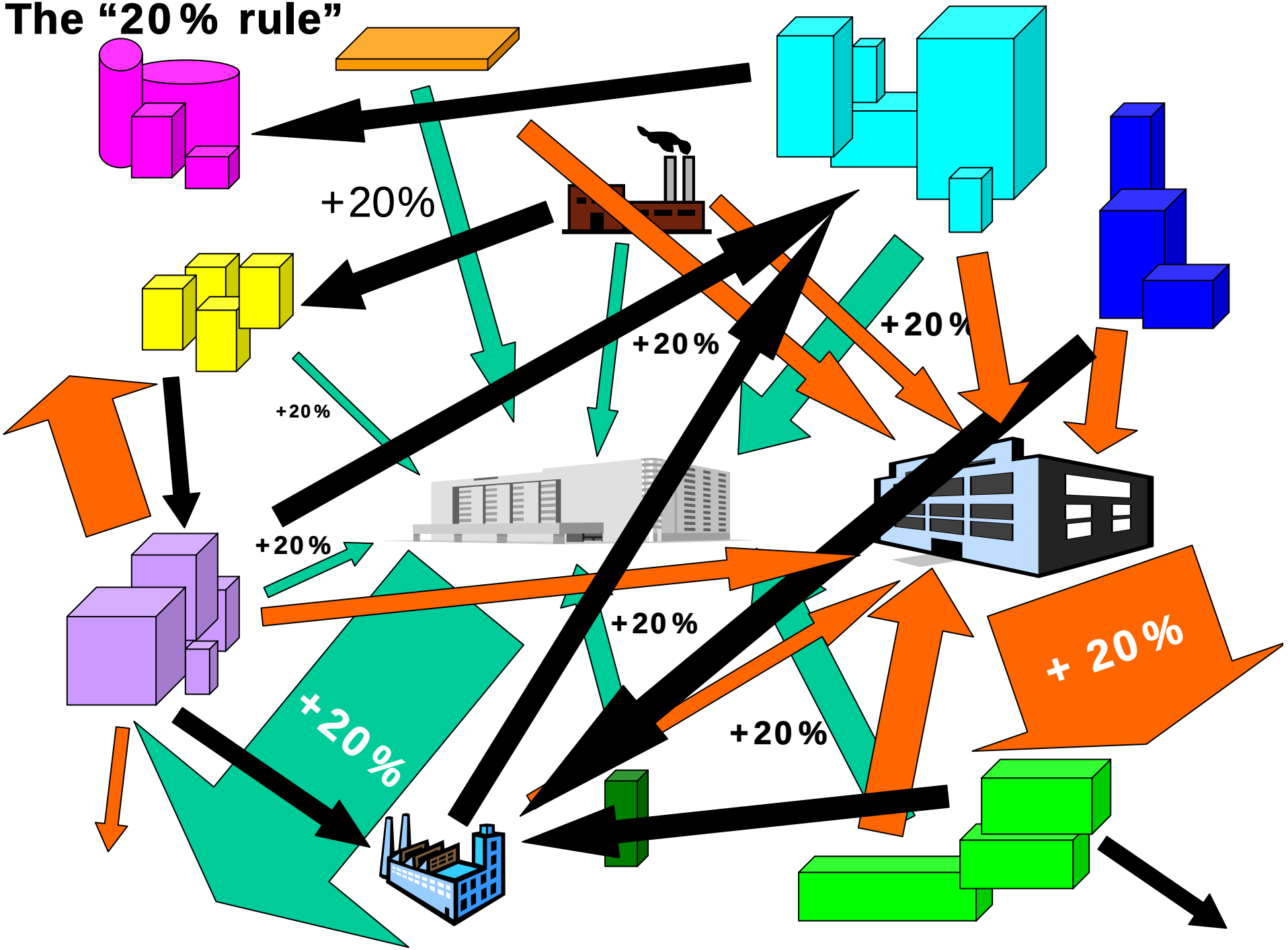
Each company buys from many other companies goods and services for an average amount of 82 % of the billing of its final products and services.

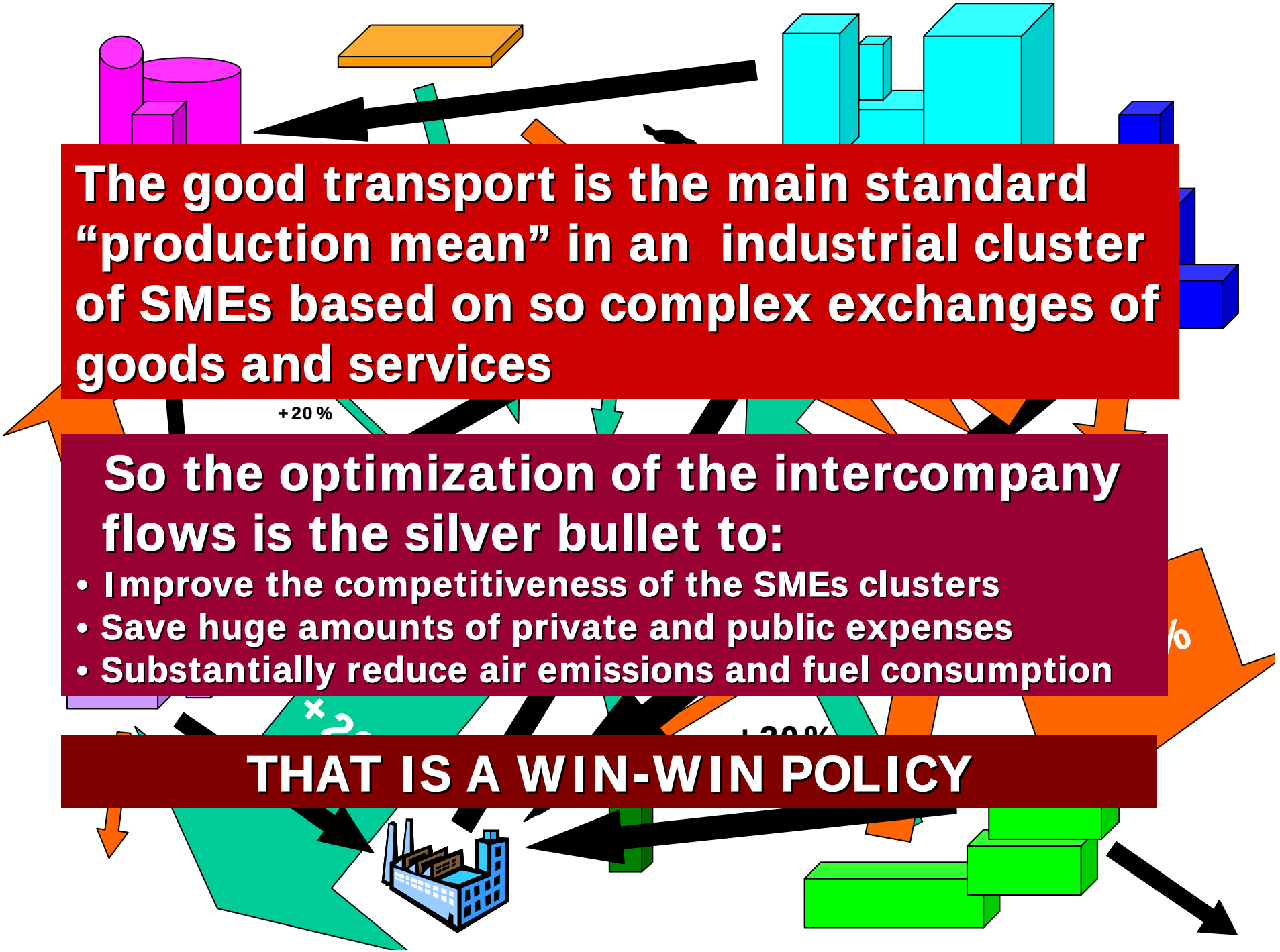
EVERYTHING IS MANAGED BY ROAD TRANSPORT !!!



The Emilia-Romagna region itself could be seen as a “cluster of industrial clusters”

The “20 % rule”




The good transport is the main standard “production mean” in an industrial cluster of SMEs based on so complex exchanges of goods and services
+20 %
So the optimization of the intercompany flows is the silver bullet to:
• Improve the competitiveness of the SMEs clusters
• Save huge amounts of private and public expenses
• Substantially reduce air emissions and fuel consumption
THAT IS A WIN-WIN POLICY

INDUSTRIAL LOGISTICS

LIVING LABS

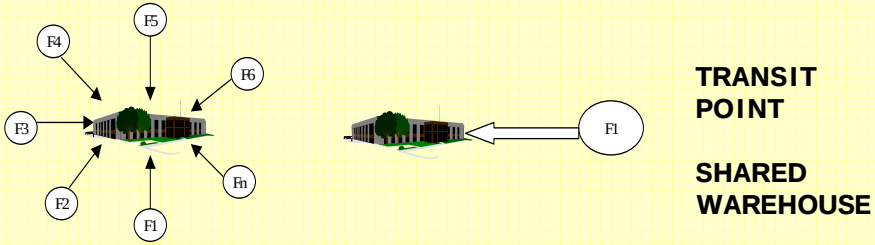
CORELOG

COORDINATED REGIONAL LOGISTICS

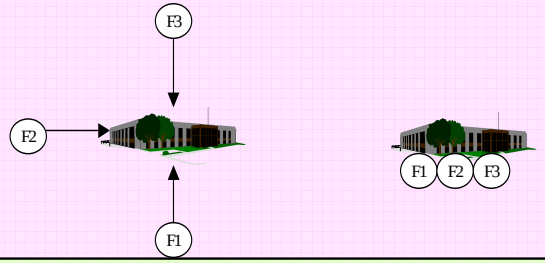
REGION-ENTERPRISES LAB
PILOT PROJECTS

Emilia-Romagna Region has promoted several pilot projects directly involving clusters of SMEs in different areas according to three different approaches

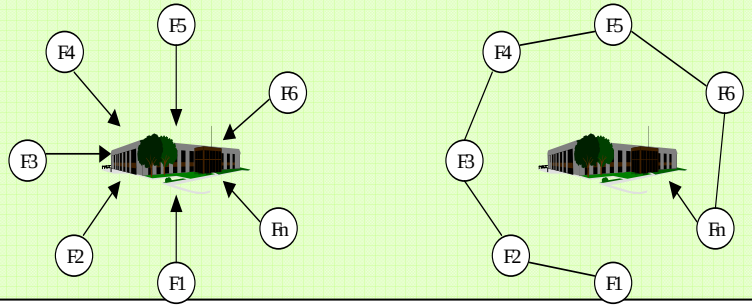
Pilot practice A - cluster 1 & 2
Sub-supplying centralization
(Bologna, more than 15 SMEs)



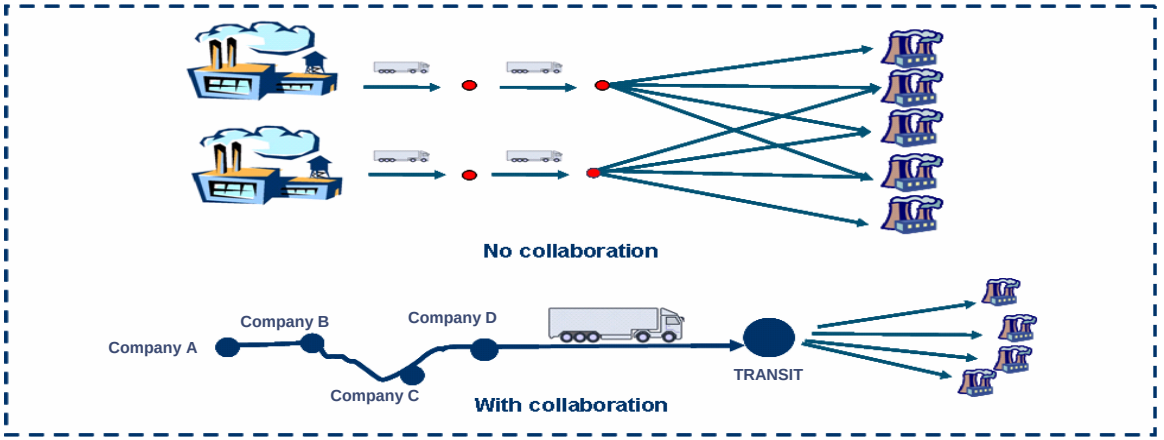
Pilot practice B - cluster 3
Re-location of suppliers plants
(Modena, 600 SMEs looking for new localization)



Pilot practice C – cluster 4&5
"Milk-run" system
(Reggio Emilia and Bologna, 10 SMEs + DUCATI)



LIVING LABS FOR INTEGRATED OUTBOUND LOGISTIC PLANNING



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.

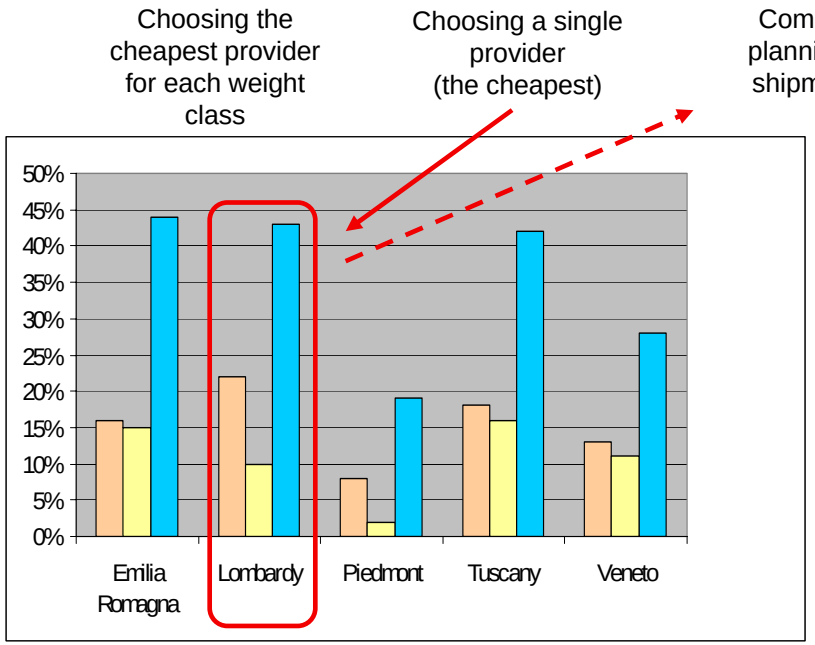
⇨ **Solution TO BE 1b** – Benchmark analysis for selecting the cheapest provider in terms of average weighted tariff taking into account the % of shipments on each weight class, on the basis of actual contractual tariff lists. The selected provider is active on all provinces of each region and it is 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.

LIVING LABS FOR INTEGRATED OUTBOUND LOGISTIC PLANNING

% 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%

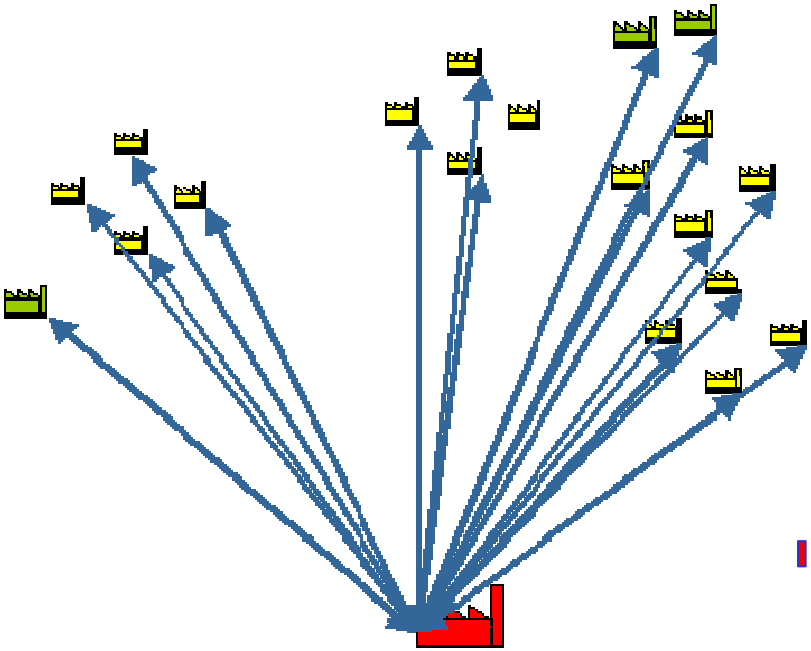


Source: PricewaterhouseCoopers Advisory for Regione Emilia-Romagna, I-Log Project (Interreg IIIB CADSES), 2005

LIVING LABS FOR INTEGRATED OUTBOUND LOGISTIC PLANNING

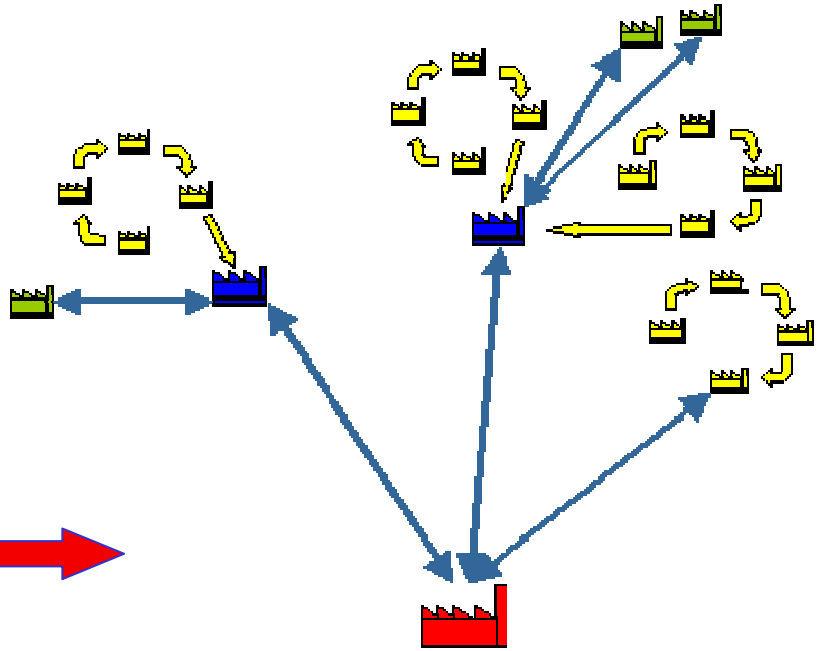
	LOAD FACTOR	
DESTINATIONS	TO BE 2 SOLUTION	RER DATA 2002
LOMBARDY	**71,0%**	**40,1%**
EMILIA ROMAGNA	**66,3%**	
VENETO	**67,7%**	
PIEDMONT	**52,9%**	
TUSCANY	**53,8%**	

LIVING LAB “DUCATI MOTORS” : INTERNATIONAL MILK RUN SYSTEM



BOLOGNA

ONE-TO-ONE SOLUTION



BOLOGNA

MILK-RUN & CONSOLIDATION HUBS

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

LIVING LAB “DUCATI MOTORS” : INTERNATIONAL MILK RUN SYSTEM

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

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

REGGIO EMILIA

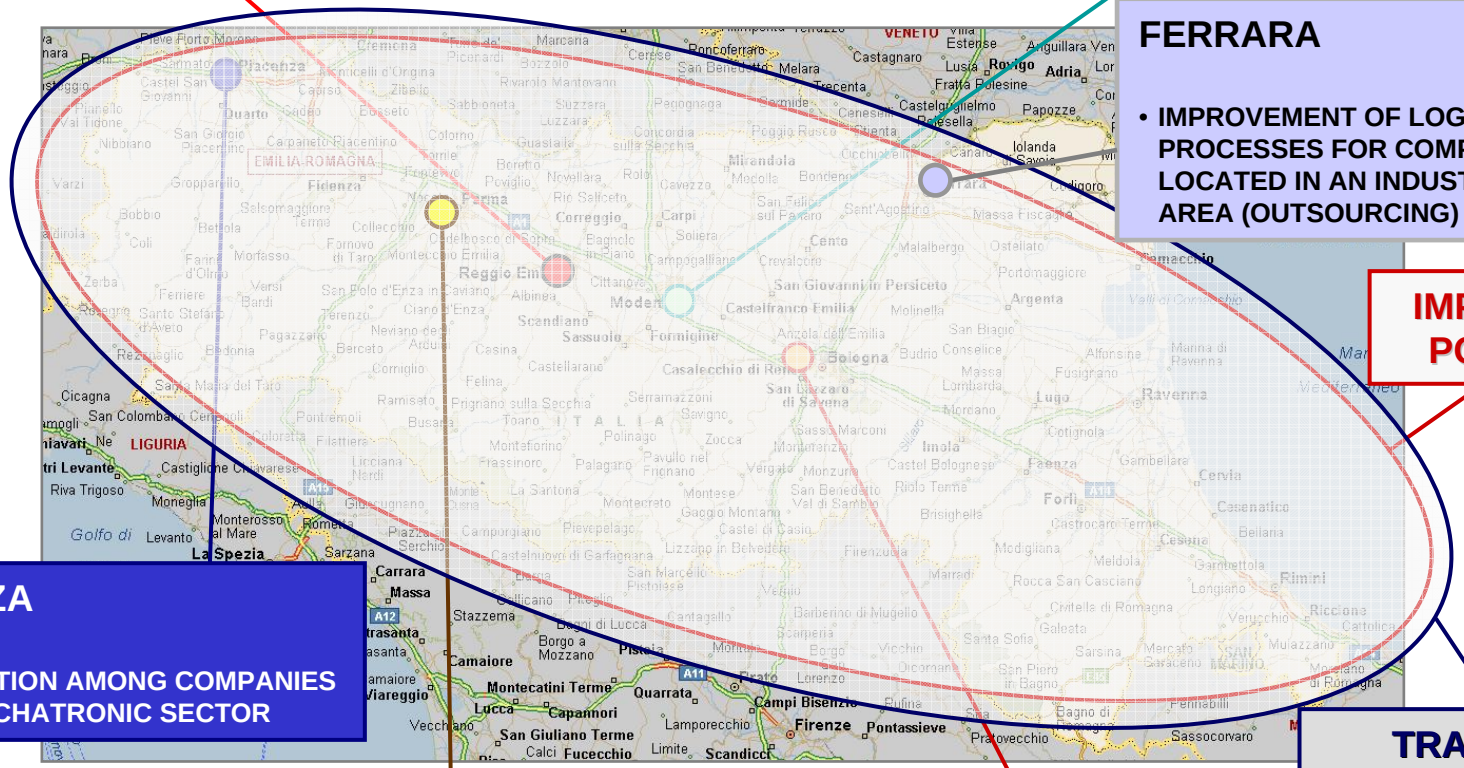
- INBOUND LOGISTICS RATIONALISATION IN MEDIUM-SIZED COMPANIES
- RATIONALISATION AND OPTIMISATION OF LOCAL AND REGIONAL LOGISTICS FLOWS

MODENA

- LOGISTICS COOPERATION AND RATIONALIZATION IN INDUSTRIAL AREAS
- LOGISTIC CRITERIA FOR COMPANIES SETTLEMENT

FERRARA

- IMPROVEMENT OF LOGISTICS PROCESSES FOR COMPANIES LOCATED IN AN INDUSTRIAL AREA (OUTSOURCING)



PIACENZA

- COOPERATION AMONG COMPANIES IN THE MECHATRONIC SECTOR

IMPACT OF POLICIES

TRAINING

PARMA

- LOGISTICS COOPERATION AND RATIONALIZATION IN INDUSTRIAL AREAS
- DEVELOPMENT OF AN INDUSTRIAL DISTRICT LOGISTIC COMPANY – AGGREGATION OF LOGISTIC PROVIDERS

BOLOGNA

- COORDINATED LOGISTICS PLATFORM TO MANAGE MECHANICAL SMEs LOGISTIC FLOWS
- LOGISTICS COOPERATION AND RATIONALIZATION IN INDUSTRIAL AREAS
- LOGISTIC CRITERIA FOR COMPANIES SETTLEMENT

THANK YOU FOR
THE KIND ATTENTION