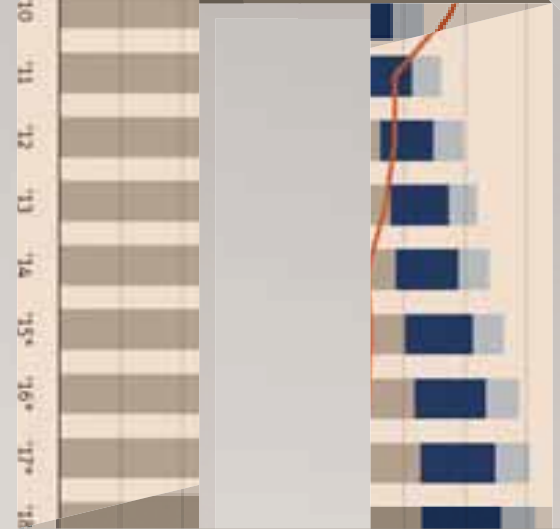


# a portrait in figures



100 numbers to understand road transport

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# a portrait in figures

100 numbers to understand road transport

**Deborah Appolloni**  
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## A portrait in figures:

100 numbers to understand road transport

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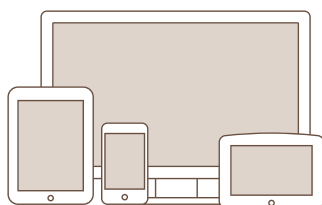
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## A SECTOR IN SEARCH OF MIRRORS



*Perhaps, if I had wings  
To fly above the clouds,  
And count the stars, one by one...  
I would be happier*

This is the doubt or, if you prefer, the hope with which Giacomo Leopardi ends the Night Song of a wandering Asian shepherd. Road haulage – if you don't mind the resemblance - somewhat supports the same ambition without demanding the same tools.

It doesn't require wings, but desperately needs to count, quantify and reduce its perimeter, market and operations to numbers.

Working and doing business without having the knowledge of space in which you move in, is the same as a man who shaves without having a mirror to look at. The risk of cutting oneself, meaning undertaking risky or low-paying investments, becomes much more likely.

As psychologists also teach, self-knowledge is the precondition for living an existence, even at corporate level, in a balanced and conscious manner and above all being able to fully exploit ones potentials. In general, it is a valid principle, but even more so in these modern times, where the rhythm of evolution is pressing and the wounds caused by the crisis have left scars that are sometimes long to heal.

It is sufficient to look around to feel that, from 1998 to today, economy in general and road haulage in particular, have undergone profound changes, violent blows which have forced so many to leave activities and others to find radically different alternative ways to be able to keep going.

The consequences are obvious: in almost ten years the sector has changed, companies have changed, organizational and management methods they work with have changed. But in what way?

We need numbers, we need to look at ourselves in the mirror, we need to be able to update those beliefs, often completely outdated or even relegated to a cliché, which conceived road transport as crumble, disorganized, undercapitalized and data processing backward.

*Working and doing business without having the knowledge of space in which you move in, is the same as a man who shaves without having a mirror to look at. The risk of cutting oneself, meaning undertaking risky or low-paying investments, becomes much more likely*



The problem is that existing mirrors often reflect an image which causes more problems than solutions. At times because statistics on road haulage developed by an entity come into conflict with those of another entity. Controversy is typical over the number of existing companies: are they those registered in the Register of Road hauliers, those registered with the Chambers of Commerce or rather both?

Fortunately today, the Central Committee is clearing this up, but it is a long and patient process. Then, there are mirrors which are too big, those that reflect statistics which are too general and therefore not very useful to delimit exactly the features of the sector.

Without considering that these mirrors sometimes move with lengthy times, making the statistics available three or four years after the photograph was taken. And you will understand that, at the speed with which current innovations occur, four years correspond to a geological era.

But can complaining be useful in this situation? Can it be constructive to blame this institution or another one? I think it is more profitable to roll up our sleeves, start the journey, start to define a path, maybe hoping to take other steps in the future.

This is exactly the purpose of the book that you have in your hands: fill some gaps, turn cold numbers in a sector as ever passionate and critical, build an orientation compass, useful to all navigators within road transport, from operators to suppliers up to the institutions.

In the end, we would not be able to get the stars one by one, but I am sure that, contrary to what happened to the poor Leopardian shepherd, this book will be able to give comfort to haulage firms and maybe a mirror.

*This is exactly the purpose of the book that you have in your hands: fill some gaps, turn cold numbers in a sector as ever passionate and critical, build an orientation compass, useful to all navigators within road transport, from operators to suppliers up to the institutions*

**Claudio Villa**  
*President of Federtrasporti*





# Chapter 1



## Road Haulage - Moving Scenarios

**79,8 bn**

euros is the contract logistics turnover estimated in 2016 by the Observatory of the Politecnico in Milan, up 1,2% compared to 2015 and 2,6% compared to 2014.



**40%**

is the influence of the logistics on behalf of third party transport on the whole Italian market. In 2014 it was worth 43,5 billion euros, an increase of 3,8% compared to 2009. (source: Observatory Contract Logistics Polimi)



**+30%**

is the increase in limited companies in road haulage sector from 2010 to 2016, going from 15.747 to 20.526. Consortium and cooperatives have also increased: +13,4% in 6 years. (source: infocamere)

**9,6 bn/€**

is the sum that the Italians spent on online purchases in 2016, up 18% compared to 2015. And three billion more than in 2011. Growth is higher for the purchase of goods, compared to that of services.



**300 €**

is the average online spending of Italian consumer. It is still low compared to 1.600 euros for English consumers, 900 euros for a French consumers and 850 for a German consumers.

**15.573**

is the number of Italian companies with more than 6 vehicles compared to 17.889 for the French, 20.500 for the Germans, 16,190 for the Polish, 7.173 for the Romanians and 907 for the Slovaks. (source: Gipa-Unrae)



**10%**

is the percentage of freight transport that moves within cities compared to the total number of kilometres travelled. 45% of the amount of tons per km originate in cities, whereas 3% to 5% of the urban territory is dedicated exclusively to moving goods. (source: FitConsulting)



**77%**

is the percentage of tons of goods circulating in Italy transported by third party transport providers covering an average of 128,8 km. Own-account transport operations still accounts for the 23% of the total. (source: Istat 2014)

**98,5%**

is the share of freight remaining within the national borders (937.370.621 tonnes in 2014). International transport accounts only for a marginal quota (25.685.353 tons). (source: Istat)



**31%**

is the share of third-party transportation in Milan for delivery of goods, in Turin it is about 23%. The rest is in the hands of private individuals.

CONTEXT

THE CO



# 95.259

is the number of road Haulage companies registered at the Chambers of Commerce on 30 November 2016, 15% less than in 2010 (112.216). In six years, Italy lost nearly 17.000 transport companies.

(source: Infocamere)



# 30%

is the percentage of vehicles / km that made unladen journey, in the medium-range distances. From 2010 to 2015, unladen journeys increased by about 20% for the third-party transportation, especially for short and medium-range distances.

(source: Rocco Giordano Editor)



# -35%

is the fall in the number of companies with vehicles registered in the National Register of Road Haulage in 2016 compared to 2010. On the other hand, the critical mass is growing: the average vehicle-to-business ratio rose from 4 to 5,9.

(source: National Register of Road Haulage)



# -34%

is the drop in goods transported by road from 2010 to 2014, going from 199.272 to 131.176 million tons (domestic and international transport).

(source: National Transport Account)



# 19.543

From 2010 to the present day, 19,543 sole trading company disappeared. There were 73.395 of six years ago to 53.852 existing today Partnerships have also been hit hard: there are 2.850 less than in 2010.

(source: Infocamere)

# 70.000

was the number of jobs lost in the sector from 2009 to 2016.

Today, the total number of employees is 300.000, with 76.000 owners or associates and the rest are employees.

(source: CGIA Mestre Think Thank)



# 9 bn/€

or 0,7% of the national GDP, is wasted every year due to the inefficiencies of the urban logistics system.

# 7,4 bn/ton

is the overall quantity of dangerous goods transported on the road in 2014, 6,2% of total goods. It's a decrease compared to 2010, when they amounted to 11,4 billion tonnes.

(source: Eurostat/Federchimica)



# -15,6%

is the drop in the additional resources that the Government has allocated to the category in 2016 compared to 2009: from 457 to 385,5 millions of €.

(source: Uomini e Trasporti)

# 5,4 bn/ton

is the overall quantity of dangerous goods transported by train in 2016 that would represent a 2,3% decrease compared to 2011. (source: Federchimica)



# -9,6%

is the fall in terms of vehicles per km of highway freight traffic from 2008 to 2015. The year 2013 witnessed the strongest drop (-14,4% in 2008). The year 2015 witnessed the first trend reversal: + 3,7% compared to the previous year. This trend gets confirmed in the period from January to August 2016: + 4,2% compared to the same period of 2015. Only in August the increase was 8,4%.

(source: Aiscat)

# COMPANIES

# DIFFICULTIES



## 1.1. The New Face of Italian Haulage

Nearly 17.000 road haulage companies disappeared after 6 years meaning there was a 15% decrease compared to 2010. The crisis has hit this sector hard that already was showing different characteristics of fragility inherent in its history.

Italian road haulage has been a weak giant for many years: many small and super small companies, often made up of the owner and their truck (in Italy they are called “padroncini” or small independent carriers), responded to the needs of Italian industrial base (also mostly made up of medium sized and small companies). An over-supply, in part, overestimated by the massive flow of incentives and aid that the government poured into the industry. Though paradoxically - in a more or less closed system – the haulage system often used them to keep the prices low for the benefit of the customer.

Hence the economic crisis had the same consequences for road haulage as a violent slap in the face: some were taken more by surprise rather than suffering, some tried to bear the pain before giving in anyway and others, albeit confused, have found the power to react or some expedient to compete in this new scenario, designed not only by the crisis. Because there is another factor which has to be added to the effect of the new economic situation, which came almost at the same time; the one caused by opening the European borders and the arrival of competition by Eastern carriers, with a widening competitive gap, which was already a specific Italian issue (*see also chapter 2*).

This rapid burst of blows changed the features of Italian road haulage, triggering those processes that no law had been able to initiate in the past. This is the case, for example, of networks, stimulated by various laws that proved to be ineffective and only confirmed, once again, the historic Italian resistance to sharing. This resistance which was partially dropped when many drivers considered the union of forces to be an opportunity and a way to withstand and fight the crisis. But let’s proceed with order.

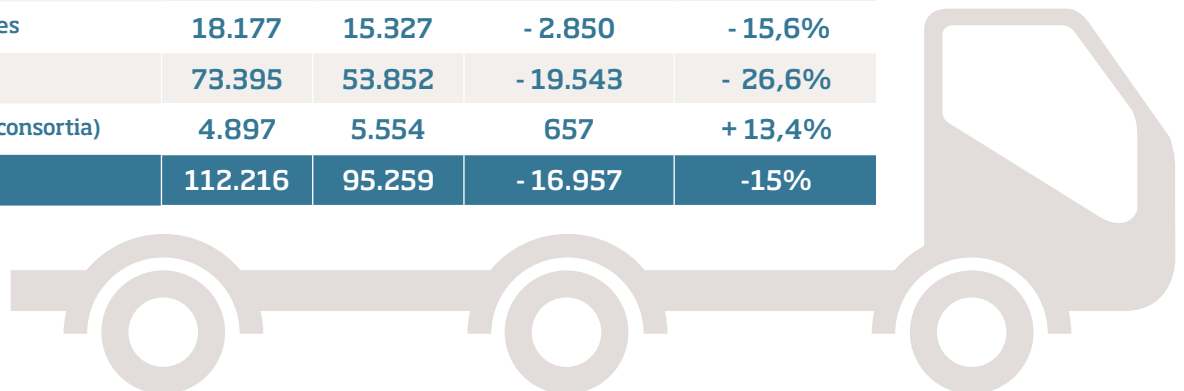
Most of the companies that disappeared between 2010 and 2016 are small companies, consisting of self-employed drivers: from 73.395 to 53.852 (-26,6%), a bit less than 20.000 had to close shop; data which proved that the largest price was paid by the “padroncini”. The sign “minus” is also found for the partnerships which in these years fell by 15,6%, ranging from 18.177 to 15.327 companies. To grasp the traits of the new face of the hauling system we need to look at the two “plus” signs in the table below.

The first thing that jumps out is the figure of the limited companies which was + 30,3%. They increased by nearly 5,000 units, increasing from 15.747 to 20.526. The other significant datum is the number of cooperatives and consortia that rose by + 13,4% with 657 new businesses.

### LEGAL FORMS OF ENTREPRENEURSHIP ENGAGED IN ROAD HAULAGE: WINNERS # LOSERS

| COMPANIES TYPOLOGY              | 2010           | 2016          | difference      | percentage  |
|---------------------------------|----------------|---------------|-----------------|-------------|
| Limited companies               | 15.747         | 20.526        | 4.779           | +30,3%      |
| Partnership companies           | 18.177         | 15.327        | - 2.850         | - 15,6%     |
| Sole Traders                    | 73.395         | 53.852        | - 19.543        | - 26,6%     |
| Others (cooperatives/consortia) | 4.897          | 5.554         | 657             | + 13,4%     |
| <b>TOTAL</b>                    | <b>112.216</b> | <b>95.259</b> | <b>- 16.957</b> | <b>-15%</b> |

(source: Infocamere)



Two data that certainly tell the beginning of a trend: Italian road hauling begins to be structured, on the one hand by looking for less individually run companies (which also does not expose its capital as much), which can provide the tools for a shareholder open to the enthusiasm of new energy; on the other hand, they saw union and cooperation as a different way to “resist” and to grow in a not so promising external context. In short, the trucking people seem to have realized that small independent truck drivers was obsolete, no longer suitable for a globalized world and in precarious recovery. Therefore even if only at the initial stage, the new features of the industry are beginning to shape up: companies are more structured, collaborative, and more critical.

(source: Ministry of Transport, Road Haulage)

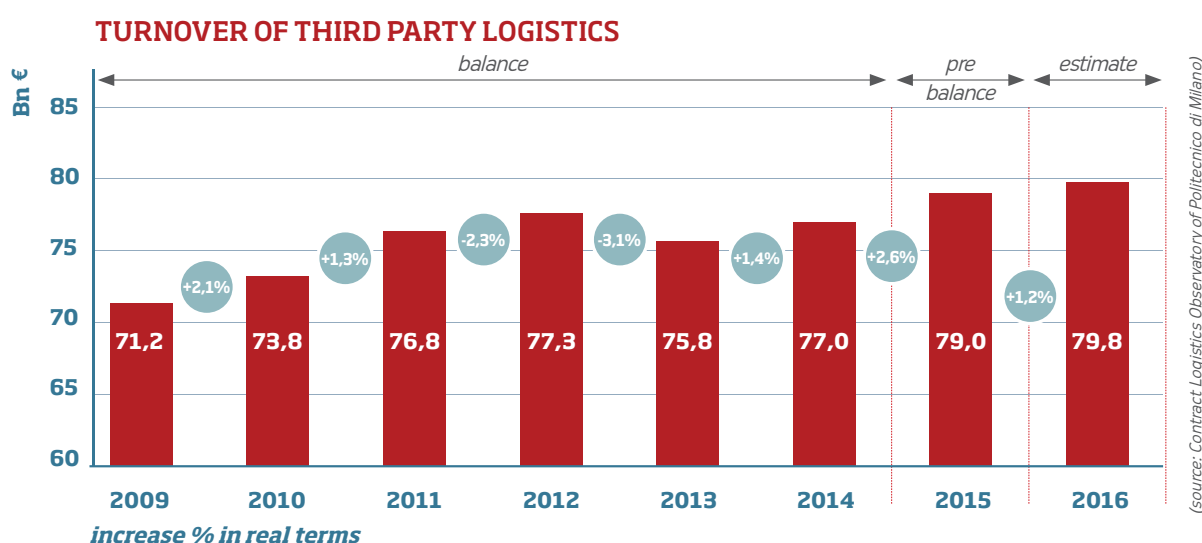
## HOW THE BUSINESS OF ROAD HAULIERS IS CHANGING

|                                     | 2000           | 2010           | 2016           |
|-------------------------------------|----------------|----------------|----------------|
| Registered companies                | 186.599        | 163.714        | 106.407        |
| Companies with vehicles             | 87.587         | 133.258        | 91.407         |
| Companies without vehicles          | 99.012         | 50.429         | 15.000*        |
| <b>TOTAL VEHICLES</b>               | <b>346.844</b> | <b>416.517</b> | <b>542.472</b> |
| <b>Average vehicles per company</b> | <b>3,96</b>    | <b>4</b>       | <b>5,9</b>     |

\* provisional data

The companies’ average vehicle fleet also varied from 4 to 5,9 according to the data provided by the Road Haulage Register. According to the findings of the authority headed by Maria Teresa Di Matteo, the companies which disappeared in the same period (*see table above*) were 35% (almost 60 thousand), but one has to deal with another Italian anomaly: the registration to the Road Hauliers register of many companies that do not even own a vehicle or which have no longer been registered with the Chambers of Commerce for years. The provincial Registers’ revision has started and, due to the cancellation of these companies, the data are inflated compared to what was assessed by Infocamere.

Research carried out by “Contract Logistics Observatory” from the Politecnico di Milano on the impact of third-party logistics providers also helped to demonstrate how the sector is growing and developing. After the slowdown in 2013, the percentage of outsourcing of logistics services began to grow, accounting for 40% of its activities in Italy. This value is around 43,5 billion euros (the total value of Italian logistics is estimated at 109 billion, of which 65,6 billion is for internal costs and the rest went to outsourcing), up 3,8% compared to 2009. Turnover is also increasing: in 2016 it was 79,8 billion, up 1,2% compared with 2015 and up 12% compared to the year 2009.

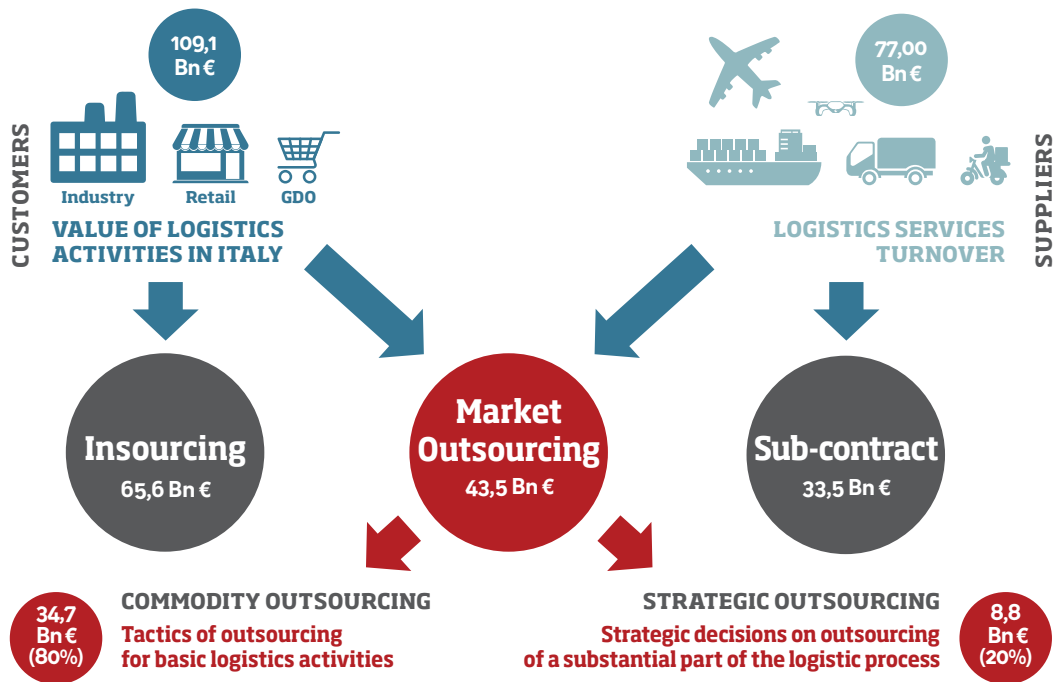


**increase % in real terms**

N.B. Data for 2016 have been calculated on the basis of Istat estimate data (May 2016). Data for 2017 are not available yet



## NUMBERS OF THIRD PARTY LOGISTICS



## 1.2. Context and critical situations

**W**hat has happened in the last few years and how are we coming out of the situation? During the recession, Italian road haulage has not only lost business, but also jobs (70.000 from 2009 to 2016), volume of demand, traffic, vehicles and sales, while remaining the leader as far as the transport modes' market share: 85,4% in 2014 (last available Eurostat), 10 percentage points more than the European average. The goods in Italy continue to travel on trucks, despite the incentive towards "intermodality" being strong, but the road haulage system has paid the highest price in the years of the negative economic situation.

Between 2006 and 2014, Italian trucking system lost 51% of transported tons / km: transport demand has almost halved. In the same period, according to Eurostat figures, Germany sold 40%, Spain 1%, while the volumes of Eastern European countries increased by double digits.

The goods passed into the hands of foreign companies. Evidence of this also comes from the data on motorway road traffic in Italy: between 2008 and 2015 this decreased by 9,6%, from 19.806 to 17.896 million vehicles / km. 2013 was the year of the most significant decline with a -14,4% compared to 2008. By 2015, however, traffic has returned to grow: + 3,7% compared to the previous year, while from January to August 2016 it increased by 4,2%.

Heavy-goods vehicles' registrations also contribute to designing this scenario. Between 2008 and 2015, sales were cut in half (-53%), while since last year the market has been recovering, although volumes are far from pre-recession amounts (*see also chapters 2 and 5*).

Despite these rays of hope for a recovery and change, the Italian system is still suffering from a structural crisis. Third-party hauliers are under internal competition coming from its own-account, particularly in urban areas: 23% of the tonnes of goods circulating in Italy are still transported by those who produce them. Most goods – up to 98,5% - remain within the national borders: international transport is practically dying, while the unladen journeys are increasing: the dynamics of logistics is changing and 30% of vehicles / km on average are made up of unladen journeys, a percentage up to 50% in the urban area; from 2010 to 2015 this rose by 20% especially in short-range connections.



## THE DESTINATION OF PUBLIC FINANCING IN THE ROAD TRANSPORT SECTOR

| INTERVENTION                                      | 2009                               | 2014         | 2015       | 2016         |
|---|------------------------------------|--------------|------------|--------------|
| Toll reduction                                    | 60                                 | 131,9        | 120        | 115          |
| Tax deductions                                    | 120                                | 113          | 60         | 70           |
| Railway and maritime intermodality                | 77<br>( <i>ecobonus</i> )          |              |            | 70           |
| Fleet of vehicles replacement and new investments | 15<br>( <i>investments funds</i> ) | 15           | 40         | 25           |
| Training contribution                             |                                    | 10           | 10         | 10           |
| Guarantee fund                                    | 50                                 | 8,2          |            | 10           |
| Reduction on "Ssn" & "Rca" insurances             | 75                                 | 22           | 20         | 20           |
| Contribution towards international travels        |                                    |              |            | 65,5         |
| Reduction on ownership tax                        | 44                                 |              |            |              |
| <b>TOTAL</b>                                      | <b>457</b>                         | <b>300,1</b> | <b>250</b> | <b>385,5</b> |

Review of additional allocations for the transport sector. Values in millions of euros. (source: Uomini e Trasporti)

Finally, a mention to the flow of money that the Government pours into the category each year: from 2009 to 2016, public resources were cut by 15,6%, in line with the decrease in the number of companies (see also the table below).

In relation to the extent of financial support for the sector, it should be noted that Italian commercial third-party haulage companies consume almost 4% of the total national fuel consumption and, between excise and VAT, they pay something like 8 billions euros a year to the state coffers.

## OWN-ACCOUNT VS THIRD-PARTIES ROAD TRANSPORT

| TITLE OF TRANSPORT |                 | ALL                |                    |                       | OWN-ACCOUNT        |                   |                       | THIRD-PARTY        |                   |                       |
|--------------------|-----------------|--------------------|--------------------|-----------------------|--------------------|-------------------|-----------------------|--------------------|-------------------|-----------------------|
| TYPE OF AGGREGATE  |                 | GOOD (Ton)         | GOOD Ton/Km (mgl)  | AVERAGE DISTANCE (km) | GOOD (Ton)         | GOOD Ton/Km (mgl) | AVERAGE DISTANCE (km) | GOOD (Ton)         | GOOD Ton/Km (mgl) | AVERAGE DISTANCE (km) |
| DOMESTIC           | DISTANCE        |                    |                    |                       |                    |                   |                       |                    |                   |                       |
|                    | up to 50 km     | 457.141.018        | 8.597.357          | 19                    | 162.407.078        | 2.768.308         | 17                    | 294.733.940        | 5.829.049         | 20                    |
|                    | 51-100 km       | 155.120.123        | 10.724.053         | 69                    | 29.885.690         | 2.038.806         | 68                    | 125.234.432        | 8.685.247         | 69                    |
|                    | 101-150 km      | 93.052.975         | 11.239.711         | 121                   | 10.907.276         | 1.260.413         | 116                   | 82.145.700         | 9.979.298         | 121                   |
|                    | 151-200 km      | 71.553.848         | 12.187.170         | 170                   | 5.575.573          | 911.431           | 163                   | 65.978.275         | 11.275.739        | 171                   |
|                    | 201-300 km      | 78.617.243         | 18.897.013         | 240                   | 4.670.632          | 1.079.711         | 231                   | 73.946.611         | 17.817.301        | 241                   |
|                    | 301-400 km      | 37.261.023         | 12.775.601         | 343                   | 1.972.648          | 663.319           | 336                   | 35.288.375         | 12.112.281        | 343                   |
|                    | 401-500 km      | 15.905.024         | 7.074.039          | 445                   | 517.097            | 226.460           | 438                   | 15.387.928         | 6.847.578         | 445                   |
|                    | 501 km and more | 28.719.368         | 20.811.129         | 725                   | 731.879            | 553.619           | 756                   | 27.987.489         | 20.257.511        | 724                   |
|                    | <b>TOTAL</b>    | <b>937.370.621</b> | <b>102.306.072</b> | <b>109</b>            | <b>216.667.873</b> | <b>9.502.068</b>  | <b>44</b>             | <b>720.702.749</b> | <b>92.804.004</b> | <b>129</b>            |
| INTERNATIONAL      | DISTANCE        |                    |                    |                       |                    |                   |                       |                    |                   |                       |
|                    | up to 50 km     | 2.461.217          | 57.817             | 23                    | 658.166            | 7.096             | 11                    | 1.803.051          | 50.721            | 28                    |
|                    | 51-100 km       | 774.225            | 61.328             | 79                    | 65.425             | 5.122             | 78                    | 708.800            | 56.205            | 79                    |
|                    | 101-150 km      | 1.271.743          | 151.223            | 119                   | 54.797             | 6.511             | 119                   | 1.216.946          | 144.711           | 119                   |
|                    | 151-200 km      | 1.230.828          | 214.069            | 174                   | 34.667             | 6.062             | 175                   | 1.196.161          | 208.007           | 174                   |
|                    | 201-300 km      | 2.348.820          | 600.779            | 256                   | 87.706             | 20.875            | 238                   | 2.261.115          | 579.903           | 256                   |
|                    | 301-400 km      | 2.147.619          | 761.101            | 354                   | 28.458             | 10.221            | 359                   | 2.119.162          | 750.880           | 354                   |
|                    | 401-500 km      | 2.268.994          | 1.016.910          | 448                   | 24.869             | 11.659            | 469                   | 2.244.125          | 1.005.251         | 448                   |
|                    | 501 km and more | 13.181.905         | 12.644.101         | 959                   | 157.393            | 164.417           | 1.045                 | 13.024.513         | 12.479.684        | 958                   |
|                    | <b>TOTAL</b>    | <b>25.685.353</b>  | <b>15.507.327</b>  | <b>604</b>            | <b>1.111.481</b>   | <b>231.965</b>    | <b>209</b>            | <b>24.573.872</b>  | <b>15.275.363</b> | <b>622</b>            |

Data elaborated on 20 October 2016 (source: Istat)





## DANGEROUS GOODS ALSO TRAVEL TO THE EAST

The transportation of dangerous substances follows the trends which have already been observed for other types of goods (*see also chapter 2*). In Italy, traffic volumes have been lost as in almost all major western markets, while many Eastern countries have seen a substantial increase and, in some cases, an explosion of their trade. Between 2010 and 2014 (latest available Eurostat data), the transportation of dangerous goods in the 28 EU countries decreased from 79 billion to 75 billion tonnes / km. 2013 was the most depressed year with 73.946 billion tonnes / km, this went up by 1,5% in 2014. During this period, the biggest losses were registered in the Netherlands (-29%) followed by Ireland (- 25%) and Belgium (-20%).

On the other hand, very high increases were recorded in countries such as Slovakia (44%), Lithuania (38%) and Slovenia (31%). Italy lost 35% of its volume, ranging from 11.342 to 7.358 billion tons/km. According to the Fedchimica Set report, only 6,2% (equivalent to 7,4 billion tons / km) of goods transported in 2014 may be related to dangerous goods. The migration of dangerous goods traffic to the East is a consequence of the dynamics shared with other sectors, even with reference to the dynamics of international competition. Anyway we should note, if nothing else just out of curiosity, the statement that Mr. Eleuterio Arcese, head of one of the most important Italian road haulage companies, made at *Staffetta Quotidiana* (a newspaper specialized in the fuel sector) in October 2012. The then president of Anita has admitted buying fuel abroad for his 800 trucks because it costs less. «It is not worth buying diesel in Italy», said Mr. Arcese. «Our trucks have 1.000 liters tanks. With the refueling done abroad, we make our journeys to Italy and then, when we're done, we fill the tanks abroad again. Getting fuel in Austria or abroad is worth double: there is cost savings in the first place; in addition, you get refunded the excise duty immediately, while in Italy you have to wait at least three months. The mechanism do ut des - works very well abroad, here in Italy we are stuck to do, to give...»

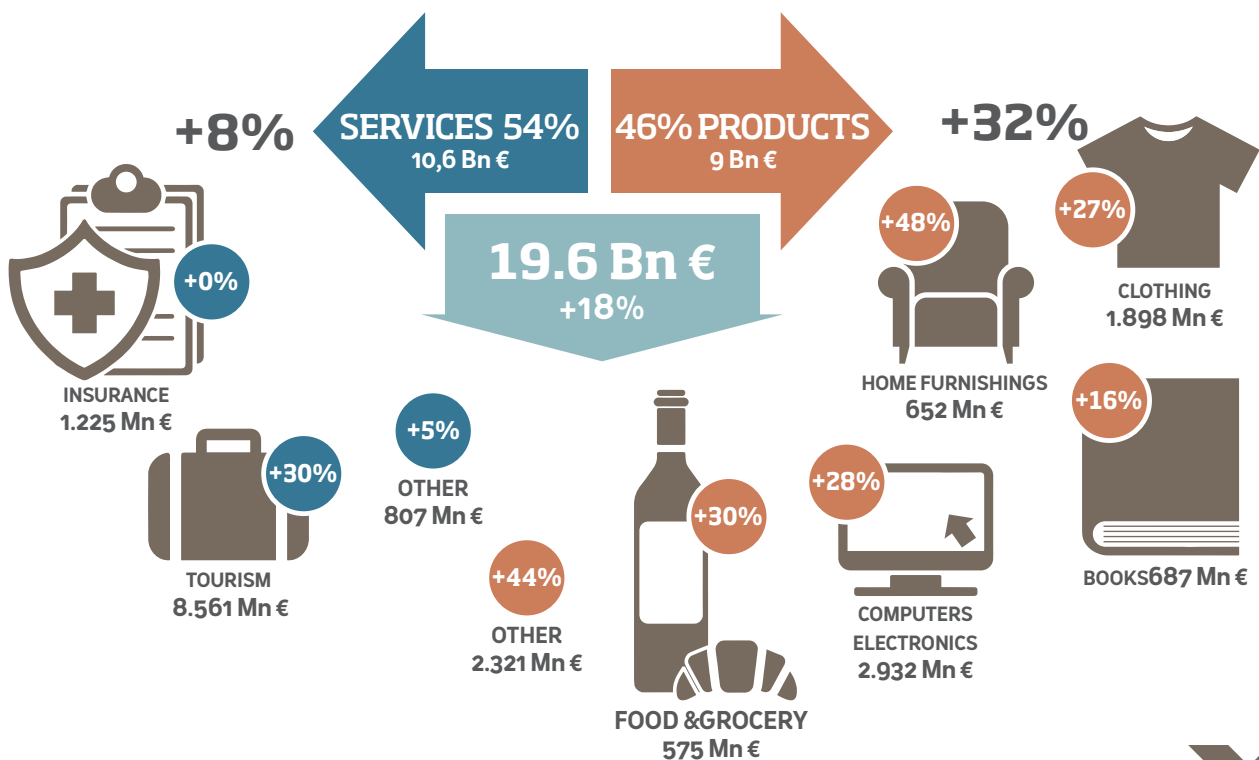
### 1.3. The e-commerce opportunity and the “Carrier 2.0”

Logistics and transport have to deal with eCommerce: The shopping revolution is also changing the delivery world, which is looking for and experimenting with new ways of delivering parcels, bringing about a big impact on the organization of the warehouses. The amount of transported goods has changed, the single parcel becomes the protagonist of the journey from the logistics base to the customer’s doorstep with just one single click. Faced with this revolution, the carrier has to change its nature, adapting, transforming itself compared to what it once was. The opportunity that eCommerce brings with it is innovation in the chain as well as distribution methods: a reassessment of “logistics” which goes beyond the reduction of the cost of transport, but which can really be an opportunity for the dense network of Italian medium-sized road haulage companies. It is an opportunity that mustn’t be missed, so that profits don’t go to foreign competitors. To lead the way, research was carried by the Contract Logistics Observatory of the Politecnico di Milano which shows that the key to success is to understand new services and needs required by the online world, to explain them and then to develop them. The new customers seek logistics partners able to follow the entire “turnkey” chain. They need to evolve, develop those non-core activities that become essential prerequisites for delivering efficient, cost-effective, flexible and rapid services.

On the other hand, eCommerce in Italy is still a young sector full of potential, and this is confirmed not only by the figures but also by the fact that many multinational web corporations have chosen or are choosing Italy as a logistics base for South Europe. Amazon has announced major investments for 2017 with the opening of two new logistics centers: one in Passo Correse, 30 kilometers from Rome, which will be the second hub of the Seattle colossus in Italy after the one located in Castel San Giovanni (near Piacenza), with an investment of €150 million for an area that is 60 thousand square meters and will employ 1.200 people; the second will be in the Vercelli’s surrounding area in time for black Friday 2017, the biggest day for online shopping. The Piedmont distribution center, with an investment of €65 million, will employ 600 employees.

Zalando also started up a store in Italy, in Stradella, just 18 miles from Amazon’s mega-site. An area that is becoming effectively a stronghold of 2.0 logistics with the headquarters of Yoox being just few km south, in Bologna. According to the eCommerce Observatory B2c Netcom of the Politecnico di Milano, among the top twenty online sellers in Italy, the most common solution is to have a stock/store located in the Central Northern area (Lombardy, Emilia Romagna and Tuscany).

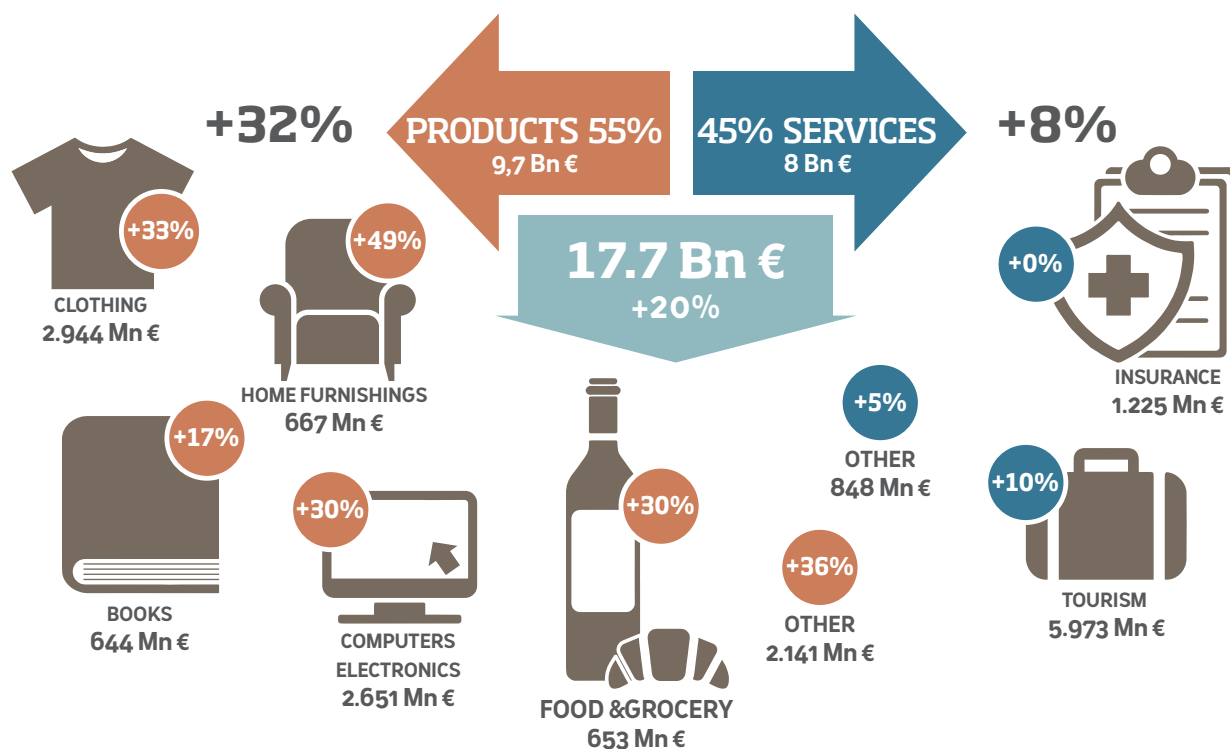
#### WHAT ITALIANS BUY ONLINE



eCommerce Observatory B2c Netcom of the Politecnico di Milano



## WHAT IS ON SALE ON ITALIAN WEBSITES



eCommerce Observatory B2c - Netcom of the Politecnico di Milano

This ensures 24-48 hours delivery throughout Italy, excluding islands or other areas that are difficult to reach.

These investments arise from the awareness that eCommerce in Italy, although showing good growth, is in fact a lagging compared to the major European markets, however it still has high growth potential. In other countries, comparable to Italy by size, but where eCommerce B2C is far more advanced, the annual online spending per inhabitant is triple than in Italy. Specifically, €300 per year per inhabitant in Italy must be compared with €1.600 per inhabitant of the United Kingdom, €900 in France and €850 in Germany.

In 2016 Italian online purchases increased by 18% compared to 2015, reaching 19,6 billion euros. Over the last six years, the percentage of growth has remained basically stable (between 14 and 20%), while the absolute value has more than doubled, from 1,3 billion in 2011 to 3 billion in 2016. Another interesting fact is the increase of product growth compared to services, which already represent a well-developed portion among web purchases.

The very implicit potential of the industry is attracting the biggest players in our country and convincing traditional brands to “jump into the online bandwagon”. It is the so-called “multi-channel Ops”, an extremely interesting trend that is directly affecting logistics. Many traditional retailers decide to go online through “marketplaces” such as Amazon or eBay, using their logistics and IT facilities, while others (the growing sector) decide to autonomously launch a multi-channel strategy to allow their customers to continue their online purchase. A choice made for example, just to name a few, by Ikea, Oviessè and many supermarkets with home-delivery shopping services.

In this scenario, the role of logistics service providers is a double one. According to the Contract Logistics Observatory of the Politecnico di Milano, the 2 characteristics most appreciated at this stage are that these 2.0 carriers, on one hand represent service providers with an added-value, and on the other hand they are managing the whole process.

Logistics service providers therefore play a key role in managing the variability of flows and the high level of service required. In other words, the trend being observed is the evolution of the traditional carrier: customers are increasingly demanding more innovative services rather than simply home delivery. From very basic things such as delivering with an appointment in order to lower the percentage of a negative outcome, at-your-door-delivery, cash payments, to more complex ideas such as additional services (delivery with operators to help with assembly or installations). The ultimate outcome of this process will be the development of new operators, that are already in the market, which integrate all the steps of the online logistics chain: from web site management to warehouse management to final delivery. In short, a complete “turnkey package” for the brands that decide to embark on the web.

There are several innovative projects, reviewed by the Observatory with a survey conducted on 85 of the online brands in Italy, launched with the aim of improving customer experience at the delivery stage. Speed and flexibility are the privileged features. The most accurate and advanced merchants are working to offer delivery services and return policies and procedures that not only help drop the barriers to online buying, but that work to make eCommerce a habit. Services such as on-site delivery on a definite day and to the door are offered by about 50% of the top 30 products and 30% of the other operators. Other services, such as delivery on Saturdays or Sundays, delivery by appointment or with operator to help with installation, are adopted by 30% of the top 30 and 7% of other operators. Despite the high request, services such as delivery within 24 hours (7% for top 30 products) are still uncommon in Italy.





# Chapter 2



The tough relationship with Europe



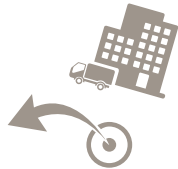
**159.600**



is the number of road haulage companies in Poland (2015). It is 60% more than the Italians (95.788), three times more than the Romanians (29.500) and the double the French (77.779). Germany with 128.300 companies, has over 10 times the number of Slovakian firms (12.250). (source: Gipa-Unrae)

**+26%**

is the growth of heavy goods vehicle registrations between 2008 and 2015 in Poland. In the same period Italy registered a decrease of -53%, France -23%, Germany -9%. (source: Gipa-Unrae)



**10%**

the percentage of Italian fleets companies holding at least one branch abroad.

In 2015 it was 8%, in 2013 5%.

(source: Gipa-Unrae)

**20%**



is the percentage of HGV drivers travelling in Italy with a foreign license.

(source: TrasportoUnito)

**60%**



are the vehicles with foreign license plates entering and leaving Italy via the Alpine passes. Mostly these are the Romanian ones.

(source: AIPCR)

**+2,7%**



is the increase in the number of controls carried out in 2016 by Polstrada on vehicles from other European countries. (source: Polstrada)



**1 out of 3**

the proportion of Italian fleets companies holding at least one branch abroad. In 2015 it was 8%, in 2013 5%. (source: Uomini e Trasporti)



**-51%**

is the loss of tons / km for Italian road haulage between 2006 and 2014. In the same period, Germany has sold 40%, Spain has grown by 1%, Slovenia, Hungary and Slovakia have doubled the tonnes / km transported.

(source: Eurostat/Comité National Routier, Chr)

**450 €**



is the total cost of a secondment for drivers in Italy offered by Bulgarian or Romanian temporary agencies. (source: Uomini e Trasporti)

**+67,2%**



is the increase between 2006 and 2014 of tons of goods transported in Italy under international road haulage. Between 2014 and 2015 the quantity has almost halved.

(source: Eurostat)

CONTEXT

THE CO

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# 1,10 €/km

is the minimum rate accepted by the Italian haulage drivers according to the CCGIA of Mestre. Eastern carriers would travel at 80 cents/km.



# 1.642,37 €

is the monthly amount of the minimum wage for a driver according to the collective agreement in force in Italy for 39 hours per week. In France it is 1.467 euros for 35 hours, while in Germany it is 1.473 euros for 40 hours.

(source: Cnr)

# 0,43 €/km

is the cost of an Italian driver employed in the international transport market. This is only higher in Belgium (0,48 euros), while France is on the same level. In Bulgaria, it drops to 0,11 euros, Romania to 0,13, Slovenia to 0,19. (source: Cnr)



# 70,53%

is the rate of work irregularities in the transport and storage sector in 2016. It is the sector with the highest percentage.

(source: Labour Inspectorate)



# 280 €

is the minimum wage of a driver in Romania (40 hours a week), almost six times lower than the Italian one. In Bulgaria it is 214 euros, in Poland it is 434 euros, while in Slovenia it is 791 euros. (source: Cnr)

# +42%



is the percentage of road cabotage infringements (Article 46bis Cds) discovered by the Traffic Police in 2015 compared to the previous year. In 2016 they decreased by 13,3%.



# 35,9%

is the tax burden on the total cost of work for an Italian driver employed internationally in 2016. Only Spain (36,6%) and Belgium (51,6%) are higher than Italy. In Slovenia it is 16,1%, in Romania 22,8%. (source: Cnr)



# 190

are the accidents involving a heavy vehicle HGV in 2016 (during the first 10 months). They are unchanged compared to 2015, but with more deaths (214 people, + 2,9% compared to 2015).

# 25,9%

is the impact of the undeclared work in the 'Trade, Transport and Catering' sector in 2014 in Italy. In 2013 it was 26,2%. (source: Istat)



# 116%

is the increase between 2015 and 2016 of irregular deliveries and irregularities in the areas of road haulage and storage: violations ranged from 1.541 to 3.327. (source: Labour Inspectorate)



# 82%

is the percentage of drivers who have violated driving and rest period regulations among the 5.535 checked in 2016.

(source: Labour Inspectorate)



## 2.1. Unbridled Competition

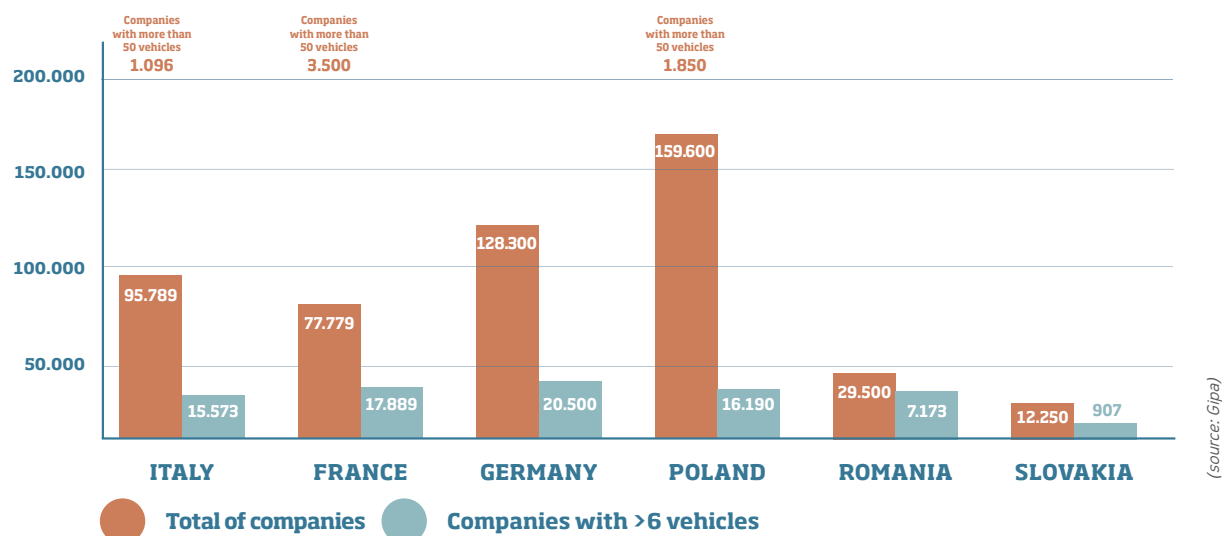
It is perhaps the most difficult challenge of these years: the competition with European companies. Europe runs at different speeds with very different costs and conditions, in a sector such as road transport, generating social dumping, unfair competition, solutions that almost break the law and bend the rules so its difficult to recover. After the European opening to the East and the risk of international road cabotage for the transport of goods, trucks with foreign registration number plates have been increasing on the Italian motorways. According to an estimate of Trasportounito (Transport united), drivers with a foreign driving license are 20% of those in circulation. According to a study conducted by the “Permanent International Association of Road Congresses” (AIPCR) over 60% of trucks crossing the Alps have a non-Italian number plate: most of them are Romanian, but there are also high percentages of Croatian, Slovenian and Turkish ones.

The “invasion” of truck companies from the East first has taken away important market share at the benefit of foreign companies, and then lured many Italian companies into potentially cutting costs through somewhat legal systems. Finally, entire companies have even (in whole or in part) transferred their business and offices to the East with a massive exodus, which is not always justified by logistical requirements. In short, the relationship between Italian and European road haulage is difficult: in some (few) cases it is seen as an opportunity, more often as an enemy that companies need to deal with in order to defend themselves.

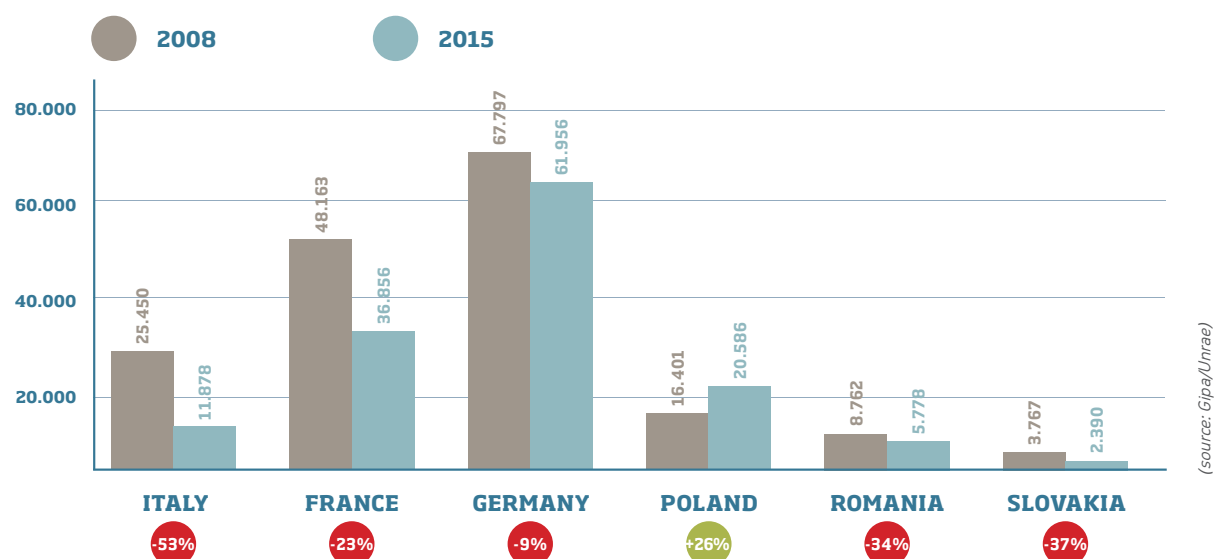
Moreover, Italy seems to have been impacted greatly by this situation. According to the Gipa-Unrae report (published at the end of 2016), which compares the Italian situation with the most significant countries in Europe, of the 95.788 Italian companies, only 15.573 can count on a fleet with more than 6 vehicles, little more than 16% of the total. The number of companies with more than 50 vehicles is even lower: 1.096, or 1.1% of the total. In France 77.779 companies ( 22%) have more than 6 vehicles and 4,5% more than 50 vehicles. The situation in Germany is even better, while the sector in Romania is much stronger, albeit on lower figures, where 29.500 companies, about 24,3% have more than 6 trucks as well as Poland (see chart below).

There are two significant data which allow to better understand what has happened in these years and how the geography of European road haulage has changed: the trend of Heavy Goods Vehicle registration and market share.

### ROAD HAULAGE COMPANIES IN EUROPE



## REGISTRATION OF HEAVY-GOOD VEHICLES IN EUROPE



Between 2008 and 2015 - the crucial period of the economic crisis - the only country where HGV sales had a positive outcome was Poland, from 16.401 to 20.586 registrations. For the rest, according to the Gipa-Unrae survey, Italy had the worst figures, France just did slightly better, while Germany limited the damage to -9%.

Even the traffic of goods moved (apparently?) to the East. The confirmation comes from analyzing Eurostat data, although it is necessary to take into consideration that in recent years the GDP of Eastern European countries has had a more favourable trend compared to the West. Tons / km transported by Bulgarian companies grew by 164% between 2006 and 2014, by 54% in Hungary and Slovakia, by 45% in Slovenia.

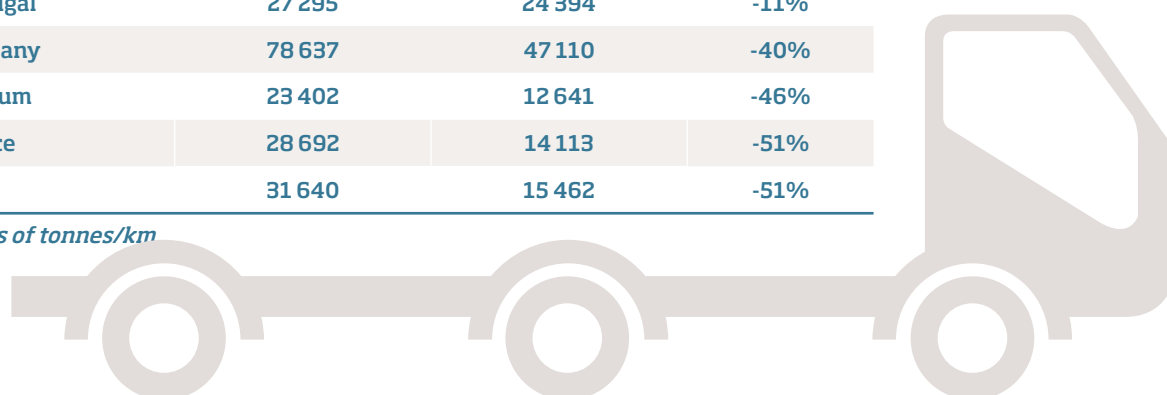
The west was playing to a different tune during that period: only Spain brought home a slim +1%, as for the rest Italy recorded -51% which was the same as France, Belgium was at -46% and Germany settled at -40%.

## TRANSPORT VOLUMES: EST AND WEST COMPARED

| COUNTRY  | 2006   | 2014   | 2014/2006 |
|----------|--------|--------|-----------|
| Bulgaria | 7 959  | 21 027 | 164%      |
| Hungary  | 18 054 | 27 887 | 54%       |
| Slovakia | 17 009 | 26 265 | 54%       |
| Slovenia | 9 834  | 14 211 | 45%       |
| Spain    | 67 200 | 67 610 | 1%        |
| Portugal | 27 295 | 24 394 | -11%      |
| Germany  | 78 637 | 47 110 | -40%      |
| Belgium  | 23 402 | 12 641 | -46%      |
| France   | 28 692 | 14 113 | -51%      |
| Italy    | 31 640 | 15 462 | -51%      |

(source: Eurostat)

millions of tonnes/km



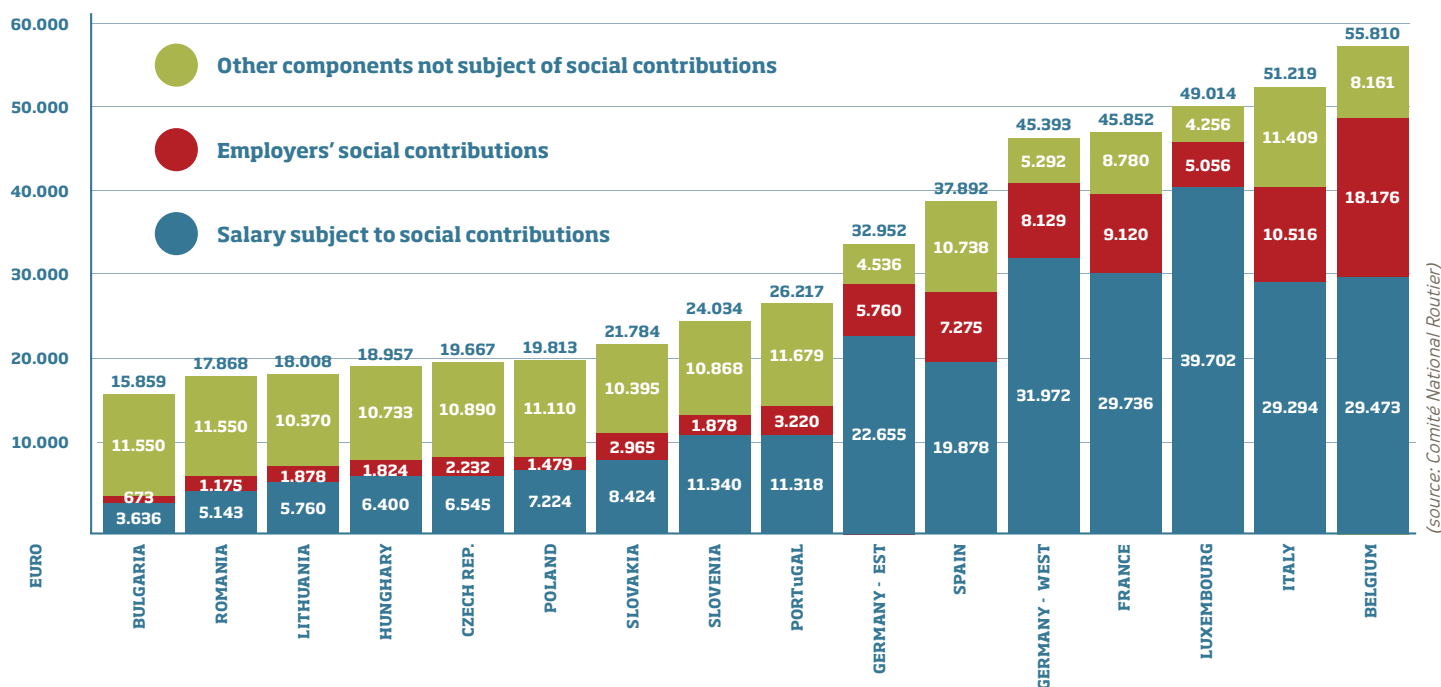
## 2.2. The competitive gap

Between 2006 and 2015, international road cabotage (i.e. the possibility for foreign carriers to carry out services in another country) exploded. According to Eurostat data, Germany witnessed an increase of 186,6% on tons transported as road cabotage, Belgium was at 80% and France was at 21,5%. And Italy? Our country peaked in 2014 with 7,8 million tons, 67,2% more than in 2006, returning in 2015 at a value that was the same as 10 years before.

A sign of opposing trends that can be justified by the introduction of the burden of proof in the case of road check points, introduced by the so called “Unlock Italy” Decree at the end of 2014 (*see also section 2.3*). The fact remains that Eastern companies have triggered a powerful price-dropping battle in the West, stemming from a basic advantage: far lower operating costs.

According to a study carried out by CGIA in Mestre, the rates of Italian carriers would be between 1,10 and 1,20 € / km (already below market value), while in the Eastern it costs are around 80-90 cents / km.

### THE COST OF DRIVERS, ITEM BY ITEM



## CABOTAGE IN EUROPEAN COUNTRIES: YESTERDAY AND TODAY

data in thousands of tonnes

| COUNTRY         | 2006   | 2007   | 2008   | 2009   | 2010   | 2011   | 2012   | 2013   | 2014   | 2015   |
|-----------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Belgium         | 8.246  | 8.162  | 9.886  | 9.828  | 15.231 | 12.931 | 11.407 | 13.687 | 14.100 | 14.855 |
| Bulgaria        | 1.028  | 157    | 12     | 61     | 25     | 602    | 24     | 60     | 37     | 57     |
| Czech Republic  | 466    | 978    | 1.745  | 478    | 764    | 577    | 886    | 504    | 509    | 2.181  |
| Denmark         | 1.392  | 2.452  | 2.302  | 1.804  | 2.507  | 2.145  | 1.932  | 2.012  | 2.080  | 1.113  |
| Germany         | 14.528 | 16.369 | 17.611 | 18.134 | 21.260 | 23.818 | 29.185 | 36.112 | 39.889 | 41.642 |
| Estonia         | 35     | 3      | 10     | 40     | 84     | 39     | 85     | 93     | 17     | 256    |
| Ireland         | 2.014  | 1.607  | 2.011  | 948    | 1.701  | 1.375  | 1.232  | 2.396  | 1.539  | 2.098  |
| Greece          | 481    | 435    | 562    | 536    | 665    | 826    | 306    | 463    | 625    | 301    |
| Spain           | 7.484  | 8.589  | 4.414  | 2.263  | 2.078  | 1.971  | 1.860  | 2.236  | 2.778  | 3.147  |
| France          | 16.190 | 19.666 | 21.512 | 19.747 | 19.262 | 17.215 | 17.013 | 19.779 | 19.574 | 19.670 |
| Croatia         | 32     | 20     | 31     | 19     | 19     | 9      | 10     | 21     | 10     | 47     |
| Italy           | 4.711  | 4.876  | 5.092  | 5.075  | 5.606  | 6.618  | 5.867  | 7.052  | 7.879  | 4.595  |
| Latvia          | 29     | 18     | 63     | 34     | 103    | 110    | 35     | 73     | 122    | 143    |
| Lithuania       | 23     | 28     | 32     | 71     | 44     | 52     | 76     | 277    | 127    | 410    |
| Luxembourg      | 615    | 568    | 601    | 624    | 420    | 479    | 155    | 487    | 353    | 496    |
| Hungary         | 184    | 65     | 283    | 592    | 130    | 257    | 593    | 208    | 475    | 253    |
| Netherland      | 2.973  | 3.917  | 3.812  | 3.265  | 4.931  | 4.627  | 4.636  | 4.648  | 5.692  | 3.892  |
| Austria         | 3.967  | 5.669  | 7.984  | 3.851  | 2.593  | 3.620  | 3.673  | 5.693  | 5.512  | 3.618  |
| Poland          | 124    | 399    | 226    | 249    | 451    | 1.659  | 1.254  | 723    | 344    | 274    |
| Portugal        | 142    | 172    | 23     | 255    | 766    | 164    | 665    | 245    | 320    | 729    |
| Romania         | 96     | 91     | 596    | 543    | 230    | 152    | 257    | 193    | 152    | 260    |
| Slovenia        | 3      | 24     | 61     | 41     | 5      | 41     | 224    | 38     | 227    | 125    |
| Slovakia        | 441    | 339    | 759    | 298    | 480    | 883    | 788    | 562    | 719    | 943    |
| Finland         | 102    | 206    | 145    | 278    | 322    | 229    | 390    | 281    | 368    | 336    |
| Sweden          | 1.976  | 2.717  | 3.929  | 2.555  | 4.218  | 4.391  | 3.515  | 4.075  | 4.715  | 4.672  |
| United Kingdom  | 8.584  | 7.601  | 7.902  | 5.453  | 5.541  | 4.497  | 4.708  | 5.157  | 6.886  | 7.294  |
| Liechtenstein   | -      | -      | 3      | 26     | 14     | 2      | 63     | 16     | 440    | 6      |
| Norway          | 495    | 543    | 543    | 379    | 452    | 629    | 655    | 1.134  | 1.205  | 1.005  |
| Switzerland     | 807    | 618    | 715    | 638    | 796    | 602    | 964    | 758    | 803    | 473    |
| Macedonia state | 1.579  | -      | 107    | -      | -      | 14     | -      | 20     | 13     | -      |
| Albania         | 775    | 47     | 5      | 56     | 106    | 540    | 2.407  | 19     | 15     | 8      |
| Serbia          | -      | 79     | 2      | 13     | 12     | 26     | 627    | 58     | 42     | 29     |
| Turkey          | 56     | 47     | 77     | 76     | 34     | 44     | 90     | 144    | 138    | 213    |
| Russia          | 329    | 290    | 226    | 208    | 249    | 700    | 693    | 478    | 477    | 485    |
| Ukraine         | 56     | 46     | 45     | 93     | 111    | 106    | 25     | 173    | 60     | 86     |

(source: Eurostat)



## TAX BURDEN ON COMPANIES: ITALY AND THE EAST

(source: *Uomini e Trasporti* processing - based on data from the World Bank)

| COUNTRY        | RATE OF COMPANY TAXATION |
|----------------|--------------------------|
| Italy          | 64,8%                    |
| Slovakia       | 51,2%                    |
| Czech Republic | 50,4%                    |
| Estonia        | 49,4%                    |
| Hungary        | 48,4%                    |
| Lithuania      | 42,6%                    |
| Romania        | 42%                      |
| Poland         | 40,3%                    |
| Latvia         | 35,9%                    |
| Slovenia       | 31%                      |
| Bulgaria       | 27%                      |
| Croatia        | 20%                      |

Let's take a key example: work. How much does a driver in Italy cost? According to a study conducted by Comité National Routier (Cnr), the French National Observatory on the Road Freight Market and presented within the European Road Haulers Association, a regularly employed Italian driver costs almost 8 times more than a driver with a Bulgarian contract. Compared to a wage of 1.642,37€ in Italy (for 39 hours per week), Bulgaria only pays 214€ for 40 hours a week (280€ in Romania, 434€ in Poland). If we add the amount of taxes and Labour charges to this which is 35,9% in Italy (only Spain and Belgium are higher), compared to 18,5% in Bulgaria or 22,8% in Romania, the picture becomes clear and it is quite easy to understand the extent of the competitive gap.

And this is not all. Because on the other front, there are also the burden of taxing and the bureaucratic complications among the difficulties that push the Italian trucking companies to relocate. A boost that has strengthened in recent years: in 2016, 10% of companies interviewed by Gipa said they had a branch abroad. In 2015 it was 8%, in 2013 only 5%.

It is also interesting to see where one relocates. If in the years before the crisis the countries to attract more companies were those with a strong economy, such as Germany and France, since 2010 we have to look to the East, with Hungary, Slovakia, Romania, Bulgaria and Poland in pole position. In these countries, Italian firms also find slower bureaucracy and reduced tax burden by 50%, in addition to management costs cut by half.

The solutions adopted to relocate are also changing. If in the early years of the new millennium the opening of a branch was the main and most common choice, other solutions are also being considered today, such as the launch of new companies, local business acquisitions or intermediary transformations, partnerships with local third party carriers.





## 2.3. How to stay afloat

Those companies that stayed in Italy tried all possible options to stay afloat and to compete in a market where the margins were shrinking more and more. The findings were varied and always at the fringes of legality. This is the case of “International Secondment of staff”, a legal practice regulated by European laws (*see box page 31*) that allows workers to move within the Union. An employee may be engaged in another branch or administered by an agency to meet different needs, such as a period of high demand for example, but they are always abiding by some rules and, above all, they are paid the basic salary of the country where the work is carried out.

Taxes, on the other hand, can be paid in the worker’s country of origin: hence Bulgarian, Romanian or Polish drivers save on average 30% compared to Italian counterparts. The “Annual Report on Labor and Social Work Supervision (2016)” of the National Labor Inspectorate speaks clearly: transport and storage sectors (Ateco code H) are the first as far as infringements related to administration and irregular Secondment are concerned. The stride forward between 2015 and 2016 was impressive: + 116% ranging from 1.541 to 3.327 violations. The light on road haulage has also been shed by intelligence reports from around the territory; this led to the signing of a memorandum of understanding, in February 2016, between the Labor Inspectorate, the Ministry of Infrastructure and Transport and the Interior Ministry for joint actions to be conducted experimentally, beginning in September-November 2016 in three trial regions (Veneto, Emilia-Romagna and Apulia). These probes, that are still under way, involved 371 companies and 378 workers, of which about 25% of non-Italian nationality; 57 drivers did not have the documentation showing the work relationship, but above all, 30% of the drivers (116) were hired part-time (with a “contratto di somministrazione”) and 3% were seconded.

### HOW MUCH YOU SAVE WITH A BULGARIAN LICENSE PLATE

|   | Insurance policy | Stamp duty | Cost per vehicle per year | Cost of Register | Total startup cost |
|---|------------------|------------|---------------------------|------------------|--------------------|
|  <b>Italy</b>    | 4.680*           | 887        | 5.567                     | 2.000***         | <b>7.567</b>       |
|  <b>Bulgaria</b> | 1.200**          | 200        | 1.400                     | 500****          | <b>1.900</b>       |

(source: Gimy Service)

\* Estimate based on a third-party Road tractor of a company based in Parma (IT)

\*\* Estimate based on a third-party Road tractor of a company based in Varna (BG)

\*\*\* This sum (2000) includes: certificate of professional competence, financial standing and good repute. For the purpose of carrying out activities in road haulage, it is necessary to prove to local Register office the “fourth requirement”, i.e. to have an establishment (registered office or branch) in Italy

\*\*\*\* In Bulgaria the registration to National Register is sufficient to have the unlimited Intra-Community license.

### WHAT IS THE “RELOCATION”

The concept of Relocation abroad (setting up a company in the countries with a more favourable tax regime) involves the proper identification of the tax residence of companies, in accordance with the Italian tax discipline. In detail, for example, the relocation, as well as the fictitious transfer of tax residence for elusive and evasive purposes, may occur in the case of establishing holdings in the territory of States which provide, total exemption of the (potential) capital under certain conditions, gains arising from the sale of equity investments. In the case of industrial and commercial companies established abroad, the relocation or externalization of activities, is shown only formally, placing the actual place of production abroad regarding the income in order to take it away from the tax jurisdiction of the Italian state. As a consequence, in relation to companies deemed to be “relocated”, the financial administration objects the omission of the tax return payments, with the consequent taxation and collection of taxable and non-taxable local taxes (Ires, Irap, ecc.) and Vat not declared and taxed in Italy.

Definition by Piergiorgio Valente, Accountant, Centro Studi Internazionale GEB Partners



Moreover, it is no news that the phenomenon is growing and, in practice, there are “imaginative interpretations” applied to the European regulation: some Italian agencies opened an office abroad offering drivers for 450 euros (all-inclusive), or road haulers agencies promising to hire Italian drivers with a Bulgarian or Romanian contract. Often they do it thanks to shell companies in these countries, real cases of Relocation abroad and Tax inversion (see box) created ready-made by specialized agencies.

There are many more ploys that are used. To lower costs or to overcome the burdens of the Italian bureaucracy (which weighs on the competitiveness of companies) there are also those who use Bulgarian registration plates or a Slovenian license.

The web is full of offers: sites with Bulgarian agencies (descriptions and instructions in perfectly spelled Italian..) and most of them are managed by Italian owners, which offer maximum cooperation to obtain a Bulgarian registration plate. What is the cost? 500€ for a vehicle (including stamp duty and insurance for a year), for vehicles over 2.500 cc the price starts at 800€, while for trucks over 3,5 tons one can pay less than 1.500€, but with different strategies. If vehicles are being offered with “removal from the Register in Italy and re-registration in Sofia” inc. where the agency becomes the owner and leases back (long-term) to the former owner, as far as heavy good vehicles, the most common practice is to constitute a sleeping company. That means that the owner of the company, assisted by these agencies, opens a company with a sole shareholder whose vehicles are made out to and re-registered in Bulgaria.

The advantage here is that one will remain the owner of the same vehicles that will be leased by a Bulgarian law firm (in Bulgaria there is no obligation of registration to National Register for renting of HGV) to the Italian transport company, that eventually has the same person as head of the company. The cost? According to the quote received by a Bulgarian company, for the constitution of a sleeping company, is from 650 to 730 € all-inclusive (including brokering). The change in price depends on whether the company holder was present or not in Bulgaria. In addition to this cost, there is 90€ of annual fees, 190€ for registration, 35€ for new number plates and registration certificate, 120€ (one-off) for the recycling tax need to be added. The insurance for vehicles above 3,5 tons is calculated around 500 euros, plus the municipal tax payable from the second year. On final balance, for the first year one can spend as little as 1.475 euros and the second year, one only pays for insurance and municipal tax.

With Bulgarian number plates, therefore, companies are looking for economical help. But there are also those outside the national borders looking for time savings. This is the case for the new route between Italy and Slovenia in search of a quick release or renewal of the ADR license. European legislation allows it: if obtained in a Member State, the document is also valid in Italy and so many drivers purchase the all-inclusive package: weekend, training course and exam.





## WHAT IS INTERNATIONAL "SECONDMENT" OF STAFF

The discipline regarding the "Secondment" of workers in Italy is first mentioned in the Directive 96/71/EC, transposed at the national level through the legislative Decree. n. 72/2000, and in Directive n. 2014/67/EU, transposed nationally through the Legislative Decree 136/2016.

According to the discipline in force, there are essentially three different types of Secondment which can be carried out:

- by a company established in a different Member State in its own branch in Italy or in a company belonging to the same group and operating in Italy;
- by a company established in a different Member State under a commercial contract (for example, transport, contract, etc.) which is executed in favor of a client having its registered office or operating in Italy;
- by a temporary employment agency established in a different Member State using a company operating in Italy (c.d. secondment – part time).

In order to prevent possible violations and irregularities in the use of the secondment instrument, art. 3 of Legislative Decree 136/2016 provides for a non-exhaustive listing of the symptomatic elements that should guide the assessment of the authenticity of the individual secondment options.

In addition, the companies which use secondment for workers in Italy must follow some procedures, such as:

- send a prior notice (within 24 hours of the beginning of the secondment) to the offices of the Ministry of Labor in order to indicate the characteristics and data concerning the secondment and the workers involved;
- issue a copy in Italian of the employment contracts of seconded workers;
- appoint a person that is a resident in Italy in order to carry out formal obligations.

In cases where the non-authenticity of secondment is established, the seconded worker will be considered to be entirely dependent on the company which is using their services. In addition, administrative pecuniary sanctions are expected both for cases where it is established that the secondment was not authentic and in the event of non-compliance with the above mentioned procedural charges.

*Definition by Alessandro Vacca, Zunarelli Law Firm*

And once they get home they are happy because in a couple of weeks they will be given the new license. In short, there is not a huge savings on costs (they are very similar) but definitely on time: in Italy, in order to renew the license there are several week-end classes and the exam is held during the week and therefore there is also a loss of the working day to account for. In the end it's worth going abroad to settle everything in 24 hours.

Finally, there is tax evasion, a constant sore point of the country, which found fertile soil in this sector. According to the latest Istat report (Economy Not Observed - October 2016), between 2011 and 2014, the impact of the black economy on value added tax on 'Trade, Transport, Housing and Catering' (the Institute of Statistics does not have the disaggregated data that only relates to the transport sector) increased from 25% to 25,9% (but in 2013 it was 26,2%). One of the highest, second only to what was recorded in 'Other Business Services' (33,6% in 2014), but also higher than the one found in the building industry (23,5%). The trade-transport-catering sector, according to Istat, makes up for 20,3% of GDP, but contributes almost for 39,4% of tax evasion: the deficit on tax returns on the part of Added Value overall weighs in at 13,8%.

Even under the table and irregular work characterizes the industry. According to Istat for the large sectors including "commerce, transport, hotels and public exercises," the rate of irregularity for both employees and self-employed workers is increasing: from 15,6% in 2013 to 16,5% in 2014, it is up 1,5 percentage points from 2011. It is a figure confirmed by the National Labor Inspectorate, which in its 2016 report shows that 70,53% of the inspections carried out, detected infringements of employee recruitment. This is the highest percentage of all inspected sectors and with a rate of irregularity of 10 points above the national average. Finally, there is a final figure to prove that every gimmick is good enough to earn that competitive edge that is useful to stay afloat: 82% of the worker inspections in the transport industry (or 5.535 drivers) uncovered violations of the driving and rest periods regulations and that another 411 drivers were not in line with the Labor Organization Law (Legislative Decree 234/2007).



## 2.4. Feeble defense

Against abusive road cabotage, Italy has put in place a defense which is somehow still a little weak. With the so-called “Unblock Italy” (the law amending the decree was published in the Official Gazette n. 262 of November 11th, 2014) a new measure was introduced at the end of 2014; the obligation to keep the documents on board in order to prove that there is no difference with the tachograph recordings and therefore the carrier is in line with the regulations that allow a maximum of three trips to Italy, in the context of international transport, within a seven days period, after which the vehicle has the obligation to return to the country of origin. In the absence of such documentation, a fine of between € 5.000 to € 15.000 will be imposed and the vehicle will be seized for three months.

The difference with the past lays in the inspection procedures: now it is the driver who has to prove he is in order and complying with the current regulations and not the other way around, (i.e. the agents who have to look for infringements). A law that established 2015 as the year of controls against irregular road cabotage with the direct consequence of bringing back the quantity of goods transported under the road cabotage to levels from 10 years earlier (*see also paragraph 2.2*). The inspections found 165 infringements of Article 46 bis of the Road Code (Unlawful road cabotage), up 42% compared to 2014. In 2016, however, there were 143 offenses, down by 13,3% compared to the year before.

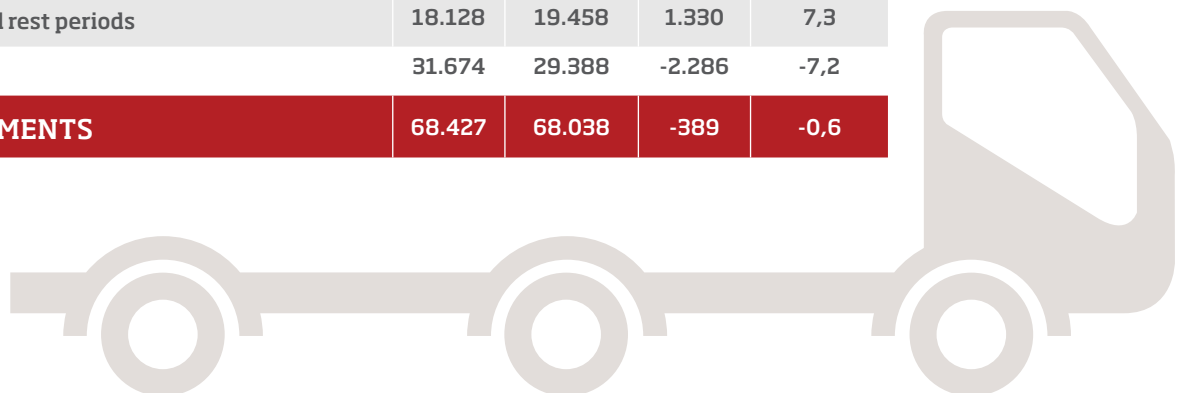
### INFRINGEMENTS DETECTED

(source: Road Police Service)

| LAW no. 298/74  | 2015   | 2016*  | Diff.  | Diff. % |
|---|--------|--------|--------|---------|
| Art.26/1 Unauthorized practice  | 142    | 93     | -49    | -34,5   |
| Art.26/2 Use of unauthorized transport  | 46     | 25     | -21    | -45,7   |
| Art.46 Unauthorized transport   | 625    | 823    | 198    | 31,7    |
| Art.46 bis Unlawful Road Cabotage**   | 165    | 143    | -22    | -13,3   |
| 7 & 2 Law Decree N. 286/05<br>(Use of unauthorized transport by a business company) | 15     | 22     | 7      | 46,7    |
| ROAD TRAFFIC LAWS   | 2015   | 2016*  | Diff.  | Diff. % |
| Art.61 Loading gauge exceedance   | 254    | 249    | -5     | -2,0    |
| Art.62 Authorized mass exceedance   | 38     | 36     | -2     | -5,3    |
| Art.142 Speed limits  | 14.237 | 14.962 | 725    | 5,1     |
| Art.164 Vehicle load regulations  | 426    | 387    | -39    | -9,2    |
| Art.167 Carriage of goods with motor vehicles                                       | 2.677  | 2.452  | -225   | -8,4    |
| Art.174 Driving and rest periods  | 18.128 | 19.458 | 1.330  | 7,3     |
| Others  | 31.674 | 29.388 | -2.286 | -7,2    |
| TOTAL INFRINGEMENTS   | 68.427 | 68.038 | -389   | -0,6    |

\* January/October 2016

\*\*source: CEPS Settebagni



It remains to be seen whether the effect of the reform in road inspections has been able to contain the wave of irregularities in road cabotage or whether the novelty effect is fading, resulting in the softening of it. It should be noted that included in the violations which mostly increased in 2016, there were “Unauthorized transport” (+31,7%) and “non-compliance with driving time and rest periods” (+7,3%).

Another element to be considered is the extent of inspections that in 2016, at least as far as Traffic Police activity is concerned, decreased (-3,9% provisional), affecting mainly Italian carriers: out of 263.232 vehicles checked, only 85,4%, were with an Italian registration plate, 13,2% coming from EU countries and the rest from outside of the EU.

In this context, the trend of accidents involving commercial vehicles above 3,5 tons between 2015 and 2016 should be considered (*see the following table*); although the number of accidents remained constant, there was an increase in the number of deaths, and with very high values on the highways.

### DEATH ACCIDENTS - VEHICLES OVER 3.5 TONES

source: Road Police Service

|                  | TOTAL DEATH ACCIDENTS |       |       |         | Highway |       |       |         | Ordinary roads |       |       |         |
|------------------|-----------------------|-------|-------|---------|---------|-------|-------|---------|----------------|-------|-------|---------|
|                  | 2015*                 | 2016* | Diff. | Diff. % | 2015*   | 2016* | Diff. | Diff. % | 2015*          | 2016* | Diff. | Diff. % |
| <b>Accidents</b> | 190                   | 190   | 0     | 0       | 71      | 82    | +11   | +15,5   | 119            | 108   | -11   | -9,2    |
| <b>Deaths</b>    | 208                   | 214   | +6    | +2,9    | 79      | 97    | +18   | +22,8   | 129            | 117   | -12   | -9,3    |

\* Comparison data between the first ten months of 2015 and the 2016 correspondents



### CHECKS MONITORING (BY NATIONALITY OF THE VEHICLE)

source: Road Police Service

| LICENSE PLATE                 | 2015             | 2016*            | Diff.          | Diff. %     |
|-------------------------------|------------------|------------------|----------------|-------------|
| ITALIAN                       | 236.312          | 224.843          | -11.469        | -4,9        |
| EU COUNTRY                    | 33.806           | 34.735           | 929            | 2,7         |
| EXTRA EU COUNTRY              | 3.910            | 3.654            | -256           | -6,5        |
| <b>TOTAL Checked vehicles</b> | <b>274.028</b>   | <b>263.232</b>   | <b>-10.796</b> | <b>-3,9</b> |
| <b>WORKING DAYS checked</b>   | <b>2.967.772</b> | <b>3.116.633</b> | <b>148.861</b> | <b>5,0</b>  |

\* January/October 2016





# Chapter 3



Companies and commitments



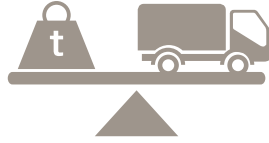
**11**

are the main industry trade associations present in the Central Committee of the Carrier Record, and there are many more minor associations.



**96.454**

are regularity certificates issued from 15 December 2015 to 18 January 2017. In 2016, 246 certificates per day were requested, including Saturdays and Sundays. *(source: HGV register)*



**75%**

is the third party carriers' average coefficient of loading of heavy vehicles in Northern Italy, falling to 65% in the Centre and the South and 40% in urban areas. Own-account transport carriers on average travel half empty (50%) *(source: Giordano Editor)*



**68,3 million**

transport deals were traded on the TimoCom platform in 2016.



**124.281**

are the companies listed in the HGV register. *(source: National Register of Road Haulage)*

CONTEXT

THE CO



# 41.362

are the requests processed by INPS since the launch of the database as of January 18, 2017.

This number is lower than the number of the certificates because it is possible to make inspections on the same company over different days and from different buyers.

*(source: HGV register)*



# 13,8%

is the rate of company irregularities resulting from online consultations.

Decreasing if compared to 14,5% of the first six months of database activity.

*(source: HGV register)*



# 300.000

is the number of workers in the road haulage sector in Italy.

*(given 2016 Filt-Cgil)*



# 30%

is the percentage of unladen journeys vehicles make on medium range trips, (i.e. with no load). From 2010 to 2015, unladen journeys increased by about 20% for the third-party transportation, especially for short and medium-range relationships.

*(source: Giordano Editor)*

# MPANIES

# DIFFICULTIES

# 182.307

are the drivers who have stopped working in the last 10 years.

Out of the 775.000 vehicle registration certificates valid in Italy, only 25.000 are assigned to young people.

*(source: Ministry of Infrastructure and Transport)*



## 3.1. The new relationship with the client: The Register database

The rate of irregularity of the road haulage companies registered in the National Register database is getting better: from 14,5% in the first six months to 13,8% after more than one year of activity. Monitoring refers to the activity from 15 December 2015 to 18 January 2017. Not only that. In 2016, the year of full time database activity, 89.942 “attestati di regolarità” (Tax compliance certificates) were issued, an average of 246 per day (including Saturdays and Sundays). It is a sign that the clients starts to appreciate the IT platform (accessible from the National Register website) which allows them to check the financial situation of the more than 124.000 registered companies, as well as the Register enrollment regularity, in the Ren (National Electronic Registry) and the Chamber of Commerce; thus marking an evolution of the relationship between supply and demand and giving the Transport sector more transparency. The reason is simple: the customer who entrusts transportation to a company which is irregular or non-compliant from a fiscal point of view becomes co-responsible. Before the introduction of the database, the inspection could take place with the request of a Durc (*Documento Unico di Regolarità Contributiva*) a document certifying the correct fiscal compliance of a firm; now the customer can access the platform directly and ask for proof of that, which is sent right away by PEC certified email within a period of time « which spans from 45 seconds to 6 hours – guaranteeing the Central Committee– depending on the company submitted to check and in which different positions this finds itself ».

As a matter of fact, the Register is doing more in terms of transparency. Indeed, the Stability Law of 2014 has given the Central Committee the opportunity to investigate other aspects such as « the adequacy and regularity of companies enrolled in relation to the specific ways of carrying out the economic activity, the congruence between the fleet and the number of employees / drivers

### EXAMINATIONS OF THE REGISTER'S DATA-BASE

(source: HGV register)

| DESCRIPTION   | 2017         | 2016          | 2015         | Totale        | %          |
|---|--------------|---------------|--------------|---------------|------------|
| <b>Total requests to INPS</b>                       | <b>1.802</b> | <b>37.669</b> | <b>3.003</b> | <b>42.474</b> |            |
| <b>Unsuccessful request</b>                         | <b>514</b>   | <b>598</b>    | <b>-</b>     | <b>1.112</b>  | <b>3%</b>  |
| <b>Rejected request (*)</b>                         | <b>-</b>     | <b>15</b>     | <b>-</b>     | <b>15</b>     | <b>1%</b>  |
| <b>Request under investigation (**)</b>             | <b>514</b>   | <b>583</b>    | <b>-</b>     | <b>1.097</b>  | <b>99%</b> |
| <b>Requests settled by INPS</b>                     | <b>1.288</b> | <b>37.071</b> | <b>3.003</b> | <b>41.362</b> | <b>97%</b> |
| <b>Regular DURC</b>                                 | <b>1.192</b> | <b>30.204</b> | <b>2.520</b> | <b>33.916</b> | <b>82%</b> |
| <b>Irregular DURC</b>                               | <b>9</b>     | <b>5.394</b>  | <b>325</b>   | <b>5.728</b>  | <b>14%</b> |
| <b>Request rejected for wrong CF of the company</b> | <b>1</b>     | <b>441</b>    | <b>97</b>    | <b>539</b>    | <b>1%</b>  |
| <b>Rejected requests (***)</b>                      | <b>86</b>    | <b>1.032</b>  | <b>61</b>    | <b>1.179</b>  | <b>3%</b>  |

(\*) rejected request at request stage

(\*\*) request being processed by INPS

(\*\*\*) rejected request after being processed for exceeding the set limits (6HH or 30 days)



(source: HGV register)

| TOTAL REGULARITY CERTIFICATES |               |
|-------------------------------|---------------|
| YEAR                          | TOTAL         |
| 2017 (since gennuary)         | 3.510         |
| 2016                          | 89.942        |
| 2015 (only december)          | 3.002         |
| <b>TOTAL</b>                  | <b>96.454</b> |

*Tax certificates have been produced with the function available on the Register website from the beginning of examination in applied cooperation (15/12/2015) until the launch of the Register web portal (16/15/2016).*

*The number of tax certificates produced by the Register web portal for the year 2016 is 50.942.*

*The number of tax certificates is higher than that of DURC examination, due to possibility to carry out more checks on the same company over different days and by different customers.*

and the regularity of vehicle insurance coverage». In short, it is a crosscheck of different databases (Inail, Ced and Ania) at the service of the Register that is able to protect and guarantee the regularity of businesses which, thanks to a dedicated web platform, allows the carriers to verify their position and, if necessary, to adjust it. The possibility of employing other verification phases related to further profiles with irregularities, such as the one on Tax compliance, should be integrated with this one.

The effort towards transparency is also based on the correction of what is considered the abnormality of Italian Road haulage sector, namely companies registered in the Register without vehicles and, in general, upon a thorough “cleansing” of the local registers of those companies that no longer practice the profession. Thus, the removal process of those entities began – altogether 23.195 – which are no longer registered with the Chambers of Commerce: from 1 November 2016 to 22 February 2017 there were 4.448 companies removed from the Register. Furthermore, an inspection on the 15.588 companies that are without vehicles is also being carried out. After the cancellation of the companies no longer listed in the Chamber of Commerce and those with no vehicles, there should be about 90.000 companies registered in the Register. These data correspond to the number of “attestati di regolarità” (89.942), the Tax certificates, issued in 2016.



## 3.2. With the help of the sharing economy



Supply and demand in the Transport world is evolving. In particular, the latter is adapting to the former in order to meet the increasingly need for supplies due to reduced stocks and a logistics which is more and more “on demand”. The result? The diseconomies expand as well as the number of unladen journeys that go with them. A study of the Logistics Systems magazine, published by Giordano Editore reveals that on average 30% of medium-haul services (from 51 to 200 km) consists of unladen journeys. It looks slightly better for the long-haul reaching 25%, while in the urban area (within a 50km range) 38% of vehicles travel without a truckload. From 2010 to 2015, unladen journeys have increased by around 20% for the Third Party carriers, especially for short and medium-range journeys. As far as the individually owned transport sector, which generally operates on distances not exceeding 250 km, unladen journeys reach 50%, on average. The load factors are doing a bit better; over the last few years the weight-to-volume ratio is improving and stands at around 85% on the international transport, 75% in domestic journeys in Northern Italy and between 65% and 70% in the Center-South. However, as far as urban deliveries are concerned, this does not exceed 40%. In the face of this, and in the absence of regulatory or structural approaches, the market is finding its own solutions. And often the sharing economy helps Road Haulage industry.

First of all, freight exchanges: these are old practices compared to the new concept of the sharing economy. Most have already been around for a few decades, but they arose based on the concept of sharing, facilitated by technology, in response to the problem of unladen journeys. There are different companies currently active on the Italian market. Let's see some.

TimoCom, for example, was founded in Germany in 1997. Today it has 110 thousand users in 44 different markets with 36 thousand registered companies. Italy represents one of the largest markets for the giant of Dusseldorf with 1.300 companies and 3.600 registered users. Over the past three years,

### THE WEIGHT OF THE... EMPTY LOAD

(source: Giordano Editore)

| RANGE (km) | traffic /ton-km (%) | turnover (billions €) | vehicles-km (billions) | empty (%) | vehicles-km (empty) |
|------------|---------------------|-----------------------|------------------------|-----------|---------------------|
| > 50       | 8                   | 28                    | 5,6                    | 38        | 2,1                 |
| 51 > 200   | 32                  | 36                    | 22,4                   | 30        | 6,7                 |
| > 200      | 60                  | 14                    | 42,0                   | 25        | 10,5                |

TimoCom has grown remarkably: between 5 and 6% each year on the domestic market, recording in 2016, 68,3 million total deals traded on the platform. In fact, the German multinational has been open to the domestic market and in Italy it has experienced a considerable increase in terms of shares and memberships. The platform, which connects all players in the logistics chain, is open to all, but preliminary checks and cautions are in place for the sake of business relations' integrity. For example, in the area of credit management, TimoCom provides its clients with a recovery process that, if not successful, might end up with the indebted company being expelled from the platform.

Also Wtransnet, a provider founded 20 years ago in Spain by a family of entrepreneurs, puts several guarantees on the plate. In order to be admitted, a series of verifications on professional and economic compliance must be fulfilled. This international freight exchange, which operates a network of over 11,000 businesses in Europe, is focusing on Italy: since last year it has set up an operational headquarters in our country, which registers a double digit figure of increased business and volumes that rose by 60% last year .

Another one, allegedly the first ever freight exchange service, is Teleroute, now a company of Wolters Kluwer group's. In fact, the group was set up in Brussels in 1985 and later expanded to 27 European countries. The mother company, Wolters Kluwer, has other "in house" providers (Nolis and BursaTransport).

Another solution comes from the market. There are several load-sharing websites that have been set up in recent years that merely put demand and supply in contact, generally charging a small percentage to the carrier who gets the job. One of these is Sendilo.it, a startup founded and conceived in 2012 by Francesco Murru, which can boast a growth rate of 15 to 18% with 7.000 registered users between road haulers and clients, in Italy and also abroad.

The next step are apps, that are now also very common in Italy, that put simple citizens in touch with each other, improvising as couriers or haulers, agreeing to take a parcel or a load to deliver to various destinations. Just to name a few, *iCarry.it*, is the first platform of "sharing delivery" services to ship the parcels across the city. Through *iCarry.com* you can send parcels to the other side of the city within a few hours, contacting other available users to deliver them. The same philosophy is used for *TocTocBox (toctocbox.com)*: both solutions do not mention any professional hauling.



### 3.3. The truck driving profession

**H**ow has the road haulers' trade changed in these years? It's hard to give one single straight answer. Looking at the future, this profession is about to change drastically: new technologies are ready and all those many people who get in a truck every morning will soon have to deal with vehicles that are getting closer to automatic driving and more intelligent roads. But in the meantime the daily newspaper are full with stories of the many difficulties of a trade that is affected by the recession, but also by new markets that are opening up, competition, lack of reforms or only half completed, difficult relationships with customers and subcontractors. And then there is (more or less obvious) illegality activity, with the authorities' inspections struggling to give justice to those who do this job honestly and for whom the issue of road accidents are not just statistical data, but mean real work-related deaths. In recent years, many drivers have faced the closure of their company or redundancy, due to the decrease in business volume; some have worked alongside colleagues from Eastern Europe, they are seconded and are paid half of their salaries. Others were not surprised when the job offer was formalized with a Bulgarian or Romanian work contract. In short, it is a profession to stay away from, that is unattractive to young people who look elsewhere for jobs.

At the top of the drivers' concerns, there are illegal and / or unjust employment regimes that would lead to social dumping followed by, shortly afterward, inadequate controls. The ranking drawn up by a study published by the European Parliament on "the social and work conditions of road haulers", conducted by TRT Transport and Territory on the living and working conditions of professional drivers in the field of road freight transport, also indicates the lack of social harmonization between Member States, the quality of rest and dedicated facilities, and stress levels connected to driving and rest times. Among the aspects that according to the category would have gone worse in recent years, 28% indicate income levels, 23% working hours, 21% working environment, followed by the accessibility and security of parking areas (18%), skills required in the job and job demand (5%).

Not surprisingly, the alarm has been sounded by several countries: Germany is expected to retire over 250,000 drivers over the next 10-15 years. In the United Kingdom there are about 45.000 open vacancies to which 40.000 more will be added to replace those who will retire only next year. These data are from the Freight Transport and Road Haulage Association. According to the studies of the two associations, the lack of drivers was generated by many factors: not only the average age of drivers is high (about 53.000 workers are close to retirement age), but it turns out that currently about 80.000 people, qualified as HGV drivers, earn a living by doing another job.

In Italy, the drivers' supply, according to the estimates by the Ministry of Infrastructure and Transport, has decreased by 182.307 units over the last 10 years, putting the process of generational replacement at risk: of the 775.000 valid driver qualification cards, only 25.000 are made out to young people.





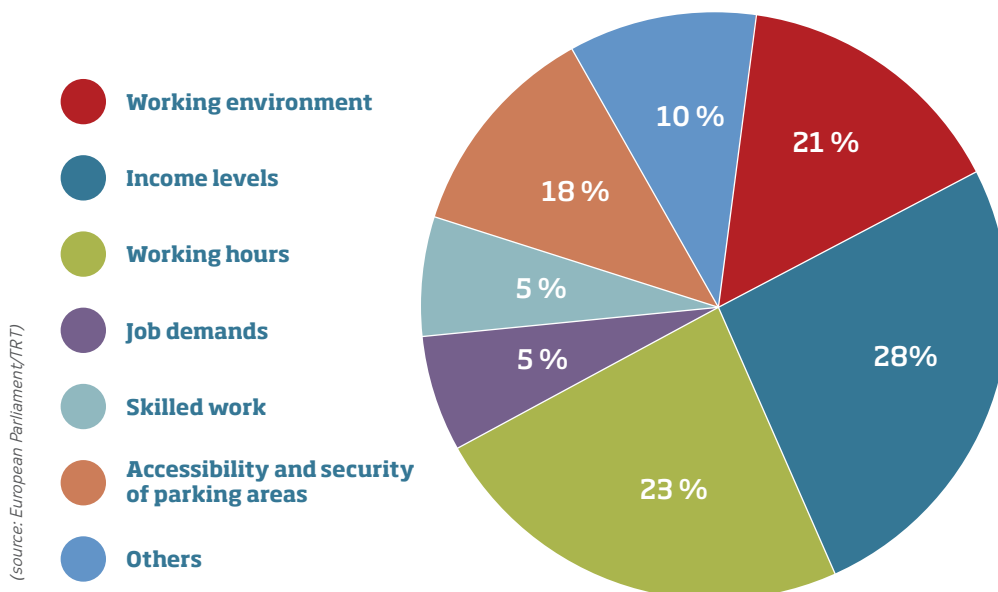
A generation replacement made even more necessary by the massive availability of new onboard instrumentation that requires adequate training and preparation. Eastern countries drivers' competition in just a few years will not be enough and companies will increasingly ask for more specialized drivers.

The project promoted by the Road Haulers' Register, which aims to rehabilitate this profession, making it attractive again to young people, should also be interpreted in this context. A memorandum of understanding promoted by the Haulage Associations was signed on January 3, 2017 by many trade associations of the transport sector (Anita, Transport Confartigianato, Fai-Confrasperto, Federlavoro and -Confocooperative, Fedit, Fiap, FitaCna, Legacoop Services, Sna-Casartigiani, T.I. Assotir), Italian and foreign car manufacturers associations (Anfia and Unrae) as well as driving schools associations (Unasca and Confarca) to offer one thousand young people adequate training in order to receive the professional driving license.

According to the protocol, the Haulage Associations will cover much of the cost of obtaining the driving license and the Professional Qualification Certificate (CQC), thanks also to the promotional rates being applied by the various driving schools. Automobile associations will provide training sessions and support Italian haulage companies so that young people can get directly into the labour market.

At the same time, the important technological and environmental innovations that today characterize the sector will be illustrated in Secondary Schools, according to an information scheme in collaboration with the Unrae and Anfia, vehicle manufacturers associations.

### THE ASSESSMENT OF CONDITIONS WHICH HAVE MOSTLY WORSEN, ACCORDING TO PROFESSIONAL ROAD HAULERS.



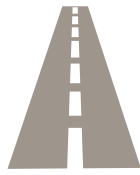


# Chapter 4



Gap in infrastructure

**175.556 km**



is the road network in Italy in 2014, 12,7% more than in 1990. In 24 years, regional and provincial roads grew by 40,2%. (source: CNIT)

**6.751 km**



is the length of the Italian motorway network, 45% of the Spanish network (14.981 km) and 58,4% of the French one (11.552 km). Germany has 3,61 km of highways per 100 km<sup>2</sup> (12.971 km overall), Italy 2,24. In 10 years there has been an increase of 4% km: in Spain 45,4%, in France 11,3% and in Germany 7,5%. (source: Eurostat)

**62,8 mn/tons**

of goods passed through Italy and the trio Switzerland, Austria and France in 2014.

With a slight increase of +1,8%, compared to 2013 Brennero and Resia are the busiest crossing points, with 31,3 million tonnes of freight and an increase of 4,2% over the previous year. The traffic from Monginevro, Frejus and Mont Blanc is stable, + 0,9%, for a total of 19 million tons. Sales were down substantially by Sempione, Gran San Bernardo and the San Bernardino crossing passages, by -4,3% (3,3 million tonnes), and by S. Gotthard by -2,1% (9,1 million tonnes).

(source: Eu Transport in figures)



**57,1 km**

is the length of the S. Gotthard tunnel, the longest in the world and the deepest with a length of 2.300m.

The freight trains maximum speed is 160 km / h, thus reducing the journey by 30 minutes. In the new tunnel, 250 freight trains pass through every day compared to 180 in the old tunnel.

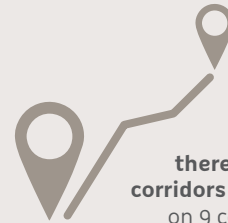
(source: Uomini e Trasporti)



**4**

is the highest number of infringement proceedings opened by the EU against Italy in the transport sector, specifically aircraft. Germany has 6. In rail transport Germany is at 6, Italy at 1. In road-haulage Italy to 0, Germany 4; in shipping, Italy is at 1 Belgium is at 4.

(source: Transport Scoreboard 2016)



**4**

there are the TEN-T corridors crossing Italy, on 9 cores. (source: CNIT)

**42**

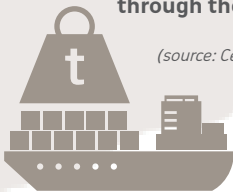
are the routes of the Motorways of the Sea in 2016. 15 of these pass from Sicily and Liguria as well. 20 are national routes connecting only Italian ports and 22 are international ports. (source: Ram Spa)

**2 bn/tons**

is the quantity of goods that passed through the Mediterranean, 19% of world traffic.

Italy manages 473 million tonnes.

(source: Center for Studies and Research for the south - SRM)





# 5,5 km

is the average of the railway lines per 100 km<sup>2</sup> in Italy. In Germany it is more than double (11,5 km per 100km<sup>2</sup>). The Italian rail route is 16.752 km long, the German one is 41.328 km, the French one is 30.318 km. Over the past 10 years, France has dismantled 2,17% of its railroad network, Germany 0,49%. Spain, which has 15.312 km, from 2004 to 2013 built 19,2% more rail lines, Italy built 4,9% more. (source: Eurostat)



# 90,8 mn/tons

are the goods transported by rail companies in Italy in 2014, a figure rather stable compared to what it was ten years earlier (83.533.164 tonnes). (source: CNIT)

# 28

are the parking areas and parking areas in the ports of Genoa, La Spezia, Livorno, Naples, Civitavecchia, Ravenna, Brindisi, Palermo and Trieste. 18 are parking areas in the ports and 10 parking areas outside the ports. (source: Ania Foundation)



# 144

In 2012 there were 144 parking lots and parking areas on the Italian road and motorway network. 98 are free parking areas and 46 protected parking areas. (source: Ania Foundation)



# 485,3 mn/tons

of goods passed through Italian ports in 2016 (excluding Gioia Tauro), with a 1,6% decrease compared to 2015. Instead of 3,6% Roll-on/Roll-off traffic (93,6 million tons). It accounts for 27,8% of container traffic (10,5 million Teu). (source: Assoporti)



# 154.165 m

is the total length of the railways in intermodal transport hubs. (source: CNIT)

# 2,5 mn

are the Teu moved from the port of Gioia Tauro in 2015, 14% less than 2014. Genoa reaches 2,2 million (+3,2%). The first port in Europe is Rotterdam (11,8 million Teu), followed by Hamburg (9,0 million Teu), Antwerp (8,6), Bremerhaven (5,9), Valencia (4,3), Algeciras (3,6). The world's first port is Shanghai (33,6) followed by Singapore (32,2), Shenzhen (23,2), Hong Kong (22,3). The top ten counts 8 Chinese ports. (source: Eu Transport in figures)



# 31.642.545 sq. m

is the total area of the trading hubs in Italy in 2015. The largest interchange, the one of Verona, measures 4,5 million sq. m. (source: CNIT)



# Chapter 5



**Sustainability and technology: the challenges of the future**

**54,4%**



**is the increase in truck registrations (> 3,5 t) recorded in 2016 in Italy compared to 2015.** In the weight class >16 t the figure is 52,9%, while among the between 3,5 and 16 t rises to 59,8%. Despite the recovery, compared with 2008, the market fell by 32%, following the negative trend of several European countries (France -26,1%, Germany -15,2). The tractors' sales quota raised by the 27,83% in one year (2014-2015), reaching 50,3% of the total market in 2015.

*(source: Anfia-Unrae)*



**90,2%**



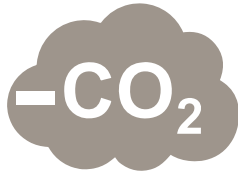
**is the percentage of customs clearance made in a time ranging from 12 seconds to 5 minutes.** The percentage in this slot has increased with Customs 4.0 and the introduction of the electronic file.



**14,6%**

**is the share of freight rail transport in 2014 in Italy,** which is below the EU average by 18% and far from Germany (23,4%), Austria (43,6%) and France (15,6%).

The road transport, however, continues to have a modal share of 85,4%, ten times higher than the European average. *(source: Eurostat)*



**-10%**

**is the savings on emissions because of tires, aerodynamics and driving styles together with new technology.**

The Calculation is contained in Board # 25 on Transport and Logistics Sustainability published by Freight Leaders Council.

**2019**

**is the date set out in the Amsterdam Declaration (Communication Eu 766) for introducing or starting cross-border testing within Europe with AGVs Automatic Guided Vehicles** and, in general, to coordinate the laws of each country on cooperative and intelligent transport systems. *(source: C-Its)*



**-10% Co2**

**is the decrease of Co2** which is the savings on emissions that can be obtained on average **by platooning.**

*(source: Acea)*



**9,9 liters**

**the consumption of a 40-tonne 5-axles vehicle** that is "burned" only to make the tires roll.



# 12,9 year

is the average age of the working fleet as of June 30, 2016. 70% of the vehicles were ante Euro 4, the remaining portion was divided as follows: 5,5% Euro 4, 19,7% Euro 5 and 4,8% Euro 6.

(source: Unrae)

# 350.000

is the number of the fleet trailers, 70,7% of which were registered before 2005. This means that in Italy there are 247.750 trailers, with more than 16 years old.

(source: Unrae)



# 99,2%

is the share of diesel-powered lorries within the Italian working fleet in 2015.

The percentage of petrol-powered vehicles is 0,6%, while the alternative fuels powered engines are just bits and crumbs: petrol-methane (0,03%), petrol-gas liquids (0,07%), electric and hybrid (0,04%). (source: Aci)

# 2,6 million tonnes / year

is Hvo production capacity of Finnish Neste in its refineries in Finland, Singapore and Rotterdam.

# 270.000

thousand tons / year is the Eni Hvo production in Venice bio-refinery.

(source: Eni)



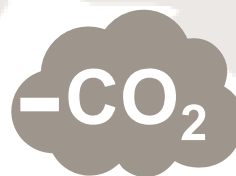
# 31.267,9 Ktoe

was the final consumption of diesel and petrol in the transport sector in Italy in 2014. 1.065,4 ktoe of biofuels, less than half of France (2.906,2 ktoe) and Germany (2.739,7 ktoe). (source: Eu Transport in figures)



# 4

is the number of corridors within the European Blue Corridors project that involves 11 states. 2 of these pass through Italy via the Eni stations of Piacenza and Pontedera.



# between 4% to 10% of CO<sub>2</sub>

is the expected reduction in Co2 emissions regarding commercial vehicles using ecodriving supports.

The result depends on the driver's personal driving style.

(source: Ertico Its Europe)



# 20

are the LNG stations expected to be in Italy by the end of 2017; 105 in Europe;

1 in Germany, 32 in the United Kingdom, 20 in Spain and 18 in the Netherlands by 2016.

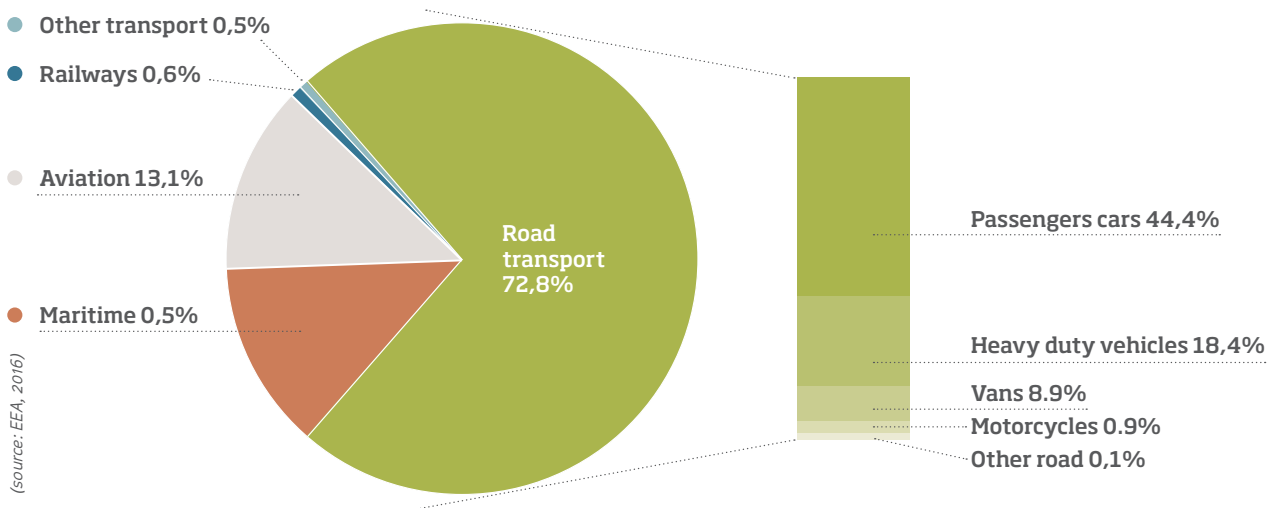
(source: Assogasliquids and Lng Blue Corridors)

## 5.1. Sustainability: The time of choices

By 2050, the European Environment Agency (EEA) expects the freight transport industry to increase its activity by 57%, compared to 2010. An important growth that will also have environmental consequences. Already in 2014, the entire transport sector was responsible for nearly a quarter of greenhouse gas emissions in Europe and was also recognized as the only economic sector in which emissions were higher than 1990 levels, precisely because of the increase in goods displacement.

In this scenario, the freight sector plays an important role; 78,2% of the emissions attributed to the transport sector are thought to be relative to road transport, with 18,4% referring directly to freight transport, according to the Transport and Environment Reporting Mechanism (Term) of the EEA. It is clear that the future of transport can in no way be separated from the issue of environmental sustainability: if we cannot imagine a future where goods and people move less, we must imagine « better ways to move them ».

### EMISSIONS OF DIFFERENT MODES OF TRANSPORT



### FUEL SUPPLY OF TRUCKS IN ITALY

| (source: Aci)                  | since 1999       | 2000 - 2002    | 2003 - 2005    | 2006 - 2007    |
|--------------------------------|------------------|----------------|----------------|----------------|
| <b>GASOLINE</b>                | 103.810          | 31.802         | 21.488         | 13.698         |
| <b>GASOLINE AND LIQUID GAS</b> | 8.503            | 1.688          | 1.521          | 2.218          |
| <b>GASOLINE AND METHANE</b>    | 3.478            | 1.561          | 3.006          | 7.998          |
| <b>DIESEL</b>                  | 1.226.223        | 522.389        | 501.393        | 377.751        |
| <b>ELECTRIC - HYBRID</b>       | 194              | 471            | 495            | 368            |
| <b>OTHERS</b>                  | 17               | 12             | -              | -              |
| <b>NOT DEFINED</b>             | 90               | 11             | 19             | 10             |
| <b>TOTAL</b>                   | <b>1.342.315</b> | <b>557.934</b> | <b>527.922</b> | <b>402.043</b> |

To improve the modes of transport means looking at the future of new technology and intelligent transport systems that, coupled with more efficient tires and with reduced rolling capacity, aerodynamics and more ecological driving styles, can lead to fuel savings of over 10%. But we have to start from what we have, and today the existing vehicle fleet in Italy is made up of old vehicles, with an average age of about 13 years, for 70% pre “Euro 4”, 99,2% with diesel-powered engines. There is therefore a gap to be narrowed to overcome the challenge of making transport safer, more efficient and more sustainable: there are plenty of opportunities.

The strong sales growth in 2016 is a very positive sign; that year recorded + 54% of registrations compared to 2015 with 23.370 new trucks. This result was achieved thanks also to the economic instruments provided by the government, as there were tax incentives to renew the fleet (approximately 25 million), towards the purchase of CNG, LNG and electric vehicles. But also thanks to the super-depreciation rate of 140%, extended throughout 2017, and the new “Sabatini Law”, aimed at supporting companies which invest in instrumental assets for their core business. Another positive element also needs to be added to these calculations; the so called “white certificates” (calculating the Co2 savings and accordingly issuing Energy Efficiency Certificates - Tee), valid from 2013 onwards for road transport companies. In the end it should be noted that, although growing, the market has reached lower sales volumes than in 2008: anyway the trend has turned positive again, doing definitely better than 2014, the year when the heaviest drop was recorded, with only 12.148 new registrations.

Crucial to the success of these economic policies was the structural supply of incentives, leaving space for appropriate planning. To convert a fleet from one fuel to another, for a transport company means making important investments, reviewing features of its own transport management, and acquiring new environmental-sensitive customers. These are all aspects that cannot undergo sudden changes of a business plan.

The clientele is an important drive for change. The promptness of carriers to renew their fleet is often linked to the sensitivity of customers in terms of environmental issues, a sensitivity that is undeniably spreading among public opinion. The more the potential client to be is a big business and exposed to the media, the more it will promote a green policy. A vicious and virtuous circle, which is still accompanied by norms and constraints, but that can have a positive effect on the environment and business economy.

| 2008 - 2009 | 2010 - 2011 | 2012 - 2013 | 2014 - 2015 | NOT DEFINED | TOTAL     |
|-------------|-------------|-------------|-------------|-------------|-----------|
| 11.646      | 19.125      | 5.513       | 4.026       | 1.659       | 212.767   |
| 9.467       | 9.258       | 3.243       | 2.952       | 50          | 38.900    |
| 18.403      | 23.306      | 11.917      | 10.376      | 29          | 80.074    |
| 309.147     | 269.388     | 181.656     | 215.900     | 4.032       | 3.607.879 |
| 454         | 327         | 544         | 773         | -           | 3.626     |
| -           | -           | -           | -           | -           | 29        |
| -           | -           | 1           | -           | 558         | 689       |
| 349.117     | 321.404     | 202.874     | 234.027     | 6.328       | 3.943.964 |



## 5.2. Taking a chance on alternative fuels

**I**t will take several decades before reducing the use of diesel in heavy good vehicles transport sector. The low cost of diesel, that of diesel powered-vehicles, engine performance and full autonomy, along with environmental advantages over gasoline, makes diesel the most attractive fuel for road haulage.

On the other hand, the car production companies spend as much as possible to make diesel engines more efficient, and with the new Euro 6 generations they are able to further reduce fuel consumption. According to the Freight Leaders Council (FLC), the association that brings together the most important logistics companies in Italy and in 2016 they published a “Transport Sustainability Report”, the transition imposed by Community legislation between Euro 5 and Euro 6 has led to a 2 to 5% reduction in emissions. And much more can still be achieved by working on the issue of the tires, vehicles aerodynamics and driving styles, which, along with new technology, can lead to fuel savings of up to 10%, according to FLC once again.

### FUEL CONSUMPTION IN EUROPE

|              | FINAL CONSUMPTION (*) | MOTOR GASOLINE | GAS/DIESEL OIL | BIOFUELS | BIOGASOLINE | BIODIESEL | OTHER LIQUID BIOFUELS |
|--------------|-----------------------|----------------|----------------|----------|-------------|-----------|-----------------------|
| <b>Eu-28</b> | 274 107.3             | 78 999.9       | 195 107.4      | 14 006.9 | 2 656.6     | 11 341.9  | 8.4                   |
| <b>BE</b>    | 8 067.3               | 1 268.5        | 6 798.8        | 396.7    | 39.2        | 357.5     |                       |
| <b>BG</b>    | 2 089.7               | 505.5          | 1 584.2        | 110.7    | 14.8        | 95.9      |                       |
| <b>CZ</b>    | 5 315.1               | 1 557.9        | 3 757.1        | 316.8    | 65.8        | 251.0     |                       |
| <b>DK</b>    | 3 681.3               | 1 322.3        | 2 359.0        | 231.1    |             | 231.1     |                       |
| <b>DE</b>    | 49 857.5              | 17 682.2       | 32 175.3       | 2 739.7  | 779.1       | 1 957.0   | 3.5                   |
| <b>EE</b>    | 727.7                 | 241.7          | 486.0          | 5.8      | 5.8         |           |                       |
| <b>IE</b>    | 3 617.0               | 1 178.9        | 2 438.1        | 89.7     | 24.7        | 65.0      |                       |
| <b>EL</b>    | 4 852.2               | 2 697.1        | 2 155.0        | 134.5    |             | 134.5     |                       |
| <b>ES</b>    | 25 165.2              | 4 596.4        | 20 568.8       | 950.8    | 186.3       | 764.5     |                       |
| <b>FR</b>    | 38 875.4              | 6 790.6        | 32 084.8       | 2 906.2  | 406.5       | 2 499.7   |                       |
| <b>HR</b>    | 1 762.7               | 554.9          | 1 207.8        | 29.8     |             | 29.8      |                       |
| <b>IT</b>    | 31 267.9              | 8 494.6        | 22 773.3       | 1 065.4  | 10.2        | 1 055.2   |                       |
| <b>CY</b>    | 589.8                 | 360.8          | 229.0          | 9.7      |             | 9.7       |                       |
| <b>LV</b>    | 885.8                 | 205.8          | 679.9          | 24.2     | 6.4         | 17.8      |                       |
| <b>LT</b>    | 1 421.3               | 205.4          | 1 215.9        | 63.2     | 5.8         | 57.4      |                       |
| <b>LU</b>    | 2 001.1               | 313.6          | 1 687.5        | 71.6     | 3.2         | 68.3      | 0.1                   |
| <b>HU</b>    | 3 464.9               | 1 186.7        | 2 278.2        | 188.4    | 60.4        | 128.1     |                       |
| <b>MT</b>    | 176.7                 | 73.9           | 102.7          | 4.9      |             | 4.9       |                       |
| <b>NL</b>    | 9 531.8               | 3 801.2        | 5 730.7        | 357.6    | 136.7       | 220.9     |                       |
| <b>AT</b>    | 6 936.5               | 1 529.6        | 5 406.9        | 585.2    | 63.1        | 522.2     |                       |
| <b>PL</b>    | 12 689.1              | 3 535.4        | 9 153.7        | 705.4    | 132.8       | 572.5     |                       |
| <b>PT</b>    | 4 968.6               | 1 144.5        | 3 824.1        | 261.2    | 2.0         | 254.5     | 4.7                   |
| <b>RO</b>    | 4 921.8               | 1 354.1        | 3 567.7        | 166.6    | 41.6        | 125.0     |                       |
| <b>SI</b>    | 1 724.2               | 447.2          | 1 276.9        | 46.4     | 7.6         | 38.8      |                       |
| <b>SK</b>    | 1 868.1               | 551.6          | 1 316.5        | 133.9    | 24.6        | 109.3     |                       |
| <b>FI</b>    | 3 472.8               | 1 363.9        | 2 108.9        | 497.6    | 70.0        | 427.7     |                       |
| <b>SE</b>    | 6 518.7               | 2 850.5        | 3 668.2        | 788.3    | 165.1       | 623.2     |                       |
| <b>UK</b>    | 37 657.2              | 13 185.1       | 24 472.2       | 1 125.3  | 404.9       | 720.4     |                       |
| <b>MK</b>    | 484.6                 | 105.1          | 379.5          |          |             |           |                       |
| <b>TR</b>    | 15 896.5              | 1 991.6        | 13 904.9       | 137.2    | 35.2        | 102.0     |                       |
| <b>IS</b>    | 261.4                 | 141.6          | 119.9          | 3.5      |             | 3.5       |                       |

(\*) without bio components

(source: Statistical Pocketbook 2016)



## BIOFUEL PRODUCTION IN EUROPE

|              | TOTAL           | BIOGASOLINE    | BIODIESEL       | OTHER LIQUID BIOFUELS |
|--------------|-----------------|----------------|-----------------|-----------------------|
| Eu-28        | 13 889.5        | 2 295.5        | 11 248.9        | 345.1                 |
| BE           | 506.3           | 165.2          | 339.6           | 1.6                   |
| BG           | 67.8            | 13.2           | 54.5            |                       |
| CZ           | 261.0           | 67.1           | 193.8           |                       |
| DK           | 17.3            |                |                 | 17.3                  |
| DE           | 3 596.8         | 449.5          | 3 042.6         | 104.7                 |
| IE           | 24.2            |                | 24.2            |                       |
| EL           | 141.6           |                | 141.6           |                       |
| ES           | 1 318.1         | 247.3          | 1 070.8         |                       |
| FR           | 2 567.4         | 492.9          | 2 074.5         |                       |
| HR           | 31.2            |                | 31.2            |                       |
| IT           | 613.6           | 0.6            | 512.1           | 100.9                 |
| LV           | 66.6            |                | 66.6            |                       |
| LT           | 112.0           | 6.2            | 105.8           |                       |
| HU           | 306.3           | 187.1          | 119.2           |                       |
| MT           | 1.0             |                | 1.0             |                       |
| NL           | 1 520.0         |                | 1 520.0         |                       |
| AT           | 383.0           | 148.1          | 234.4           | 0.5                   |
| PL           | 745.2           | 92.1           | 653.0           | 0.1                   |
| PT           | 301.1           |                | 286.5           | 14.6                  |
| RO           | 104.6           | 7.7            | 96.9            |                       |
| SK           | 147.0           | 54.3           | 92.7            |                       |
| FI           | 406.1           | 12.8           | 354.2           | 39.1                  |
| SE           | 261.7           | 88.6           | 106.8           | 66.2                  |
| UK           | 389.5           | 262.7          | 126.8           |                       |
| TR           | 69.7            | 35.4           | 33.9            | 0.4                   |
| IS           | 0.1             |                | 0.1             |                       |
| NO           | 3.5             |                |                 | 3.5                   |
| <b>TOTAL</b> | <b>13 889.5</b> | <b>2 295.5</b> | <b>11 248.9</b> | <b>345.1</b>          |

Notes: (\*) liquid biofuels, used directly as fuel, not included in biogasoline or biodiesel.

(source: Statistical Pocketbook 2016)





In any case, the road to the fuels of the future has already been set forth, and customers and the manufacturers know it. While road haulers are beginning to deal with what is more convenient. One of the most favourite alternatives in road haulage and sea transportation is the LNG. Liquefied gas guarantees environmental benefits and increased autonomy over CNG, it also has a competitive price at the pump and levels of performance comparable to diesel. Last but not least, it is at the center of a national strategy that promotes development from the distribution network point of view, whereas the incentives for purchasing vehicles reach up to 20 thousand euros in the case of trucks with a mass above 7 tons.

Regarding distribution, things are moving very quickly, thanks to Europe's commitment to Liquefied Methane, which not only meets environmental standards, but also contributes to reducing dependence on oil, a sensitive issue for the EU agenda, ensuring greater security of supply. For this reason, 4 strategic routes are being developed with 14 supply stations across Europe, financed with over 14 million euros under the "LNG Blue Corridors" project.



There are 11 countries and 27 partners involved, including vehicle manufacturers and oil and gas utilities. There are two corridors regarding the Atlantic area and the Mediterranean region, and Italy has two stations, while the other two join the North with the South and the West with the East. But the European network can also rely on major private investments, which have led to the construction of more than 90 refueling stations, mostly in Spain (20) and in the UK (30). There are 11 refueling stations active in Italy at present, but the list is constantly evolving. The ones in Piacenza and Pontedera, both owned by Eni, are part of the Mediterranean corridor of the European project. The one in Padua was the first to be built within a freight village.

The one in Piacenza, in particular, is the most used plant in Europe according to the LNG Conference, with about 60-90 supplies a day for at least 6-10 tons of LNG. All this despite the data on the circulating fleet show the low distribution of industrial vehicles fueled by LNG (about 120-150 in 2016) and in general with alternative power supplies, given the predominance of diesel (99,2% of the circulating vehicle fleet > 3,5t to 2015). Yet HGV's manufacturers offer several green solutions in their fleet. Not only LNG, but also methane and biofuel engines, namely bioethanol, biodiesel (Fame), Hvo (Hydrotreated vegetable oils) and biogas.

The increase in biofuel consumption is one of Europe's prerogatives: by 2020, each Member State will have to bring the percentage of renewable energy used in the transport sector, namely the share of biofuels plus electric, up to 10%. In Italy, according to the EEA Transport and Environment Reporting Mechanism, the quota of renewable energies used for transport was less than 5% in 2014, which is also lower than in 2012. Those who have already achieved the EU parameters are Finland and Sweden, reaching 21,6% and 19,2%, respectively, in 2014 (EEA Term). Looking at biofuels in detail, Italy consumed just over a thousand ktoe (Eu Transport) in 2014. In comparison, during the same year, diesel and gasoline consumption was 31 thousand ktoe.

Germany is the largest producer of biofuels in Europe, with 3.600 ktoe in 2014, followed by France (2.500 ktoe), Holland (1.500 ktoe) and Spain (1.300 ktoe). Italy comes sixth, with 613,6 ktoe, after Poland, which produced 745 ktoe of biofuels in 2014. Overall, biodiesel is the most widely produced and consumed biofuel in Europe, while bioethanol plays a marginal role.



## 5.3. Platooning Generation

**O**n April 6th, 2016, six different car manufacturers put their HG vehicles on the road to Rotterdam, starting from six different cities in Europe: six convoys, consisting of two to three vehicles interconnected in semi-autonomous driving mode, traveled hundreds of kilometers on public roads crossing several borders. The destination was European Truck Platooning, an event organized during the EU Dutch-led semester, which for the first time sparked the interest of European politicians regarding this technology, revealing not only the environmental and logistical benefits, but also the inevitable role that this will have in the near future.

All the car manufacturers were involved in the test. DAF, in particular, took part in the EcoTwin Consortium, set up together with NXP (which deals with the state-of-the-art wireless communication systems between cameras, sensors, radar and Wifi-P), Ricardo (providing professional advice on the functional safety of control systems), TNO (which contributes through software development and the synergy of all new technologies). According to Mr. Ron Borsboom, a member of the DAF Truck Board, the test « should pave the way for vehicle manufacturers and allow them to make further tests on public roads to gain more and more experience ». He did mention, however, that « a considerable development is still needed before we can introduce convoy as a new technology on the market ». How long will it take? According to Mr. Borsboom, it is « a process that cannot be completed before 2020. There are still many issues to be tackled in terms of legislation, reliability and consent ». In other words what he meant was that, regardless of the more or less advanced technical progress, « it is up to politics to make all this possible ».

The advantages of the platoon are not limited to the environmental aspect, where the outcome is important with lower aerodynamic resistance with the convoy. In terms of safety, platooning ensures greater vehicle control because of their connection, while from an infrastructural point of view, it optimizes the space, while also providing better working conditions for drivers.

For example, the stopping distance in case of braking is reduced considerably, because if the head vehicle brakes, the command is automatically transmitted to the following vehicles, much faster than what a driver would do. This allows a better use of the road space, because under these conditions the safety distance could be reduced from the 150 meters currently required to 80 meters, while also preventing the “accordion effect”, that in heavy traffic produces long queues and traffic jams.

However, there are still some obstacles to hamper the proliferation of this mode of transport in Europe. These obstacles have nothing to do with technology, which, as it was demonstrated in Rotterdam, have reached an advanced testing phase. Instead there are different laws of the States that limit their distribution on a large scale, also preventing convoys from carrying out appropriate experimentation. That is why, following the Rotterdam rally, the Amsterdam Declaration was signed, where EU member states committed to removing regulatory and infrastructural obstructions in order to expand platooning; it is all predicted for 2019, the year when according to the Declaration, cross-border testing will start in Europe.

More generally, in addition to platooning, European attention focuses on other intelligent transport systems (ITS) that involve connecting vehicles and infrastructure around them. Traffic lights and road signs capable of exchanging information with vehicles, paving the way for the spread of automatic driving. All this is part of the Cooperative





Intelligent Transport System (C-Its) plan adopted by Europe with Communication 766, which set 2019 as the year of the experimental debut, in conjunction with mass production of intelligent vehicles expected for the same date. The strategy, among other things, aims to maximize IT security, a delicate aspect in a fully digital environment, and to ensure system interoperability across countries by coordinating individual regulations and promoting the development and research in the field. The transversal advantages of the C-Its expansion today affect many interests and priorities of the European Union, as the Commission itself points out: including the reduction of gas emissions and energy consumption, industry digitalization, as well as the interesting potential of the market, which is estimated at tens of billions of euros per year, with hundreds of thousands of jobs that could be created. For this reason, EU Transport Commissioner Violeta Bulc said that investments worth more than three billion euros will be made for the development of the C-Its plan.

Over the next 15 years, ITS will change the aspect of the transport system as we know it today. Making journeys simpler, with drivers that are always connected and up to date on traffic conditions and dangerous situations. And they are even more secure, because “digital technology contributes to the reduction of human error, by far the main cause of accidents in the transport sector,” recalls the European Commission. According to a study by Ertico Its Europe, the reduction in emissions expected among commercial vehicles using ecodriving devices ranges from 4% to 10%. For heavy goods vehicles, the benefits grow up to 25% in specific situations, such as standing by crossroads and traffic lights, under normal traffic conditions. But the list is big: from parking sensors to booking delivery spaces, which can be carried out remotely so one can find a place to offload the goods right away. There are plenty of technologies; they need to be applied as soon as possible to avoid them from becoming obsolete, as recommended by the European Commission in its Communication.

Italy is also focusing on smart roads: the Ministry of Infrastructure and Transport launched a major project to digitalize infrastructure in mid-2016, a major step forward towards the proliferation of connected or AGV vehicles that must “talk” with the roads. The route was promoted by Minister Graziano Delrio and introduced by Ennio Cascetta, Coordinator of the Struttura Tecnica di Missione, with the participation of experts, stakeholders and business operators of the sector. In addition to raising awareness and exchanging experiences, the goal is to initiate a process of “stakeholder engagement” to determine the minimum standards to be applied to the digitalization of road infrastructure. It is a process in line with the 160-million-euro investment that Anas is making to bring “the roads of the future into the present”. The company led by Gianni Vittorio Armani invested 20 million euros for implementing the Salerno-Reggio Calabria (now called the A2 - Autostrada del Mediterraneo), which will become the first smart road in Italy: the first sections should be inaugurated in the second half of 2018.

Moreover, on the Official Journal of 14 November 2016, four additional online public tenders, for a framework agreement procedure, with a total value of 140 million euros, were published (currently in the awarding process), relating to the supply and installation of advanced technological systems “Smart Road” for about 2.500 km of Anas network throughout the country. In detail, the four public tenders amount to an 60 million euro investment for the technological implementation of approximately 1.500 km of roads distributed across the Anas network; - 30 million euros for interventions on the Grande Raccordo Anulare of Rome and on the A91 Roma-Fiumicino motorway; 30 million euros for the technological equipment along the Orte route – Mestre of the E45 and E55 and 20 million euros for the A19 Palermo-Catania motorway, which indeed amounts to a coverage of about 2.500 km of the national road network.





*Interview with Paolo Starace,  
CEO of DAF Industrial Vehicles in Italy*

**« PLATOONING?  
THIS IS WHAT IT WILL BE USED FOR..»**

***The Haulage trucking companies shed their skin. There are less of them, but they are better organized and structured. In fact, they express new needs. In the face of these changes, how does the vehicle manufacturer's supply change?***

*As a manufacturer, we first started from product evolution, dictated by two factors: on the one hand, a strict set of regulations that forced us to go in that direction; on the other hand, market demands with respect to a cut in consumption and emissions. But this evolution was not enough to meet new needs. It was also necessary to develop new services and, in particular, package deals aimed at meeting a guarantee of demands regarding costs. Because if the recession led to uncertainties on with revenue, many*

*expressed the need of having fixed costs, as a monthly installment, to acquire not only a vehicle with certain configurations, but also maintenance and much more. Then we went further to include connectivity packages in the range of services we offered, namely, what was needed to integrate and link the vehicle, to the processes of the company not only from a physical point of view - moving goods from A to B -, regarding downstream processes of the client. We are talking about logistics management, predictive maintenance, driver and vehicle efficiency, to provide everything you need to optimize uptime.*

***This is as far as business optimizations. And with respect to the costs control in order to compete on an enlarged market?***

*To answer this, we must try to look ahead, following the trajectories made possible by the technological evolution. Let's take a look at platooning, which is precisely an attempt to sensibly break down one of the main elements that makes the difference in competitive terms, that is, the cost of labor. Putting it simply, platooning allows you to move two or three vehicles with just one driver. And if tomorrow some highways will be able to implement some sensors for autonomous driving, it will be enough to drive the vehicle to the highway and go pick it up at the exit. 10 years from now technology will lead to a response to the issue of driving costs. If, furthermore, there is going to be a possible harmonization of European taxation or the creation of a two-speed Europe, perhaps in a few years those discriminating factors which today help Eastern companies might disappear. Finally, the costs are also contained by implementing critical mass. It is not conceivable that a large industry will rely on a carrier with 3 trucks... And this is another great discriminating factor of Italy compared to the Northern or Eastern European market, where there have been great concentrations. But this is an activity that is not up to us manufacturers.*

***Do we want to specify that these technological contributions reduce the cost of labor, but do not wipe out jobs?***

*Absolutely Absolutely the truth is that we, like Unrae, have promoted an initiative to bring young people closer to this industry. But it is very likely that this industry will evolve. It will happen anyway, let me go further and make a comparison, as it happened to mechanics: first they worked with a screwdriver and a hammer, now without a PC they go nowhere.*

*10 years from now technology will lead to a response to the issue of driving costs. If, furthermore, there is going to be a possible harmonization of European taxation or the creation of a two-speed Europe, perhaps in a few years those discriminating factors which today help Eastern companies might disappear*

*And so the driver, in addition to being able to drive, will have to do more. If he works internationally, for example, the fact of knowing more languages will be an added value. It's just an example, but there are so many others.*

***We talked about connectivity services. But today every carrier uses its own software or one that belongs to their business customers. How can we deal virtuously with this IT fragmentation?***

*This is a point which will determine the future. DAF is a growing brand, earning new market shares and, like all growing brands, approaching new situations. In order to grow, DAF not only sells new vehicles to existing customers, but it acquires new ones, that may have other vehicles and use*

*other computer platforms. That's why we have developed our open source platform so that we are able not only to import data from other vehicles and to manage them with a single app, but also to export them to other platforms. Then it will be about understanding if the other platforms are willing to accept external data. However, this is our choice and I am convinced that everyone will have to adapt to this path because a manufacturing company with a closed platform is likely to be cut off. At that point a new phase will happen - it's my vision - where there will be aggregators, a bit like what happens today with the websites where you find the several hotel offers and then one comes to a decision. As I do not rule out that tomorrow this industry might also find new interest from the outside world, for example regarding large information providers. I mean: why is Google interested in creating a self-driving car? Because if tomorrow it will be able to drive someone and bring them to the office releasing them from the burden of driving, this person will be able to divert the attention elsewhere. She/he can read, go on the internet, do more. Do all the things that a professional driver cannot do today and could do tomorrow, taking care of work problems for his boss.*

***The past decade as well as the next one will be crucial for the evolution of the vehicle and the profession. But what about the purchase of the vehicle or financing, has there been and is there going to be any evolution?***

*There has definitely been an evolution and it is also very important, but it is limited to the captive, the manufacturers' holding company. General-interest banks, on the other hand, have been out of the industry for years having limited financial capacity to invest in certain sectors. And this has helped captives develop deals that banks have never offered: incorporating a range of services (leasing, insurance, maintenance, etc.) into a single bill and a single direct debit. Not to mention that the captives have negotiating power over, for example, insurance companies; the premiums that they can achieve are surely cheaper than what a small independent carrier can get. But over time the role of the captives will go even further. Today, for example, there is more and more talk of rental as an evolution of what once was full leasing. But let us return to the concept already expressed: as a hauler, I am interested in paying a sum that is all inclusive. Lastly, there will be an evolution from the point of view of functional payment tools to facilitate the operator, especially if this is small. I mean, who nowadays, can afford to physically go to a bank counter to make an installment?*





*Interview with Alberto Di Mase,  
Italy Country Marketing Manager of Visirun*

## **SIMPLICITY AS VALUE**

***Which support can technology, vehicle tracking, fleet management control provide to help reduce the running costs of a road haulage company?***

*Over the last few years, technological advances in areas such as the cloud and mobile applications have opened up new opportunities for realities of all sizes in the logistics and transport sector, which today can rely on highly efficient software for satellite location, tracking of vehicles and fleet management. These are effective systems that allow you to remotely control a fleet, so you can always have a complete and detailed picture of the situation of the vehicles.*

*With Visirun, for example, you can monitor your fleet from your PC, smartphone or tablet, getting real-time information on mileage, fuel consumption, average speed, position, start, stop and break times. Our strength is simplicity: although our solution is technologically advanced, it's intuitive and easy to use. No training courses are required, no installation or upgrading is required on corporate computers or the local devices. You just access the Visirun.com portal to start using the service. The benefits are obvious: users can check the status of the fleet and respond proactively to their customers' requests. The software calculates times and distances by keeping track of the traffic situation, flags whether a vehicle is stationary, moving or with the engine switched on, indicating any waste of fuel. Our customers can manage their fleet more efficiently, optimizing time and costs. Another aspect to consider is safety:*

*Visirun is suitable for setting up more than 40 types of custom made alarms, including, for example, exceeding the speed limit, off-engine motion, unexpected stops, deviation from the established routes and exceeding permitted driving times. There are also silent alarms for armed robbery, towing with the engine off, unauthorized access to the vehicle. The crash sensor detects and breaks down any accidents and provides a graphic detail of the decelerations preceding the impact along with a seriousness indicator of the accident. It is an important way to protect the safety of drivers and safeguard the vehicles and the goods.*

***Vehicle monitoring can help to optimize cargo capacity and minimize the typical cargo problems such as that of unladen journeys?***

*Certainly. Remote control allows you to know precisely the*

*IT IS POSSIBLE TO KNOW WHEN THE DELIVERY WILL TAKE PLACE, WHAT IS THE ROUTE OR THE FUEL LEVEL IN THE TANK, HOW MANY HOURS THE DRIVER HAS BEEN DRIVING. IN THIS WAY, YOU CAN DECIDE WHICH VEHICLE CAN MAKE ANOTHER DELIVERY DURING THE RETURN JOURNEY.*



entire route of the vehicle. It is possible to know when the delivery will take place, what is the route or the fuel level in the tank, how many hours the driver has been driving. In this way, you can decide which vehicle can make another delivery during the return journey. Thanks to geolocation, it is also possible to locate the vehicle closest to a certain point of interest, to request a diversion and to pick up a new cargo.

**Another “historic enemy” of the Road Haulage and in general of a lot of national entrepreneurship is represented by bureaucracy: how can an extremely simplified reporting service help to fight it?**

The simple and detailed reporting service can greatly facilitate bureaucracy management: for example, the data of the tachograph can be quickly and automatically checked thanks to a remote download to determine the actual driving hours of one or more drivers, which will then be paid accordingly. You can then fill reports out on driving hours and the route made by individual vehicles and set up alarms to schedule maintenance of individual vehicles and tire replacement.



**Deborah Appolloni**, is a professional journalist, started in 2001 to deal with the field of mobility for the newspaper "Il Sole 24 Ore - Trasporti". In 2010 she wrote the book «Razza padroncina, dieci anni di autotrasporto 2000-2010», published by Il Sole 24 Ore. She currently curates the communication for the National Railway Safety Agency, the Freight Leaders Council and TTS Italia (Association for Telematics in Transport). She writes monthly surveys on the world of freight and logistics for the specialized magazine "Uomini e Trasporti". She graduated in Slavic Studies at La Sapienza University and after several work experiences and study abroad she returned to Italy: she lives in Rome, is married and mother of two children.

**Maria Carla Sicilia** was born in Cosenza 28 years ago. She completed her studies at La Sapienza University, graduating with a degree in Publishing and Writing. Since 2015 she has been working together with "Staffetta Quotidiana", where she has started dealing with energy and mobility issues. She also writes for "Quattorruote" and "TuttoGreen" de La Stampa. At present she works at the editorial office of the newspaper "Il Foglio" in Rome, where she has been living already for 10 years in the Garbatella district.

**Free surcharge**

to No 328-June 2017 of Uomini e Trasporti  
Monthly political and technical information  
Publication of the professional trade association  
Organ of Federtrasporti Group

**Copies also distributed separately**

**Editor in Chief**

Daniele Di Ubaldo

**Deputy Editor**

Patrizia Amaducci

**Marketing and Advertising**

Matteo Carretti

**Publisher**

Federservice Soc.Coop.

**Management, editorial office, administration**

Via G. Di Vittorio, 21/B1 - 40013 Castel Maggiore (Bo) - Italy  
tel. +39 051 7093831 - redazione@uominietrasporti.it  
Authorisation of the Court of Bologna No 4993 of 15-06-1982

**Graphic project**

Lorenzo de Angelis - Ldart.it

**Print**

Casma Tipolito  
Via B. Provaglia,3 - Bologna - Italy

**Reproduction, even partial, without the prior written permission of the publisher is prohibited.**

The publication is available  
on the website [www.uominietrasporti.it](http://www.uominietrasporti.it)  
in the area reserved for subscribers.

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