

**1<sup>st</sup> City-Industry-Summit TROLLEY**  
21<sup>st</sup> October 2010, Parma

**RESULTS OF THE SURVEY:  
“TROLLEYBUS SYSTEMS IN ITALY”**



ASSTRA was born the 1<sup>st</sup> January 2001 from the combination of two associations that practised the profession for over 50 years.

**FENIT**  
*Federazione  
Nazionale  
Imprese  
Trasporti*

*By 1946*



*By 1947*

Is the National Association of Local Public Transport in Italy

ASSTRA represents a network of more than 200 companies running not only urban and suburban public transport services on:

- buses,
- tramway,
- trolleybuses,
- metropolitan railway,
- light rail (Except those operated by Trenitalia S.p.A.),
- waterborne transport,
- tourist and school services,
- parking areas,
- towing away of vehicles.

# WHAT IT DOES

Acts to create awareness of policy-makers and public opinion on the social, economical and environmental role of local public transport according to the principles of sustainable development.

Offers its members a wide spectrum of services such as legal, economic-financial and tax advice along with counselling in matters relating to trade unions, insurance, railways and technological progress.



Represents the interest of its members in front of governmental authorities, policy-makers, Trade Unions, economical, political and social organizations, both national, European and international.

# THE PRINCIPAL ASSTRA DATA

THE PRINCIPAL ASSTRA DATA	
Associate members	205
Quotes of market urban transport	95%
Quotes of market extra-urban transport	75%
Public Transport Fleet	35.000
Regional Common	830 trains
Net extent	210.000 km
Produced kilometers	1,65 billion
Employeds	100.000
Served councils	5.000
Passengers per year	5,2 billion
Turnover	9 billion €

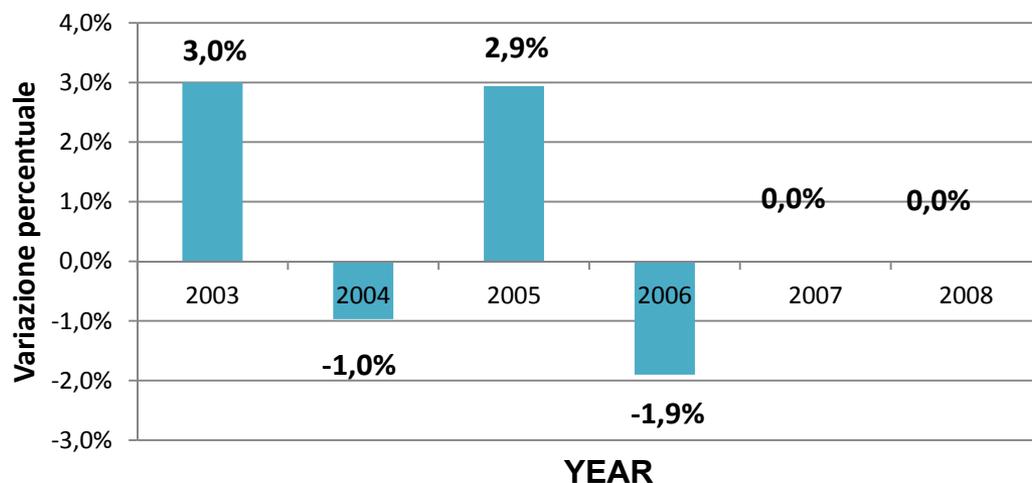
[Source: ASSTRA, Yearbook Year 2008]

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# THE OFFER OF VEHICLES OF PUBLIC LOCAL TRANSPORT

TYPE PARK	N. CARRIAGES	SOURCE
Bus	34.375	ASSTRA (2006)
Trolleybus	437	ASSTRA
Tram	957	CNT 2006-07
Underground	1.298	CNT 2006-07
<b>TOTAL</b>	<b>35.700</b>	



**FLEET DYNAMICS**  
(2003-2008, percentage change)

ASSTRA presents the results of the survey 'TROLLEYBUS SYSTEMS' aimed at painting a picture of the Italian situation referred to 2009.



➤ **Sample :**  
13 Companies, i.e. **100%** of the entire universe

➤ **Population:**  
ASSTRA Universe  
(13 Filobus Companies )



Inviare al Servizio Innovazioni Tecnologiche (fax: 06/69603555; amitrano@asstra.it)



**QUESTIONARIO  
"SISTEMI FIOLOVIARI"**

**RICHIESTA CHIARIMENTI**

Nel caso di incertezze o difficoltà nella compilazione della rilevazione, le Imprese potranno rivolgersi al Servizio Innovazioni Tecnologiche.

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*Si informano le Aziende Associate, che tutti i questionari pervenuti saranno conservati e autelati da ASSTRA nel rispetto delle norme sulla privacy; i dati raccolti saranno trattati in forma anonima, e l'esito dell'indagine sarà presentato attraverso un'elaborazione aggregata dalla quale non sarà assolutamente possibile risalire al singolo caso specifico.*

Azienda: .....	Città: .....
Responsabile Aziendale della compilazione della rilevazione	
Servizio: .....	
Nome: .....	Cognome: .....
Telefono: .....	Fax: .....
Cellulare: .....	E-Mail: .....

Autorizzo il trattamento dei dati ai sensi del D.Lgs. 196/2003 .....

(firma)

1/8

CITY/COMPANY
ANCONA/CONEROBUS
CAGLIARI/CTM
GENOVA/AMT
IMPERIA/RT
LA SPEZIA/ATC
MILANO/ATM
MODENA/ATCM
NAPOLI/ANM
NAPOLI/CTP
PARMA/TEP
RIMINI/TS
ROMA/ATAC-TRAMBUS



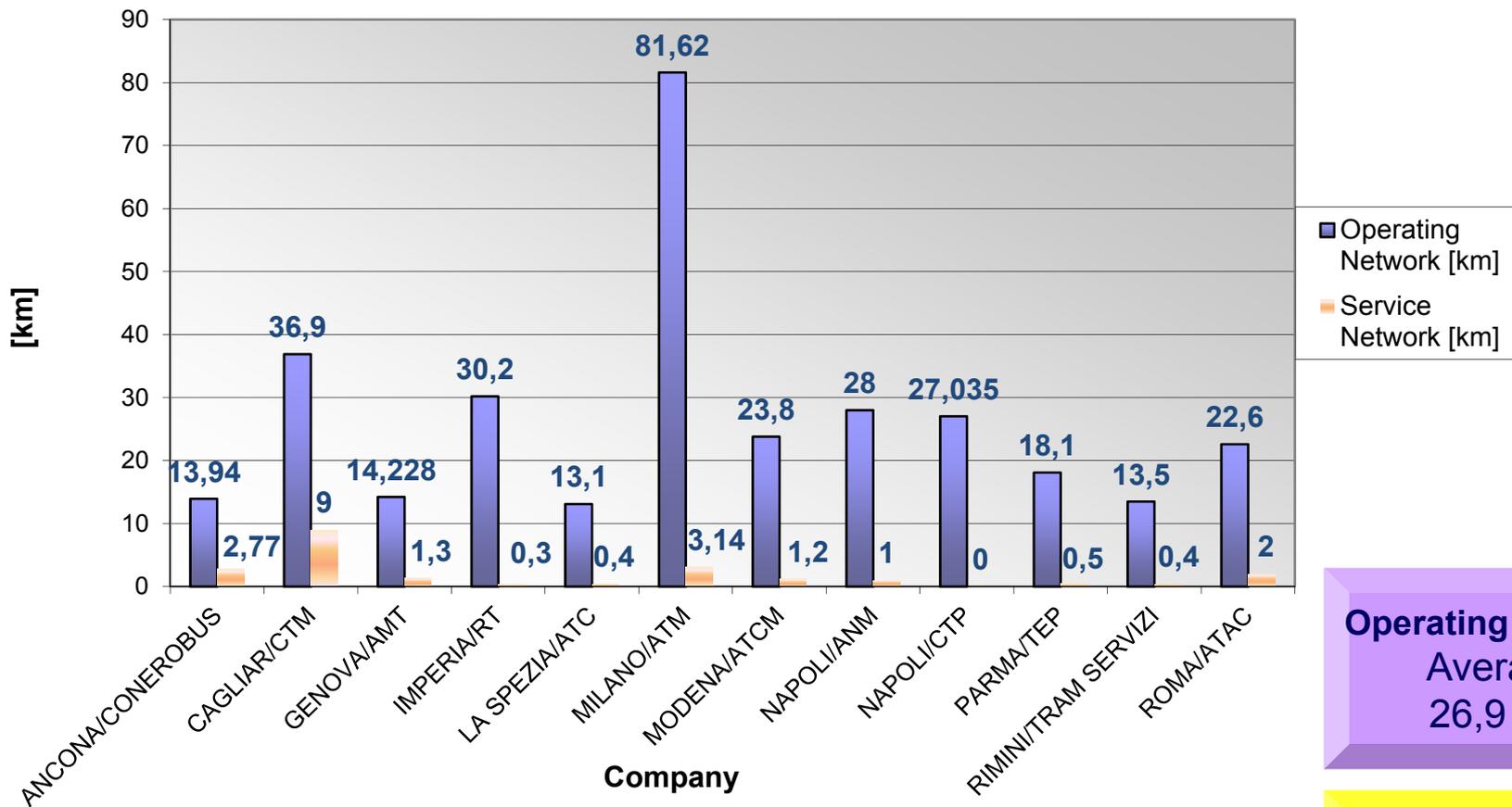
- SECT. 1: GENERAL INFORMATION
- SECT. 2: VEHICLE
- SECT. 3: FIXED INSTALLATION
- SECT. 4: POSSIBLE DEVELOPMENTS

# SECTION 1

## GENERAL INFORMATION



# TROLLEYBUS NETWORK



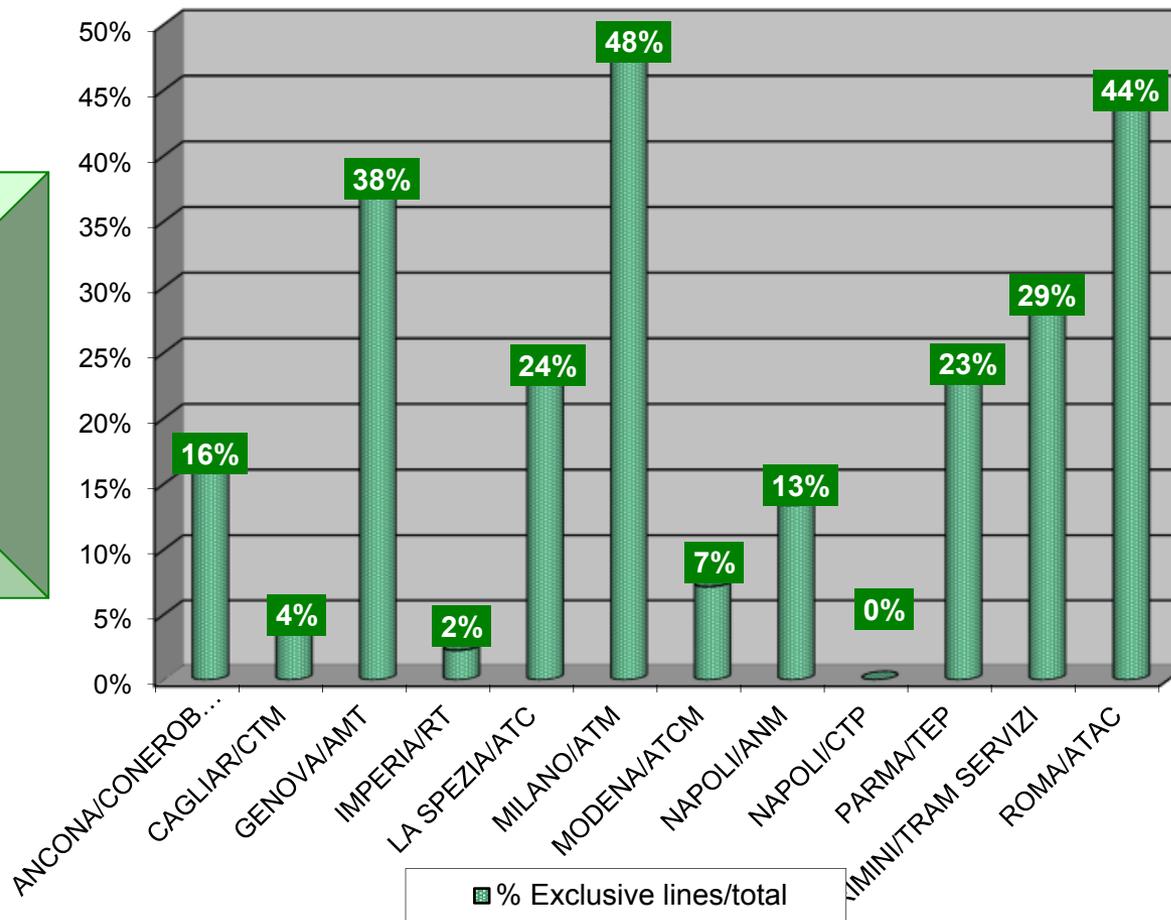
**Operating Network  
Average  
26,9 km**

**Service Network  
Average  
1,83 km**

The diagram shows for each transport company the length of the operating and service networks. The service networks exist in 11 companies.

# EXCLUSIVE LANES [kms]

% of exclusive lanes/total lanes  
**23%**  
(average value)



The diagram points out the low number of exclusive lanes for trolleybuses expressed in kms. Indeed, exclusive lanes amounts to 23% of the entire network (except for ATM Milan, and ATAC Rome that exceed 40%).

**TOTAL: 30 OPERATED LINES**



**TRAVELLER/YEAR**  
(Mean Value)  
5.410.643

**Incremento  
2007-2008**

**16%**

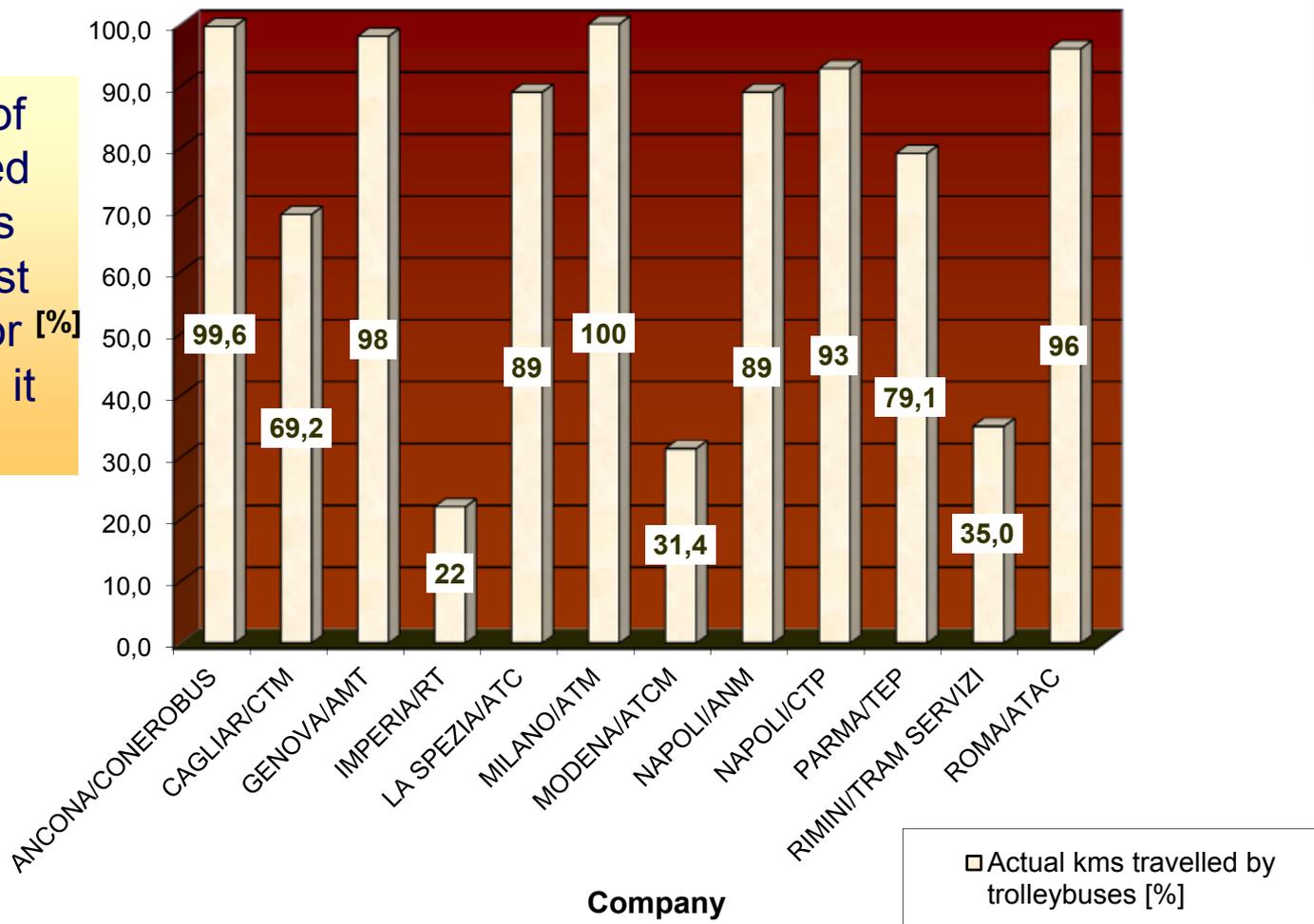
**NO. STOPS**  
1179  
**MIDDLE DISTANCE**  
265 m

**ATAC ROMA  
EXSPRESS LINE  
MIDDLE DISTANCE**  
750 m



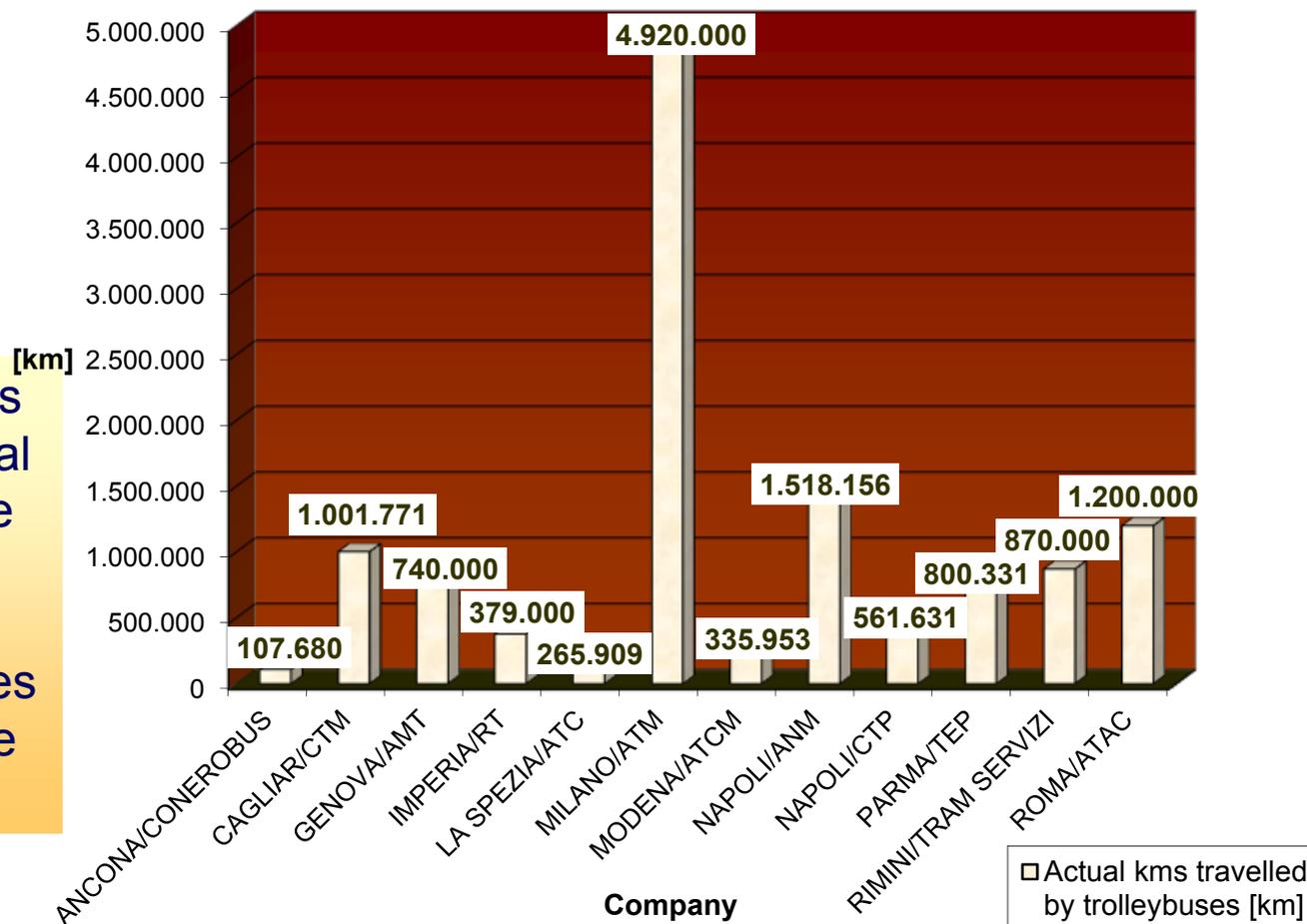
# PERCENTAGE OF ACTUAL KM TRAVELLED BY TROLLEYBUSES [%]

The percentage of actual km travelled by trolleybuses is rather high in most cases. Indeed, for only 3 companies it lies below 40%.



# ACTUAL KMS TRAVELLED BY TROLLEYBUSES [km]

The diagram shows the number of actual km travelled in one year (2008). Please note that almost all companies operate the service all year round.



## TROLLEYBUS SERVICE DURATION:

- 92% of companies: ALL YEAR ROUND
- 8% of companies: ON SCHOOLDAYS

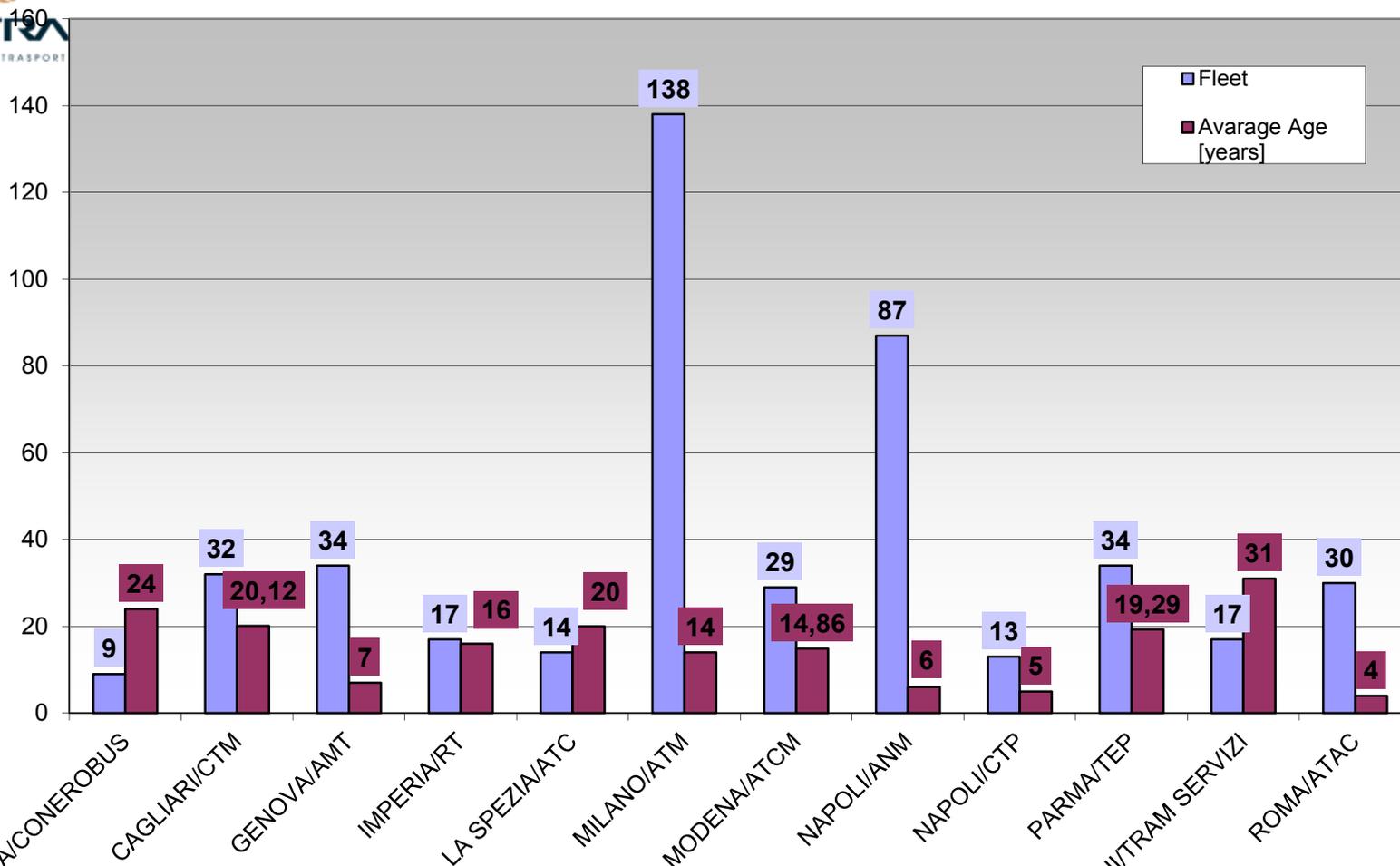


# SECTION 2

## VEHICLE



# FLEET/AVARAGE AGE

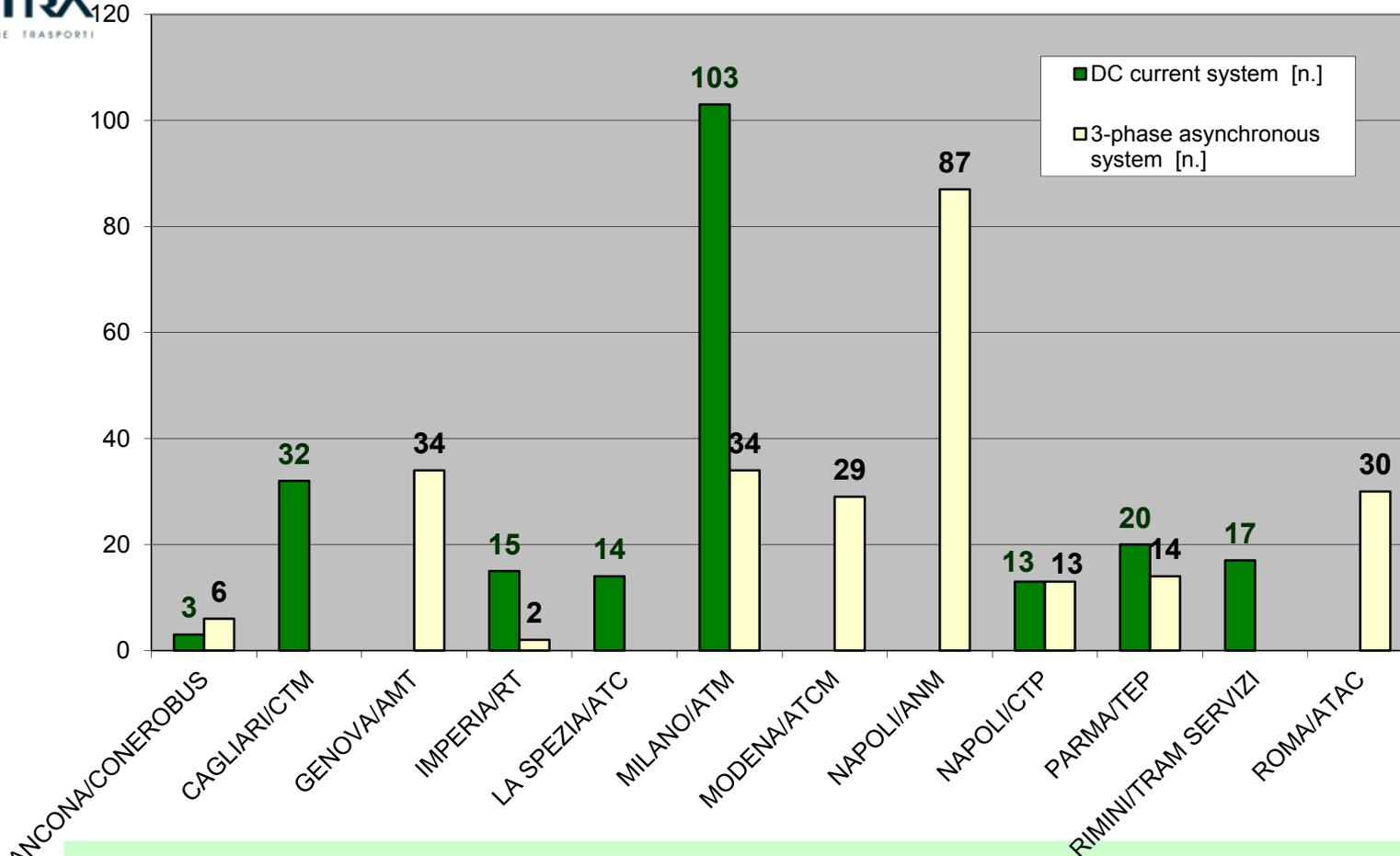


**AVARAGE AGE**  
15,5 years

**21%**  
TROLLEYBUSES WITH  
AIR CONDITIONING SYSTEM

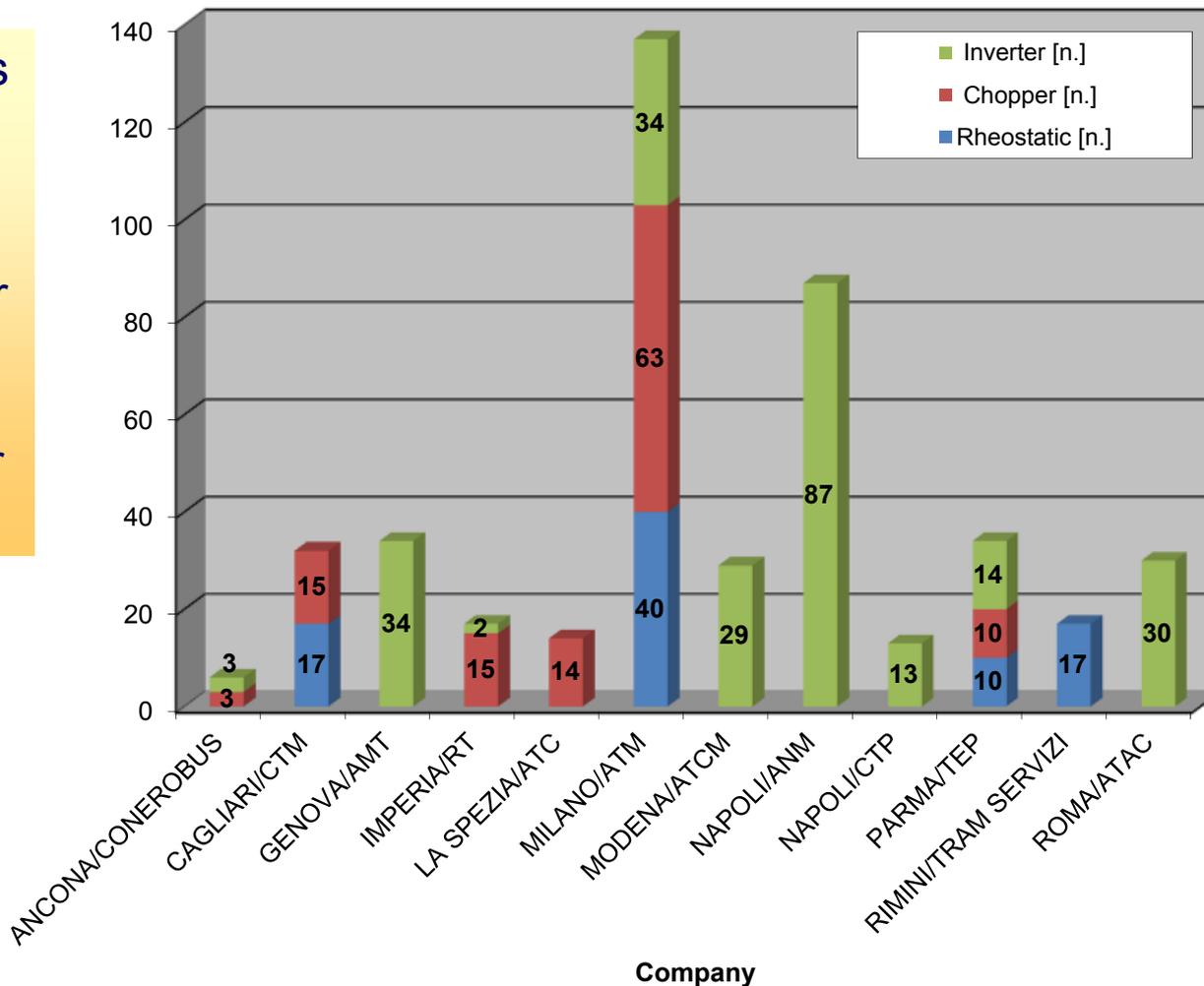
**VEHICLE LENGHT:**  
↗70% = 12 m  
↗30% > 12 m

# TYPES OF MOTORS



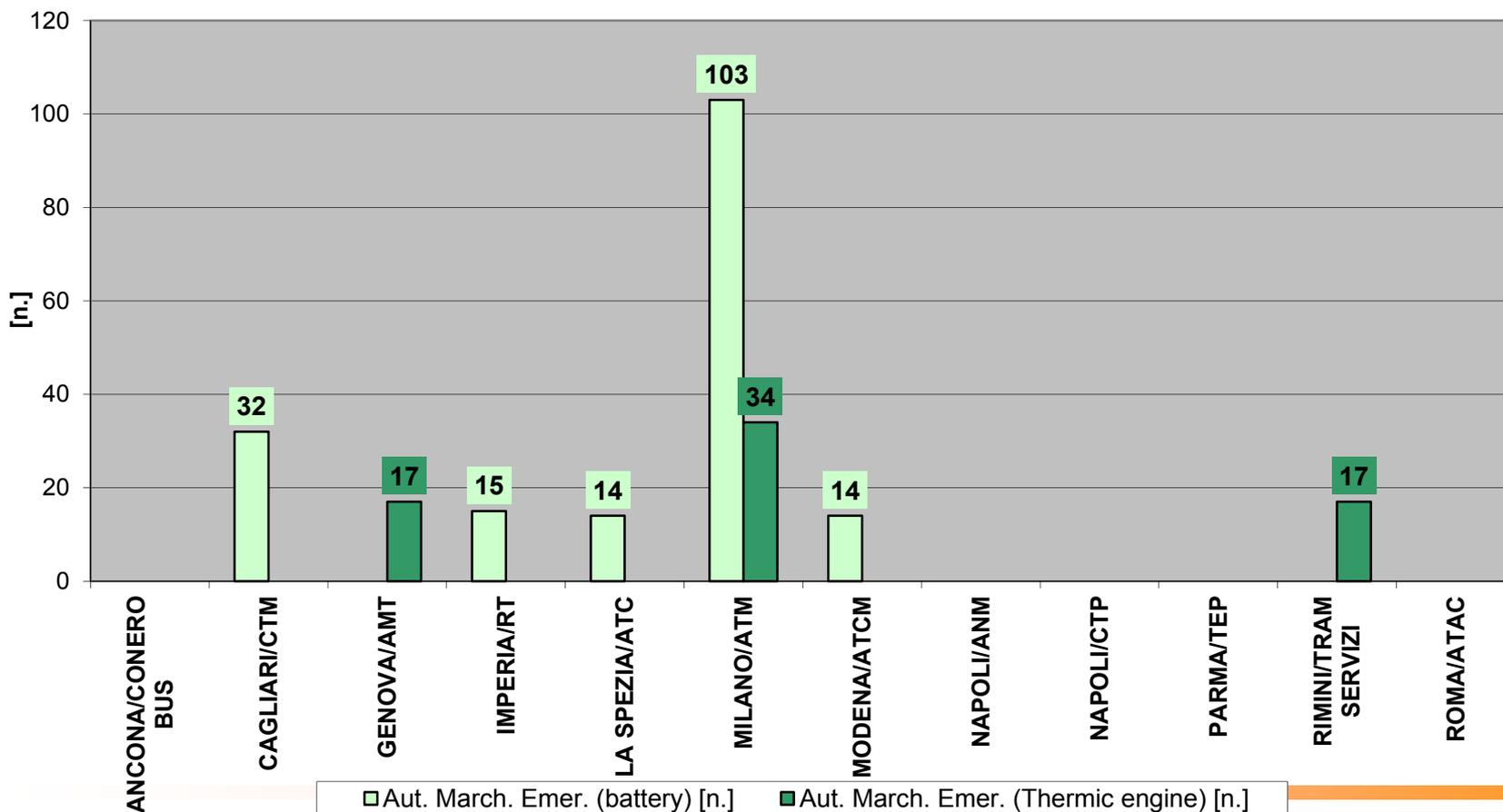
The diagram shows the types of motors in regular service vehicles and it specifies the number of vehicles with a DC current system and of those with a 3-phase asynchronous system for each company.

The diagram shows the number of vehicles equipped with rheostatic, Chopper or Inverter control systems. The most widely used is the Inverter type.



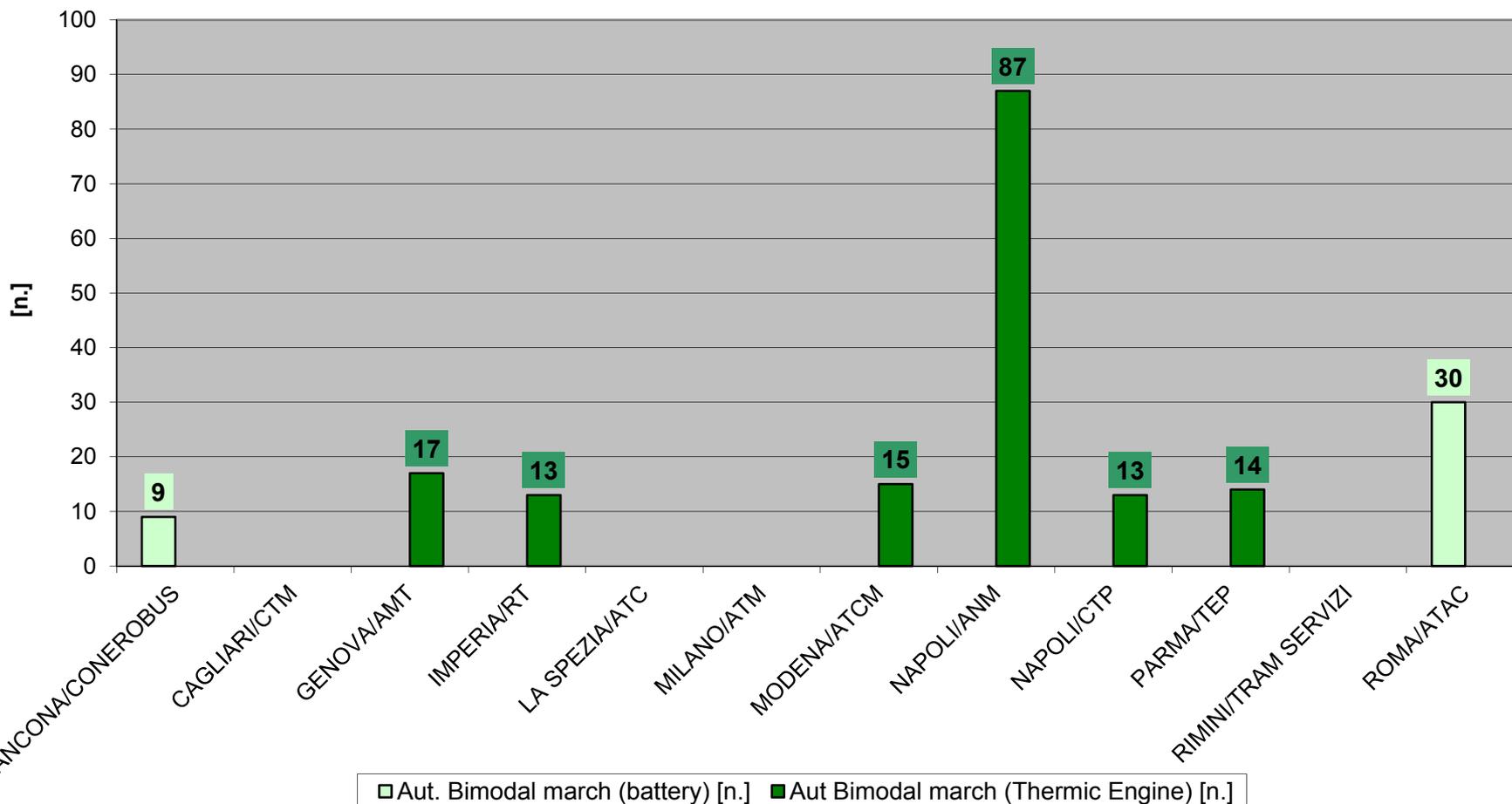
# AUTONOMOUS MARCH SYSTEM OF REGULAR TROLLEYBUSES

VEHICLE EQUIPPED WITH AUTONOMOUS MARCH SYSTEM OF ONLY EMERGENCY



# AUTONOMOUS MARCH SYSTEM OF REGULAR TROLLEYBUSES

VEHICLE EQUIPPED WITH AUTONOMOUS BIMODAL MARCH SYSTEM



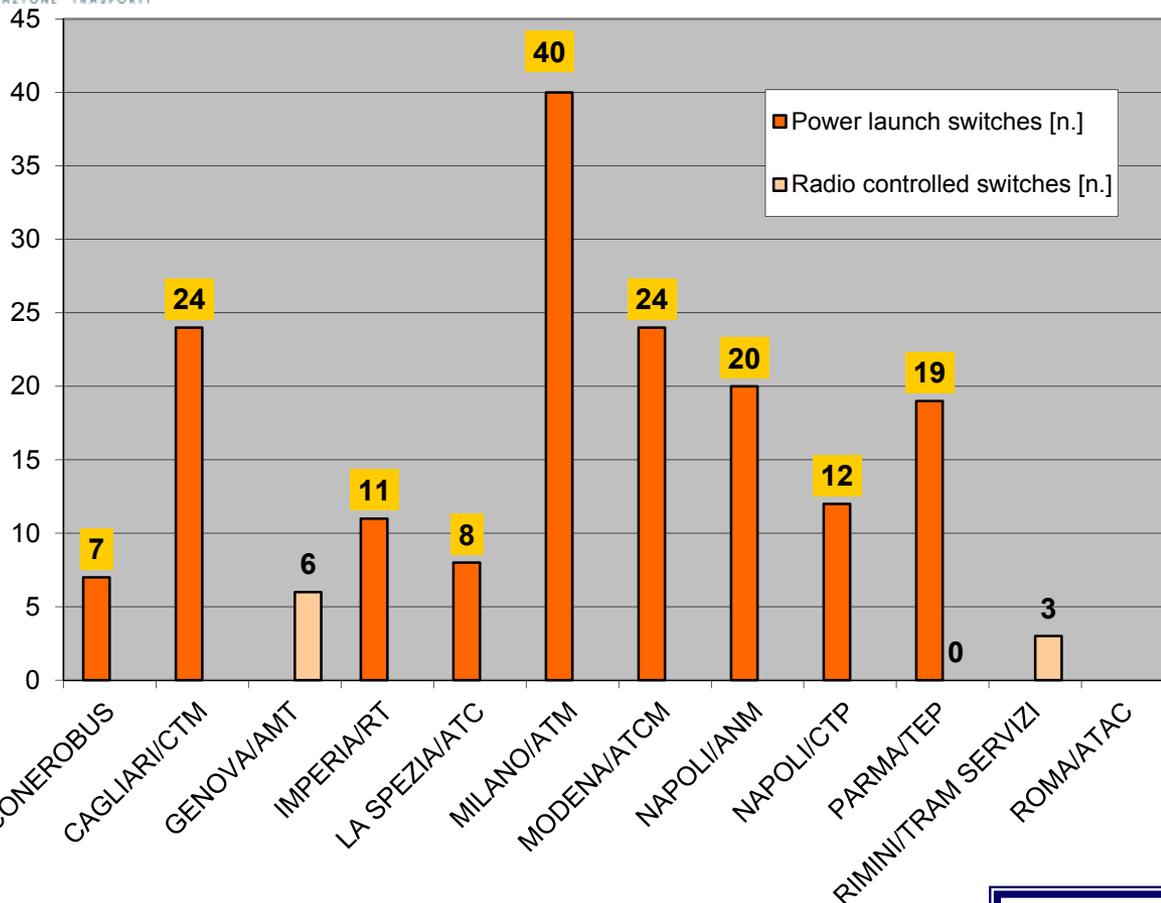
# SECTION 3

## FIXED INSTALLATION



# SWITCHES-DEPOTS

## SWITCHES



Please note that only AMT Genoa and Tram Servizi Rimini use radio controlled switches.



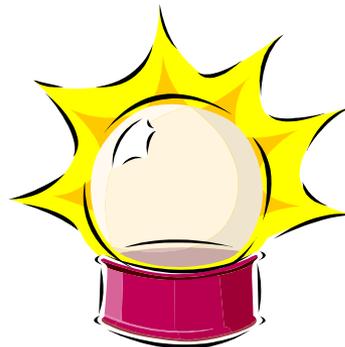
**DEPOTS**



➤ 14 Depots  
➤ 33 TROLLEYBUS/DEPOT

# SECTION 4

## POSSIBLE DEVELOPMENTS



Projects	% Companies	Quantity (TOTAL VALUES)
Modernization of installation	25 %	Km of line: 12
Fleet replacement	50%	No. of vehicles: 84
New rolling stock (increase)	27%	No. of vehicles : 61
Purchase of specific equipment and control systems	25%	SSE systems and driving aids
Network extension	42%	Km of network : 48,6

The table shows the 'works in progress' in Italian companies. They involve mainly the **fleet** (84 new vehicles) and the **network** (to be extended by 48,6 km).





**SGM S.p.A. Lecce**



**AMTAB S.p.A. Bari**

# RESULTS OF THE SURVEY: “TROLLEYBUS SYSTEMS”

★ Thank you for your attention ★

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