



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



STANDARDS, TECHNOLOGICAL EVOLUTION & TRADITION

Eugenio Cavagnoli

President Codes & Standard Committee

AssoAscensori



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



- ➔ **STANDARDIZATION IN ITALY**
- ➔ **EN 81-20 & 50**
- ➔ **STANDARDIZATION vs DESIGN**



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



STANDARDIZATION IN ITALY



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



**The lift sector is one of the
most regulated**

**The first legislation for lifts in
Italy dates back to 1945**



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



**European CEN standards
become automatically Italian
standards (UNI)**

+

**UNI develops its own
standards for lifts and
escalators**



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE

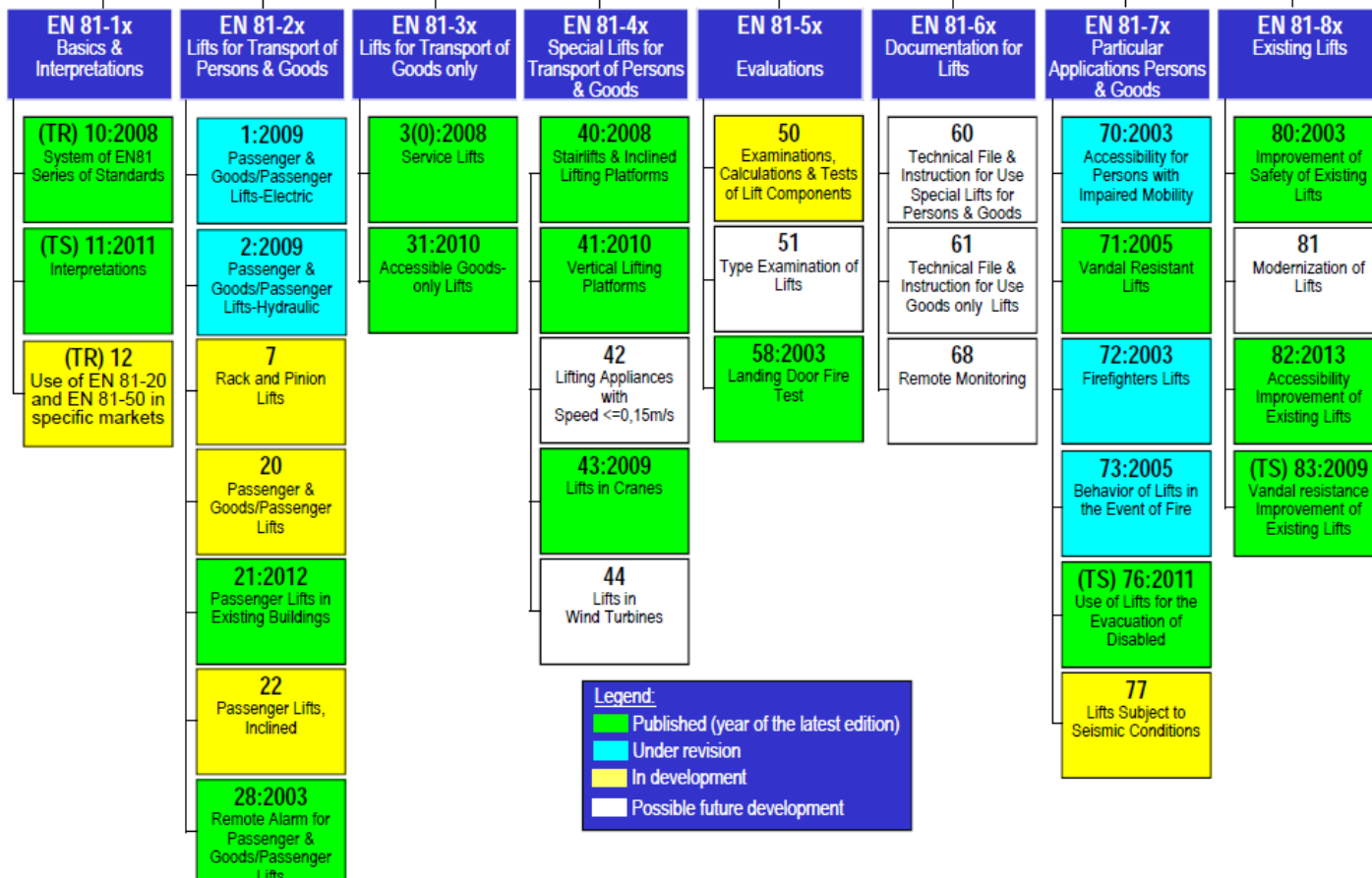


CEN/TC 10 Work Program

Structure of EN 81 family of Standards

EN 81
Family of Standards

CEN TC 10 (Lifts, escalators and moving walks)



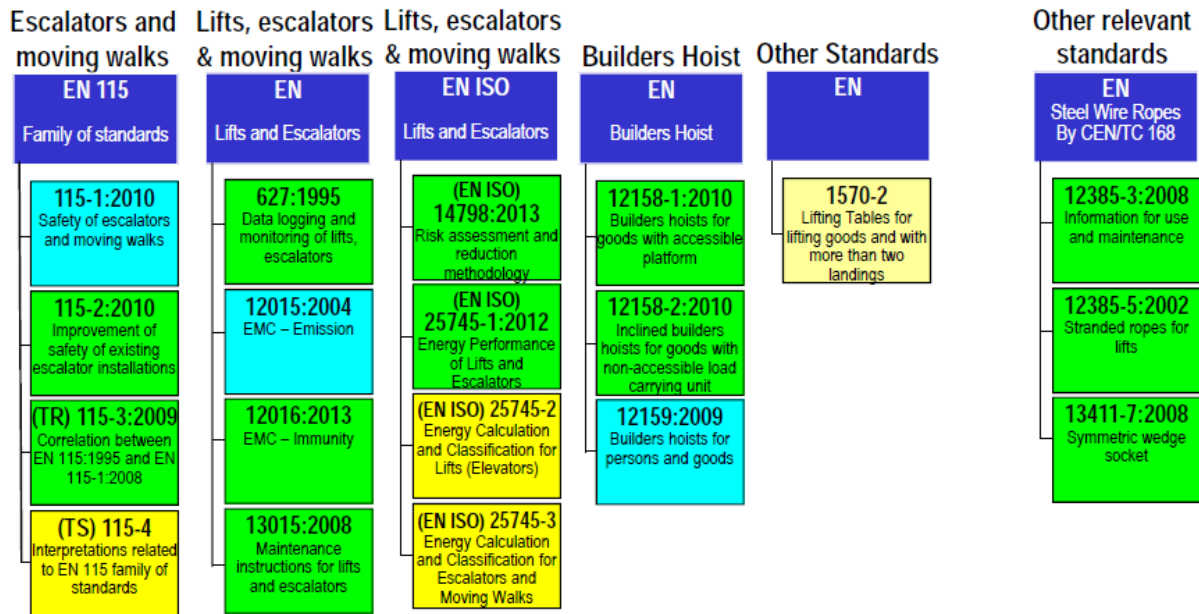


FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



CEN/TC 10 Work Program Other standards

CEN TC 10 (Lifts, escalators and moving walks)



Legend:

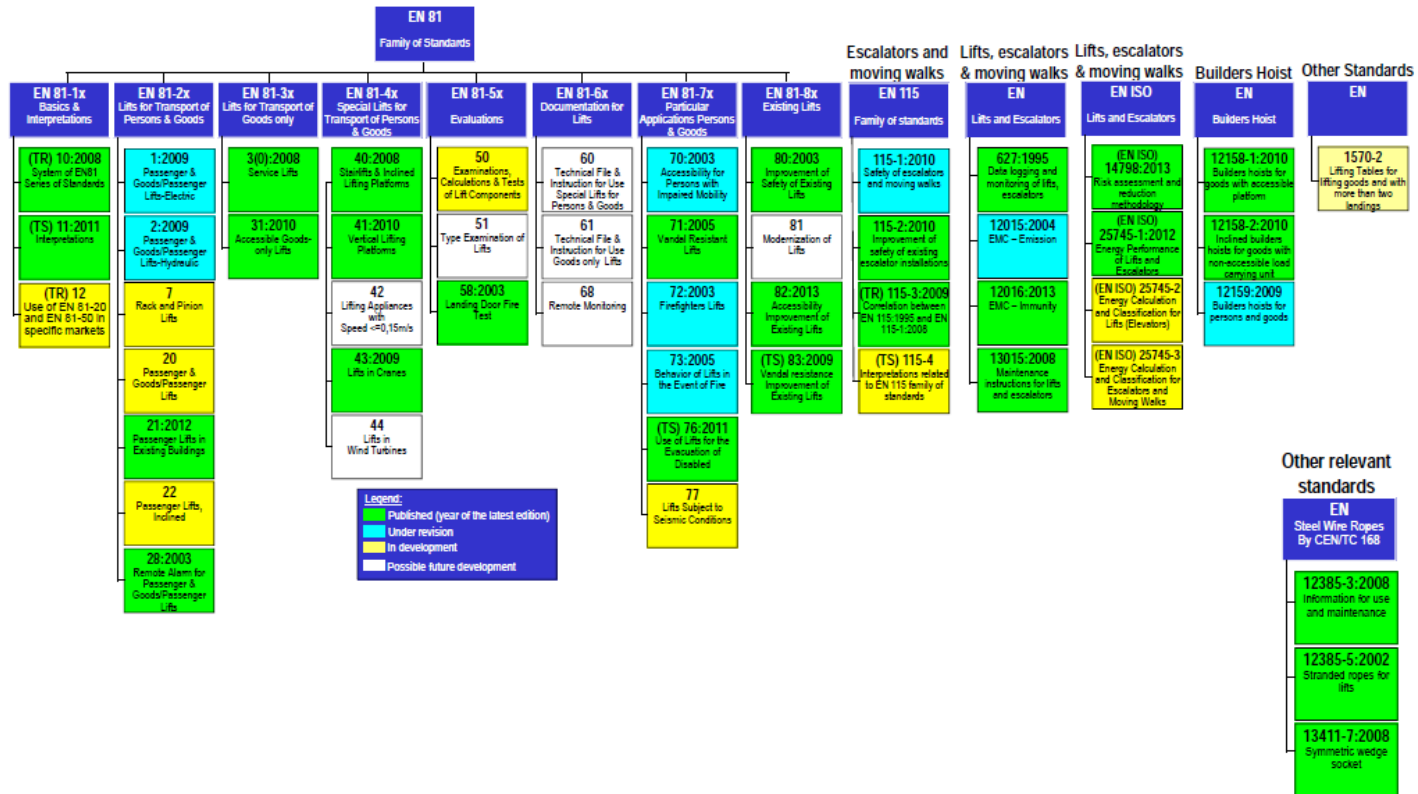
- Published (year of the latest edition)
- Under revision
- In development
- Possible future development



CEN/TC 10 Work Program

Complete overview

CEN TC 10 (Lifts, escalators and moving walks)





FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



EN 81-20 & 50



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



The EN 81-20 and EN 81-50 documents will represent the biggest change to the design standards for lifts for the last 20 years.



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



WHY CHANGE?

Many items have influenced the creation of these new standards, such as:



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



- ➔ **improvement in safety due to changes in proven technology and the need to reflect changes to the state of the art;**
- ➔ **incorporation of essential health and safety requirements from modified EU Directives;**
- ➔ **elimination of reported errors;**
- ➔ **clarification of the text and incorporation of proposals resulting from interpretation requests;**
- ➔ **improvement of the references to other standards according to the progress in that field.**



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



WHAT DOES IT MEAN?



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



INCREASED SAFETY FOR PASSENGERS

Examples of new requirements:

- ➔ Increased strength of doors, car and well
- ➔ Increased lighting in the lift car
- ➔ Prevention of persons leaving car if stopped between floors
- ➔ Improved materials used in car enclosure (flameproof and safety glass)
- ➔ Better classification of loading conditions, and safety using loading vehicles (forklifts etc)



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



INCREASED SAFETY FOR ENGINEERS

Examples of new requirements:

- ➔ Increased refuge space in pit and headroom
- ➔ One space for each person
- ➔ Pit control station and improved car top control
- ➔ Improved pit access (ladders, control positions, etc.)
- ➔ Emergency lighting on car roof
- ➔ Improved balustrade on car roof
- ➔ Door bypass control to prevent use of “shorts



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



WHAT DO EN 81-20 & 50 INVOLVE?



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



MANUFACTURING CONSIDERATION

- ➔ **Development of new products requires time and manpower and should be considered according to the implementation dates.**
- ➔ **New materials will need to be sourced and additional components are required to be purchased or manufactured.**
- ➔ **Some new elements will require new product certification, which may need to be from independent sources. e.g. Notified Bodies**



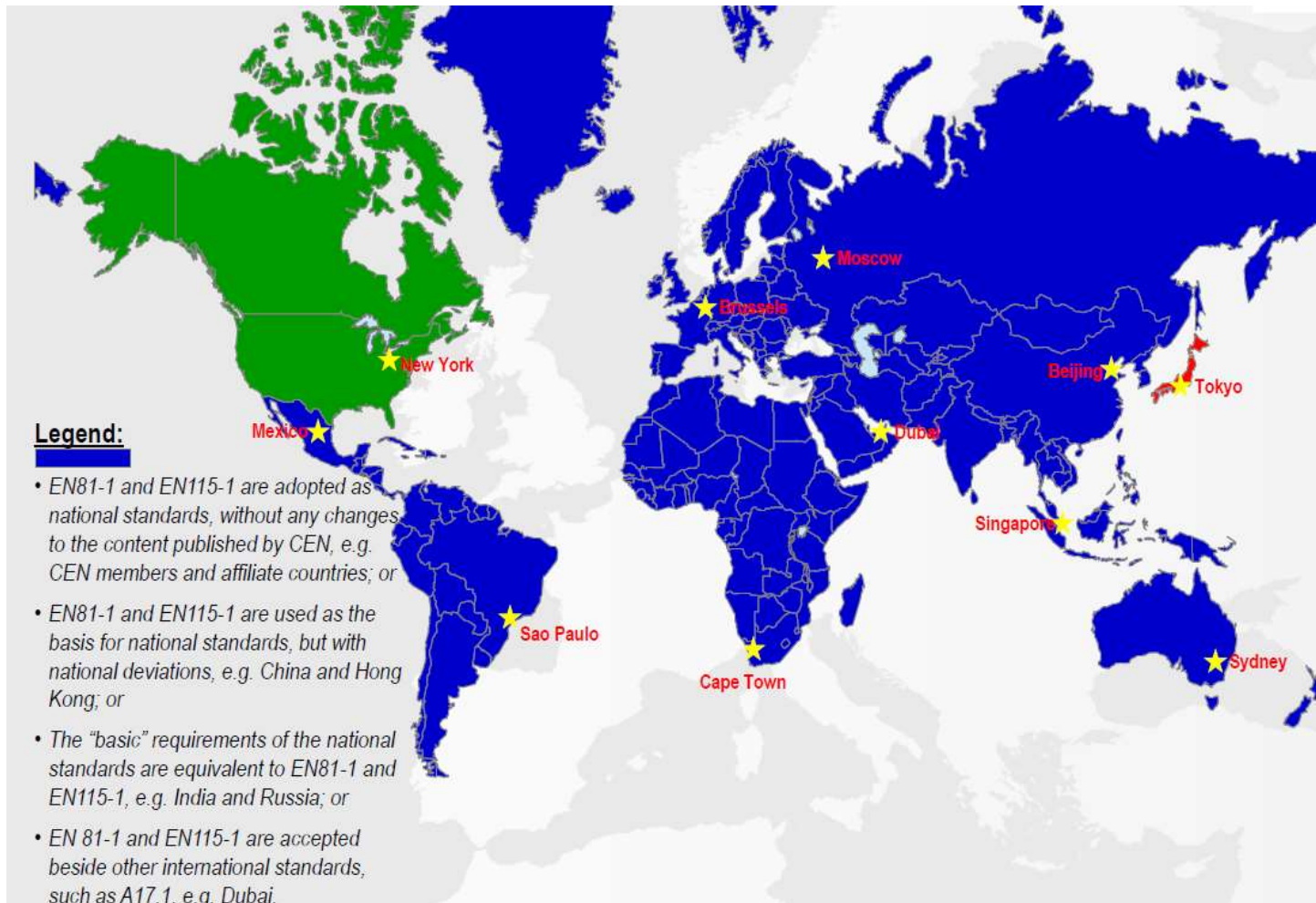
FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



MANUFACTURING CONSIDERATION

- ➔ There may be a need for new product documentation describing new features (user manuals, certificates, etc.)
- ➔ New installation methods and risk assessments may be required
- ➔ New on site test procedures to show product conformity.

ANTICIPATED USE OF EN 81-20





FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



GLOBAL HARMONISATION

There have been numerous discussions in CEN and ISO about the possibility of a new “global” design standard for lifts.

It seems there may now be a real chance to have the latest and most up to date standard (EN 81-20) form the basis for a world wide ISO giving the same technical requirements for lift safety regardless of where in the world the lift may be installed, serviced or inspected.



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



STANDARDIZATION VS DESIGN



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



**The observance of the
standards does not imply
neither less style or design
nor less attention to
architectural heritage**



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



Have a look to the new stylish skyline of Milano!!





FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



Unicredit Tower - César Pelli



*City life
Isozaki Tower*

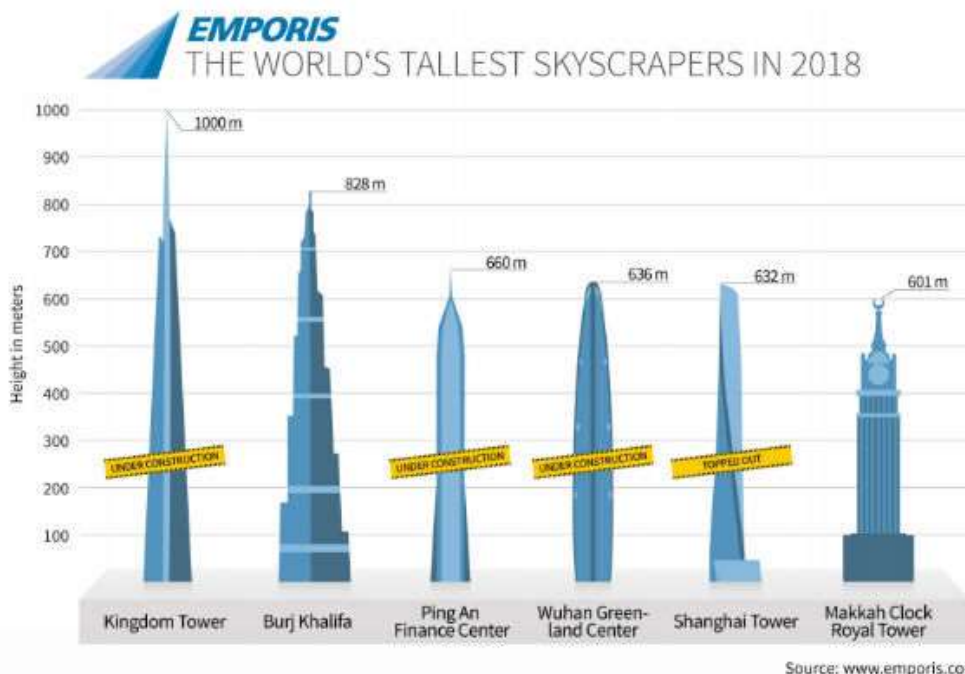


*Vertical Forest
Stefano Boeri*



*Diamond Tower
Lee Polisano*

...or to the world's tallest skyscrapers in 2018!!





FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



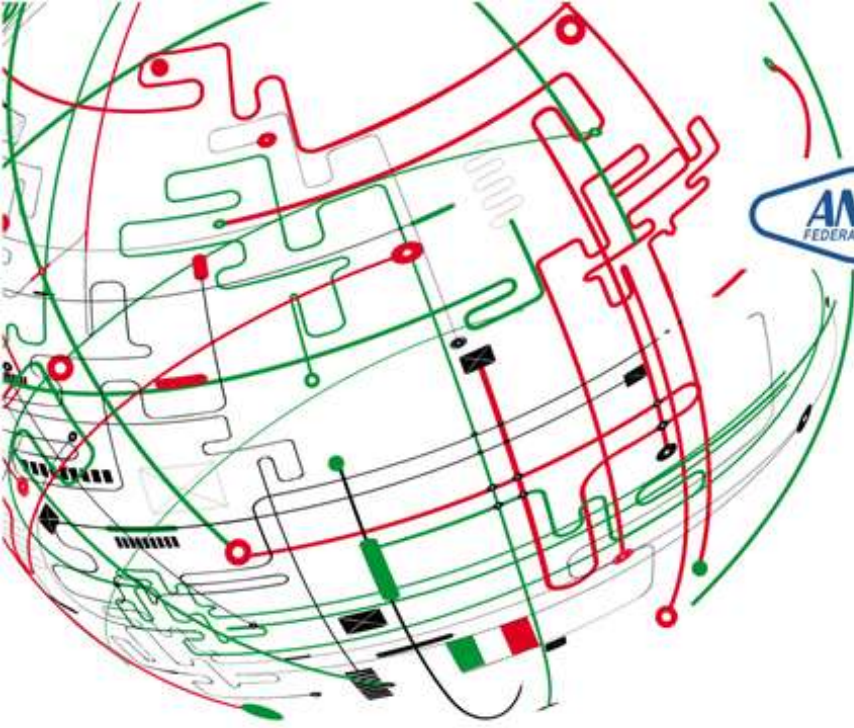
And what about installation in historical buildings...



*Coliseum
Rome*



*Mole
Antonelliana
Torino*



FEDERAZIONE NAZIONALE
IMPRESE ELETTROTECNICHE
ED ELETTRONICHE



THANK YOU

