



# MODERN TECHNOLOGIES FOR ORGANIZATION OF BARRIER-FREE ENVIRONMENT RAILWAY STATION

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4B – Connecting stations with the city

# Content

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- The accessible & inclusion challenge
- Existing universal design solutions
- Examples of equipped venues

# Accessibility & Inclusion : a global challenge

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Over **1 billion\*** people in the world have some form of disability

\* United Nations 2004

The Convention on the Rights of Persons with Disabilities

signed by **153 countries**

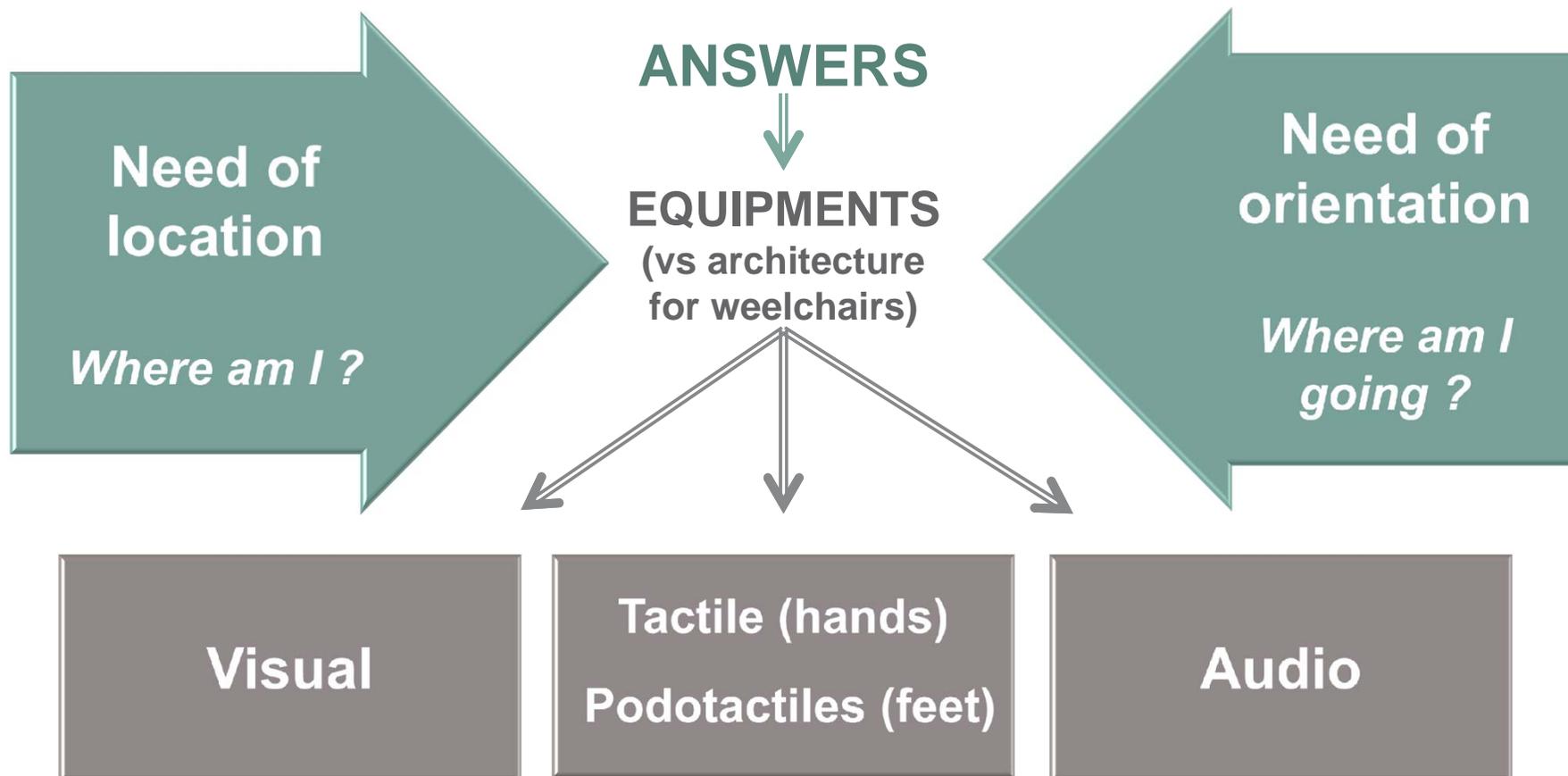


## Article 9, **accessibility**

**Accessibility and inclusion** of persons with disabilities **are fundamental rights** recognized by the Convention on the Rights of Persons with Disabilities and are not only objectives, but also pre-requisites for the enjoyment of other rights. The Convention (Article 9, accessibility) seeks to enable persons with disabilities to live independently and participate fully in all aspects of life and development. It calls upon States Parties to **take appropriate measures** to ensure that persons with disabilities have **access to all aspects of society**, on an equal basis with others, as well as **to identify and eliminate obstacles and barriers to accessibility**.

# Special needs of visually impaired people

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# Types of technical solutions

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## Visual

- SIGNAGE
  - Contrast
  - Size
  - Pictograms (ISO 7001)
- MAPS
  - Same

## Tactile (hands) Podotactiles (feet)

- TACTILE SIGNAGE
  - Embossed
  - Braille
- PODOTACTILE
  - ISO 23599  
Tactile walking surface indicators
  - Local standards

## Audio

- SPEAKERS
  - Sounds (sound design)
  - Voice (human or synthesis)
- Embedded technologies
  - Smartphones
  - Remote control
  - Others
- Concept of AUDIO SIGNAGE
  - Developed by EO GUIDAGE) in 1993

## CONCEPT OF MULTISENSORY SIGNAGE

# Travel chain

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**No rupture for user**

**International standards**

# Vocal signage : universal solution for visually impaired people

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## NEEDS



- Locate public transport terminals
- Obtain information about transport given by visual displays
- Locate crosswalk and know the traffic light color
- Locate building and its main entrance
- Be informed about the most accessible pathway
- Locate & reach the main reception
- Locate and use tickets distributors
- Understand the structure of the building
- Know where you are inside a building
- Find the right station platform
- Find entrance of the vehicle
- Ask for bus stop
- Etc.

Smart cities / Smart buildings

## ANSWER

Give the possibility to VI people to communicate with the city and to locate equipments

## IT SOLUTION : AUDIO SIGNAGE

Install audio beacons with speakers activated by remote control or smartphone

# Vocal signage : universal solution for visually impaired people

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More than **10.000**  
**buildings**

equipped in France

- Public buildings
- Railway stations
- Museums
- Banks
- Post offices
- Tribunals
- Sport facilities, etc.

More than **100.000**  
traffic lights for street &  
tramway

# Ex.1 : Train & bus station – RATP - Paris

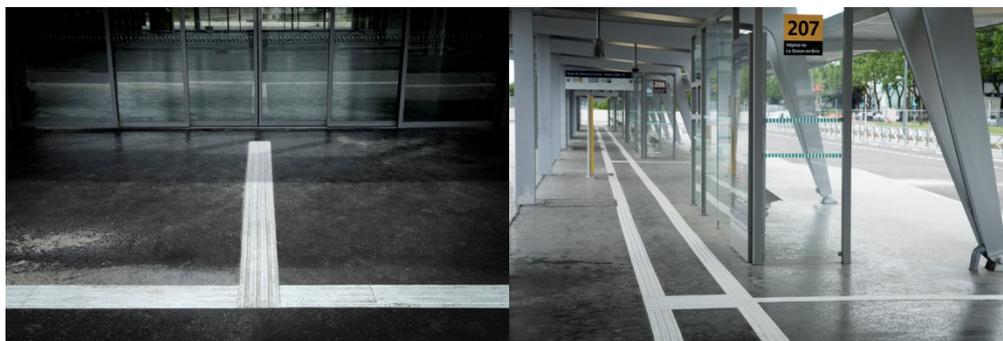
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Noisy-le-Grand Station



Audio beacons to locate doors

Tactile guide path in rubber

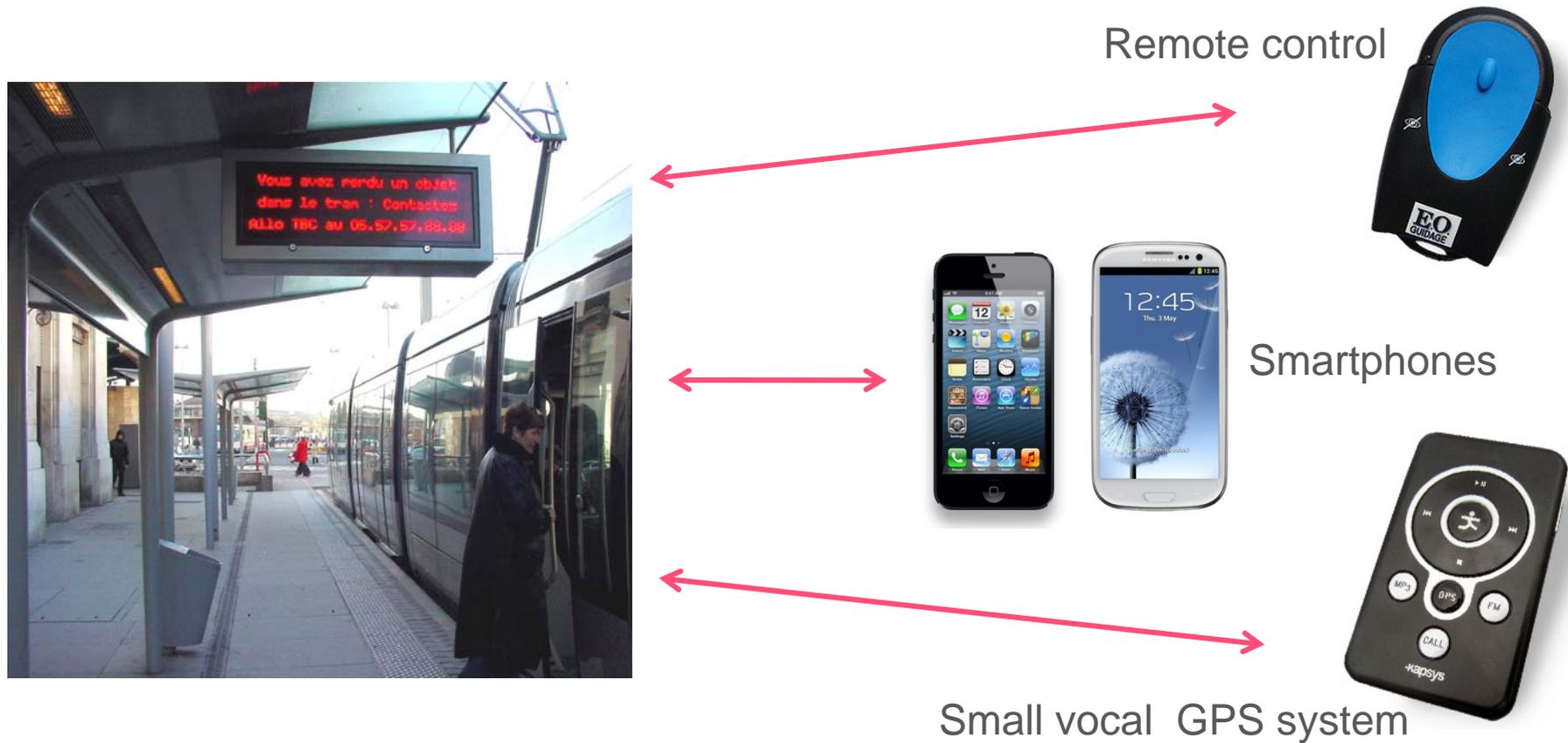


Audio beacon to locate train platform



# Ex.2 : Tram & bus station – Rennes (FR)

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# Ex.3 : Railway station – Namur - Belgium

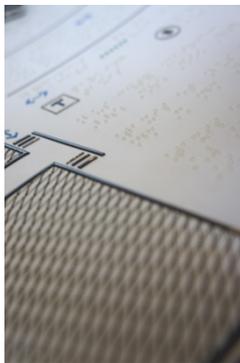
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Audio beacons



Multisensory maps (visual, embossed, audio, braille)



Embossed booklet  
A booklet, designed and produced by EO GUIDAGE, is given to any VI people who ask for it.



# Ex.4 : Railway station – SNCF - Paris

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Warning surface

Audio beacons

Tactile guide path

Braille tube labels for handrails



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...Thank you for your kind attention

## CONTACTS

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