



Smart**Human**City



Smart technologies fostering accessible tourism



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IMAGINING AN ACCESIBLE CITY





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ONCE Foundation



- Created by the ONCE (the Spanish Blind People Organization) as an instrument to focus on persons with **other disabilities**
- Objectives:
 - Programmes of work-related **training and employment**
 - Promoting **universal accessibility**
- Figures in 2013
 - Approved **projects: 1383**
 - **Training beneficiaries: 12,144**
 - **Jobs created and / or consolidated: 7,704**





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Accessibility



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- Design according to the people needs
- Attention to diversity of:
 - Technologies
 - Devices: laptops, mobiles, tablets, eKiosks, information panels, etc.
 - Browser, OS, input device (keyboard, mouse, tactile, voice, etc.)
 - Context of use
 - Location (home, public space, transport stations , telecentres)
 - Light, noise, connection speed, etc.





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Diversity of end-users (1/2)



- PRM
- Limited dexterity
- Blind
- Low vision
- Deaf (sign language)
- Deaf or low hearing (captioning)
- Learning disabilities



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Diversity of end-users (2/2)



- Older people
- Children
- Non-native speakers
- Not familiar with a technology
- Temporal disabilities



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Accessibility standards



- Web → Web Content Accessibility Guidelines (WCAG) 2.0
- Non-Web ICT → WCAG 2.0 to Information and Communications Technologies (WCAG2ICT)
- **EN 301 549** ‘Accessibility requirements suitable for public procurement of ICT products and services in Europe’
 - 1st European Standard
 - Published in January 2014
 - Joint effort of CEN, CENELEC and ETSI



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R&D



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Design errors



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User-centered design (UCD)



- “Nothing about us, without us.” European Disability Forum
- Social studies, co-design, validation & testing with end-users



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Smart traffic lights (PassBlue)



- Fully integrated into a Green Pedestrian LED traffic light optics
 - looks like non accessible ones
- Sound emission upon users' request
- Activation via remote control or Bluetooth
- Can emit spoken info messages. E.g. the street name



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Personalisation of Public Digital Terminals



I have difficulty understanding what I read	I am blind	I have low vision
I am not well acquainted with the use of ATMs	I am deaf	I can only hear loud sounds
I have mobility problems	I have manual dexterity problems	I don't identify with any of the situations above

Seleccioni

- [7] Retirar diners
- [4] Extracte
- [9] Ingressar bitllets amb sobre
- [6] Ingressar xecs amb sobre
- [8] Altres opcions

Indiqui l'operació que vol fer

Retirar 80 euros (13.311 ptes.)

Retirar altres quantitats

Altres operacions (Extractes, mòbils ...)

Indiqui l'operació que vol fer

Retirar diners

Retirar 40 € del meu compte

Consultar saldo

Altres operacions

Indiqui l'operació que vol fer

Retirar diners

Retirar 40 € del meu compte

Consultar saldo i moviment

Pagaments de mòbils i altres serveis

Depositar diners (bitllets i xecs)

Operacions de transferència

Altres operacions



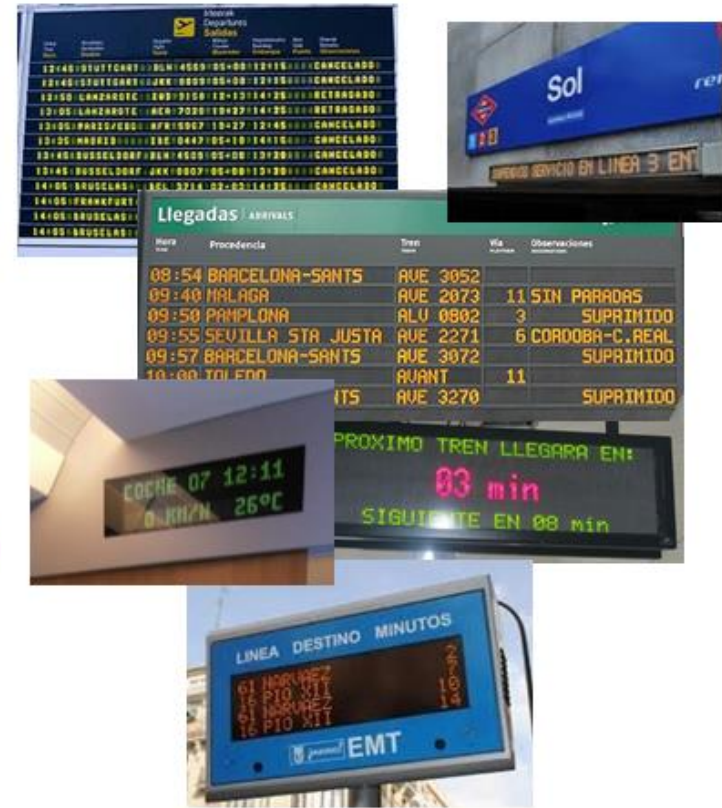
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Information panels and public address systems (PA) to your mobile





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Thank you for your attention

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