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# Persons with Disabilities: Numbers

## I know, you all know, but:

- 253 million people are affected by some form of blindness and visual impairment. This represents 3.2% of the world's population. That's twice Mexico's population\*!
- 466 million people have a disabling deafness and hearing loss. This represents 6% of the world's population, that is to say all of the inhabitants of the European Union!
- About 200 million people have an intellectual disability (IQ below 75). This represents 2.6% of the world's population. It covers the number of inhabitants in Brazil!
- 75 million people need a wheelchair on a daily basis. This represents 1% of the world's population. That's twice Canada's population!

# Is AI etc. the solution to all the problems?

Inclusion

Labor Market integration

Healthcare

Accessibility

.....

# ETC

AI, IoT (Internet or Industry), Smart ?  
(Cities, Workplace, robotics.....)

Health Care Robotics, Self driving cars,  
Machine Learning, Deep Learning, AR,  
VR.....

and what else?

Happy reading and some questions about that

Do blind and visually  
impaired persons go on  
vacation by car?

Do wheelchair users no longer  
need ramps because we only  
shop online?

Will care robots make the  
care problem obsolete?

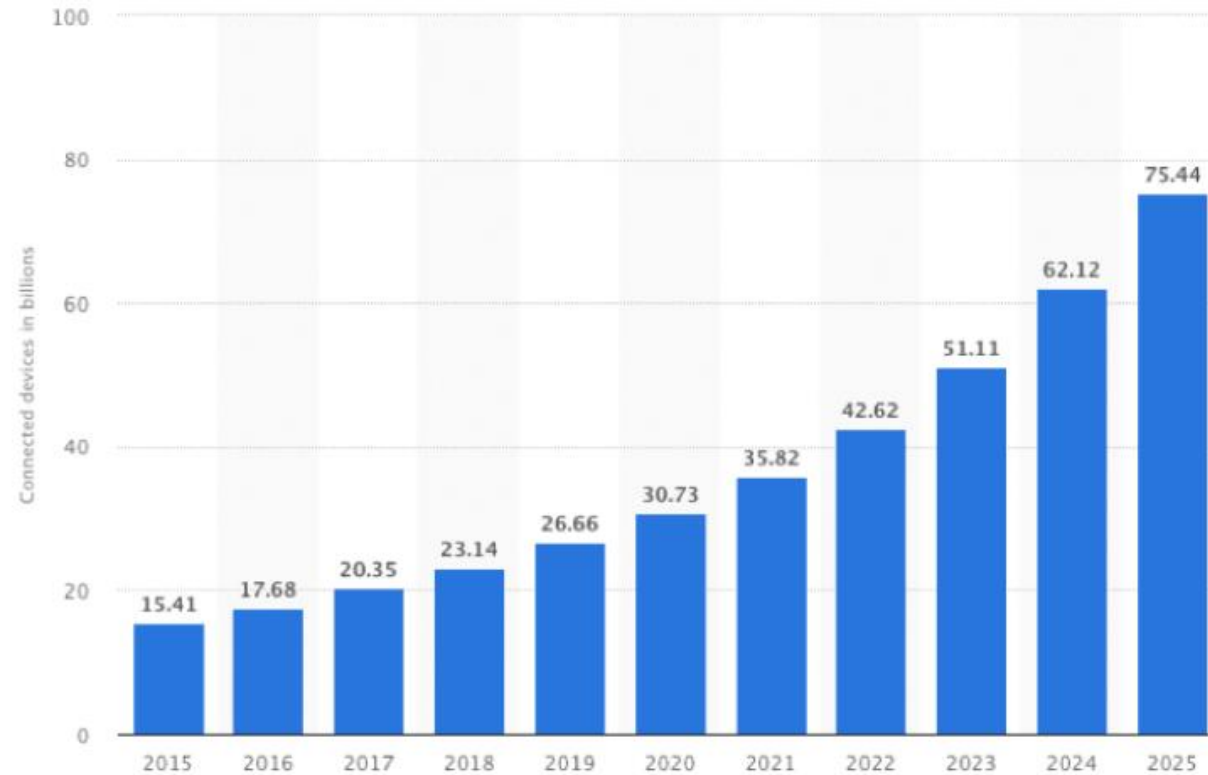
Do we no longer need  
accessibility specialists because  
everything is solved by AI?



Not really directly connected to AI  
(indirectly yes) , but it is worth  
mentioning:

# 30.000.000.000 Geräte

## Yes, also your washing machine



© Statista 2019

Entwicklung IoT: Forschungsinstitute wie Statista gehen von über 30 Milliarden vernetzten Geräten im Jahr 2020 und 75 Milliarden im Jahr 2025 aus.

# Possible solutions

- Customizing and automatic re-engineering
- Automated image descriptions
- Automatic captioning
- Sign language avatars
- Translation into simple language
- Augmented Reality for people with limited mobility
- Learning - for people with dyslexia and learning difficulties
- Robots for care
- Smart home, smart cities
- Wearables for mobility, orientation
- .....

# Problems?

- Accessibility and Usability (Design4All)
- Interoperability and standardization
- Discrimination over data, Bias
- Blackboxing
- Privacy and Security
- Affordability
- Digital Skills - Digital Gap
- Trustworthiness

# Worth for Trust?

- Lawfull
- Ethical
  - Human agency and oversight
  - Technical robustness and safety
  - Privacy and data governance
  - Transparency
  - Diversity and non-discrimination
  - Societal and environmental wellbeing
  - Accountability
- Robust