



Key Challenges and Principles

Ethics

Key challenges: bias and discrimination, privacy, safety, and accountability

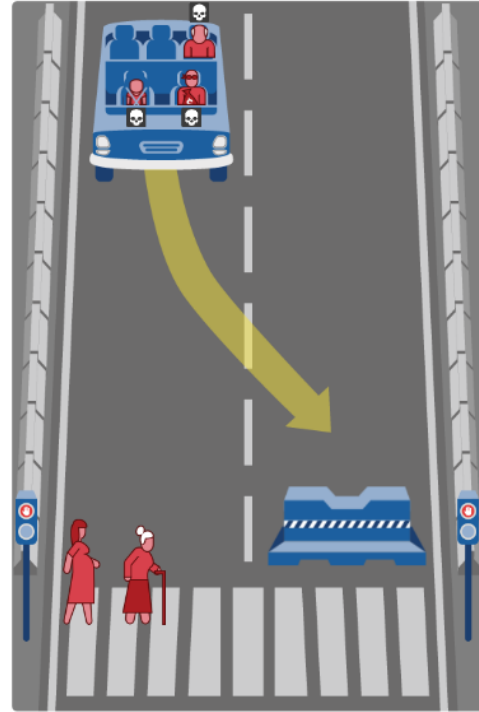
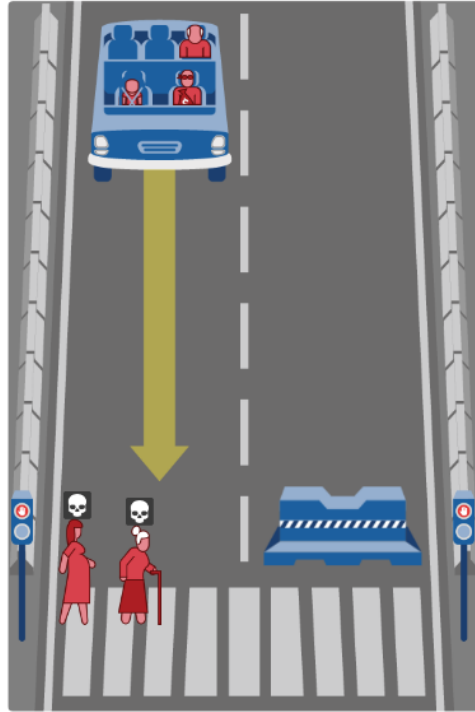
Biases and discrimination: facial recognition technology misidentifying individuals from certain racial groups

Data privacy and data protection: AI systems collect vast amounts of data on individuals' movements and behaviors

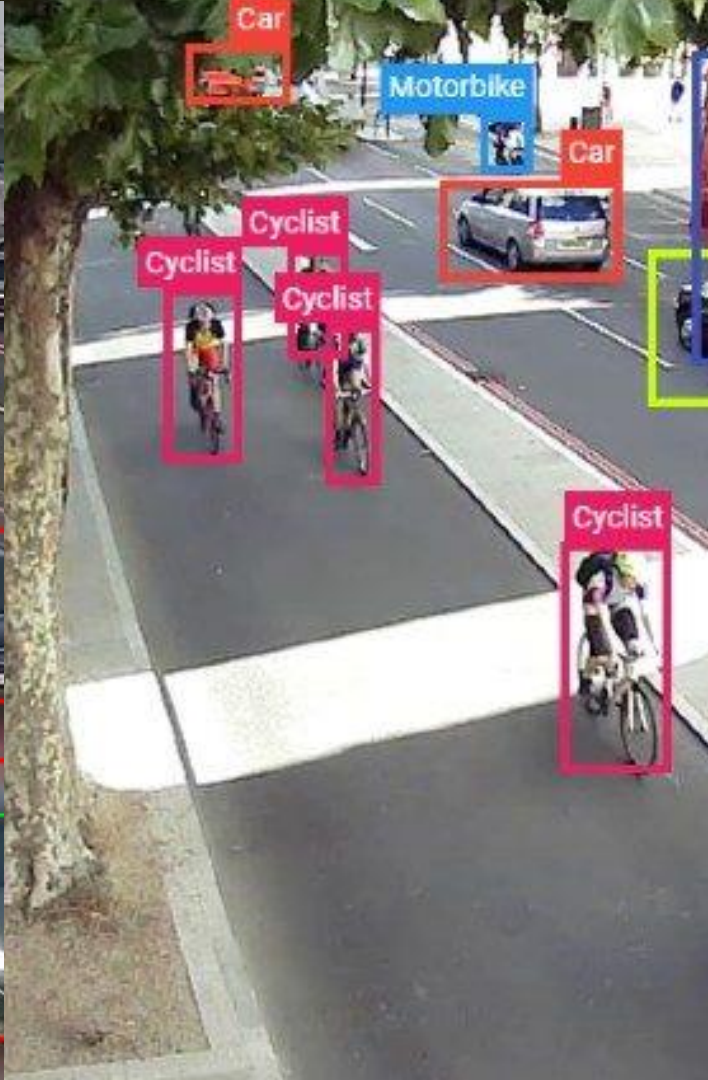
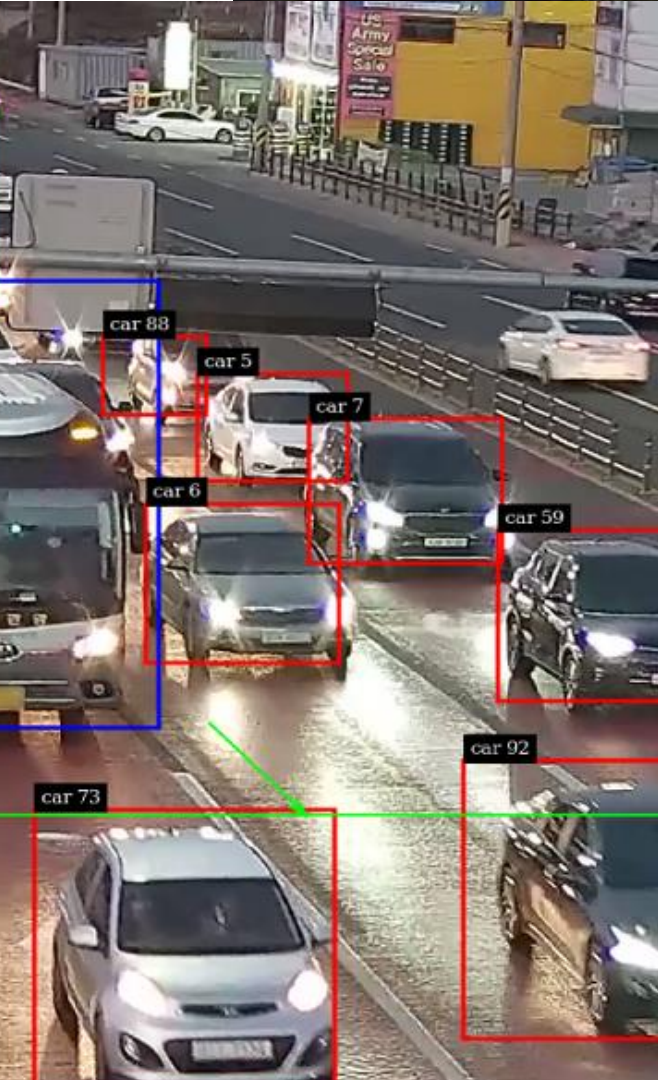
Safety: designed and tested to ensure they do not pose a risk to passengers or other road users

Accountability: to ensure that AI systems are used ethically and that the decisions they make are transparent and explainable

Elderly Woman + Baby vs Criminal, baby, and elderly m



<https://www.moralmachine.net/>



Data Quality

- incomplete or of low-quality data, impacting the reliability of AI systems.
- Lack of data governance, data sharing, and data standardization

Data Protection/Use

- Misuse of personal data individuals' movements and behaviors
- Monopolies and concentration of power

Employment

Automation and
Replacement

Skill gaps

Just Transition

Energy

Use of AI requires a
substantial amount of
energy

Goal conflicts – data center
vs. e-mobility vs. XYZ





Gender equality and vulnerable groups

Bias in data and algorithms

Lack of representation of women in the development transport solutions

Reinforcing traditional gender roles

Failing to consider the unique needs and experiences of women and vulnerable groups in transport, e.g. in case of personalized recommendations for safe routes and modes of transport

Role of transport planning and mobility advice

AI → gathering and analyzing data on transport and mobility, fair enough!

But who is defining transport goals and (other) objectives?

Whose mobility and which modes of transport the system should prioritize?

How to integrate other objectives, such as safety, accessibility, environment, gender, vulnerable groups?



10 Principles (tentative)



1 Promote transparency



- Develop transparent systems, models and algorithms that are easily auditable
- Make data and decision-making processes accessible to the public
- Ensure they are unbiased and non-discriminatory

2 Ensure privacy protection



- Implement robust data protection policies to safeguard privacy and sensitive data
- Ensure data is collected and used lawfully, fairly, transparently with safeguards

3 Foster innovation



- Encourage innovation and experimentation on AI-based solutions
- Support start-ups, entrepreneurs and research in developing solutions

4 Consider social impacts



- Promote social equity, accessibility and affordability
- Prevent exacerbating existing inequalities

5 Support environmental sustainability



- Promote sustainability and reduce carbon emission and air pollution
- Optimize and reduce the environmental impact of transport and mobility





6 Promote economic sustainability

- Promote local employment and contribute to growth of sustainable industries



7 Use ethical principles

- Include fairness, accountability and transparency in AI approaches
- Maximize social and environmental benefits while minimizing harms



8 Foster (international) collaboration

- Develop integrated and sustainable mobility solutions through partnerships between government, industry and civil society



9 Use open data and software

- Enable users and stakeholders to access and use (non-private) data openly
- Promote open data ecosystem: transparency, collaboration and innovation

10 Ensure legal compliance

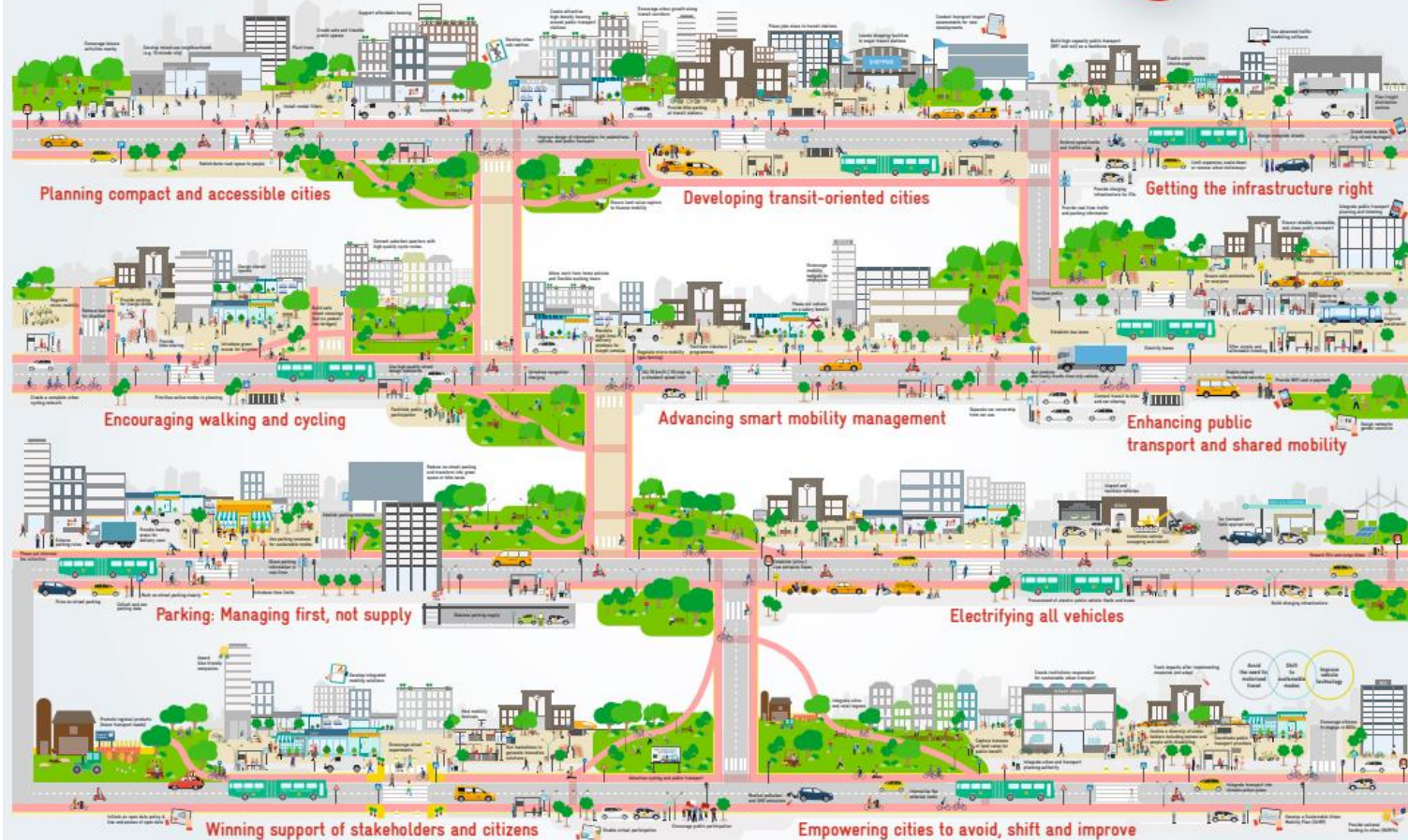


- Comply with applicable laws, regulations and standards related to privacy, data protection and environmental sustainability
- Comply with legal and regulatory requirements
- Establish appropriate oversight and governance



10 PRINCIPLES FOR SUSTAINABLE URBAN TRANSPORT

YEARS
10
PRINCIPLES



"A city is more compact and when it has highways, but when a city is a bridge or a river, it is more about connectivity with other cities." (Simon Stead)

As different transport systems in use in the future making urban spaces compatible it provides access to jobs, education, and health care. Therefore, in many urban areas, traffic problems triggered by urban form and space. Traffic jams, noise, people's time, resulting in considerable financial losses for the economy. Car-based

urban transport systems relying on fossil fuels consume enormous amounts of energy and contribute to global warming. Road accidents, their associated costs, their fuel especially among vulnerable groups such as pedestrians and cyclists, but not least, millions of urban areas are excluded from safe and efficient transport services. They cannot afford a car and need only on sustainable public transport for

the opportunity to other mobility use for described in a few short words. Moving people and goods efficiently, developing a city for a living or office, for citizens, cities, they were created in 2013 to accommodate the urban context and experience. The transport systems in use in the future making urban spaces compatible it provides access to jobs, education, and health care. Therefore, in many urban areas, traffic problems triggered by urban form and space. Traffic jams, noise, people's time, resulting in considerable financial losses for the economy. Car-based

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Way Forward

Let us jointly develop a common vision for a way forward!

Expect to see short-term disruption and uncertainty, followed by subsequent improvements

The more machines evolve, the more we value unique skills and abilities by humans

AI can make jobs more interesting for people by letting their human ingenuity and power of creativity unfold through AI

AI can outsource repetitive tasks, therefore free up time for more creative and intellectually sophisticated endeavors

AI cannot imitate EQ-skills such as empathy, consideration, kindness, self-control and caring for others

Not fear, but experiment, learn, adapt and decide how to use and not use this tool

AI can, has and will surpass us, but it could also help us lead a more human-centric life