

# An Ethical Overview of Self-Driving Vehicles

## Presentation of A Brief Introduction

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2023.Apr.11



## **I.BACKGROUND**

## **II.ISSUES INVOLVED**

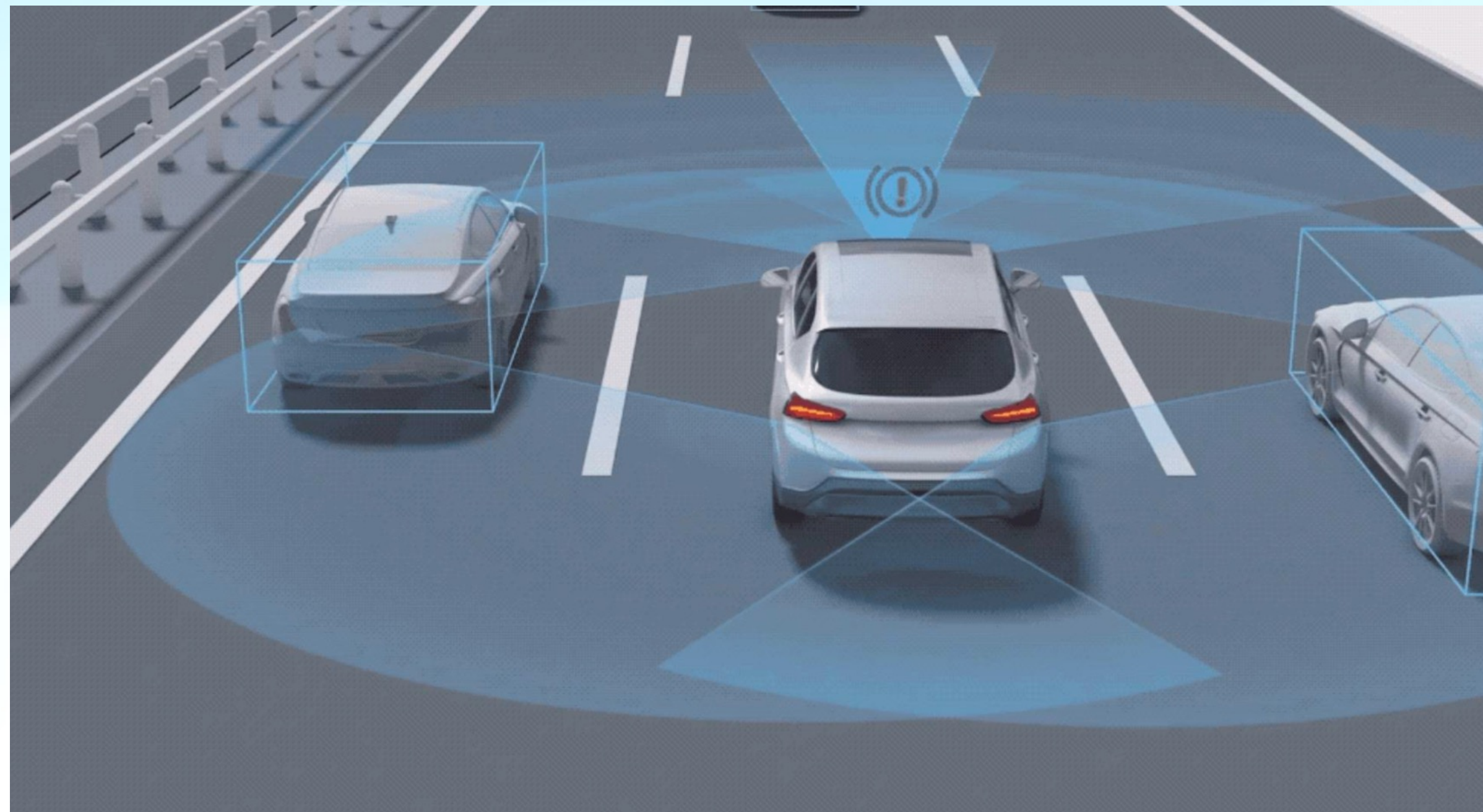
- 1) LIABILITY ISSUE
- 2) SECURITY
- 3) CONCERNS OF EXTERNAL CONTROL
- 4) EFFECTS ON HEALTH AND THE ENVIRONMENT
- 5) EFFECTS ON SOCIAL AND LABOR MARKET
- 6) POTENTIAL FORMS OF CRIMINALITY

## **III.MY OPINIONS**

## **IV.REFERENCES**

# I.BACKGROUND

Self-driving vehicles have been predicted to radically change our patterns of travelling and transportation (Gruel & Stanford, 2016; Pernestål & Kristoffersson, 2019).





## II. ISSUES INVOLVED - LIABILITY ISSUE

The introduction of automated road traffic will give rise to large changes in responsibility ascriptions concerning accidents and traffic safety.

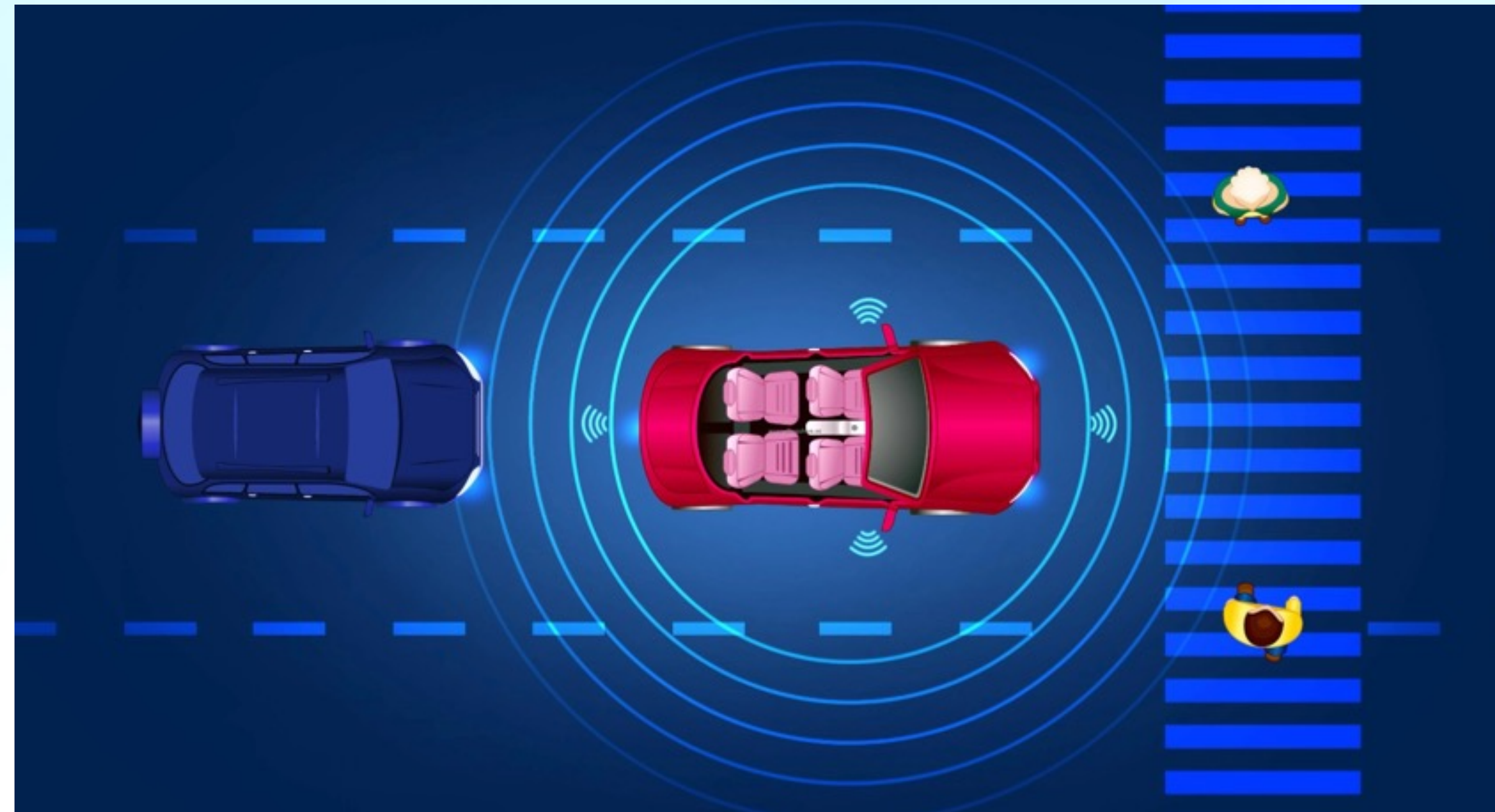
Probably, the responsibilities now assigned to drivers will for the most part be transferred to the constructors and maintainers of vehicles, roads, and communication systems.



## II. ISSUES INVOLVED - SECURITY

The short reaction times of self-driving vehicles can be used to enhance safety or to increase speed.

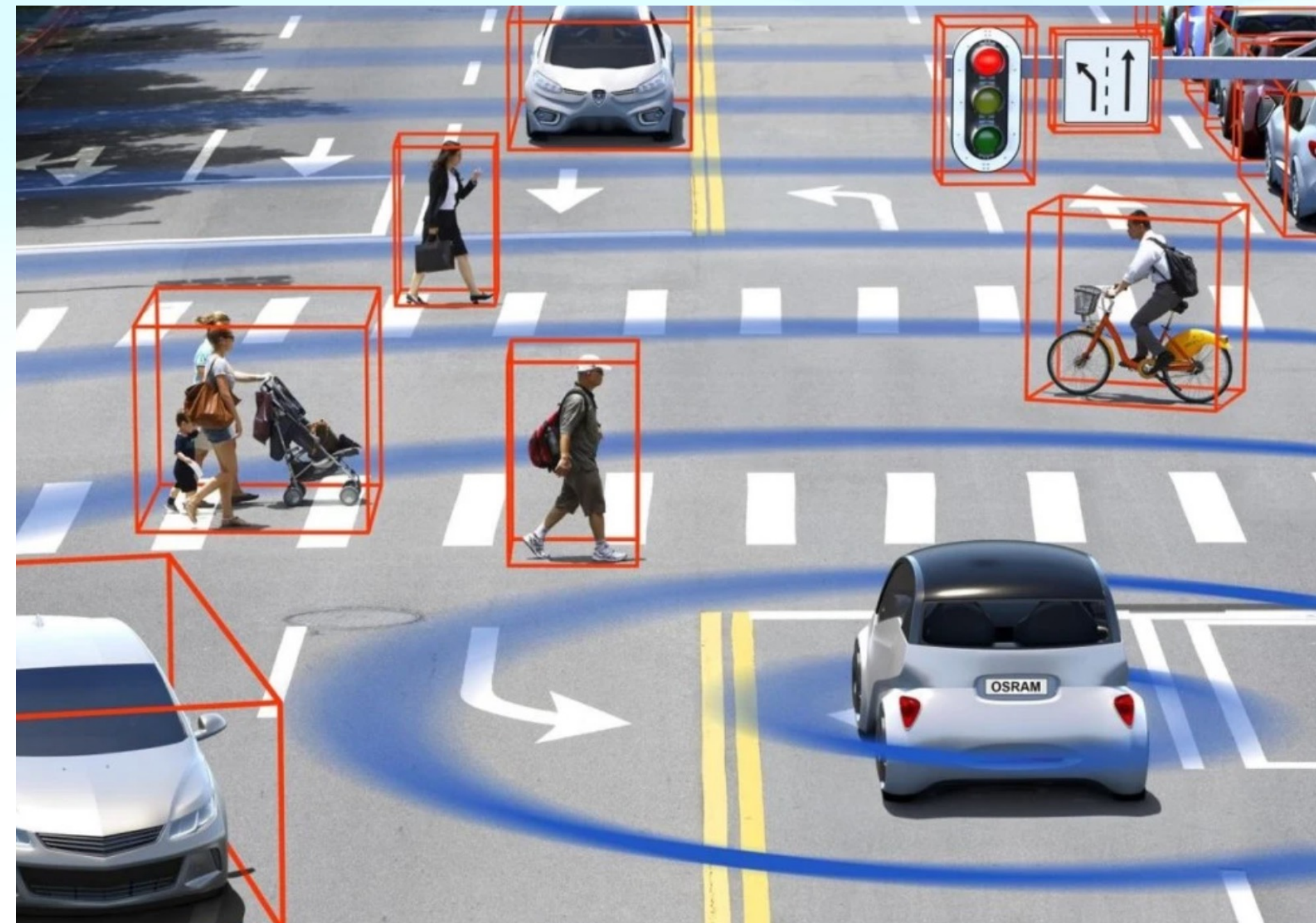
A trade-off between safety and speed will have to be struck.





## II. ISSUES INVOLVED – CONCERNS OF EXTERNAL CONTROL

The police will probably be able to stop a self-driving vehicle by taking control of it electronically. This is much safer than traditional high-speed pursuits. However, the purposes and procedures for decisions to halt a vehicle will have to be based on a balance between the interests of law enforcement and other legitimate interests.





## II. ISSUES INVOLVED - EFFECTS ON HEALTH AND THE ENVIRONMENT

It may reduce the need for physical exercise, but also improve energy efficiency and reduce environmental pollution. The distribution between road traffic and other modes of transportation may change, but it is unclear what the effects will be.





## II. ISSUES INVOLVED - EFFECTS ON SOCIAL AND LABOR MARKET

Positive social consequences include increased mobility for people with disabilities, the ability for children to travel alone, and improved access to employment opportunities for underprivileged people.





## II. ISSUES INVOLVED – POTENTIAL FORMS OF CRIMINALITY

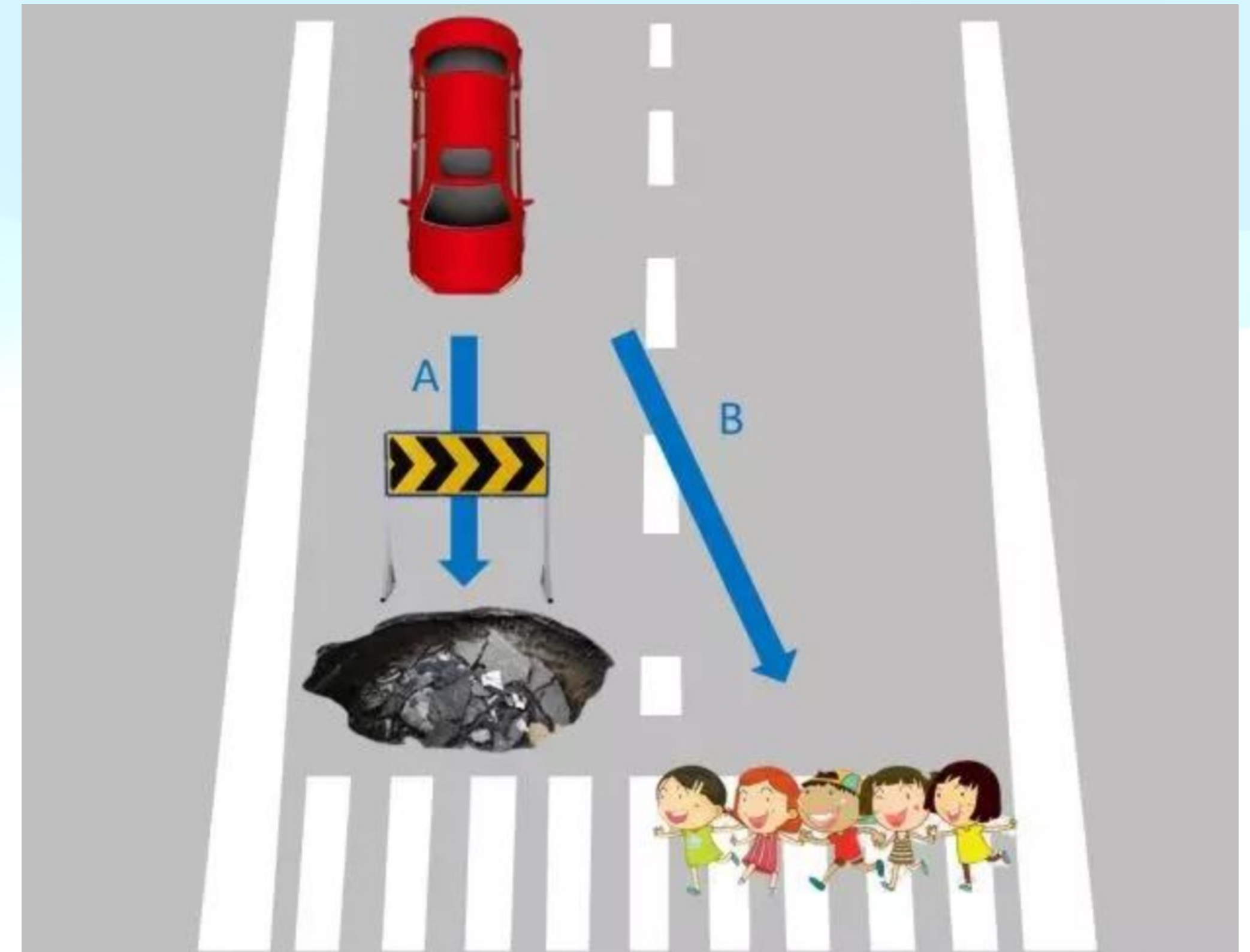
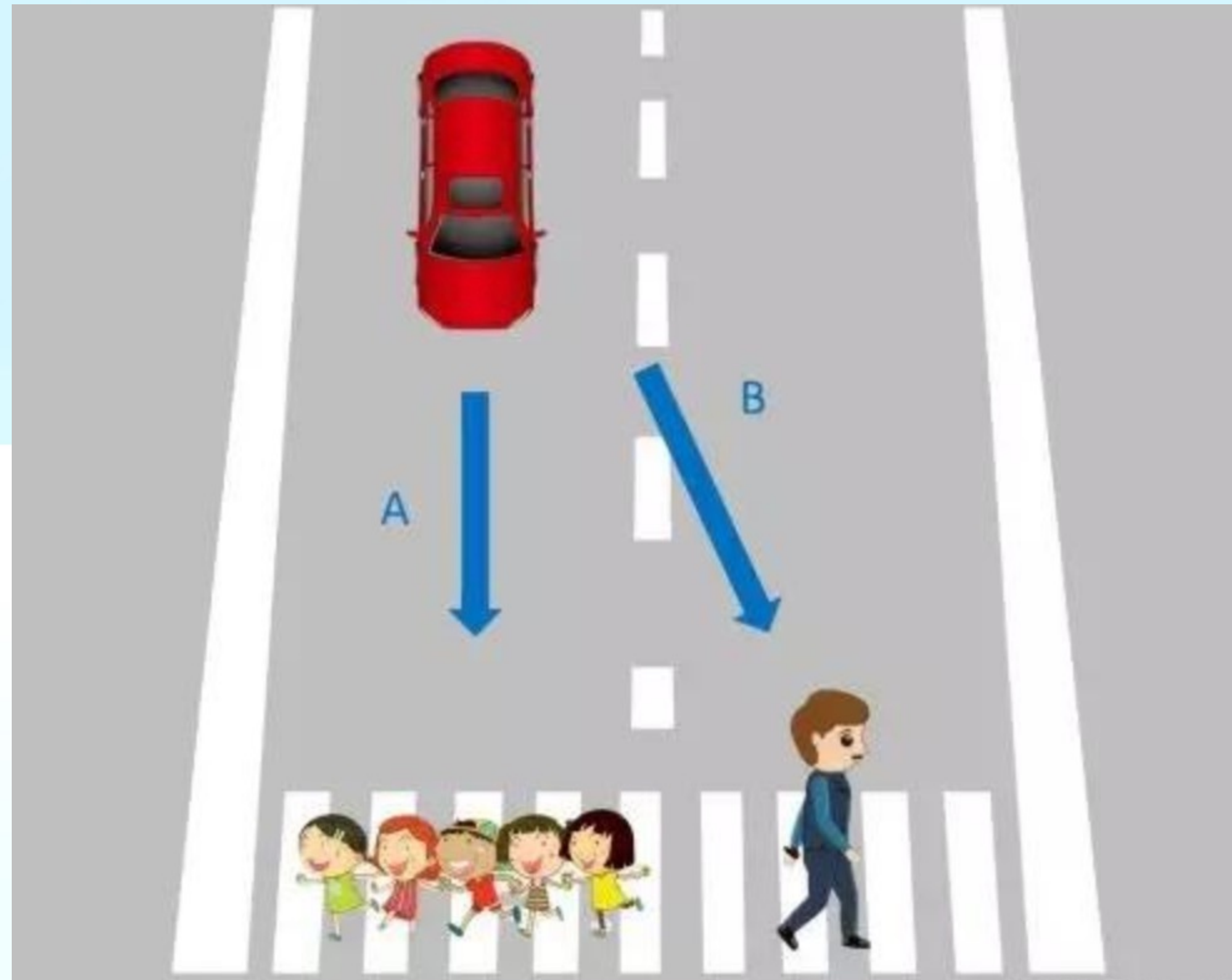
There are four potential forms of criminality associated with vehicle automation: illegal transportation, unauthorized access to data, sabotage, and new forms of auto theft.





### III. MY OPINION

With the development of self-driving technology, we need to develop a series of appropriate measures to ensure people's safety and privacy are protected and establish an effective liability system.





## IV. REFERENCES

1. Abraham, K. S., & Rabin, R. L. (2019). Automated vehicles and manufacturer responsibility for accidents. *Virginia Law Review*, 105(1), 127–171.
2. Borenstein, J., Herkert, J. R., & Miller, K. W. (2019). Self-driving cars and engineering ethics: The need for a system level analysis. *Science and Engineering Ethics*, 25(2), 383–398.
3. Hansson, S.O., Belin, MÅ. & Lundgren, B. Self-Driving Vehicles—an Ethical Overview. *Philos. Technol.* 34, 1383–1408 (2021). <https://doi.org/10.1007/s13347-021-00464-5>
4. <https://compass.onlinelibrary.wiley.com/doi/10.1111/phc3.12507>
5. <https://arxiv.org/pdf/1802.04103.pdf>
6. [https://www.sohu.com/a/455253748\\_99890637](https://www.sohu.com/a/455253748_99890637)
7. <https://www.zhihu.com/question/282657108/answer/1348667859>



*Thanks*

